



# FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS) THE EXTENDED NEW YORK CITY WATERSHED LAND ACQUISITION PROGRAM

CEQR No. 10DEP046U

**DECEMBER 10, 2010** 

# **PREPARED BY:**

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# New York City Watershed Land Acquisition Program Final Environmental Impact Statement December 10, 2010

CEQR No: 10DEP046U

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# **FOREWORD**

This document is the Final Environmental Impact Statement (FEIS) for the Extended New York City Watershed Land Acquisition Program (LAP) proposed by the New York City Department of Environmental Protection (NYCDEP), also acting as lead agency. The Draft Environmental Impact Statement (DEIS) was prepared in accordance with the State Environmental Quality Review Act (SEQRA) (Section 8-0113, Article 8 of the Environmental Conservation Law) as set forth in 6 NYCRR Part 617, and the City Environmental Quality Review (CEQR) process, as set forth in Executive Order 91 of 1977 and its amendments.

The DEIS was accepted as complete by NYCDEP and issued for public review and comment on June 1, 2010. The issuance of the DEIS with the Notice of Completion on June 1, 2010 marked the beginning of public review under CEQR. The DEIS was circulated to interested and involved agencies and members of the public. The DEIS was posted on the NYCDEP Web page, and hard copies of the document were made available in public repositories located within and around the watershed and in New York City.

Three joint NYSDEC and NYCDEP public hearings were held to obtain oral testimony on the DEIS and Water Supply Permit Application. These hearings were held on July 12, 2010 at SUNY Delhi, in Delhi, NY, on July 13, 2010 at Hunter Elementary School in Hunter, NY, and on July 14, 2010 at Tri-Valley High School in Grahamsville, NY. The period for submitting written comments remained open until November 22, 2010.

A public notice advertising the dates, times, and locations of the public hearings on the DEIS was published in the *City Record* and in newspapers of general circulation in the affected area, including *Journal News (Northern Edition)*, *Times Herald Record, Kingston Daily Freeman, Oneonta Daily Star, Mountain Eagle*, and the *Walton Reporter*. Information on the public hearings was also published in NYSDEC's *Environmental Notice Bulletin*. Notices of the scheduled public hearings were mailed to the recipient list of the DEIS and to those who provided testimony at the public scoping meetings on March 23 and March 24, 2010 in Delhi, NY and Hunter, NY, respectively.

This FEIS summarizes and responds to all substantive and relevant comments made during public review in a new chapter, Chapter 12, "Comments and Responses." Where appropriate, revisions and clarifications have also been made to the other chapters of the document, both in response to public comments and to reflect project changes that were made subsequent to the issuance of the DEIS. Revisions made throughout the FEIS are indicated by <u>double underlines</u>.

The major changes since the DEIS include the following:

- Since issuance of the DEIS, NYCDEP has been in active negotiations with its regulators (NYSDEC, NYSDOH, USEPA), watershed communities and environmental organizations to address concerns about the proposed Extended Land Acquisition Program. A Draft Water Supply Permit has been issued by NYSDEC. In addition, a companion Agreement will be signed by many of the parties to the 1997 Watershed Memorandum of Agreement (1997 MOA), reaffirming the parties' commitments under the 1997 MOA and making additional commitments with respect to the LAP and related programs going forward.
- Among other program changes since the issuance of the DEIS is that the draft permit term is 15 years instead of 10 years. This 15 year term, analyzed in the DEIS as the

Greater Impact Alternative, has been incorporated into the project as the Greater Impact Scenario in the FEIS.

- Other program changes since the DEIS include numeric thresholds for natural features criteria, delineation of expanded hamlet areas, and new or more detailed program elements including a Pilot Riparian Buffers Program, a Forest Conservation Easement Program, and an Enhanced Land Trust Program. These changes have been incorporated into the project description in the FEIS.
- In addition to permit terms related specifically to the Extended LAP, the permit requires the continuation of funding for Watershed Partnership Programs. These programs are, for the most part, part of the Long Term Watershed Protection Program and Filtration Avoidance Determination. The impacts of these programs were included in the environmental review that supported the 2007 FAD (Negative Declaration, dated September 2007), to the extent reasonably foreseeable. Environmental review of the continuation of these programs will be conducted, as applicable, to support the FAD review of 2012, subsequent FADs, and for discretionary permits and approvals required for these programs.
- The companion Agreement enhances or clarifies provisions in the Water Supply Permit. The Agreement is largely administrative and addresses program implementation, litigation, and tax issues, among other issues not addressed by the Water Supply Permit that are of interest to stakeholders. To the extent that the commitments memorialized in the Agreement simply clarify elements of the Extended LAP itself, their impacts are addressed in this EIS. The commitments relating to current and potential litigation are not subject to environmental review. The Towns of Hamden and Kortright will be responsible for environmental review of the amendments to their local laws concerning conservation easements.

This FEIS is being distributed in the same manner as the DEIS, is posted on the NYCDEP Web page, and hard copies of the document are being made available in public repositories located in and around the watershed and the City.

No less than 10 days following completion of the FEIS, NYCDEC and NYCDEP will make its Statement of Findings prepared under CEQR/SEQRA.

# EXECUTIVE SUMMARY

# PROJECT DESCRIPTION

### INTRODUCTION

The New York City Department of Environmental Protection (NYCDEP) proposes to continue the watershed Land Acquisition Program (LAP) in the three surface water watersheds that constitute the New York City surface water supply system; the three watersheds are the Delaware, Catskill, and Croton Watersheds. With the expiration of the existing Public Water Supply Permit (WSP) in January 2012, NYCDEP submitted an application for a new 10-year WSP on January 21, 2010, in accordance with the 2007 Filtration Avoidance Determination (FAD) issued by the U.S. Environmental Protection Agency (EPA), seeking permit approval prior to January 2012 to continue LAP through the year 2022. Per agreement with NYSDEC, other regulators (NYSDOH, USEPA), West of Hudson community representatives and representatives of environmental organizations (together "West of Hudson Watershed Stakeholders") after the submittal of the WSP application, it has been agreed that the term of the successor WSP will be 15 years. The future program that would be covered under the new WSP is referred to herein as the "Extended LAP."

In addition, a companion Agreement will be signed by many of the parties to the 1997 Watershed Memorandum of Agreement (1997 MOA), reaffirming the parties' commitments under the 1997 MOA and making additional commitments with respect to the LAP and related programs going forward.

This Environmental Impact Statement (EIS) <u>was</u> prepared to support the application for the WSP. It is anticipated that the future WSP would continue to authorize land acquisition in the three watersheds for watershed protection purposes, with a substantially greater emphasis on acquisitions in the <u>West of Hudson portions of the</u> Cat-Del System.

### **PURPOSE AND NEED**

The mission of the Land Acquisition Program (LAP) is to acquire fee simple and conservation easement interests to protect environmentally-sensitive land in the New York City (City) watershed as a part of the City's overall Watershed Protection Program. LAP is a key component of the City's efforts to increase watershed protection and avoid filtration of the Cat-Del System, which provides water to over 9 million residents of the City and nearby communities in New York State. Land acquisition is an anti-degradation strategy, which seeks to avoid potential adverse water quality impacts associated with development and other land uses.

The Extended LAP is needed to continue to support FAD requirements and to focus additional attention to basins and sub-basins with a low percentage of protected lands. LAP acquisition criteria are evolving to meet this objective.

# PROGRAM TO DATE

Since its creation in the 1990s, LAP has protected, through acquisition, over 100,000 acres of land in the 1 million-acre Cat-Del System and over 2,000 acres of land in the Croton System. The land and easements acquired are to be maintained in perpetuity as undeveloped land for watershed protection. Together with lands protected by the State and other entities, these acquisitions have raised the level

of permanently protected land in the Cat-Del System from 24 percent in 1997 to 34 percent today (Figure ES-1).

The LAP grew out of the City's response to the Federal Safe Drinking Water Act Amendments (1986) and Surface Water Treatment Rule (SWTR, 1989). As a result of an increased awareness of the threat posed by micro-organisms in unfiltered surface water systems, the SWTR required such public water supplies to either filter their supply or meet specific "filtration avoidance criteria." The City, through its Department of Environmental Protection, sought to meet those criteria and avoid filtration through the development of a comprehensive Watershed Protection Plan for the Cat-Del System.

Under the SWTR, an applicant for filtration avoidance needs to "demonstrate through ownership and/or written agreements with landowners within the watershed that it can control all human activities which may have an adverse impact on the microbiological quality of the source water." Increased ownership of watershed lands is a key component of the City's ability to meet this condition. Prior to 1997, the City owned approximately 35,500 acres of land in the Cat-Del System (excluding reservoirs), and the State of New York owned another 202,000 acres, for a total protected land base of approximately 24 percent of the watershed land area. Since the early 1990s, the City has sought to increase those percentages though a robust land acquisition program.

NYCDEP initially sought to establish a land acquisition program in the Cat-Del System as a condition of the first FAD, issued by the EPA in 1993. In August 1993, the City applied for a Water Supply Permit (WSP) from the New York State Department of Environmental Conservation (NYSDEC). That application, and the City's concurrent efforts to promulgate new Watershed Rules and Regulations with the New York State Department of Health (NYSDOH), met strong resistance from municipalities in the watershed. While many residents in these upstate communities supported such land protection efforts for various reasons, many also viewed these efforts as a threat to local economic development.

Over the ensuing three and a half years, the City, Federal and State regulators, local governments and environmental organizations engaged in a variety of efforts to resolve these issues, which

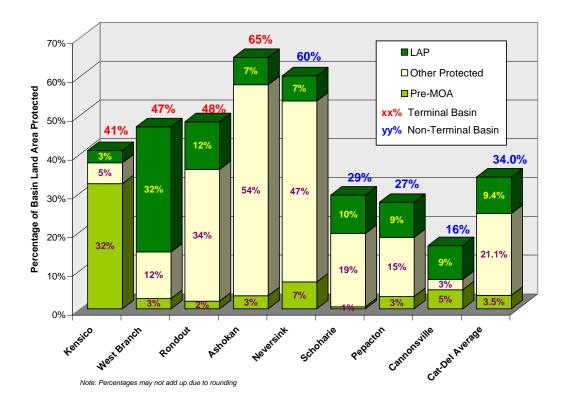


Figure ES-1: Protected Land as a Percentage of Basin Land Area

resulted in a comprehensive New York City Watershed Memorandum of Agreement (MOA) in January 1997. Under this landmark agreement, the City agreed to undertake a wide array of programs to protect water quality while also supporting local economic development. The MOA called on the City to dedicate up to \$300 million for a land acquisition program in the Cat-Del System, and identified specific program parameters and acquisition procedures, as detailed below in Section II.B.

In January 1997, the City received a WSP issued by NYSDEC, and the first real estate closing under LAP occurred in October, 1997. The WSP was issued for a ten-year period (through January 2007), with a five-year renewal option (through January 2012) that was exercised. Since 1997, EPA has issued several FADs that have continued to place a strong emphasis on land acquisition. In 2007, EPA, in collaboration with DOH and NYSDEC, issued a ten-year FAD that required the City to dedicate an additional \$241 million for land acquisition in the Cat-Del System. The 2007 FAD also required the City to apply for a new WSP in January 2010. As a prelude to that permit application, the FAD called for a "long-term land acquisition strategy...for the period from 2012 to 2022" to be submitted by September 30, 2009.

With the expiration of the existing WSP in January 2012, NYCDEP submitted an application for a new WSP in January 2010 with permit approval requested prior to January 2012 in order to continue LAP from January 2012 through 2022. <u>Based on discussions with the West of Hudson Watershed Stakeholders after the submittal of the WSP application, NYSDEC agreed that the term of the successor WSP will be 15 years.</u> This Environmental Impact Statement (EIS) <u>supports</u> the application for the WSP. It is anticipated that the future WSP would continue to authorize land acquisition in the three watersheds for watershed protection purposes, with an emphasis on acquisitions in the West of Hudson portions of the Cat-Del System.

Under the MOA, the City was required to solicit at least 355,050 acres of land in the Cat-Del System, with specific acreage requirements by basin and priority area. These solicitation requirements were met by 2006 and the City agreed to conduct additional solicitation and resolicitation on an annual basis as a result of the 2002 and 2007 FADs. The City's solicitation requirements and results in the Cat-Del System are summarized in Table ES-1. For the purposes of the DEIS, July 2009 data referenced in the September 2009 Long-Term Plan, will serve as the baseline for analysis.

In addition to the lands solicited and acquired directly by the City (as shown in Table ES-1), the City funds the acquisition of conservation easements by the Watershed Agricultural Council (WAC) on agricultural land. That program (see below under "Rights Acquired") resulted in the acquisition of an additional 16,954 acres of farm easements through July, 2009, which acreage is not shown above – nor are acres of farms solicited by WAC

The identification of the most important parcels for acquisition within this vast watershed is an ongoing process based on a number of geographic, topographic, cost and real estate factors. LAP first prioritizes property for solicitation on the basis of its location within the water supply system, followed by site-specific characteristics. These principles are embodied in the Priority Area and Natural Features Criteria provisions of the MOA.

Table ES-1
Solicitation and Acquisition Status by Basin as of July, 2009

		<b>MOA Solicitation</b>		Acres Acquired
District	Basin	Requirement	<b>Acres Solicited</b>	(LAP Fee + CE)
EOH	Kensico	950	1,071	207
	West Branch	14,250	14,676	8,602
	EOH Sub-total	15,200	15,747	8,809
WOH	Ashokan	45,530	46,417	11,460
•	Rondout	29,052	30,126	6,583
	Neversink	12,910	21,891	2,974
	Schoharie	68,700	95,491	19,000
	Pepacton	78,630	122,016	18,861
	Cannonsville	105,028	143,820	13,065
	WOH Sub-total	339,850	459,761	71,943
Cat-Del Totals		355,050	475,508	80,752

<sup>&</sup>lt;sup>1</sup> Since virtually all eligible lands in Priority Areas (PA) 1 and 2 were solicited while only 75% of lands in Priority 3 and 50% of Priority 4 had been solicited as of 2006, almost all newly solicited lands thereafter derived from the remaining unsolicited lands in PA's 3 and 4. These two PAs are found in the Cannonsville, Pepacton, Schoharie, and Neversink Basins.

# EXTENDED LAND ACQUISITION PROGRAM

Since 2008, through the City's submission of a WSP application on January 21, 2010 and DEIS on June 1, 2010, NYCDEP has been in active discussions with its regulators (NYSDEC, NYSDOH, USEPA) and West of Hudson Watershed Stakeholders to address concerns about the proposed Extended Land Acquisition Program. The parties to those negotiations have come to agreement on the core permit terms. Other related terms that the parties have agreed to will be memorialized in a separate Agreement, discussed below. Among other changes, the parties agree that the Permit term will be 15 years. This fifteen year term, analyzed in the DEIS as the Greater Impact Alternative, has been incorporated into the project as the Greater Impact Scenario in the FEIS.

The Extended LAP would continue to use the same basic real estate methods it uses today, which have resulted in the acquisition by LAP and WAC of over 96,000 acres as of July, 2009.

### **Areas of Focus**

The Extended LAP program for the period from 2012 to 2022 will refine solicitation activity to focus more attention on certain basins and sub-basins. As described in the September 2009 Long-Term Plan, the prioritization of solicitations will be based on some combination of their location within the system as a whole, the basin or sub-basin's existing level of protection, and a basin's anticipated contribution to future water supply including:

- Non-terminal reservoir basins with less than 30 percent protected lands;
- Specific sub-basins with a relatively low percentage of protected lands; and
- Reservoir basins that are expected to provide larger contributions to future water supply.

Using this strategy, Areas of Focus have been developed to identify basins and sub-basins which warrant additional attention for solicitation based on current levels of protection, success rates, contribution to water supply, and other factors. Parcel selection would include procedures to maximize the water quality benefit of acquisitions.

Areas of Focus have been developed to identify basins and sub-basins which warrant additional attention for solicitation based on current levels of protection, success rates, contribution to water supply and other factors:

- 1. Less-Protected Reservoir Basins The Schoharie, Pepacton and Cannonsville basins are the largest basins in the Cat-Del System, together comprising some 720,000 acres or over 70 percent of the system land area. They contain about 75 percent of the remaining solicited land. For this reason, any acquisition strategy from 2012 to 2022 would necessarily be focused on these three basins. The fact that these three non-terminal basins also contain the lowest percentage of protected lands provides further basis for this focus.
- **2. Critical Sub-Basins** Each reservoir basin is comprised of discrete sub-basins whose location, topography and land use patterns vary in ways that greatly influence the water quality entering and leaving each reservoir. LAP has identified several categories of sub-basins whose characteristics merit heightened focus including sub-basins near intakes and less protected sub-basins. As shown in Figure ES-2, sub-basins with less than 20 percent protected lands are primarily located in the Pepacton and Cannonsville Basins.

**3. Contribution to Future Supply -** The LAP Priority Areas emphasize travel time to distribution as a primary concern for water quality protection. The success of LAP to date in increasing protected lands in Priority Areas 1 and 2 allows additional factors going forward to prioritize future acquisitions to build on this success. One such factor is the proportion of source water originating from each reservoir basin.

Long-term planning by NYCDEP has identified several factors - including improved water quality in the Cannonsville Basin, the pending completion of the Croton Water Treatment Plant, and turbidity in the Catskill System - which may result in supply shifts that should be taken into consideration in planning LAP's solicitation strategy. The Ashokan and Pepacton basins would continue to provide the most supply, with increases projected for Rondout, Cannonsville and the Ashokan basin contributions

**4. Develop strategies to promote the wise use of acquisition funds over the long-term** - Acquisition costs vary tremendously within the Cat-Del system. Further, the high cost areas (Kensico, West Branch and Ashokan, in descending order) correspond in large part to the basins that now have the highest percentage of protected lands. Therefore the incremental protection value of acres acquired in the less-protected basins WOH is higher than the value of acquiring acreage in more expensive, highly protected basins. For these reasons, LAP's parcel selection strategy will more directly consider cost and levels of protection.

In practice, three of these Areas of Focus (Less-Protected Basins, Critical Sub-Basins and Contribution to Future Supply) overlap to some degree. For example, the sub-basins north of Pepacton Reservoir qualify in all three categories and therefore would be Areas of "High" Focus, while certain sub-basins in Schoharie Basin that already have a high percentage of protected land only qualify on the basis of one factor (Less-Protected Basins) and would receive less focus.

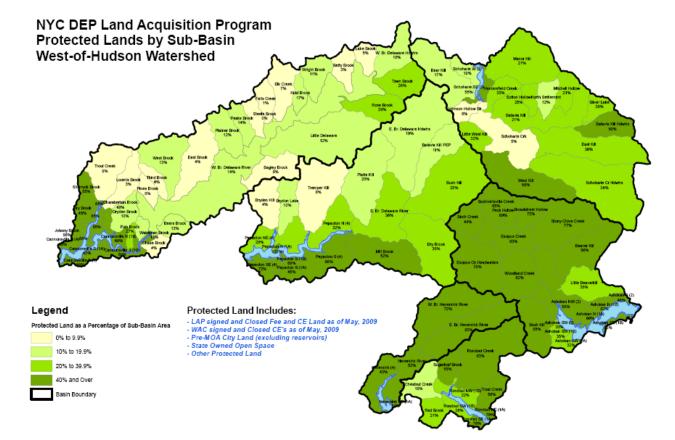


Figure ES-2: Percent Protected Lands by Sub-Basin

### **Other Solicitation Criteria**

NYCDEP expects to continue to resolicit most of the 375,000 acres of solicited land not yet acquired. The vast majority of these solicited parcels are comprised of vacant land over 20 acres in size or residential parcels over 30 acres with slope or surface water features that merit protection for water quality protection. However some marginal parcels previously solicited would not be actively pursued, and some new lands would be solicited, according to the criteria detailed below:

- **1. Parcels Adjoining Previously-Acquired Land** Parcels adjoining lands acquired in fee simple should continue to be identified and solicited to support multiple program objectives, including management efficiency, increased utility for working landscape partnerships, and enhanced recreational opportunities.
- **2. Smaller Vacant Parcels in Proximity to Surface Water Features** Small lots, especially those in proximity to streams, merit protection. Program experience since 1997 has also shown that the management burden of smaller fee lots is relatively minimal, particularly compared with CEs. For these reasons, LAP would identify more small lots near water for solicitation, particularly in Areas of Focus. This strategy would enable LAP to maximize the water quality impact of its acquisitions.
- **3.** Conservation Easements In contrast to fee simple acquisitions, CEs require a significant ongoing dedication of resources for annual monitoring and occasional enforcement. Despite these long-term costs, CEs provide a unique tool to protect lands (particularly those with residences) whose owners are not interested in selling their land outright. Size, natural features,

development potential and location would be the primary programmatic criteria used to make decisions to pursue a particular CE, but other factors would continue to be considered although in ways that may vary from past practice depending on the level of protection in a given area. These factors include the size and configuration of tax parcels comprising the CE, the presence or absence of other CEs on adjoining or nearby lands, and an analysis of the landowner's stated plans for future use of the property.

# **Program Changes**

As a result of negotiations between <u>NYCDEP</u>, <u>DEC</u>, <u>other regulators</u>, and <u>West of Hudson Watershed Stakeholders</u>, several components of the Extended LAP have been agreed upon. These components are discussed below.

## Hamlet Expansion Areas

As a result of these negotiations, there has been agreement to potential modifications to the 1997 Designated Areas (see page 1-10 above). Under MOA Paragraph 68, West-of-Hudson municipalities were given the opportunity in 1997 to designate areas, including villages, hamlets, village extension areas and industrial/commercial areas, and to determine, by resolution, whether to exclude the City's acquisition under LAP of property in fee simple in these areas. The intent of these "Designated Areas" was to "...provide reasonable opportunities for growth in and around existing population centers."

The <u>aforementioned</u> negotiations <u>fo</u>cused on the interest of some West-of-Hudson towns in expanding the geographic extent of the Designated Areas beyond those delineated in 1997. The <u>West of Hudson Watershed Stakeholders</u> also <u>expressed an interest in changing</u> the rules <u>governing</u> LAP acquisition in the Designated Areas. In particular, in 2008, the CWT requested and the City <u>and other West of Hudson Watershed Stakeholders</u> agreed that each WOH town could identify additional "Expansion Areas" for future growth. The <u>West of Hudson Watershed Stakeholders</u> agreed that such expansion areas are appropriate given the relatively small size of the MOA Designated Areas (which are already largely developed) and the increased scope of LAP. In addition, the City and the CWT agreed, that municipalities could elect to make both the current designated hamlet areas and these Expansion Areas off limits to <u>virtually</u> all LAP acquisitions (including <u>Watershed Conservation Easements</u>), not just to fee simple purchases as was previously the case. (As explained below, the Riparian Buffers Program, authorizing acquisitions in fee simple and conservation easements of certain buffer properties, may be allowed in areas that are otherwise designated as off limits to the LAP.)

Seventeen watershed towns have proposed Expansion Areas<sup>2</sup> (See Table 1-2). The <u>West of Hudson Watershed Stakeholders and individual counties and towns</u> have worked diligently to balance community concerns over opportunities for future development with water quality protection needs in determining the appropriate scope of each town's proposal. <u>The West of Hudson Watershed Stakeholders</u> have agreed on Expansion Areas for <u>all seventeen towns, whose proposals total 26,709</u> acres. If the hamlets are expanded as proposed, and all of the affected municipalities elect to preclude LAP acquisition in them, approximately <u>10,500</u> acres of previously solicited lands would no longer be eligible for acquisition.

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<sup>&</sup>lt;sup>1</sup> Except the Riparian Buffer Program

<sup>&</sup>lt;sup>2</sup> The towns will retain the right to remove – but not add – parcels from the proposed Expanded Hamlets and to formalize the status of such parcels as in or out of the Expanded Hamlets from that point on when the towns adopt resolutions to exclude (or not exclude) acquisition.

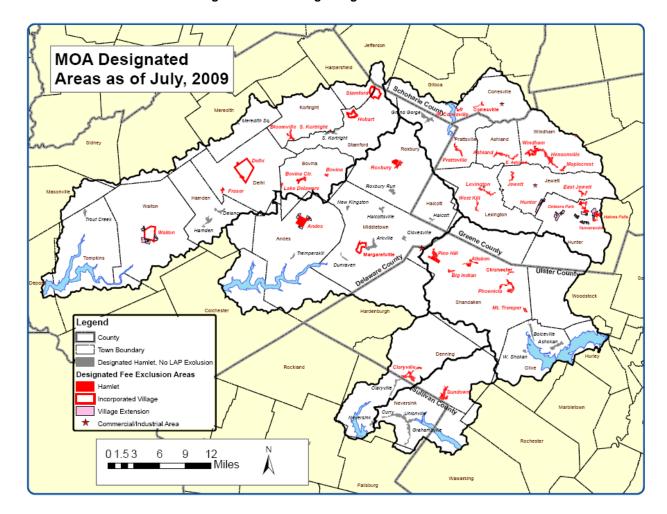


Figure ES-3: Existing Designated Hamlets

Because the expanded hamlet boundaries have been <u>agreed to, pending opt-in provisions by</u> the individual towns <u>as described in the Permit</u>, they are included in the Proposed Action. However, since <u>the extent and scope of LAP exclusions from hamlets will be unknown until acted upon by the towns</u>, there is a possibility that these expanded areas will not be part of the Extended LAP. Therefore, for purposes of the EIS, a No Hamlet Expansion Alternative is also evaluated.

The hamlet designation and expansion areas would be consistent with and reinforced by a number of other existing NYCDEP watershed programs. The proposed expanded hamlets and other existing NYCDEP programs recognize the water quality benefits of encouraging development in areas where it is already concentrated -- and where there is infrastructure to support it. The Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources (Watershed Regulations) encourage growth within villages and designated hamlets by providing relief in those areas from the general prohibition against new impervious surfaces within 100 feet of watercourses and wetlands so long as the applicant seeks and obtains NYCDEP approval of a stormwater pollution prevention plan (SPPP). Similarly, NYCDEP-funded wastewater programs under the MOA, primarily intended to control wastewater threats from existing development, also support the smart growth philosophy of encouraging community growth within hamlet areas rather than the diffuse sprawl development that often occurs in the absence of

centralized environmental infrastructure. Under the New Sewage Treatment Infrastructure, Community Wastewater Management, and Sewer Extension Programs, NYCDEP has funded the construction of new wastewater infrastructure in a number of villages and hamlets.

# **Table ES-2 Town Hamlet Expansion Areas**

Table 1-2

Final Town Hamlet Expansion Area Proposals
Accepted by the Parties November 30, 2010

Status of Expansion Proposal	Town	Town Watershed Acres	Existing Designated Area
Status of Expansion Proposal			
	Andes	65,748	1,052
	Bovina	28,427	392
	Colchester	18,670	n.a.
	Denning	56,447	1,107
	Franklin	5,888	n.a.
	Gilboa	10,840	n.a.
	Halcott	14,375	69
No Expansion Proposal Made (15 towns)	Hardenburgh	22,675	n.a.
	Hurley	8,518	n.a.
	Neversink	43,804	1,197
	Prattsville	13,851	207
	Stamford	31,120	1,331
	Tompkins	45,024	109
	Wawarsing	10,607	n.a.
	Woodstock	22,346	n.a.
	Sub-Total		5,464

Acceptable Town-wide Proposal	Shandaken	78,875	1,561
	Sub-Total		1,561

				Original 2008 Proposed Expansion Area	Current Proposal
	Meredith	15,395	73	105	71
	Masonville	8,311	n.a.	150	150
	Sidney	601	n.a.	218	218
	Middletown	62,244	1,734	298	298
	Lexington	51,274	362	375	375
	Roxbury	56,051	957	435	435
	Harpersfield	7,076	405	1,331	1,298
Town Proposal Acceptable	Olive	29,252	547	3,303	1,333
to All Parties	Conesville	21,590	275		1,570
(17 towns)	Ashland	15,987	362	4,004	1,676
	Jewett	32,087	652	4,769	2,014
	Hamden	33,517	420	4,958	2,434
	Delhi	41,343	2,346	4,450	2,556
	Windham	28,986	1,148	13,458	2,797
	Hunter	43,174	3,251	4,460	2,891
	Walton	55,991	1,503	11,194	2,929
	Kortright	25,047	250	7,913	3,664
	Sub-Total		14.285	61.421	26,709

Summary:	Existing MOA Designated Areas:	21,310
	Town Expansion Proposals Acceptable to all Parties:	26,709

### Natural Features Criteria

Natural Features Criteria as defined in MOA 63, establish a set of hydrologic and topographic features, one or more of which must be present on a property in order to qualify for acquisition in Priority Areas 2, 3 or 4. (In priority areas 1A and 1B, natural features criteria are not required.) There are two main categories of natural features criteria:

- 1) Surface water features: Parcels must
  - be at least partially located within 1,000 feet of a reservoir, or
  - be at least partially located within the 100-year flood plain, or
  - be at least partially located within 300 feet of a watercourse, as defined in the Watershed Regulations, or
  - contain in whole or in part a federal jurisdiction wetland greater than five (5) acres or a NYSDEC mapped wetland, or
- 2) Slopes: Parcels must contain ground slopes greater than fifteen percent (15%).

Another proposed change to the Extended LAP under discussion involves modifying the Natural Features Criteria to define thresholds for the minimum amount of the specified natural features that must be present on a property to qualify for acquisition.

As a result of the negotiations among the West of Hudson Watershed Stakeholders, the Extended LAP will incorporate numeric thresholds to define the minimum amount of the specified natural features that must be present on a property to qualify for acquisition. The parties have agreed that properties in Priority Areas 2, 3 or 4, must meet either or both of the following thresholds:

- At least seven percent (7%) of the property exhibits Surface Water Features<sup>2</sup>, or
- At least fifty percent (50%) of the property exhibits slopes greater than 15 percent.

The determination of whether the<u>se</u> Natural Features Criteria thresholds are met would be based on the best information available to the City at the time the City orders an appraisal. Th<u>is</u> modification would remove some lands from eligibility for future solicitation, and would focus <u>LAP</u> on those lands most sensitive for water quality. Table 1-4 shows the impact of the proposed hamlet Expansion Areas (PEAs) and Natural Features Criteria <u>thresholds</u> on the <u>existing</u> pool of solicited lands,

The proposed Expansion Areas could remove about <u>10,500</u> acres from solicitation <u>(based on prior solicitations of eligible land)</u>, and the proposed thresholds for Natural Features Criteria could remove <u>roughly</u> another <u>11,950</u> acres.

Although the PEAs, MOAs and NFC thresholds would remove <u>about 26,000</u> acres of solicited land, there would still be a very large universe, about <u>337,000</u> acres <u>of remaining eligible land solicited</u>, for NYCDEP to draw from for its <u>future</u> acquisitions in the West-of-Hudson watershed. Therefore

<sup>1</sup> The draft WSP provides limited exceptions from these thresholds to allow for acquisition of certain properties adjacent to lands owned by the City or State.

<sup>&</sup>lt;sup>2</sup> Surface Water Features include 1,000-foot buffers around reservoirs, 300-foot buffers around watercourses, 100-year floodplains, DEC-mapped wetlands, or federal jurisdiction wetlands over 5 acres.

NYCDEP does not consider these new <u>limitations</u> to be a constraint on the total number of acres it will acquire, but rather that they will focus acquisitions on <u>different and</u> more sensitive <u>properties</u> within the previously solicited group.

Table ES-3: Impact of PEAs, MOA Designated Areas and Proposed NFC Thresholds on Remaining Solicited Land as of March 2010

	(a)	(b)	(c)	(d)	(e)	(f)
			Ir	mpact on Remaining Soli	cited Acres	
County	Remaining Solicited Acres	Proposed Expansion Areas (PEA)	MOA Designated Areas	NFC: 7% SWC / 50% Steep Slope Threshold	Totals Solicited Acres Impacted (sum of Columns b, c & d)	Remaining Acres available for solitication
Delaware	186,725	4,500	1,423	8,378	13,104	173,621
Greene	65,323	6,430	965	2,612	10,007	55,316
Schoharie	14,306	1,113	0	533	1,646	12,660
Sullivan	19,859	0	308	440	748	19,111
Ulster	48,531	381	316	675	1,372	47,159
Totals	334,744	12,424	3,012	12,638	26,877	307,867
	_					1
Walton	28,527	2,588			2,588	25,939
Shandaken	13,761		385	15	400	13,361
Totals	377,032	15,012	3,397	12,653	29,865	347,167
Column (a)	'Remaining Solicited Actindude WAC solicitation		acres not already sign	ed or closed; Includes all Pr	iority Areas; Does not	
Column (b)	Sub-set of Column (a) ly only the acres within the		PEA's in each County.	If only a portion of a solicite	d parcel lies within a PEA,	
Column (c)	Sub-set of Column (a) lying within each MOA Designated Areas in each County. Acres are counted whether or not the Town has previously elected to exclude LAP acquisitions in fee simple. If only a portion of a solicited parcel lies within an MOA designate					
Column (d)	(d) Sub-set of Column (a) in properties solicited by LAP whose NFC would fall below the 7% SWC or 50% Steep Slope threshold and also located in Priority Area 2, 3 or 4 and outside the PEA's.					
(1) Delaware County	are Delaware County totals exclude Walton PEA, which has not yet been accepted by the parties. Acreage that would be excluded from solicitation by the current Walton PEA proposal is presented at the bottom of the table.					
(2) Ulster County				of designating specific parcel will not proactively solicit la		

# Riparian Buffer Pilot Program

The City has agreed to implement <u>an initial</u> three-year <u>Riparian Buffer</u> Program (<u>RBP</u>) in which the City would allocate up to Five Million Dollars (\$5,000,000) of the funds currently committed to the LAP to a program for acquiring Riparian Buffers, in easement or fee. As currently envisioned, the City-funded <u>RBP</u> would be implemented in conjunction with one or more Stream Management Plans developed under the City's Stream Management Program, and would be carried out in partnership with one or more local land trusts. <u>The RBP would involve the acquisition of small parcels along streams</u>, wetlands and other water features. Towns that exclude LAP acquisitions in designated areas may nonetheless opt to allow acquisition of riparian buffers in such areas. Since much of this land is already constrained by regulatory buffers and physical limitations on development, the RBP is not expected to have a large impact on the supply of developable land in towns where it is implemented. The amounts of land protected under the RBP are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

# Forest Conservation Easement Program

The City has also agreed to implement a five-year Forest Conservation Easement Program ("FCE Program") in which the City would allocate up to six million dollars (\$6,000,000) of funds currently committed to the LAP to acquisitions of easements on forested land. As currently envisioned, the City-funded FCE Program would be implemented in partnership with the Watershed Agricultural Council (WAC) in similar fashion to the Farm Easement Program that has been in operation by WAC and NYCDEP since 1999. The FCE Program would focus on properties that are (1) enrolled in WAC's Forest Management Program (for which a Forest Management Plan has been developed); (2) enrolled in NYSDEC's Forest Stewardship Program or Section 480A Forest Tax Law (for which a Forest Management Plan has been developed); or (3) important for other reasons related to water quality. The FCE will complement the land protected by NYCDEP CEs and WAC Farm Easements within the acquisitions analyzed in this EIS, and does not represent an increment for analysis. The amounts of land protected under the FCE program are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

# Enhanced Land Trust Program

The City has further agreed to implement an Enhanced Land Trust Program ("ELT Program") in which one or more land trusts would (1) acquire large properties that contain improvements such as dwellings, which improvements are otherwise off limits to NYCDEP, (2) facilitate subdivision of the properties, and (3) convey the vacant portion to the City at fair market value, and the residential portion into private ownership on the open market. The ELT Program would be implemented only in those towns that elect to allow the land trust to acquire properties with dwellings (a class of properties that the MOA prevents the City from acquiring itself). As envisioned, the City will pay for most of the carrying costs incurred by the land trust(s) under this program. The amounts of land protected under the ELT program are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

# **Use of Water Supply Lands**

NYCDEP allows recreation, forestry, mining, and low intensity <u>agriculture</u> on NYCDEP owned lands. These are expected to continue and possibly be expanded on land purchased under Extended LAP, subject to future applicable approvals, where consistent with water supply protection <u>and operations</u> and public safety. <u>In addition to the recreational uses that have been allowed on NYCDEP owned lands, under the draft WSP, NYCDEP will allow snowmobile trails where appropriate, sponsored by qualifying organizations.</u>

The Proposed Action for this EIS is the new Water Supply Permit that would allow for continued acquisition under the Land Acquisition Program. Most of the uses allowed on NYCDEP lands are either a continuation of an existing use or are subject to separate site specific approvals of land use plans and/or stormwater pollution prevention plan approvals and environmental review, where applicable, and are not reviewed in this EIS. Recreational uses, which are allowed pursuant to "NYCDEP Rules for the Recreational Use of Water Supply lands and Waters" underwent SEQRA review (Negative Declaration dated July 2008) and are not subject to further review and approval; therefore, they are reviewed in this EIS.

# **Other Permit Elements and Side Agreement**

### Permit Elements

As a result of negotiations among NYCDEP, NYSDEC, other regulators, and watershed stakeholders since the submittal of the DEIS, several additional refinements and a number of new components have been added to the Extended LAP WSP. Paragraph 25 of the WSP describes "Programs to Foster Cooperation and Requirement to Fund Watershed Protection and Partnership Programs." The draft WSP includes requirements that NYCDEP continue Partnership Programs with outstanding commitments from the 1997 MOA and/or continuing commitments under the 2007 FAD. It outlines NYCDEP's commitments to the following Partnership Programs, including the requirement that conditions of any subsequent FADs related to these programs become incorporated into the WSP. The impacts of these programs were included in the environmental review that supported the 2007 FAD (Negative Declaration dated September 2007), to the extent reasonably foreseeable. Environmental review of the continuation of these programs will be conducted, as applicable, to support the FAD review of 2012, subsequent FADs, and for discretionary permits and approvals required for these programs.

# Side Agreement Elements

In addition to reaching agreement on a number of core terms for the WSP itself, the West of Hudson Watershed Stakeholders have reached consensus on an Agreement which both reaffirms the parties' commitments under the 1997 MOA and specifies additional commitments made in connection with the draft WSP and the extended LAP. In many instances, the Agreement will enhance or clarify provisions in the Water Supply Permit. To the extent the commitments memorialized in the Agreement simply clarify elements of the extended LAP itself, their impacts are addressed in this EIS. The commitments relating to current and potential litigation are not subject to environmental review. The Towns of Hamden and Kortright will be responsible for environmental review of the amendments to their local laws.

# **Projection of Possible Future Land Acquisition By County**

# 10 Year Projection Scenario

For purposes of the EIS, projections were made of potential future acquisitions to understand potential impacts of the Extended LAP. So as not to underestimate socioeconomic or community character impacts, the projections are highly conservative for purposes of developing a reasonable worst case scenario – that is, a high estimate of acquisitions – at the town level for evaluation in this EIS. The projections use the pool of previously solicited lands as a starting point (after removing land already acquired). These acres were then multiplied by an assumed future success rate for each town. The future success rates are conservative, in that they err on the side of over-estimating acquisition. Using the county-wide historical success rate as a starting point, the town-based rates assume that future acquisition will occur at a rate higher than has been seen to date. This approach tends to account for regional differences, without being overly tied to past results, which can be greatly influenced by specific large acquisitions. The average county success rate was then increased for those towns that are in "areas of high focus" according to the Long-Term Land Acquisition Plan – that is, areas of particular significance in terms of potential impact on water quality.

Table ES-4<u>A</u> presents projections for future watershed land acquisitions by county. Acres of fee, conservation easement (CE) and Watershed Agricultural Council (WAC) easement land that could be acquired through 2022 were projected for each town (town level projections are presented in *Socioeconomic Conditions* below).

Table ES-4A: Reasonable Worst Case Projections of Acquisitions Under the Extended LAP

District	County	Historical Success Rate	Fee/CE Acres Acquired To-Date	Assumed Future Success Rate	Projected Future Acres	Projected Future WAC CE Acres	Total Proj. Acres LAP + WAC
WOH	Delaware	13%	31,174	20%	40,900	13,152	54,052
	Greene	20%	16,072	27%	16,760	952	17,712
	Schoharie	18%	3,351	25%	3,384	1,162	4,546
	Sullivan	14%	3,461	20%	3,963	301	4,264
	Ulster	22%	17,663	25%	15,942	433	16,375
	Sub-Total	16%	71,721	22%	80,948	16,000	96,948
ЕОН	Dutchess	46%	1,049	25%	307	0	307
	Putnam	63%	7,564	30%	1,210	0	1,210
	Sub-Total	60%	8,614	33%	1,517	0	1,517
	Totals	17%	80,335	22%	82,465	16,000	98,465

Note: Town-Level Projections were not conducted for Westchester County due to low anticpated volume

As shown in Table ES- $4\underline{A}$ , the projected amounts of land in the watershed, particularly in the West-of-Hudson watershed, are higher over the next 12 years than the previous 12 years. This is an unlikely scenario because the City has already solicited much of the land it will be soliciting in the future and the success rates are likely to be somewhat lower rather than higher as shown in the projections, since the remaining lands are largely owned by individuals who have declined to sell in the past. These optimistic projections are therefore highly conservative for purposes of projecting future potential impacts, particularly with respect to socioeconomic and community conditions.

No projections were made for the Croton System or Westchester County. Acquisitions in the Croton Watershed would be highly unusual and only made for a limited set of very water sensitive lands. For Kensico Reservoir watershed in Westchester County, very few parcels would be expected to be acquired. Due to the highly developed nature of the watershed, land that would be acquired would tend not to be vacant land, but more likely land that is either part of an existing recreational area (such as a golf course), office park or other use. The potential for these acquisitions are discussed qualitatively but, due to the predicted low levels of acquisition, no potential significant impacts are expected to occur.

# 15 Year Greater Impact Scenario

This EIS also evaluates a 15 Year Greater Impact Scenario (previously analyzed as the Greater Impact Alternative under the DEIS), As discussed above, per agreement with NYSDEC, other regulators, and West of Hudson Watershed Stakeholders, since the submittal of the WSP application, it has been agreed that the term of the permit will be 15 years. The analysis in this scenario assumes that NYCDEP would acquire an additional 10 percent above the 10 Year Projection Scenario shown in Table ES-4A. As shown on Table ES-4B, based on this approach, NYCDEP purchases in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2027 would total 89,043, as compared with 80,948 acres through 2022 in the 10 Year Projection Scenario. Purchases of farm easements by the Watershed Agricultural Council from 2010 through 2027 are not expected to exceed 16,000 acres.

This scenario is considered to be an extremely conservative (i.e. high impact) estimate of land to be acquired under the Extended LAP. The projections in Table 1-5 use very conservative assumptions to estimate the amount of land to be acquired under the Extended LAP. It is highly unlikely that, even under a 15 year Water Supply Permit, additional land would be acquired beyond the levels

estimated in Table ES-4B. Nevertheless, NYCDEP evaluated the projections presented in Table ES-4B.

Table ES-4B: 15 Year Greater Impact Scenario Projections of Acquisitions Under the Extended LAP

District	County	Historical Success Rate		Assumed Future Success Rate	Projected Future Acres	Projected Future WAC CE Acres	Total Proj. Acres LAP + WAC
WOH	Delaware	13%	31,290	20%	44,990	13,152	58,142
	Greene	20%	16,108	27%	18,438	952	19,388
	Schoharie	18%	3,385	25%	3,722	1,162	4,884
	Sullivan	14%	3,471	20%	4,359	301	4,660
	Ulster	22%	17,690	25%	17,536	433	17,969
	Sub-Total	16%	71,943	22%	89,043	16,000	105,043
EOH	Dutchess	46%	1,049	25%	338	0	338
	Putnam	63%	7,553	30%	1,331	0	1,331
	Sub-Total	60%	8,602	33%	1,669	0	1,669
	Totals	17%	80,545	22%	90,712	16,000	106,712

### EIS PROCESS

This DEIS has been prepared to assist decision-makers by providing a full disclosure of the environmental consequences of the proposed action. The DEIS conforms with the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617) in accordance with Article 8 of the Environmental Conservation Law and the City Environmental Quality Review (CEQR) Executive Order 91 of 1977 (as amended).

As the first step in the environmental review process, a Draft Scope of Work was issued on February 16, 2010. Public meetings to obtain oral testimony on the <u>Draft Scope</u> were held in Hunter and Delhi, New York on March 23, and March 24, 2010 respectively. The period for submitting written comments remained open until April 5, 2010. A Final Scope of Work <u>was</u> issued on April 30, 2010, finalizing the scope of analysis for the DEIS based on comments received. Based on the Final Scope of Work, <u>a</u> DEIS was prepared and certified as complete on <u>June 1, 2010</u>. The DEIS <u>was</u> circulated for public review. <u>Three joint NYSDEC and NYCDEP public hearings were held to obtain oral testimony on the DEIS and Water Supply Permit Application. These hearings were held on July 12, 2010 at SUNY Delhi, in Delhi, NY, on July 13, 2010, at Hunter Elementary School in Hunter, NY and on July 14, 2010, and at Tri-Valley High School in Grahamsville, NY. The period for submitting written comments remained open until November 22, 2010.</u>

This Final EIS (FEIS) <u>includes</u> written responses to address public comments made on the DEIS (See Chapter 12).

# PERMITS AND APPROVALS

NYCDEP has applied to NYSDEC for a Water Supply Permit which will authorize the continuation of the LAP beyond the January 2012 expiration of the 1997 WSP. In addition, NYCDEP consults regularly with NYSDOH, USEPA, and NYSDEC concerning its continued implementation of the requirements for the LAP as set forth in the 2007 Filtration Avoidance Determination. <a href="NYCDEP">NYCDEP</a> and the West of Hudson Watershed Stakeholders will also enter into a side Agreement reaffirming

their commitments under the 1997 MOA and clarifying and expanding upon certain provisions of the WSP.

# LAND USE AND COMMUNITY CHARACTER

### WEST-OF-HUDSON

### **Land Use**

Under the Extended LAP, NYCDEP would acquire undeveloped land, which would remain undeveloped and therefore the current land uses for these lands would remain largely unchanged. One of the planning elements of LAP is that it seeks to acquire more ecologically-sensitive lands, thereby keeping future development in areas where it is largely occurring. The program could somewhat reduce the amount of parcelization that is occurring and the potential for sprawl development.

Because extension of the LAP would include continuation of the WAC agricultural easement program – with easements being potentially acquired on an estimated 16,000 additional acres of farmland through <u>2027</u> – it is possible that the extension of LAP would slightly reduce the decline in farmland acreage expected to occur without the proposed action.

LAP would not be purchasing land in existing designated hamlet areas or within the boundaries of proposed hamlet expansions not only where towns opt to exclude these acquisitions, but also because parcels in these areas tend to be smaller and less desirable for LAP acquisition. Since most commercial development would be expected within these areas, commercial land uses are not expected to be substantially affected by the proposed action, and the existing land use patterns in these areas would continue. As documented in *Socioeconomic Conditions*, , with the projected land acquisition under the Extended LAP, there would be ample area remaining to accommodate future growth in the watershed towns.

### **Community Character**

Community character can be affected by changes in visual character, socioeconomic conditions, traffic and noise, among other impacts. No new structures would be constructed and no traffic or noise impacts would occur as a result of the proposed Extended LAP. The primary focus of this community character analysis is therefore potential impacts from changes in socioeconomic impacts.

The sections below discuss each of the major goals found in local planning documents. For a more detailed assessment of community character under the proposed action, see the assessments of the most affected towns provided in *Town Level Assessments*.

## Maintaining rural character

Most of the land that NYCDEP has acquired to date under LAP consists of relatively large parcels of vacant or low-density residential land in outlying areas of watershed towns. As of July 2009, the average size of parcels acquired in fee simple in the West-of-Hudson region was 72 acres, and the average size of those on which the NYCDEP had purchased conservation easements was 156 acres. This pattern is likely to continue. Through the preservation of these relatively large parcels, LAP will contribute to maintaining the rural character of the communities in which it is buying land.

# Protecting the natural environment

Acquisitions under LAP also contribute to protection of the natural environment of watershed communities. About two-thirds of the land acquired by NYCDEP is of a type, or is in locations, that help define the character of the natural environment – such as steep slopes, land along streams and

other waterbodies, and wetlands; and 89 percent of the land acquired to date in the West-of-Hudson region in fee or through conservation easements is forested. Through 2009, acquisitions by NYCDEP have increased the percentage of protected land in the West-of-Hudson watershed from 24 to 34 percent of total land area. Additional acquisitions under LAP will continue to contribute to protection of the natural environment of watershed communities. As a result of negotiations between NYCDEP and watershed stakeholders, the new WSP would modify LAP's "Natural Features Criteria" (NFC) as described in *Chapter 1 Project Description*.

<u>These changes are not expected to</u> affect the total acreage to be acquired by NYCDEP <u>under the Extended LAP</u>, <u>but would</u> correspondingly increase somewhat the amount of land acquired with features that help define the character of the natural environment in watershed communities.

The benefits that watershed communities realize from protecting the region's natural environment are not limited to its esthetic value. Protected land also benefits these communities by providing a variety of "ecosystem services" – for example, by helping to protect local drinking water supplies, both surface water and aquifers. Ensuring water quality is identified as a priority in many town and village comprehensive plans.

# Outdoor recreation

The opportunities for outdoor recreation in watershed towns are an important characteristic of these communities – prized by full-time residents, second-home owners and visitors. Through its Land Acquisition Program, NYCDEP helps make land available for a variety of public recreational uses. As of the fall of 2009, NYCDEP had opened for recreational use 64 percent of the West-of-Hudson land acquired under LAP in fee simple – a total of 34,684 acres. If we apply the same percentage to the additional acreage NYCDEP expects to acquire in fee simple under LAP, we can estimate that NYCDEP could increase the total acreage open to public recreational use by more than 44,000 acres. In reality, the addition to lands available for recreational use is likely to be greater, as the trend in recent years has been for NYCDEP to increase the percentage of its land that is open to the public.

Many West-of-Hudson watershed communities already have extensive opportunities for outdoor recreation – especially those in Greene and Ulster counties that include large amounts of New York State-owned Forest Preserve land. Increasing the supply of land available for recreational uses through the acquisition of additional land by NYCDEP at a minimum reinforces what is already for many residents an important characteristic of these communities. At the same time, communities that have historically had less protected land – including many in northern and western portions of Delaware County – may benefit disproportionately from the opening of City-acquired land for public recreational uses.

## Preserving agriculture

To date, the Watershed Agricultural Council has acquired agricultural easements on more than 17,000 acres of farmland. As of December 2009, about 97 percent of the area covered by these easements was still in active agricultural use. On a smaller scale, NYCDEP also contributes to the preservation of agriculture in the region by making selected lands purchased in fee simple available for agricultural use. These programs help maintain a "working landscape" in many of the region's communities. Extension of the Land Acquisition Program should contribute to the preservation of agricultural uses in the watershed by making possible the purchase of additional WAC agricultural easements – expected by NYCDEP to total up to 16,000 additional acres through 2027.

With or without LAP, the region's agricultural sectorfaces serious challenges. While they are a useful tool for preserving farmland, agricultural easements are not by themselves an answer to such challenges. There are, however, several factors that could <u>during the life of the WSP</u> enhance the viability of farming in the region. These factors could includeshifts to more profitable forms of

agriculture, rising transportation <u>costs</u> (which increase the competitiveness of farms that are located relatively close to major metropolitan markets), increased consumer demand for locally grown food, and growing demand for biofuels. Used in combination with other strategies that take advantage of these trends, WAC easements could help preserve agricultural land in West-of-Hudson watershed communities.

Preserving and revitalizing hamlets

Pursuant to the 1997 MOA, as noted previously, 23 towns have MOA Designated Areas, covering a total of <u>21,310</u> acres, within which towns and villages can elect to preclude NYCDEP from acquiring land in fee simple. This element of the LAP helps to reinforce historic centers of development and avoid purchase of lands designated for commercial use vital to the existing community character.

As discussed in *Project Description*, seventeen towns have proposed expansion of the areas, totaling about 26,873 acres, in which towns may preclude NYCDEP from purchasing land. The proposed hamlet-area expansions would increase the land area covered by these designations to almost 48,000 acres. NYCDEP estimates that the expanded hamlet areas contain approximately 15,000 acres that NYCDEP had previously solicited, but would henceforth agree not to acquire. The expansion of designated hamlet areas is not likely to change the total acreage to be acquired under the Extended LAP. But it will to some extent affect where NYCDEP acquires land. By exempting the expanded hamlet areas from any further acquisitions under LAP, while acquiring additional land in outlying areas, NYCDEP will in effect be supporting efforts in several towns to maintain or restore the economic vitality of hamlets and village centers.

Meeting the needs of older residents

The population of the West-of-Hudson watershed region is aging. The Cornell Program on Applied Demographics projects that by 2020, 19.9 percent of the population of the five West-of-Hudson counties will be age 65 or older. The increasing concentration of older residents is especially evident in Delaware County, where 28.8 percent of all residents in 2020 are expected to be age 65 or older.

The aging of the region's population will have an effect on development patterns, as towns seek to encourage development of housing and services for older residents in hamlets and village centers. This could lead to greater density of new development – and thus to a reduction in the total volume land required to support new residential development.

The aging of resident owners could also have an impact on the Land Acquisition Program. Owners' interest in selling all or part of their land could increase – whether to meet retirement needs, because of lack of interest on the part of their families in keeping the property, or for other reasons. The result could be an increase in the rate of acceptance of NYCDEP's solicitations of land owners.

The proposed action could benefit older residents of West-of-Hudson communities in several ways:

- By taking advantage of the opportunity to sell a portion of their land to (or grant an easement to) NYCDEP, some older owners would be able to obtain money that would allow them to remain in (and in some cases invest in) their homes, while leaving the character of the land they sell largely undisturbed;
- At the same time, expansion of designated hamlet areas would help ensure that land remains available for development of senior housing within hamlets and village centers.

### **Conclusions**

The Extended LAP would reinforce community goals of preserving natural features and rural character, and enhancing opportunities for outdoor recreation. The designated hamlets and their potential future extension would contribute to reinforcing and preserving hamlet centers. It would preserve sensitive water resources, while keeping future development in hamlets and expanded areas where much of it currently occurs. The program would not conflict with goals of meeting needs of older residents. As discussed in *Socioeconomic Impacts*, there are not expected to be significant direct or indirect displacement effects. In addition, the town level assessments did not identify potential significant land use or community character impacts. Therefore the proposed action is not expected to result in potentially significant adverse impacts on land use or community character.

### **EAST-OF-HUDSON**

Between 2010 and 2022, the Draft EIS projected that NYCDEP would acquire a total of 1,517 acres in four East-of-Hudson watershed towns (East Fishkill, Kent, Putnam Valley and Carmel) either through purchase in fee simple or through conservation easements. Under the 15 Year Greater Impact Scenario, NYCDEP projects that it could acquire 1,669 acres in the East-of-Hudson watershed through 2027. This represents an increase of about 3 percent in the total acreage of protected land within the boundaries of the East-of-Hudson watershed. Putting it another way – as a percentage of all land within the watershed, protected land in these four towns would increase from 22.6 to 23.9 percent. The acquired land would likely include a mix of privately-owned vacant land, the undeveloped portions of parcels now classified as low-density residential (that is, parcels of more than 15 acres) and possibly land formerly used for agricultural purposes.

While the new Water Supply Permit will cover the Croton System, it is not expected that NYCDEP would purchase any considerable amount of land. Any purchase would be a unique situation, most likely a parcel that had unusual water supply attributes. It is therefore not possible to estimate future land acquisitions in the Croton System. Due to the small amount of land that would be purchased, it is not expected that the program would significantly affect patterns of land use or the character of communities in the Croton System towns.

Overall, the small scale of projected acquisitions in the East-of-Hudson watershed under the Extended LAP means that the program is unlikely to have any significant impact on land use patterns in the region. Moreover, to the extent that the program helps to preserve what is seen in several towns as a limited supply of open space, and encourages concentration of new development in already-developed portions of the towns, it will be fully consistent with local efforts to maintain the character of the community.

# SOCIOECONOMIC CONDITIONS

### WEST-OF-HUDSON

This section discusses potential impacts of additional land acquisition under the Extended LAP on socioeconomic conditions in West-of-Hudson watershed towns. The assessment examines potential impacts on:

- Supply of developable land
- Land prices, housing prices and affordability

- Industries and businesses
- Local government revenues

# **Impacts on Supply of Developable Land**

This section discusses LAP's projected potential impact through 2022 (<u>10 Year Projection Scenario</u>) and 2027 (<u>15 Year greater Impact Scenario</u>) on the supply of developable land in watershed towns, and the implications of this impact on towns' growth potential.

After removing towns with less than 5 percent of their area within the watershed, a four-step process was undertaken to estimate the impact of NYCDEP's LAP program on developable land at the town level through 2022 and 2027 for the 10 Year Projection and 15 Year Greater Impact Scenario respectively. More detailed town level assessments were conducted for towns with the highest level of potential impacts.

# 10 Year Projection Scenario

This scenario uses a four-step process to project remaining developable land through 2022:

- Step 1: Determine available developable land as of 2009
- Step 2: Project housing demand through 2022
- Step 3: Project LAP acquisitions through 2022 and the portion of those lands that are developable
- Step 4: Estimate remaining developable land in 2022 after housing demand and LAP acquisitions

Reasonable worst case estimates of land to be acquired under the Extended LAP are provided in *Project Description*. The projections account for the future "areas of high focus" according to the Long-Term Land Acquisition Plan and represent a reasonable worst case scenario since the total amount of land to be acquired is projected to be greater in the next twelve years than in the previous twelve, although, this is not in fact expected to be the case. Based on this approach, NYCDEP projected purchases in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2022 are projected to total 80,948 acres, as compared with 71,721 through 2009. Purchases of farm easements by the Watershed Agricultural Council from 2010 through 2022 will total 16,000 acres.

The town-by-town results of this analysis presented in Table ES-5 $\underline{\underline{A}}$ , suggest that after accounting for LAP acquisition and projected residential development through 2022, all 34 towns will have sufficient land available to accommodate additional residential development well beyond 2022. As Table ES-5 $\underline{\underline{A}}$  shows, for the 34 towns collectively, land to be acquired by LAP between 2010 and 2022 represents about 11 percent of 2009's available developable land; and new residential development over that time period is estimated to consume another 6 percent. Overall, approximately 84 percent of 2009's available developable land would still remain in 2022. Each town would have at least 65 percent of its 2009 supply of developable land remaining in 2022. Since the analysis is very conservative, representing a reasonable worst case scenario, the percentage of developable land remaining in 2022 is likely to be higher.

Comparing the columns "Developable Land Needed for Housing through 2022" and "Developable Land Left in 2022," (last white column to first yellow column in Table ES-5<u>A</u>) demonstrates that should housing demand continue beyond 2022 at the pace projected through 2022, there is ample land available in each town for many years to come.

Towns that met either of two criteria were selected for further review:

- Those in which LAP is projected to acquire 20 percent or more of the town's 2009 supply of developable land; and
- Those in which 10 percent or more of the town's 2009 supply of developable land is projected to be consumed by residential development and LAP is projected to acquire greater than 5 percent of the town's 2009 supply of developable land.

As shown in Table ES- $5\underline{\underline{A}}$ , 14 towns (those with bold text in the LAP contribution or housing contribution columns) meet these criteria. These towns – along with five others selected for reasons of geographic balance – are shaded in yellow in Table ES- $5\underline{\underline{A}}$  and are assessed in more detail in *Town Level Assessments*. In the remaining 15 towns (those not shaded in yellow), the percentage of the town's 2009 supply of developable land still remaining in 2022 ranges from 80 to 95 percent.

Table ES-5 $\underline{\underline{A}}$ : Remaining developable acreage in 2022, by town, after projected LAP activity and development

			Daniantad	Davidanakla		0/ -4 0000				0/ -f.t
		Availabla	Projected	Developable	Davidanahla	% of 2009			0/ of town ores	% of tow
		Available	developable	land needed	Developable	land left in	LAP	Hausiaa	% of town area	are
Country	Таша	developable	land acquired	for housing	land left in 2022	2022		Housing	developable, 2009	developable 202
County	Town	acres, 2009	through 2022	through 2022			contribution	contribution		4.29
Ulster	Denning	4,187	1,359	71	2,757	65.9%	32.5%	1.6%	6.4%	
Greene	Lexington	3,475	871	314	2,290	65.9%	25.1%	9.0%	6.8%	4.5%
Greene	Prattsville	2,773	820	100	1,853	66.8%	29.5%	3.6%	20.1%	13.49
Ulster	Hardenburgh	2,692	636	166	1,891	70.2%	23.6%	6.0%	5.2%	3.7%
Greene	Ashland	3,351	698	260	2,393	71.4%	20.8%	7.8%	21.0%	15.0%
Ulster	Olive	5,684	871	748	4,065	71.5%	15.3%	12.8%	15.1%	10.89
Greene	Halcott	1,668	389	79	1,199	71.9%	23.3%	4.8%	11.6%	8.3%
Delaware		4,939	1,187	199	3,554	72.0%	24.0%	4.0%	15.9%	11.49
	Conesville	5,525	955	560	4,009	72.6%	17.3%	10.1%	21.9%	15.9%
Sullivan	Neversink	12,797	1,976	1,501	9,319	72.8%	15.4%	11.7%	24.1%	17.6%
Delaware	Andes	7,221	1,472	486	5,262	72.9%	20.4%	6.7%	10.3%	7.5%
Greene	Windham	5,272	880	540	3,853	73.1%	16.7%	10.2%	18.2%	13.39
Ulster	Shandaken	1,444	185	186	1,073	74.3%	12.8%	11.9%	1.8%	1.49
Greene	Jewett	6,292	1,052	511	4,729	75.2%	16.7%	8.1%	19.6%	14.79
Delaware	Hamden	6,146	724	701	4,721	76.8%	11.8%	11.4%	16.0%	12.39
Delaware	Middletown	7,455	1,191	513	5,751	77.1%	16.0%	6.9%	12.0%	9.3%
Greene	Hunter	6,722	1,166	348	5,207	77.5%	17.3%	5.2%	11.6%	9.0%
Delaware	Delhi	5,851	990	264	4,596	78.6%	16.9%	4.5%	14.2%	11.19
Delaware	Bovina	3,726	711	68	2,948	79.1%	19.1%	1.8%	13.1%	10.49
Delaware	Roxbury	5,927	951	216	4,760	80.3%	16.1%	3.6%	10.6%	8.5%
Ulster	Woodstock	6,759	839	479	5,441	80.5%	12.4%	7.0%	15.6%	12.6%
Delaware	Walton	8,845	1,268	329	7,249	81.9%	14.3%	3.7%	14.2%	11.69
Delaware	Tompkins	10,947	1,215	572	9,161	83.7%	11.1%	5.2%	17.4%	14.69
Delaware	Kortright	8,370	630	406	7,334	87.6%	7.5%	4.9%	20.9%	18.39
Ulster	Hurley	5,003	134	410	4,460	89.1%	2.7%	8.0%	25.9%	23.09
Delaware	Meredith	13,063	824	469	11,769	90.1%	6.3%	3.6%	35.0%	31.5%
	Jefferson	8,722	208	639	7,874	90.3%	2.4%	7.3%	31.4%	28.49
Schoharie		10,583	714	251	9,619	90.9%	6.7%	2.4%	28.2%	25.6%
	Masonville	10,890	417	447	10,027	92.1%	3.8%	4.1%	31.2%	28.79
Ulster	Wawarsing	23,610	958	802	21,850	92.5%	4.1%	3.2%	28.0%	25.9%
Delaware	Deposit	4,052	24	230	3,798	93.7%	0.6%	5.7%	14.5%	13.69
	Colchester	9,406	234	296	8,875	94.4%	2.5%	3.1%	10.7%	10.19
	Harpersfield	9,959	311	200	9,448	94.9%	3.1%	2.0%	36.8%	34.9%
Delaware		19,006	381	520	18,104	95.3%	2.0%	2.7%	36.4%	34.79
_ 3.44.0	TOTAL	252,361	27,241	13,883	211,238	83.7%	10.8%	5.5%	16.6%	13.9%

In some towns, particularly those with very mountainous terrain or other natural features not suitable for development, or that include large areas already protected by New York City, or that are already highly developed, available developable land may be limited. An additional analysis was therefore performed to evaluate the percent of a town's total land area that is developable and the effects of land acquisition on that supply of developable land.

Table ES-6<u>A</u> lists six towns where the supply of developable land in 2009 is estimated to be less than 10 percent of the town's total land area, or less than 3,000 acres. All six are already included among the 19 towns subjected to further review under the criteria discussed above. The implications of the Extended LAP's impact on these towns' limited supply of developable land in the context of future growth demand in these towns are addressed in the individual *Town-Level Assessments*.

Table ES-6 A: Towns with less than 10 percent (or less than 3,000 acres of) developable land available in 2009

		Total town	Available developable	Developable land	% of town area developable,	% of town area developable,
County	Town	land	acres, 2009	left in 2022	2009	2022
Ulster	Shandaken	78,875	1,444	1,073	1.8%	1.4%
Ulster	Hardenburgh	51,756	2,692	1,891	5.2%	3.7%
Ulster	Denning	65,430	4,187	2,757	6.4%	4.2%
Greene	Lexington	51,274	3,475	2,290	6.8%	4.5%
Greene	Halcott	14,375	1,598	1,199	11.1%	8.3%
Greene	Prattsville	13,786	2,773	1,853	20.1%	13.4%

### 15 Year Greater Impact Scenario

This scenario discusses the potential impacts of the Extended LAP over 15 years, in which NYCDEP acquires 10 percent more land than projected through 2022, This scenario was originally part of the "Greater Impact Alternative" under the DEIS. The analysis for this scenario is considered to be an extremely conservative (i.e. high impact) estimate of land to be acquired under the Extended LAP. The 10 year projections described in Chapter 1 use very conservative assumptions to estimate the amount of land to be acquired under the Extended LAP. It is highly unlikely that, even under a 15 Year Permit, the Water Supply Permit, additional land would be acquired beyond the levels analyzed projected through 2022. Nevertheless, NYCDEP is providing a 15 year analysis that examines acquisitions of 10 percent more land.

This scenario uses the same four-step process as described above to project remaining developable land but here to 2027 instead of 2022:

The town-by-town results of this analysis are presented in Table ES 5-B. (The towns are ranked in reverse order of the percentage of the town's 2009 supply of developable land remaining in 2027.) The analysis concludes that all 34 towns have sufficient land available to accommodate both the projected acquisitions under LAP through 2027, and the projected rate of residential development beyond 2027.

As Table ES- 5B shows, for the 34 towns collectively, land to be acquired by LAP between 2010 and 2027 represents about 11.7 percent of 2009's available developable land; and new residential development over that time period is estimated to consume 7.9 percent.

Overall, the 15 Year Greater Impact Scenario is projected to result in approximately 80.4 percent of 2009's available developable land would still remain in 2027, as compared with 83.7 percent under

the proposed action. Each town would have at least 60 percent of its 2009 supply of developable land remaining in 2027, as compared with a minimum of 65 percent under the proposed action. As discussed above, due to the very conservative nature of the analysis, , the percentage of developable land remaining in 2027 is likely to be higher than projected for this EIS.

For the 34 towns collectively, the additional acreage projected to be acquired through 2027 represents about 1 percent of the towns' collective supply of developable land, while new residential development between 2022 and 2027 accounts for about 2.5 percent.

<u>Table ES-5 B: Remaining developable acreage in 2027, by town, after Extended LAP activity and development through 2027. (Cells with bold and yellow show where criteria for more detailed town level assessment was met or exceeded.)</u>

			Projected	Developable land		% of 2009		
		Available	developable	needed for	Developable	developable		
		developable	land acquired	housing through	land left in	land left in	LAP	Housing
County	Town	acres, 2009	through 2027	2027	2027	2027	contribution	contribution
Greene	Lexington	3,475	958	445	2,072	60%	27.6%	12.8%
Ulster	Denning	4,187	1,495	97	2,595	62%	35.7%	2.3%
Greene	Prattsville	2,773	901	142	1,730	62%	32.5%	5.1%
Ulster	Olive	5,684	958	1,060	3,666	64%	16.9%	18.6%
Ulster	Hardenburgh	2,692	699	235	1,758	65%	26.0%	8.7%
Greene	Ashland	3,351	768	369	2,215	66%	22.9%	11.0%
Sullivan	Neversink	12,797	2,017	2,127	8,510	67%	16.9%	16.6%
Schoharie	Conesville	5,525	1,051	793	3,681	67%	19.0%	14.4%
Greene	Windham	5,272	968	765	3,539	67%	18.4%	14.5%
Greene	Halcott	1,668	428	112	1,127	68%	25.7%	6.7%
Ulster	Shandaken	1,444	203	264	977	68%	14.1%	18.3%
Delaware	Andes	7,221	1,619	689	4,912	68%	22.4%	9.5%
Delaware	Stamford	4,939	552	281	3,421	69%	25.0%	5.7%
Greene	Jewett	6,292	1,158	723	4,411	70%	18.4%	11.5%
Delaware	Hamden	6,146	797	993	4,356	71%	13.0%	16.2%
Delaware	Middletown	7,455	1,310	727	5,419	73%	17.6%	9.7%
Greene	Hunter	6,722	1,283	494	4,945	74%	19.1%	7.3%
Delaware	Delhi	5,851	1,090	375	4,387	75%	18.6%	6.4%
Ulster	Woodstock	6,759	923	679	5,157	76%	13.7%	10.0%
Delaware	Bovina	3,726	782	96	2,849	76%	21.0%	2.6%
Delaware	Roxbury	5,927	1,047	306	4,574	77%	17.7%	5.2%
Delaware	Walton	8,845	1,395	466	6,985	79%	15.8%	5.3%
Delaware	Tompkins	10,947	1,336	810	8,801	80%	12.2%	7.4%
Delaware	Kortright	8,370	693	575	7,102	85%	8.3%	6.9%
Ulster	Hurley	5,003	147	580	4,276	85%	2.9%	11.6%
Schoharie	Jefferson	8,722	229	906	7,587	87%	2.6%	10.4%
Delaware	Meredith	13,063	907	665	11,491	88%	6.9%	5.1%
Schoharie	Gilboa	10,583	785	355	9,443	89%	7.4%	3.4%
Delaware	Masonville	10,890	458	633	9,799	90%	4.2%	5.8%
Ulster	Wawarsing	23,610	1,054	1,136	21,420	91%	4.5%	4.8%
Delaware	Deposit	4,052	26	326	3,700	91%	0.6%	8.0%
Delaware	Colchester	9,406	258	419	8,728	93%	2.7%	4.5%
Delaware	Harpersfield	9,959	342	283	9,334	94%	3.4%	2.8%
Delaware	Franklin	19,006	420	737	17,849	94%	2.2%	3.9%
	TOTAL	252,361	29,055	19,664	202,816	80%	11.7%	7.9%

As shown in Table ES-5B, 16 towns (those with bold text in the LAP contribution or housing contribution columns) meet the criteria discussed above for detailed town level analysis. All but one of these towns is among the towns for which individual town level assesseents were identified under the 10 Year Projection Scenario. In the remaining 17 towns (those not shaded in yellow), the percentage of the town's 2009 supply of developable land still remaining in 2027 ranges from 73 to 94 percent.

In some towns, particularly those with very mountainous terrain or other natural features not suitable for development, or that include large areas already protected by New York City, or that are already highly developed, available developable land may be limited. An additional analysis was therefore performed to evaluate the percent of a town's total land area that is developable and the effects of land acquisition on that supply of developable land.

<u>Table ES-6B lists six towns where the supply of developable land in 2009 is estimated to be less than 10 percent of the town's total land area, or less than 3,000 acres. These towns are discussed further in the individual Town level assessments.</u>

<u>Table ES-6B: Towns with less than 10 percent or fewer than 3,000 acres of developable town area</u>

<u>land remaining in 2009 under Greater Impact Scenario</u>

County	Town	Total town land	Available developable acres, 2009	Developable land left in 2027	% of town area developable, 2009	% of town area developable, 2027
Ulster	Shandaken	78,875	1,444	977	1.8%	1.2%
Ulster	Hardenburgh	51,756	2,692	1,758	5.2%	3.4%
Ulster	Denning	65,430	4,187	2,595	6.4%	4.0%
Greene	Lexington	51,274	3,475	2,072	6.8%	4.0%
Greene	Halcott	14,375	1,598	1,127	11.1%	7.8%
Greene	Prattsville	13,786	2,773	1,730	20.1%	12.5%

For the region as a whole, this analysis strongly suggests that the projected level of acquisitions by NYCDEP will not significantly constrain new development in the West-of-Hudson watershed between now and 2027 or afterward. During the next seventeen years, West-of-Hudson watershed communities will confront a variety of obstacles to economic growth and development – but for the region as a whole, the availability of developable land does not appear to be one of them.

### Impacts on Land Prices, Housing Prices, and Affordability

Determining the impact of LAP on land and housing prices is difficult. Multiple factors affect the price of land in the watershed – broader real estate market trends, local demographic trends, proximity to the Thruway, etc, and determinations of causality are extremely difficult. This section examines the extent to which LAP acquisitions have and could in the future continue to influence land prices, housing prices and affordability.

# Impact on land prices

Since 1997, NYCDEP's Land Acquisition Program has accounted for a significant portion land transfers in many watershed towns. As Table ES-7 shows, the Program's share of all purchases of vacant land over 10 acres, whether measured by number of transactions or total acreage, has varied significantly over time. As the end of the real estate boom of the early and mid-2000's, and the onset of the recession led to a decline in private purchases of land, NYCDEP's share of all purchases has risen. NYCDEP's share of all transactions has also varied geographically; in 2008 and 2009, for example LAP acquisitions accounted for 92 percent of all land purchases in the Greene County mountaintop towns, but only 19 percent in north central Ulster County and 22 percent in northeastern and western Delaware County.

LAP / Total land sales Other land sales **Land Acqusition Program** Year **Transactions** Acres **Transactions** Acres **Transactions** Acres 2001 93 9,267 457 22,212 17% 29% 2002 77 6,212 597 26,927 11% 19% 2003 81 9,081 569 23,830 12% 28% 2004 64 7.647 548 22.272 10% 26% 2005 78 9,394 546 22,152 13% 30% 6,760 2006 73 396 14,518 16% 32% 2007 76 6,198 362 15,593 17% 28% 2008 11,898 96 8,329 267 26% 41% 2009 55 6,079 172 6,475 24% 48%

Table ES-7: LAP transactions as a percent of all transactions of vacant and low-density residential and agricultural land greater than 10 acres, West of Hudson watershed towns, 2001-2009

Given the scale of NYCDEP's participation in the market for land, it would be reasonable to expect NYCDEP to have some impact on prices – and in particular, to expect that LAP acquisitions, by increasing demand for watershed land, would cause land prices to rise. However, the data on NYCDEP's impact on prices are ambiguous.

As Table ES-8 shows, the median sale price per acre on arms-length sales of vacant parcels of more than ten acres rose substantially between 2001 and 2009 in most of the nine watershed town groups. When price trends in these groups are, however, compared with trends in the six non-watershed town groups, it is clear that sharp increases in land prices were common outside as well as inside the watershed; and in some cases prices rose more rapidly outside than inside the watershed.

- The median sale price in Blenheim, Broome and Summit, for example, rose faster than the median for watershed towns in Schoharie County.
- The increase in the median price for Cairo, Durham and Greeneville was greater than the increase in the median for Greene County's western mountaintop towns, but less than the increase in the eastern mountaintop towns.
- The median price per acre rose faster in southern Otsego County than in northeastern and western Delaware County but not as fast as the median price increased in southeastern Delaware County.

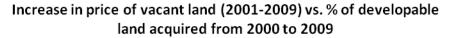
Table ES-8: Median sales price per acre on arms-length sales of vacant parcels of more than ten acres, by town  $group^6$ 

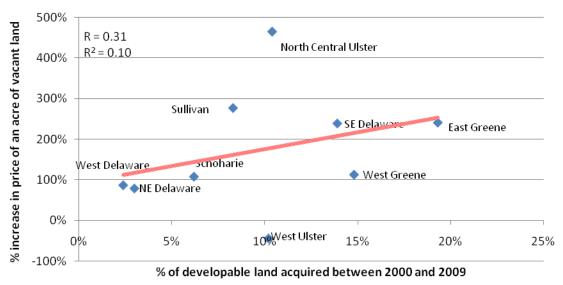
	Median price pe	% Change, 2001-	
Town Groups	2001	2009	2009
Inside watershed			
Northeastern Delaware County	\$1,304	\$2,330	79%
Southeastern Delaware County	\$1,441	\$4,884	239%
Western Delaware County	\$1,036	\$1,942	87%
Greene County Mountaintop East	\$2,094	\$7,143	241%
Greene County Mountaintop West	\$2,044	\$4,345	113%
Schoharie County	\$1,203	\$2,500	108%
Sullivan County	\$2,110	\$7,963	277%
North Central Ulster County	\$1,196	\$6,765	466%
Western Ulster County	\$7,437	\$4,186	-44%
Outside watershed			
Columbia County	\$3,452	\$9,615	179%
Greene County	\$1,168	\$3,835	228%
Otsego County	\$664	\$1,664	150%
Schoharie County	\$783	\$1,703	117%
Sullivan County	\$1,250	\$6,519	422%
Ulster County	\$2,642	\$6,519	147%

Changes in land prices in watershed towns can be analyzed not only in relation to price changes outside the watershed, but also in terms of how the rate of price escalation varies within the watershed. If LAP purchases were a contributing factor in the rise in land prices, it would be reasonable to expect prices to rise faster in areas where NYCDEP has acquired the most land. Figure ES-3 shows the percentage increase in median price per acre in each of the nine watershed town groups, along with the percentage of developable land in each town group that had been acquired by NYCDEP through mid-2009.

<sup>&</sup>lt;sup>6</sup> The price trend for some groups – including Western Ulster County – is based on a limited number of transactions involving vacant land of more than 10 acres.

Figure ES-3: Percent increase in the median price of vacant land (2001-09) compared with the percent of developable land acquired from 2000 to 2009, by town group





The graph suggests that between 2001 and 2009 there was a weak correlation of 0.31 (r-squared = 0.10) between LAP acquisitions and land price increases.

Several conclusions might be drawn from the data presented above.

- The price of land rose sharply in most parts of the West-of-Hudson watershed region between 2001 and 2009 but the data do not suggest that land prices rose more rapidly in watershed towns than in nearby non-watershed towns;
- Within the West-of-Hudson watershed, there is only a weak correlation between the rate at which the price of vacant land increased and the extent of acquisitions under LAP;
- When prices are high, some people will be more inclined to respond positively to an offer to buy their land.
- As the market has cooled, acquisitions by NYCDEP under LAP have come to represent a significantly larger part of the market for large tracts of undeveloped land. The Program's impact on the market may be greater when private demand is weak and prices are falling than it was during the boom.

Through the mid-2000's, LAP may thus have been a contributing factor in the escalation of land prices in some parts of the watershed – although its contribution to the rise in land prices was limited by NYCDEP's policy, pursuant to the 1997 MOA, of paying only "fair market value" as

determined by independent appraisals. But it was clearly not the only – or even the leading – factor in this pattern of price increases.

While LAP may have some impact on the price of larger tracts of land, it does not appear to have had a significant impact on the price of smaller parcels (those of less than 10 acres). Purchases of small parcels account for less than 1 percent of the land acquired in the west-of-Hudson under LAP; and purchases by NYCDEP account for less than 1 percent of all sales of small parcels.

Impact on housing prices and affordability

Increases in the cost of housing, have been a matter of continuing concern in many parts of the watershed. It does not appear, however, that the acquisition of watershed land under LAP has been a significant contributing factor in the rise in home prices. Price increases such as those seen in West-of-Hudson watershed towns have been seen elsewhere as well. Table ES-9 shows increases in home prices in watershed and non-watershed towns between 2001 and 2009.

While none of these out-of-watershed areas matched the percentage increase recorded in the western Greene County mountaintop towns or in the watershed towns of Schoharie County, they are comparable to or greater than those in other parts of the watershed. For example:

- The increase in median home prices in southeastern Columbia County (Ancram, Copake, Gallatin and Tagkhanic) between 2001 and 2009, matched the increase during the same period in the eastern mountaintop towns of Greene County and median sales prices in the two areas in were similar.
- Prices increases in southern Otsego County towns (Maryland, Milford, Otego and Unadilla) were roughly comparable to those in Delaware County.
- Prices rose faster in Liberty and Fallsburg than in Neversink.

Table ES-9: Change in median sales price of single-family homes inside and outside the watershed, 2001-2009

	Median sale	% Change, 2001-		
Town Groups	2001	2009	2009	
Inside watershed				
Schoharie County	\$46,500	\$133,000	186%	
Greene County Mountaintop West	\$53,000	\$146,000	175%	
Western Ulster County	\$88,500	\$184,000	108%	
Western Delaware County	\$52,000 \$100,000		92%	
Greene County Mountaintop East	\$110,000	\$210,500	91%	
Southeastern Delaware County	\$75,000	\$130,000	73%	
Northeastern Delaware County	\$62,500	\$106,000	70%	
North Central Ulster County	\$135,000	\$199,000	47%	
Sullivan County	\$107,500	\$136,000	27%	
Outside watershed				
Ulster County	\$106,000	\$217,250	105%	
Columbia County	\$116,500	\$222,500	91%	
Sullivan County	\$72,000	\$133,500	85%	
Schoharie County	\$62,900	\$114,000	81%	
Greene County	\$87,500	\$152,375	74%	
Otsego County	\$60,000	\$100,000	67%	

There appears to be little correlation between home price trends in various market areas and the extent of acquisitions under LAP (a correlation of 0.09, r-squared = 0.01). As shown in the following graphs (Figures ES-4 and ES-5), there appears to be a much stronger correlation between home price increases and the percentage of second homes in an area (a correlation of 0.68, r-squared = 0.46).

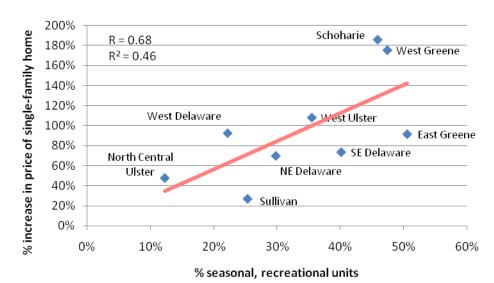
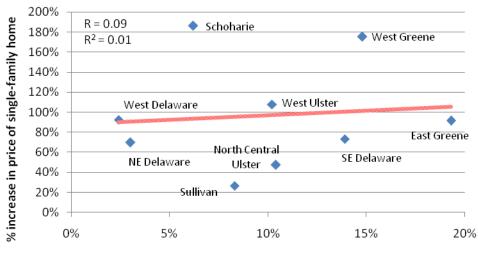


Figure ES-4: Increase in price of single-family homes (2001-2009) vs. share of seasonal recreational units (2000)





% of developable land acquired between 2000 and 2009

For lower-income households in the West-of-Hudson watershed, affordability is generally not a question of homeownership; instead it is in part a matter of the availability and affordability of rental housing. The existing supply of affordable rental housing in watershed towns (including housing for older residents) is concentrated in or in the immediate vicinity of hamlets and village centers; and it is highly likely that any future development of affordable rental housing will similarly occur in these areas. To the extent that existing hamlet designations – and the proposed expansion of designated hamlet areas, described below – preclude any future LAP acquisitions in these areas, they ensure that LAP will not in the future have significant adverse impact on the availability or cost of affordable rental housing.

The future impact of LAP on prices, affordability, and socioeconomic conditions

Future real estate market conditions are too uncertain to project with any specificity either the future course of real estate prices in the West-of-Hudson watershed through <u>2027</u>, or how further acquisitions of watershed land by NYCDEP will affect those prices. Several general points are nevertheless worth noting.

As long as private demand for larger tracts of undeveloped land remains weak, LAP may play a stabilizing role in this segment of the market – maintaining prices at levels somewhat higher than sellers would be able to obtain in absence of the program. Even more significant than LAP's impact on prices may be its impact on the liquidity of the market for undeveloped land. LAP in effect assures owners of NYCDEP-sought properties that even in a weak market they may have a willing buyer at fair market value (as fair market value is defined by NYCDEP, based on independent appraisals).

To the extent that LAP helps to maintain the price of undeveloped land, and maintains the liquidity of the market, it may have several effects on socioeconomic conditions in the watershed:

- LAP may increase slightly the overall cost of new development in the watershed, by increasing marginally the prices that developers pay for larger tracts of land. It does not appear, however given the declines in median price per acre in the past few years that LAP's impact on land prices is great enough to have a significant impact on the financial feasibility of new development;
- As noted below in the discussion of the program's impact on agriculture, LAP may make it easier and more attractive for owners of agricultural land to sell. LAP may thus accelerate somewhat the shift of watershed land out of agricultural use. But in the long run, as discussed in detail under agriculture below, it is unlikely to have any real impact on the level of agricultural activity or agricultural land use in the region. Owners who are choosing to stop farming their land and who are then in some cases choosing to sell all or part of it are generally responding to a much broader range of economic and other factors, not simply to opportunity that the Land Acquisition Program represents;
- Through the fall of 2009, NYCDEP had paid a total of \$53.1 million to landowners with primary addresses in the West-of-Hudson watershed from whom NYCDEP had purchased fee interests or conservation easements in the West-of-Hudson watershed. These payments to resident land-owners represented 34 percent of all payments to owners of West-of-Hudson watershed land under the Land Acquisition Program.

Pursuant to the MOA, NYCDEP adheres to a policy of paying "fair market value" for land acquired under LAP. Consequently, it can be argued that NYCDEP's purchases of fee interests in themselves provide no real net benefit to owners, since they presumably would have been able to sell to another buyer at a similar price. In periods when demand for watershed land weakens, however, LAP may as noted above benefit prospective sellers of attractive, eligible land by in effect guaranteeing the liquidity of the market. Especially for owners who need – for whatever reason – to sell their property, NYCDEP's role as a "willing buyer" can be of real value – even if a sale to NYCDEP brings no more than fair market value; and

• Payments by NYCDEP and WAC for conservation and agricultural easements also provide a benefit to some West-of Hudson landowners. In the absence of the NYCDEP and WAC easement programs, these owners probably would not have the opportunity to sell this type of limited interest, while retaining fee ownership, and enjoying continued (although restricted) use of their land.

While NYCDEP's purchases of land thus appear to have *some* impact on land prices – especially as it continues to buy land at a time when demand from other potential buyers has declined – the analysis of home prices shows no significant impact of NYCDEP's land purchases on the price of single-family homes. Other factors – including broader trends in the housing market, and the popularity of some areas within the watershed as second-home or retirement locations – appear to have had a greater impact on home prices.

Moreover, because LAP is restricted from acquiring land in designated hamlet areas – and because designated hamlet areas may be substantially expanded – LAP is unlikely to have any adverse impact on the future development or cost of affordable rental housing.

It is difficult to project real estate market conditions in the West-of-Hudson region through 2022; projecting through 2027 is correspondingly more uncertain. But using the best available information and reasonable projections, there is little evidence to suggest that the Extended LAP's impact on real estate prices would substantially affect socioeconomic conditions in the watershed region through 2027.

## **Impacts on Industries and Businesses**

The assessment of LAP's potential impact on industries in the watershed region focuses primarily on the program's direct impact on selected land-based industries.

# Agriculture

Through July 2009, NYCDEP reports that it had secured in fee simple at least 45 parcels of watershed land at least some portion of which, in the recent past prior to acquisition by NYCDEP, had been actively used as farmland. These 45 parcels together totaled 5,497 acres, of which actively-used agricultural land totaled 1,135 acres. A summary of these acquisitions by town appears in Table ES-10.

Table ES-10: NYCDEP acquisitions of agricultural land in fee simple through 2009

County/Town	Total acquired	acres	Active agricultural acres acquired
<b>Schoharie County</b>			
svilleCone	434		70
<b>Greene County</b>			
Ashland	255		18
Lexington	336		13
Prattsville	993		146
Halcott	448		47
Windham	45		29
Jewett	40		21
SUBTOTAL	2,117		274
Delaware County			
Bovina	35		4
Delhi	566		136
Franklin	57		23
Hamden	414		118
Harpersfield	33		8
Kortright	284		84
Masonville	156		46
Meredith	257		56
Middletown	274		23
Roxbury	638		137
Stamford	232		156
SUBTOTAL	2,946		791
TOTAL	5,497		1,135

NYCDEP's information on how lands were used in the years preceding acquisition by LAP is incomplete. It is thus possible that the total acreage in active farm use prior to acquisition was somewhat greater than the 1,135 acres cited above. In order to provide some margin for error (and to be conservative), it is assumed for purposes of this analysis that the land in which NYCDEP had acquired fee interest in the West-of-Hudson watershed as of July 2009 includes approximately 1,500 acres that in the recent past prior to acquisition had been actively used for some form of agricultural production.

Acquisition of farmland by NYCDEP does not necessarily mean an end to agricultural production. NYCDEP currently has 23 five-year permits in place allowing farm operators in the watershed to use NYCDEP-owned land for agricultural production. These 23 permits cover a total of 661 acres – of which 21 permits, covering 653 acres, are on properties in the West-of-Hudson region. Specific agricultural uses under these permits include production of hay, alfalfa, corn, grapes, blueberries and other crops, and use as pasture land. About 80 percent of all land on which NYCDEP has issued farm permits is located in Delaware County.<sup>7</sup>

Some local officials have noted that the benefits farm operators can realize from use of NYCDEP land under a five-year permit are limited; and in particular, that such land is not an asset against which operators can borrow. While this is correct, it should also be noted that farming leased land is a common practice in rural communities, both in New York and elsewhere.

Based on the data presented above, it is estimated that under LAP, NYCDEP has acquired fee title to approximately 850 acres of land in the West-of-Hudson watershed that at some time in the recent past prior to acquisition had been actively-used farm land, but is not now being used for agricultural production.

In no case does the cessation of agricultural activity appear to be a direct *result* of NYCDEP's purchase of farmland. Nevertheless, in order to explore further the potential impact of NYCDEP's acquisitions of farmland in fee simple, what the impact would have been if acquisitions of 850 acres in fee simple by NYCDEP had in fact resulted in the cessation of farming was also considered.

Using data from the U.S. Census of Agriculture and the Commerce Department's Bureau of Economic Analysis, it was then estimated for each county an average ratio of farm employment (both farm proprietors and wage-and-salary workers) to acres of active farmland. In 2007, the West-of-Hudson watershed counties averaged 0.0133 jobs per acre of farm land – or about 1 farm job for every 75 acres of farm land – and \$242.65 in farm income per acre.

Applying these ratios to our estimate of 850 acres of formerly-agricultural land acquired by NYCDEP that is not now being actively used, it is estimated that acquisition of farm land by NYCDEP through July 2009 – if it had in fact caused the cessation of agricultural use – would have resulted in the loss of 11 jobs in agriculture, and approximately \$206,250 in farm income.

much greater economic impact than cutting hay – but it may not be financially sustainable.

<sup>&</sup>lt;sup>7</sup> Activities conducted under NYCDEP permits do not necessarily have an economic impact equal to that of the agricultural activities for which the land was previously used. Land that once supported a herd of dairy cattle, for example, might now be used only for production of hay. But this is not necessarily a result of acquisition by NYCDEP – it is more a result of economic conditions. Dairy farming may have a

As noted above, no cases were identified in which the cessation of agricultural use was a direct result of acquisition by NYCDEP. But even if that had been the case, the preceding calculation suggests that its impact on employment and income in the watershed region would have been quite limited.

Judging fully the direct impact of the Land Acquisition Program on agriculture requires taking into account not only the impact of fee acquisitions, but also the acquisition of agricultural easements through NYCDEP's partnership with the Watershed Agricultural Council. As shown in Table ES-11, as of July 2009 WAC had acquired 90 agricultural easements covering 16,954 acres in the West-of-Hudson watershed.

It is difficult to assess the impact of these easements on the level of agricultural activity in the region. Nationwide studies suggest that agricultural easements have been an effective tool for keeping land in agricultural use and protecting open space. Data on the results of the WAC program to date seem to be consistent with this finding; of nearly 17,000 acres on which WAC has acquired easements since 2001, all but 579 acres – 3.4 percent of the total acreage under easement – was still being farmed as of December 2009. However, the attrition rate is higher for farms on which easements were acquired in the program's earlier years.

What impact agricultural easement programs will have in the long run on the economic viability of farming and the overall health of local agricultural economies remains at this point an open question, both at the national level and in the watershed region. But in the near term, the WAC program appears to be achieving the goal of keeping land in agricultural use.

It is not possible at this point to say with any certainty how much of the roughly 17,000 acres on which WAC has acquired easements represents land that in the absence of a WAC easement would no longer be in agricultural use. But even if the percentage of land under easement that meets this criterion is relatively small, it would still represent a positive contribution to the preservation of agricultural uses in the watershed.

To the extent that it helps keep land in agricultural use, the WAC easement program has no adverse impact on the agricultural district program. Acquisition of land by NYCDEP in fee simple could theoretically have an adverse impact on the viability of agricultural districts in the watershed, if it were to result in the cessation of active farm use of significant amounts of land within such districts; and NYCDEP is required to notify the State Department of Agriculture and Markets whenever it is purchasing land within an agricultural district. But as noted above, there are relatively few cases in which NYCDEP has acquired in fee simple land that had been in active agricultural use prior to acquisition. Moreover, to the extent that they forestall conversion of farm land to non-farm uses, acquisitions by NYCDEP in fee simple can in fact support the goals of the State program. It thus appears unlikely that further acquisitions by NYCDEP under LAP would have any adverse impact on the viability of agricultural districts.

Based on the preceding analysis, it is estimated that – even in the worst case – the Land Acquisition Program is likely to have little or no direct impact on agricultural production in the West-of-Hudson watershed region.

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<sup>&</sup>lt;sup>8</sup> Alvin Sokolow, *A National View of Agricultural Easement Programs: Measuring Success in Protecting Farmland*, American Farmland Trust, December 2006.

Table ES-11: West-of-Hudson WAC easements, by town

County/Town	WAC Acres
<b>Delaware County</b>	
Andes	1,212
Bovina	1,436
Delhi	862
Hamden	901
Kortright	1,663
Meredith	553
Middletown	733
Roxbury	616
Stamford	4,849
Tompkins	84
Walton	1,267
SUBTOTAL	14,176
<b>Greene County</b>	
Ashland	178
Halcott	389
Jewett	105
Windham	226
SUBTOTAL	898
Schoharie County	
Gilboa	143
Jefferson	275
SUBTOTAL	418
Sullivan County	
Neversink	1,462
TOTAL	16,954

Agriculture in Delaware County

Of the counties with large portions of their land in the watershed, agriculture plays a greater role in the economic life of Delaware County. Below we therefore explore in some greater detail LAP's possible impact on agriculture in Delaware County.

Several important factors have shaped the context within which NYCDEP has been acquiring land in Delaware County. Perhaps the most important of these is a long-term (and continuing) decline in the amount of land within the county that is used for agricultural purposes. This is by no means a recent trend; total farm acreage in Delaware County, according to the USDA, has declined by about 75 percent since 1940. Between 1978 and 2008 total farmland acreage dropped by 47.5 percent – from 312,095 to 163,800. Between 1997 and 2008, total farm acreage in Delaware County fell by 33,600 acres – a decline of 17 percent. The decline in farm acreage in this period was actually somewhat slower during this period than in the preceding ten years

It is important to note, however, that the number of people employed in agriculture, the percentage of all income that is derived from farming and the total acreage of farm land are not the only measures of agriculture's significance to the regional economy. Although relatively small in overall terms, agriculture is still one of the region's leading "export" industries – that is, an industry that sells its products outside the region and brings revenue into the region. Investments in farm land, facilities and equipment are significant. Moreover, several other types of business in the region, such as vendors of farm supplies and equipment and dairy processing plants are dependent on its agricultural base.

As ES-10 above shows, the total volume of former farmland acquired by NYCDEP in Delaware County between 1997 and 2009 that had been actively farmed at some point preceding acquisition was 791 acres; and as noted above, about 530 acres of the land acquired in fee simple was in October 2009 once again in active agricultural use under permits issued by NYCDEP.

The past decade has been a particularly difficult time for dairy farmers, due to the volatility of both milk prices and the cost of inputs such as feed and fuel. After peaking at more than \$21 per hundred pounds early in 2008, the average price paid to farmers for milk and milk products fell below \$11.50 in the spring of 2009. Since mid 2009, prices have rebounded somewhat, reaching \$16.00 again in the spring of 2010; but even at this level it is still difficult for many farmers to make ends meet. According to USDA estimates, production costs for New York State dairy farmers in 2009 averaged \$25.27 per hundred pounds.

Given the volatility of - and the difficulty of making money in - dairy farming, it is not surprising that a substantial number of owners are choosing instead to sell their land, whether to NYCDEP or to other buyers.

The Watershed Agricultural Council has acquired agricultural easements on a total of 14,176 acres in Delaware County – about 84 percent of the total acreage in the West-of-Hudson region on which WAC has to date acquired easements, and about 9 percent of the county's farm land. Since the beginning of the program, WAC has paid more than \$16.1 million to 68 owners of

<sup>&</sup>lt;sup>9</sup> New York Agricultural Statistics Service, "Delaware County Farm Statistics," April 2009

<sup>&</sup>lt;sup>10</sup> New York State Department of Agriculture and Markets, *New York State Dairy Statistics*, 2008, Table 22

farms in Delaware County for these easements (an average of more than \$230,000 per transaction).

It is difficult to measure directly the impact of WAC easements on the overall health of the county's agricultural sector. Nevertheless, it seems reasonable to assume that for many of the participating farmer-owners, proceeds from the sale of easements provide at least a short-term improvement to their financial position; and that for some, funding from the sale of easements provides resources that help them continue farming their land.

An overall assessment of LAP's impact on agriculture in Delaware County needs to take into account a number of factors:

- The decline in farmland in Delaware County long preceded LAP;
- the total volume of farmland has been declining in non-watershed counties as well;
- NYCDEP's acquisitions of previously-active farmland in fee simple involve only about 2.4 percent of the total volume of land removed from agricultural use since 1997; and
- Farm land acquired by NYCDEP in fee simple can be returned to active agricultural use through the issuance of permits.

In light of these factors, LAP does not appear to have in any significant way contributed to the decline of agriculture in Delaware County. Nor does it appear that Delaware County's agricultural economy would be significantly larger or more prosperous than it is today if NYCDEP had not for the past twelve years been acquiring land and easements in the watershed.

#### Mining

As of October 2009, NYCDEP had acquired five parcels of watershed land that had previously included bluestone mining operations, which had been terminated prior to sale. While acquisition by NYCDEP does not appear to have directly caused the cessation of these operations, we can (as we did with agricultural land) analyze what the impact would have been if it had been attributable to LAP. Reflecting the existing mix of solo operators and somewhat larger multi-employee businesses, we assume for purposes of this analysis that these operations averaged 2.8 employees each, for a total of 14 jobs lost when mining operations were suspended, and a loss of approximately \$592,000 in annual earnings.

Even if cessation of these five operations were attributable to LAP, however, it does not necessarily translate into a loss for the region as a whole. When demand is at least stable (or increasing), production might be increased at other locations within the region, offsetting the loss of production on lands acquired by NYCDEP. We cannot say with any certainty whether this shift in fact occurred in specific cases – but it is worth noting that between 2000 and 2006, wage-and-salary employment in mining increased in the watershed counties by 47 percent. Overall, mining in the region does not appear to have been adversely affected by any loss of specific sites associated with acquisition of land by NYCDEP.

Over time, the level of bluestone production in the region is driven primarily by demand. The supply of stone, and the availability of mining sites, does not appear to be a significant

constraint. According to a former president of the Bluestone Association, there is no danger of the region running out of bluestone. 11

As of December 2009, NYCDEP had acquired only one former sand and gravel site in the West-of-Hudson region. The five-acre site was part of a 31-acre parcel sold to NYCDEP by the Town of Andes; and it had been largely exhausted prior to its acquisition by NYCDEP. We thus conclude that NYCDEP's acquisitions of watershed land have had no substantial impact on this segment of the mining industry.

Any mining or logging (discussed below) activity displaced from land acquired by NYCDEP is more likely to relocate to other sites than to disappear altogether; but it is possible that some businesses and some jobs could be lost in the process. Moreover, not all jobs are equal – the earnings of those employed in mining are significantly higher, and in forestry somewhat higher, than the wages paid in retail, restaurant, lodging and other jobs that might be associated with the projected increase in recreational use of land acquired by NYCDEP. In either case, however, the numbers of jobs that could potentially be gained or lost are small.

Moreover, any potential adverse impacts on the region's bluestone industry could in the future be alleviated by NYCDEP's willingness to permit extraction of bluestone, under appropriate conditions, on lands acquired by NYCDEP in fee simple or on which it holds a conservation easement.<sup>12</sup>

# Natural Gas Drilling

NYSDEC is currently completing a supplemental generic environmental impact statement for natural gas drilling using high-volume horizontal drilling in the Marcellus Shale formation. The Marcellus Shale underlies the entire West of Hudson Watershed; in April 2010, however NYSDEC announced that "that due to the unique issues related to the protection of New York City and Syracuse drinking water supplies, these watersheds will be excluded from the pending generic environmental review process for natural gas drilling using high-volume horizontal drilling in the Marcellus shale formation." Applications to drill in the New York City watersheds will require "a case-by-case environmental review process" "to address continuation of the FAD<sup>13</sup>."

Currently there are no pending applications for horizontal drilling located in the New York City Watershed. Chesapeake Energy, the largest lease holder in the Marcellus Shale, made a commitment to not drill in the NYC watershed. Any drilling in the watershed would go through significant reviews and must demonstrate that it would pose no threat to water quality and the Filtration Avoidance determination. NYC would not pursue natural gas development on the lands it owns, or allow landowners on lands we hold in easement to develop gas, except to the extent required by state law through "compulsory integration."

Accordingly, at this time, the extent and location of natural gas drilling in the watershed, and the associated economic impacts, are not reasonably foreseeable. Based on the remaining supply of

<sup>&</sup>lt;sup>11</sup> Oneonta Daily Star, April 28, 2008.

<sup>&</sup>lt;sup>12</sup> See, for example, New York City DEP, A Landowners Guide for Commercial Bluestone Mining Practices on a DEP Conservation Easement, January 2010.

<sup>&</sup>lt;sup>13</sup> NYSDEC's April 23, 2010 press release, http://www.dec.ny.gov/press/64699.html

land and the conservative nature of the analysis conducted in this EIS, it is not expected that the Extended LAP would itself constrain natural gas drilling in the West-of-Hudson watershed, although not enough is known at this time. Any natural gas drilling proposed would be subject to further environmental review.

### Forestry and logging

About 81 percent of the land area of the West-of-Hudson watershed – a total of about 823,500 acres – is covered by forest. The land acquired by NYCDEP in fee simple includes approximately 47,885 acres of forest land – about 5.8 percent of all forest land in the watershed. NYCDEP conservation easements and WAC agricultural easements covered an additional 25,417 acres of forest land – about 3.1 percent of all forest land in the watershed. Beyond the boundaries of the watershed, much of the land area of the five West-of-Hudson counties is also forested – a total of 2.36 million acres of forest land purchased by NYCDEP thus accounts for about 2.0 percent of the total forested area of the five counties.

There is currently a total of about 450,000 acres of privately-owned forest land within the watershed, and hundreds of thousands of additional acres elsewhere in the five counties, which is likely to be sufficient to sustain the level of production and employment implicit in the NYSDOL and Census numbers cited above. Even if the amount of forest land acquired under LAP doubles between 2010 and 2022, the total would still represent only a small portion of all privately-owned forest land in the five counties.

In addition to logging, NYCDEP also permits tapping of maple trees on NYCDEP-owned land. While comprehensive data are not available regarding maple production on LAP-acquired land prior to acquisition, it appears that most of the taps permitted by NYCDEP as of October 2009 represent a continuation of production that preceded acquisition by NYCDEP. Acquisitions under LAP thus do not appear to have had any substantial impact on maple-tapping.

# Recreation and Tourism

Under the Extended LAP, NYCDEP would continue to open up lands acquired for public access and increase recreational uses, where consistent with public safety and water quality. As noted in *Open Space and Recreation*, 64 percent of the land acquired in fee simple under LAP is now open for recreational uses. NYCDEP anticipates that a similar or greater percentage of lands acquired in the Extended LAP would likely be opened up to recreation.

Preserving open space and opening up areas for recreation provide a number of socioeconomic benefits. A wide range of research over the past decade has highlighted the importance of opportunities for active outdoor recreation as one of the factors shaping young adults' decisions on where to live and work;<sup>14</sup> and surveys of West-of-Hudson watershed residents conducted in the context of town planning efforts highlight the value that current residents place on access to recreational opportunities – including casual walking and hiking, boating, hunting, fishing, snowmobiling and other outdoor pursuits.

Expanding opportunities for active outdoor recreation can also strengthen the economy of watershed communities by attracting both short-term visitors and second-home buyers, building on what is already one of the region's greatest strengths. Recreation and other tourism-related businesses, including hotels and restaurants, accounted for approximately 13 percent of all

<sup>&</sup>lt;sup>14</sup> For example, see Richard Florida, Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life.

employment in the watershed region in 2008. Some visitors, of course, are drawn to the region by forms of recreation not available on NYCDEP-owned lands, such as downhill skiing. But others come to enjoy the broader range of recreational activities available in the region, such as those cited above – including activities that are increasingly available on NYCDEP-owned land.

In 2005, about 36,500 people who lived outside the watershed counties held permits for public recreational use of NYCDEP's watershed properties. Since about 90 percent of all NYCDEP properties open for recreational use are located west of the Hudson, it was assumed that the West-of-Hudson watershed region draws a similar percentage of non-local visitor traffic – about 32,850 people.

Using data from several national sources on spending by anglers, hunters and other participants in outdoor recreational activities, it can be estimated that these visitors spent approximately \$9.0 million in the West-of-Hudson watershed region in 2005. Some of this spending, of course – especially that which might be associated with fishing and boating – is attributable to reservoirs and other properties that were owned by the City prior to the beginning of the Land Acquisition Program. Assuming that newly-opened land accounts for one-third of all local spending by non-local recreational users of NYCDEP land, it is estimated (using the IMPLAN input-output modeling system) that in 2005 this \$3.0 million in visitor spending directly supported 45 full-time-equivalent (FTE) jobs in the West-of-Hudson region – in retailing, restaurants, motels and other local businesses.

Not all of the employment associated with increased recreational use of NYCDEP-owned land should be considered "net new" employment. Just as some mining or logging jobs might be shifted from properties acquired by NYCDEP to other locations within the region, increased recreational use of NYCDEP-owned land by non-local visitors might represent (at least in part) a shift of visitor traffic from other recreational venues in the region.

A review of studies of the costs and benefits of open space protection conducted by the Office of the State Comptroller in the report, *Economic Benefits of Open Space Preservation* (March 2010) found that:

- Open space supports industries that generate billions of dollars in economic activity annually;
- Open space protection can be financially beneficial to local governments by reducing costs for public infrastructure and programs, lessening the need for property tax increases:
- Open space preservation can support regional economic growth; and
- Well-planned open space protection measures need not conflict with meeting other vital needs, such as economic development, municipal fiscal health and affordable housing.

Furthermore, the report links open space preservation with the health of particular industries (i.e., agriculture, farming, tourism and recreation).

On balance, the impact of visitor spending associated with increased recreational use of land acquired by NYCDEP is probably somewhere between neutral and very slightly positive. Rather than increased visitor spending, the greatest economic benefit of expanded public access to Cityowned land is likely to be the value that local full- and part-time residents derive from recreational use of these properties (see Chapter 6, Open Space and Recreation).

### Other Businesses

In addition to natural-resource-based industries, acquisition of watershed land by NYCDEP could potentially have a direct impact on other types of commercial activity as well.

The amount of watershed land currently devoted to commercial, industrial and community uses is relatively small – a total of 16,236 acres, or 1.6 percent of all watershed land. While NYCDEP is not precluded under the terms of the MOA from acquiring commercial or industrial land in the West-of-Hudson watershed, to date there have been very few cases in which NYCDEP has acquired property under LAP that was previously used commercially. In 2009, NYCDEP contracted to acquire a 328-acre property in Windham that had previously been operated as a private campground, with 45 camp sites. The Department has acquired only one other undeveloped property in the West-of-Hudson region that was formally zoned for commercial use – a 3-acre site in the Town of Olive.

The Land Acquisition Program's apparently limited direct impact on commercial and industrial uses in West-of-Hudson watershed towns in part reflects a provision of the 1997 MOA under which NYCDEP has agreed not to acquire land in hamlet areas designated by the West-of-Hudson watershed towns. In the towns that chose to use this option, designation of hamlet areas helped to exempt existing commercial centers from acquisition of property by NYCDEP. In general, parcels in these areas tend to be smaller than those typically purchased under LAP.

The 21,310 acres of designated hamlet areas include approximately 2,719 acres of land currently used for commercial, industrial and community purposes – about 16 percent of all such land within the watershed. The designated hamlet areas also include 6,018 acres of privately-owned vacant land.

The proposed hamlet-area expansions would increase the land area covered by these designations to almost <u>48</u>,000 acres. NYCDEP estimates that the expanded hamlet areas contain approximately <u>10,500</u> acres that NYCDEP had previously solicited, but would henceforth agree not to acquire should the towns elect to preclude these acquisitions. <u>Moreover, in some cases where towns choose not to exclude LAP acquisitions from hamlets or village centers, LAP may not seek to acquire additional land because parcels in hamlets and village centers tend to be smaller and less desirable for LAP acquisition.</u>

Expansion of designated hamlet areas will help ensure that LAP continues to not have a negative impact on commercial activity in watershed towns by precluding any further acquisition of land by NYCDEP in the areas most suited to commercial development and the creation of new businesses. This is further supported by numerous NYCDEP programs that limit the impact of the Watershed Rules and Regulations in hamlet areas and investments in infrastructure including wastewater treatment plants, community septics, and sewers in hamlet areas.

## **Impacts on Local Government Revenues**

Acquisition of watershed land by NYCDEP could also have a direct effect the region's economy through its impact on county, municipal and school district tax revenues. Based on the analyses conducted above for impacts on developable land and on industries and businesses, there would not be significant displacement effects due to the Extended LAP. Further, the Extended LAP is unlikely to constrain the overall level of development in watershed towns. Therefore, the potential for new local tax revenues from new development should not be reduced under the Extended LAP.

It is important to note that the Memorandum of Agreement was designed to minimize any potential adverse impact on local tax revenues that might result from acquisition of land by NYCDEP.

- NYCDEP-owned land and easements are fully taxable; therefore, acquisition of real property interests by NYCDEP does not result directly in any loss of real property tax revenues.
- Under the MOA, New York City cannot challenge local assessments of the value any property purchased through LAP for a period of 20 years following acquisition. Thus assessments on properties acquired in 1997, will not be subject to challenge until 2017; and assessments on properties acquired in 2009 will not be subject to challenge until 2029.

Moreover, there will now be a 30-year limitation from date of acquisition on challenging tax assessments (increased from a 20-year limitation under the negotiations).

In accord with the provisions spelled out in the MOA, NYCDEP in fiscal year 2009 paid a total of \$5,963,538 million in county, town, village and school taxes on land acquired through LAP – including \$2,457,411 paid to counties, towns, villages and school districts West-of-Hudson.

In order to put these payments in context, taxes paid by NYCDEP on LAP-acquired land and easements were calculated as a percentage of the total revenues of the affected jurisdictions. (Because that latest data from the State Comptroller's Office on local government revenues are for 2008, we used NYCDEP's payments in 2008 for this comparison.) Despite the fact NYCDEP pays full taxes pursuant to State law and the MOA, real property taxes paid on LAP-acquired land represent only a small percentage of the general property tax revenues – and an even smaller percentage of the total revenues of West-of-Hudson watershed counties and towns. The same is true with the region's school districts.

Moreover, not all types of new development have a positive impact on local finances. Research in communities in New York and elsewhere has shown that privately-owned open land consistently generates more for local government in real property tax revenues than it costs in public services. In the watershed, NYCDEP is taxed as if it were a private owner; and land owned by NYCDEP generates minimal demand for local government services. Second home development may produce a net fiscal benefit for local governments; but other single-family residential development sometimes costs more in terms of demand for schools and other services than in generates in new revenues.<sup>15</sup>

Of course, at a time when local government finances under severe stress – not only in the region, but throughout New York State and the U.S. – local governments and school districts – must be concerned about even very small portions of the local tax base. However, there is no evidence that acquisition of watershed land under LAP has in itself had any adverse impact on local revenues – or that it would in the future.

In addition to LAP's impact on general municipal governments and school districts, some local representatives have expressed concern about the program's potential impacts on the financial viability of fire districts. Although they represent only a small part of total local finances, these districts provide a vitally important public service. Moreover – to a far greater extent than

<sup>&</sup>lt;sup>15</sup> Farmland Information Center, "Fact Sheet: Cost of Community Services Studies," August, 2004.

general local governments or school districts – they are almost totally dependent on property taxes. If LAP did in fact have any adverse impact on local property tax revenues, fire districts could thus be affected disproportionately. The data cited above suggest, however, that LAP does not have any significant adverse impact on local property tax revenues.

The program's direct impact on local government revenues is generally neutral. Because existing laws and provisions of the MOA governing the payment of real property taxes by the City are not expected to change, we expect that the impact of further acquisitions through <u>2027</u> will similarly be neutral.

#### Conclusion

Overall, the projected acquisitions in the West-of-Hudson watershed under the Extended LAP will have only a limited impact on socioeconomic conditions. Even using very conservative assumptions about the amount of land to be acquired under the Extended LAP and the pace new residential development through 2027, for the West-of-Hudson region as a whole the supply of developable land would be more than adequate to support the projected level of development through 2027 and many years beyond. Modifications to LAP that are included in the proposed action – most notably, the proposed expansion of designated hamlet areas – would minimize any conflicts with development in the hamlet areas.

Based on an analysis of trends in land prices in the West-of-Hudson region between 2001 and 2009, LAP does not appear to have been a significant driver of the escalation in the price of vacant land that occurred in the region during the boom years. (The pattern of price increases in watershed towns is broadly consistent with increases that occurred in towns outside the watershed.) As demand for land has weakened, the Program may have had the effect of keeping vacant land prices from falling as much as they might have fallen in the Program's absence. While LAP may have a limited impact on the price of larger tracts of vacant land in outlying areas, it appears to have had no impact at all on the price of housing in the West-of-Hudson region.

LAP similarly appears to have had no significant effect on land-based industries such as farming, mining and forestry; and to have had a slightly positive impact on outdoor recreation. And because other commercial and industrial activity accounts for less than 2 percent of all land use in the West-of-Hudson region – and because it tends to be concentrated in or near the existing hamlets – no significant impact on other forms of commercial activity is expected. Finally, the Extended LAP would have no significant impact on local government or school district financing in the West-of-Hudson watershed region.

Any incremental effect of the 15 Year Greater Impact Scenario on socioeconomic conditions in West-of-Hudson watershed towns beyond the 10 Year Projection Scenario is likely to be minimal.

Based on the analysis provided in this report, the Extended LAP is not expected to result in potential significant levels of direct or indirect displacement or in other potential significant adverse socioeconomic conditions in the West-of-Hudson watershed.

## **EAST- OF- HUDSON**

This section of Chapter 3 addresses the potential impact of additional acquisitions under the Extended LAP between 2010 and 2027 on socioeconomic conditions in East-of-Hudson

watershed towns. In the portion of the Catskill-Delaware watershed that lies east of the Hudson, areas of focus for the Land Acquisition Program (as outlined in NYCDEP's September 2009 Long-term Land Acquisition Plan) and the total acreage to be acquired between 2010 and 2027 are likely to be substantially less than the historic pattern of activity.

## **Impacts on Supply of Developable Land**

<u>Under the Extended LAP</u> NYCDEP expects to acquire additional land primarily in only four of the eight towns – East Fishkill, Kent, Carmel and Putnam Valley. Although land could be purchased in other towns, for example around the Kensico Reservoir, the supply of land is very limited and the cost is very high. Any land purchased would represent a very small portion of the affected town and would likely be land that is currently used for another purpose (rather than vacant land). Therefore, no potential significant adverse socioeconomic impacts would be expected to occur.

## 10 Year Projection Scenario

Using the same approach used previously to gauge LAP's impact on the supply of developable land west of the Hudson, Table ES-12<u>A</u> shows the projected impact of the Land Acquisition Program on the supply of developable land in the four towns <u>through 2022</u>. As the table shows, the program's impact varies widely across the four towns.

											Ì
				Projected	Developable		% of 2009			% of town	% of town
		Total	Available	developable	land needed	Developable	developable			area	area
		Town	developable	land acquired	for housing	land left in	land left in	LAP	Housing	developable,	developable,
County	Town	Land	acres, 2009	through 2022	through 2022	2022	2022	contribution	contribution	2009	2022
Putnam	Carmel	24,029	1,520	81	842	597	39%	5%	55%	6.3%	2.5%
Dutchess	East Fishkill	36,799	4,192	118	1,516	2,558	61%	3%	36%	11.4%	7.0%
Putnam	Kent	26,959	2,096	329	180	1,588	76%	16%	9%	7.8%	5.9%
Putnam	Putnam Valley	27,464	5,560	10	569	4,981	90%	0%	10%	20.2%	18.1%
	TOTAL	115 250	12 260	E27	2 107	0.724	720/	40/	220/	120/	90/

Table ES-12∆: Impact of LAP on East-of-Hudson Catskill-Delaware towns through 2022

In Putnam Valley, LAP's potential impact is limited by the fact that only 8 percent of the Town's total area is within the watershed. Moreover, the number of acres that LAP expects to acquire in Putnam Valley between 2010 and 2022 is relatively small – 34 acres, of which about 10 acres are characterized as developable. This represents less than 0.2 percent of the Town's supply of developable land as of 2009. In East Fishkill, Carmel and Kent, the amount of land projected to be acquired by LAP through 2022 is more substantial. It should be noted that the estimates of developable land available in each town as of 2009 and developable land remaining in 2022 that are presented in Table ES-12<u>A</u> are conservative in several respects and remaining land available will likely be higher.

The potential impact of additional acquisitions in East Fishkill, Carmel and Kent on the supply of developable land is discussed below.

East Fishkill

<sup>&</sup>lt;sup>16</sup> For purposes of this analysis developable land does not have any of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent, or land with slow infiltrating soils (NRCS Hydrological Soil Group D); land with any one or more of these characteristic in considered undevelopable.

The potential impact of future acquisitions on socioeconomic conditions in East Fishkill is shaped by several factors:

- The relatively small portion of the Town that lies within the watershed;
- The extent to which the area within the watershed differs from the rest of the Town; and
- The pace of residential development within the Town.

Only 16 percent of East Fishkill's total area lies within the watershed. Moreover, the 5,832-acre watershed area – located in the southeastern part of the Town – differs from the rest of the East Fishkill in several respects. Elevations are higher, and the terrain is more rugged – according to the Town's 2002 comprehensive plan, about 50 percent of the total land area of this portion of the Town consists of land with slopes of more than 25 percent.

East Fishkill's housing stock has grown rapidly in the past two decades – from 7,265 in 1990 to an estimated 9,570 in 2008, an increase of nearly 32 percent. For the period 1997 through 2008 (according to data provided by the Census Bureau) new residential building permits issued in East Fishkill averaged 168 units per year.

Table ES-12<u>A</u> suggests that if growth were to continue at that pace, new residential development between 2010 and 2022 would consume about 36 percent of the Town's supply of developable land (as of 2009). However, using the average rate of new development between 1997 and 2008 as a basis for projecting future growth may overstate the likely rate of development in East Fishkill. Issuance of new residential building permits declined sharply in the east-of-Hudson towns as the housing boom came to an end.

In contrast to the relatively high rate of consumption of developable land for new housing projected in Table ES-12<u>A</u>, the developable portion of land projected to be acquired under LAP represents only 3 percent of the Town's supply of developable land as of 2009.

## Carmel

Carmel lies almost entirely within the watershed; watershed land accounts for 93 percent of the Town's total land area. It is the most developed of the four towns highlighted in Table ES-12<u>A</u>, and has the smallest amount of developable land still available as of 2009. As a result of the relatively high rate of development projected in Carmel – 100 units per year between 2010 and 2022 – the analysis indicates that only 39 percent of the town's 2009 supply of developable land would still remain in 2022. However, LAP's contribution to the removal of developable land is modest. The amount of developable land projected to be acquired by NYCDEP is 81 acres, and represents only 5 percent of the town's 2009 supply of such land.

Several factors are likely to alleviate any such conflicts between LAP acquisitions and residential development. As noted above, projections based on past rates of new construction may overstate the rate of development through 2022; the likelihood that future LAP acquisitions would occur in outlying parts of the town; and the town's desire to preserve open space.

### Kent

As Table ES-12<u>A</u> shows, the acreage projected to be acquired by LAP is greater in Kent than in other East-of-Hudson towns – both in absolute terms and as a percentage of the Town's total supply of developable land. Through 2022, projected acquisitions under LAP would take 16 percent of the Town's 2009 supply of developable land.

However, the rate of new residential development is projected to be significantly lower in Kent than in the other towns where LAP will be acquiring land – an estimated 28 units per year in Kent, as compared to 168 per year in East Fishkill, and 100 in Kent. New residential development between 2010 and 2022 is projected to consume about 9 percent of Kent's 2009 supply of developable land. As of 2022, the Town would still have about 1,588 acres of developable low-density residential and vacant land – about 76 percent of the supply of such land in 2009.

### 15 Year Greater Impact Scenario

As shown below in Table ES-12B, the impact of increasing by 10 percent the total acreage to be acquired is small in both relative and absolute terms.

Projected Developable land % of 2009 % of town % of town Available developable needed for Developable developable developable land acquired housing through land left in land left in IAP Housing developable developable County Town acres, 2009 through 2027 2027 2027 2027 contribution contribution 2009 2027 Dutchess East Fishkill Putnam Carmel 1 520 89 1 192 238 15.7% 5.8% 78.5% 6.3% 1.0% Putnam 2,096 362 254 1,480 70.6% 17.3% 12.1% 7.8% 5.5% Kent Putnam Putnam Valley 591 4.401

Table ES-12 B: 15 Year Greater Impact Scenario on East-of-Hudson towns

Under the 15 Year Greater Impact Scenario, projected acquisitions by NYCDEP would increase from 1,517 acres to 1,669. Under this alternative, the percentage of developable land remaining in 2027 declines from the 9,724 acres estimated under the 10 year permit scenario to 8,376 – but this change is due almost entirely to the additional residential development that is projected to occur between 2022 and 2027.

# Impact on land prices, housing and affordability

In contrast to the acreage to be acquired under LAP west of the Hudson, which represents approximately 9.8 percent of all West-of-Hudson watershed land, the <u>1,669</u> acres projected to be acquired east of the Hudson represent only 0.6 percent of East-of-Hudson watershed land. Especially in the context of a regional real estate market that has consistently been one of the strongest in the greater New York metropolitan area in recent decades, LAP will clearly be in the position of a "price taker" in the East-of-Hudson towns – its level of engagement in the market will simply be too small to have a significant impact on either land prices or housing costs.

# Impact on business and commercial activity

The impact of projected future acquisitions on major industries and on commercial development in the East-of-Hudson watershed towns is likely to be limited. As noted above, acquisition of land and easements under LAP has since 1997 proven to be fully compatible with strong growth in both Putnam County and southern Dutchess County. Between 1997 and 2009, LAP acquired more land in Putnam County (measured as a percentage of the county's total land area) than in any other county east or west of the Hudson – and Putnam recorded by far the strongest employment growth of any of the eight watershed counties.

Moreover, the potential for any adverse impact on the future economic vitality of the East-of-Hudson watershed towns is limited by the decline in the level of acquisition activity projected by

NYCDEP. The <u>1,669</u> acres NYCDEP expects to acquire between 2010 and <u>2027</u> is <u>less than 20</u> percent of the acreage acquired between 1997 and 2009.

The potential for conflict is also limited by the fact that land-based industries – particularly agriculture and natural resources – are a relatively small part of the region's economy. Outdoor recreation plays a more significant role – but the impact of projected acquisitions by NYCDEP on outdoor recreation will if anything be positive.

Finally, the 1997 MOA strictly limits acquisition by NYCDEP of land zoned for commercial or industrial use. This further limits the potential for conflict between acquisition of additional land under LAP and the towns' economic vitality.

## Impact on local government revenues

Acquisition of watershed land by NYCDEP could also have a direct effect the region's economy through its impact on county, municipal and school district tax revenues. Based on the analyses conducted above for impacts on developable land, there would not be significant displacement effects due to the Extended LAP. Further, the Extended LAP is unlikely to constrain the overall level of development in watershed towns. Therefore, the potential for new local tax revenues from new development should not be reduced under the Extended LAP.

As noted in the discussion of LAP's potential impact on local government revenues west of the Hudson, land and easements acquired by New York City are fully taxable. Acquisition of land by NYCDEP thus has no direct affect on local property tax revenues. Moreover, although NYCDEP pays full taxes on property interests it has acquired, it is important to recognize that properties acquired under LAP represent only a very small portion of the total assessed value – and generate a very small portion of the revenues of – the affected local taxing jurisdictions. In 2008:

- The \$874,579 in general property taxes paid by NYCDEP on LAP-acquired properties east of the Hudson represented less than 0.1 percent of the combined real property tax revenues of the affected counties and towns; and
- The \$2,213,916 in school taxes paid by NYCDEP on LAP-acquired properties represented only 0.28 percent of the combined real property tax revenues of the affected school districts.

Given that the acreage projected to be acquired under LAP between 2010 and 2027 is less than 20 percent of the acreage acquired in the eight east-of-Hudson Catskill Delaware watershed towns, tax revenues generated by the newly-acquired property are likely to represent an even smaller fraction of 1 percent of the revenues of the affected jurisdictions' real property tax revenues.

Given the very small portion of taxable value that any newly-acquired property will represent, the fact that these properties remain fully taxable, and the lack of any significant impact on new development, it is extremely unlikely that future acquisitions in the East-of-Hudson towns could have any substantial impact on local government or school district revenues.

#### Conclusion

Overall, the projected acquisitions in the East-of-Hudson portion of the Catskill-Delaware watershed under the Extended LAP – which represent only <u>0.7</u> percent of all East-of-Hudson

watershed land, and only <u>1.6</u> percent of the watershed land that NYCDEP is projected to acquire during that period, on both sides of the Hudson – would have only a very limited impact on the supply of developable land, in watershed towns, and generally would not affect land or housing prices, growth rates, business conditions or local government revenues. Based on the analysis provided in this report, the Extended LAP is not expected to result in potential significant levels of direct or indirect displacement or other potential significant adverse socioeconomic conditions in the East-of-Hudson watershed.

# TOWN LEVEL ASSESSMENTS

As noted above, detailed assessments were conducted for  $\underline{20}$  towns based on the selection criteria  $\underline{\text{described}}$  above.

Extending the term of the WSP from 10 to 15 years and increasing the land projected to be acquired in the West-of-Hudson region by 10 percent has only a marginal impact on which towns meet the two screening criteria. Only one additional town – Woodstock – met the criteria for detailed town level analysis under the 15 Year Greater Impact Scenario as compared to the 10 Year Projection Scenario.

For all towns but Woodstock, the town level assessments provided below are based on the 10 Year Projection Scenario. However, based on a review of the longer time period and the larger number of acres to be acquired under the 15 Year Greater Impact Scenario within the 20 towns, the Extended LAP would not result in any significant impacts.

Both the projected levels of LAP acquisitions and the projected levels of residential development used in all of the town-level assessments represent a "reasonable worst case" scenario. Therefore, on the basis of the analyses described in the EIS, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in the 20 towns assessed in this chapter under both the 10 Year Projection Scenario and the 15 Year Greater Impact Scenario.

## The assessments are summarized below.

- **Denning** is a very low-density rural community, with an estimated population of 524 in 2008, and one of the highest percentages of excising protected land (mostly State-owned) among watershed towns. Through 2022, NYCDEP is projected to acquire 32 percent of the Town's remaining developable land. But because the projected rate of new development is low, only two percent of the current supply of developable land is projected to be needed to support new residential development through 2022. Thus, the Town would have 66 percent of its 2009 developable land remaining in 2022. Denning's comprehensive plan shows a strong local preference for maintaining its current character, and limiting development. The Town has a 1,107-acre designated hamlet area, which it has not sought to expand.
- Olive (population 4,750) has seen significant growth in its resident population since 1990. As a result, while NYCDEP is projected to acquire a much lower percentage of the Town's remaining developable land than in Denning 15 percent the amount of land projected to be needed to support new development through 2022 is much greater 13 percent of Olive's current supply of such land. However, most new development has been concentrated along Routes 28 and 28A, while NYCDEP is most likely to be acquiring land outside of these areas. Moreover, the Town has proposed and NYCDEP is comfortable with more than doubling Olive's existing designated hamlet area, which will ensure that substantial acreage

will be available to support new commercial and residential development. The Town is projected to have 72 percent of its 2009 developable land remaining in 2022. Finally, our projection of the amount of land needed for new residential development may be conservative – development in Olive has been slower in this decade than it was in the 1990's.

- Shandaken (population 3,400) has the highest percentage of existing protected land (72 percent) of any watershed town. That feature, along with its mountainous terrain, leaves the Town with relatively little available developable land. As in Olive, NYCDEP's projected acquisitions represent a relatively low percentage of the Town's developable land (13 percent), but the share of developable land projected to be needed to support the projected rate of residential development through 2022 is relatively high (12 percent). Nevertheless, the Town would have 74 percent of its 2009 developable land remaining in 2022. Recognizing the extent to which Shandaken is already protected, NYCDEP and the Town have proposed that in the future NYCDEP will not actively solicit individual land-owners, but will instead respond only to owner-initiated inquiries. NYCDEP is comfortable with that proposal.
- *Hardenburgh* (population 211) is a very low-density rural town with just 2.6 persons per square mile, it has the lowest population density of any watershed town. As in Denning, the share of the Town's developable land projected as being acquired by NYCDEP is relatively high (24 percent); but the amount of land project to be needed to support continued slow growth is small only about six percent of the current supply of developable land. Thus, the town would have 70 percent of its 2009 developable land remaining in 2022.
- windham (population 1,755) has been one of the West-of-Hudson watershed's fastest-growing towns since 2000. The Town's economy is built primarily on skiing and other leisure activity. The Town has a large second-home sector; in 2000, 56 percent of its housing units were for seasonal or recreational use the highest percentage of any watershed town. With NYCDEP projected to acquire 17 percent of the Town's developable land and 10 percent projected to be needed to support projected residential development, some competition for land might be expected. The Town would have 73 percent of its 2009 developable land remaining in 2022. However, a closer look at where development is occurring shows that it has been clustered in and around the existing hamlets and around Windham Mountain. Expansion of the designated hamlet area by roughly 2,800 acres as proposed by the Town and accepted by NYCDEP would provide ample room for additional development in these same high-growth areas through 2022 and beyond. Moreover, by using a 2-acre minimum in our calculation of land needed to support future development, we may be overstating the amount of land that will be required. The actual median parcel size for new units built since 2000 has been only 1.3 acres.
- *Hunter*'s economy, like Windham's, is built primarily on skiing and other recreational activity. It has a somewhat larger resident population (2,750), and a large second-home sector (48 percent of all housing units in 2000 were for seasonal or recreational use); but the Town has grown at a much slower rate in recent years. NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and five percent would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. With more than 3,200 acres designated, Hunter already has the largest designated hamlet area among

watershed towns. Under the Town's proposal, which NYCDEP has accepted, this area will be nearly doubled, to more than 6,100 acres. This agreement would allow further development in and around the villages of Hunter and Tannersville, where development has historically occurred, while focusing NYCDEP's acquisitions on outlying areas.

- Ashland (population 827) has seen strong population growth in recent years, combined with somewhat faster housing growth. Like most of Greene County's other "mountaintop towns," the Town has a strong second home sector: about 42 percent of all housing units in 2000 were for seasonal or recreational use. Much of the Town's recent development has occurred along Route 10, or on the eastern side of the Town (bordering Windham). NYCDEP is projected to acquire 21 percent of the Town's current supply of developable land; and eight percent would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 71 percent of its 2009 developable land remaining in 2022. As in Windham and Hunter, a proposed major expansion of Ashland's designated hamlet areas from 362 to more than 2,000 acres would alleviate potential for conflict between NYCDEP's projected acquisitions and the need for land to support further development.
- *Jewett* (population 1,015) is a low-density, primarily rural town located between Windham and Hunter. Jewett has a relatively large second-home population 53 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and eight percent would be required to support the projected rate of new residential development. Thus, the Town would have 75 percent of its 2009 developable land remaining in 2022. As elsewhere, a proposed expansion of designated hamlet areas from 652 to 2,666 acres would alleviate potential conflict between continued development and the projected acquisition of additional land by NYCDEP.
- Lexington (population 874) is another low-density, primarily rural town with a relatively large second-home population 54 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 25 percent of the Town's current supply of developable land; and nine percent would be required to support the projected rate of new residential development. Thus, the Town would have 66 percent of its 2009 developable land remaining in 2022. The Town has proposed, and NYCDEP supports, expansion of designated hamlet areas from 362 to 737 acres.
- *Halcott* is an almost exclusively rural community, with the smallest area and population (203) of any watershed town. The Town has very little commercial activity (mostly homebased businesses); but it has a substantial second-home sector 42 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 23 percent of Halcott's current supply of developable land, while five percent is projected to be required to support the level of residential development projected for the same period. Thus, the town would have 72 percent of its 2009 developable land remaining in 2022. The Town's comprehensive plan highlights a strong local preference for maintaining its rural character, natural beauty and support for outdoor recreation and notes strong resident opposition to any large-scale commercial or industrial development. Like Denning, Halcott has not sought to expand its 69-acre designated hamlet area.

- *Prattsville* (population 712) is also a primarily rural town. The Town's population declined in the 1990's; it has rebounded somewhat since 2000, but remains below the 1990 level. The second-home market is smaller than those in other mountaintop towns 29 percent of all units are seasonal or recreational. The Town's business base consists almost entirely of retail and service businesses supporting the local population. Through 2022, NYCDEP is projected to acquire 30 percent of Prattsville's current supply of developable land. New residential development, however, is projected to average only four units per year, and to consume only four percent of the Town's developable land. Thus, the Town would have 67 percent of its 2009 developable land remaining in 2022. The Town has a 207-acre hamlet area, which it has chosen not to expand.
- Among watershed towns, *Stamford* (population 1,954) is notable for the diversity of its economy. It includes one of the region's largest concentrations of agriculture, outdoor recreation and the arts in and around the Village of Stamford, a substantial second-home sector, and manufacturing and book retailing in the Village of Hobart. As of July 2009, WAC has acquired easements on 4,849 acres of farmland in Stamford - by far the most in any watershed town. Through 2022, NYCDEP is projected to acquire 24 percent of the Town's current supply of developable land. About two-thirds of this total is expected to be developable farmland placed under WAC easements, allowing for continued farm use; only one-third would be land directly acquired by NYCDEP in fee simple or as conservation easements. With a relatively low rate of new residential development — only four percent of the current supply of developable land is projected to be required for new development through 2022. Thus, the Town would have 72 percent of its 2009 developable land remaining in 2022. Designated hamlet areas in Stamford currently total 1,333 acres. The Town has not proposed to expand them. Local officials have raised concerns about the impact of past WAC acquisitions on the availability of land for development in and around the Villages of Stamford and Hobart and the hamlet of South Kortright. In recognition of these concerns, NYCDEP – in its negotiations with regulators and local officials – supports the exclusion of WAC easements from designated hamlet areas as part of the Extended LAP. If agreed upon by all parties to the negotiations, this would leave remaining land potentially available for growth within the designated areas, while allowing WAC's projected acquisition of farm easements elsewhere in the Town. Commercial development has been focused within the two villages, where LAP is precluded, and it is expected that opportunities for redevelopment and new commercial development will continue to be available in the Villages of Hobart and Stamford. New residential development can be expected to continue to be accommodated in the outlying portions of the Town.
- *Middletown* is a primarily rural community (population 3,881) with a mixed economy that has experienced moderate growth in recent years. Most commercial activity is concentrated in the Villages of Margaretville and Fleischmanns and the hamlet of Arkville along Route 28, and near in the northern part of the town, near Roxbury. About 36 percent of all housing units are for seasonal or recreational use. NYCDEP is projected to acquire 16 percent of Middletown's current supply of developable land through 2022. An additional seven percent of the current supply would be required to support the projected rate of new residential development about 21 new units per year through 2022. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. Middletown currently has a total of 1,734 acres in designated hamlet areas. The Town has proposed to expand the designated areas by 229 acres, to a total of 2,032 acres. NYCDEP has accepted the Town's proposal.

- Andes is a primarily rural, low-density community with a roughly stable resident population of 1,336. In 2000, 49 percent of all housing units were seasonal or recreational; and it appears that there has been continued growth in this sector since 2000. Commercial activity is concentrated in the hamlet (and former Village) of Andes which, relative to its size, has seen substantial new business development since 2000. NYCDEP is projected to acquire 20 percent of the current supply of developable land through 2022; and about seven percent will be required to support projected new residential development through 2022. Thus, the Town would have 74 percent of its 2009 developable land remaining in 2022. Andes has a designated hamlet area of 1,047 acres, which the Town has chosen not to expand.
- **Bovina**, with an estimated population of 633 in 2008, is a low-density, primarily rural town with a substantial second-home population 40 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire about 19 percent of the Town's current supply of developable land. However, residential growth in the town has been slow. Only about two percent of the Town's developable land would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 79 percent of its 2009 developable land remaining in 2022.
- *Hamden* is a rural town (population 1,237) in the geographic center of Delaware County. Most businesses are clustered along Route 10, while low-density residential uses are scattered throughout the town. The southeastern part of the Town (about 13 percent of its total land area) lies outside the watershed. Acquisitions of developable land by NYCDEP are projected to total 12 percent of the Town's total supply of developable land as of 2009, while land required for new residential development during the same period is projected at 11 percent of the current supply. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. In 1997, the Town designated hamlet areas totaling 420 acres. NYCDEP and the Town have proposed a significant expansion of the designated areas to a total of 2,854 acres, which NYCDEP has agreed is appropriate. Both the existing and proposed hamlet areas are primarily along Route 10, where development typically occurs.
- *Delhi* (population 4,547) is a low-density, primarily rural town. More than half the Town's population is concentrated in the Village of Delhi the county seat for Delaware County, the site of the SUNY-Delhi campus, and a commercial center for Delhi and several other towns. Through 2022, NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and five percent would be required to support the projected rate of new residential development. Thus, the Town would have 79 percent of its 2009 developable land remaining in 2022. The Town has proposed an expansion of designated hamlet areas from 2,346 to 4,902 acres, alleviating potential conflict between continued development and the projected acquisition of additional land by NYCDEP.
- Conesville is a low-density rural community (population 714) in Schoharie County with a diverse agricultural sector, but relatively few commercial uses. About 54 percent of the Town's housing units are seasonal or recreational; the Town saw strong growth in this sector in the 1990s, but the trend has slowed since then. The Town's comprehensive plan calls for preserving its rural character, natural beauty and remaining agricultural activity; and specifically urges greater use of WAC easements to preserve farmland. Acquisitions by NYCDEP through 2022 are projected to total 17 percent of the Town's total supply of developable land as of 2009. About one-quarter of new acquisitions are expected to be WAC easements. Land required for new residential development during the same period is

projected at 10 percent of the current supply of developable land; however, because this projected growth rate is based in part on strong growth in the 1990s, this projection may be overstated. Given the conservative projection, the Town would have 73 percent of its 2009 developable land remaining in 2022. The Town has proposed that designated hamlet areas be increased from 275 to 1,845 acres – shifting NYCDEP acquisitions away from areas that are likely to be most suited for new development. NYCDEP has accepted this proposal.

• With its resident population growing by about one-third since 1990, *Neversink* (population 3,909 in 2008) has been one of the fastest-growing watershed towns. Development is concentrated along Route 55, and around the hamlet of Grahamsville. NYCDEP's acquisitions through 2022 are projected at 15 percent of the current supply of developable land. At the projected rate of growth, new residential development would be projected to require 12 percent the current supply of developable land. Use of 1990-2008 data on growth in housing units may, however, overstate the likely pace of future development in Neversink; building permit data suggest that growth has been significantly slower in the past decade than it was in the 1990's. Given the conservative projection, the Town would have 73 percent of its 2009 developable land remaining in 2022. The Town currently has designated hamlet areas of 1,197 acres, which it has proposed not to expand.

Woodstock (population 6,346) has the second-largest population among the towns in the West-of-Hudson watershed region (after Wawarsing). However, most of the resident population is concentrated in the Town's eastern half, which lies outside the watershed. About one-third of all residents live in the hamlet of Woodstock, which is also the Town's main center of commercial activity. Under the 15 Year Greater Impact Scenario, NYCDEP is projected to acquire 2,593 acres in fee simple and conservation easements in Woodstock between 2010 and 2027. While substantial, this estimate is barely half the total of 5,120 acres that were acquired by LAP in Woodstock through June 2009. Woodstock is expected to have one of the highest rates of residential development among the West-of-Hudson towns, with 289 additional units being projected by 2027 (an average of 17 new units per year). Nevertheless, any potential for conflict between the Extended LAP and the need for land to support new development is limited by the fact that any new NYCDEP acquisitions would occur in the western half of the Town, while any new development is likely to be concentrated in the eastern half. Under this scenario, 76 percent of the Town's 2009 supply of eligible land would still be available in 2027.

# WATER QUALITY AND NATURAL RESOURCES

The Extended LAP is intended to provide long-term benefits to the water quality of the City's water supply system through the preservation of sensitive lands proximate to water resources. Land acquisition is an anti-degradation strategy, which can preclude adverse water quality impacts associated with development and other land uses.

As expressed in the 2007 FAD, "Land acquisition is one of the most effective, and therefore, important mechanisms to permanently protect the City's Catskill/Delaware watershed. The Land Acquisition and Stewardship Program [now LAP], which is described in detail in the New York City Watershed MOA, seeks to prevent future degradation of water quality by acquiring sensitive lands and by managing the uses on these lands."

Land Acquisition is an anti-degradation strategy that ensures protection by precluding land use changes on undeveloped land. Development, including the associated land disturbances and impervious surfaces, has the potential to introduce increased levels of pollutants, including pathogens, nutrients and turbidity, into watercourses. This is particularly important during storm events when pollutant levels are elevated and the rapid movement of water reduces the effectiveness of natural cleansing processes. Once the landscape is disturbed for development, the probability that pollutants could reach the drinking water supply is directly related to several factors including proximity to surface water features and topography. The water quality effects of the City's acquisitions of sensitive lands accrue over time, as future development would occur at locations with less potential to adversely impact water quality rather than on the land protected by LAP.

The Extended LAP has a number of elements targeted at maximizing these water quality benefits as discussed below.

### **PRIORITIZATION**

The LAP first prioritizes property for solicitation on the basis of its location within the water supply system, followed by site-specific characteristics so as to maximize the water quality benefit of lands acquired. The proposed Extended LAP seeks to increase the percentage of protected lands in the Cat-Del System as a whole, with a particular emphasis on:

- Non-terminal reservoir basins with less than 30 percent protected lands;
- Specific sub-basins with a relatively low percentage of protected lands; and
- Reservoir basins that are expected to provide larger contributions to future water supply.

Ensuring protection of lands with water quality sensitive features is proposed to be accomplished through the targeted purchase of lands based on Natural Features Criteria, including wetlands, floodplains, and lands within 300 feet of streams, ponds or lakes or within 1,000 feet of reservoirs and lands with moderate to steep slopes.

### **NATURAL FEATURES**

The Extended LAP provides beneficial water quality impacts; therefore the proposed action would result in beneficial water quality impacts under the <u>proposed</u> Natural Features Criteria. Even though some land may be eliminated from potential future solicitation, the land that is purchased will, under any regime involving Natural Features thresholds, be land that is more water quality sensitive and therefore provides more protection of water resources. Nor would this revision be expected to decrease the number of acres eventually acquired; rather, a similar number of acres would be acquired from a slightly smaller pool of solicited land.

# **STREAM BUFFERS**

In addition, through a Riparian Buffer Program, the City would further protect the watershed by purchasing land within riparian buffers that may not be eligible for, or where the owners may not be interested in, LAP's existing fee simple or conservation easement programs. The proposed City-funded Riparian Buffer Pilot Program being considered would be implemented in conjunction with

one or more Stream Management Plans developed under the City's Stream Management Program, and would be carried out in partnership with one or more local land trusts.

# **CONCLUSIONS**

LAP was established for the sole purpose of protecting the City's drinking water quality. Water quality in the NYC reservoirs is very high and the Extended LAP would support maintaining that quality in the future. The goals of LAP are consistent with the federal Surface Water Treatment Rule (SWTR, 1989), New York State Department of Health regulations (10 NYCRR Part 5-1.30(c)(7)(I), and the Filtration Avoidance Criteria under the SWTR. The LAP provides for water quality protection through anti-degradation and smart growth principles.

The Extended LAP is expected to result in the protection of a substantial amount of land rich in natural features such as water resources, wildlife habitat, natural vegetation, wetlands and forested land. The preservation of these lands and water resources, particularly given that many of these areas would continue to provide substantial contiguous natural corridors, would provide a direct benefit to water quality and natural resources by keeping these lands protected from the impacts of development. The LAP places a high priority on acquiring wetlands and lands adjacent to watercourses, and its efforts are expected to result in the protection of many regulated and non-regulated freshwater wetlands, floodplains, riparian areas, and other environmentally sensitive water resources. LAP would protect lands in their natural state, thus preserving potential habitat of species that may utilize those lands, and ensure water quality, thereby protecting aquatic systems.

Most lands purchased under LAP are forested and that would be expected to continue under the Extended LAP. The Extended LAP could help reduce fragmentation, the breaking up of large parcels of forest into smaller pieces, by protecting more continuous adjoining parcels of forested land. Increasing parcelization and conversion to non-forest land has been documented in the Cat-Del watershed. The Extended LAP is likely to protect lands adjacent to existing protected areas such as State Forest Preserve lands. Because forests act as filters, the removal of forested land near watercourses could impact water quality. Fragmentation further reduces the beneficial effects of forests on water quality. The Extended LAP would seek to preserve the forest cover in lands it acquires, which would help to protect water quality and natural habitats.

Protecting forested lands provides ancillary benefits. As stated in the NYS Open Space Plan, <sup>17</sup> forested areas remove carbon dioxide from the atmosphere, thereby mitigating the threat of global warming; and reduce the consumption of nonrenewable fossil fuels for residential and commercial cooling and heating, and trap pollutants in the atmosphere. The current and Extended LAP programs are expected to support, rather than reduce, the removal of carbon dioxide from the air.

The Extended LAP would limit the potential future amount of impervious surface cover in water quality sensitive areas, leaving less sensitive lands and areas that have already been disturbed available for future growth. The <u>Natural Features Criteria</u>, <u>Riparian Buffer Program</u>, and

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<sup>&</sup>lt;sup>17</sup> New York State Open Space Plan. 2009

expanded hamlet areas under the Extended LAP (See *Project Description*) would further support these development patterns. Concentrating future development around hamlet areas where much of it historically and currently occurs is consistent with the principles of smart growth and associated benefits on water quality and the environment. While development in hamlet areas could result in some localized water quality impacts, these impacts would be combined with greater protection of natural areas with high ecological value and by ensuring that development occurs in a sustainable manner in these higher density areas, under the Watershed Rules and Regulations. Smart growth promotes coordination between development and conservation plans. The proposed Extended LAP is consistent with these outlined principles, with numerous Comprehensive Plans prepared by towns, and should have a net benefit to water quality while minimizing impacts to future growth.

Therefore, the proposed Extended LAP is anticipated to have beneficial impacts to water quality and natural resources and no potential for significant, adverse impacts are expected to occur.

# OPEN SPACE AND RECREATION

### **WEST-OF-HUDSON**

Through the Extended LAP, NYCDEP would preserve additional open space in the watershed region as well as associated scenic vistas and natural resources. With respect to active open space and recreational use, NYCDEP would continue under the Extended LAP to open up lands acquired for public access and increase recreational uses, where consistent with public safety and water quality. About 64 percent of the land acquired in fee simple under LAP is now open for recreational uses. NYCDEP anticipates that a similar or greater percentage of lands acquired in the Extended LAP would likely be opened up to recreation in the future.

Recreational use of City lands is governed by the "NYCDEP Rules for the Recreational Use of Water Supply Lands and Waters" with the latest version dated <u>November 29, 2010</u> (Recreational Use Rules). There are several types of recreation allowed on NYCDEP lands and the type allowed is largely a function of where the land is located. NYCDEP allows fishing from shore, fishing from boats, casual walking and hiking, boating, cross country skiing, small and big game hunting, and trapping (on PAAs).

Under the Recreational Use Rules, some LAP lands are designated for 'entry by permit.' That is, recreation users must have a valid NYCDEP Access Permit. Here, lands may be designated for one or more uses (i.e. hiking only, hunting and hiking) depending on several factors. Those who want to keep a boat on any of the NYCDEP the reservoirs for fishing, a valid NYCDEP Boat Tag is also required. Additionally, the Recreational Use Rules have a designation for Public Access Areas (PAAs) in which hiking, hunting, fishing and trapping are allowed without the need for a NYCDEP Access Permit. The majority of WOH lands now acquired are open as PAAs. NYCDEP is also in the process of converting many "entry by permit" or "no trespassing" properties into PAAs. In 2010, NYCDEP is opening a bow-hunting only property along the southern shore of the Ashokan Reservoir. This is a narrow strip of land that does not lend itself to gun-hunting. In 2009, NYCDEP also began the Cannonsville Reservoir Boating Pilot Program in which non-motorized vessels (kayaks, canoes, etc.) are allowed, and users do not have to be fishing. Approximately half of the reservoir was open for this project in 2009. During 2010, NYCDEP expanded the pilot area to include the western portion of the reservoir.

NYCDEP has also issued revocable land use permits to entities such as municipalities and non-profit groups for uses such as snowmobile trails and ball fields in special situations.

Increasing the acreage that is open for public recreational use would benefit the region's communities in several ways.

- Recreational uses are highly valued by residents of watershed communities. In a survey
  of Delaware County residents conducted in 2009, access to both land and waterways for
  hiking, fishing and other recreational uses was rated as being either "very important" or
  "important" by a large majority of respondents; and hunting was rated similarly by a
  somewhat smaller majority.<sup>18</sup>
- A wide range of research over the past decade has highlighted the importance of opportunities for active outdoor recreation as one of the factors shaping young adults' decisions on where to live and work.<sup>19</sup>
- Expanding opportunities for active outdoor recreation can also strengthen the economy of watershed communities by attracting both short-term visitors and second-home buyers, building on what is already one of the region's greatest strengths. Recreation and other tourism-related businesses, including hotels and restaurants, accounted for approximately 13 percent of all employment in the watershed region in 2008.

In addition to its value as an amenity for full- and part-time residents, the opening of land acquired under the Extended LAP for recreational use can also benefit the region by attracting visitors from outside the West-of-Hudson watershed region. In 2005, according to data provided by NYCDEP, about 36,500 people who lived outside the watershed counties held permits for public recreational use of NYCDEP's watershed properties. Since about 90 percent of all NYCDEP properties open for recreational use are located west of the Hudson, it was assumed that the West-of-Hudson watershed region draws a similar percentage of non-local visitor traffic – about 32,850 people. While these visitors provide business and jobs for the watershed, the greatest benefit of expanded public access to City-owned land is likely to be the value that local full- and part-time residents derive from recreational use of these properties.

The Extended LAP is consistent with the 2009 New York State Open Space Conservation Plan and with the land conservation priorities recommended by the Regional Advisory committees. The solicitation and prioritization strategies to be employed by the Extended LAP both coincide with and provide further support to the priorities in the State Plan. As a practical matter, this means that some of the properties identified by the State may be acquired by the City. In addition, the City will likely acquire additional properties that either adjoin State priority sites (providing increase recreational opportunities and possibly enhancing access to State lands) or

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<sup>&</sup>lt;sup>18</sup> AEL Associates, Concern about the New York City Land Acquisition Program in Delaware County Communities: Summary of the 2009 Telephone Survey Results, September 2, 2009, page 22.

<sup>&</sup>lt;sup>19</sup> For example, see Richard Florida, *Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life.* 

otherwise enhance recreational opportunities in the watershed region to compliment the State's goals.

Preservation of open space through the Extended LAP would also be consistent with the ecological and social benefits of land protection outlined in the Open Space Plan:

- Freshwater and tidal wetlands filter and process polluted water.
- Forested areas remove carbon dioxide from the atmosphere, thereby mitigating the threat of global warming; trees and parks in urban settings reduce noise, lower temperatures in the summer, reduce the consumption of nonrenewable fossil fuels for residential and commercial cooling and heating, and trap pollutants in the atmosphere.
- Forests are a primary source of clean water; the Adirondacks and Catskills are the sources of several of the state's major river systems.
- The Catskills also contain much of New York City's reservoirs critical to the needs of millions of New Yorkers.

In conclusion, the Extended LAP in the West-of-Hudson watershed is expected to benefit open space and recreation in the watershed. Therefore, it is not anticipated that the proposed action would have a significant adverse impact on open space and recreation.

### **EAST-OF-HUDSON**

Although the Extended LAP East-of- Hudson is not expected to substantially change the amount of protected open space in the watershed, any land purchased would preserve open space in a largely developed area and its associated scenic vistas and natural resources. With respect to active open space and recreational use, NYCDEP would continue under the Extended LAP to open lands acquired for public access and increase recreational uses, where consistent with public safety and water quality. In conclusion, the Extended LAP in the East-of-Hudson watershed is expected to benefit open space and recreation in the watershed. Therefore, it is not anticipated that the proposed action would have a significant or adverse impact on open space and recreation.

# **CULTURAL RESOURCES**

The Extended LAP would not generally result in any construction activity that would disturb historic or archeological resources in the watershed. The Extended LAP has the potential to result in a benefit to historic and archaeological resources on acquired sites by ensuring that these sites would not be disturbed. In some cases, lands under consideration for acquisition may contain historic structures. As part of the Community Review Process mandated by the MOA, local Town or Village governments would advise the City whether they wish any structures on property to be removed. For acquired property determined to require demolition or alteration of any structure, NYCDEP determines if the structure is subject to State and local regulations regarding historic resources. If the structure is of historical significance, the City adheres to all applicable historic preservation laws and rules and regulations. Therefore, the Extended LAP is not expected to result in the potential for significant adverse impacts on historic or archaeological resources.

# OTHER IMPACT CATEGORIES

The following impact categories were reviewed to determine whether there was a potential for significant impacts from the Extended LAP: visual character, community facilities, traffic, air, noise, and hazardous materials. It was determined that there are no potential impacts and no additional analysis is warranted. The support for this determination is discussed below under each impact category.

# MITIGATION AND UNAVOIDABLE IMPACTS

Based on the assessments conducted in this EIS, the Extended LAP would not result in potential significant adverse impacts. Therefore, no mitigation is being proposed and there are no unavoidable impacts.

# IRREVERSIBLE&IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed Extended LAP would not require the construction of any new facilities. Natural resources including water resources and habitats would be preserved. Resources that would be used for the program would be for purchases of land and operation and maintenance purposes including the human effort required to plan and implement the program. These resources are considered irretrievably and irreversibly committed. No potential significant irreversible and irretrievable resources impacts are expected.

# **ALTERNATIVES**

This EIS assesses the impact of four alternatives to the Extended LAP (the proposed action as described in *Project Description*). It examines the potential impact of alternatives to the proposed action on land use, socioeconomic conditions, community character and other conditions in the watershed. The following alternatives are evaluated:

- The "No Action" alternative; since LAP is a requirement of the FAD, this alternative assumes that New York City's water supply would be filtered.
- A Lesser-Impact Alternative; in which the amount of land to be acquired under the Extended LAP in fee simple and through conservation easements is 10 percent less than estimated in the <u>10 Year Projection</u> Scenario evaluated for the Proposed Action; and
- A No Hamlet Expansion Alternative in which the amount of land to be acquired is the same as under the Extended LAP in fee simple and through conservation easements, but the proposed hamlet expansions discussed in *Project Description* are eliminated. The original hamlet areas designated pursuant to the MOA would remain in place but they

would not be expanded. Other aspects of the program would remain the same as analyzed under the Proposed Action.

Each of these alternatives is examined below.

### NO ACTION ALTERNATIVE

The No Action Alternative presents environmental conditions that would exist if the proposed action were not implemented. The assessment of the No Action Alternative is required for all Environmental Impact Statements (EISs).

The No Action Alternative would put the City in violation of the 2007 Filtration Avoidance Determination (FAD) issued by USEPA, which requires the City to pursue the Land Acquisition Program. If the City does not comply with the 2007 FAD, NYSDOH could require that the Catskill/Delaware System be filtered. Filtration of the Catskill/Delaware System would require the siting, design, construction, and operation of a drinking water filtration plant and could result in potential environmental impacts to the local community where the facility is sited and considerable costs to water and sewer ratepayers.

### LESSER IMPACT ALTERNATIVE

This section discusses the potential impacts of an action in which NYCDEP acquires 10 percent less land than was projected for <u>under the 10 Year Projection Scenario</u>. Based on this approach, NYCDEP acquisitions in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2022 would total 72,853 acres, as compared with 80,948 acres through 2022 in the <u>10 Year Projection Scenario</u>. Purchases of farm easements by the Watershed Agricultural Council from 2010 through 2022 would total 14,400 acres, as compared to 16,000 acres through 2022 in the <u>10 Year Projection Scenario</u>.

### Socioeconomic Conditions - West-of-Hudson

Impacts on Supply of Developable Land

The analysis suggests that all 34 towns have sufficient land available to accommodate both the projected acquisitions under LAP, and the projected rate of residential development through 2022. For the 34 towns collectively, land to be acquired by LAP between 2010 and 2022 represents about 9.7 percent of 2009's available developable land; and new residential development over that time period is estimated to consume 5.5 percent. (It was estimated that under the proposed action, the land to be acquired by LAP between 2010 and 2022 would represent 10.8. percent of the 34 towns' 2009 supply of developable land, and that new residential development during the same period would consume 5.5 percent.) For the 34 towns as a whole, approximately 84.8 percent of 2009's available developable land would still remain in 2022, as compared with 83.7 percent under the reasonable worst-case scenario. Each town would have at least 68 percent of its 2009 supply of developable land remaining in 2022, as compared with a minimum of 66 percent under the reasonable worst-case scenario. Due to the very conservative nature of the analysis, the percentage of developable land remaining in 2022 is likely to be higher.

For the region as a whole, the impact of the Lesser Impact Alternative on the availability of land for development would not differ materially from the impact of the proposed action. In neither case would the projected level of acquisition significantly constrain new development in the West-of-Hudson watershed between 2010 and 2022.

# Other Socioeconomic Conditions, Land Use and Community Character

A 10 percent decrease in the acreage projected to be acquired under the Extended LAP would have very little effect on the program's impact on socioeconomic conditions, land use patterns or the character of communities in the watershed. Such a reduction could marginally reduce the potential for conflicts in a few towns between the Extended LAP and the need for land for future development – but the effect would not be substantial. There could be a marginal reduction in the potential for displacement of mining or timber harvesting as a result of acquisition of land by NYCDEP; the potential for such displacement does not appear to be significant in any case. A 10 percent reduction in the acreage to be acquired could also result in a commensurate reduction in the areas that could be opened by NYCDEP for public recreational use. A 10 percent reduction would be unlikely to affect hamlet areas and village centers in the watershed towns, since the reduction in land to be acquired would generally take place outside these areas.

### Socioeconomic Conditions - East-of-Hudson

The impact of the proposed action on land use, community character and socioeconomic conditions in the East-of-Hudson region would be quite limited – primarily because the amount of land projected to be acquired in the East-of-Hudson region under the 10 Year Projection Scenario totals only 1,517 acres, spread across four towns. Under the Lesser Impact Alternative, the land to be acquired in the East-of-Hudson watershed region would decline by 10 percent, to 1,365 acres of which developable land would total 484 acres. There would be slightly less potential for conflict between the Extended LAP and the need for land to accommodate new development than in there would be under the proposed action – but in either case, the impact would be negligible.

### Water Quality and Natural Resources, Open Space

LAP provides benefits to water quality, natural resources and open space. If NYCDEP acquires 10 percent less land than the <u>10 Year Projection Scenario</u>, these benefits may be reduced, but the action would still provide benefits.

### **Cultural Resources**

Under the Lesser Impact Alternative, the same protocol would be applied with respect to protecting and preserving historical and archaeological resources.

### NO EXPANSION OF DESIGNATED HAMLET AREAS

# **Socioeconomic Conditions**

The final alternative to be considered is one in which there would be no expansion of designated hamlet areas. The hamlet areas originally designated by watershed towns pursuant to the 1997 MOA would remain in place and LAP activity would not occur in these areas to the extent these

towns have precluded acquisitions. This alternative is being considered because the negotiations over the Extended LAP with stakeholders are ongoing and the hamlet expansions are under discussion, although NYCDEP has agreed and remains committed to including the expanded hamlet areas. For this alternatives analysis, it is assumed that the total amount of land to be acquired by NYCDEP in fee simple or through conservation easements or by WAC would remain as described in *Project Description*. Without the expanded hamlets, however, this alternative assumes that some of the land acquired would be in the areas proposed for hamlet expansions.

Because the MOA did not provide for designation of hamlet areas east of the Hudson, the proposed action does not include expansion of hamlet areas in East-of-Hudson towns. The No Hamlet Expansion Alternative would thus not affect the analysis of the East-of-Hudson region and is not considered here.

As discussed in *Project Description* above, the proposed expansion areas (including a proposed expansion in the Town of Walton to which the parties have not yet agreed) cover a total of <u>about 26,700</u> acres. Among the 16 towns in which hamlet expansions have been proposed, the impact of not expanding the designated hamlet areas is likely to vary from town to town, based on a number of factors:

- The scale of LAP acquisitions in the town through 2022, and their projected impact on the town's supply of developable land;
- The pace and location of new development in the town, the acreage required to support it, and its projected impact on the supply of developable land;
- The extent to which any major development planned for the towns are known to be located within the proposed expansion areas;
- The size of the proposed expansion areas, relative to the overall size of the town;
- The acreage within the proposed expansion areas already solicited by LAP; and
- LAP's projected "success rate."

Broadly speaking, eliminating the proposed hamlet expansions would not necessarily alter the total amount of land to be acquired within the 16 affected towns – but it would affect where the acquired land is located, and the potential for conflict between projected LAP acquisitions and requirements for land to support projected future development.

## Table ES-13:

- Highlights the size of each proposed expansion area relative both the existing MOA designated hamlet areas, and to the size of the town as a whole;
- Identifies the amount of land within each expansion area already solicited by NYCDEP or potentially available for WAC easements; and

Projects the acreage that NYCDEP and WAC might acquire<sup>20</sup> in what would have been each town's proposed expansion areas.

This calculation suggests that under the No Hamlet Expansion Alternative, 3,975 acres could be acquired in fee, CEs or WAC within the proposed expansion areas of the 15 towns where the parties have reached agreement on the proposed hamlet expansions, and potentially more than 700 additional acres in the area Walton has proposed to add to its 1997 designated areas.

In some towns, as Table ES-13 shows, the proposed expansion area (PEA) as a proportion of the Town's total area is variable. In some towns, the number of acres that the Extended LAP could potentially acquire in what had been the proposed expansion areas for this and other reasons would be relatively small. In others, the proposed expansion areas represent a much larger share of the Town's total area – as much as 11 percent in Ashland – and the number of acres that the Extended LAP could acquire in these areas could also be larger –in Windham, Hunter and Walton, potentially more than 500 acres.

<sup>20</sup> Based on NYCDEP's projected "success rate," based on past experience, that it could potentially acquire through 2022; and an assumption that, for the West-of-Hudson watershed as a whole, WAC will succeed in acquiring easements on about 18 percent of all potentially eligible farm land.

Table ES-13: Solicited acres and projected fee and CE acquisitions in proposed expansion areas

						Projected fee			
	MOA	Proposed	PEA as % of			and CE	Acres in MOA	Projected	Total DEP and
	designated	expansion	total town	Solicited		acquisitions in	PEA Available	WAC CE in	WAC Acres
Town	acres	acres	acres	acres in PEA	Success rate	PEA	for WAC CE	PEA/MOA	Projected
Delhi	2,346	2,556	6%	891	20%	178	818	147	325
Hamden	420	2,434	6%	776	20%	155	1,027	185	340
Harpersfield	405	1,298	5%	370	20%	74	847	152	226
Kortright	250	3,664	9%	1,372	20%	274	1,743	314	588
Masonville	0	150	0%	0	20%	0	0	n.a.	(
Meredith	73	71	0%	60	20%	12	17	n.a.	12
Middletown	1,734	298	0%	208	20%	42	48	n.a.	42
Roxbury	957	435	1%	104	20%	21	342	62	83
Sidney	0	218	1%	34	20%	7	0	n.a.	7
Walton	1,503	2,929	5%	889	20%	178	1,169	210	388
Ashland	362	1,676	10%	997	27%	269	17	n.a.	269
Hunter	3,251	2,891	5%	1,744	27%	471	0	n.a.	471
Jewett	652	2,014	6%	556	27%	150	0	n.a.	150
Lexington	362	375	1%	375	27%	101	0	n.a.	101
Windham	1,148	2,797	10%	1,429	27%	386	0	n.a.	386
Conesville	275	1,570	6%	449	25%	112	583	105	217
Olive	547	1,333	3%	243	25%	61	0	n.a.	61
Total	14,285	26,709		10,497		2,491	6,611	1,175	3,666

Taking into account the factors outlined above, there appear to be seven towns where elimination of the proposed hamlet expansions could have the greatest impact. The potential impact of the No Hamlet Expansion Alternative in each of these towns is discussed below.

#### Windham

Since development pressures have been stronger in Windham in recent years than in any other West-of-Hudson town, the demand for land within the proposed expansion areas during the next decade could potentially be strong. Much of Windham's recent development has tended to occur on small parcels in the proposed expansion area. If a significant portion of the land in the proposed expansion area were to be acquired under the Extended LAP, the result in some cases could be to shift new development away from the edge of the Town's core hamlets, and toward outlying areas in Windham. Other projects that might be feasible only in or near the Town's principal hamlets ranging from higher density housing to resort-related development could potentially not occur at all.

### Hunter

The expansion of Hunter's designated areas would provide space to accommodate growth on the outskirts of the Villages of Hunter and Tannersville, and along a portion of Route 23A. More than *two*-thirds of the land in the expansion areas has already been solicited by NYCDEP. As in Windham, acquisition of any significant portion of the proposed expansion areas through the Extended LAP could result in some development projects shifting toward outlying areas of the Town – or in some projects that need a relatively close-in location not being undertaken at all.

#### Ashland

The impact of the No Hamlet Expansion Alternative could be particularly significant in Ashland, for several reasons. The proposed expansion areas represent a significant portion of the Town's total area; and <u>about</u> 60 percent of the land within the expansion areas has already been solicited by NYCDEP. The town has been one of the fastest-growing in the watershed during the past decade; acquisition of portions of the proposed expansion areas under the Extended LAP could, as in Hunter and Windham, shift some of the anticipated development to outlying areas.

#### Jewett

While somewhat less vulnerable than the three towns cited above, Jewett could also be affected by the elimination of the proposed hamlet expansion. The percentage of the Town's total area that would be included within the proposed expansion area is lower than in Windham or Ashland; and the percentage of land within the expansion area already solicited by NYCDEP is also lower. Thus, while the No Hamlet Expansion Alternative might result in some shifting of development from the expansion areas to outlying areas of the Town, such shifts would likely be less extensive in Jewett than in Windham, Hunter or Ashland.

#### Conesville

Because the hamlet areas originally designated by the Town are relatively small – totaling only 275 acres – expansion may be particularly important for providing room for further development in Conesville. The percentage of land within Conesville's expansion area already solicited by NYCDEP is 29 percent. The acreage which might be acquired by NYCDEP in this area (112 acres) and WAC easements could add another 105 acres to this total

### Delhi

Delhi's proposed hamlet expansion is among the largest – both in acres and as a percentage of the Town's total area. The percentage of land within the area already solicited by NYCDEP is relatively low (40 percent). Nevertheless, the acreage that could potentially be acquired either in fee simple or through NYCDEP and WAC easements is substantial – a total of 325 acres, as shown in Table ES-13. Because there is relatively little land available for development within the Village of Delhi – Delaware County's largest village, the County seat, and the principal center of civic and commercial activity for much of the County – ensuring the availability of land for development beyond the originally-designated hamlet area may be important to the Town's future. It could be particularly important, for example, for the development of a supply of rental housing that is adequate to meet the needs of both SUNY students and full-time residents, and to the development of housing that is affordable for county, municipal, SUNY and other public employees.

#### Hamden

Past WAC easements in Hamden have removed land from potential development in and near the Town's existing designated hamlet areas. Under the No Hamlet Expansion Alternative, this problem could be aggravated by the potential acquisition of WAC easements on 185 additional acres, and additional 155 acres acquired by NYCDEP totaling 340 acres, within what would have been Hamden's proposed hamlet expansion area.

### Harpersfield

Because the amount of land already solicited by NYCDEP in Harpersfield's proposed expansion area is relatively small, projected acquisitions in fee simple or through NYCDEP conservation within this area total only 74 acres. However, WAC easements could add 152 acres to this total, increasing the potential for conflict between future acquisitions the need for land to accommodate new development.

# Kortright

The land projected to be acquired in fee simple or through conservation easements in Kortright under the Extended LAP includes only 5 percent of the Town's estimated supply of developable land as of 2009. At first glance, it might thus appear that the town does not need a major expansion of its designated hamlet area in order to ensure the availability of land to support future development. However, because of the remote location of the northern parts of Kortright, the southern portion of the Town may offer the best prospects for future development. It thus may be particularly important for Kortright to ensure the availability of land in the south, rather than shifting development into more remote areas.

### Walton

Walton's proposed hamlet expansion totals  $\underline{2,929}$  acres, making it one of the largest of the 16 proposed expansions. Roughly 30 percent of the land that would be covered by the proposed expansion has already been solicited by NYCDEP. Elimination of the proposed hamlet expansion could thus result in NYCDEP and WAC acquisition of more than  $\underline{889}$  acres within the expansion area. In Chapter 3 it was projected that as of  $\underline{2027}$  Walton would still have  $\underline{79}$  percent of its 2009 supply of developable land remaining, after taking into account projected LAP acquisitions and projected residential development. While in the aggregate the Town's supply of developable land may be adequate, it is important to note that commercial and industrial activity in the town are heavily concentrated in and around the Village of Walton. Ensuring the availability of land in this area may thus be important to future development of the Town's economy.

# Other Socioeconomic Conditions, Land Use and Community Character

Overall, elimination of the proposed hamlet expansions could have several negative effects on land use, socioeconomic conditions and community character in watershed towns. It could result in new development "leapfrogging" the proposed expansion areas, and shifting to locations further away from the existing hamlets and village centers. Because development in outlying locations is likely to be at lower densities, eliminating the proposed hamlet expansion could result in greater consumption of land for any given level of development. It could also increase the distance that residents need to travel for shopping and basic services with associated increased traffic, air and noise generation. The potential for development to leapfrog to outlying areas could reduce somewhat the Extended LAP's contribution to preserving the low density, rural character and high-quality natural environment that many residents of watershed towns wish to preserve.

Eliminating the proposed expansion would not support the ongoing efforts toward economic and community revitalization in the region's hamlets and village centers – a priority for many West-of-Hudson watershed towns. In some cases, acquisition of land or easements in these areas by NYCDEP or WAC could result in certain types of development (that which requires relatively close-to-town locations) not occurring at all. Examples of such development could include housing for older residents – other affordable housing – and higher-density residential development around ski centers. Any extensive acquisition of land or easements in these areas by either NYCDEP or WAC could also have the effect of precluding the expansion of existing commercial or industrial businesses – or the development and growth of new businesses – within the affected areas.

Implementation of the Extended LAP without the proposed hamlet expansions could thus potentially lead to a conflict within the hamlet expansion areas between the projected level of acquisitions under the Extended LAP and community character and economic development goals including the need for land to support affordable and higher density housing and commercial businesses which typically would occur in these areas as well as maintaining rural character and natural resources in outlying areas.

# Water Quality and Natural Resources, Open Space

As discussed in *Water Quality and Natural Resources*, concentrating growth in designated areas is a principle of smart growth and a means of reducing sprawl and growth of impervious cover in sensitive areas of the watershed. Land Acquisition under the No Hamlet Alternative would still provide water quality benefits and open space benefits; however, development may occur in areas that are more sensitive to water quality, and the benefits of the Extended LAP may not be as fully realized.

### **Cultural Resources**

Under the No Hamlet Expansion Alternative, the same protocol would be applied with respect to protecting and preserving historical and archaeological resources.

# **CHAPTER 1:**

# PROJECT DESCRIPTION

### INTRODUCTION AND BACKGROUND

The New York City Department of Environmental Protection (NYCDEP) proposes to continue the watershed Land Acquisition Program (LAP) in the three surface water watersheds that constitute the New York City surface water supply system; the three watersheds are the Delaware, Catskill, and Croton Watersheds. With the expiration of the existing Public Water Supply Permit (WSP) in January 2012, NYCDEP submitted an application for a new 10-year WSP on January 21, 2010, in accordance with the 2007 Filtration Avoidance Determination (FAD) issued by the U.S. Environmental Protection Agency (EPA), seeking permit approval prior to January 2012 to continue LAP through the year 2022. Per agreement with NYSDEC, other regulators (NYSDOH, USEPA), West of Hudson community representatives and representatives of environmental organizations (together "West of Hudson Watershed Stakeholders") after the submittal of the WSP application, it has been agreed that the term of the successor WSP will be 15 years. The future program that would be covered under the new WSP is referred to herein as the "Extended LAP."

In addition, a companion Agreement will be signed by many of the parties to the 1997 Watershed Memorandum of Agreement (1997 MOA), reaffirming the parties' commitments under the 1997 MOA and making additional commitments with respect to the LAP and related programs going forward.

The goal of the New York City Department of Environmental Protection (NYCDEP) Land Acquisition Program (LAP) is to acquire fee simple and conservation easement interests to protect environmentally-sensitive land in the New York City (City) watershed as a part of the City's overall Watershed Protection Program. LAP is a key component of the City's efforts to continue to provide high quality drinking water without filtration of the Catskill-Delaware (Cat-Del) System, which provides water to over 9 million residents of the City and nearby communities in New York State. Since its creation in the 1990s, LAP has protected, through acquisition, over 100,000 acres of land in the 1 million-acre Cat-Del System and over 2,000 acres of land in the Croton System. The land and easements acquired are to be maintained in perpetuity as undeveloped land for watershed protection. Together with lands protected by the State and other entities, these acquisitions have raised the level of permanently protected land in the Cat-Del System from 24 percent in 1997 to 34 percent today.

<sup>&</sup>lt;sup>1</sup> Although the Catskill watershed and Delaware watershed are distinct geographical features, they are functionally managed together and for regulatory purposes are considered a single integrated system.

This Environmental Impact Statement (EIS) <u>was</u> prepared to support the <u>City's</u> application for the WSP. It is anticipated that the future WSP would continue to authorize land acquisition in the three watersheds for watershed protection purposes, with a substantially greater emphasis on acquisitions in the West of Hudson portions of the Cat-Del System.

## OVERVIEW OF THE NEW YORK CITY WATER SUPPLY SYSTEM

The New York City water supply system <u>provides</u> drinking water to almost half the population of the State of New York—eight million people in New York City and one million people in Westchester, Putnam, Orange, and Ulster Counties—plus the millions of commuters and tourists who visit the City throughout the year. The source of this superior water is a network of 19 reservoirs and three controlled lakes in a 1,969 square mile watershed that extends 125 miles to the north and west of New York City. Overall, the system has a total storage capacity of approximately 550 billion gallons. Consumption in the year 2000 averaged 1.2 billion gallons a day. The Croton system, the City's first upstate water supply, provides about 10% of the daily consumption. The other 90% comes from the Cat-Del system (see Figure 1-1<u>a</u>).

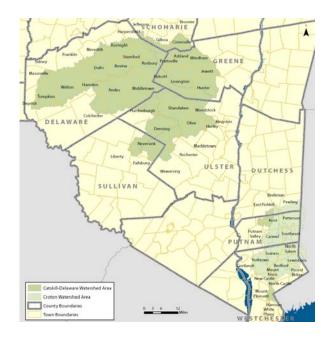


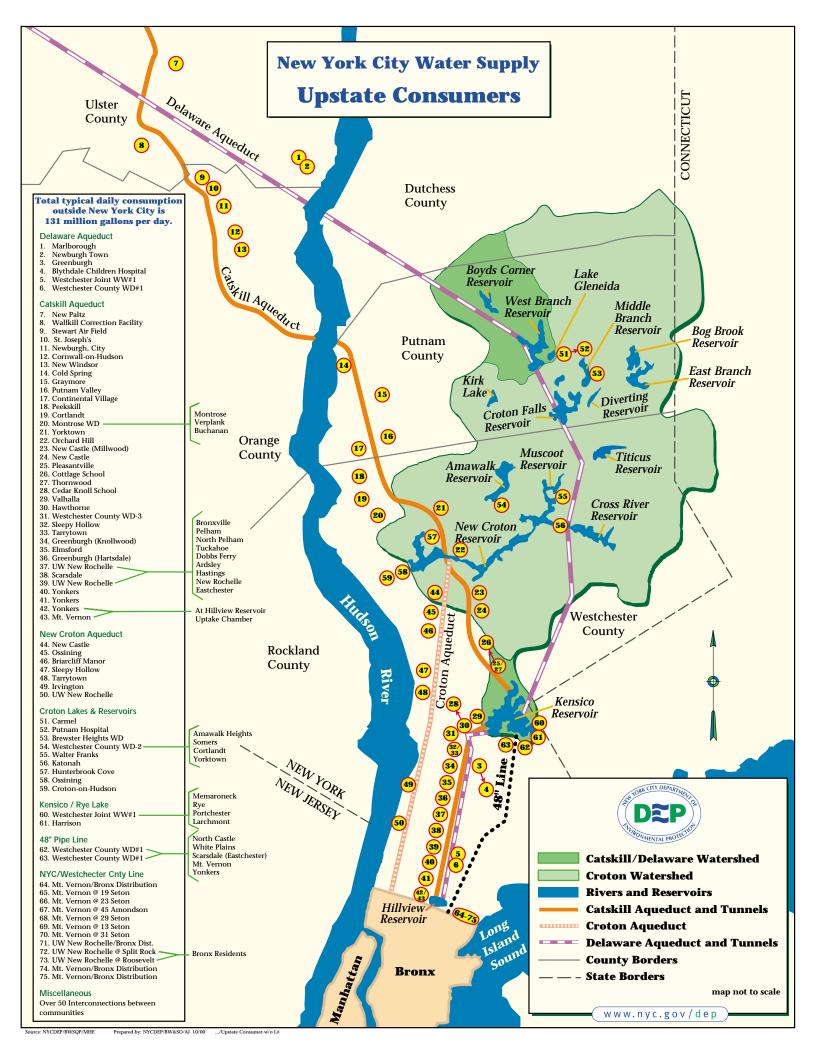
Figure 1-1a- Map of Catskill/Delaware and Croton Watersheds

The Catskill system consists of two reservoirs—Schoharie and Ashokan—located west of the Hudson River in Ulster, Schoharie, Delaware, and Greene Counties. Water leaves the Schoharie Reservoir via the 18-mile Shandaken Tunnel, which empties into the Esopus Creek and then travels 22 miles through the Esopus to the Ashokan Reservoir. Water leaves Ashokan Reservoir via the 75-mile-long Catskill Aqueduct, which travels to the Kensico Reservoir in Westchester County. The Catskill system provides, on average, 40% of the City's daily water supply.

The Delaware system is comprised of four reservoirs west of the Hudson River: Cannonsville, Pepacton, and Neversink in the Delaware River basin, and Rondout in the Hudson River basin. The outflow from the first three reservoirs arrives in the Rondout via three separate tunnels;

water then leaves Rondout and travels to West Branch Reservoir in Putnam County via the 90-mile Rondout/West Branch Tunnel. Water from West Branch then flows through the Delaware Aqueduct to the Kensico Reservoir. The Delaware system provides 50% of the City's daily demand. Because waters from the Catskill and Delaware watershed are commingled at Kensico Reservoir, they are frequently referred to as one system: the Catskill/Delaware system.

The Croton watershed is located entirely east of the Hudson River in Westchester, Putnam, and Dutchess Counties, with a small portion in the State of Connecticut. Historically, 10 percent of the City's average daily water demand is provided by the Croton system, although in times of drought it may supply significantly more water. The City is in process of constructing a water treatment plant to filter the Croton water supply. It should be noted that the Croton Falls and Cross River Reservoirs, although located in the Croton System, can provide water to the Delaware Aqueduct during periods of drought and would thus be considered part of the Cat-Del System under those conditions and consequently part of the 2002 FAD. Consistent with the 1905 Water Supply Act, the City's water supply system provides over one million upstate consumers with drinking water. See Figure 1-1b.



## PURPOSE AND NEED

The mission of the Land Acquisition Program (LAP) is to acquire fee simple and conservation easement interests to protect environmentally-sensitive land in the New York City (City) watershed as a part of the City's overall Watershed Protection Program. LAP is a key component of the City's efforts to increase watershed protection and avoid filtration of the Cat-Del System, which provides water to over 9 million residents of the City and nearby communities in New York State. Land acquisition is an anti-degradation strategy, which seeks to avoid potential adverse water quality impacts associated with development and other land uses. The Extended LAP is needed to continue to support FAD requirements and to focus additional attention to basins and sub-basins with a low percentage of protected lands. LAP acquisition criteria are evolving to meet this objective.

## PROGRAM TO DATE

The LAP grew out of the City's response to the Federal Safe Drinking Water Act Amendments (1986) and Surface Water Treatment Rule (SWTR, 1989). As a result of an increased awareness of the threat posed by micro-organisms in unfiltered surface water systems, the SWTR required such public water supplies to either filter their supply or meet specific "filtration avoidance criteria." The City, through its Department of Environmental Protection, sought to meet those criteria and avoid filtration through the development of a comprehensive Watershed Protection Plan for the Cat-Del System.

Under the SWTR, an applicant for filtration avoidance needs to "demonstrate through ownership and/or written agreements with landowners within the watershed that it can control all human activities which may have an adverse impact on the microbiological quality of the source water." Increased ownership of watershed lands is a key component of the City's ability to meet this condition. Prior to 1997, the City owned approximately 35,500 acres of land in the Cat-Del System (excluding reservoirs), and the State of New York owned another 202,000 acres, for a total protected land base of approximately 24 percent of the watershed land area. Since the early 1990s, the City has sought to increase those percentages though a robust land acquisition program.

NYCDEP initially sought to establish a land acquisition program in the Cat-Del System as a condition of the first FAD, issued by the EPA in 1993. In August 1993, the City applied for a Water Supply Permit (WSP) from the New York State Department of Environmental Conservation (NYSDEC). That application, and the City's concurrent efforts to promulgate new Watershed Rules and Regulations with the New York State Department of Health (NYSDOH), met strong resistance from municipalities in the watershed. While many residents in these upstate communities supported such land protection efforts for various reasons, many also viewed these efforts as a threat to local economic development.

Over the ensuing three and a half years, the City, Federal and State regulators, local governments and environmental organizations engaged in a variety of efforts to resolve these issues, which resulted in a comprehensive New York City Watershed Memorandum of Agreement (MOA) in January 1997. Under this landmark agreement, the City agreed to undertake a wide array of programs to protect water quality while also supporting local economic development. The MOA called on the City to dedicate up to \$300 million for a land acquisition program in the Cat-Del System, and identified specific program parameters and acquisition procedures, as detailed below in Section II.B.

In January 1997, the City received a WSP issued by NYSDEC, and the first real estate closing under LAP occurred in October, 1997. The WSP was issued for a ten-year period (through January 2007), with a five-year renewal option (through January 2012) that was exercised. Since 1997, EPA has issued several FADs that have continued to place a strong emphasis on land acquisition. In 2007, EPA, in collaboration with DOH and NYSDEC, issued a ten-year FAD that required the City to dedicate an additional \$241 million for land acquisition in the Cat-Del System. The 2007 FAD also required the City to apply for a new WSP in January 2010. As a prelude to that permit application, the FAD called for a "long-term land acquisition strategy...for the period from 2012 to 2022" to be submitted by September 30, 2009.

With the expiration of the existing WSP in January 2012, NYCDEP submitted an application for a new WSP in January 2010 with permit approval requested prior to January 2012 in order to continue LAP from January 2012 through 2022. <u>Based on discussions with the West of Hudson Watershed Stakeholders after the submittal of the WSP application, NYSDEC agreed that the term of the successor WSP will be 15 years.</u> This Environmental Impact Statement (EIS) supports the application for the WSP. It is anticipated that the future WSP would continue to authorize land acquisition in the three watersheds for watershed protection purposes, with an emphasis on acquisitions in the <u>West of Hudson portions of the</u> Cat-Del System.

Under the MOA, the City was required to solicit at least 355,050 acres of land in the Cat-Del System, with specific acreage requirements by basin and priority area. These solicitation requirements were met by 2006 and the City agreed to conduct additional solicitation and resolicitation on an annual basis as a result of the 2002 and 2007 FADs. The City's solicitation requirements and results in the Cat-Del System are summarized in Table 1-1.<sup>2</sup> For the purposes of the  $\underline{\underline{F}}$ EIS, July 2009 data referenced in the September 2009 Long-Term Plan will serve as the baseline for analysis.

<sup>&</sup>lt;sup>2</sup> Since virtually all eligible lands in Priority Areas (PA) 1 and 2 were solicited while only 75% of lands in Priority 3 and 50% of Priority 4 had been solicited as of 2006, almost all newly solicited lands thereafter derived from the remaining unsolicited lands in PAs 3 and 4. These two PAs are found in the Cannonsville, Pepacton, Schoharie, and Neversink Basins.

Table 1-1
Solicitation and Acquisition Status by Basin as of July, 2009

		MOA Solicitation		Acres Acquired
District	Basin	Requirement	Acres Solicited	(LAP Fee + CE)
EOH	Kensico	950	1,071	207
	West Branch	14,250	14,676	8,602
	EOH Sub-total	15,200	15,747	8,809
WOH	Ashokan	45,530	46,417	11,460
	Rendout	29,052	30,126	6,583
	Neversink	12,910	21,891	2,974
	Schoharie	68,700	95,491	19,000
	Pepacton	78,630	122,016	18,861
	Cannonsville	105,028	143,820	13,065
	WOH Sub-total	339,850	459,761	71,943
Cat-Del Totals		355,050	475,508	80,752

In addition to the lands solicited and acquired directly by the City (as shown in Table 1-1), the City funds the acquisition of conservation easements by the Watershed Agricultural Council (WAC) on agricultural land. That program (see below under "Rights Acquired") resulted in the acquisition of an additional 16,954 acres of farm easements through July, 2009, which acreage is not shown above – nor are acres of farms solicited by WAC.

### REAL ESTATE METHODS AND PROCEDURES

LAP utilizes a number of methods and procedures that were devised early in the program's development and are guided by the principles and restrictions set forth in the MOA and WSP. These methods and procedures govern the way the City contacts landowners, how appraisals are conducted, the real property rights to be acquired, provisions for public recreational access on lands acquired in fee simple, and how the City pays property taxes on property rights acquired. The City has a strong record of compliance with its MOA, FAD and WSP obligations. The key components of such compliance are as follows:

# Willing Buyer / Willing Seller (MOA ¶ 60/ 1997 WSP Special Condition 5)

Landowners and the City must both enter into a proposed transaction on a strictly voluntary basis. Landowners are under no obligation to sell until and unless they sign a contract of sale.

## Fair Market Value (MOA ¶61/1997 WSP Special Condition 13)

Land and easements are appraised at fair market value by independent, certified NY State Appraisers commissioned by the City. Landowners have the right to present their own appraisals, made by certified appraisers, which must be considered by the City's appraiser. The City's offer, however, is the value determined by its appraisal, after consideration of any such alternate appraisal. That is, the City does not negotiate price with landowners, but rather makes

an offer of the appraised amount, which the landowner is free to accept or reject. Only under very limited circumstances (mortgage or tax foreclosure, legal judgment) can the City acquire land at below fair market value.

# Solicitation (MOA ¶60, 64, 65 and Attachment Z)

The City's obligation to diligently pursue acquisition is defined in Attachment Z of the MOA. Although the City retains the flexibility to decline to appraise a property upon inspection, the City is obligated (except in very limited circumstances and subject to regulatory approval) to pursue acquisition once an appraisal is ordered. Since 1997 under the MOA (and since 2002 pursuant to the FAD), the City has been required to meet a series of annual targets for landowner solicitation and resolicitation. Hereafter, the term "solicitation" includes both "original solicitation" in which the City makes the initial outreach to pursue acquisition of a property, and "re-solicitation," in which the City makes subsequent attempts to contact the same or subsequent landowner of a given property, after being unable to make contact or reach agreement at the point of original solicitation.

### Rights Acquired

Through LAP the City <u>has to date</u> acquire<u>d</u>, or fund<u>ed</u> the acquisition of, three distinct types of property interests:  $\frac{3}{2}$ 

**Fee Simple** – The City acquires land outright. This is the City's preferred acquisition method. Fee simple acquisition results in the highest level of management, allows the City to consider recreational, natural resource management and other uses on the property acquired, and makes the most efficient use of City staff resources.

Conservation Easements – In cases where landowners want to retain ownership and exclusive use of their land, conservation easements ("CEs") allow protection through the acquisition of perpetual deeded rights. Although initial acquisition costs are lower than for fee simple purchases, CEs involve significantly higher long-term costs for monitoring and potential enforcement of deed provisions. CE purchases are pursued on larger properties whose owners are not interested in selling fee simple interest.

Watershed Agricultural Easements - The City also funds the acquisition of CEs on farms by the Watershed Agricultural Council (WAC). These CEs, which involve the farmer's

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<sup>&</sup>lt;sup>3</sup> As explained in detail below, the draft WSP would create additional categories of property interests, all of which may be acquired by partner organizations. With respect to properties acquired in fee, in addition to general acquisitions as NYCDEP has historically pursued, NYCDEP may acquire "Riparian Buffer in fee," real property (including floodplains) adjacent to streams, lakes, rivers, wetlands, and/or water bodies which may not meet the otherwise applicable size thresholds and which may be acquired in areas where LAP acquisitions are otherwise excluded. Similarly, in addition to the NYCDEP conservation easements and Watershed Agricultural Easements that have been acquired under the LAP to date, the WSP describes two other categories of Watershed Conservation Easements: Riparian Buffer Easements (on real property meeting the same criteria as Riparian Buffers in fee) and Watershed Forest Conservation Easements, on real property in forest production or designated for future forest production.

implementation of a Whole Farm Plan that governs best management practices for agricultural uses, allow for a diversity of farm-related uses but preclude most other types of development.

A summary of acres acquired by Real Estate type and year is shown in Figure 1- 2 below.

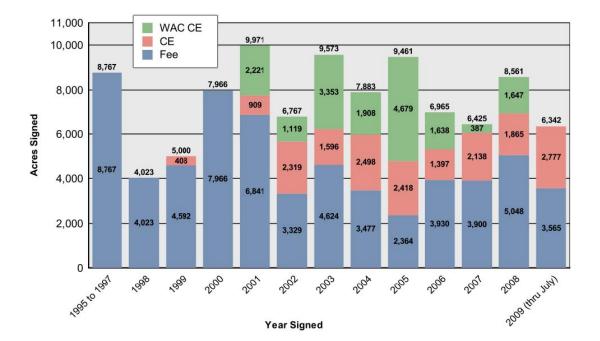


Figure 1-2-Acres Acquired by Real Estate Type and Year

## Property Taxes (MOA ¶79 and 80/ WSP Special Conditions 18-20)

The City pays property taxes on all land and CEs acquired under LAP, including any lands under watershed agricultural CEs that are not agriculturally-exempt. The City pays taxes on eased properties in proportion to the value of the easement acquired as set forth in NYS Real Property Tax Law. Under the MOA, the City has committed not to challenge tax assessments on such lands absent specified circumstances not anticipated to occur.

## PLANNING PRINCIPLES

The Cat-Del watershed spans just over 1 million acres draining into nine reservoirs in eight upstate counties. Figure 1-3 shows protected land as a percentage of land area by basin.

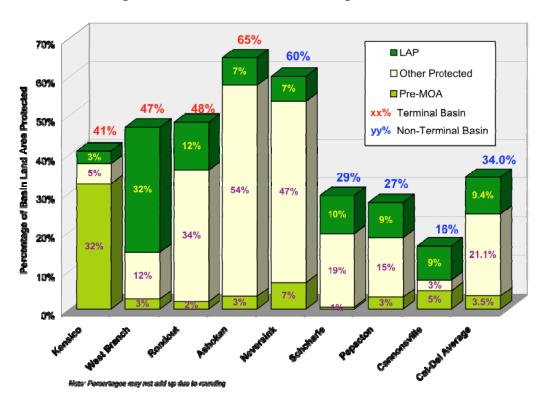


Figure 1-3: Protected Land as a Percentage of Basin Land Area

The identification of the most important parcels for acquisition within this vast watershed is an ongoing process based on a number of geographic, topographic, cost and real estate factors. LAP first prioritizes property for solicitation on the basis of its location within the water supply system, followed by site-specific characteristics. These principles are embodied in the Priority Area and Natural Features Criteria provisions of the MOA as discussed below.

## **Priority Areas**

The basins and sub-basins comprising the Cat-Del System were assigned to Priority Areas (as depicted in Figure 1-4) as follows:

- *Priority 1A* Sub-basins within 60-day travel time to distribution located near reservoir intakes;
- *Priority 1B* All other sub-basins within 60-day travel time to distribution;
- *Priority 2* All remaining sub-basins in terminal reservoir basins;
- *Priority 3* Sub-basins in non-terminal reservoir basins with existing water quality problems; and
- *Priority 4* All other sub-basins in non-terminal reservoir basins.

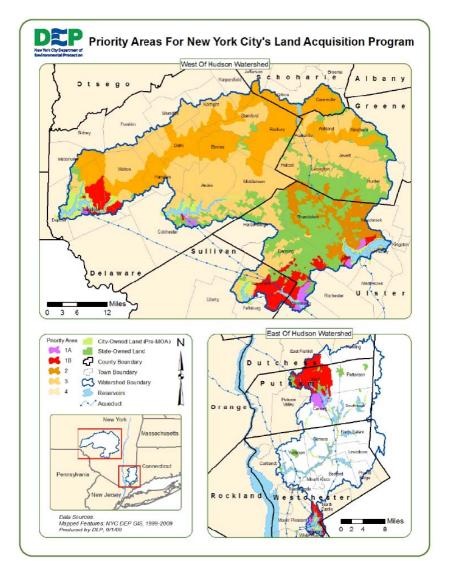


Figure 1-4: Cat Del System Priority Areas

The MOA required that the City solicit at least 355,050 acres in accordance with a schedule that reflected LAP's priorities both in timing (higher priority areas were solicited first) and in percentage of eligible lands solicited (ranging from 95 percent of eligible lands in Priority 1A and 1B to 50 percent of eligible lands in Priority 4).

Following the new funding commitments contained in the 2007 FAD, the City's 2008 to 2010 Solicitation Plan called for an additional 90,000 acres of new solicitation. These additional acres were solicited primarily in Priority Areas 3 and 4 (since Priority 1 and 2 had already been almost entirely solicited), effectively raising the level of solicitation in those Priority Areas above the minimum levels specified in the MOA.

#### **Natural Features Criteria**

Natural Features Criteria as defined in MOA 63 establish a set of hydrologic and topographic features, one or more of which must be present on a property in order to qualify for acquisition in Priority Areas 2, 3 or 4. (In priority areas 1A and 1B, natural features criteria are not required.) LAP uses the NYCDEP Geographic Information System (GIS) to overlay these features onto digitized tax parcels as part of the parcel evaluation process.

Currently Paragraph 63 of the Watershed MOA establishes criteria that parcels must meet in order to be eligible for acquisition under the LAP, including natural features criteria applicable to parcels in Priority Areas 2, 3, and 4. There are two main categories of natural features criteria.

- 1) Surface water features: Parcels must
  - be at least partially located within 1,000 feet of a reservoir, or
  - be at least partially located within the 100-year flood plain, or
  - be at least partially located within 300 feet of a watercourse, as defined in the Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources (Watershed Regulations), or
  - contain in whole or in part a federal jurisdiction wetland greater than five (5) acres or a NYSDEC mapped wetland, or
- 2) Slopes: Parcels must contain ground slopes greater than fifteen percent (15%).

## **Hamlet Designations**

Under the 1997 MOA, West-of-Hudson municipalities had the opportunity to identify Designated Areas, including villages, hamlets, village extension areas and industrial/commercial areas, and separately to determine, by resolution, whether to exclude the City's acquisition of property in through LAP in fee simple in these areas. The intent of the Designated Areas was to "...provide reasonable opportunities for growth in and around existing population centers." The designated hamlet areas are shown in Figure 1-5.

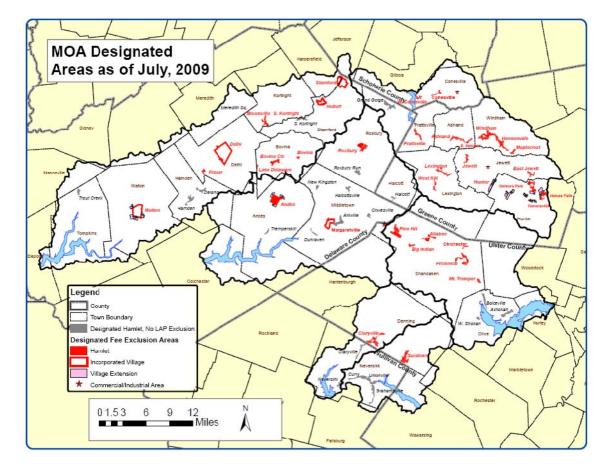


Figure 1-5: Existing Designated Hamlets

# **Flood Buyout**

The Federal Emergency Management Agency (FEMA) runs a Hazard Mitigation Grant Program (HGMP) which provides funding to state and local governments to reduce future costs associated with natural disasters. After parts of Delaware County experienced significant flooding in 1996, the County asked New York City to participate in a flood buyout program funded through HGMP. Through this program, homeowners in flood-prone areas (primarily in the Villages of Margaretville and Fleischmanns) were able to sell their houses at pre-flood values. The homes acquired were demolished and the land is to be maintained in a natural state for flood abatement. Through LAP, the City contributed to the required 25 percent local match under HGMP to pay for the land component of each acquisition, as well as associated soft costs. As a result of this program, LAP acquired 28 parcels comprising a total of 14 acres of land.

In the Extended LAP, NYCDEP would be open to participating in future flood buyout projects if requested by a county or local government.

## **Use of Water Supply Lands**

NYCDEP allows a number of uses on LAP acquired land where consistent with water quality and public safety. Approximately 59,000 acres since 1997 have been opened up to recreational uses such as fishing, hiking, snowshoeing, cross country skiing, bird watching, educational programs, nature study and interpretation, and hunting. In 2008, NYCDEP expanded recreational uses of West-of-Hudson (WOH) lands to include Public Access Areas (PAAs) in which no NYCDEP access permits are required. The majority of WOH lands that are not adjacent to reservoirs are being converted to PAAs and this is the default designation for newly acquired lands. Also in 2008, NYCDEP eliminated the use of the NYCDEP Hunt tag in an attempt to make it easier for the public to access NYCDEP lands. In 2009, NYCDEP also began the Cannonsville Reservoir Boating Pilot Program in which non-motorized vessels (kayaks, canoes, etc.) are allowed, and users do not have to be fishing. Approximately half of the reservoir was open for this project in 2009. During 2010, NYCDEP expanded the pilot area to include the western portion of the reservoir. The entire reservoir is open for recreational boating except a few small areas around City infrastructure and facilities. Furthermore, NYCDEP is developing a comprehensive forest inventory and management plan to address the need for proactive forest management to maintain a healthy forest ecosystem. Since 1997, NYCDEP has opened 1,722 acres City-owned land to forestry.

NYCDEP allows other low-intensity uses of its land including certain agricultural activities. The public may submit proposals and / or bids to conduct agricultural activities on City lands that have had a history of such use. For example, farmers may propose to harvest hay, plant row crops, graze livestock and tap sugar maple trees for maple sap. Proposers / bidders must agree to conduct activities in a manner consistent with water quality protection and as approved by NYCDEP. NYCDEP currently has over 30 active projects. Bluestone mining and forestry can be allowed on eased properties, subject to NYCDEP plan approval.

Most of the uses allowed on NYCDEP lands are subject to separate site specific approvals of land use plans and, in certain instances stormwater pollution prevention plan approvals and environmental review, where applicable. Recreational uses are allowed pursuant to "NYCDEP Rules for the Recreational Use of Water Supply lands and Waters" and regulations that underwent SEQRA review (Negative Declaration dated July 2008). Because these uses are not subject to further review and approval, they are reviewed in this EIS. Agricultural activities are normally undertaken as a continuation of a pre-existing agricultural use which occurred prior to NYCDEP's acquisition, whether on NYCDEP-owned land, NYCDEP-owned easements, or WAC easements. NYCDEP prepares sustainable forestry project plans for land it owns in the watershed. These plans are subject to SEQRA review before forest improvement projects are permitted. Bluestone mining is currently only allowed on conservation easements, with NYCDEP approvals of mining plans submitted by the landowner; any operation greater than an acre is subject to environmental review under SEQRA as part of obtaining a stormwater permit pursuant to NYCDEP Watershed Rules and Regulations. Smaller sites would have limited impacts. The number of such operations on NYCDEP properties or easements would be small and their location is not reasonably foreseeable. NYCDEP's requirement to review and approve mining plans does not replace any regulatory oversight required by NYS, which requirements must still be met by the owner of the eased property if thresholds exceed those in NYS regulations.

# **EXTENDED LAND ACQUISITION PROGRAM**

Since 2008, through the City's submission of a WSP application on January 21, 2010 and DEIS on June 1, 2010, NYCDEP has been in active discussions with its regulators (NYSDEC, NYSDOH, USEPA) and West of Hudson Watershed Stakeholders to address concerns about the proposed Extended Land Acquisition Program. The parties to those negotiations have come to agreement on the core permit terms. Other related terms that the parties have agreed to will be memorialized in a separate Agreement, discussed below. Among other changes, the parties agree that the Permit term will be 15 years. This fifteen year term, analyzed in the DEIS as the Greater Impact Alternative, has been incorporated into the project as the Greater Impact Scenario in the FEIS.

The Extended LAP would continue to use the same basic real estate methods <u>solicitation</u> described above, which have resulted in the acquisition by LAP and WAC of over 96,000 acres as of July, 2009.<sup>4</sup> The Extended LAP program for the period from 2012 to 2022 will refine solicitation activity to focus more attention on certain basins and sub-basins. As described in the September 2009 Long-Term Plan, the prioritization of solicitations will be based on some combination of their location within the system as a whole, the basin or sub-basin's existing level of protection, and a basin's anticipated contribution to future water supply including:

Non-terminal reservoir basins with less than 30 percent protected lands;
Specific sub-basins with a relatively low percentage of protected lands; and
Reservoir basins that are expected to provide larger contributions to future water supply.

Using this strategy, Areas of Focus have been developed to identify basins and sub-basins which warrant additional attention for solicitation based on current levels of protection, success rates, contribution to water supply, and other factors. Parcel selection would include procedures to maximize the water quality benefit of acquisitions.

Many local communities have consistently expressed how important recreational access, forestry and agriculture are to their local economies, which have historically been connected to these land-dependent activities. Under the MOA, the City committed to consider recreational access for lands acquired in fee simple. Since 1997, NYCDEP has expanded the use of City fee-owned lands that support local economic vitality while maintaining its obligation to protect water quality. Increased recreational access, at times in partnership with NYSDEC, has been at the forefront of these changes.

### PLANNING PRINCIPLES

#### **Areas of Focus**

Areas of Focus have been developed to identify basins and sub-basins which warrant additional attention for solicitation based on current levels of protection, success rates, contribution to water supply and other factors:

<sup>&</sup>lt;sup>4</sup> See Table 1-1.

- 1. Less-Protected Reservoir Basins The Schoharie, Pepacton and Cannonsville basins are the largest basins in the Cat-Del System, together comprising some 720,000 acres or over 70 percent of the system land area. They contain about 75 percent of the remaining solicited land. For this reason, any acquisition strategy from 2012 to 2022 would necessarily be focused on these three basins. The fact that these three non-terminal basins also contain the lowest percentage of protected lands provides further basis for this focus.
- **2. Critical Sub-Basins** Each reservoir basin is comprised of discrete sub-basins whose location, topography and land use patterns vary in ways that greatly influence the water quality entering and leaving each reservoir. LAP has identified several categories of sub-basins whose characteristics merit heightened focus:

**Sub-Basins Near Intake** - Sub-basins which drain directly into a reservoir near intakes<sup>5</sup> are particularly sensitive because an inflow of pollutants from even a small sub-basin at these locations can have a large impact on the overall quality of water leaving the reservoir. This factor, identified by the City through study of the Malcolm Brook sub-basin at the Kensico Reservoir intake, was reflected in the Priority Area 1A designations for basins within 60-day travel time. LAP plans to extend this concept to specific sub-basins in Priority Areas 3 and 4.

Less-Protected Sub-Basins – While basin-wide protection levels provide a useful tool to evaluate system-wide progress, the distribution of protected lands on a sub-basin level reveals patterns masked at the basin level. As shown in Figure 1-4 Sub-basins with less than 20 percent protected lands are primarily located in the Pepacton and Cannonsville Basins. In cases where these sub-basins are also located near intakes (such as the Tremper Kill, Bryden Hill and Bryden Lake sub-basins north of the Pepacton Reservoir), protection efforts are particularly critical.

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<sup>&</sup>lt;sup>5</sup> Intakes are the point where water leaves the reservoir and enters an aqueduct for transport towards distribution.

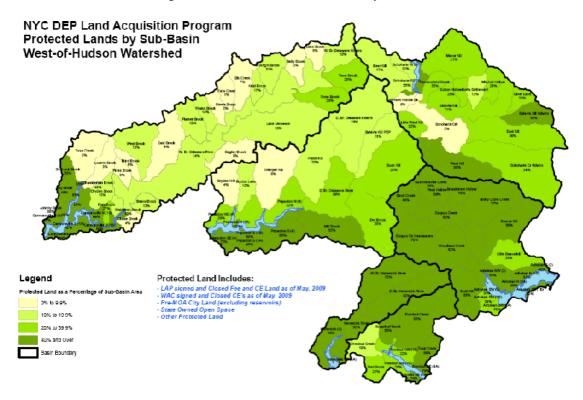


Figure 1-6 Percent Protected Lands by Sub-Basin

**3.Contribution to Future Supply -** The LAP Priority Areas emphasize travel time to distribution as a primary concern for water quality protection. The success of LAP to date in increasing protected lands in Priority Areas 1 and 2 allows additional factors going forward to prioritize future acquisitions to build on this success. One such factor is the proportion of source water originating from each reservoir basin.

Long-term planning by NYCDEP has identified several factors - including improved water quality in the Cannonsville Basin, the pending completion of the Croton Water Treatment Plant, and turbidity in the Catskill System - which may result in supply shifts that should be taken into consideration in planning LAP's solicitation strategy. The Ashokan and Pepacton basins would continue to provide the most supply, with increases projected for Rondout, Cannonsville and the Ashokan basin contributions

**4. Develop strategies to promote the wise use of acquisition funds over the long-term** - Acquisition costs vary tremendously within the Cat-Del system. Further, the high cost areas (Kensico, West Branch and Ashokan, in descending order) correspond in large part to the basins that now have the highest percentage of protected lands. Therefore the incremental protection value of acres acquired in the less-protected basins WOH is higher than the value of acquiring acreage in more expensive, highly protected basins. For these reasons, LAP's parcel selection strategy will more directly consider cost and levels of protection.

In practice, three of these Areas of Focus (Less-Protected Basins, Critical Sub-Basins and Contribution to Future Supply) overlap to some degree. For example, the sub-basins north of Pepacton Reservoir qualify in all three categories and therefore would be Areas of "High" Focus, while certain sub-basins in Schoharie Basin that already have a high percentage of protected land only qualify on the basis of one factor (Less-Protected Basins) and would receive less focus.

### **Other Solicitation Criteria**

NYCDEP expects to continue to resolicit most of the 375,000 acres of solicited land not yet acquired. The vast majority of these solicited parcels are comprised of vacant land over 20 acres in size or residential parcels over 30 acres with slope or surface water features that merit protection for water quality protection. However some marginal parcels previously solicited would not be actively pursued, and some new lands would be solicited, according to the criteria detailed below:

- **1. Parcels Adjoining Previously-Acquired Land** Parcels adjoining lands acquired in fee simple should continue to be identified and solicited to support multiple program objectives that are considered accessory to or consistent with protection of water quality, including management efficiency, increased utility for working landscape partnerships, and enhanced recreational opportunities. The importance of these program objectives will result in the solicitation of some connecting parcels that would not otherwise merit strong consideration based solely on size or water quality criteria. The identification of these parcels will be continually updated as new acquisitions occur.
- **2. Smaller Vacant Parcels in Proximity to Surface Water Features** The Cat-Del System includes over 1,000 vacant parcels of between 10 and 20 acres, taken alone or in small assemblages. On one hand, many of these lots lack the steep slopes or proximity to streams associated with significant water quality impacts. However, other small lots, especially those in proximity to streams, merit protection. Program experience since 1997 has also shown that the management burden of smaller fee lots is relatively minimal, particularly compared with CEs. For these reasons, LAP would identify more small lots near water for solicitation, particularly in Areas of Focus. This strategy would enable LAP to maximize the water quality impact of its acquisitions.
- **3.** Conservation Easements In contrast to fee simple acquisitions, CEs require a significant ongoing dedication of resources for annual monitoring and occasional enforcement. Despite these long-term costs, CEs provide a unique tool to protect lands (particularly those with residences) whose owners are not interested in selling their land outright.

Size, natural features, development potential and location would be the primary programmatic criteria used to make decisions to pursue a particular CE, but other factors would continue to be considered although in ways that may vary from past practice depending on the level of protection in a given area. These factors include the size and configuration of tax parcels comprising the CE, the presence or absence of other CEs on adjoining or nearby lands, and an analysis of the landowner's stated plans for future use of the property.

- **Properties in well-protected Basins and Sub-Basins** In locations where protected lands already comprise a high percentage of the basin and/or sub-basin area, potential CE's between 75 and 100 acres will be evaluated to ensure that their development potential and proximity to surface water features merit proceeding with the acquisition;
- Properties in Areas of Focus LAP will develop guidelines to acquire smaller CEs (under 75 acres) in less-protected basins and sub-basins, particularly where land use patterns result in a higher degree of landowner interest in CEs in comparison to fee simple acquisition. In Areas of High Focus, such as the sub-basins north of the Pepacton Reservoir in Andes and Colchester, smaller parcels will be more likely to be pursued than in other areas; and
- *Compelling Properties* LAP will continue to pursue CEs on properties over 100 acres with significant development potential and proximity to surface water throughout the watershed.

# **Program Changes**

As a result of negotiations between <u>NYCDEP</u>, <u>NYSDEC</u>, <u>other regulators</u>, and <u>West of Hudson Watershed Stakeholders</u>, several components of the Extended LAP have been agreed upon. These components are discussed below.

## Hamlet Expansion Areas

As a result of these negotiations, there has been agreement to potential modifications to the 1997 Designated Areas (see page 1-10 above). Under MOA Paragraph 68, West-of-Hudson municipalities were given the opportunity in 1997 to designate areas, including villages, hamlets, village extension areas and industrial/commercial areas, and to determine, by resolution, whether to exclude the City's acquisition under LAP of property in fee simple in these areas. The intent of these "Designated Areas" was to "...provide reasonable opportunities for growth in and around existing population centers."

The <u>aforementioned</u> negotiations <u>fo</u>cused on the interest of some West-of-Hudson towns in expanding the geographic extent of the Designated Areas beyond those delineated in 1997. The <u>West of Hudson Watershed Stakeholders</u> also <u>expressed an interest in changing</u> the rules <u>governing LAP</u> acquisition in the Designated Areas. In particular, in 2008, the CWT requested and the City <u>and other West of Hudson Watershed Stakeholders</u> agreed that each WOH town could identify additional "Expansion Areas" for future growth. The <u>West of Hudson Watershed Stakeholders</u> agreed that such expansion areas are appropriate given the relatively small size of the MOA Designated Areas (which are already largely developed) and the increased scope of LAP. In addition, the City and the CWT agreed, that municipalities could elect to make both the current designated hamlet areas and these Expansion Areas off limits to <u>virtually</u> all LAP acquisitions (including <u>Watershed Conservation Easements</u>), not just to fee simple purchases as was previously the case <u>6</u>. (<u>As explained below, the Riparian Buffers Program, authorizing acquisitions in fee simple and conservation easements of certain buffer properties, may be allowed in areas that are otherwise designated as off limits to the LAP.)</u>

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<sup>&</sup>lt;sup>6</sup> Except the Riparian Buffer Program

Seventeen watershed towns have proposed Expansion Areas<sup>2</sup> (See Table 1-2). The West of Hudson Watershed Stakeholders and individual counties and towns have worked diligently to balance community concerns over opportunities for future development with water quality protection needs in determining the appropriate scope of each town's proposal. The West of Hudson Watershed Stakeholders have agreed on Expansion Areas for all seventeen towns, whose proposals total 26,709 acres. If the hamlets are expanded as proposed, and all of the affected municipalities elect to preclude LAP acquisition in them, approximately 10,500 acres of previously solicited lands would no longer be eligible for acquisition.

Because the expanded hamlet boundaries have been <u>agreed to, pending opt-in provisions by</u> the individual towns <u>as described in the Permit</u>, they are included in the Proposed Action. However, since <u>the extent and scope of LAP exclusions from hamlets will be unknown until acted upon by the towns</u>, there is a possibility that these expanded areas will not be part of the Extended LAP. Therefore, for purposes of the EIS, a No Hamlet Expansion Alternative is also evaluated.

The hamlet designation and expansion areas would be consistent with and reinforced by a number of other existing NYCDEP watershed programs. The proposed expanded hamlets and other existing NYCDEP programs recognize the water quality benefits of encouraging development in areas where it is already concentrated -- and where there is infrastructure to support it. Similarly, they acknowledge the reality that historically, communities have often developed along streams, and therefore that growth within these areas may require construction within the limiting distances where impervious surfaces are generally prohibited under the Watershed Regulations. These Watershed Regulations encourage growth within villages and designated hamlets by providing relief in those areas from the general prohibition against new impervious surfaces within 100 feet of watercourses and wetlands so long as the applicant seeks and obtains NYCDEP approval of a stormwater pollution prevention plan (SPPP). In the recent amendments to the Watershed Regulations, which became effective on April 4, 2010, NYCDEP amended the definition of "hamlet" to ensure that the expanded hamlets will qualify for this regulatory relief. To the extent that SPPPs are required under the Watershed Regulations where they would not otherwise be required under State or federal law, or to the extent that the Watershed Regulations impose more stringent requirements for SPPPs, the City pays the costs for designing, implementing, and maintaining stormwater control measures under the MOA, through the Future Stormwater Program managed by the Catskill Watershed Corp.

<sup>&</sup>lt;sup>7</sup> The towns will retain the right to remove – but not add – parcels from the proposed Expanded Hamlets and to formalize the status of such parcels as in or out of the Expanded Hamlets from that point on when the towns adopt resolutions to exclude (or not exclude) acquisition.

Table 1-2

Final Town Hamlet Expansion Area Proposals

Accepted by the Parties November 30, 2010

Acceptable Town-wide Proposal

Status of Expansion Proposal	Town	Town Watershed Acres	Existing Designated Area
·	Andes	65,748	1,052
	Bovina	28,427	392
	Colchester	18,670	n.a.
	Denning	56,447	1,107
	Franklin	5,888	n.a.
	Gilboa	10,840	n.a.
	Halcott	14,375	69
No Expansion Proposal Made (15 towns)	Hardenburgh	22,675	n.a.
	Hurley	8,518	n.a.
	Neversink	43,804	1,197
	Prattsville	13,851	207
	Stamford	31,120	1,331
	Tompkins	45,024	109
	Wawarsing	10,607	n.a.
	Woodstock	22,346	n.a.
<u> </u>	Sub-Total	•	5,464

Shandaken 78,875 1,561

Sub-Total

Original 2008 Proposed Current xpansion Area Proposal Meredith 15,395 Masonville 8,311 n.a. 150 150 Sidney 601 n.a. 218 218 Middletown 62,244 1,734 298 298 51,274 375 375 Lexington 362 56,051 957 435 435 Roxbury Harpers field7,076 405 1,331 1,298 3,303 1,333 547 Town Proposal Acceptable Olive 29,252 to All Parties Conesville 21,590 275 1,570 (17 towns) Ashland 15,987 362 4,004 1,676 Jewett 32,087 652 4,769 2,014 Hamden 420 4,958 2,434 33,517 Delhi 41,343 2,346 4,450 2,556 Windham 28,986 1,148 13,458 2,797 Hunter 43,174 3,251 4,460 2,891 11,194 Walton 1,503 2,929 55,991 25,047 3,664 61,421 Sub-Total 14,285 26,709

Summary: Existing MOA Designated Areas: 21,310
Town Expansion Proposals Acceptable to all Parties: 26,709

Similarly, NYCDEP-funded wastewater programs under the MOA, primarily intended to control wastewater threats from existing development, also support the smart growth philosophy of encouraging community growth within hamlet areas rather than the diffuse sprawl development that often occurs in the absence of centralized environmental infrastructure. Under the New Sewage Treatment Infrastructure, Community Wastewater Management, and Sewer Extension Programs, NYCDEP has funded the construction of new wastewater infrastructure in a number of villages and hamlets, as shown in Table 1-3. The centralized wastewater treatment facilities at these locations support the widespread local desire for hamlet revitalization. These facilities further the goals embodied in the hamlet provisions of the MOA and the expanded hamlet proposals embraced by communities and NYCDEP by encouraging clean and "green" development in population centers and reducing pressure for development and land consumption in outlying areas.

Table 1-3: Wastewater Infrastructure Funded by NYCDEP

Village/Hamlet	Town or Village/County	Type of Facility
Andes	Andes/Delaware	WWTP
Bloomville	Kortright/Delaware	Community Septic System
Bovina Center	Bovina/Delaware	Community Septic System
Fleischmanns	Fleischmanns/Delaware	WWTP
Grand Gorge	Roxbury/Delaware	Sewer Extensions
Hamden	Hamden/Delaware	Community Septic System
Roxbury	Roxbury/Delaware	Connection to City's Grand George WWTP
South Kortright	Stamford/Delaware	Community Septic System (in planning stage)
Trout Creek	Tompkins/Delaware	Community Septic System (in planning stage)
Ashland	Ashland/Greene	WWTP
Hunter	Hunter/Greene	WWTP
Lexington	Lexington/Greene	Community Septic System (in planning stage)
Prattsville	Prattsville/Greene	WWTP
Tannersville	Tannersville/Greene	Sewer Extensions
Windham	Windham/Greene	WWTP
Grahamsville	Neversink/Sullivan	Sewer Extensions
Boiceville	Olive/Ulster	WWTP

#### Natural Features Criteria

As a result of the negotiations among the West of Hudson Watershed Stakeholders, the Extended LAP will incorporate numeric thresholds to define the minimum amount of the specified natural features that must be present on a property to qualify for acquisition. The parties have agreed that properties in Priority Areas 2, 3 or 4, must meet either or both of the following thresholds:

- At least seven percent (7%) of the property exhibits  $\underline{\underline{S}}$  urface  $\underline{\underline{W}}$  ater  $\underline{\underline{F}}$  eatures<sup>2</sup>, or
- At least fifty percent (50%) of the property exhibits slopes greater than 15 percent.

The determination of whether the<u>se</u> Natural Features Criteria thresholds are met would be based on the best information available to the City at the time the City orders an appraisal. Th<u>is</u> modification would remove some lands from eligibility for future solicitation, and would focus <u>LAP</u> on those lands most sensitive for water quality. Table 1-4 shows the impact of the proposed hamlet Expansion Areas (PEAs) and Natural Features Criteria <u>thresholds</u> on the <u>existing</u> pool of solicited lands,

<sup>&</sup>lt;sup>8</sup> The draft WSP provides limited exceptions from these thresholds to allow for acquisition of certain properties adjacent to lands owned by the City or State.

Surface Water Features include 1,000-foot buffers around reservoirs, 300-foot buffers around watercourses, 100-year floodplains, DEC-mapped wetlands, or federal jurisdiction wetlands over 5 acres.

Table 1-4: Impact of PEA's, MOA Designated Areas and proposed NFC Thresholds on Remaining Solicited Land WOH by County as of November, 2010

	(a)	(b)	(c)	(d)	(e)	(f)		
	Γ	Impact on Remaining Solicited Acres						
County	Remaining Solicited Acres	Proposed Expansion Areas (PEA)	MOA Designated Areas	NFC: 7% SWC / 50% Steep Slope Threshold	Totals Solicited Acres Impacted (sum of Columns b, c & d)	Remaining Acres Available for Solicitation		
Delaware	207,563	4,704	1,462	8,043	14,209	193,354		
Greene	62,146	5,101	958	2,368	8,427	53,719		
Schoharie	12,883	449	0	517	966	11,917		
Sullivan	19,398	0	315	397	712	18,686		
Ulster (1)	48,120	243	306	628	1,177	46,943		
Totals	350,110	10,497	3,041	11,953	25,491	324,619		
Shandaken	13,284		576	0	576	12,708		
Totals	363,394	10,497	3,617	11,953	26,067	337,327		
Column (a)	'Remaining Solicited Acre	s' are LAP solicited	acres WOH not alread	dy signed or closed; Includes	all Priority Areas; Does not			

Column (a)	'Remaining Solicited Acres' are LAP solicited acres WOH not already signed or closed; Includes all Priority Areas; Does not
	include WAC solicitation.
Column (b)	Sub-set of Column (a) lying within accepted PEA's in each County. If only a portion of a solicited parcel lies within a PEA, only the acres within the PEA is counted.
Column (c)	Sub-set of Column (a) lying within each MOA Designated Areas in each County. Acres are counted whether or not the Town has previously elected to exclude LAP acquisitions in fee simple. If only a portion of a solicited parcel lies within an MOA
	designated area, only the acres within the Des Area is counted.
Column (d)	Sub-set of Column (a) in properties solicited by LAP whose NFC would fall below the 7% SWC or 50% Steep Slope
	threshold and also located in Priority Area 2, 3 or 4 and outside the PEA's and MOA Designated Areas.
(1) Ulster	Ulster County totals exclude the Town of Shandaken. In lieu of designating specific parcels for its PEA, Shandaken has
County	requested, and the parties have agreed, that the City will not proactively solicit land in Shandaken, but may negotiate with
	any landowners who initiate contact.

The proposed Expansion Areas could remove about <u>10,500</u> acres from solicitation <u>(based on prior solicitations of eligible land)</u>, and the proposed thresholds for Natural Features Criteria could remove <u>roughly</u> another <u>11,950</u> acres.

Although the PEAs, MOAs and NFC thresholds would remove <u>about 26,000</u> acres of solicited land, there would still be a very large universe, about <u>337,000</u> acres <u>of remaining eligible land solicited</u>, for NYCDEP to draw from for its <u>future</u> acquisitions in the West-of-Hudson watershed. Therefore NYCDEP does not consider these new <u>limitations</u> to be a constraint on the total number of acres it will acquire, but rather that they will focus acquisitions on <u>different and</u> more sensitive <u>properties within the previously solicited group</u>.

# Riparian Buffer Program

The City has agreed to implement <u>an initial</u> three-year <u>Riparian Buffer</u> Program (<u>RBP</u>) in which the City would allocate up to Five Million Dollars (\$5,000,000) of the funds currently committed to the LAP to a program for acquiring Riparian Buffers, in easement or fee. As currently envisioned, the City-funded <u>RBP</u> would be implemented in conjunction with one or more Stream Management Plans developed under the City's Stream Management Program, and would be carried out in partnership with one or more local land trusts. <u>The RBP would involve the acquisition of small parcels along streams, wetlands and other water features. Towns that exclude LAP acquisitions in designated areas may nonetheless opt to allow acquisition of riparian buffers in such areas. Since much of this land is already constrained by regulatory buffers and physical limitations on development, the RBP is not expected to have a large impact on the supply of developable land in towns where it is implemented. The amounts of land protected under the RBP are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.</u>

## Forest Conservation Easement Program

The City has also agreed to implement a five-year Forest Conservation Easement Program ("FCE Program") in which the City would allocate up to six million dollars (\$6,000,000) of funds currently committed to the LAP to acquisitions of easements on forested land. As currently envisioned, the City-funded FCE Program would be implemented in partnership with the Watershed Agricultural Council (WAC) in similar fashion to the Farm Easement Program that has been in operation by WAC and NYCDEP since 1999. The FCE Program would focus on properties that are (1) enrolled in WAC's Forest Management Program (for which a Forest Management Plan has been developed); (2) enrolled in NYSDEC's Forest Stewardship Program or Section 480A Forest Tax Law (for which a Forest Management Plan has been developed); or (3) important for other reasons related to water quality. The FCE will complement the land protected by NYCDEP CEs and WAC Farm Easements within the acquisitions analyzed in this EIS, and does not represent an increment for analysis. The amounts of land protected under the FCE program are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

## Enhanced Land Trust Program

The City has further agreed to implement an Enhanced Land Trust Program ("ELT Program") in which one or more land trusts would (1) acquire large properties that contain improvements such as dwellings, which improvements are otherwise off limits to NYCDEP, (2) facilitate subdivision of the properties, and (3) convey the vacant portion to the City at fair market value, and the residential portion into private ownership on the open market. The ELT Program would be implemented only in those towns that elect to allow the land trust to acquire properties with dwellings (a class of properties that the MOA prevents the City from acquiring itself). As envisioned, the City will pay for most of the carrying costs incurred by the land trust(s) under this program. The amounts of land protected under the ELT program are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

## **Use of Water Supply Lands**

As discussed in the Program to Date section above, NYCDEP allows recreation, forestry, mining, and low-intensity <u>agriculture</u> on NYCDEP owned lands. These <u>activities</u> are expected to continue and possibly be expanded on lands purchased under <u>the</u> Extended LAP, subject to <u>NYCDEP</u> approvals as applicable and where consistent with water supply protection and <u>operations and public safety</u>.

In addition to the recreational uses that have been allowed on NYCDEP owned lands, under the draft WSP, NYCDEP will allow snowmobile trails where appropriate, sponsored by qualifying organizations. NYCDEP will also continue the pilot boating program in the Cannonsville reservoir and, based on the results of the ongoing evaluation study, will consider whether to continue and/or expand it. The draft WSP requires NYCDEP to submit a report evaluating recreational uses on its watershed property in seven years, based on consultation with other stakeholders, and upon request from NYSDEC every ten years thereafter.

NYCDEP has also agreed to modify the model conservation easement that it conveys to NYSDEC to provide for the possibility of cell towers and wind turbines on land it owns in fee simple. Such exercise of reserved rights could be triggered by applicants from the community, at which point NYCDEP would determine whether such land use is consistent with applicable standards and conditions; if so, NYCDEP would submit a proposal to NYSDEC to exercise such reserved right. In addition, cell towers and wind turbines will be treated as new reserved rights subject to grantee approvals under conservation easements acquired by NYCDEP and WAC (existing easements that lack this provision will be amended to provide such rights where necessary). NYCDEP and WAC will consider requests to exercise such reserved rights pursuant to terms of the easements and water quality protection measures associated with the proposals.

The Proposed Action for this EIS is the new Water Supply Permit that would allow for continued acquisition under the Land Acquisition Program. As discussed above under *Program to Date*, most of the uses allowed on NYCDEP lands are subject to separate site-specific approvals of land use plans and/or stormwater pollution prevention plans, and environmental reviews, where applicable. Recreational uses, which are allowed pursuant to "NYCDEP Rules for the Recreational Use of Water Supply lands and Waters" underwent SEQRA review (Negative Declaration dated July 2008), and are not subject to further review and approval; therefore, they are <u>not</u> reviewed in this EIS. Other uses are either a continuation of an existing use or are subject to future approvals and environmental review and are not reviewed in this EIS. <u>Proposals for activities under the new provisions within conservation easements for cell towers and wind turbines would be subject to environmental review under SEQRA as part of obtaining a stormwater permit pursuant to NYCDEP Watershed Regulations if they involve more than 1 acre; smaller sites would be expected to have limited impacts. The number of such proposals on NYCDEP properties or easements are expected to be small and their location is not reasonably foreseeable.</u>

### Other Permit Elements and Side Agreement

### Permit Elements

As a result of negotiations among NYCDEP, NYSDEC, other regulators, and watershed stakeholders since the submittal of the DEIS, several additional refinements and a number of new components have been added to the Extended LAP WSP. Paragraph 25 of the WSP describes "Programs to Foster Cooperation and Requirement to Fund Watershed Protection and Partnership Programs." The draft WSP includes requirements that NYCDEP continue Partnership Programs with outstanding commitments from the 1997 MOA and/or continuing commitments under the 2007 FAD. It outlines NYCDEP's commitments to the following Partnership Programs, including the requirement that conditions of any subsequent FADs related to these programs become incorporated into the WSP. The impacts of these programs were included in the environmental review that supported the 2007 FAD (Negative Declaration dated September 2007), to the extent reasonably foreseeable. Environmental review of the continuation of these programs will be conducted, as applicable, to support the FAD review of 2012, subsequent FADs, and for discretionary permits and approvals required for these programs.

# **Continued Programs:**

Septic Remediation and Replacement Program

Septic Maintenance Program

Community Wastewater Management Program

Stormwater Retrofit Program

**Education and Outreach Program** 

Catskill Watershed Corporation General Operating Expenses

Stormwater Coordination Position

Watershed Agricultural Program

Forest Management Plan

Stream Management Program

Water Conservation Program

In addition to the above-referenced "Continued Programs", the Final WSP commits NYCDEP to fund a Tax Litigation Avoidance Program [WSP para. 25(b)(8)], which is considered an administrative program and not subject to environmental review under SEQRA. The WSP also includes funding for the East of Hudson Non-Point Source Pollution Control Program, for continuing administration and management of an existing regulatory program not including a reordering of priorities.

### Side Agreement Elements

In addition to reaching agreement on a number of core terms for the WSP itself, NYCDEP and the West of Hudson Watershed Stakeholders have reached consensus on an Agreement which both reaffirms the parties' commitments under the 1997 MOA and specifies additional commitments made in connection with the draft WSP and the extended LAP. In many instances, the Agreement will enhance or clarify provisions in the WSP. Specifically, the Agreement will provide for the following, among other things:

- Parties to the Agreement will not challenge the successor WSP or this environmental review.
- <u>The Coalition of Watershed Towns and the Towns of Hamden and Roxbury agree to dismiss pending litigation against the City of New York.</u>
- Parties to the Agreement may enforce the Agreement and the successor WSP pursuant to the conditions of the 1997 MOA, specifically paragraphs 177 and 180 through 183.
- <u>Clarification concerning the City's commitments under the WSP not to solicit property in the Town of Shandaken for acquisition; to identify when structures on property proposed to be acquired meet the definition of "uninhabitable dwellings"; to use the best</u>

information available in determining whether property meets the natural features thresholds ("Special Criteria"); and to conduct all appropriate environmental review in the event that the City acquires "replacement lands" after the termination of the LAP.

- <u>Details concerning the rights and responsibilities of NYCDEP and land trusts in implementing the enhanced land trust program.</u>
- <u>Details concerning WAC's stewardship of Agricultural Easements and commitments to transparency in the implementation of the Easement Program and Whole Farm Program.</u>
- <u>Commitments relating to the stewardship of the City's fee and easement property, including the availability of natural resources on City property.</u>
- <u>An agreement to support amendments to the Real Property Tax Law to continue the taxability of Watershed Conservation Easements, among other things.</u>
- <u>Details concerning the Tax Litigation Avoidance Program, as required under the draft WSP.</u>
- Requirements that the Towns of Hamden and Kortright amend existing local laws relating to conservation easements.

To the extent the commitments memorialized in the Agreement simply clarify elements of the extended LAP itself, their impacts are addressed in this EIS. The commitments relating to current and potential litigation are not subject to environmental review. The Towns of Hamden and Kortright will be responsible for environmental review of the amendments to their local laws.

# PROJECTION OF POSSIBLE FUTURE LAND ACQUISITION, BY COUNTY

## 10-Year Projection Scenario

For purposes of the EIS, projections were made of potential future acquisitions <u>by the City</u> to understand potential impacts of the Extended LAP. So as not to underestimate socioeconomic or community character impacts, the projections are highly conservative for purposes of developing a reasonable worst case scenario – that is, a high estimate of acquisitions – at the town level for evaluation in this EIS. The projections use the pool of previously solicited lands as a starting point (after removing land already acquired). These acres were then multiplied by an assumed future success rate for each town. The future success rates are conservative, in that they err on the side of over-estimating acquisition. Using the county-wide historical success rate as a starting point, the town-based rates assume that future acquisition will occur at a rate higher than has been seen to date. This approach tends to account for regional differences, without being overly tied to past results, which can be greatly influenced by specific large acquisitions. The average county success rate was then increased for those towns that are in "areas of high focus"

according to the Long-Term Land Acquisition Plan – that is, areas of particular significance in terms of potential impact on water quality, where the City expects to solicit more frequently.

Table 1-5 presents projections for future watershed land acquisitions by county. Acres of fee, conservation easements acquired by NYCDEP (CE), and farm easements acquired by the Watershed Agricultural Council (WAC) that could be acquired through 2022 were projected for each town (town level projections are presented in Chapter 3, *Socioeconomic Conditions*).

Table 1-5: Reasonable Worst Case Projections of Acquisitions Under the Extended LAP

		Historical Success	Fee/CE Acres Acquired	Assumed Future Success	Projected Future	Projected Future WAC	Total Proj. Acres LAP +
District	County	Rate	Thru July, 2009	Rate	Acres	CE Acres	WAC
WOH	Delaware	13%	31,290	20%	40,900	13,152	54,052
	Greene	20%	16,108	27%	16,760	952	17,712
	Schoharie	18%	3,385	25%	3,384	1,162	4,546
	Sullivan	14%	3,471	20%	3,963	301	4,264
	Ulster	22%	17,690	25%	15,942	433	16,375
	Sub-Total	16%	71,943	22%	00,940	16,000	96,940
EOH	Dutchess	48%	1,049	25%	307	0	307
	Putnam	63%	7,553	30%	1,210	0	1,210
	Sub-Total	60%	8,602	33%	1,517	0	1,517
	Tctals	17%	80,545	22%	82,465	16,000	98,465

Note: Town-Level Projections were not conducted for Westchester County due to low anticpated volume

As shown in Table 1-5, the projected amounts of land in the watershed, particularly in the West-of-Hudson watershed, are higher over the next 12 years than the previous 12 years. This is an unlikely scenario because the City has already solicited much of the land it will be soliciting in the future and the success rates are likely to be somewhat lower rather than higher as shown in the projections, since the remaining lands are largely owned by individuals who have declined to sell in the past. These optimistic projections are therefore highly conservative for purposes of projecting future potential impacts, particularly with respect to socioeconomic and community conditions.

## 15-Year Greater Impact Scenario

This EIS also evaluates a 15 Year Greater Impact Scenario (previously analyzed as the Greater Impact Alternative under the DEIS). As discussed above, per agreement with NYSDEC, other regulators, community representatives and representatives of environmental organizations since the submittal of the WSP application, it has been agreed that the term of the permit will be 15 years. The analysis in this scenario assumes that NYCDEP would acquire an additional 10 percent above the 10-Year Projection Scenario shown in Table 1-5. As shown on Table 1-6, based on this approach, NYCDEP acquisitions in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2027 would total 89,043, as compared with

80,948 acres through 2022 in the 10-Year Projection Scenario. Acquisitions of farm easements by the WAC from 2010 through 2027 are not expected to exceed the 16,000 acres projected in the 10-Year Projection Scenario.

This scenario is considered to be an extremely conservative (i.e. high impact) estimate of land to be acquired under the Extended LAP. The projections in Table 1-5 use very conservative assumptions to estimate the amount of land to be acquired under the Extended LAP. It is highly unlikely that, even under a 15 year Water Supply Permit, additional land would be acquired beyond the levels estimated in Table 1-5. Nevertheless, NYCDEP evaluated the projections presented in Table 1-6.

Table 1-6: 15-Year Greater Impact Scenario Projections of Acquisitions Under the Extended LAP

District	County	Historical Success Rate		Assumed Future Success Rate	Projected Future Acres	Projected Future WAC CE Acres	Total Proj. Acres LAP + WAC
WOH	Delaware	13%	31,290	20%	44,990	13,152	58,142
	Greene	20%	16,108	27%	18,438	952	19,388
	Schoharie	18%	3,385	25%	3,722	1,162	4,884
	Sullivan	14%	3,471	20%	4,359	301	4,660
	Ulster	22%	17,690	25%	17,536	433	17,969
	Sub-Total	16%	71,943	22%	89,043	16,000	105,043
EOH	Dutchess	46%	1,049	25%	338	0	338
	Putnam	63%	7,553	30%	1,331	0	1,331
	Sub-Total	60%	8,602	33%	1,669	0	1,669
	Totals	17%	80,545	22%	90,712	16,000	106,712

No projections were made for the Croton System or Westchester County. Acquisitions in the Croton Watershed would be highly unusual and only made for a limited set of very watersensitive lands. For the Kensico Reservoir watershed in Westchester County, very few parcels would be expected to be acquired due to the existing high levels of protection and relatively built-out status of the basin. Due to the highly developed nature of the watershed, land or CEs that would be acquired would tend not to be vacant land, but more likely land that is part of an existing recreational or educational area (such as a golf course or ecological study area) or other such use that could continue under a CE. The potential for these acquisitions are discussed qualitatively but, due to the predicted low levels of acquisition, no potential significant impacts are expected to occur.

# **EIS PROCESS**

This DEIS has been prepared to assist decision-makers by providing a full disclosure of the environmental consequences of the proposed action. The DEIS conforms with the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617) in accordance with Article 8 of the Environmental Conservation Law and the City Environmental Quality Review (CEQR) Executive Order 91 of 1977 (as amended).

As the first step in the environmental review process, a Draft Scope of Work was issued on February 16, 2010. Public meetings to obtain oral testimony on the <u>Draft Scope</u> were held in Hunter and Delhi, New York on March 23, and March 24, 2010 respectively. The period for submitting written comments remained open until April 5, 2010. A Final Scope of Work <u>was</u> issued on April 30, 2010, finalizing the scope of analysis for the DEIS based on comments received. Based on the Final Scope of Work, <u>a</u> DEIS was prepared and certified as complete on <u>June 1, 2010</u>. The DEIS <u>was</u> circulated for public review. <u>Three joint NYSDEC and NYCDEP public hearings were held to obtain oral testimony on the DEIS and Water Supply Permit Application. These hearings were held on July 12, 2010 at SUNY Delhi, in Delhi, NY, on July 13, 2010, at Hunter Elementary School in Hunter, NY and on July 14, 2010, and at Tri-Valley High School in Grahamsville, NY. The period for submitting written comments remained open until November 22, 2010.</u>

This Final EIS (FEIS) <u>includes</u> written responses to address public comments made on the DEIS (See Chapter 12).

### PERMITS AND APPROVALS

NYCDEP has applied to NYSDEC for a Water Supply Permit which will authorize the continuation of the LAP beyond the January 2012 expiration of the 1997 WSP. In addition, NYCDEP consults regularly with NYSDOH, USEPA, and NYSDEC concerning its continued implementation of the requirements for the LAP as set forth in the 2007 Filtration Avoidance Determination. <a href="https://www.nycolor.org/nycolor.or

# **CHAPTER 2:**

# LAND USE AND COMMUNITY CHARACTER

## INTRODUCTION

This chapter of the EIS assesses the impact of the proposed action on land use in the Cat-Del watershed region, and on the character of communities in this region. It includes:

- A description of existing conditions in the West-of-Hudson watershed region;
- A discussion of trends likely to shape land use and community character in the region in the absence of the proposed action; and
- An examination of the potential impact of additional acquisitions under the Land Acquisition Program on land use and on the character of communities west of the Hudson.

The chapter then discusses existing conditions, the future without the proposed action, and the potential impact of additional acquisitions on land use and community character in the East-of-Hudson region.

#### WEST-OF-HUDSON

#### **EXISTING CONDITIONS**

The West-of-Hudson Cat-Del watershed is an area of more than 1 million acres, covering all or part of 41 towns in five New York State counties. Patterns of land use and development vary across the watershed. Table 2-1 and Figure 2-1 summarize the land uses in the watershed portion of each county.<sup>1</sup>

For the watershed as a whole, the single largest land use category shown in the table is protected lands – lands owned primarily by New York State (primarily in the Catskill Preserve) and New York City and to a lesser extent by private conservation groups. These properties account for approximately 34 percent of all land in the 1.013 million-acre watershed, ranging from 20 percent in Delaware County to 60 percent in Ulster County.

The second largest category is residential land, with about 314,300 acres – about 31 percent of all land in the watershed. The third largest category is private vacant land – about 23 percent of the watershed lands. Agriculture makes up about 7 percent of watershed lands, while commercial, industrial and community uses comprise about 2 percent of watershed lands.

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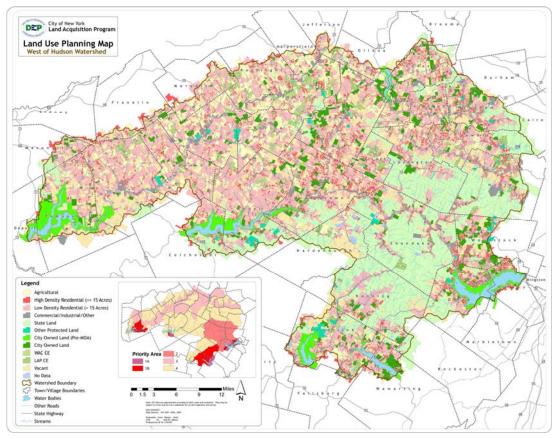
<sup>&</sup>lt;sup>1</sup> The data in Table 2-1 are based on a land use categorization by NYCDEP using tax parcel property use codes obtained from the New York State Office of Real Property Services (NYSORPS). The acreage in each class excludes all land outside the boundary of the watershed. The total for the acres in the columns entitled Agriculture, Residential, Commercial/Industrial/Community, Total Protected Land, and Private Vacant does not equal the Acres in Watershed column because this excludes parcels for which land use data is not known (less than one percent of the total) and the tax parcel polygons do not include the acreage in road rights-of-way.

Table 2-1: Land Uses Within the Watershed

	Delaware	Greene	Schoharie	Sullivan	Ulster	TOTAL
Total acres in the county	925,440	414,720	398,080	620,800	720,640	3,079,680
Land acres in the watershed	492,487	199,701	34,613	42,919	221,465	991,185
Agriculture acres	61,178	4,552	5,389	1,489	2,205	74,812
% of the watershed	12%	2%	15%	3%	1%	7%
Residential acres	190,111	54,730	12,198	12,459	44,787	314,285
% of the watershed	38%	27%	34%	28%	19%	31%
Com./ind.l/community acres	8,421	4,728	590	406	2,091	16,236
% of the watershed	2%	2%	2%	1%	1%	2%
Protected acres	96,592	81,912	6,797	15,079	133,179	333,558
% of the watershed	20%	41%	20%	35%	60%	34%
Vacant land acres	130,246	50,357	9,562	11,931	34,922	237,019
% of the watershed	26%	25%	27%	26%	15%	23%
Unclassified land acres	5,938	3,423	77	1,555	4,281	15,274
% of the watershed	2%	2%	1%	3%	2%	2%

Source: NYC DEP and ORPS, 2009

Figure 2-1: Map of land uses in the West of Hudson Watershed



Land can also be classified according to its physical characteristics. According to data compiled by NYCDEP, in 2001 about 81 percent of all watershed land in the West-of-Hudson area was forest-covered. Moreover, research published in 2008 by the SUNY College of Environmental Science and Forestry and the Yale School of Forestry and Environmental Studies found that in recent decades the total acreage of forest land has increased in the West-of-Hudson watershed area, primarily as a result of the reforestation of land previously classified as agricultural. Between 1975 and 2002, total forested acreage in this area increased by 11 percent. Conversely, there was a 34 percent decline in the amount of land in active agricultural use, and a 33 percent increase in developed land.<sup>1</sup>

## **Delaware County**

The existing land uses for the watershed portion of Delaware County are shown below in Figure 2-2. As shown in Table 2-1, 12 percent of the watershed portion of the county consists of agricultural lands, by far the highest number of acres of any of the watershed counties. Residential uses comprise 38 percent of the county's total area within the watershed, while only two percent of watershed areas within the county are allocated for commercial/industrial use. Twenty-one percent of the watershed area in the county is comprised of protected lands.

While Delaware County is largely rural, the character of its communities varies. Especially in the northern and western part of the county, agriculture remains a significant part of the local economy and local community life. Much of the resident population, and most civic and commercial activity, is concentrated in and around the County's villages and hamlets – most notably in and around the Village of Delhi, the county seat and the location of the SUNY-Delhi campus. Several towns have significant second-home populations, including Andes, Bovina, Stamford and Roxbury. (Figure 2-2: Delaware County Watershed Land Use Map)

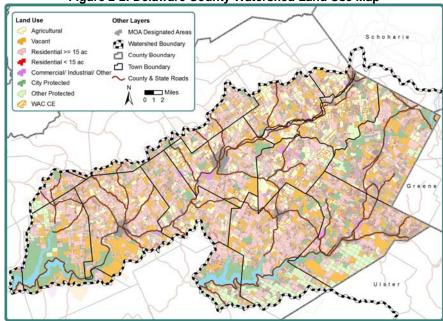


Figure 2-2: Delaware County Watershed Land Use Map

<sup>&</sup>lt;sup>1</sup> Myrna Hall, Rene Germain, Mary Tyrrell and Neil Sarpor, *Predicting Future Water Quality from Land Use Change Projections in the Catskill-Delaware Watersheds*, SUNY College of Environmental Science and Forestry/Yale School of Forestry and Environmental Studies, December 2008 p.5.

# **Greene County**

The existing land uses for the watershed portion of Greene County are shown in Figure 2-3. As shown in Table 2-1, Agriculture accounts for two percent of the area of the county within the watershed, and residential areas comprise 27 percent. Only two percent of watershed areas are allocated for commercial/industrial use. Forty-one percent of the watershed area in the county is comprised of protected lands.

The Greene County towns that are entirely (or, in the case of Hunter, mostly) within the boundaries of the watershed are collectively referred to as the "mountaintop towns," reflecting their location in the Catskill mountain area and their relatively high elevation. The economy of the eastern mountaintop towns – Hunter, Windham, Ashland and Jewett – is based primarily on recreational activity, and in particular on major ski centers located in Windham and Hunter. These towns include several substantial villages and hamlets, including Hunter, Tannersville, Windham, Hensonville and Jewett. The western towns – Prattsville, Lexington and Halcott – are more rural, and less densely populated, with relatively little commercial activity. The mountaintop towns have the greatest concentration of second homes in the watershed, accounting for roughly half of all dwelling units.

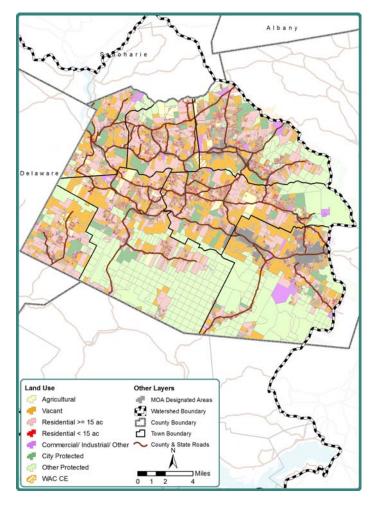


Figure 2-3: Greene County Watershed Land Use Map

## **Schoharie County**

The existing land uses for the watershed portion of Schoharie County are shown in Figure 2-4. As shown in Table 2-1, 15 percent of the watershed portion of the county's watershed land is in

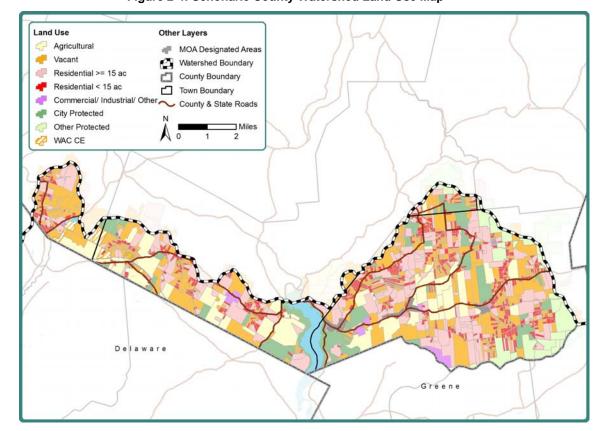


Figure 2-4: Schoharie County Watershed Land Use Map

agricultural use, while residential uses comprise 34 percent. Twenty-one percent of all watershed land in Schoharie County consists of protected land, including land owned by the State or the City, or by private non-profit conservation groups, or covered by some type of conservation easement. Only two percent of all watershed land within the county is used for commercial/industrial and community purposes.

The Schoharie County watershed towns – Conesville, Gilboa and Jefferson — are largely rural in nature. Agriculture – including both large and small farms, niche agricultural enterprises – still accounts for a significant part of the local economy. Other natural resource-based enterprises, including timber production and other forest-based businesses, are also significant. The area's natural beauty has also made it attractive to second-home owners; 46 percent of all housing units in the watershed towns – and 54 percent in Conesville – are classified as being for seasonal or recreational use.

# **Sullivan County**

Existing land uses for the watershed portion of Sullivan County are shown in Figure 2-5. As Table 2-1 shows, 3 percent of the watershed portion of the county consists of agricultural land, while residential uses account for 28 percent. Only one percent of watershed areas within the county are used for commercial/industrial purposes. Thirty-eight percent of the watershed area in the county is comprised of protected lands.

The watershed portion of the County consists primarily of the Town of Neversink, along with small portions of Liberty and Fallsburg. Neversink has been among the fastest-growing communities in the region in recent years, although in remains a rural community. Development in Neversink is concentrated primarily along Routes 42 and 55, and in and around the hamlet of Grahamsville.

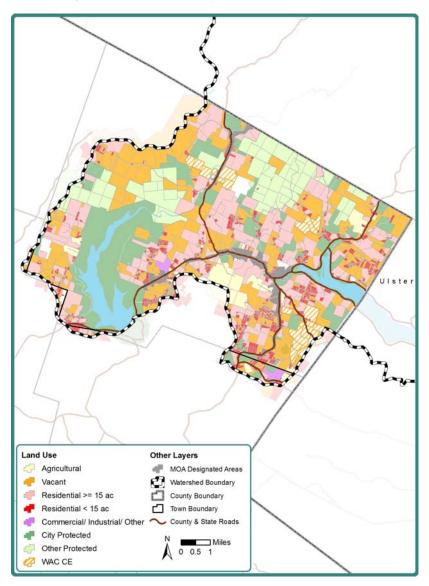


Figure 2-5: Sullivan County Watershed Land Use Map

# **Ulster County**

The existing land uses for the watershed portion of Ulster County are shown in Figure 2-6. As Table 2-1 shows, one percent of all watershed land the county is in agricultural use, while residential uses comprise 19 percent. Only one percent of watershed land within the county is used for commercial/industrial or community purposes. Sixty-two percent, the highest of any watershed county is comprised of protected lands, including significant portions of the Catskill Forest Preserve owned by New York State.

The watershed towns of Ulster County are diverse. They include two towns – Woodstock and Wawarsing – with relatively large populations; but in both cases the towns' major population centers are located outside the boundaries of the watershed. In Olive and Shandaken, population and business activity tend to be concentrated in a network of relatively small, older hamlets that stretch along Route 28. In the western part of the county, Shandaken, Denning and Hardenburgh are characterized by small, slow-growing populations, mountainous terrain, and economies built on outdoor recreation.

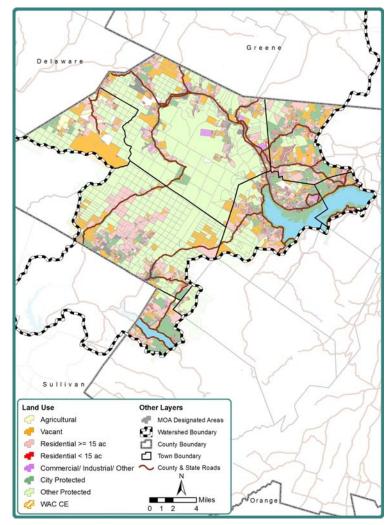


Figure 2-6: Ulster County Watershed Land Use Map

#### **Parcelization**

Parcelization – the division of larger tracts of land into smaller parcels – has been a trend in the watershed for some time. Between 1996 and 2007, the total number of parcels rose from 45,403 to 47,085 – an increase of 3.7 percent over 11 years. Table 2-2 shows the seven West-of-Hudson towns with the greatest percentage increases in parcels and the seven with the lowest in percentage increase in parcels.

Table 2-2: Seven WOH towns with greatest percentage increases in parcels, seven WOH towns with lowest percentage increase in parcels (includes only areas within each town that are within the watershed)

Seven to	wns with gre	atest incre	ase in	Seven towns with lowest increase in					
	parcel	S		parcels					
		New	%			New	%		
		parcels,	change,			parcels,	change,		
	Parcels in	1996-	1996-		Parcels in	1996-	1996-		
Town	1996	2007	2007	Town	1996	2007	2007		
Deposit	21	5	23.8%	Colchester	455	(3)	-0.7%		
Gilboa	387	91	23.5%	Denning	730	5	0.7%		
Jefferson	142	26	18.3%	Jewett	1,878	15	0.8%		
Conesville	1,086	76	7.0%	Woodstock	1,204	10	0.8%		
Franklin	189	13	6.9%	Middletown	3,998	45	1.1%		
Stamford	1,694	116	6.8%	Tompkins	920	11	1.2%		
Masonville	212	14	6.6%	Hurley	524	10	1.9%		

Source: NYC DEP

Parcelization may sometimes be a leading indicator for residential development – although land that is subdivided may then remain undeveloped for some time. It should be noted, however, that not all parcelization reflects an intent to develop. It might also, for example, involve an owner selling 40 acres of a 50-acre tract to a neighboring farmer, or to NYCDEP, or to a non-profit land trust.

## FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Without the proposed action, several trends that have shaped land use in the West-of-Hudson watershed during the past ten to twenty years are likely to continue. The amount of land devoted to residential uses is likely to increase, as a result of new residential development. If the pace of development in watershed towns between 2010 and 2022 matches the pace at which new housing was developed from the 1990s through 2008 (and assuming that the number of acres per unit remains constant) an estimated 30,000 acres of land would be needed to accommodate such development. If the same pace of development is maintained between 2022 and 2027, an additional 12,500 acres would be needed.

The increase in the amount of land in residential use within the boundaries of the watershed is likely, however, to be significantly smaller than the preceding estimate might imply – for several reasons:

• The pace of residential development during the next several years is likely to be slower than the pace of development during the past decade. Projecting <u>future</u> residential development

based on trends during the past decade may thus overstate the amount of land that will be consumed by residential development. Several factors could contribute to a slower rate of residential development through 2027: a weaker economy (especially during the next few years); changes in the housing and mortgage markets; and population trends that could reduce the demand for housing in the region. (See Chapter 3, Socioeconomics Conditions.)

- Some of the new development will occur on lots created through subdivision of larger, low-density residential parcels. In other cases, new housing may simply replace older structures that will be demolished. Both these types of development can result in an increase in housing stock without increasing the total amount of land in residential use. (See discussion on parcelization, above).
- Based both on existing development patterns and trends during the past decades, we can
  expect that only a portion of new residential development that occurs in the West-of-Hudson
  watershed towns will be within the boundaries of the watershed.

Between 1992 and 2008, according to the National Agricultural Statistics Service, the total amount of farmland in the five West-of-Hudson counties declined by 19.4 percent – an average annual decline of about 1.3 percent. If the total amount of land in agricultural use within the watershed were to decline at this rate through 2022, agricultural uses would decline from about <u>7.5 percent</u> to about <u>6.4 percent</u> of all watershed lands – a shift of about <u>11,700</u> acres from agricultural to other uses. <u>If the same trend were to continue through 2027, agricultural uses would decline to 6.0 percent of all land in the West-of-Hudson watershed, with 15,700 acres shifting from agriculture to other uses.</u>

Without the proposed action, other changes in land use would (with several potential exceptions at the town level) be relatively small. Growth in total acreage used for other commercial, industrial and community purposes would be very small given that these uses only represent 2% of watershed land. Without the proposed action, there would likely be no significant growth in the amount of State, City or privately-protected land in the watershed region.

A variety of available sources were examined to identify future community character goals and characteristics of the communities valued by local residents. These include town and village comprehensive plans, surveys of local residents, generic environmental impact studies, and other local planning documents (see Table 2-3 for a complete list of sources reviewed).

Chapter 4 provides detailed community character assessments for towns most affected by the proposed action. Town and village plans, surveys of residents and other documents highlight certain features, characteristics, values and concerns that are common to many West-of-Hudson watershed communities. These include:

- The predominantly rural character of most watershed communities, and a desire on the part of residents and community leaders to maintain that character;
- A high-quality natural environment, and a commitment to protecting it;
- The availability of opportunities for a diverse array of outdoor recreational activities;
- A strong interest in preserving agriculture and other "working landscapes;"
- A strong interest in supporting (and, where necessary, revitalizing) hamlets and village centers, which in many towns are the principal centers of population and commerce the places where much of the town's history is centered and in some cases, the places that offer the best prospects for new growth and development that is compatible with the towns' interest in maintaining their rural character, natural beauty and agricultural base; and

• Recognition of the need to provide for an aging population, especially in terms of the availability of housing, health care and other services suited to the needs of older residents.

There are shared concerns across many watershed communities about the need to expand the range of economic opportunities available in the region – in particular, opportunities that would allow residents of the region to raise their incomes, and that would help the region retain and attract young adult workers and families.

Table 2-3: Planning and Other Documents Reviewed

Town plans	Town of Bovina, Comprehensive Plan, 2002
	Town of Conesville, Comprehensive Plan, August 2007
	Town of Denning, Comprehensive Plan, October 2007
	Town of Gilboa, Comprehensive Plan, March 2004
	Town of Halcott, Comprehensive Plan, December 2003
	Town of Hamden, Comprehensive Plan, 2010
	Town of Hunter, Comprehensive Plan, 2000
	Town of Jewett, Comprehensive Plan, July 2007
	Town of Roxbury, Comprehensive Plan
	Town of Shandaken, Comprehensive Plan, July 2005
	Town of Walton, Comprehensive Plan, 2006
	Town of Woodstock, Comprehensive Plan, 2003
Other town	Town of Lexington, Draft Generic ElS, August 2003
documents	Town of Prattsville, Draft Park Master Plan, 2008
	Town of Windham, Draft Generic EIS, May 2009
Village plans	Village of Fleischmanns, Comprehensive Plan, draft, October 2009
٠.	Village of Margaretville, Comprehensive Land Use and Action Plan, 2008
	Village of Stamford, Comprehensive Plan, April 2007
Other	Delaware County Action Plan for Watershed Protection and Economic Vitality, May 2002
documents	AEL Associates, Concern About the New York City Land Acquisition Program in Delaware County
	Communities: Summary of the 2009 Telephone Survey Results, September 2009
	Greene County, Comprehensive Economic Development Plan, July 2007
	Mountain Cloves Scenic Byway Steering Committee, Mountain Cloves Scenic Byway: Proposed
	Corridor Management Plan, October 2008
	Sullivan County, Second Home Owner Study, October 2008
	Ulster County, Open Space Plan, December 2007
	Ulster County, Ulster Tomorrow: A Sustainable Economic Development Plan for Ulster County, July
	2008
Other sources	Andes Chamber of Commerce
	Andes.com
	Alliance for Bovina
	Hunter Chamber of Commerce
	Catskill Center for Conservation and Development
	Central Catskills Collaborative

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

#### Land Use

Under the Extended LAP, NYCDEP would acquire undeveloped land, which would remain undeveloped and therefore the current land uses for these lands would remain largely unchanged. One of the planning elements of LAP is that it seeks to acquire more ecologically-sensitive lands, thereby keeping future development in areas where it is largely occurring. The program could somewhat reduce the amount of parcelization that is occurring and the potential for sprawl development.

The extension of the LAP would include continuation of the WAC agricultural easement program. Based on the terms specified in the draft Water Supply Permit (WSP), the additional land on which easements would be acquired through 2027would be 16,000 acres. By keeping more land in agricultural use, and in some cases enhancing the economic viability of existing farm operations, the extension of the WAC easement program could potentially reduce somewhat the percent decline in farmland acreage expected to occur without the proposed action.

<u>Under the terms of the draft WSP, LAP</u> would not be purchasing land <u>or easements</u> in existing designated hamlet areas or within the boundaries of proposed hamlet expansions, where towns opt to exclude these acquisitions. <u>Moreover, in some cases where towns choose not to exclude LAP acquisitions from hamlets or village centers, LAP may not seek to acquire additional land. This is because parcels in <u>hamlets and village centers</u> tend to be smaller and less desirable for LAP acquisition. Since most commercial development would be expected within these areas, commercial land uses are not expected to be substantially affected by the proposed action, and the existing land use patterns in these areas would continue. As documented in Chapter 3, *Socioeconomic Impacts*, , with the projected land acquisition under the <u>Extended LAP</u>, there would be ample area remaining to accommodate future growth in the watershed towns.</u>

## **Community Character**

Community character can be affected by changes in visual character, socioeconomic conditions, traffic and noise, among other impacts. No new structures would be constructed and no traffic or noise impacts would occur as a result of the proposed Extended LAP. The primary focus of this community character analysis is therefore potential impacts from changes in socioeconomic impacts.

The sections below discuss each of the major goals found in local planning documents as discussed in "Future Conditions without the Proposed Action" above. For a more detailed assessment of community character under the proposed action, see the assessments of the most affected towns provided in Chapter 4.

# Maintaining rural character

Most of the land that NYCDEP has acquired to date under LAP consists of relatively large parcels of vacant or low-density residential land in outlying areas of watershed towns. As of July 2009, the average size of parcels acquired in fee simple in the West-of-Hudson region was 72 acres, and the average size of those on which the NYCDEP had purchased conservation easements was 156 acres. This pattern is likely to continue. Through the preservation of these relatively large parcels, LAP will contribute to maintaining the rural character of the communities in which it is buying land.

# Protecting the natural environment

Acquisitions under LAP also contribute to protection of the natural environment of watershed communities. About two-thirds of the land acquired by NYCDEP is of a type, or is in locations, that help define the character of the natural environment – such as steep slopes, land along streams and other waterbodies, and wetlands; and 89 percent of the land acquired to date in the West-of-Hudson region in fee or through conservation easements is forested. Through 2009, acquisitions by NYCDEP have increased the percentage of protected land in the West-of-Hudson watershed from 24 to 34percent of total land area. Additional acquisitions under LAP will continue to contribute to protection of the natural environment of watershed communities. (As a result of negotiations between NYCDEP and watershed stakeholders, the new WSP would modify LAP's "Natural Features Criteria" (NFC) as described in Chapter 1 Project Description. These changes are not expected to affect the total acreage to be acquired by NYCDEP under the Extended LAP, but would correspondingly increase somewhat the amount of land acquired with features that help define the character of the natural environment in watershed communities.

The benefits that watershed communities realize from protecting the region's natural environment are not limited to its esthetic value. Protected land also benefits these communities by providing a variety of "ecosystem services" – for example, by helping to protect local drinking water supplies, both surface water and aquifers. Ensuring water quality is identified as a priority in many town and village comprehensive plans.

#### Outdoor recreation

The opportunities for outdoor recreation in watershed towns are an important characteristic of these communities – prized by full-time residents, second-home owners and visitors. Through its Land Acquisition Program, NYCDEP helps make land available for a variety of public recreational uses. As of the fall of 2009, NYCDEP had opened for recreational use 64 percent of the West-of-Hudson land acquired under LAP in fee simple – a total of 34,684 acres. If we apply the same percentage to the additional acreage NYCDEP expects to acquire in fee simple under LAP, we can estimate that NYCDEP could increase the total acreage open to public recreational use by about 44,000 acres. In reality, the addition to lands available for recreational use is likely to be greater, as the trend in recent years has been for NYCDEP to increase the percentage of its land that is open to the public.

Many West-of-Hudson watershed communities already have extensive opportunities for outdoor recreation – especially those in Greene and Ulster counties that include large amounts of New York State-owned Forest Preserve land. Increasing the supply of land available for recreational uses through the acquisition of additional land by NYCDEP at a minimum reinforces what is already for many residents an important characteristic of these communities. At the same time, communities that have historically had less protected land – including many in northern and western portions of Delaware County – may benefit disproportionately from the opening of City-acquired land for public recreational uses.

## Preserving agriculture

To date, the Watershed Agricultural Council has acquired agricultural easements on more than 17,000 acres of farmland. As of December 2009 (as discussed in Chapter 3), about 97 percent of the area covered by these easements was still in active agricultural use. On a smaller scale, NYCDEP also contributes to the preservation of agriculture in the region by making selected lands purchased in fee simple available for agricultural use. These programs help maintain a "working landscape" in many of the region's communities. Extension of the Land Acquisition Program should contribute to

the preservation of agricultural uses in the watershed by making possible the purchase of additional WAC agricultural easements – expected by NYCDEP to total up to 16,000 additional acres through 2027.

With or without LAP, the region's agricultural sector, faces serious challenges. While they are a useful tool for preserving farmland, agricultural easements are not by themselves an answer to such challenges. There are, however, several factors that could <u>during the life of the WSP</u> eenhance the viability of farming in the region. <u>These factors could include</u> shifts to more profitable forms of agriculture, rising transportation costs (<u>which increase the competitiveness of farms that are located relatively close to major metropolitan markets</u>), increased consumer demand for locally-grown food, <u>and</u> growing demand for biofuels. Used in combination with other strategies that take advantage of these trends, WAC easements could help preserve agricultural land in West-of-Hudson watershed communities.

## Preserving and revitalizing hamlets

Pursuant to the 1997 MOA, as noted previously, 23 towns have MOA Designated Areas, covering a total of 21,310 acres, within which towns and villages can elect to preclude NYCDEP from acquiring land in fee simple. This element of the LAP helps to reinforce historic centers of development and avoid purchase of lands designated for commercial use vital to the existing community character.

As discussed in Chapter 1, seventeen towns have proposed expansion of the areas, totaling about 26,700 acres, in which towns may preclude NYCDEP from purchasing land. The proposed hamlet-area expansions would increase the land area covered by these designations to more than 48,000 acres. NYCDEP estimates that the expanded hamlet areas contain approximately 15,000 acres that NYCDEP had previously solicited, but would henceforth agree not to acquire. The expansion of designated hamlet areas is not likely to change the total acreage to be acquired under the Extended LAP. But it will to some extent affect where NYCDEP acquires land. By exempting the expanded hamlet areas from any further acquisitions under LAP, while acquiring additional land in outlying areas, NYCDEP will in effect be supporting efforts in several towns to maintain or restore the economic vitality of hamlets and village centers.

#### Meeting the needs of older residents

The population of the West-of-Hudson watershed region is aging. The Cornell Program on Applied Demographics projects that by 2020, 19.9 percent of the population of the five West-of-Hudson counties will be age 65 or older. The increasing concentration of older residents is especially evident in Delaware County, where 28.8 percent of all residents in 2020 are expected to be age 65 or older.

The aging of the region's population will have an effect on development patterns, as towns seek to encourage development of housing and services for older residents in hamlets and village centers. This could lead to greater density of new development – and thus to a reduction in the total volume land required to support new residential development.

The aging of resident owners could also have an impact on the Land Acquisition Program. Owners' interest in selling all or part of their land could increase – whether to meet retirement needs, because of lack of interest on the part of their families in keeping the property, or for other reasons. The result could be an increase in the rate of acceptance of NYCDEP's solicitations of land owners.

The proposed action could benefit older residents of West-of-Hudson communities in several ways:

- By taking advantage of the opportunity to sell a portion of their land to (or grant an easement
  to) NYCDEP, some older owners would be able to obtain money that would allow them to
  remain in (and in some cases invest in) their homes, while leaving the character of the land
  they sell largely undisturbed;
- At the same time, expansion of designated hamlet areas would help ensure that land remains available for development of senior housing within hamlets and village centers.

#### **Conclusions**

The Extended LAP would reinforce community goals of preserving natural features and rural character, and enhancing opportunities for outdoor recreation. The designated hamlets and their potential future extension would contribute to reinforcing and preserving hamlet centers. It would preserve sensitive water resources, while keeping future development in hamlets and expanded areas where much of it currently occurs. The program would not conflict with goals of meeting needs of older residents. As discussed in Chapter 3, *Socioeconomic Conditions*, there are not expected to be significant direct or indirect displacement effects. In addition, the town level assessments provided in Chapter 4 did not identify potential significant land use or community character impacts. Therefore the proposed action is not expected to result in potentially significant adverse impacts on land use or community character.

#### EAST OF HUDSON

#### **EXISTING CONDITIONS**

The East-of-Hudson watershed region differs from the West-of-Hudson region in several important respects. As shown in Table 2-4, the East-of-Hudson watershed encompasses a total of 234,171 acres, covering portions of twenty towns and one city in three New York State counties. (The watershed also includes a small portion of the State of Connecticut, which is not covered by the Land Acquisition Program and is not included in this analysis.) The East-of-Hudson area is thus less than one-quarter the size of the West-of-Hudson watershed region. Moreover, the East-of-Hudson region is much more densely developed; the overall character of most areas within the region is suburban rather than rural.

The East-of-Hudson watersheds primarily serve the Croton System, feeding into the terminal New Croton Reservoir in the towns of Yorktown and Cortlandt (Westchester County). However three reservoirs East-of-Hudson function as part of the Cat-Del System, due to connections with aqueducts en route from West-of-Hudson to New York City: West Branch and Boyd's Corner Reservoirs in Putnam County, and Kensico Reservoir in Westchester County. These three Cat-Del reservoirs have been the focus of LAP in the East-of-Hudson region. While LAP has acquired land in the Croton System basins, the vast majority of past (and future) acquisition activity East-of-Hudson is expected to be in the three Cat-Del basins. This analysis will consider existing conditions throughout the East-of-Hudson region, while the impact assessment will focus on the areas where acquisitions are expected to occur.

As shown in Table 2-4, residential uses account for about 34 percent of all land in the East-of-Hudson watershed, and State, City or privately-protected land for 23 percent. Commercial, industrial

23%

and community uses account for 6.4 percent of all land (as compared with only 1.6 percent in the West-of-Hudson watershed), while agricultural uses account for only 2.8 percent.

Commercial/industrial/ Acres in the Agriculture Residential community Total protected lands Private vacant % of WS County **Total acres** watershed Acres Acres % of WS Acres % of WS Acres % of WS Acres % of WS Dutchess 85,396 20,491 3,003 15% 9,016 473 2% 1,374 7% 5,823 22,995 124.244 92.377 1.116 1% 33% 7.562 8% 25% 22.655 25% Putnam 30.612 Westchester 223,881 121,303 2,524 2% 40,881 34% 7,020 6% 28,568 24% 12,797 11% **EOH Total** 433,521 234,171 6,643 3% 80,509 34% 15,055 6% 52,937 41,276 18%

Table 2-4: Land Uses in the East-of-Hudson Watershed

Figure 2-7 highlights the distribution of land uses in the watershed portions of Dutchess and Putnam counties. (The Westchester portion of the watershed is not shown because, as noted in Chapter 1, NYCDEP does not expect to acquire any additional land in Westchester County under the Extended Land Acquisition Program.

Residential uses account for 44 percent of all land in the watershed portion of Dutchess County, and privately-owned vacant land for 28 percent. Compared with other parts of the East-of-Hudson watershed, Dutchess County also includes a relatively large amount of land still in agricultural use – about 3,000 acres, or 15 percent of the total area of the watershed portion of the County. Relatively little watershed land in Dutchess County, in contrast, is devoted to commercial, industrial and community uses.

Residential uses account for one-third of all land in the watershed portion of Putnam County, and protected lands and privately-owned vacant land each account for 25 percent. Only a small portion of the County's watershed land (1.2 percent) is agricultural, while 8.2 percent is used for commercial, industrial or community purposes.

The character of the East-of-Hudson communities in which NYCDEP expects to acquire land under the Extended LAP varies considerably.

- East Fishkill For the past twenty years, East Fishkill has been one of the fastest-growing towns in the greater New York metropolitan area. However, only 16 percent of the town's total area is within the watershed; and most of East Fishkill's growth has been outside the watershed portion of the town. The watershed portion of the town is relatively rugged; the town's comprehensive plan estimates that more than half of all land in this area has slopes of 25 percent or more. The watershed portion of the town includes a mix of residential and agricultural uses and protected land; there is relatively little commercial development in this part of the town.
- **Kent** Although it has experienced substantial growth in recent decades, with an increase in population of about 10 percent between 1990 and 2008, Kent is still a primarily rural community, 84 percent of which is within the watershed. Most of Kent's population (and most of its commercial activity) is concentrated on the eastern side of the town, especially in and around the hamlet of Lake Carmel. The rest of the town consists primarily of lowdensity residential areas, with clusters of higher-density development near the lakes that dot

the area. About 43 percent of the watershed portion of the town consists of City, State or privately-protected land.

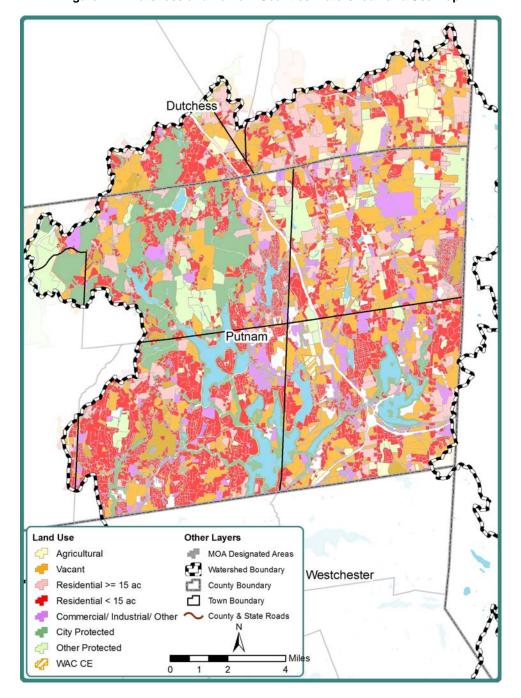


Figure 2-7: Dutchess and Putnam Counties Watershed Land Use Map

• Carmel – The Town of Carmel is the largest in Putnam County (measured by population), and has for the past two decades been among the region's fastest-growing; between 1990 and 2008 its population grew by 21 percent. The town's principal population centers – and centers of business activity – are the hamlets of Mahopac and Carmel. While the overall character of the town is suburban, there are substantial areas outside the two major hamlets that are still rural, with much lower population densities and lower levels of development.

## FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Since the 1980's, the principal factors affecting land use in East-of-Hudson watershed towns have been residential and (to a lesser extent) commercial development. Development in both sectors is likely to continue during the next twelve years.

If the pace of residential development experienced since the 1990's were to continue through 2022, approximately 6,800 additional units would be developed in the watershed towns of Dutchess and Putnam counties between 2010 and 2022; and another 2,800 units between 2022 and 2027. Based on the median parcel size per unit of new development in each of the towns since 2000, this would imply that more than 5,600 acres would be converted to residential use through 2022; and 2,300 additional acres between 2022 and 2027, for a total of 7,900 acres. In reality, the consumption of additional land for residential development during this period is likely to be significantly less than 7,900 acres, for several reasons:

- Since the mid-2000's, new residential development in the watershed towns of Dutchess and Putnam has declined sharply. While housing construction is likely to recover within the next few years, it is unlikely to return to the levels seen earlier in this decade. The estimate of 9,400 units to be developed through 2027 is thus probably significantly overstated.
- Some new housing will be built on lots created through the subdivision of large, low-density residential parcels increasing density but not increasing the amount of land devoted to residential use.
- In several towns, local planning and zoning policies now encourage higher-density, cluster-style development will reduce consumption of land for residential development.
- After two decades of vibrant growth, several towns are now giving greater priority to preservation of open space; this emphasis could constrain new development.

Finally, a significant portion of the total new development likely to occur between <u>during the life of the Extended LAP</u> – in Dutchess County, probably most of the new development – will occur outside the watershed portion of the towns.

Additional commercial development is likely <u>during this period</u> – but it is likely to be concentrated primarily in areas that already serve as the towns' commercial centers – such as Carmel in Putnam County and Hopewell Junction in Dutchess County.

Overall, the next twelve years are thus likely to see some new development – although at a slower pace than during the early to mid-2000's – but relatively little change in overall land use patterns or the character of watershed communities.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Between 2010 and 2022, the Draft EIS projected that NYCDEP would acquire a total of 1,517 acres in four East-of-Hudson watershed towns (East Fishkill, Kent, Putnam Valley and Carmel) either through purchase in fee simple or through conservation easements. Under the 15 Year Greater Impact Scenario, NYCDEP projects that it could acquire 1,669 acres in the East-of-Hudson watershed through 2027. This represents an increase of about 3 percent in the total acreage of protected land within the boundaries of the East-of-Hudson watershed.

Putting it another way – as a percentage of all land within the watershed, protected land in these four towns would increase from 22.6 to  $\underline{23.9}$  percent. The acquired land would likely include a mix of privately-owned vacant land, the undeveloped portions of parcels now classified as low-density residential (that is, parcels of more than 15 acres) and possibly land formerly used for agricultural purposes.

While the new WSP will cover the Croton System, it is not expected that NYCDEP would purchase any considerable amount of land. Any purchase would be a unique situation, most likely a parcel that had unusual water supply attributes. It is therefore not possible to estimate future land acquisitions in the Croton System. Due to the small amount of land that would be purchased, it is not expected that the program would significantly affect patterns of land use or the character of communities in the Croton System towns.

Overall, the small scale of projected acquisitions in the East-of-Hudson watershed under the Extended LAP means that the program is unlikely to have any significant impact on land use patterns in the region. Moreover, to the extent that the program helps to preserve what is seen in several towns as a limited supply of open space, and encourages concentration of new development in already-developed portions of the towns, it will be fully consistent with local efforts to maintain the character of the community.

# **CHAPTER 3:**

# SOCIOECONOMIC CONDITIONS

#### INTRODUCTION

This chapter of the EIS addresses the impact of extending the Land Acquisition Program on socioeconomic conditions in the watershed regions. The assessment covers several types of potential socioeconomic impact, including the Program's potential impact on:

- The supply of land available for future development, and on whether this supply is expected to sufficiently accommodate projected growth;
- The price of land and the affordability of housing;
- Selected industries or activities that are particularly dependent on the availability of land;
- Other commercial activity; and
- Local government revenues.

Chapter 3 first addresses the Extended LAP's impact on socioeconomic conditions in the West-of-Hudson watershed region. It provides an overview of the methodology used in analyzing socioeconomic impact; describes current socioeconomic conditions in the region; describes future conditions without the proposed action; and assesses the impact of the proposed action in the arenas outlined above.

An assessment of the Program's potential impact on socioeconomic conditions in the East-of-Hudson watershed region follows. While the analytical framework is broadly the same as that used in assessing the Program's impact west of the Hudson, our findings are presented in less detail, due primarily to the much smaller scale of projected acquisitions in the East-of-Hudson region.

## **WEST-OF-HUDSON**

#### METHODOLOGY

This section describes the approach used in assessing the potential impact of the proposed action on the supply of developable land in the West-of-Hudson watershed towns, on land prices and the affordability of housing, on selected industries and commercial activity within the towns, and on local government revenues. Because it addresses some of the most critical issues regarding LAP's future potential impact, we begin with a detailed discussion of the methodology used in assessing the Program's impact on the supply of developable land.

The socioeconomic analysis is based on a "reasonable worst case scenario" developed for EIS purposes so that socioeconomic impacts are not underestimated.

## Estimating the Potential Impact of LAP on the Amount of Developable Land

This section describes in detail the process used to estimate the impact of LAP through 2022 (10 Year Projection Scenario) and 2027 (15 Year greater Impact Scenario) on the supply of developable land in watershed towns.

First, seven towns in which less than 5 percent of the town's total area lies within the boundaries of the watershed were screened out. An evaluation was conducted to ensure that there is not a disproportionate concentration of developable land in the watershed portion of these towns. As shown in Table 3-1, which highlights the characteristics of the watershed portion of these seven towns, this is not the case: in each of these portions of the towns, there are either low density uses, little potential for new development, or very little land projected to be acquired under LAP.

Table 3-1: Towns with less than 5 percent of the town's total area lies within the watershed

					Acres acquired by	Est. acres to be acquired
		Acres in	% in		LAP, 1997-	by LAP, 2010-
Town	Total acres	watershed	watershed	Land Uses in Watershed	2009	2022
Sidney	32,280	601	1.90%	Almost all low-density residential and private vacant land; No agricultural or commercial uses	0	21
Broome	30,805	41	0.10%	30 acres of state-owned land; a few high-density residential parcels	0	0
Fallsburg	50,609	1,002	2.00%	About 39% is state-owned, pre-MOA City-owned or LAP-acquired land; the rest is a diverse mix of vacant and low-density residential land (about 33%) and high-density residential or commercial uses (29%)	251	84
Liberty	51,629	238	0.50%	About 49% vacant and low-density residential land; about 18% high-density residential; no data on 33%	0	9
Kingston	4,709	6	0.10%	A mix of residential and commercial uses	0	0
Marbletown	35,197	256	0.70%	Almost entirely reservoir or pre-MOA City-owned land	0	0
Rochester	57,098	1,996	3.50%	87% is state-owned land; the remainder mostly vacant or low-density residential; no commercial or agricultural uses	17	64

# 10 Year Projection Scenario

After screening out these seven towns, a four-step process was used to estimate the impact of the LAP program on the remaining 34 West-of-Hudson towns through 2022. These four steps are:

Step 1: Determine available developable land as of 2009;

Step 2: Project housing demand through 2022;

Step 3: Project LAP acquisitions through 2022; and

Step 4: Estimate remaining developable land in 2022 after housing demand and LAP.

#### Step 1. Determine available developable land in each town as of 2009

To determine the amount of available developable land in the towns as of 2009, data from the New York State Office of Real Property Services (ORPS) and NYCDEP's geographic information system (GIS) were used to identify privately-owned vacant and low-density residential land in each town that could be developable. For purposes of this analysis, developable land includes all privately-owned vacant and low-density residential land (defined as residential parcels of 15 or more acres, reduced by 5 acres per parcel to account for the existing residence on each parcel). These criteria would also be consistent with the Enhanced Land Trust and Forest Conservation Easement programs, which could also acquire lands from this pool.

The GIS was used to exclude acreage from this pool of land which has features that are typically unsuitable for development:

- 100-foot buffer on streams and waterbodies,
- 300-foot buffer on reservoirs 100-year and reservoir stems,
- DEC-mapped wetlands with a 100-foot buffer,
- federal jurisdiction wetlands with no buffer,
- FEMA 100-year floodplains,

• slopes of greater than 15 percent,; and

• slow infiltrating soils (NRCS Hydrological Soil Group D)<sup>1</sup>

In addition to considering vacant and low-density residential-coded parcels in the pool of available developable land, an alternate calculation was developed that included agricultural land as well. The purpose of this alternate calculation and the method in which it was used are described in more detail in step 4 below.

The Ulster County Soils data appear to be flawed and were not used for the Ulster County developable land analysis. Due to the overlap between this soil class and the other criteria used in defining developable land, particularly the steepness of slopes in these Ulster towns, it is not expected that this significantly affected the analysis.

Step 2. Estimating demand for land for residential development from 2010 through 2022

The second step in our analysis was to estimate trends in residential development in West-of-Hudson watershed towns for the period from 2010 through 2022. To estimate future growth, recent trends were evaluated. Three types of data were reviewed:

- Building permits issued for new housing units in watershed towns between 1997 and 2008;<sup>1</sup>
- U.S. Census data on numbers of housing units by town in 1990 and 2000, and an estimate of housing units for 2008;<sup>2</sup> and
- Data from the ORPS on the date the residence on each residential parcel was built (so-called "year-built" data), focusing in particular on those built between 2001 and 2009.<sup>3</sup>

Data from all three sources were compared to estimate new units per year for the time periods associated with each data set. It should be noted that all three data sources have limitations. For some watershed towns, year-built data are not available. Neither year-built data nor data on building permits allow us to distinguish between new units built on previously undeveloped land and those built on land previously occupied by older residences; nor do they take account of structures that have been demolished but not replaced. They may thus overstate the total amount of land consumed by new residential construction. Data on the total number of units in the town avoid this problem – they allow tracing of net changes in the towns' housing stock. As noted above, however, the data for 2008 are estimates; more precise counts will be available only when 2010 census data are released.

For purposes of developing a "reasonable worst case scenario," for the EIS, the analysis used whichever of the new-units-per-year estimates derived from the three data sets was highest to project the total number of new residential units that might be developed in each town between 2010 and 2022. (In towns where year-built data were not available, the higher of the two other estimates was used,) This represents a conservative approach, in that it may for the reasons cited above result in an overstatement of the rate of expected new residential development, and of the amount of land needed for this purpose.

Beyond using the highest of the three "units per year" values, basing the estimate of land required for residential development on the rate of development during the past two decades also makes the analysis more conservative. The demand for housing that drives residential development in the West-of-Hudson region is fueled partly by population growth and partly by the market for second homes. Population growth in the region, however, is likely to be considerably slower through 2022 than it has been in the past decade. Demand for second homes is also likely to be constrained – by a slow recovery from the recession that began in 2008, and by more conservative mortgage lending practices. For the next several years, demand in this sector appears unlikely to return to the levels seen earlier in this decade. (The impact of these factors is discussed in greater detail below; see the discussion of "Future Conditions without the Project," p. 3-36.)

To estimate the number of acres consumed by each future residential unit developed, data obtained from ORPS was used to determine the median residential lot size in each town for residential lots

<sup>&</sup>lt;sup>1</sup> Source: U.S. Census Bureau

<sup>&</sup>lt;sup>2</sup> Sources: U.S. Census Bureau provided data for 1990 and 2000; DemographicsNow provided data for 2008.

<sup>&</sup>lt;sup>3</sup> Source: New York State Office of Real Property Services (ORPS)

larger than one acre<sup>1</sup>. The proportion of *developable* land to be consumed by each projected future residential parcel was estimated based on the percentage of existing high-density residential land (smaller than 15-acre lots) that is developable within the watershed portion of each town.<sup>2</sup> Because smaller, higher-density lots typically include a higher percentage of developable land, this approach is more conservative than using the average developable percentage for all residential land – that is, it yields a higher estimate of the developable acreage needed to support new residential development.

To estimate the total developable acreage required to support residential development in each town through 2022, we multiplied:

- The total number of housing units projected per year, by
- The number of acres per unit, by
- The percentage of those acres that are considered to be developable, by,
- 12 years.

Note that demand for commercial and industrial land consumption was not projected. Such land represents less than 2 percent of watershed lands and; and NYCDEP generally does not acquire properties used for commercial or industrial purposes. Moreover, a significant portion of the region's commercial activity is concentrated in hamlet areas, where NYCDEP generally does not acquire land. These uses are discussed in the document under Impacts on Industries and Businesses.

Step 3. Estimate future purchases of developable land by NYCDEP under the Land Acquisition Program

Acres of fee, conservation easement (CE) and Watershed Agricultural Council (WAC) easement land that could be acquired through 2022 were projected for each town. Fee and CE acquisitions were projected using the acres of remaining solicited land by town<sup>3</sup>, combined with an assumed future success rate by town. The future success rate, by town, was determined using the Program's county-wide historical success rate as a starting point. This county level approach tends to account for regional differences, without being overly tied to past results, which can be greatly influenced by specific large acquisitions. The average county success rate was then increased for those towns that are in "areas of high focus" according to the Long-Term Land Acquisition Plan – that is, areas of particular significance in terms of potential impact on water quality. To develop a reasonable worst-case scenario, the overall success rate was forecast to be higher than previous success rates so that the total amount of land acquired would conservatively be estimated as higher in the next 12 years than in the past 12 years. This result is not expected to occur; the estimate is used as an outer bound for EIS purposes.

<sup>&</sup>lt;sup>1</sup> Lots under one acre were excluded since they typically represent older residential development in historic town centers and are thus not reflective of the predicted size of future development.

<sup>&</sup>lt;sup>2</sup> Source: NYC DEP data based on ORPS and other sources.

<sup>&</sup>lt;sup>3</sup> There may be some land in watershed towns that is eligible for acquisition in fee simple or through conservation easements, and could thus potentially be solicited, but has not yet been solicited. Properties that have already been solicited represent by far the greatest part of all remaining land that would be eligible for acquisition under the Extended LAP, although there may be some land that is eligible that has not been solicited. Already-solicited land thus represents a reasonable proxy for land that could potentially be acquired in the future.

To estimate how much of the land projected to be acquired by NYCDEP in each town would be developable, two alternative measures were used and the higher selected for each town:

- The percentage of fee and CE land acquired under LAP between 1997 and 2009 that is defined as developable; and
- The percentage of all remaining privately-owned vacant and low-density residential land defined as developable as of 2009.

For each town, we then estimated the total number of *developable* acres that NYCDEP is likely to acquire through 2022 by multiplying NYCDEP's projected fee and CE acquisitions by the higher of these two percentages.

Step 4. Estimate remaining developable land in 2022 after accounting for LAP acquisitions and housing development

Lastly, we projected the amount of developable land remaining in each town in 2022 after 12 years of residential development and LAP acquisitions. We subtracted from the developable acres available in each town as of 2009 (Step 1) the developable acres projected for housing development through 2022 (Step 2) and the developable acres projected for LAP activity through 2022 (Step 3). Based on these results, we calculated the percent of the 2009 level of developable land in the town that is projected to be available for development as of 2022.

The Natural Features Criteria thresholds were not considered in the analysis of impacts on developable land in the EIS. This approach is conservative for purposes of the socioeconomic impact analysis because the new thresholds will minimize any adverse socioeconomic effects by reducing the types of land the City can acquire.

As discussed in Chapter 1, Riparian Buffer Program would involve the acquisition of small parcels along streams, wetlands and other water features. Towns that exclude LAP acquisitions in designated areas may nonetheless opt to allow acquisition of riparian buffers in such areas. Since much of this land is already constrained by regulatory buffers and physical limitations on development, the RBP is not expected to have a large impact on the supply of developable land in towns where it is implemented. The amounts of land protected under the RBP are subsumed within the amounts projected under the Extended LAP for purposes of this EIS.

#### Assumptions on Agricultural Land

As noted in Step 1, the definition of "available developable land" <u>used in this analysis</u> included only privately-owned vacant land and low-density residential land (that is, residential parcels of 15 acres or larger) that met the screening criteria for developable land. No agricultural land was included in this definition of available developable land – even though a substantial portion of the region's agricultural land would meet the screening criteria for developable land outlined above. As a result, the estimates of the supply of developable land used in the analysis are probably somewhat conservative. Because agricultural land was excluded from estimates of the supply of developable land in each town, WAC agricultural easements were also excluded from the estimates of developable land that would be acquired by LAP in each town through 2022 (Step 3 above).

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<sup>&</sup>lt;sup>1</sup> Source: NYC DEP land acquisition database.

In order to ensure that the definition of developable land used in the analysis was consistent with the requirement to base the analysis on a "reasonable worst-case scenario," an alternative definition that included agricultural land that met the screening criteria listed under Step 1 was also tested. In this alternative, WAC easements were *included* in the estimates of land to be acquired in each town by LAP through 2022.

As might be expected, these two approaches yield somewhat different results in terms of the percentage of the current supply of developable land that still remains in 2022. In most towns, excluding agricultural land from the supply of developable land results in a lower percentage of developable land remaining in 2022. In a few cases, however – where NYCDEP expects a relatively high percentage of all agricultural land to be covered by WAC easements – including agricultural land yields a lower percentage of developable land remaining in 2022. For each town, we applied whichever method produced the lower estimate of developable land remaining in 2022.

## 15 Year Greater Impact Scenario

This scenario discusses the potential impacts of the Extended LAP over 15 years, in which NYCDEP acquires 10 percent more land than projected through 2022, This scenario was originally part of the "Greater Impact Alternative" under the DEIS. The analysis for this scenario is considered to be an extremely conservative (i.e. high impact) estimate of land to be acquired under the Extended LAP. The 10 year projections described in Chapter 1 use very conservative assumptions to estimate the amount of land to be acquired under the Extended LAP. It is highly unlikely that, even under a 15 Year Permit, the Water Supply Permit, additional land would be acquired beyond the levels analyzed projected through 2022. Nevertheless, NYCDEP is providing a 15 year analysis that examines acquisitions of 10 percent more land.

This scenario uses the same four-step process as described above to project remaining developable land but here to 2027 instead of 2022:

- Step 1: Determine available developable land as of 2009;
- Step 2: Project housing demand through 2027;
- Step 3: Project LAP acquisitions through 2027; and
- Step 4: Estimate remaining developable land in 2027 after housing demand and LAP.

#### Assessing Impacts on Land Prices and the Affordability of Housing

Evaluation of the potential impact of the proposed action on the price of land and (indirectly) on the price of housing and affordability included:

- Analysis of data obtained from the ORPS on arms-length sales of privately-owned vacant land in watershed towns, for the period 2001-2009, to determine trends in the price of land;
- Comparison of price trends in watershed towns with prices in nearby non-watershed towns;
- Exploring the potential relationship between the rate at which land prices have risen in various areas within the watershed region, and the extent of LAP acquisitions in those areas;
- Analysis of the scale of NYCDEP's acquisitions relative to the overall size of the of the market for watershed land (in terms of both numbers of transactions and total acreage, and of how this relationship varies within the watershed and over time);
- Exploring the implications of any potential impacts on land prices for socioeconomic conditions in the region;

- Analysis of data from the ORPS on sales of single-family homes in watershed towns between 2001 and 2009;
- Review of data on median family income and poverty levels, and analysis of changes in the
  percentage of median family income needed to finance the purchase of a median-priced
  home in various areas within the watershed; and comparison of these trends with those in
  non-watershed towns;
- Exploring the potential relationship between the rate at which home prices have risen in various areas within the watershed region, and the extent of LAP acquisitions in those areas;
- Review of data on locations of affordable housing and other factors affecting the affordability of housing in the watershed region; and
- Interviews with representatives of affordable housing organizations in the region.

#### **Estimating Impacts on Industries and Businesses**

The EIS evaluates the potential impact of the proposed action on several industries and types of activity that could be affected either positively or negatively by LAP. The evaluation focuses primarily on several land-based industries and activities that could be particularly affected by further acquisitions of watershed land under LAP, including agriculture, mining, forestry and outdoor recreation. The program's potential impact on commercial activity more broadly is also considered.

For each sector, available data were reviewed on numbers of businesses, employment, and economic productivity and overall trends. An assessment is provided of how much land related to these types of businesses LAP has acquired in the past and the extent to which related uses are allowed on LAP and WAC lands. Based on this information, the impacts of future LAP acquisitions were assessed. Sources of data used in the analysis are listed below in Table 3-2.

Table 3-2: Sources of data used in the analysis of industry impacts

# **Agriculture** U.S. Census of Agriculture National Agricultural Statistics Service U.S. Department of Commerce, Bureau of Economic Analysis - data on farm employment and income NYS Department of Agriculture and Markets Land use data on agricultural land use based on ORPS Mining NYSDEC database on mining operations in the region NYSDEC report on bluestone mining NYSDOL data on employment, U.S. Census Bureau data on self-employment in mining Forestry U.S. Forest Service NYSDOL U.S. Census Bureau. Other Commercial Businesses NYSDOL regional, county and ZIP-code level data on employment in the region Land use data on commercial/industrial/institutional land use based on ORPS

In addition to these sources, interviews were conducted with economic development stakeholders throughout the region including county planning and economic development officials, and representatives of Chambers of Commerce, Catskill Watershed Corporation, Watershed Agricultural Council, Delaware County Planning Department, Delaware County Economic Development, Ulster County Development Corporation, Delaware County Opportunities, Western Catskills Community Revitalization Council, Community Action of Greene County, and Rural Ulster Preservation Corporation.

Data from Claritas on business establishments within the region, where they are located and

how many people they employ

The assessment of the Program's potential impact on these sectors focuses largely on its *direct* impact: to what extent is acquisition of additional land under LAP likely to result in a cessation of existing productive activity on the land to be acquired, or to preclude the otherwise likely development of new productive activity on that land? It is also possible that additional acquisition of land under LAP could have indirect impacts. If, for example, the analysis showed that additional acquisitions were likely to result directly in a substantial reduction in farming within the region, it would be important to consider the indirect effects of such a change – for example, a similar decline in businesses (such as feed stores) that support the agricultural sector. However, because the analysis showed that the acquisition of additional land under LAP would have little direct impact, the analysis of indirect impacts was not needed or undertaken.

## Impact on local government revenues

This chapter of the DEIS also explores the program's potential impact on local government revenues. Data sources used in this analysis included information on school taxes and general real property taxes (including town, county and special district taxes) paid by NYCDEP on LAP-acquired properties; and data from the New York State Comptroller's Office on local government, school district, and fire district revenues.

128,704

1.2%

## EXISTING CONDITIONS

#### **Population**

Total, WOH Watershed Towns

In 2008, the combined population of the 41 West-of-Hudson watershed towns<sup>1</sup> is estimated at 122,006<sup>2</sup>. As Table 3-3 shows, the combined population of West-of-Hudson towns grew substantially during the 1960's and 1970's; but growth has slowed in each decade since 1980. The combined population of the towns grew by 13.18 percent in the 1970's, 4.93 percent in the 1980's, and 4.28 percent in the 1990's – but by just an estimated 1.16 percent between 2000 and 2008.

% Change, % Change, 1990-2000 2000-2008 Geography 1960 1970 1980 1990 2000 2008 Delaware Watershed Towns 38,372 39,497 41,356 41,403 41,832 40,279 1.0% -3.7% Greene Watershed Towns 5,879 5,357 7,017 7,332 7,791 8,145 6.3% 4.5% 3.9% Schoharie Watershed Towns 2,692 2,734 4,016 4,173 4,055 -2.8% 3,628 25,419 Sullivan Watershed Towns 4.9% 4.7% 16,989 19,343 22,581 24,221 26,607 Ulster Watershed Towns 27,163 33,826 39,705 45,034 48,011 49,618 6.6% 3.3%

Table 3-3: Population of Watershed Towns, Grouped by County, 1960-2008

Source: U.S. Census (1960-2000), DemographicsNow (2008)

116,267

122,006

127,226

102,727

93,055

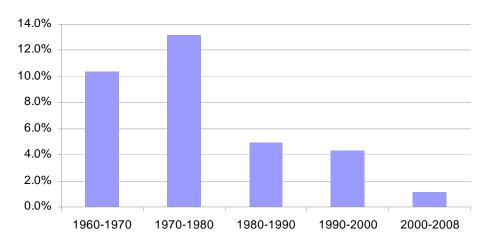


Figure 3-1: Growth Rate by Decade for West-of-Hudson Watershed Towns, 1960 - 2008

Source: U.S. Census (1960-2000), DemographicsNow (2008)

-

<sup>&</sup>lt;sup>1</sup> Town population data shown in Tables 1 to 3 are for the entire town, including the non-watershed portions. As the term is used here, "population" includes people whose primary residence is in the watershed towns. It generally does not include second-home owners, but does include institutional populations (such as nursing home or adult home residents); and may also include some temporary residents such as college students.

<sup>&</sup>lt;sup>2</sup> DemographicsNow, a service of SRC, LLC, provides annual estimates for many of the demographic and economic indicators included in the decennial census and the Census Bureau's annual American Communities Survey (ACS). Demographics Now and ACS estimates are generally consistent; ACS, however, does not provide data for smaller municipalities, such as the West-of-Hudson watershed towns.

As Figure 3-1 and Figure 3-2 show, patterns of growth in the watershed towns vary from county to county. Ulster, Greene and Sullivan County towns have seen continued growth; but towns in two counties that had recorded modest growth between 1990 and 2000 – Delaware and Schoharie – are estimated to have lost population since 2000.

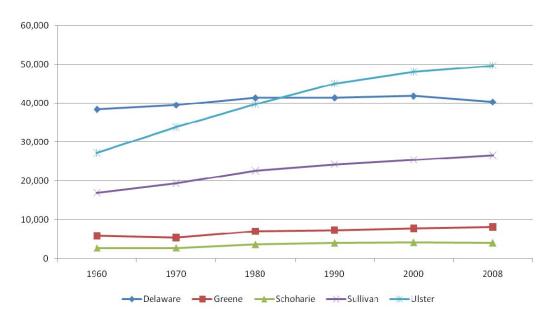


Figure 3-2: West-of-Hudson Watershed Town population trends, 1960-2008

Source: U.S. Census (1960-2000), DemographicsNow (2008)

Not all residents of the five counties' watershed towns live within the boundaries of the watershed; in fact, most do not. Of the 41 towns, 12 are wholly within the watershed – so by definition all of their residents live within the watershed. The portion of the remaining 29 towns' land area that lies within the watershed ranges from less than 1 percent in Broome to 98.6 percent in Walton. Based on point data from ORPS on the location of residential parcels within these towns, we can estimate the share of each town's population living within or outside the watershed.

Table 3-4 shows the total number of people residing within the boundaries of the West-of-Hudson watershed in 2008 was estimated by this method to be 49,134. Slightly more than half lived in Delaware County -21 percent in Ulster - and 20 percent in Greene County.

Table 3-4: Population of the watershed portion of watershed towns, by county, 1990-2008

				% Change,	% Change,
County	1990	2000	2008	1990-2000	2000-2008
Delaware	25,137	25,679	24,998	2.2%	-2.7%
Greene	9,024	9,407	9,764	4.3%	3.8%
Schoharie	1,083	1,134	1,110	4.7%	-2.1%
Sullivan	2,287	2,735	3,002	19.6%	9.8%
Ulster	9,356	9,872	10,260	5.5%	3.9%
WOH Total	46,887	48,827	49,134	4.1%	0.6%

As with the five counties, variations in population and population growth are also evident at the town level. Table 3-5 lists the seven largest and seven smallest towns, measured by population, among the 34 towns in which at least 5 percent of the town's total land area lies within the watershed<sup>1</sup>. They range from Wawarsing, with an estimated population of 13,320 in 2008, to Halcott, with an estimated population of 203.

Table 3-5: Seven smallest and seven largest towns in the watershed (> 5% in WS), by population, 1990-2008

		Seven sma	llest town	s					Seven la	rgest town	s		
					% Change,	% Change,						% Change,	% Change,
Town	County	1990	2000	2008	1990-2000	2000-2008	Town	County	1990	2000	2008	1990-2000	2000-2008
Halcott	Greene	193	193	203	0.0%	5.2%	Neversink	Sullivan	2,951	3,909	4,117	32.5%	5.3%
Hardenburgh	Ulster	200	208	211	4.0%	1.4%	Delhi	Delaware	5,015	4,547	4,465	-9.3%	-1.8%
Denning	Ulster	495	516	524	4.2%	1.6%	Olive	Ulster	4,087	4,757	4,861	16.4%	2.2%
Bovina	Delaware	550	664	633	20.7%	-4.7%	Walton	Delaware	5,953	5,472	5,332	-8.1%	-2.6%
Prattsville	Greene	774	665	712	-14.1%	7.1%	Woodstock	Ulster	6,290	6,346	6,402	0.9%	0.9%
Conesville	Schoharie	684	726	714	6.1%	-1.7%	Hurley	Ulster	6,741	6,754	6,854	0.2%	1.5%
Ashland	Greene	803	752	827	-6.4%	10.0%	Wawarsing	Ulster	12,347	13,320	13,552	7.9%	1.7%

Source: US Census and DemographicsNow

Watershed towns also vary in terms of population growth or decline. As shown in Table 3-6, among towns whose land area is at least 5 percent within the watershed, population changes ranged from a 10 percent increase in Ashland and Neversink between 2000 and 2008, to a loss of 4.7 percent in Bovina.

Table 3-6: Seven towns with lowest and seven towns (> 5% in WS) with highest rate of growth, 1990-2008

	Seven towns with lowest growth rate						Seven towns with highest growth rate						
					% Change,	% Change,						% Change,	% Change,
Town	County	1990	2000	2008	1990-2000	2000-2008	Town	County	1990	2000	2008	1990-2000	2000-2008
Bovina	Delaware	550	664	633	20.7%	-4.7%	Halcott	Greene	193	193	203	0.0%	5.2%
Meredith	Delaware	1,513	1,588	1,519	5.0%	-4.3%	Lexington	Greene	831	830	874	-0.1%	5.3%
Middletown	Delaware	3,406	4,051	3,881	18.9%	-4.2%	Windham	Greene	1,682	1,660	1,755	-1.3%	5.7%
Jefferson	Schoharie	1,190	1,285	1,241	8.0%	-3.4%	Shandaken	Ulster	3,047	3,235	3,427	6.2%	5.9%
Hamden	Delaware	1,144	1,280	1,237	11.9%	-3.4%	Prattsville	Greene	774	665	712	-14.1%	7.1%
Roxbury	Delaware	2,388	2,509	2,434	5.1%	-3.0%	Ashland	Greene	803	752	827	-6.4%	10.0%
Gilboa	Schoharie	1,207	1,215	1,185	0.7%	-2.5%	Neversink	Sullivan	2,951	3,553	3,909	20.4%	10.0%

<sup>1</sup> The town population data presented in Table 3-5 is for the entire town, including portions outside the watershed.

## Source: US Census and DemographicsNow

Figure 3-3 shows, there is also considerable variation in population density within the region, ranging from 225.1 persons per square mile in Hurley in 2008 to 2.6 persons per square mile in Hardenburgh.

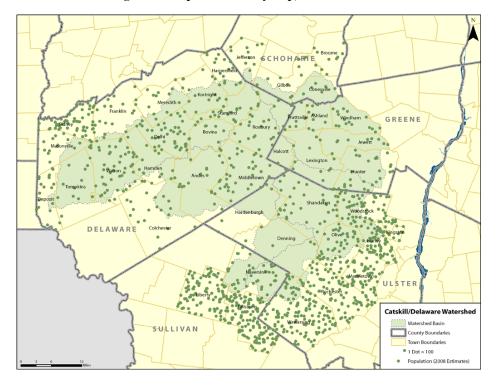


Figure 3-3: Population density map, West-of-Hudson

Very slow or no population growth – and in some towns, a decline in population – can have a variety of consequences for communities. It can undermine a community's ability to sustain essential public services and local institutions, as well as the retail and consumer service businesses that also help to sustain community life.

## Age

As in New York State and the nation as a whole, the population of the watershed region has been aging. Between 1990 and 2008, the median age among all residents of West-of-Hudson watershed towns rose from 40.7 to 42.6. During the same period, the median age in New York State rose from 33.8 to 38. As with population, however, there is considerable variation among watershed towns in terms of the concentration of older residents.

Table 3-7 lists the 7 highest-ranking and 7 lowest-ranking towns, measured by the percentage of all residents who are 65 or older.

Table 3-7: Seven lowest-ranking and seven highest-ranking towns (> 5% in WS), by percentage of residents 65+, 2008

Seven town	s with lowest propo residents 65+	rtion of	Seven towns with highest proportion of residents 65+			
Town	County	%	Town	County	%	
Neversink	Sullivan	12.1%	Halcott	Greene	21.0%	
Wawarsing	Ulster	13.0%	Lexington	Greene	21.0%	
Olive	Ulster	14.4%	Andes	Delaware	21.7%	
Meredith	Delaware	14.6%	Bovina	Delaware	22.3%	
Masonville	Delaware	15.3%	Colchester	Delaware	23.5%	
Jefferson	Schoharie	16.1%	Middletown	Delaware	24.7%	
Hunter	Greene	16.2%	Harpersfield	Delaware	25.6%	

Source: DemographicsNow

The aging of West-of-Hudson watershed communities has implications for the region's future, in terms of:

- Slower economic growth;
- Transitional challenges for small businesses and family farms;
- Changes in housing needs;
- Increased turnover in property ownership; and
- Sensitivity to increases in property taxes.

# **Employment**

About 56.3 percent of all residents of West-of-Hudson watershed towns age 16 and older were employed in 2008. As Table 3-8 shows, the number of 16-and-older residents of the West-of-Hudson watershed towns who were employed declined slightly between 1990 and 2000 – from 55.4 to 54.4 percent – and then rose to 56.3 percent in 2008.

Table 3-8: Resident employment in West-of-Hudson watershed towns, grouped by county, 1990-2008

	1990		200	00	2008			
							% Change in	% Change in
						%	Resident	Resident
		% Employed,		% Employed,		Employed,	Employment,	Employment,
County	Employed	16+	Employed	16+	Employed	16+	1990-2000	2000-2008
Delaware	17,684	54.8%	18,091	53.9%	18,101	53.9%	2.3%	0.1%
Greene	3,100	53.3%	3,318	54.2%	3,600	53.8%	7.0%	8.5%
Schoharie	1,669	52.7%	1,769	52.5%	1,788	52.4%	6.0%	1.1%
Sullivan	9,789	51.6%	9,619	48.3%	11,550	54.1%	-1.7%	20.1%
Ulster	20,826	58.4%	22,338	58.1%	24,750	60.2%	7.3%	10.8%
<b>WOH Total</b>	53,068	55.4%	55,135	54.4%	59,789	56.3%	3.9%	8.4%

Source: DemographicsNow

To some extent, relatively low employment ratios in the West-of-Hudson watershed towns reflect the larger proportion of their population that is over 65. But it may also reflect more limited availability of employment opportunities in mostly-rural communities, as discussed below in the section on the economy of the watershed region.

It should be noted that the 2008 data cited above do not take into account the full impact of the recession that began in 2008. The number of unemployed residents in watershed towns has probably increased since 2008. County-level data from the New York State Department of Labor (Table 3-9) indicate that between July 2008 and July 2009, the number of employed residents of the five West-of-Hudson counties fell by 5,200 – a decline of 2.8 percent.

Table 3-9: Resident employment change by county, July 2008 - July 2009

	Payrol	I Employm	<b>Unemployment Rate</b>		
County	Jul-08	Jul-09	% Change	Jul-08	Jul-09
Delaware	22,500	21,200	-5.8%	5.8%	8.5%
Greene	23,900	23,000	-3.8%	5.7%	8.3%
Schoharie	15,200	14,700	-3.3%	6.2%	8.5%
Sullivan	35,700	34,800	-2.5%	5.9%	7.9%
Ulster	86,800	85,200	-1.8%	5.7%	8.1%

Source: NYS Department of Labor

#### **Income**

DemographicsNow estimates that the median household income in West-of-Hudson watershed towns in 2008 was \$45,135 – about 84.6 percent of the median household income for New York State. Adjusting for inflation, median household income declined by 1.6 percent between 2000 and 2008, after increasing by 2.4 percent between 1990 and 2000. Table 3-10 highlights differences in median income for the watershed towns in each of the five counties, and the percentage change in median household income (adjusted for inflation) between 1990 and 2008. Ulster County had the highest median income in 2008 – nearly 98 percent of New York State's median income – and Delaware County the lowest – less than 76 percent of the statewide median income. Median household incomes in 2008 in nearby non-watershed counties were comparable to those shown below – for example, \$41,885 in Otsego County, and \$52,354 in Columbia County.

Table 3-10: Average of median incomes for West-of-Hudson watershed towns, by county, 1990, 2000 and 2008 (2008 \$)

				% Change,	% Change,
County	1990	2000	2008	1990-2000	2000-2008
Delaware	\$39,980	\$41,143	\$40,367	2.9%	-1.9%
Greene	\$39,826	\$42,774	\$41,771	7.4%	-2.3%
Schoharie	\$38,599	\$42,795	\$42,123	10.9%	-1.6%
Sullivan	\$44,814	\$42,994	\$42,275	-4.1%	-1.7%
Ulster	\$51,924	\$53,664	\$52,231	3.4%	-2.7%
New York State	\$54,408	\$54,565	\$53,376	0.3%	-2.2%
WOH	\$44,793	\$45,864	\$45,135	2.4%	-1.6%

Source: DemographicsNow

Table 3-11 shows, median incomes are higher in Ulster County watershed towns than in other watershed towns. At the town level, incomes ranged from \$36,659 in Halcott and Lexington to \$62,677 in Hurley. Of the 34 West-of-Hudson towns in which at least 5 percent of the town's total area is within the watershed, all but four had median household incomes below the statewide median in 2008.

Table 3-11: Seven lowest- and seven highest-income towns (> 5% in WS), 2008

	s with lowest n ehold incomes		Seven towns with highest median household incomes				
Town	County	2008	Town	County	2008		
Halcott	Greene	\$36,654	Meredith	Delaware	\$46,632		
Lexington	Greene	\$36,654	Jewett	Greene	\$50,097		
Deposit	Delaware	\$36,978	Bovina	Delaware	\$50,943		
Prattsville	Greene	\$37,460	Neversink	Sullivan	\$54,855		
Walton	Delaware	\$37,552	Olive	Ulster	\$55,202		
Middletown	Delaware	\$38,598	Woodstock	Ulster	\$60,000		
Broome	Schoharie	\$39,267	Hurley	Ulster	\$62,677		

Source: DemographicsNow

Although the median income for the five-county region is less than 85 percent of the median for the state as a whole, poverty rates are comparable. As Table 3-12 shows, for the period 2006-2008, the poverty rate for the five counties combined averaged 12.5 percent, as compared to 13.8 percent for New York State. The percent of the population living in households with income below the federally-defined poverty level (\$17,170 for a family of three in 2007) ranged from 9.9 percent in Greene County to 15.8 percent in Sullivan County. As shown in the table, poverty rates for nearby non-watershed counties generally fall within the same range.

Table 3-12: Percent of Population Living Below the Poverty Level, 2006 – 2008

	% Below Poverty
	Rate
Delaware	14.3%
Greene	9.9%
Schoharie	10.5%
Sullivan	15.8%
Ulster	11.7%
WOH Counties	12.5%
Columbia	10.3%
Otsego	14.4%
New York State	13.8%

Source: American Community Survey 2006 – 2008

Poverty rates are not available at the town level after 2000. We can, however, get a rough sense of the concentration of low-income households from more recent estimates of the percentage of all households in each town with incomes of less than \$20,000. As Table 3-13 shows, the number of such households ranged from 10.9 percent of all households in Hurley to 28.4 percent in Lexington.

Table 3-13: Seven highest- and lowest-percentages of households earning below \$20,000 (Towns >5% WS)

Seven towns with the highest percentages of households earning below \$20,000

Town	County	2009
Hunter	Greene	24.1%
Middletown	Delaware	24.1%
Wawarsing	Ulster	25.3%
Walton	Delaware	26.6%
Deposit	Delaware	26.9%
Halcott	Greene	28.2%
Lexington	Greene	28.4%

Seven towns with the lowest percentages of households earning below \$20,000

nouseholds earning below \$20,000			
Town	County	2009	
Hurley	Ulster	10.9%	
Bovina	Delaware	11.2%	
Neversink	Sullivan	12.5%	
Prattsville	Greene	12.5%	
Olive	Ulster	13.4%	
Woodstock	Ulster	15.6%	
Franklin	Delaware	16.2%	

Relatively low incomes – and in particular, incomes that are both relatively low and declining in real terms – can have serious implications for communities, including:

- Declining living standards;
- Fewer people who can afford homeownership, especially in times of rising real estate values:
- Increased pressure on property-owners to sell or subdivide land; and
- Reduced ability of local governments to support needed public services.

## **Residential Development**

DemographicsNow estimates that in 2008 there were 79,414 housing units in the watershed towns west of the Hudson (including those located in the portions of watershed towns that are outside the watershed). The total number of housing units grew by 7 percent between 1990 and 2000, and by 4.8 percent between 2000 and 2008. As shown in Table 3-14 growth in the number of housing units was slower in the watershed towns of Delaware and Ulster counties between 2000 and 2008 than it had been in the 1990s. In the three Schoharie County watershed towns, the number of housing units grew rapidly during the 1990s, but was relatively unchanged afterward. In contrast, after very little growth in the 1990s, the supply of housing in Greene County's watershed towns grew by 6.5 percent – and the three Sullivan County watershed towns continued the strong growth recorded in the 1990s.

Table 3-14: Total housing units in watershed town, grouped by county, 1990-2008

	Total	housing un	its	% Change,	% Change,
Geography	1990	2000	1990-2000	2000-2008	
Delaware County	23,836	24,963	25,379	4.7%	1.7%
Greene County	8,005	8,019	8,544	0.2%	6.5%
Schoharie County	2,841	3,440	3,406	21.1%	-1.0%
Sullivan County	12,846	13,971	15,351	8.8%	9.9%
Ulster County	23,248	25,370	26,734	9.1%	5.4%
West-of-Hudson	70,776	75,763	79,414	7.0%	4.8%

Source: DemographicsNow

Patterns of residential development vary within the watershed region, partly reflecting the variations in population density described earlier. Table 3-15 lists the watershed towns with the largest and smallest numbers of dwelling units in 2008, according to estimates from DemographicsNow. These two lists (presented for the entire town, including portions outside the watershed) reflect both the density of housing in the town and geographic size of the town. For example, the seven smallest towns include two with a large area and very few housing units (Denning and Hardenburgh) and three that have a small area (Halcott, Prattsville and Ashland). Wawarsing, in contrast, is the largest watershed town in terms of total area, but it is largely outside the watershed.

Table 3-15: Seven towns with the smallest and seven towns with largest number of dwelling units (> 5% in WS), 2008

(> 5 /0 III *\\5); 2000								
Seven towns wi	ith smallest nun units	nber of housing	Seven towns v	vith largest nun units	nber of housing			
		Total housing			Total housing			
Town	County	units	Town	County	units			
Halcott	Greene	225	Shandaken	Ulster	2,915			
Hardenburgh	Ulster	237	Hunter	Greene	2,947			
Prattsville	Greene	444	Middletown	Delaware	3,031			
Bovina	Delaware	526	Walton	Delaware	3,050			
Denning	Ulster	537	Hurley	Ulster	3,093			
Ashland	Greene	675	Woodstock	Ulster	4,000			
Conesville	Schoharie	733	Wawarsing	Ulster	6,131			

Source: DemographicsNow

Watershed towns also vary by rate of growth in the supply of housing. Table 3-16 lists the towns with the highest and lowest percentage increases in the total supply of housing between 2000 and 2008.

Changes in the supply of housing are not purely a function of growth in resident population. In the West-of-Hudson area, second homes account for a significant part of the region's overall housing stock. In 2000, according to the U.S. Bureau of the Census, more than 19,000 units in the West-of-Hudson area – 26 percent of the watershed towns' total housing stock – were classified as being for "seasonal, recreational or occasional use."

Table 3-16: Seven towns with the smallest and seven towns with the largest percentage increase in the number of dwelling units (> 5% in WS), 2000-2008

Seven towns	Seven towns with smallest % increase in number of dwelling units					ns with largest %	6 increase in nur	nber of dwell	ing units
		Total	Total				Total	Total	
		housing	housing	% Change,			housing	housing	% Change,
Town	County	units, 2000	units, 2008	2000-2008	Town	County	units, 2000	units, 2008	2000-2008
Jefferson	Schoharie	904	891	-1.4%	Shandaken	Ulster	2,710	2,915	7.6%
Gilboa	Schoharie	992	985	-0.7%	Lexington	Greene	933	1,004	7.6%
Conesville	Schoharie	733	733	0.0%	Windham	Greene	2,002	2,155	7.6%
Delhi	Delaware	1,818	1,822	0.2%	Halcott	Greene	209	225	7.7%
Middletown	Delaware	3,013	3,031	0.6%	Prattsville	Greene	406	444	9.4%
Bovina	Delaware	521	526	1.0%	Ashland	Greene	603	675	11.9%
Meredith	Delaware	816	826	1.2%	Neversink	Sullivan	1,960	2,249	14.7%

Source: DemographicsNow

Table 3-17 highlights the distribution of housing units in various parts of the region across four categories – owner-occupied, renter-occupied, seasonally vacant and other vacant – in 2000. Similar data are not available for 2008. However, the fact that the number of housing units in watershed towns is estimated to have grown by 4.8 percent between 2000 and 2008, while the towns' resident population grew by 1.2 percent, could indicate that the number of seasonal and recreational units has grown since 2000.

Table 3-17: Total housing units, owner-occupied, renter-occupied, seasonally vacant, and other vacant units, 2000

	Total housing Owner-occupied Re		er-occupied	Seasonally	% Seasonally	Other vacant	
	units	units	units	vacant units	vacant of total	units	
Delaware Watershed Towns	24,963	12,652	4,096	6,474	26%	1,740	
Greene Watershed Towns	8,019	2,374	841	4,005	50%	799	
Schoharie Watershed Towns	3,440	1,492	217	1,566	46%	165	
Sullivan Watershed Towns	13,971	5,514	3,304	3,580	26%	1,573	
Ulster Watershed Towns	25,370	14,342	4,751	4,157	16%	2,121	
Total, WOH Watershed Towns	75,763	36,374	13,209	19,782	26%	6,398	

Source: DemographicsNow

There are some towns west of the Hudson where seasonally vacant units represent a particularly large share of the total housing stock. Table 3-18 lists the seven towns that in 2000 had the highest percentages of seasonally vacant units, relative to the total supply of housing.

Table 3-18: Top seven towns (> 5% in WS), seasonally vacant units

			For seasonal,	%
		<b>Total housing</b>	recreational or	seasonal/rec
Town	County	units	occasional use	/occ of total
Windham	Greene	2,002	1,123	56%
Conesville	Schoharie	733	399	54%
Halcott	Greene	209	113	54%
Lexington	Greene	933	504	54%
Jewett	Greene	1,026	539	53%
Andes	Delaware	1,326	648	49%
Hunter	Greene	2,840	1,353	48%

Source: DemographicsNow

Large concentrations of second homes can have both positive and negative impacts on local communities. They can be a source of business and job opportunities in construction; and may help support higher levels of retail and consumer services than full-time residents could support on their own. They generate property tax revenues, without adding commensurately to local school district costs (although second homes do not necessarily entail lower levels of spending on other local public services, such as road maintenance and fire protection).

Strong demand for second homes can increase the price of existing homes – which can benefit current homeowners, but also make it more difficult for other local residents who are seeking to buy a home.

# **Housing Prices**

As in many other parts of the U.S. and New York State, housing prices rose sharply in watershed towns in the early and mid 2000's, giving rise to widespread concern about the continued ability of local residents to afford homes in the region. To assess the impact of this trend – and to highlight differences within the watershed region – the 34 towns in which at least five percent of the town's total area is within the watershed were grouped into eight sub-county areas, based on both geographic proximity and market characteristics.

- Schoharie County including Conesville, Gilboa and Jefferson;
- Greene County Mountaintop East including Windham, Ashland, Jewett and Hunter;
- Greene County Mountaintop West including Lexington, Prattsville and Halcott;
- North Central Ulster County including Woodstock, Hurley, Olive and Wawarsing;
- West Ulster County including Shandaken, Denning and Hardenburgh;
- Sullivan County including Neversink;
- Southeast Delaware County including Andes, Middletown and Roxbury;
- Northeast Delaware County including Harpersfield, Kortright, Stamford and Bovina; and
- West Delaware County including Colchester, Deposit, Delhi, Franklin, Hamden, Masonville, Meredith, Tompkins and Walton.

The town groups are shown in Figure 3-4.

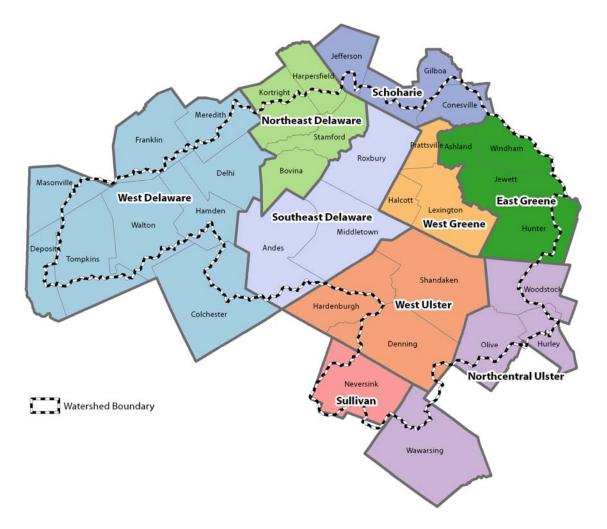


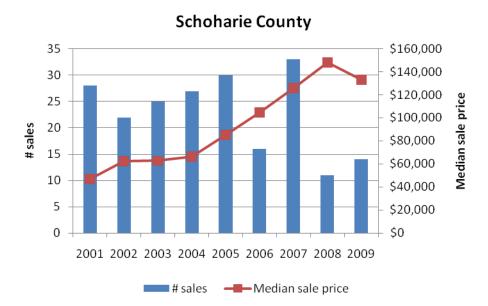
Figure 3-4: Map of town groups inside the watershed

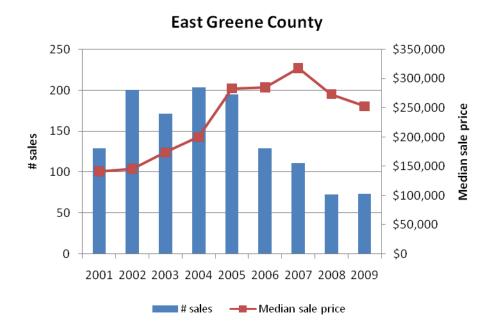
Using data obtained from the New York State Office of Real Property Services on arms-length sales of single-family homes on lots of five acres or less, we calculated for each of these areas the percentage increase in home prices in each of these eight areas between 2001 and 2009. The results are summarized below in **Table 3-19** and displayed graphically for each area in **Figure 3-5**. As the Table shows, the cumulative increase in the price of single-family homes during this period ranged from 27 percent in Sullivan County (Neversink) to 186 percent in the Schoharie County.

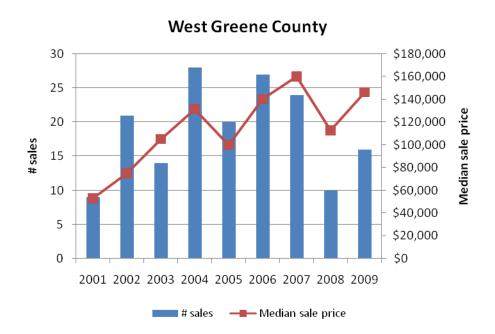
Table 3-19: Median sale prices of single-family homes on lots of five acres or less, 2001-2009

	Median sale	% Change, 2001-	
Town Groups	2001	2009	2009
Inside watershed			
Schoharie County	\$46,500	\$133,000	186%
Greene County Mountaintop West	\$53,000	\$146,000	175%
Western Ulster County	\$88,500	\$184,000	108%
Western Delaware County	\$52,000	\$100,000	92%
Greene County Mountaintop East	\$110,000	\$210,500	91%
Southeastern Delaware County	\$75,000	\$130,000	73%
Northeastern Delaware County	\$62,500	\$106,000	70%
North Central Ulster County	\$135,000	\$199,000	47%
Sullivan County	\$107,500	\$136,000	27%

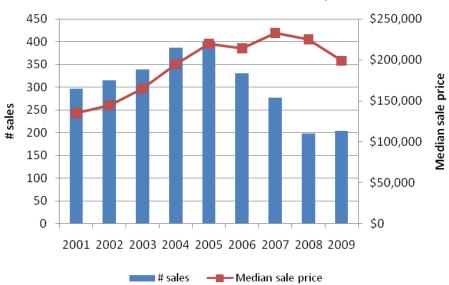
Figure 3-5: Median sale price and number of sales of single-family homes on lots of five acres or less, by town group, 2001-2009



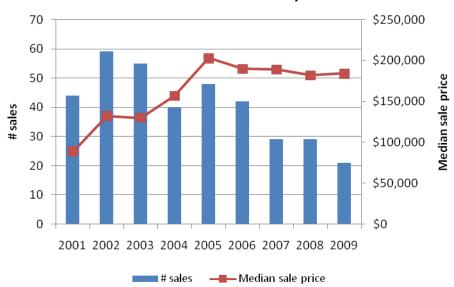


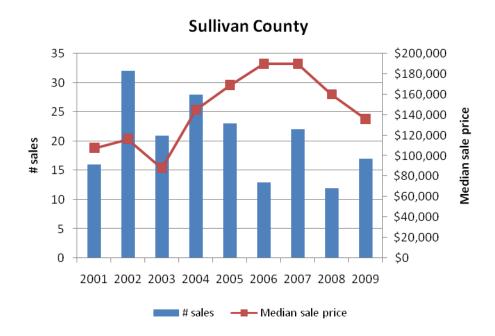


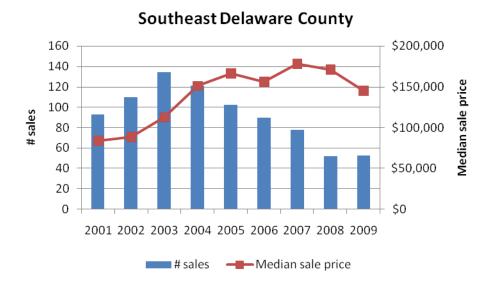


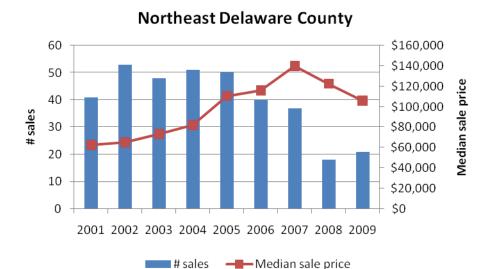


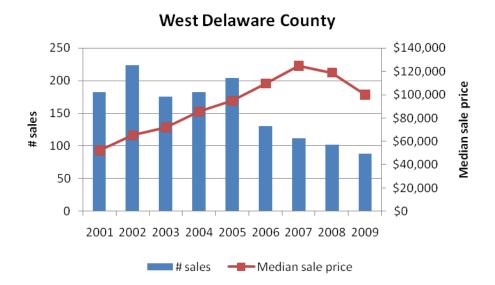
# **West Ulster County**











As they have elsewhere, price increases in the West-of-Hudson watershed region have affected the affordability of housing for local residents. To gauge the impact of price increases on affordability, we calculated the annual carrying cost for a mortgage on a median-priced home – assuming a 20 percent down payment and a 30-year, fixed-rate mortgage at 6 percent. We then calculated the resulting annual mortgage payments as a percentage of the median family income for each county. The results are shown below in Table 3-20. Since incomes rose much more slowly than housing prices, the percentage of countywide median family income needed to cover annual mortgage payments rose in all eight sub-county areas; but the rate of increase – and the results – varied considerably across the region. For example:

West Delaware

- The percentage of countywide median family income needed to finance the purchase of a median-priced home in eastern mountaintop towns in Greene County rose from 14.4 to 22.4 percent; in both absolute and relative terms, this area has the region's most expensive housing.
- In the Schoharie County watershed towns, the percentage of countywide median family income needed to finance a median-priced single family home more than doubled between 2001 and 2009; nevertheless, annual mortgage payments for the median-priced home in 2009 equaled only 12.7 percent of median family income.
- In Neversink, the increase in percentage of countywide median family income needed to purchase a median-priced home fell slightly from 14.2 to 12.9 percent.
- Northwestern Delaware County had the region's least expensive housing both in absolute terms and as a percentage of the County's median family income.

Median Family Income **Annual Mortgage Payment Percent of Income Sub-region** 2006-08 2001 2001 2009 2001 2009 Schoharie \$43,118 \$60,187 \$2,676 \$7,655 6.2% 12.7% East Greene \$43,854 \$54,103 \$6,331 \$12,116 14.4% 22.4% West Greene \$43,854 \$54,103 \$3,051 \$8,403 7.0% 15.5% North Central Ulster \$51,708 \$69,477 \$7,770 \$11,454 15.0% 16.5% West Ulster \$51,708 \$69,477 \$5,094 \$10,590 9.9% 15.2% Sullivan \$43,458 \$56,209 \$6,187 \$7,828 14.2% 13.9% Southeast Delaware \$7,482 10.9% 14.6% \$39,695 \$51,396 \$4,317 Northeast Delaware \$39,695 \$51,396 \$3,597 \$6,101 9.1% 11.9%

Table 3-20: Percent of median family income required to cover annual mortgage payments

Mortgage carrying costs are of course not the only factor in the cost of homeownership – fuel, insurance and real property tax costs also have an effect. But the data presented in Table 3-20 provide a good measure of how the cost of homes vary within the watershed region, and how they have varied over time, in relation to income.

\$2,993

\$5,756

7.5%

11.2%

\$51,396

\$39,695

For those who cannot afford to purchase (or otherwise do not wish to own) a home, the problem of affordability is heightened in some parts of the region by the relative scarcity of rental housing. In 2008, rental units accounted for 17.4 percent of all housing in the watershed towns. As Table 3-21 shows, rental housing ranges from a high of 21.3 percent of all units in North Central Ulster to a low of 6.4 percent in Schoharie County watershed towns. Region-wide, rental housing accounted for fewer than 10 percent of all housing units in 11 of the 34 towns in which land within the watershed accounted for at least 5 percent of the town's total area.

Table 3-21: Percentage of rental units by town group, 2008

	Total	Renter-	% Renter-
	housing	occupied	occupied
Sub-region	units	units	units
Schoharie	2,609	168	6.4%
West Greene	1,673	134	8.0%
Southeast Delaware	6,493	700	10.8%
Sullivan	2,249	246	10.9%
East Greene	6,871	760	11.1%
West Ulster	3,689	524	14.2%
Northeast Delaware	3,759	539	14.3%
West Delaware	12,098	2,100	17.4%
North Central Ulster	15,670	3,345	21.3%

In some watershed towns – especially those that are more rural in character – mobile homes play an important part in meeting the need for affordable housing. As Table 3-22 shows, mobile homes as a percentage of all housing units range from none in Woodstock to 29 percent in Halcott.

Table 3-22: Seven towns with lowest and highest % of mobile homes (> 5% in WS), 2000

Seve	n towns with le	owest % of mobile ho	mes of tota	l housing	units	Seven	towns with h	ighest % of mobile he	omes of tota	al housing	g units
			Total		% Mobile			_	Total		% Mobile
			housing	Mobile	homes of				housing	Mobile	homes of
County	Town	Group	units	homes	total	County	Town	Group	units	homes	total
Ulster	Woodstock	North Central Ulster	4,000	0	0%	Greene	Prattsville	West Greene	444	87	20%
Greene	Windham	East Greene	2,155	63	3%	Delaware	Tompkins	West Delaware	816	164	20%
Greene	Hunter	East Greene	2,947	106	4%	Delaware	Franklin	West Delaware	964	206	21%
Ulster	Olive	North Central Ulster	2,446	129	5%	Delaware	Masonville	West Delaware	772	167	22%
Greene	Jewett	East Greene	1,094	70	6%	Delaware	Kortright	Northeast Delaware	1,024	222	22%
Ulster	Hurley	North Central Ulster	3,093	241	8%	Delaware	Colchester	West Delaware	1,669	363	22%
Ulster	Shandaken	West Ulster	2,915	239	8%	Greene	Halcott	West Greene	225	66	29%

# The Economy of the Watershed Region

Assessing the impact of further acquisitions under the Extended LAP requires an understanding of the regional economic context within which the program operates. This part of Chapter 3:

- Briefly discusses trends in employment and industry mix in the watershed region; and
- Discusses current conditions and recent trends in several industries that are particularly dependent on land resources.

### Employment growth, 1997-2008

As Table 3-23 shows, all five West-of-Hudson watershed counties experienced significant growth between 1997 and 2007 in county-wide payroll employment. In all but Greene County, payroll employment declined in 2008, as the recession began to take its toll.

Table 3-23: Total Industries Payroll Employment, 1997 – 2008

	1997 Average	2007 Average	2008 Average				_
	Annual	Annual	Annual	Change	% Change	Change	% Change
County	<b>Employment</b>	<b>Employment</b>	<b>Employment</b>	1997 - 2007	1997 - 2007	2007 - 2008	2007 - 2008
Delaware	15,953	17,211	16,634	1,258	7.9%	(577)	-3.4%
Greene	12,355	14,571	14,649	2,216	17.9%	78	0.5%
Schoh arie	8,259	9,160	8,949	901	10.9%	(211)	-2.3%
Sullivan	23,321	25,950	25,869	2,629	11.3%	(81)	-0.3%
Ulster	55,278	62,246	60,382	6,968	12.6%	(1,864)	-3.0%
WOH Counties	115,166	129,138	126, 483	13,972	12.1%	(2,655)	-2.1%
NYS	7,902,044	8,550,093	8,596,391	648,049	8.2%	46,298	0.5%

Source: New York State Department of Labor

Similar data are not available at the town level; but ZIP code-level data can provide a rough sense of changes in employment in a comparable area. Between 1997 and 2007, according to the New York State Department of Labor, private payroll employment grew from 34,108 to 35,624 – an increase of 4.4 percent – in 73 ZIP codes that roughly correspond to the West-of-Hudson watershed towns. This increase was not distributed evenly across the region, however; private payroll employment declined between 1997 and 2007 in 31 of the 73 West-of-Hudson ZIP codes.

Figure 3-6 highlights gains and losses in private payroll employment by ZIP code. While a number of West-of-Hudson communities suffered significant job losses between 1997 and 2007, it is worth noting that NYSDOL data also show relatively strong job growth in several small communities throughout the West-of-Hudson area. Table 3-24 highlights ZIP-code-level increases in private payroll employment in several West-of-Hudson communities, as reported by NYSDOL. These data should be interpreted cautiously because ZIP-code-level employment numbers in small communities can be affected by NYSDOL's disclosure rules and by company reporting practices. However, they highlight that some watershed communities have done better than others in terms of job growth.

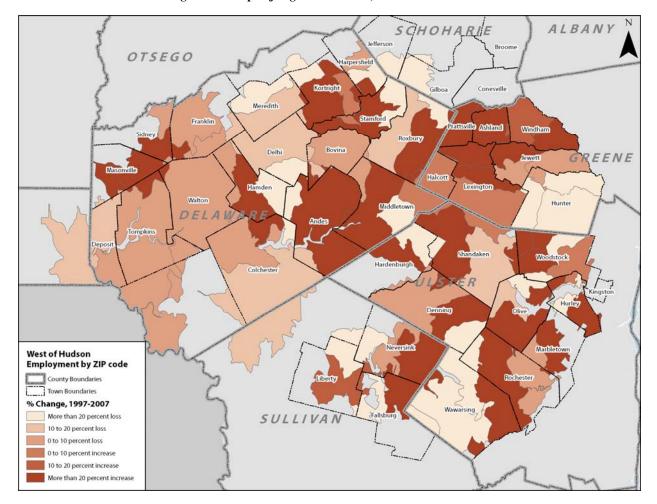


Figure 3-6: Map of job gains and losses, West-of-Hudson

Table 3-24: Private payroll employment, 1997-2007

	1997 Average Annual	2007 Average Annual	Change 1997-	% Change 1997 -
ZIP/Community	Employment	Employment	2007	2007
12443 HURLEY	165	418	253	153.0%
12455 MARGARETVILLE	525	640	115	21.8%
12481 SHOKAN	94	271	177	188.1%
12496 WINDHAM	571	661	89	15.6%
12498 WOODSTOCK	1,279	1,335	57	4.5%
13731 ANDES	64	96	32	49.7%
13788 HOBART	240	843	604	252.1%

Source: New York State Department of Labor

# Industry mix

As Table 3-25 shows, as of 2008 there are some notable similarities and differences in industry mix across the five counties. In all five, government accounts for an unusually large share of total employment. (In New York State as a whole, government accounted for 16.8 percent of all payroll employment in 2008.) Relatively few, in contrast, are employed in financial, information and business services. Delaware County has by far the largest concentration of manufacturing jobs; Sullivan County has the highest concentration in health care and social assistance; and Greene and Ulster counties the largest concentrations of jobs in tourism-related industries.

Table 3-25: Average annual county employment by industry, 2008

_	Delav	ware	Gree	ene	Scho	harie	Sulli	van	Uls	ter
Industry Title	Employment	% of total								
Total	16,634		14,649		8,949		25,869		60,382	
Government	4,492	27.0%	4,404	30.1%	2,930	32.7%	6,403	24.8%	14,335	23.7%
Ag & natural resources	232	1.4%	99	0.7%	173	1.9%	416	1.6%	1,028	1.7%
Construction	536	3.2%	773	5.3%	431	4.8%	1,080	4.2%	2,482	4.1%
Manufacturing	4,323	26.0%	1,098	7.5%	286	3.2%	1,318	5.1%	4,026	6.7%
Retail trade	1,785	10.7%	2,213	15.1%	1,177	13.2%	3,237	12.5%	9,283	15.4%
Finance, information & business services	1,107	6.7%	1,107	7.6%	761	8.5%	2,879	11.1%	7,704	12.8%
Education, health & social assistance	1,896	11.4%	1,250	8.5%	1,127	12.6%	5,187	20.1%	9,319	15.4%
Leisure activities	1,095	6.6%	2,363	16.1%	712	8.0%	2,820	10.9%	7,014	11.6%
Other	1,001	6.0%	1,293	8.8%	563	6.3%	2,430	9.4%	4,985	8.3%

Source: New York State Department of Labor

As noted above, payroll employment data are not available at the town level. But using ZIP-code level data, we can calculate industry mix – and how it has changed since 2007 – in the same set of ZIP codes used in Figure 3-6. Figure 3-7 shows industry mix in the West-of-Hudson area in 1997 and 2007. In 2007, the manufacturing sector – primarily concentrated in Delaware County – accounted for 27 percent of all private payroll employment in the West-of-Hudson ZIP codes; the principal tourism-related industries (hotels, restaurants, the arts and recreation) for 14 percent; retailing for 13 percent; and health care for 12 percent. Together these four sectors accounted for two-thirds of all private payroll employment in the region.

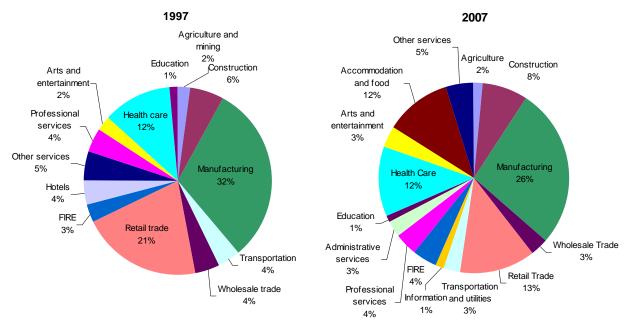


Figure 3-7: Average annual employment, West-of-Hudson

Source: New York State Department of Labor

Because of a change in the way employment and other industry data are classified by NYSDOL, the mix of industries in the watershed region in 2007 cannot be compared directly to the mix of industries ten years earlier – but there are enough similarities in industry definitions to allow us to draw some comparisons. Several broad trends are evident:

- Employment in manufacturing held relatively steady in the West-of-Hudson ZIP codes (especially when we take into account that some jobs included in the manufacturing sector in 1997 are counted as information-sector jobs in the 2007 data).
- Construction industry employment rose by 42 percent between 1997 and 2007 in the West-of-Hudson ZIP codes.
- Employment in finance, insurance and real estate increased by about 40 percent between 1997 and 2007.
- Employment in retailing, restaurants, hotels and recreation all relatively low-wage sectors grew by 6.7 percent in the West-of-Hudson ZIP codes.
- Employment in health and social services rose by 2.7 percent.

During 2008, the recession of 2008-09 began to affect business and employment in the watershed region. In the West-of-Hudson watershed ZIP codes, average annual private payroll employment fell by 2.8 percent – a loss of 987 jobs. Losses were concentrated in manufacturing, construction, and administrative support services. The decline in private payroll employment in the West-of-Hudson watershed area in 2008 effectively erased nearly two-thirds of the modest gains of the preceding ten years.

## Agriculture

Agricultural uses account for a significant share of all land use in the watershed region; and for many watershed residents, agriculture is an important part of what defines the character of their communities. Nevertheless, by some measures it represents a relatively small part of overall economic activity in the watershed region<sup>1</sup>.

As in many other parts of New York State, the amount of land used for agriculture has been declining in the watershed region for several decades. Between 1978 and 2008 (as Figure 3-8 shows), total farm acreage in the five West-of-Hudson watershed counties declined by 40 percent. Similarly, as shown in Table 3-26 between 1997 and 2007, farm employment in the five counties (including both farm proprietors and their employees) fell by 41 percent.

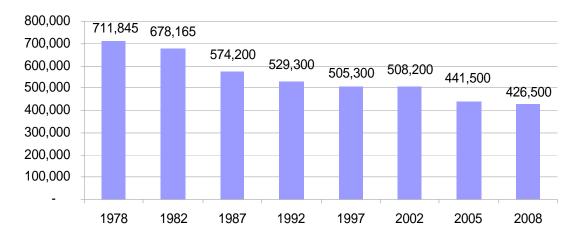


Figure 3-8: West-of-Hudson Farmland Acres, 1978 – 2008

Table 3-26: Farm Employment by County, 1997 - 2007

% Change 1977 - 2007 Geography 1977 1987 1997 2007 West-of-Hudson 9,713 6,597 -41.0% 8,305 5,730 Delaware 3,420 2,691 2,125 1,860 -45.6% Greene 799 782 -29.9% 636 560 -35.0% Schoharie 1,954 1,663 1,440 1,270 Sullivan 1,504 1,200 860 756 -49.7% 1,969 Ulster 2,036 1,536 1,284 -36.9%

Source: U.S. Department of Commerce, Bureau of Economic Analysis

<sup>&</sup>lt;sup>1</sup> The data in Tables 3-27 through 3-29, and in Figure 3-7 represent agricultural activity in the entire county, including watershed and non-watershed portions.

Table 3-27 highlights several measures of agricultural activity in the five counties, and how they have changed between 1997 and 2007, based on data from the U.S. Census of Agriculture. Between 1997 and 2002, the number of farms in the five West-of-Hudson watershed counties rose from 2,199 to 2,622, and then declined to 2,377 in 2007. For the entire ten-year period from 1997 to 2007, the number of farms increased by 8.1 percent. Similarly, the total acreage devoted to farming rose from 470,266 in 1997 to 509,202 in 2002, and then fell to 431,038 in 2007. For the ten-year period, total farm acreage in the eight counties shrank by 8.3 percent. As a result, average farm size fell from 214 acres to 181 acres.

Measured by revenues, the great majority of these 2,377 farms are very small enterprises. In 2007, only 176 farms in the five counties sold more than \$250,000 in farm products. Combined sales of farm products in 2007 by all farms in the five counties totaled \$222.7 million – an average of about \$94,000 per farm. Between 1997 and 2007, the total value of farm products sold by farms in the five counties increased by about 12 percent in real terms. The increased value of products sold, combined with an 8.3 percent reduction in total acreage being farmed, suggests that the remaining farmland is being used more productively. The data show considerable variation across the five counties in sales per acre of farm land – from \$872 in Ulster to \$368 in Schoharie and \$333 in Delaware.

County-level data from the U.S. Bureau of Economic Analysis shown in Table 3-28 provide some insight into the place of agriculture in the economy of the watershed counties. In 2007, farm employment – including both self-employed farm operators and wage or salary workers employed in farming – accounted for 1.8 percent of total employment in the five counties, and 1 percent of total earnings. Farm employment ranged from less than 1 percent of all employment in Ulster County to 5.2 percent of all employment in Schoharie; and farm earnings from less than 0.4 percent of total earnings in Ulster to 2.3 percent in Delaware and Schoharie.<sup>1</sup>

Given the low revenues and low net earnings per farm cited in the Census of Agriculture data, it is not surprising that for many farm operators, farming is not their primary occupation. In 2007, about 44 percent of all farm operators in the five counties said that farming was not their primary occupation.

It is important to note, however, that the number of people employed in agriculture, the percentage of all income that is derived from farming and the total acreage of farm land are not the only measures of agriculture's significance to the regional economy. Although relatively small in overall terms, agriculture is still one of the region's leading "export" industries – that is, an industry that sells its products outside the region and brings revenue into the region. Investments in farm land, facilities and equipment are significant. Moreover, several other types of business in the region, such as vendors of farm supplies and equipment and dairy processing plants are dependent on its agricultural base.

<sup>&</sup>lt;sup>1</sup> The farm employment data presented in Table 3-28 differ from those used in Figure 3-6 in two respects – they are county-wide numbers (rather than being limited to ZIP codes that roughly coincide with watershed boundaries); and they include self-employed farm operators, rather than just wage-earning or salaried farm employees.

Table 3-27: Census of Agriculture data, by county and West-of-Hudson, 1997-2007 Delaware Greene Schoharie Sullivan WOH Number of farms 1997 717 244 518 311 409 2,199 342 2002 788 579 381 532 2 622 2007 742 286 525 323 501 2.377 % Change, 1997-2007 3.5% 17.2% 1.4% 3.9% 22.5% 8.1% Land in farms (acres) 183,667 110,773 1997 48,770 58,067 68,989 470,266 2002 191,537 112,735 63,614 83,418 509,202 57.898 2007 165 572 44 328 95 490 50 443 75 205 431 038 % Change, 1997-2007 -9.9% -9.1% -13.8% -13.1% 9.0% -8.3% Average size of farm (acres) 256 200 214 187 169 214 2002 243 169 195 167 157 194 2007 222 155 182 156 150 181 % Change, 1997-2007 -13.3% -22.5% -15.0% -16.6% -11.2% -15.2% Market value of products sold - Inflation adjusted 2008 \$ (000s) 1997 \$ 59,859 \$ 12,068 36,313 \$ 31.788 \$ 58,745 \$ 198.772 2002 \$ 60,461 17,204 \$ 32,288 \$ 45,182 \$ 41,188 \$ 196,323 2007 57,271 \$ 17,005 \$ 36,510 \$ 43,742 \$ 68,126 \$ 222,654 % Change, 1997-2007 40.9% 0.5% 37.6% 16.0% 12.01% Average per farm sales - Inflation adjusted 2008 \$ 1997 \$ 70 588 41,326 \$ 60 521 \$ 82 996 \$ 117,491 \$ 74 584 55,765 118.589 2002 \$ 76.727 \$ 50,304 \$ \$ \$ 77.422 \$ 75.761 2007 \$ 76.669 \$ 59.458 \$ 69.543 \$ 135.425 \$ 135.981 \$ 95.415 % Change, 1997-2007 8.6% 43.9% 14.9% 63.2% 15.7% 27.9% Government payments - Inflation adjusted 2008 \$ (000s) 337 \$ 1997 \$ 410 \$ 137 \$ 385 \$ 251 \$ 1,520 \$ \$ \$ \$ 2002 \$ 2,368 \$ 376 1,951 664 930 6,289 2007 \$ 1,295 234 \$ 619 \$ 252 \$ 295 2,695 \$ \$ 215.5% 60.8% % Change, 1997-2007 70.8% 0.6% -12.4% 77.33% Average per farm receiving payments -Inflation adjusted 2008 \$ 2,632 \$ 1997 \$ 1,922 \$ 3,013 \$ 3,342 \$ 5,517 \$ 3,285 2002 \$ 10,670 5,703 \$ 11,897 8,739 \$ 13,668 10,135 2007 \$ 5,160 3,714 4,516 \$ 3,879 5,364 \$ 4,527 % Change, 1997-2007 96.0% 93.2% 49.9% -2.8% 16.1% 37.8% Number of farms with sales of \$250K or more 1997 36 7 24 19 38 124 2002 54 11 27 18 33 143 2007 64 31 20 52 176 % Change, 1997-2007 29.2% 36.8% 77.8% 28.6% 41.9% Net income from operations - Inflation adjusted 2008 \$ (000s) 1997 \$ 11,155 \$ (272) \$ 3,735 \$ 3,722 \$ 11,972 \$ 30,312 2002 \$ 8,234 5.985 5.985 941 21,765 \$ 620 \$ \$ \$ \$ 2007 \$ 13,642 \$ 2.721 \$ 7.882 \$ 2.853 \$ 14 846 \$ 41 944 % Change, 1997-2007 22 3% 10993% 111.1% -23.4% 24.0% 38.37% Average net income per farm - Inflation adjusted 2008 \$ 1997 \$ 15,536 \$ (1,099) \$ 7,182 \$ 11,856 29,058 \$ 12,507 \$ 10,390 12,577 2002 \$ 10.436 1.818 \$ \$ 38.472 \$ 1.769 \$ 2007 \$ 18,262 9,515 15,013 8,832 29,633 16,251 % Change, 1997-2007 109.0% -25.5% 17.5% 966.0% 2.0% 29.9% % Operators by principal occupation, farming

Source: U.S. Department of Agriculture, Census of Agriculture

60.04%

57.51%

57.71%

62.38%

63.78%

50.77%

57.21%

64.10%

57.09%

58.3%

61.3%

56.2%

46.72%

56.14%

50.70%

1997

2002

59.69%

63.07%

58.89%

During the next 10 to 15 years, the relatively low earnings of farm operators will continue to represent a serious challenge for those communities interested in maintaining their agricultural base. Weak farm earnings, and a continuing decline in acreage being farmed, could increase pressure for sale of farmland. The fact that so many farmers in the region rely on other jobs as their primary source of income may to some extent provide a buffer against this pressure – but it also means that the stability of agriculture in the region depends to some extent on the availability and quality of jobs in other industries.

It should be noted, however, that this challenge is by no means limited to the watershed region. Indeed, by some measures agriculture has performed better in the watershed region than in neighboring counties. In Orange, Otsego and Columbia counties, for example, total farm acreage fell by an average of 12.6 percent between 1997 and 2007; and sales of farm products, adjusted for inflation, fell by 23.9 percent.

Table 3-28: Farming as a percentage of employment and earnings, 2007, by county and West-of-Hudson

Geography	Farm Earnings (\$000s)	Farm Earnings % of Total	Farm Employment	Farm Employment % of Total
West-of-Hudson	122,426	1.4%	5,730	2.4%
Delaware	45,855	3.7%	1,860	4.9%
Greene	13,604	1.5%	560	2.1%
Schoharie	20,931	3.8%	1,270	7.7%
Sullivan	23,716	1.4%	756	1.6%
Ulster	18,320	0.4%	1,284	1.2%

Source: U.S. Department of Commerce, Bureau of Economic Analysis

#### Mining

Mining has long been part of the economy of the West-of-Hudson watershed, especially in Delaware County. In 2008, according to the New York State Department of Labor, there were 36 mining and quarrying businesses employing 401 people in wage-and-salary jobs in the West-of-Hudson counties (including areas outside the watershed), with average earnings of just over \$45,000 per year. In addition, the Census Bureau reports that in 2007 there were 170 self-employed workers in mining and quarrying in the West-of-Hudson watershed counties, with average revenues of about \$36,000 each.

Data published by the New York State Department of Environmental Conservation indicate that as of the end of 2009, there were 75 active mines in the 41 West-of-Hudson watershed towns, occupying a total of approximately 735 acres. They included 41 mines producing sand and gravel, 31 producing bluestone and 3 producing clay.

Table 3-29: Number of mines and acreage, by type of mine and county

	Bluestone		Clay		Sand and	gravel	Total	
	# of mines	Acres	# of mines	Acres	# of mines	Acres	# of mines	Acres
Delaware	30	199	1	4	22	287	53	490
Greene	1	40	-	-	6	51	7	90
Schoharie	-	-	-	-	8	83	8	83
Sullivan	-	-	-	-	2	11	2	11
Ulster	-	-	2	12	3	48	5	60
Total	31	239	3	16	41	480	75	735

Bluestone mining has been particularly significant in Delaware County – not only because of this industry segment's concentration in the county, but also because bluestone is for Delaware County an "export" commodity, sold widely outside the county. Bluestone mines are required to have either a permit from the New York State Department of Environmental Conservation or, for new operations, a temporary "exploratory authorization." In 2008, according to DEC, there were 64 bluestone mines in the state with active DEC permits, of which 35 were located in Delaware County; and 13 operating with exploratory authorizations, of which 7 were located in Delaware County. Most of these operations are small, employing from 1 to 4 people.

In addition to mines that operate under NYSDEC permits and exploratory authorizations, there are some small bluestone operations that fall below the threshold at which a permit is required – defined by the State Mined Land Reclamation Act as any mining operation that extracts at least 1,000 tons of material (including overburden) for at least twelve consecutive months. These small operations are not included in the data on mining sites presented in Table 3-29; but they probably represent a significant portion of self-employment in mining in the region.

During the building boom earlier in this decade, demand for bluestone was strong, driven not only by traditional uses such as sidewalks and plazas, but also by its increased use for other purposes such as countertops. Although there has been some decline in demand since the onset of the recession, the New York State Bluestone Association reports that demand has held up relatively well.

The acreage occupied by sand and gravel mining operations in watershed towns, as shown in Table 3-29, is double that occupied by bluestone mines. Sand and gravel mining sites – including several that are owned by town governments – are largely used for road work and other heavy construction. While these operations generally serve local markets and do not have the economic value of bluestone, they provide a needed commodity and help local communities avoid the cost of importing sand and gravel.

#### Forestry and logging

Forestry and logging have long been part of the West-of-Hudson watershed economy – although the scale of these operations is somewhat smaller than that of the mining business, and independent

<sup>&</sup>lt;sup>1</sup> New York State Department of Environmental Conservation, *Report to the Governor and the Legislature Regarding Bluestone Mining in New York State*, March 15, 2008. Most of New York's bluestone mines outside Delaware County are located in Broome County.

operators play a larger role. In 2008, the State Department of Labor reports that there were 25 forestry and logging businesses in the five West-of-Hudson counties, employing a total of 60 wage-and-salary workers, with average annual earnings of \$24,766. In 2007, according to the Census Bureau, there were also 236 self-employed logging and forestry workers in the five counties, with total annual receipts averaging about \$57,000.

About 81 percent of the land area of the West-of-Hudson watershed – a total of about 823,500 acres – is covered by forest. State-owned protected land, on which logging is prohibited, accounts for nearly one-quarter of this total. The land acquired by NYCDEP in fee simple in the West-of-Hudson watershed includes approximately 47,885 acres of forest land – about 5.8 percent of all forest land in the watershed. NYCDEP conservation easements and WAC agricultural easements covered an additional 25,417 acres of forest land – about 3.1 percent of all forest land.

Beyond the boundaries of the watershed, much of the land area of the five West-of-Hudson counties is also forested – a total of 2.36 million acres of forest land, or 75 percent of the combined area of the five counties.

#### Outdoor recreation

Outdoor recreation is an important segment of the watershed region's economy. Opportunities for outdoor recreation attract both second-home owners and visitors to the region – and for many full-time residents, they are a major part of what makes the region an attractive place to live. Ski centers in Hunter, Windham and at Belleayre are among the region's largest employers. Many other small and mid-sized businesses provide goods and services related to outdoor recreation – ski shops, rental and servicing of boats and canoes, snowmobile sales and servicing, and many others. Moreover, people who come to the region to take advantage of its recreational opportunities also support a wide range of other businesses, including hotels, restaurants and retailers.

Data published by the New York State Department of Labor (Table 3-30) highlight the role of tourism-related industries in the economy of five West-of-Hudson counties. Employment in these industries in 2008 ranged from 2.6 percent of total payroll employment in Delaware County to 10.9 percent in Greene County.

The "location quotients" presented in the table are a measure of the degree to which these industries are concentrated in each county. A location quotient of 1.0 means that these industries share of total employment is the same in a given county as it is for the U.S. as a whole. An "LQ" of less than 1.0 means that these industries account for a lower percentage of employment than they do at the national level; an LQ of more than 1.0 means a higher percentage. As the table shows, location quotients for the travel-and-tourism sector range from a relatively low 0.66 in Delaware County to a very high 2.77 in Greene County. (By way of comparison, the travel-and-tourism location quotient for New York State as a whole is 0.86.)

Table 3-30: Travel and Tourism Employment by County, 2008 (\$ millions)

	Travel &	То	urism	Travel & Tour Area Jobs	Location	
	<b>Employment</b>		Wages	Employment	Wages	Quotient
Delaware	430	\$	6.4	2.6%	1.1%	0.66
Greene	1,600	\$	60.6	10.9%	6.1%	2.77
Schoharie	320	\$	4.6	3.6%	1.6%	0.99
Sullivan	1,770	\$	37.2	6.8%	4.2%	1.69
Ulster	3,760	\$	84.9	6.2%	3.9%	1.45
New York State	363,200	\$	13,459.8	4.2 %	2.6%	0.86

Source: New York State Department of Labor, Quarterly Census of Employment and Wages

As noted previously, recreational businesses, hotels and restaurants (a somewhat broader definition of visitor-related industries than that used in the DOL analysis cited above) together accounted in 2007 for about 15 percent of all private payroll employment in West-of-Hudson watershed ZIP codes (as shown in Figure 3-7) – more than 5,300 jobs. Moreover, employment in these three industries plus retailing grew by about 6.7 percent between 1997 and 2007. This sector was thus one of the region's leading sources of new jobs during this period.

It is important to note, however, that much of the employment in this sector of the region's economy consists of relatively low-paid, seasonal or part-time jobs. Table 3-31 shows average annual earnings per employee in the relevant industries.

Table 3-31: Average annual wages in selected industries, by county, 2008

	Hotel	Restaurant	Retailing	Recreation
Delaware	\$16,192	\$11,115	\$27,183	\$15,945
Greene	\$14,175	\$12,600	\$24.851	\$19,873
Schoharie	\$16,409	\$11,455	\$23,901	\$15,088
Sullivan	\$21,841	\$12,828	\$24,675	\$23,019
Ulster	\$22,705	\$13,532	\$25,606	\$21,960

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

In the absence of the proposed action, socioeconomic conditions in the West-of-Hudson watershed towns during the <u>period of the new Water Supply Permit</u> are likely to be similar to those of the past few years – with some notable differences.

Population growth is likely to be considerably slower through 2027 than it has been in the past decade. Between 2000 and 2010, county-level projections published by Cornell University's Program on Applied Demographics estimate that the population of the five west-of-Hudson counties, taken together, will grow by 2.44 percent. Between 2010 and 2020, growth is projected to slow to 1.11 percent – and between 2020 and 2025, the population of the five-county area is expected to decline by 0.24 percent. The projections produced by the Program on Applied Demographics are shown in Table 3-32.

Table 3-32: Population change and projections through 2025, by county

County	2000	2005	2010	2020	2025
Delaware	48,055	46,842	45,939	42,995	40,980
Greene	48,195	48,946	49,718	51,029	51,388
Schoharie	31,582	31,933	31,670	30,678	29,864
Sullivan	73,966	75,539	77,020	79,322	79,845
Ulster	177,749	181,423	184,479	189,107	190,123
TOTAL	381,547	386,688	390,836	395,151	394,225

Source: Cornell University Program on Applied Demographics

The demand for housing that drives residential development in the West-of-Hudson region is fueled partly by population growth, and partly by the market for second homes. Demand for second homes appears unlikely to return in the near future to the levels seen earlier in this decade. In the near term, demand is likely to be constrained by a slow recovery from the recession of 2008-09, and by more conservative mortgage lending practices. Longer-term, demographic trends may limit demand.

Several sources cite the 45-to-64 age group as being the heart of the market for second homes. As the baby boom generation matured, the number of New York metropolitan area residents in this age bracket grew rapidly after 1990, contributing to the surge in demand in this segment of the region's housing market. After about 2015, however, the number of New York metro area residents in this age bracket will flatten out and then start to decline. There will still be a market for second homes – but the growth in demand seen in this part of the market during the past two decades is unlikely to be repeated. These trends are summarized in Table 3-33.

Table 3-33: Population projections for residents age 45-to-64, New York metropolitan area

						% Change	%Change				
	1990	2000	2005	2015	2025	1990-2000	1990-2005	1990-2025	2005-2015	2005-2025	2015-2025
New York County	309,545	347,487	378,854	408,896	400,725	12.26%	22.39%	29.46%	7.93%	5.77%	-2.00%
Kings County	419,020	508,714	552,915	606,092	602,619	21.41%	31.95%	43.82%	9.62%	8.99%	-0.57%
Queens County	401,892	484,676	531,155	631,523	657,065	20.60%	32.16%	63.49%	18.90%	23.70%	4.04%
Richmond County	74,992	103,914	121,833	147,791	153,619	38.57%	62.46%	104.85%	21.31%	26.09%	3.94%
Bronx County	213,122	251,048	275,140	323,883	331,826	17.80%	29.10%	55.70%	17.72%	20.60%	2.45%
Nassau County	295,437	320,944	359,504	391,738	350,618	8.63%	21.69%	18.68%	8.97%	-2.47%	-10.50%
Rockland County	60,918	69,711	74,411	81,604	78,983	14.43%	22.15%	29.65%	9.67%	6.14%	-3.21%
Westchester County	192,534	216,678	243,039	277,376	265,785	12.54%	26.23%	38.05%	14.13%	9.36%	-4.18%
TOTAL	1,967,460	2,303,172	2,536,851	2,868,903	2,841,240	17.06%	28.94%	44.41%	13.09%	12.00%	-0.96%

To the extent that demand for residential development is driven in part by population growth, the estimates of land required to support new development may be overstated. The estimates of land required to support residential development in watershed towns between 2010 and 2022 and between 2022 and 2027 that are used in our analysis of the impact of the proposed action effectively assume that both of these elements of demand (resident population growth and second-home buyers) will be

sustained at the levels that prevailed during the past decade. The resulting estimates are summarized below in Table 3-34.1

Table 3-34: Annual housing unit development through 2027

			20	010-2022		2010-2027			
County	Town	Annual rate of development (units/year)	Total housing units, 2010-2022	Total acres	Total developable acres	Total housing units, 2010-	Total acres	Tota developabl acre	
	Andes	12	145	1,707	486	2027	2,418	689	
	Bovina	2	22	1,707	68	31	2,416	96	
Delaware	Colchester	13	151	861	296	214	1,219	419	
Delaware	Delhi	10	118	743	264	167	1,219	375	
	Deposit	9	108	562	230	153	796	326	
Delaware	Franklin	8	97	805	520	137	1,141	737	
	Hamden	13	159	1,682	701	225	2,383	993	
	Harpersfield	4	45	293	200	64	414	283	
	Kortright	9	102	785	406	145	1,113	575	
	Masonville	5	63	519	447	90	736	633	
	Meredith	4	48	557	469	68	789	665	
	Middletown	21	249	1,446	513	353	2.049	727	
	Roxbury	8	96	518	216	136	734	306	
	Stamford	7	87	459	199	123	651	281	
	Tompkins	10	120	1,392	572	170	1,972	810	
	Walton	10	141		329	200			
				862			1,221	466	
SUBTOTA	L Delaware Count	ty	1,751	13,379	5,916	2,481	18,954	8,381	
Greene	Ashland	7	88	449	260	125	636	369	
Greene	Halcott	2	24	206	79	34	292	112	
Greene	Hunter	25	305	609	348	432	863	494	
Greene	Jewett	13	157	818	511	223	1,159	723	
Greene	Lexington	9	110	682	314	156	966	445	
Greene	Prattsville	4	47	247	100	66	350	142	
Greene	Windham	37	444	888	540	629	1,258	765	
SUBTOTA	L Greene County		1,175	3,900	2,154	1,664	5,525	3,051	
Schoharie	Conosvillo	12	143	899	560	202	1,273	793	
Schoharie		7	87	463	251	124	656	355	
Schoharie		9	111	1,096	639	157	1,552	906	
	L Schoharie Cour	-	341	2,457	1,450	483	3,481	2,054	
		_							
Sullivan	Neversink	38	461	2,027	1,501	653	2,871	2,127	
SUBTOTA	L Sullivan County	1	461	2,027	1,501	653	2,871	2,127	
Ulster	Denning	3	36	241	71	51	342	100	
Ulster	Hardenburgh	3	36	540	166	51	765	235	
Ulster	Hurley	16	190	551	410	269	781	580	
Ulster	Olive	23	271	1,194	748	384	1,692	1,060	
Ulster	Shandaken	18	217	650	186	307	921	264	
Ulster	Wawarsing	48	581	1,163	802	824	1,648	1,136	
Ulster	Woodstock	17	201	785	479	285	1,112	679	
	L Ulster County		1,533	5,124	2,862	2,171	7,259	4,054	
	OTAL West-of-Hu	4	5,260	26,888	13,883	7,451	38,091	19,667	

Based on the highest estimates of the US Census, building permit and Office of Real Property data between 1990 and 2008). See Methodology section above for details on how these estimates were derived.

While it is appropriate to use these historically-based estimates of residential development for purposes of constructing a "reasonable worst-case scenario" regarding the impact of the proposed action, it is important to recognize that they may significantly overstate the scale of new residential development that is likely to occur in the West-of-Hudson watershed towns, with or without the proposed action.

Information on planned or proposed developments that have been reviewed or are under review by NYCDEP (for compliance with stormwater planning requirements, or pursuant to SEQRA, or for other purposes) suggests that new development in the region during the next several years is likely to be limited. Moreover, as shown in Table 3-35, much of the planned new development is concentrated in a relatively small number of towns; the Town of Windham alone accounts for more than half the units shown.

Table 3-35: Planned or proposed residential units in the West-of-Hudson watershed, March, 2010

			Not Yet
County	Town	Approved	Approved
Greene	Windham	409	102
Ulster	Shandaken	259	-
Delaware	Middletown	21	-
Greene	Jewett	13	-
Delaware	Bovina	8	-
Delaware	Andes	8	1
Greene	Hunter	8	53
Total Wes	t-of-Hudson	726	103

Source: NYCDEP project review files

Beyond trends in population and residential development, several other trends seen in the past few years are likely to continue:

• The population of the West-of-Hudson watershed region, as noted previously, has been aging – and this trend will continue. While the total population of the five counties is expected to decline slightly, the Cornell Program in Applied Demographics expects the number of residents age 65 and older to increase by more than 40 percent. As a result, the percentage of the population of the five counties age 65 and older is expected to rise from 15.8 percent to 22.2 percent by 2025. The Cornell population projections are shown in Table 3-36;

Table 3-36: Projected population 65 and older, as a percent of the total population

	2010	2015	2020	2025
Delaware County	22.4%	25.5%	28.9%	32.3%
Greene County	15.8%	17.3%	19.1%	21.4%
Schoharie County	16.2%	18.2%	20.7%	23.4%
Sullivan County	15.3%	17.2%	19.4%	21.7%
Ulster County	14.3%	16.1%	18.1%	20.2%
TOTAL WEST OF HUDSON	15.8%	17.7%	19.9%	22.2%

- Consistent with broader regional trends, agriculture in the West-of-Hudson watershed region is likely to continue its long-term decline whether measured by total farmland acreage, by employment or by agriculture's share of the region's overall economy;
- Especially as the broader regional economy begins to recover, the watershed region could
  during the next several years see some continued growth in outdoor recreation and related
  tourist-based industries; and
- With the possible exception of several towns where development pressures are still strong, land and housing prices are unlikely to return during the next several years to the levels reached in the mid-2000's.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

This section discusses potential impacts of additional land acquisition under the Extended LAP on socioeconomic conditions in West-of-Hudson watershed towns. The assessment examines potential impacts on:

- Supply of developable land
- Land prices, housing prices and affordability
- Industries and businesses
- Local government revenues

## Impacts on Supply of Developable Land – 10 Year Projection Scenario

This section discusses LAP's projected potential impact through 2022 on the supply of developable land in watershed towns, and the implications of this impact on towns' growth potential.

After removing towns with less than 5 percent of their area within the watershed, a four-step process was undertaken to estimate the impact of NYCDEP's LAP program on developable land at the town level through 2022 (see *Methodology* section above for details on the evaluation methods). More detailed town level assessments were conducted for towns with the highest level of potential impacts.

- Step 1: Determine available developable land as of 2009
- Step 2: Project housing demand through 2022 (see Future Conditions Without the Proposed Action)
- Step 3: Project LAP acquisitions through 2022 and the portion of those lands that are developable
- Step 4: Estimate remaining developable land in 2022 after housing demand and LAP acquisitions

Reasonable worst case estimates of land to be acquired under the Extended LAP are provided in Chapter 1, *Project Description*. The projections account for the future "areas of high focus" according to the Long-Term Land Acquisition Plan and represent a reasonable worst case scenario since the total amount of land to be acquired is projected to be greater in the next twelve years than in the previous twelve, although, this is not in fact expected to be the case. Based on this approach, NYCDEP projected purchases in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2022 are projected to total 80,948 acres, as compared with 71,721 through 2009. Purchases of farm easements by the Watershed Agricultural Council from 2010 through 2022 will total 16,000 acres.

The amount of *developable* land acquired was estimated using the methods described in the *Methodology* section above.

The town-by-town results of this analysis are presented in Table 3-37. (The towns are ranked in reverse order of the percentage of the town's 2009 supply of developable land projected to be remaining in 2022.) The analysis suggests that after accounting for LAP acquisition and projected residential development through 2022, all 34 towns will have sufficient land available to accommodate additional residential development well beyond 2022.

As Table 3-37<u>A</u> shows, for the 34 towns collectively, land to be acquired by LAP between 2010 and 2022 represents about 11 percent of 2009's available developable land; and new residential development over that time period is estimated to consume another 6 percent. Overall, approximately 84 percent of 2009's available developable land would still remain in 2022. Each town would have at least 65 percent of its 2009 supply of developable land remaining in 2022: As discussed above in this section and in more detail in the methodology section, the analysis is very conservative, representing a reasonable worst case scenario, and the percentage of developable land remaining in 2022 is likely to be higher.

For the region as a whole, this analysis strongly suggests that the projected level of acquisitions by NYCDEP will not significantly constrain new development in the West-of-Hudson watershed – either between now and 2022 or afterward. During the next twelve years, West-of-Hudson watershed communities will confront a variety of obstacles to economic growth and development – but for the region as a whole, the availability of developable land does not appear to be one of them.

Comparing the columns "Developable Land Needed for Housing through 2022" and "Developable Land Left in 2022," (last white column to first yellow column in Table 3-37) demonstrates that should housing demand continue beyond 2022 at the pace projected through 2022, there is ample land available in each town for many years to come.

Using the data presented in Table 3-37, towns that met either of two criteria were selected for further review:

- Those in which LAP is projected to acquire 20 percent or more of the town's 2009 supply of developable land; and
- Those in which 10 percent or more of the town's 2009 supply of developable land is projected to be consumed by residential development and LAP is projected to acquire greater than 5 percent of the town's 2009 supply of developable land.

As shown in Table 3-37 $\underline{A}$ , 14 towns (those with bold text in the LAP contribution or housing contribution columns) meet these criteria. These towns – along with five others selected for reasons of geographic balance – are shaded in yellow in Table 3-37 $\underline{A}$  and are assessed in more detail in Chapter 4, *Town Level Assessments*. In the remaining 15 towns (those not shaded in yellow), the percentage of the town's 2009 supply of developable land still remaining in 2022 ranges from 80 to 95 percent.

In some towns, particularly those with very mountainous terrain or other natural features not suitable for development, or that include large areas already protected by New York City, or that are already highly developed, available developable land may be limited. An additional analysis was therefore performed to evaluate the percent of a town's total land area that is developable and the effects of land acquisition on that supply of developable land.

Table 3-38<u>A</u> lists six towns where the supply of developable land in 2009 is estimated to be less than 10 percent of the town's total land area, or less than 3,000 acres. All six are already included among the 19 towns subjected to further review under the criteria discussed above. The implications of the Extended LAP's impact on these towns' limited supply of developable land in the context of future growth demand in these towns will be addressed in the individual town-level assessments presented Chapter 4.

Table 3-37<u>A</u>: Remaining developable acreage in 2022, by town, after projected LAP activity and development

			Proiected	Developable		% of 2009				% of town
		Available	developable	land needed	Developable				% of town area	area
		developable	land acquired	for housing	land left in	land left in	LAP	Housing	developable,	developable
County	Town	acres, 2009	through 2022	through 2022	2022	2022	contribution	contribution	2009	2022
Ulster	Denning	4,187	1,359	71	2,757	65.9%	32.5%	1.6%	6.4%	4.2%
Greene	Lexington	3,475	871	314	2,290	65.9%	25.1%	9.0%	6.8%	4.5%
Greene	Prattsville	2,773	820	100	1,853	66.8%	29.5%	3.6%	20.1%	13.4%
Ulster	Hardenburgh	2,692	636	166	1,891	70.2%	23.6%	6.0%	5.2%	3.7%
Greene	Ashland	3,351	698	260	2,393	71.4%	20.8%	7.8%	21.0%	15.0%
Ulster	Olive	5,684	871	748	4,065	71.5%	15.3%	12.8%	15.1%	10.8%
Greene	Halcott	1,668	389	79	1,199	71.9%	23.3%	4.8%	11.6%	8.3%
Delaware	Stamford	4,939	1,187	199	3,554	72.0%	24.0%	4.0%	15.9%	11.4%
Schoharie	Conesville	5,525	955	560	4,009	72.6%	17.3%	10.1%	21.9%	15.9%
Sullivan	Neversink	12,797	1,976	1,501	9,319	72.8%	15.4%	11.7%	24.1%	17.6%
Delaware	Andes	7,221	1,472	486	5,262	72.9%	20.4%	6.7%	10.3%	7.5%
Greene	Windham	5,272	880	540	3,853	73.1%	16.7%	10.2%	18.2%	13.3%
Ulster	Shandaken	1,444	185	186	1,073	74.3%	12.8%	11.9%	1.8%	1.4%
Greene	Jewett	6,292	1,052	511	4,729	75.2%	16.7%	8.1%	19.6%	14.7%
Delaware	Hamden	6,146	724	701	4,721	76.8%	11.8%	11.4%	16.0%	12.3%
Delaware	Middletown	7,455	1,191	513	5,751	77.1%	16.0%	6.9%	12.0%	9.3%
Greene	Hunter	6,722	1,166	348	5,207	77.5%	17.3%	5.2%	11.6%	9.0%
Delaware	Delhi	5,851	990	264	4,596	78.6%	16.9%	4.5%	14.2%	11.1%
Delaware	Bovina	3,726	711	68	2,948	79.1%	19.1%	1.8%	13.1%	10.4%
Delaware	Roxbury	5,927	951	216	4,760	80.3%	16.1%	3.6%	10.6%	8.5%
Ulster	Woodstock	6,759	839	479	5,441	80.5%	12.4%	7.0%	15.6%	12.6%
Delaware	Walton	8,845	1,268	329	7,249	81.9%	14.3%	3.7%	14.2%	11.6%
Delaware	Tompkins	10,947	1,215	572	9,161	83.7%	11.1%	5.2%	17.4%	14.6%
Delaware	Kortright	8,370	630	406	7,334	87.6%	7.5%	4.9%	20.9%	18.3%
Ulster	Hurley	5,003	134	410	4,460	89.1%	2.7%	8.0%	25.9%	23.0%
Delaware	Meredith	13,063	824	469	11,769	90.1%	6.3%	3.6%	35.0%	31.5%
Schoharie	Jefferson	8,722	208	639	7,874	90.3%	2.4%	7.3%	31.4%	28.4%
Schoharie	Gilboa	10,583	714	251	9,619	90.9%	6.7%	2.4%	28.2%	25.6%
Delaware	Masonville	10,890	417	447	10,027	92.1%	3.8%	4.1%	31.2%	28.7%
Ulster	Wawarsing	23,610	958	802	21,850	92.5%	4.1%	3.2%	28.0%	25.9%
Delaware	Deposit	4,052	24	230	3,798	93.7%	0.6%	5.7%	14.5%	13.6%
Delaware	Colchester	9,406	234	296	8,875	94.4%	2.5%	3.1%	10.7%	10.1%
Delaware	Harpersfield	9,959	311	200	9,448	94.9%	3.1%	2.0%	36.8%	34.9%
Delaware		19,006	381	520	18,104	95.3%	2.0%	2.7%	36.4%	34.7%
	TOTAL	252,361	27,241	13,883	211,238	83.7%	10.8%	5.5%	16.6%	13.9%

Table 3-38A: Towns with less than 10 percent (or less than 3,000 acres of) developable land available in 2009

			Available		% of town area	% of town area
		Total town	developable	Developable land	developable,	developable,
County	Town	land	acres, 2009	left in 2022	2009	2022
Ulster	Shandaken	78,875	1,444	1,073	1.8%	1.4%
Ulster	Hardenburgh	51,756	2,692	1,891	5.2%	3.7%
Ulster	Denning	65,430	4,187	2,757	6.4%	4.2%
Greene	Lexington	51,274	3,475	2,290	6.8%	4.5%
Greene	Halcott	14,375	1,598	1,199	11.1%	8.3%
Greene	Prattsville	13,786	2,773	1,853	20.1%	13.4%

As noted above, detailed assessments for 19 towns are found in Chapter 4, *Town Level Assessments*. The towns selected are shown in Figure 3-9.

Stamford

Achtend Windham

Definit Boylina

Definit Boylina

Harden Middle town

Andes

Shandaken

Hardenburgh

Towns Selected For Town-Level Assessment

Figure 3-9: Towns Selected for Town-Level Assessment

A summary of the results of the analysis is provided below for each of these towns.

- **Denning** is a very low-density rural community, with an estimated population of 524 in 2008, and one of the highest percentages of existing protected land (mostly State-owned) among watershed towns. Through 2022, NYCDEP is projected to acquire 32 percent of the Town's remaining developable land. But because the projected rate of new development is low, only two percent of the current supply of developable land is projected to be needed to support new residential development through 2022. Thus, the Town would have 66 percent of its 2009 developable land remaining in 2022.
- Olive (population 4,750) has seen significant growth in its resident population since 1990. As a result, while NYCDEP is projected to acquire a much lower percentage of the Town's remaining developable land than in Denning 15 percent the amount of land projected to be needed to support new development through 2022 is much greater 13 percent of Olive's current supply of such land. However, most new development has been concentrated along Routes 28 and 28A, while NYCDEP is most likely to be acquiring land outside of these areas. Moreover, the Town has proposed and NYCDEP is comfortable with more than doubling Olive's existing designated hamlet area, which will ensure that substantial acreage will be available to support new commercial and residential development. The Town is projected to have 72 percent of its 2009 developable land remaining in 2022. Finally, our projection of the amount of land needed for new residential development may be conservative development in Olive has been slower in this decade than it was in the 1990's.
- Shandaken (population 3,400) has the highest percentage of existing protected land (72 percent) of any watershed town. That feature, along with its mountainous terrain, leaves the Town with relatively little available developable land. As in Olive, NYCDEP's projected acquisitions represent a relatively low percentage of the Town's developable land (13 percent), but the share of developable land projected to be needed to support the projected rate of residential development through 2022 is relatively high (12 percent). Nevertheless, the Town would have 74 percent of its 2009 developable land remaining in 2022. Recognizing the extent to which Shandaken is already protected, NYCDEP and the Town have proposed that in the future NYCDEP will not actively solicit individual land-owners, but will instead respond only to owner-initiated inquiries. NYCDEP is comfortable with that proposal.
- *Hardenburgh* (population 211) is a very low-density rural town with just 2.6 persons per square mile, it has the lowest population density of any watershed town. As in Denning, the share of the Town's developable land projected as being acquired by NYCDEP is relatively high (24 percent); but the amount of land project to be needed to support continued slow growth is small only about six percent of the current supply of developable land. Thus, the town would have 70 percent of its 2009 developable land remaining in 2022.
- Windham (population 1,755) has been one of the West-of-Hudson watershed's fastest-growing towns since 2000. The Town's economy is built primarily on skiing and other leisure activity. The Town has a large second-home sector; in 2000, 56 percent of its housing units were for seasonal or recreational use the highest percentage of any watershed town. With NYCDEP projected to acquire 17 percent of the Town's developable land and 10 percent projected to be needed to support projected residential development, some competition for land might be expected. The Town would have 73 percent of its 2009 developable land remaining in 2022. However, a closer look at where development is occurring shows that it has been clustered in

and around the existing hamlets and around Windham Mountain. Expansion of the designated hamlet area by <u>roughly 2,800</u> acres – as proposed by the Town and accepted by NYCDEP – would provide ample room for additional development in these same high-growth areas through 2022 and beyond. Moreover, by using a 2-acre minimum in our calculation of land needed to support future development, we may be overstating the amount of land that will be required. The actual median parcel size for new units built since 2000 has been only 1.3 acres.

- Hunter's economy, like Windham's, is built primarily on skiing and other recreational activity. It has a somewhat larger resident population (2,750), and a large second-home sector (48 percent of all housing units in 2000 were for seasonal or recreational use); but the Town has grown at a much slower rate in recent years. NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and five percent would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. With more than 3,200 acres designated, Hunter already has the largest designated hamlet area among watershed towns. Under the Town's proposal, which NYCDEP has accepted, this area will be nearly doubled, to more than 6,100 acres. This agreement would allow further development in and around the villages of Hunter and Tannersville, where development has historically occurred, while focusing NYCDEP's acquisitions on outlying areas.
- Ashland (population 827) has seen strong population growth in recent years, combined with somewhat faster housing growth. Like most of Greene County's other "mountaintop towns," the Town has a strong second home sector: about 42 percent of all housing units in 2000 were for seasonal or recreational use. Much of the Town's recent development has occurred along Route 10, or on the eastern side of the Town (bordering Windham). NYCDEP is projected to acquire 21 percent of the Town's current supply of developable land; and eight percent would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 71 percent of its 2009 developable land remaining in 2022. As in Windham and Hunter, a proposed major expansion of Ashland's designated hamlet areas from 362 to more than 2,000 acres would alleviate potential for conflict between NYCDEP's projected acquisitions and the need for land to support further development.
- *Jewett* (population 1,015) is a low-density, primarily rural town located between Windham and Hunter. Jewett has a relatively large second-home population 53 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and eight percent would be required to support the projected rate of new residential development. Thus, the Town would have 75 percent of its 2009 developable land remaining in 2022. As elsewhere, a proposed expansion of designated hamlet areas from 652 to 2,666 acres would alleviate potential conflict between continued development and the projected acquisition of additional land by NYCDEP.
- Lexington (population 874) is another low-density, primarily rural town with a relatively large second-home population 54 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 25 percent of the Town's current supply of developable land; and nine percent would be required to support the projected rate of new residential development. Thus, the Town would have 66 percent of its 2009 developable land remaining in 2022. The Town has proposed, and NYCDEP supports, expansion of designated hamlet areas from 362 to 737 acres.

- *Halcott* is an almost exclusively rural community, with the smallest area and population (203) of any watershed town. The Town has very little commercial activity (mostly home-based businesses); but it has a substantial second-home sector 42 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire 23 percent of Halcott's current supply of developable land, while five percent is projected to be required to support the level of residential development projected for the same period. Thus, the town would have 72 percent of its 2009 developable land remaining in 2022. The Town's comprehensive plan highlights a strong local preference for maintaining its rural character, natural beauty and support for outdoor recreation and notes strong resident opposition to any large-scale commercial or industrial development. Like Denning, Halcott has not sought to expand its 69-acre designated hamlet area.
- *Prattsville* (population 712) is also a primarily rural town. The Town's population declined in the 1990's; it has rebounded somewhat since 2000, but remains below the 1990 level. The second-home market is smaller than those in other mountaintop towns 29 percent of all units are seasonal or recreational. The Town's business base consists almost entirely of retail and service businesses supporting the local population. Through 2022, NYCDEP is projected to acquire 30 percent of Prattsville's current supply of developable land. New residential development, however, is projected to average only four units per year, and to consume only four percent of the Town's developable land. Thus, the Town would have 67 percent of its 2009 developable land remaining in 2022. The Town has a 207-acre hamlet area, which it has chosen not to expand.
- Among watershed towns, *Stamford* (population 1,954) is notable for the diversity of its economy. It includes one of the region's largest concentrations of agriculture, outdoor recreation and the arts in and around the Village of Stamford, a substantial second-home sector, and manufacturing and book retailing in the Village of Hobart. As of July 2009, WAC has acquired easements on 4,849 acres of farmland in Stamford by far the most in any watershed town. Through 2022, NYCDEP is projected to acquire 24 percent of the Town's current supply of developable land. About two-thirds of this total is expected to be developable farmland placed under WAC easements, allowing for continued farm use; only one-third would be land directly acquired by NYCDEP in fee simple or as conservation easements. With a relatively low rate of new residential development only four percent of the current supply of developable land is projected to be required for new development through 2022. Thus, the Town would have 72 percent of its 2009 developable land remaining in 2022. Designated hamlet areas in Stamford currently total 1,333 acres. The Town has not proposed to expand them.
- *Middletown* is a primarily rural community (population 3,881) with a mixed economy that has experienced moderate growth in recent years. Most commercial activity is concentrated in the Villages of Margaretville and Fleischmanns and the hamlet of Arkville along Route 28, and near in the northern part of the town, near Roxbury. About 36 percent of all housing units are for seasonal or recreational use. NYCDEP is projected to acquire 16 percent of Middletown's current supply of developable land through 2022. An additional seven percent of the current supply would be required to support the projected rate of new residential development about 21 new units per year through 2022. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. Middletown currently has a total of 1,734 acres in designated hamlet areas. The Town has proposed to expand the designated areas by <u>229</u> acres, to a total of <u>2,032</u> acres. NYCDEP has accepted the Town's proposal.

- Andes is a primarily rural, low-density community with a roughly stable resident population of 1,336. In 2000, 49 percent of all housing units were seasonal or recreational; and it appears that there has been continued growth in this sector since 2000. Commercial activity is concentrated in the hamlet (and former Village) of Andes which, relative to its size, has seen substantial new business development since 2000. NYCDEP is projected to acquire 20 percent of the current supply of developable land through 2022; and about seven percent will be required to support projected new residential development through 2022. Thus, the Town would have 74 percent of its 2009 developable land remaining in 2022. Andes has a designated hamlet area of 1,047 acres, which the Town has chosen not to expand.
- **Bovina**, with an estimated population of 633 in 2008, is a low-density, primarily rural town with a substantial second-home population 40 percent of all housing units in 2000 were for seasonal or recreational use. Through 2022, NYCDEP is projected to acquire about 19 percent of the Town's current supply of developable land. However, residential growth in the town has been slow. Only about two percent of the Town's developable land would be required to support the projected rate of new residential development through 2022. Thus, the Town would have 79 percent of its 2009 developable land remaining in 2022.
- *Hamden* is a rural town (population 1,237) in the geographic center of Delaware County. Most businesses are clustered along Route 10, while low-density residential uses are scattered throughout the town. The southeastern part of the Town (about 13 percent of its total land area) lies outside the watershed. Acquisitions of developable land by NYCDEP are projected to total 12 percent of the Town's total supply of developable land as of 2009, while land required for new residential development during the same period is projected at 11 percent of the current supply. Thus, the Town would have 77 percent of its 2009 developable land remaining in 2022. In 1997, the Town designated hamlet areas totaling 420 acres. NYCDEP and the Town have proposed a significant expansion of the designated areas to a total of 2,854 acres, which NYCDEP has agreed is appropriate. Both the existing and proposed hamlet areas are primarily along Route 10, where development typically occurs.
- *Delhi* (population 4,547) is a low-density, primarily rural town. More than half the Town's population is concentrated in the Village of Delhi the county seat for Delaware County, the site of the SUNY-Delhi campus, and a commercial center for Delhi and several other towns. Through 2022, NYCDEP is projected to acquire 17 percent of the Town's current supply of developable land; and five percent would be required to support the projected rate of new residential development. Thus, the Town would have 79 percent of its 2009 developable land remaining in 2022. The Town has proposed an expansion of designated hamlet areas from 2,346 to 4,902 acres, alleviating potential conflict between continued development and the projected acquisition of additional land by NYCDEP.
- Conesville is a low-density rural community (population 714) in Schoharie County with a diverse agricultural sector, but relatively few commercial uses. About 54 percent of the Town's housing units are seasonal or recreational; the Town saw strong growth in this sector in the 1990s, but the trend has slowed since then. The Town's comprehensive plan calls for preserving its rural character, natural beauty and remaining agricultural activity; and specifically urges greater use of WAC easements to preserve farmland. Acquisitions by NYCDEP through 2022 are projected to total 17 percent of the Town's total supply of developable land as of 2009. About one-quarter of new acquisitions are expected to be WAC easements. Land required for new residential development during the same period is projected at 10 percent of the current

supply of developable land; however, because this projected growth rate is based in part on strong growth in the 1990s, this projection may be overstated. Given the conservative projection, the Town would have 73 percent of its 2009 developable land remaining in 2022. The Town has proposed that designated hamlet areas be increased from 275 to 1.845 acres – shifting NYCDEP acquisitions away from areas that are likely to be most suited for new development. NYCDEP has accepted this proposal.

With its resident population growing by about one-third since 1990, *Neversink* (population 3,909 in 2008) has been one of the fastest-growing watershed towns. Development is concentrated along Route 55, and around the hamlet of Grahamsville. NYCDEP's acquisitions through 2022 are projected at 15 percent of the current supply of developable land. At the projected rate of growth, new residential development would be projected to require 12 percent the current supply of developable land. Use of 1990-2008 data on growth in housing units may, however, overstate the likely pace of future development in Neversink; building permit data suggest that growth has been significantly slower in the past decade than it was in the 1990's. Given the conservative projection, the Town would have 73 percent of its 2009 developable land remaining in 2022. The Town currently has designated hamlet areas of 1,197 acres, which it has proposed not to expand.

## **Impacts on Supply of Developable Land- 15 Year Greater Impact Scenario**

A similar analysis was conducted for the 15 Year Greater Impact Scenario based on the approach described in "Methodology" above. The analysis in this scenario assumes that NYCDEP would acquire an additional 10 percent above the 10 Year Projection Scenario. This scenario is considered to be an extremely conservative (i.e. high impact) estimate of land to be acquired under the Extended LAP. It is highly unlikely that, even under a 15 year Water Supply Permit, additional land would be acquired beyond the levels estimated under the 10 Year Projection Scenario.

The town-by-town results of this analysis are presented in Table 3-37B. (The towns are ranked in reverse order of the percentage of the town's 2009 supply of developable land remaining in 2027.) The analysis concludes that all 34 towns have sufficient land available to accommodate both the projected acquisitions under LAP through 2027, and the projected rate of residential development beyond 2027.

As Table 3-37B shows, for the 34 towns collectively, land to be acquired by LAP between 2010 and 2027 represents about 11.7 percent of 2009's available developable land; and new residential development over that time period is estimated to consume 7.9 percent. (It was estimated above, that under the proposed action, the land to be acquired by LAP between 2010 and 2022 would represent 10.8 percent of the 34 towns' 2009 supply of developable land, and that new residential development during the same period would consume 5.5 percent.)

Overall, the 15 Year Greater Impact Scenario is projected to result in approximately 80.4 percent of 2009's available developable land to still remain in 2027, as compared with 83.7 percent under the proposed action. Each town would have at least 60 percent of its 2009 supply of developable land remaining in 2027, as compared with a minimum of 65 percent under the proposed action. As discussed above, due to the very conservative nature of the analysis, , the percentage of developable land remaining in 2027 is likely to be higher than projected for this EIS.

In some towns – including Olive, Windham, Lexington, Conesville and Neversink – the estimates of developable land remaining in 2027 that are presented in Table 3-37B are significantly lower than those for the 10 Year Projection Scenario. In most cases, however, this is primarily a result of projecting through 2027 the relatively high rates of residential development seen in recent decades.

<u>For the reasons provided in "Future Conditions Without the Proposed Action," these development levels are unlikely.</u>

For the 34 towns collectively, the additional acreage projected to be acquired through 2027 represents about 1 percent of the towns' collective supply of developable land, while new residential development between 2022 and 2027 accounts for about 2.5 percent.

<u>Table 3-37 B: Remaining developable acreage in 2027, by town, after Extended LAP activity and development through 2027. (Cells with bold and yellow show where criteria for more detailed town level assessment was met or exceeded.)</u>

			Projected	Developable land		% of 2009		
		Available	developable	needed for	Developable	developable		
		developable	land acquired	housing through	land left in	land left in	LAP	Housin
County	Town	acres, 2009	through 2027	2027	2027	2027	contribution	contributio
Greene	Lexington	3,475	958	445	2,072	60%	27.6%	12.89
Ulster	Denning	4,187	1,495	97	2,595	62%	35.7%	2.39
Greene	Prattsville	2,773	901	142	1,730	62%	32.5%	5.19
Ulster	Olive	5,684	958	1,060	3,666	64%	16.9%	18.69
Ulster	Hardenburgh	2,692	699	235	1,758	65%	26.0%	8.79
Greene	Ashland	3,351	768	369	2,215	66%	22.9%	11.0
Sullivan	Neversink	12,797	2,017	2,127	8,510	67%	16.9%	16.69
Schoharie	Conesville	5,525	1,051	793	3,681	67%	19.0%	14.4
Greene	Windham	5,272	968	765	3,539	67%	18.4%	14.5
Greene	Halcott	1,668	428	112	1,127	68%	25.7%	6.7
Ulster	Shandaken	1,444	203	264	977	68%	14.1%	18.3
Delaware	Andes	7,221	1,619	689	4,912	68%	22.4%	9.5
Delaware	Stamford	4,939	552	281	3,421	69%	25.0%	5.7
Greene	Jewett	6,292	1,158	723	4,411	70%	18.4%	11.5
Delaware	Hamden	6,146	797	993	4,356	71%	13.0%	16.2
Delaware	Middletown	7,455	1,310	727	5,419	73%	17.6%	9.7
Greene	Hunter	6,722	1,283	494	4,945	74%	19.1%	7.3
Delaware	Delhi	5,851	1,090	375	4,387	75%	18.6%	6.4
Ulster	Woodstock	6,759	923	679	5,157	76%	13.7%	10.0
Delaware	Bovina	3,726	782	96	2,849	76%	21.0%	2.6
Delaware	Roxbury	5,927	1,047	306	4,574	77%	17.7%	5.2
Delaware	Walton	8,845	1,395	466	6,985	79%	15.8%	5.3
Delaware	Tompkins	10,947	1,336	810	8,801	80%	12.2%	7.4
Delaware	Kortright	8,370	693	575	7,102	85%	8.3%	6.9
Ulster	Hurley	5,003	147	580	4,276	85%	2.9%	11.6
Schoharie	Jefferson	8,722	229	906	7,587	87%	2.6%	10.4
Delaware	Meredith	13,063	907	665	11,491	88%	6.9%	5.1
Schoharie	Gilboa	10,583	785	355	9,443	89%	7.4%	3.4
Delaware	Masonville	10,890	458	633	9,799	90%	4.2%	5.8
Ulster	Wawarsing	23,610	1,054	1,136	21,420	91%	4.5%	4.8
Delaware	Deposit	4,052	26	326	3,700	91%	0.6%	8.0
Delaware	Colchester	9,406	258	419	8,728	93%	2.7%	4.5
Delaware	Harpersfield	9,959	342	283	9,334	94%	3.4%	2.8
Delaware	Franklin	19,006	420	737	17,849	94%	2.2%	3.9
	TOTAL	252,361	29,055	19,664	202,816	80%	11.7%	7.9

For the region as a whole, this analysis strongly suggests that the projected level of acquisitions by NYCDEP under this 15 Year Greater Impact Scenario will not significantly constrain the amount of new development in the West-of-Hudson watershed – either between now and 2027 or afterward. As with the 10 Year Projection Scenario, it would preserve sensitive natural lands, while keeping future development in hamlet and expanded areas where much of it currently occurs.

As discussed above, towns that met either of two criteria were selected for further review:

- Those in which LAP is projected to acquire 20 percent or more of the town's 2009 supply of developable land; and
- Those in which 10 percent or more of the town's 2009 supply of developable land is projected to be consumed by residential development and LAP is projected to acquire more than 5 percent of the town's 2009 supply of developable land.

As shown in Table 3-37B, 16 towns (those with bold text in the LAP contribution or housing contribution columns) meet these criteria. All but one of these towns – Woodstock – is among the towns for which individual town-level assessments were identified under the 10 Year Projection Scenario.

In *Woodstock*, the 15 year Greater Impact Scenario would increase the percentage of the Town's 2009 supply that could be acquired under LAP from 12.4 percent as of 2022 to 13.7 percent as of 2027; and developable land needed to support projected residential development would increase from 7.0 percent of the 2009 supply of such land in 2022 to 10.0 percent in 2027. However, any potential for conflict between LAP acquisitions and the need for land for new development would be quite limited, since LAP acquisitions would take place entirely within the much less developed western half of the Town (that is, within the watershed), while new development is most likely to occur in the eastern (non-watershed) portion of the Town, in and near the hamlets of Woodstock, Bearsville and Zena. A more detailed assessment of the Extended LAP's impact on Woodstock is provided in Chapter 4.

In the remaining 17 towns (those not shaded in yellow in Table 3-37B), the percentage of the town's 2009 supply of developable land that would still remain in 2027 ranges from 73 to 94 percent.

In some towns, particularly those with mountainous terrain or other natural features not easily developed, or that include large areas of land already protected by New York State or New York City, or that are already highly developed, the supply of developable land may already be limited. An additional analysis was therefore performed to evaluate the percent of a town's total land area that is developable and the effects of land acquisition on that supply.

<u>Table 3-38 B lists six towns where the supply of developable land in 2009 is estimated to be less</u> than 10 percent of the town's total land area, or less than 3,000 acres.

<u>Table 3-38 B: Towns with less than 10 percent or fewer than 3,000 acres of developable town area land</u> remaining in 2009 under Greater Impact Scenario

County	Town	Total town land	Available developable acres, 2009	Developable land left in 2027	% of town area developable, 2009	% of town area developable, 2027
Ulster	Shandaken	78,875	1,444	977	1.8%	1.2%
Ulster	Hardenburgh	51,756	2,692	1,758	5.2%	3.4%
Ulster	Denning	65,430	4,187	2,595	6.4%	4.0%
Greene	Lexington	51,274	3,475	2,072	6.8%	4.0%
Greene	Halcott	14,375	1,598	1,127	11.1%	7.8%
Greene	Prattsville	13,786	2,773	1,730	20.1%	12.5%

The towns listed in Table 3-38B include several that are developed at low densities – including Denning, Hardenburgh, Halcott and Prattsville – where, given the projected rate of new development, the limited supply of developable land is unlikely to be a significant constraint on development through 2027.

Among the towns listed in Table 3-38B or highlighted in Table 3-38A, Shandaken appears to be the only case where a very limited supply of developable land could potentially lead to a conflict between the projected level of acquisitions under the Extended LAP and the need for land to accommodate new development. As discussed above, NYCDEP and the Town have agreed on a change in the way LAP operates in Shandaken that should substantially reduce the potential for conflict. Under this agreement, LAP would no longer actively solicit individual landowners in Shandaken, but would instead only pursue properties of interest whose owners initiate negotiations with NYCDEP.

Among the other towns highlighted in Table 3-37B, there may also be some potential for conflict in Windham – not because the supply of land is relatively limited, but because the demand for land for development has been strong during the past decade, and could be in the future. As in Shandaken, a 10 percent increase in projected acquisitions under the Extended LAP would increase somewhat the potential for conflict. In this case, any potential conflict between the Extended LAP and the need for land to accommodate future development could be alleviated by the proposed near-quadrupling of the Town's designated hamlet areas, to a total of 3,942 acres. The expanded hamlet areas would cover 14 percent of the town's land area, and would help ensure that a substantial amount of land remains available for new development through 2027 and beyond, especially since the proposed expansion areas are located in those parts of Windham where much of the Town's development is occurring.

## Impacts on Land Prices, Housing Prices, and Affordability

Determining the impact of LAP on land and housing prices is difficult. Multiple factors affect the price of land in the watershed – broader real estate market trends, local demographic trends, proximity to the Thruway, etc, and determinations of causality are extremely difficult. This section examines the extent to which LAP acquisitions have and could in the future continue to influence land prices, housing prices and affordability.

# Impact on land prices

2009

Since 1997, NYCDEP's Land Acquisition Program has accounted for a significant portion land transfers in many watershed towns. As Table 3-39 shows, the Program's share of all purchases of vacant land over 10 acres, whether measured by number of transactions or total acreage, has varied significantly over time. As the end of the real estate boom of the early and mid-2000's, and the onset of the recession led to a decline in private purchases of land, NYCDEP's share of all purchases has risen. NYCDEP's share of all transactions has also varied geographically; in 2008 and 2009, for example LAP acquisitions accounted for 92 percent of all land purchases in the Greene County mountaintop towns, but only 19 percent in north central Ulster County and 22 percent in northeastern and western Delaware County.

	ianu greater	man to actes,	west of fluusoff water	isneu towns, 200	11-2009		
	Land Acqusition Program		Other land	sales	LAP / Total land sales		
Year	Transactions	Acres	Transactions	Acres	<b>Transactions</b>	Acres	
2001	93	9,267	457	22,212	17%	29%	
2002	77	6,212	597	26,927	11%	19%	
2003	81	9,081	569	23,830	12%	28%	
2004	64	7,647	548	22,272	10%	26%	
2005	78	9,394	546	22,152	13%	30%	
2006	73	6,760	396	14,518	16%	32%	
2007	76	6,198	362	15,593	17%	28%	
2008	96	8 329	267	11 898	26%	41%	

172

6.475

24%

48%

Table 3-39: LAP transactions as a percent of all transactions of vacant and low-density residential and agricultural land greater than 10 acres, West of Hudson watershed towns, 2001-2009

Given the scale of NYCDEP's participation in the market for land, it would be reasonable to expect NYCDEP to have some impact on prices – and in particular, to expect that LAP acquisitions, by increasing demand for watershed land, would cause land prices to rise. However, the data on NYCDEP's impact on prices are ambiguous.

To trace changes in the price of land in watershed towns, data from ORPS on arms-length sales of vacant land of more than ten acres (excluding purchases by NYCDEP under LAP) were analyzed for each of the nine groups of West-of-Hudson watershed towns defined earlier in this chapter and shown on Figure 3-4 The same data were also analyzed for six groups of towns that are either wholly outside the watershed (or that in several cases have less than four percent of their total area within the watershed). The six town groups are:

- Southern Columbia County (Ancram, Copake, Gallatin and Tagkhanic)
- Three towns in Schoharie County (Blenheim, Broome and Summit)

6.079

- Three Greene County towns (Cairo, Durham and Greeneville)
- Four Ulster County towns (Marbletown, Rochester, Saugerties and Ulster)
- Two towns in Sullivan County (Fallsburg and Liberty)
- Southern Otsego County(Maryland, Milford, Otego and Unadilla)

These town groups are shown below in Figure 3-10.

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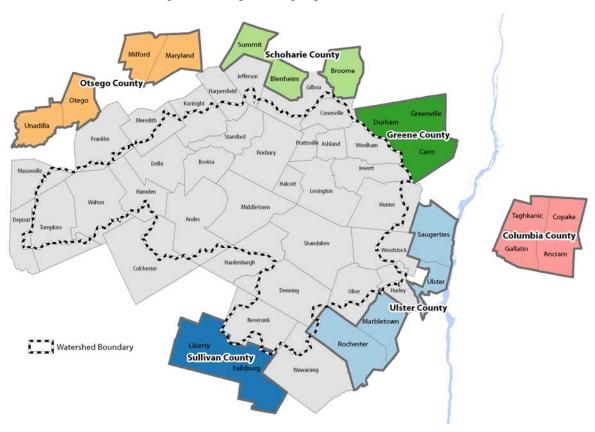


Figure 3-10: Map of town groups outside the watershed

Table 3-40 shows, the median sale price per acre on arms-length sales of vacant parcels of more than ten acres rose substantially between 2001 and 2009 in most of the nine watershed town groups. When price trends in these groups are, however, compared with trends in the six non-watershed town groups, it is clear that sharp increases in land prices were common outside as well as inside the watershed; and in some cases prices rose more rapidly outside than inside the watershed.

- The median sale price in Blenheim, Broome and Summit, for example, rose faster than the median for watershed towns in Schoharie County.
- The increase in the median price for Cairo, Durham and Greeneville was greater than the increase in the median for Greene County's western mountaintop towns, but less than the increase in the eastern mountaintop towns.
- The median price per acre rose faster in southern Otsego County than in northeastern and western Delaware County but not as fast as the median price increased in southeastern Delaware County. .

Table 3-40: Median sales price per acre on arms-length sales of vacant parcels of more than ten acres, by town group<sup>1</sup>

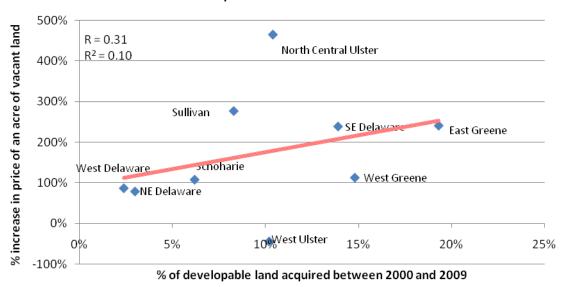
	Median price pe	r acre	% Change, 2001-
Town Groups	2001	2009	2009
Inside watershed			
Northeastern Delaware County	\$1,304	\$2,330	79%
Southeastern Delaware County	\$1,441	\$4,884	239%
Western Delaware County	\$1,036	\$1,942	87%
Greene County Mountaintop East	\$2,094	\$7,143	241%
Greene County Mountaintop West	\$2,044	\$4,345	113%
Schoharie County	\$1,203	\$2,500	108%
Sullivan County	\$2,110	\$7,963	277%
North Central Ulster County	\$1,196	\$6,765	466%
Western Ulster County	\$7,437	\$4,186	-44%
Outside watershed			
Columbia County	\$3,452	\$9,615	179%
Greene County	\$1,168	\$3,835	228%
Otsego County	\$664	\$1,664	150%
Schoharie County	\$783	\$1,703	117%
Sullivan County	\$1,250	\$6,519	422%
Ulster County	\$2,642	\$6,519	147%

Changes in land prices in watershed towns can be analyzed not only in relation to price changes outside the watershed, but also in terms of how the rate of price escalation varies within the watershed. If LAP purchases were a contributing factor in the rise in land prices, it would be reasonable to expect prices to rise faster in areas where NYCDEP has acquired the most land. Figure 3-11 shows the percentage increase in median price per acre in each of the nine watershed town groups, along with the percentage of developable land in each town group that had been acquired by NYCDEP through mid-2009.

<sup>&</sup>lt;sup>1</sup> The price trend for some groups – including Western Ulster County – is based on a limited number of transactions involving vacant land of more than 10 acres.

Figure 3-11: Percent increase in the median price of vacant land (2001-09) compared with the percent of developable land acquired from 2000 to 2009, by town group

# Increase in price of vacant land (2001-2009) vs. % of developable land acquired from 2000 to 2009



The graph suggests that between 2001 and 2009 there was a weak correlation of 0.31 (r-squared = 0.10) between LAP acquisitions and land price increases.

Several conclusions might be drawn from the data presented above.

- The price of land rose sharply in most parts of the West-of-Hudson watershed region between 2001 and 2009 but the data do not suggest that land prices rose more rapidly in watershed towns than in nearby non-watershed towns;
- Within the West-of-Hudson watershed, there is only a weak correlation between the rate at which the price of vacant land increased and the extent of acquisitions under LAP;
- When prices are high, some people will be more inclined to respond positively to an offer to buy their land.
- As the market has cooled, acquisitions by NYCDEP under LAP have come to represent a significantly larger part of the market for large tracts of undeveloped land. The Program's impact on the market may be greater when private demand is weak and prices are falling than it was during the boom.

Through the mid-2000's, LAP may thus have been a contributing factor in the escalation of land prices in some parts of the watershed – although its contribution to the rise in land prices was limited by NYCDEP's policy, pursuant to the 1997 MOA, of paying only "fair market value" as determined

by independent appraisals. But it was clearly not the only – or even the leading – factor in this pattern of price increases.

During the past few years, however – as private demand for watershed land has declined and LAP has come to account for a larger percentage of all land sales – the program's impact on land prices may have changed. Just as they have outside the watershed, median prices of vacant land in watershed towns have declined since peaking in 2006-2007. However – because of the scale of its purchases and its willingness to pay fair market value for eligible watershed land – LAP may now have the effect of keeping the price of undeveloped land from falling as rapidly as it might have fallen in the absence of LAP. The impact of this effect on future socioeconomic conditions within the watershed will be discussed below, following the discussion of LAP's impact on the prices and affordability of housing.

While LAP may have some impact on the price of larger tracts of land, it does not appear to have had a significant impact on the price of smaller parcels (those of less than 10 acres). Purchases of small parcels account for less than 1 percent of the land acquired in the west-of-Hudson under LAP; and purchases by NYCDEP account for less than 1 percent of all sales of small parcels.

## Impact on housing prices and affordability

Increases in the cost of housing, as described in the section on existing conditions, have been a matter of continuing concern in many parts of the watershed. It does not appear, however, that the acquisition of watershed land under LAP has been a significant contributing factor in the rise in home prices. Price increases such as those seen in West-of-Hudson watershed towns have been seen elsewhere as well. Table 3-41 shows increases in home prices in watershed and non-watershed towns between 2001 and 2009.

While none of these out-of-watershed areas matched the percentage increase recorded in the western Greene County mountaintop towns or in the watershed towns of Schoharie County, they are comparable to or greater than those in other parts of the watershed. For example:

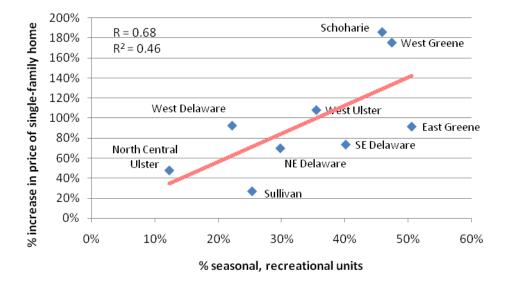
- The increase in median home prices in southeastern Columbia County (Ancram, Copake, Gallatin and Tagkhanic) between 2001 and 2009, matched the increase during the same period in the eastern mountaintop towns of Greene County and median sales prices in the two areas in were similar.
- Prices increases in southern Otsego County towns (Maryland, Milford, Otego and Unadilla) were roughly comparable to those in Delaware County.
- Prices rose faster in Liberty and Fallsburg than in Neversink.

Table 3-41: Change in median sales price of single-family homes inside and outside the watershed, 2001-2009

	Median sale	price	% Change, 2001-
Town Groups	2001	2009	2009
Inside watershed			
Schoharie County	\$46,500	\$133,000	186%
Greene County Mountaintop West	\$53,000	\$146,000	175%
Western Ulster County	\$88,500	\$184,000	108%
Western Delaware County	\$52,000	\$100,000	92%
Greene County Mountaintop East	\$110,000	\$210,500	91%
Southeastern Delaware County	\$75,000	\$130,000	73%
Northeastern Delaware County	\$62,500	\$106,000	70%
North Central Ulster County	\$135,000	\$199,000	47%
Sullivan County	\$107,500	\$136,000	27%
Outside watershed			
Ulster County	\$106,000	\$217,250	105%
Columbia County	\$116,500	\$222,500	91%
Sullivan County	\$72,000	\$133,500	85%
Schoharie County	\$62,900	\$114,000	81%
Greene County	\$87,500	\$152,375	74%
Otsego County	\$60,000	\$100,000	67%

There appears to be little correlation between home price trends in various market areas and the extent of acquisitions under LAP (a correlation of 0.09, r-squared = 0.01). As shown in Figure 3-12 and Figure 3-13, there appears to be a much stronger correlation between home price increases and the percentage of second homes in an area (a correlation of 0.68, r-squared = 0.46).

Figure 3-12: Increase in price of single-family homes (2001-2009) vs. share of seasonal recreational units (2000)



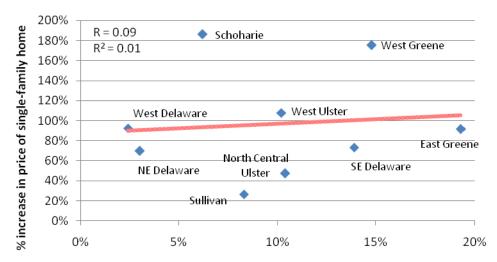


Figure 3-13: Increase in the price of single-family homes vs. LAP acquisitions as a %'ge of developable land

% of developable land acquired between 2000 and 2009

For lower-income households in the West-of-Hudson watershed, affordability is generally not a question of homeownership; instead it is in part a matter of the availability and affordability of rental housing. The existing supply of affordable rental housing in watershed towns (including housing for older residents) is concentrated in or in the immediate vicinity of hamlets and village centers; and it is highly likely that any future development of affordable rental housing will similarly occur in these areas. To the extent that existing hamlet designations – and the proposed expansion of designated hamlet areas, described below – preclude any future LAP acquisitions in these areas, they ensure that LAP will not in the future have significant adverse impact on the availability or cost of affordable rental housing.

#### The future impact of LAP on prices, affordability, and socioeconomic conditions

Future real estate market conditions are too uncertain to project with any specificity either the future course of real estate prices in the West-of-Hudson watershed through 202<u>7</u>, or how further acquisitions of watershed land by NYCDEP will affect those prices. Several general points are nevertheless worth noting.

As long as private demand for larger tracts of undeveloped land remains weak, LAP may play a stabilizing role in this segment of the market – maintaining prices at levels somewhat higher than sellers would be able to obtain in absence of the program. Even more significant than LAP's impact on prices may be its impact on the liquidity of the market for undeveloped land. LAP in effect assures owners of NYCDEP-sought properties that even in a weak market they may have a willing buyer at fair market value (as fair market value is defined by NYCDEP, based on independent appraisals).

To the extent that LAP helps to maintain the price of undeveloped land, and maintains the liquidity of the market, it may have several effects on socioeconomic conditions in the watershed:

- LAP may increase slightly the overall cost of new development in the watershed, by increasing marginally the prices that developers pay for larger tracts of land. It does not appear, however given the declines in median price per acre in the past few years that LAP's impact on land prices is great enough to have a significant impact on the financial feasibility of new development;
- As noted below in the discussion of the program's impact on agriculture, LAP may make it easier and more attractive for owners of agricultural land to sell. LAP may thus accelerate somewhat the shift of watershed land out of agricultural use. But in the long run, as discussed in detail under agriculture below, it is unlikely to have any real impact on the level of agricultural activity or agricultural land use in the region. Owners who are choosing to stop farming their land and who are then in some cases choosing to sell all or part of it are generally responding to a much broader range of economic and other factors, not simply to opportunity that the Land Acquisition Program represents;
- Through the fall of 2009, NYCDEP had paid a total of \$53.1 million to landowners with primary addresses in the West-of-Hudson watershed from whom NYCDEP had purchased fee interests or conservation easements in the West-of-Hudson watershed. These payments to resident land-owners represented 34 percent of all payments to owners of West-of-Hudson watershed land under the Land Acquisition Program.
  - Pursuant to the MOA, NYCDEP adheres to a policy of paying "fair market value" for land acquired under LAP. Consequently, it can be argued that NYCDEP's purchases of fee interests in themselves provide no real net benefit to owners, since they presumably would have been able to sell to another buyer at a similar price. In periods when demand for watershed land weakens, however, LAP may as noted above benefit prospective sellers of attractive, eligible land by in effect guaranteeing the liquidity of the market. Especially for owners who need for whatever reason to sell their property, NYCDEP's role as a "willing buyer" can be of real value even if a sale to NYCDEP brings no more than fair market value; and
- Payments by NYCDEP and WAC for conservation and agricultural easements also provide a
  benefit to some West-of Hudson landowners. In the absence of the NYCDEP and WAC
  easement programs, these owners probably would not have the opportunity to sell this type
  of limited interest, while retaining fee ownership, and enjoying continued (although
  restricted) use of their land.

While NYCDEP's purchases of land thus appear to have *some* impact on land prices – especially as it continues to buy land at a time when demand from other potential buyers has declined – the analysis of home prices shows no significant impact of NYCDEP's land purchases on the price of single-family homes. Other factors – including broader trends in the housing market, and the popularity of some areas within the watershed as second-home or retirement locations – appear to have had a greater impact on home prices.

Moreover, because LAP is restricted from acquiring land in designated hamlet areas – and because designated hamlet areas may be substantially expanded – LAP is unlikely to have any adverse impact on the future development or cost of affordable rental housing.

It is difficult to project real estate market conditions in the West-of-Hudson region through 2022; projecting through 2027 is correspondingly more uncertain. But using the best available information and reasonable projections, there is little evidence to suggest that the Extended LAP's impact on real estate prices would substantially affect socioeconomic conditions in the watershed region through 2027.

#### **Impacts on Industries and Businesses**

As explained above in the section on methodology, the assessment of LAP's potential impact on industries in the watershed region focuses primarily on the program's direct impact on selected land-based industries.

## Agriculture

Through July 2009, NYCDEP reports that it had secured in fee simple at least 45 parcels of watershed land at least some portion of which, in the recent past prior to acquisition by NYCDEP, had been actively used as farmland. These 45 parcels together totaled 5,497 acres, of which actively-used agricultural land totaled 1,135 acres. A summary of these acquisitions by town appears in Table 3-42.

NYCDEP's information on how lands were used in the years preceding acquisition by LAP is incomplete. It is thus possible that the total acreage in active farm use prior to acquisition was somewhat greater than the 1,135 acres cited above. In order to provide some margin for error (and to be conservative), it is assumed for purposes of this analysis that the land in which NYCDEP had acquired fee interest in the West-of-Hudson watershed as of July 2009 includes approximately 1,500 acres that in the recent past prior to acquisition had been actively used for some form of agricultural production.

Acquisition of farmland by NYCDEP does not necessarily mean an end to agricultural production. NYCDEP currently has 23 five-year permits in place allowing farm operators in the watershed to use NYCDEP-owned land for agricultural production. These 23 permits cover a total of 661 acres – of which 21 permits, covering 653 acres, are on properties in the West-of-Hudson region. Specific agricultural uses under these permits include production of hay, alfalfa, corn, grapes, blueberries and other crops, and use as pasture land. Table 3-43 lists the number of permits and total acreage by county and town. As the table shows, about 80 percent of all land on which NYCDEP has issued farm permits is located in Delaware County.<sup>1</sup>

Some local officials have noted that the benefits farm operators can realize from use of NYCDEP land under a five-year permit are limited; and in particular, that such land is not an asset against which operators can borrow. While this is correct, it should also be noted that farming leased land is a common practice in rural communities, both in New York and elsewhere.

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<sup>&</sup>lt;sup>1</sup> Activities conducted under NYCDEP permits do not necessarily have an economic impact equal to that of the agricultural activities for which the land was previously used. Land that once supported a herd of dairy cattle, for example, might now be used only for production of hay. But this is not necessarily a result of acquisition by NYCDEP – it is more a result of economic conditions. Dairy farming may have a much greater economic impact than cutting hay – but it may not be financially sustainable.

Table 3-42: NYCDEP acquisitions of agricultural land in fee simple through 2009

County/Town	Total acres acquired	Active agricultural acres acquired
<b>Schoharie County</b>		
Conesville	434	70
<b>Greene County</b>		
Ashland	255	18
Lexington	336	13
Prattsville	993	146
Halcott	448	47
Windham	45	29
Jewett	40	21
SUBTOTAL	2,117	274
Delaware County		
Bovina	35	4
Delhi	566	136
Franklin	57	23
Hamden	414	118
Harpersfield	33	8
Kortright	284	84
Masonville	156	46
Meredith	257	56
Middletown	274	23
Roxbury	638	137
Stamford	232	156
SUBTOTAL	2,946	791

Table 3-43: Agricultural permits and acres, by town

County/Town	Permits	Acres
<b>Greene County</b>		
Ashland	1	28
Prattsville	1	67
Windham	1	27
SUBTOTAL	3	122
<b>Delaware County</b>		
Delhi	1	50
Franklin	1	74
Hamden	1	15
Harpersfield	1	7
Kortright	1	24
Masonville	1	58
Middletown	3	36
Roxbury	6	124
Stamford	3	143
SUBTOTAL	18	531
Westchester County		
Yorktown	2	8
TOTAL	23	661

Based on the data presented above, it is estimated that under LAP, NYCDEP has acquired fee title to approximately 850 acres of land in the West-of-Hudson watershed that at some time in the recent past prior to acquisition had been actively-used farm land, but is not now being used for agricultural production.

In no case does the cessation of agricultural activity appear to be a direct *result* of NYCDEP's purchase of farmland. Nevertheless, in order to explore further the potential impact of NYCDEP's

acquisitions of farmland in fee simple, what the impact would have been if acquisitions of 850 acres in fee simple by NYCDEP had in fact resulted in the cessation of farming was also considered.

Using data from the U.S. Census of Agriculture and the Commerce Department's Bureau of Economic Analysis, it was then estimated for each county an average ratio of farm employment (both farm proprietors and wage-and-salary workers) to acres of active farmland. In 2007, the West-of-Hudson watershed counties, as shown below in Table 3-44, averaged 0.0133 jobs per acre of farm land – or about 1 farm job for every 75 acres of farm land – and \$242.65 in farm income per acre.

	Delaware	Greene	Schoharie	Sullivan	Ulster	WOH
Farmland (acres)	165,572	44,328	95,490	50,443	75,205	431,038
Farm employment	1,860	560	1,270	756	1,284	5,730
farm income (\$000s)	\$ 39,175	\$ 11,622	\$ 17,882	\$ 20,261	\$ 15,651	\$ 104,591
Jobs per acre	0.01	0.01	0.01	0.01	0.02	0.01
Income per acre	\$ 236.60	\$ 262.18	\$ 187.27	\$ 401.66	\$ 208.11	\$ 242.65

Table 3-44: Agricultural land, employment, income by county, 2007

Applying these ratios to our estimate of 850 acres of formerly-agricultural land acquired by NYCDEP that is not now being actively used, it is estimated that acquisition of farm land by NYCDEP through July 2009 – if it had in fact caused the cessation of agricultural use – would have resulted in the loss of 11 jobs in agriculture, and approximately \$206,250 in farm income.

As noted above, no cases were identified in which the cessation of agricultural use was a direct result of acquisition by NYCDEP. But even if that had been the case, the preceding calculation suggests that its impact on employment and income in the watershed region would have been quite limited.

Judging fully the direct impact of the Land Acquisition Program on agriculture requires taking into account not only the impact of fee acquisitions, but also the acquisition of agricultural easements through NYCDEP's partnership with the Watershed Agricultural Council. As shown in Table 3-46, as of July 2009 WAC had acquired 90 agricultural easements covering 16,954 acres in the West-of-Hudson watershed.

It is difficult to assess the impact of these easements on the level of agricultural activity in the region. Nationwide studies suggest that agricultural easements have been an effective tool for keeping land in agricultural use and protecting open space. Data on the results of the WAC program to date seem to be consistent with this finding; of nearly 17,000 acres on which WAC has acquired easements since 2001, all but 579 acres – 3.4 percent of the total acreage under easement – was still being farmed as of December 2009. However, as shown below in Table 3-45, the attrition rate is higher for farms on which easements were acquired in the program's earlier years.

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<sup>&</sup>lt;sup>1</sup> Alvin Sokolow, A National View of Agricultural Easement Programs: Measuring Success in Protecting Farmland, American Farmland Trust, December 2006.

Table 3-45: Percent of acres with WAC easements still in active agricultural use by year of acquisition

Year of	
Acquisition	% Active Acres
2001	75%
2002	98%
2003	70%
2004	100%
2005	93%
2006	100%
2007	100%
2008	100%
2009	99%
Total	96%

What impact agricultural easement programs will have in the long run on the economic viability of farming and the overall health of local agricultural economies remains at this point an open question, both at the national level and in the watershed region. But in the near term, the WAC program appears to be achieving the goal of keeping land in agricultural use.

It is not possible at this point to say with any certainty how much of the roughly 17,000 acres on which WAC has acquired easements represents land that in the absence of a WAC easement would no longer be in agricultural use. But even if the percentage of land under easement that meets this criterion is relatively small, it would still represent a positive contribution to the preservation of agricultural uses in the watershed.

Table 3-46: West-of-Hudson WAC easements, by town

County/Town	WAC Acres
<b>Delaware County</b>	
Andes	1,212
Bovina	1,436
Delhi	862
Hamden	901
Kortright	1,663
Meredith	553
Middletown	733
Roxbury	616
Stamford	4,849
Tompkins	84
Walton	1,267
SUBTOTAL	14,176
<b>Greene County</b>	
Ashland	178
Halcott	389
Jewett	105
Windham	226
SUBTOTAL	898
Schoharie County	
Gilboa	143
Jefferson	275
SUBTOTAL	418
Sullivan County	
Neversink	1,462
	-, · o <b>-</b>
TOTAL	16,954

The purposes of the WAC agricultural easement program are broadly consistent with those of New York State's agricultural district program. Article 25AA of the Agriculture and Markets Law authorizes creation of agricultural districts, the purpose of which is to encourage continued use of farmland for agricultural production, by providing landowners with real property tax incentives and protection against a variety of actions that might adversely affect farm use; such actions could include local laws or rules restricting agricultural use, public-agency land acquisitions or capital projects that might adversely affect farming, and private nuisance suits. Districts are created through the initiative of local land-owners, subject to initial county review, certification by the State Department of Agriculture and Markets, and final approval by the county; and are subject to periodic recertification by the State. As of 2007, there were 289 agricultural districts in 53 New York State counties, covering about 8.5 million acres and \$70 million annually in property tax abatements.

To the extent that it helps keep land in agricultural use, the WAC easement program has no adverse impact on the agricultural district program. Acquisition of land by NYCDEP in fee simple could theoretically have an adverse impact on the viability of agricultural districts in the watershed, if it were to result in the cessation of active farm use of significant amounts of land within such districts; and NYCDEP is required to notify the State Department of Agriculture and Markets whenever it is purchasing land within an agricultural district. But as noted above, there are relatively few cases in which NYCDEP has acquired in fee simple land that had been in active agricultural use prior to acquisition. Moreover, to the extent that they forestall conversion of farm land to non-farm uses, acquisitions by NYCDEP in fee simple can in fact support the goals of the State program. It thus appears unlikely that further acquisitions by NYCDEP under LAP would have any adverse impact on the viability of agricultural districts.

Based on the preceding analysis, it is estimated that – even in the worst case – the Land Acquisition Program is likely to have little or no direct impact on agricultural production in the West-of-Hudson watershed region.

#### *Agriculture in Delaware County*

Of the counties with large portions of their land in the watershed, agriculture plays a greater role in the economic life of Delaware County. Below we therefore explore in some greater detail LAP's possible impact on agriculture in Delaware County.

Several important factors have shaped the context within which NYCDEP has been acquiring land in Delaware County. Perhaps the most important of these is a long-term (and continuing) decline in the amount of land within the county that is used for agricultural purposes. This is by no means a recent trend; total farm acreage in Delaware County, according to the USDA, has declined by about 75 percent since 1940. As Figure 3-14 shows, between 1978 and 2008 total farmland acreage dropped by 47.5 percent – from 312,095 to 163,800.

 $<sup>^{\</sup>rm 1}\,$  New York Agricultural Statistics Service, "Delaware County Farm Statistics," April 2009

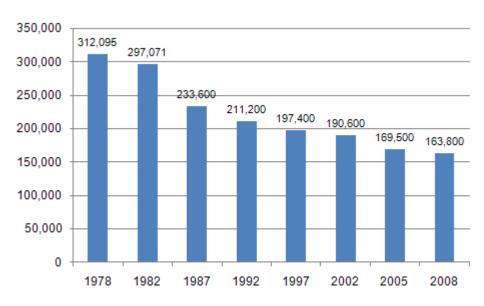


Figure 3-14: Farmland in Delaware County (acres), 1978-2008

Between 1997 and 2008, total farm acreage in Delaware County fell by 33,600 acres – a decline of 17 percent. The decline in farm acreage in this period was actually somewhat slower during this period than in the preceding ten years.

As Table 3-42 shows, the total volume of former farmland acquired by NYCDEP in Delaware County between 1997 and 2009 that had been actively farmed at some point preceding acquisition was 791 acres; and as noted above, about 530 acres of the land acquired in fee simple was in October 2009 once again in active agricultural use under permits issued by NYCDEP.

It should also be noted that as of 2007, dairy farming accounted for 62 percent of all agricultural sales in the county. Like the broader agricultural sector, dairy farming in Delaware County has been declining for some time; between 1978 and 2008, milk production in the county declined by 55 percent.

The past decade has been a particularly difficult time for dairy farmers, due to the volatility of both milk prices and the cost of inputs such as feed and fuel. After peaking at more than \$21 per hundred pounds early in 2008, the average price paid to farmers for milk and milk products fell below \$11.50 in the spring of 2009. Since mid 2009, prices have rebounded somewhat, reaching \$16.00 again in the spring of 2010; but even at this level it is still difficult for many farmers to make ends meet. According to USDA estimates, production costs for New York State dairy farmers in 2009 averaged \$25.27 per hundred pounds. Annual average milk prices paid to farmers in New York State are shown in Figure 3-15.

Given the volatility of – and the difficulty of making money in – dairy farming, it is not surprising that a substantial number of owners are choosing instead to sell their land, whether to NYCDEP or to other buyers.

<sup>&</sup>lt;sup>1</sup> New York State Department of Agriculture and Markets, New York State Dairy Statistics, 2008, Table 22.

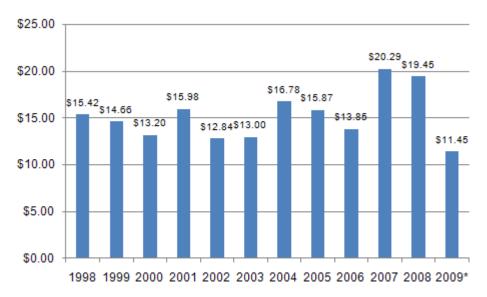


Figure 3-15: Milk prices paid to farmers in New York State (annual average)

\*First half of 2009

The Watershed Agricultural Council has acquired agricultural easements on a total of 14,176 acres in Delaware County – about 84 percent of the total acreage in the West-of-Hudson region on which WAC has to date acquired easements, and about 9 percent of the county's farm land. Since the beginning of the program, WAC has paid more than \$16.1 million to 68 owners of farms in Delaware County for these easements (an average of more than \$230,000 per transaction).

It is difficult to measure directly the impact of WAC easements on the overall health of the county's agricultural sector. Nevertheless, it seems reasonable to assume that for many of the participating farmer-owners, proceeds from the sale of easements provide at least a short-term improvement to their financial position; and that for some, funding from the sale of easements provides resources that help them continue farming their land.

As noted above in our discussion of LAP's impact on the price of land, LAP may act to stabilize the price of large tracts of watershed land. To the extent that this keeps the price of land somewhat higher than it might otherwise be – and perhaps even more important, to the extent that LAP ensures that owners can find a "willing buyer" at fair market value – LAP may in fact make it easier and more attractive for some farmers in Delaware County to sell their land than it would be in the program's absence.

The fact that LAP provides an outlet for owners who want to sell does not, however, mean that the program is somehow *causing* the decline of agriculture in Delaware County, or elsewhere in the region. The program expands the options available to owners for whom agricultural uses no longer makes sense economically, or who for other reasons choose not to continue farming.

An overall assessment of LAP's impact on agriculture in Delaware County needs to take into account a number of factors.

- The decline in farmland in Delaware County long preceded LAP;
- As shown above in the discussion of existing conditions the total volume of farmland has been declining in non-watershed counties as well;
- NYCDEP's acquisitions of previously-active farmland in fee simple involve only about 2.4
  percent of the total volume of land removed from agricultural use since 1997; and
- Farm land acquired by NYCDEP in fee simple can be returned to active agricultural use through the issuance of permits.

In light of these factors, LAP does not appear to have in any significant way contributed to the decline of agriculture in Delaware County. Nor does it appear that Delaware County's agricultural economy would be significantly larger or more prosperous than it is today if NYCDEP had not for the past twelve years been acquiring land and easements in the watershed.

# Mining

As of October 2009, NYCDEP had acquired five parcels of watershed land that had previously included bluestone mining operations, which had been terminated prior to sale. While acquisition by NYCDEP does not appear to have directly caused the cessation of these operations, we can (as we did with agricultural land) analyze what the impact would have been if it had been attributable to LAP. Reflecting the existing mix of solo operators and somewhat larger multi-employee businesses, we assume for purposes of this analysis that these operations averaged 2.8 employees each, for a total of 14 jobs lost when mining operations were suspended, and a loss of approximately \$592,000 in annual earnings.

Even if cessation of these five operations were attributable to LAP, however, it does not necessarily translate into a loss for the region as a whole. When demand is at least stable (or increasing), production might be increased at other locations within the region, offsetting the loss of production on lands acquired by NYCDEP. We cannot say with any certainty whether this shift in fact occurred in specific cases – but it is worth noting that between 2000 and 2006, wage-and-salary employment in mining increased in the watershed counties by 47 percent. Overall, mining in the region does not appear to have been adversely affected by any loss of specific sites associated with acquisition of land by NYCDEP.

Over time, the level of bluestone production in the region is driven primarily by demand. The supply of stone, and the availability of mining sites, does not appear to be a significant constraint. According to a former president of the Bluestone Association, there is no danger of the region running out of bluestone.<sup>1</sup>

As of December 2009, NYCDEP had acquired only one former sand and gravel site in the West-of-Hudson region. The five-acre site was part of a 31-acre parcel sold to NYCDEP by the Town of Andes; and it had been largely exhausted prior to its acquisition by NYCDEP. We thus conclude that NYCDEP's acquisitions of watershed land have had no substantial impact on this segment of the mining industry.

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<sup>&</sup>lt;sup>1</sup> Oneonta Daily Star, April 28, 2008.

Any mining or logging (discussed below) activity displaced from land acquired by NYCDEP is more likely to relocate to other sites than to disappear altogether; but it is possible that some businesses and some jobs could be lost in the process. Moreover, not all jobs are equal – the earnings of those employed in mining are significantly higher, and in forestry somewhat higher, than the wages paid in retail, restaurant, lodging and other jobs that might be associated with the projected increase in recreational use of land acquired by NYCDEP. In either case, however, the numbers of jobs that could potentially be gained or lost are small.

Moreover, any potential adverse impacts on the region's bluestone industry could in the future be alleviated by NYCDEP's willingness to permit extraction of bluestone, under appropriate conditions, on lands acquired by NYCDEP in fee simple or on which it holds a conservation easement.<sup>1</sup>

## Natural Gas Drilling

NYSDEC is currently completing a supplemental generic environmental impact statement for natural gas drilling using high-volume horizontal drilling in the Marcellus Shale formation. The Marcellus Shale underlies the entire West of Hudson Watershed; in April 2010, however NYSDEC announced that "that due to the unique issues related to the protection of New York City and Syracuse drinking water supplies, these watersheds will be excluded from the pending generic environmental review process for natural gas drilling using high-volume horizontal drilling in the Marcellus shale formation." Applications to drill in the New York City watersheds will require "a case-by-case environmental review process" "to address continuation of the FAD<sup>2</sup>."

Currently there are no pending applications for horizontal drilling located in the New York City Watershed. Chesapeake Energy, the largest lease holder in the Marcellus Shale, made a commitment to not drill in the NYC watershed. Any drilling in the watershed would go through significant reviews and must demonstrate that it would pose no threat to water quality and the Filtration Avoidance determination. NYC would not pursue natural gas development on the lands it owns, or allow landowners on lands we hold in easement to develop gas, except to the extent required by state law through "compulsory integration."

Accordingly, at this time, the extent and location of natural gas drilling in the watershed, and the associated economic impacts, are not reasonably foreseeable. Based on the remaining supply of land and the conservative nature of the analysis conducted in this EIS, it is not expected that the Extended LAP would itself constrain natural gas drilling in the West-of-Hudson watershed, although not enough is known at this time. Any natural gas drilling proposed would be subject to further environmental review.

#### Forestry and logging

As noted in the section on existing conditions, about 81 percent of the land area of the West-of-Hudson watershed – a total of about 823,500 acres – is covered by forest. The land acquired by NYCDEP in fee simple includes approximately 47,885 acres of forest land – about 5.8 percent of all

<sup>&</sup>lt;sup>1</sup> See, for example, New York City DEP, A Landowners Guide for Commercial Bluestone Mining Practices on a DEP Conservation Easement, January 2010.

<sup>&</sup>lt;sup>2</sup> NYSDEC's April 23, 2010 press release, http://www.dec.ny.gov/press/64699.html

forest land in the watershed. NYCDEP conservation easements and WAC agricultural easements covered an additional 25,417 acres of forest land – about 3.1 percent of all forest land in the watershed. Beyond the boundaries of the watershed, much of the land area of the five West-of-Hudson counties is also forested – a total of 2.36 million acres of forest land purchased by NYCDEP thus accounts for about 2.0 percent of the total forested area of the five counties.

The City has also agreed to implement a Forest Conservation Easement Program ("FCE Program") in which the City would allocate up to six million dollars (\$6,000,000) of funds currently committed to the LAP for acquisitions of easements on forested land. As currently envisioned, the City-funded FCE Program would be implemented in partnership with the Watershed Agricultural Council (WAC) in similar fashion to the Farm Easement Program that has been in operation by WAC and NYCDEP since 1999. The FCE Program would focus on properties that are (1) enrolled in WAC's Forest Management Program (for which a Forest Management Plan has been developed); (2) enrolled in NYSDEC's Forest Stewardship Program or Section 480A Forest Tax Law (for which a Forest Management Plan has been developed); or (3) important for other reasons related to water quality and/or forestry protection. The FCE Program is expected to have a beneficial impact on forestry resources in the watershed since it will increase LAP's existing focus on identifying forested lands for protection in ways that will facilitate ongoing forestry in accordance with water quality protection guidelines. Since such properties are otherwise likely to be protected through existing programs, most importantly NYCDEP's existing conservation easement program, the FCE Program is not expected to have a discernible additional impact on the supply of developable land in towns where it is implemented. The amounts acquired under the FCE program are subsumed within the amounts projected to be acquired under the Extended LAP for purposes of this EIS.

Because of the more episodic nature of timber harvesting, it is difficult to say definitively how much of this activity had been occurring on land acquired by NYCDEP prior to its acquisition. Some landowners may have periodically harvested timber; and there is strong anecdotal evidence suggesting that it is fairly common for owners to generate some extra income by cutting timber prior to selling or subdividing their property.<sup>1</sup>

As of 2009, there was relatively little timber harvesting on land owned by NYCDEP. Loggers operating under permits issued by the Department currently harvest timber from NYCDEP land. However, by far the greatest part of this activity in fiscal year 2009 occurred on land that had already been City-owned prior to 1997; only about 2 percent of the Department's timber harvesting projects took place on land acquired under LAP. This may result in part from the fact that some owners cut timber prior to selling their land.

The fact that timber is generally not being harvested on land acquired under LAP does not necessarily result in a decline in timber production throughout the region. There is currently a total of about 450,000 acres of privately-owned forest land within the watershed, and hundreds of thousands of additional acres elsewhere in the five counties, which is likely to be sufficient to sustain the level of production and employment implicit in the NYSDOL and Census numbers cited above. Even if the amount of forest land acquired under LAP doubles between 2010 and 2027, the total would still represent only a small portion of all privately-owned forest land in the five counties.

In addition to logging, NYCDEP also permits tapping of maple trees on NYCDEP-owned land. As of October 2009, NYCDEP had issued permits for tapping a total of 1,840 trees on watershed land acquired under LAP, of which 1,790 were located west of the Hudson – including 1,500 in Roxbury.

<sup>&</sup>lt;sup>1</sup> Hall, Tyrrell and Sarpor, op. cit. p. 20.

According to the New York State Maple Producers Association, maple syrup yields in New York in 2009 averaged about 0.24 gallons per tap; and prices in 2008 (the last year for which data are available) averaged \$42.40 per gallon. Based on these data, we estimate that maple-tapping on West-of-Hudson land acquired by NYCDEP under LAP generated about \$18,215 in 2009.

While comprehensive data are not available regarding maple production on LAP-acquired land prior to acquisition, it appears that most of the taps permitted by NYCDEP as of October 2009 represent a continuation of production that preceded acquisition by NYCDEP. Acquisitions under LAP thus do not appear to have had any substantial impact on maple-tapping.

#### Recreation and Tourism

Under the Extended LAP, NYCDEP would continue to open up lands acquired for public access and increase recreational uses, where consistent with public safety and water quality. As noted in Chapter 6, *Open Space and Recreation*, 64 percent of the land acquired in fee simple under LAP is now open for recreational uses. NYCDEP anticipates that a similar or greater percentage of lands acquired in the Extended LAP would likely be opened up to recreation.

Preserving open space and opening up areas for recreation provide a number of socioeconomic benefits. A wide range of research over the past decade has highlighted the importance of opportunities for active outdoor recreation as one of the factors shaping young adults' decisions on where to live and work; and surveys of West-of-Hudson watershed residents conducted in the context of town planning efforts highlight the value that current residents place on access to recreational opportunities — including casual walking and hiking, boating, hunting, fishing, snowmobiling and other outdoor pursuits.

Expanding opportunities for active outdoor recreation can also strengthen the economy of watershed communities by attracting both short-term visitors and second-home buyers, building on what is already one of the region's greatest strengths. Recreation and other tourism-related businesses, including hotels and restaurants, accounted for approximately 13 percent of all employment in the watershed region in 2008. Some visitors, of course, are drawn to the region by forms of recreation not available on NYCDEP-owned lands, such as downhill skiing. But others come to enjoy the broader range of recreational activities available in the region, such as those cited above – including activities that are increasingly available on NYCDEP-owned land.

In 2005, about 36,500 people who lived outside the watershed counties held permits for public recreational use of NYCDEP's watershed properties. Since about 90 percent of all NYCDEP properties open for recreational use are located west of the Hudson, it was assumed that the West-of-Hudson watershed region draws a similar percentage of non-local visitor traffic – about 32,850 people.

Using data from several national sources on spending by anglers, hunters and other participants in outdoor recreational activities, it can be estimated that these visitors spent approximately \$9.0 million in the West-of-Hudson watershed region in 2005. Some of this spending, of course – especially that which might be associated with fishing and boating – is attributable to reservoirs and other properties that were owned by the City prior to the beginning of the Land Acquisition Program. Assuming that newly-opened land accounts for one-third of all local spending by non-local

<sup>&</sup>lt;sup>1</sup> For example, see Richard Florida, Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life.

recreational users of NYCDEP land, it is estimated (using the IMPLAN input-output modeling system) that in 2005 this \$3.0 million in visitor spending directly supported 45 full-time-equivalent (FTE) jobs in the West-of-Hudson region – in retailing, restaurants, motels and other local businesses.

As noted in the section on existing conditions, industries that serve outdoor recreational visitors to the region are primarily low-wage industries, including, recreation, hotels, restaurants and retailing. Increased employment associated with increased visitor traffic would for the most part be concentrated in these industries.

The relatively low wages paid in new jobs associated with recreation use of lands acquired by NYCDEP could be viewed as having a negative impact if the Land Acquisition Program effectively involved a trade-off between loss of higher-paying jobs in other industries and an increase in lower-paying, visitor-based employment. But as discussed in this Chapter, there is no evidence that NYCDEP's acquisition of watershed land has in fact resulted in a loss of higher-paying jobs. While growth in recreation-based industries may not meet the region's need for higher-wage jobs, it can nevertheless be valuable – especially in those towns that are seeking to develop more diversified, year-round forms of tourism.

Not all of the employment associated with increased recreational use of NYCDEP-owned land should be considered "net new" employment. Just as some mining or logging jobs might be shifted from properties acquired by NYCDEP to other locations within the region, increased recreational use of NYCDEP-owned land by non-local visitors might represent (at least in part) a shift of visitor traffic from other recreational venues in the region.

A review of studies of the costs and benefits of open space protection conducted by the Office of the State Comptroller in the report, *Economic Benefits of Open Space Preservation* (March 2010) found that:

- Open space supports industries that generate billions of dollars in economic activity annually;
- Open space protection can be financially beneficial to local governments by reducing costs for public infrastructure and programs, lessening the need for property tax increases;
- Open space preservation can support regional economic growth; and
- Well-planned open space protection measures need not conflict with meeting other vital needs, such as economic development, municipal fiscal health and affordable housing.

Furthermore, the report links open space preservation with the health of particular industries (i.e., agriculture, farming, tourism and recreation). Figure 3-16 shows the contribution of these sectors to the New York State economy.

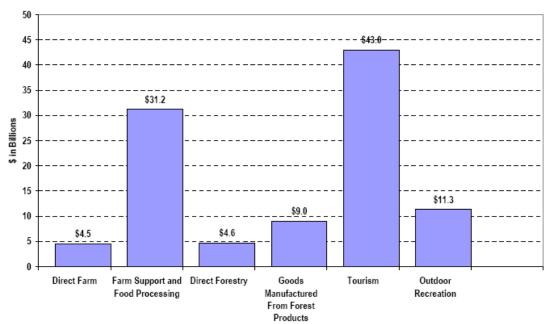


Figure 3-16: Contribution of industries reliant on open space to New York State economy

Source: Office of the State Comptroller.

On balance, the impact of visitor spending associated with increased recreational use of land acquired by NYCDEP is probably somewhere between neutral and very slightly positive. Rather than increased visitor spending, the greatest economic benefit of expanded public access to Cityowned land is likely to be the value that local full- and part-time residents derive from recreational use of these properties (see Chapter 6, *Open Space and Recreation*).

#### Other Businesses

In addition to natural-resource-based industries, acquisition of watershed land by NYCDEP could potentially have a direct impact on other types of commercial activity as well.

The amount of watershed land currently devoted to commercial, industrial and community uses is relatively small – a total of 16,236 acres, or 1.6 percent of all watershed land. While NYCDEP is not precluded under the terms of the MOA from acquiring commercial or industrial land in the West-of-Hudson watershed, to date there have been very few cases in which NYCDEP has acquired property under LAP that was previously used commercially. In 2009, NYCDEP contracted to acquire a 328-acre property in Windham that had previously been operated as a private campground, with 45 camp sites. The Department has acquired only one other undeveloped property in the West-of-Hudson region that was formally zoned for commercial use – a 3-acre site in the Town of Olive.

The Land Acquisition Program's apparently limited direct impact on commercial and industrial uses in West-of-Hudson watershed towns in part reflects a provision of the 1997 MOA under which NYCDEP has agreed not to acquire land in hamlet areas designated by the West-of-Hudson watershed towns. Under this provision of the MOA, 23 towns designated a total of 21,311 acres in

village centers and hamlets and along commercial corridors for exclusion from the Land Acquisition Program. These towns (and the designated acreage in each) are listed below in Table 3-47. In the towns that chose to use this option, designation of hamlet areas helped to exempt existing commercial centers from acquisition of property by NYCDEP. In general, parcels in these areas tend to be smaller than those typically purchased under LAP.

The 21,310 acres of designated hamlet areas include approximately 2,719 acres of land currently used for commercial, industrial and community purposes – about 16 percent of all such land within the watershed. The designated hamlet areas also include 6,018 acres of privately-owned vacant land.

In the context of recent discussions among NYCDEP, watershed towns, regulatory agencies and other parties, NYCDEP has tentatively agreed to a proposed expansion of the areas in which NYCDEP will not solicit or purchase property, primarily in the vicinity of the areas designated as hamlets or village extensions in 1997. Seventeen towns have proposed specific additions to these areas.

As shown in Table 3-47, the proposed hamlet-area expansions would increase the land area covered by these designations to more than <u>48,000</u> acres. NYCDEP estimates that the expanded hamlet areas contain approximately <u>10,500</u> acres that NYCDEP had previously solicited, but would, <u>at the option of towns involved</u>, henceforth agree not to acquire. <u>Moreover, in some cases where towns choose not to exclude LAP acquisitions from hamlets or village centers, LAP may not seek to acquire additional land because parcels in hamlets and village centers tend to be smaller and less desirable for <u>LAP</u> acquisition.</u>

Table 3-47: Number of acres in existing designated hamlet areas, and proposed hamlet expansions, by town

County/Town	Existing Designated Hamlet Area, Acres	Proposed Expansion, <u>Area</u> Acres	Total area, acres
Delaware County			
Andes	1,052	0	1,052
Bovina	392	0	392
Delhi	2,346	<u>2,556</u>	4,902
Hamden	420	<u>2,434</u>	<u>2,854</u>
Harpersfield	405	<u>1,298</u>	<u>1,703</u>
Kortright	250	<u>3,664</u>	3,914
<u>Masonville</u>	<u>n/a</u>	<u>150</u>	<u>150</u>
Meredith	73	71	144
Middletown	1,734	<u>298</u>	2,032
Roxbury	957	<u>435</u>	1,392
<u>Sidney</u>	<u>n/a</u>	<u>218</u>	218
Stamford	1,331	0	1,331
Tompkins	109	0	109
Walton	1,503	2,929	4432
SUBTOTAL	10,572	14,053	24,625
Greene County			
Ashland	362	<u>1,676</u>	2,038
Halcott	69	0	69
Hunter	3,251	2,891	6,142
Jewett	652	<u>2,014</u>	2,666
Lexington	362	375	737
Prattsville	207	0	207
Windham	1,148	2,797	3,945
SUBTOTAL	6,051	<u>9,753</u>	<u>15,80</u> 4
Schoharie County			
Conesville	275	<u>1,570</u>	<u>1,845</u>
Ulster County			
Denning	1,107	0	1,107
Olive	547	1,333	1,880
SUBTOTAL	1,654	1,333	2,987
Sullivan County			
Neversink	1,197	0	1,197
Shandaken	1,561	0	1,561
SUBTOTAL	2,758	0	2,758
TOTAL	21,310	<u> 26,709</u>	48,019

The role that expanded hamlet areas can play in protecting both existing and potential future commercial activity in watershed towns is reflected in the degree to which existing business activity and employment is concentrated within these areas. Using business and employment data obtained from Claritas<sup>1</sup>, the locations of all establishments employing more than 20 people were mapped against the boundaries of the proposed expanded hamlet areas. These areas – representing less than 5 percent of the land area of the watershed – account for approximately 58 percent of all employment in establishments in the watershed ZIP Codes with more than 20 employees.

Overall, it appears that acquisition of watershed land through the LAP program has at most had a negligible direct impact on any other commercial activity that might previously have been conducted on the acquired properties.

Expansion of designated hamlet areas will help ensure that LAP continues to not have a negative impact on commercial activity in watershed towns by precluding any further acquisition of land by NYCDEP in the areas most suited to commercial development and the creation of new businesses. This is further supported by numerous NYCDEP programs that limit the impact of the Watershed Rules and Regulations in hamlet areas and investments in infrastructure including wastewater treatment plants, community septics, and sewers in hamlet areas.

Because it will be focused primarily on purchases of vacant land, and the undeveloped portions of larger, low-density residential parcels, LAP is unlikely to have any adverse impacts on home-based businesses, which in the region's more rural communities often account for a significant portion of all commercial activity. In fact, by allowing owners to capitalize on the value of their land by selling (or granting an easement on) some portion of it to NYCDEP, LAP could be a source of capital for such businesses.

## **Impacts on Local Government Revenues**

Acquisition of watershed land by NYCDEP could also have a direct effect the region's economy through its impact on county, municipal and school district tax revenues. Based on the analyses conducted above for impacts on developable land and on industries and businesses, there would not be significant displacement effects due to the Extended LAP. Further, the Extended LAP is unlikely to constrain the overall level of development in watershed towns. Therefore, the potential for new local tax revenues from new development should not be reduced under the Extended LAP.

It is important to note that the Memorandum of Agreement was designed to minimize any potential adverse impact on local tax revenues that might result from acquisition of land by NYCDEP.

- NYCDEP-owned land and easements are fully taxable; therefore, acquisition of real property interests by NYCDEP does not result directly in any loss of real property tax revenues.
- Under the MOA, New York City cannot challenge local assessments of the value any property purchased through LAP for a period of 20 years following acquisition. Thus assessments on properties acquired in 1997, will not be subject to challenge until 2017; and assessments on properties acquired in 2009 will not be subject to challenge until 2029.

<sup>&</sup>lt;sup>1</sup> Claritas is a for-profit provider of demographic, economic and business information.

Moreover, <u>there will now be 30-year</u> limitation from date of acquisition on challenging tax assessments (<u>increased from a 20-year limitation under the negotiations</u>).

In accord with the provisions spelled out in the MOA, NYCDEP in fiscal year 2009 paid a total of \$5,963,538 million in county, town, village and school taxes on land acquired through LAP – including \$2,457,411 paid to counties, towns, villages and school districts West-of-Hudson.

In order to put these payments in context, taxes paid by NYCDEP on LAP-acquired land and easements were calculated as a percentage of the total revenues of the affected jurisdictions. (Because that latest data from the State Comptroller's Office on local government revenues are for 2008, we used NYCDEP's payments in 2008 for this comparison. They are shown in Table 3-48)

General taxes paid School taxes paid Village taxes paid Total taxes by DEP paid by DEP County by DEP by DEP **Delaware County** \$ 378,877 2,512 469,448 850,836 Greene County 94,922 142,726 237,648 Schoharie County 59,521 63,254 122,776 Sullivan County 19,540 33,575 53,115 **Ulster County** 267,806 449,079 716,886 Total West-of-Hudson 1,981,261 820,667 1,158,083 2,512

Table 3-48: General and School taxes paid on LAP properties, 2008

As Table 3-49 and Table 3-50 show, despite the fact NYCDEP pays full taxes pursuant to State law and the MOA, real property taxes paid on LAP-acquired land represent only a small percentage of the general property tax revenues – and an even smaller percentage of the total revenues of West-of-Hudson watershed counties and towns. The same is true with the region's school districts.

Table 3-49: NYCDEF	tav navments as a r	nercent of county a	nd town property	tax and total revenue	2008
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	Prop	perty taxes paid	otal county and town property	otal county and	percent of county	DEP payments as a percent of all county & town
County		by DEP	taxes	town revenue	taxes	revenue
Delaware County	\$	378,877	\$ 38,168,571	\$ 126,573,708	0.99%	0.30%
Greene County	\$	94,922	\$ 32,868,517	\$ 115,706,674	0.29%	0.08%
Schoharie County	\$	59,521	\$ 17,248,772	\$ 60,512,882	0.35%	0.10%
Sullivan County	\$	19,540	\$ 42,926,193	\$ 188,735,604	0.05%	0.01%
Ulster County	\$	267,806	\$ 91,840,914	\$ 376,302,289	0.29%	0.07%
Total West-of-Hudson	\$	820,667	\$ 223,052,967	\$ 867,831,157	0.37%	0.09%

Table 3-50: NYCDEP payments as a percent of school district property tax and total revenues, 2008

			Total school		DEP payments as a precent of school	DEP payments as a percent of all
	Sch	ool taxes paid	district property	Total school	district property	school district
County		by DEP	tax revenue	district revenue	taxes	revenue
Total WOH School Districts	\$	1,158,083	\$ 155,755,028	\$ 335,421,071	0.74%	0.35%

Because no development can take place on properties acquired (or on which easements are acquired) by NYCDEP, local taxing jurisdictions would no longer be able to realize the potential for increased real property tax revenues that might be associated with such development. It does not appear that acquisition of developable land by NYCDEP has created any significant constraint on the supply of land available for development. In some cases, the Land Acquisition Program may have indirectly affected the specific *location* of development within West-of-Hudson watershed towns – but it does not appear to have directly affected the overall *level* of development. Acquisition of watershed land under LAP does not appear to have had any substantial direct impact on local taxes due.

Moreover, not all types of new development have a positive impact on local finances. Research in communities in New York and elsewhere has shown that privately-owned open land consistently generates more for local government in real property tax revenues than it costs in public services. In the watershed, NYCDEP is taxed as if it were a private owner; and land owned by NYCDEP generates minimal demand for local government services. Second home development may produce a net fiscal benefit for local governments; but other single-family residential development sometimes costs more in terms of demand for schools and other services than in generates in new revenues. <sup>1</sup>

Of course, at a time when local government finances under severe stress – not only in the region, but throughout New York State and the U.S. – local governments and school districts – must be concerned about even very small portions of the local tax base. However, there is no evidence that acquisition of watershed land under LAP has in itself had any adverse impact on local revenues – or that it would in the future.

In addition to LAP's impact on general municipal governments and school districts, some local representatives have expressed concern about the program's potential impacts on the financial viability of fire districts. Although they represent only a small part of total local finances, these districts provide a vitally important public service. Moreover – to a far greater extent than general local governments or school districts – they are almost totally dependent on property taxes. If LAP did in fact have any adverse impact on local property tax revenues, fire districts could thus be affected disproportionately. The data cited above suggest, however, that LAP does not have any significant adverse impact on local property tax revenues.

In a few cases, the Land Acquisition Program has directly increased local tax revenues. This occurs in those cases where NYCDEP acquires in fee simple from a tax-exempt owner property that had been used for a tax-exempt purpose; or acquires a conservation easement on a property in which the tax-exempt owner retains a fee interest. In these cases, land or easements become fully taxable at the point of acquisition by NYCDEP.

<sup>&</sup>lt;sup>1</sup> Farmland Information Center, "Fact Sheet: Cost of Community Services Studies," August, 2004.

Finally, it is worth noting that NYCDEP is a reliable taxpayer. Especially in periods of economic distress, when some local property-owners may find it difficult to pay their real property taxes on a timely basis, NYCDEP ownership provides a relatively stable source of revenue.

The program's direct impact on local government revenues is generally neutral. Because existing laws and provisions of the MOA governing the payment of real property taxes by the City are not expected to change, we expect that the impact of further acquisitions through 2027 will similarly be neutral.

#### Conclusion

Overall, the projected acquisitions in the West-of-Hudson watershed under the Extended LAP will have only a limited impact on socioeconomic conditions. Even using very conservative assumptions about the amount of land to be acquired under the Extended LAP and the pace new residential development through 2027, , for the West-of-Hudson region as a whole the supply of developable land would be more than adequate to support the projected level of development through 2027 and many years beyond. Modifications to LAP that are included in the proposed action – most notably, the proposed expansion of designated hamlet areas – would minimize any conflicts with development in the hamlet areas.

Based on an analysis of trends in land prices in the West-of-Hudson region between 2001 and 2009, LAP does not appear to have been a significant driver of the escalation in the price of vacant land that occurred in the region during the boom years. (The pattern of price increases in watershed towns is broadly consistent with increases that occurred in towns outside the watershed.) As demand for land has weakened, the Program may have had the effect of keeping vacant land prices from falling as much as they might have fallen in the Program's absence. While LAP may have a limited impact on the price of larger tracts of vacant land in outlying areas, it appears to have had no impact at all on the price of housing in the West-of-Hudson region.

LAP similarly appears to have had no significant effect on land-based industries such as farming, mining and forestry; and to have had a slightly positive impact on outdoor recreation. And because other commercial and industrial activity accounts for less than 2 percent of all land use in the West-of-Hudson region – and because it tends to be concentrated in or near the existing hamlets – no significant impact on other forms of commercial activity is expected. Finally, the Extended LAP would have no significant impact on local government or school district financing in the West-of-Hudson watershed region.

Any incremental effect of the 15 Year Greater Impact Scenario on socioeconomic conditions in West-of-Hudson watershed towns beyond the 10 Year Projection Scenario is likely to be minimal.

Based on the analysis provided in this report, the Extended LAP is not expected to result in potential significant levels of direct or indirect displacement or in other potential significant adverse socioeconomic conditions in the West-of-Hudson watershed.

## **EAST- OF- HUDSON**

This section of Chapter 3 addresses the potential impact of additional acquisitions under the Extended LAP between 2010 and 2022 and between 2022 and 2027 on socioeconomic conditions in East-of-Hudson watershed towns.

#### **METHODOLOGY**

The approach used in assessing the program's potential impact in the East-of-Hudson region is in concept similar to that used in assessing its impact west of the Hudson. It encompasses the program's potential impact on the supply of developable land in the affected towns; on the price of land and housing; on employment and business activity; and on local government revenues.

However, the discussion of potential East-of-Hudson impacts presented below is less detailed than the preceding discussion of potential impacts in the West-of-Hudson region. This is so for several reasons.

- NYCDEP expects that through 202<u>7</u>, it will be acquiring additional land primarily in only four towns East Fishkill, Kent, Carmel and Putnam Valley. If land is acquired in other towns, it would be an atypical situation, most likely involving a unique piece of property;
- Between 2010 and 2022, NYCDEP expects to acquire a total 1,517 acres in the four towns, of which we estimate that 538 will be developable; through 2027 this acreage would increase to 1,669 of which 591 acres would be developable; this represents only a small portion (4 percent) of the four towns' total supply of developable land as of 2009; and
- By many measures population growth, income, education, and job growth economic conditions in the East-of-Hudson region are more favorable than those in the West-of-Hudson region; these towns may therefore be less susceptible to any possible adverse impacts from purchases of additional land by NYCDEP.

In addition, while the new WSP will cover the Croton System, due to the high cost of land and highly built environment in that system and other factors, it is not expected that NYCDEP would purchase any appreciable amount of land. Any purchase would be a unique situation, most likely a parcel that had unusual location or water quality protection attributes. It is therefore not possible to estimate future land acquisitions in the Croton System. Due to the small amount of land that would be purchased, it is not expected that the program would result in potential significant adverse socioeconomic impacts in the Croton System towns.

Below we describe existing socioeconomic conditions in the nine East-of-Hudson towns that lie partially within the East-of-Hudson watershed; describe NYCDEP's acquisitions to date in these towns; and assess the impact of future acquisitions in these towns.

#### **EXISTING CONDITIONS**

#### **Population and age distribution**

In 2008, the population of the eight East-of-Hudson towns and one city that lie partially within the Catskill-Delaware watershed totaled 244,044 – an increase of five percent since 2000. If we exclude White Plains – of which only 22 acres, or 0.3 percent of the city's area, lie within the watershed – the combined population of the eight other towns in 2008 was estimated to be 187,010 – an increase of four percent since 2000. The population in the eight East-of-Hudson watershed towns from 1990 to 2008 is shown in Table 3-51.

Table 3-51: Population of eight East-of-Hudson watershed towns in the Catskill-Delaware watershed

				% change 1990. %	change 2000
Town	1990	2000	2008	2000	2008
East Fishkill	22,101	25,589	29,003	16%	13%
Carmel	28,816	33,006	34,843	15%	6%
Kent	13,183	14,009	14,523	6%	4%
Putnam Valley	9,094	10,686	11,456	18%	7%
Harrison	23,308	24,154	23,356	4%	-3%
Mount Pleasant	40,590	43,221	44,287	6%	2%
New Castle	16,648	17,491	17,444	5%	0%
North Castle	10,061	10,849	12,098	8%	12%
TOTAL	163,801	179,005	187,010	9%	4%

The population of the eight East-of-Hudson towns is generally comparable in age to that of New York State – but somewhat younger than that of the West-of-Hudson watershed towns. In 2008, the median age in the eight towns ranged from 38.3 in Mount Pleasant to 41.8 in North Castle and New Castle. The percentage of the population age 65 and older ranged from 9.5 percent in East Fishkill to 14.8 percent in Harrison.

#### **Employment and income**

In all of the East-of-Hudson towns, the percentage of all residents age 16 and over who are employed is relatively high, ranging in 2008 from 58.5 in Harrison to 69.2 percent in Carmel and Kent. Conversely, unemployment rates in these towns were relatively low in 2008, ranging from 2.7 percent in North Castle and New Castle to 5.4 percent in Putnam Valley. Unemployment rates for the towns are shown in Table 3-52.

(As a result of the recession, unemployment rates are no doubt somewhat higher now than they were in 2008. In the last quarter of 2009, for example, the unemployment rate for Putnam County averaged 6.7 percent.)

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<sup>&</sup>lt;sup>1</sup> Unless otherwise noted, the data in Tables 3-51 through 3-59 are presented for each town or county in its entirety, not for the portion of each town or county that lies within the Cat-Del watershed.

Table 3-52: Employment in East-of-Hudson Catskill-Delaware towns (2008)

					% Employed,	Unemployment
Town	Population 16+	In Labor Force	<b>Employed</b>	Unemployed	16+	Rate, 16+
East Fishkill	22,487	16,156	15,550	584	69.2%	3.6%
Carmel	27,774	19,419	18,528	718	66.7%	3.7%
Kent	11,655	8,382	8,064	317	69.2%	3.8%
Putnam Valley	9,145	6,374	6,026	343	65.9%	5.4%
Harrison	18,417	11,278	10,779	499	58.5%	4.4%
Mount Pleasant	34,665	21,189	20,298	890	58.6%	4.2%
New Castle	12,756	8,786	8,552	233	67.0%	2.7%
North Castle	9,112	6,146	5,977	168	65.6%	2.7%
TOTAL	146,011	97,730	93,774	3,752	64.2%	3.8%

Median household incomes in the East-of-Hudson watershed towns are significantly higher than the median for New York State (\$53,376 in 2008). Table 3-53 shows the median household income for each of the eight towns in 2008, as well as inflation-adjusted income growth between 2000 and 2008.

Table 3-53: Median household income in East-of-Hudson Catskill-Delaware towns (2008 dollars)

			% (	change 1990. % ch	ange 2000
Town	1990	2000	2008	2000	2008
East Fishkill	\$ 89,560	\$ 98,175	\$ 99,610	9.6%	1.5%
Carmel	\$ 95,422	\$ 96,365	\$ 97,364	1.0%	1.0%
Kent	\$ 84,516	\$ 91,176	\$ 91,846	7.9%	0.7%
Putnam Valley	\$ 87,270	\$ 91,219	\$ 91,997	4.5%	0.9%
Harrison	\$ 93,072	\$ 100,072	\$ 101,632	7.5%	1.6%
Mount Pleasant	\$ 95,313	\$ 101,429	\$ 103,085	6.4%	1.6%
New Castle	\$ 173,215	\$ 204,096	\$ 216,806	17.8%	6.2%
North Castle	\$ 132,308	\$ 148,800	\$ 150,329	12.5%	1.0%
New York State	\$ 54,408	\$ 54,565	\$ 53,376	0.3%	-2.2%

Conversely, poverty rates in the East-of-Hudson region are relatively low. While current data on the percentage of all residents with incomes below the poverty level are not available at the town level, the Census Bureau provides estimates at the county level for 2006-2008. The county level poverty rates are shown in Table 3-54.

Table 3-54: People living under the poverty level, by county, 2006-2008

	% people with
	income below
County	poverty level
Dutchess	8.1%
Putnam	6.3%
Westchester	7.5%
New York State	13.8%

# Residential development

DemographicsNow estimates that in 2008 there were 64,017 housing units in the eight Catskill-Delaware watershed towns east of the Hudson. The total number of housing units in these towns grew by 9 percent between 1990 and 2000, and by 4 percent between 2000 and 2008. As Table 3-55 shows, growth was particularly strong in the watershed towns of Putnam and Dutchess counties.

**Table 3-55: Housing units, 1990-2008** 

				% change,	% change,
Town	1990	2000	2008	1990-2000	2000-2008
Dutchess County					
East Fishkill	7,265	8,495	9,570	17%	13%
Putnam County					
Carmel	10,152	11,283	11,955	11%	6%
Kent	5,073	5,353	5,569	6%	4%
Putnam Valley	3,986	4,253	4,555	7%	7%
Total	19,211	20,889	22,079	9%	6%
Westchester County					
Harrison	7,931	8,624	8,315	9%	-4%
Mount Pleasant	13,228	14,002	14,240	6%	2%
New Castle	5,545	5,825	5,853	5%	0%
North Castle	3,529	3,706	4,160	5%	12%
Total	30,233	32,157	32,568	6%	1%
EOH Total	56,709	61,541	64,217	9%	4%

As in other parts of New York State and the U.S., housing prices have increased significantly in the East-of-Hudson towns during the past decade. Table 3-56 shows how median sale price of single-family homes has risen in the eight towns since 2001.

Table 3-56: Median sale price of single-family homes, 2001-2009

	% Change,				
Town	2001	2001 2009			
East Fishkill	\$265,000	\$385,000	45%		
Carmel	\$255,000	\$360,000	41%		
Kent	\$187,000	\$255,000	36%		
Putnam Valley	\$208,500	\$335,500	61%		

# The economy of the East-of-Hudson region

Between 1997 and 2007, payroll employment in the three East-of-Hudson watershed counties rose by a robust 12.1 percent. In Putnam County, payroll employment rose by a particularly strong 33.5 percent. With the beginning of the recession in 2008, the region began to lose jobs – but average annual employment declined by only 0.5 percent. Payroll employment by county is shown in Table 3-57.

Table 3-57: Total Industries Payroll Employment, 1997 - 2008

	1997 Average Annual	2007 Average Annual	2008 Average Annual	Change	% Change	Change	% Change
County	<b>Employment</b>	<b>Employment</b>	Employment	1997 - 2007	1997 - 2007	2007 - 2008	2007 - 2008
Dutchess	102,894	116,551	115,006	13,657	13.3%	(1,545)	-1.3%
Putnam	19,399	25,900	25,213	6,501	33.5%	(687)	-2.7%
Westchester	380,082	420,597	420,107	40,515	10.7%	(490)	-0.1%
<b>EOH Counties</b>	502,375	<i>563,04</i> 8	560, 326	60,673	12.1%	(2,722)	-0.5%
NYS	7,902,044	8,550,093	8,596,391	648,049	8.2%	46,298	0.5%

Source: New York State Department of Labor

Communities in Putnam and southern Dutchess County that were affected by the Land Acquisition Program participated in this growth. In the Hopewell Junction ZIP code area, for example, private payroll employment rose by 5.7 percent between 1997 and 2007 – a gain of 521 jobs. In the Carmel and Mahopac ZIP codes, payroll employment during the same period grew by 23 percent – a gain of 1,695 jobs. (Both areas have since seen some decline in employment.) In Westchester, inconsistencies between town and ZIP Code boundaries make ZIP Code-level data less useful for tracing changes in employment at the local level. Employment by ZIP Code is shown in Table 3-58.

Table 3-58: Employment by watershed area ZIP code, 1997 and 2007, East-of-Hudson ZIP watershed

		1997 Average Annual	2007 Average Annual	2008 Average Annual	Change 1997-	% Change
Zip Code	Place Name	Employment	Employment	Em pl oy ment	2007	1997 - 2007
Putnam		7,514	9,209	9,166	1,695	23%
10512	Carmel	4,980	5,738	5,663	758	15.2%
10541	Mahopac	2,535	3,472	3,503	937	37.0%
Dutchess						
12533	Hopewell Junction	9,125	9,646	9,091	521	5.7%
Total		16,639	18,855	18,257	2,216	13.3%

#### FUTURE WITHOUT THE PROPOSED ACTION

Socioeconomic conditions in the East-of-Hudson Catskill-Delaware watershed towns during the period 2010 through 202<u>7</u> are likely to be similar to those of the past few years – with some notable differences.

The population of the eight towns is likely to keep growing through  $202\underline{7}$ , although at a somewhat slower pace than in the preceding decades. Population projections are generally not available at the town level. However, as shown below in Table 3-59, the Cornell University Program in Applied Demographics projects that between 2010 and 2025, the population of Dutchess County will increase by 9 percent; the population of Putnam County by more than 10 percent, and the population of Westchester County by nearly 4.8 percent.

Table 3-59: Projected population growth, 2000-2025

						% Change	% Change
County	2000	2010	2015	2020	2025	2000 to 2025	2010 to 2025
Dutchess County	280,150	301,396	310,896	320,154	328,519	17.27%	9.00%
Putnam County	95,745	103,186	106,826	110,354	113,576	18.62%	10.07%
Westchester County	923,459	964,914	980,555	996,357	1,011,179	9.50%	4.79%

Source: Cornell University, Program on Applied Demographics, 2010

The pace of residential development will also be significantly slower between 2010 and 202½ than in the preceding decades. Figure 3-17 traces the number of new units authorized under building permits issued in several East-of-Hudson towns between 1997 and 2008. As the graph shows, the number of new units dropped sharply after the middle of the decade, reflecting the end of the housing bubble and the beginning of the recession. While housing and mortgage markets will eventually recover, residential construction is likely to remain depressed for at least the next few years – and is unlikely to return at any time during the next twelve years to the levels reached during the early 2000s.

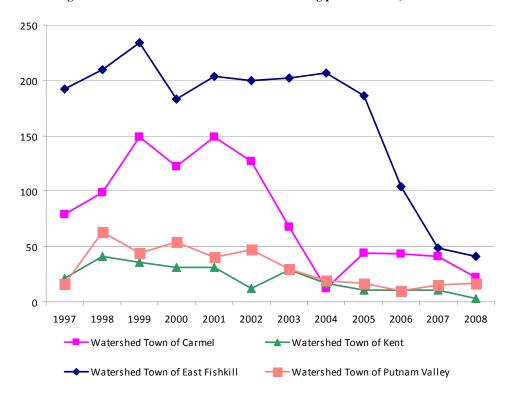


Figure 3-17: Number of residential units in building permits issued, 1997-2008

The economy of the East-of-Hudson watershed region has consistently been among the strongest regional economies in New York State during the past several decades, and this pattern is likely to continue. In 2009, an employment forecast prepared for the New York Metropolitan Transportation Council projected that between 2010 and 2025, employment in the Dutchess, Putnam and Westchester counties would grow by 17 percent – an increase of 135,000 jobs. The population forecast is shown in Table 3-60.

Table 3-60: Projected employment growth, East-of-Hudson counties, 2010-2035

County	2010	2015	2020	2025	2030	2035	% Change 2010 - 2020	% Change 2010 - 2025
Dutchess	159.5	171.2	182.0	193.2	203.2	213.5	14.1%	21.1%
Putnam	40.7	43.1	45.3	47.2	48.8	50.3	11.3%	16.0%
Westchester	588.3	620.9	650.3	683.3	712.7	743.0	10.5%	16.1%
<b>EOH Counties</b>	788.5	835.2	877.6	923.7	964.7	1,006.8	11.3%	17.1%

Source: New York Metropolitan Transportation Council

#### FUTURE WITH THE PROPOSED ACTION

In the West-of-Hudson region, NYCDEP expects that the overall scale of solicitation under the <u>Extended</u> Land Acquisition Program, and the mix of acquisitions in fee simple and conservation easements will generally be similar to or, in some areas of high focus, greater than what they have been during the past twelve years. In the portion of the Catskill-Delaware watershed that lies east of the Hudson, in contrast, areas of focus for the Land Acquisition Program (as outlined in NYCDEP's September 2009 Long-term Land Acquisition Plan) and the total acreage to be acquired between 2010 and 2027 are likely to be substantially less than the historic pattern of activity.

For information purposes, and to provide some context for the assessment of future impacts that follows – Table 3-61 provides some data on land and easements acquired through June 2009 in the eight East-of-Hudson towns.

Total acres % of town Acres Acres Acres of WAC acquired by Total town acres in acquired in acquired in CE farm LAP through watershed fee by LAP by LAP 6/09 acres easements East Fishkill 36,799 1.049 0 0 1.049 16% Kent 27.358 84% 5.299 628 0 5.927 Carmel 26.077 93% 860 0 860 0 26,464 774 0 0 774 Putnam Valley 8% 0 0 Harrison 11,104 7% 0 0 25 25 Mount Pleasant 20,981 10% 0 0 New Castle 15,024 65% 21 110 0 131

29%

Table 3-61: LAP activity to date in the eight EOH Catskill-Delaware towns<sup>1</sup>

As noted above, NYCDEP expects to acquire additional land primarily in only four of the eight towns – East Fishkill, Kent, Carmel and Putnam Valley. Although land could be purchased in other towns, for example around the Kensico Reservoir, the supply of land is very limited and the cost is very high. Any land purchased would represent a very small portion of the affected town and would likely be land that is currently used for another purpose (rather than vacant land). Therefore, no potential significant adverse socioeconomic impacts would be expected to occur.

88

0

0

88

#### 10 Year Projection Scenario

16,712

North Castle

Table 3-62 presents the projected level of acquisitions in each of the four primary towns <u>through</u> <u>2022.</u>

<sup>1</sup>The data include acquisitions in both the Catskill-Delaware and Croton watershed areas.

3-93

Table 3-62: Projected LAP activity in East-of-Hudson Catskill-Delaware watershed towns through 2022

County	Town	Project LAP acquisitions through 2022 (acres)	Est. developable land acquired (acres)
Dutchess	East Fishkill	307 acres	118 acres
Putnam	Carmel	189 acres	81 acres
Putnam	Kent	987 acres	329 acres
Putnam	Putnam Valley	34 acres	10 acres
TOTAL		1,517 acres	538 acres

Using the same approach used previously to gauge LAP's impact on the supply of developable land west of the Hudson, Table 3-63<u>A</u> shows the projected impact of the Land Acquisition Program on the supply of developable land in the four towns. As the table shows, the program's impact varies widely across the four towns.

Table 3-63A: Impact of LAP on East-of-Hudson Catskill-Delaware towns through 2022

				Projected	Developable		% of 2009			% of town	% of town
		Total	Available	developable	land needed	Developable	developable			area	area
		Town	developable	land acquired	for housing	land left in	land left in	LAP	Housing	developable,	developable,
County	Town	Land	acres, 2009	through 2022	through 2022	2022	2022	contribution	contribution	2009	2022
Putnam	Carmel	24,029	1,520	81	842	597	39%	5%	55%	6.3%	2.5%
Dutchess	East Fishkill	36,799	4,192	118	1,516	2,558	61%	3%	36%	11.4%	7.0%
Putnam	Kent	26,959	2,096	329	180	1,588	76%	16%	9%	7.8%	5.9%
Putnam	Putnam Valley	27,464	5,560	10	569	4,981	90%	0%	10%	20.2%	18.1%
	TOTAL	115,250	13,368	537	3,107	9,724	73%	4%	23%	12%	8%

In Putnam Valley, LAP's potential impact is limited by the fact that only 8 percent of the Town's total area is within the watershed. Moreover, the number of acres that LAP expects to acquire in Putnam Valley between 2010 and 2022 is relatively small – 34 acres, of which about 10 acres are characterized as developable. This represents less than 0.2 percent of the Town's supply of developable land as of 2009.

In East Fishkill, Carmel and Kent, the amount of land projected to be acquired by LAP through 2022 is more substantial. However, due to the lesser focus on East of Hudson in the Extended LAP, the projected rate of LAP acquisitions and the projected rate of development do not meet the threshold for more detailed town-level analysis as described in the assessment of socioeconomic impact west of the Hudson – projected LAP acquisition of at least 20 percent of the town's 2009 supply of

land with any one or more of these characteristic in considered undevelopable.

<sup>&</sup>lt;sup>1</sup> For purposes of this analysis developable land does not have any of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent, or land with slow infiltrating soils (NRCS Hydrological Soil Group D);

developable land, or projected consumption of at least 10 percent of 2009 developable land by new residential development, combined with LAP acquisition of greater than 5 percent.

It should be noted that the estimates of developable land available in each town as of 2009 and developable land remaining in 2022 that are presented in Table 3-63  $\underline{\underline{A}}$  are conservative in several respects.

- Our definition of developable land excludes several categories of land that could in fact support future development, including currently-undeveloped portions of residential parcels of less than 15 acres; commercial and industrial land; and agricultural land.
- The estimates of the amount of developable land required to support new residential development assume that the average annual rate of new housing construction that the four towns experienced from the late 1990's through 2008 will be sustained through 2022. Given a sharp decline in new development during the past few years as shown above in the discussion of "future conditions without the proposed action" –and the prospect of a slow recovery, this seems unlikely.

The potential impact of additional acquisitions in East Fishkill, Carmel and Kent on the supply of developable land is discussed below.

#### East Fishkill

The potential impact of future acquisitions on socioeconomic conditions in East Fishkill is shaped by several factors:

- The relatively small portion of the Town that lies within the watershed;
- The extent to which the area within the watershed differs from the rest of the Town; and
- The pace of residential development within the Town.

As shown in Table 3-63, only 16 percent of East Fishkill's total area lies within the watershed. Moreover, the 5,832-acre watershed area – located in the southeastern part of the Town – differs from the rest of the East Fishkill in several respects. Elevations are higher, and the terrain is more rugged – according to the Town's 2002 comprehensive plan, about 50 percent of the total land area of this portion of the Town consists of land with slopes of more than 25 percent.

East Fishkill's housing stock has grown rapidly in the past two decades – from 7,265 in 1990 to an estimated 9,570 in 2008, an increase of nearly 32 percent. For the period 1997 through 2008 (according to data provided by the Census Bureau) new residential building permits issued in East Fishkill averaged 168 units per year.

Table 3-63 suggests that if growth were to continue at that pace, new residential development between 2010 and 2022 would consume about 36 percent of the Town's supply of developable land (as of 2009). However, using the average rate of new development between 1997 and 2008 as a basis for projecting future growth may overstate the likely rate of development in East Fishkill. As Figure 3-17 shows, issuance of new residential building permits declined sharply in the east-of-Hudson towns as the housing boom came to an end.

In contrast to the relatively high rate of consumption of developable land for new housing projected in Table 3-63, the developable portion of land projected to be acquired under LAP represents only 3 percent of the Town's supply of developable land as of 2009.

#### Carmel

Carmel lies almost entirely within the watershed; watershed land accounts for 93 percent of the Town's total land area. It is the most developed of the four towns highlighted in Table 3-63, and has the smallest amount of developable land still available as of 2009. As a result of the relatively high rate of development projected in Carmel – 100 units per year between 2010 and 2022 – the analysis indicates that only 39 percent of the town's 2009 supply of developable land would still remain in 2022. However, LAP's contribution to the removal of developable land is modest. The amount of developable land projected to be acquired by NYCDEP is 81 acres, and represents only 5 percent of the town's 2009 supply of such land.

Several factors are likely to alleviate any such conflicts between LAP acquisitions and residential development. As noted above, projections based on past rates of new construction may overstate the rate of development through 2022; the likelihood that future LAP acquisitions would occur in outlying parts of the town; and the town's desire to preserve open space.

#### Kent

As Table 3-62 shows, the acreage projected to be acquired by LAP is greater in Kent than in other East-of-Hudson towns – both in absolute terms and as a percentage of the Town's total supply of developable land. Through 2022, projected acquisitions under LAP would take 16 percent of the Town's 2009 supply of developable land.

However, the rate of new residential development is projected to be significantly lower in Kent than in the other towns where LAP will be acquiring land – an estimated 28 units per year in Kent, as compared to 168 per year in East Fishkill, and 100 in Kent. New residential development between 2010 and 2022 is projected to consume about 9 percent of Kent's 2009 supply of developable land. As of 2022, the Town would still have about 1,588 acres of developable low-density residential and vacant land – about 76 percent of the supply of such land in 2009.

#### 15 Year Greater Impact Scenario

As shown below in Table 3-63 B, the impact of increasing by 10 percent the total acreage to be acquired is small in both relative and absolute terms.

Table 3-63 B: 15 Year Greater Impact Scenario on East-of-Hudson towns

			Projected	Developable land		% of 2009			% of town	% of town
		Available	developable	needed for	Developable	developable			area	area
		developable	land acquired	housing through	land left in	land left in	LAP	Housing	developable,	developable,
County	Town	acres, 2009	through 2027	2027	2027	2027	contribution	contribution	2009	2027
Dutchess	East Fishkill	4,192	129	2,148	1,914	45.7%	3.1%	51.2%	11.4%	5.2%
Putnam	Carmel	1,520	89	1,192	238	15.7%	5.8%	78.5%	6.3%	1.0%
Putnam	Kent	2,096	362	254	1,480	70.6%	17.3%	12.1%	7.8%	5.5%
Putnam	Putnam Valley	5,560	11	806	4,743	85.3%	0.2%	14.5%	20.2%	17.3%
	TOTAL	13,368	591	4,401	8,376	62.7%	4.4%	32.9%	11.4%	7.1%

Under the 15 Year Greater Impact Scenario, projected acquisitions by NYCDEP would increase from 1,517 acres to 1,669. Under this alternative, the percentage of developable land remaining in 2027 declines from the 9,724 acres estimated under the 10 year permit scenario to 8,376 – but this change is due almost entirely to the additional residential development that is projected to occur between 2022 and 2027.

### Impact on land prices, housing and affordability

In contrast to the acreage to be acquired under LAP west of the Hudson, which represents approximately 9.8 percent of all West-of-Hudson watershed land, the <u>1,669</u> acres projected to be acquired east of the Hudson represent only 0.6 percent of East-of-Hudson watershed land. Especially in the context of a regional real estate market that has consistently been one of the strongest in the greater New York metropolitan area in recent decades, LAP will clearly be in the position of a "price taker" in the East-of-Hudson towns – its level of engagement in the market will simply be too small to have a significant impact on either land prices or housing costs.

### Impact on business and commercial activity

The impact of projected future acquisitions on major industries and on commercial development in the East-of-Hudson watershed towns is likely to be limited. As noted above, acquisition of land and easements under LAP has since 1997 proven to be fully compatible with strong growth in both Putnam County and southern Dutchess County. Between 1997 and 2009, LAP acquired more land in Putnam County (measured as a percentage of the county's total land area) than in any other county east or west of the Hudson – and Putnam recorded by far the strongest employment growth of any of the eight watershed counties.

Moreover, the potential for any adverse impact on the future economic vitality of the East-of-Hudson watershed towns is limited by the decline in the level of acquisition activity projected by NYCDEP. The <u>1,669</u> acres NYCDEP expects to acquire between 2010 and 2027 is less than 20 percent of the acreage acquired between 1997 and 2009.

The potential for conflict is also limited by the fact that land-based industries – particularly agriculture and natural resources – are a relatively small part of the region's economy. Outdoor recreation plays a more significant role – but the impact of projected acquisitions by NYCDEP on outdoor recreation will if anything be positive.

Finally, the 1997 MOA strictly limits acquisition by NYCDEP of land zoned for commercial or industrial use. This further limits the potential for conflict between acquisition of additional land under LAP and the towns' economic vitality.

# Impact on local government revenues

Acquisition of watershed land by NYCDEP could also have a direct effect the region's economy through its impact on county, municipal and school district tax revenues. Based on the analyses conducted above for impacts on developable land, there would not be significant displacement effects due to the Extended LAP. Further, the Extended LAP is unlikely to constrain the overall level of development in watershed towns. Therefore, the potential for new local tax revenues from new development should not be reduced under the Extended LAP.

As noted in the discussion of LAP's potential impact on local government revenues west of the Hudson, land and easements acquired by New York City are fully taxable. Acquisition of land by NYCDEP thus has no direct affect on local property tax revenues. Moreover, although NYCDEP pays full taxes on property interests it has acquired, it is important to recognize that properties acquired under LAP represent only a very small portion of the total assessed value – and generate a very small portion of the revenues of – the affected local taxing jurisdictions. In 2008:

- The \$874,579 in general property taxes paid by NYCDEP on LAP-acquired properties east of the Hudson represented less than 0.1 percent of the combined real property tax revenues of the affected counties and towns; and
- The \$2,213,916 in school taxes paid by NYCDEP on LAP-acquired properties represented only 0.28 percent of the combined real property tax revenues of the affected school districts.

Given that the acreage projected to be acquired under LAP between 2010 and 202<u>T</u> is <u>less than 20</u> percent of the acreage acquired in the eight east-of-Hudson Catskill Delaware watershed towns, tax revenues generated by the newly-acquired property are likely to represent an even smaller fraction of 1 percent of the revenues of the affected jurisdictions' real property tax revenues.

Finally, because the acquisition of <u>1.669</u> acres between 2010 and 202<u>7</u> is not expected to constrain to any significant extent the pace of new development in the East-of-Hudson towns, it is unlikely to affect the towns' potential to generate new revenues through development.

Given the very small portion of taxable value that any newly-acquired property will represent, the fact that these properties remain fully taxable, and the lack of any significant impact on new development, it is extremely unlikely that future acquisitions in the East-of-Hudson towns could have any substantial impact on local government or school district revenues.

### Conclusion

Overall, the projected acquisitions in the East-of-Hudson portion of the Catskill-Delaware watershed under the Extended LAP – which represent only <u>0.7</u> percent of all East-of-Hudson watershed land, and only <u>1.6</u> percent of the watershed land that NYCDEP is projected to acquire during that period, on both sides of the Hudson – would have only a very limited impact on the supply of developable land, in watershed towns, and generally would not affect land or housing prices, growth rates, business conditions or local government revenues. Based on the analysis provided in this report, the Extended LAP is not expected to result in potential significant levels of direct or indirect displacement or other potential significant adverse socioeconomic conditions in the East-of-Hudson watershed.

# **CHAPTER 4:**

# TOWN LEVEL ASSESSMENTS

# **INTRODUCTION**

As discussed in Chapter 3, Town Level Assessments were conducted for towns that met either of two criteria:

- Those in which LAP is projected to acquire 20 percent or more of the town's 2009 supply of developable land; and
- Those in which 10 percent or more of the town's 2009 supply of developable land is projected to be consumed by residential development and LAP is projected to acquire more than 5 percent of the town's 2009 supply of developable land.

### Seventeen towns meet these criteria:

- In Delaware County Andes, Bovina, Hamden, and Stamford;
- In Greene County Ashland, Halcott, Jewett, Lexington, Prattsville and Windham:
- In Schoharie County Conesville:
- In Sullivan County Neversink; and
- <u>In Ulster County Denning, Hardenburgh, Olive, Shandaken and Woodstock.</u>

<u>To provide a better geographic balance across the region, individual town-level assessments are also included for three other towns – Delhi, Middletown and Hunter – in addition to the 17 towns listed above.</u>

Extending the term of the WSP from 10 to 15 years and increasing the land projected to be acquired in the West-of-Hudson region by 10 percent has only a marginal impact on which towns meet the two screening criteria. Only one of the 17 towns cited above – Woodstock – met the criteria for detailed town level analysis under the 15 Year Greater Impact Scenario as compared to the 10 Year Projection Scenario.

For all towns but Woodstock, the town level assessments provided in this Chapter are based on the 10 Year Projection Scenario. However, based on a review of the longer time period and the larger number of acres to be acquired under the 15 Year Greater Impact Scenario within the 20 towns, the Extended LAP would not result in any significant impacts.

Among the 20 towns for which individual profiles are presented below, Shandaken appears to be the only case where a very limited supply of developable land could potentially lead to a conflict between the projected level of acquisitions under the Extended LAP and the need for land to accommodate new development. As also noted in Chapter 3, however, NYCDEP and the Town have agreed upon (and the draft WSP incorporates) a change in the way LAP operates in Shandaken that is likely to substantially reduce the potential for conflict. Under this agreement, LAP would no longer actively solicit individual landowners in Shandaken, but would instead only pursue properties of interest whose owners initiate negotiations with NYCDEP.

Among the other towns listed above, there may also be some potential for conflict in Windham. In the case of Windham, this conflict arises less as a result of the supply of land being limited,

than because the demand for land for development has been strong during the past decade, and could be in the future. In this case, however, any potential conflict between the Extended LAP and the need for land to accommodate future development could be alleviated by the proposed near-quadrupling of the Town's designated hamlet areas, to a total of 3,942 acres. The expanded hamlet areas would cover 14 percent of the Town's land area, and would help ensure that a substantial amount of land remains available for new development through 2027 and beyond, especially since the proposed expansion areas are located in those parts of Windham where much of the Town's development is occurring.

Moreover – as was noted in Chapter 3 – both the projected levels of LAP acquisitions and the projected levels of residential development used in all of the town-level assessments represent a "reasonable worst case" scenario. Therefore, on the basis of the analyses described in Chapters 2, 3, and 4, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in the 20 towns assessed in this chapter under both the 10 Year Projection Scenario and the 15 Year Greater Impact Scenario.

# **DELAWARE COUNTY**

# **TOWN OF ANDES**

### **EXISTING CONDITIONS**

The Town of Andes, located in southeastern Delaware County, is a primarily rural, low-density community. The Town's resident population grew by about 5 percent in the 1990s, but has been roughly stable since 2000; in 2008, it was estimated at 1,336.

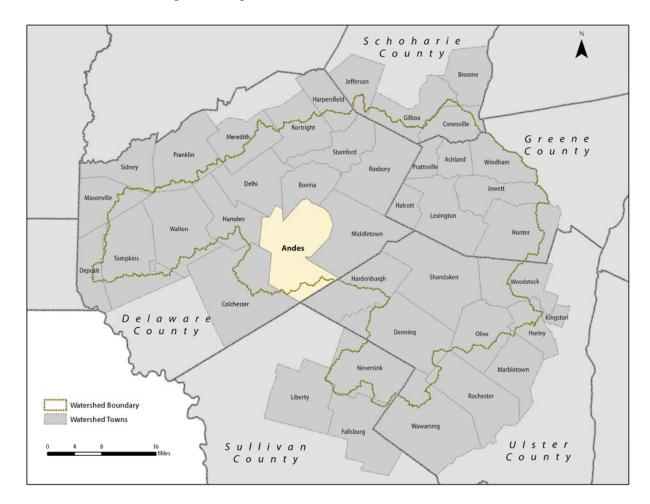


Figure 4-1: Map of Andes in relation to the watershed

<b>Town of Andes – Quick Facts</b>						
Land area:	72,003 acres					
Percent of town land area within the watershed:	91%					
Percent of land protected	25%					
Population (estimated), 2008:	1,336					
Median age (estimated), 2008	48.8					
Median household income (estimated), 2008	\$44,093					

As shown in Table 4-1 and Figure 4-2, more than one-third of the Town's total area consists of low-density residential land. Protected areas (including buffer lands around the Pepacton Reservoir) and privately-owned vacant land each account for about one-quarter of the total.

Development since 1990 (as shown by the parcels highlighted in black in Figure 4-2), has occurred throughout the Town. Based on data from the Office of Real Property Services, it is estimated that between 2000 and 2009, 58 new residential units were developed in Andes.

Andes has a substantial second-home population. About 49 percent of all housing units in 2000 were for seasonal or recreational use. This sector appears to have grown somewhat since 2000, with a 4 percent increase in the number of housing units in the town, despite the fact that the resident population has not grown.

Commercial activity is concentrated in the hamlet of Andes – formerly an incorporated village, which several years ago chose to "unincorporate." Relative to its size, the hamlet of Andes has seen substantial new business development since 2000, with a hotel, new restaurants and galleries.

Table 4-1: Land uses by type

	In Watershed		Out V	Vatershed	Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural <sup>1</sup>	4,789	7%	0	0%	4,789	7%
High-Density Residential	3,939	6%	181	3%	4,121	6%
Low-Density Residential	23,205	35%	1,423	23%	24,627	34%
Commercial/Other	180	0%	0	0%	180	0%
State/Other Protected	8,937	14%	3,489	56%	12,426	17%
City Protected	8,018	9%	N/A	N/A	5,922	8%
Vacant	15,592	24%	1,359	22%	16,951	24%
Total	65,748		6,255		72,003	

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<sup>&</sup>lt;sup>1</sup> The agricultural category includes WAC conservation easements.

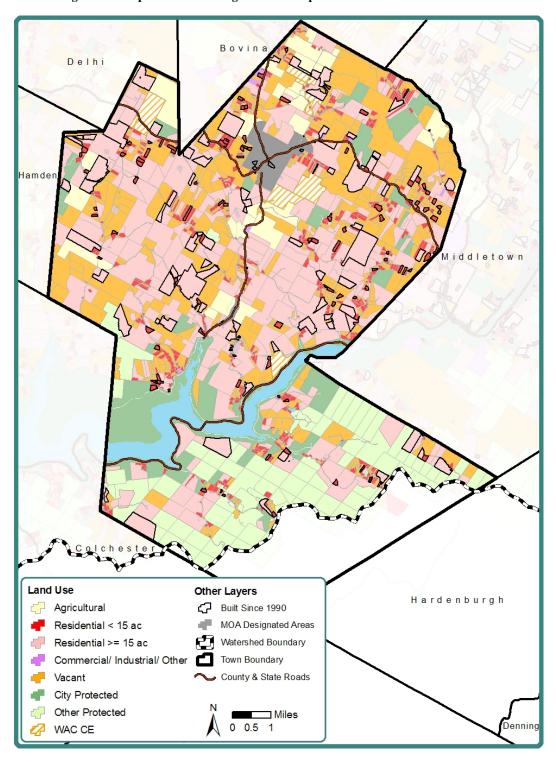


Figure 4-2: Map of Andes showing land use and protected land within the Watershed

The Andes Chamber of Commerce characterizes the Town as offering:

....quiet charm and a peaceful haven for a day, a season or a lifetime. Historic sites, quaint shops, fine restaurants and abundant outdoor recreational opportunities are here to help our visitors and residents unwind and experience authentic small town American life.

We are as proud of our history as we are of our present, with a great public school, wonderful restaurants, wireless access throughout Main Street, family-run farms, small service businesses and great community spirit.

The Chamber also notes other strengths that are attracting visitors and residents:

Telecommuting, quality of life, strong second home markets and tourism, along with plenty of cultural and recreational activities...

A local website, Andes.com, notes that the Town still retains strong ties to its agricultural roots.

Though the number of dairy farms in Andes has shrunk to only a few, you can still see Holstein cows grazing on our picturesque hills, surrounded by rolling corn and hay fields, with horses, beef cattle, goats, sheep, alpaca and llamas....The sustainable local agriculture movement featuring organic vegetables, meadow raised meats and farmers' markets is drawing enthusiastic young people to this new incarnation of agriculture.

"Small is beautiful" could be the motto for so much of Andes: no industrial farms, no chain stores, no clogged roads; in many ways, life as it used to be.

# **Previous LAP Activity**

Through June 2009, 5,346 acres had been acquired in Andes under the Land Acquisition Program – about 7.4 percent of the Town's total land area. Figure 4-3 shows the location of LAP properties in Andes, by type of acquisition.

Table 4-2: Acquisitions in the Town of Andes through July 2009

Type of acquisition	Acres
Fee simple	2,434
Conservation easements	1,701
WAC agricultural easements	1,212
Total acquired	5,346

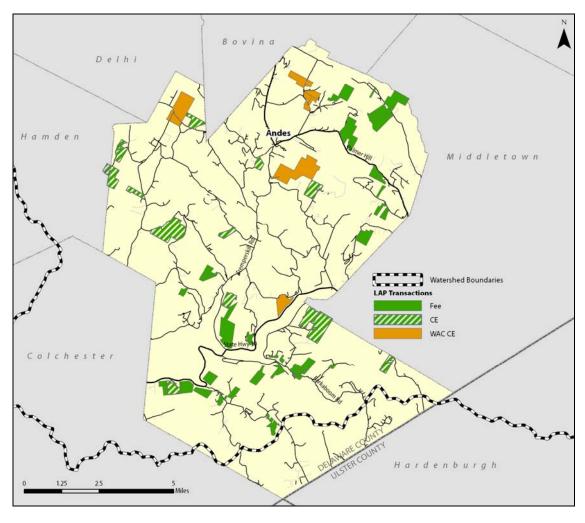


Figure 4-3: Map of LAP properties in Andes, by type of acquisition

As of July 2009, approximately 1,212 acres of agricultural land in Andes were covered by WAC easements. As of October 2009, NYCDEP's purchases of land in fee simple in Andes did not include any land that had been actively used for agricultural purposes immediately prior to acquisition; nor had any permits for agricultural use of NYCDEP land been requested.

As of the fall of 2009, NYCDEP had opened a total of 1,864 acres of land acquired under LAP in Andes for a variety of recreational uses – about 77 percent of the land that LAP has acquired in fee simple in Andes. Opening NYCDEP-owned land for public use expands the resources for outdoor recreation that are available in the Town – a factor in its attractiveness for both residents and visitors.

Pursuant to the 1997 MOA, Andes designated a hamlet area totaling 1,052 acres, covering the Town's commercial center and the area that had previously fallen within the Village of Andes, within which NYCDEP cannot acquire land in fee simple. This has helped ensure the availability of space for development of new businesses within the hamlet.

### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022 as discussed in Chapter 3, the resident population of Delaware County is expected decline slightly. At the same time, the demand for second homes in the County may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. If the pace of new development in Andes (as measured by new residential units) remains the same as it was between 1990 and 2008 (about 12 new units per year), it can be estimated that the land required to support new development through 2022 would total approximately 1,707 acres. This would include 486 acres of land characterized as developable<sup>2</sup> – about 7 percent of the Town's supply of developable land.

Between 2010 and 2022, Andes is also likely to see a continued decline in land used for agricultural purposes, although there is some potential for growth of smaller-scale, specialized agricultural enterprises. As shown during the past decade – although to some extent interrupted by the recession – there may be some potential for further commercial revitalization in the hamlet of Andes.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

NYCDEP's Long-term Land Acquisition Plan identifies the sub-basins north of the Pepacton Reservoir, including the Town of Andes, as an "area of high focus." In part as a result of its focus on this area, NYCDEP projects that through 2022, the Extended LAP could acquire 6,904 additional acres in Andes either in fee simple or through conservation easements – the largest number of acres projected to be acquired in any of the watershed towns. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions are projected to include approximately 1,472 acres of developable land – 20 percent of the Town's supply of developable vacant and low-density residential land in 2009. NYCDEP further estimates that WAC could during the same period purchase easements on 786 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Andes would still be left with approximately 73 percent of the Town's current stock of developable non-agricultural land.

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<sup>&</sup>lt;sup>2</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS hydrological Group D).

Table 4-3: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		7,221 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	6,904 acres	
Developable vacant or low-density residential land acquired		1,472 acres
Residential Development, 2010-2022		
Projected housing units built	143 units	
Land needed for housing	1,707 acres	
Developable portion of land needed for housing		486 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		5,262 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		73 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Andes' supply of such land is relatively limited. As defined here, developable land represented about 10.3 percent of the Town's total land area in 2009; and by 2022 this percentage is projected to decline to 7.5 percent. It is important to note, however, that the estimates of developable land cited in Table 4-3 are in several respects conservative – especially in that the definition of developable land used here includes no agricultural land. Moreover, basing projected residential development on the rate of development in Andes between 1990 and 2008 may overstate the amount of land that would be required to support residential development. Overall, the Town's supply of developable land appears to be sufficient to accommodate both additional LAP acquisitions and the projected level of new development through 2022.

Additional acquisitions through 2022 can also be assessed in terms of their potential impact on the character of the community. Overall, the Land Acquisition Program could help to reinforce many of the Town's key assets, by protecting the environment and preserving farmland. Moreover, assuming that the percentage of newly-acquired land opened to public recreational use is similar to what it has been through 2009, it is estimated that through 2022 more than 3,100 acres of land acquired in fee simple could be made available by NYCDEP for public recreational use. These lands could provide a significant amenity for both full-time and part-time residents, and a resource for further development of visitor-based activity.

WAC's acquisition of additional easements could also help preserve the Town's remaining agricultural uses, and could also encourage the continued development of new agricultural uses.

Moreover, because of the Town has already designated a 1,052-acre hamlet area, further acquisitions by NYCDEP are unlikely to have any adverse impact on the ongoing revitalization of the hamlet of Andes. (The Town did not seek to expand its designated hamlet area.)

### **CONCLUSIONS**

Although the number of acres that could be acquired under the Extended LAP is projected to be higher in Andes than in any other West-of-Hudson watershed town, the amount of developable land remaining in the Town would be more than adequate to support the projected level of new residential development. Acquisition of WAC easements on 786 acres of agricultural land could help preserve the Town's working farmland. The Extended LAP would also help preserve the Town's natural environment; and opening lands acquired by NYCDEP for public recreational use could provide and significant amenity for both residents and visitors. As noted above, pursuant to the 1997 MOA, the Town had designated a 1,052-acre hamlet area, within which NYCDEP cannot acquire land in fee simple, which will help maintain the current character of this area.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Andes.

# TOWN OF BOVINA

### **EXISTING CONDITIONS**

The Town of Bovina is located at the center of the eastern portion of Delaware County. The Town's resident population in 2008 was estimated to be 633 – a decrease of 4.7 percent since 2000. With a population density of only 14.1 persons per square mile, Bovina is primarily rural in character, with some limited commercial activity concentrated in the hamlet of Bovina Center.

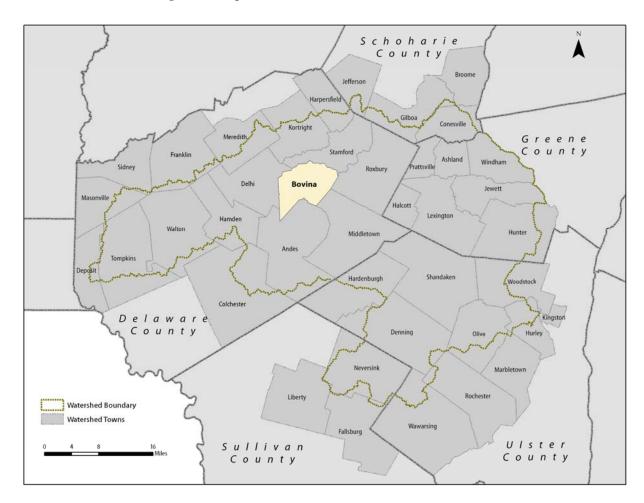


Figure 4-4: Map of Bovina in relation to the watershed

Town of Bovina – Quick Facts						
Land area:	28,427 acres					
Percent of town land area within the watershed:	100%					
Percent of land protected:	13%					
Population (estimated), 2008:	633					
Median age (estimated), 2008	47					
Median household income (estimated), 2008	\$50,943					

As shown in Table 4-4 and Figure 4-5, one-third of the Town's total area is agricultural land; and another 30 percent is low-density residential. Economic activity in the town includes a mix of agriculture, small businesses that serve the local population, and businesses – such as several small inns and bed-and-breakfasts – that serve tourists. As the seat of Delaware County government and the site of SUNY Delhi, the nearby Village of Delhi serves as a center of commerce, services and employment for many residents of Bovina.

Second homes made up 40 percent of Bovina's housing stock in 2000, down from 49.8 percent in 1990. The Town's population grew between 1990 and 2000; some of this growth appears to have been related to conversions of second homes to permanent residences.<sup>3</sup> Based on U.S. Census data and estimates by DemographicsNow, it is estimated that between 2000 and 2008, 5 new housing units were built in Bovina.

Table 4-4: Land uses by type

	In Watershed/Total			
Land Use	Acres	% of Total		
Agricultural	9,257	33%		
High-Density Residential	1,704	6%		
Low-Density Residential	8,352	29%		
Commercial/Other	718	3%		
State/Other Protected	875	3%		
City Protected	1,105	4%		
Vacant	6,100	21%		
Total	28,427			

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<sup>&</sup>lt;sup>3</sup> Town of Bovina Delaware County, NY Comprehensive Plan (2002), p. 2-10.

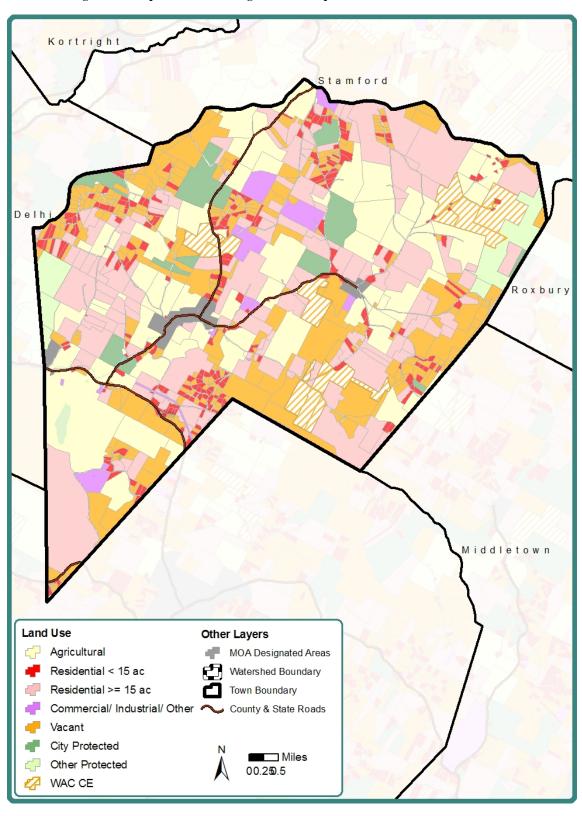


Figure 4-5: Map of Bovina showing land use and protected land within the Watershed

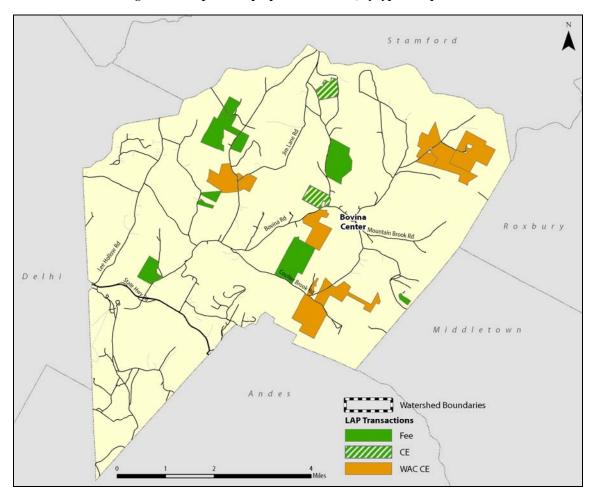
# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 2,685 acres in Bovina pursuant to the 1997 MOA. As shown in Table 4-5 below, purchases of land in fee simple account for 37 percent of the total acreage acquired under LAP. Figure 4-6 shows the location of LAP properties in Bovina, by type of acquisition.

Table 4-5: Acquisitions in the Town of Bovina through July 2009

Type of acquisition	Acres
Fee simple	1,009
Conservation easements	240
WAC agricultural easements	1,436
Total acquired	2,685

Figure 4-6: Map of LAP properties in Bovina, by type of acquisition



As of July 2009, WAC had acquired agricultural easements covering 1,436 acres in Bovina – about 16 percent of all land in the Town that is coded as agricultural.

As of October 2009, a total of 330 acres acquired by NYCDEP in fee simple in Bovina had been opened by NYCDEP for recreational use – about 33 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program. This figure can be expected to grow as additional properties are closed and reviewed for public access.

Pursuant to the 1997 MOA, the Town designated 392 acres of hamlet areas, within which NYCDEP cannot acquire land in fee simple. These designations ensure that acquisitions by NYCDEP will not conflict with commercial and community uses within the designated areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Delaware County is expected to decline slightly. At the same time, the demand for second homes may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development was estimated based on the rate of development during the past two decades. If it is assumed that the pace of new development in Bovina (as measured by new residential units) remains the same as it was between 1990 and 2008, it can be estimated that the land required to support new development through 2022 would total approximately 187 acres – including 68 acres of land characterized as developable 4 – about 2 percent of the Town's supply of developable land.

There is currently one major project planned in Bovina that could result in further development beyond the level cited above – the Aman Resort at Broadlands. The resort is to be developed by Aman, a major international resort operator, on a 2,000-acre property (parts of which are in Andes and Delhi) that was formerly the Gerry estate. It would include a 50-room hotel and luxury spa, along with a 50-lot subdivision that would accommodate the construction of 50 individually-owned "villas." The project was announced in 2007, but has reportedly been delayed due to economic conditions.

Between 2010 and 2022, the long-term decline in land used for agricultural production is likely to continue. Other commercial activity in the Town is likely to remain stable.

In its 2002 Comprehensive Plan, the Town of Bovina listed several goals:

1. Use positive incentive-based programs to guide development.

<sup>&</sup>lt;sup>4</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

- 2. Provide for the orderly future growth and development of the Town of Bovina.
- 3. Provide adequate light, air and privacy; secure safety from fire, flood and other danger; and prevent overcrowding.
- 4. Preserve the character of existing rural highways and promote safe, efficient and uncongested circulation of traffic.
- 5. Protect surface and groundwater supplies from pollution, maintain high quality physical environments and preserve wildlife habitats.
- 6. Promote the economic development of the Town of Bovina so as to improve incomes, create new business and employment opportunities and raise the standard of living within the community.
- 7. Encourage the retention and further development of the Town of Bovina's vital agricultural sector so as to improve farm incomes and maintain the working landscapes that define the Town's character.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Bovina to date, NYCDEP estimates that through 2022, it could acquire a total of 2,273 acres either in fee simple or through conservation easements. It is estimated that this total could include approximately 711 acres of developable land. NYCDEP further estimates that WAC could during the same period purchase easements on 512 acres of agricultural land.

As shown in the following table, after taking into account both LAP acquisitions and the land required to support new development, Bovina would still be left with approximately 79 percent of the Town's current stock of developable vacant and low-density residential land.

Table 4-6: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		3,726 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,273 acres	
Developable vacant or low-density residential land acquired		711 acres
Residential Development, 2010-2022		
Projected housing units built	24 units	
Land needed for housing	187 acres	
Developable portion of land needed for housing		68 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		2,948 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		79 percent

It should be noted that the 2009 and 2022 estimates of developable land presented in Table 4-6 are in several respects conservative. The definition of developable land cited above does not include agricultural land; nor does it include undeveloped portions of residential parcels of less than 15 acres. Overall, NYCDEP's acquisitions through 2022 are thus unlikely to have any adverse impact on the availability of land for development in Bovina – through 2022 and beyond.

Extension of LAP can also be assessed in terms of its potential impact on the character of the community.

While LAP has little or no direct impact on several of the Town's goals, it is clearly consistent with those relating to the protection of water quality and a high-quality physical environment. WAC's acquisition of easements on 512 additional acres of farmland is also consistent with the goal of maintaining Bovina's agricultural economy and working landscapes.

Assuming that the proportion of newly-acquired land opened by NYCDEP for public recreational use will be similar to the proportion made available in Bovina as of October 2009, additional acquisitions by NYCDEP are likely to result in more than 675 acres of additional land being opened for public recreation in Bovina by 2022.

### **CONCLUSIONS**

While the amount of land that could be acquired in Bovina under the Extended LAP is substantial, the remaining supply of developable land would be more than adequate to support the relatively low level of new development expected to occur between 2010 and 2022. Acquisition of WAC easements on 512 acres would also help preserve farmland in Bovina; and acquisitions by NYCDEP will help preserve the Town's high-quality natural environment. As noted above, pursuant to the 1997 MOA, the Town had designated 392 acres of hamlet areas, within which NYCDEP cannot acquire land in fee simple, which will help maintain the current character of this area.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Bovina.

# **TOWN OF DELHI**

# **EXISTING CONDITIONS**

The Town of Delhi, located in central Delaware County, is a low-density, primarily rural town. The Village of Delhi, located entirely within the Town, is the County seat and serves as a commercial center for much of Delaware County. The Town's resident population declined by about 8 percent in the 1990s, and is estimated to have declined an additional 2 percent since 2000. In 2008, its population was estimated at 4,547.

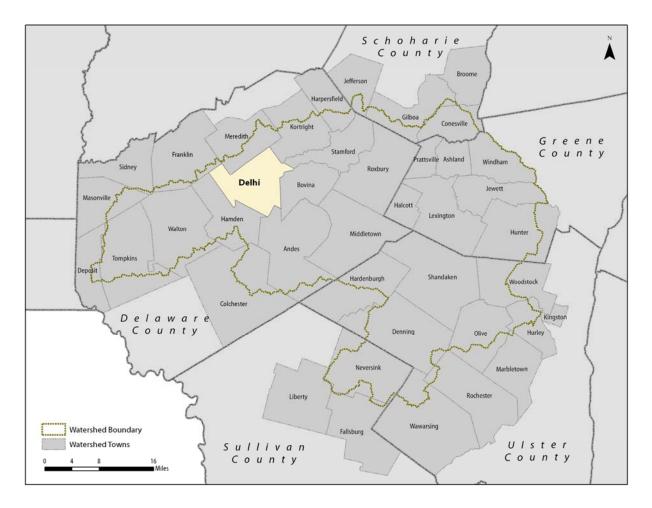


Figure 4-7: Map of Town of Delhi in relation to the watershed

Town of Delhi – Quick Facts			
Land area:	41,343 acres		
Percent of town land area within the watershed:	100%		
Percent of land protected	10%		
Population (estimated), 2008:	4,547		
Median age (estimated), 2008	31		
Median household income (estimated), 2008	\$44,018		

As shown in Table 4-7 and Figure 4-8, more than one-third of the Town's total area consists of low-density residential land. Privately-owned vacant and agricultural land each account for slightly less than one-quarter of the total. More than half the Town's population and much of its commercial activity are concentrated in the Village of Delhi. (According to the 2000 Census, the Village accounted for 56 percent of the Town's population). In addition to employment related to county government, the Village also contains SUNY Delhi – the Town's largest enterprise, with about 3,100 students and 300 employees. Other notable institutions and businesses in Delhi include O'Connor Hospital, the Countryview nursing home, Delhi Bank, Delhi Telephone Company and a variety of farm-related businesses.

While the number of housing units in Delhi grew by a net average of about 10 new units per year between 1990 and 2008, most of this growth appears to have occurred in the 1990's. Based on U.S. Census data and estimates by DemographicsNow, it is estimated that between 2000 and 2009, a net of 4 new residential units were developed in Delhi.

Table 4-7: Land uses by type

	In Watershed/Total		
Land Use	Acres	% of Total	
Agricultural <sup>5</sup>	9,105	22%	
High-Density Residential	2,576	6%	
Low-Density Residential	14,442	35%	
Commercial/Other	1,768	4%	
State/Other Protected	734	2%	
City Protected	2,228	5%	
Vacant	9,610	23%	
Total	41,343		

<sup>&</sup>lt;sup>5</sup> The agricultural category includes WAC conservation easements.

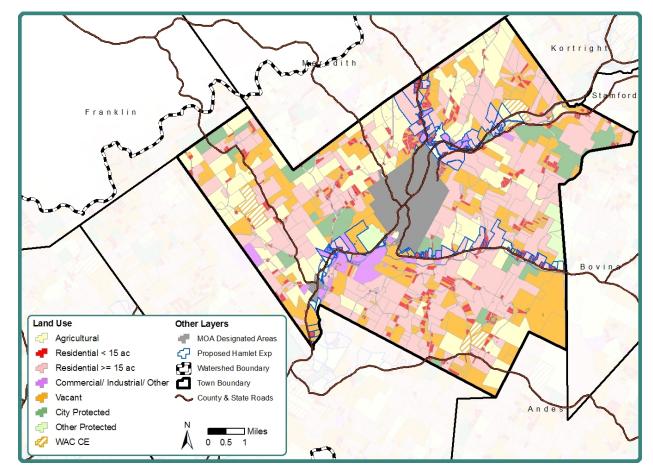


Figure 4-8: Map of Delhi showing land use and protected land within the Watershed

# **Previous LAP Activity**

Through July 2009, 3,594 acres had been acquired in Delhi under the Land Acquisition Program – about 8.7 percent of the Town's total land area. Figure 4-9 shows the location of LAP properties in Delhi, by type of acquisition.

Table 4-8: Acquisitions in the Town of Delhi through July 2009

Type of acquisition	Acres
Fee simple	2,731
Conservation easements	0
WAC agricultural easements	862
Total acquired	3,594

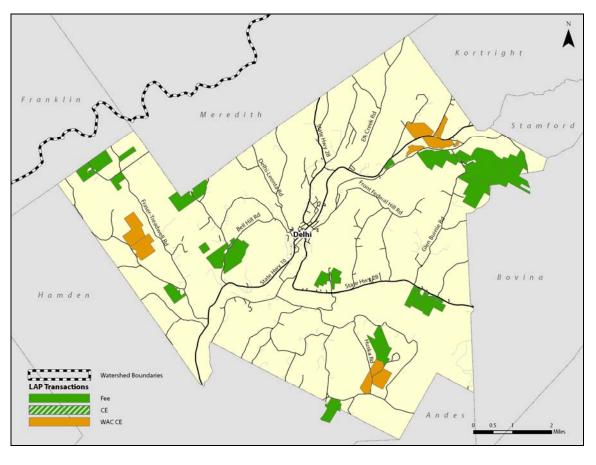


Figure 4-9: Map of LAP properties in Delhi, by type of acquisition

As of October 2009, NYCDEP's purchases of land in fee simple in Delhi included 136 acres that had been actively used for agricultural production prior to acquisition. The Department had issued one permit for agricultural use of 50 acres of land it had acquired in fee simple in Delhi. As of July 2009, approximately 862 acres of agricultural land in Delhi was covered by WAC easements.

As of the fall of 2009, NYCDEP had opened a total of 2,634 acres of land acquired under LAP in Delhi for a variety of recreational uses – more than 96 percent of the land that LAP has acquired in fee simple in Delhi.

Pursuant to the 1997 MOA, Delhi designated hamlet areas totaling 2,346 acres, within which NYCDEP cannot acquire land. The area covers the Village of Delhi and the hamlet of Fraser and is the second-largest area designated by any of the watershed towns. This has helped ensure that LAP does not conflict with commercial, civic and community uses within the designated areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Delaware County is expected to decline slightly. For purposes of constructing a "reasonable worst-case scenario," it is estimated that future residential development based on the rate of development during the past two decades. Assuming that the pace of new development in Delhi (as measured by new residential units) remains the same as it was between 1990 and 2008 (about 10 new units per year), it is estimated that the land required to support new development through 2022 will total approximately 743 acres. This would include 264 acres of land characterized as developable bout 5 percent of the Town's supply of developable land.

Between 2010 and 2022, the amount of land used in agricultural production in Delhi will probably continue to decline; there is, however, some potential for the growth of smaller-scale, specialty agriculture. SUNY Delhi could also be a source of new development, potentially including the construction of new off-campus housing for students.

### FUTURE CONDITIONS WITH THE PROPOSED ACTION

NYCDEP estimates that through 2022 it is projected to acquire 3,432 additional acres in Delhi either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, these acquisitions are projected to include approximately 990 acres of developable land – 17 percent of the Town's supply of developable vacant and low-density residential land in 2009. NYCDEP further estimates that WAC could during the same period purchase easements on 519 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Delhi would still be left with approximately 79 percent of the Town's current stock of developable land.

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<sup>&</sup>lt;sup>6</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

Table 4-9: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		5,851 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	3,432 acres	
Developable vacant or low-density residential land acquired		990 acres
Residential Development, 2010-2022		
Projected housing units built	120 units	
Land needed for housing	743 acres	
Developable portion of land needed for housing		264 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		4,596 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		79 percent

The 2009 and 2022 estimates of developable land presented in Table 4-9 are conservative in several respects. The definition of developable land cited above does not include agricultural or commercial/industrial land; nor does it include undeveloped portions of residential parcels of less than 15 acres. Table 4-9 may thus understate the amount of developable land likely to remain in 2022. Overall, NYCDEP's acquisitions through 2022 are unlikely to have an adverse impact on the availability of land for new development in Delhi – through 2022 and beyond.

Future acquisitions under LAP can also be assessed in terms of their impact on the character of the community. In several areas, this impact is likely to be positive. The purchase of WAC easements on 519 acres of farmland (in addition to the WAC easements already in place) can help preserve agricultural activity in Delhi; and NYCDEP's purchases of land and conservation easements can help to protect the Town's natural environment.

Assuming that the percentage of newly-acquired land opened to public recreational use is similar to what it has been through 2009, it can be estimated that through 2022 more than 3,000 additional acres of land acquired in fee simple could be made available by NYCDEP for public recreational use. In some cases, land acquired by NYCDEP could provide a significant amenity for both full-time and part-time residents, and a resource for further development of visitor-based businesses.

Finally, under a proposed agreement among NYCDEP, the Town, the regulatory agencies and other stakeholders, Delhi's designated hamlet areas would be expanded from 2,346 to 4,902 acres.

Overall, it appears that the extension of the LAP program through 2022 is unlikely to have any significant adverse impact on the character of the community.

#### **CONCLUSIONS**

Although the number of acres projected to be acquired in Delhi under the Extended LAP is substantial, the Town's supply of developable land would still be more than adequate to accommodate the projected level of new development through 2022 and beyond. The Extended LAP would help protect the Town's natural environment and would result in additional Cityowned land being opened for public recreational use. WAC's projected acquisition of farm

easements on 519 acres would help preserve some of the Town's agricultural land; and the proposed addition of 2,759 acres to the Town's designated hamlet area would help ensure that land is available to accommodate future development not only in the Village of Delhi, but also along major roads throughout the Town.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Delhi.

# TOWN OF HAMDEN

### **EXISTING CONDITIONS**

The Town of Hamden is a low-density rural community located at the geographic center of Delaware County. The Town's resident population was estimated in 2008 at 1,237. Hamden's population grew by 12 percent during the 1990s, but is estimated to have declined by 4 percent since 2000.

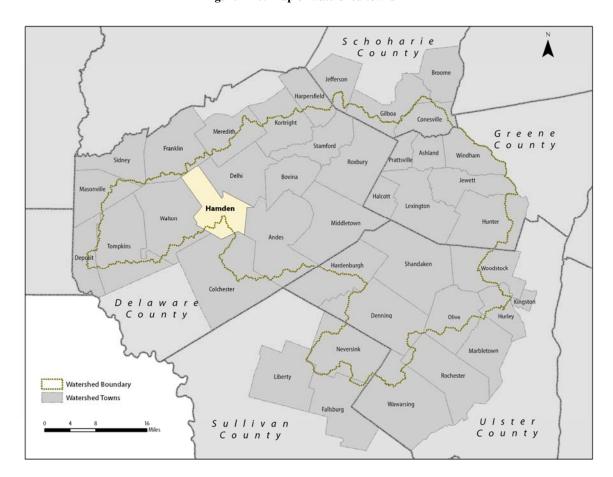


Figure 4-10: Map of watershed towns

<b>Town of Hamden – Quick Facts</b>			
Land area:	38,310 acres		
Percent of town land area within the watershed:	87%		
Percent of land protected	9%		
Population (estimated), 2008:	1,237		
Median age (estimated), 2008	44.4		
Median household income (estimated), 2008	\$43,357		

As Table 4-10 and Figure 4-11 show, about 72 percent of Hamden's total area consists of either low-density residential land (45 percent of the Town's total acreage) or privately-owned vacant land (27 percent). The Town also has a substantial supply of agricultural land – 14 percent of its total land area – which is particularly concentrated in the eastern portion of the Town. Hamden has a substantial second-home sector as well; in 2000, 33 percent of the Town's housing units were for seasonal or recreational use. Hamden also has a small commercial base, located primarily along Route 10 in the hamlets of Hamden and Delancey, consisting primarily of small businesses that serve the local population, as well as some tourist-oriented businesses.

Using data on building permits, it is estimated that between 2000 and 2009, about 20 new housing units were built in Hamden.

Table 4-10: Land uses by type

	In Wa	itershed	Out W	Vatershed	Т	otal
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural	5,106	15%	121	3%	5,227	14%
High-Density Residential	1,904	6%	243	5%	2,147	6%
Low-Density Residential	14,609	44%	2,538	53%	17,146	45%
Commercial/Other	359	1%	104	2%	463	1%
State/Other Protected	459	1%	0	0%	459	1%
City Protected	1,765	5%	N/A	N/A	1,765	5%
Vacant	8,402	25%	2,007	42%	10,410	27%
Total	33,517		4,793		38,310	

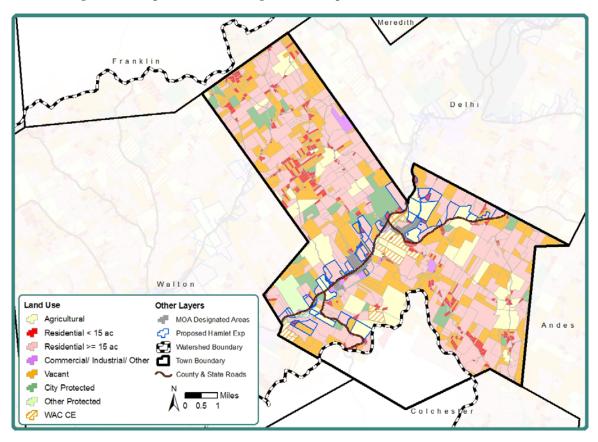


Figure 4-11: Map of Hamden showing land use and protected land within the Watershed

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 2,942 acres in Hamden pursuant to the 1997 MOA. As shown in Table 4-11 below, purchases of land in fee simple account for about 49 percent of all acquisitions in the Town. Figure 4-12 shows the location of LAP properties in Hamden, by type of acquisition.

Table 4-11: Acquisitions in the Town of Hamden through July 2009

Type of acquisition	Acres
Fee simple	1,429
Conservation easements	612
WAC agricultural easements	901
Total acquired	2,942

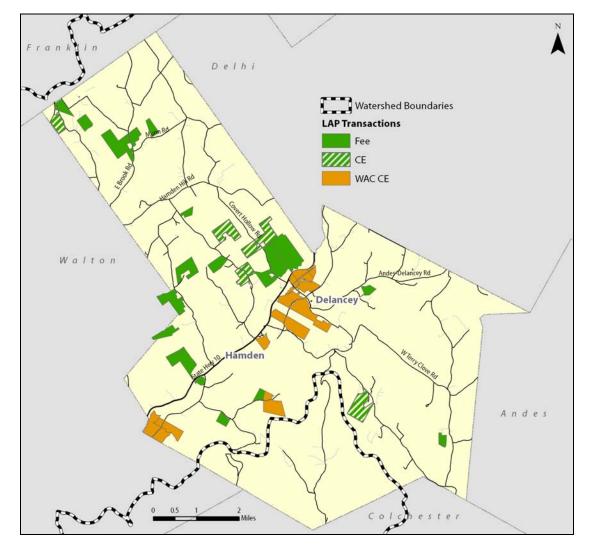


Figure 4-12: Map of LAP properties in Hamden, by type of acquisition

As of October 2009, NYCDEP had acquired 118 acres that had been in agricultural use prior to acquisition. In 2006, NYCDEP issued a five-year permit for agricultural use of 15 acres of land that had been acquired under LAP; the property is currently being used for the production of corn and hay. WAC has also purchased easements covering 901 acres of farmland in Hamden – about 17 percent of all agricultural land in the Town.

Of the 1,429 acres that NYCDEP acquired in fee simple in Hamden through June 2009, 842 acres – 59 percent of the total – had been opened for public recreational use as of October 2009. This figure, which will grow as additional properties are closed and reviewed for public access, represents a significant resource in a Town with relatively little State-owned land, and no pre-MOA City-owned land.

Pursuant to the 1997 MOA, the Town designated parcels in the hamlets of Delancey and Hamden totaling 420 acres. However, the Town did not elect to preclude fee simple acquisitions in these areas. As shown in Figure 4-12, WAC easements have been acquired on one property in

the hamlet of Hamden and several in the hamlet of Delancey. While these easements are intended to support the continuation of agricultural use of those lands, they removed land from potential development in and around these hamlets. In recognition of the growth concerns raised by local officials, as part of the land acquisition negotiations with regulators and local officials, NYCDEP supports the exclusion of WAC easement in hamlets in the Extended LAP.

# FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Delaware County is expected to decline slightly. If it is assumed that the pace of new development in Hamden (as measured by new residential units) remains the same as it was between 1990 and 2008, it can be estimated that about 156 additional units will be built by  $2022^{\circ}_{10}$  and that the land required to support this new development through 2022 will total approximately 1,682 acres, including 701 acres of land characterized as developable – about 11 percent of the Town's supply of such land as of  $2009.^{\circ}_{10}$ 

Between 2010 and 2022, Hamden is also likely to see a continued decline in land used for agricultural purposes; and the scale of commercial activity in other sectors is likely to remain small

<u>Hamden's Comprehensive Plan, completed in 2010, defines several major goals for the town's future;</u>

- Provide for the orderly future growth and development of the town of Hamden.
- Provide adequate light, air and privacy; secure safety from fire, flood and other danger; and prevent overcrowding.

In his comments on the Draft EIS, Hamden Town Supervisor Wayne Marshfield noted that the pace of new residential development in the town has been slower in recent years, and that the estimate of 156 additional units overstates the number of new units likely to be built in Hamden between 2010 and 2022. This may well be correct. It is important to remember that our estimate of 156 additional units through 2022 is not a forecast of the likely rate of new development. It is instead a projection that is being used to define a "reasonable worst-case scenario" in terms of the potential for conflict between future development trends and possible future acquisitions by NYCDEP under an extended Land Acquisition Program. In Hamden (and in other towns as well) the result is that both the estimate of acreage needed to support new development, and the estimate of acres to be acquired by NYCDEP, are probably overstated.

For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

<sup>&</sup>lt;sup>9</sup> <u>Using a somewhat different definition of "buildable' land, the Town's comprehensive plan, completed in 2010, estimated that 22 percent of Hamden's total land area – 8,499 acres – is buildable, as compared with our estimate of 6,146 acres of developable land in 2009. The town's estimate of buildable land, however, includes land that has already been developed.</u>

- Preserve the character of existing rural highways and promote safe, efficient and uncongested circulation of traffic.
- Protect surface and groundwater supplies from pollution, maintain quality physical environments and preserve wildlife habitats.
- Encourage uses of land and building designs that create harmonious appearances.
- Encourage flexibility in the development of land to facilitate economical provision of streets and utilities and provide varied housing choices.
- <u>Promote the development of an economically viable agriculture sector and the preservation of working farms.</u> <sup>10</sup>

These goals, which are elaborated in more detail in the plan, provide a sense of how Hamden would like to develop, and what it would like to preserve, during the years ahead.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based in part on LAP's experience in Hamden to date, NYCDEP estimates that through 2022, it could acquire 2,696 additional acres either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions could include approximately 724 acres of developable land – about 12 percent of the Town's supply of developable vacant and low-density residential land as of 2009. During the same period, it is estimated that WAC could acquire agricultural easements covering 944 acres of farmland.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support residential new development, Hamden would still be left with 4,721 acres of developable vacant and low-density residential land in 2022 – approximately 77 percent of the Town's current stock of such land.

Table 4-12: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		6,146 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,696 acres	
Developable vacant or low-density residential land acquired		724 acres
Residential Development, 2010-2022		
Projected housing units built	156 units	
Land needed for housing	1,682 acres	
Developable portion of land needed for housing		701 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		4,721 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		77 percent

<sup>&</sup>lt;sup>10</sup> Town of Hamden, New York, Comprehensive Plan, 2010, pp. 2-1 to 2-4.

The estimate of the amount of developable land remaining in 2022 may be conservative in several respects. The pace of residential development in Hamden has been slower since 2000 than it was in the 1990s. By using the period 1990-2008 as the basis for our estimate of the land required for new development between 2010 and 2012, we may be overstating the likely rate of new development in the Town through 2022.

Moreover, the definition of developable vacant and low-density residential land cited above excludes agricultural land. Given trends in agriculture in Delaware County, some of this land is likely in the future to be available for development.

The potential impact of additional acquisitions can also be assessed in terms of how they affect the character of the community. Acquisitions of land in fee simple and through conservation easements at the scale projected by NYCDEP through 2022 could reinforce the low-density, predominantly rural character of the Town – but are unlikely to affect development in the Route 10 corridor during this period. Under a proposed agreement among NYCDEP, the Town, the regulatory agencies and other stakeholders, Hamden's designated hamlet areas would be expanded from 420 to 2,854acres. If the Town elects to preclude LAP acquisition, this agreement could help ensure that land remains available to accommodate future development in the Route 10 corridor.

Finally, the projected purchase of WAC agricultural easements could contribute to preservation of farm land in Hamden – a town in which a substantial portion of the Town's total area is still devoted to agricultural uses.

#### CONCLUSIONS

Under the Extended LAP, the projected acquisition of nearly 2,700 acres of land in Hamden in fee simple and through conservation easements would help protect the Town's low-density rural character and the quality of its environment, and expand opportunities for outdoor recreation in a town with relatively little publicly accessible open space. WAC's projected acquisition of farm easements would also protect a portion of the Town's agricultural land.

If further acquisitions by NYCDEP or LAP are not precluded within the designated (or proposed expanded) hamlet areas, such acquisitions could to some extent limit opportunities for development within the designated areas. Nevertheless, even with the substantial acquisitions projected in this analysis, Hamden would have more than enough developable land within the Town to support the projected level of new residential development through 2022 and beyond.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Hamden.

# TOWN OF MIDDLETOWN

# **EXISTING CONDITIONS**

The Town of Middletown is a primarily rural town located in southeastern Delaware County, with an estimated resident population of 3,881 in 2008. The Town includes the Village of Margaretville, a regional commercial center for the Central Catskills. The Town's population grew by nearly 19 percent in the 1990s – but since 2000 is estimated to have declined by 4 percent.

Schoharie County Greene County attsville Ashland Jewett Lexington Middletown Colchester Delaware County Watershed Boundary Watershed Towns Sullivan Ulster County County

Figure 4-13: Map of Middletown in relation to west-of-Hudson watershed

Town of Middletown – Quick Facts		
62,244 acres		
100%		
23%		
3,881		
48		
\$38,598		

As Table 4-13 and Figure 4-14 show, low-density residential land and privately-owned vacant land are the predominant land uses in Middletown, accounting for 28 percent and 30 percent respectively of the Town's total area. Middletown has a mixed economy. Commercial activity is located primarily in the villages of Margaretville and Fleischmanns, the hamlet of Arkville and elsewhere along Route 28. The Town also has a substantial agricultural sector, and a substantial second-home sector as well – about 36 percent of all housing units in Middletown in 2000 were for seasonal or recreational use.

Development activity since 1990 (as shown by parcels outlined in black in Figure 4-14) has occurred throughout the area north and west of Route 28. As noted above, most of the Town's growth in the past two decades occurred in the 1990s. Between 2000 and 2008, the number of housing units in Middletown increased by 18.

Table 4-13: Land uses by type

Land Use	Acres	% of Total
Agricultural <sup>11</sup>	2,659	4%
High-Density Residential	7,733	12%
Low-Density Residential	17,399	28%
Commercial/Other	1,512	2%
State/Other Protected	6,942	11%
City Protected	5,764	9%
Vacant	18,727	30%
<b>Total Town Acres</b>	62,244	

<sup>&</sup>lt;sup>11</sup> The agricultural category includes WAC conservation easements.

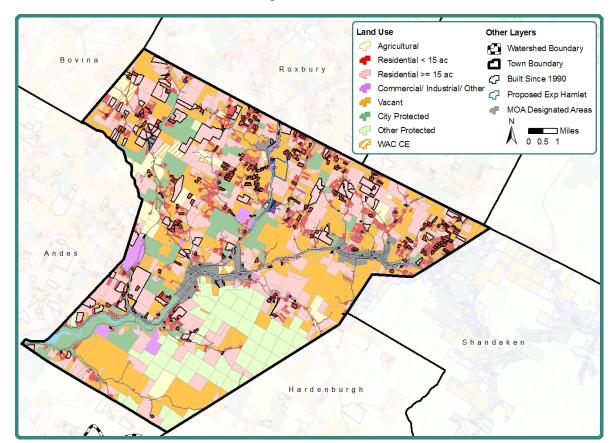


Figure 4-14: Map of the Town of Middletown, showing land use, protected land and proposed hamlet expansion areas

# **Previous LAP Activity**

Through June 2009, 5,689 acres had been acquired in Middletown pursuant to the 1997 MOA. As shown in Table 4-14 below, about 68 percent of this total was acquired in fee simple; NYCDEP acquired conservation easements on 19 percent; and WAC acquired agricultural easements on 13 percent. Figure 4-15 shows the location of LAP properties in Middletown, by type of acquisition.

Table 4-14: Acquisitions in the Town of Middletown through July 2009

Type of acquisition	Acres
Fee simple	3,892
Conservation easements	1,063
WAC agricultural easements	733
Total acquired	5,689

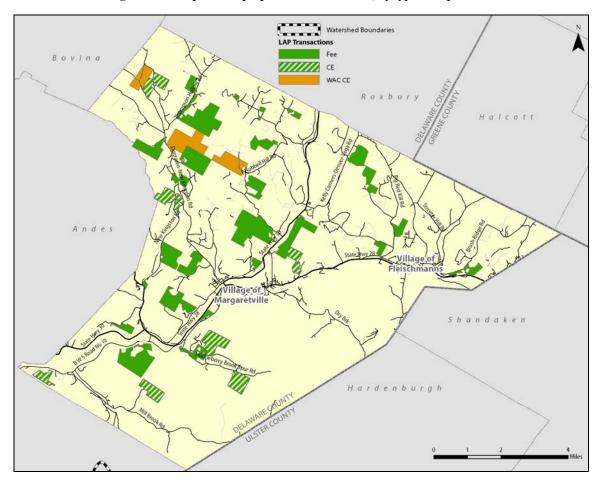


Figure 4-15: Map of LAP properties in Middletown, by type of acquisition

Through 2009, WAC has acquired agricultural easements on 733 acres of farmland in Middletown – about 25 percent of the Town's agricultural land. In addition to land covered by WAC easements in Middletown, NYCDEP has acquired in fee simple 23 acres that had been in active agricultural use prior to NYCDEP's acquisition of the property. Since 2007, however, NYCDEP has issued permits to three farm operators for use of 36 acres of LAP-acquired land – primarily for production of corn and hay.

As of October 2009, a total of 2,059 acres acquired by NYCDEP in fee simple in Middletown had been opened by NYCDEP for public recreational use – about 53 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program. This represents a significant addition to the total amount of land open for public recreation in a town that prior to the Land Acquisition Program had relatively little publicly available open space.

Pursuant to the 1997 MOA, Middletown established five designated hamlets (Arkville, Dunraven, Halcottsville, Clovesville and New Kingston). In addition, the Town contains the Villages of Margaretville and Fleischmanns. These designated areas total 1,734 acres. The Town elected to preclude LAP purchases in fee simple in the Village of Margaretville, but not in the other designated hamlets.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Delaware County is expected to decline slightly. At the same time, the demand for second homes may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. If we assume that the pace of new development in Middletown (as measured by new residential units) remains the same as it was between 1990 and 2008, we can estimate that the land required to support new development through 2022 would total approximately 1,446 acres – including 513 acres of land characterized as developable. <sup>12</sup>

The planned Belleayre Resort straddles the boundary between Shandaken and Middletown. Under an agreement negotiated in 2007 among the developer, local officials, NYCDEP, and NYSDEC, the project would include two hotels with a total of 370 rooms, an 18-hole golf course, and 259 lodging units and other facilities.

The Comprehensive Plan for Fleischmanns presents a vision for the future in which the village seeks to:

manage development and redevelopment to protect the integrity of our village, its historic districts, Main Street business district, cultural & civic institutions, public parks, and our natural resources; preserve historic buildings, open space and the integrity of our historic residential neighborhoods; enhance the convenience of pedestrian access to services and facilities within our walkable community and employment opportunities for our residents; provide sustainable public infrastructure and services to meet growing community needs in a cost-effective manner; recreational opportunities for all age groups; and set quality design standards to ensure that new growth and redevelopment enriches our community aesthetics and is in harmony with the existing fabric of the Village.

The goals outlined in Margaretville's Comprehensive Plan are similar. They include:

- I. Revitalizing commercial activity
  - Maintaining an economically viable and vibrant Main Street that caters to a broad variety of consumer markets.
  - Developing Margaretville's reputation as a year-round destination.
- II. Driving the innovative and creative economy.

-

For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

- Encouraging environmentally friendly businesses that help build sustainable wealth
- Developing economically sustainable businesses that incorporate green construction guidelines and sustainable business practices, and generate jobs at community scale.
- Promoting and expanding opportunities to experience arts, culture, healthy lifestyles and generate a community of well-being in Margaretville.

# III. Generating jobs

- Creating 50-100 locally available full-time jobs.
- o Attracting and retaining health practitioners.

# IV. Enhancing community housing

• To ensure a healthy, well-balanced mix of affordable housing that serves all income and age groups.

### V. Benchmarking cultural resources

• To preserve, protect and restore culturally and historically significant structures in the community.

#### VI. Promoting recreation

- Integrating the region's recreational amenities into Margaretville's quality of life.
- Capitalizing upon recreational assets and integrating them into the Margaretville economy

Several other sources highlight the characteristics that residents of Middletown value. For example, the Central Catskills Collaborative – an alliance of municipalities along the Route 28 corridor that includes Middletown, Margaretville and Fleischmanns – notes that this area has "retained the beauty and charm that have attracted visitors and residents to the region for generations." Qualities cited by the Collaborative include:

....the closely knit hamlets with their mixed uses, sidewalks and historic architecture; the surrounding forests and clean waterways with their recreational opportunities; and the open, rolling farmland.

# FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Middletown to date, NYCDEP estimates that through 2022, it is projected to acquire 4,507 additional acres either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions would include approximately 1,191 acres of developable land.

NYCDEP further estimates that WAC could during the same period purchase easements on 476 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Middletown would still be left with 5,751 acres of developable vacant and low-density residential land – approximately 77 percent of the Town's current stock of such land.

Table 4-15: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		7,455 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	4,507 acres	
Developable vacant or low-density residential land acquired		1,191 acres
Residential Development, 2010-2022		
Projected housing units built	249 units	
Land needed for housing	1,446 acres	
Developable portion of land needed for housing		513 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		5,751 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		77 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Middletown's supply of such land is relatively limited. As defined here, developable land represented about 12 percent of the Town's total land area in 2009; and by 2022 this percentage is projected to decline to 9.3 percent.

It is important to note, however, that the estimates of developable land cited in Table 4-15 are in several respects conservative. The definition of developable land cited above in effect assumes that no currently-agricultural land will become available for development during the next 12 years; given the long-term decline in Delaware County in the use of land for agriculture, this is probably an unrealistic assumption. Moreover, projecting future residential development on the basis of "year-built" data for 1990 through 2008 may overstate the amount of land likely to be required for new development through 2022.

Based on this analysis, we conclude that the projected level of acquisitions by NYCDEP is not likely to adversely affect the availability of land for new development in Middletown.

LAP's impact in Middletown can also be assessed in terms of its impact on the character of the community. While additional acquisitions by NYCDEP through 2022 may have little or no direct impact on some of the values and goals defined in the Fleischmanns and Margaretville plans – such as goals regarding job creation and affordable housing – the Extended LAP is likely to be broadly consistent with the plans' emphasis on encouraging development within the villages and promoting recreation.

Assuming that the proportion of newly-acquired land opened by NYCDEP for public recreational use will be similar to the proportion made available in Middletown as of October 2009, additional acquisitions by NYCDEP could result in more than 1,800 acres of additional land being made opened for public recreation in Middletown by 2022 – reinforcing what is already one of the Town's strengths.

WAC's acquisition of easements on 476 additional acres of farmland is also consistent with the goal of preserving farmland in Middletown, as expressed by the Central Catskills Collaborative and others.

Finally, the Town is proposing to add <u>298 acres</u> to Middletown's designated hamlet areas, which NYCDEP agrees is reasonable. If the Town elects to preclude LAP acquisition on this expansion area of the MOA hamlets, this could help ensure that further acquisitions are compatible with the goal of continued revitalizations of the Town's population centers.

#### **CONCLUSIONS**

Under the Extended LAP, the acquisition of land in Middletown in fee simple and through conservation easements (which could total more than 4,500 acres by 2022) would help protect the quality of the Town's natural environment, and could add more than 1,800 acres to the land available for public recreation. Additional WAC easements would also help preserve farmland in the Town. Even with these acquisitions, Middletown's supply of developable land would be more than adequate to support the projected level of development through 2022 and beyond. If the Town and Village of Fleischmanns elect to preclude LAP acquisitions within the expanded MOA hamlets, this could help ensure that further acquisitions are compatible with the goal of continued revitalization of the Town's population centers.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Middletown.

# TOWN OF STAMFORD

# **EXISTING CONDITIONS**

The Town of Stamford is located in northeastern Delaware County. Stamford's resident population in 2008 was estimated to be 1,954 – a slight increase from 2000, but still 4.5 percent below the Town's population in 1990. Stamford, one of the region's leading agricultural centers, is primarily rural in character, with a majority of its residents concentrated in and around the villages of Stamford (part of which is located in the Town of Harpersfield) and Hobart (which is located close to the borders of both Harpersfield and Kortright).

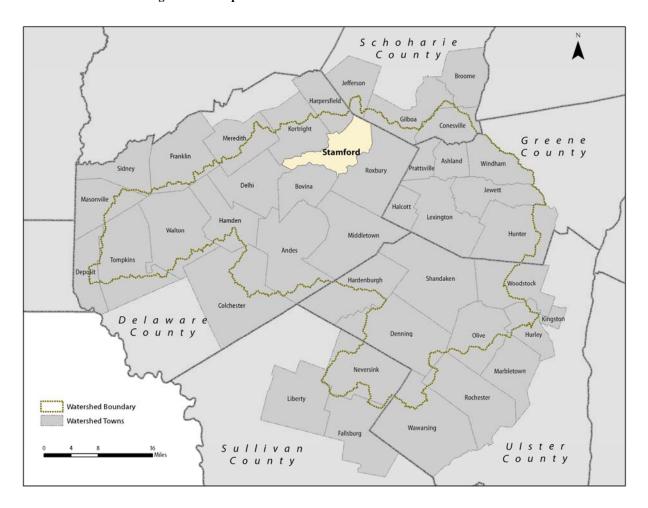


Figure 4-16: Map of Stamford in relation to the watershed

Town of Stamford – Quick Facts		
Land area:	31,120 acres	
Percent of town land area within the watershed:	100%	
Percent of town protected as of 7/31/09:	27%	
Population (estimated), 2008:	1,954	
Median age (estimated), 2008:	42	
Median household income (estimated), 2008:	\$42,881	

Stamford is among the region's more economically diverse towns. It has a large agricultural sector – one of the region's largest manufacturing enterprises (Covidien, with 700 employees, located in the village of Hobart), and a unique cluster of booksellers, also in Hobart. The Village of Stamford has a concentration of businesses serving local residents, and several arts organizations, as well as housing for the elderly, an adult home and a 122-bed nursing home. The Town also has a substantial second-home population – as of 2000, 24 percent of all housing units were for seasonal or recreational use.

Much of the Town's population and commercial activity is concentrated along its northern boundary – in the villages of Stamford and Hobart (and to a lesser extent in the hamlet of South Kortright), paralleling the West Branch of the Delaware River as well as Routes 23 and 10. As noted above, the Village of Stamford – the largest population center in northeastern Delaware County, with a population of more than 1,200 – is partly within the Town of Stamford, and partly in the neighboring Town of Harpersfield. Hobart and South Kortright similarly border on the towns of Harpersfield and Kortright.

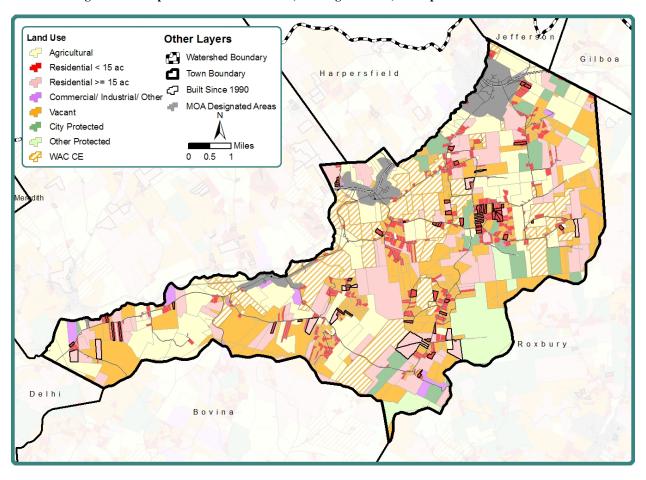
As Table 4-16 and Figure 4-17 show, agricultural land (including land covered by WAC easements) accounts for the largest part of the Town's total area – about 38 percent. Low-density residential land accounts for 17 percent of the total and privately-owned vacant land for 23 percent. In contrast to many watershed towns in Greene and Ulster counties, Stamford has historically had relatively little publicly-protected land. Other than land acquired under LAP, State-owned and other protected land totals only 1,742 acres – less than 6 percent of the Town's total area.

There are several clusters of residential development since 1990, including some more compact developments in the eastern part of the town and low-density residential developments in the southern and western parts of the town (see parcels outlined in black in Figure 4-17). Between 2000 and 2008, the number of housing units in the Town increased by 72; and the same period saw some business growth in the villages.

Table 4-16: Land uses by type

Land Use	Acres	% of Total
Agricultural <sup>13</sup>	11,718	38%
High-Density Residential	2,389	8%
Low-Density Residential	5,406	17%
Commercial/Other	643	2%
State/Other Protected	1,742	6%
City Protected	1,418	5%
Vacant	7,082	23%
<b>Total Town Acres</b>	31,120	

Figure 4-17: Map of the Town of Stamford, showing land uses, development since 1990



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<sup>&</sup>lt;sup>13</sup> The agricultural category includes WAC conservation easements.

# **Previous LAP Activity**

Through July 2009, NYCDEP and WAC had acquired interests in a total of 6,535 acres in Stamford. As shown in Table 4-17 below, WAC agricultural easements account for nearly 75 percent of all land acquired under LAP.

Table 4-17: Acquisitions in the Town of Stamford through July 2009

Type of acquisition	Acres
Fee simple	1,034
Conservation easements	652
WAC agricultural easements	4,849
Total acquired	6,535

Figure 4-18 shows the location of NYCDEP- and WAC-acquired properties in Stamford, by type of acquisition. As shown, a substantial part of the acquired acreage is located in areas immediately adjacent to the Villages of Stamford and Hobart, mostly in the form of WAC easements. Land acquired in fee simple or in the form of City conservation easements is mostly located in the eastern portion of the Town.

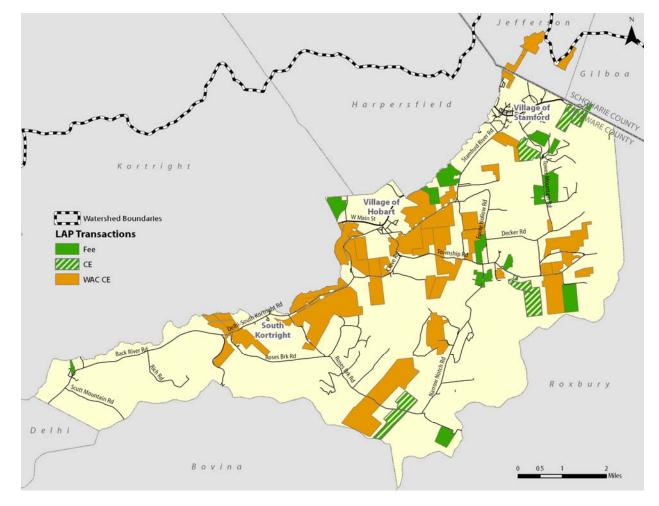


Figure 4-18: Map of LAP properties in Stamford, by type of acquisition

Through June 2009, WAC had acquired agricultural easements covering 4,849 acres in Stamford – far more than in any other West-of-Hudson watershed town. These easements cover about 16 percent of the Town's total area, and about 41 percent of its agricultural land. While WAC easements have helped to preserve farmland, the concentration of these easements in areas just outside the villages of Stamford and Hobart and the hamlet of South Kortright has removed the properties under easement from the pool of land potentially available for development on the outskirts of the two villages and the hamlet of South Kortright.

As of October 2009, NYCDEP had acquired in fee simple a total of 156 acres of land in Stamford previously used for agricultural production. However, NYCDEP had also issued permits to three farm operators for use of a total of 143 acres of this City-owned land for agricultural production. These properties are used primarily for the production of hay.

As of October 2009, NYCDEP has opened 522 acres of land in Stamford that has been acquired under LAP for public recreational use – including 302 acres on which hunting is allowed. This represents slightly more than half of the 1,034 acres that NYCDEP has acquired in fee simple within Stamford since the beginning of the land acquisition program – and a major addition to the Town's overall supply of land available for public recreational use.

Pursuant to the MOA, the Town designated hamlet areas totaling 1,331 acres. The Town did not elect to preclude LAP fee simple purchases in the hamlet of South Kortright, or in the Village Extension Areas around Stamford and Hobart, but the Villages of Stamford and Hobart did elect to preclude fee simple acquisitions within their borders. This helps ensure that LAP fee purchases do not conflict with future development potential and plans within the villages. However, as shown in Figure 3, the land on which WAC has acquired easements includes substantial tracts of land in areas immediately adjacent to the Villages of Hobart and Stamford, and the hamlet of South Kortright. To the extent that these areas are potentially more attractive for development – for example, because of proximity to commercial areas and major roads – WAC conservation easements will limit development in areas within the Town of Stamford adjacent to these communities. However, there does not appear to be significant development pressure in these areas. Although there has been some commercial business development within the Village of Stamford over the past decade, the Village's comprehensive plan notes that there are 85 vacant parcels, many of which could be developable, including a site identified for potential affordable housing, and there are further opportunities for redevelopment. There could be redevelopment opportunities in the Village of Hobart and hamlet of South Kortright as well. Furthermore, the preclusion of LAP purchases within the villages ensures that the villages can support future opportunities for commercial development. In recognition of the growth concerns raised by local officials, as part of the land acquisition negotiations with regulators and local officials, NYCDEP supports extending the opportunity to local governments to exclude WAC and NYCDEP easements (in addition to excluding NYCDEP fee simple acquisitions) within designated areas in the Extended LAP.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Delaware County is expected to decline slightly. At the same time, the demand for second homes in the area may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," estimated future residential development is based on the rate of development during the past two decades. Assuming that the pace of new development in Stamford (as measured by new residential units) remains the same as it was between 1990 and 2008, it is estimate that 84 new units would be developed in the Town between 2010 and 2022, and that the land required to support this new development would total approximately 459 acres.

Between 2010 and 2022, Stamford is also likely to see a continued decline in land used for agricultural purposes, coupled with slow growth in a number of other sectors. Stamford's ability to retain (and if possible build on) its existing manufacturing base could be critical to the health of the Town's economy during this period.

The vision of the community set forth in the Village of Stamford's comprehensive plan cites several factors as contributing to the qualities that "make Stamford special."

Physical beauty and a mountain setting are assets that draw residents and visitors to the Village. The small size of the community, coupled with the quiet, rural setting, creates a safe, family-oriented atmosphere. Also because of this setting, residents of Stamford have endless opportunities to participate in outdoor recreation such as camping, hiking, hunting, fishing, cycling, snowmobiling, cross-country and downhill skiing. Given these

excellent recreational opportunities and beautiful setting, it is no coincidence that the Village has a number of second homes.

Residents of the Village are fortunate in enjoying a rural setting while having access to an array of community services such as water and sewer, fire protection, snow removal, basic health care, assisted care facilities, education and a library. Beyond basic services, it is remarkable how many arts and cultural opportunities are found in and around Stamford. This unique aspect of the community provides a major building block for the Village's development strategy. Another distinguishing characteristic of the Village is its rich history as a resort community, reflected in its architecturally interesting building stock. These unique buildings invite tourism-based development strategies. Rehabilitation and street beautification are two obvious components of such strategies.

The plan notes that the Village has seen the development of an array of new businesses since 1995 – mostly retail and service businesses serving the local population. The plan also notes that (as of 2007) there were sites available within the village center for both new commercial development and affordable housing.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

NYCDEP estimates that through 2022, it could acquire an additional 3,035 acres either in fee simple or through NYCDEP conservation easements within the Town of Stamford. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that these acquisitions could include approximately 502 acres of developable land.<sup>14</sup>

NYCDEP further estimates that WAC could acquire an additional 1,504 acres in easements during the same period. It is estimated that this total would include about 685 acres of developable land. If the Town and Villages elect to preclude LAP and WAC acquisitions under the proposed settlement some of these projected easements would likely be precluded.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Stamford would still be left with approximately 72 percent of the town's current stock of developable land.

<sup>14</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic is considered undevelopable.

Table 4-18: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant, low-density residential or agricultural land in 2009		4,939 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	3,035 acres	
Projected WAC acquisitions	1,504 acres	
Developable vacant, low-density residential or agricultural land acquired		1,187 acres
Residential Development, 2010-2022		
Projected housing units built	84 units	
Land needed for housing	459 acres	
Developable portion of land needed for housing		199 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		3,554 acres
Percent of 2009 developable vacant, low-density residential or agricultural land remaining in 2022		72 percent

The potential impact of additional acquisitions can also be assessed in terms of their impact on the character of the community. Aside from its limited impact on the supply of developable land, the Extended LAP's impact on socioeconomic conditions and community character in Stamford is likely to be at least neutral for the reasons discussed below.

Further acquisitions in fee simple, and NYCDEP's continuing review of policies governing recreational uses of watershed land, could result in an increase in the City-owned acreage in Stamford available for public recreational use. Assuming that the percentage of newly-acquired land opened to public recreational use is similar to what it has been through 2009, more than 900 acres of land acquired in fee simple through 2022 could be made available by NYCDEP for public recreational use. NYCDEP's policies on active management of forest land will also likely result in greater use of NYCDEP-owned land for productive activities such as timber harvesting. Preservation of the town's natural environment will support local efforts to develop visitor-oriented businesses, building on such assets as the Catskill Scenic Trail and the Mt. Utsayantha Trail.

Since the adoption of the MOA, economic development efforts in the region have emphasized growth within hamlets and village centers. <sup>15</sup> And while the Town has not sought to expand the hamlet areas designated pursuant to the MOA, the Town and Village boards may elect to preclude easement acquisitions within the existing hamlet designated areas in the future, which would help to reduce future conflicts between NYCDEP acquisitions and village revitalization efforts.

#### **CONCLUSIONS**

Between 2010 and 2022, it is projected that NYCDEP could acquire more than 3,000 acres in fee simple or conservation easements in Stamford. These acquisitions could help preserve the quality of the Town's natural environment, and could result in the opening of more than 900 acres of City-owned land for public recreational use. In addition, it is projected that during the same period WAC could acquire farm easements on more than 1,500 acres of agricultural land. Despite these acquisitions, the remaining supply of developable land would be adequate to support the projected level of new development through 2022 and beyond.

As noted above, local officials have raised concerns about the impact of past WAC acquisitions on the availability of land for development in and around the Villages of Stamford and Hobart

<sup>&</sup>lt;sup>15</sup> Village of Stamford Comprehensive Plan, April 2007.

and the hamlet of South Kortright. In recognition of these concerns, NYCDEP – in its negotiations with regulators and local officials – supports the exclusion of WAC easements from designated hamlet areas as part of the Extended LAP. If agreed upon by all parties to the negotiations, this would leave remaining land potentially available for growth within the designated areas, while allowing WAC's projected acquisition of farm easements elsewhere in the Town.

Furthermore, there does not appear to be significant development pressure in these areas. Commercial development has been focused within the two villages, and it is expected that opportunities for redevelopment and new commercial development will continue to be available in the Villages of Hobart and Stamford. The preclusion of LAP purchases within the villages ensures that they can support future opportunities for commercial development. New residential development can be expected to continue to be accommodated in the outlying portions of the Town.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions, or community character in the Town of Stamford.

# **GREENE COUNTY**

# TOWN OF ASHLAND

# **EXISTING CONDITIONS**

The Town of Ashland is one of Greene County's "mountaintop towns." Ashland's resident population in 2008 was estimated to be 827 - a 10 percent increase since 2000, making the Town one of the fastest-growing in the West-of-Hudson watershed.

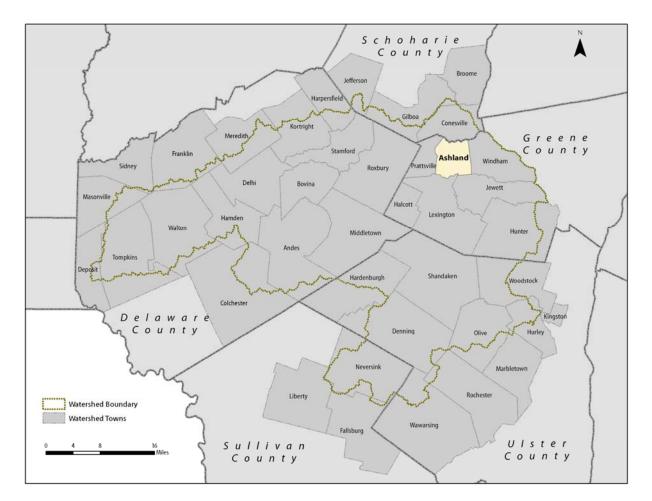


Figure 4-19: Map of Town of Ashland in relation to west-of-Hudson watershed

Town of Ashland – Quick Facts		
15,987 acres		
100%		
19%		
327		
12.4		
\$43,457		
\$4		

Ashland is a largely rural, primarily residential community. As shown in Table 4-19 and Figure 4-20, more than 60 percent of the Town's land area consists of low-density residential or vacant land, with higher-density development taking place primarily along the State Route 23 and other main roads.

Like other mountaintop towns, Ashland has a strong second home sector: about 42 percent of all housing units in 2000 were for seasonal or recreational use. Between 2000 and 2008, the Town's housing stock grew by 12 percent. Much of the Town's recent development (as shown in the black highlighted parcels on Figure 4-20) has occurred along Route 23, Sutton Hollow Road and Route 10, or on the eastern side of the Town (bordering Windham). Using data on building permits, it is estimated that between 2000 and 2009, about 81 new housing units were built in Ashland.

Commercial activity in Ashland is limited, consisting largely of small businesses serving the local population. It also includes a winery and the mountaintop area's only active bluestone mine. Commercial and community activity in Ashland is concentrated primarily along Route 23. As Figure 4-20 shows, Ashland currently has a limited amount of land in agricultural use – in the northern part of the Town (near Conesville) and in its southeastern corner (bordering Windham).

Table 4-19: Land uses by type

Land Use	Acres	% of Total
Agricultural <sup>16</sup>	963	6%
High-Density Residential	1,868	12%
Low-Density Residential	5,611	35%
Commercial/Other	301	2%
State/Other Protected	1,035	6%
City Protected	1,811	11%
Vacant	4,058	25%
<b>Total Town Acres</b>	15,987	

<sup>&</sup>lt;sup>16</sup> The agricultural category includes WAC conservation easements.

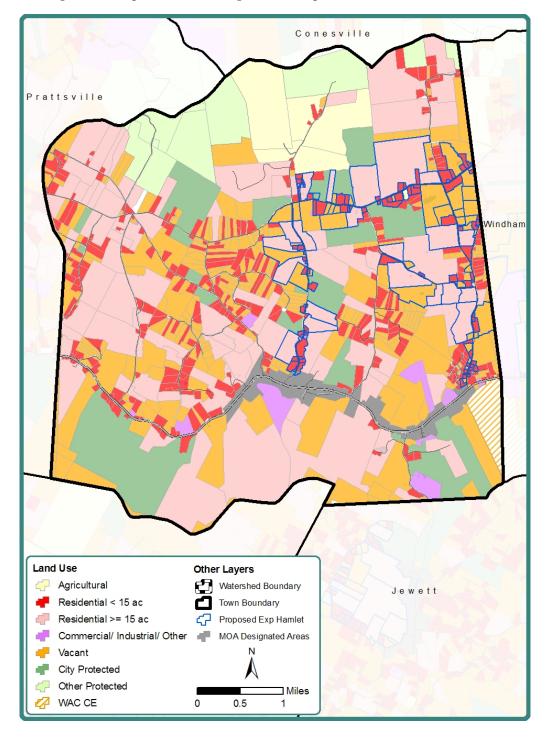


Figure 4-20: Map of Ashland showing land use and protected land within the Watershed

# **Previous LAP Activity**

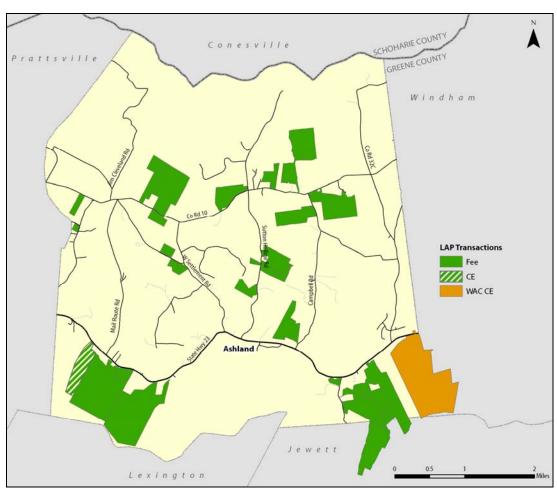
Through June 2009, NYCDEP had acquired a total of 2,068 acres in Ashland pursuant to the 1997 MOA. As shown in

Table 4-20 below, purchases of land in fee simple account for about 88 percent of all LAP acquisitions in the Town. Figure 4-21 shows the location of LAP properties in Ashland, by type of acquisition.

Table 4-20: Acquisitions in the Town of Ashland through July 2009

Type of acquisition	Acres
Fee simple	1,812
Conservation easements	77
WAC agricultural easements	178
Total acquired	2,068

Figure 4-21: Map of LAP properties in Ashland, by type of acquisition



As of October 2009, NYCDEP had acquired 18 acres in fee simple that prior to acquisition had been in active agricultural use. In 2008, NYCDEP issued a five-year permit for agricultural use of 28 acres of land it had acquired in fee simple; the property is currently being used as pasture and for the production of hay. WAC has also purchased an easement covering 77 acres of farmland in the southeastern portion of the town.

Of the 1,812 acres that NYCDEP acquired in fee simple as of July 2009, 986 acres – 53 percent of the total – had been opened for public recreational use as of October 2009. This represents a significant addition to recreational resources in a Town with a relatively small amount of protected, publicly-owned land. State-owned land in Ashland totals only 1,035 acres, or about 6 percent of the Town's total area.

Pursuant to the watershed MOA, the Town designated parcels with a total of 362 acres as the hamlets of Ashland and East Ashland. These parcels are along Route 23, and cannot be acquired by the City in fee simple, helping to ensure that such acquisitions do not conflict with commercial and residential development in these hamlet areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – significantly slower than the rate of growth in Ashland during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming that the pace of new development in Ashland (as measured by new residential units) remains the same as it was between 1990 and 2008, it can be estimated that about 84 additional units would be built by 2022; and that the land required to support this new development through 2022 would total approximately 449 acres, including 260 acres of land characterized as developable<sup>17</sup> – about 8 percent of the Town's supply of such land as of 2009.

# FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based in part on LAP's experience in Ashland to date, NYCDEP estimates that through 2022, it is projected to acquire an additional 1,778 acres either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that this total would include approximately 698 acres of

<sup>&</sup>lt;sup>17</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Group D).

developable land – about 21 percent of the Town's supply of developable vacant and low-density residential land as of 2009.

In additional to the land and easements acquired by NYCDEP, between 2010 and 2022 WAC is expected to acquire easements on 170 acres of agricultural land in Ashland.

As shown in the following table, it is thus estimated that after taking into account both LAP acquisitions and the land required to support new development, Ashland would have 2,393 acres of developable vacant and low-density residential land remaining in 2022 – approximately 71 percent of the Town's current stock of such land.

Table 4-21: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		3,351 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	1,778 acres	
Developable vacant or low-density residential land acquired		698 acres
Residential Development, 2010-2022		
Projected housing units built	84 units	
Land needed for housing	449 acres	
Developable portion of land needed for housing		260 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		2,393 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		71 percent

NYCDEP's projected acquisitions in Ashland through 2022 are unlikely to adversely affect the predominantly rural, low-density character of the Town. Moreover, additional WAC easements are likely to help preserve some of the Town's remaining agricultural activity.

Under a proposed agreement among the Town, NYCDEP, the regulatory agencies and other stakeholders, Ashland's designated hamlet areas would be expanded from 362 to <u>1,676</u> acres. This agreement would help ensure that land remains available to accommodate further development in areas along Sutton Hollow Road and Route 10, and on the Town's eastern edge, bordering Windham – areas that appear to have significant potential for further growth.

#### **CONCLUSIONS**

While the number of acres that could be acquired in Ashland under the Extended LAP is substantial, there is likely to be sufficient developable land available to accommodate projected growth through 2022. Moreover, the significant proposed increase in the size of the Town's designated hamlet areas would help alleviate any potential conflict between acquisitions under Extended LAP and the need for land for development. Acquisitions in outlying areas would help preserve Ashland's natural environment; and additional WAC easements could help preserve its remaining farmland.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Ashland.

# TOWN OF HALCOTT

# **EXISTING CONDITIONS**

With an estimated 203 residents in 2008, Halcott – the westernmost of Greene County's "mountaintop towns" – is the least-populated of the West-of-Hudson watershed towns. The Town's population is estimated to have grown by about 5.2 percent since 1990, with all of the increase coming after 2000. The town is almost entirely rural in character, with a population density of 9.0 per square mile.

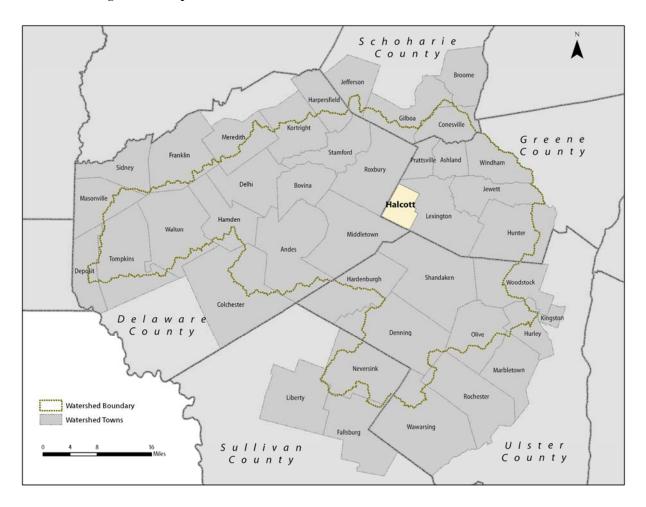


Figure 4-22: Map of Town of Halcott in relation to west-of-Hudson watershed

Town of Halcott – Quick Facts				
Land area:	14,375 acres			
Percent of town land area within the watershed:	100%			
Percent of land protected	35%			
Population (estimated), 2008:	203			
Median age (estimated), 2008	48			
Median household income (estimated), 2008	\$36,654			

Halcott's location contributes to its small population and rural character. The northern reaches of the Town are dominated by the Bear Pen and Vly Mountains, which effectively limit access to and from Halcott to roads coming from the south. The Town's limited developed land is concentrated in the hamlet of Halcott and along several Town roads which parallel Vly Creek and its tributaries.

As shown in Table 4-22 and Figure 4-23 land use in Halcott is primarily low-density residential, with clusters of higher-density residential development along Silas Lake Road, County Road 3 and Elk Creek Road. Halcott also has a substantial second-home population. In 2000, 54 percent of the town's 209 housing units were for seasonal or part-time use. About 31 percent of Halcott is privately-owned vacant land, and there is very little (about 4 acres) commercial, industrial or community land use in the Town. Halcott's 2003 comprehensive plan states that the Town has only a few commercial enterprises, most of which are home-based. Agriculture has long been a feature of life in Halcott. The Town's 2003 comprehensive plan states that as of 2003 there were only two commercial farms operating in the Town; but that many land-owners engage in a variety of smaller-scale, less-formal agricultural activities.

Most development since 1990 (as shown by the parcels outlined in black in Figure 4-23), occurred in or near Silas Lake Road, County Road 3 and Elk Creek Road. Based on building permit data, it is estimated that between 2000 and 2009, 18 new housing units were built in Halcott.

Table 4-22: Land uses by type

Land Use	Acres	% of Total
Agricultural <sup>18</sup>	523	4%
High-Density Residential	936	7%
Low-Density Residential	3,930	27%
Commercial/Other	4	0%
State/Other Protected	2,488	17%
City Protected	2,028	14%
Vacant	4,421	31%
<b>Total Town Acres</b>	14,375	

<sup>&</sup>lt;sup>18</sup> The agricultural category includes WAC conservation easements.

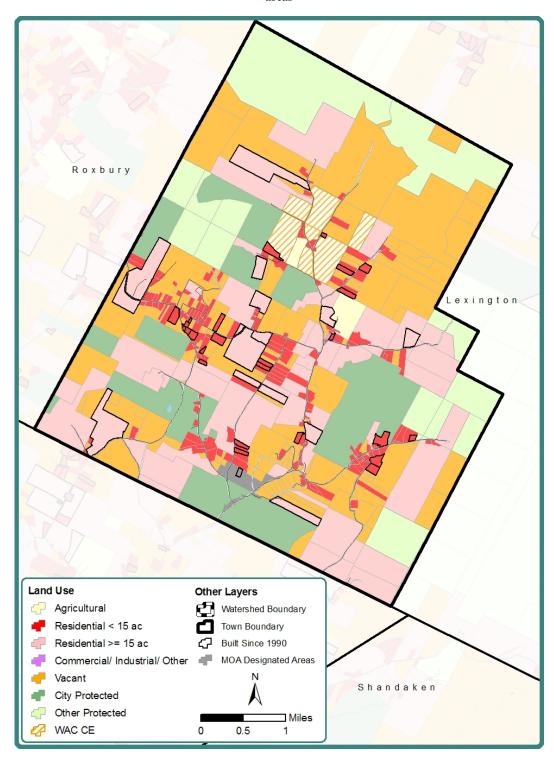


Figure 4-23: Map of the Town of Halcott, showing land use, protected land and proposed hamlet expansion areas

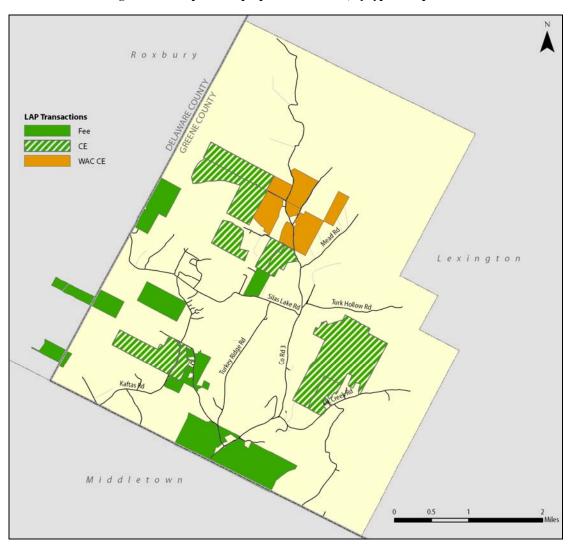
# **Previous LAP Activity**

Through July 2009, NYCDEP had acquired a total of 2,611 acres in Halcott pursuant to the 1997 MOA – 18.2 percent of the town's land area. As shown in Table 4-23 below, conservation easements acquired by the City account for nearly half of the total acreage acquired under LAP. Figure 4-24 shows the location of LAP properties in Halcott, by type of acquisition.

Table 4-23: Acquisitions in the Town of Halcott through July 2009

Type of acquisition	Acres
Fee simple	919
Conservation easements	1303
WAC agricultural easements	389
Total acquired	2,611

Figure 4-24: Map of LAP properties in Halcott, by type of acquisition



Through 2009, WAC has acquired agricultural easements on 389 acres of farmland – about 75 percent of the Town's agricultural land. As of October 2009, NYCDEP had acquired in fee simple 47 acres of land previously used for agricultural production. To date, the Department has not issued permits for agricultural use of any of this land.

As of October 2009, a total of 394 acres acquired by NYCDEP in fee simple in Halcott had been opened by NYCDEP for recreational use – more than 42 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program.

Pursuant to the 1997 MOA, Halcott designated a hamlet area totaling 69 acres. However, the Town did not elect to preclude fee simple acquisitions in these areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – somewhat slower than the rate of growth in Halcott during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. If the pace of new development in Halcott (as measured by new residential units) remains the same as it was between 1990 and 2008, it is estimated that the land required to support new development through 2022 would total approximately 206 acres – including 79 acres of land characterized as developable. <sup>19</sup>

Beyond the projected rate of new residential development, conditions in Halcott are likely to remain stable – a very low-density rural community, with limited commercial activity geared primarily to serving the local population.

In a survey of residents and second-home owners conducted as part of the planning process, the three issues identified as being most critical to Halcott's future were preserving the community's rural character, maintaining the quality of the environment, and open space preservation. (All three rated ahead of keeping taxes low and keeping roads in good repair.)

A community workshop held in conjunction with the planning process similarly found nearly-unanimous opposition to any type of larger-scale commercial or industrial development, or

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For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

development of any type of multi-family housing. The plan notes that "people highly value the small family farms and working landscapes remaining in Halcott."

Addressing the future, the vision statement included in Halcott's 2003 comprehensive plan says that:

In the future, our natural beauty and secluded rural character remain the most prominent features of Halcott. The landscape is a mix of undeveloped open and forested land, thriving farms and low-density rural residences that are consistent with Halcott's traditional character. Clean air and clean water, unobstructed views of the mountains and an abundant wildlife community exist throughout the town. Agriculture is actively encouraged and sustained locally in a non-polluting manner...

The plan describes the Town's goals as follows:

- 1) Land Use: Halcott will utilize land use laws appropriate to a small town to maintain its rural character. The Town will continue to operate with an understanding of the New York City watershed regulations and will consider the impact of Town policy on stateowned lands and Catskill Forest Preserve lands located within the Town boundaries.
- 2) Visual Resources: Policies will guide development to conserve the rural views valued by the community.
- 3) Community Character: The continuation of Halcott's rural atmosphere will be maintained by preserving open space, establishing the Town's center, and promoting historical resources.
- 4) Transportation: Existing roads will be maintained in a safe and cost-effective manner. New development will not create negative impacts on the rural quality of existing roads.
- 5) Community Services and Community Building: Communication will be encouraged among all residents. The Town will seek solutions for providing adequate garbage removal and emergency services through Greene County or through reciprocal arrangements with adjacent counties. Townspeople will be educated about existing community resources. The Town will improve recreational opportunities for residents.
- 6) Job Opportunities: Home-based and small businesses that are consistent with the rural character and quality environment of the Town will be encouraged.

The comprehensive plan also calls for promoting "home-based and small businesses that are consistent with the rural character and quality environment of the Town."

# FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Halcott to date, NYCDEP estimates that through 2022, it could acquire an additional 1,571 acres either in fee simple or through conservation easements. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that this total will include approximately 389 acres of developable land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Halcott would still be left with approximately 72 percent of the Town's current stock of developable vacant, low-density residential and agricultural land.

Table 4-24: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant, low-density residential or agricultural land in 2009		1,668 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	1,571 acres	
Projected WAC acquisitions	0 acres	
Developable vacant, low-density residential or agricultural land acquired		389 acres
Residential Development, 2010-2022		
Projected housing units built	24 units	
Land needed for housing	206 acres	
Developable portion of land needed for housing		79 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		1,199 acres
Percent of 2009 developable vacant, low-density residential or agricultural land remaining in 2022		72 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Halcott's supply of such land is relatively limited. As defined here, developable land represents about 11.6 percent of the Town's total land area; by 2022 it would decline to 8.3 percent. Nevertheless, given its very low density and the modest level of new development projected through 2022, the supply of land in Halcott should be adequate to accommodate both the projected level of LAP acquisitions and the projected rate of growth. Moreover, the Town's plan shows a clear preference for allowing most of Halcott to remain undeveloped.

The impact of additional acquisitions through 2022 can also be assessed in terms of their impact on the character of the community. NYCDEP's acquisition of land and easements in Halcott appears to be broadly consistent with values and vision presented in the Town's 2003 comprehensive plan.

Additional acquisitions under LAP are likely to contribute to the achievement of the Town's goals regarding its rural character, open space and visual resources and are also likely to expand the range of recreational resources available to local residents. Moreover, while LAP may not contribute directly to achievement of the plan's transportation and job creation goals, and does not directly address the Town's objectives in areas such as ensuring the availability of affordable housing and sustainable economic development, it does not appear to be in conflict with these goals.

Despite the relatively high level of program activity projected for Halcott, there appears to be no conflict between additional acquisitions by NYCDEP and the Town's vision for its future. Acquisitions by NYCDEP appear to be consistent with the overall character of the community. And to the extent that they help preserve the Town's remaining farmland, WAC easements also help to maintain the character of the community.

# **CONCLUSIONS**

The acquisition of additional land in Halcott under Extended LAP would help preserve the Town's very-low-density, rural character, and would leave sufficient developable land to accommodate the limited future development projected for Halcott. Moreover, the Extended LAP would generally not conflict with the small-scale commercial activity that is typical in Halcott.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Halcott.

## **TOWN OF HUNTER**

## **EXISTING CONDITIONS**

The Town of Hunter, located in southern Greene County, is one of the county's "mountaintop towns." Hunter's resident population in 2008 was estimated to be 2,759. The Town's population grew by 29 percent in the 1990s; but has grown only slightly since 2000. Population centers include the Villages of Hunter and Tannersville and several hamlets, including Maplecrest, Haines Falls and Onteora Park.

Schoharie County Greene County Roxbury Jewett Lexington Hunter Middletown Shandaken Colchester Kingston Delaware County Hurley Neversink Watershed Boundary Watershed Towns Ulster Sullivan County County

Figure 4-25: Map of Town of Hunter in relation to west-of-Hudson watershed

Town of Hunter – Quick Facts				
Land area:	57,702 acres			
Percent of town land area within the watershed:	75%			
Percent of land protected	58%			
Population (estimated), 2008:	2,759			
Median age (estimated), 2008	42			
Median household income (estimated), 2008	\$41,249			

Hunter's economy is centered on skiing and other recreational activities at Hunter Mountain, and other leisure activities elsewhere in the Town. Like many similar towns, Hunter has a strong second-home sector; in 2000, 48 percent of all housing units were for seasonal or recreational use. Much of the Town's commercial activity is concentrated in the two villages. Hunter currently has no land in agricultural use.

As shown in Table 4-25 and Figure 4-26, state-owned land accounts for more than half the Town's total area, and privately-owned vacant land for 22 percent. A relatively high percentage (5 percent) of Hunter's total area is devoted to commercial, industrial or community uses.

Much of the recent development that has occurred in the watershed portion of Hunter since 1990 (as shown in the black highlighted parcels on Figure 4-26), has been clustered in and near Route 23 and the Villages of Hunter and Tannersville. Using data on building permits, it was estimated that between 2000 and 2009, approximately 120 new housing units were built in Hunter.

Table 4-25: Land uses by type

	In Wa	ntershed	Out W	atershed	T	otal
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural	0	0%	0	0%	0	0%
High-Density Residential	2,919	7%	434	3%	3,353	6%
Low-Density Residential	4,217	10%	630	4%	4,847	8%
Commercial/Other	2,168	5%	755	5%	2,923	5%
State/Other Protected	19,870	46%	11,091	76%	30,961	54%
City Protected	2,598	6%	N/A	N/A	2,598	5%
Vacant	10,646	25%	2,164	15%	12,810	22%
Total	43,174		14,529		57,703	

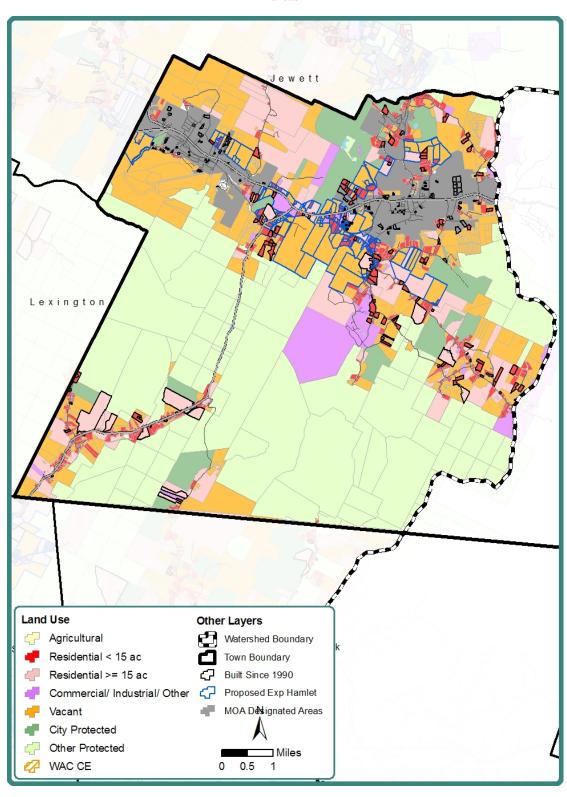


Figure 4-26: Map of the Town of Hunter showing land use, protected land and proposed hamlet expansion areas

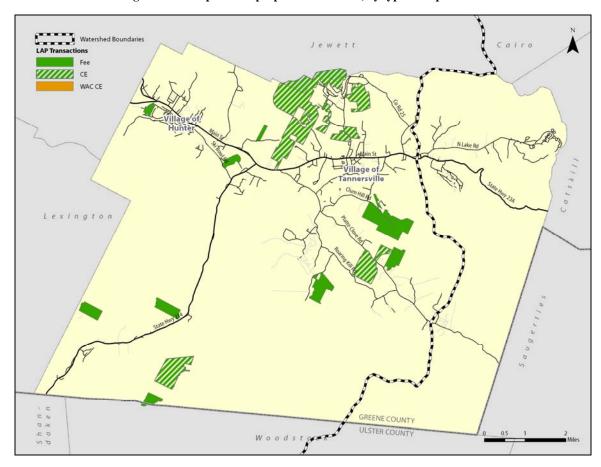
## **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 2,490 acres in Hunter pursuant to the 1997 MOA. As shown in Table 4-26 below, conservation easements account for about 63 percent of all acquisitions in the Town. Figure 4-27 shows the location of LAP properties in Hunter, by type of acquisition.

Table 4-26: Acquisitions in the Town of Hunter through July 2009

Type of acquisition	Acres
Fee simple	933
Conservation easements	1,557
WAC agricultural easements	0
Total acquired	2,490

Figure 4-27: Map of LAP properties in Hunter, by type of acquisition



Of the 933 acres that NYCDEP acquired in fee simple as of July 2009, 666 acres – 71 percent of the total – had been opened for public recreational use as of October 2009. Opening City-owned land for public recreational use reinforces what is already one of the Town's leading strengths.

As noted above, much of the Town's commercial activity is concentrated in the villages of Hunter and Tannersville. Pursuant to the 1997 MOA, the Town designated hamlet areas in Haines Falls and Onteora Park, and in 2006 the Town elected to preclude further fee simple purchased in these hamlet areas. The Villages of Hunter and Tannersville are also designated areas, although the Village did not elect to preclude fee simple purchases by LAP. These designated areas (totaling 3,251 acres, the largest such area for any watershed town) provide the Town and Village with an opportunity to ensure that acquisition of real property interests by NYCDEP does not conflict with commercial activity in the villages and hamlet areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – significantly slower than the rate of growth in the County during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. Assuming the pace of new development in Hunter (as measured by new residential units) remains the same as it was between 1990 and 2008, it can be estimated that the land required to support new development through 2022 would total approximately 609 acres, including 348 acres of land characterized as developable<sup>20</sup> – about 5 percent of the Town's supply of such land as of 2009.

Several new development projects are currently in various stages of planning in Hunter, including Cortina Mountain Estates, a 94-lot subdivision, Twin Mountain Estates, consisting of 8 duplex residences, and Catskill Camp and Cottages, a 99-lot subdivision in Tannersville. Depending on market conditions and regulatory approvals, construction could begin on those projects within the next several years.

Hunter's most recent comprehensive plan was completed in 2000. This plan cites a series of "primary land use policies" defined in a 1991 Town plan as still being relevant in 2000.

• Protect the Rural Character and Social, Environmental and Economic Stability of Hunter. Support efforts to concentrate any future development in and near areas where development already exists.

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<sup>&</sup>lt;sup>20</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). land with any one or more of these characteristic in considered undevelopable.

- Guide Future Growth to Minimize Conflicts among Uses of Land. Future development should complement existing public facility service areas, road network and development patterns.
- Balance Municipal Facilities and Services with Population Requirements. As land develops and demographics change, requirements for public services will change as well.
- Protect the Outstanding Visual Qualities of Hunter's Landscape. Any new development must be sensitive to this quality.
- Encourage Public Input in All Planning and Land Use Decisions. Public participation in and appreciation of the Town's planning and land use efforts is highly desirable.
- Provide for a Variety of Housing Types, Living Choices, and Affordable Locations in recognition of the critical need of all families and individuals to have adequate housing, as well as the opportunity for every citizen to live in decent housing within their ability to pay.<sup>21</sup>

The Town of Hunter has recognized the beauty of the Catskill environment as one of its most important assets. A plan for designation of the "Mountain Cloves Scenic Byway," developed by the Town in collaboration with the Villages of Hunter and Tannersville, the Catskill Center for Conservation and Development and several other organizations, calls both for preservation of the Town's scenic assets and for a more coherent approach to marketing them.

The Hunter Chamber of Commerce similarly characterizes the Town as "famous for its waterfalls, views and vistas," and notes the importance of outdoor recreation – including "hiking trails, mountain biking, fishing streams, camping, swimming, cross-country and downhill skiing" – as one of the Town's most important assets.

## FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Hunter to date, NYCDEP projects that through 2022, it will acquire 2,726 additional acres either in fee simple or through conservation easements. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that these acquisitions would include approximately 1,166 acres of developable land – about 17 percent of the Town's supply of developable vacant and low-density residential land as of 2009.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Hunter would still be left with 5,207 acres of developable vacant and low-density residential land in 2022 – approximately 77 percent of the Town's current stock of such land.

<sup>&</sup>lt;sup>21</sup> Town of Hunter, Comprehensive Plan, 2000, p. 17.

Table 4-27: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		6,722 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,726 acres	
Developable vacant or low-density residential land acquired		1,166 acres
Residential Development, 2010-2022		
Projected housing units built	305 units	
Land needed for housing	609 acres	
Developable portion of land needed for housing		348 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		5,207 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		77 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Hunter's supply of such land is relatively limited. As defined here, developable land represents about 11.6 percent of the Town's total land area, and would by 2022 fall to 9 percent. Nevertheless, Hunter's supply of developable land appears to be sufficient to accommodate both additional LAP acquisitions and the projected level of new development.

Moreover, the estimate of remaining developable land in 2022 cited in Table 4-27 could well prove to be conservative. As noted above, the pace of development in Hunter has been considerably slower since 2000 than it was in the 1990s; the assumption that new development will average 25 new units per year could prove to be overstated. The estimate in Table 4-27 of the land required to support new development also assumes an average of 2.0 acres per unit; median parcel size for new units has in fact been smaller during the past decade.

The impact of future acquisitions by NYCDEP can also be assessed in terms of their impact on the character of the community.

The Land Acquisition Program is broadly consistent with the Town's stated policies regarding the preservation of Hunter's rural character, its natural environment and its outstanding visual quality. And by opening more land for public recreational use, the Land Acquisition Program is also helping to reinforce one of the Town's greatest strengths. Future acquisitions are likely have a positive impact in areas such as preserving the Town's visual quality, and are likely to be consistent with the Town's desire to encourage development in already-developed areas. Under a proposed agreement among the Town, NYCDEP, the regulatory agencies and other stakeholders, the Town hamlet areas would be expanded to cover a total of 6,142 acres. The proposed expansion could help ensure that land remains available to accommodate further development in and around the villages of Hunter and Tannersville.

Except to the extent that they support the concentration of new development in areas already served by public infrastructure, additional acquisitions would not directly contribute to maintaining a balance between public facilities and a growing, changing population. It is worth noting however, that other NYCDEP watershed programs have directly assisted the Town in its efforts to maintain this balance. And while LAP would not directly contribute to achieving the Town's affordable housing goals, it is unlikely to have any adverse impact on the Town's efforts in that area.

#### **CONCLUSIONS**

Hunter's supply of developable land should be sufficient to accommodate both the projected level of acquisitions under the Extended LAP and substantial new development. Moreover, the proposed expansion of the Town's designated hamlet areas would give Hunter the largest hamlet areas – totaling 6,142 acres – of any of the West-of-Hudson watershed towns. This expansion would help ensure that new acquisitions under the extended LAP are focused primarily in outlying areas, where they would help to protect the natural environment that is so critical to the Town's economy; and that land remains available for development near the Town's village centers.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Hunter.

## TOWN OF JEWETT

## **EXISTING CONDITIONS**

Watershed Boundary
Watershed Towns

The Town of Jewett, one of Greene County's "mountaintop towns," is a low-density, primarily rural town situated between Hunter and Windham. The resident population in 2008 was estimated to be 1,015. The Town's population grew by 4 percent in the 1990s and an additional 5 percent since 2000. Population centers include the hamlets of Jewett and East Jewett.

Schoharie County Greene Stamford County attsville Ashland Jewett Halcott Lexington Middletown Hardenburgh Colchester Kingston Delaware County Neversink

Wawarsing

Ulster

County

Figure 4-28: Map of Town of Jewett in relation to west-of-Hudson watershed

Sullivan

County

Town of Jewett – Quick Facts				
Land area:	32,095 acres			
Percent of town land area within the watershed:	100%			
Percent of land protected	33%			
Population (estimated), 2008:	1,015			
Median age (estimated), 2008	46			
Median household income (estimated), 2008	\$50,097			

As shown in Table 4-28 and Figure 4-29, about 30 percent of the Town's total area is privately-owned vacant land; and another 23 percent is protected by the State or other entities. Like most of the mountaintop towns, Jewett has a strong second-home sector; in 2000, 52 percent of all housing units were for seasonal or recreational use. Only 1 percent of Jewett's total area is devoted to commercial, industrial or community uses. There is limited commercial activity in the Town, consisting mostly of small businesses serving the local population, as well as visitors to the area. Harriman Lodge – a summer camp serving developmentally disabled adults, operated by AHRC New York City – is located near the hamlet of East Jewett.

Using data on building permits, it is estimated that between 2000 and 2009, approximately 68 new housing units were built in Jewett. As shown by the parcels outlined in black in Figure 4-29, most of this recent development is concentrated around the hamlets of Jewett and East Jewett, and in the area north of the Village of Hunter.

Table 4-28: Land uses by type

	In Watershed/Total	
Land Use	Acres	% of Total
Agricultural	1,048	3%
High-Density Residential	3,261	10%
Low-Density Residential	6,747	21%
Commercial/Other	425	1%
State/Other Protected	7,414	23%
City Protected	2,852	9%
Vacant	9,783	30%
Total	32,095	

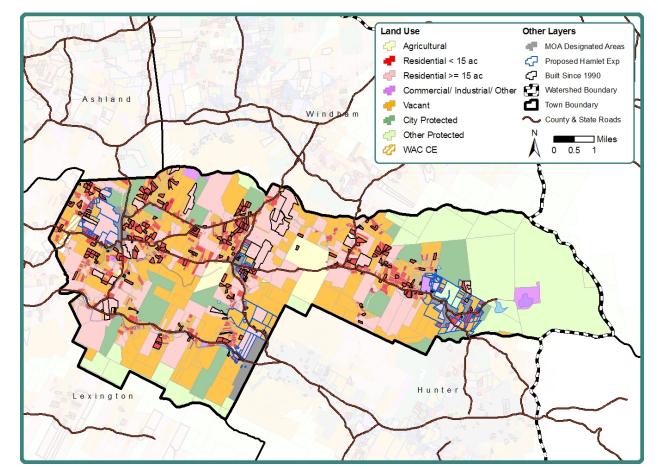


Figure 4-29: Map of the Town of Jewett showing land use, protected land and proposed hamlet expansion areas

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 3,037 acres in Jewett pursuant to the 1997 MOA. As shown in Table 4-29, conservation easements account for about 62 percent of all acquisitions in the Town. Figure 4-30 shows the location of LAP properties in Jewett, by type of acquisition.

Table 4-29: Acquisitions in the Town of Jewett through July 2009

Type of acquisition	Acres
Fee simple	1,062
Conservation easements	1,870
WAC agricultural easements	105
Total acquired	3,037

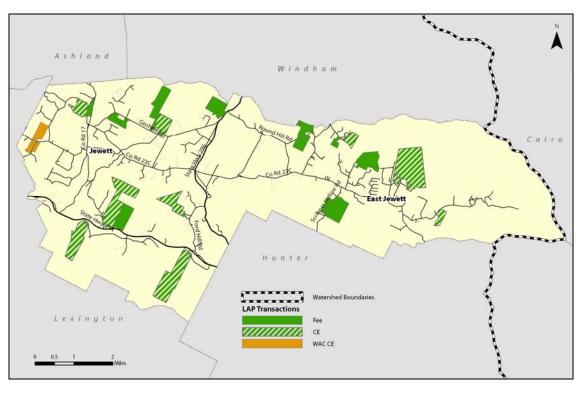


Figure 4-30: Map of LAP properties in Jewett, by type of acquisition

As of October 2009, NYCDEP's purchases of land in fee simple in Jewett included 21 acres that had been actively used for agricultural production prior to acquisition. As of that date, no for agricultural use of NYCDEP-owned property in Jewett had been submitted. As of July 2009, approximately 105 acres of agricultural land in Jewett was covered by WAC easements.

Of the 1,062 acres that NYCDEP acquired in fee simple as of July 2009, 672 acres – 63 percent of the total – had been opened for public recreational use as of October 2009. Opening Cityowned land for public recreational use reinforces what is already one of the Town's leading strengths.

Pursuant to the 1997 MOA, Jewett designated hamlet areas totaling 652 acres, covering parts of the hamlets of Jewett and East Jewett, and an area bordering the Village of Hunter. Designation of these areas, within which LAP cannot acquire land in fee simple, has helped ensure that LAP does not conflict with existing uses within the designated areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – somewhat slower than the rate of growth in Jewett during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development was estimated based on the rate of development during the past two decades. Assuming that the pace of new development in Jewett (as measured by new residential units) remains the same as it was between 1990 and 2008, it is estimated that the land required to support new development through 2022 will total approximately 818 acres, including 511 acres of land characterized as developable<sup>22</sup> – about 8 percent of the Town's supply of such land as of 2009.

Between 2010 and 2022, the long-term decline in agricultural uses that has occurred in recent decades is expected to continue, although there is some potential for the development of small-scale, specialized agriculture. Some growth in commercial activity is also likely, reflecting the projected increase in population.

In its comprehensive plan, completed in 2007, the Town of Jewett set out a vision for its future, and identified twelve goals to guide the Town toward long-term prosperity. *Goal 1: Rural and small town character is maintained.* 

- Goal 2: Jewett maintains a clean and healthy natural environment.
- Goal 3: Agricultural activities and farmlands are maintained and encouraged.
- Goal 3: Roads are safe, free of traffic congestion, and remain an important part of the rural aesthetic character of Jewett.
- Goal 4: Telecommunication services and facilities are available for personal and business uses.
- Goal 5: Town government is responsive, open, and stable to provide efficient and effective local public services and amenities.
- Goal 6: Businesses operate in an unobtrusive manner consistent with the character and needs of Jewett.
- Goal 7: Housing opportunities are diverse and available to many income levels and ages.
- Goal 8: Outdoor recreational facilities and opportunities are available.
- Goal 9: Jewett is a friendly, neighborly community with high community involvement and spirit.
- Goal 10: Accommodate our aging population.

characteristic in considered undevelopable.

- Goal 11: Create opportunities for a younger population.
- Goal 12: There is an increased convergence of interests between primary and secondary homeowners in Jewett.

<sup>&</sup>lt;sup>22</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Jewett to date, NYCDEP estimates that through 2022, it could acquire 2,591 additional acres either in fee simple or through conservation easements. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that these acquisitions will include approximately 1,052 acres of developable land – about 17 percent of the Town's supply of developable vacant and low-density residential land as of 2009. NYCDEP further estimates that WAC could during the same period purchase easements on 203 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Jewett would still be left with 4,729 acres of developable vacant and low-density residential land in 2022 – approximately 75 percent of the Town's current stock of such land.

Table 4-30: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		6,292 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,591 acres	
Developable vacant or low-density residential land acquired		1,052 acres
Residential Development, 2010-2022		
Projected housing units built	156 units	
Land needed for housing	818 acres	
Developable portion of land needed for housing		511 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		4,729 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		75 percent

The impact of future acquisitions can also be assessed in terms of how they affect the character of the community.

Several of these goals listed in the town comprehensive plan– notably goals 1 through 3 and 8 – are consistent with the purposes of the Land Acquisition Program. Further acquisitions under LAP would support maintenance of Jewett's rural, small-town character, and the quality of its natural environment. The acquisition of WAC easements on 203 acres of additional farmland could help preserve agricultural activity.

Moreover, if the percentage of land acquired in fee simple that is opened to public recreational use is the same between 2010 and 2022 as it has been to date, it can be estimated that NYCDEP would open more than 600 additional acres in Jewett for recreational use.

Finally, under a proposed agreement among NYCDEP, the Town, the regulatory agencies and other stakeholders, Jewett's designated hamlet areas (areas in which LAP would be precluded from acquiring additional land) would be expanded from 652 to <u>2,014</u> acres. This would help ensure that land in and near the hamlets remains available for future development.

#### **CONCLUSIONS**

While the amount of land to be acquired in Jewett under the Extended LAP could be substantial, it appears that sufficient developable land would be available to support the projected level of residential development through 2022. The projected acquisitions would help preserve the Town's natural environment; and the projected acquisition of WAC easements on 203 acres of farmland could help preserve the Town's remaining farmland. Moreover, the proposed increase in the acreage included in the Town's designated hamlet areas should help ensure that land remains available for development in these areas.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Jewett.

## TOWN OF LEXINGTON

#### **EXISTING CONDITIONS**

With an estimated 874 residents in 2008, Lexington is a low-density rural community. It is the second-largest of Greene County's "mountaintop towns" in terms of area (after Hunter) – but at 10.9 persons per square mile, it has the second-lowest population density of these towns (after Halcott). Lexington's overall low density in part reflects the fact that 56 percent of its total area consists of protected land (mostly owned by New York State). Lexington's population is estimated to have grown by about 5.3 percent between 2000 and 2008.

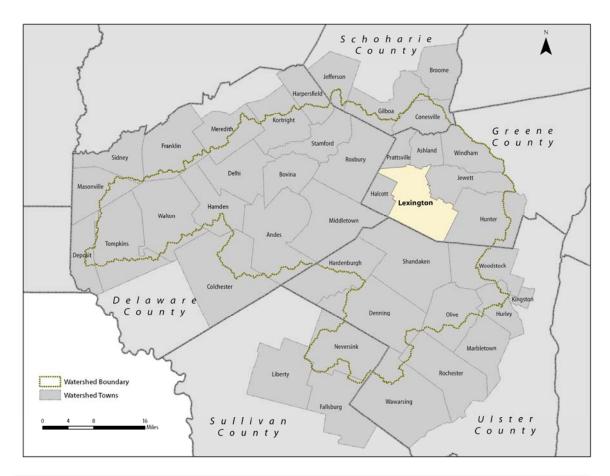


Figure 4-31: Map of Town of Lexington in relation to west-of-Hudson watershed

Town of Lexington – Quick Facts				
Land area:	51,274 acres			
Percent of town land area within the watershed:	100%			
Percent of land protected	56%			
Population (estimated), 2008:	874			
Median age (estimated), 2008	47.9			
Median household income (estimated), 2008	\$36,654			

As Table 4-31 and Figure 4-32 show, about three-quarters of the Town's non-protected land consists of either low-density residential or privately-owned vacant land. Commercial and community uses occupy only 113 acres, and consist primarily of small businesses serving the local population, along with some tourist-oriented businesses such as bed-and-breakfasts. Commercial activity and community uses in Lexington are located primarily along Route 42, in the hamlets of Lexington and West Kill. Like most other mountaintop towns, Lexington has a large second-home sector. In 2000, 54 percent of all housing units were for seasonal or recreational use. Lexington currently has a limited amount of land in agricultural use.

Most development since 1990 (as shown by the parcels outlined in black in Figure 4-32), occurred in or near the hamlets of Lexington and West Kill, or in the hamlet of Spruceton in the eastern part of the Town. Using data on building permits, it was estimated that between 2000 and 2009, about 81 new housing units were built in Lexington.

Table 4-31: Land uses by type

Land Use	Acres	% of Total
Agricultural	1,617	3%
High-Density Residential	2,437	5%
Low-Density Residential	9,185	18%
Commercial/Other	113	0%
State/Other Protected	26,696	52%
City Protected	1,940	4%
Vacant	8,738	17%
<b>Total Town Acres</b>	51,274	

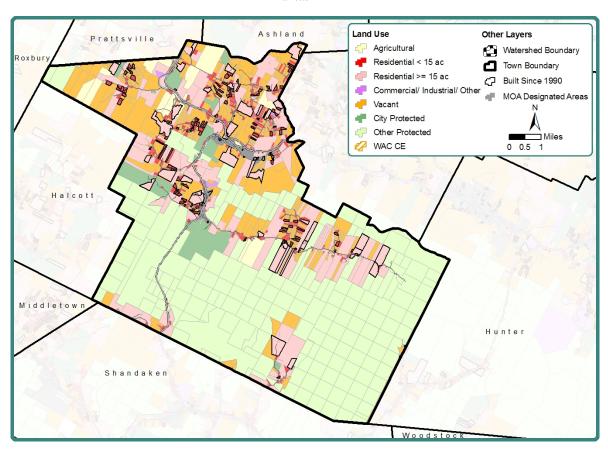


Figure 4-32: Map of the Town of Lexington showing land use, protected land and proposed hamlet expansion areas

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired interests in a total of 1,951 acres in Lexington pursuant to the 1997 MOA. As shown in Table 4-32 below, purchases of land in fee simple account for about 94 percent of all acquisitions in the Town. Figure 4-33 shows the location of LAP properties in Lexington, by type of acquisition.

<b>Table 4-32: Ac</b>	auisitions in	the Town	of Lexington	through July	2009

Type of acquisition	Acres
Fee simple	1,866
Conservation easements	85
WAC agricultural easements	0
Total acquired	1,951

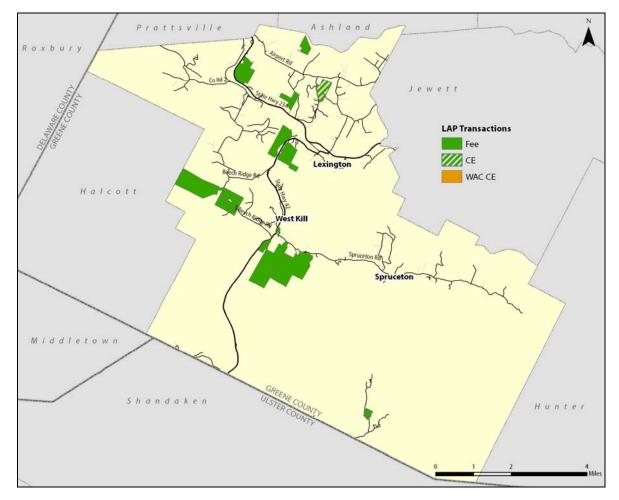


Figure 4-33: Map of LAP properties in Lexington, by type of acquisition

As of October 2009, NYCDEP had acquired 13 acres in fee simple in Lexington that prior to acquisition had been in active agricultural use. As of October 2009, no application for agricultural use of this land had been submitted to NYCDEP. Through June 2009, WAC had not purchased any agricultural easements in Lexington.

Of the 1,866 acres that NYCDEP acquired in fee simple as of July 2009, 1,715 acres – 92 percent of the total – had been opened for public recreational use as of October 2009. This reinforces what is already one of the Town's strengths –opportunities for outdoor recreation. Pursuant to the 1997 MOA, the Town designated hamlet areas totaling 362 acres. While NYCDEP has acquired some properties near the designated areas, the hamlet designation ensures that the City's acquisitions do not conflict with commercial and other uses within the designated areas.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – somewhat slower than the rate of growth in Lexington

during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. Assuming that the pace of new development in Lexington (as measured by new residential units) remains the same as it was between 1990 and 2008, it is estimated that about 108 additional units would be built by 2022; and that the land required to support this new development through 2022 would total approximately 682 acres, including 314 acres of developable land<sup>23</sup> – about 9 percent of the Town's supply of such land as of 2009.

Beyond the projected residential development, Lexington is likely to remain a low-density, primarily rural town. Any new commercial development in the Town is likely to focus primarily on small businesses serving the local population or visitors to the mountaintop region.

A Generic EIS prepared for the Town in 2003 sets out the following vision:

The Town of Lexington is remarkable for its extraordinary natural beauty and relatively low level of development. The Town is nestled in the rural, mountaintop region of southwest Greene County with a small, stable and closely knit population. The mountainous terrain and distance from cities has allowed it to retain its year-round population while attracting a slowly increasing number of seasonal residents....the Town should remain predominantly rural, with low levels of development designed to serve its residents. Tourist oriented business and condominium development are to be discouraged in order to maintain the sense of community desired by its residents.

....The quiet and natural setting of the Town is one of its strongest assets, attracting its permanent and seasonal residents alike...The acquisition of large portions of the Town by the State for the Catskill Park and the ongoing purchases of land by New York City to protect its watershed have assured that the forested mountains will remain undeveloped. The strongest commercial businesses should be built around these resources, including hunting, outdoor recreation and related services. In the next 10 to 20 years, the Town should create opportunities for new businesses and jobs in the existing hamlets, and at the same time strive to maintain low-density residential development in the outlying areas.... <sup>24</sup>

<sup>&</sup>lt;sup>23</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

<sup>&</sup>lt;sup>24</sup> Town of Lexington, Draft Generic EIS, August 2003, pp. 2-3.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Because Lexington is in an "area of high focus," as defined in NYCDEP's Long-Term Land Acquisition Plan – primarily because Schoharie Creek runs through the town – NYCDEP expects that the amount of land to be acquired in the Town will increase substantially during the next twelve years. NYCDEP estimates that through 2022, it could acquire 3,771 additional acres in the Town either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions could include approximately 871 acres of developable land – about 25 percent of the Town's supply of developable vacant and low-density residential land as of 2009. NYCDEP does not currently expect that any agricultural easements would be acquired in Lexington through 2022.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Lexington would still be left with 2,290 acres of developable vacant and low-density residential land in 2022 – approximately 66 percent of the Town's current stock of such land.

Table 4-33: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		3,475 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	3,771 acres	
Developable vacant or low-density residential land acquired		871 acres
Residential Development, 2010-2022		
Projected housing units built	108 units	
Land needed for housing	682 acres	
Developable portion of land needed for housing		314 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		2,290 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		66 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Lexington's supply of such land is already limited. As defined here, developable land represents about 6.8 percent of the Town's total land area; and by 2022 this percentage would decline to 4.5 percent.

While the large percentage of LAP purchases may imply some potential for conflict between further LAP acquisitions and future development, it is important to note that the 2009 and 2022 estimates for the supply of developable land presented in Table 4-33 are conservative in several respects. They do not include agricultural land, or any undeveloped portions of residential parcels of less than 15 acres. Overall, the supply of developable land in Lexington appears to be sufficient to accommodate both additional LAP acquisitions and the projected level of new development through 2022.

The potential impact of additional acquisitions on the character of the community can be assessed relative to the vision the Town has defined for itself.

As a result of the projected level of acquisitions, the percentage of Lexington's total area that is protected would rise to 63 percent. This will help preserve the natural features that are among the Town's greatest assets, and the rural, low-density character cited in the Generic EIS, while leaving room for some additional low-density residential development. If the percentage of land acquired in fee simple that is opened for public recreational use remains the same as it has been to date, more than 3,000 acres of additional LAP-acquired land could be opened for recreational use by 2022.

Under a proposed agreement among the Town, NYCDEP, the regulatory agencies and other stakeholders, Lexington's designated hamlet areas would be expanded to cover a total of 737 acres – more than doubling the current acreage in designated areas. This expansion would help ensure that land remains available to accommodate limited development in the Town's major corridors, consistent with the vision described above.

## **CONCLUSIONS**

The amount of land to be acquired in Lexington under the Extended LAP could be substantial – and would represent a substantial percentage of the Town's supply of developable land. Nevertheless, given the Town's very low density, there is likely to be sufficient developable land available to support the projected level of residential development through 2022 and many years beyond. Expansion of the Town's designated hamlet areas would also help to accommodate some commercial development, consistent with the Town's stated goal of developing business and employment opportunities in these areas.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Lexington.

# TOWN OF PRATTSVILLE

## **EXISTING CONDITIONS**

The Town of Prattsville is one of Greene County's "mountaintop towns." Prattsville's resident population in 2008 was estimated to be 712 – an increase of 7.1 percent since 2000. Prattsville is primarily rural in character, with a resident population density of approximately 33 per square mile.

Schoharie County Broome Jefferson Gilboa Greene County Franklin Prattsville Ashland Sidney Halcott Walton Middletow Hardenburgh Woodstock Colchester Delaware Kingston County Olive Hurley Marbletow Liberty Watershed Boundary Watershed Towns Wawarsing Fallsburg Sullivan Ulster County County

Figure 4-34: Map of Town of Prattsville in relation to west-of-Hudson watershed

Town of Prattsville – Quick Facts		
Land area:	13,851 acres	
Percent of town land area within the watershed:	100%	
Percent of land protected	23%	
Population (estimated), 2008:	712	
Median age (estimated), 2008	37	
Median household income (estimated), 2008	\$37,460	

As shown in Table 4-34 and Figure 4-35, 60 percent of Prattsville's total area consists of either low-density residential (28 percent) or privately-owned vacant land (32 percent). The Town has a substantial seasonal or part-time population. In 2000, according to the Census Bureau, 29 percent of Prattsville's 406 housing units were for seasonal or recreational use. Commercial activity in the Town is generally limited to retail and service businesses that serve the local population, with some concentrated along Route 23A in the hamlet of Prattsville. While about 5 percent of Prattsville's land area (about 701 acres) is coded as being agricultural, active farming within the Town appears to be limited. According to the website of the Pratt Museum – a local institution that focuses on the community's history – there was only one active farm in the Town in the fall of 2009.

Recent development activity since 1990 (as shown in black highlighted parcels in Figure 4-35) has generally been small in size and scattered throughout the town. Using data from the New York State Office of Real Property Services, it is estimated that between 2000 and 2009, 43 new housing units were built in Prattsville.

Table 4-34: Land uses by type

Land Use	Acres	% of Total
Agricultural	701	5%
High-Density Residential	955	7%
Low-Density Residential	3,905	28%
Commercial/Other	398	3%
State/Other Protected	914	7%
City Protected	2,338	16%
Vacant	4,395	32%
<b>Total Town Acres</b>	13,851	

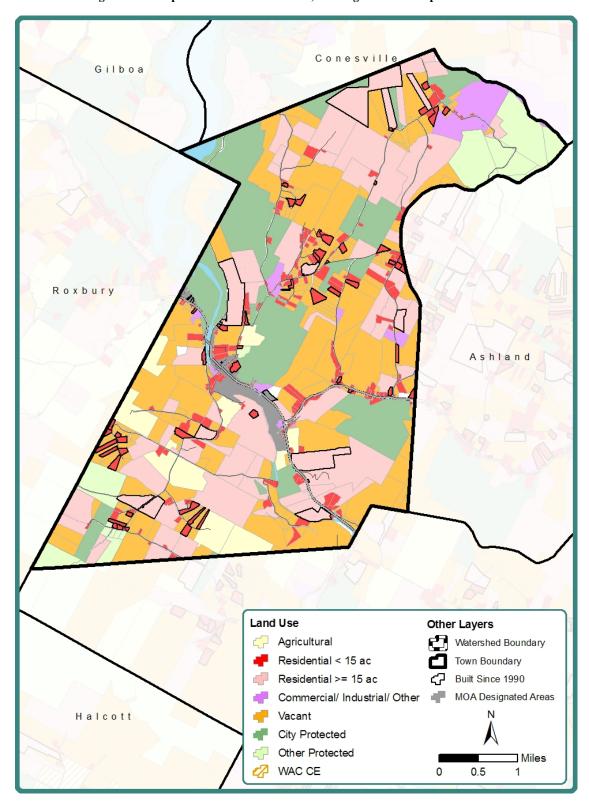


Figure 4-35: Map of the Town of Prattsville, showing land use and protected land

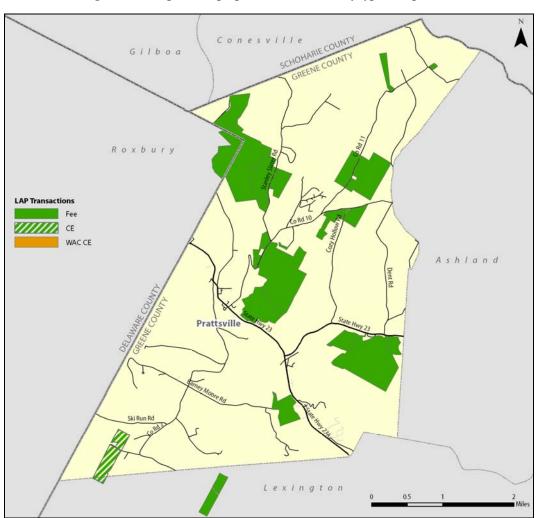
## **Previous LAP Activity**

Through July 2009, NYCDEP had acquired a total of 1,924 acres in Prattsville under LAP – about 14 percent of the Town's land area. As shown in Table 4-35, nearly 90 percent the land was acquired in fee simple. Figure 4-36 shows the location of LAP properties in Prattsville, by type of acquisition.

Table 4-35: Acquisitions in the Town of Prattsville through July 2009

Type of acquisition	Acres
Fee simple	1,724
Conservation easements	200
WAC agricultural easements	0
Total acquired	1,924

Figure 4-36: Map of LAP properties in Prattsville, by type of acquisition



As of October 2009, NYCDEP had acquired approximately 146 acres in fee simple in Prattsville that had previously been used for agricultural production. In 2009, NYCDEP, issued a permit to a farm operator for use of 67 acres, which will be used for production of hay. As of October 2009, no agricultural easements have been acquired in Prattsville.

As of October 2009, a total of 556 acres acquired by NYCDEP in fee simple in Prattsville had been opened by NYCDEP for public recreational use – about 32 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program.

Pursuant to the 1997 MOA, the Town designated a 207-acre hamlet area in the hamlet of Prattsville, along Route 23, within which NYCDEP cannot acquire land. This designation ensures that acquisitions by NYCDEP will not conflict with commercial and community development within the designated area.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – somewhat slower than the rate of growth in Prattsville during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. If we assume that the pace of new development in Prattsville (as measured by new residential units) remains the same as it was between 2000 and 2009, we can estimate that the land required to support new development through 2022 will total approximately 247 acres – including 100 acres of land characterized as developable. <sup>25</sup>

As noted above, commercial activity the Town is currently limited; and any growth in this sector is likely to be limited as well.

A parks master plan prepared for Prattsville in 2008 notes that "While agriculture and manufacturing have generally declined, tourism, recreation and the arts have remained important components of the regional economy."

Although all lands in the New York City watershed are subject to an additional layer of regulatory oversight, the undeveloped character of the watershed is desirable for low-

<sup>&</sup>lt;sup>25</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

impact residential development. Second-home owners from the New York City metropolitan area contribute to the population and economy of the Town and the surrounding region.<sup>26</sup>

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Prattsville to date, and the fact that portions of Prattsville in the Schoharie Creek and Johnson Hollow sub-basins are Areas of High Focus under the Extended LAP, NYCDEP estimates that through 2022, it could acquire 2,195 additional acres either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions will include approximately 820 acres of developable land.

NYCDEP further estimates that WAC could during the same period purchase easements on 151 acres.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Prattsville would still be left with approximately 67 percent of the Town's current stock of developable vacant and low-density residential land.

Table 4-36: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		2,773 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,195 acres	
Developable vacant or low-density residential land acquired		820 acres
Residential Development, 2010-2022		
Projected housing units built	47 units	
Land needed for housing	247 acres	
Developable portion of land needed for housing		100 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		1,853 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		67 percent

The impact of future acquisitions can also be assessed in terms of how they affect the character of the community. Further acquisitions by NYCDEP, whether in fee simple or through conservation easements, could help maintain the low-density, rural character and the natural assets that the Town values. Moreover, if the percentage of newly-acquired land that is opened for public recreational use remains consistent with what it has been to date in Prattsville, Town residents and visitors could between 2010 and 2022 gain access to more than 400 acres of additional City-owned land.

If the projected purchase of WAC agricultural easements on 151 acres of farmland occurs—which would be the first use of this program in the Town – it could potentially help maintain the limited agricultural activity that remains in Prattsville.

<sup>&</sup>lt;sup>26</sup> Town of Prattsville, Draft Parks Master Plan, 2008

As noted above, pursuant to the 1997 MOA, the Town had designated a 207-acre hamlet area, within which NYCDEP cannot acquire land in fee simple. This will help maintain the current character in this area assuming the Town continues to preclude NYCDEP from acquiring land within it. Prattsville is one of fifteen watershed towns that have not sought to expand designated hamlet areas.

## **CONCLUSIONS**

The number of acres that could be acquired in Prattsville under the Extended LAP is substantial – especially in relation to the total size of the Town and its supply of developable land. Nevertheless, given the Town's low density and relatively slow growth, there appears to be little potential for conflict between the Extended LAP and the need for land to accommodate new development.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Prattsville.

# TOWN OF WINDHAM

## **EXISTING CONDITIONS**

The Town of Windham is one of Greene County's "mountaintop towns." Windham's resident population in 2008 was estimated to be 1,755 – an increase of 5.7 percent since 2000. Windham is primarily rural in character, with a majority of its full-time residents concentrated in and around the hamlets of Windham, Hensonville and Maplecrest.

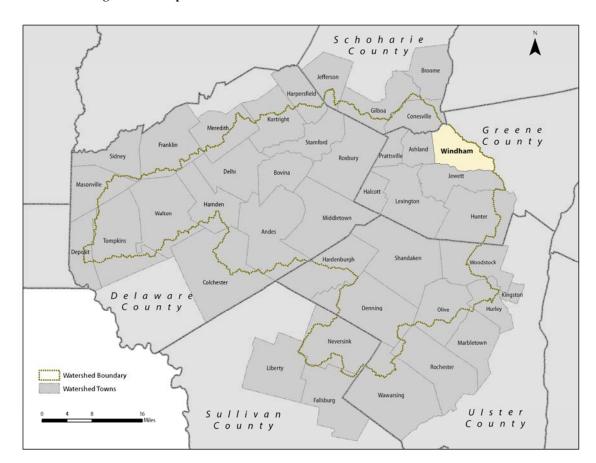


Figure 4-37: Map of Town of Windham in relation to west-of-Hudson watershed

Town of Windham – Quick Facts		
Land area:	29,009 acres	
Percent of town land area within the watershed:	100%	
Percent of land protected	31%	
Population (estimated), 2008:	1,755	
Median age (estimated), 2008	46	
Median household income (estimated), 2008	\$44,952	

Windham has in recent years experienced more rapid growth and subdivision activity than most other towns in the West-of-Hudson watershed. Ski Windham, a large downhill ski resort adjacent to the hamlet of Windham that together with nearby Hunter Mountain attracts 600,000 visitors each year, has been among the leading drivers of this growth.

In addition to its full-time population, the Town has a relatively large seasonal or part-time population; in 2000, according to the Census Bureau, 56 percent of Windham's 2,002 housing units were for seasonal or recreational use – the highest percentage among all west-of-Hudson watershed towns. Second-home owners are drawn to the Town in part by Ski Windham and other outdoor recreational opportunities.

Most of the development in Windham since 1990 (as shown by the parcels outlined in black in Figure 4-38) has occurred on fairly small parcels in the southern, central and western parts of the town. Based on building permit data, it is estimated that between 2000 and 2008, 416 new housing units were built in Windham. The pace of development in Windham (as measured by either population or growth in the number of housing units) was significantly faster between 2000 and 2008 than it had been in the preceding decade. Land prices in Windham are among the highest in the West-of-Hudson watershed region – and as elsewhere in the region, prices rose sharply during the 2000-2008 real estate boom. The Town's popularity as a second-home destination appears to be a major contributor to high land costs. A Generic EIS prepared for the Town in 2009 noted that "slope-side development" at Windham Mountain "has greatly skewed local real estate prices." 27

As Table 4-37 and Figure 4-38 shows, commercial and industrial uses make up only about 2.5 percent of the town area. Commercial activity is primarily clustered in and around the hamlets of Windham and Hensonville and along Route 296. The heart of Windham's economy – along with that of most of Greene County's other mountaintop towns – is the tourism industry, which brings skiers to Ski Windham in the winter and hikers, mountain bikers, anglers and hunters to the Town during the rest of the year. Agriculture has a limited role in Windham, accounting for only 2.4 percent of the Town's land area.

Table 4-37: Land uses by type

Land Use	Acres	% of Total
Agricultural <sup>28</sup>	599	2%
High-Density Residential	3,282	11%
Low-Density Residential	5,477	19%
Commercial/Other	1,319	5%
State/Other Protected	6,229	21%
City Protected	2,725	9%
Vacant	8,316	29%
<b>Total Town Acres</b>	29,009	

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<sup>&</sup>lt;sup>27</sup> Town of Windham Draft Generic Environmental Impact Statement on the Development Capacity of the Town of Windham (May 2009), p. 9.

<sup>&</sup>lt;sup>28</sup> The agricultural category includes WAC conservation easements.

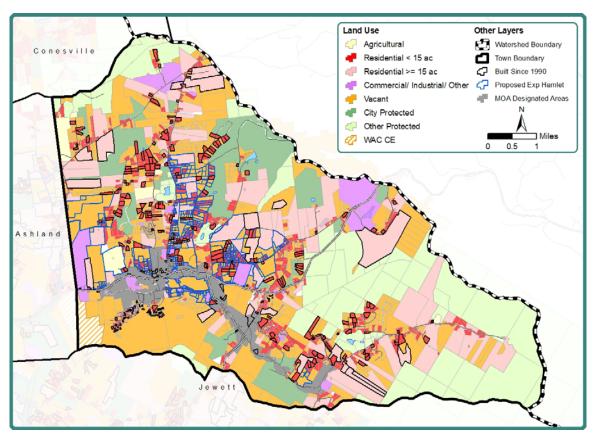


Figure 4-38: Map of Windham, showing land use, protected land and proposed hamlet expansion areas

# **Previous LAP Activity**

Through July 2009, NYCDEP had acquired a total of 2,889 acres in Windham pursuant to the 1997 MOA – just under 10 percent of the Town's total land area. As shown in Table 4-38 below, purchases of land in fee simple account for 92 percent of the total acreage acquired under LAP. Figure 4-39 shows the location of LAP properties in Windham, by type of acquisition.

Table 4-38: Acquisitions in the Town of Windham through July 2009

Type of acquisition	Acres
Fee simple	2,662
Conservation easements	0
WAC agricultural easements	226
Total acquired	2,889

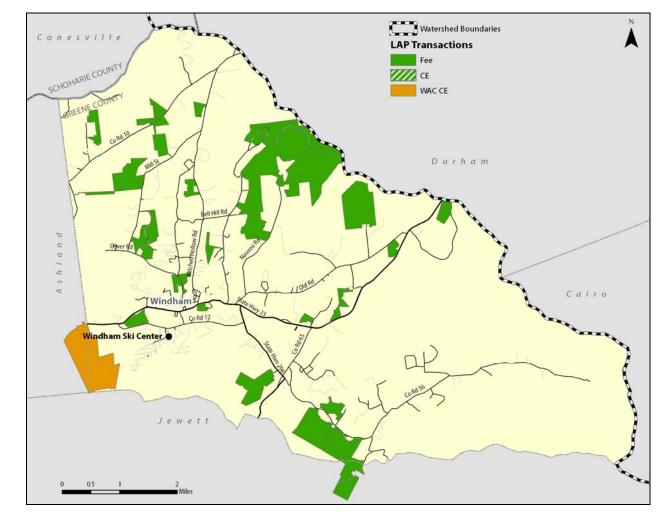


Figure 4-39: Map of LAP properties in Windham, by type of acquisition

Through June 2009, WAC had acquired easements on 226 acres of agricultural land in Windham, covering about 36 percent of the Town's farmland. As of October 2009, NYCDEP had also acquired in fee simple approximately 29 acres of land previously used for agricultural production. In 2006, NYCDEP issued a permit to a farm operator for use of 27 acres for agricultural production. This property is used primarily for the production of hay and alfalfa.

As of October 2009, a total of 1,261 acres acquired by NYCDEP in fee simple in Windham had been opened by NYCDEP for recreational use – more than 47 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program. Opening additional land for public recreational use adds to what is already one of the Town's greatest assets – resources for outdoor recreation.

As shown in Figure 4-39, most of the land acquired in Windham by the Land Acquisition Program through July 2009 is located in outlying areas of the Town, not immediately adjacent to the Town's main hamlet areas, and the ski center. Pursuant to the 1997 MOA, Windham had designated hamlet areas totaling 1,148 acres and the Town Board voted in 2006 to make these

hamlet areas off-limits for acquisition in fee simple by NYCDEP. Accordingly, NYCDEP has not acquired any land in fee simple Windham's 1997 hamlet areas since 2006.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Greene County is expected to grow by about 3 percent – significantly slower than the rate of growth in Windham during the past decade. At the same time, the demand for second homes in the mountaintop towns may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been based on the rate of development during the past two decades. Assuming the pace of new development in Windham (as measured by new residential units) remains the same as it was between 1990 and 2008, we can estimate that the land required to support new development through 2022 would total approximately 888 acres – including 540 acres of land characterized as developable. <sup>29 30</sup>

Several new development projects are in various stages of planning in Windham, including the Windham Mountain Sporting Club, a multi-phase development that would include 169 residential units on 465 acres, and Stonewall Glen, a recently approved project including 48 townhouse units, a clubhouse and some commercial space. Both are located near Windham Mountain. As noted in Chapter 3, as of March 2010, NYCDEP either had approved or was in various stages of the review process for developments in Windham totaling more than 600 units.

Even with a slower economy and changing demographic trends, Windham could thus experience greater growth between 2010 and 2022 than the great majority of west-of-Hudson watershed towns.

The 2009 Generic EIS cited above sets out a vision for the town:

The Town desires to create a sustainable community primarily through the creation of a diverse economy. The key to a sustainable community is a stable employment base that provides a livable wage....To realize these goals, the Town will expand its tourism industry to become a full four-season destination community. The present tourism based

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<sup>&</sup>lt;sup>29</sup> For Windham, the calculation of land needed for housing unit development was based on a relatively conservative assumption that future development would consume lots somewhat larger than has been typical of recent development. Based on ORPS data, NYCDEP calculated a median lot size of 0.8 acres per unit for housing units built since 2000. Applying a more conservative 2.0 acres per unit to the housing units projection, we project 888 acres being needed to support residential development.

<sup>&</sup>lt;sup>30</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

local economy is too reliant on the ski industry and related businesses serving Windham Mountain....More diverse recreation and tourism are envisioned.<sup>31</sup>

In line with this vision, the Generic EIS identifies certain goals and values as being critical to the Town's future. These include:

- a. Maintaining and increasing diversity in recreation, education, and appreciation of cultural, historic and natural resources.
- b. Increased and higher quality of employment opportunities.
- c. Sustainable and increased entrepreneurial, commercial and industrial opportunities.
- d. Diversified sources of consumer services and retail products, especially in areas totally or substantially lacking.
- e. Enhanced housing stock, with a distributed balance of value enabling people with a variety of incomes to reside in the towns.
- **f.** Vehicular and traffic patterns and controls that function smoothly and do not interfere with the enjoyment of the Town by residents and visitors.32

## FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Windham to date, NYCDEP estimates that through 2022, it could acquire 2,127 additional acres either in fee simple or through conservation easements. Based on the percentage of the Town's vacant and low-density residential land that is developable as of 2009, it is estimated that this total could include approximately 880 acres of developable land. NYCDEP further estimates that WAC could during the same period purchase easements on 80 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Windham would still be left with approximately 73 percent of the Town's current stock of developable vacant and low-density residential land.

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<sup>&</sup>lt;sup>31</sup> Town of Windham, op cit, p. 2.

<sup>&</sup>lt;sup>32</sup> Ibid. p. 14.

Table 4-39: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		5,272 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	2,127 acres	
Developable vacant or low-density residential land acquired		880 acres
Residential Development, 2010-2022		
Projected housing units built	444 units	
Land needed for housing	888 acres	
Developable portion of land needed for housing		540 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		3,853 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		73 percent

Given the pace of development in Windham, projected LAP acquisitions through 2022 might be expected to have some impact on the availability of land for development, and possibly on the price of developable land. Several factors, however, are likely to reduce significantly any potential impacts:

- The Town has proposed an expansion of Windham's designated hamlet areas by <u>2,797</u> acres, to a total of <u>3,945</u> acres, which NYCDEP has determined is reasonable. This expansion could help ensure that areas near the existing hamlets that are particularly suited to new development would not be acquired by NYCDEP.
- Our estimate of the supply of developable land remaining in Windham is probably conservative. It excludes, for example, some smaller parcels in and around the hamlets that are already available for residential development, and it excludes land that might be made available by subdivision of residential parcels of less than 15 acres. It also excludes agricultural land in effect assuming that no land currently used for agricultural purposes will be developed between now and 2022.
- Moreover, our projection of land required for new development through 2022 assumes an average of 2.0 acres per unit – a higher average than recent experience would suggest.

The potential impact of future acquisitions on the character of Windham can also be assessed relative to the future the Town has envisioned for itself. While additional acquisitions under LAP will not directly contribute to achievement of the Town's goals regarding diversification, expanded economic opportunity and affordable housing, such acquisitions are generally compatible with the Town's goals. They would help the Town maintain its rural character, protect its natural beauty and preserve some of its remaining farmland. Moreover, by opening up additional land for recreational uses other than skiing, LAP could in the future contribute in a modest way to the process of diversifying Windham's tourist business.

Perhaps most notably, the proposed expansion of designated hamlet areas would help ensure that the further acquisitions do not conflict with the types of development the Town is seeking to

promote in and around the hamlets. The Extended Land Acquisition Program thus appears to be consistent with many of the Town's goals.

### **CONCLUSIONS**

The pace of development in Windham in recent years suggests that this is one of several towns where there may be some potential for conflict between projected acquisitions under the Extended LAP and projected future development. For the reasons noted above, however, the rate of new development in Windham between 2010 and 2022 may be slower than it has been during the past decade, and the amount of land required to support such development may likewise be less. Moreover, the proposed expansion of the Town's designated hamlet areas would help ensure that new acquisitions under the Extended LAP take place primarily in outlying areas, and that Extended LAP would not acquire land that can support new development in and around the existing hamlets.

Beyond the availability of land for new development, the Extended LAP is not expected to affect the overall level of economic activity in the Town – and would help preserve the high-quality natural environment on which much of its economy depends.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Windham.

# **SCHOHARIE COUNTY**

## TOWN OF CONESVILLE

### **EXISTING CONDITIONS**

The Town of Conesville is located in the southeastern corner of Schoharie County. The Town's estimated population in 2008 was 714. Population has grown by 4 percent since 1990, with all of the increase estimated to have occurred between 1990 and 2000. Conesville includes three hamlet areas – Manor Kill, Conesville and West Conesville. It has a diverse agricultural base, but relatively little commercial activity.

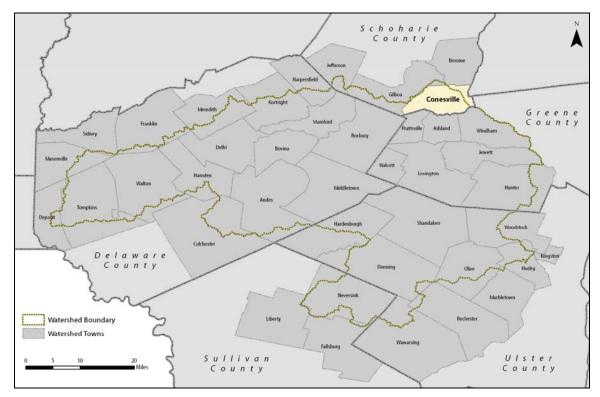


Figure 4-40: Map of Conesville in relation to the watershed

Town of Conesville – Quick Facts					
Land area:	25,492 acres				
Percent of town land area within the watershed:	85%				
Percent of land protected	20%				
Population (estimated), 2008:	714				
Median age (estimated), 2008	45				
Median household income (estimated), 2008	\$41,384				

As Table 4-40 and Figure 4-41 show, low-density residential and privately-owned vacant land together account for more than half the Town's total area. According to the Town's 2007 comprehensive plan, Conesville's agricultural sector includes several substantial farms, as well

as several smaller niche enterprises. Commercial activity in the Town is limited primarily to businesses serving the local population – both residents and second-home owners.

With access to the New York City metropolitan area, as well as the Greater Albany area, Conesville has a large second-home population. About 54 percent of all housing units in 2000 were for seasonal or recreational use. Growth in this sector was especially strong in the 1990s, when – despite a modest increase in resident population – the number of housing units in the Town grew by 41 percent.

Based on U.S. Census data and estimates by DemogaphicsNow, it is estimated that between 2000 and 2009, there was no net increase in Conesville in land used for residential development.

Table 4-40: Land uses by type

	In Watershed Out		In Watershed Out Watershed		Vatershed	Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total	
Agricultural	2,653	12%	115	3%	2,768	11%	
High-Density Residential	2,692	12%	72	2%	2,764	11%	
Low-Density Residential	5,363	25%	1,105	28%	6,468	25%	
Commercial/Other	391	2%	15	0%	406	2%	
State/Other Protected	2,407	11%	1,385	35%	3,791	15%	
City Protected	2,084	10%	N/A	N/A	2,084	8%	
Vacant	5,468	25%	1,059	27%	6,527	26%	
Total	21,590		3,902		25,492	_	

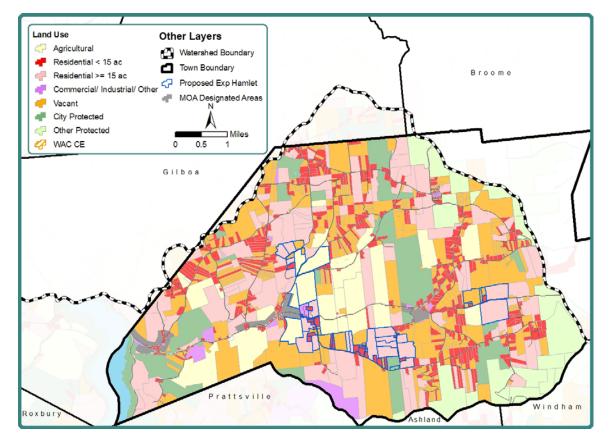


Figure 4-41: Town of Conesville, land use, protected land and proposed expansion area

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired 2,274 acres in Conesville under the Land Acquisition Program – about 8.9 percent of the Town's total land area. As shown below, purchases of land in fee simple accounted for 94 percent of the total. Figure 4-42 shows the location of LAP properties in Conesville, by type of acquisition.

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Table 4-41: Acquisitions in the Town of Conesville through July 2009

Type of acquisition	Acres
Fee simple	2,148
Conservation easements	127
WAC agricultural easements	0
Total acquired	2,274

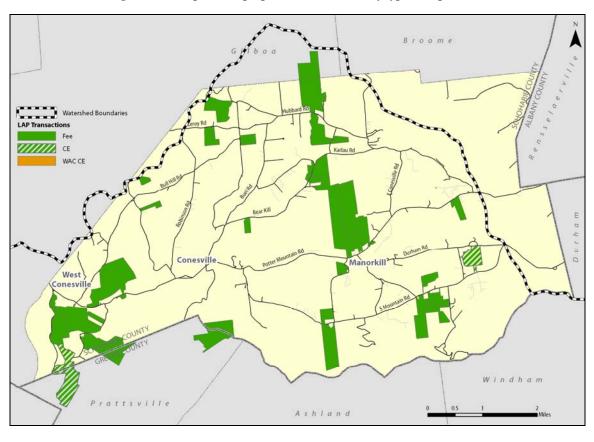


Figure 4-42: Map of LAP properties in Conesville, by type of acquisition

As of July 2009, none of Conesville's agricultural land was covered by WAC easements. As part of its acquisition of several larger parcels in fee simple, NYCDEP has to date acquired about 70 acres of land that had previously been in active agricultural use. One agreement with a landowner for use of NYCDEP land for maple tapping is in place.

As of the fall of 2009, NYCDEP had opened a total of 1,236 acres of land acquired under LAP for a variety of recreational uses – about 60 percent of the land that LAP has acquired in fee simple in Conesville.

Pursuant to the 1997 MOA, Conesville designated hamlet areas totaling 275 acres, within which NYCDEP cannot acquire land in fee simple. These designations help ensure the acquisitions by NYCDEP do not conflict with existing commercial activity or further development within the hamlets of Manor Kill, Conesville and West Conesville.

## FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Schoharie County is expected to decline slightly. At the same time, the demand for second homes in Conesville may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the

number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," future residential development has nevertheless been estimated based on the rate of development during the past two decades. If it is assumed that the pace of new development in Conesville (as measured by new residential units) remains the same as it was between 1990 and 2008 (about 12 new units per year), it can be estimated that the land required to support new development through 2022 will total approximately 899 acres – including 560 acres of land characterized as developable.<sup>33</sup> (This estimate may in fact overstate the number of new units, and thus the amount of land, likely to be developed during this period. As noted above, the available data suggest that the pace of development has been much slower since 2000 than it was in the 1990s.)

Between 2010 and 2022, Conesville is also likely to see a continued decline in land used for agricultural purpose, potentially offset by modest growth in other sectors.

A survey conducted in conjunction with the development of Conesville's comprehensive plan found that:

When asked to describe their vision for Conesville after the next 10-20 years, the three elements that came out on top were a "clean and green" environment, preservation of remaining farms and a strong natural resources industry.

The goals stated in Conesville's comprehensive plan are to:

- 1) Base all land use regulations on a foundation of protecting private property rights.
- 2) Provide for orderly growth and development in the Town of Conesville.
- *Make the Town secure from dangers of flooding, fire and other dangers.*
- 4) Preserve where practical the character of existing highways and promote efficient and safe circulation of traffic.
- 5) Protect surface and ground water quality, maintain high-quality physical environments and preserve wildlife habitats through effective design.
- 6) Provide for those agricultural, forestry, tourism and similar businesses with potential to improve local incomes and preserve working landscapes.

For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

The plan also urges greater use of WAC easements to preserve farmland.<sup>34</sup>

### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based in part on LAP's experience in the Town to date, NYCDEP estimates that through 2022 it could acquire 1,828 additional acres in Conesville either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that the projected total could include approximately 955 acres of developable land. NYCDEP further estimates that WAC could during the same period purchase easements on 572 acres of agricultural land.

As shown in the following table, it is estimated that after taking into account both the Extended LAP acquisitions and the land required to support new development, Conesville would still be left with approximately 73 percent of the Town's current stock of developable vacant and low-density residential land.

Table 4-42: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		5,525 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	1,828 acres	
Developable vacant or low-density residential land acquired		955 acres
Residential Development, 2010-2022		
Projected housing units built	144 units	
Land needed for housing	899 acres	
Developable portion of land needed for housing		560 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		4,009 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		73 percent

Further acquisitions in Conesville through 2022 can also be assessed in terms of their potential impact on the character of the community. NYCDEP's Land Acquisition Program appears to be broadly consistent with the goals outlined in the Conesville comprehensive plan – especially those relating to preservation of environmental quality and of "working landscapes." Moreover, because the program operates strictly on a "willing seller, willing buyer" basis, it is also consistent with the goal of protecting property rights.

The acquisitions in fee simple and through conservation easements projected above could have a positive impact on the Town's stated goals of preserving its rural character and maintaining a "clean and green" environment. And as called for in the Town's comprehensive plan, the introduction of WAC agricultural easements in Conesville could contribute to preservation of the Town's existing farms.

Assuming that the percentage of NYCDEP-acquired land remains constant, NYCDEP's projected acquisitions in fee simple through 2022 would open more than 1,000 additional acres

<sup>&</sup>lt;sup>34</sup> Town of Conesville, Comprehensive Plan, 2007, pp.3-1 to 3-3.

to public recreational use. This could represent a significant amenity for both residents and second-home owners – and could also support the development of tourism-based businesses.

The Town has proposed that designated hamlet areas be increased from 275 to 1.845 acres, which NYCDEP has agreed is appropriate. This expansion, focused in the central portion of the Town east of the hamlet of Conesville, could shift NYCDEP acquisitions away from areas that the Town feels are likely to be most suited for new development – and could help ensure that land is available in these areas for new commercial, residential or other development.

#### CONCLUSIONS

Even with the Extended LAP projected to acquire more than 1,800 acres through fee purchases and conservation easements between 2010 and 2022, there should be sufficient developable land available in Conesville to support the projected level of new residential development – especially if as discussed above the rate of new development proves to be substantially lower than that which occurred between 1990 and 2008. At the same time, the Extended LAP would help preserve the natural environment that is valued both by full-time residents and second-home owners; and the projected acquisition of WAC easements on 572 acres of farmland in the Town should help preserve its agricultural base. The proposed increase in the size of Conesville's designated hamlet areas will also ensure that some land is available to support development in other sectors.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Conesville.

# **SULLIVAN COUNTY**

# TOWN OF NEVERSINK

# **EXISTING CONDITIONS**

The Town of Neversink, located in northeastern Sullivan County, had an estimated population of 3,909 in 2008. The Town's resident population has grown by more than 32 percent since 1990, with most of this growth occurring before 2000.

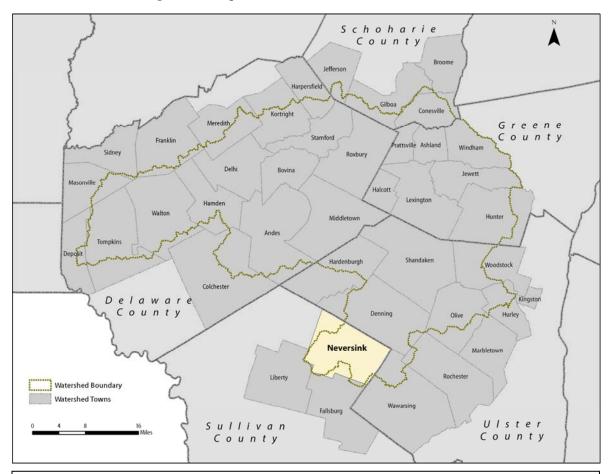


Figure 4-43: Map of Neversink in relation to the watershed

Town of Neversink – Quick Facts					
Land area:	55,144 acres				
Percent of town land area within the watershed:	79%				
Percent of land protected	31%				
Population (estimated), 2008:	3,909				
Median age (estimated), 2008	39.7				
Median household income (estimated), 2008	\$54,855				

As shown in Table 4-43 and Figure 4-44, low-density residential and privately-owned vacant land together account for nearly half the Town's total area. Neversink has an active agricultural sector. Commercial activity is generally concentrated along Routes 55 and 42, in and around the hamlet of Grahamsville.

Neversink has a substantial second-home sector. About 25 percent of all housing units in 2000 were for seasonal or recreational use. Growth in this sector appears to have continued since 2000; between 2000 and 2008, the Town's housing stock grew by nearly 15 percent, while its resident population grew by about 5 percent.

Recent development activity since 1990 (as shown in the black highlighted parcels in Figure 4-44) has largely occurred in the vicinity of the hamlet of Grahamsville and Routes 55 and 42. Based on estimates supplied by DemographicsNow, it is estimated that between 2000 and 2009, approximately 289 new housing units were built in Neversink. This level of growth, high in comparison to many West-of-Hudson towns, can be attributed to the Town's closer proximity to the New York metropolitan area, and to easy access to Rte 17/I-86.

Table 4-43: Land uses by type

	In Watershed		Out Watershed		Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural <sup>35</sup>	2,909	7%	365	3%	3,274	6%
High-Density Residential	2,939	7%	1,122	10%	4,060	7%
Low-Density Residential	9,120	21%	2,410	21%	11,530	21%
Commercial/Other	283	1%	68	1%	351	1%
State/Other Protected	5,616	13%	2,836	25%	8,452	15%
City Protected	9,918	19%	N/A	N/A	8,324	15%
Vacant	11,670	27%	3,539	31%	15,210	28%
Total	43,804		11,340		55,144	

<sup>&</sup>lt;sup>35</sup> The agricultural category includes WAC conservation easements.

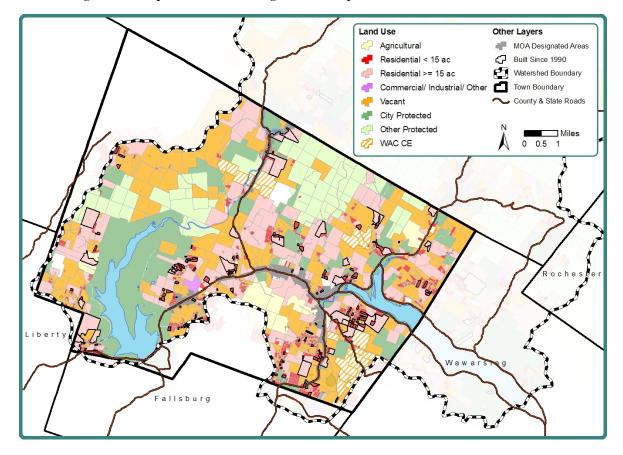


Figure 4-44: Map of Neversink showing land use and protected land within the Watershed

Neversink's website highlights the Town's historic relationship to the watershed, noting that it is "home to the Neversink Reservoir and part of the Rondout Reservoir." The Town also notes that because of its position in the city's water supply system, "Neversink has the added benefit of a guaranteed pristine environment."

Moreover, because of its location in the watershed and at the southern end of the Catskill Park, "Neversink affords residents and visitors numerous recreational activities including hiking, biking, hunting, fishing and camping."

# **Previous LAP Activity**

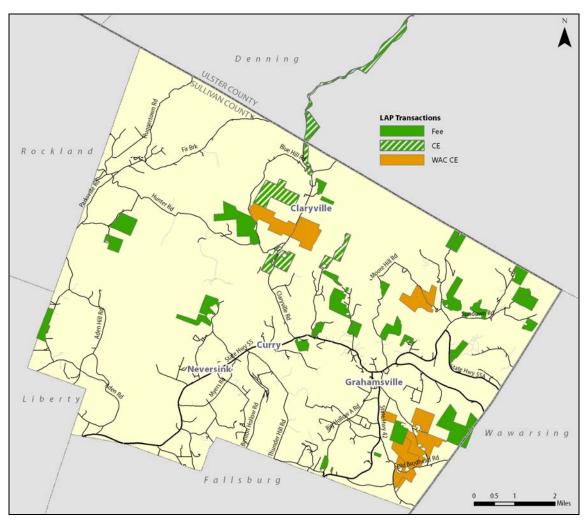
Through June 2009, NYCDEP had acquired a total of 4,671 acres in Neversink pursuant to the 1997 MOA. As shown in Table 4-44 below, purchases in fee simple account for about 53 percent of all acquisitions in the town.

Figure 4-45 shows the location of LAP properties in Neversink, by type of acquisition.

Table 4-44: Acquisitions in the Town of Neversink through July 2009

Type of acquisition	Acres
Fee simple	2,462
Conservation easements	748
WAC agricultural easements	1,462
Total acquired	4,671

Figure 4-45: Map of LAP properties in Neversink, by type of acquisition



Through June 2009, as noted above, WAC had acquired easements on 1,462 acres of agricultural land – about 45 percent of all agricultural land in Neversink.

As of July 2009, NYCDEP had opened 2,487 acres of land acquired under LAP for public recreational use. Opening this land for recreational use represented a 79 percent increase in the total City-owned acreage available for public recreational use in Neversink.

Pursuant to the 1997 MOA, the Town designated hamlet areas totaling 1,197 acres, concentrated along the major roads in and around Grahamsville. While the Town did not elect to preclude fee simple purchases in these hamlet areas, acquisitions under LAP (including WAC easements) have nevertheless focused primarily on outlying areas.

### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Sullivan County is expected to grow by about 3 percent – a much lower growth rate than the County has experienced in the past two decades. At the same time, the demand for second homes in Sullivan County may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. If it is assumed that the pace of new development in Neversink (as measured by new residential units) remains the same as it was between 1990 and 2008, it can then be estimated that the land required to support new development through 2022 will total approximately 2,027 acres, including 1,501 acres of land characterized as developable<sup>36</sup> – about 12 percent of the Town's supply of such land as of 2009.

As it will elsewhere in the region, the overall level of agricultural production in Neversink is likely to decline.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

As shown in Table 4-45, NYCDEP projects that through 2022, it could acquire 4,171 additional acres in Neversink either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions will include approximately 1,833 acres of developable land – about 14 percent of the Town's supply of developable vacant, low-density residential and agricultural land as of 2009.

NYCDEP also projects that WAC could acquire easements on 301 acres of agricultural land – of which 143 acres, or one percent of the Town's 2009 supply, will be developable.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions (including WAC easements) and the land required to support new development, Neversink would still be left with 9,319 acres of developable vacant, low-density residential and agricultural land in 2022 – approximately 73 percent of the Town's current stock of such land.

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<sup>&</sup>lt;sup>36</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic in considered undevelopable.

Table 4-45: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant, low-density residential or agricultural land in 2009		12,797 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	4,171 acres	
Projected WAC acquisitions	301 acres	
Developable vacant, low-density residential or agricultural land acquired		1,976 acres
Residential Development, 2010-2022		
Projected housing units built	456 units	
Land needed for housing	2,027 acres	
Developable portion of land needed for housing		1,501 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		9,319 acres
Percent of 2009 developable vacant, low-density residential or agricultural land remaining in 2022		73 percent

The estimate of the amount of developable land remaining in 2022 may be conservative in several respects. As noted above, the pace of development in Neversink has been somewhat slower since 2000 than it was in the 1990s; the assumption that new development will average 38 new units per year could prove to be overstated.

The potential impact of additional acquisitions between 2010 and 2022 can also be assessed in terms of their potential effects on the character of the community. To the extent that it helps to protect the Town's natural environment, the Land Acquisition Program thus reinforces some of Neversink's greatest strengths.

Agriculture is an important aspect of community life in Neversink. Each year the Neversink Agricultural Society sponsors a local fair that is one of the oldest events of its kind in New York State. By helping to preserve farmland in an area that has seen significant development during the past twenty years, the WAC easement program helps to preserve the Town's agricultural heritage.

Acquisition of additional land by NYCDEP will further protect the "pristine environment" that Neversink highly values. Moreover, based on NYCDEP's experience in Neversink to date, we estimate that more than 2,000 acres of additional land acquired by NYCDEP in fee simple could be opened for public recreational use – further enhancing one of the Town's greatest attractions.

As noted above, Neversink designated hamlet areas totaling 1,197 acres pursuant to the 1997 MOA. The Town has not sought to expand these areas. Under the terms of the <u>new WSP</u> concerning hamlet expansions, Neversink would have the option to expand.

NYCDEP's acquisition of land in outlying areas of Neversink helps to maintain the Town's primarily low-density, rural character, and helps protect the quality of the Town's natural environment.

#### CONCLUSIONS

Despite the projected acquisition of more than 4,100 acres in fee simple or conservation easements under the Extended LAP, and 301 acres in WAC farm easements, it is estimated that in 2022 there would still be more than 9,000 acres of developable land remaining in Neversink. The Town's supply of such land thus appears to be more than sufficient to support the projected

rate of residential development. Projected acquisitions under the Extended LAP would help preserve the Town's high-quality natural environment; and Extended LAP could also result in the opening of more than 2,000 acres in Neversink for public recreational use – thus reinforcing one of the Town's greatest strengths.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Neversink.

# **ULSTER COUNTY**

# **TOWN OF DENNING**

## **EXISTING CONDITIONS**

Denning is primarily rural, with development concentrated on the southern border of the town. Denning's resident population in 2008 was estimated to be 524 – an increase of 1.6 percent since 2000. The Town's population density is only 5.1 persons per square mile.

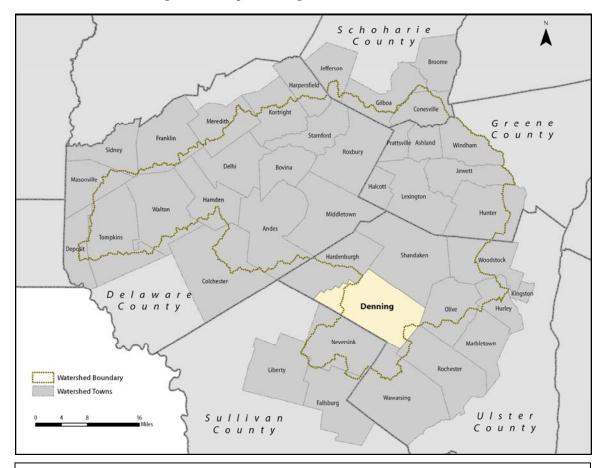


Figure 4-46: Map of Denning in relation to the watershed

<b>Town of Denning – Quick Facts</b>					
Land area:	65,430 acres				
Percent of town land area within the watershed:	86%				
Percent of land protected:	55%				
Population (estimated), 2008:	524				
Median age (estimated), 2008	48				
Median household income (estimated), 2008	\$43,765				

As shown in Table 4-46 and Figure 4-47, land use in Denning is dominated by New York State Forest Preserve land, comprising 41,061 acres or 63 percent of the Town's total area. The rest of the Town consists primarily of either low-density residential parcels (19 percent of the Town's area) or privately-owned vacant land (12 percent). In addition to its full-time population, the Town has a relatively large seasonal or part-time population; in 2000, according to the Census Bureau, 47 percent of Denning's 518 housing units were for seasonal or recreational use. The land area devoted to commercial, industrial and community uses is small (181 acres).

The Town's largest enterprise, and one of its strongest economic assets, is the Frost Valley YMCA, a 6,000-acre complex that draws 40,000 visitors a year for family vacations and other recreational, cultural and educational activities, and employs 120 people. Due largely to its mountain terrain, agricultural uses are very limited in Denning.

There has been little recent development activity. Based on Census data, it is estimated that between 2000 and 2008, 19 new housing units were built in Denning.

Table 4-46: Land uses by type

	In Wa	itershed	Out V	Out Watershed		Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total	
Agricultural	0	0%	0	0%	0	0%	
High-Density Residential	1,544	3%	201	2%	1,745	3%	
Low-Density Residential	11,320	20%	1,429	16%	12,750	19%	
Commercial/Other	10	0%	171	2%	181	0%	
State/Other Protected	33,367	59%	7,845	87%	41,212	63%	
City Protected	2,402	4%	N/A	N/A	2,402	4%	
Vacant	6,415	11%	1,716	19%	8,130	12%	
Total	56,447		8,983		65,430		

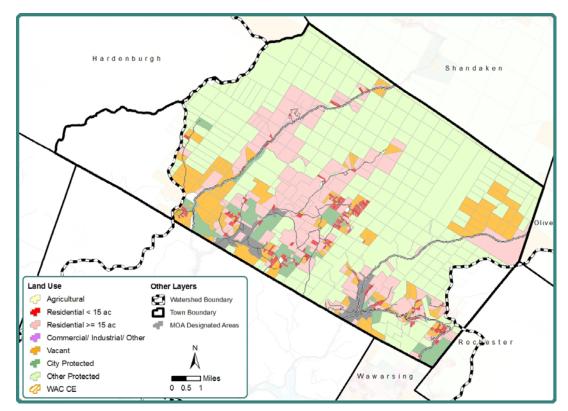


Figure 4-47: Map of Denning showing land use and protected land within the Watershed

# **Previous LAP Activity**

Through July 2009, NYCDEP had acquired a total of 2,499 acres in Denning pursuant to the 1997 MOA. As shown in Table 4-47 below, purchases of land in fee simple account for 65 percent of the total acreage acquired under LAP. Figure 4-48 shows the location of LAP properties in Denning, by type of acquisition.

Table 4-47: Acquisitions in the Town of Denning through July 2009

Type of acquisition	Acres
Fee simple	1,634
Conservation easements	865
WAC agricultural easements	-
Total acquired	2,499

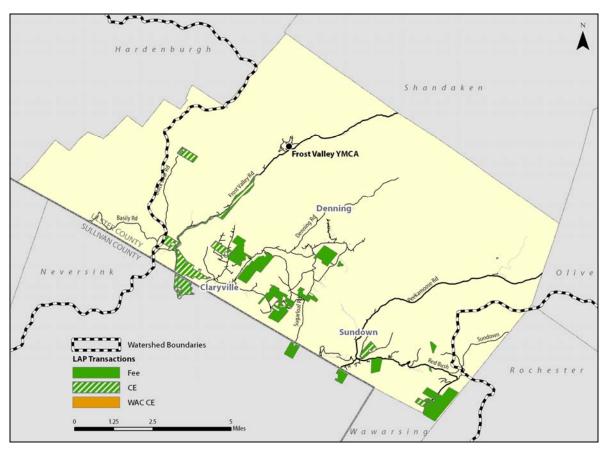


Figure 4-48: Map of LAP properties in Denning, by type of acquisition

As of October 2009, a total of 1,206 acres acquired by NYCDEP in fee simple in Denning had been opened by NYCDEP for recreational use – about 74 percent of the land that NYCDEP has acquired in fee simple in the Town since the beginning of the Land Acquisition Program.

As shown in Figure 4-48, much of the land acquired in Denning by the NYCDEP Land Acquisition Program through July 2009 is located on the outskirts of the town's two hamlets, Claryville (which is partly in the Town of Neversink) and Sundown. Under the terms of the MOA, the Town elected to preclude acquisitions within the designated hamlets themselves; Denning has designated hamlet areas totaling 1,107 acres.

## FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Ulster County is expected to grow by about 3 percent, somewhat slower than the rate of growth during the past two decades. At the same time, the demand for second homes in the County may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming the pace of new development in Denning (as measured by new residential units) remains the same as it was between 1990 and 2008, it is estimated that the land required to support new development through 2022 will total approximately 241 acres – including 71 acres of land characterized as developable. <sup>37</sup>

Beyond this modest residential development, conditions are likely to remain consistent with those of the past decade – a largely rural community, with commercial activity limited primarily to businesses that serve the local population, and visitors to the region.

Denning's 2007 Comprehensive Plan calls for lower density zoning outside of the Town's hamlet areas to help "manage growth" and preserve the rural character of the Town.38 The Comprehensive Plan also highlights the importance of protecting the natural environment. As the Town's Plan puts it:

Denning is not a suburban community. Nor is it a place with all modern conveniences. Accordingly, new housing will be carefully sited to protect natural resources and enhance established neighborhoods and roads in, or adjacent to, the hamlets in Claryville and Sundown, and also the settlements at Frost Valley, Red Hill, Denning and Ladleton. Outside of these places, forestry and other physical development should occur selectively, with consideration of the capability of the soils, slopes, and streams to support new development.<sup>39</sup>

The plan defines a series of goals that Denning seeks to achieve, including:

- Maintain and preserve Denning's natural beauty and rural character, such as its hillsides and views
- Help keep land and housing prices affordable for residents
- Manage and improve the form and quality of existing neighborhoods to reinforce and enhance existing community character
- Protect water resources
- Accommodate new growth within the traditional community settings and specific designated areas. Minimize the conversion of undeveloped land in the remote mountain areas and other outlying areas in favor of careful infill in and adjacent to the valley and on Red Hill. This will strengthen the community and its sense of place.

<sup>&</sup>lt;sup>37</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, or slopes of greater than 15 percent. Land with any one or more of these characteristic in considered undevelopable.

<sup>&</sup>lt;sup>38</sup> Source: Town of Denning Comprehensive Plan 2007, pg. 19.

<sup>&</sup>lt;sup>39</sup> Town of Denning Comprehensive Plan 2007, pg. 5.

- Ensure that development is compatible with natural resources protection by achieving site development where buildings and access are separated from the most sensitive resources
- Allow for adequate, affordable housing in Denning, including some that meets the needs of older seniors and those of more modest means
- By working collaboratively with the Town of Neversink, plan for coherent growth which straddles municipal boundaries and provides the desired mix
- Diversify and strengthen the Town's fiscal base
- Promote a strong sense of community
- Foster systems of public communication which are informative and accessible in a variety of forms so that anyone interested has access
- Recognize that various lifestyles make up the intrinsic character of Denning
- Emphasize maintaining and enhancing existing road and stormwater facilities before adding new infrastructure
- Encourage and accommodate pedestrian options in hamlets and at large institutional properties
- Encourage opportunities in technology and economic development that are compatible with rural development and sustainable resource management
- Support tourism and cooperate with county- and state-level economic development policies and programs
- Minimize the costs of municipal services, especially costs related to fringe development
- Recognize the limited potential for growth in the hamlets that which occurs should appear as small scale and should not be overly intensive
- Support businesses which practice the sustainable utilization of natural resources, including forestry and farming
- Provide clear and effective land use laws that are specific to the type of land use activity and its setting. Provide incentives in order to promote and achieve desired outcomes
- Promote public health and well-being by informing residents about how to minimize flood hazards and other risks, and describe how they should act in the event of a natural disaster

• Achieve innovative application of energy conservation and production in order to save public sector resources and sustain supplies<sup>40</sup>

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Denning to date, NYCDEP estimates that through 2022, it could acquire a total of 5,046 acres either in fee simple or through conservation easements. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that these acquisitions will include approximately 1,359 acres of developable land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Denning will still be left with approximately 66 percent of the Town's current stock of developable land.

Table 4-48: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		4,187 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	5,046 acres	
Developable vacant or low-density residential land acquired		1,359 acres
Residential Development, 2010-2022		
Projected housing units built	36 units	
Land needed for housing	241 acres	
Developable portion of land needed for housing		71 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		2,757 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		66 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Denning's supply of such land is already quite limited. As defined here, developable land represents about 6.4 percent of the Town's total land area; and by 2022 this percentage would decline to 4.2 percent. Although NYCDEP is proposing to acquire a significant amount of land in Denning through 2022, the rate of housing development in the town has been extremely low. It is expected that there would be little potential for conflict between the projected level of the Extended LAP acquisitions and land needed for new development, given the low level of new development projected through 2022.

NYCDEP's Land Acquisition Program appears to be broadly consistent with the Town's goals, in particular those that relate to preserving the town's natural beauty and rural character, protecting water resources and other natural resources, and accommodating growth within traditional community settings. (This broad consistency should not, however, be taken to imply Town support for continuation or expansion of the Land Acquisition Program. As Town officials have noted, continued acquisitions by NYCDEP through 2022 on the scale assumed in the Draft EIS were not envisioned in 2007, when the Comprehensive Plan was written.)

<sup>&</sup>lt;sup>40</sup> Ibid. pp. 10-11

## **CONCLUSIONS**

While the amount of land projected to be acquired under the Extended LAP is substantial, the program is unlikely to affect the pace or character of development in the Denning. Extended LAP be consistent with the low-density, rural character of the Town, and would help preserve the natural environment that is among the Town's greatest assets.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Denning.

## TOWN OF HARDENBURGH

## **EXISTING CONDITIONS**

The Town of Hardenburgh – the westernmost town in Ulster County – is a very low-density rural community. With a resident population of 211, it has the lowest population density of any watershed town – 2.6 persons per square mile. Although only 44 percent of the Town's total area lies within the watershed, we estimate (based on the location of residential parcels) that about two-thirds of the Town's resident population live within the watershed.

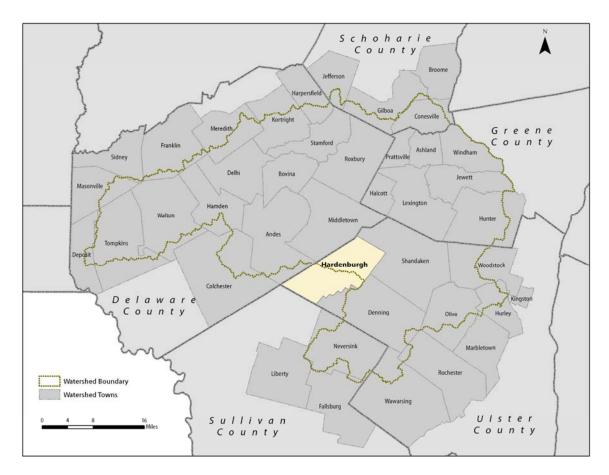


Figure 4-49: Map of Hardenburgh in relation to the watershed

Town of Hardenburgh – Quick Facts			
Land area:	51,756 acres		
Percent of town land area within the watershed:	44%		
Percent of land protected	53%		
Population (estimated), 2008:	211		
Median age (estimated), 2008	48.2		
Median household income (estimated), 2008	\$44,509		

Land uses in Hardenburgh reflect the Town's low-density rural character. As Table 4-49 and Figure 4-50 show, State-owned land accounts for more than half the Town's total area – especially in the portion of the Town that lies outside the watershed. Vacant land (23 percent of the total) and low-density residential parcels (10 percent) account for most of Hardenburgh's non-protected land. Most of the undeveloped privately owned land in the watershed portion of the town is controlled by a single land owner.

Although its total population is small, Hardenburgh has a relatively large second-home sector. In 2000, 47 percent of the Town's housing units were for seasonal or recreational use. Commercial, industrial and community uses occupy about 4 percent of the Town's land; but are almost entirely located outside the watershed. Commercial services for the northern portion of the Town (within the watershed), which is geographically distinct from the southern portion, are provided primarily in the hamlet of Arkville, in Delaware County.

There has been a modest amount of development in Hardenburgh since 1990 (as shown in the black highlighted parcels on Figure 4-50). Based on estimates from DemographicsNow on growth in the number of housing units in the Town, it is estimated that between 2000 and 2009, 9 housing units were added in Hardenburgh.

Table 4-49: Land uses by type

	In Wa	itershed	Out Watershed		Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural	2,007	9%	175	1%	2,182	4%
High-Density Residential	534	2%	304	1%	838	2%
Low-Density Residential	1,989	9%	3,188	11%	5,178	10%
Commercial/Other	3	0%	1,877	6%	1,880	4%
State/Other Protected	9,108	40%	17,634	61%	26,743	52%
City Protected	543	2%	N/A	N/A	543	1%
Vacant	6,808	30%	4,864	17%	11,672	23%
Total	22,675		29,081	_	51,756	_

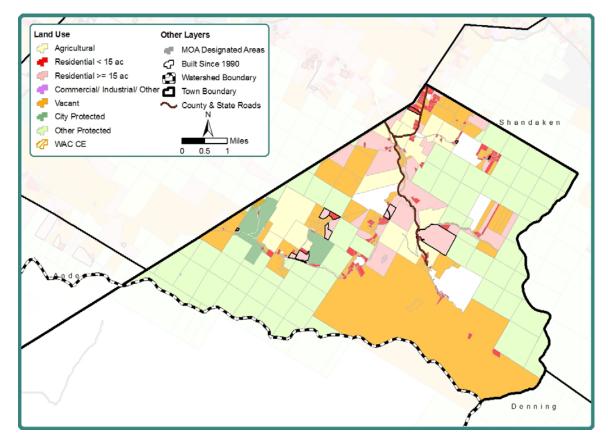


Figure 4-50: Map of Hardenburgh showing land use and protected land within the Watershed

# **Previous LAP Activity**

Through June 2009, as Table 4-50 shows, NYCDEP had acquired conservation easements on 595 acres of watershed land in Hardenburgh – slightly more than 1 percent of the Town's total area. As of that date, NYCDEP had not acquired any acreage in Hardenburgh in fee simple; nor had WAC acquired any agricultural easements.

Figure 4-51 shows the location of LAP properties in Hardenburgh.

Table 4-50: Acquisitions in the Town of Hardenburgh through July 2009

Type of acquisition	Acres
Fee simple	0
Conservation easements	595
WAC agricultural easements	0
Total acquired	595

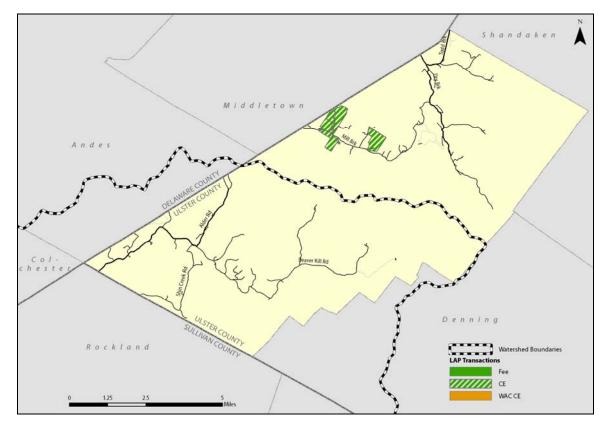


Figure 4-51: Map of LAP properties in Hardenburgh, by type of acquisition

Through June 2009, as noted above, WAC had acquired no agricultural easements in Hardenburgh. Nor had NYCDEP acquired in fee simple any land that had previously been used for agricultural purposes.

Having acquired no land in fee simple, NYCDEP has not opened any land acquired in Hardenburgh for recreational use. (Acquisition of conservation easements by NYCDEP does not bring with it the right to open land for public recreational use; control over access to such land remains with the owner.)

## FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Ulster County is expected to grow by about 3 percent, somewhat slower than the rate of growth during the past two decades. At the same time, the demand for second homes in the County may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming that the pace of new residential development in Hardenburgh averages 3 new units per year (a rate consistent with the issuance of building permits between 1997 and 2008), and that each new unit consumes 15 acres of land, it is estimated that the land required to support new

development through 2022 will total approximately 540 acres. This would include 166 acres of land characterized as developable – about 6 percent of the Town's supply of developable land.<sup>41</sup>

### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Because a relatively high proportion of its total area (53 percent) is already protected, especially through State ownership, as well as the Town's physical characteristics, the total supply of developable vacant and low-density residential land in Hardenburgh is limited – an estimated 2.692 acres as of 2009.

After having acquired relatively little land through June 2009, NYCDEP estimates that through 2022 it could acquire a total of 3,209 acres in Hardenburgh either in fee simple or through conservation easements. Based on the developable percentage of land acquired in fee simple or as conservation easements as of June 2009, it is estimated that these acquisitions will include approximately 636 acres of developable land – 24 percent of the Town's supply of developable vacant and low-density residential land in 2009. NYCDEP further estimates that WAC will during the same period purchase easements on 432 acres of agricultural land.

As shown in the following table, after taking into account both LAP acquisitions and the land required to support new development, it is estimated that Hardenburgh would still be left with approximately 70 percent of the Town's current stock of developable vacant and low-density residential land.

Table 4-51: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		2,692 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	3,209 acres	
Developable vacant or low-density residential land acquired		636 acres
Residential Development, 2010-2022		
Projected housing units built	36 units	
Land needed for housing	540 acres	
Developable portion of land needed for housing		166 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		1,891 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		70 percent

As noted in Chapter 3, this estimate of LAP's impact on the Town's supply of developable land needs also to take into account that as of 2009, Hardenburgh's supply of such land is already quite limited. As defined here, developable land represents only 5.2 percent of the Town's total

jurisdiction wetlands with no buffer, FEMA 100-year floodplains, or slopes of greater than 15 percent. Land with any one or more of these characteristic in considered undevelopable.

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<sup>&</sup>lt;sup>41</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal

land area; and by 2022 this percentage would decline to 3.7 percent. However, with the low rate of new development projected in Hardenburgh (36 units over 12 years), it is expected that there is little potential for conflict between projected LAP acquisitions and the land needed to support new development. The Extended LAP through 2022 is thus unlikely to have any adverse impact on the rate of residential development in Hardenburgh.

NYCDEP acquisitions would also help protect the Town's natural environment, thus preserving the rural character of the Town. Moreover, assuming that the percentage of newly-acquired land opened to public recreational use is similar to what it has been in other watershed towns through 2009, it is estimated that through 2022 more than 1,200 acres of land acquired in fee simple in Hardenburgh could be made available by NYCDEP for public recreational use. WAC's acquisition of additional easements could also help preserve the Town's remaining agricultural uses.

Hardenburgh is one of several watershed towns that did not have the option to designate any hamlet areas under the 1997 MOA. In 2009, the Town also chose not to propose any new hamlet-area designations.

## **CONCLUSIONS**

Hardenburgh has a very limited supply of developable land. But given the extremely low-density character of the Town and its history of limited growth, the projected level of acquisitions in Hardenburgh under the extended LAP is unlikely to affect in any substantial way the existing patterns of land use in the Town, or the availability of land for development through 2022.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Hardenburgh.

# TOWN OF OLIVE

## **EXISTING CONDITIONS**

The Town of Olive is located in central Ulster County, at the eastern edge of the West-of-Hudson watershed region. The Town's resident population in 2008 was estimated at 4,759 – an increase of more than 16 percent since 1990, with most of this growth occurring before 2000.

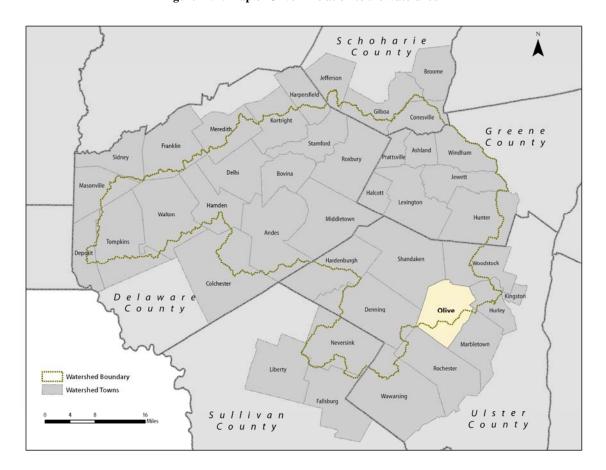


Figure 4-52: Map of Olive in relation to the watershed

Town of Olive – Quick Facts			
Land area:	41,735 acres		
Percent of town land area within the watershed (including reservoirs):	70%		
Percent of land protected	58%		
Population (estimated), 2008:	4,759		
Median age (estimated), 2008	45.0		
Median household income (estimated), 2008	\$55,202		

About 58 percent of the total area of the Town of Olive is protected (including the surface area of part of the Ashokan Reservoir, which makes up about 10 percent of the total area of the Town). Low-density residential and privately-owned vacant land makes up much of the rest – about 38 percent of the Town's total area (see Table 4-52 and Figure 4-53). Compared to many other watershed towns, a relatively high percentage of the Town's land is in higher-density residential use, reflecting the concentration of a substantial part of the Town's population in its hamlets, as well as the Town's proximity to employment opportunities in Kingston and along the New York State Thruway. About 13 percent of all housing units in Olive in 2000 were for seasonal or recreational use – one of the lowest percentages among all west-of-Hudson watershed towns. Olive currently has very little agricultural land – about 191 acres, virtually all of which is located outside the watershed.

Much of the recent development that has occurred in the watershed portion of Olive since 1990 (as shown in the black highlighted parcels on Figure 4-53), has been clustered in and near the hamlets along Routes 28 and 28A, including Ashokan, Shokan, Boiceville, West Shokan and Olivebridge. Based on estimates supplied by DemographicsNow, we estimate that between 2000 and 2009, approximately 158 new housing units were built in Olive.

Table 4-52: Land uses by type

	In Watershed		Out Watershed		Total	
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural	1	0%	190	2%	191	0%
High-Density Residential	3,044	10%	2,751	22%	5,795	14%
Low-Density Residential	3,394	12%	3,545	28%	6,939	17%
Commercial/Other	426	1%	463	4%	888	2%
State/Other Protected	6,907	24%	1,183	9%	8,090	19%
City Protected	10,044	22%	N/A	N/A	6,524	16%
Vacant	5,039	17%	3,728	30%	8,767	21%
Total	29,252		12,483		41,735	

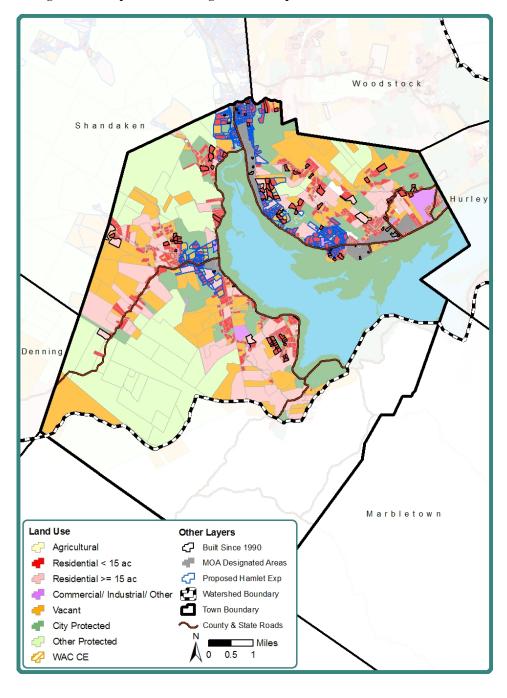


Figure 4-53: Map of Olive showing land use and protected land within the Watershed

The Town's website describes Olive as "primarily residential in nature, with a large percentage of seasonal residents, and a limited number of backyard farms with victory gardens." In a section geared to visitors, the site highlights Olive's natural beauty and recreational resources.

Olive embodies the beauty of the Catskills with its pristine streams and majestic mountain peaks. Sunrise and sunset at the Ashokan reservoir will take your breath away as you watch Mother Nature's color show. Olive has something for everyone. Fishing and wild game hunting...Hiking trails, maintained walkways, mountain bike trails and picnic areas around the Ashokan.

Natural beauty is Olive's strong point, from its cool, clear mountain streams to the majestic forests.

In describing opportunities for outdoor recreation in Olive, the site highlights fishing and boating on the Ashokan Reservoir, and hiking on the trails above the reservoir. The site also highlights opportunities for snowmobiling, tubing on the Esopus Creek, and the Town's restaurants and shops.

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 2,285 acres in Olive pursuant to the 1997 MOA. As shown in Table 4-53 below, purchases in fee simple account for about 63 percent of all acquisitions in the town. Figure 4-54 shows the location of LAP properties in Olive, by type of acquisition.

Table 4-53: Acquisitions in the Town of Olive through July 2009

Type of acquisition	Acres
Fee simple	1,717
Conservation easements	568
WAC agricultural easements	0
Total acquired	2,285

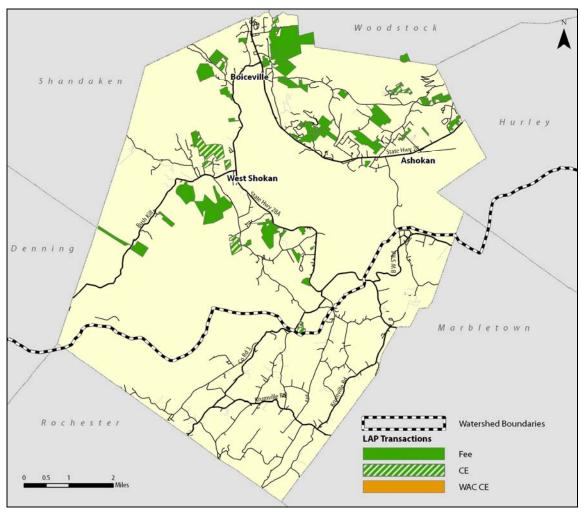


Figure 4-54: Map of LAP properties in Olive, by type of acquisition

Of the 1,717 acres that NYCDEP acquired in fee simple as of July 2009, 926 acres – 54 percent of the total – had been opened for public recreational use.

Pursuant to the 1997 MOA, the Town designated hamlet areas totaling 547 acres. However the Town did not elect to prohibit acquisition of lands by LAP within these designated Hamlets.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Ulster County is expected to grow by about 3 percent, somewhat slower than the rate of growth during the past two decades. For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming the pace of new development in Olive (as measured by new residential units) remains the same as it was between 1990 and 2008 (about 23 units per year), it is estimate that the land required to support new development through 2022 will total

approximately 1,194 acres, including 748 acres of land characterized as developable – about 13 percent of the Town's supply of such land as of 2009. 42

In addition to new residential development, the Town could see some additional growth in small businesses that serve local residents and visitors to the region.

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

Based on LAP's experience in Olive to date, NYCDEP estimates that through 2022, it could acquire an additional 1,899 acres either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions will include approximately 871 acres of developable land – about 15 percent of the Town's supply of developable vacant and low-density residential land as of 2009.

As shown in the following table, it is thus estimated that after taking into account both LAP acquisitions and the land required to support new development, Olive will still be left with 4,065 acres of developable vacant and low-density residential land in 2022 – approximately 72 percent of the town's current stock of such land.

Table 4-54: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		5,684 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	1,899 acres	
Developable vacant or low-density residential land acquired		871 acres
Residential Development, 2010-2022		
Projected housing units built	276 units	
Land needed for housing	1,194 acres	
Developable portion of land needed for housing		748 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		4,065 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		72 percent

This estimate could prove to be conservative. As noted above, the pace of development in Olive has been somewhat slower since 2000 than it was in the 1990s. The assumption that new

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<sup>&</sup>lt;sup>42</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, or slopes of greater than 15 percent. Land with any one or more of these characteristic in considered undevelopable.

development will average 23 new units per year between 2010 and 2022 could prove to be overstated.

The relatively high demand for land to accommodate new development that has been projected here could suggest some potential for conflict between the projected level of acquisitions by NYCDEP and future development in Olive. However, as Figure 4-54 indicates, much of the recent development within the Town has been concentrated along or near Routes 28 and 28A, while much of the vacant and low-density residential land most likely to be acquired by NYCDEP lies outside these corridors.

The potential impact of future acquisitions can be assessed relative to the character of the community, as reflected both in historic patterns of development and as that character is described by the Town in the above section. NYCDEP's acquisition of watershed land and conservation easements is broadly consistent with the preservation of the Town's natural assets, and has added to the supply of land available for public recreation. Moreover, the designation of hamlet areas within which the City does not acquire property helps ensure that LAP is compatible with the goals for preservation and revitalization of hamlets in the Route 28 corridor that have been stated by the Central Catskills Collaborative, of which the Town of Olive is a member. Moreover, the Town has proposed to expand Olive's designated hamlet areas from 547 to 1.333 acres, which NYCDEP agrees is reasonable. If the Town elects, in the future, to prohibit acquisitions from the designated area, this would further ensure that land is available within these areas to continue to accommodate future development.

#### **CONCLUSIONS**

While the amount of land projected to be acquired in Olive under the Extended LAP is substantial, the Town would still have a substantial supply of undeveloped land as of 2022. Additional acquisitions under the Extended LAP would help protect the high-quality natural environment that is clearly among Olive's greatest economic assets.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Olive.

#### TOWN OF SHANDAKEN

#### **EXISTING CONDITIONS**

The Town of Shandaken is located in northwestern Ulster County, entirely within the New York City watershed. Shandaken's resident population in 2008 was estimated to be 3,427 – an increase of 5.9 percent since 2000. Shandaken is primarily rural in character, with most of its population concentrated in hamlets such as Pine Hill, Shandaken, Phoenicia and Big Indian along Route 28.

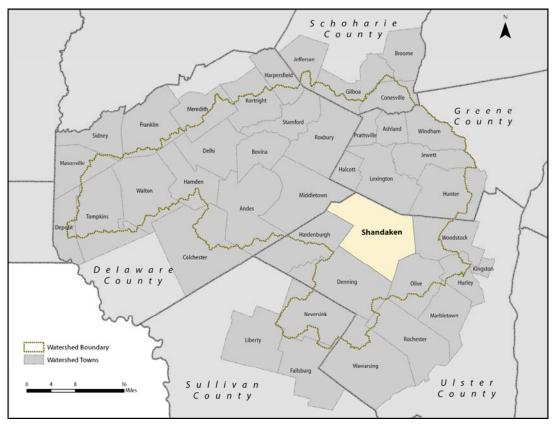


Figure 4-55: Map of Shandaken in relation to the watershed

Town of Shandaken – Quick Facts					
Land area:	78,875 acres				
Percent of town land area within the watershed:	100%				
Percent of land protected:	72%				
Population (estimated), 2008:	3,427				
Median age (estimated), 2008	47				
Median household income (estimated), 2008	\$39,555				

The local economy is based primarily on recreational activity, including skiing at Belleayre Mountain as well as hiking and hunting in the State Forest Preserve. In addition to its full-time population, the Town has a relatively large seasonal or part-time population; in 2000, according

to the Census Bureau, 32 percent of Shandaken's 2,710 housing units were for seasonal or recreational use. DemographicsNow estimates that between 2000 and 2008, the total number of housing units in the Town increased by 205 – an average of 25.6 units per year.

As Table 4-55 and Figure 4-56 show, nearly 72 percent of Shandaken's total area consists of protected land, with privately-owned vacant land and low-density residential land accounting for about two-thirds of the remainder.

Table 4-55: Land uses by type

Land Use	Acres	% of Total
Agricultural	0	0%
High-Density Residential	3,808	5%
Low-Density Residential	6,361	8%
Commercial/Other	1,474	2%
State/Other Protected	53,753	68%
City Protected	2,701	3%
Vacant	9,804	12%
<b>Total Town Acres</b>	78,875	

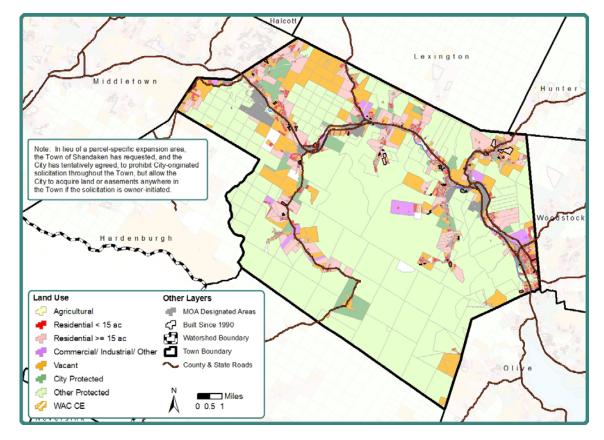


Figure 4-56: Map of the Town of Shandaken, showing land uses, development since 1990

After declining sharply in the first half of the twentieth century, the Town's population has grown steadily in recent decades. With a resident population of 3,235 in 2000, Shandaken for the first time surpassed its previous high – which had been set in 1900. With a high percentage of its lands already protected – its mountainous terrain – and much of the land in its hamlet areas already developed – Shandaken has relatively little developable land remaining.

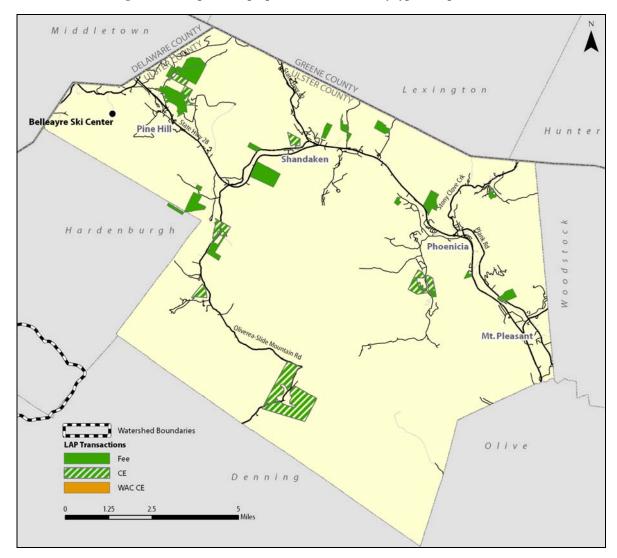
# **Previous LAP Activity**

Through July 2009, NYCDEP had acquired a total of 2,660 acres in Shandaken pursuant to the 1997 MOA. As shown in Table 4-56, below, purchases of land in fee simple account for 54 percent of the total acreage acquired under LAP. Figure 4-57 shows the location of LAP properties in Shandaken, by type of acquisition.

Table 4-56: Acquisitions in the Town of Shandaken through July 2009

Type of acquisition	Acres
Fee simple	1,424
Conservation easements	1,236
WAC agricultural easements	-
Total acquired	2,660

Figure 4-57: Map of LAP properties in Shandaken, by type of acquisition



As shown in Figure 4-57, most of the land acquired in Shandaken by the LAP through June 2009 is located near the Route 28 corridor, but outside the Town's main hamlet areas.

Of the 1,424 acres acquired by NYCDEP in fee simple in Shandaken, 1,220 acres have been opened for public recreational use.

Pursuant to the 1997 MOA, Shandaken designated six hamlet areas totaling 1,506 acres in Pine Hill, Big Indian, Allaben, Phoenicia, Mount Tremper and Chichester. These designations, which are shown in gray in Figure 4-56, have helped ensure that acquisition of land and easements by NYCDEP does not conflict with commercial activity and further development in the hamlets.

#### FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2022, as discussed in Chapter 3, the resident population of Ulster County is expected to grow by about 3 percent, somewhat slower than the rate of growth during the past two decades. At the same time, the demand for second homes in the County may not return to the peak levels of the last twenty years – in the near term due to economic conditions, and later in the forecast period (as also discussed in Chapter 3) due to a decline in the number of greater New York area residents in the 45-to-64 age bracket – the prime second-home-buying years.

For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming the pace of new development in Shandaken (as measured by new residential units) remains, on an average annual basis, the same as it was between 1990 and 2008, we can estimate that the land required to support new development through 2022 will total approximately 650 acres – including 186 acres of land characterized as developable.

The planned Belleayre Resort straddles the boundary between Shandaken and Middletown. Under an agreement negotiated in 2007 among the developer, local officials, NYCDEP, and NYSDEC, the project would include two hotels with a total of 370 rooms, an 18-hole golf course, and 259 lodging units and other facilities.

The Town of Shandaken's 2005 comprehensive plan presents a vision of the Town as a place:

...with bustling hamlets, interesting shops, successful restaurants and attractive overnight accommodations, surrounded by open spaces and unspoiled natural beauty – one with a prosperous economy centered on tourism, historically our most enduring business...We put a high priority on the revitalization of our hamlets.<sup>44</sup>

The Town's goals as defined in the comprehensive plan are to:

A. Protect and preserve the environmental, historical, and cultural features and resources within the Town of Shandaken from harm, physical degradation and visual impacts.

<sup>&</sup>lt;sup>43</sup> For purposes of this analysis, developable land includes all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, or slopes of greater than 15 percent.. Land with any one or more of these characteristic in considered undevelopable.

<sup>&</sup>lt;sup>44</sup> Robert G. Cross, Town Supervisor, "Vision Statement," Town of Shandaken, Comprehensive Plan for the Town of Shandaken, New York, July 2005.

- B. Promote the economic development of the Town of Shandaken to ensure an acceptable standard of living for its residents.
- C. Provide programs and laws to guide future development toward desired patterns within the Town of Shandaken.
- D. Provide the infrastructure needed to meet the other Comprehensive Plan goals and to meet the health, safety and quality of life needs of residents of Shandaken.
- E. Be proactive in establishing regional partnerships to address issues that transcend Town boundaries.
- F. Develop community education and outreach programs that foster an understanding of key issues facing the Town and encourage public participation in developing effective solutions.45

#### FUTURE CONDITIONS WITH THE PROPOSED ACTION

As noted in Chapter 3, any analysis of the Extended LAP's impact on Shandaken's supply of developable land needs to take into account that as of 2009, Shandaken's supply of such land is already quite limited. As defined here, developable land represents only 1.8 percent of the Town's total land area. Given the projected level of development in Shandaken, and the number of developable acres projected to be acquired by LAP, this percentage could decline to 1.4 percent by 2022.

- Given the pace of development in Shandaken, projected LAP acquisitions through 2022 might thus be expected to impact the availability of land for development. Several factors, however, are likely to reduce significantly any potential impacts: As noted above, the definition of developable land used in this analysis is conservative in several respects. The effective supply of developable land as of 2009 is in reality likely to be somewhat larger than Table 4-57 indicates. In fact, Shandaken's 2005 comprehensive plan, using a somewhat broader definition of developable land, estimated the Town's remaining developable land at 4,760 acres compared to 1,444 used in this analysis. Even under this broader definition the supply of land available for development is clearly limited. It should nevertheless be noted that despite this relatively tight supply of developable land, both the Town's population and its housing stock has grown significantly between 2000 and 2008 by 5.9 and 7.6 percent, respectively.
- Incorporated into the Extend LAP will be a new NYCDEP policy that will potentially reduce acquisitions in Shandaken. Recognizing the reality that nearly 72 percent of Shandaken land area is already protected, Town officials have proposed and NYCDEP has agreed to a new policy under which the Department will forego active solicitation of individual land-owners in the Town, but will still be free to enter into negotiations with, and purchase land from, owners who initiate contact with NYCDEP.

Based on LAP's experience in the Town to date, and taking into account the change in policy described above, NYCDEP estimates that through 2022, it could acquire an additional 1,450 acres in Shandaken either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, we estimate that these acquisitions will include approximately 185 acres of developable land.

As shown in the following table, it is estimated that after taking into account both LAP acquisitions and the land required to support new development, Shandaken will still be left with approximately 74 percent of the Town's current stock of developable non-agricultural land.

Table 4-57: Remaining developable land after LAP and housing development, 2010-2022

Developable vacant or low-density residential land in 2009		1,444 acres
LAP Acquisitions, 2010-2022		
Projected fee and CE acquisitions	1,450 acres	
Developable vacant or low-density residential land acquired		185 acres
Residential Development, 2010-2022		
Projected housing units built	216 units	
Land needed for housing	650 acres	
Developable portion of land needed for housing		186 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2022		1,073 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2022		74 percent

The potential impact of additional acquisitions through 2022 can also be assessed in terms of how such acquisitions affect the character of the community. The comprehensive plan acknowledges some tension among three important priorities: protecting the natural environment; the need to protect the city's water supply, resulting in additional acquisitions by NYCDEP from the town's already-limited supply of developable land; and "local residents who need additional economic opportunities to sustain their quality of life." The plan expresses particular concern about "a growing disconnect between the cost of housing and the ability of local wage-earners to afford a place to live."

While LAP may not contribute directly to achievement of other goals outlined in the plan – such as promoting economic development – it does not appear to conflict with those goals. The very high proportion of protected land in the town means that its development capacity will inevitably be limited – but with collaboration between the Town and the Department, it should be possible to accommodate both new development, additional acquisitions under LAP and preserve the character of the Town, through 2022 and beyond.

#### **CONCLUSIONS**

Due to the Town's very limited supply of developable land, Shandaken is one of just a few West-of-Hudson watershed towns where there may be some potential for conflict between projected acquisitions under the Extended LAP and projected future development. However, the

<sup>&</sup>lt;sup>45</sup> Ibid., p. III-3

proposed agreement among NYCDEP, the Town and other stakeholders under which NYCDEP would no longer actively solicit land in Shandaken will help alleviate any potential for conflict. Moreover, LAP does not conflict with what appears likely to be by far the most significant development proposal affecting the town – the planned Belleayre Resort.

Given the likelihood of relatively limited acquisitions in Shandaken under the Extended LAP, and on the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Shandaken.

## TOWN OF WOODSTOCK

#### **EXISTING CONDITIONS**

The Town of Woodstock is located in northern Ulster County, at the eastern edge of the West-of-Hudson watershed region. The Town's resident population in 2008 was estimated at 6,346 – an increase of one percent since 1990. The hamlet of Woodstock – which is located outside the watershed – is the Town's largest population center, accounting for about one-third of all residents, and its leading commercial center.

Schoharie County Broome Greene County Franklin rattsville Ashland Jewett Halcott Lexington Middletown Hardenburgh Woodstock Colchester Delaware County Hurley Neversink Watershed Boundary Watershed Towns Ulster Sullivan County County

Figure 4-58: Map of watershed towns

Town of Woodstock – Quick Facts				
Land area:	43,321 acres			
Percent of town land area within the watershed (including reservoirs):	52%			
Percent of land protected	30%			
Population (estimated), 2008:	6,346			
Median age (estimated), 2008	50.0			
Median household income (estimated), 2008	\$60,000			

Unlike most other watershed towns, 19 percent of Woodstock's land is higher-density residential use, reflecting the concentration of a substantial part of the Town's population in its hamlets. An additional 21 percent is low-density residential, and another 24 percent is vacant land. Woodstock currently has very little agricultural land – about 49 acres, all of which is located outside the watershed. Commercial, industrial and community uses account for about 4 percent of the Town's land, with almost all of these uses being located outside the boundaries of the watershed. (See Table 4-58)

Woodstock has long been well-known as a center for the arts, music and entertainment. Its businesses and cultural institutions include galleries, studios, theaters, museums and music venues, and an annual film festival, as well as restaurants and visitor accommodations. The Town is also home to Ametek Rotron, an aerospace firm that, with 350 employees, is among the region's largest manufacturing enterprises.

About 13 percent of all housing units in Woodstock in 2000 were for seasonal or recreational use – one of the lowest percentages among all west-of-Hudson watershed towns.

Much of the recent development that has occurred in the watershed portion of Woodstock since 1990 (as shown in the black highlighted parcels on Figure 4-59) has been clustered in and near the hamlets along Route 212 and Wittenburg Road, including Lake Hill, Willow and Wittenburg. Based on estimates supplied by DemographicsNow, we estimate that between 2000 and 2009, approximately 153 new housing units were built in Woodstock.

Table 4-58: Land Uses by Type

	In Watershed Out Watershed			Total		
Land Use	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agricultural	0	0%	49	0%	49	0%
High-Density Residential	2,817	13%	5,975	27%	8,792	19%
Low-Density Residential	4,851	22%	4,505	21%	9,356	21%
Commercial/Other	50	0%	1,553	7%	1,603	4%
State/Other Protected	4,419	20%	3,888	18%	8,307	18%
City Protected	5,039	23%	N/A	N/A	6,524	14%
Vacant	4,970	22%	5,882	27%	10,852	24%
Total	22,346		20,975		43,321	

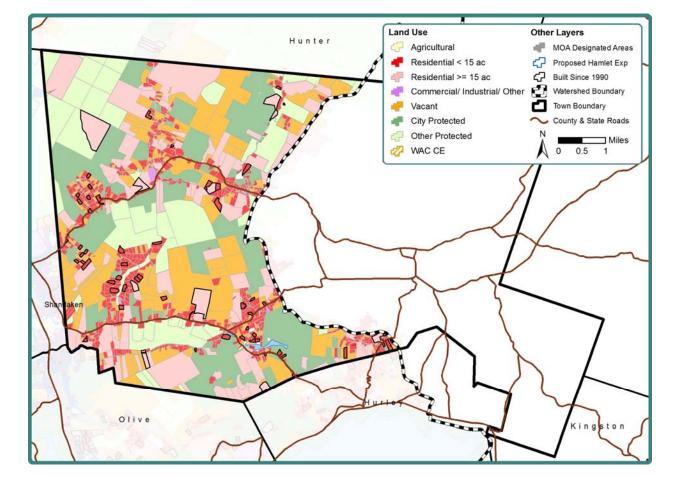


Figure 4-59: Map of Woodstock showing land use and protected land within the Watershed

# **Previous LAP Activity**

Through June 2009, NYCDEP had acquired a total of 5,120 acres in Woodstock pursuant to the 1997 MOA. As shown in Table 4-59 below, purchases in fee simple account for about 92 percent of all acquisitions in the town. Figure 4-60 shows the location of LAP properties in Woodstock, by type of acquisition.

Table 4-59: Acquisitions in the Town of Woodstock through July 2009

Type of acquisition	Acres
Fee simple	4,700
Conservation easements	420
WAC agricultural easements	0
Total acquired	5,120

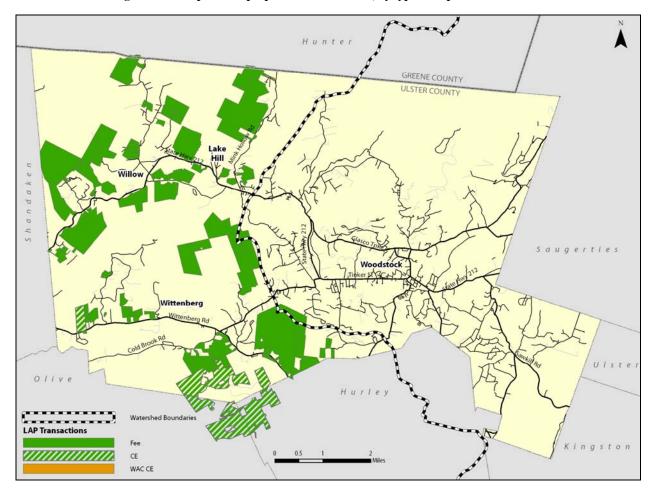


Figure 4-60: Map of LAP properties in Woodstock, by type of acquisition

Of the 4,700 acres that NYCDEP acquired in fee simple as of July 2009, 1,212 acres -26 percent of the total - had been opened for public recreational use.

# FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Between 2010 and 2025, as discussed in Chapter 3, the resident population of Ulster County is expected to grow by about 3 percent, somewhat slower than the rate of growth during the past two decades. For purposes of constructing a "reasonable worst-case scenario," we have nevertheless estimated future residential development based on the rate of development during the past two decades. Assuming the pace of new development in Woodstock (as measured by new residential units) remains the same as it was between 1990 and 2008 (about 17 units per year), it is estimate that the land required to support new development through 2027 will total approximately 1,112 acres, including 679 acres of land characterized as developable 46 – about 10 percent of the Town's supply of such land as of 2009.

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For purposes of this analysis, developable land includes all privately-owned vacant land and lowdensity residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres

Currently-planned development includes a complex of 50 units of affordable housing, to be developed in the hamlet of Woodstock by the Rural Ulster Preservation Corporation. In addition to new residential development, the Town could see some additional growth in arts-related uses, and in small businesses that serve local residents and visitors to Woodstock.

The Town's 2003 Comprehensive Plan outlines the following goals:

- Protect, maintain, and enhance the quality of Woodstock's natural setting and ecosystems (e.g., forests, streams, drainage systems, groundwater sources, wetlands, meadows, and others) to preserve the distinctive natural setting and ensure a sustainable future for the Town and its residents.
- Maintain balance between small-scale recreation opportunities and large-scale environmental features to provide a variety of recreational and cultural opportunities for all residents and visitors.
- Preserve and enhance existing hamlet centers as complementary buttresses to the overall quality of life in the Town.
- Since affordability breeds diversity, which spurs economic and cultural dynamism, the Town should encourage a variety of housing types to accommodate the varying needs of all Woodstock residents including seniors, starting artists, and young families.
- Protect and enhance the town's community, cultural, environmental, and natural resources to maintain Woodstock as a location of choice for residents, artists, artisans, entrepreneurs and others seeking a dynamic cultural life in a rural setting.
- Provide an integrated transportation system that can serve a variety of needs in a manner that is safe, economical, ecologically sound, and aesthetically pleasing.
- Continue to provide high quality municipal services to every resident in the community that protects the natural environment; regards residents' needs; and protects the health, safety, and general welfare of the community.

#### FUTURE CONDITIONS WITH THE GREATER IMPACT ALTERNATIVE

Based on LAP's experience in Woodstock to date, NYCDEP estimates that under the proposed action, it could acquire an additional 2,593 acres in the Town between 2010 and 2027, either in fee simple or through conservation easements. Based on the percentage of the Town's low-density residential and vacant land that is developable as of 2009, it is estimated that these acquisitions would include approximately 923 acres of developable land – about 13.7 percent of the Town's supply of developable vacant and low-density residential land as of 2009.

per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has any one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, DEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, or slopes of greater than 15 percent. Land with any one or more of these characteristic in considered undevelopable.

As shown in Table 4-60, it is thus estimated that after taking into account both LAP acquisitions and the land required to support new development, Woodstock will still be left with 5,157 acres of developable vacant and low-density residential land in 2027 – approximately 76 percent of the Town's current stock of such land.

Table 4-60: Remaining developable land after LAP and housing development, 2010-2027

Developable vacant or low-density residential land in 2009		6,759 acres
LAP Acquisitions, 2010-2027		
Projected fee and CE acquisitions	2,593 acres	
Developable vacant or low-density residential land acquired		923 acres
Residential Development, 2010-2027		
Projected housing units built	289 units	
Land needed for housing	1,112 acres	
Developable portion of land needed for housing		679 acres
Remaining Town Land after LAP and Residential Development		
Developable vacant or low-density residential land after LAP and development in 2027		5,157 acres
Percent of 2009 developable vacant or low-density residential land remaining in 2027		76 percent

The Greater-Impact Alternative can also be assessed in terms of its potential impact on the character of the Town of Woodstock. Broadly speaking, this alternative appears to be fully consistent with the goals set out in the Town's draft comprehensive plan in 2003.

The acquisitions projected under the Greater-Impact Alternative would help protect the primarily low-density character and natural environment of the western portion of Woodstock, while having no direct impact in the southeastern portion of the Town – in and near the hamlets of Woodstock, Bearsville and Zena – that are the most likely areas for new development.

With respect to open space and recreation, the Town's goals are consistent with those of NYCDEP. The Town's Comprehensive Plan states:

The western portion of the town is located within the New York City Watershed and, as a result, the New York City Department of Environmental Protection (DEP) has targeted the more environmentally sensitive of these lands for acquisition on a willing buyer/willing seller basis. Their intent is to acquire lands to prohibit development and thus protect water quality. Interestingly, DEP's goals are consistent with the goals of this comprehensive plan - to protect the natural environment. However, as lands are acquired they may present new opportunities to expand the recreational resources in the community. To meet this future need, coordinate with DEP to continue to allow public access for hiking, hunting, and fishing on city-acquired land per the New York City watershed protection effort.

Because the Town's largest and most developed hamlets are outside the watershed, the projected acquisitions would not affect the character of these areas, or their capacity for further development. (Woodstock is one of several watershed towns that, pursuant to the 1997 MOA, chose not to designate any hamlet areas within the watershed portion of the town. In 2009, the Town also chose not to propose any new hamlet-area designations.) Both the proposed action and the Greater-Impact Alternative thus appear to be generally consistent with the goal of preserving and enhancing these hamlets.

#### CONCLUSIONS

Under both the proposed action, additional acquisitions by NYCDEP would be limited to the western portion of the Town – the area within the boundaries of the watershed, consisting primarily of low-density residential properties, privately-owned vacant land and land already protected by New York City or New York State. Even with the projected acquisition of nearly 2,600 acres, there appears to be an adequate supply of land in the non-watershed portions of the Town (and to a lesser extent, within the watershed) to support the projected level of new development. And beyond its potential impact on the supply of developable land, the proposed action appears to be consistent with the goals defined in Woodstock's 2003 draft comprehensive plan.

On the basis of the analyses described above and in Chapters 2 and 3, the Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Woodstock.

# **CHAPTER 5:**

# WATER QUALITY AND NATURAL RESOURCES

#### INTRODUCTION

The Extended LAP is intended to provide long-term benefits to the water quality of the City's water supply system through the preservation of sensitive lands proximate to water resources. Land acquisition is an anti-degradation strategy, which can preclude adverse water quality impacts associated with development and other land uses.

This section will provide a description of existing water quality in the watershed and a discussion of the anticipated beneficial effects of land acquisition on water quality, water resources, and natural resources. It will also examine the water quality and natural resource impacts of avoiding land acquisition in and around hamlet areas where centralized services already exist, while focusing acquisition efforts in other areas, consistent with "smart growth" principles.

The Extended LAP would result in a beneficial effect on water quality and natural resources, and there would be no potential for significant adverse impacts to occur. Therefore, the analysis provided in this chapter is qualitative and relies on the extensive documentation in the literature that demonstrates beneficial impacts on water quality and natural resources of land preservation and smart growth principles.

### **EXISTING CONDITIONS**

LAP is a key component of the City's efforts to increase watershed protection and avoid filtration of the Cat-Del system, which provides water to over nine million residents of the City and nearby communities in New York State. Since the program started in the 1990s, LAP has protected, through acquisition, over 96,000 acres of land in the one million-acre Cat-Del System. Together with lands previously protected by the State and other entities, these acquisitions have raised the level of permanently protected land in the Cat-Del System from 24 percent in 1997 to 34 percent today.

The NYC reservoirs and water supply system are subject to the federal Surface Water Treatment Rule (SWTR) standards, NYS ambient water quality standards, and NYCDEP's own target criteria for water quality. A summary of the latest reservoir-wide statistics for a variety of physical, biological, and chemical analytes are shown in Figures 5-1a through 5-1d<sup>1</sup> for individual reservoirs throughout the Cat-Del system.

Median turbidity levels in all terminal reservoirs are well below the standard of 5.0 NTU. Median total phosphorus was lower than the water quality guidance value of 15  $\mu$ g/L for each source water reservoir in 2008. Nitrate was uniformly low in all reservoirs with no samples

<sup>&</sup>lt;sup>1</sup> "2008 Watershed Water Quality Annual Report," New York City Department of Environmental Protection, Bureau of Water Supply, July 2009

approaching the standard of 10~mg/ L. Ammonia was very low for WOH terminal reservoirs and no excursions above the standard were evident.

Table 5-1a: Reservoir-wide summary statistics for a variety of physical, biological, and chemical analytes, 2008.

			West Ashokan B	asin		East Ashokan Basin			Schoharie		
Analyte	WQS	N	Range	Median	N	Range	Median	N	Range	Median	
PHYSICAL											
Temperature (°C)		143	4.0 - 22.8	9.5	92	3.8 - 23.7	10.5	119	4.2 - 22.1	9.7	
pH (units)	6.5 <b>-</b> 8.5 <sup>1</sup>	143	5.9 - 7.5	6.7	92	5.9 - 8.2	7.1	119	6.3 - 7.7	6.9	
Alkalinity (mg/L)		12	6.6 - 13.9	10.1	9	9.2 - 12.1	9.9	9	9.7 - 18.8	12.9	
Conductivity		105	42 - 70	55	86	50 - 64	56	108	58 - 92	73	
Hardness (mg/L) <sup>2</sup>		9	12.7 - 20.0	18.1	8	15.9 - 18.2	16.3	6	16.4 - 19.8	18.6	
Color (Pt-Co units)	(15)	141	6 - 18	12	89	5 - 15	9	91	5 - 24	16	
Turbidity (NTU)	$(5)^3$	144	1.3 - 9.3	3.6	91	0.8 - 6.6	1.6	120	1.2 - 11.0	4.3	
Secchi Disk Depth (m)		39	1.4 - 4.5	3.1	25	2.1 - 5.8	4.2	41	1.1 - 4.0	2.2	
BIOLOGICAL											
Chlorophyll a (µg/L)	7 4	28	1.04 - 4.71	2.18	20	0.96 - 3.78	1.88	35	0.16 - 5.67	1.63	
Total Phytoplankton (SAU)	2000 4	75	<5 - 610	180	59	5 - 870	170	52	<5 - 1100	56	
CHEMICAL											
Dissolved Organic Carbon (mg/L)		85	1.0 - 2.1	1.3	57	1.3 - 1.8	1.5	73	1.4 - 2.8	1.7	
Total Phosphorus (μg/L)	15 4	105	<5 - 14	8	65	<5 - 13	8	104	6 - 19	10	
Total Nitrogen (mg/L)		75	0.15 - 0.39	0.30	48	0.11 - 0.40	0.29	73	0.14 - 0.45	0.32	
Nitrate+Nitrite-N (mg/L)	10 1	59	< 0.050 - 0.301	0.222	42	< 0.050 - 0.276	0.181	37	< 0.050 - 0.350	0.180	
Total Ammonia-N (mg/L)	2 1	85	< 0.02 - 0.03	< 0.02	57	<0.02 - 0.05	0.02	64	< 0.02 - 0.04	0.02	
Iron (mg/L)	0.3 1	8	0.02 - 0.50	0.05	8	0.02 - 0.06	0.03	4	0.11 - 0.33	0.15	
Manganese (mg/L)	(0.05)	8	na	na	8	na	na	4	na	na	
Lead (μg/L)	50 1	8	<1 - 1	<1	8	<1 - <1	<1	4	<1 -<1	<1	
Copper (µg/l)	2001	8	<3 - 14	<3	8	<3 - 27	<3	4	<3 -<3	<3	
Calcium (mg/L)		9	3.8 - 6.2	5.5	8	4.8 - 5.2	5.0	6	5.1 - 6.0	5.8	
Sodium (mg/L)		9	3.32 - 4.41	3.79	8	3.59 - 4.09	3.75	6	4.57 - 5.32	5.04	
Chloride (mg/L)	250 <sup>1</sup>	36	5.9 - 7.6	6.6	27	6.3 - 7.1	6.7	28	6.8 - 11.1	9.6	

Table 5-1b: Reservoir-wide summary statistics for a variety of physical, biological, and chemical analytes, 2008.

			Cannonsville	2		Pepacton			
Analyte	WQS	N	Range	Median	N	Range	Median		
PHYSICAL									
Temperature (°C)		183	3.7 - 23.2	11.8	203	2.7 - 23.3	7.3		
pH (units)	6.5-8.5 <sup>1</sup>	166	6.5 - 9.1	7.0	157	6.6 - 9.2	7.1		
Alkalinity (mg/L)		18	10.9 - 20.4	15.8	21	9.2 - 13.5	10.5		
Conductivity		183	73 - 103	83	190	54 - 67	58		
Hardness (mg/L) <sup>2</sup>		18	20.0 - 26.6	24.7	19	16.3 - 20.3	18.2		
Color (Pt-Co units)	(15)	165	8 - 23	14	197	6 - 17	12		
Turbidity (NTU)	$(5)^{3}$	165	0.8 - 11.0	2.4	197	0.4 - 9.0	1.6		
Secchi Disk Depth (m)		59	1.7 - 5.3	2.9	66	0.6 - 5.1	3.9		
BIOLOGICAL									
Chlorophyll a (µg/L)	7 4	48	1.44 - 13.27	5.07	43	0.03 - 8.03	4.33		
Total Phytoplankton (SAU)	2000 4	76	5 - 4400	295	61	<5 - 880	230		
CHEMICAL									
Dissolved Organic Carbon (mg/L)		147	1.3 - 2.2	1.6	145	1.2 - 2.0	1.4		
Total Phosphorus (μg/L)	15 4	163	5 - 19	14	192	<5 - 22	8		
Total Nitrogen (mg/L)		120	0.20 - 0.79	0.54	130	0.14 - 0.59	0.47		
Nitrate+Nitrite-N (mg/L)	10 1	60	< 0.050 - 0.721	0.402	64	<0.050 - 0.480	0.381		
Total Ammonia-N (mg/L)	2 1	132	<0.02 - 0.05	0.02	142	<0.02 - 0.04	< 0.02		
Iron (mg/L)	0.3	8	0.04 - 0.11	0.07	8	0.02 - 0.04	0.03		
Manganese (mg/L)	(0.05)	8	na	na	8	na	na		
Lead (µg/L)	50 1	8	<1 -<1	<1	8	<1 - <1	<1		
Copper (µg/l)	$200^{1}$	8	<3 - 5	<3	8	<3 - 3	<3		
Calcium (mg/L)		18	5.6 - 7.6	7.1	19	4.8 - 6.1	5.3		
Sodium (mg/L)		18	5.94 - 7.56	6.40	19	3.62 - 3.90	3.74		
Chloride (mg/L)	250 <sup>1</sup>	32	10.3 - 12.7	11.1	40	6.2 - 7	6.8		

Table 5-1c: Reservoir-wide summary statistics for a variety of physical, biological, and chemical analytes, 2008.

		Neversink			Rondout		
Analyte	WQS	N	Range	Median	N	Range	Median
PHYSICAL							
Temperature (°C)		136	3.3 - 22.4	8.1	179	2.9 - 22.3	10.4
pH (units) Alkalinity (mg/L) Conductivity	6.5-8.5	136 9 136	5.6 - 7.3 1.7 - 6.5 25 - 31	6.3 3.0 29	149 9 179	6.0 - 8.5 5.3 - 9.9 44 - 61	7.0 6.5 53
Hardness (mg/L) <sup>2</sup> Color (Pt-Co units)	(15)	9 136	7.3 - 8.2 7 - 18	8.0 12	9 180	12.1 - 16.9 7 - 16	14.3 12
Turbidity (NTU) Secchi Disk Depth (m)	(5) 3	136 39	0.3 - 1.6 4.4 - 9.8	0.8 5.8	180 51	0.4 - 1.7 3.7 - 6.9	0.9 5.3
BIOLOGICAL							
Chlorophyll a (µg/L)	7 4	32	0.47 - 6.00	2.65	24	0.22 - 5.13	2.28
Total Phytoplankton (SAU)	2000 4	62	<5 - 220	41	106	<5 - 650	155
CHEMICAL							
Dissolved Organic Carbon (mg/L)		97	1.4 - 2.1	1.6	80	1.3 - 1.9	1.5
Total Phosphorus (μg/L)	15 4	135	<5 - 8	5	100	< 5 - 9	7
Total Nitrogen (mg/L)		97	0.10 - 0.35	0.28	80	0.25 - 0.47	0.34
Nitrate+Nitrite-N (mg/L)	10 1	46	<0.050 - 0.250	0.180	29	0.120 - 0.411	0.257
Total Ammonia-N (mg/L)	2 1	96	<0.02 - 0.08	< 0.02	70	<0.02 - 0.03	< 0.02
Iron (mg/L)	0.3	7	0.04 - 0.10	0.06	8	0.02 - 0.04	0.02
Manganese (mg/L)	(0.05)	7	na	na	8	na	na
Lead (µg/L)	50 1	7	<1 - 1	<1	8	<1 - <1	<1
Copper (µg/l)	2001	7	<3 - <3	<3	8	<3 - <3	<3
Calcium (mg/L)		9	2.1 - 2.3	2.3	9	3.5 - 4.9	4.1
Sodium (mg/L)	1	9	1.69 - 1.85	1.80	9	3.42 - 4.17	3.64
Chloride (mg/L)	250 <sup>1</sup>	21	3.1 - 3.7	3.5	25	6.4 - 8.1	6.9

Table 5-1d: Reservoir-wide summary statistics for a variety of physical, biological, and chemical analytes, 2008.

		West Branch Kensico			Boyd Corners		S			
Analyte	WQS	N	Range	Median	N	Range	Median	N	Range	Median
PHYSICAL										
Temperature (°C)		147	3.6 - 23.6	13.8	427	2.6 - 21.9	11.4	44	6.9 - 26.0	17.5
pH (units) Alkalinity (mg/L) Conductivity	6.5-8.5	133 14 139	6.4 - 8.1 9.4 - 50.5 59 - 165	7.2 17.9 95	362 20 401	6.3 - 7.5 8.7 - 13.3 50 - 88	7.0 10.6 67	44 5 44	6.8 - 8.1 23.9 - 37.1 193 - 224	7.4 34.5 209
Hardness (mg/L) <sup>2</sup> Color (Pt-Co units)	(15)	5 147	19.2 - 30.2 8 - 30	22.1 15	20 371	16.12 - 20.5 5 - 15	19.0 10	5 39	40.4 - 51.2 15 - 30	48.3 25
Turbidity (NTU) Secchi Disk Depth (m)	(5) 3	147 60	0.7 - 3.5 0.2 - 5.0	1.4 3.6	427 117	0.2 - 2.5 2.3 - 6.1	1.1 4.8	40 17	0.7 - 3.1 2.6 - 4.3	1.7 3.6
BIOLOGICAL										
Chlorophyll a (µg/L)	7 4	28	< 0.40 - 16.60	4.45	61	<0.40 - 9.30	4.30	18	<0.40 - 14.10	6.90
Total Phytoplankton (SAU)	2000 4	76	21 - 2500	440	159	30 - 1300	260	13	30 - 3300	400
CHEMICAL										
Dissolved Organic Carbon (mg/L)		62	1.5 - 3.3	2.0	193	1.1 - 1.9	1.5	40	2.2 - 4.4	3.9
Total Phosphorus (μg/L) Total Nitrogen (mg/L)	15 4	74 75	5 - 19 0.15 - 0.39	9 0.26	195 177	3 - 10 0.15 - 0.44	6 0.29	40 37	6 - 15 0.15 - 0.67	12 0.24
Nitrate+Nitrite-N (mg/L)	10 1	76	<0.010 - 0.264	0.131	170	0.042 - 0.336	0.190	38	< 0.010 - 0.133	0.005
Total Ammonia-N (mg/L)	2 1	76	< 0.010 - 0.101	< 0.010	136	< 0.010 - 0.035	< 0.010	38	< 0.010 - 0.033	< 0.010
Iron (mg/L)	0.3 1	5	0.03 - 0.96	0.06	6	0.02 - 0.04	0.02	4	0.07 - 0.49	0.10
Manganese (mg/L)	(0.05)	5	na	na	6	na	na	4	na	na
Lead (μg/L)	50 1	5	<1 -<1	<1	6	<1 - <1	<1	4	<1 -<1	<1
Copper (µg/l) Calcium (mg/L)	2001	5 5	<3 - <3 5.1 - 7.9	<3 5.8	6 20	<3 - <3 4.7 - 5.8	<3 5.4	4 5	<3 - <3 10.1 - 12.6	<3 12.0
Sodium (mg/L)		5	7.85 - 10.5	8.80	20	4.7 - 5.8	5.41	5	20.6 - 22.5	22.10
Chloride (mg/L)	250 <sup>1</sup>	14	9.6 - 34.3	19.0	20	7.3 - 10.9	9.0	5	38 - 41.3	40.4

The SWTR (40 CFR § 141.71(a)(1)) requires that water at a point just prior to disinfection not exceed specified thresholds for fecal coliform bacteria and turbidity. To ensure compliance with this requirement, NYCDEP monitors water quality for each of the water supply systems at "keypoints" (entry points from the reservoirs to the aqueducts) just prior to disinfection. As stated in the latest Annual Water Quality Report (2008), the fecal coliform counts at all the keypoints consistently met the SWTR standard that no more than 10% of daily samples may contain > 20 CFU 100mL-1. The 2008 calculated percentages for effluent waters at Croton Gate House, Catksill Lower Effluent Chamber and Shaft 18 on the Delaware Aqueduct were far below this limit. Median fecal coliform counts (CFU 100mL-1) in raw water samples taken at these sites were the same, at 1 CFU 100mL-1, while maxima were 7, 45, and 74, respectively. The SWTR limit for turbidity is 5 NTU. All three effluent waters, measured at 4-hour intervals, were consistently well below this limit in 2008.

Since 1993, the City has been granted a series of Filtration Avoidance Determinations for the Cat-Del system by the U.S. Environmental Protection Agency (EPA). This designation recognizes the high quality of New York City's West of Hudson water supply.<sup>2</sup>

Through the City's overall Watershed Protection Program, which includes many water quality improvement as well as anti-degradation programs, the high water quality of the system's reservoirs has been maintained and, in certain cases, improved. At the Cannonsville Reservoir, upgrades to wastewater treatment plants and Best Management Practices (BMPs) implemented at farms have resulted in lower algae levels and Total Phosphorus in the Reservoir. At a number of reservoirs, the City's waterfowl management program has dramatically reduced coliform levels.

## FUTURE WITHOUT THE PROPOSED ACTION

One of the planning elements of LAP is that it seeks to acquire more ecologically-sensitive lands, thereby encouraging development in areas where it is already occurring, or where it will have less impact of water quality. Without the Extended LAP, development can be expected to occur in a more diffuse manner, also known as sprawl, in areas where the adverse impacts on water quality could be greater. Without the Extended LAP, new development could occur in areas that are less suitable from an ecological standpoint and could be more damaging to water quality. Greater parcel fragmentation could also occur, with adverse impacts on natural resources and habitats.

In addition, the Extended LAP is a requirement of the Filtration Avoidance Determination. Without the Extended LAP, NYCDEP would risk losing filtration avoidance. See also, Chapter 11, *Alternatives, No Action Alternative*.

#### FUTURE WITH THE PROPOSED ACTION

As expressed in the 2007 FAD, "Land acquisition is one of the most effective, and therefore, important mechanisms to permanently protect the City's Catskill/Delaware watershed. The Land Acquisition and Stewardship Program [now LAP], which is described in detail in the New York City Watershed MOA, seeks to prevent future degradation of water quality by acquiring sensitive lands and by managing the uses on these lands."

Land Acquisition is an anti-degradation strategy that ensures protection by precluding land use changes on undeveloped land. Development, including the associated land disturbances and impervious surfaces, has the potential to introduce increased levels of pollutants, including pathogens, nutrients and turbidity, into watercourses. This is particularly important during storm events when pollutant levels are elevated and the rapid movement of water reduces the effectiveness of natural cleansing processes. Once the landscape is disturbed for development, the probability that pollutants could reach the drinking water supply is directly related to several factors including proximity to surface water features and topography. The water quality effects of the City's

<sup>&</sup>lt;sup>2</sup> New York City Filtration Avoidance Determination, Surface Water Treatment Rule Determination for New York City's Catskill/Delaware Water Supply System, USEPA in consultation with NYSDOH, July 2007.

acquisitions of sensitive lands accrue over time, as future development would occur at locations with less potential to adversely impact water quality rather than on the land protected by LAP.

The Extended LAP has a number of elements targeted at maximizing these water quality benefits as discussed below.

## **PRIORITIZATION**

The LAP first prioritizes property for solicitation on the basis of its location within the water supply system, followed by site-specific characteristics so as to maximize the water quality benefit of lands acquired. The proposed Extended LAP seeks to increase the percentage of protected lands in the Cat-Del System as a whole, with a particular emphasis on:

- Non-terminal reservoir basins with less than 30 percent protected lands;
- Specific sub-basins with a relatively low percentage of protected lands; and
- Reservoir basins that are expected to provide larger contributions to future water supply.

Ensuring protection of lands with water quality sensitive features is proposed to be accomplished through the targeted purchase of lands based on Natural Features Criteria, including wetlands, floodplains, and lands within 300 feet of streams, ponds or lakes or within 1,000 feet of reservoirs and lands with moderate to steep slopes.

#### NATURAL FEATURES

The Natural Features Criteria for the Extended LAP were modified to include numeric thresholds. As described in Chapter 1, *Project Description*, Table 1-4, the criteria would remove certain lands from future solicitation. This potential change would focus acquisitions on those lands more connected and sensitive to water quality. Further, by avoiding certain properties which would fall beneath the thresholds for acquisition, future development would be more likely to occur on properties deemed to have a lower potential impact on water quality. As discussed in Chapter 1, the criteria could reduce the amount of land available for solicitation. from 363,394 acres under current criteria to about 352,441 acres.

Even though some land may be eliminated from potential future solicitation, the land that is purchased will, under Natural Features thresholds, be land that is more water quality sensitive and therefore provides more protection of water resources. Nor would this revision be expected to decrease the number of acres eventually acquired; rather, a similar number of acres would be acquired from a slightly smaller pool of solicited land.

#### **STREAM BUFFERS**

In addition, through a Riparian Buffer Program, as discussed in Chapter 1, the City would further protect the watershed by purchasing land within riparian buffers that may not be eligible for, or where the owners may not be interested in, LAP's existing fee simple or conservation easement

programs. The proposed City-funded Riparian Buffer Program would be implemented in conjunction with one or more Stream Management Plans developed under the City's Stream Management Program, and would be carried out in partnership with one or more local land trusts.

The next two sections provide a review of the literature on land acquisition and smart growth principles as water quality and natural resources protection measures. These sections are followed by an assessment and conclusions based on the literature review.

# LITERATURE REVIEW OF LAND ACQUISITION AS A WATER QUALITY AND NATURAL RESOURCES PROTECTION MEASURE

The importance of preserving undeveloped lands for water quality and ecosystem health is well-documented in the literature. This section reviews a number of these sources.

In a study<sup>3</sup> conducted by the National Research Council (NRC) in 2000, it was concluded that:

Purchasing private land is one of the most important nonstructural tools used to protect a watershed...A land acquisition program is potentially one of the most successful strategies for source water protection.

In their report, "Protecting Water Resources with Smart Growth," EPA notes:

Preserving open space is critical to maintaining water quality at the regional level. Large, continuous areas of open space reduce and slow runoff, absorb sediments, serve as flood control, and help maintain aquatic communities. In most regions, open space comprises significant portions of a watershed, filtering out trash, debris, and chemical pollutants before they enter a community's water system. Open space provides a number of other benefits, including habitat for plants and animals, recreational opportunities, forest and ranch land, places of natural beauty, and important community space: <sup>4</sup>.

The Extended LAP would limit the potential future amount of impervious surface cover in water quality sensitive areas, leaving less sensitive lands and areas that have already been extensively disturbed available for future growth. The Center for Watershed Protection<sup>5</sup> has extensively researched imperviousness and how it relates to habitat structure, water quality and biodiversity of aquatic systems:

Impervious surfaces collect and accumulate pollutants deposited from the atmosphere, leaked from vehicles or derived from other sources. During storms, accumulated pollutants are quickly

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<sup>&</sup>lt;sup>3</sup> National Research Council. 2000. Watershed Management for Potable Water Supply: Assessing the New York City Strategy. Washington, DC: National Academy Press.

<sup>&</sup>lt;sup>4</sup> "Protecting Water Resources with Smart Growth," U.S. EPA, <u>www.epa.gov/smartgrowth</u>.

<sup>&</sup>lt;sup>5</sup> "Impacts of Impervious Cover on Aquatic Systems," Center for Watershed Protection, March 2003

washed off and rapidly delivered to aquatic systems. Monitoring and modeling studies have consistently indicated that urban pollutant loads are directly related to watershed imperviousness. Indeed, imperviousness is the key predictive variable in most simulation and empirical models used to estimate pollutant loads.

As shown in Figure 5-1, the ecological health of streams is greatly impacted by impervious cover. Biological and physical indicators of stream quality tend to show observable negative impacts at levels of imperviousness as low as 5 percent,<sup>6</sup> and with impervious cover greater than 25 percent, a stream may be unable to support ecological habitat. The Cat-Del watershed has a low percentage of impervious cover, and the Extended LAP would help to increase that protection.

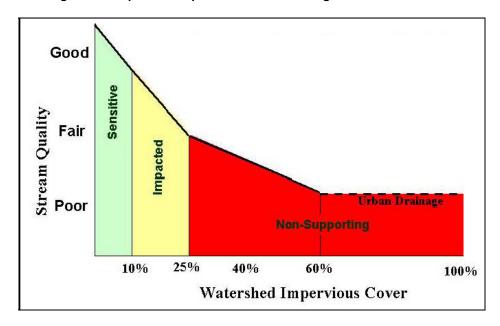


Figure 5-1: Impacts of Imperviousness on Ecological Health

Source: Center for Watershed Protection

In the SUNY College of Environmental Science and Forestry/Yale School of Forestry and Environmental Studies joint study, *Predicting Future Water Quality from Land Use Change Projections in the Catskill-Delaware Watersheds*, the authors state that:

<sup>&</sup>lt;sup>6</sup> "Impacts of Impervious Cover on Aquatic Systems," Center for Watershed Protection, March 2003

<sup>&</sup>lt;sup>7</sup> Myrna Hall, Rene Germain, Mary Tyrrell and Neil Sarpor, Predicting Future Water Quality from Land Use Change Projections in the Catskill-Delaware Watersheds, SUNY College of Environmental Science and Forestry/Yale School of Forestry and Environmental Studies, December 2008.

Land use and water quality are inextricably linked," and have shown that forest cover provides more optimal land cover for protecting water quality than many of the potential uses to which that land may be converted..

In regard to the City's watershed in particular, they further note that:

Although the forest cover appears to be stable, both through remotely sensed data and 'windshield survey,' fragmentation and parcelization have been increasingly altering the natural landscape by breaking large forest areas into smaller parcels and large land holdings into smaller ones... Fragmentation and parcelization (Sampson and DeCoster 2000) are two agents of change in forest cover, and are often an unnoticed threat.

As noted in the joint study referenced above:

[T]hese current trends of parcelization in the Cat/Del watershed may ultimately threaten water quality. The Croton watershed in the east of Hudson section of the city's water supply system serves as an example of the impacts of development on water quality. In the Croton watershed, widespread development patterns have resulted in the extensive urban infrastructure increasing peak flows of stormwater runoff, leading to erosion, streambank instabilities, and higher concentrations of pollutants (NYC DEP 2003).

# LITERATURE REVIEW OF SMART GROWTH AS A WATER QUALITY PROTECTION MEAURE

Smart growth principles are important tools for protecting water quality and ecosystem health. This section reviews a number of literature sources.

As noted in EPA's "2003 Draft Report on the Environment":

When such [growth and preservation] areas are clearly defined, development is encouraged on land with less ecological value, such as previously developed areas (e.g., brownfields, greyfields) and vacant properties. Land with higher ecological value, such as wetlands, marshes, and riparian corridors, is then preserved or otherwise removed from the pool of "developable land."

The Center for Watershed Protection promotes concentration of new development in areas of existing development.

The best way to minimize the creation of additional impervious area at the regional scale is to concentrate it in high density clusters or centers.<sup>8</sup>

#### ASSESSMENT AND CONCLUSIONS

<sup>&</sup>lt;sup>8</sup> "The Importance of Imperviousness," feature article from Watershed Protection Techniques. 1(3): 100-111, Center for Watershed Protection.

LAP was established for the sole purpose of protecting the City's drinking water quality. As shown in the tables in Existing Conditions section above, water quality in the NYC reservoirs is very high and the Extended LAP would support maintaining that quality in the future. The goals of LAP are consistent with the federal Surface Water Treatment Rule (SWTR, 1989), New York State Department of Health regulations (10 NYCRR Part 5-1.30(c)(7)(I), and the Filtration Avoidance Criteria under the SWTR. The LAP provides for water quality protection through anti-degradation and smart growth principles.

The Extended LAP is expected to result in the protection of a substantial amount of land rich in natural features such as water resources, wildlife habitat, natural vegetation, wetlands and forested land. The preservation of these lands and water resources, particularly given that many of these areas would continue to provide substantial contiguous natural corridors, would provide a direct benefit to water quality and natural resources by keeping these lands protected from the impacts of development. The LAP places a high priority on acquiring wetlands and lands adjacent to watercourses, and its efforts are expected to result in the protection of many regulated and non-regulated freshwater wetlands, floodplains, riparian areas, and other environmentally sensitive water resources. LAP would protect lands in their natural state, thus preserving potential habitat of species that may utilize those lands, and ensure water quality, thereby protecting aquatic systems.

Most lands purchased under LAP are forested and that would be expected to continue under the Extended LAP. The Extended LAP could help reduce fragmentation, the breaking up of large parcels of forest into smaller pieces, by protecting more continuous adjoining parcels of forested land. Increasing parcelization and conversion to non-forest land has been documented in the Cat-Del watershed. The Extended LAP is likely to protect lands adjacent to existing protected areas such as State Forest Preserve lands. Because forests act as filters, the removal of forested land near watercourses could impact water quality. Fragmentation further reduces the beneficial effects of forests on water quality. The Extended LAP would seek to preserve the forest cover in lands it acquires, which would help to protect water quality and natural habitats.

Protecting forested lands provides ancillary benefits. As stated in the NYS Open Space Plan, forested areas remove carbon dioxide from the atmosphere, thereby mitigating the threat of global warming; and reduce the consumption of nonrenewable fossil fuels for residential and commercial cooling and heating, and trap pollutants in the atmosphere. The current and Extended LAP programs are expected to support, rather than reduce, the removal of carbon dioxide from the air.

The Extended LAP would limit the potential future amount of impervious surface cover in water quality sensitive areas, leaving less sensitive lands and areas that have already been disturbed available for future growth. The <a href="Natural Features Criteria">Natural Features Criteria</a>, Riparian Buffer Program, and expanded hamlet areas under the Extended LAP (See Chapter 1) would further support these development patterns. Concentrating future development around hamlet areas where much of it historically and currently occurs is consistent with the principles of smart growth and associated benefits on water quality and the environment. While development in hamlet areas could result

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<sup>&</sup>lt;sup>9</sup> New York State Open Space Plan. 2009

# **Extended New York City Land Acquisition Program FEIS**

in some localized water quality impacts, these impacts would be combined with greater protection of natural areas with high ecological value and by ensuring that development occurs in a sustainable manner in these higher density areas, under the Watershed Rules and Regulations. Smart growth promotes coordination between development and conservation plans. The proposed Extended LAP is consistent with these outlined principles, with numerous Comprehensive Plans prepared by towns, and should have a net benefit to water quality while minimizing impacts to future growth.

Based on the literature review and assessment above, the proposed Extended LAP is anticipated to have beneficial impacts to water quality and natural resources and no potential for significant, adverse impacts are expected to occur.

# **CHAPTER 6:**

# OPEN SPACE AND RECREATION

### INTRODUCTION

This chapter assesses the potential impacts of the proposed action on Open Space and land-based recreational opportunities. Open Space may be public or private and may include active and/or passive areas. This chapter will:

- provide a description of the existing conditions of open space in the Cat-Del Watershed;
- discuss future conditions without the proposed action;
- assess the impacts of the Extended LAP on Open Space and Recreation.

#### **WEST-OF- HUDSON**

#### **EXISTING CONDITIONS**

As of July 2009, a total of 356,247 acres within the West of Hudson watershed can be considered protected lands, including:

- 204,238 acres of State-owned land, concentrated mostly in Ulster and Greene counties;
- 88,674 acres acquired by New York City in fee simple or as conservation or agricultural easements under LAP;
- 32,870 acres of land that New York City had already owned prior to the execution of the MOA, excluding reservoirs (which cover 22,542 acres); and
- 7,923 acres owned or protected by others, such as private non-profit land conservation trusts (but not including the Watershed Agricultural Council).

Excluding the reservoir acreage, together, these four categories account for about 34 percent of the land area of the West-of-Hudson watershed and 20 percent of the total land area of the 41 watershed towns (including lands both within and outside the watershed). As shown in Figure 6-1, the percentage of protected land increased from 24% to 34% in the Cat-Del system since the start of the LAP program.

City Pre City Pre MOA MOA 3.5% State All other State All other land land Other 20.5% 21.1% 76.0% 66.0% LAP

Figure 6-1 Protected Land in the Cat-Del System, 1997 vs. 2009

1997: 24% Protected Land 2009: 34% Protected Land

The status of protected watershed lands by county is provided in Table 6-1. Ulster County and Greene County have the largest percentages of watershed acres of protected lands occupying 60 percent and 41 percent respectively. In contrast, Sullivan County, Schoharie County and Delaware County have lower percentages of 35 percent, 20 percent and 20 percent, respectively.

Table 6-1: Status of protected watershed lands by county

		Land in the watershed						
County	Total acres	Acres in the watershed	LAP protected	State protected	Other protected	City pre- MOA	Total protected lands	Protected lands % of watershed
Delaware	925,400	492,487	45,350	25,796	3,812	21,634	96,592	20%
Greene	414,720	199,701	16,970	63,815	831	296	81,912	41%
Schoharie	398,080	34,613	3,769	2,569	0	459	6,797	20%
Sullivan	620,800	42,919	4,922	4,054	1,561	4,541	15,079	35%
Ulster	720,640	221,465	17,663	108,004	1,719	5,794	133,179	60%
WOH Total	3,079,680	991,185	88,674	204,238	7,923	32,723	333,558	34%

Source: NYC DEP

The protected lands listed above that are owned by entities other than the City generally allow for a wide range of recreational uses, including many of those allowed on City lands such as fishing, hiking, showshoeing, cross-country skiing, bird watching, educational programs, nature study and interpretation, and hunting (MOA section 72). Some allow more intensive uses such as horseback riding, overnight camping, boating, mountain biking, and in some cases motorized vehicles – uses that are not generally allowed on land acquired by the City (also as described in MOA section 72).

Just as there is considerable variation among watershed towns on various demographic, economic and development characteristics as described in Chapter 3, so is there with respect to the extent of protected lands. Table 6-2 lists the seven towns with the highest concentrations of protected lands, and the seven towns with the lowest. As shown in this table, most of the towns with low concentrations of protected lands are located in Delaware County. This is mostly due to the fact that the Catskill Park includes a relatively small portion of Delaware County, resulting in a much lower percentage of State land in comparison to Greene, Ulster and Sullivan.

Table 6-2: Seven towns with the lowest and seven towns with the highest concentrations of protected lands (>5% in WS)

Seven towns with lowest concentration of protected lands in the watershed

			Acres in	Protected	Protected
		Total	the	acres in the	acres % of
Town	County	acres	watershed	watershed	watershed
Harpersfield	Delaware	27,069	7,076	151	2.1%
Meredith	Delaware	37,313	15,395	1,116	7.2%
Hamden	Delaware	38,310	33,517	2,942	8.8%
Walton	Delaware	62,574	55,991	5,092	9.1%
Kortright	Delaware	40,004	25,047	2,530	10.1%
Jefferson	Schoharie	27,753	2,942	300	10.2%
Delhi	Delaware	41,343	41,343	4,328	10.5%

Seven towns with highest concentration of protected lands in the watershed

		Total	Acres in the	Protected acres in the	Protected acres % of
Town	County	acres	watershed	watershed	watershed
Lexington	Greene	51,274	51,274	28,678	56%
Colchester	Delaware	90,916	18,670	10,452	56%
Wawarsing	Ulster	85,857	10,607	6,030	57%
Olive	Ulster	41,735	29,252	16,928	58%
Denning	Ulster	65,430	56,447	35,866	64%
Hurley	Ulster	23,091	8,518	6,164	72%
Shandaken	Ulster	78,875	78,875	56,440	72%

Source: NYCDEP

The protected lands as a percentage of reservoir basin area are shown in Figure 6-2. Cannonsville and Pepacton Reservoir basins have the smallest percentage of protected lands, while Ashokan and Neversink have the highest.

The West of Hudson region has an abundance of existing open space, offering many opportunities for a variety of recreational activities; such as fishing, hunting, hiking, trapping, cross-country skiing, mountain biking and snowmobiling. First and foremost, the State Forest Preserve, covering over 200,000 watershed acres, provides an extensive natural area that is generally open for a number of recreational activities. This large base of open space has been augmented since 1997 by lands acquired by the City and opened for recreational use. As of October 2009 (as shown in Table 6-3), NYCDEP has opened a total of 34,684 acres of West-of-Hudson land acquired under LAP for public recreational use – about 64 percent of the acreage purchased in fee simple under the Land Acquisition Program (land under conservation easements is not generally opened for public access by their owners). This represents a 179 percent increase in the total acreage of NYCDEP-owned land in the region that is available for public recreational use since 1997.

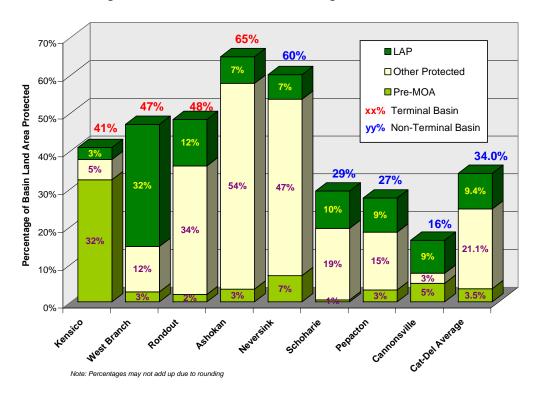


Figure 6-2: Protected Land as a Percentage of Basin Land Area

Table 6-2: Acreage open for recreational use, pre-MOA land and LAP land, as of June 30, 2009

County	Pre-MOA Acres	LAP acres	<b>Total Acres</b>
Delaware County	13,048	15,634	28,682
Greene County	-	7,154	7,154
Schoharie County	-	1,637	1,637
Sullivan County	3,136	2,487	5,623
Ulster County	1,535	7,772	9,307
WOH Total	17,719	34,684	52,403

Outdoor recreation is both a major industry in the West-of-Hudson watershed region, and an amenity that is of considerable value to the region's residents and visitors. With few exceptions, properties that have been acquired by NYCDEP were generally not open for public recreational use prior to acquisition, when privately owned. Virtually all of the 34,684 acres acquired under LAP that have been opened to the public thus represent a net addition to the total acreage available in the region for public recreational use. As shown in Figure 6-3 and Table 6-4, NYCDEP allows a number of uses on LAP acquired land where consistent with water quality and public safety. Approximately 59,000 acres since 1997 have been opened for recreational

uses such as fishing, hiking, snowshoeing, cross country skiing, bird watching, educational programs, nature study and interpretation, rifle hunting and to a lesser extent, muzzle-loading implements and trapping. Prior to 2008, NYCDEP required members of the public to hold recreational use permits; in 2008, NYCDEP expanded recreational uses of WOH lands to include Public Access Areas (PAAs) in which no NYCDEP access permits are required. The majority of WOH lands that are not adjacent to reservoirs are being converted to PAAs and this is the default designation for all newly acquired lands. Also in 2008, NYCDEP eliminated the use of the NYCDEP Hunt tag in an attempt to make it easier for the public to access NYCDEP lands.

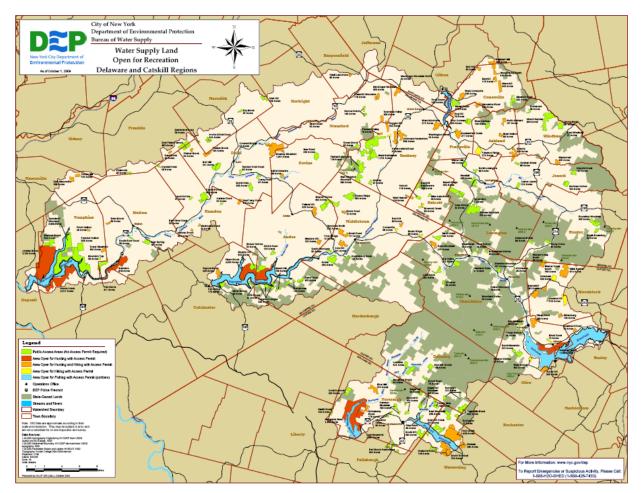


Figure 6-3: West of Hudson Recreation Areas

Table 6-3: City-owned Recreation Acres in West of Hudson Watershed Counties

**Delaware County** 

		Delaware County							
RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS AREA	HIKE	FISH	HUNT	TRAP	ACRES
Alpaca Ridge	Middletown	Thompson Hollow Rd.	4P	AREA	_	_	_	<b>✓</b>	401
Archie Elliot Road	Meredith	Archie Elliot Rd.	40	·		_	1	·	141
Arena	Middletown	Reservoir Rd	3A	· /	-		/	·	382
Barbour Brook	Tompkins	Barbour Brook Rd.	40	<b>✓</b>	_	<b>✓</b>	<b>~</b>	<b>✓</b>	364
Barkaboom	Andes	Barkaboom Rd	4W	✓	/		<b>✓</b>	<b>√</b>	140
Bear Spring	Walton	Route 206	4W	<b>~</b>	/		<b>✓</b>	<b>✓</b>	197
Beech Hill	Andes	Beech hill Rd.	4W	✓	/	<b>✓</b>	<b>✓</b>	<b>√</b>	156
Beerston	Walton	Route 10	4W				<b>V</b>		871
Bell Hill	Delhi	Peakes brook & Bell Hill Rd.	40	<b>✓</b>	/	<b>V</b>	<b>✓</b>	<b>✓</b>	328
Betty Brook	Kortright	Betty Brook Rd.	40	<b>✓</b>	_	<b>✓</b>	<b>V</b>	<b>✓</b>	105
Bloomville	Kortright	NÝ Route 10	40	<b>✓</b>	_	<b>✓</b>	<b>✓</b>	<b>✓</b>	245
Bobs Brook	Walton	Bobs Brook Rd.	40		<b>V</b>		<b>✓</b>		59
Bramley Mountain	Delhi	Bramley Mountain Rd.	4P	<b>~</b>	<b>/</b>	✓	<b>✓</b>		1.051
Brook Road	Middletown	Brook Rd.	4P	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	✓	70
Brush Ridge	Middletown	Koop Rd.	4R		<b>V</b>	✓			64
Bryants Brook	Andes	NY Route 28		<b>✓</b>	1	<b>✓</b>	<b>✓</b>	✓	92
Bullet Hole	Delhi	Bullet Hole Rd.	4P	<b>✓</b>	_		<b>V</b>	<b>✓</b>	198
Carey Road	Delhi	NY Route 28	4P	<b>✓</b>	_	<b>✓</b>	<b>~</b>	<b>✓</b>	179
Carman Road	Hamden	Carman RD.	4P	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	✓	33
Cat Hollow	Colchester	Route 30	4W	<b>✓</b>	<b>V</b>		<b>✓</b>	✓	175
Churchill Mountain	Stamford	McGregor & Tower Mountain Rds.	4P		1	<b>✓</b>	<b>✓</b>		175
Cole Hill	Middletown	Swart Rd.	4P		/		<b>V</b>		241
Couse Hill	Masonville	County Route 27	40		/		<b>V</b>		101
Covered Bridge	Delhi	NY route 10	4P	<b>√</b>	/	<b>V</b>	<b>✓</b>	<b>✓</b>	22
Covert Hollow	Hamden	Covert Hollow Rd.	40	✓	_	<b>✓</b>	<b>✓</b>	<b>✓</b>	428
Covesville	Middletown	Hog Mountain Rd.	4R		<b>V</b>				55
Crystal Creek	Hamden	Dunk Hill Rd. & Fish Hollow	40	<b>~</b>	<b>V</b>	✓	<b>✓</b>	✓	48
Delaware Headwaters	Roxbury	Route 30	4P		<b>V</b>		✓		600
Dibble Road	Andes	Dibble Rd.	4P	<b>~</b>	<b>V</b>		<b>✓</b>	✓	105
Dry Brook	Meredith	Dry Brook Rd.	40	✓	<b>✓</b>	✓	✓	✓	67
Duggan Hill	Roxbury	Duggan Hill Rd.	4P		<b>V</b>		<b>✓</b>		189
Dunraven North	Middletown	County Route 6	4P		<b>/</b>	<b>✓</b>	<b>✓</b>		202
East Brook	Franklin	East Brook Rd.	40		<b>V</b>		<b>✓</b>		49
East Masonville	Masonville	Route 27	40		<b>V</b>		<b>✓</b>		136
East Platner Brook	Delhi	County Route 16	40	✓	<b>V</b>	<b>✓</b>	<b>✓</b>	✓	453
East River Road	Hamden	County Route 26	4P		<b>V</b>	<b>✓</b>			20
East Terry Clove	Delhi	County Route 2 & East Terry Clove	4P		<b>V</b>	✓	<b>✓</b>		108
Finch Hollow	Tompkins	Finch hollow Rd.	40		1		<b>✓</b>		49
Fish Brook	Walton	Fish Brook Rd.	40	✓	<b>~</b>		<b>✓</b>	✓	363
Fletcher Hollow	Tompkins	Fletcher Rd.	40	✓	<b>V</b>		<b>✓</b>	✓	371
Flynn Brook	Andes	NYC Road 6	4P			<b>✓</b>	✓		2,183
Hardscrabble Road	Tompkins	Hardscrabble Rd.	4P		<b>V</b>				47
Hinkley	Roxbury	Carroll hinkley Rd.	4P	✓	<b>V</b>		<b>✓</b>	✓	87
Huckleberry Brook	Middletown	Huckleberry Brook Rd.	3A	✓	✓	✓	<b>✓</b>	✓	101
Irish Hill	Meredith	Irish Hill Rd.	40	✓	<b>~</b>	✓	<b>✓</b>	✓	156
Johnny Brook	Deposit	Barbour Brook Rd.	40			✓	✓		3,813
Launt Hollow	Hamden	Launt Hollow Rd.	40	✓	<b>✓</b>	<b>~</b>	<b>✓</b>	✓	85
Little Delaware	Bovina	Bob Hall Rd.	4P		<b>✓</b>	<b>✓</b>	<b>✓</b>		102
MacDonald Road	Hamden	MacDonald Rd.	4P		<b>✓</b>	<b>~</b>	<b>✓</b>		30
Mallory Brook	Hamden	County Route 26	4P		<b>✓</b>	✓	<b>✓</b>		36
McGregor Mountain	Roxbury	NY Route 23	4P		<b>✓</b>		<b>~</b>		255
Meekers Hill	Andes	Close Hollow Rd.	4P		1	✓	<b>✓</b>		119
Miller Hollow	Colchester	Miller Hollow Rd.	4W	✓	<b>✓</b>		<b>✓</b>	<b>✓</b>	23
Mountain Top	Tompkins	Fish Brook Rd.	40	✓	✓		<b>✓</b>	✓	36
Murphy Hill	Andes	NYC Rd. 6 & Murphy Hill Rd.	4P	✓	<b>✓</b>		<b>✓</b>	✓	519
Narrow Notch	Stamford	Narrow Notch, Town Brook	4P	✓	<b>✓</b>	✓	<b>✓</b>	✓	140
New Kingston Mountain	Middletown	New Kingston Mountain Rd.	4P	✓	<b>~</b>		<b>✓</b>	✓	282
New Road	Bovina	New Rd.	4P	✓	<b>✓</b>		<b>✓</b>	✓	231
Odell Lake Road	Harpersfield	O'Dell Lake Rd.	40		<b>✓</b>	<b>✓</b>	<b>✓</b>		44
Palmer Hill	Åndes	Finkle Rd. & Route 28	4P		<b>V</b>		<b>✓</b>		234
•	•	•			•				

Delaware County (cont)

		Dolamaio County (cont)							
RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS AREA	HIKE	FISH	HUNT	TRAP	ACRES
Peakes Brook	Delhi	Peakes Brook & Frank Hafele Rds.					<b>✓</b>		207
Pepacton Ledges	Andes	Route 30	4W	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>	294
Platner Brook	Delhi	County Route 16	40		<b>✓</b>	<b>V</b>	<b>✓</b>		54
Plattekill Mountain	Roxbury	Lower Meeker Hollow Rd.	4P	<b>✓</b>	<b>✓</b>	<b>V</b>	<b>✓</b>	✓	716
Pleasant Valley	Roxbury	Baumback Rd.	4P		~		<b>✓</b>		78
Plymouth	Franklin	County Route 21	40	<b>~</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	80
Raynor Brook	Colchester	NYC Rd. 1	4P	<b>✓</b>	<b>✓</b>		<b>✓</b>		360
Red Kill	Middletown	Big Red Kill Rd.	4R		<b>✓</b>	<b>✓</b>	<b>✓</b>		82
Rehor Road	Andes	Barkaboom and Rehor Rds.	3A	✓	<b>✓</b>		<b>✓</b>	✓	145
Reuben Todd Road	Delhi	Reuben Todd Rd.	4P	<b>✓</b>	<b>✓</b>		✓	✓	124
Roses Brook	Stamford	Roses Brook Rd.	4P	<b>✓</b>	<b>✓</b>		✓	✓	83
Sally's Alley	Roxbury	Route 36, Sally's Alley	4R	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	✓	257
Sands Creek	Tompkins	NYC Road 6	4W			<b>✓</b>	<b>✓</b>		1,956
Shaver Hollow	Andes	Shaver Hollow Rd.	4P 🗸 🗸		<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	33
Shaw Road	Kortright	NY Route 10	4P		<b>✓</b>	<b>✓</b>			52
South Dunraven	Middletown	Ben Meeker Rd.	4P	<b>✓</b>	<b>✓</b>		<b>✓</b>	✓	62
South River Road	Walton	South River Rd.	4W	<b>✓</b>	<b>✓</b>		<b>✓</b>	✓	37
Speedwell Mountain	Tompkins	Route 10	40	<b>√</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>	3,706
Spring Valley	Meredith	Waterman Rd.	40	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	✓	35
Sutherland Road	Meredith	Peakes Brook Rd.	40	<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>	36
Swart Road	Middletown	Swart Rd.	4P	✓	✓	<b>✓</b>	✓	<b>✓</b>	160
Tower Mountain	Tompkins	Fish Brook Rd.	40		<b>✓</b>		<b>✓</b>		107
Town Brook	Stamford	Town Brook Rd.	4P	<b>✓</b>	<b>~</b>		<b>✓</b>	✓	30
Township Valley	Stamford	Davis Rd.	4P		<b>✓</b>		<b>✓</b>		127
Trow Bridge	Middletown	Sutherland Rd.	4P		<b>✓</b>	<b>✓</b>			12
Vinci Brook	Colchester	NY Route 30	4W	✓	<b>✓</b>		<b>✓</b>	✓	85
Weaver Hollow	Andes	Weaver Hollow Rd.		~	<b>✓</b>		<b>✓</b>	<b>✓</b>	627
West Halcott	Halcott	Red Kill Rd.	4R		<b>~</b>	<b>✓</b>	<b>✓</b>		108
West Platner Brook	Delhi	Platner Brook rd.	40	<b>√</b>	✓	✓	✓	✓	80
West Schoharie	Roxbury	Willium Lutz Rd.	4R		1		1		322
West Settlement	Roxbury	Roses Brook, Burroughs Memorial	4P	<b>✓</b>	✓		✓	✓	1,710

**Greene County** 

RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS AREA	HIKE	FISH	HUNT	TRAP	ACRES
Balsam Mountain	Lexington	Spruceton Rd.	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	708
Batavia	Ashland	NY Route 23 &County Route 17	4R		<b>✓</b>	✓	✓		338
Beech Ridge	Lexington	Beech Ridge Rd.	4R	✓	<b>✓</b>	<b>✓</b>	✓	✓	487
Brownell Creek	Halcott	Kaftas & West Settlement Rd.	4R		<b>~</b>	<b>✓</b>			98
Center Jewett	Jewett	NY Rte. 23a	4R	✓	<b>✓</b>		<b>✓</b>	<b>✓</b>	121
Deep Notch	Lexington	NY Rte. 42	3A	✓	<b>✓</b>		<b>√</b>	<b>✓</b>	32
Diamond Notch	Hunter	Diamond Notch Rd.	3A	✓	<b>~</b>		✓	<b>✓</b>	86
Dog Hill	Prattsville	Gilboa Rd.	4R		<b>✓</b>		✓		81
East Windham	Windham	NY Route 23	4R	✓	<b>✓</b>		✓	<b>✓</b>	27
Four Corners	Prattsville	County Rte.11 & Albert Slater Rd.	4R	✓	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	203
Halcott	Halcott	West Settlement Rd.	4R	✓	<b>✓</b>	<b>✓</b>	✓	✓	116
Huntersfield Creek	Prattsville	County Route 10& Stanley Slater Rd.	4R	✓	<b>✓</b>	<b>✓</b>	✓		277
Jennie Notch	Windham	Jennie Notch Rd.	4R	✓	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	246
Katydid Creek	Jewett	Shad Rd.	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	143
Maben Hill	Lexington	NY Rte. 23a		✓	<b>✓</b>		✓	✓	149
Macumber Road	Conesville	Macumber Rd.			<b>✓</b>		✓		142
Maplecrest	Windham	Route 40	3A		<b>✓</b>		✓		125
Mount Hayden	Windham	Bagley & Narvoo Rds.	4R	✓	<b>✓</b>		✓	<b>✓</b>	815
North Ashland	Ashland	County Route 10	4R		<b>✓</b>	<b>✓</b>	✓		136
North Lexington	Lexington	Off Rte. 23c	4R	✓	<b>~</b>		✓	<b>✓</b>	69
Patterson Ridge	Ashland	NY Route 23	4R		<b>✓</b>	✓			273
Red Kill Headwaters	Halcott	Travis Faulkner Rd.	4R	✓	<b>✓</b>		✓	✓	137
Richmond	Windham	County Rte. 10	4R	✓	<b>✓</b>		✓	✓	56
Roundtop Mountain	Hunter	Gillespie Rd.	3A	✓	<b>✓</b>		✓	✓	331
Scribner Hollow	Jewett	Scribner Hollow Rd.	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	194
Silas Lake Road	Halcott	Travis Faulkner Rd.	4R	✓	<b>✓</b>		✓	✓	49
South Roundtop	Hunter	Platte Clove Rd.	3A	✓	<b>~</b>		✓	<b>✓</b>	95
Spruceton	Lexington	NY Route 42	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	9
Stony Clove	Hunter	NY Route 214	3A	✓	<b>✓</b>	✓	✓	✓	98
Warner Ćreek North	Hunter	Silver Hollow Rd.	3A	✓	<b>✓</b>	✓	✓	<b>✓</b>	56
West Ashland	Ashland	West Settlement Rd.	4R	✓	<b>✓</b>		✓	<b>✓</b>	136
West Hollow	Ashland	Sutton Hollow Rd.	4R		✓		✓		85
Westkill	Lexington	NY Route 42	4R	<b>✓</b>	~	1	<b>~</b>	<b>✓</b>	263

Schoharie County

		Schonarie County							
RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS AREA	HIKE	FISH	HUNT	TRAP	ACRES
Bearkill	Conesville	Bearkill Rd.	4G		1		<b>V</b>		110
Bluebird Road	Conesville	South Mountain & Bluebird Rds.	4R	✓	<b>✓</b>		<b>✓</b>	✓	222
Bull Hill	Conesville	Bull Hill Rd.	4G		✓	<b>✓</b>	✓		92
Hubbard Hill	Gilboa	East Conesville Rd.	4G		<b>✓</b>		✓		290
Hubbard Hill South	Conesville	Hubbard & Bearkill Rds.	4G		<b>✓</b>		✓		110
Manorkill	Conesville	Potter Mountain Rd.	4G		<b>~</b>		V		240
McGregor Mountain North	Gilboa	NY Route 23	4P		<b>~</b>	~			32
Mount Royal	Conesville	NY Rte. 990v & Pangsburn Rd.	4R	~	<b>✓</b>	<b>✓</b>	✓	✓	279
Pangman Road	Conesville	Pangman Rd.	4R	~	<b>✓</b>		✓	✓	175
Road Seven	Gilboa	NYC Road 7	4R			<b>✓</b>	✓		148
Washington Street	Prattsville	NY Rte. 10	4R		<b>✓</b>	✓			31
West Conesville	Conesville	Bull Hill Rd.	4G		<b>✓</b>		✓		240
Windy Ridge	Gilboa	South Gilboa Rd.	4P	<b>✓</b>	~		V	<b>√</b>	42

**Sullivan County** 

		Junivan County							
RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS AREA	HIKE	FISH	HUNT	TRAP	ACRES
Blue Hill	Neversink	Blue Hill & Hunter Rds.	3A		<b>✓</b>	✓	✓		296
Bungalow Brook	Neversink	Bungalo Brook Rd.	3A	✓	<b>✓</b>		✓	✓	38
Chestnut Creek	Neversink	Ny Rt.55	3H	✓	<b>~</b>	<b>✓</b>	✓	✓	90
Conklin Brook	Neversink	Woodard Rd.	3H	✓	<b>✓</b>	~	<b>✓</b>	✓	213
Denman Mountain	Neversink	Denman Mountain Road	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	186
East Neversink	Neversink	Rt.55 and Shields Rd.	3H			<b>✓</b>	<b>✓</b>		1,597
Moore Hill	Neversink	Moore Hill Rd.	3A	✓	<b>✓</b>	<b>✓</b>	✓	✓	125
North Side	Neversink	Northside and Co. Hwy 153	3C	✓	<b>✓</b>	<b>✓</b>	✓	<b>✓</b>	230
Pine Patch	Neversink	Rt.55A	3C	✓	✓		✓	✓	69
Red Brook Headwaters	Neversink	NY Route 42 and Hayden Rd.	3H	✓	<b>✓</b>		<b>√</b>	<b>√</b>	369
Schumway Road	Neversink	Schumway Rd.	3H		<b>✓</b>		✓		176
Smith Road	Neversink	Smith Rd.	3H	✓	<b>✓</b>		✓	✓	103
South Hill	Neversink	NY Route 55	3H	✓	<b>✓</b>		✓	<b>✓</b>	385
Sugarloaf	Neversink	Sugarloaf Rd.	3A	✓	~	✓	✓	✓	93
Sugarloaf Mountain	Neversink	Viscomi Rd.	3A	✓	<b>✓</b>		✓	✓	195
West Neversink	Neversink	Aden Hill Rd.	3H			✓	✓		1,194

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		Clotol County							
RECREATION AREA	TOWN	LOCATION	WMU *		HIKE	FISH	HUNT	TRAP	ACRES
Acorn Hill	Olive	NYC Route 28a	3C	AREA	_		_		220
Ashokan North	Olive	NY Route 28 & Reservoir Rd.	3C		•		-		1,316
Beaverkill	Woodstock	Route 212	3A		_	-	-		422
Beetree Hill	Woodstock	Baker Rd.	3A		-	•	·		319
Big Indian Cluster	Shandaken	NY Route 28 & County Route 47	3A, 4R	<b>√</b>	· /		·	_	256
Birch Creek	Shandaken	Lower Birch Creek Rd.	4R	· /	7	_	-	-	181
Black Road	Olive	Black Rd.	3A	·	-	-	•	•	81
Boulevard Road	Hurley	Boulevard Rd.	3C			-	<b>/</b>		76
Broadstreet Hollow	Shandaken	Broadstreet Hollow Rd.	3A	<b>√</b>	~	•	· /	_	58
Chichester	Shandaken	Silver Hollow Rd.	3A	· ·	-		-		26
Deer Kill Creek	Wawarsing	Off Rte. 55a	3C	· ·	-	•	-	-	347
Diamond Road	Wawarsing	Diamond & Brown Rds.	3H	· ·	· /		-	· /	146
Dinch Road	Denning	Diarriond & Brown Rds.  Dinch Rd.	3A	•	-		•	•	75
East Mountain	Wawarsing	Mancuso & Lackawack Rds.	3C	<b>√</b>	· /		_	_	238
Herdman Road	Shandaken	Herdman Rd.	3A	· ·	· /	_		· /	18
Ladleton			3A	· ·	· /	•	· /	· /	431
Ladieton Lost Clove	Denning Shandaken	Denning Rd. Lost Clove Rd.	3A	· ·	· /	_	· /	· ·	162
Mink Hollow	Woodstock	Mink Hollow Rd.	3A	•	· /		· /	·	623
Olderbark	Woodstock	NY Route 212	3A		~	•	•		186
			3A	<b>✓</b>	· /		<b>/</b>	_	79
Oliverea Peck Hollow	Shandaken Shandaken	Oliveria Rd.	3A	· ·			·		48
	Olive	Peck Hollow Rd.	3C	•	~	•	· /	•	370
Piney Point Road Red Hill Knolls		Piney Point Rd.	3A	<b>✓</b>	· /		· /	_	
	Denning	Red Hill Knolls Rd.	3C	· ·	· /		· /	· /	157 17
Rochester Romer Mountain	Rochester Shandaken	Mill rd. NY Route 28	3C 3A	· ·	· /		· /	· /	17
Romer Mountain Rose Mountain	Shandaken	Birch Creek & St. Katherine Extension	4R	•	· /		· /	•	213
			3A	_	· /		· /	<b>/</b>	43
Shandaken	Shandaken	High Street		· ·	_		_	· /	
Sheridan Mountain	Shandaken	NY Route 28 & County Route 47	3A	· ·	1		1	·	108
Sholam	Wawarsing	Sholam Rd.	3C		· /		· /	_	240
South Mountain	Olive	High Point Mountain	3C	✓	-			·	285
South Rondout	Wawarsing	Route 55 & Sherman Rd. Traver Hollow Rd.	3H		<b>Y</b>		<b>V</b>	<b>/</b>	708 46
Sun Mountain	Olive		3A 3C	· ·	· /	_	· /	· /	
Sundown	Denning	Sundown/Greenville Rd.		· ·	· /		· /	· /	116 25
Traver Hollow	Olive	NYC Route 28a	3A	· ·	· /	1	· /	·	
Trout Creek	Wawarsing	Route 55a & Sholam Rds.	3C		-	~			1,429
Watson Hollow	Olive	Private rd. #3	3C	✓	<b>1</b>		1	✓	23
Warner Creek South	Woodstock	Silver Hollow Rd.	3A		<b>V</b>		<b>✓</b>		156
West Shokan	Olive	NYC Route 28a	3C		✓				102
Wittenberg	Woodstock	Wittenberg Rd.	3C		✓	<b>✓</b>	✓		280
Woodland Valley	Shandaken	Woodland Valley Rd.	3A	✓	✓	✓	✓	✓	19
Yagerville	Denning	Yagerville & Mill Rds.	3C	✓	✓	✓	✓	✓	467

Quality Deer Management Area, no buck harvest on certain days, antler size regulation in effect

#### FUTURE WITHOUT THE PROPOSED ACTION

There are a number of State and local plans to preserve open space and promote recreation into the future including plans formulated by New York State, Greene County, and Ulster County.

#### **New York State Open Space Conservation Plan**

The New York State Department of Environmental Conservation (NYSDEC) issued the "New York State Open Space Conservation Plan ("Open Space Plan") in 2009, which detailed the importance of open space and strategies to promote land conservation by New York State and others. Regional Advisory committees were set up to provide recommendations on the implementation of the Open Space Conservation Plan.

<sup>\*\*</sup> Deer hunting Only no small game or Bear Hunting allowed here

The New York City West of Hudson watershed lies within Regions 3 and 4.<sup>1</sup> The Open Space Plan recommends that conservation efforts in Region 3 by the State and others should focus on the following areas located in the NYC Watershed, among others outside the Watershed:

#### Catskill River Corridor:

On a daily basis, thousands of people use major travel corridors such as Rt. 28, Rt. 212, Rt. 214, Rt. 23, Rt. 23A, Rt. 42 Rt. 30, Rt. 10, Rt. 17 (future Interstate 86), and Rt. 97 to access numerous Catskill communities and popular recreation destinations. Because these major travel corridors generally follow major river corridors, they provide visitors with a startling first impression of the Catskill/Delaware region as a vital riverine habitat. Some of these river corridors are not only particularly important as fisheries resources, but they are also exceptional recreational resources that provide immeasurably to the region's nature-based economy. Unfortunately, many sections of these river and road corridors are experiencing an increase in development which has resulted in severely damaging flood incidents, some of which have proven fatal. Land protection priority should be given to parcels that protect riparian buffer land, preserve or restore flood plain areas, protect scenic areas and vistas along principle road corridors and on visible ridgelines, protect flood prone areas and enhance public access and recreational opportunities. Conservation focus areas include:

- Delaware River Branches The region encompassing the Delaware River corridor is identified in the Open Space Plan as a Major Greenway and Recreationway in Regions 3, 4 and 7, and the entire Delaware River corridor from Hancock (Delaware County) to Cherry Island (Orange County) is designated as a National Scenic and Recreational River. The East and West Branches of the Delaware River, are exceptional cold-water fisheries, with the Main stem Delaware also being critical as a waterway open to fish migrating to and from the ocean. These rivers also offer numerous recreational opportunities, such as fishing, canoeing, rafting, and eagle watching, which bring in many visitors and boost the regional economy. These rivers and their watersheds are also critical biological resources, from both aquatic and terrestrial standpoints, with many rare, unique, threatened, and endangered species living in this area, including the bald eagle, timber rattlesnake, American shad, and several plant species. The East and West Branches of the Delaware River are part of the New York City Water Supply System, which is the nation's largest unfiltered municipal water supply, and protection of these watersheds is critical for the continuation of a clean drinking water supply for millions of people. Currently only a tiny percentage of land along the Delaware River Branches and Main-stem corridors is permanently protected, especially that area outside and downstream of the New York City Watershed, viewshed on large contiguous vacant parcels held by private hunt clubs through conservation easement acquisitions.
- Route 28 Corridor New York State Route 28 is the primary road corridor through the central Catskill high peaks region, connecting population centers and major interstates in metropolitan Kingston and Oneonta. Because of this already existing transportation infrastructure, it is well suited for sustainable small-scale economic development to draw visitors, support local businesses and preserve the natural environment. This area provides

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<sup>&</sup>lt;sup>1</sup> DEC Region 3 includes the Counties of Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester. Region 4 includes the Counties of Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie.

an opportunity to simultaneously protect land and promote growth in the Catskills using an outdoor recreation-based tourism that focuses on land preservation and controlled recreational use of public natural areas. Environmentally sound economic development initiatives here are very sustainable. It is a potential State Scenic Byway and includes eastern and western gateways to the Catskill Park. Priority areas along this route are known as Gateway Properties, lands adjacent to, and visible from, the easternmost five or six miles of Rt. 28, and include, but are not limited to:

- Ticeteneyck Mt./Tonshi Mt./Kenozia Lake The first highly visible, mountainous, open space area along Rt. 28 in Ulster County; no State land has been acquired to date in this area. Large private land-holdings make significant acquisitions possible;
- Catskill Interpretive Center Area Opportunity to connect the proposed Ulster County Interpretive Center Site with existing Forest Preserve lands situated on Mt. Tobias. Acquisition of key parcels along Rt. 28 and Wittenberg Rd. will protect the views of mountains, forests, and meadows from the proposed Visitor Center.
- Meade Hill/Fleischmann Mountain A large, highly visible, completely unprotected mountain ridge immediately adjacent to Rt. 28 in the Town of Middletown; critical to the continuity of mountain habitat and vistas between Dry Brook Ridge and the Belleayre Mountain Ski Area.

#### Catskill Unfragmented Forest

The region encompassing the Catskill Mountains is identified in the Open Space Plan as a Major Resource Area in Regions 3 and 4. The Catskill Park, which is a mosaic of State Forest Preserve lands and private property, comprises a large, central part of this region. Large, unfragmented areas of forest land in the Catskill high peaks area are excellent candidates for addition to the Forest Preserve. Priorities for acquisition within the greater Catskill Mountain/Delaware River Region should focus on securing sensitive, unprotected high elevation areas and alpine communities; protecting expanses of un-fragmented forests; connecting protected areas, particularly in the valleys between high elevations; protecting reverence habitat and riparian buffer land; preserving areas demonstrating high biological diversity; preserving significant cultural and scenic resources; and improving access and recreational opportunities on public land. Special consideration should also be given to protecting and providing access to the Region's water resources, including specific attention to protecting the watershed supplying New York City's public drinking water. Region 3 conservation efforts should focus on the following sites:

• Balsam, Graham and Doubletop Mountains/Dry Brook Valley - Several large tracts including the summits of the last three Catskill peaks over 3500' in elevation still in private ownership lie adjacent to the Big Indian Wilderness. These lands provide habitat for a distinctive assemblage of bird species, especially those that prefer subalpine coniferous forests, as well as at least one known federally threatened plant species. They play a critical role in the wilderness character of the area. Lying within New York City's watershed, they contribute clean drinking water to both the Catskill and Delaware systems. Dry Brook is also an excellent trout stream.

- Peekamoose Gorge An approximately 3300-acre tract of land in Ulster County surrounded on all sides by Forest Preserve; very rugged and remote with numerous seasonal waterfalls. Rondout Creek drains this property and is a significant trout stream and an important contributor to the New York City drinking water supply. Property harbors at least one known federally listed endangered species.
- Frost Valley Large forested tracts in the east and west valleys protect the source waters of the Neversink River and merge the two highest quality forest blocks in the High Allegheny Plateau. Protection of these tracts will prevent impacts to the Neversink River, reduce potential for forest fragmentation and improve access between the Big Indian Wilderness, the Slide Mountain Wilderness and the Sundown Wild Forest.
- West Shokan / Sampsonville Area Lands Opportunities to expand the Forest Preserve holdings on the eastern side of the Slide Mountain Wilderness in Ulster County should be explored; including areas around Maltby Hollow, and Hanover, South, High Point, and Mombaccus Mountains.

Region 4 conservation efforts should focus on the following sites:

- Bearpen / Vly / Roundtop Mountains Substantial progress has been made to protect the higher elevations of Bearpen, Roundtop, and Vly Mountains; however, additional acquisition is needed on the lower elevations of these mountains.
- Catskill Escarpment North &Windham High Peak Includes the dramatic landscape between the Hudson River Valley and the Catskill peaks; principal concerns are protection of significant scenic vistas and ecologically unique areas; enhancement of recreational opportunities and improved public access; and consolidation of State holdings.
- Rusk Mountain Wild Forest This very popular recreation area lacks sufficient access, especially in the Spruceton Valley, and additional protection and access is needed in the western portion of the Wild Forest.
- Hunter West Kill Wilderness Consolidation, improved access, and preservation of wilderness character are the primary concerns.
- Catskill Mountain Heritage Trail Includes significant historic sites and scenic views from the John Burroughs Homestead, Burroughs Memorial site, and Woodchuck Lodge near Roxbury on Route 30, continuing easterly along the Route 23 and 23A corridors, and extending to the Thomas Cole House in the Village of Catskill. Very few acres of the original Burroughs Homestead are permanently protected, and there is a critical need to protect the pastoral setting surrounding Woodchuck Lodge and the Burroughs Memorial site.

#### **Greene County Soil and Water Conservation District**

Greene County's Soil and Water Conservation District published *The Mountaintop Community Recreation, Cultural Resources & Scenic Quality Strategy* (January 2009) "to identify and prioritize opportunities for improving recreational, cultural and scenic resources that could benefit the Mountaintop communities' tourism industry," covering nine municipalities located in

the Mountaintop region of Greene County, New York in the northern Catskill Forest Preserve and includes the towns of Ashland, Halcott, Hunter, Jewett, Lexington, Prattsville, and Windham, and the villages of Hunter and Tannersville. The plan seeks to improve outdoor recreational activities by focusing on projects that involve:

- Developing multi- use trails conducive for families and casual walkers,
- Working with NYCDEP to create complementary trails on city-owned property,
- Improving access to streams, and
- Creating bicycling lane designations &/or widening shoulders for bicycle riders.

#### **Ulster County**

Ulster County's *Open Space Plan* was released in December of 2007 to provide a "framework for coordinated management and protection of natural resources" in the County. The plan identifies and prioritizes both natural resource areas that should be protected, and "priority growth areas" where future development should be concentrated to take advantage of existing infrastructure, zoning and population density.

In the Future Without the Proposed Action, there will be ongoing efforts to preserve and protect open space and provide recreational opportunities in the watershed region, although at levels and a pace below those expected under a Future With the Proposed Action.

#### FUTURE WITH THE PROPOSED ACTION

Through the Extended LAP, NYCDEP would preserve additional open space in the watershed region as well as associated scenic vistas and natural resources. With respect to active open space and recreational use, NYCDEP would continue under the Extended LAP to open up lands acquired for public access and increase recreational uses, where consistent with public safety and water quality. As noted in the Existing Conditions section, 64 percent of the land acquired in fee simple under LAP is now open for recreational uses. NYCDEP anticipates that a similar or greater percentage of lands acquired in the Extended LAP would likely be opened up to recreation in the future.

Recreational use of City lands is governed by the "NYCDEP Rules for the Recreational Use of Water Supply Lands and Waters" with the latest version dated <u>November 29, 2010</u> (Recreational Use Rules). There are several types of recreation allowed on NYCDEP lands and the type allowed is largely a function of where the land is located. NYCDEP allows fishing from shore, fishing from boats, casual walking and hiking, boating, cross country skiing, small and big game hunting, and trapping (on PAAs).

Under the Recreational Use Rules, some LAP lands are designated for 'entry by permit.' That is, recreation users must have a valid NYCDEP Access Permit. Here, lands may be designated for one or more uses (i.e. hiking only, hunting and hiking) depending on several factors. Those who want to keep a boat on any of the NYCDEP the reservoirs for fishing, a valid NYCDEP Boat Tag is also required. Additionally, the Recreational Use Rules have a designation for Public Access Areas (PAAs) in which hiking, hunting, fishing and trapping are allowed without the

need for a NYCDEP Access Permit. The majority of WOH lands now acquired are open as PAAs. NYCDEP is also in the process of converting many "entry by permit" or "no trespassing" properties into PAAs. In 2010, NYCDEP is opening a bow-hunting only property along the southern shore of the Ashokan Reservoir. This is a narrow strip of land that does not lend itself to gun-hunting. In 2009, NYCDEP also began the Cannonsville Reservoir Boating Pilot Program in which non-motorized vessels (kayaks, canoes, etc.) are allowed, and users do not have to be fishing. Approximately half of the reservoir was open for this project in 2009. During 2010, NYCDEP expanded the pilot area to include the western portion of the reservoir.

NYCDEP has also issued revocable land use permits to entities such as municipalities and non-profit groups for uses such as snowmobile trails and ball fields in special situations.

Increasing the acreage that is open for public recreational use would benefit the region's communities in several ways.

- Recreational uses are highly valued by residents of watershed communities. In a survey of Delaware County residents conducted in 2009, access to both land and waterways for hiking, fishing and other recreational uses was rated as being either "very important" or "important" by a large majority of respondents; and hunting was rated similarly by a somewhat smaller majority. Table 6-5 summarizes respondents' answers to questions about hunting, fishing, hiking and access to waterways.
- A wide range of research over the past decade has highlighted the importance of opportunities for active outdoor recreation as one of the factors shaping young adults' decisions on where to live and work.<sup>3</sup>
- Expanding opportunities for active outdoor recreation can also strengthen the economy of watershed communities by attracting both short-term visitors and second-home buyers, building on what is already one of the region's greatest strengths. Recreation and other tourism-related businesses, including hotels and restaurants, accounted for approximately 13 percent of all employment in the watershed region in 2008.

In addition to its value as an amenity for full- and part-time residents, the opening of land acquired under the Extended LAP for recreational use can also benefit the region by attracting visitors from outside the West-of-Hudson watershed region. In 2005, according to data provided by NYCDEP, about 36,500 people who lived outside the watershed counties held permits for public recreational use of NYCDEP's watershed properties. Since about 90 percent of all NYCDEP properties open for recreational use are located west of the Hudson, it was assumed that the West-of-Hudson watershed region draws a similar percentage of non-local visitor traffic – about 32,850 people. While these visitors provide business and jobs for the watershed (see

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<sup>&</sup>lt;sup>2</sup> AEL Associates, Concern about the New York City Land Acquisition Program in Delaware County Communities: Summary of the 2009 Telephone Survey Results, September 2, 2009, page 22.

<sup>&</sup>lt;sup>3</sup> For example, see Richard Florida, *Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life.* 

Chapter 3, *Socioeconomic Conditions*), the greatest benefit of expanded public access to Cityowned land is likely to be the value that local full- and part-time residents derive from recreational use of these properties.

Table 6-4: Summary of responses to recreation questions in the 2009 Delaware County telephone survey

Recreation Issue	Percent of respondents
Access to land for fishing	71.6 %
Very important	32.9 %
Important	38.7 %
Access to land for hunting	61.3 %
Very important	32.1 %
Important	29.2 %
Access to local waterways	78.6 %
Very important	39.1 %
Important	39.5 %
Access to land for hiking and walking	76.8 %
Very important	30.4 %
Important	46.4 %

The Extended LAP is consistent with the 2009 New York State Open Space Conservation Plan and with the land conservation priorities recommended by the Regional Advisory committees. The solicitation and prioritization strategies to be employed by the Extended LAP both coincide with and provide further support to the priorities in the State Plan. As a practical matter, this means that some of the properties identified by the State may be acquired by the City. In addition, the City will likely acquire additional properties that either adjoin State priority sites (providing increase recreational opportunities and possibly enhancing access to State lands) or otherwise enhance recreational opportunities in the watershed region to compliment the State's goals. As stated in the Plan:

"New York City Watershed Lands: New York City expects to continue acquisition efforts under the 1997 Watershed Agreement (signed by local communities, counties, and the State) and the 1997 Water Supply Permit issued by DEC, and in accordance with a comprehensive water quality-based watershed protection plan. It is recommended that the State work with the City to identify and protect high priority sites with the Region that are not being pursued by or protected under City acquisition programs. In particular the State should focus acquisition efforts on lands that (1) have potential for development, forestry, or fisheries and are (2) relatively large and/or (3) link areas already protected by private or public entities and/or (4) allow for improved long term

management of land and water resources. All such work by the State should naturally conform to established criteria for protection under the State Open Space Conservation Plan.<sup>4</sup>"

Preservation of open space through the Extended LAP would also be consistent with the ecological and social benefits of land protection outlined in the Open Space Plan:

- Freshwater and tidal wetlands filter and process polluted water.
- Forested areas remove carbon dioxide from the atmosphere, thereby mitigating the threat of global warming; trees and parks in urban settings reduce noise, lower temperatures in the summer, reduce the consumption of nonrenewable fossil fuels for residential and commercial cooling and heating, and trap pollutants in the atmosphere.
- Forests are a primary source of clean water; the Adirondacks and Catskills are the sources of several of the state's major river systems.
- The Catskills also contain much of New York City's reservoirs critical to the needs of millions of New Yorkers.

In conclusion, the Extended LAP in the West-of-Hudson watershed is expected to benefit open space and recreation in the watershed. Therefore, it is not anticipated that the proposed action would have a significant adverse impact on open space and recreation.

#### EAST-OF- HUDSON

#### **EXISTING CONDITIONS**

As of July 2009, a total of 64,136 acres within the East-of-Hudson watershed can be considered protected lands, including:

- 4,997 acres of State-owned land,;
- 10,954 acres acquired by New York City in fee simple or as conservation or agricultural easements under LAP;
- 20,231 acres of land that New York City had already owned prior to the execution of the MOA, as well as reservoirs covering 11,200 acres; and
- 16,754 acres owned or protected by others, such as private non-profit land conservation trusts.

On EOH lands, NYCDEP allows: fishing from shore, fishing from boats, hiking and small and big game hunting. City-owned lands open for recreation EOH are allowed by "entry by permit," that is, recreation users must have a valid NYCDEP Access Permit. Lands may be designated for one or more uses (i.e. hiking only, hunting and hiking) depending on several factors. Those who want to keep a boat on any of the NYCDEP reservoirs for fishing must also have a valid NYCDEP Boat Tag.

<sup>&</sup>lt;sup>4</sup> 2009 NYS Open Space Plan.

As mentioned above, NYCDEP issues revocable land use permits to entities such as municipalities and non-profit groups. NYCDEP issues land use permits to allow recreational uses of its lands. For example, NYCDEP issued permits to Teatown Reservation and Putnam County to construct and maintain hiking trails on City land.

A map showing the City land open for public recreation is provided in Figure 6-4.

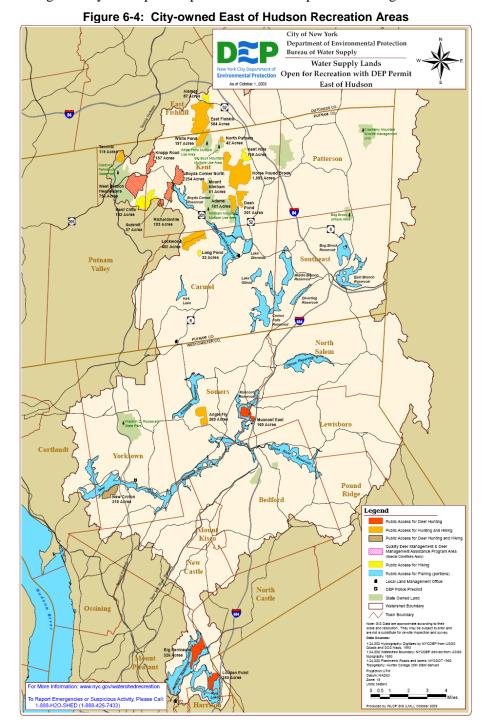


Table 6-5: Recreation Areas in East of Hudson Watershed Counties

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RECREATION AREA	TOWN	LOCATION	WMU *	PUBLIC ACCESS	HIKE	FISH	HUNT	TRAP	ACRES		
East Fishkill	East Fishkill	NY Rte 52 & Leetown Rd.	3N		<b>✓</b>	<b>✓</b>	<b>√</b>		807		
	Westchester County										
			WMU	PUBLIC							
RECREATION AREA	TOWN	LOCATION	***************************************	ACCESS	HIKE	FISH	HUNT	TRAP	ACRES		
				AREA							
Angle Fly	Somers	NY Route 35	38		✓		<b>✓</b>		269		
Big Peninsula	North Castle	King Street	3S			✓	✓		327		
Louden Point	North Castle	Route 120	3S			<b>✓</b>	✓		180		
Muscoot East	Lewisboro	Old Bedford Rd.	38			<b>~</b>	✓		160		
New Croton**	Yorktown	Croton Dam Rd.	38		V		<b>√</b>		208		

<sup>\*</sup> Quality Deer Management Area, no buck harvest on certain days, antier size regulation in effect

#### FUTURE WITHOUT THE PROPOSED ACTION

There are a number of State and local plans to preserve open space and promote recreation in the East-of-Hudson watershed region.

## **New York State Open Space and Conservation Plan**

The NYS Open Space Conservation Plan, as described above, outlines several priority areas in the East of Hudson Watershed. It mentions that roughly 70 percent of NYC's East-of-Hudson reservoir system overlaps with, and has been identified by the USDA Forest Service as part of, a Highlands Conservation Focal Area.

#### Highlands East of Hudson River

Croton-to-Highlands Biodiversity Area – The Towns of Putnam Valley in Putnam County, and Cortlandt, Yorktown, and New Castle in Westchester County have been recognized for their high biodiversity value by the Wildlife Conservation Society/Metropolitan Conservation Alliance (MCA). MCA's biodiversity plan, published in 2004, delineates those areas it determined are suitable for development and those areas that contain species vulnerable to habitat fragmentation and should be a priority for acquisition. This area of the East of Hudson watershed has also been identified by the Forest Service as a Highlands Conservation Focal Area.

Northern Putnam Greenway - Extending from the Taconic Ridge on the east to the Hudson River on the west, this proposed greenway is critical to maintaining the ecological integrity of the Highlands Region and to protecting the rural character of one of New York's fastest growing counties. Acquisitions in this area of Putnam County would provide important linkages for passive recreation and wildlife corridors, preservation of scenic viewsheds, and protection of critical water supplies. Representative parcels include those areas that would link and are adjacent to Ciaiola County Park, Cranberry Mountain, the Great Swamp, Ice Pond, Wonder Lake State Park, Big Buck, White Pond, Horse Pound Brook, Ninham Mountain, Lockwood Pond, California Hill, and Fahnestock/Hudson Highlands State Parks.

<sup>\*\*</sup> Deer hunting Only no small game or Bear Hunting allowed here

#### Great Swamp

The largest and highest quality red maple hardwood swamp in southern New York is located in the Towns of Pawling and Dover, Dutchess County and the Towns of Patterson and Southeast, Putnam County. Much of the Great Swamp is within the Croton River Basin and flows directly into the East Branch Reservoir, a New York City reservoir part of the Croton Watershed. It contains critical habitat for bird and aquatic species—nine of which are rare, protects and purifies the water supply for millions of New York residents, is an aquifer recharge area, reduces flooding, and provides outstanding educational and recreational opportunities. This vital and fragile natural resource needs to be safeguarded from further development and associated runoff. In order to protect the unique habitat of the Great Swamp, the diverse range of wildlife it supports, its scenic value, and its critical function of water purification, not only the inholdings but also the surrounding uplands need to be conserved. Large parts of the Great Swamp's 63,000-acre watershed have been identified by the Forest Service as a Highlands Conservation Focal Area.

#### The Town of Kent

The Town of Kent has identified the preservation of open space – for its scenic beauty, active recreation, and environmental quality – as a goal of its land use planning. As stated in its 2002 Croton Plan, Kent "contains many forested areas as well as lakes, reservoirs and streams, a number of which provide excellent outdoor recreational opportunities, such as fishing, hiking, camping, and hunting. The scenic beauty of much of the landscape, as well as the outdoor recreational opportunities and rural character of the Town, might well be perceived as some of its best and most important assets."

#### The Town of Carmel

The Town of Carmel 2002 Croton Plan states as a goal the "need to protect watercourses, wetlands, steeply sloped lands and an integrated open space system" and the need to make additional land available for public recreation.

#### **Town of East Fishkill**

As in Carmel and Kent, the Town of East Fishkill has developed specific plans and policies in order to preserve open space and limit residential growth. As the Final Generic Environmental Impact Statement for the East Fishkill Comprehensive Plan and Code Amendments puts it:

The 2002 Comprehensive Plan seeks to guide the Town's development over the next ten years. It suggests ways to reduce the rate of new residential construction, to encourage the

<sup>&</sup>lt;sup>5</sup> Town of Kent Croton Plan, 2002. p. IV-12.

<sup>&</sup>lt;sup>6</sup> Town of Carmel Croton Watershed Plan, 2002. p. 1-52.

preservation of open space and greenways, to protect environmentally sensitive areas, and to lower the potential population build-out of the Town.<sup>7</sup>

In a 2003 survey of residents of Putnam Valley administered in the development of the comprehensive plan, residents support the preservation of open space and limiting residential development: 71 percent of respondents agreed with the statement "Putnam Valley needs to protect more open space." 68 percent of respondents agreed with the statement.

#### FUTURE WITH THE PROPOSED ACTION

Although the Extended LAP East-of- Hudson is not expected to substantially change the amount of protected open space in the watershed, any land purchased would preserve open space in a largely developed area and its associated scenic vistas and natural resources. With respect to active open space and recreational use, NYCDEP would continue under the Extended LAP to open lands acquired for public access and increase recreational uses, where consistent with public safety and water quality.

In conclusion, the Extended LAP in the East-of-Hudson watershed is expected to benefit open space and recreation in the watershed. Therefore, it is not anticipated that the proposed action would have a significant or adverse impact on open space and recreation.

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Final Generic Environmental Impact Statement, East Fishkill Comprehensive Plan And Related Code Amendments, 2002. pg. 1.

## **CHAPTER 7:**

## **CULTURAL RESOURCES**

The Extended LAP would not generally result in any construction activity that would disturb historic or archeological resources in the watershed. The Extended LAP has the potential to result in a benefit to historic and archaeological resources on acquired sites by ensuring that these sites would not be disturbed. In some cases, lands under consideration for acquisition may contain historic structures. As part of the Community Review Process mandated by the MOA, local Town or Village governments would advise the City whether they wish any structures on property to be removed. For acquired property determined to require demolition or alteration of any structure, NYCDEP determines if the structure is subject to State and local regulations regarding historic resources.

As directed by State and City agencies, NYCDEP staff notifies the State Office of Parks, Recreation and Historic Preservation of their plans to demolish structures, and provide photo documentation of the structures. Where requested by OPRHP, NYCDEP staff generates comprehensive photo documentation of the site and provide a copy to the local historical society. The photo documentation will generally include the historic farmhouse, farmstead, fields and an overview map of the site showing photo locations. Where available from neighbors, former owners, and the internet, a narrative history of the farm will be included in the photo documentation package.

If the structure is of historical significance, the City adheres to all applicable historic preservation laws and rules and regulations. Therefore, the Extended LAP is not expected to result in the potential for significant adverse impacts on historic or archaeological resources.

### **CHAPTER 8:**

## OTHER IMPACT CATEGORIES

#### INTRODUCTION

The following impact categories were reviewed to determine whether there was a potential for significant impacts from the Extended LAP: visual character, community facilities, traffic, air, noise, and hazardous materials. It was determined that there are no potential impacts and no additional analysis is warranted. The support for this determination is discussed below under each impact category.

#### VISUAL CHARACTER

Extended LAP acquisitions would preserve low density and vacant land with natural features. No structures are proposed and no view corridors would be altered. Visual character would remain unaltered. Therefore, through conservation of existing natural landscapes, Extended LAP is not anticipated to have a significant adverse impact to visual character in the watershed towns.

#### **COMMUNITY FACILITIES**

The Extended LAP would not directly displace community facilities since Extended LAP would primarily acquire vacant or low-density residential property, occasionally with vacant or uninhabited existing structures. In addition, it is not anticipated that Extended LAP would result in new or increased levels of development or would substantially change population patterns. Therefore, it would not generate increased demand for community facilities such as schools, libraries, police, or hospitals. Because the Extended LAP is not expected to significantly displace populations, for reasons presented in Chapter 3, *Socioeconomic Conditions*, it would not significantly contribute to declining enrollment. In addition, Chapter 3 concluded that the Extended LAP would not have a significant impact on school district revenues. With respect to fire services, the land acquired is currently vacant and would remain so into the future, thereby not impacting fire services. If, absent the program, particular parcels were to be developed, it is not anticipated that developed parcels would place a lesser burden on fire services. Therefore, the Extended LAP is not expected to result in a potential significant adverse impact on community facilities in the watershed towns.

#### **TRAFFIC**

The Extended LAP would not generate new increased levels of development or associated vehicular trips. No significant displacement effects are projected and any shifts in locations of development are expected to be localized in nature. In addition, Extended LAP purchases would not occur within hamlets or hamlet expansion areas, thus leaving historic and current development patterns largely unchanged.

While as discussed in Chapter 6 *Open Space and Recreation*, the Extended LAP is expected to result in an increase in the lands available for recreational use, the associated traffic impacts are expected to be minimal as documented in the July 2008 Negative Declaration for the Proposed Amendments to the Rules for the Recreational Use of Waters Supply Lands and Waters. The Extended LAP would not substantially alter traffic flows. Therefore, the Extended LAP is not

expected to result in the potential for significant adverse impacts on traffic conditions in the watershed towns.

#### **NOISE**

As discussed under "Traffic" above, the program would not generate significant increases in traffic (new mobile sources of noise). In addition, the Extended LAP would not result in the creation of new stationary noise sources due to the fact that no new development would occur on lands acquired. Any increased use of these lands for recreational purposes and traffic or other noise associated with those uses would not be expected to result in significant elevated noise levels given the large and relatively isolated areas and the numbers of visitors at a given time and as documented in the July 2008 Negative Declaration for the Proposed Amendments to the Rules for the Recreational Use of Waters Supply Lands and Waters. Therefore, the Extended LAP is not expected to result in the potential for significant adverse impacts on noise conditions in the watershed towns.

## **AIR QUALITY**

As explained above in "Traffic" and "Noise," no significant generation of mobile or stationary sources are expected as a result of Extended LAP activity. Therefore, the Extended LAP is not expected to result in the potential for significant adverse impacts on air quality conditions in the watershed towns.

#### HAZARDOUS MATERIALS

In general, the Extended LAP would not result in construction activity or excavation on acquired property. Some demolition of vacant structures on the acquired sites may take place and may require the removal of foundations. Prior to demolition, these structures would be surveyed to determine whether they contain asbestos or hazardous substances. Any identified materials would be remediated following the laws of the State of New York, the City of New York and any applicable local regulations. Prior to acquiring title of a piece of property, the City will conduct a Phase I site assessment to investigate the possible presence of hazardous materials. If evidence of hazardous materials are found, the City would not proceed with the purchase until all issues related to the materials are resolved in accordance with federal, State and local regulations. Therefore, the Extended LAP is not expected to result in the potential for significant adverse hazardous materials impacts.

#### SOLID WASTE

The Extended LAP would not generate a significant increase in solid waste. LAP acquired lands would be preserved. Recreational activities may increase, but should not result in significant generation of solid waste. Therefore, the Extended LAP is not expected to result in the potential for significant adverse solid waste impacts.

#### **ENERGY**

As stated above, the Extended LAP would not result in construction activity that would require energy resources. LAP acquired lands would be preserved and it is not anticipated maintenance of these lands would require significant energy resources. Therefore, the Extended LAP is not expected to result in the potential for significant adverse impacts on energy.

## **CHAPTER 9:**

## MITIGATION AND UNAVOIDABLE IMPACTS

Based on the assessments conducted in this EIS, the Extended LAP would not result in potential significant adverse impacts. Therefore, no mitigation is being proposed and there are no unavoidable impacts.

## **CHAPTER 10:**

# IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed Extended LAP would not require the construction of any new facilities. Natural resources including water resources and habitats would be preserved. Resources that would be used for the program would be for purchases of land and operation and maintenance purposes including the human effort required to plan and implement the program. These resources are considered irretrievably and irreversibly committed. No potential significant irreversible and irretrievable resources impacts are expected.

## **CHAPTER 11**

## ANALYSIS OF ALTERNATIVES

#### INTRODUCTION

This chapter considers several alternatives to the Proposed Action. As described in Chapter 1, "Project Description," the objective of the proposed action is to acquire fee simple and conservation easement interests to protect environmentally-sensitive land in the New York City (City) watershed as a part of the City's overall Watershed Protection Program. LAP is a key component of the City's efforts to continue to provide high quality drinking water without filtration of the Catskill-Delaware (Cat-Del) System, which provides water to over 9 million residents of the City and other communities in New York State. The program is mandated under the 2007 USEPA Filtration Avoidance Determination (FAD). Land acquisition was similarly a key component of the 1997 and 2002 FADs.

The State Environmental Quality Review Act (SEQRA) and City Environmental Quality Review (CEQR) process require that alternatives to the proposed action be identified and evaluated as part of the EIS process. The alternatives analysis should: (1) present reasonable options for reducing or eliminating project impacts, while substantively meeting project goals and objectives; (2) demonstrate a reasonable range of options to the proposed action; and (3) compare potential impacts under alternative approaches for meeting project objectives. The range of alternatives to be considered is determined by the nature, goals, and objectives of the specific action and its potential impacts, as disclosed by the technical impact assessments (see Chapters 2 through 10).

Each alternative is to be described to the extent that impacts can be compared with the impacts identified for the proposed action. Therefore, the level of detail in the analysis is dependent on the alternative and the project impacts. When limited impacts are identified, a qualitative assessment is appropriate. Where a significant impact of the proposed action has been disclosed, or where the alternative may disclose a significant impact in an area where the proposed action had none, it is appropriate to provide additional detail on impacts under the alternative.

This chapter of the EIS assesses the impact of <u>three</u> alternatives to the Extended LAP (the proposed action as described in Chapter 1). It examines the potential impact of alternatives to the proposed action on land use, socioeconomic conditions, community character and other conditions in the watershed. The following alternatives will be evaluated <u>in this chapter</u>:

• The "No Action" alternative; since LAP is a requirement of the FAD, this alternative assumes that New York City's water supply would be filtered.

<sup>&</sup>lt;sup>1</sup> Although the Catskill watershed and Delaware watershed are distinct geographical features, they are functionally managed together and for regulatory purposes are considered a single integrated system.

- A Lesser-Impact Alternative; in which the amount of land to be acquired under the Extended LAP in fee simple and through conservation easements is 10 percent less than estimated in the 10 Year Projection Scenario; and
- A No Hamlet Expansion Alternative in which the amount of land to be acquired is the same as under the Extended LAP in fee simple and through conservation easements, but the proposed hamlet expansions discussed in Chapter 1 are eliminated. The original hamlet areas designated pursuant to the MOA would remain in place – but they would not be expanded. Other aspects of the program would remain the same as analyzed under the Proposed Action.

Each of these alternatives is examined below.

The DEIS also considered a Greater Impact Alternative in which NYCDEP would acquire 10 percent more land than projected in the 10 Year Projection Scenario and the NYCDEP Land Acquisition Program is extended for five additional years, through 2027. The FEIS includes this alternative as part of the proposed action as "the 15 Year Greater Impact Scenario" as described in Chapter 1 and as assessed throughout the EIS as applicable.

#### NO ACTION ALTERNATIVE

The No Action Alternative presents environmental conditions that would exist if the proposed action were not implemented. The assessment of the No Action Alternative is required for all Environmental Impact Statements (EISs).

The No Action Alternative would put the City in violation of the 2007 Filtration Avoidance Determination (FAD) issued by USEPA, which requires the City to pursue the Land Acquisition Program. If the City does not comply with the 2007 FAD, NYSDOH could require that the Catskill/Delaware System be filtered. Filtration of the Catskill/Delaware System would require the siting, design, construction, and operation of a drinking water filtration plant and could result in potential environmental impacts to the local community where the facility is sited and considerable costs to water and sewer ratepayers.

For this EIS, the Proposed Action is the acquisition of a new Water Supply Permit to allow for the continued acquisition of land under the Land Acquisition Program. It is not within the scope of the environmental review, nor is it reasonable or proper to assess the entire Long-Term Watershed Protection Program or FAD requirements within this review. Nor is it required under SEQRA that a cost-benefit analysis be conducted of LAP compared to other elements of the FAD. The analysis included cumulative effects from other FAD requirements to the extent they are overlapping and could result in potential significant adverse impacts such as the Watershed Rules and Regulations limits on development in certain areas of the watershed. It has been determined, based on the analysis in this EIS, that the Extended LAP will have a beneficial

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The entire Long Term Watershed Protection Program was the subject of a previous environmental review that resulting in a Negative Declaration, dated September 2007.

effect on water quality and no potential significant adverse impacts on land use, community character, or socioeconomic conditions.

Under the No Action Alternative, in the West-of-Hudson and East-of-Hudson Watersheds, the Land Use, Community Character Socioeconomic, Water Quality and Open Space conditions would be the same as those discussed under the *Future Conditions Without the Proposed Action* sections in each chapter above.

#### LESSER IMPACT ALTERNATIVE

This section discusses the potential impacts of an action in which NYCDEP acquires 10 percent less land than was projected in the 10 Year Projection Scenario for the proposed action in Chapter 1, *Project Description*. Based on this approach, NYCDEP acquisitions in fee simple and conservation easements in the West-of-Hudson watershed between 2010 and 2022 would total 72,853 acres, as compared with 80,948 acres through 2022 in the 10 Year Projection Scenario. Purchases of farm easements by the Watershed Agricultural Council from 2010 through 2022 would total 14,400 acres, as compared to 16,000 acres through 2022 in the Proposed Action's r10 Year Projection Scenario.

#### SOCIOECONOMIC CONDITIONS

#### West-of-Hudson

Impacts on Supply of Developable Land

This section discusses the Lesser Impact Alternative's projected potential impact through 2022 on the supply of developable land in watershed towns. This alternative uses the same process as that described in Chapter 3 to project remaining developable land in 2022. After removing towns with less than 5 percent of their area within the watershed, a four-step process was undertaken to estimate the impact of NYCDEP's Extended LAP program on developable land at the town level through 2022.

- Step 1: Assume the same amount of available developable land in 2009 as determined in Chapter 3.
- Step 2: Assume the same <u>10 Year Projection Scenario</u> rate of housing demand as determined in Chapter 3.
- Step 3: Assume that NYCDEP will acquire ten percent less land than the <u>10 Year Projection Scenario</u>, and estimate the portion of those lands that are developable.
- Step 4: Estimate remaining developable land in 2022 after housing demand and LAP acquisitions.

The amount of developable land acquired was estimated using the methods described in the *Methodology* section above.

The town-by-town results of this analysis are presented in Table <u>11-1</u>, (The towns are ranked in descending order of the percentage of the town's 2009 supply of developable land remaining in 2022.) The analysis suggests that all 34 towns have sufficient land available to accommodate

both the projected acquisitions under LAP, and the projected rate of residential development through 2022.

As Table 11-1 shows, for the 34 towns collectively, land to be acquired by LAP between 2010 and 2022 represents about 9.7 percent of 2009's available developable land; and new residential development over that time period is estimated to consume 5.5 percent. (It was estimated in Chapter 3 that under the proposed action, the land to be acquired by LAP between 2010 and 2022 would represent 10.8. percent of the 34 towns' 2009 supply of developable land, and that new residential development during the same period would consume 5.5 percent.) For the 34 towns as a whole, approximately 84.8 percent of 2009's available developable land would still remain in 2022, as compared with 83.7 percent under the 10 Year Projection Scenario. Each town would have at least 68 percent of its 2009 supply of developable land remaining in 2022, as compared with a minimum of 66 percent under the 10 Year Projection Scenario. As discussed above and in Chapter 3 in detail, due to the very conservative nature of the analysis, the percentage of developable land remaining in 2022 is likely to be higher.

For the region as a whole, the impact of the Lesser Impact Alternative on the availability of land for development would not differ materially from the impact of the proposed action, as assessed in Chapter 3. In neither case would the projected level of acquisition significantly constrain new development in the West-of-Hudson watershed between 2010 and 2022.

Table 11-1 Remaining developable acreage in 2022, by town, after Extended LAP activity minus 10 percent and development through 2022. (Cells with bold and yellow show where criteria for more detailed town level assessment was met or exceeded.)

			Projected	Developable		% of 2009		
		Available	developable land	land needed	Developable	developable		
		developable	acquired through	for housing	land left in	land left in	LAP	Housing
County	Town	acres, 2009	2022 - 10%	through 2022	2022	2022	contribution	contribution
Greene	Lexington	3,475	784	314	2,377	68.4%	22.6%	9.0%
Ulster	Denning	4,187	1,223	71	2,893	69.1%	29.2%	1.7%
Greene	Prattsville	2,773	738	100	1,935	69.8%	26.6%	3.6%
Ulster	Olive	5,684	784	748	4,152	73.0%	13.8%	13.2%
Ulster	Hardenburgh	2,692	572	166	1,954	72.6%	21.2%	6.2%
Greene	Ashland	3,351	628	260	2,463	73.5%	18.7%	7.8%
Sullivan	Neversink	12,797	1,778	1,501	9,517	74.4%	13.9%	11.7%
Schoharie	Conesville	5,525	860	560	4,105	74.3%	15.6%	10.1%
Greene	Windham	5,272	792	540	3,940	74.7%	15.0%	10.2%
Greene	Halcott	1,668	350	79	1,238	74.2%	21.0%	4.8%
Ulster	Shandaken	1,444	167	186	1,091	75.6%	11.5%	12.9%
Delaware	Andes	7,221	1,325	486	5,410	74.9%	18.3%	6.7%
Delaware	Stamford	4,939	1,068	199	3,673	74.4%	21.6%	4.0%
Greene	Jewett	6,292	947	511	4,835	76.8%	15.1%	8.1%
Delaware	Hamden	6,146	652	701	4,793	78.0%	10.6%	11.4%
Delaware	Middletown	7,455	1,072	513	5,870	78.7%	14.4%	6.9%
Greene	Hunter	6,722	1,049	348	5,324	79.2%	15.6%	5.2%
Delaware	Delhi	5,851	891	264	4,695	80.2%	15.2%	4.5%
Ulster	Woodstock	6,759	755	479	5,524	81.7%	11.2%	7.1%
Delaware	Bovina	3,726	640	68	3,019	81.0%	17.2%	1.8%
Delaware	Roxbury	5,927	856	216	4,855	81.9%	14.4%	3.6%
Delaware	Walton	8,845	1,141	329	7,375	83.4%	12.9%	3.7%
Delaware	Tompkins	10,947	1,094	572	9,282	84.8%	10.0%	5.2%
Delaware	Kortright	8,370	567	406	7,397	88.4%	6.8%	4.9%
Ulster	Hurley	5,003	120	410	4,473	89.4%	2.4%	8.2%
Schoharie	Jefferson	8,722	187	639	7,895	90.5%	2.1%	7.3%
Delaware	Meredith	13,063	742	469	11,852	90.7%	5.7%	3.6%
Schoharie	Gilboa	10,583	643	251	9,690	91.6%	6.1%	2.4%
Delaware	Masonville	10,890	375	447	10,068	92.5%	3.4%	4.1%
Ulster	Wawarsing	23,610	863	802	21,946	93.0%	3.7%	3.4%
Delaware	Deposit	4,052	21	230	3,800	93.8%	0.5%	5.7%
Delaware	Colchester	9,406	211	296	8,899	94.6%	2.2%	3.1%
Delaware	Harpersfield	9,959	280	200	9,479	95.2%	2.8%	2.0%
Delaware	Franklin	19,006	343	520	18,142	95.5%	1.8%	2.7%
	TOTAL	252,361	24,516	13,883	213,963	84.8%	9.7%	5.5%

Table 11-1 highlights the towns in which, even under the Lesser-Impact Alternative, the projected level of acquisitions between 2010 and 2022 accounts for at least 20 percent of the Town's 2009 supply of developable land, or the projected level of residential development consumes at least 10 percent of that supply – the thresholds used in Chapter 3 to identify towns for further review. More detailed assessments of the nine of the towns highlighted in yellow in Table 11-1 are already included in Chapter 4.

In the remaining 25 towns (those not shaded in yellow in <u>Table 11-1</u>), the percentage of the town's 2009 supply of developable land still remaining in 2022 ranges from 73.5 to 95.5 percent.

Table <u>11-2</u> lists six towns where the supply of developable land in 2009 is estimated to be less than 10 percent of the town's total land area, or less than 3,000 acres.

Table <u>11-2</u>: Towns with less than 10 percent or fewer than 3,000 acres of developable town area land remaining in 2009 under Lesser Impact Alternative

County	Town	Total town land	Available developable acres, 2009	Developable land left in 2022	% of town area developable, 2009	% of town area developable, 2022
Ulster	Shandaken	78,875	1,444	1,091	1.8%	1.4%
Ulster	Hardenburgh	51,756	2,692	1,954	5.2%	3.8%
Ulster	Denning	65,430	4,187	2,893	6.4%	4.4%
Greene	Lexington	51,274	3,475	2,377	6.8%	4.6%
Greene	Halcott	14,375	1,598	1,238	11.1%	8.6%
Greene	Prattsville	13,786	2,773	1,935	20.1%	14.0%

Other Socioeconomic Conditions, Land Use and Community Character

A 10 percent decrease in the acreage projected to be acquired under the Extended LAP would have very little effect on the program's impact on socioeconomic conditions, land use patterns or the character of communities in the watershed. Such a reduction could marginally reduce the potential for conflicts in a few towns between the Extended LAP and the need for land for future development – but the effect would not be substantial. There could be a marginal reduction in the potential for displacement of mining or timber harvesting as a result of acquisition of land by NYCDEP; but as discussed in the Greater Impact Alternative analysis, the potential for such displacement does not appear to be significant in any case. A 10 percent reduction in the acreage to be acquired could also result in a commensurate reduction in the areas that could be opened by NYCDEP for public recreational use.

A 10 percent reduction would be unlikely to affect hamlet areas and village centers in the watershed towns, since the reduction in land to be acquired would generally take place outside these areas.

#### East-of-Hudson

As noted in Chapters 2 and 3, the impact of the proposed action on land use, community character and socioeconomic conditions in the East-of-Hudson region would be quite limited – primarily because the amount of land projected to be acquired in the East-of-Hudson region under the proposed action totals only 1,517 acres, spread across four towns.

Under the Lesser Impact Alternative, the land to be acquired in the East-of-Hudson watershed region would decline by 10 percent, to 1,365 acres of which developable land would total 484 acres (see Table 11-3). There would be slightly less potential for conflict between the Extended LAP and the need for land to accommodate new development than in there would be under the proposed action – but in either case, the impact would be negligible.

% of 2009 Projected Developable % of town Available developable land land needed Developable % of town area developable area developable acquired through for housing land left in LAP Housing developable. County Dutchess acres, 2009 2022 (-10%) through 2022 contribution contribution 2009 East Fishkill Putnam 1.520 73 842 605 39.8% 4.8% 55.4% 6.3% 2.5% Carmel 2.096 180 6.0% Putnam 296 1.621 77.3% 14.1% 8.6% 7.8% Putnam Putnam Valley 5.560 569 4.982 89.6% 0.2% 10.2% 20.2% 18.1%

Table 11-3: Lesser Impact Alternative in East-of-Hudson towns

#### WATER QUALITY AND NATURAL RESOURCES, OPEN SPACE

As described in Chapter 5, *Water Quality and Natural Resources*, and Chapter 6, *Open Space and Recreation*, LAP provides benefits to water quality, natural resources and open space. If NYCDEP acquires 10 percent less land than the proposed action, these benefits may be reduced, but the action would still provide benefits.

#### **CULTURAL RESOURCES**

Under the Lesser Impact Alternative, the same protocol as described in Chapter 7, *Cultural Resources*, would be applied with respect to protecting and preserving historical and archaeological resources.

#### NO EXPANSION OF DESIGNATED HAMLET AREAS

The final alternative to be considered is one in which there would be no expansion of designated hamlet areas. The hamlet areas originally designated by watershed towns pursuant to the 1997 MOA would remain in place and LAP activity would not occur in these areas to the extent these towns have precluded acquisitions. This alternative is being considered because the negotiations over the Extended LAP with stakeholders are ongoing and the hamlet expansions are under discussion, although NYCDEP has agreed and remains committed to including the expanded hamlet areas. For this alternatives analysis, it is assumed that the total amount of land to be acquired by NYCDEP in fee simple or through conservation easements or by WAC would remain as described in Chapter 1. Without the expanded hamlets, however, this alternative assumes that some of the land acquired would be in the areas proposed for hamlet expansions.

Because the MOA did not provide for designation of hamlet areas east of the Hudson, the proposed action (as described in Chapter 1) does not include expansion of hamlet areas in East-

of-Hudson towns. The No Hamlet Expansion Alternative would thus not affect the analysis of the East-of-Hudson region and is not considered here.

Table <u>11-4</u> shows the number of acres included in each town's designated areas pursuant to the MOA and the number of acres in the proposed expansion areas. As shown, the proposed expansion areas cover a total <u>about</u> <u>26,700</u> acres.

Among the 16 towns in which hamlet expansions have been proposed, the impact of not expanding the designated hamlet areas is likely to vary from town to town, based on a number of factors:

- The scale of LAP acquisitions in the town through 2027, and their projected impact on the town's supply of developable land;
- The pace and location of new development in the town, the acreage required to support it, and its projected impact on the supply of developable land;
- The extent to which any major development planned for the towns are known to be located within the proposed expansion areas;
- The size of the proposed expansion areas, relative to the overall size of the town;
- The acreage within the proposed expansion areas already solicited by LAP; and
- LAP's projected "success rate."

Broadly speaking, eliminating the proposed hamlet expansions would not necessarily alter the total amount of land to be acquired within the 16 affected towns – but it would affect where the acquired land is located, and the potential for conflict between projected LAP acquisitions and requirements for land to support projected future development.

#### Table <u>11-5</u>:

- Highlights the size of each proposed expansion area relative both the existing MOA designated hamlet areas, and to the size of the town as a whole;
- Identifies the amount of land within each expansion area already solicited by NYCDEP or potentially available for WAC easements; and
- Projects the acreage that NYCDEP and WAC might acquire<sup>1</sup> in what would have been each town's proposed expansion areas.

This calculation suggests that under the No Hamlet Expansion Alternative, 3,975 acres could be acquired in fee, CEs or WAC within the proposed expansion areas of the 15 towns where the parties have reached agreement on the proposed hamlet expansions, and potentially more than 700 additional acres in the area Walton has proposed to add to its 1997 designated areas

<sup>&</sup>lt;sup>1</sup> Based on NYCDEP's projected "success rate," based on past experience, that it could potentially acquire through 2022; and an assumption that, for the West-of-Hudson watershed as a whole, WAC will succeed in acquiring easements on about 18 percent of all potentially eligible farm land.

Table 11-4: Number of acres in existing designated hamlet areas, and proposed hamlet expansions, by town

County/Town	Existing Designated Hamlet Area, Acres	Proposed Expansion, <u>Area_</u> Acres	Total area, acres	
Delaware County				
Andes	1,052	0	1,052	
Bovina	392	0	392	
Delhi	2,346	<u>2,556</u>	<u>4,902</u>	
Hamden	420	<u>2,434</u>	<u>2,854</u>	
Harpersfield	405	<u>1,298</u>	<u>1,703</u>	
Kortright	250	<u>3,664</u>	<u>3,914</u>	
<u>Masonville</u>	<u>n/a</u>	<u>150</u>	<u>150</u>	
Meredith	73	71	144	
Middletown	1,734	<u>298</u>	2,032	
Roxbury	957	<u>435</u>	<u>1,392</u>	
Sidney	<u>n/a</u>	<u>218</u>	<u>218</u>	
Stamford	1,331	0	1,331	
Tompkins	109	0	109	
Walton	1,503	<u>2,929</u>	4432	
SUBTOTAL	10,572	<u>14,053</u>	24,625	
Greene County				
Ashland	362	<u>1,676</u>	2,038	
Halcott	69	0	69	
Hunter	3,251	2,891	6,142	
Jewett	652	<u>2,014</u>	<u>2,666</u>	
Lexington	362	375	737	
Prattsville	207	0	207	
Windham	1,148	<u>2,797</u>	<u>3,945</u>	
SUBTOTAL	6,051	<u>9,753</u>	<u>15,804</u>	
Schoharie County				
Conesville	275	<u>1,570</u>	<u>1,845</u>	
Ulster County				
Denning	1,107	0	1,107	
Olive	547	1,333	1,880	
SUBTOTAL	1,654	1,333	2,987	
Sullivan County				
Neversink	1,197	0	1,197	
Shandaken	1,561	0	1,561	
SUBTOTAL	2,758	0	2,758	
TOTAL	21,310	<u>26,709</u>	<u>48,019</u>	

Table 11-5: Solicited acres and projected fee and CE acquisitions in proposed expansion areas

						Projected fee			
	MOA	Proposed	PEA as % of			and CE	Acres in MOA	Projected	<b>Total DEP and</b>
	designated	expansion	total town	Solicited		acquisitions in	PEA Available	WAC CE in	WAC Acres
Town	acres	acres	acres	acres in PEA	Success rate	PEA	for WAC CE	PEA/MOA	Projected
Delhi	2,346	2,556	6%	891	20%	178	818	147	325
Hamden	420	2,434	6%	776	20%	155	1,027	185	340
Harpersfield	405	1,298	5%	370	20%	74	847	152	226
Kortright	250	3,664	9%	1,372	20%	274	1,743	314	588
Masonville	0	150	0%	0	20%	0	0	n.a.	0
Meredith	73	71	0%	60	20%	12	17	n.a.	12
Middletown	1,734	298	0%	208	20%	42	48	n.a.	42
Roxbury	957	435	1%	104	20%	21	342	62	83
Sidney	0	218	1%	34	20%	7	0	n.a.	7
Walton	1,503	2,929	5%	889	20%	178	1,169	210	388
Ashland	362	1,676	10%	997	27%	269	17	n.a.	269
Hunter	3,251	2,891	5%	1,744	27%	471	0	n.a.	471
Jewett	652	2,014	6%	556	27%	150	0	n.a.	150
Lexington	362	375	1%	375	27%	101	0	n.a.	101
Windham	1,148	2,797	10%	1,429	27%	386	0	n.a.	386
Conesville	275	1,570	6%	449	25%	112	583	105	217
Olive	547	1,333	3%	243	25%	61	0	n.a.	61
Total	14,285	26,709		10,497		2,491	6,611	1,175	3,666

<u>As shown in Table 11-5, the size of the proposed expansion area (PEA)</u> as a proportion of the Town's total area <u>varies from town to town</u>. In some towns, the number of acres that the Extended LAP could potentially acquire in what had been the proposed expansion areas for this and other reasons, would be relatively small. In others, the proposed expansion areas represent a much larger share of the Town's total area – as much as 10 percent in Ashland – and the number of acres that the Extended LAP could acquire in these areas could also be larger –in Windham, Hunter, <u>Kortright</u> and Walton, potentially about <u>400 acres or more</u>.

Taking into account the factors outlined above, there appear to be  $\underline{10}$  towns where elimination of the proposed hamlet expansions could have the greatest impact. The potential impact of the No Hamlet Expansion Alternative in each of these towns is discussed below.

#### Windham

As shown in Table 11-4, the proposed expansion of Windham's designated hamlet area is 2,797 acres that would bring the designated area to a total of 3,945 acres. Since development pressures have been stronger in Windham in recent years than in any other West-of-Hudson town, the demand for land within the proposed expansion areas during the next decade could potentially be strong. As discussed in Chapter 4, much of Windham's recent development has tended to occur on small parcels in the proposed expansion area. As shown in Table 11-5, nearly two-thirds of the land in the expansion areas has already been solicited by NYCDEP. If a significant portion of the land in the proposed expansion area were to be acquired under the Extended LAP, the result in some cases could be to shift new development away from the edge of the Town's core hamlets, and toward outlying areas in Windham. Other projects that might be feasible only in or near the Town's principal hamlets ranging from higher density housing to resort-related development could potentially not occur at all.

#### Hunter

Agreement has also been reached among the parties on expansion of Hunter's designated areas by 2,891 acres, to a total of 6,142 acres. These additional designations would provide space to accommodate growth on the outskirts of the Villages of Hunter and Tannersville, and along a portion of Route 23A. As shown in Table 11-5, more than two-thirds of the land in the expansion areas has already been solicited by NYCDEP. As in Windham, acquisition of any significant portion of the proposed expansion areas through the Extended LAP could result in some development projects shifting toward outlying areas of the Town – or in some projects that need a relatively close-in location not being undertaken at all.

#### **Ashland**

The impact of the No Hamlet Expansion Alternative could be particularly significant in Ashland, for several reasons. The proposed expansion areas represent a significant portion of the Town's total area; and <u>about</u> 60 percent of the land within the expansion areas has already been solicited by NYCDEP. The town has been one of the fastest-growing in the watershed during the past decade; acquisition of portions of the proposed expansion areas under the Extended LAP could, as in Hunter and Windham, shift some of the anticipated development to outlying areas.

#### .Jewett

While somewhat less vulnerable than the three towns cited above, Jewett could also be affected by the elimination of the proposed hamlet expansion. The percentage of the Town's total area that would be included within the proposed expansion area is lower than in Windham or Ashland; and the percentage of land within the expansion area already solicited by NYCDEP is also lower. Thus, while the No Hamlet Expansion Alternative might result in some shifting of development from the expansion areas to outlying areas of the Town, such shifts would likely be less extensive in Jewett than in Windham, Hunter or Ashland.

#### Conesville

Because the hamlet areas originally designated by the Town are relatively small – totaling only 275 acres – expansion may be particularly important for providing room for further development in Conesville. The percentage of land within Conesville's expansion area already solicited by NYCDEP is 29 percent. The acreage which might be acquired by NYCDEP in this area (112 acres) and as noted in Table 11-5, WAC easements could add another 105 acres to this total.

#### Delhi

Delhi's proposed hamlet expansion is among the largest – both in acres and as a percentage of the Town's total area. The percentage of land within the area already solicited by NYCDEP is relatively low (40 percent). Nevertheless, the acreage that could potentially be acquired either in fee simple or through NYCDEP and WAC easements is substantial – a total of 325 acres, as shown in Table 11-8. Because there is relatively little land available for development within the Village of Delhi – Delaware County's largest village, the County seat, and the principal center of civic and commercial activity for much of the County – ensuring the availability of land for development beyond the originally-designated hamlet area may be important to the Town's future. It could be particularly important, for example, for the development of a supply of rental housing that is adequate to meet the needs of both SUNY students and full-time residents, and to the development of housing that is affordable for county, municipal, SUNY and other public employees.

#### Hamden

As noted in Chapter 3, past WAC easements in Hamden have removed land from potential development in and near the Town's existing designated hamlet areas. Under the No Hamlet Expansion Alternative, this problem could be aggravated by the potential acquisition of WAC easements on 185 additional acres, and additional 155 acres acquired by NYCDEP totaling 340 acres, within what would have been Hamden's proposed hamlet expansion area.

#### Harpersfield

Because the amount of land already solicited by NYCDEP in Harpersfield's proposed expansion area is relatively small, projected acquisitions in fee simple or through NYCDEP conservation within this area total only 74 acres. However, WAC easements (as shown in Table 11-5) could add 152 acres to this total, increasing the potential for conflict between future acquisitions the need for land to accommodate new development.

#### **Kortright**

As noted in Chapter 3, the land projected to be acquired in fee simple or through conservation easements in Kortright under the Extended LAP includes only 5 percent of the Town's estimated supply of developable land as of 2009. At first glance, it might thus appear that the town does not need a major expansion of its designated hamlet area in order to ensure the availability of land to support future development. However, because of the remote location of the northern parts of Kortright, the southern portion of the Town may offer the best prospects for future development. It thus may be particularly important for Kortright to ensure the availability of land in the south, rather than shifting development into more remote areas. Under the No Hamlet Expansion Alternative, it is projected that NYCDEP and WAC could, as shown in Table 11-5, acquire 588 acres within what had been the Town's proposed hamlet expansion areas.

#### Walton

Walton's proposed hamlet expansion totals <u>2,929</u> acres, making it one of the largest of the 16 proposed expansions. <u>Roughly 30</u> percent of the land that would be covered by the proposed expansion has already been solicited by NYCDEP. Elimination of the proposed hamlet expansion could thus result in NYCDEP and WAC acquisition of more than <u>889</u> acres within the expansion area. In Chapter 3 it was projected that as of <u>2027</u> Walton would still have <u>79</u> percent of its 2009 supply of developable land remaining, after taking into account projected LAP acquisitions and projected residential development. While in the aggregate the Town's supply of developable land may be adequate, it is important to note that commercial and industrial activity in the town are heavily concentrated in and around the Village of Walton. Ensuring the availability of land in this area may thus be important to future development of the Town's economy.

#### Other Socioeconomic Conditions, Land Use and Community Character

Overall, elimination of the proposed hamlet expansions could have several negative effects on land use, socioeconomic conditions and community character in watershed towns. It could result in new development "leapfrogging" the proposed expansion areas, and shifting to locations further away from the existing hamlets and village centers. Because development in outlying locations is likely to be at lower densities, eliminating the proposed hamlet expansion could result in greater consumption of land for any given level of development. It could also increase the distance that residents need to travel for shopping and basic services with associated increased traffic, air and noise generation. The potential for development to leapfrog to outlying

areas could reduce somewhat the Extended LAP's contribution to preserving the low density, rural character and high-quality natural environment that many residents of watershed towns wish to preserve.

Eliminating the proposed expansion would not support the ongoing efforts toward economic and community revitalization in the region's hamlets and village centers – a priority for many West-of-Hudson watershed towns. In some cases, acquisition of land or easements in these areas by NYCDEP or WAC could result in certain types of development (that which requires relatively close-to-town locations) not occurring at all. Examples of such development could include housing for older residents – other affordable housing – and higher-density residential development around ski centers. Any extensive acquisition of land or easements in these areas by either NYCDEP or WAC could also have the effect of precluding the expansion of existing commercial or industrial businesses – or the development and growth of new businesses – within the affected areas.

Implementation of the Extended LAP without the proposed hamlet expansions could thus potentially lead to a conflict within the hamlet expansion areas between the projected level of acquisitions under the Extended LAP and community character and economic development goals including the need for land to support affordable and higher density housing and commercial businesses which typically would occur in these areas as well as maintaining rural character and natural resources in outlying areas.

#### WATER QUALITY AND NATURAL RESOURCES, OPEN SPACE

As discussed in Chapter 5, *Water Quality and Natural Resources*, concentrating growth in designated areas is a principle of smart growth and a means of reducing sprawl and growth of impervious cover in sensitive areas of the watershed. Land Acquisition under the No Hamlet Alternative would still provide water quality benefits; however, development may occur in areas that are more sensitive to water quality, and the benefits of the Extended LAP may not be as fully realized.

#### **CULTURAL RESOURCES**

Under the No Hamlet Expansion Alternative, the same protocol as described in Chapter 7, *Cultural Resources*, would be applied with respect to protecting and preserving historical and archaeological resources.

## **CHAPTER 12:**

## **Comments and Responses**

#### INTRODUCTION

This chapter summarizes and responds to all substantive comments on the Draft Environmental Impact Statement (DEIS) for the Extended New York City Watershed Land Acquisition Program made during the public review period. These consist of comments made at the joint public hearings held by NYCDEP and NYSDEC on July 12, 2010; at SUNY Delhi in Delhi, NY, on July 13, 2010; at Hunter Elementary School in Hunter, NY; and on July 14, 2010 at Tri-Valley High School in Grahamsville, NY; as well as written comments submitted to NYCDEP and NYSDEC. The period for public comment remained open until November 22, 2010.

The names and affiliations of individuals who commented on the DEIS, with the date of the comments, is listed below, followed by a summary and response by the City to all substantive comments. The comments are organized by subject area, generally following the organization of the DEIS. Where similar comments on the same subject matter have been made by more than one person, a single description summarizes all comments on that issue. Following each comment is the list of people who made the comment. The City's responses then follow each comment.

## LIST OF GROUPS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

#### Written:

- Fay Muir, Croton Watershed Clean Water Coalition (CWCWC), 6-8-10
- Dr. Shyamal K. Sen Gupta, 6-11-10
- James E. Eisel, Delaware County Board of Supervisors, 6-15-10
- Charles F. Gregory, 6-27-10
- Gordon Douglas, Friends of Great Swamp (FROGS), 7-9-10
- James E. Eisel, 7-12-10
- Dr. Shyamal K. Sen Gupta, 7-12-10
- Jay Simpson, Riverkeeper, 7-13-10
- Joy Ann Monforte, 7-14-10
- Thomas A. Axtell, Supervisor Town of Deposit, 7-23-10
- Dennis and Tina Schvedja, 7-28-10
- Dr. Shyamal K. Sen Gupta, 8-2-10
- Wayne Marshfield, Town of Hamden, 8-6-10
- Joan Townsend, 8-10-10
- Mary Beth Murphy, Croton Kensico Watershed Intermunicipal Coalition, 9-10-10
- Christopher J Maney 9-17-10
- Cecile Lawrence, 10-3-10
- Edward Furgol, 10-4-10

#### **Extended NYC Watershed Land Acquisition Program FEIS**

- Eileen McCorry, 10-4-10
- Patricia Norton-White, 10-10-10
- Randy and Kathy Sherwood, 10-14-10
- Tom and Donna Van Sickell, 10-14-10
- Amy Kenyon, Farm Catksills, 10-18-10
- Kate Ryan, 10-21-10
- Richard Kathmann, 10-22-10
- Paula Nelson 10-22-10
- Craig Michaels, Riverkeeper 11-22-10
- Carolyn Konheim and Brian T. Ketcham, P.E. 11-22-10
- Jeffrey S. Baker, Counsel to Coalition of Watershed Towns, 11-22-10
- New York City Watershed Stream Corridor Management Programs 11-22-10
  - o Jeff Flack, Executive Director (Greene County SWCD)
  - o Gary Capella, Executive Director (Ulster County SWCD)
  - o Brian Brustman, District Manager (Sullivan County SWCD)
  - o Richard Weidenbach, Executive Director (Delaware County SWCD)
- Cathleen Breen, NYPIRG 11-22-10
- Zachary Thompson 11-22-10
- George George Rodenhausen Rapport Meyers LLP, counsel to EOH Coalition, 11-22-10
- Bruce Dolph, Town of Walton, 11-22-10
- James Eisel, Delaware County 11-22-10
- Christopher Crane, Westchester County Board of Legislators 11-22-10

#### **Oral Testimony:**

#### July 12, 2010, Delhi, NY

- Peter Bracci, Supervisor, Town of Delhi
- James E. Eisel, Chairman Delaware County Board of Supervisors
- Leonard Utter, Supervisor, Town of Middletown, Margaretville
- Dean Frazier, Delaware County Department of Watershed Affairs
- Jack McShane, Andes Resident
- Andrew Mason, Jefferson and Schoharie County.
- Amy Kenyon, Farm Catskills
- Dominic Morales, resident of Delhi
- Sharon Moyse
- Dr. Shyamal K. Sen Gupta
- Joan Archibald-Townsend
- Sally Scrimshaw
- Richard Hirsh

#### July 13, 2010, Hunter, NY

- Walt Grote, Windham, NY
- Anna Grote, Windham, NY
- Michael McCrary, Councilman, Town of Jewett

• Ms. Priscilla (Apracilla) Graef

## July 14, 2010, Grahamsville, NY

- Joy Ann Monforte
- Bill Van Aken
- Stephen Bobik
- Eric Goldstein
- Charles Van Aken
- Richard Coombe
- Jim Metnash
- Dorothy Muthig
- Georgianna Lepke
- Jackie Totten
- Robert Botsford

## COMMENTS AND RESPONSES

#### **COMMENTS ON EIS PROCESS**

**Comment 1:** Request extension on Public Comment Period. (Delaware County Board of Supervisors)

**Response 1:** NYCDEP and NYSDEC extended the public comment period on the DEIS and WSP from the original date of July 30, 2010 to September 15, 2010. A subsequent extension was granted until October 22, 2010. It was further extended to November 22, 2010.

**Comment 2:** Hearing at Grahamsville was not properly advertised. (Bill VanAken, C. VanAken, Coombe) Request for additional hearing. (B. Van Aken) I really wonder why we didn't get some earlier notification through the town. (Botsford).

**Response 2:** The following is a list of advertising media that the Notice of Hearing was published in: *Journal News* (Northern Edition), *Times Herald Record*, *Kingston Daily Freeman*, *Oneonta Daily Star*, *Mountain Eagle* and the *Walton Reporter*. In addition, it was published in the Environmental Notice Bulletin and The City Record. The hearings were listed on Mayor's Office of Environmental Coordination Calendar and on the NYCDEP website. In addition, the Notice was mailed to the recipients on the distribution list of the DEIS which included all town supervisors and mayors of municipalities in the watershed. The NYCDEP press department issued a media advisory to the press as well.

**Comment 3:** I would like to express my appreciation for having one of the hearings in Neversink, so residents wouldn't have to drive so far to express or to listen. (Lepke) **Response 3:** Comment Noted.

**Comment 4:** I finally realize that we're neighbors, and hopefully we can work together, but I think there should be a lot more communication going on. (Botsford) **Response 4:** Comment Noted.

**Comment 5:** NYCDEP should not be the lead agency for its own SEQR review. If the City is allowed to do its own SEQR, then it must be required to review the full economic impact on the individual Towns, Village and Hamlets as well as the economic impact on Delaware County. (Axtell)

**Response 5:** The definition of a Lead Agency is an involved agency principally responsible for undertaking, funding or approving an action, and therefore responsible for determining whether an environmental impact statement is required in connection with the action and for the preparation and filing of the statement if one is required. A majority of the time, the agency proposing a project is the Lead Agency for that project since it is the agency principally responsible for undertaking, funding and approving an action. Therefore, NYCDEP being the lead agency for the proposed project is consistent with all applicable environmental review regulations in accordance with SEQRA. As lead agency, NYCDEP conducted a thorough review of socioeconomic impacts of the Extended LAP consistent with SEQRA.

#### **COMMENTS ON DEIS**

#### General

**Comment 6:** NRDC has concluded from preliminary review that the DEIS is consistent with State Environmental Law. DEIS is consistent with public scoping document. There were hearings throughout the watershed on scope, and DEIS is consistent with the scope and publicly approved outline. DEIS has properly analyzed the reasonable alternatives to this project and correctly concluded the continuation of the program would not have significant adverse environmental impacts. (NRDC) The city's draft EIS complies with the relevant statutory and regulatory requirements Overall there are no adverse environmental impacts expected from the proposed Land Acquisition Program. Because of the lack of adverse environmental impacts, mitigation is not necessary. However, the city has nevertheless taken significant steps to address concerns of watershed stakeholders with respect to the land acquisition program. For example, as discussed below, the city has negotiated with watershed stakeholders an agreement on real property tax payments and has committed to a continuation of major new water quality funding projects of benefit to watershed residents. Moreover, as noted above, the two years of negotiations in which watershed stakeholders were represented provided an opportunity to insure that alternatives to the city's original plan were fully considered. Indeed, as noted below, the final draft permit was modified in significant areas to take into account the concerns of watershed stakeholders on such issues as the definition of watershed "hamlet" areas that will now be exempt from acquisition by the city. The City has more than satisfied the SEQRA balancing test requirement, and that consistent with social, economic and other essential considerations, adverse environmental impacts will be minimized or avoided. Indeed, NRDC believes that as now structured as a result of the two years of negotiation s with watershed stakeholders, the Land Acquisition Program will be broadly protective of the environmental and economic interests of both downstate and upstate New Yorkers. (Goldstein/NRDC)

**Response 6:** Comment Noted.

**Comment 7:** DEIS is consistent with the concept of upstate/downstate partnership. (Goldstein)

**Response 7:** Comment Noted.

**Comment 8:** There are inconsistencies, numerous errors in the document. (Bobik)

**Response 8:** Any errors identified have been corrected in the FEIS.

### **Project Description**

**Comment 9:** Opposition to Land Acquisition and to its focus in Delaware County. (Eisel, Gregory, Sen Gupta)

**Response 9:** Comment Noted. The City's EIS analysis indicates that the increased focus of the Land Acquisition Program on Delaware County in the future will not result in significant adverse impacts.

**Comment 10:** The ten to fifteen-year analysis is not adequate. What happens in 10 to 15 years out? What will be the starting point for measuring potential impacts for the next 10

year cycle? (Frazier) The DEIS does not address all the concerns we pose from the DEIS scope of work. (Frazier). Our scoping comments requested that time frames be extended beyond the duration of the pending 10-year Water Supply Permit. The DEIS forecasts cover 12-17 years, which we consider insufficient considering the permanent nature of Land Acquisition Program (LAP) conservation easements and land acquisitions. The DEIS would be considerably more instructive if it addressed the long term full socio-economic development potential and the impact of land acquisition on that potential. How does a future where Delaware County communities are allowed to evolve in a manner that is self-determined, based on local land-use planning guided by local knowledge, differ from potential futures in which the LAP permanently constrains development options to varying degrees? These are the questions the DEIS should answer. In lieu of a long term evaluation, the DEP and DEC have elected to focus on the next 15 years with the understanding that a new review under SEQRA would be undertaken for any additional land acquisition thereafter. (Delaware County)

Response 10: The Environmental Impact Statement evaluates the proposed action – the Extended LAP under the new Water Supply Permit. For the purposes of the DEIS, a reasonable worst-case scenario was evaluated for a 10 year Water Supply Permit. The DEIS also considered the possibility of a 5 year renewal in the Greater Impact Alternative. Since issuing the DEIS, a Draft Water Supply Permit was issued, which would grant the City a 15 year permit. The 15 year Greater Impact Scenario was incorporated into the FEIS. Any action beyond 15 years, or land acquisition that exceeds the acreage projected in the 15 year Greater Impact Scenario would be subject to subsequent review. As discussed in Chapter 2 and Chapter 3, over 60% of the developable land will be remaining in all affected towns for long term future growth. In addition, the Extended LAP also includes provisions to focus acquisitions on lands that meet natural features criteria and protect hamlets, agriculture, forestry and recreational uses in the watershed.

**Comment 11:** Will solicitation stop once solicitation success reaches 20 percent of the available land in this town? (Frazier)

**Response 11:** For the purposes of the EIS, projections were made of potential future acquisitions. As described in Chapter 1, so as not to underestimate impacts, the projections were conservative for the purposes of developing a 10 year reasonable worst case scenario. In the FEIS, a greater impact scenario was added to be consistent with the permit limits of 106,712 acres. Under the terms of the permit, NYCDEP will only be allowed to acquire land up to this amount. See also Comment 10 above.

**Comment 12:** DEIS does not specify where the 1,517 acres of projected acquisitions East of Hudson would occur, and it is therefore difficult to critique the acquisitions. (CWCWC)

**Response 12:** Table 3-62 of the EIS states that the projected East of Hudson acquisitions (1,517 acres) under the 10 Year Projection Scenario are estimated as follows: Town of Kent (987 acres), Carmel (189 acres), East Fishkill (307 acres), and Putnam Valley (34 acres). Under the 15 year Greater Impact Scenario, the projected acquisitions would increase from 1,517 acres to 1,669 acres and are broken down as follows: Town of Kent (1,086 acres), Carmel (208 acres), East Fishkill (338 acres), and Putnam Valley (37 acres).

# **Land Use and Community Character**

**Comment 13:** How does continued acquisition benefit "local communities"? There are no communities in Delaware County that benefit from water supply from the reservoirs. (Axtell)

Response 13: As described in Chapter 2: Land Use and Community Character, LAP is consistent with many objectives outlined in individual town and regional plans. There are thousands of residences West-of-Hudson, including Delaware County, that receive their water from sub-surface wells or municipally-owned surface reservoirs; protecting land upgradient of these areas will very likely benefit those properties. Furthermore, preservation of open space and protection of water quality contribute to maintaining the environmental quality of local communities and watershed. Lands acquired by LAP would be opened up for recreation where consistent with water quality and public safety. Cannonsville Reservoir is currently implementing a 3 year pilot program for recreational boating. Furthermore, the Extended LAP also includes provisions to protect agriculture, forestry and recreational uses in the watershed.

**Comment 14:** The Land Acquisition Program negatively impacts rural character/way of life/sense of place in watershed/future generations. (Gregory, Bracci, Utter, Frazier, Moyse, Archibald-Townsend, B. VanAken, Eisel, Maney)

**Response 14:** As stated in Chapter 2 of the Draft EIS, and in the individual town-level assessments presented in Chapter 4, the Land Acquisition Program appears to be consistent with many of the goals and objectives for watershed communities described in the towns' comprehensive plans, such as preservation of their rural character; preservation of agriculture, forestry and other working landscapes; expansion of opportunities for outdoor recreation; strengthening of hamlet areas, etc. Watershed communities have other goals to which LAP does not contribute directly – such as creation of new jobs or the development of more affordable housing; but overall, the Program does not conflict with these goals. See also responses to Comments 10 and 13 above.

## **Socioeconomic Conditions**

**Comment 15:** The Program has already had a detrimental effect on the local economy. (Gregory)

**Response 15:** The review of the region's economic conditions conducted during the preparation of the Draft EIS found no evidence that the Land Acquisition Program has had a significant adverse effect on the region's economy. Furthermore, and from an overall regional perspective, the West-of-Hudson watershed region had a slow economy during the past decade. See Chapter 3: Socioeconomic Conditions, Existing Conditions.

Comment 16: We want to see a socioeconomic monitoring program and resulting database developed comparable to the extensive water quality monitoring database that has evolved over the years. The MOA asserts that economic vitality is important - with LAP triggering the need for so much economic mitigation, we believe that the LAP should also include economic monitoring to determine how well that mitigation is working. (Delaware County) Response 16: As discussed below in Comment 72, the negotiated program elements have been incorporated into the Water Supply Permit. These elements are described further in Chapter 1, Project Description. The environmental review concluded that there were no

significant socioeconomic impacts associated with the Extended LAP and therefore no mitigation is provided. Over time, the LAP will be reviewed for socioeconomic impacts during subsequent FAD renewals.

## Impacts on Developable Land

**Comment 17:** I believe your methodology in determining developable land is flawed. If you truly want to know what developable land exists in terms of what the town can realize for future revenue income, you have to look at land that's accessible and usable for housing. To incorporate all the land privately owned is skewing the numbers in your favor, and it throws everything off. I think you are attempting to put the towns out of business. (Bobik)

**Response 17:** The definition of developable land used in the Draft EIS did not "include all land privately owned." As discussed in Chapter 3, it included "all privately-owned vacant land and low-density residential land (the total area of all residential parcels of 15 or more acres, reduced by 5 acres per parcel to allow for existing homes on these parcels), but excludes from these two categories land that has one or more of the following characteristics: a 100-foot buffer on streams and waterbodies, a 300-foot buffer on reservoirs and reservoir stems, NYSDEC-mapped wetlands with a 100-foot buffer, federal jurisdiction wetlands with no buffer, FEMA 100-year floodplains, slopes of greater than 15 percent or land with slow infiltrating soils (NRCS Hydrological Soil Group D). Land with any one or more of these characteristic is considered "undevelopable." Also excluded was any privately-owned vacant or low-density residential land that under the preceding definition would have qualified as developable, but on which a conservation easement has been granted. Some of the land that qualifies as developable under these criteria may in fact be undevelopable for a variety of practical and economic reasons. For example, some otherwise developable parcels may have no road access, and be located in areas where providing new road access is not practical or economic. However, this same issue would impact acres acquired by the City through LAP, so in that respect the analysis is consistent. In addition, the definition of developable land cited above is conservative. It does not include any developable (but as yet undeveloped) portions of residential parcels of less than 15 acres; or any land currently used for commercial purposes. In all but three towns (Stamford, Conesville and Neversink), the definition of developable land that was used in the DEIS also excluded agricultural land. 1 Because the definition of supply of developable land was so conservative, any overstatement of the supply of developable land due to factors such as inaccessibility is generally offset by the exclusion of developable, higher-density residential, agricultural and commercial land from the estimates used in the DEIS.

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<sup>&</sup>lt;sup>1</sup> In most towns in the west-of-Hudson watershed region, the supply of developable agricultural land is greater than the amount of developable land on which the Watershed Agricultural Council is projected to acquire easements between 2010 and 2022. By excluding both the existing supply of developable farm land and new WAC easements from the calculation, the Draft EIS in effect understates the amount of developable land that is likely to remain in these towns in 2022. However, in three towns where WAC is projected to be particularly active – Stamford, Conesville and Neversink – the opposite is likely to be true – the net effect of counting both the existing supply of developable farm land and projected new WAC easements on such land is to reduce the amount of developable land that would still be available in the three towns in 2027. To be consistent with the principle of basing the analysis on a "reasonable worst-case scenario," in these three towns, the draft EIS *does* include developable agricultural land in its overall definition of developable land.

**Comment 18:** The City is not targeting all developable lands, so we don't know if the land being targeted is critical to the future economic viability of the town. (Frazier)

**Response 18:** The EIS analysis estimates that under the 15 year Greater Impact Scenario, all towns would have at least 60 percent of the developable land available in 2009. In addition, the proposed expanded hamlets are intended to keep in reserve the most important properties as identified by local communities as appropriate for future development. The Extended LAP also includes provisions to protect agriculture, forestry and recreational uses in the watershed.

**Comment 19:** Lands to be acquired over the entire Extended Land Acquisition Program represent about 11 percent of the currently available West of Hudson developable land. 89 percent of developable land would still be available for development at the end of this program. (Goldstein)

**Response 19:** Comment Noted. Note that in the FEIS, under the 15 Year Greater Impact Scenario, 80 percent of the 34 towns' aggregate supply of developable land as of 2009 would still be undeveloped in 2027; and no town would have less than 60 percent of its 2009 supply of developable land still available in 2027.

**Comment 20:** Fifty percent of the watershed land mass is in Delaware County and I suspect that the Program will acquire far more than 50% of the Watershed in Delaware County, and that the city will try to purchase all prime developable land. (Eisel)

**Response 20:** 502,672 acres of Delaware County are within the watershed. In order to acquire 50% of the watershed within Delaware County, LAP would need to acquire 251,336 acres. NYCDEP currently owns 88,050 acres within the watershed portion of Delaware County (including Pre-MOA lands and land under water). The EIS projects that under the 15 year Greater Impact Scenario LAP is estimated to acquire 58,142 acres in Delaware County. It is not the City's interest, nor is the City in a position, to acquire "all prime developable land."

Comment 21: Main concern is City taking up land from future generations. (Metnash) The types of land listed [NYCDEP is interested in acquiring] includes watercourses, wetlands, flood plains and stream buffers. They (NYCDEP) neglected to include on the list land that would be most desirable for economic development or expansion. The various towns and villages within the watershed as well as Delaware County already face difficult economic times. Vacant/ properties inside the villages and hamlets being acquired by NYCDEP are crucial to possible future economic development. (Axtell) Once the city purchases the land, it will lose all potential for further development. The land purchase agreement will hurt the community for years to come. (Dolph) The Draft Environmental Impact Statement (DEIS) acknowledged that the New York City Department of Environmental Protections (DEP) land acquisition is "in perpetuity." This is an irreversible and irretrievable commitment of the land resources of Delaware County. (Delaware County)

**Response 21:** In the 34 West-of-Hudson towns where at least 5 percent of the Town's total area is within the boundaries of the watershed, the EIS estimates that, after taking into account land needed to support new development and land to be acquired under LAP, 84

percent of the 34 towns' aggregate supply of developable land as of 2009 would still be undeveloped in 2022; and no town would have less than 65 percent of its 2009 supply of developable land still available in 2022. Under the 15 year Greater Impact Scenario, 80 percent of the 34 towns' aggregate supply of developable land as of 2009 would still be undeveloped in 2027; and no town would have less than 60 percent of its 2009 supply of developable land still available in 2027. Thus, while an Extended Land Acquisition Program would in fact reduce the supply of developable land available to future generations in watershed towns, in no case would the reduction be so great as to impose a significant constraint on projected future growth. As stated in Chapter 1, towns will have the opportunity to expand the existing hamlet areas by over 26,700 acres of land that is most important to the towns. This mechanism by which towns can designate properties as offlimits to LAP (in addition to the many that are not eligible for acquisition) was intended to give local communities strong assurances that significant future development would remain available. In addition, as discussed above and in Chapter 3, lands acquired under the extended LAP could allow certain uses such as agriculture, forestry and recreation where consistent with water quality and public safety. This provides some economic benefit to for the local communities

**Comment 22:** Our economic impact analysis indicated there are potential impacts that the DEIS does not address.(Frazier) In its response to our scoping comments, the NYCDEP declined to compare its forecasts and conclusions with those in Delaware County's Economic Impact Assessment (EIA) published in 2009. We believe that the scenarios for DEP and WAC land acquisition in the EIA, namely 102,000 acres of which half would be developable, remain plausible unless there are legal constraints placed on the amounts of total land and developable land that DEP can acquire in fee or encumber with easements. The DEIS forecasts acquisition of 54,052 acres in Delaware County, of which 12,530 (23%) would be developable. (Figures are 10% higher in one scenario.) Our tally of prior DEP acquisitions is 41,300 acres of which 19,800 (48%) was considered developable. (Delaware County EIA 93). Given that 48% of LAP acquisitions and easements to date were of developable land, we find it highly unlikely that the DEP would ease or acquire a mere 12,530 acres of Delaware County's developable land (or 23% of projected future acquisitions). If this document's prediction of harm to the cultural and economic vitality of Delaware County communities is based on not exceeding the 23% developable land threshold, all activities of the LAP must cease if it is indeed reached, to allow for assessment of the effects of any further acquisition. Land and easement acquisition by other entities (i.e. land trusts) must be included when calculating the ratio of developable to non-developable land for this purpose. (Delaware County)

Response 22: In the 10 Year projection of land to be acquired under the Extended LAP that was presented in the Draft EIS, DEP estimated that through 2022 it would acquire a total of 40,900 acres in Delaware County in fee simple or through conservation easements, and that WAC would acquire agricultural easements covering 13,152 additional acres. This projection was based on DEP's historical experience in Delaware County – where it had acquired a total of 31,174 acres in fee simple or through conservation easements through June 2009 – adjusted to reflect the fact that DEP's plan for the Extended LAP calls for an increased focus on sub-basins that as of 2009 had relatively limited amounts of protected land. DEP's projection further assumed that WAC would acquire easements on a total of 16,000 additional acres of watershed farmland during this period, and that Delaware County's share of all WAC easement acreage would remain the same through 2022 as it had been through 2009.

The 15 Year Greater Impact Scenario included in the FEIS projected that DEP would acquire 10 percent more land in fee simple or through conservation easements through 2027, for a total of 44,990 acres, and that the additional acreage to be covered by WAC easements would remain at 13,152, for a total of 58,142 acres to be acquired in Delaware County through 2027.

The assumption used in Delaware County's economic impact analysis – that LAP would acquire 102,000 additional acres in the County—is not consistent with the NYCDEP's historical experience with LAP acquisitions or on NYCDEP's strategy for future acquisitions in the watershed and Delaware County. In any case, under the terms of the draft Water Supply Permit, LAP acquisitions in the West-of-Hudson watershed through 2027 (including WAC easements) would be limited to a total of 105,043 acres.

As noted in Chapter 3, the Draft EIS used a deliberately conservative definition of what constitutes developable land so that future impacts of the program on the amount of developable land would not be underestimated. The primary focus of the EIS is the prospective impact of future acquisitions. In this context the purpose of using a conservative definition of developable land was to begin the analysis with a conservative measure of each town's current supply of developable land, and thus to produce a conservative estimate of how much developable land would still be available in 2022 (or 2027).

A less stringent definition of what constitutes developable land would in fact increase somewhat the developable percentage of land acquired under LAP through 2009. But it would also *increase* the number of acres of developable land projected to remain in 2022 (or 2027), and thus lessen the projected impact of LAP on the future supply of developable land in watershed towns.

Any possible future acquisitions of watershed land by land trusts or other similar organizations (other than acquisitions made by such organizations under the permit) were not included in the analysis of the impact the Extended LAP on the supply of developable land in watershed towns. The scale of such purchases is unlikely to be great enough to have a significant impact on the overall supply of land.

Impacts on land prices, housing prices and affordability

**Comment 23:** Opposes land acquisition because it skews real estate market values and impacts land values (Eisel, Frazier)

**Response 23:** From 2000 through 2007, the price of land increased sharply in most parts of the West-of-Hudson watershed region. The same price trends were evident, however, in areas outside the watershed. See Chapter 3: Socioeconomic Conditions, Impacts on land prices, housing prices and affordability (pages 3-60 to 3-69)

An analysis of data on arms-length sales of privately-owned vacant land in watershed towns found only a weak correlation between the extent of NYCDEP's purchases of land and the rate at which land prices have increased. Overall, the Draft EIS concludes that when land prices were increasing rapidly, LAP was not the sole, or even the primary, driver of land prices in the watershed. Much of the increase was driven by the same factors that prevailed elsewhere. These factors included low interest rates, easy availability of financing, and the speculative dynamic that characterizes all real estate booms, with buyers attracted not by the

land's value to them or its income-producing potential, but by the belief that they could sell at a profit if prices would continue to rise.

As overall demand for relatively large tracts of vacant land has declined during the past two years, NYCDEP's continued presence in the market may have the effect of keeping prices from falling as rapidly as they might have in NYCDEP's absence. The analysis of housing price trends conducted for the Draft EIS found virtually no relationship between the rate at which housing prices have increased in various market areas within the watershed and the scale of LAP purchases in those areas. There is a much stronger correlation between the rate of home price escalation and the size of the second-home market in relation to the community's total supply of housing (that is, the number of seasonal and recreational units as a percentage of all housing units.)

**Comment 24:** People that might be interested in buying land inside the watershed with the intent of building a home or starting a business are finding it very difficult to do so. Prices paid by NYCDEP per-acre averages much higher [than market rates], thereby making it unaffordable for others. Existing NYCDEP regulations and cost pertaining to septic system installations makes it less likely that there will be new homes or business ventures started in the watershed. (Axtell)

Response 24: Prices paid by NYCDEP are based on independent appraisals of fair market value, and are broadly consistent with overall market trends. Because per-acre land prices can vary greatly, depending on the location and characteristics of specific properties, the buyer's intended use and other factors (such as how quickly the buyer is prepared to move to closing) there will inevitably be some cases where the prices appraised by NYCDEP exceed prices on what might appear to be comparable properties, and some cases where NYCDEP appraisals are higher than offers made by other prospective buyers of the same property. Region-wide, a large majority of sales of residential land in the West-of-Hudson watershed region involve parcels that are outside the eligibility and/or solicitation criteria thresholds set by NYCDEP for purchase under the Land Acquisition Program. As a result, NYCDEP is generally not competing with most buyers of individual residential properties. The analysis of housing price trends conducted for the Draft EIS found virtually no relationship between the rate at which housing prices have increased in various market areas within the watershed and the scale of LAP purchases in those areas. The analysis of impacts on developable land included the cumulative effects of watershed regulation constraints on siting developments.

**Comment 25:** The Land Acquisition Program is having a devastating impact on land prices. Downeast Development Consulting Group summarizes that property values in the County have increased notably, making land owners wealthier but raising the cost of land and housing. (Marshfield) The loss of land for new buyers, will drive the prices of land beyond the reach of the majority of people (Dolph)

**Response 25:** The report prepared by the Downeast Consulting Group does cite the increase in land prices that occurred in the early 2000s; and this trend is analyzed in greater detail in the EIS. As noted above, however, purchases of land and easements by NYCDEP are a fairly insignificant factor among many factors contributing to the escalation of land prices during this period.

**Comment 26:** NY City and the State should fund affordable housing initiatives in and around villages and hamlets. (Marshfield)

**Response 26:** The EIS analyzed impacts on affordable housing and found that the types of land purchased under LAP were not similar to those purchased for affordable housing. Funding of affordable housing initiatives is outside the scope of this environmental review.

Comment 27: A larger part of the difference [between Delaware County EIA and the NYCDEP DEIS] is from the DEP assuming a much lower tax rate per acre than our norm for vacant land. We estimate \$75-125/acre for property taxes on undeveloped land, prior to any reduction on appeal. The DEIS implies \$25/acre (\$800,000 taxes on 31,174 acres) on the prior LAP acquisitions. None of this land has been held for 20 years. Thus DEP may have been paying only one third of what others pay for their unoccupied land. A more reasonable assumption for the expanded area would be to use the \$75-125 estimate. Under the terms of the draft WSP, the local communities will be able to ensure that vacant land purchased by the City will be properly and fairly assessed at its market value times the local equalization rate and that assessment will be allowed to increase at the same rate as other vacant land within the community. (Delaware County)

**Response 27:** Comment Noted. The taxes paid by NYCDEP on land acquired under LAP (whether on fee interests or on the value of easements) are based on values determined by the local taxing jurisdictions. The DEIS figure of \$800,000 in taxes paid in Delaware County (actually \$850,836) are actual taxes paid, not a projection.

Comment 28: The DEIS compares selected land prices inside and outside the watershed as a basis for concluding that the prior LAP had no effect on prices. It then extrapolates that the Extended LAP would also have no net effect. There is a significant issue with the comparison between the inside- and outside-the-watershed areas being compared, one that was not addressed in the DEIS: those inside the watershed are subjected to DEP's expensive wastewater and stormwater requirements, and those outside the watershed are not. The cost and delays involved in complying with DEP's regulations reduce the appeal of land for development, which would be reflected in the lower price of that land. This effect could mask an increase in land prices stemming from the DEP being a continuously funded, ever-present potential buyer. (Delaware County)

**Response 28:** The Draft EIS does not conclude that LAP has had no effect on land prices. It acknowledges that LAP may have been a (relatively minor) factor among a number of factors contributing to the rise in land prices between 2000 and 2007, and that since 2007 LAP has probably had the effect of keeping land prices from dropping as sharply as they might have in the program's absence.

It is possible that the rise in watershed land prices documented in the Draft EIS might have been somewhat greater in the absence of various requirements imposed by NYCDEP's watershed rules and regulations – that is, the anticipated cost of compliance with those requirements might have been reflected in somewhat lower land prices. However, the analysis presented reflects the cumulative effects that both the Watershed Rules and Regulations and the LAP have had on land prices. It is also worth noting that purchases of land for development of a type or on a scale that would entail significant incremental costs for compliance represent only a portion of all land transactions in the region.

## Agriculture

**Comment 29:** The DEIS says that agriculture is not particularly important to the economy of the watershed which is just erroneous. Agriculture significantly represents more jobs and more capital investment and more of the economy than tourism and recreation.) We think that land acquisition does have an impact on agriculture and that should be addressed and mitigated in the DEIS. (Kenyon) The EIS downplays the importance of agriculture to the economy of the region while comparatively over-stating the value of recreational lands. Farm Catskills is supportive of the steps that the NYC DEP has taken to make its landholdings more accessible for recreation. Yet agriculture is another land use that protects the watershed, and is an even more significant contributor to the local economy. Therefore the LAP impacts on this industry of small businesses that relies on access to land should be more carefully considered in the EIS and steps should be taken to mitigate adverse impacts on farmland price and availability. Other analyses not considered in the EIS have shown that the LAP has already and will likely continue to put upwards pressure on agricultural land prices and result in the loss of more than 400 jobs over the next ten years. This should be taken into consideration for the EIS to be comprehensive and credible. (See NYC Watershed Economic Impact Assessment Report, Downeast Consulting Group, May 2009. Online at www.delcowatershed.com) (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

Response 29: As the EIS notes, agriculture itself represents a relatively small share of total employment and income in watershed counties, and agriculture's role in the region's economy has been declining for several decades. This is not, however, the only measure of the industry's significance. Especially west of the Hudson, agriculture (like recreation) represents a larger share of the region's export base than its share of total income and employment; and there are important linkages between farming and some other industries in the region (such as providers of agricultural supplies and equipment, and dairy processing). The FEIS acknowledges more explicitly these aspects of agriculture's role in the economy. However, as analyzed in the EIS, the land acquisition program would not be expected to have a significant impact on agriculture for the following reasons:

- As discussed in Chapter 3 the total volume of farmland has been declining in non-watershed counties as well;
- NYCDEP's acquisitions of previously-active farmland in fee simple involve only a small percentage (1.4 percent for the West of Hudson watershed as a whole) of the total volume of land removed from agricultural use since 1997; and
- Farm land acquired by NYCDEP in fee simple can be returned to active agricultural use through the issuance of permits.

It should also be noted that the relative importance of agriculture to the local economy varies within the region. Agriculture plays a greater role than recreation in the economies of Delaware County and Schoharie County but a lesser role in Greene, Ulster and Sullivan counties. The estimate of job losses in farming and related industries presented in the Downeast report (referenced in the comment) are based on an assumption that NYCDEP will engage in extensive purchases of active agricultural land in Delaware County, and that as a direct result of these purchases, active agricultural use of the acquired land will end. NYCDEP currently has 23 five-year permits in place allowing farm operators in the

watershed to use NYCDEP-owned land for agricultural production. As shown in table 3-43, 80 percent of all land on which NYCDEP has issued farm permits is located in Delaware County. As discussed above, research conducted during the preparation of the EIS found no evidence that LAP is a major contributor to the decline of farming in the region. Furthermore, the WAC program helps to preserve working farms.

Comment 30: The NYCDEP is making unprecedented strides towards encouraging the principles of Smart Growth by more actively encouraging and allowing future development in hamlet areas and walkable Main Streets with access to infrastructure connections. But the Main Streets of our rural communities are interconnected with the health of our farm and forestry businesses that depend on natural resources. Our communities cannot expect to survive on tourism and recreation businesses alone. Every community's comprehensive plan in Delaware County states the overwhelming support that residents and property owners have for the farms here. Every dollar spent at a farm has a positive ripple effect and turns over multiple times in the local economy. One acre of farmland can generate many thousands of dollars in annual farm sales, which means an even greater net impact on the economy—the EIS should more carefully consider the degree to which the LAP's acquisition of farmland past and projected impacts this. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

**Response 30:** NYCDEP agrees that economic vitality of hamlets and village centers depends in part on the economic health of the communities that surround them and the industries that support those communities, including agriculture, recreation, manufacturing and others; and the EIS explicitly acknowledges the value that watershed communities attach to the preservation of agriculture. However, research conducted during the preparation of the EIS found no evidence that LAP has a significant adverse impact on these industries. Furthermore, the WAC program provides a positive effect on preserving working farms.

Comment 31: Clean water and good food are not separate issues. New York City and New York State should require its environmental and food policy programs to come out of their policy silos and work together. The Land Acquisition Program should support efforts of other city and state programs to protect the city's food supply, and invest in the Catskill region to keep the farmland active, viable, and well-managed as part of the city's water and food-shed. The fact that the agricultural sector has declined in the past decades is not a reason to suggest that it is relatively unimportant—rather a call to action for all interested parties, including New York City to counteract the globalization of our food supply and boldly work to protect the watersheds as a source of clean drinking water and of good foods for both New York City and the Catskill region. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

**Response 31:** In 1992 NYCDEP developed the Watershed Agriculture Program to promote healthy farming and reduced runoff from watershed farms. Since 1992, NYCDEP has invested over \$120 million to this effort. Additionally, to preserve farmland throughout the watershed, NYCDEP has allocated over \$45 million in farm easements. NYCDEP's investment in farm improvements and preserving farmland serves as a national model on the synergy of promoting both clean water and food production.

Comment 32: The EIS also asserts that the LAP has a neutral or net positive impact on agriculture and therefore no changes to the program or mitigation steps need to be taken

(ES-33). This is not accurate, as reflected by the experience of farmers themselves, not represented in the EIS. The NYCDEP Land Acquisition Program has a real impact on the future shape of watershed communities because of the permanence of its acquisitions and its restrictions on the uses of land. Conversations with numerous farmers tell the stories of prime farmland the NYCDEP purchased that farmers would have bought if they had known it was for sale; of land they no longer have access to for historic agricultural uses after NYCDEP purchase; and of farmland prices being driven higher. Farmers in Delaware County who participated in a survey conducted by the Economic Development Department identified the NYCDEP land acquisition program as one of the barriers to their future viability as land becomes less available and more expensive. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

Response 32: As noted in the Draft EIS, between 1997 and 2009 land acquired by NYCDEP in fee simple in Delaware County that had recently been in active agricultural use totaled less than 800 acres. Even if the cessation of agricultural use had been a direct result of acquisition by NYCDEP, the 800 acres of previously-active agricultural land acquired by NYCDEP during this period would represent only 2.4 percent of the 33,600-acre decline in active farmland that (as reported by USDA) occurred in Delaware county between 1997 and 2008. Moreover, of the 800 acres of former farmland acquired by DEP in Delaware County, as of the fall of 2009, 530 acres had been returned to agricultural use under permits issued by DEP. As noted in the Draft EIS, the escalation of land prices in the years prior to the recession was due to many factors; communities that are wholly outside the watershed, and not affected by LAP, also experienced sharp increases in land prices. While higher land prices (along with depressed farm incomes) may make agricultural land less affordable for current or aspiring farmers, the analysis of data on land sales conducted during the preparation of the Draft EIS suggests that LAP was a fairly insignificant factor of many factors contributing to the rise in prices prior to the recession. The conclusion that the Land acquisition as a whole - including the WAC agricultural easement program - has had a neutral to mildly positive impact on agriculture appears to be justified as discussed above and by the evidence reviewed during the preparation of the Draft EIS.

Since the end of the real estate boom, DEP's purchases of watershed land may have had the effect of keeping prices from falling as much as they would have in the absence of such purchases. Especially in this context, however, it is important to remember that the impact of maintaining land values is not solely negative. More stable land prices can help stem the deterioration of loan-to-value ratios – and may, for example, make it easier for some owners to refinance outstanding loans. Finally, to date the WAC program has clearly allowed participating farm-owners to monetize the potential development value of their land, while keeping it in agricultural use and preventing further losses. LAP's negligible direct impact on the amount of land in agricultural use in the watershed region, LAP's limited impact in terms of land values, and the positive impact of the WAC easement program on keeping land in agricultural use, appear to justify the conclusion that on the whole, the Land Acquisition Program has had a neutral to mildly positive impact on agriculture in the region

Comment 33: The NYC DEP must take action to develop a more viable (from the farmers' perspective) program to lease its farmland holdings to farmers. This program should include a more robust outreach through local institutions about available land and the program requirements; a significantly longer lease term of at least five (5) years with an option to renew; and the ability for farmers to make long-term investments in fencing, trees or soil amendments. Particularly for new and young farmers, accessing land is one of the biggest

barriers to success. But no farmer can build a business and make the required capital investment around a one to two year lease with an uncertain future. All forms of agriculture require a ten year investment horizon–consider that the USDA considers any farmer who has been in business for less than 10 years a "beginning farmer." The success of the program should be measured by the degree of outreach the DEP does with farmers (this could take place through local partner farm service providers), and the degree to which farmers utilize the land. It is not sufficient for the DEP to simply say "the land is available to lease" with no evaluation of the program to determine if the outreach and lease terms are practical and useable by farm businesses. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

Response 33: NYCDEP sends out notices about leases for agricultural use of City lands to WAC who disseminates it throughout the agricultural community and has public notices in local papers about these leases. NYCDEP recently met with the WAC Agricultural Committee to discuss our program and have added information to our website. The leases are for 5 years and have the option for another 5 year renewal. This has been in place for about four years. NYCDEP looks to our partner, WAC, to help with outreach to the farming community. Another way to measure the success of the program is the number of leases for agricultural use of City lands that are active, which is now over 50. NYCDEP is constantly reviewing feedback on our program and looking for ways to improve it. Several modifications to our agreement have been made over the years to expand uses and provide greater flexibility.

Comment 34: There is a design flaw in the NYCDEP current and proposed programs to protect farmland from development while keeping it part of the agricultural community. At least 40% of active farmland in the watershed is owned by non-farmers who allow farms to use their land and receive the agricultural tax exemption. These property owners are being solicited directly by the NYCDEP and many will choose to sell their land, when it could instead both be protected and remain as a locally-owned asset, either by a farmer or a community owned land trust, keeping the land in active agriculture while also protecting it from future development. Local community land trusts need to be involved in the solicitation process, to provide an opportunity to keep land in ownership by a local resident or organization who will protect the land and keep it actively used. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann) The NYCDEP should immediately stop purchasing active agricultural land and invest in a pilot community land trust program. There are numerous cases where the owner wishes to sell rather than put an agricultural easement on the property. When solicitation brings to DEP's attention a farmland parcel they might purchase, the DEP should partner with a local land trust to purchase the property in fee. At that point, the land trust can make the land available for purchase by a farmer, subject to future development restrictions, for a period of six months. This would allow local farmers the opportunity to purchase the property at its agricultural value and keep the land locally-owned, while also achieving the goal of watershed protection. If no farmers bid on the property, the land trust could then transfer title to the NYCDEP, or purchase the property at its agricultural value, retain local ownership and lease it to a farmer for growing food. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann)

**Response 34:** The City works closely with the Watershed Agricultural Council to ensure that farms with Whole Farm Plans are considered for Farm Easements; the City also allows farmers to 'lease' certain newly-acquired land for farm uses. WAC easements are intended

to provide a similar benefit as land trusts-- local ownership and "active use" – for purposes of protecting water quality and agricultural use in tandem. NYCDEP cannot acquire dwellings, and land trusts that may be in position to do so using DEP funds under the upcoming WSP will need to convey dwellings on small lots back into circulation.

Comment 35: The NYCDEP can and should do more to keep farmland affordable and available for farmers, thereby mitigating adverse impacts of its LAP on farming. The goals of watershed protection and local ownership of farmland are not incompatible. NYCDEP should mitigate the Land Acquisition Program's impact on farmland affordability by developing and funding a program that would give farmers an additional option to protect farmland affordability, through the sale of an Option to Purchase at Agricultural Value. This is a program that has been successful in Vermont for over ten years, and has resulted in farms remaining active and owned by farmers, rather than transferring to a second homeowner when the farmer who conserved the land stops farming. This is a voluntary program which has been proven in other areas to achieve long-term affordability of agricultural land for farmers. There are young people in the watershed communities with farming experience and a desire to own and operate a sustainable farm-they would invest in these farms if they were available at their agricultural value-something that the NYC programs do not currently protect. (Farm Catskills, Kenyon, Lawrence, Furgol, McCorry, Norton-White, Sherwood, Van Sickell, Ryan, Kathmann). We would be very interested in the City developing a voluntary program like other large scale agricultural easement programs that address affordability of farm land. An affordability element could be added to the agriculture easement program. There could be a process for our farm land to remain in private ownership subject to a conservation easement rather than it being purchased by the City; this is where the land trusts would come in. We think there's an opportunity to further develop the rural land trusts in keeping land in private ownership and still protecting the water, and we hope to see the City also continue to improve its process of leasing lands for agriculture. (Kenyon) I think we have valuable land that is being tied up now in the watershed that can be used for sustainable agriculture, community agriculture and more for economic development. (Morales)

**Response 35:** Chapter 1 of the FEIS describes the City funded farm easement program managed by the Watershed Agricultural Council (WAC). This program is intended to protect water quality while simultaneously allowing farming to continue. Chapter 3 discusses the interface between LAP and agricultural use, and notes that the City has opened 661 acres (of the 1,135 acres of the active agricultural land it has acquired to date) to farming. As discussed above, LAP has had little effect on land prices. As stated in the Draft Permit, the Extended LAP makes natural resources available where consistent with water quality, public safety and operational concerns.

**Comment 36:** Farm land no longer being useable is going to be a major problem down the road. (Archibald-Townsend)

**Response 36:** As noted in the Draft EIS, total farm acreage in the watershed counties has been declining for several decades. Through its easement program and other services, the Watershed Agricultural Council seeks to keep land in active agricultural use. And as noted above, whenever possible DEP seeks to make land it has acquired that is suitable for agricultural use available to local farm operators through the permit process.

**Comment 37:** Benefits to agriculture are dubious. Who will be left to make such a monumental financial commitment to farming the land remaining here that cannot afford to buy it? (Frazier)

**Response 37:** The Draft EIS does not suggest that NYCDEP's purchases of land in fee simple provide a significant benefit to agriculture; rather, it suggests that the total amount of recently-used farmland bought by NYCDEP in fee simple is too small to have any significant impact on farming in the region. The Watershed Agricultural Council's farm easement program clearly provides a financial benefit to owners who wish to keep farming their land. However, as the Draft EIS acknowledges, the program's long-term effectiveness in helping to maintain the economic viability of farms on which easements have been granted is less clear.

Comment 38: The WAC program is not helping farmers; it is destroying them. WAC easements are encompassing lands that have no farm value, lands that are of value to communities but not to farming. WAC easements should provide that the property could be sold at agricultural value to another farmer and the WAC program fund the difference between it and the market value to the selling farmer. The way WAC has it set up today is that every farm under their program will eventually be sold to a second home owner and will never return to the term farm again. (Marshfield)

Response 38: The review of the WAC easement program conducted during the preparation of the Draft EIS found no evidence suggesting that the WAC program's direct impact on farmers is negative. A farm is eligible for an easement if it has a Whole Farm Plan (WFP), and farms with WFPs are usually active and productive. It is true that agricultural use under an easement is not "forced" but rather "allowed", so that if a landowner chose to cease farming s/he would not be in violation of the easement. However, most eased farms are quite large, and include only one or a few dwellings, and the easement restricts further housing development outside of building envelopes. So while there are no obligations for the owner to undertake agricultural uses, those uses offer remunerative activities while "second-home ownership" does not; reason thus dictates that in general there would be a bias toward ownership of such eased properties by those interested in farming.

**Comment 39:** WAC easements place too many restrictions on the farmer. The farmer should be able to access their property for mining, wind power, and other natural resources as well as utility use. WAC should be paying taxes on the developable portion of the land restricted under the easement. Further, gravel mining should be allowed on WAC easements, similar to the allowance under Ag and Markets. Further, seeking unanimous approval by WAC committees when a farmer wishes to engage in timber or bluestone extraction is not right and should be changed to a majority approval of that committee. (Marshfield)

**Response 39:** The WAC easement was drafted to allow maximum flexibility for farming and related activities and works hand-in-hand with a whole farm plan. Gravel may be extracted as "may be reasonably necessary to carry out the uses permitted on the Property under the terms of the Easement." Communication towers or devices, wind turbines, satellite or television antennae or such similar equipment may be placed on the easement, subject to applicable governmental approval, but only in a manner consistent with the conservation purposes of the easement and with prior written approval of WAC if such devices or equipment are planned outside of the Acceptable Development Area. The easement also

allows for bluestone mining and forestry. NYC pays the portion of taxes for lands under the easement for the portion of the property encumbered by an easement. The City has agreed to pay taxes on lands under easements acquired on or after January 1, 2011, even if the underlying property is otherwise tax exempt because of an agricultural assessment. Large-scale gravel mining would not be consistent with the conservation purposes of the easement. To date, there have been no denials of a forestry or bluestone project.

## Impact on Local Government Revenues

Comment 40: As less land becomes available for private development, local tax base will shrink even further, resulting in higher taxes or less services for residents. (Gregory). Loss of the desirable developable land will place a bigger tax burden on the remainder of residents throughout Delaware County. (Axtell, Dolph). Taxes continue to go up due to the lack of taxable property in the village of Delhi area thanks to County and State purchases. This needs to stop. No more purchases. We don't need to have our taxes increase due to fewer taxable parcels (Maney). A good portion of the land that they're acquiring, if they didn't acquire it, if somebody else purchased it, could be developed so we will lose any future increase in a tax base by people who would buy the property and build houses on it. (Moyse) Removal of every single acre affects the existence of the town, reducing future tax revenue, and burdening existing residents. (Monforte) As greater and greater portions of our communities become subject to deed restrictions precluding development, the tax burden on the developed properties will continue to rise. As a result, the WSP contains provisions that help ensure the owners of land subject to the deed restrictions will pay their fair share of property tax. (Delaware County)

**Response 40:** Because the current supply of developable land (and the supply that will still remain after 15 years) generally appears adequate to accommodate the projected level of new development, it is unlikely that additional LAP acquisitions at the level projected in the EIS would significantly constrain taxable development in watershed towns. As discussed further in Chapter 3, under Impacts on Local Government Resources, studies of the fiscal impact of new development have often found that the cost of community services associated with new residential development exceeds the revenues that the new development generates.

**Comment 41:** Misconception that more people up there, the more holes we fill, that our taxes are going to go down. The more homes we bring, taxes are going to go up. (Hirsh) **Response 41:** Comment Noted.

Comment 42: New York City can grieve taxes on the fee purchase property after they own it for a certain number of years, and will claim that the land is no longer useable for any purpose, no longer developable and therefore they should have their assessments lowered. (Moyse) Concern over tax implications must be addressed. To suggest that the city will never challenge their taxes on newly–acquired lands because they represent such a small part of their tax liability is impossible to stand by over the long term. (Frazier). The City is committed not to challenge tax assessments on acquired conservation easements and I want to find out if that is actually true and why not do the same thing for lands acquired in fee? (McShane)

**Response 42:** Chapter 3 of FEIS addresses the property tax issues under the discussion of Impacts to Local Government Resources. Under the draft Water Supply Permit ,the City

cannot grieve taxes on newly acquired land for a 30-year period beginning on the date of each acquisition, provided assessors adhere to requirements outlined in State law. The City recognizes community concern over taxation of newly-acquired lands. While it is true that the City cannot (and has not) guaranteed that it will never challenge such assessments, there are several reasons to expect that such challenges will be minimal. First, the City has agreed to extend the prohibition on City challenges on assessment of newly-acquired land from 20 to 30 years from the date of acquisition. Second, while there are certain conditions under which the City can challenge assessments during that initial 20- or 30-year period, the City has not challenged the assessments on any newly-acquired land since the first parcels were acquired in 1997. Third, provided that assessments of City-owned vacant land are generally in line with assessments on similar, private land, the City would have no reason to challenge those assessments.

Comment 43: While NYCDEP did state that 'NYC pays full taxes on all land and facilities," they neglected to advise that they have the right to challenge the assessment on newly acquired lands after 20 years. There is no doubt that NYC will do this. NYCDEP seeks reduction in land use classification to vacant, swamp or other similar classifications. These reductions will also severely affect the tax base and further increase the tax burden on our residents. Since the NYCDEP states that land acquisition is essential to assuring water quality, then that makes the land acquired more valuable and should be assessed according to that standard. It is also understood that NYCDEP provides drinking water not only to itself but to several towns and villages outside the City for which they receive revenue. This then is a commercial business. Their lands should be assessed accordingly. (Axtell)

**Response 43:** As described above, the City has agreed to extend the limitations on assessment challenges from 20 to 30 years. It is true that beyond that timeframe the City would have the right to challenge its assessments, but we do not expect to exercise that right unless individual parcels are unfairly assessed. We expect that City lands will be assessed similarly to other private vacant lands in the same towns, and therefore challenges should be rare. The City does provide drinking water to a number of municipalities along the aqueducts, but State law requires that water be provided at cost.

**Comment 44:** City-purchased land should never be tax exempt.(Archibald-Townsend) **Response 44:** State law does not allow for exemption in the case of City-acquired watershed land. The City pays taxes on the full assessed value of all of its land holdings.

**Comment 45:** Taxes- you don't pay full value on the reservoir. Also understand the taxes do not increase like our landowner's taxes increase with value. (C. VanAken)

**Response 45:** The City pays full taxes as assessed, and has no reason to expect that assessors treat City-owned properties differently than privately-owned properties. Under the Tax Litigation Avoidance Program, which the City is required to fund under the draft permit, the City will make substantial resources available to communities to resolve disputes concerning the valuation of the City's "unique properties" in the watershed, such as reservoirs and dams. The City has seen a substantial increase in its property tax bills during the last ten years just as most other landowners have.

**Comment 46:** I feel that each town in the Watershed should be compensated with money (our Tax Dollars also) for the percentage of land that is owned by the Watershed. So if you

currently own 35% of Delhi there should be a certain percent paid to Delhi. The same for Bovina, Hamden, Walton, Margaretville, etc. Each year if that increases so should the percentage of money paid to each town increase. (Townsend)

**Response 46:** Comment Noted.

Comment 47: The socio-economic analysis of the LAP entirely ignores the enormous benefit of the Catskill-Delaware system (Cat-Del) to New York City and adjacent municipal areas. SEORA requires assessing the secondary and indirect impacts of proposed Actions. Seen in this context, the DEIS and related negotiations address relatively trivial economic issues and escape identifying larger inequities and their consequences. A rarely recognized value of Cat-Del water is that the City profits from the commodity it gets virtually for free. We have calculated that applying the prevailing rates for water to annual usage produces annual revenue of \$1,727,406,417. In comparison, the total adopted DEP expense budget for FY2010 for both water delivery and waste treatment is \$1,023,628,315, a difference of \$703,778,102 excluding the revenues from wastewater treatment. Where does this more than \$700 million in water supply revenues go each year? Since the water revenue collected by the Water Board goes into the City's General Fund, it is hard to know if the surplus water revenue is being used to pay for debt incurred from General Obligation bonds that may have funded some past water related program—or whether, as with many special City levies, the water revenue gets lost in the general funds that are dispersed among many City services according to the priorities of the presiding mayor and City Council.

While the transfer of water and sewer revenues to non-water uses may be disturbing to rate payers, environmental advocates and bond holders who take lower interest rates because of the assurance that the bonds are fully backed by water rates rather than faith in the credit of the City government, the magnitude of the transfer is also relevant to local officials and residents in the Cat-Del system. These interests and the LAP DEIS have been primarily focused on the fiscal impact of the LAP on local taxes, which are in the low millions of dollars, rather than on the opportunities to divert some small part of the \$700 million transfer annually of water funds (or \$2.5 billion in "lost" waste water treatment fees). It is clearly legitimate to claim a portion of these surplus funds as a payment for resources appropriated by the city. Indeed, a lot more financial compensation can be made to the towns of the Cat-Del water shed at very little impact on the City's finances. A major rethinking of adequate compensation for the restrictions on development and usage of land in the watershed is particularly warranted when it is clear that the City is extracting a precious resource for free.

[There is a] widely-accepted notion that an area's common resources cannot be exploited without some sort of compensation to the community where these resources originate. Developing the mandate and form of this compensation will require broader analysis that should be a condition of the FEIS. Civic leaders and elected officials in the Cat-Del system should stand strong to claim a fair share of the city's bounty that is more than paid for by rate payers and bond holders on the unfounded assumption that the funds are dedicated exclusively to water supply and wastewater treatment. (Konheim and Ketcham)

**Response 47**: As a matter of law, New York City's water rates must be set to cover the system's operating and capital expenses each year. For more information on the setting of the City's water and sewer rates, please refer to "Public Information Regarding Water and Wastewater Rates," New York City Water Board, which is available at <a href="https://www.nyc.gov/nycwaterboard">www.nyc.gov/nycwaterboard</a>. This document identifies all system expenditures upon which the rate is based. In addition NYCDEP has agreed as part of the negotiations to continue to

fund Partnership programs to benefit the watershed communities. This funding will be included as part of the permit.

Comment 48: This land acquisition program is promoting cleared lands to grow up into more forest and uncultivated areas. Our stretched and stressed volunteer fire departments in Delaware County do not need tens of thousands of more combustible lands to protect. On top of that our fire department and ambulance squads depend on taxes to survive and to be here when they supply their services to our people and our people needing life and death help. With no added growth from building and with no additional people coming in to our areas, our volunteer departments will not survive, at least as a volunteer service to our county, one of the poorest counties in the State of New York. This land acquisition program is destructive to our emergency and fire departments as well to our County. (Marshfield)

Response 48: Given a continuing decline in the total acreage in Delaware County that is still in active agricultural use, the reversion of some farm land to forest, brush or meadowland may be inevitable. Over time, this process could potentially increase the risk of fire and the workload borne by local fire departments. The Land Acquisition Program, however, is not a significant contributor to this process. Previously-active farmland purchased by NYCDEP in fee simple since 1997 represents only 2.4 percent of the land removed from agricultural use in Delaware County between 1997 and 2008. Moreover, as of the fall of 2009 about twothirds of 791 acres of previously-active Delaware County farmland acquired by NYCDEP in fee simple since 1997 was being used by local farmers for a variety of agricultural purposes, under permits issued by NYCDEP. As noted above, a review of NYCDEP's payments of local property taxes to local governments and school districts in the watershed found no evidence that LAP has to date had any significant adverse impact on school district or local governments; nor does it appear likely that LAP will significantly constrain new taxable development. Additionally, NYCDEP will be developing a forest management plan for all City-owned lands in the watershed and that plan will specifically address fire risk management, among other things

# Natural Gas Drilling

Comment 49: If the City implements through NYSDEC more stringent or impossible rules to have gas drilling on a property, I feel that is a taking of private property rights. Landowners within the watershed who lose the rights to drill for gas should be compensated adequately by NYC users of their water. (McShane) Should allow natural gas to pay for some stuff in this country and put people to work. (C. VanAken) The City Study of natural gas drilling projected there would be nine wells per drill site every square mile in their analysis for the stated DEIS. Our estimates using their concentration data suggest that the economic loss could amount to hundreds of millions of dollars annually. (Frazier)

**Response 49:** The Extended LAP does not impose rules concerning natural gas drilling in the New York City watershed; accordingly this comment addresses issues beyond the scope of this environmental review. While the City has stated its belief that hydraulic fracturing in the watershed poses an unacceptable risk to water quality and water supply infrastructure, the City has not adopted or proposed any rules concerning hydrofracking. As noted in Chapter 3, NYSDEC is currently completing a supplemental generic environmental impact statement ("SGEIS") for natural gas drilling using high-volume horizontal drilling in the Marcellus Shale formation that underlies much of the New York City watershed.

As noted in Chapter 3, the New York City watershed is excluded from the pending SGEIS concerning natural gas drilling using high volume horizontal drilling in the Marcellus shale formation. Any drilling application within the New York City watershed will require "a case by case environmental review process" "to address continuation of the FAD." Furthermore, there are no pending applications for horizontal drilling located in the New York City watershed and any drilling would go through significant reviews and must demonstrate that it would pose no threat to water quality and the Filtration Avoidance Determination. In this connection, and as noted at EIS Chapter 3, the extent and location of natural gas drilling in the watershed, and the associated economic impacts, are not reasonably foreseeable.

#### **Town Level Assessments**

**Comment 50:** References used are misleading. Pages 4-120-122 refer to Town of Denning Comprehensive Plan, but fail to mention the plan makes no reference to the permanent removal of property from future development. (Monforte)

**Response 50:** The language that refers to the Town's comprehensive plan has been revised to make clear that the plan does not explicitly address the question of how much land might be acquired by NYCDEP; and that consistency between the plan's objectives and LAP's impact on land use and community character in Denning should not be taken to imply any endorsement of either LAP's current operations or its proposed extension.

**Comment 51:** Developable land is extremely limited with 73% already protected and what is not is undevelopable due to flood plains, stream management, steep incline, etc. DEIS projection is that by 2022, Denning will only have 4.2 percent developable land left. That is not acceptable. (Monforte)

**Response 51:** The estimate that the supply of developable land remaining in Denning as of 2022 would represent only 4.2 percent of the Town's total area (about 2,757 acres) needs to be seen in context. The DEIS also estimates that as of 2009, only about 6.4 percent (4.187 acres) of the Town's total land area was developable. While the remaining supply of developable land as of 2027 will indeed be limited, the EIS estimates the number of new units to be built in Denning would average only 3 per year. Based on the average size of residential parcels developed in Denning during the past decade, development at this rate would consume about 12 acres of developable land each year.

**Comment 52:** Denning is currently working on revising zoning laws and LAP should take this into consideration. (Monforte)

**Response 52:** In general, LAP purchases vacant land or low density residential. Since LAP would not result in changes to land use, it should not conflict with zoning laws. The proposed zoning changes, which are based on the 2007 comprehensive plan, are generally geared to ensuring that future growth is compatible with the Town's rural character and hamlet development. The Extended LAP generally does not conflict with this goal.

**Comment 53:** In the Town of Denning, is the additional 5,046 acres to be purchased from 2010 to 2022, as proposed in the DEIS in accordance with the new 10 year filtration waiver from the EPA? (Monforte)

**Response 53:** The estimate of 5,046 acres is the City's best estimate of the maximum number of acres that would be acquired between 2010 and 2022. Under the 15 year permit scenario, this number is 5,551 acres. These estimates are consistent with the 2007 FAD because the FAD does not dictate or restrict the number of acres the City must acquire.

**Comment 54:** Is this additional 5,046 acres including some of our developable lands, in addition to the amount of land previously agreed to in the 1997 MOA? (Monforte)

**Response 54:** Yes. Page 4-122 of the DEIS discusses the projected acreage and includes approximately 1,359 acres of land that is expected to be developable. Under the 15 year Greater impact scenario, the land to be acquired is projected include approximately 1,495 developable acres, The remaining supply of developable land under this scenario would be 4.0 percent of the Town's land area in 2027, rather than 4.2 percent in 2022.

**Comment 55:** All towns should have individual assessments in Delaware County given their area of focus. (Frazier)

**Response 55:** All towns were evaluated individually for impacts of the LAP on the amount of developable land in each town. Based on this initial assessment, certain towns meeting certain criteria were selected for more in depth Town Level Assessments. Town level assessments were performed for 19 watershed towns that met or exceeded one of the following criteria:

- Those in which LAP is projected to acquire 20 percent or more of the town's 2009 supply of developable land; and
- Those in which 10 percent or more of the town's 2009 supply of developable land is projected to be consumed by residential development and LAP is projected to acquire greater than 5 percent of the town's 2009 supply of developable land.
- Towns with very little developable land (developable land in 2009 was less than 10 percent of town area or less than 3.000 acres)

Six towns in Delaware County were selected for further assessment. No potential significant impacts were identified for these towns.

Comment 56: The Town of Middletown has a total acreage of approximately 60,000 acres. Out of this, 42,000 acres are at a 15 percent or greater slope, 4,800 acres are water buffers, 6,000 acres are owned by New York City, 9,600 acres are owned by New York State. As you can see, we are running out of land, even though some of the steep slope is owned by the State of New York. Land is a very important commodity, farmers need land, building developers need land, and any expansion of any kind needs land. The Town of Middletown is already being stranded by the lack of developable land. All of our tax base is predicated on land and what is built onto it. The continued purchase of land by NYCDEP, coupled with the historic desire to have assessments lowered, will only result in deadly strangulation of the watershed communities. It has been suggested by some that New York City pay a surcharge over and above the taxes agreed upon payments under the MOA to these communities to help them finance the basic needs of their taxpayers. (Utter)

**Response 56:** Based on the definition of developable land cited above on p. 12-8 (which excludes land with slopes of more than 15 percent, water buffers, State- and City-protected land and several other types of land not suitable for development, such as land in flood

plains), the analysis conducted for the Draft EIS estimated that in 2009, 7,455 acres of privately-owned vacant and low-density residential land in Middletown (12 percent of the Town's total area) could be considered developable. As acknowledged on p. 12-8, this estimate includes some land that may not currently be developable for a variety of practical and economic reasons – such as inadequate road access or lack of other infrastructure, and real estate values that cannot support the investment that would be needed to overcome these problems. At the same time, the definition cited above excludes other types of land that may in fact be developable – such as agricultural land, commercial properties, and undeveloped portions of residential properties of less than 15 acres. On balance, it appears that there is still a substantial amount of land potentially available for new development in Middletown, For impacts on taxes, see responses in section "Impacts on Local Government Revenues" above. See also responses to comments 64 and 65.

Comment 57: 25,000 acres in the Town of Hamden have over 15 % slope, 728 acres are within waterway buffer zones, and 3,400 acres are unsuitable for building and septic systems. That leaves only 5,872 acres left for development in the Town of Hamden, which in turn means that 85% of our land already is not suitable for building. Isn't that already enough land to protect and preserve our water supply that serves the downstate area? (Marshfield) Response 57: Using the definition of developable land cited on page 12-8, the Draft EIS estimated that in 2009, Hamden had approximately 6,146 developable acres of privately-owned vacant and low-density residential land – slightly higher than the Town's estimate cited above. Between 2010 and 2022,the Draft EIS projects that NYCDEP will acquire approximately 724 acres of developable land in Hamden – about 11.8 percent of the town supply of developable land, according to the Draft EIS; or about 12.3 percent according to the Town's estimate. These projected acquisitions will thus (by either definition) leave at least 87 percent of Hamden's current supply of land available to support new development, during the 2010-2022 period and beyond. See also responses to comments 64 and 65.

**Comment 58:** In 1997 our two designated hamlet areas in Hamden were developed without rights of exclusion from NYCDEP purchases, which in turn bred WAC easement purchases in each, one having stymied any hamlet growth forever and the other the WAC easement created hardships for the NYCDEP funded Community septic program. Lands in the designated hamlet areas need to be off hands to purchases by the City or their associated land trusts. (Marshfield)

**Response 58:** The new Water Supply Permit would allow communities to restrict future conservation easements in Hamlet areas.

Comment 59: The Town of Hamden has updated its comprehensive plan. In 2000 the Town of Hamden had 92 parcels used for agriculture, today we have 45 parcels and there is now only 3,029 acres of prime agricultural lands in town. Our median household income is \$35,313, not \$43,357 as the DEIS proclaims. We have set many goals in our plan, such as 1. to protect surface and groundwater supplies from pollution, maintain high quality physical environments and preserve wildlife habitats, 2. encourage conservation subdivision designs where lots are clustered to provide open space buffers that can trap storm water run-off, 3. promote the development of an economically viable agricultural sector and the preservation of working farms, 4. discourage use of permanent conservation easements as a preservation approach in favor of more flexible approaches such as leased development rights and other

limited duration techniques, 5. promote the use of NYC acquired land for agricultural purposes and discourage further City acquisition of farmland, and 6.acquisitions of additional conservation easements in town should be opposed. These are only a sample of 44 goals set by our plan. (Marshfield)

**Response 59:** Comment Noted. The median household income of \$35,313 cited in Hamden's comprehensive plan is the median household income for the Town, as reported in the 2000 Census. The higher figure cited in the Draft EIS is an estimate of median household income in 2008 based on data from DemographicsNow. The Town Level assessment for Hamden has been revised to include the principal goals stated in the Town's 2010 comprehensive plan, and to take into account the analysis of remaining buildable land included in the plan.

Comment 60: In the Draft Environmental Impact Statement it suggests that "156 additional units will be built by 2022." I'm here to tell you that in 2009 and so far in 2010 we have issued only one housing building permit. Before that 10 home building permits were issued per year, and that was a real busy year for us. At this rate realistically, I project new housing units constructed through to 2022 to be between 50 and 100 units. The EIS also states "the purchases of an additional 2,700 acres will protect our Town's low density rural character and provide opportunities for outdoor recreation." To make it very clear the Town of Hamden needs economic development incentives so that we can blend that in with our" low density character." Outdoor recreation does not give us our needed economic boost. If you think we support the LAP because it supports our rural character, you're wrong. The concluding statement in the EIS that 'The Extended LAP would not be expected to result in any potentially significant adverse impacts on land use, socioeconomic conditions or community character in Hamden." This is absolutely wrong on all counts. Having lived in this town for over 40 years, and having been Supervisor of this town for over 17 years, I have witnessed the adverse effects of the land acquisition program that has affected the economics and character of this town. (Marshfield)

**Response 60:** As stated in the DEIS, Chapter 4, the projected number of new residential units (156) is not meant to indicate the level of residential development that is *likely* to occur in Hamden between 2010 and 2022. It is instead intended to define a "reasonable worst-case scenario" with respect to the potential for conflict between the Land Acquisition Program and Town's need for land to support new development, and any adverse impacts that might arise from such conflict. The use of a lower rate of residential development would result in a lower estimate of land needed to support such development, and thus reinforce the conclusion that LAP is unlikely to conflict with future development.

The Draft EIS recognizes the need for economic development in Hamden and other watershed towns. The proposed expansion of designated hamlet areas is intended in part to ensure that LAP does not conflict with this need. Moreover, while LAP cannot by itself ensure that the types of economic development sought by the Town will in fact occur, other resources are available under the 1997 MOA (including those offered by the Catskill Watershed Corporation) to support economic development in Hamden. See also responses to comments 64 and 65.

**Comment 61:** Regarding hamlet of Andes and other hamlets and restriction on selling development rights: first of all there has been no due process; no one in the Town of Andes ever spoke to me or anyone else that I know of. The coalition of watershed towns concept that taking away my rights to establish an agricultural easement on my hamlet farm thru

WAC is un-American and more in keeping with the concept of a commune in order to theoretically support hamlet growth while losing your personal property rights. Will this brushstroke over the hamlet affect most of the residents? No it will not. It only targets a handful of property owners under the guise of not discriminating against those few property owners who might actually qualify under present WAC acreage requirement standards. I am the only property owner in Andes interested at present in the Ag easement program as far as I know. That makes me the one target of the Town. As for future development of the hamlet taking away my rights in order to ensure keeping the property open for future development is sheer crystal ball politics and totally speculative. 10 years/20 years/30 years. Keeping my property away from New York City easement has no basis in reality. In the 13 years since 1997 MOA no development has occurred within the hamlet that would not have occurred anyway. No light industry. The towns have to compete with each other's for the development they may be seeking. Will my property or some other be offered as a tax incentive to bring in industry? This means not only do I lose my own rights but in essence they are to be offered to some incoming entity to lure it into the hamlet. Holding my land for some future ends is nothing less than property speculation. There has not been any investigation as to whether my property would even be developable and for what. The Towns have no evidence or proof or basis for taking my property rights away from me. (Nelson)

Response 61: The City has long recognized the rights of local municipalities to determine whether certain population centers and associated parcels ("designated hamlets") should be excluded from the LAP. The question of whether - and if so how - towns communicated with their residents about such town decisions has to date been for the towns themselves to address. The 1997 MOA and Water Supply Permit (WSP) issued by DEC, which imposed requirements on how the City operates the LAP, imposed no requirements on whether or how towns should seek public participation in their decision-making process. However, the 2010 Water Supply Permit (which viewed http://www.dec.ny.gov/permits/70376.html) does provide that unless a municipality engages in a process of public participation, any decision it makes with respect to excluding LAP from acquiring parcels in designated hamlets would be void (see Special Condition 10). In addition, municipalities have the right to remove parcels from (but not add parcels to) the list of parcels proposed for LAP exclusion prior to such decision(s), although this option is not available in incorporated villages. It is expected that this new process, would provide for the public participation desired by those with concerns, especially affected landowners.

## **Water Quality and Natural Resources**

**Comment 62:** Broad scientific consensus recognizes the long-term environmental benefits that result from land acquisition and NYCDEP's Land Acquisition Program remains an international model that highlights the positive effects on land, air, and water quality, as well as habitat protection that can be achieved through robust land protection efforts. (Riverkeeper).

The single most effective strategy for ensuring the long-term safety of a surface drinking water drinking supply is to safeguard the watershed lands that surround, and drain into its reservoirs. This conclusion is widely shared by independent water experts. [I want to] restate the importance of the Extended LAP to the health and economy of NYC and New York State. The primary line of defense for safeguarding this water resource is land acquisition

and protecting the forest, meadows and streams in their natural state. USEPA, National Academy of Sciences, The American Waterworks Association and experts from around the country have all concluded that land acquisition is an indispensable and essential element to providing a safe drinking water supply. It is necessary for the NYC drinking water supply. While New York City has made significant progress in advancing its Watershed Land Acquisition Program over the past 13 years, a large portion of the city 's watershed lands remains vulnerable to pollution and water quality threats. Significantly, of the country's five major unfiltered drinking water systems, New York City protects the smallest percentage of its watershed lands through ownership and easements. Portland, San Francisco and Seattle own or control virtually 100% of their watershed lands. Roughly 45% of the lands in Boston's watershed are protected. But even with the success of the city's program since 1997, only 34% of the Catskill/Delaware watershed lands are owned or controlled by New York City or New York State. In part for these reasons, EPA and the State Health Department, consistent with the federal Safe Drinking Water Act, have made the continuation of a vigorous watershed land acquisition program a cornerstone requirement of New York City 's 2007 filtration avoidance determination. (Goldstein/NRDC)

**Response 62:** Comments Noted. The purpose of the Extended LAP is presented in Chapter 1 and Chapter 5 further discusses the water quality benefits of land acquisition.

Comment 63: Since water quality in Delaware County is high, no population explosion is anticipated, and there is very little development pressure, what is the justification for land acquisition? How much land is enough to protect water quality? Request for quantitative/scientific study demonstrating land acquisition will improve water quality. (Eisel, Bracci, Frazier, Morales, Maney). NYCDEP has yet to show how land acquisition actually does assure water quality. (Axtell). This is being done in the assumption of water quality, yet I have not seen anything that proves the acquisition of all this land will improve water quality. (Dolph). The CWT does not believe that the DEIS adequately addresses the needs for further land acquisition and simply accepts the decision to purchase more land as a requirement of the FAD. The DEIS fails to consider trends in water quality in the watershed and fails to evaluate the impact of the watershed regulations that were revised in 1997, the watershed protection and partnership programs and their impact on improving water quality and the effect of the previous land acquisition program. (CWT)

**Response 63:** As discussed in Chapter 5, the Extended LAP is intended to provide long-term benefits to the water quality of the City's water supply system through the preservation of sensitive lands proximate to water resources. Land acquisition is an anti-degradation strategy, which avoids adverse water quality impacts associated with development and other land uses. As presented in the EIS, beneficial impacts on water quality and natural resources of land preservation and smart growth principles are well documented in the literature cited in this chapter. The Extended LAP would not result in significant adverse impacts on water quality.

**Comment 64:** Why is it necessary for NYCDEP to be earmarking huge sums of money to acquire the most desired developable land inside the communities in the watershed. Most of the land being acquired is non-forested. By NYCDEP's own admission, managed forested land "supports water quality," How does acquiring vacant properties help water quality? (Axtell)

**Response 64:** Approximately two-thirds of the West-of Hudson, lands acquired under LAP is forested. As described in Chapter 5, NYCDEP prioritizes parcels with greater water quality benefit. LAP helps maintain water quality by protecting water quality sensitive lands

The expansion of Town hamlet areas, and keeping development in areas where it has historically occurred is encouraged by LAP and consistent with principles of "smart growth," as discussed in the Water Quality chapter.

Comment 65: I would like to see a moratorium on land acquisition, until a collaborative effort between the towns and NYCDEP to come up with plans using planning boards to develop a case-by-case basis how do we develop this land and at the same time keep water quality. I don't see any land use planning taking place here, or a meeting of minds to come up with a solution. (Morales) NYC should focus acquisitions on lands that will provide the highest level of protection to the water supply, avoiding the acquisition of lands where potential impacts can otherwise be mitigated. Our community is concerned that properties most susceptible for development will be purchased by the City leaving less desirable properties available for future expansion and growth. (Marshfield) In the "FUTURE WITHOUT PROPOSED ACTION" section, it states (Page 5-6): "Without the Extended LAP, development can be expected to occur in a more diffuse manner, also known as sprawl, in areas where adverse impacts could be greater. Without the Extended LAP, new development could occur in areas that are less suitable from an ecological standpoint and could be more damaging to water quality. Greater parcel fragmentation could also occur, with adverse impacts on natural resources and habitats." Sprawl does not have to occur. The Town could control this through land use regulations (including site plan, which could also include buffer or sensitive areas, etc.) without utilizing the LAP. In the "PRIORITIZATION" (Page 5-7) it states, "The LAP first prioritizes property for solicitation on the basis of its location within the water supply system, followed by site specific characteristics so as to maximize the water quality benefit of the lands acquired." Prioritization of land when proposing the Agriculture] and Farmland Protection Plan in our County, as well as Albany County, had a negative connotation and a sense that property rights are being taken away, while a goal of this plan is to protect property rights. Also, part of the strategy of the LAP is allegedly to acquire parcels adjacent to those already owned by the City, without regard to water quality impact. These priorities are conflicting. (Thompson)

**Response 65:** NYCDEP does not participate in local land use planning. Ensuring protection of lands with water quality sensitive features is proposed to be accomplished through the targeted purchase of lands based on Natural Features Criteria, including wetlands, floodplains, and lands within 300 feet of streams, ponds or lakes or within 1,000 feet of reservoirs and lands with moderate to steep slopes. As a result of the negotiations with the watershed communities and other stakeholders, the Extended LAP will incorporate numeric thresholds to define the minimum amount of the specified natural features that must be present on a property to qualify for acquisition. The parties have agreed that properties in Priority Areas 2, 3 or 4, must meet either or both of the following thresholds:

- At least seven percent (7%) of the property exhibits Surface Water Features<sup>1</sup>, or
- At least fifty percent (50%) of the property exhibits slopes greater than 15 percent.

<sup>&</sup>lt;sup>1</sup> Surface Water Features include 1,000 foot buffers around reservoirs, 300 foot buffers around watercourses, 100-year floodplains, DEC-mapped wetlands or federal jurisdiction wetlands over 5 acres.

The expanded hamlet areas under the Extended LAP (See Chapter 1) would further support these development patterns. Concentrating future development around hamlet areas where much of it historically and currently occurs is consistent with the principles of smart growth and associated benefits on water quality and the environment. The proposed Extended LAP is consistent with these outlined principles, with numerous Comprehensive Plans prepared by towns, and should have a net benefit to water quality while minimizing impacts to future growth. There has been a collaborate process in discussing the hamlet expansion areas, and the natural features criteria between the City and watershed stakeholders

**Comment 66**: If resources and funds are used for matters not directly related to protecting water quality, there will be less funds available to address water quality. This mission creep must be addressed explicitly in the EIS. (Delaware County)

**Response 66**: Chapter 1 of the EIS describes the areas of focus for the Extended LAP. As noted in Chapter 1, there are a number of natural features criteria that must be present on a property in order to qualify for acquisition in Priority Areas 2, 3 and 4. NYCDEP believes these thresholds and other program elements will promote the wise use of acquisition funds over the long term.

**Comment 67:** Even small land acquisitions have an impact on overall water quality, which was proven by research from Yale and SUNY ESF. (McShane) Delaware County has fundamental disagreements with the findings of the Yale SUNY-ESF Study. (Delaware County)

**Response 67:** Comments Noted. This study was referenced in the EIS.

**Comment 68:** Supports conclusion that land acquisition will help protect our environment and particularly our waterways. (Mason)

**Response 68:** Comment Noted.

# **Open Space and Recreation**

**Comment 69:** I would argue that recreational use is limited. (no horses, no snowmobiles, no four wheelers). Land is not mowed, and there are no longer trails. (Moyse). On land NYCDEP has taken they have lost snowmobile trails. The more you acquire, the less we have to ride on. You are taking away recreation (Muthig)

**Response 69**: Many or most properties that the City acquires in fee simple were previously posted against trespass, so most recreational use created by the City represents new opportunities for the public. In regard to snowmobiles in particular, the City has a policy of allowing existing trails to continue and partnering with organizations who are willing to maintain existing trails and/or develop new ones. Additionally, NYCDEP has issued several land use permits for organization that are willing to construct and maintain hiking trails.

**Comment 70:** Claims of recreational benefits are vague and overstated (Frazier) **Response 70:** Comment Noted.

**Comment 71:** Land Acquisition also increases public access to the land for recreation. (Mason)

**Response 71:** Comment Noted.

## **Mitigation and Unavoidable Impacts**

Comment 72: There has been progress in "mitigating" impacts of the LAP since 2009 (listed below). The DEIS catalogues many related negotiations, such as the pending expansion of hamlet areas and opening up more DEP-controlled land to low intensity recreational use. These mitigations should be written into the water supply permit and listed in the mitigations section of the EIS. There are two sources of mitigation measures produced from the negotiations that should be documented in the Final Environmental Impact Statement. First, those measures agreed to by parties to the negotiations presented as Special Conditions (SC) in the NYSDEC Draft Water Supply Permit # 0-9999-00051100001 Second, the Side Agreement between several parties to the negotiations including but not limited to the CWT, DC, NYC DEP and the Catskill Watershed Corporation. (Delaware County)

**Response 72:** The above referenced elements have been incorporated into the Water Supply Permit and the side agreement and are described further in Chapter 1 of the FEIS. The environmental review concluded that there were no significant impacts associated with the Extended LAP and therefore no mitigation is provided.

#### **Alternatives**

**Comment 73:** NYCDEP should build a filtration plant. (Gregory, Moyse, B. VanAken, C. VanAken,) Article in the paper says they're going to have to spend \$20 Billion to filtrate. Back in '97 the figure was \$8B. If you built it in 97, you could have built 2 and half filtration plants by now and employed some people. (C. Van Aken)

**Response 73**: NYCDEP believes that watershed protection, instead of building a filtration plant (which would, itself, have a large carbon footprint), is better for the environment, those who consume NYC water and for communities of the watershed.

Comment 74: Continuing a vigorous land acquisition program is also an essential economic imperative. Land acquisition is a key requirement under the federal Safe Drinking Water Act for systems seeking to avoid the federal filtration mandate." EPA has specifically required New York City to increase its land ownership in the watershed to avoid having to build extensive filtration facilities for the Catskill/Delaware water supply. Alternatively, requiring filtration of this system, which provides approximately one billion gallons of water a day to half the state's population, would cost ten to fifteen billion dollars in capital expenditures alone, according to New York City's Department of Environmental Protection, as well as operating costs of several hundred million dollars per year. The burden on city water ratepayers of such a filtration order would be dramatic and could have a significant ripple effect on housing and economics in New York City, the fiscal engine of New York State (Goldstein/NRDC)

**Response 74:** Comment Noted. Filtration of the Cat-Del system is discussed in the No Action Alternative.

Comment 75: The DEIS does not seriously consider as an alternative the "no action" alternative on not purchasing more land and simply discounts such an option as not being

consistent with the FAD, without seriously considering if the FAD could be revised and the slim likelihood that the primacy agency would order filtration solely on the basis of a lack of further land acquisition. (CWT)

**Response 75**: The Extended LAP is a key requirement under the Filtration Avoidance Determination (FAD). As a regulated water supplier, NYCDEP must comply with the terms of the FAD and cannot reasonably assume that the determination would continue in the absence of a key program.

## COMMENTS ON LAND ACQUISITION PROGRAM

Comment 76: Riverkeeper feels that the hamlet expansion areas as outlined in the draft Water Supply Permit and the City's DEIS are equitable and will help upstate communities grow in a manner consistent with watershed protection. Riverkeeper feels the Natural Features Criteria Modifications, combined with the ability of the primacy agency to make further modifications should filtration avoidance be threatened as a result, achieves the right balance for protecting water quality and promoting sensible upstate economic development. (Riverkeeper)

**Response 76:** Comment Noted.

**Comment 77**: Riparian Buffer Pilot Program and Involvement of Land Trusts are Positive Steps. Towards this end, Riverkeeper urges the City to draft an internal guidance document that clarifies interpretation of "habitable dwellings" under MOA paragraphs 42 and 67 in the hopes that NYCDEP will be able to solicit certain properties with high water quality protection values that it previously deemed off-limits for purposes of land acquisition. (Riverkeeper)

**Response 77**: The City and other parties, including Riverkeeper, intend to enter into an Agreement that, among other things, recognizes that "uninhabitable dwelling" can be an ambiguous term and provides that that the City will use good faith efforts to ensure that the City does not acquire a habitable dwelling.

Comment 78: A cornerstone of the 1997 Watershed MOA was the establishment and dedication of funds for a variety of programs that promote watershed protection and sustainable economic development. These programs have created jobs and funneled millions of dollars directly into upstate communities. In fact, some programs, such as the Watershed Advisory Council's Whole Farm Plan and easement programs, have been so successful that stewardship costs for maintaining these programs have risen significantly. Riverkeeper urges the City to continue, and in some cases increase, its historic level of funding for these critical programs in order to ensure their continued success. (Riverkeeper)

**Response 78:** Comment Noted. Under Special Condition 26 in the Draft Water Supply Permit, the commitments to these Watershed Partnership Programs are identified.

Comment 79: In light of the negotiated elements of the WSP and Agreement, the CWT is prepared to support the WSP. The WSP and Agreement include important elements necessary to satisfy the equity elements of ECL §15-1503. The new WSP continues important elements of the 1997 WSP, such as: prohibition on the use of eminent domain; protection of villages and hamlets; the requirement that eligible lands meet natural features criteria, recreational uses of City-owned land; payment of taxes on the City-owned land and continued support of various watershed protection and programs.

The new WSP and Agreement build upon the 1997 WSP and MOA in important ways, clarifying issues that arose from the first permit and addressing new issues. Important elements of the new permit and Agreement include: putting a hard cap on the amount of acreage that can be acquired under this permit, providing a mechanism for communities to expand the hamlet areas that were previously identified in 1997; allowing towns and villages to prohibit City acquisitions of conservation easements in hamlets and villages instead of only prohibiting fee acquisitions; presenting minimum numerical thresholds for the natural features criteria to assure that the City complies with the provisions of the Attachment Z of

the MOA; extending the commitment to not challenge the tax assessments on newly acquired lands to 30 years; committing to continued support of various watershed protection and partnership programs; insuring WAC transparency and committing the City to Tax Litigation Avoidance Program which it is hoped will resolve decades of contention on the taxation of the City's reservoirs and infrastructure in a manner that is fair and equitable to all parties.

While the CWT supports the new WSP, conditioned as it is, that does not mean that the CWT believes the new LAP is justified. Nor should CWT's acceptance of this permit mean that CWT will necessarily support a future or extended LAP. In fact the CWT does not feel that the City or the state have demonstrated a need for the further acquisition of lands in the West of Hudson Watershed. We believe that further acquisitions beyond the 105,000 acres could present unmitigatable damage to the ability of the communities to maintain a sustainable base of development on which the communities can thrive. (CWT)

Response 79: Comment Noted.

**Comment 80**: In the draft WSP, there are provisions which allow the local communities to set aside certain areas within their town where commercial and/or residential development is possible. This mitigation measure is critical to address the long term needs of the communities.(Delaware County)

**Response 80**: NYCDEP recognizes the importance of the hamlet expansion areas. As descripted in Chapter 1, The City, together with the State, EPA, and several environmental groups have worked diligently with the CWT, the watershed counties, and individual towns to balance community concerns over opportunities for future development with water quality protection needs in determining an appropriate scope for each town's proposal.

Comment 81: NRDC has reviewed the Draft Permit and believes that it is consistent with law and with the state's broad public interest. First, the permit, as now proposed is in accordance with the 2007 USEPA filtration avoidance determination, which pursuant to the federal Safe Drinking Water Act, directed New York City to commit 241 million dollars to fund its Land Acquisition Program over the next decade. The proposed permit will allow that program to move forward on the timetable required by the avoidance determination, pursuant to federal law and implementing regulations. Second, the proposed permit is consistent with State Environmental Conservation Law, Section 15-1503(2), which requires, among other things, that the project is just and equitable to all affected municipalities and their inhabitants. As now set forth in the draft permit and supporting documents, insure that the city's implementation of the land acquisition program will be just and equitable to watershed stakeholders. The proposed permit, of course, continues the city's long-standing practice of acquiring watershed properties only from willing sellers; eminent domain is specifically precluded. All sellers would receive fair market value for their lands as determined by an independent, certified New York State Appraiser. In addition, as noted in the draft permit itself, the city's land acquisition goals recognize the importance of ensuring that the availability of developable land in the watershed will remain sufficient to accommodate project growth without adverse effects on water quality and without substantially changing future population patterns in the watershed communities. Finally, the proposed permit conditions and supporting agreements reflect the work of more than two years of negotiations among all the affected stakeholders. Numerous provisions in those documents respond to watershed stakeholder concerns of equity, such as provisions relating to city payments of taxes on watershed lands, city funding for septic systems rehabilitations of watershed homeowners, and city agreements to exclude significant watershed acreage from possible future acquisition following designation of hamlet extension areas by the watershed towns themselves. (Goldstein/NRDC)

Response 81: Comment Noted

**Comment 82:** Natural features criteria need to be defined more than just having the presence of any amount of slope or stream. (Marshfield)

**Response 82:** As discussed in Chapter 1, natural features criteria thresholds have been developed through a negotiation process between the City and West of Hudson Watershed Stakeholders to meet that very concern. The new Water Supply Permit will require that City fee and conservation easement acquisitions will have to contain at least 7 percent surface water criteria or 50 percent steep slopes (in Priority Areas 2, 3 or 4) in order to qualify for acquisition.

**Comment: 83:** Riverkeeper's position is that the land acquisition program described in MOA Article II does and should apply to the City's 2012 WSP. (Riverkeeper) The new permit must be consistent with the principles set forth in the MOA (EOH Coalition)

**Response 83:** The City has reached agreement with Riverkeeper, among other signatories of the MOA, that affirms the rights and responsibilities of the MOA parties with respect to the LAP. The City expects this agreement to be signed before or at the same time the Permit is issued.

**Comment 84:** I ask that permission for NYCDEP to purchase more land be denied. (Utter). This program should not be renewed. (Axtell)

Response 84: Comment Noted.

**Comment 85:** I am writing to express my strong support of the NYCDEP watershed land acquisition program. Seven years ago, my wife and I purchased a home because it is within the NYC Catskills Watershed. We enjoy the rural character, and wish it to stay that way. The people living within the NYC Watershed are very fortunate. In NJ, citizens have passed open space bonds and taxes at all levels: state, county, and municipal, totaling billions of dollars to protect open space. In Delaware and surrounding Counties, citizens are getting necessary land acquisition for free. In addition, these open space acquisitions, particularly the lands under easement, are helping to keep local agricultural efforts going. NYCDEP also spends millions of \$ on various agricultural programs, a huge shot in the arm for the local economies. Local citizens receive free septic systems, worth upwards of \$30,000 apiece, again more millions. Hunters, fishermen, and hikers have thousands of acres at their disposal, again for free (NYC picking up the tab). Wonderful for local citizens and tourism alike. Of course the intent of the Watershed Land Acquisition program is to comply with the FAD, and provide clean drinking water to millions of NYC residents. In providing this pure drinking water, NYC efforts have been used as an example countless times across the country. In essence, if it isn't dirty, you don't have to clean it. I applaud NYC's efforts and look forward to the continued success and expansion of NYCDEP's Watershed efforts. (Scheveida)

Response 85: Comment Noted.

**Comment 86:** No brainer that this is a good thing. (Hirsh)

Response 86: Comment Noted.

**Comment 87:** Everybody here wants clean water, but what people resist is that it feels like someone out of the area is telling you what to do. We do have to balance that of taking care of our water supply and our environment for everybody. (Scrimshaw)

**Response 87:** Comment Noted. LAP operates under a "Willing Buyer / Willing Seller" policy. Landowners and the City must both enter into a proposed transaction on a strictly voluntary basis. Landowners are under no obligation to sell until and unless they sign a contract of sale.

**Comment 88:** It seems the motivations for these acquisitions are to provide open space to the environmental community. (Bracci) LAP must protect the land required to meet definitive water quality goals, and nothing more. There are private and public interest groups that believe the LAP is an ideal opportunity for preserving open space and preventing development; they believe that open space should be the primary purpose of the LAP. We disagree. (Delaware County)

**Response 88:** The goal of the NYC Land Acquisition Program is to protect environmentally-sensitive land in the NYC watershed as part of the City's overall watershed protection Program. LAP is a key component of the City's efforts to provide high quality drinking water without filtration of the Catskill-Delaware System. Protection of open space and expanding recreational opportunities are collateral results of the Land Acquisition Program.

**Comment 89:** The Land Acquisition Program is not really about protecting water quality but is a tool being used to gain total control in the watershed. (Axtell)

Response 89: Comment Noted. See Response to Comment 88 above.

**Comment 90:** I was under the impression that the current contract was ending in 2016, and now it's 2022. Has it already been extended six years? (Moyse)

**Response 90:** The current Filtration Avoidance Determination (FAD) expires in 2017. The current Water Supply Permit expires in 2012. The city is seeking a successor Water Supply Permit that would last 15 years from the date of issuance.

Comment 91: What is the next step after 2022? Do you need another reservoir? (Totten)

**Response 91:** The City has no plans to develop another reservoir.

**Comment 92:** Is there anything that you would be doing to preclude the resale of property that you've purchased through your land acquisition project? I hope there would be some way to exclude re-sales. (Graef)

**Response 92:** Filtration Avoidance depends on the City's successful demonstration that the property it acquires is protected in the long term. Pursuant to the MOA, there are strict guidelines under which such transfers could take place. All lands acquired in fee simple must are subject to a conservation easement (NYSDEC CE) that is conveyed by the City to

NYSDEC. This NYSDEC CE creates an otherwise perpetual prohibition against development of the property that can only be extinguished in Priority Areas 3 and 4 (or 'B' and 'C' in the Croton) if the proceeds are used to acquire real property interests in Priority Areas 1 and 2 (or 'A' in the Croton). The City has no intention to exercise such conveyances. The City could theoretically convey its own conservation easements, on land it acquires that remains subject to a NYSDEC CE, to an entity such as a land trust or municipality if that entity agrees to pay taxes acceptable to the local assessor. Apart from one large property in Windham that is currently being transferred to NYSDEC (with the support of local communities), which will be managed for public access in concert with NYSDEC's neighboring holdings, and the potential for similar transfers to NYSDEC of lands adjacent to State land, the City has no intentions to convey other properties.

**Comment 93:** It is positive that NYCDEP is open to future flood buyouts. (McShane) **Response 93:** Comment Noted.

**Comment 94:** Concerned that the towns arbitrarily expand the hamlets without contacting the landowners within those expansion areas. (McShane)

**Response 94:** As a result of the ongoing negotiations with watershed stakeholders, the Water Supply Permit will include requirements that municipalities notify affected property owners prior to adoption of binding resolutions to expand hamlet areas.

**Comment 95**: It seems there is not a collaborative effort to do natural resource inventory. (Morales)

**Response 95:** NYCDEP has engaged the US Forest Service to develop a comprehensive forest inventory of all its watershed lands and develop a 10 year forest management plan. The inventory is now complete and plan development will take place in the Fall and Winter of 2010-2011; the plan will be finalized by November 2011. This will help the long-term planning related to forest management. Additionally, NYCDEP has begun to include natural resource information in its community review process with towns.

**Comment 96:** I don't feel that our tax dollars should be used to buy land when there are issues that are more pressing. (Townsend)

**Response 96:** The City's LAP is funded by water user ratepayers, not NYS or local taxes.

**Comment 97:** On many surveys it says NYSDEC and NYCDEP. NYSDEC lands is assessed for \$300 to \$700 an acre, which is six years behind the times. Are you going to put that back to the previous assessment of the State or are you going to keep the NYCDEP land assessment? (B. VanAken)

**Response 97:** Each City survey is certified to NYSDEC because under the MOA, the City is required to convey a conservation easement to the State on all lands acquired in fee simple. It is the assessor's duty to determine how the City's real property interests are assessed in any given year. As stated above, the City pays taxes on the full assessed value of all of its land holdings.

**Comment 98:** You do not manage your land properly. The last 10 years there's been mercury in the fish. That mercury comes from your operations. The last ten years you've also sprayed herbicide around all the reservoirs. You need to get local people involved and employ local people. (B. VanAken)

**Response 98:** There is no basis for the assertion that the City's water supply operations have led to increased mercury levels in fish. NYCDEP applies herbicides as needed to control invasive species, such as Black Swallowwort, that could be detrimental to water quality. NYCDEP employs hundreds of people at its facilities throughout the watershed and its investments in watershed protection and economic development throughout the watershed support hundreds of additional jobs.

**Comment 99:** I feel the requisite plan for quarrying on NYCDEP lands goes over and above and beyond too far the NYSDEC regulations which are far more than adequate to protect the land when the quarrying goes on. These new regulations on the easement lands will put a lot of my bluestone quarrying friends out of business. (McShane)

**Response 99:** Pages 3-35 and 3-36 of the DEIS addresses mining. The City allows bluestone mining on lands under easement with approved bluestone mining plans. And as stated in the draft side Agreement DEP will work with the local communities and local stakeholders (farmers, blue stone miners, maple syrup farmers, foresters/loggers, etc.) to help ensure that the natural resources (including commodities such as timber and bluestone as well as recreational opportunities) are available on City-owned lands, on a case by case basis, subject to water quality, operational, and other reasonable concerns, consistent with the terms of NYSDEC's conservation easement on such property. NYSDEC is a stakeholder and the mining regulatory agency and holds the State's conservation easement. Access to natural resources is to be encouraged and DEP will continue to explore options, expand and develop programs (including working with local stakeholders) to facilitate such access."

**Comment 100:** I was always concerned with the rules and regulations and the control by NYCDEP on the land. Approximately how many violations by owners have been found, owners of the land on the conservation easement? I'd like to know what the penalties have been for the violations and what those violations have been. (McShane)

**Response 100:** In the past 10 years there have only been 3 "major" violations on NYCDEP conservation easements. NYCDEP's practice is to work with the landowner to rectify violations and restore damage rather than to seek penalties. Of the three violations, NYCDEP and the owner were able to resolve before going to court in two cases. In one case, NYCDEP begin legal action however NYCDEP and the landowner were able to settle the case out of court. There have been approximately 5 "minor" violations, mostly technical language violations that were resolved with landowners. The City has not sought penalties in connection with violations of conservation easements.

**Comment 101:** For land presently under a NYCDEP conservation easement, could the balance of it be sold to the City so that the City would own it in fee? (McShane)

Response 101: On several occasions, landowners under easement have offered their encumbered properties to the City. The City is not obligated to acquire such properties, and

in some cases cannot due to the existence of dwellings, but in several cases we have pursued such opportunities when presented.

**Comment 102:** If you're going to have a conservation easement that the NYCDEP will do an analysis of the landowner's stated plans for future use, I was wondering what the purpose of that analysis was and what that would be used for when you're negotiating a conservation easement on the property. (McShane)

Response 102: Since an easement involves a long-term relationship between the grantor, the grantee, and the land, it is ideal if the grantor's land use plans and activities are considered during the design of a conservation easement. Such effort is expected to result in minimizing of potential future conflicts, so that it is in the interest of the local community as well. The landowner's interests are often consistent with, but in any case must be balanced by, the necessities of protecting water quality. The City also considers other factors in the design of easements such as treating all landowners equitably, and operating a very large program as efficiently as possible.

Comment 103: Our big concern is over accessibility that is being given to the properties that NYCDEP is buying, expressing particular concern over property number 5447, which is adjacent to our property. If public access is allowed, it could allow the public to access neighboring properties. It would basically open our property to public access and to hunting, fishing, trapping and whatever you allow. And that is our biggest concern. Can you give me any advice as to what or who to talk to get this signage left white as it is now or as it is going to be, but my understanding is that our town board has recommended that you open it up to public access. So do you have any suggestions? (W. Grote) We specifically brought the property because we had nice privacy. So now I think we feel very violated now. I don't have a problem with NYCDEP being there and understand the need for water quality protection, but would prefer that the NYCDEP property would remain closed to the public. We've had in the past ATV's up there. Who is going to police this? I would like to think that you can, but I don't think there's enough people available. (A. Grote)

Response 103: Local communities have lobbied very strongly over the years for the City to open its fee simple acquisitions for public access. The City considers town comments during the Local Consultation process very seriously, and we also maintain open lines of communication with towns, and with neighbors, long after properties are acquired. To resolve concerns about uses on specific parcels, we recommend the landowner seek to schedule a discussion with both town officials and City land management staff. The majority of our lands open for recreation receive limited use. We suggest you make sure your property is properly posted. NYCDEP also posts additional "private land ahead" signs when a landowner makes us aware of trespassing problems. Landowners who do not agree with the recreation designation should contact their town supervisor.

Comment 104: Both people within the Town of Jewett and neighboring towns are concerned as to what control NYSDEC/NYCDEP has over forestry practices on both conservation easements and on NYCDEP land. Some of these practices are destructive to roads and the environment. We have noticed that on some conservation easements, small trees are being taken out and there seems to be no indication of reforestation. What protection will the towns have against overuse and what procedures do we put in place for making complaints? (McCrary)

Response 104: NYCDEP professional foresters review and approve forest management activities on NYCDEP Conservation Easements. NYCDEP works closely with the landowner to ensure the long-term health of the forest is considered and proper road placement, construction and maintenance are followed. NYCDEP also recommends landowners hire professional foresters to help the landowner plan and carry out forest improvement projects. Forests in the northeast do not lend themselves to "reforestation" and allowing natural regeneration is the preferred method. NYCDEP Foresters recommend practices that can help enhance natural generation and help with its success. NYCDEP also requires landowners and their foresters/loggers to follow the practices as detailed in the "New York State Forestry Best Management Practices for Water Quality - BMP Field Guide 2000." NYCDEP considers long-term forest health, including proper silvicultural practices, to be one of the most important components of long-term watershed protection. NYCDEP is undertaking a comprehensive forest inventory of all its lands and developing a long-term forest management plan. (Also to be included as a special condition under the Water Supply Permit) NYCDEP has also funded the WAC Forestry Program who had developed several hundred forest management plans for private landowners and offers costshare programs. Any complaints on eased lands can be forwarded to NYCDEP Watershed Lands and Community Planning Section Chief at (845) 346-7862.

Comment 105: The WSP and the documents of conveyance must contain safeguards to ensure that decisions regarding the future use and enjoyment of these controlled parcels will be made in a fair and transparent manner that, while protective of water quality, also recognize the needs of a living community to adapt to an ever changing world and technology. (Delaware County) There has been much progress in the last year to open up DEP-controlled land to locally beneficial economic activity. It is highly desirable to keep land in agriculture – including the ability to change crops and allow bluestone and sand/gravel potential to be realized in addition to allowing winter and summer low intensity recreation, expanded boating on the reservoirs, etc. DEP must streamline administrative requirements in using their land, and either directly or through local partners it should actively promote these local economic uses. (Delaware County)

**Response 105:** As discussed in Chapter 1, there are a number of uses allowed on water supply lands, including recreation, forestry, mining, and low intensity cultivation. These are expected to continue and possibly be expanded on lands purchased under Extended LAP, subject to future approvals, as applicable and where consistent with water supply protection, operations, and public safety.

Comment 106: It is our request that the NYSDEC should require as a condition of this permit, sustained NYC DEP funding of the Stream Corridor Management Program(s) throughout the watershed. These programs are consistent with, and complement, the programs of the Catskill Watershed Corporation and the Watershed Agricultural Council's Agricultural and Forestry Programs. (New York City Watershed Stream Corridor Management Programs). DEP's Stream Management Program goal was to integrate flood hazard mitigation, stormwater management, protection of drinking water supply and quality, and enhancement of fisheries habitat and riparian ecosystem function, using a watershed scale assessment of fluvial geomorphology and associated hydrology and hydraulics. The MOA recognized the importance of stream stabilization and called for a program of Stream Corridor Protection by developing sub-basin level Stream Corridor Management Plans.

Therefore, the NYCDEP WSP should specify adequate funding for this important program. (Breen/NYPIRG)

Response 106: The WSP will be updated to include (SC 25(b)(13)) the following language: "Stream Management Program: Consistent with the terms of the 2007 FAD and pursuant to the City's contracts with Soil and Water Contract Districts in Delaware County (\$8,251,000), Greene County (\$10,748,506), Ulster County (\$4,460,000), and Sullivan County (\$3,292,684) and with Ulster County Cornell Cooperative Extension (\$3,647,570), the City shall provide funding for the continuation of each of the existing Stream Corridor Management Program contracts. For the duration of this Permit, the City commits to fund the Stream Corridor Management Program pursuant to any subsequent FAD or FAD amendment which shall be incorporated herein and made an enforceable condition of this permit."

Comment 107: The ability of WAC to perform to the best of its ability is hampered by what can only be described as a stalemate. A number of projects that would have been beneficial to water quality protection have not moved forward because of the unresolved issue of unanimous consent on the WAC Governance Committee. This issue must be resolved if the City and WAC are to have a productive working arrangement and since they have yet to resolve the problem, the NYCDEP WSP as well as the MOA ¶180 Agreement ("side agreement") should address this critical issue. Conservation easements require stewardship of land in perpetuity and without adequate stewardship funding WAC's ability to effectively steward farm easements is severely limited. Therefore, the NYCDEP WSP should direct the City to allocate significant capital investment that should be placed in the WAC's endowment fund to ensure long-term stewardship responsibilities of WAC conservation easements.

**Response 107**: DEP funds WAC's stewardship activities for the term of the City's contractual engagement with WAC. DEP intends to continue contracting with WAC for the foreseeable future. WAC has always had a contractual obligation to garner funds for stewardship beyond the term of contract engagement with the City. In early 2011, DEP and WAC will be engaged in contract renewal discussions and will seek to memorialize clarifying language in the contract.

**Comment 108**: In the interest of water quality protection, the NYCDEP WSP should require the Forestry Conservation Easement Program be subject to the same approval process as the Riparian Buffer Program (RPB) as stated in Special Condition 29, whereby the City will be required to submit to NYSDEC for approval a written recommendation regarding the implementation of the RBP. (Breen/NYPIRG)

**Response 108:** DEP's reading of the draft WSP is that both the RPB (see SC 29f) and the Forest Conservation Easement Program (see SC 31b) involve similar requirements for DEP to submit written recommendations to NYSDEC.

Comment 109: Waters of Cross River could also be diverted into the Delaware Aqueduct and lands around this reservoir should also be protected, including lands in Towns of Bedford and Lewisboro. Even though Croton Watershed waters will be filtered in the new treatment plant in the Bronx, this will not help the local watershed communities that rely on these waters as their drinking supply. NYCDEP should continue to pursue acquisitions in the Croton Watershed. CWCWC Requests NYCDEP to consider partnering with local agencies

to buy 29-acre property on Granite Pointe that is surrounded by the Amawalk Reservoir, which supplies parts of Yorktown, Cortland and Somers. There is sufficient space in Putnam County to justify acquisition and preservation of lands as Open Space.

CWCWC proposes two acquisitions: Kent Manor (113 acres in Town of Kent) and Hillcrest Commons (108 Acres in Town of Carmel) (CWCWC)

Friends of Great Swamp (FROGS) supports NYCDEP's proposal to continue land acquisition in the three watersheds and emphasizes importance of directing a portion of the LAP funds to acquiring lands in the East Branch of the Croton Watershed. Specifically, Friends of the Great Swamp recommend that NYCDEP purchase additional wetlands and buffer lands along the East Branch Croton north of the Doansburg Road Crossing which should also include the main tributary of the East Branch at this point, the lands on the south side of Haviland Hollow Brook. Four or Five Million dollars should be allocated to purchase lands along the East Branch Croton in the next few years. The NYCDEP, working in conjunction with federal funding available through the Highlands Funding project or partnering with Frogs though the North American Wetlands Act Funding, should be able to leverage federal funds to aid in their land acquisition efforts. Additional watershed protection of the other major tributaries of the East Branch Croton: Muddy Brook, Mountain Brook, Stephens Brook and Brady Brook can be obtained by obtaining conservation easements from property owners abutting these brooks. Such conservation easements should assure that no building takes place within 100 feet of the banks of each brook and that no storm water runoff be discharged within 100 feet of each stream bank. Planting trees along the stream banks and planting other water filtering vegetation would allow natural vegetation to act as filters to ensure the quality of water entering these brooks would retain their purity. Local conservation organizations, like Friends of the Great Swamp, the Putnam County Land Trust and the Oblong Land Conservancy would partner with NYCDEP's efforts to obtain these easements.(FROGS)

The NYCDEP application heavily emphasizes land acquisition in the West-of-Hudson watershed rather than the East-of-Hudson watershed. Most of the funds from the proposed Land Acquisition Program (LAP) would be used to purchase land in the WOH watershed areas," According to the DEIS, cost-benefit considerations and property availability would favor WOH land acquisitions over EOH acquisitions. However, acquiring land by fee simple and conservation easements East-of-Hudson is just as important as in the WOH region. During Filtration Avoidance Determination (FAD) review, the Environmental Protection Agency (EPA) has urged land acquisition or conservation easements to protect remaining open space in the Kensico watershed.8 If non-point runoff in the Kensico basin results in water quality degradation, then the water protection expenditures WOH have less ultimate impact. Acquiring land WOH to protect the water supply thus becomes futile if water quality may worsen downstream. The 1997 Memorandum of Agreement (MOA) expressed the importance of using land acquisition to protect the Croton watershed. 10 As such, land acquisition East-of-Hudson to protect the Croton and Kensico watersheds is still needed. Additional land solicitations should be evaluated for the Kensico basin, as there was only a nineteen recent success rate, and only seventeen percent of the total land in the area was solicited. While Westchester County is generally more expensive for purchasing property, presently low market values could allow for more favorable agreements. Conservation easements should also be emphasized as an alternative to property purchases East-ofHudson, and the easement arrangement can have favorable tax benefits for landowners. If a landowner has a qualified conservation easement that meets IRS requirements, they can "receive an annual income tax credit for 25% of the property taxes ... up to \$5,000." In particular, there may be opportunities within the Croton watershed for watershed agricultural easements, which are recognized in the MOA and the Draft Permit. The Draft Permit should also recognize the East-of-Hudson communities in defining the capacity of the Watershed Agricultural Council (Draft Permit definition only identifies partnership with West-of-Hudson communities). Several reservoirs within the East-of-Hudson watershed provide emergency protection for the Catskill/Delaware systems (West Branch, Croton Falls, Cross River, Kensico reservoirs). The importance of water quality in these reservoirs is underscored as NYCDEP completes repairs to its infrastructure, such as its pending repairs and improvements to the Catskill and Delaware aqueducts. 14 Accordingly, the land acquisition and watershed programs associated with the water supply permit should allocate funds towards the protection of these reservoirs that also serve a critical emergency function. (Crane/Westchester County Board of Legislators)

NYCDEP should be required to continue funding the EOH Land Acquisition Program. The Draft Permit must consider not only the impacts of conducting a land acquisition program, but also the impacts of abandoning it. The applicant's vastly different commitment to land acquisition EOH and WOH has thrown off the long- negotiated compromise reached by the parties in the MOA and has created a situation where the EOH communities are stuck with the burden of the compromise without retaining the benefit. EOH inhabitants receive relatively little benefit in relation to the extremely high cost of compliance with watershed regulations. (EOH Coalition)

**Response 109**: Since the inception of the LAP, the City has acquired considerable amounts of land in the East of Hudson watershed region, totaling 11,194 acres. NYCDEP will continue to acquire properties in East of Hudson that play an important role in water quality protection. NYCDEP land acquisition priorities for the next phase of the program are detailed in NYCDEP's September 2009 Long-Term Plan for Land Acquisition available at <a href="http://www.nyc.gov/html/dep/pdf/resources/lt\_plan\_final.pdf">http://www.nyc.gov/html/dep/pdf/resources/lt\_plan\_final.pdf</a>

#### OTHER COMMENTS

Comment 110: Concern over previous use of glass on the streets in Oneonta. EPA, NYCDEP, NYSDEC, CWS should evaluate if the underground and reservoir water has at all been polluted. If found, the Oneonta government must eliminate pollution completely solely at their cost. I most strongly urge Water Supply permit be temporarily suspended and held in abeyance until NYSDEC ensures that waters have not been polluted by glass. (Sen Gupta) Response 110: Comment Noted. The City is not aware of any mechanism through which the use of glass on the streets of Oneonta might affect, or be affected by, the City's Land Acquisition Program. Oneonta is outside of the NYC Watershed.

Comment 111: We need to have a livelihood in the watershed in order to keep the low-density land use patterns, in order to protect 9 million people's water. It's critical that you continue the partnership programs with the upstate communities. Urge to consider opening Neversink reservoir for boating and recreation. Also bike trails around the reservoirs so that we could have bed and breakfasts, we could start selling more produce at farm stands and along with that additional workers. (Coombe) I support opening up reservoirs to the public in order to create jobs for future generations. (Metnash)

**Response 111:** NYCDEP is in the second year of the Cannonsville Pilot Boating project and to date, the Pilot has gone well. A study is currently under way to assess the impacts, both positive and negative, of the Pilot program. Depending on the results of that study, expansion to other reservoirs will be considered provided willing partners can be found.

Comment 112: What's the backup plan if the sewer system goes bad? (Botsford)

Response 112: Wastewater treatment plants are permitted by NYSDEC and regulated by NYSDEC and NYCDEP. If problems are identified, the permit holder is required to remediate.

**Comment 113:** [I]t is the strong belief of CKWIC that NYSDEC has mandated the phosphorus reduction requirements based on the needs of the New York City drinking water supply and therefore NYCDEP should be held accountable for funding the expenditures that the CKWIC municipalities will face regarding phosphorus reduction requirements. To this end, CKWIC would like to create an agreement, in similar fashion to the MOA, to address furthering the goals of the municipalities, NYSDEC and NYCDEP. (Murphy)

Controlling stormwater runoff and reducing phosphorus in the EOH is critically important; therefore, the NYCDEP WSP should recognize the City's responsibility and require them to not only remove their own allocation of phosphorus but also require them to work in partnership with the EOH municipalities in their regional effort. Furthermore, the NYCDEP WSP should require the City make available adequate funding and technical resources to EOH. (Breen, NYPIRG) DEP should be required to Pay the Cost of the Heightened MS4 requirements. The burden of the TMDL implementation plan should be addressed by the Draft Permit. (EOH Coalition)

It is encouraging that the draft water supply permit ("Draft Permit") acknowledges East-of-Hudson (EOH) non-point source controls for funding and partnership with NYCDEP. Eastof-Hudson municipalities are significantly impacted by additional non-point source requirements under NYSDEC's Municipal Separate Storm Sewer System (MS4) permit) and the non-point source implementation plan for the phosphorus Total Maximum Daily Load (TMDL) for certain reservoirs in the Croton watershed. Among other requirements, these newer obligations require municipalities to implement stormwater retrofit projects, map stormwater conveyance systems, and increase septic system administration - all at a time when municipal funds are stretched thin in the present recessionary climate. Previous estimates on stormwater retrofits alone in the EOH watershed are over \$200 million, according to a 2008 NYSDEC report. The Draft Permit obligates NYCDEP to expend significant funds for non-point source protection programs in the West-of-Hudson (WOH) Similar NYCDEP funding for the East-of-Hudson watershed is warranted to achieve nonpoint source protections for the Croton and Kensico basins, NYSDEC should accordingly require increased NYCDEP funds for enhanced watershed protection and partnership programs within the EOH watershed, in order to parallel the increased protection measures that have been required of this area. As NYSDEC is aware, the Westchester municipalities in the EOH watershed have historically collaborated to pursue water quality initiatives and programs, which collaboration continues under the new MS4 permit requirements. Such partnership indicates that additional NYCDEP funds for non-point source protections would receive prudent consideration by these municipalities, helping to attain a greater benefit/use from the funds (Crane/Westchester County Board of Legislators).

**Response 113:** The EIS found no significant impacts on the East of Hudson Watershed from the Extended LAP. Nonetheless, although NYDEP is under no obligation to do so, in the spirit of partnership, NYCDEP has committed to provide \$10 million for East of Hudson Non-Point Source Pollution Control Program.

Comment 114: NYCDEP has implemented the "Bluebelt" system in Staten Island to accomplish water quality and flood control objectives. This system diverts stormwater to manmade but natural looking ponds and streams that are surrounded by vegetation and wetlands to purify the water and avoid discharge to storm sewers. Nitrogen and phosphates are naturally removed, at substantially reduced costs (tens of millions of dollars). The Bluebelt program exhibits partnership among federal, state, and local agencies. While there may be some differences in types of stormwater management needs between the Staten Island and New York City watershed communities, the Bluebelt approach may have applicability for non-point source control in the EOH watershed and should be considered. It may be possible to utilize the lands acquired by NYCDEP to implement a similar program. Response 114: Comment Noted.