

A. INTRODUCTION

In accordance with guidelines established in the *New York City Environmental Quality Review (CEQR) Technical Manual*, this chapter assesses the adequacy of the existing and future open space resources in the area and analyzes the potential of the proposed actions to affect their use. An open space assessment is necessary when a proposed action could potentially have a direct or indirect effect on open space resources. A direct impact physically changes, diminishes, or eliminates an open space, or reduces its utilization or aesthetic value. An indirect effect occurs when the population generated by a proposed project or action could noticeably diminish the capacity of an area's open space to serve the future populations.

According to the *CEQR Technical Manual*, a project that would add fewer than 200 residents or 500 employees, or a similar number of other users to an area, is not considered to have the potential to result in indirect effects on open space. With the proposed actions, projected development identified in the reasonable worst-case development scenario (RWCDs) would result in an increase of 5,876 residents and 3,580 non-residents (including 2,878 employees and approximately 702 hotel guests per day) within the rezoning area by 2019. The proposed actions include the mapping of parkland in the current amusement area and the construction of a new public park, tentatively called Highland View Park. The proposed actions also include the alienation of two parcels of parkland: one parcel including a parking lot; and the second parcel including a parking lot, as well as the Abe Stark Rink. Development resulting from the proposed actions would also displace an open space in the form of a community garden. Therefore, the project has the potential to both directly and indirectly affect open space resources in Coney Island.

B. INITIAL QUANTITATIVE ASSESSMENT

For projects that might result in direct or indirect effects on open space, the *CEQR Technical Manual* suggests that an initial quantitative assessment is useful in clarifying the degree to which an action would affect open space and further analysis is needed. This analysis is based on the calculation of an open space ratio (expressed as the amount of public open space acreage per 1,000 user population) for existing conditions as well as conditions in the future with the proposed actions.

An initial quantitative assessment of potential open space impacts consists of calculating the total population in the relevant study areas, tallying the open space acreage within the areas, and comparing the open space ratios for existing conditions to the open space ratios with the proposed actions in each study area (see "Methodology," below).

Table 5-1 compares the relevant open space ratios for the existing conditions to the ratios for the existing conditions plus the populations added by the RWCDs for the proposed actions. The ratios in each of these conditions are also compared to the New York City Department of City Planning (DCP) open space ratio guidelines as set forth in the *CEQR Technical Manual*.

Table 5-1
Initial Quantitative Assessment of Publicly Accessible Open Space Resources in the Non-Residential and Residential Study Areas

Ratio	Open Space Ratios per 1,000 Persons				Percent Change
	DCP Guideline	Existing Condition	DCP Guideline with the Proposed Actions	Existing Condition Plus the Proposed Actions	
Non-Residential Study Area					
Passive/non-residents	0.15	25.329	0.15	9.943	-61
Passive/total population	0.44*	4.086	0.41*	2.380	-42
Residential Study Area					
Total/residents	2.5	3.686	2.5	3.074	-17
Active/residents	2.0	1.812	2.0	1.511	-17
Passive/residents	0.5	1.874	0.5	1.562	-17
Passive/total population	0.44*	1.557	0.42*	1.246	-20
Notes:	*Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.				
Sources:	U.S. Census of Population and Housing, U.S. Bureau of the Census, 2000; 2000 journey-to-work census data compiled by DCP; New York City Department of Parks and Recreation (DPR); AKRF fieldwork, August 2007 and August 2008.				

While Coney Island has high open space ratios that in most measures greatly exceed DCP guidelines, **Table 5-1** shows that the additional population introduced by the proposed actions would result in a reduction in all open space ratios. In the non-residential study area, the passive open space ratios under existing conditions are 25.329 acres per 1,000 workers and 4.086 acres per 1,000 total population (workers and residents). With the populations added by the proposed actions these ratios would fall to 9.943 acres per 1,000 workers, a 61 percent decrease, and 2.380 acres per 1,000 total population, a 42 percent decrease. In the residential study area, the total open space ratio is 3.686 acres per 1,000 residents, the active ratio is 1.812 acres per 1,000 residents, and the passive ratios are 1.874 acres per 1,000 residents and 1.557 acres per 1,000 total population. With the populations added by the proposed actions, these ratios would all fall by between 17 and 20 percent.

The *CEQR Technical Manual* states that a detailed open space assessment is warranted if a proposed action would be expected to decrease open space ratios by 5 percent or more, as this is considered a substantial change. In addition, if a study area exhibits a low open space ratio (i.e., below DCP guidelines), even a decrease of less than 5 percent in the ratio may have an adverse impact. In this case, the initial quantitative assessment indicates that the proposed actions would decrease each of the relevant open space ratios by at least 17 percent. Therefore, a detailed open space assessment was conducted to determine whether the proposed actions would result in any significant adverse impacts to open space and recreational facilities.

C. METHODOLOGY

This analysis of potential impacts to open space resources was conducted based on the guidelines contained in the *CEQR Technical Manual*. The methodologies and assumptions used in this analysis are described below.

STUDY AREAS

According to CEQR guidelines, the first step in assessing potential open space impacts is to establish study areas to be examined. Study areas are based on the distance the average person is assumed to be willing to walk to reach a neighborhood open space. Workers (or other non-residential populations) typically use passive open spaces and are assumed to walk about a ¼-mile distance from their places of work to reach an open space. Residents may be more likely to travel farther to reach parks and recreational facilities. It is assumed that residents will walk about a ½-mile distance to reach both passive and active neighborhood open spaces. Because the proposed actions are expected to introduce substantial numbers of both residents and workers to the area, two study areas are evaluated: a non-residential study area based on a ¼-mile distance from the rezoning area, and a residential study area based on a ½-mile distance from the rezoning area.

As recommended in the *CEQR Technical Manual*, the open space study areas comprise all census tracts that have at least 50 percent of their area located within either the ¼-mile or the ½-mile radius of the rezoning area. All open spaces, as well as the relevant populations in census tracts that fall at least 50 percent within the radius, are included in the study areas.

INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities within the study areas were inventoried to determine their size, character, and condition. Open spaces that are not accessible to the general public were excluded from the survey. The information used for this analysis was gathered through field studies conducted in August 2007, August 2008, and November 2008 and from the New York City Department of Parks and Recreation (DPR).

At each open space, active and passive recreational areas were noted. Active open space acreage is used for activities such as jogging, field sports, and children's active play. Such open space features might include basketball courts, baseball fields, or play equipment. Passive open space acreage is characterized by activities such as strolling, reading, sunbathing, and people-watching. Some spaces, such as lawns and boardwalks, can be considered both active and passive recreation areas since they can be used for passive activities such as sitting or strolling as well as active recreational uses like jogging or cycling. The use level at each facility was determined based on observations of the amount of space or equipment that was observed to be in use as described in the *CEQR Technical Manual*.

Some open spaces and recreational facilities in the Coney Island area function differently than resources in other neighborhoods, because they serve both the local community's needs and as destinations for visitors from throughout the region. To account for these differences, the inventory of open space resources in this analysis makes the following considerations:

- The entire length of Coney Island Beach (all of which falls within census tracts that have more 50 percent of their area located within either the ¼-mile or the ½-mile radius of the project site) is included in the analysis.
- DPR's Abe Stark Rink, a publicly accessible recreational facility that charges a fee for its use, is included in the analysis.
- Mapped parkland that contains only parking lots is not included in the analysis.

ADEQUACY OF OPEN SPACE RESOURCES

CRITERIA FOR QUANTIFIED ANALYSIS

The determination of the need for a quantified open space analysis is based on both the adequacy of the quantity of open space and how the proposed actions would change open space ratios. If a potential decrease in an adequate open space ratio exceeds 5 percent, as is the case with the proposed actions, it is generally considered to be a substantial change warranting further analysis. Given that the proposed actions would substantially increase local resident and employee populations, as shown in the initial quantitative analysis above, a detailed quantitative analysis has been performed.

COMPARISON TO DCP GUIDELINES

To assess the adequacy of the quantity of open space resources, open space ratios are compared against guideline values set by DCP. Although these open space ratios are not meant to determine whether a proposed action would have a significant adverse impact on open space resources, they are helpful in understanding the extent to which an impact can occur. The following guidelines are used in this type of analysis:

- For non-residential populations, a guideline of 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate.
- For residential populations, a guideline of 2.5 acres per 1,000 residents is considered adequate. Ideally, this is comprised of 0.50 acres of passive space and 2.0 acres of active open space. For large-scale actions such as that analyzed in this EIS, the City seeks to attain a planning goal of a balance of 80 percent active open space and 20 percent passive open space.
- For the combined resident and non-resident population, a target open space ratio is established by creating a weighted average of the amount of open space necessary to meet the DCP guideline of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 non-residents.

INCLUSION OF VISITOR POPULATION

Several prominent open spaces in Coney Island—such as the amusement area and Coney Island Beach—are destinations that attract visitors from throughout the region. To account for the quantitative effect of these regional visitors on open spaces in the study areas, this analysis calculates open space ratios that include the visitor population. Because DCP has not set guidelines for the adequacy of open space ratios when such visitor populations are added to resident and worker populations, these ratios will be disclosed for comparative and informational purposes only.

IMPACT ASSESSMENT

The assessment of potential significant adverse impacts on open space is both quantitative and qualitative. The assessment considers nearby destination resources and project-created open spaces or private/quasi-private recreational facilities not available to the general public. It is recognized that DCP open space planning goals are not feasible for many areas of the City, and they are not considered impact thresholds. Rather, they are benchmarks indicating how well an area is served by open space.

D. EXISTING CONDITIONS

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

Four census tracts (326, 348.02, 350, and 352) make up the ¼-mile non-residential study area, which includes the rezoning area (see **Figure 5-1**). As **Table 5-2** shows, the residential population within these census tracts is 13,283. The worker population in this study area is 2,555. Though this analysis conservatively assumes that residents and employees in the study area are wholly discrete populations, it is likely that some persons both live and work within the study area. As a result, this analysis double-counts the daily user population in cases where residential and worker populations overlap.

Table 5-2
Non-Residential Study Area Population by Age

Census Tract	Total Residential Population	Under 5		Age 5-9		Age 10-14		Age 15-19		Age 20-64		Age 65+		Median Age	Employees
		#	%	#	%	#	%	#	%	#	%	#	%		
326	7,247	636	9	817	11	773	11	661	9	3,842	53	518	7	27.2	770
348.02	907	94	10	83	9	64	7	75	8	547	60	44	5	28.0	770
350	3,579	120	3	110	3	168	5	226	6	2,168	61	787	22	47.3	130
352	1,267	25	2	22	2	15	1	15	1	468	37	722	57	68.1	885
Total 2000 Census	13,000	875	7	1,032	8	1,020	8	977	8	7,025	54	2,071	16		2,555
Est. add'l*	283														
Total Current, 1/4 mile	13,283														2,555

Notes: * The estimated additional residential population is based on RPAD data on the number of housing units constructed in the study area since 2000.

Sources: 2000 Census of Population and Housing; NYC Department of Finance Real Property Assessment Database (RPAD)

As shown in **Table 5-2**, just over half of the non-residential study area's residential population was between 20 and 64 years old as of the 2000 Census. Approximately 31 percent of the population was 19 years old or younger, and approximately 16 percent of the population was aged 65 and above. For Brooklyn as a whole, approximately 30 percent of the residential population was 19 years old and younger, approximately 59 percent was between the ages of 20 and 64 years old, and approximately 12 percent was 65 years old and older. The non-residential study area, therefore, has a higher percentage of seniors than Brooklyn as a whole, but is otherwise similar to the rest of the borough.

RESIDENTIAL STUDY AREA

The ½-mile residential study area is made up of six census tracts (328, 340, 342, 348.01, 354, and 356) in addition to the four census tracts in the non-residential study area. As **Table 5-3** shows, the residential population in this ½-mile area is 41,717. The worker population is 8,485. As in the non-residential study area, this analysis assumes that residents and employees in the study area are wholly discrete populations, and thus likely double-counts the daily user population in cases where residential and worker populations overlap.

Within the 10 census tracts that comprise the ½-mile residential study area, persons between the ages of 20 and 64 again constituted the majority (52 percent) of the residential population in 2000 (see **Table 5-3**). Approximately 26 percent of the population was 19 years old or younger, and approximately 23 percent of the population was aged 65 and above. The residential study area had a higher percentage of seniors than Brooklyn as a whole, and smaller percentages of adults, teenagers, and children.

Table 5-3

Residential Study Area Population by Age

Census Tract	Total Residential Population	Under 5		Age 5-9		Age 10-14		Age 15-19		Age 20-64		Age 65+		Med. Age	Employees
		#	%	#	%	#	%	#	%	#	%	#	%		
Total, Non-Residential Study Area	13,283	875		1,032		1,020		977		7,025		2,071			2,555
328	3,304	218	7	314	10	326	10	284	9	1,912	58	250	8	31.9	475
340	2,511	127	5	176	7	160	6	174	7	1,032	41	842	34	47.4	635
342	7,462	565	8	763	10	728	10	653	9	3,474	47	1,279	17	31.8	945
348.01	1,064	86	8	79	7	71	7	77	7	656	62	95	9	31	1,140
354	5,622	119	2	148	3	186	3	232	4	2,905	52	2,032	36	55.5	2,220
356	8,164	226	3	211	3	290	4	322	4	4,317	53	2,798	34	54.1	515
Total 2000 Census	41,410	2,216	5	2,723	7	2,781	7	2,719	7	21,321	51	9367	23		8,485
Est. add'l *	307														
Total Current ½-mile	41,717														8,485

Notes: * The estimated additional residential population is based on RPAD data on the number of housing units constructed in the study area since 2000.

Sources: 2000 Census of Population and Housing; NYC Department of Finance Real Property Assessment Database (RPAD)

Given the range of age groups present in the population, the residential study area has need for various kinds of active and passive recreation facilities, including those with amenities that can be used by children, adults, and seniors. Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers’ and young adults’ needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

VISITOR POPULATION

An estimated average of 86,000 visitors from outside the study area visit Coney Island daily during the summer season.¹ Visitors to Coney Island are primarily attracted to the area for passive recreational uses such as strolling the amusement area, visiting the New York Aquarium, and sitting on the beach, though beachgoers may also use the water for active recreation. Therefore, they are treated in this quantitative analysis as non-residential users of passive open space, similar to employees who work in the area.

¹ Based on a DPR estimate of 8.6 million visitors to Coney Island during the summer season of 2007 averaged across approximately 100 days from Memorial Day to Labor Day.

INVENTORY OF OPEN SPACE RESOURCES

NON-RESIDENTIAL STUDY AREA

Thirteen public open space and recreational resources are located within the ¼-mile non-residential study area (see **Table 5-4** and **Figure 5-2**). These include many small playgrounds, the publicly accessible grounds of public and private housing developments, the amusement area, and large recreational facilities such as Asser Levy Park, and the Coney Island Beach and the Riegelmann Boardwalk. Altogether, the open space resources in the non-residential study area total approximately 128.59 acres. Open space in the non-residential study area is divided approximately equally between active and passive use, with 65.07 acres considered to be for passive recreational use and 63.52 acres considered to be for active recreational use.

Coney Island Beach and the adjacent Riegelmann Boardwalk, which extend along the study area's entire southern shoreline, make up the largest open space in the study area. The beach and boardwalk's 107 acres account for approximately 83 percent of the total open space in the non-residential study area, approximately 83 percent of the passive open space, and approximately 84 percent of the active open space. During the summer months, the beach provides for a variety of passive and active recreation activities, including sunbathing and swimming; spray showers and volleyball nets are located on the upland portion of the beach, closest to the boardwalk. During the non-summer months the beach is less-used due to cold winds coming off the ocean, but continues to provide opportunities for running or walking along the water's edge. Like the beach, the 80-foot-wide boardwalk is most fully utilized during the summer, but continues to be used to a lesser extent during the remainder of the year for walking, running, biking and sitting. Bicycling is permitted on the boardwalk between 5 and 10 AM. Amenities on the boardwalk include public restrooms, benches, small sun shelters, and some retail frontage near the amusement area. In addition, Steeplechase Pier, which juts out over the beach and into the ocean at approximately West 17th Street, is popular with anglers and others seeking a closer view of the water.

Many of the non-residential study area's open space resources are recreational destinations, including the beach and Riegelmann Boardwalk, Abe Stark Rink, and the amusement area. Steeplechase Park is a public park located south of Surf Avenue between West 16th and West 19th Streets that contains KeySpan Park, an 8,000-seat outdoor baseball stadium. KeySpan Park is home to the Brooklyn Cyclones, a minor-league affiliate of the New York Mets; it also hosts concerts in the summer. Because KeySpan Park charges an admission fee and its baseball diamond is not available for public use, it is not in the quantitative analysis of public open space. The remainder of Steeplechase Park contains soccer fields and a running track, a small playground, and the Parachute Jump, the landmarked superstructure of a ride that is no longer in operation. Abe Stark Rink sits on the lot abutting Steeplechase Park to the west. This indoor ice skating rink is operated by DPR and is open from fall through spring. The majority of its lot is occupied by accessory parking that serves both the rink and KeySpan Park, and this area is not included in the quantitative analysis. The ice rink facility, which is open year round except for the period from mid-July to mid-August, is approximately 0.85 acres. The amusement area is located between West 8th Street and Stillwell Avenue. During the summer, a number of vendors operate a variety of active rides in this area catering to both children and adults. The rides, which charge a range of fees for admission, are set along paths and midways suitable for passive walking and people-watching. One third of the Astroland/Deno's amusement area, or 1.39 acres,

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is included as passive open space in this chapter’s quantitative analysis.¹ It is estimated that this portion of the amusement area is available free of charge for people to stroll and people-watch.

**Table 5-4
Inventory of Open Space Resources**

Map No.	Name	Location	Owner	Total Acres	Passive	Active	Amenities	Condition	Use Level
Non-Residential Study Area									
1	Coney Island Beach and Riegelmann Boardwalk	Waterfront between Corbin Pl. and W. 37th St.	DPR	107.00	53.50	53.50	Boardwalk, beach, benches, lighting, bathrooms, sprinklers, some retail fronting boardwalk	Fair	Heavy (during warm months)
2	Steeplechase Park	Riegelmann Boardwalk bet. W. 16th and W. 19th Sts.	DPR	2.50	1.00	1.50	Soccer fields, running track, playground, Parachute Jump	Excellent	Heavy (during season)
3	Abe Stark Rink	Surf Avenue bet. W. 19th and W. 20th Sts.	DPR	0.85	0.17	0.68	Indoor ice skating rink, parking	Good	Heavy
4	Astroland/ Deno's	Surf Avenue bet. W. 10th St. and Stillwell Ave.	Private	1.39	1.39	0	Amusement parks, rides, midway games, walking paths	Fair	Heavy (during season)
5	Asser Levy Park	Surf Ave. bet. Ocean Pkwy. and W. 5th St.	DPR	10.42	5.21	5.21	Swings, jungle gyms, chess and checker tables, water fountains, bathrooms, bandshell, handball courts, benches	Excellent	Heavy
6	Luna Park Playground	W. 12th St. and Surf Ave.	DPR	1.80	0.27	1.53	Swings, slides, jungle gyms, basketball courts, handball courts, paved baseball/softball fields, benches, bathrooms, water fountains	Good	Moderate
7	Neptune Playground	W. 12th St. and Neptune Ave.	DPR/ DOE	1.24	1.12	0.12	Jungle gyms, basketball courts, handball courts, volleyball court, chess/checkers tables, benches, water fountain, bicycle parking	Excellent	Low
8	Carey Gardens	Surf Ave. and W. 23rd St.; W. 24th St. bet. Mermaid and Neptune Aves.	NYCHA	1.96	0.98	0.98	Jungle gyms, spray fountain, basketball courts, benches, walkways	Good	Moderate
9	Unity Tower Tenants Association Community Garden	Corner of W. 20th St. and Surf Ave.	HPD	0.32	0.32	0	Gardens, tables, chairs	Good	Moderate
10	Cyclone Community Garden	W. 20th St at Mermaid Ave.	HPD	0.22	0.22	0	Gardens	Good	Moderate
11	Senior Association of Mermaid Avenue Community Garden	West 20th Street between Mermaid and Surf Aves.	HPD	0.35	0.35	0	Gardens, seating	Good	Moderate
12	El Jardin de Boardwalk	Surf Ave. to Boardwalk bet. W. 22nd and W. 21st Sts.	DPR	0.43	0.43	0	Gardens, tables, chairs	Fair	Low
13	Santos White Community Garden	Mermaid Ave. bet. W. 21st St and W. 22nd St.	DPR	0.11	0.11	0	Podium/stage, gardens	Excellent	High
Total:				128.59	65.07	63.52			

¹ While Astroland has since been closed down, it was in operation at the time this open space analysis was conducted and is therefore included in the quantitative open space analysis.

Table 5-4 (cont'd)
Inventory of Open Space Resources

Map No.	Name	Location	Owner	Total Acres	Passive	Active	Amenities	Condition	Use Level
Residential Study Area									
14	Coney Island I (Site 8)	Surf Ave. and W. 36th St.	NYCHA	0.46	0.35	0.11	Jungle gyms, spray fountains, benches, paved walkways	Good	Moderate
15	O'Dwyer Gardens	Surf Ave. bet. W. 32nd and W. 35th Sts.	NYCHA	2.49	1.25	1.24	Jungle gyms, basketball courts, benches, paved walkways	Good	Moderate
16	Surfside Gardens	W. 31st St. bet. Surf and Mermaid Aves.; W. 32nd St. bet. Mermaid and Neptune Aves.	NYCHA	3.98	1.59	2.39	Jungle gyms, chess/checkers tables, basketball courts, paved walkways, benches	Fair	Low
17	Nautilus Playground	W. 30th St. and Boardwalk	DPR	1.38	0.28	1.10	Jungle gyms, basketball courts, handball courts, spray fountain, open paved area, water fountains, bathrooms	Good	Moderate
18	Poseidon Playground	W. 27th St. and Boardwalk	DPR	0.80	0.40	0.40	Swings, spray fountain, handball courts, picnic tables, benches	Fair	Low
19	Surf Playground	Surf Ave. and W. 27th St.	DPR	1.12	0.22	0.90	Swings, jungle gyms, basketball courts, open paved area, spray fountain, bathrooms, benches, water fountains	Good	Moderate
20	Coney Island I (Sites 4 and 5)	Blocks bounded by Surf and Mermaid Aves., W. 25th and W. 28th Sts.	NYCHA	1.92	1.15	0.77	Jungle gyms, chess/checkers tables, basketball courts, open paved area, paved walkways, benches	Poor	Low
21	Century Playground	Brighton Beach Ave. and W. 2nd St.	DPR	2.04	0.41	1.63	Swings, jungle gyms, spray fountain, picnic tables, chess/checkers tables, basketball courts, handball courts, paved baseball/softball fields, paved walkways, bathrooms, water fountains	Excellent	Heavy
22	Ocean Parkway Malls	Ocean Pkwy. bet. Belt Pkwy. and Surf Ave.	DOT/DPR	3.95	1.98	1.97	Paved walkways, benches, bike path/greenway	Good	Moderate
23	Warbasse Houses	Neptune Ave. and W. 5th St.	Private	6.32	4.74	1.58	Jungle gyms, chess/checkers tables, basketball courts, paved walkways, benches, decorative plantings	Excellent	Moderate
24	Youth and Senior Garden	Surf Ave, bet. W. 31st St and W. 32nd St.	HPD	0.39	0.39	0	Garden plots and planter boxes, shed	Good	Moderate
25	Surf Side Community Garden	Corner of Surf Ave. and W. 29th St.	HPD	0.70	0.70	0	Benches, chicken coops, planter boxes,	Good	Moderate
	Total:			154.13	78.52	75.61			
<p>Notes: See Figure 5-2. DPR = New York City Department of Parks and Recreation; HPD = New York City Department of Housing Preservation and Development; DOE = New York City Department of Education; DOT = New York City Department of Transportation; NYCHA = New York City Housing Authority.</p> <p>Sources: AKRF field surveys, August 2007; DPR web site, September 2007.</p>									

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Asser Levy Park is located east of the New York Aquarium, on both sides of Surf Avenue between Ocean Parkway and West 5th Street. This approximately 10.42-acre park is the study area's largest green open space. The larger portion of the park lies to the north of Surf Avenue, and contains tree-lined walkways and playground areas organized around a central lawn and bandshell, which is used for concerts and movies on summer evenings. South of Surf Avenue, much of the park's area is occupied by the Seaside Courts. These heavily used outdoor handball courts attract top players from throughout the City for pick-up games and organized tournaments.

Luna Park Playground is located north of the Culver/Brighton subway viaduct between West 8th and West 12th Streets. This 1.80-acre, predominantly asphalt playground provides play equipment for young children, paved fields and courts, benches, and public bathrooms. It is in good condition and is moderately used.

Neptune Playground is located east of the Sea Beach/West End subway viaduct near the intersection of Neptune Avenue and West 12th Street. This 1.24-acre playground includes play equipment for young children, basketball, handball, and volleyball courts, chess and checkers tables, water fountains, and benches. The recently renovated playground is in excellent condition and is lightly used, possibly because most of its area does not front a public street and feels somewhat isolated.

Carey Gardens, a New York City Housing Authority (NYCHA) housing development, contains about 1.96 acres of publicly accessible open space on the block bounded by Mermaid Avenue, West 22nd Street, Surf Avenue, and West 23rd Street, and the block bounded by Neptune Avenue, West 23rd Street, Mermaid Avenue, and West 24th Street. This open space includes passive areas of paved walkways, trees, and benches, and active areas with play equipment, a spray fountain, and basketball courts. The passive areas, especially those on the northern block, are well used by seniors. The active areas are moderately used on the southern block and lightly used on the northern block. All of the open space is in good condition.

The non-residential study area also includes five community gardens: the Unity Tower Tenants Association community garden, the Cyclone Garden, the Senior Association of Mermaid Avenue Community Garden, El Jardin de Boardwalk, and Santos White community garden. These open spaces provide areas for passive recreation, where people can sit or stroll in addition to gardening.

RESIDENTIAL STUDY AREA

Within the ½-mile residential study area, 25 publicly accessible open spaces and recreational facilities serve the surrounding residential and worker populations. These include the 13 open spaces described above in the non-residential study area plus an additional 12 open spaces (see **Figure 5-2** and **Table 5-4**). Including the public parks and open spaces in the non-residential study area, the residential study area contains a total of approximately 154.13 acres of publicly accessible open space, approximately 75.61 acres (49 percent) of which are estimated to be for active recreational use and 78.52 (51 percent) for passive recreational use.

To the west of the non-residential study area, the majority of the open spaces in the residential study area are the grounds of NYCHA housing developments. These developments include Coney Island I (Site 8), O'Dwyer Gardens, Surfside Gardens, and Coney Island I (Sites 4 and 5) (see **Figure 5-2** and **Table 5-4** for locations). As a whole, the open spaces in these developments are roughly evenly divided between passive and active amenities. The passive amenities include tree-lined walkways with benches at the interiors of blocks, and groups of benches and chess and checker tables along sidewalks and close to the entrances of the buildings. These amenities tend

to be in good condition, and are in low to moderate use depending on the development. Active amenities include playgrounds and spray fountains for small children and basketball courts for older children and adults. Many of the basketball courts appear to have been recently renovated and are in excellent condition, with clearly painted lines, glass backboards, and nets on all rims. Most of the active amenities are in moderate to high use.

Nautilus Playground is located along Riegelmann Boardwalk between West 29th and West 32nd Streets. This 1.38-acre playground, which appears to have been recently renovated, is primarily dedicated to active recreation; it includes basketball courts, handball courts, play equipment, a spray fountain, and restrooms. The playground is in excellent condition and is moderately used.

Poseidon Playground occupies approximately 0.79 acres of a full-block DPR facility that is primarily used for the storage of beach cleaning and maintenance equipment. The playground portion of the block is located at West 27th Street along Riegelmann Boardwalk. The asphalt playground includes swings, handball courts, a spray fountain, and picnic tables. It is in good condition and is lightly to moderately used.

Surf Playground is located along the north side of Surf Avenue between West 25th and West 27th Streets. The moderately used playground includes swings, play equipment, a spray fountain, basketball courts, and restrooms. It is in good condition.

The grounds of the Warbasse Houses, a private residential development occupying two blocks on the north side of Neptune Avenue at West 5th Street, are the largest open space in the eastern portion of the residential study area at approximately 6.32 acres. These primarily passive grounds are not surrounded by a fence and are accessible to the public. Passive amenities include walking paths lined with benches, decorative lawns and plantings, trees, and chess and checkers tables. These areas are in excellent condition, and are moderately used, mostly by seniors. Active amenities include playgrounds and basketball courts. These amenities are in good condition and are lightly used.

The Ocean Parkway Malls are wide, landscaped medians that divide the service roads from the main vehicular travel lanes on Ocean Parkway. Approximately 3.95 acres of the Malls fall within the study area, extending along the eastern boundary of the residential study area from Surf Avenue to the Belt Parkway. On the western side of the Parkway, the Malls include benches, trees, a grassy berm, and a greenway divided by a low fence into a bicycle lane and a jogging lane. The eastern side of the Parkway is reserved for pedestrians only, and includes a wider grassy area, benches, and some chess and checkers tables. The Ocean Parkway Malls are in good condition, and are maintained jointly by DPR and the New York City Department of Transportation (NYCDOT). They are moderately used.

Century Playground is located on the north side of Brighton Beach Avenue on both sides of West 2nd Street. This approximately 2.04-acre playground contains predominantly active facilities, including swings, play equipment, a spray fountain, basketball courts, handball courts, and a paved baseball/softball field. The limited passive facilities include picnic benches and chess and checkers tables. The playground is in excellent condition, and is heavily used, mostly by small children and their guardians.

Community gardens within the residential study area include the Youth and Senior Garden on Surf Avenue between West 31st and West 32nd Streets and the Surf Side community garden at the corner of Surf Avenue and West 29th Street.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

As described above, the analysis of the non-residential study area focuses on passive open spaces that may be used by workers or others who come to the area but do not reside there. To assess the adequacy of the open spaces in the area, the ratio of workers to acres of open space is compared to DCP’s planning guideline of 0.15 acres of passive space per 1,000 workers. In addition, the passive open space ratio for both workers and residents in the area is compared to a weighted average ratio, as recommended in the *CEQR Technical Manual*. Because many of the open space resources in the non-residential study area are destinations that attract visitors from throughout the region, the passive open space ratio for the combined population of residents, workers, and visitors is also shown.

The non-residential study area contains approximately 128.59 acres of open space, of which 65.07 acres are estimated to be for passive use. It has a total worker population of 2,555 employees, and a combined worker and residential population of 15,838 persons. As stated above, this analysis likely double-counts the daily user population in cases where residential and worker populations overlap. During the summer season, when the number of visitors is the highest, the estimated total daily population of the non-residential study area, including residents, workers, and visitors, is 101,838.

Based on the data presented above, the non-residential study area has a passive open space ratio of 25.466 acres of passive open space per 1,000 workers; this is substantially higher than the DCP’s guideline of 0.15 acres per 1,000 workers (see **Table 5-5**). The combined passive open space ratio for workers and local residents is 4.108 acres per 1,000 persons. This ratio is also substantially higher than the recommended weighted average ratio of 0.44 acres per 1,000 residents and workers. The combined passive open space ratio for workers, residents, and visitors is approximately 0.639. DCP has not issued guidelines for open space ratios that include visitor populations. In all instances where DCP has issued guidelines for open space ratios, the non-residential study area provides substantially more than the City’s desired planning goal for passive open space for workers and for the total population of workers and residents.

**Table 5-5
Existing Conditions: Adequacy of Open Space Resources**

	Population	Open Space Acreage			Open Space Ratios per 1,000 Persons			DCP-Recommended Open Space Ratios per 1,000 Persons		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Workers	2,555	128.59	63.52	65.07	N/A	N/A	25.466	N/A	N/A	0.15
Combined workers and residents	15,838				N/A	N/A	4.108	N/A	N/A	0.44*
Combined workers, residents, and visitors	101,838				N/A	N/A	0.639	N/A	N/A	N/A
Residential Study Area										
Residents	41,717	154.13	75.61	78.52	3.695	1.812	1.882	2.5	2.0	0.5
Combined residents and workers	50,202				N/A	N/A	1.564	N/A	N/A	0.44*
Combined residents, workers, and visitors	136,202				N/A	N/A	0.577	N/A	N/A	N/A
Notes: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

RESIDENTIAL STUDY AREA

The analysis of the residential study area examines both passive and active open spaces because residents, unlike workers, are likely to use both types of open space. To assess the adequacy of the open spaces in the area, the ratios of residents to acres of open space are compared to DCP's planning guidelines of 0.5 acres of passive space per 1,000 residents, 2.0 acres of active open space per 1,000 residents, and 2.5 acres of total open space per 1,000 residents. In addition, the passive open space ratio for both residents and workers in the residential study area is compared to the recommended weighted average ratio. The passive open space ratio for the total combined population of residents, visitors, and workers is also shown.

The residential study area contains approximately 154.13 acres of open space, of which 75.61 acres are estimated to be for active use, and 78.52 acres are estimated to be for passive use. It has a total residential population of 41,717 persons, and a combined residential and worker population of 50,202 persons. During the summer season, when the number of visitors is the highest, the estimated daily population of the residential study area including residents, workers, and visitors is 136,202.

Based on the data presented above, the total active and passive open space ratio in the residential study area is 3.695 acres per 1,000 residents. This is above DCP's planning guideline of 2.5 acres of combined active and passive open space per 1,000 residents. The passive open space ratio is 1.882 acres per 1,000 residents, which is also above DCP's planning guideline of 0.5 acres of passive open space per 1,000 residents. However, the active open space ratio is 1.812 acres per 1,000 residents, which is less than DCP's planning guideline of 2.0 acres per 1,000 residents.

When the employees who work within the residential study area are added to the population, the passive open space ratio is reduced to 1.564 acres per 1,000 residents and workers. This ratio remains well above the recommended weighted average guideline ratio of 0.44 acres per 1,000 residents and workers.

When seasonal visitors to the residential study area are added to the residential and worker population, the combined passive open space ratio is reduced to 0.577 acres of passive space per 1,000 persons. As described above, DCP has not issued guidelines for open space ratios that include visitor populations.

QUALITATIVE CONSIDERATIONS

Access to Water at Coney Island Beach

The area considered in the quantitative analysis as part of Coney Island Beach includes land area only. However, beachgoers also have access to and make use of the water, which during the summer is well used for activities such as swimming and jet skiing. Therefore, the study areas include unique active recreational opportunities that are not reflected in the quantitative analysis.

Nearby Publicly Accessible Open Spaces Outside of the Study Areas

Three large public parks, Kaiser, Six Diamonds, and Calvert Vaux Parks, lie just outside of the open space study areas. Though their combined 143 acres of open space was not included in the quantitative analysis, it is likely that the populations in the study areas make use of these parks due to their proximity. Therefore, these nearby open space resources may serve to accommodate some of the demand for open space in the study areas.

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Kaiser Park is located between Neptune Avenue and the Coney Island Creek from West 25th Street to Bayview Avenue. The southern edge of this 26.26-acre park abuts the northern boundary of the residential study area. Kaiser Park contains a variety of active and passive amenities, including baseball diamonds, a soccer field, handball courts, tennis courts, basketball courts, a running track, a playground, a fishing pier, barbeque grills, and picnic tables. A landscaped walkway and dunes are located along the Coney Island Creek shoreline, and are considered to be good spots for migratory bird-watching.

Calvert Vaux Park is located between the northern shoreline of the Coney Island Creek and the Belt Parkway, from West 22nd Street to Bay 44th Street. This 73.14-acre park contains an open lawn, a children's play area, a spray fountain, basketball courts, bocce courts, and a comfort station. Though the park is separated from most of the study areas by the Coney Island Creek, it is easily accessible by bus or bicycle. As discussed below under "Future Without the Proposed Actions," Calvert Vaux is soon to begin a 12-month reconstruction project.

The 43.56-acre Six Diamonds Park contains 6 ball fields and is located on the waterfront. It has a direct connection to a privately maintained publicly accessible esplanade at Home Depot that connects to Cropsy Avenue.

Private Open Spaces in the Study Areas

Several of the larger housing developments in the study areas, such as Trump Village, contain private open spaces on their grounds. These private open spaces tend to be similar in nature to the publicly accessible grounds of the NYCHA developments in the western portion of the residential study area and the Warbasse Houses. Though these private spaces are not accessible to all of the residents and workers in the study areas, they lessen the use of nearby publicly accessible spaces by serving the needs of the residents in their developments.

Visitor Populations and Destination Open Spaces in the Study Areas

The consideration of the summertime visitor population to Coney Island markedly reduces the passive open space ratios in both study areas. However, it can be assumed that the vast majority of persons who do not live or work within the study area are only visiting a limited number of the open spaces listed in **Table 5-4**. Most of the open spaces that draw large numbers of visitors from outside of the study areas are located in or close to the rezoning area: Coney Island Beach and Riegelmann Boardwalk, KeySpan Park, the Cyclone and amusement area, and the Aquarium. These facilities were designed to attract and accommodate visitors from throughout the metropolitan region, and the large visitor populations that are drawn to them does not detract from their use or usability by residents and workers from within the study area. To a lesser extent, visitors come from outside the study area to use Abe Stark Rink (for organized hockey leagues and open skating) and Asser Levy Park (for evening concerts and movies and the Seaside Courts). These spaces attract persons from outside the study area because of their specific programmatic offerings. The presence of visitors does not preclude interested residents and workers from within the study area from taking advantage of these offerings, and, in fact, may enhance them.

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

As discussed in Chapter 1, “Project Description,” and Chapter 2, “Land Use, Zoning, and Public Policy,” in the future without the proposed actions, it is estimated that an increment of 612 residential units, 92,351 square feet of commercial space, and 71,946 square feet of community facility space would be added within the rezoning area on identified projected development sites under the RWCDs. This development would add an increment of approximately 1,448 residents and 373 employees to the area.¹

In addition, several other residential and commercial developments within a ¼-mile radius of the rezoning area are expected to be developed in the future without the proposed actions (see Table 2-3 and Figure 2-6 in Chapter 2, “Land Use, Zoning, and Public Policy”). The additional projects within the non-residential study area would introduce a total of 32 new housing units. An estimated 75 residents and 1 employee would be introduced to the non-residential study area by these developments.

In total, it is expected that in the future without the proposed actions, 1,523 new residents and 374 new employees would be added to the ¼-mile non-residential study area by 2019. This would bring the total residential population to 14,806 and the total worker population to 2,929.

The total population including visitors in addition to residents and workers would be 103,735.

RESIDENTIAL STUDY AREA

The residential population within the ½-mile residential study area is expected to increase by 2019. In addition to the development described above that would occur in the ¼-mile non-residential study area, development in the ½-mile residential study area would include a total of 480 new housing units, 19,000 sf of retail space, and 40,000 sf of community facility space.

These developments would introduce approximately 1,136 residents and 340 workers in addition to those that would be added in the non-residential study area. Thus, the total residential population of the residential study area is expected to be approximately 44,376 and the total employee population is expected to be 9,199 by 2019.

The total population including visitors in addition to residents and workers would be 139,575.

STUDY AREA OPEN SPACES

NON-RESIDENTIAL STUDY AREA

Absent the proposed actions, it is expected that improvements would be made to some study area open spaces. The 2.2-acre Steeplechase Plaza would be created on existing parkland adjacent to

¹ Residential population estimates are based on an average household size of 2.44 in the study areas and an assumed vacancy rate of 3 percent. It is assumed that the ratio of employees to floor area is 3 employees per 1,000 square feet of retail space, 1 employee per 1,000 square feet of community facility space, and 1 employee per 26 housing units.

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the Parachute Jump between KeySpan Park and Riegelmann Boardwalk that is currently part of Steeplechase Park. The new Steeplechase Plaza is expected to include plazas and landscaped areas, a water feature, a skate park, and a pavilion housing the renovated B&B Carousel. The creation of Steeplechase Plaza will require the relocation of the soccer fields that are currently on that site. It is expected that the soccer fields will be relocated to Calvert Vaux Park as part of that park's upcoming reconstruction (described below under "Residential Study Area").

Additionally, the planned Coney Island Center at Asser Levy Park would replace a temporary performance venue with a permanent amphitheater with 5,000 fixed seats and 3,000 non-fixed seats. The amphitheater will be used for concerts Memorial Day to Labor Day and for recreational activity such as soccer from October to December and April to May. Neither of these improvements would change the quantity of open space in the non-residential study area.

As shown in the RWCDS in Table 1-2 of Chapter 1, "Project Description," community gardens would be displaced in the future without the proposed actions on Projected Development Sites 7 and 10. Projected development site 7 currently includes the 0.32-acre Unity Tower Tenants Association Community Garden; Projected Development Site 10 includes the 0.22-acre Cyclone Community Garden and the 0.35-acre Senior Association of Mermaid Avenue Community Garden. These community gardens are located on HPD property. Their occupancy is subject to the settlement between the New York State Attorney General and the City of New York. The settlement requires that the City offer sites within ½-mile of the existing garden for relocation, if such sites are available. If such sites are available, the gardeners may relocate to them and have the gardens become permanent DPR sites. Both of these sites would be redeveloped in the future without the proposed actions, resulting in a decrease of 0.89 acres of passive open space in the non-residential study area. Therefore, in the future without the proposed actions, the non-residential study area would include a total of 127.69 acres of open space, with 63.52 acres for active use and 64.17 acres for passive use.

RESIDENTIAL STUDY AREA

No additional changes to open spaces are expected in the residential study area by 2019. The displacement of the three community gardens described above would result in a total of 153.24 acres of open space in the residential study area, with 77.63 acres for passive use and 75.61 acres for active use.

It should be noted that Calvert Vaux Park (formerly known as Dreier-Offerman Park), which is located just north of the residential study area, is soon to begin a 12-month reconstruction. This \$40-million project is scheduled for completion by 2011. It will include three new baseball fields, six new soccer fields, kayak launches, picnic areas, restrooms, a bicycle path, new nature trails, an amphitheater, a playground, a recreation center and a pavilion. The park will be a center for competitive soccer and baseball on the improved Brooklyn waterfront.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

By 2019 in the future without the proposed actions, the number of workers in the non-residential study area is expected to increase to 2,929 and the total amount open space is expected to be 127.69 acres. In 2019, the ratio of passive open space per 1,000 workers would be 21.908, a decline of about 14 percent compared to existing conditions; this is much higher than the City's guideline of 0.15 acres (see **Tables 5-6** and **5-7**). For the combined residential and non-

residential population, the passive open space ratio would be 3.618 acres per 1,000 people (a decline of about 11 percent compared to existing conditions), which is higher than the recommended weighted average ratio of 0.44 acres per 1,000 residents and workers.

**Table 5-6
2019 Future Without the Proposed Actions: Adequacy of Open Space Resources**

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Workers	2,929	127.69	63.52	64.17	N/A	N/A	21.908	N/A	N/A	0.15
Combined workers and residents	17,735				N/A	N/A	3.618	N/A	N/A	0.44*
Combined workers, residents, and visitors	103,735				N/A	N/A	0.619	N/A	N/A	N/A
Residential Study Area										
Residents	44,376	153.24	75.61	77.63	3.453	1.704	1.749	2.5	2.0	0.50
Combined workers and residents	53,575				N/A	N/A	1.449	N/A	N/A	0.44*
Combined residents, workers, and visitors	139,575				N/A	N/A	0.556	N/A	N/A	N/A
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

**Table 5-7
2019 Future Without the Proposed Actions: Open Space Ratios Summary**

Ratio	DCP Guideline	Existing Ratio	Future Without the Proposed Actions Ratio	Percent Change
Non-Residential Study Area				
Passive/workers	0.15	25.329	21.908	-13.97
Passive/total population	0.44*	4.086	3.618	-11.93
Residential Study Area				
Total/residents	2.5	3.686	3.453	-6.55
Passive/residents	0.5	1.874	1.749	-7.07
Active/residents	2.0	1.812	1.704	-5.96
Passive/total population	0.44*	1.557	1.449	-7.35
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.				

When seasonal visitors to the non-residential study area are added to the residential and worker population, the combined passive open space ratio is reduced to 0.619 acres of passive space per 1,000 persons.

RESIDENTIAL STUDY AREA

As shown in **Tables 5-6** and **5-7**, in the future without the proposed actions, all open space ratios within the residential study area would decrease by between 6 and 7 percent. The passive open space ratio for residents would be 1.749, a decline of about 7 percent from existing conditions, and the active open space ratio for residents would be 1.704, a decline of about 6 percent. The total open space ratio would decline approximately 6 percent from existing conditions to 3.453

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in the future without the proposed actions. The passive open space ratio for the total population, including residents and workers, would also decline approximately 7 percent to 1.449.

The total open space ratio for residents, the passive open space ratio for residents, and the passive open space ratio for the total population would remain well above DCP guidelines. The active open space ratio per 1,000 residents would remain below DCP guidelines.

When seasonal visitors to the residential study area are added to the residential and worker population, the combined passive open space ratio in the residential study area is reduced to 0.556 acres of passive space per 1,000 persons.

F. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

As described in Chapter 1, "Project Description," it is projected in the RWCDs that there would be an incremental increase of 2,408 housing units, 732,507 square feet of commercial space (including retail and amusement-enhancing uses), and 251,411 square feet of amusements, and 468 hotel rooms within the rezoning area by 2019 as a result of the proposed actions. There would be a decrease in community facility space of 71,946 square feet as compared to the future without the proposed actions.

STUDY AREA POPULATION

NON-RESIDENTIAL STUDY AREA

The RWCDs would add an increment of approximately 3,580 non-residents (including 2,878 employees and approximately 702 hotel guests per day) to the area over conditions in the future without the proposed actions.¹ Therefore, the population of the non-residential study area would include a total of 6,509 non-residents and 20,682 residents in the 2019 future with the proposed actions.

The new amusement park in Coney East would increase the number of visitors to the rezoning area in the future with the proposed actions. It is estimated that the new amusement park would attract a total of approximately 1,011,079 million additional visitors per season, which would be an average of approximately 10,111 additional visitors per day over the summer season.² Therefore, the total non-residential study area population including visitors in addition to residents and workers would be 123,302.

RESIDENTIAL STUDY AREA

With the proposed actions, the population of the residential study area is expected to include 50,252 residents and 12,779 non-residents.

¹ Employee estimates are based on 3 employees per 1,000 square feet of retail or commercial space, 1 per 2,000 square feet of amusements, and 1 per 26 residential units, and 1 per 3 hotel rooms. The estimate of 702 hotel guests is based on an average of 2 guests per room within the projected 468 hotel rooms and an average occupancy rate of 75 percent.

² The projected additional visitor population to the amusement park is based on a 2007 report prepared for the New York Economic Development Corporation (NYCEDC) by Grubb & Ellis which included conservative, moderate, and aggressive attendance scenarios for a 15-acre amusement park. The moderate attendance projection was 2,808,553 additional visitors per season. This figure was reduced proportionately for the proposed 9-acre amusement area. Based on the 1989 Steeplechase Park FEIS, it is assumed that 60 percent of visitors to the amusement park would constitute new visitors to the area (i.e., visitors who would not already be in the area for other destinations such as the beach). It was again assumed that these visitors would be spread over the approximately 100-day period between Memorial Day and Labor Day.

The total residential study area population including visitors in addition to residents and workers would be 159,142.

STUDY AREA OPEN SPACES

NON-RESIDENTIAL STUDY AREA

The proposed actions include the creation of Highland View Park, a new, 1.41-acre open space north of Riegelmann Boardwalk between West 22nd and West 23rd Streets. While the programming has not been finalized, it is anticipated that this new park space would include a mix of neighborhood-oriented passive and active elements. Overall approximately 80 percent, or 1.1 acres, is expected to be for active recreational use, while the remaining 0.3 acres would be for passive use. The development on projected site 2 would displace El Jardin de Barrio, removing the estimated 0.43 acres of passive open space currently in use on this site.

As described in Chapter 1, “Project Description,” the proposed actions include the mapping of the amusement area (portions of Blocks 7074 and 8696) as parkland for the purpose of protecting the historic amusement area as an open amusement area and for the development of an affordable vibrant open amusement and entertainment park. The proposed actions would also add approximately 3 acres of passive open space within the newly created amusement area. These changes would result in a total net increase of 3.98 acres of public open space in the non-residential study area. With the proposed actions, the total open space in the non-residential study area would be 131.67 acres, including 67.02 acres of passive open space and 64.65 acres of active open space.

The proposed actions also include the alienation of Block 7073, portions of Lot 101 and Block 7071, Lot 100, which are currently mapped parkland, for disposition to a private developer for development. Most of this parkland area is currently used as a parking lot and therefore was not included in the quantitative open space analysis, though a portion of the land to be alienated includes Abe Stark Rink. The rink would be relocated to a location within the non-residential study area that would be determined prior to redevelopment of that site. Therefore, alienation of this parkland would not affect the type or amount of open space in the study area.

As described in Chapter 6, “Shadows,” the proposed actions would not result in any significant adverse shadows impacts on public open spaces.

The proposed actions would not result in a perceptible increase in noise at any public open spaces, nor would they result in adverse impacts with respect to air quality at public open spaces (see Chapter 18, “Air Quality,” and Chapter 19, “Noise”).

RESIDENTIAL STUDY AREA

With the changes described above under “Non-Residential Study Area,” the total amount of open space in the residential study area would be 157.22 acres, with 80.48 acres of passive open space and 76.74 acres of active open space. The proposed actions would not result in any additional changes to open spaces in the residential study area.

ADEQUACY OF OPEN SPACES

NON-RESIDENTIAL STUDY AREA

Under the proposed actions, the combined passive open space ratio would decrease to 2.465 acres per 1,000 total population (workers and residents) with the proposed actions (see **Table**

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5-8). This ratio, which would remain substantially higher than the recommended weighted average ratio of 0.42, would represent an approximately 32 percent decrease in this combined open space ratio (see **Table 5-9**). With respect to the passive open space analysis for workers, this open space ratio would decrease to 10.297 in the future with the proposed actions (see **Tables 5-8 and 5-9**). This is an approximately 53 percent decrease when compared with the future without the proposed actions. However, this ratio, at 10.297, would continue to be much higher than the DCP recommended ratio of 0.15 acres per 1,000 workers.¹

Table 5-8
2019 Future With the Proposed Actions: Adequacy of Open Space Resources

	Total Population	Open Space Acreage			Open Space Ratios per 1,000 People			DCP Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Non-Residential Study Area										
Non-residents	6,509	131.67	64.65	67.02	N/A	N/A	10.297	N/A	N/A	0.15
Combined non-residents and residents	20,682				N/A	N/A	2.465	N/A	N/A	0.42*
Combined workers, residents, and visitors	123,302				N/A	N/A	0.544	N/A	N/A	N/A
Residential Study Area										
Residents	50,252	157.22	76.74	80.48	3.129	1.527	1.602	2.5	2.0	0.50
Combined workers and residents	63,031				N/A	N/A	1.277	N/A	N/A	0.43*
Combined residents, workers, and visitors	159,142				N/A	N/A	0.506	N/A	N/A	N/A
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.										

Table 5-9
2019 Future With the Proposed Actions: Open Space Ratios Summary

Ratio	DCP Guideline	Future Without the Proposed Actions Ratio	Future with the Proposed Actions Ratio	Percent Change
Non-Residential Study Area				
Passive/workers	0.15	21.908	10.297	-53.00
Passive/total population	0.42*	3.618	2.465	-31.87
Residential Study Area				
Total/residents	2.5	3.453	3.129	-9.38
Passive/residents	0.5	1.749	1.602	-8.40
Active/residents	2.0	1.704	1.527	-10.39
Passive/total population	0.43*	1.449	1.277	-11.87
Note: * Weighted average combining 0.15 acres per 1,000 non-residents and 0.50 acres per 1,000 residents. Non-residents typically use passive spaces; therefore, for the non-residential study area, only passive open space ratios are calculated. For the residential study area, active, passive, and total park space ratios are calculated.				

When seasonal visitors to the non-residential study area are added to the residential and worker population, the combined passive open space ratio is reduced to 0.544 acres of passive space per 1,000 persons, a decline of about 12 percent from the future without the proposed actions.

¹ As noted previously, Astroland recently closed but a portion of its area is included as existing passive open space in this quantitative analysis. Without the inclusion of this open space, the passive open space ratios would be slightly lower. Nonetheless, the passive open space ratios within both the non-residential and residential study areas would remain adequate and well above city guidelines.

RESIDENTIAL STUDY AREA

In the future with the proposed actions, the total open space ratio within the residential open space study area would decrease to 3.129 acres per 1,000 residents, a decline of approximately 9 percent compared to the future without the proposed actions. This ratio would remain substantially higher than the CEQR guideline of 2.5 acres per 1,000 residents. The active open space ratio would decrease to 1.527 acres per 1,000 residents, a decline of approximately 10 percent (see **Tables 5-8** and **5-9**). This open space ratio would remain below the guideline of 2.0 acres per thousand residents. The passive open space ratio for the residential population would decline to 1.602 acres per 1,000 residents, a decline of 8.5 percent. However, the ratio for passive open space would remain much higher than the CEQR guideline of 0.5 acres per 1,000 residents. The passive open space ratio for the combined (total) population would also decrease by approximately 12 percent to 1.277 acres per 1,000 residents and workers. This ratio would remain well above the City’s guideline of 0.43.

When seasonal visitors to the residential study area are added to the residential and worker population, the combined passive open space ratio is reduced to 0.507 acres of passive space per 1,000 persons, a decline of about 9 percent from the future without the proposed actions.

IMPACT SIGNIFICANCE

DIRECT EFFECTS

As described in Chapter 1, “Project Description,” the proposed actions include the mapping of an open amusement area (portions of Blocks 7074 and 8696) as parkland. This mapping of parkland is intended to protect the historic amusement area as an open amusement area and to allow for the development of an affordable vibrant open amusement and entertainment park. This mapping of parkland would not alter the open space currently in the study areas. It would allow for the development of new amusements, approximately 3 acres of which would function as passive open space. The mapping of new parkland would not result in any significant adverse impacts on open space. Overall, the proposed actions would result in a net increase in the amount of open space in the study areas.

The proposed actions also include the alienation of Block 7073, portions of Lot 101 and Block 7071, Lot 100, which are currently mapped parkland, for disposition to a private developer for development. The portion of Block 7073, Lot 101 proposed for alienation includes the Abe Stark Rink in addition to a parking lot. The Abe Stark Rink would be replaced at a new location to be determined within the non-residential study area prior to its displacement from its current location. For this reason, and because the remainder of the parcel is used for parking rather than as open space, its alienation would not result in a significant adverse impact on open space. Because all of the parkland on Block 7071, Lot 100 is currently used as a parking lot rather than as public open space, alienation of it would not result in any significant adverse impact on open space in the study area.

As part of the proposed actions, a new parking garage would be constructed on a parcel of DPR-owned land located along the Riegelmann Boardwalk between West 25th and West 27th Streets that currently includes Poseidon Playground. The construction of the garage would require the relocation of handball courts and a playground area, which would be reconstructed on the same site in a new configuration. While the design for the parking garage and the reconfigured open space has not been finalized, it is expected that the playground would be usable for all but approximately 18 months during construction and that the reconfigured open space would have

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the same amenities and size as the existing courts and playground. The recreational amenities in this open space, which are currently in fair condition, would be improved with relocation and reconstruction. The maintenance and operations facility that is currently located on this site would either remain in its current location or be incorporated into the new parking facility building. Therefore, the relocation would not result in any significant adverse impacts on this open space.

As described above, the proposed actions would directly displace El Jardin de Boardwalk, a community garden just north of Reigelmann Boardwalk at West 22nd Street. This community garden, only a portion of which is currently in use, would be relocated within the Coney Island area at a location to be determined. Therefore, the displacement of this open space would not result in a significant adverse impact.

The proposed actions would not result in any significant adverse impacts on open space due to shadows, noise, or air emissions.

INDIRECT EFFECTS

Non-Residential Study Area

In the future with the proposed actions, the passive open space ratio for workers would remain well above DCP guidelines but would decline by 53 percent. The combined passive open space ratio for residents and workers (total population) would also remain well above the DCP guideline recommended weighted average, though it would decrease by about 12 percent (see **Table 5-8**).

Although the proposed actions would result in large declines in open space ratios in the non-residential study area, it would not cause the study area population to be underserved with respect to open space. Compared to other areas of Brooklyn and the City as a whole, Coney Island has a very high ratio of passive open space per population, due primarily to the beach and the boardwalk. The entire rezoning area is within three blocks of these open space resources, and the new worker population introduced by the proposed actions would have easy access to them, and the non-residential study area would continue to be well served by passive open space. Therefore, the proposed actions would not result in any significant adverse impacts on the non-residential study area.

Additionally, though there are no guidelines for open space ratios for populations that include seasonal visitors, this passive open space ratio of 0.544 would substantially exceed the recommended ratios for the worker and combined residential and worker populations.

Residential Study Area

Within the ½-mile residential study area, the passive open space ratio for residents, the total open space ratio for residents, and the passive open space ratio for the total population (residents and workers) would remain above DCP guidelines in the future with the proposed actions, although they would decline by approximately 8, 9, and 12 percent, respectively (see **Table 5-9**). The active open space ratio for residents, which would decline by approximately 10 percent, would continue to be below the DCP guideline of 2.0 acres per 1,000 residents. As additionally noted, the value of Coney Island Beach as a recreational resource is somewhat diminished during the non-beach season. Therefore, the City acknowledges the need to provide additional active open space for the future population resulting from the proposed actions. This could include creating publically accessible playgrounds in existing school yard sites such as has been accomplished through the City's "Schoolyards to Playgrounds Program," improvements to

Kaiser Park, and adding additional year-round active recreation opportunities to the beach. The City will seek funding for these projects as the population increases due to the proposed action. In the interim however, the residential study area would continue to be generally well served with respect to both passive and active open space. As with the non-residential study area, the residential study area has a higher ratio of passive and active open space per population than most areas in the borough and the city as a whole due to the presence of the Beach and Boardwalk.

There are several qualitative considerations that should be taken into account in assessing the adequacy of open space in the residential study area. As described previously, the study area includes active open space that is not reflected in the quantitative analysis—the Atlantic Ocean. Beachgoers use the water for activities such as swimming and jet skiing, and it provides opportunities for active recreation that are not available in most parts of the City.

Additionally, three large public parks totaling 143 acres—Kaiser Park, Six Diamonds Park, and Calvert Vaux Park—lie just outside of the residential open space study area. Kaiser Park contains a variety of active and passive amenities, including baseball diamonds, a soccer field, handball courts, tennis courts, basketball courts, a running track, a playground, a fishing pier, barbeque grills, and picnic tables. Six Diamonds Park contains 6 ball fields and is located on the waterfront. Calvert Vaux Park features an open lawn, a children’s play area, a spray fountain, basketball courts, bocce courts. It is likely that people in portions of the residential study area would use these open spaces, particularly because they offer a broad range of active open recreational opportunities. Furthermore, as described above under “Future Without the Proposed Actions,” Calvert Vaux Park is slated for a major restoration that is expected to include three new baseball fields, six new soccer fields, kayak launches, picnic areas, a central lawn, a bicycle path, new nature trails, an amphitheater, a playground, a recreation center, and a pavilion. This will improve the amount and range of active open space that could be used by residents within the ½-mile residential study area.

Given these qualitative considerations and the fact that open space ratios in the residential study area would remain relatively high, the proposed actions would not result in any significant adverse indirect impacts on open space within the residential study area.

Additionally, though there are no guidelines for open space ratios for populations that include seasonal visitors, the combined passive open space ratio of 0.506 for residents, workers, and visitors in the residential study area would substantially exceed the recommended weighted average ratios for the total worker and residential population.

G. CONCLUSIONS

DIRECT EFFECTS

The proposed actions would not result in any significant adverse direct impacts on public open space. Recreational facilities that would be displaced by the proposed actions, which include the community garden at West 22nd Street, the Abe Stark Rink, and Poseidon Playground, would be relocated. The creation of the 1.41-acre Highland View Park would provide new open space opportunities and the 9-acre Amusement Park area would ensure the longevity of a historic, recreational and amusement area within Coney Island.

Overall, the proposed actions would not result in any significant adverse direct impacts on public open space.

INDIRECT EFFECTS

NON-RESIDENTIAL STUDY AREA

In the future with the proposed actions, the passive open space ratio for workers would remain well above guidelines established by the New York City Department of City Planning (DCP) but would decline by 53 percent. The combined passive open space ratio for residents and workers (total population) would also remain well above the DCP guideline recommended weighted average, though it would decrease by about 32 percent.

Although the proposed actions would result in large declines in open space ratios in the ¼-mile non-residential study area, they would not cause the study area population to be underserved with respect to open space. Compared to other areas of Brooklyn and the City as a whole, Coney Island has a very high ratio of open space per population, due primarily to the beach and Riegelmann Boardwalk. The entire rezoning area is adjacent to and within three blocks of these open space resources, and the new worker population introduced by the proposed actions would have easy access to them, and the non-residential study area would continue to be well served by passive open space. Therefore, the proposed actions would not result in any significant adverse impacts on the non-residential study area.

RESIDENTIAL STUDY AREA

Within the ½-mile residential study area, the passive open space ratio for residents, the total open space ratio for residents, and the passive open space ratio for the total population (residents and workers) would remain above DCP guidelines in the future with the proposed actions, although they would decline by approximately 8, 9, and 12 percent, respectively. The active open space ratio for residents, which would decline by approximately 10 percent, would continue to be below the DCP guideline of 2.0 acres per 1,000 residents. As additionally noted, the value of Coney Island Beach as a recreational resource is somewhat diminished during the non-beach season. Therefore, the City acknowledges the need to provide additional active open space for the future population resulting from the proposed actions. This could include creating publically accessible playgrounds in existing school yard sites such as has been accomplished through the City’s “Schoolyards to Playgrounds Program,” improvements to Kaiser Park, and adding additional year-round active recreation opportunities to the beach. The City will seek funding for these projects as the population increases due to the proposed action. In the interim however, the residential study area would continue to be generally well served with respect to both passive and active open space. As with the non-residential study area, the residential study area has a higher ratio of passive and active open space per population than most areas in the borough and the city as a whole due to the presence of the Beach and Boardwalk.

Several qualitative considerations not reflected in the quantitative analysis contribute to the open space resources that can be used in the residential study area. The study area includes active open space—the ocean—at the beach that is not reflected in the quantitative analysis but is used for activities such as swimming and jet skiing. Additionally, three large public parks totaling 143 acres—Kaiser, Six Diamonds, and Calvert Vaux Parks—lie just outside of the residential open space study area and offer a broad range of active recreational opportunities of which many residents in the study area would likely take advantage. Given these qualitative considerations and the fact that open space ratios in the residential study area would remain relatively high, the proposed actions would not result in any significant adverse indirect impacts on open space within the residential study area. *