The Flushing Creek Study:

A Pathway to Restoration

June 2021

The *Flushing Creek Study* is made possible by a grant from the New York State Department of State under Title 11 of the Environmental Protection Fund.

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About this study

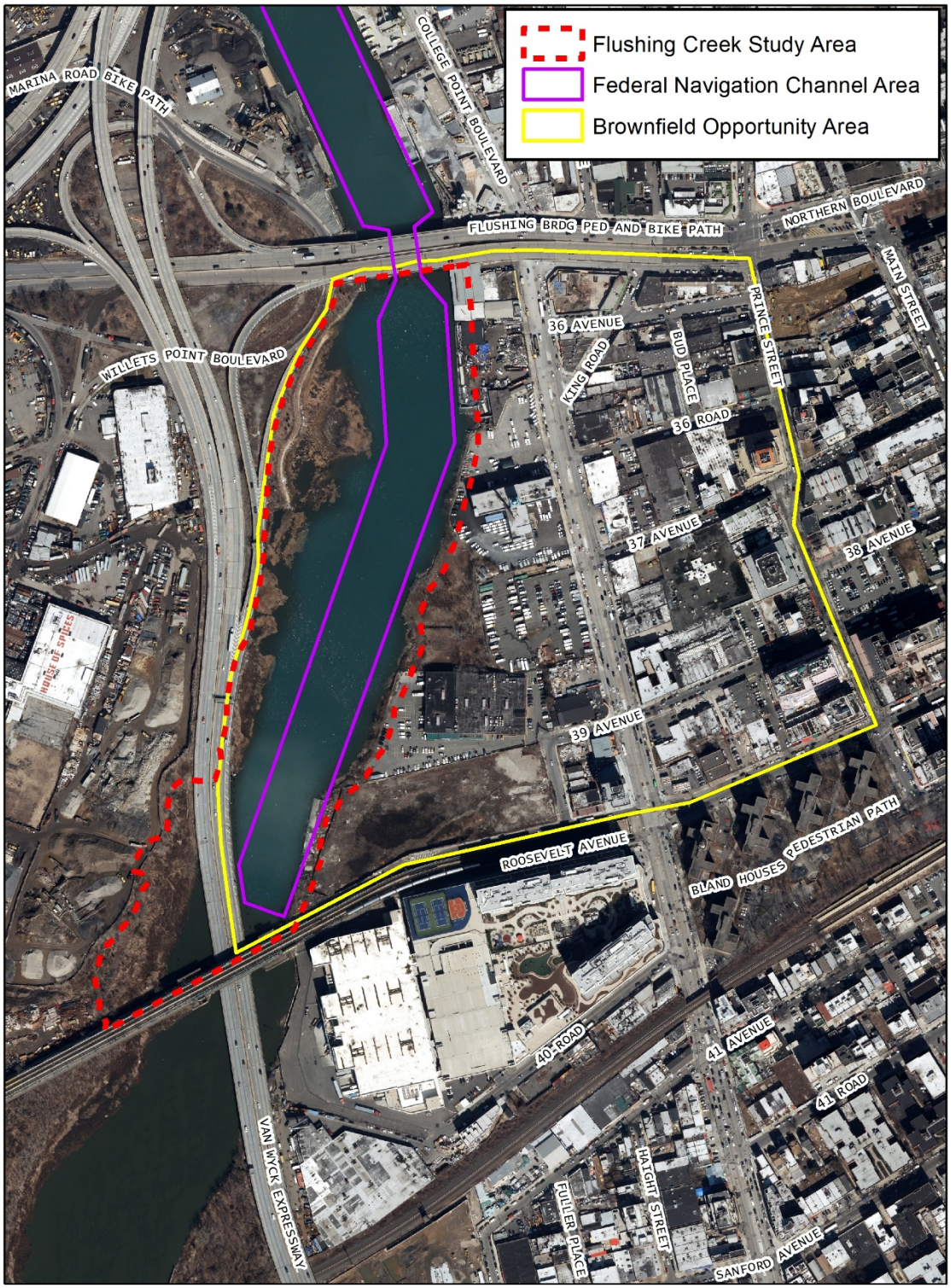
The purpose of the Flushing Creek Study (the Study) is to identify barriers to improving the health of Flushing Creek, outline the steps to remove such barriers, and examine where funds for future ecological restoration projects could be directed that would improve the health of Flushing Creek. The Study was prepared by the New York City Department of City Planning (DCP) and is made possible by a grant from the New York State Department of State (DOS) under Title 11 of the Environmental Protection Fund.

The Study is an outgrowth of the Flushing Waterfront Revitalization Plan, a Brownfield Opportunity Area (BOA) Nomination Study. The BOA study was prepared by DCP on behalf of the Flushing Willets Point Corona Local Development Corporation with funding provided by the NYS Department of State Brownfield Opportunity Area Program for a 62-acre area of mostly former industrial properties to the west of Downtown Flushing in the Borough of Queens, New York. The site was designated as a BOA by New York State by the Department of the Environmental Conservation (DEC) in 2018 as part of its brownfield opportunity program. The BOA designation is expected to help catalyze the redevelopment of brownfield sites on the eastern edge of Flushing Creek by supporting their remediation.

While facilitating public outreach and research for the BOA study, DCP became aware of the presence of a federal navigation channel within Flushing Creek generally south of Northern Boulevard. Through discussions with the New York City Department of Environmental Protection (DEP), DCP learned that the navigation channel designation precludes activities from occurring within and near the channel that are not related to maritime use, such as ecological restoration projects. In 2018, DCP received a grant from DOS to identify the process of deauthorizing this portion of the navigation channel to enable ecological restoration work to take place within the area. Expanding ecological restoration to this area would complement efforts by public agencies to improve the health of the creek and more closely reflect ongoing changes in land use of the nearby brownfield sites along Flushing Creek's eastern shoreline.

These efforts include work being done by DEP to reduce the effects of combined sewer overflow in the creek as well as other projects being led by other agencies to restore the creek's natural habitat. In particular, the U.S. Army Corps of Engineers (USACE) is advancing a wetlands restoration project to improve the ecology of Flushing Creek as part of the broader Hudson-Raritan Estuary restoration project. Combined, these efforts will continue to advance restoration of Flushing Creek as an ecosystem and enhance it as an asset for the Flushing community.

Flushing Creek Study Area Map



Introduction

Flushing Creek is a tidally influenced river that was once part of an expansive marsh stretching across central Queens. Marshes like the one that existed in Flushing are critical ecosystems. They can sequester carbon, filter toxins from water, provide habitat, and reduce the severity of flooding and erosion.

Like other waterbodies in New York City, Flushing Creek and the surrounding area have undergone considerable change. As early as the 1800s, Flushing Creek was used for heavy commercial and industrial uses, including as landfill for ash from the city's coal burning furnaces. Flushing Creek and its surrounding ecosystem were also significantly altered in advance of the 1939 and 1964 World's Fairs.

Today, private property along Flushing Creek's eastern shoreline is poised to support the expansion of Flushing's thriving downtown to the waterfront. This expansion is the culmination of more than two decades of planning in Flushing stemming from the creation of a community-guided vision and redevelopment strategy for formerly industrial land in the area.

The community's attention to Flushing Creek and its ecological health has heightened with the potential for new medium density, mixed residential and commercial development to revitalize current brownfield sites and open up Flushing's waterfront to the public. A legacy of reconfiguration, heavy industrial use, and challenges managing stormwater in a dense and growing urban area have led to habitat loss and water quality issues in Flushing Creek. In response to these challenges, public agencies have undertaken several initiatives and invested billions of dollars to improve water quality and the ecological health of Flushing Creek and Flushing Bay.

In 2018, DCP launched the Study to better understand the range of work being undertaken to improve water quality and the ecological health of Flushing Creek, as well as to investigate and pursue additional measures that would complement these efforts. As a part of this process, DCP became aware that a portion of a federal navigation channel in Flushing Creek is limiting the ability of public agencies to undertake projects to restore Flushing Creek.

Vision and Goals

The following Visions and Goals were developed to guide DCP's planning process:

- Share information about current efforts to improve water quality
    - Various government agencies have undertaken efforts to improve water quality in Flushing Creek and Flushing Bay. The Study is an opportunity to inform the public about the status of those efforts.
- Identify barriers to additional restoration efforts
    - The Study will identify the issues that need to be overcome to enable public agencies to improve the ecological health of Flushing Creek.
- Develop strategies to address these issues
    - The Study will articulate clear and attainable strategies to address these issues and the steps necessary to implement them.
- Coordinate this work with community partners and all levels of government
    - The Study will engage an array of project stakeholders, including representatives of federal, state, and municipal agencies with jurisdiction over the project area, and community-based organizations and individuals.

Community Outreach

DCP engaged a range of stakeholders throughout the planning process for the Study to better understand the challenges facing Flushing Creek. To kick the process off, DCP reached out to community organizations, city, state, and federal agencies, and local elected officials to increase awareness about the Study and to discuss ideas for improving the environmental health of Flushing Creek.

A public meeting for the Study was held on April 2, 2019, at the Union Plaza Care Center in Flushing, Queens. Queens Community Board 7 co-hosted the event and had approximately 40 attendees. The event provided an opportunity for attendees to learn about the Study and share feedback on the environmental health of Flushing Creek. DCP presented an overview of the Study, including the study area, project scope, and timeline. DCP also described the federal navigation channel and the reasons to consider deauthorizing a portion of it. DCP was joined by DEP at the event. DEP gave a presentation on the initiatives that DEP and the USACE are overseeing in and around Flushing Creek and Flushing Bay to improve water quality and the ecology of these waterbodies. At the conclusion of the event, Queens Community Board 7 gave its support to DCP to pursue deauthorization of the navigation channel.

As the planning process progressed, DCP surveyed property owners along Flushing Creek to better understand the present and predicted future uses of the federal navigation channel. This work enabled DCP to make an assessment about the intended use of private property near the navigation channel. Based on the responses from the private property owners, DCP was able to conclude that the navigation channel has not been used for navigation purposes in recent years and is not expected to be used for such purposes in the future. Survey responses from individual property owners are included in an appendix to the Study.

On February 25, 2020, the DCP team presented the Study at a panel organized by the Economic Development Committee and Waterfront Committee of the American Planning Association - New York Metro. The panel, “The Impact of New York City's Secondary Waterways” brought together approximately 40 planning professionals, representatives of the maritime industry, and members of the public, to discuss the importance of secondary waterways—smaller, but critical commercial navigation channels—to the local and regional economy. DCP presented the Study and described the status of the federal navigation channel in Flushing Creek. Feedback from attendees at this event helped to shape the Study, especially the discussion about the importance of NYC’s secondary waterways that appears later in this document.

DCP engaged city, state, and federal agencies throughout the planning process, including DEP, the New York City Department of Parks and Recreation (NYC Parks), the New York City Economic Development Corporation, DOS, and USACE. Through these interactions, DCP learned more about existing and planned efforts that are being undertaken by these agencies. DCP also met with elected officials, including the Council Member for Council District 20 and the Council Member for Council District 22, who served as the chair of City Council’s Environmental Protection Committee, and the staff of the area’s congressional representatives.

Feedback from community members, public agencies, and elected officials provided a diversity of viewpoints about the issues facing Flushing Creek. They commented on a range of issues, including combined sewer overflow, habitat degradation, and the historical legacy of pollution. Participants widely supported building on existing efforts to improve the ecology of the creek, including pursuing the deauthorization of the navigation channel.

The Flushing Creek Watershed

History

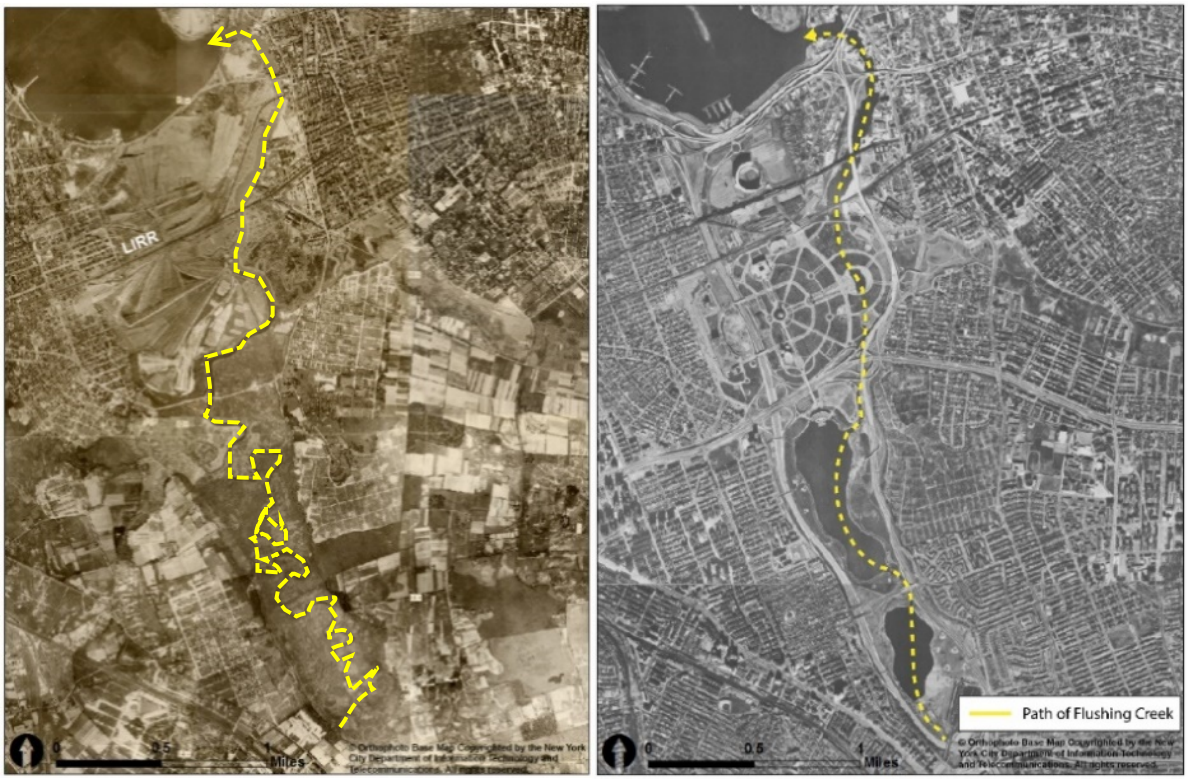
The Flushing Creek watershed spans nearly 10,000 acres—the size of 12 Central Parks. Much of this watershed is highly urbanized, with residential, commercial, and industrial uses. Flushing Meadows Corona Park, a significant open space and recreational area for nearby communities, occupies close to 20 percent of the watershed.

Flushing Creek once supported a vast tidal marsh ecosystem in present-day Flushing Meadows Corona Park. Tidal wetlands are critical ecosystems. They can sequester carbon, filter toxins from water, provide habitat, and reduce the severity of flooding and erosion. An USACE study estimates that there were at least 157 acres of tidal wetlands in Flushing Bay and Flushing Creek in the early 1900s, compared to 21 acres now—a loss of 87 percent. Public agencies including USACE, DEP, and NYC Parks are undertaking efforts to restore wetlands and other natural features in Flushing Creek's watershed. The aerial image on the left side of the next page shows that a vast marsh encompassed the creek in the early 1920s.

Similar to other secondary waterways in NYC, the ecological health of the creek has been significantly degraded due to industrialization, fill, and reconfiguration of the shoreline. In preparation for the 1939 World's Fair, Flushing Creek was straightened, and its headwaters were reconfigured into Willow Lake and Meadow Lake in Flushing Meadows Corona Park. The reconfiguration of the creek impeded tidal flushing, which is important for maintaining a healthy ecosystem. Subsequent industrial, residential, transportation, and public facility development continued to transform the creek and its watershed.

Flushing Creek's pre-World's Fair path is illustrated in yellow in the image on the left, taken in 1924. Flushing Creek's present-day path is illustrated in yellow in the image on the right, taken after the 1964 World's Fair. Beginning near the New York City Transit Jamaica Yard Facility to the south, the creek flows north through Willow Lake and Meadow Lake in Flushing Meadows Corona Park. The creek is then channeled along the eastern edge of the park, before being piped underneath the Fountain of the Planets. The creek resurfaces at the northern edge of the park, channeling underneath the Long Island Rail Road tracks before reemerging and connecting to Flushing Bay.

1924 **1966**



Water Quality Initiatives

Flushing Creek's water quality is impaired by Combined Sewer Overflow (CSO). Approximately 60 percent of New York City has a combined sewer system. Combined sewers are systems that collect both sewage and stormwater runoff in a single pipe and bring the mix to wastewater treatment facilities. During wet weather events, wastewater treatment plants are unable to handle volumes higher than twice their design capacity. The systems are designed to overflow, discharging untreated sewage and stormwater directly into NYC's waterbodies.

DEP has undertaken several major initiatives to mitigate CSO discharges and improve water quality in the Flushing Bay and Flushing Creek watershed. For example, In Flushing Creek, DEP completed a $349 million project in 2007 to build a 43 million Gallon CSO Retention Facility. In 2014, DEP finished $30 million in upgrades to increase flow conveyances to the Tallman Island Wastewater Treatment Plan. These projects reduced the volume of CSO going into Flushing Creek by 50 percent. The Flushing Creek Long Term Control Plan, approved by DEC in 2017, will allocate another $92 million to construct infrastructure for seasonal disinfection of a large CSO outfall (TI-010) to meet required water quality standards during the recreational season. Additionally, the Flushing Bay Long Term Control Plan, approved by DEC in 2017, includes a $1.6 billion investment to build a 25-million-gallon CSO storage tunnel that will capture 50 percent of the total CSO volume entering Flushing Bay once completed. This plan builds on $69 million of related work, including infrastructure improvements and environmental dredging, and restoration.

DEP is also implementing the NYC Green Infrastructure Program that will benefit Flushing Creek's watershed. Green infrastructure is an approach to stormwater management that mimics and reinforces

the natural water cycle. It can include rain gardens, green roofs, permeable pavements, and other types of engineered systems. When it rains, green infrastructure captures stormwater, preventing it from entering the sewer system and potentially overwhelming wastewater treatment plants. In the Flushing Creek watershed, as of early 2021, DEP has constructed or is in the process of constructing 1,879 green infrastructure assets that will manage 246.3 million annual gallons of stormwater, the equivalent of greening 196 acres. These numbers will continue to grow as the Program matures. More information about DEP's NYC Green Infrastructure Program is available here.

These strategies represent a significant undertaking by DEP to improve water quality and support the ecological health of Flushing Creek and its surrounding watershed.

Revitalization of Brownfield Sites

Over the past three decades, DCP has engaged the Flushing community in a series of planning efforts intended to guide the development of Downtown Flushing. This work has highlighted the potential of Flushing Creek as an asset to the Flushing community for waterfront public access. A timeline of planning efforts for this area is included in the table below.

Land Use Planning Efforts Adjacent to Flushing Creek

1998	Downtown Flushing Rezoning Downtown Flushing Waterfront Access Plan
2010	Brownfield Opportunity Area (BOA) grant received by Flushing Willets Point Corona Local Development Corp. (FWCLDC) to conduct a BOA Nomination Planning Study (BOA Study) for the Flushing waterfront
2014-2017	DCP served as consultant for the FWCLDC to complete analyses and prepare a final report for the BOA Study. Key outcome was the creation of the Flushing Waterfront Revitalization Plan that provided land use recommendations to improve waterfront public access and pedestrian/vehicular circulation for significant sites along Flushing Creek. The plan is available here
2018	Designation of the Flushing Waterfront Revitalization BOA
2018-2020	Private waterfront property owners propose zoning updates, including the creation of the Special Flushing Waterfront District

This work began in the early 1990s and culminated in a 1998 rezoning to promote new opportunities for medium-density residential and commercial development. The rezoning also established a Waterfront Access Plan (WAP) on properties adjacent to Flushing Creek. The WAP modified public access requirements specified in waterfront zoning regulations in response to the unique characteristics of Flushing Creek to ensure that access to the creek would be coordinated and cohesive.

The first project to redevelop along the waterfront under the 1998 rezoning was Sky View Parc, located on a 14-acre brownfield site south of Roosevelt Avenue between College Point Boulevard and Flushing Creek. Sky View Parc is a mixed-use development that includes an 800,000 square-foot retail complex and approximately 800 residential units. The development includes a 29,000 square-foot shorefront public walkway along Flushing Creek with seating, lighting, trees, and other plantings. The shorefront

walkway opened in 2019, providing formal public access to Flushing Creek's waterfront for the first time.

Prior to redevelopment, the Sky View Parc site was owned by Con Edison and its predecessor company, where it was used from 1923 to the 1980s for electrical and gas utility operations. Con Edison and DEC entered into a Consent Order pursuant to the Brownfield Cleanup Program to remediate PCB-impacted sediments in Flushing Creek mudflats in 2008. Remediation activities were completed in 2018.

Flushing Waterfront Revitalization Plan

Although the 1998 rezoning began to facilitate the transformation of previously industrial sites along Flushing Creek, various environmental challenges (as illustrated by the Sky View Parc example) and difficult site conditions remained. In response, the Flushing Willets Point Corona Local Development Corporation (FWCLDC)— a nonprofit organization composed of private and public stakeholders— initiated a Brownfield Opportunity Area (BOA) nomination study in 2010. In 2014, the FWCLDC sought assistance from DCP to complete the BOA nomination report and prepare a master plan.

The nomination report, the *Flushing Waterfront Revitalization Plan*, was completed in 2017, and the 62-acre area of former industrial properties was designated a BOA site by New York State in 2018. The BOA designation provides tools for communities and property owners to remediate contaminated sites and return them to productive uses in a coordinated manner.

In 2018, a consortium of private property owners on the eastern side of Flushing Creek approached DCP about the creation of a new Special Flushing Waterfront District (SFWD). The SFWD was approved by New York City Council in December 2020. Key components of the SFWD include a) creating new public open space with walkways and amenities along the Flushing Creek waterfront; (b) establishing physical and visual public access connections to and along Flushing Creek; and (c) enhancing accessibility and circulation via a private street network. The health of Flushing Creek continued to be a community priority during the public review process for the SFWD.

Federal Navigation Channel Deauthorization

While facilitating public outreach and conducting research for the BOA study, DCP became aware that the presence of a portion of a federal navigation channel has prevented efforts to restore wetlands in Flushing Creek. DCP launched the Study to explore deauthorizing this portion of the federal navigation channel to expand the area wetland restoration could be undertaken.

Background: Navigation Channels

To support commercial navigation throughout the New York harbor, USACE maintains a network of federal navigation channels. Federal navigation channels have specific boundaries that are defined by U.S. Congress through legislation. The boundaries of these shipping channels are often invisible to most New Yorkers, but their existence is essential for our local, regional, and national economies.

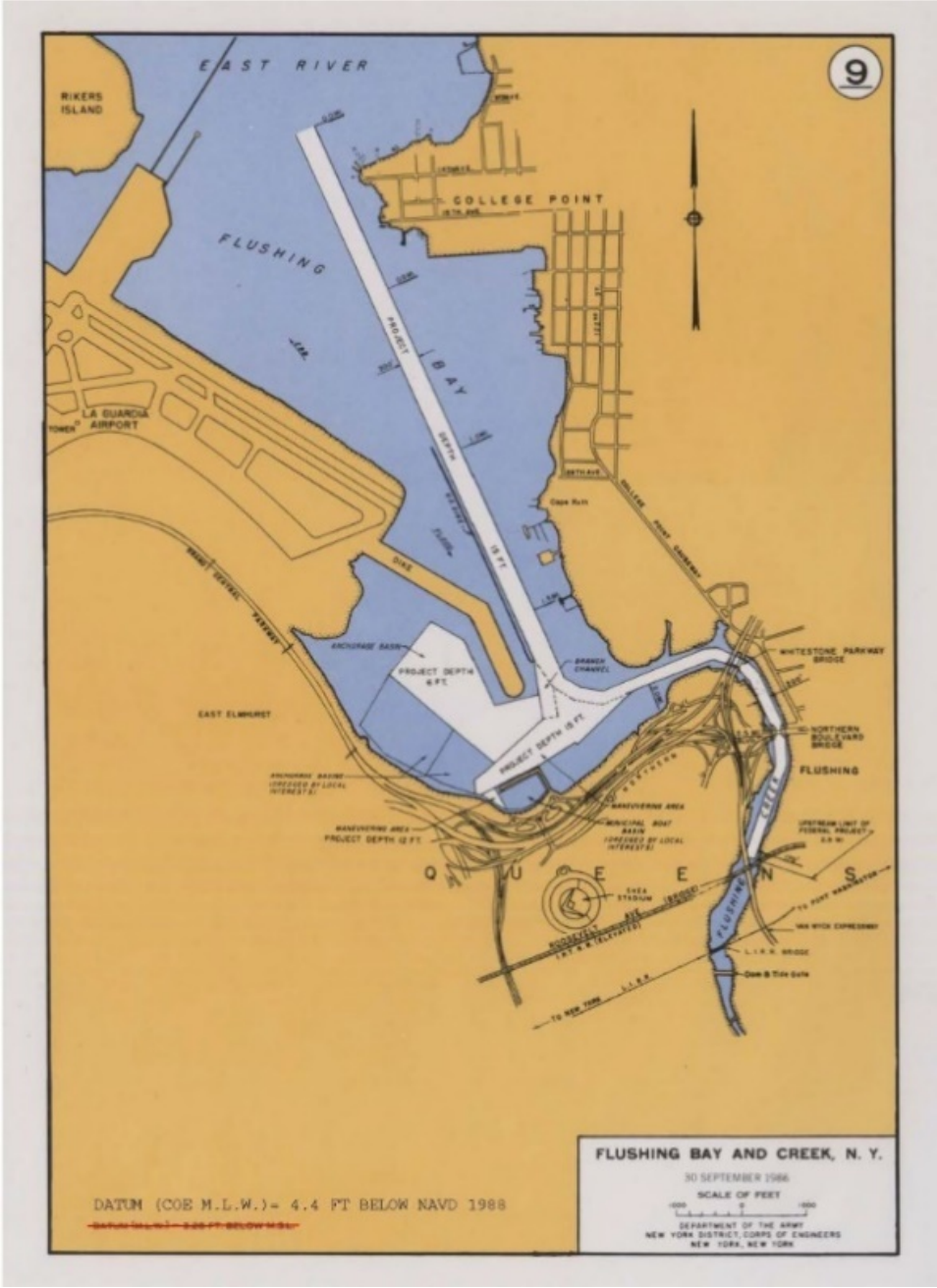
Congress also appropriates funding to USACE to dredge navigation channels. The process of sedimentation, when silt and sand washes into the channels, requires routine dredging to keep the channels deep enough for ships to pass through. Because dredging is very costly, the USACE prioritizes its dredging and maintenance activities based on the volume of goods moving through different channels.

The Flushing Bay and Flushing Creek federal navigation channel is one of these USACE projects. The channel was originally authorized in the Rivers and Harbors Act of 1902 and subsequently modified by the Rivers and Harbors Acts of 1935 and 1962. The channel extends from a point where Flushing Bay meets the East River, south to Roosevelt Avenue. The channel is delineated into four segments, including a bay channel, a creek channel, a maneuvering area, and an anchorage basin. Each segment has a defined boundary and an authorized depth that USACE can dredge to. The main Flushing Bay and Flushing Creek channel segments have an authorized depth of 15 feet to accommodate the draft of vessels.

Once a federal navigation channel is established by Congress, USACE will not grant permits for in-water activities that could interfere with the operation of the navigation channel for maritime purposes. This includes permits for wetland restoration projects.

A federal navigation channel designation generally exists in perpetuity, whether a channel is actively being used or not. In the case of Flushing Creek, DCP became aware that the portion of the navigation channel, generally south of Northern Boulevard, was inactive. DCP used the Study to explore and initiate the process for deauthorizing this unused segment of the navigation channel to enable wetlands restoration to take place near or within the area.

As discussed below, portions of Flushing Bay and Flushing Creek generally north of Northern Boulevard continue to be an important aspect of New York City's working waterfront. Because this area continues to be actively used for commercial navigation purposes, the Study did not pursue any changes to the navigation channel north of Northern Boulevard.



Deauthorization Process

Modifications to existing navigation channels require federal legislation. These projects are typically included as part of a larger federal bill called the Water Resources Development Act (WRDA). WRDA authorizes many of USACE's activities and appropriates funding for projects. Historically, WRDA bills are passed every two years. Before modifying a federal navigation channel, including deauthorization, the existing and predicted future uses of the project must be carefully analyzed. The process is as follows:

1. Undertake a study on the present and predicted future uses of the federal navigation channel.
2. Receive concurrence from USACE.
3. Introduce legislative language into the Water Resources Development Act.

DCP began discussing the prospects of deauthorizing a segment of the Flushing Bay and Flushing Creek federal navigation channel with community stakeholders, other public agencies, and elected officials beginning in spring 2019. Following positive feedback, DCP began the process to deauthorize a portion of the federal navigation channel in fall 2019.

Commercial Navigation Analysis

Before moving on step two of the deauthorization process, DCP sought to better understand the present and predicted future uses of the navigation channel. The purpose of this analysis was to ensure that the deauthorization would not hinder the use of Flushing Creek as a working waterway.

Flushing Bay and Flushing Creek are part NYC's 12 secondary waterways and they connect to six larger primary channels such as the East River and the Hudson River. Other secondary waterways include, Eastchester and Westchester Creeks in the Bronx, and Coney Island Creek in Brooklyn.

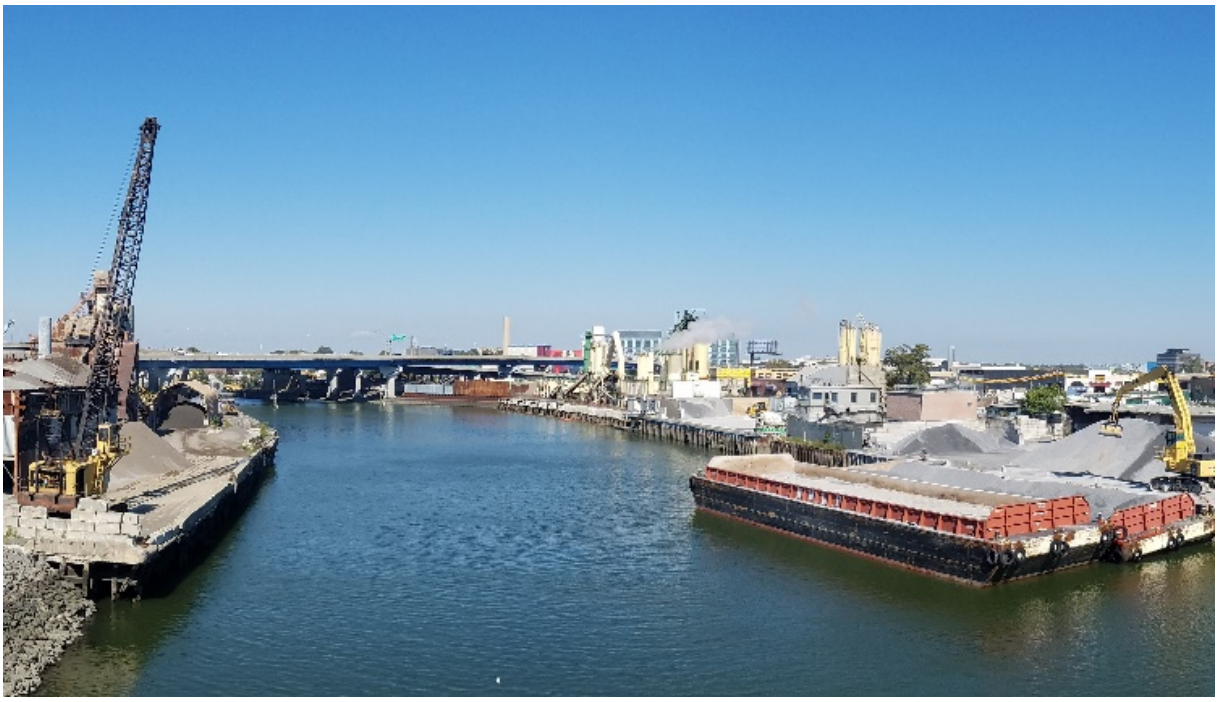
Secondary waterways are a critical component of the New York Harbor's port activities. They allow maritime industrial businesses to be located closer to their customers. Moving freight by water can help reduce the number of truck trips (and associated carbon emissions) throughout the city. In NYC, the main commodities that move through secondary waterways are aggregate (ex: crushed stone, sand, and gravel), fuel, and recyclables and scrap metal.

Aggregate makes up the largest share of commodities transported through Flushing Bay and Flushing Creek. Of the estimated 24 million tons of products transported in Flushing Bay and Flushing Creek over the past 16 years of available data, sand and gravel products accounted for approximately 16 million tons. Cement and concrete accounted for another nearly six million tons. Combined, this is over 90 percent of the total tonnage in Flushing Bay and Flushing Creek. Other commodities include distillate fuel oil and waste and scrap metal.

Despite the historic importance of secondary waterways to the city's economy, some of these areas have experienced steep declines in maritime activity. Much of this is the result of global changes in the economy over the past several decades, but regulatory and financial constraints can also affect the level of maritime activity. The USACE prioritizes dredging based on the tonnage of goods moved through a waterway and uses a minimum threshold of one million tons per year to determine whether to pursue a dredging project or not. Without dredging, navigation channels can shallow due to sedimentation, which in turn reduces the viability of a secondary waterway for maritime purposes.

North of Northern Boulevard, the Flushing Bay and Flushing Creek navigation channel is actively used for maritime purposes. This area of the federal navigation channel, from the mouth of Flushing Creek to Northern Boulevard bridge, was most recently dredged in 2015. USACE removed approximately 135,000 cubic yards of sediment from the channel.

Due to the active use of the navigation channel north of Northern Boulevard, this area was excluded from any consideration for deauthorization. One parcel immediately south of Northern Boulevard, 35-20 College Point Boulevard, was also excluded from analysis as it falls within a manufacturing district outside of the Special Flushing Waterfront District boundary, and therefore could use the navigation channel in the future.



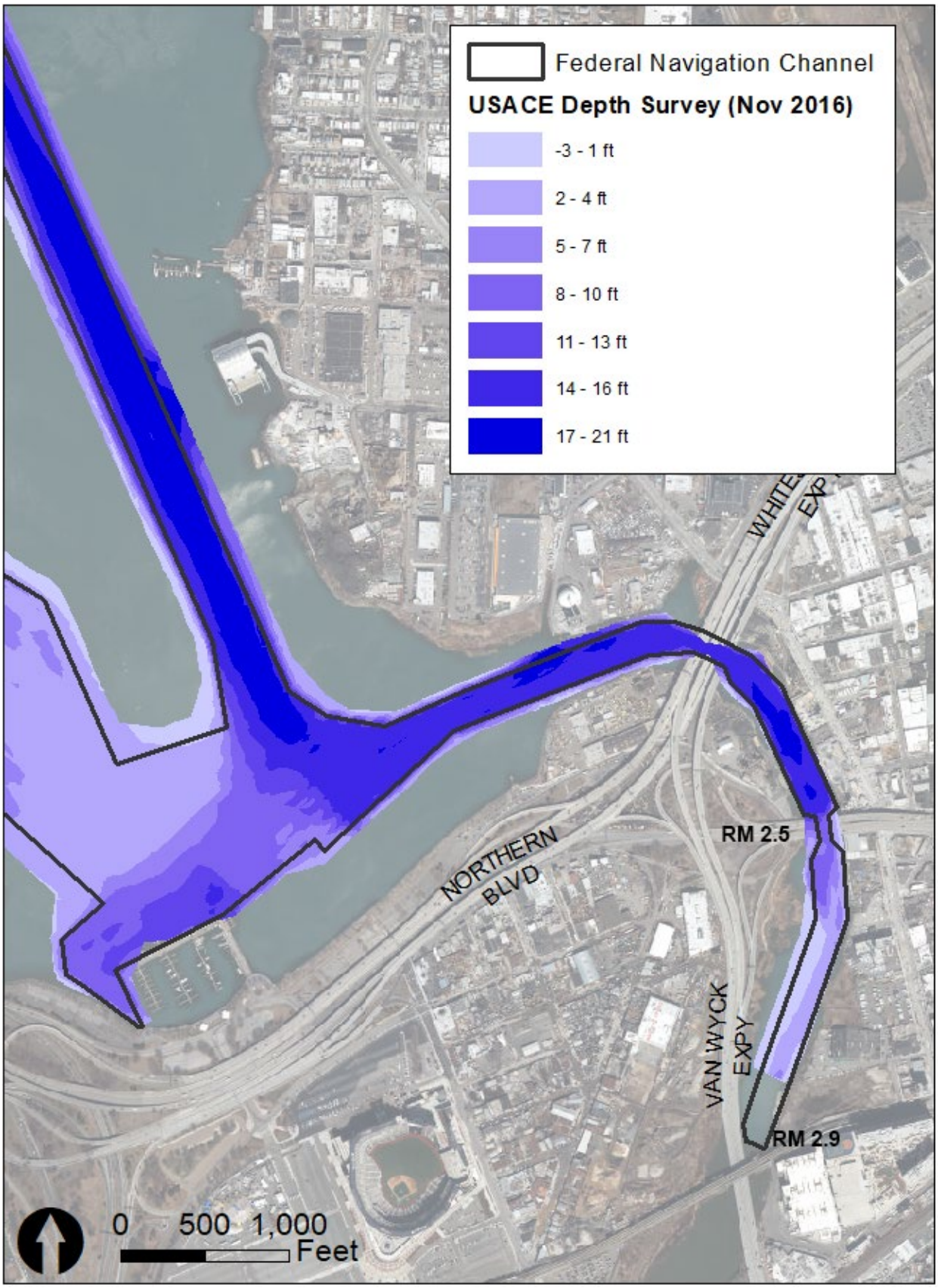
Maritime activity north of Northern Boulevard

To better understand the present and predicted future uses of the navigation channel in the remaining segment between Northern Boulevard and Roosevelt Avenue, DCP undertook an analysis based on USACE data and issued surveys to the property owners along Flushing Creek. The findings of this analysis, Flushing Creek Commercial Navigation Analysis, were submitted to USACE in January 2020. The following sections summarize the findings of this analysis.

Navigation and Maintenance Dredging History

The Flushing Bay and Flushing Creek navigation channel is being used for maritime purposes between Northern Boulevard and the mouth of Flushing Creek. USACE records indicate that maintenance dredging was performed in Flushing Creek in 1992 but are not specific about which segments of the creek were dredged. In 2003, USACE undertook maintenance dredging between Northern Boulevard and the mouth of Flushing Creek at Flushing Bay. In 2015, maintenance dredging was again performed north of Northern Boulevard, removing approximately 135,000 cubic yards of sediment. Therefore, based on USACE records, the section of the navigation channel between Northern Boulevard to the channel's terminus at Roosevelt Avenue has not been dredged since 1992 or earlier.

Depth survey data obtained from USACE Hydrographic Surveys indicates that the navigation channel shallows rapidly below Northern Boulevard, compared to the rest of the bay and creek channel segments. Future maintenance dredging by USACE in the area south of Northern Boulevard would require economic justification of project costs to obtain federal funding.


Federal Navigation Channel
USACE Depth Survey (Nov 2016)
-3 - 1 ft
2 - 4 ft
5 - 7 ft
8 - 10 ft
11 - 13 ft
14 - 16 ft
17 - 21 ft
NORTHERN BLVD
RM 2.5
VAN WYCK EXPY
RM 2.9
0 500 1,000
Feet

Berth Analysis

To better understand potential uses of the navigation channel, DCP conducted a berth-by-berth analysis. DCP obtained Ports and Waterways Facilities data from April 2019 from the USACE Waterborne Commerce Statistics Center. Twelve port facilities were identified in Flushing Bay and Flushing Creek. Of these twelve facilities, only one, "Willets Point Asphalt Corp Wharf", was listed in a location south of Northern Boulevard.

Willets Point Asphalt Corp sold the 35-32 College Point Blvd property to TDC Development and Construction Corp. on January 8th, 2008 and relocated to 32-02 College Point Blvd (north of Northern Boulevard), where the company currently operates an asphalt plant. 35-32 College Point Blvd is now owned by the F&T group. This property is within the proposed Special Flushing Waterfront District and is anticipated to be redeveloped into a mixed-use commercial and residential building.

Property Owner Surveys

In addition to the berth analysis, DCP issued a written survey to all property owners within the proposed deauthorization area to further assess any potential uses of the navigation channel. The survey included three questions:

1. How are you currently using the Flushing Bay and Flushing Creek federal navigation channel?
2. Are there any physical constraints that limit your existing maritime operations? If so, please include specific information about the vessels you are bringing in, including size, draft, and the name of the vessel.
3. How do you expect to utilize the federal navigation channel in the future?
    a. How would you operate if conditions stayed the same as they are now with current bathymetry and no maintenance?
    b. How would you operate if the channel were deeper and/or maintained at its authorized depth?
    c. Are there facility/infrastructure changes, operational modifications or other investments you would need to make in order to operate in a deeper channel? If so, how likely is it that you will be able to make these investments in the short-term (2-5 years)? In the longer term (5+ years)?

Survey responses indicated that none of the property owners adjacent to Flushing Creek within the proposed deauthorization area are currently using the navigation channel or have plans to use it in the future. Several responses indicated that if New York City were to ever seek to provide ferry service at the creek, they would be supportive of that use.

Proceeding with Deauthorization

Based on this analysis, DCP determined that maritime use south of 35-20 College Point Boulevard to the channel's southern extent at Roosevelt Avenue does not exist today and is highly unlikely to in the future. This conclusion was confirmed by surveys to property owners along the eastern side of Flushing Creek, none of whom indicated any present or future predicted use of the navigation channel for maritime purposes. Only one berth (35-32 College Point Blvd) was identified in this area, and it is no longer being actively used for maritime purposes as the user relocated their operation and sold the site in 2008. Land uses on the eastern side of Flushing Creek are expected to continue transitioning from

vacant, formerly industrial uses to mixed-use residential and commercial development with waterfront public access.

USACE concurred with DCP's Flushing Creek Commercial Navigation Analysis in March 2020. This concurrence paved the way to deauthorize the segment of the federal navigation channel generally south of Northern Boulevard. In spring 2020, DCP drafted legislative language and coordinated with the staff of elected officials to introduce the text into WRDA. The deauthorization was successfully introduced into the draft bill, and WRDA 2020 was signed into law in December 2020.

Expanding the Restoration Potential of Flushing Creek

USACE recently completed a long-running investigation of Flushing Creek's restoration potential. This work was initiated in 1999 with the Flushing Bay and Creek Feasibility Study, which was later integrated into a broader study called the Hudson Raritan Estuary (HRE) Ecosystem Restoration Project. The HRE project commenced in 2001 and is focused on restoring habitat across the entire harbor estuary. The HRE study was initiated in coordination with the Port Authority of New York and New Jersey and was later integrated with five other restoration studies in the harbor partnering with 10 local study and construction sponsors. Flushing Bay and Flushing Creek were included in this study with DEP as the local sponsor.

As part of the HRE Restoration Feasibility Study, the USACE and the Port Authority of New York and New Jersey first prepared the HRE Comprehensive Restoration Plan in coordination with regional partners which identified 296 restoration opportunities throughout the estuary. The HRE Feasibility Study then screened the restoration opportunities, investigated 33 sites, and ultimately recommended 20 sites, including Flushing Creek, based on the potential ecological benefits, monetary costs, and other ecological and social factors.

To determine the best restoration plan for each site, USACE analyzed habitat, water and sediment quality, and a host of other factors, to create and narrow down a set of restoration options. Seventeen different restoration alternatives were considered for Flushing Creek with different variations of dredging, capping, and restoration.

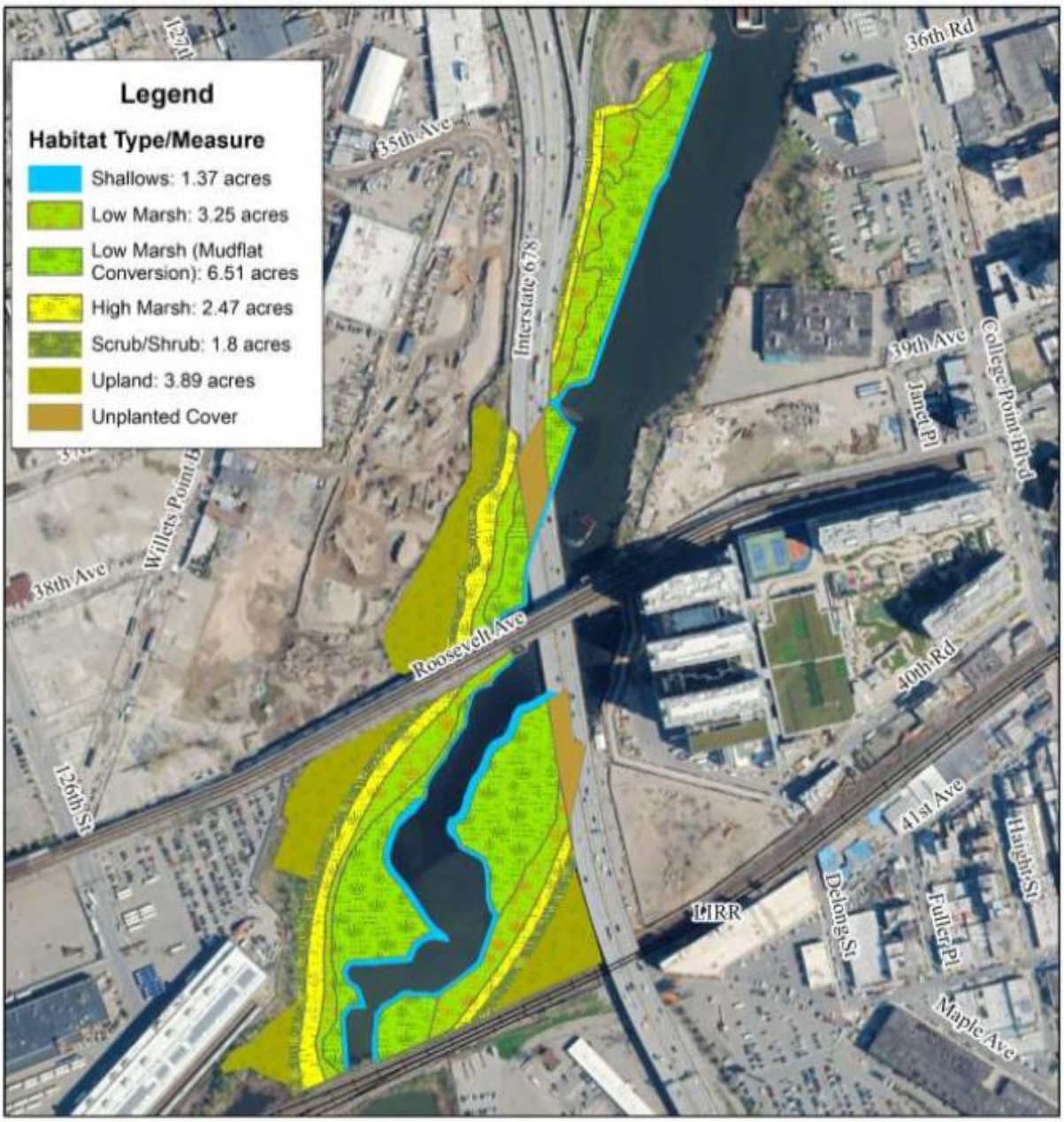
Following years of detailed analysis, the USACE finalized the Feasibility Report and Environmental Assessment in April 2020 and the Chief of Engineers Report was signed in May 2020 recommending 20 individual project locations eligible for federal authorization, including Flushing Creek. U.S. Congress authorized this restoration effort for construction through WRDA in December 2020. The USACE and DEP will initiate the Preconstruction Engineering and Design Phase to restore Flushing Creek upon receipt of federal appropriations.

Restoration Site Plan for Flushing Creek

USACE's final recommended plan for Flushing Creek includes a range of habitat restoration measures extending between the Long Island Rail Road tracks and the Northern Boulevard Bridge.

To implement this plan, USACE will regrade existing areas of marsh that are dominated by the invasive common reed, as well as convert existing mudflat areas into low marsh with native plantings. These mudflat areas are a source of hydrogen sulfide gas, which has been attributed to nuisance odors by nearby residents. In the transition zone between the low marsh areas and upland forest, USACE will restore high marsh and scrub areas. Finally, an existing upland forest will be restored to a more

functional and diverse system. In total, USACE's plan will restore approximately 19 acres of habitat. This project will provide new habitat for a range of species and complement DEP's efforts to improve water quality in Flushing Creek.



As can be seen in the current site plan on the previous page, the footprint of the proposed restoration area is limited by the presence of the Flushing Bay and Flushing Creek Federal Navigation Channel. The deauthorization of the navigation channel in this area in December 2020 will enable USACE and/or another public agency to expand restoration efforts further into Flushing Creek's tidal mudflats as either part of the HRE or as a future project.

Moving Forward

Removing the jurisdictional barrier of the navigation channel is part of a broader effort to improve the ecological health of Flushing Creek. Like other secondary waterways in New York City, Flushing Creek has been significantly altered throughout its history. Wetland loss, legacy pollution, and the incredible complexity and cost of managing stormwater and restoring natural areas in a dense urban area means that it will take many years to realize the planned improvements to Flushing Creek. Improving the health of the creek requires different management approaches, ranging from reducing CSO to building green infrastructure to restoring wetlands. Taken together, these strategies will strengthen the health of Flushing Creek and ensure its value as an asset to the Flushing community, now and into the future.

YOUNG NIAN GROUP LLC
A Subsidiary of Zhonggeng Group

12/13/2019

Cory Mann
Waterfront Planner
Waterfront & Open Space Division
NYC Department of City Planning
120 Broadway
New York, NY 10271

Re: Flushing Bay & Creek Federal Navigation Channel

1. Please specify which property or properties you own on Flushing Creek. Include address or block & lot numbers.
   131 -01 39th Ave Flushing NY 11354 ; Block# 4963 ; Lot# 65
2. How are you currently using the Flushing Bay & Creek Federal Navigation Channel?
   We are not currently using the Flushing Bay & Creek Federal Navigation Channel.
3. Are there any physical constraints that limit your existing maritime operations? If so, please include specific information about the vessels you are bringing in, including size, draft, and the name of the vessel.
   We do not have existing maritime operations therefore no physical constraints at this time.
4. How do you expect to utilize the Federal Navigation Channel for maritime purposes in the future?
   At this time, we do not expect to utilize the channel for maritime purposes. If New York City were to ever seek to provide a ferry service at the creek we would be interested in supporting such use.

    a. How would you operate if conditions stayed the same as they are now with current bathymetry and no maintenance? **N/A.**
    b. How would you operate if the channel were deeper and/or maintained at its authorized depth? **N/A.**
    c. Are there facility/infrastructure changes, operational modifications or other investments you would need to make in order to operate in a deeper channel? If so, how likely is it that you will be able to make these investments in the short-term (2-5 years)? In the longer term (5+ years)? **N/A.**

Sincerely,

John Liang
President

I hereby accept the above captioned position.

369 Lexington Avenue, 15th Floor, New York, NY 10017 (917) 795-8556

THREE FULTON SQUARE LLC
c/o F&T Group
136-20 38th Avenue, 12th Floor
Flushing, NY 11354

December 13, 2019

Cory Mann
Waterfront Planner
Waterfront & Open Space Division
NYC Department of City Planning
120 Broadway
New York, NY 10271

Re: Flushing Bay & Creek Federal Navigation Channel

Dear Mr. Mann:

At your request, Three Fulton Square LLC submits the following responses to the below questions. If the question is not relevant to the present and planned future use of the Federal Navigation Channel, you have directed us to indicate so with "N/A".

1. **Please specify which property or properties you own on Flushing Creek. Include address or block & lot numbers.**
   RESPONSE: Three Fulton Square LLC owns 37-02 College Point Boulevard, Flushing, NY a/k/a Block 4963, Lot 85 on the tax map of the City of New York, County of Queens

2. **How are you currently using the Flushing Bay & Creek Federal Navigation Channel?**
   RESPONSE: We are not currently using the Flushing Bay & Creek Federal Navigation Channel.

3. **Are there any physical constraints that limit your existing maritime operations? If so, please include specific information about the vessels you are bringing in, including size, draft, and the name of the vessel.**
   RESPONSE: We do not have existing maritime operations therefore no physical constraints at this time.

4. **How do you expect to utilize the Federal Navigation Channel for maritime purposes in the future?**
   RESPONSE: At this time we do not expect to utilize the channel for maritime purposes. If New York City were to ever seek to provide a ferry service at the creek we would be interested in supporting such use.
   a. **How would you operate if conditions stayed the same as they are now with current bathymetry and no maintenance?**
      RESPONSE: N/A

b. **How would you operate if the channel were deeper and/or maintained at its authorized depth?**
RESPONSE: N/A

c. **Are there facility/infrastructure changes, operational modifications or other investments you would need to make in order to operate in a deeper channel? If so, how likely is it that you will be able to make these investments in the short-term (2-5 years)? In the longer term (5+ years)?**
RESPONSE: N/A

[Remainder of page intentionally left blank; signature follows.]

Sincerely,

THREE FULTON SQUARE LLC

By: _____

Name: Sunny Chiu

Title: Authorized Signatory

December 17, 2019

Jiashu Xu
Managing Member
Janet Place Management LLC
112-15 Northern Blvd CF2
Corona, NY 11368
718-397-8800

Cory Mann
Waterfront Planner
Waterfront & Open Space Division
NYC Department of City Planning
120 Broadway
New York, NY 10271

Re: Flushing Bay & Creek Federal Navigation Channel

Body of letter- please include responses to the below Questions. If the question is not relevant to the present and planned future use of the Federal Navigation Channel, please indicate so with "N/A".

1. **Please specify which property or properties you own on Flushing Creek. Include address or block & lot numbers.** Block 4963, Lots 7, 8 & 9

2. **How are you currently using the Flushing Bay & Creek Federal Navigation Channel?** No we are not currently using the Flushing Bay & Creek Federal Navigation Channel

3. **Are there any physical constraints that limit your existing maritime operations? If so, please include specific information about the vessels you are bringing in, including size, draft, and the name of the vessel.** We do not have any existing maritime operations

4. **How do you expect to utilize the Federal Navigation Channel for maritime purposes in the future?** Currently we do not expect to utilize the Federal Navigation Channel for maritime purposes in the future
    a. **How would you operate if conditions stayed the same as they are now with current bathymetry and no maintenance?** N/A
    b. **How would you operate if the channel were deeper and/or maintained at its authorized depth?** N/A
    c. **Are there facility/infrastructure changes, operational modifications or other investments you would need to make in order to operate in a deeper channel? If so, how likely is it that you will be able to make these investments in the short-term (2-5 years)? In the longer term (5+ years)?** N/A

Sincerely,

Jiashu Xu

3532 CPB LLC
c/o F&T Group
136-20 38th Avenue, 12th Floor
Flushing, NY 11354

December 13, 2019

Cory Mann
Waterfront Planner
Waterfront & Open Space Division
NYC Department of City Planning
120 Broadway
New York, NY 10271

Re: Flushing Bay & Creek Federal Navigation Channel

Dear Mr. Mann:

At your request, 3532 CPB LLC submits the following responses to the below questions. If the question is not relevant to the present and planned future use of the Federal Navigation Channel, you have directed us to indicate so with "N/A".

1. **Please specify which property or properties you own on Flushing Creek. Include address or block & lot numbers.**
   RESPONSE: 3532 CPB LLC owns 35-32 and 35-50l College Point Boulevard, Flushing, NY a/k/a Block 4963, Lots 212 and 249 on the tax map of the City of New York, County of Queens

2. **How are you currently using the Flushing Bay & Creek Federal Navigation Channel?**
   RESPONSE: We are not currently using the Flushing Bay & Creek Federal Navigation Channel.

3. **Are there any physical constraints that limit your existing maritime operations? If so, please include specific information about the vessels you are bringing in, including size, draft, and the name of the vessel.**
   RESPONSE: We do not have existing maritime operations therefore no physical constraints at this time.

4. **How do you expect to utilize the Federal Navigation Channel for maritime purposes in the future?**
   RESPONSE: At this time we do not expect to utilize the channel for maritime purposes. If New York City were to ever seek to provide a ferry service at the creek we would be interested in supporting such use.
   a. **How would you operate if conditions stayed the same as they are now with current bathymetry and no maintenance?**
      RESPONSE: N/A

b. **How would you operate if the channel were deeper and/or maintained at its authorized depth?**
RESPONSE: N/A

c. **Are there facility/infrastructure changes, operational modifications or other investments you would need to make in order to operate in a deeper channel? If so, how likely is it that you will be able to make these investments in the short-term (2-5 years)? In the longer term (5+ years)?**
RESPONSE: N/A

[Remainder of page intentionally left blank; signature follows.]

Sincerely,

3532 CPB LLC

By: _____

Name: Sunny Chiu

Title: Authorized Signatory