March 28, 2023

Mr. Bryce W. Wisemiller
U.S. Army Corps of Engineers New York District,
Programs & Projects Management, Planning Division
Jacob K. Javits Federal Building, Room 17-401
26 Federal Plaza
New York, New York 10278

Subject: New York-New Jersey Harbor and Tributaries Study Draft Integrated Feasibility and Tier 1 Environmental Impact Statement

Dear Mr. Wisemiller:

Thank you for the opportunity to submit comments on the U.S. Army Corps of Engineers (USACE) New York New Jersey Harbor and Tributaries Feasibility Study (NYNJHATS) and Draft Tier 1 Environmental Impact Statement (Draft Report). I am submitting these comments on behalf of the Jamaica Bay-Rockaway Parks Conservancy (JBRPC). We are a community○-based nonprofit public-private partnership with city, state, and national park agencies dedicated to improving 10,000+ acres of public parklands around Jamaica Bay and the Rockaway peninsula and the 26-square-mile complex of marsh islands and fringe tidal wetlands within Jamaica Bay. We serve the 3 million New Yorkers who live within the watershed and visitors from near and far. JBRPC is committed to the restoration of wetlands and natural areas, improved public access to the unique natural and cultural assets in our region, robust opportunities for recreation and educational activities, and the long-term sustainability and stewardship of public parklands.

Through our work expanding public access to parks, supporting volunteer stewardship, and increasing educational and recreational opportunities, JBRPC knows Jamaica Bay well. Jamaica Bay is at the heart of the climate crisis in New York City. Surrounding frontline communities were extensively flooded during Superstorm Sandy. The Bay is home to over 1 million people, with low-lying areas that experience regular flooding during high tide cycles. Jamaica Bay neighborhoods experience poor air quality, erosion, lack of waterfront access, and limited opportunities for employment, recreation and education–significant markers of extreme environmental vulnerability given future sea level rise.

Despite intense urbanization, the Bay's ecosystem is a unique and vitally important natural system in the NY-NJ Harbor Estuary, as well as one of the largest coastal wetland ecosystems in the state. More than 325 bird species – or 20 percent of the Nation's birds – live in Jamaica Bay or rely on it as a stopover point along the Atlantic Flyway migration route. Jamaica Bay also supports

91 species of fish, and many other reptiles, amphibians, mammals, and plants, including ten state- or federally listed species.

However important, the Bay's ecology has been threatened by a long history of land use decisions, declining water quality, and damage to rich ecosystems and vulnerable habitats. Over 2,000 acres of marsh islands have disappeared from Jamaica Bay since 1924, leaving local neighborhoods unprotected from storm surge and sea level rise. It's been estimated that the marsh islands, if left alone, would vanish completely by 2025.

Against this backdrop, agencies and community groups have come together to create a more resilient Jamaica Bay. The Bay has been the site of several nature-based restoration projects led by USACE and the NY Department of Environmental Conservation. These projects have restored approximately 180-acres of marsh and re-created several badly degraded marsh islands. These restored islands have reduced waves and erosion, created habitat, and improved water quality.

In this context, while we strongly support NYNJHATS' goal of coastal storm risk management (CSRM) along the densely populated shoreline of Jamaica Bay and the Rockaways, we are deeply concerned about the potential impacts of the Tentatively Selected Plan (TSP) on the parks and communities where we work. We also see a strong need to incorporate natural and nature-based solutions (NNBS) to risk while enhancing our natural environment and improving public access to the unparalleled resources in our area. In support of our mission, we are providing the following comments pertaining to the Draft Report alternatives and their potential impacts on the Jamaica Bay Planning Region. The comments detail our concerns, questions, and recommendations for USACE to create new alternatives and additional public review opportunities.

Comment #1: Provide additional analysis on the impacts and effectiveness of the Jamaica Bay storm surge barrier and shore-based features included in the TSP, with an emphasis on the water quality impacts of CSO events.

The TSP presents a combination of CSRM measures for the Jamaica Bay Planning Region, including storm surge barriers and complementary shore-based measures such as floodwalls, levees and buried seawalls/dunes. The proposed Jamaica Bay storm surge barrier is a central element of the plan, and appears to be the single most expensive feature proposed in the TSP. However, its impacts and effectiveness have not yet been sufficiently studied or modeled by USACE, as acknowledged in the TSP and NYNJHATS community meetings over the last few months.

We're concerned that USACE would select an alternative without sufficient data collection and modeling of its proposed features, and even more concerned that a TSP and Tier 1 EIS was released for public comment with incomplete analysis and modeling. We don't believe USACE can effectively select a plan without having done this research, and we don't believe the public can effectively comment on the proposed solutions without sufficient modeling and analysis.

As the Jamaica Bay gate system would directly and indirectly impact natural, recreational, and cultural resources across the Bay, we find that this analysis should more directly assess the natural resource impacts of the Jamaica Bay storm surge barrier upon completion. Further analysis and modeling must better address impacts in three specific areas.

First and foremost, we demand more analysis on water quality impacts of the Jamaica Bay storm surge barrier. We expect that the barrier will impede the natural flow of water during tide cycles

both during closures and normal operations. Natural tidal flow is absolutely essential to the flushing of pollutants from Jamaica Bay, which is already threatened by a combination of sewage inputs, landfill leaching, industrial activity, and runoff from roads and urban development. The Bay currently receives 240–340 million gallons of treated sewage each day, including heavy metals and other contaminants not eliminated by water treatment facilities. Furthermore, we expect that closures will completely prevent the flushing of pollutants at critical times, particularly as storm-driven rainfall overwhelms sewer system capacity, leading to combined sewer overflow (CSO) of untreated effluent with high pathogen and nutrient concentrations. While we understand that the rerouting sewer infrastructure may mitigate this issue, we request a more thorough analysis of the barrier's impact on back-up and ponding of CSO and runoff in Jamaica Bay.

In addition to water quality impacts, additional analysis should consider the impacts of the storm surge barrier on sedimentation; Jamaica Bay is a sediment-starved environment, and its marsh islands are replenished only stochastically by storm events, so it is possible that the gate would exacerbate known marsh loss.

Finally, further analysis should consider the impact of the barrier on migration patterns and movement of Jamaica Bay's hydrologically transported organisms, including larvae and small fish, as well as the resident and migratory turtles, birds, and mammals that depend on them for food. For example, Jamaica Bay is home to globally significant populations of menhaden, called "the most important fish in the sea." It is unknown how construction and operation of the storm surge barrier and other shore-based features will impact this important fishery.

Beyond the barrier's operations, additional information is required on the impacts of its proposed 14-year construction phase, particularly regarding air quality impacts. More comprehensive modeling in each of these areas would help inform mitigation efforts that could be required in accordance with the extent of anticipated impacts on Jamaica Bay.

Comment #2: Create new alternatives that center NNBS as effective ways to manage coastal storm risk that simultaneously provide myriad co-benefits

In reviewing the Draft Report, our primary concern is that the TSP/Alternative 3B does not yet incorporate NNBS[1], signaling USACE's overreliance on hard ("gray") infrastructure, counter to its own Engineering With Nature Initiative that aims to "use natural processes to maximum benefit, thereby reducing demands on limited resources, minimizing the environmental footprint of projects, and enhancing the quality of project benefits," among other key elements.[2]

As outlined by the Federal Emergency Management Agency (FEMA), NNBS reduce flood risk and protect coastal property, combat climate change, improve water quality, restore and protect wetlands and stabilize shorelines.[3] They reduce urban heat and add vital open space for recreational enjoyment and myriad health and social benefits. NNBS also offer the most

[1] USACE uses the terminology natural and nature-based "features" (NNBF) in the Draft Report. JBRPC uses the term natural and nature-based "solutions" (NNBS) in keeping with FEMA, the World Bank, and other entities in reference to a holistic action-oriented approach to applying natural features or processes into the build environment to reduce coastal storm risk, promote adaptation and resilience, and address climate change, human health, food and water security while providing human well-being and biodiversity benefits.

[2] *About Engineering with Nature*. https://ewn.erdc.dren.mil/?page_id=7. Accessed 28 March 2023.

[3] *FEMA Nature-Based Solutions Homepage*. https://www.fema.gov/emergency-managers/risk-management/nature-based-solutions. Accessed 28 March 2023.

sustainable long-term, cost-effective solution to reducing coastal storm risk when the full value of land, water, air, and other natural assets is considered, as outlined in the National Strategy to Develop Statistics for Environmental-Economic Decisions.[4] A related ongoing effort to understand and quantify the full value of "economic, health, climate, environmental justice, and national security benefits" is part of the first U.S. National Nature Assessment, in which USACE is participating.[5]

Further, centering NNBS will directly support communities and build equitable and sustainable futures for places and people by increasing workforce capacity for designing and building NNBS. In this way, NNBS can create new family-sustaining nature-based jobs, meeting one of five pillars in the Biden-Harris Administration's report, Opportunities to Accelerate Nature-Based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, and Prosperity.[6] JBRPC highly values this aspect of NNBS. Through our recently launched Wetlands Fellowship program, we are building job skills related to wetlands maintenance, monitoring, and restoration while caring for Jamaica Bay's most productive ecosystems.

The absence of NNBS in the Draft Report is a grave missed opportunity to meet these federal priorities and satisfy President Biden's executive order to enlist nature to address the climate crisis. While USACE has indicated that the Final Tier 1 Environmental Impact Statement (EIS) and subsequent Tier 2 EIS will include NNBS, it is inappropriate for a Draft EIS to identify an entire portion of its content as missing before going out to the public. With this omission, we feel strongly that USACE has not considered the full suite of options available in the Jamaica Bay Planning Region , and that new alternatives need to be developed and presented to public stakeholders before the completion of the Final Integrated Feasibility Report and Tier 1 EIS and well before the completion of the Chief of Engineer's Report.

To ensure a meaningful public engagement process, the public must be able to review details of the proposed NNBS. To that end, we call on USACE to identify and investigate specific NNBS types and locations now, ideally through a Supplemental Tier 1 EIS. These NNBS should specifically address new and existing plans for the restoration of Jamaica Bay's tidal fringe wetlands and marsh islands in advance of the shore-based features proposed in the TSP. To conduct this analysis, we ask USACE to create and prioritize additional alternatives that rely on NNBS over hard structures as a primary means of CSRM. We ask that these additional alternatives also consider floodproofing, community-led optional buy-out programs, and additional smaller shore-based features that can help manage risk from more frequent storms and tidal flooding events on a shorter timeframe than the proposed schedule for TSP completion in 2044.

NNBS have previously served as the standard USACE-led response to coastal vulnerabilities in Jamaica Bay with full support and participation of the local community and governing agencies, including the National Park Service. These innovative responses have included strategic marsh replenishment and the restoration of the Yellow Bar, Rulers Bar, and Black Wall marsh islands. Other complementary efforts to implement a "green necklace" of NNBS include the recently

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[4] Office of Science and Technology Policy. *National Strategy to Develop Statistics for Environmental-Economic Decisions.* January 2023.

[5] *Framing the National Nature Assessment: A Notice by the Science and Technology Policy Office*. 87 Fed. Reg. 65622 (31 October 2022)

[6] White House Council on Environmental Quality, Office of Domestic Climate Policy, and Office of Science and Technology. Opportunities to Accelerate Nature-based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, & Prosperity: A Report to the National Climate Task Force. November 2022.

completed West Pond Living Shoreline at the Jamaica Bay Wildlife Refuge. Together these projects offer a layered approach to storm risk management combining ecological enhancement and shoreline protection from high frequency storms. Researchers are studying the effectiveness of NNBS in the region with promising results; our partners at the Science and Resilience Institute at Jamaica Bay, for example, are currently monitoring the West Pond Living Shoreline to support adaptive management and inform future NNBS efforts around Jamaica Bay and beyond.

USACE itself recognized the local value of NNBS by studying their CSRM benefits in the 2020 Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study Final Integrated Feasibility Report and Environmental Assessment.[7] We urge USACE to continue and expand this work by acknowledging, accelerating, and integrating current USACE marsh restoration projects into the Final Integrated Feasibility Report/Tier 1 EIS. By prioritizing the completion of critical NNBS at Duck Point, Pumpkin Patch, Spring Creek Park, Elder's East and Elder's West, USACE will demonstrate a commitment to immediate and effective action that disrupts the cycle of marsh decline and provides a lacework of economic benefits to the community including fair and decent workforce opportunities. Furthermore, these benefits do not come at a cost to CSRM; research has indicated that nature-based measures can yield storm risk reductions comparable to hard structures for Jamaica Bay. These proposed investments in NNBS will enhance and restore natural defenses while delivering a range of social and ecosystem services at a fraction of the cost of engineered solutions.

Referring to past marsh island restorations, USACE published an article on its website on March 2, 2023 describing its leadership in natural solutions for coastal flooding in New York and New Jersey, stating that, "a sand-replenished beach with dunes can prevent elevated ocean waters, caused by storms, from inundating coastal communities."[8] The article goes on to cite a report released by the U.S. Army Engineer Research and Development Center states, "USACE restoration of a Jamaica Bay marsh island in 2011 likely mitigated storm surge during Hurricane Sandy the following year and helped to protect the community. The Cross Bay Bridge – which is near this island – was not damaged due to Sandy and was only temporarily closed. In contrast, bridges east of this structure suffered substantial damage and were closed until the following year. Stakeholders attribute the bridge's survival to the nearby restored marsh island."

If "the disappearing marshes pose a threat to wildlife and coastal communities," as the USACE article states, then restoring the marsh islands and fringe wetlands around Jamaica Bay would reduce or eliminate threats to wildlife and coastal communities. Restoring Jamaica Bay with NNBS is a proven response to a 100-year storm, and irrefutably provides myriad co-benefits in the form of public health and well-being, outdoor recreational and educational opportunities, positive economic impact and jobs for local communities, and conservation of biodiversity and protection for multiple threatened species.

In contrast, the hard measures proposed in Alternative 3B are not proven to achieve their intended use; have not been demonstrated to "cause no harm" to local communities, wildlife habitats, or ecological processes; and have not been sufficiently modeled to include broader impacts beyond simple cost-benefit analysis between the proposed alternatives.

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[7] *Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study*. New York District, U.S. Army Corps of Engineers. April 2020. p. 4-58.

[8] Castagna, JoAnne. U.S. Army Corps of Engineers, New York District. *U.S. Army Corps of Engineers leads the way in natural solutions for coastal flooding.* 2 March 2023.

Especially in light of USACE leadership in NNBS, it is insufficient for USACE to present the Draft Report and TSP, with an estimated $52 billion price tag, without considering and including NNBS now. With this omission, we feel strongly that USACE has not considered the full suite of options available in our region and should not have gone out to the public incomplete.

We call on USACE to create new alternatives that center NNBS and include integration of existing USACE plans for Jamaica Bay marsh island restoration, as well as the development of new plans to replenish and expand fringe tidal wetlands. In this way, USACE can support a robust layered approach to CSRM and provision of community benefits. We call on USACE to issue a Revised or Supplemental Draft Tier 1 EIS for public review and comment before the decision milestone. In light of the vital need to mitigate 5-, 10-, and 20-year storm events, tidal flooding, and acute sea level rise, USACE must center NNBS that have proven capability to reduce coastal storm risk

Comment #3: Create new alternatives that address more frequent storms and flooding events, not only 1% annual chance (100-year) events

We are deeply concerned that the Draft Report focuses solely on reducing coastal storm risks associated with a 100-year event while ignoring plans to manage risks from more frequent storm events, tidal flooding, and sea level rise. The overly narrow scope and singularity of purpose is negligent considering well-documented frequent storms, regular flooding in Jamaica Bay and Rockaway communities, and measured sea level rise.

Community members in Hamilton Beach and Howard Beach on the north side of Jamaica Bay, for instance, have seen tidal flooding increase in frequency from once per year to three times per month. A FloodNet[9] ultrasonic flood sensor on Russell Street in Hamilton Beach measured three "moderate" (defined as 12" or more) flood events and one major flood event (24" or more) between March 5, 2021 when it was installed and March 5, 2023. The major flood event occurred on 12/23/2023 and resulted in a peak flood of 31.9 inches on Russell Street. Even "minor" flooding (4" or more), which occurred on 26 occasions in the 12 months ending on March 5, 2023, disrupts people's lives and puts property at risk.

Another FloodNet sensor on the south side of Jamaica Bay in Far Rockaway on Beach 84th Street recorded one major flooding event (peak of 38.2" over 3 tide cycles on 12/23/22), 14 moderate flooding events, and 41 minor flooding events in the 12-month period ending March 5, 2023. Clearly, the communities around Jamaica Bay need solutions that address these significant and frequent flood risks well beyond USACE's 100-year storm event threshold.

The need for USACE to modify its project scope, goals, and related solution alternatives is also especially acute considering anticipated sea level rise in the New York City region. USACE must base their analysis and development of alternatives on state and local sea level rise projections that were developed through extensive peer review. The New York City Panel on Climate Change 2015 Report ("NPCC2") middle range projections for sea level rise are up to 1.75 feet in the 2050s and up to 4.17' by 2100.[10] However, the most recent Panel, NPCC3 (2019) estimates sea level rise of up to 9.5' by 2100. In any case, the USACE planning metric of 1.8' of sea level rise is insufficient.

[9] FloodNet is a cooperative of communities, researchers, and government agencies led by CUNY, NYU and the NYC Mayor's Office that is working to better understand the frequency, severity, and impacts of flooding

[10] New York City Panel on Climate Change 2015. *Building the knowledge base for climate resiliency*. C. Rosenzweig & W. Solecki, Eds.: 150, Vol. 1336. Annals of the New York Academy of Sciences.

Comment #4: Expand benefit-cost analysis to incorporate ecosystem services and community benefits

The benefit-cost analysis presented in Appendix D of the Draft Report focuses primarily on the benefits of damage avoided through the construction of the proposed storm surge barriers, shore-based measures, risk reduction features, and induced flooding mitigation measures. As such, this analysis ignores the potential benefits of NNBS beyond their use as risk-reduction measures and omits benefit types that would more accurately capture the value of NNBS.

Ecosystem services such as coastal protection, erosion control, improved air quality, recreational access, and water filtration are all benefits that correspond to well-established quantification methodologies already in use by FEMA and other federal agencies. Further, the White House Office of Science and Technology reports that NNBS offer the most sustainable long-term, cost-effective solution to reducing coastal storm risk when the full value of land, water, air, and other natural assets is considered.[11]

The Draft Tier 1 EIS analysis also ignored the high-value economic benefits related to nature-based jobs and workforce development. In its report to the National Climate Task Force on Opportunities to Accelerate Nature-Based Solutions, the White House laid out clear economic benefits of investing in NNBS, stating that, "without adaptation, damages to coastal properties in the United States could add up to $3.6 trillion in costs by 2100."[12]

In Jamaica Bay, where a 26-square-mile complex of open water, marsh islands, and tidal fringe marshes stand between the Atlantic Ocean and communities, NNBS provide immeasurable health and recreation benefits, and myriad ecosystem services. In that context, USACE's analysis must consider the full economic value of NNBS. We call on USACE to expand its benefit-cost analysis to incorporate community benefits and ecosystem services when evaluating new and existing alternatives.

Comment #5: Create new alternatives that eliminate or significantly reduce impacts to public parklands

Jamaica Bay is surrounded by more than 10,000 acres of city, state, and national public parklands where New Yorkers and visitors come for passive and active recreation, educational and cultural activities, workforce development, and volunteerism. For more than a decade, JBRPC has supported and implemented hundreds of programs and projects that connect people with their public parks. With public participants, we have removed more than 30 tons of trash and debris from beaches and parks, planted more than 70,000 native plants, hosted approximately 100,000 people at public art events, and welcomed more than 6,000 school children into our educational programs.

Jamaica Bay itself is an 18,000-acre complex of open water and wetland areas that are part of the National Park Service's Gateway National Recreation Area, one of America's first urban national parks. America's fourth most visited National Park, Gateway currently serves more than

[11] Office of Science and Technology Policy. *National Strategy to Develop Statistics for Environmental-Economic Decisions.* January 2023.
[12] White House Council on Environmental Quality, Office of Domestic Climate Policy, and Office of Science and Technology. *Opportunities to Accelerate Nature-based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, & Prosperity*: *A Report to the National Climate Task Force*. November 2022.

8 million people annually and includes nationally significant resources. Floyd Bennett Field, a proposed tie-in location for the Jamaica Bay storm surge barrier, was established in 1931 as New York City's first municipal airport and was a launchpad for pioneering aviators and aeronautical ingenuity, later to become the busiest American airfield in World War II. Fort Tilden and nearby Riis Beach, where another tie-in is proposed, is one of New York City's most popular beaches, home to nesting bald eagles and other rare and endangered species, and houses significant former military assets that are included on the National Register of Historic Places.

The TSP includes multiple impacts to parks, including temporary loss of access during more than a decade of construction and permanent loss of access to parklands, waterfronts, wetlands, and open water for shore-based features and tie-ins.

We would also like to better understand the storm surge barrier's impacts on two Jamaica Bay CERCLA sites, both of which would clearly be impacted by the TSP measures. Dead Horse Bay would be home to a tie-in structure for the storm surge barrier and Spring Creek Park would be near an interior structure across Frank M. Charles Park and Hamilton Beach Park. The Dead Horse Bay landfill, in particular, is already eroding and it is important to understand whether this erosion would be exacerbated by the construction of the proposed structure.

Comment #6: Provide additional information on the assumed operations of the Jamaica Bay storm surge barrier

We have concerns related to the operation and maintenance of the proposed Jamaica Bay storm surge barrier that need to be addressed prior to the Final Tier 1 EIS.

We are also concerned that the local government operator would be pressured by community or elected leaders to close the gate more frequently than it was designed for, effectively operating a storm surge barrier as a tidal gate (i.e., using structures designed and modeled for 1% storm event for monthly tidal cycle instead).

Much of the analysis we requested in Comment #1 would require additional information on the assumed operations of the storm surge barrier, particularly the realistic frequency and duration of closures. For that reason, we ask that USACE provide additional information on operations and maintenance now. Providing an operations and maintenance manual at a future design stage would not provide adequate opportunity to analyze impacts or modify its design.

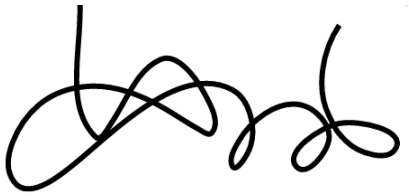
Finally, we also ask that USACE provide more information on adaptive management strategies for the barrier over time, as its actual long-term impacts are observed. For example, USACE's benefit-cost analysis is based on 50 years, but in reality, the proposed Jamaica Bay storm surge barrier will persist well beyond that timeline.

Conclusion

We are grateful for this opportunity to submit comments on the NYNJHATS Draft Report, and we are confident that incorporating these comments into the Final Tier 1 EIS will ensure that the agency creates alternatives best suited to the challenges faced in Jamaica Bay and all other planning regions. Our comments reflect concern that the scope of potential impacts of the TSP are insufficiently known and could have permanent and significant adverse impacts on Jamaica Bay and the Rockaway peninsula. As such, our comments highlight the need for more data, modeling, and alternatives analysis to develop new proposed measures that will meet NYNJHATS goals and deliver additional benefits within the project area.

We hope that our suggestions will lead to solutions that are equitable, sustainable, and prioritize the well-being of both the local environment and the community. We look forward to working together to protect parks and communities by incorporating NNBS to manage risk and enhance our natural environment.

Most sincerely,



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