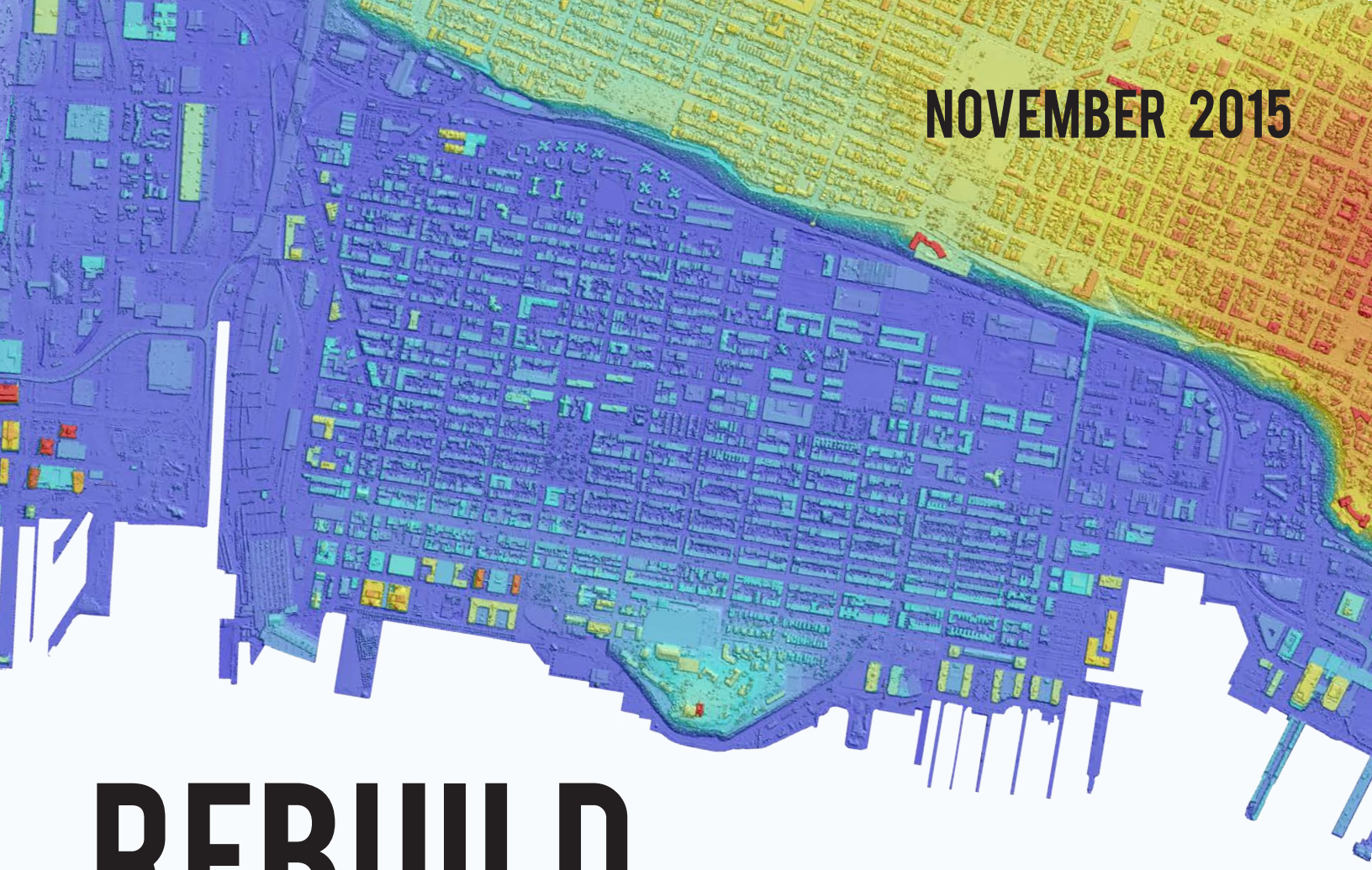

NOVEMBER 2015

REBUILD BY DESIGN

▪ RESIST ▪ DELAY ▪ STORE ▪ DISCHARGE ▪

HUDSON RIVER

Hoboken Weehawken Jersey City | New Jersey

SCOPING DOCUMENT

ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

Rebuild By Design Hudson River: Resist, Delay, Store, Discharge
Hoboken, Weehawken and Jersey City, New Jersey

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LIST OF ACRONYMS	
BFE	Base Flood Elevation
CAA	Clean Air Act
CAG	Citizen Advisory Group
CDBG-DR	Community Development Block Grant - Disaster Recovery
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COP	Citizen Outreach Plan
CRS	Community Rating System
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EJ	Environmental Justice
ESC	Executive Steering Group
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FR	Federal Register
GI	Green Infrastructure
HUD	U.S. Department of Housing and Urban Development
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHSA	North Hudson Sewerage Authority
NJDEP	New Jersey Department of Environmental Protection

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LIST OF ACRONYMS, continued	
NJHPO	New Jersey Historic Preservation Office
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NR	National Register
PANYNJ	Port Authority of New York and New Jersey
RBD	Rebuild by Design
REC	Recognized Environmental Condition
ROD	Record of Decision
SME	Subject Matter Expert
TCT	Technical Coordination Team
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service

1.0 EXECUTIVE SUMMARY

In an effort to address flood and resiliency vulnerabilities exposed as a result of Superstorm Sandy in 2012, the United States Department of Housing and Urban Development (HUD) launched the Rebuild by Design (RBD) competition inviting communities and designers to craft resiliency and flood damage reduction solutions.

The State of New Jersey was subsequently awarded $230 million to pursue the "Hudson River Project: Resist, Delay, Store, Discharge" (the Project) which seeks to reduce flooding and enhance resiliency in the municipality of Hoboken, and parts of Weehawken and Jersey City. Details of the funding of this project and other RBD projects in New Jersey were published in the Federal Register (FR) notice 79 FR 62182, on October 16, 2014. The Project's award comes in the form of Community Development Block Grant-Disaster Recovery (CDBG-DR) funding, which requires compliance with the National Environmental Policy Act (NEPA). Because of the Project's possible environmental impacts, NEPA requires the preparation of an Environmental Impact Statement (EIS). A Draft and Final EIS will be prepared in accordance with the Council on Environmental Quality's (CEQ) NEPA regulations at 40 CFR Part 1502.

The term "scoping" is defined in the CEQ NEPA regulations at 40 CFR 1501.7 as "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." As part of the public scoping process, a Draft Scoping Document was prepared and submitted for public comment on September 8, 2015. The Scoping Document acts as a roadmap for the project's environmental review process; it outlines the Project's purpose and need, the proposed Project actions, as well as a description of areas of impact to be studied in the EIS. This Final Scoping Document reflects changes resulting from substantive comments received during the public comment period, which ended on October 9, 2015.

The Project's need has arisen from the area's vulnerability to two interconnected types of flooding: coastal flooding from storm surge and high tide, as well as systemic inland (rainfall) flooding. Both coastal flooding and rainfall-induced flooding can be attributed to several factors, including naturally low topography and proximity to waterways; impervious coverage and surface runoff; sewer infrastructure with interconnected storm and sanitary sewer lines and insufficient discharge capability particularly during high tide.

Much of Hoboken's critical infrastructure is located in low-lying areas, including its fire stations, hospitals, community centers, transit centers (rail, light rail and ferry), and waste water treatment plant.

The Project is a comprehensive urban water strategy whose overall purpose is to reduce flood hazard risks, flood-related public health risks, and which seeks to leverage resiliency investment to enhance the urban condition. A resilient community is able to resist and rapidly recover from disasters or other shocks with minimal outside assistance. The project's comprehensive approach to flood reduction and resiliency consists of four integrated components:

1. **Resist:** a combination of hard infrastructure (such as bulkheads, floodwalls and seawalls) and soft landscaping features (such as berms and/or levees which could be used as parks) that act as barriers along the coast during exceptionally high tide and/or storm surge events;
2. **Delay**: policy recommendations, guidelines and urban green infrastructure to slow stormwater runoff;

3. **Store**: green and grey infrastructure improvements, such as bioretention basins, swales, and green roofs, that slow down and capture stormwater, and which will complement the efforts of the City of Hoboken's existing Green Infrastructure Strategic Plan; and
4. **Discharge**: development of new stormwater lines and pumping facilities to support *Delay* and *Store* infrastructure.

The ability to meet this purpose will be measured in terms of the following goals and objectives:

- *Goal: Contribute to Community Resiliency:*
    - Objective: The Project will seek to integrate a flood hazard risk reduction strategy with emergency, civic, and cultural assets (Hoboken's fire stations, hospitals, community centers, and transit centers). The Project will reduce flood risks within the Study Area, leading to improved resiliency and the protection of accessibility and on-going operations of services (including protecting physical infrastructure such as hospitals, fire stations and police department buildings; and roadways and transit resources). This would allow these key assets to support emergency preparedness and community resiliency during and after flood events.

- *Goal: Reduce Risks to Public Health:*
    - Objective: In addition to providing protection to critical healthcare infrastructure (such as local hospitals and emergency preparedness services), the Project will aim to reduce the adverse health impacts that result from combined sewage backups onto streets, and within businesses and residences, through a reduction in storm water infiltration into the existing combined sewer collection system combined

- *Goal: Contribute to On-going Community Efforts to Reduce FEMA Flood Insurance Rates:*
    - Objective: The City of Hoboken's exposure to flood risks has resulted in some of the highest insurance premiums in the state. The City has long had a goal of reducing those rates through a number of comprehensive flood risk reduction programs, such as those identified in the City's Green Infrastructure Plan. The NFIP's Community Rating System (CRS) allows municipalities to reduce their flood insurance rates through implementation of comprehensive floodplain management. The Project will propose concepts and alternatives that are consistent with Hoboken's overall effort of reducing FEMA Flood Insurance Rates.

- *Goal: Delivery of Co-Benefits:*
    - Objective: Where possible, the project will seek to integrate the flood hazard risk reduction strategy with civic, cultural and recreational values. The Project will look to incorporate active and passive recreational uses, multi-use facilities, and other design elements that integrate the Project into the fabric of the community. In this way, the Project will complement local strategies for future growth.

- *Goal: Connectivity to the Waterfront:*
    - Objective: The Study Area's waterfront is currently the location of a vast length of interconnected parks and public walkways which contribute to the vibrancy of the community. The Project will aim to incorporate features that do not restrict access to the waterfront. Where feasible, the Project will build upon and enhance existing waterfront access points while providing flood risk reduction.

- *Goal: Activation of Public Space:*
    - Objective: The Project will develop concepts that reduce risks to private and public property from flood impacts while also incorporating design elements that activate public and recreational spaces, thereby enhancing quality of life for the community.

- *Goal: Consider Impacts from Climate Change:*
    - Objective: The Project will take into account the projected impacts from climate change, particularly as it relates to sea level rise and its impacts on the frequency and degree of flooding.

Evaluation of the Project will involve the development of up to five flood risk reduction concepts that will address the Project's Purpose and Need. A feasibility analysis will be performed to determine what designs and strategies best address the impacts from the two types of flooding. The concept development phase will consist of stakeholder involvement and an evaluation of each of the five concepts that meets the Purpose and Need, ultimately leading to the selection of three concepts as the Project's three Build Alternatives. The Build Alternatives will then be advanced for further environmental review within the EIS.

The CEQ regulations require that agencies use the scoping process to identify significant environmental issues and to narrow the scope of the technical environmental studies and the EIS accordingly. As such, the following environmental topics will be addressed in the EIS:

- Air Quality
- Noise- (mobile, stationary, construction, aquatic)
- Vibration
- Hazardous Waste
- Cultural Resources- (archaeological, architectural)
- Natural Ecosystems- (floodplains, waters, wetlands, terrestrial and aquatic ecology)
- Socioeconomics
- Land Use and Zoning
- Environmental Justice
- Visual and Aesthetic Resources
- Infrastructure- (structures, utilities, circulation)
- Sustainability

The Public Involvement process and all outreach efforts will be summarized in the EIS. The EIS will also include an examination of cumulative impacts which takes into consideration other past, current, proposed, or reasonably foreseeable actions with similar impacts; which have also been identified during the scoping process. The Draft and Final EIS documents will be made available to the public for review and comment in accordance with CEQ regulations (see Section 2.2) and will culminate in a Record of Decision (ROD) to be made by HUD and NJDEP.

2.0 INTRODUCTION

2.1 Background

The municipalities of Hoboken, Weehawken, and Jersey City were inundated by flood waters during Superstorm Sandy in October 2012. With half of Hoboken flooded for several days, emergency services were unavailable, residents were evacuated, and the National Guard was deployed to rescue those who could not evacuate. The magnitude of Sandy's devastation, primarily attributed to a record-breaking storm surge during high tide, has somewhat dimmed the fact that little precipitation fell during that storm. Had matters been different, the Study Area's past history of flooding during heavy rainfall suggests that flooding levels and property damage could have been even higher.

The Study Area (defined as the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue [in Weehawken] to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street [in Jersey City] to the south), is vulnerable to two interconnected types of flooding: coastal flooding (both from storm surges as well as high tides) and systemic inland flooding (rainfall) from medium (generally less than 5-year, 24-hour) to high (generally over 10-year, 24 hour) rainfall events that occur during periods of high tide. The flooding problems are attributed to several factors, including naturally low topography and proximity to waterways; impervious coverage and surface runoff; existing relatively old sewer infrastructure with interconnected storm and sanitary sewer lines and insufficient discharge capability particularly during high tide.

As seen with Sandy, coastal flooding can devastate widespread areas of the Study Area and cause significant economic damage and safety concerns. In addition, systemic inland flooding associated with rainfall tends to be more localized to inland areas of lower elevation, but happens with much greater frequency than coastal surges. The systemic inland flooding typically occurs when high volumes of water are brought into the storm-sewer system from medium to high rainfall events which coincide with an approaching high tide and/or storm surge. During a high tide or storm surge, the water level of the Hudson River can rise above the level of the storm-sewer outflows; as a result, the river traps the water inside the storm-sewer system. Water then backs up within the system, flooding low-lying inland areas with storm and at times sanitary sewage.

To address the region's flood and resiliency vulnerabilities, HUD launched the RBD competition inviting communities to craft pioneering resiliency solutions. A comprehensive urban water strategy was developed that included hard infrastructure and soft landscape for coastal defense (Resist), policy recommendations, guidelines and urban infrastructure to slow stormwater runoff (Delay), green and grey infrastructure improvements to allow for greater storage of excess rainwater (Store), and water pumps and alternative routes to support drainage (Discharge). The proposal was selected in the first round of RBD grants and HUD has awarded $230 million to the State of New Jersey for the "Hudson River Project: Resist, Delay, Store, Discharge" (the Project). As stated in HUD's Federal Register (FR) notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11], the award is to assist in the funding of Phase 1 of the Project. Phase 1 includes the feasibility, design and environmental analysis of the entire comprehensive project, as well as funding for the implementation of the Resist component.

The RBD Competition delivered conceptual strategies. Those concepts must be further developed and evaluated for feasibility. Each of the concepts will be reviewed against on-the-ground, real world conditions to verify that the strategies can be built and that they will be effective. Because the need for solutions is urgent, the feasibility analysis for the Project will occur simultaneously with the preparation of the EIS. This will make the process more efficient and offer a faster route to implementation. The

feasibility study will include a project implementation and phasing plan, which will be summarized in the EIS.

2.2 Regulatory Framework

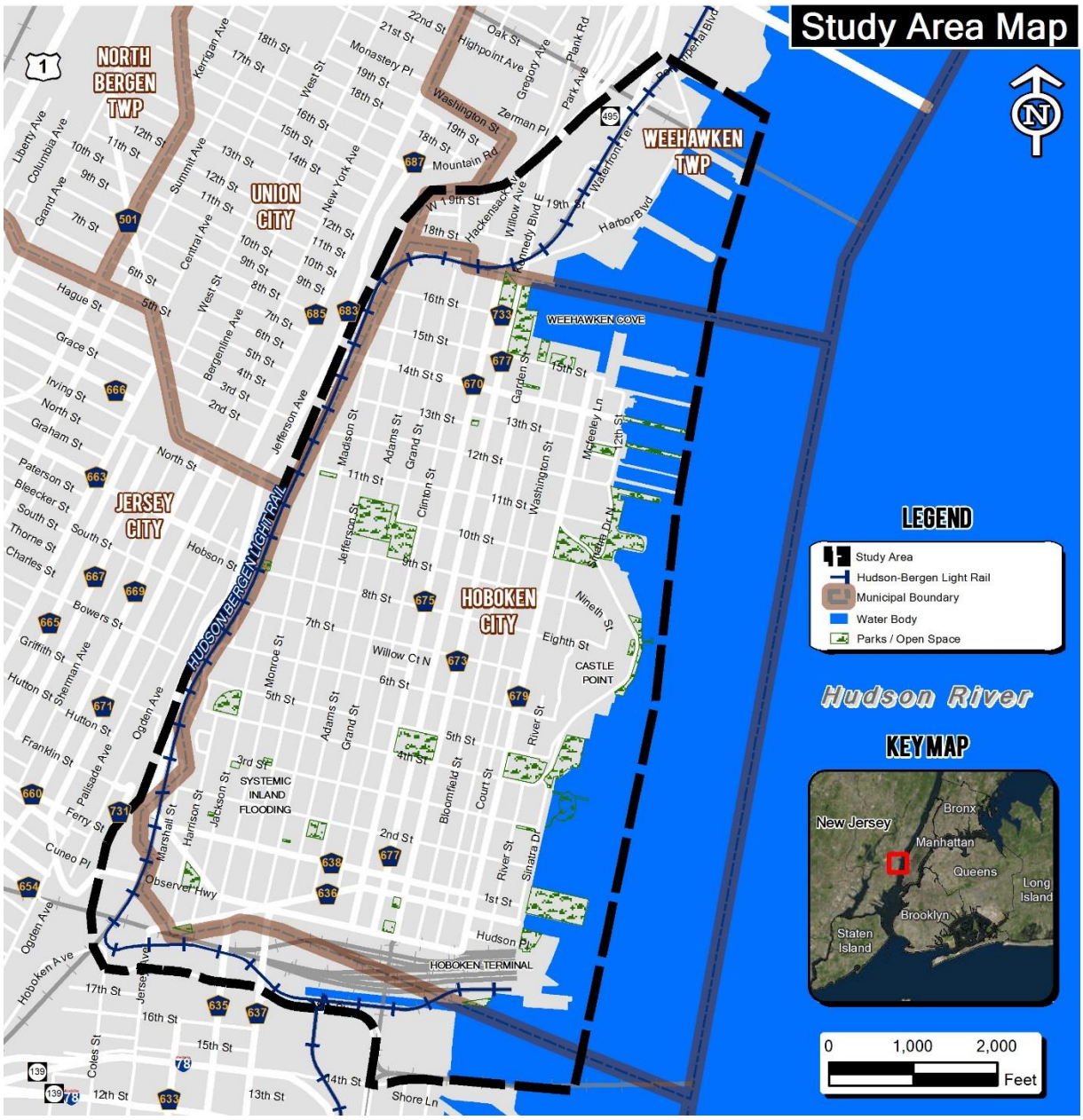
HUD's award comes in the form of CDBG-DR funds which require compliance with NEPA and its associated regulations as outlined in 24 CFR 58. When not otherwise accounted for by HUD's regulations, the Project is also subject to the CEQ NEPA regulations at 40 CFR parts 1500-1508. HUD has further outlined the Project's environmental review compliance requirements in FR notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11]. The Project's compliance with the environmental laws and authorities as stated in HUD regulations (24 CFR 58.5 and 58.6), including compliance with the National Historic Preservation Act (NHPA) of 1966, Floodplain Management and Wetland Protection Executive Orders (EOs) 11988 and 11990, Environmental Justice EO 12898, the Coastal Zone Management Act of 1972, and the Endangered Species Act of 1973 will also be demonstrated.

The State of New Jersey, acting through the New Jersey Department of Community Affairs (NJDCA), is the entity that has assumed environmental responsibilities for the Sandy CDBG-DR programs in accordance with 24 CFR 58.1(b)(1). The NJDCA has designated NJDEP to assist with the environmental review. NJDEP will prepare the EIS in accordance with HUD's procedures for NEPA found at 24 CFR Part 58, et al. A Notice of Intent (NOI) to prepare an EIS (as defined at 40 CFR 1508.22) was prepared in accordance with CEQ regulations, and represented the beginning of the public scoping process as outlined in 40 CFR 1501.07. The NOI was published on September 8, 2015 and the Draft Scoping Document was made available for a 30-day public comment period. A public meeting was held to discuss the Project and Draft Scoping Document on September 24, and two additional public open house meetings were held on September 29 and October 1.

The release of the Final Scoping Document marks the beginning of the concept development and screening phase, which will invite additional input from the community and public stakeholders. The concept screening will lead to the selection of three Build Alternatives, which will then undergo further analysis and screening with further community input. This screening process will then lead to the selection of the Preferred Alternative. The Draft EIS will be the culmination of this process and will describe the alternatives analysis process, the public participation process, the affected natural as well as built environment, an evaluation of impacts and the Preferred Alternative.

Upon completion, the Draft EIS will be made available to the general public for comment, as well as circulated to stakeholders, groups and government agencies that have been identified as having particular interest in the proposed Project. A Notice of Availability will be published in the Federal Register and local media outlets at that time in accordance with HUD and CEQ regulations. After the required comment period has elapsed (a minimum of 45 days), public comments will be addressed in a Final EIS. The Final EIS will be circulated in the same manner as the Draft EIS (including the publication of a Notice of Availability) and will have a comment period of 30 days. If, after the completion of the Final EIS comment period, no additional significant comments are received, HUD will complete a Record of Decision (ROD) and Statement of Findings. The ROD designates the selected action and provides the basis for its selection. It identifies environmental impacts as well as any required mitigation measures that were developed during the EIS.

Figure 1



2.3 Proposed Project

The Proposed Project takes a multi-faceted approach intended to address flooding from both major storm surge and high tide as well as from heavy rainfall events. These events often occur individually, but can also occur together, increasing their impacts. The Proposed Project seeks to benefit flooding areas inside the Study Area, which encompasses the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south (see **Figure 1**).

The majority of the Study Area is within Zone AE, which is defined by FEMA as the area “subject to inundation by the 1-percent-annual-chance flood event (determined by detailed methods)”. The areas

immediately adjacent to the coastline are within Zone VE. The VE zone is defined by FEMA as the area "subject to the one-percent-annual-chance flood with additional hazards due to storm-induced velocity wave action". The 1-percent annual chance flood is also referred to as the base flood or 100-year flood.

The project's comprehensive approach to flood reduction and resiliency consists of four integrated components:

1. **Resist:** a combination of hard infrastructure (such as bulkheads, floodwalls and seawalls) and soft landscaping features (such as berms and/or levees which could be used as parks) that act as barriers along the coast during exceptionally high tide and/or storm surge events;
2. **Delay**: policy recommendations, guidelines and urban green infrastructure to slow stormwater runoff;
3. **Store**: green and grey infrastructure improvements, such as bioretention basins, swales, and green roofs, that slow down and capture stormwater, and which will complement the efforts of the City of Hoboken's existing Green Infrastructure Strategic Plan; and
4. **Discharge**: development of new stormwater lines and pumping facilities to support *Delay* and *Store* infrastructure.

While the funding allocation awarded in the CDBG-DR grant provides for the implementation of Phase 1 of the Project, which includes the *Resist* component and pilot programs for *Delay*, *Store* and *Discharge*, the EIS and feasibility analysis will examine three Build Alternatives, as well as a No Action Alternative, for the entire comprehensive approach (*Resist*, *Delay*, *Store* and *Discharge*). Each of the three Build Alternatives will include elements of all four strategic project components. The three Build Alternatives will vary primarily by the *Resist* infrastructure's alignment and termination points. The possible *Resist* alignments will include: along the waterfront, in the water (in the Hudson River), and upland. The waterfront is defined as along the existing walkway/esplanade that runs along the eastern edge of the City of Hoboken and Township of Weehawken. The upland portion represents areas landward of the walkway/esplanade. The *Resist* structures may consist of a combination of multi-purpose levees, floodwalls and other features that seek to reduce the flood risk within the Project Area from future coastal flood events. In all three Build Alternatives, the *Delay, Store*, and *Discharge*, components will be located on the landward side of the *Resist* infrastructure and may consist of a combination of green infrastructure (such as bioswales, storage basins and others) and grey infrastructure (such as pumps, pipes and others).

Below is an example of three possible Build Alternatives, as well as the No Action Alternative:

- Alternative 1 may analyze a Resist alignment that is constructed along a combination of in-water, waterfront, and upland locations and terminates at appropriate locations upland or on the waterfront.
- Alternative 2 may analyze a Resist alignment constructed primarily along the waterfront with termination points at appropriate upland or waterfront locations.
- Alternative 3 may analyze a Resist alignment primarily constructed upland with termination points located upland.
- The No Action Alternative, which represents no improvements, will also be evaluated as part of the EIS.

The alternatives analysis within the EIS will consist of a comparison of the four alternatives' impacts on the environment as well as an analysis as to how well each alternative meets the Project's Purpose and Need.

The Project will integrate with the goals and objectives of existing municipal planning efforts, such as the City of Hoboken Green Infrastructure Strategic Plan (October 2013). This plan outlines Hoboken's approach to potential green infrastructure improvements throughout the City. The Project will build upon the findings of this strategic plan and incorporate its recommendations wherever practical.

The Project will look at other nearby independent projects that may benefit the Project's goals and objectives. The impacts of these projects, in conjunction with the impacts from this project, will be considered during the cumulative impacts analysis of the EIS.

3.0 PURPOSE AND NEED

3.1 Purpose

The Study Area, comprising the entire City of Hoboken, and adjacent areas of Weehawken and Jersey City (see **Figure 1**), is vulnerable to flooding from both coastal storm surge and inland rainfall events. The purpose of the Project is to reduce the flood risk to flooding areas within the Study Area. The Project intends to minimize the impacts from surge and rainfall flood events on the community, including adverse impacts to public health, while providing benefits that will enhance the urban condition, recognizing the unique challenges that exist within a highly developed urban area.

3.2 Need

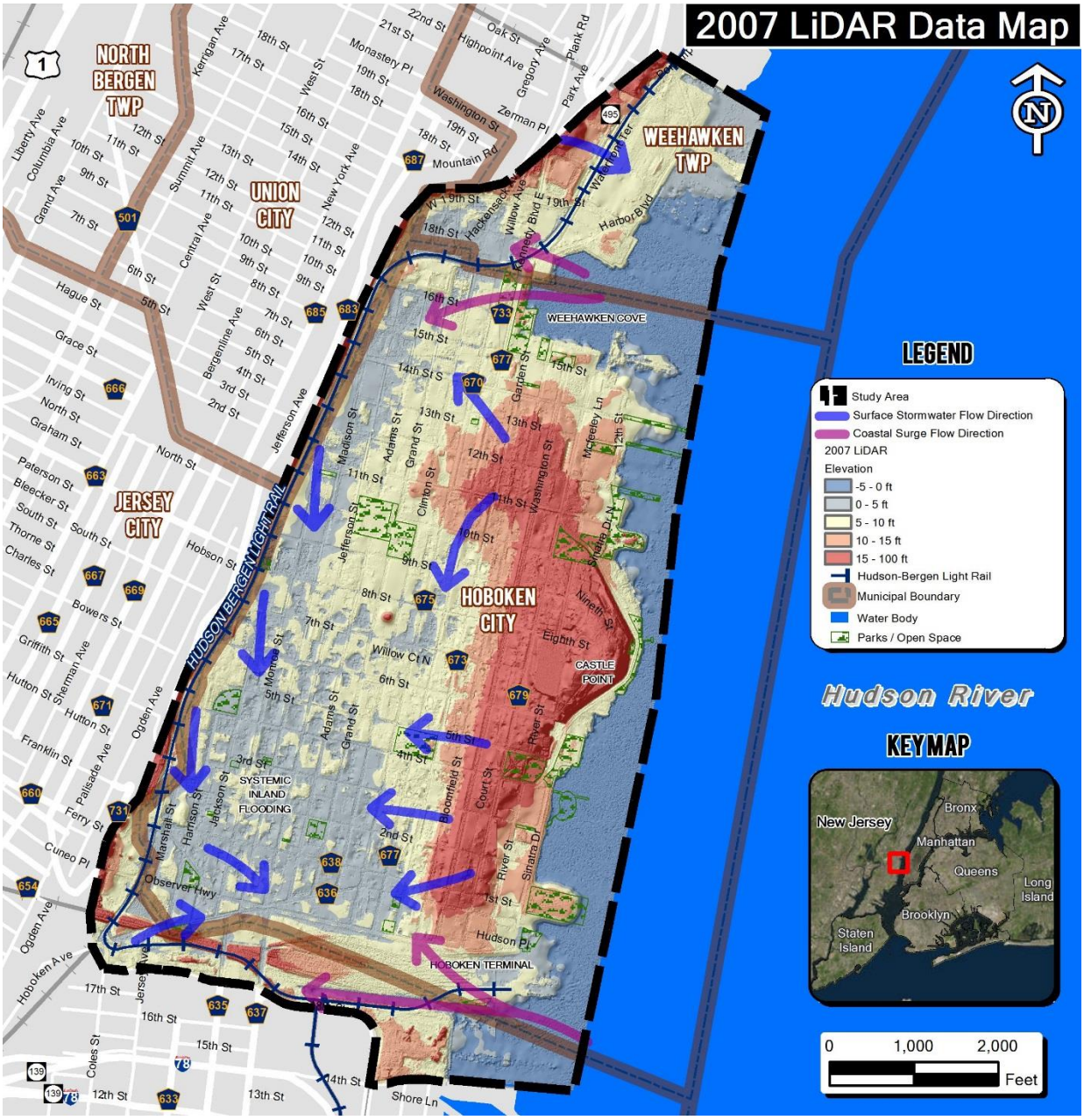
The Study Area is a very dense urban area of Hudson County that is situated along the Hudson River directly west of Manhattan, New York. The Study Area is vulnerable to two interconnected types of flooding: coastal flooding from storm surge and high tide, as well as systemic inland (rainfall) flooding from medium (generally a 5-year, 24-hour) to high (generally over 10-year, 24 hour) rainfall events.

- Coastal flooding happens with much less frequency, but can devastate widespread areas of the Study Area and cause significant economic damage and safety concerns.
- Rainfall-induced flooding occurs with significantly greater frequency than coastal flooding, and is caused in large part by the characteristics of the Study Area's topography and land use patterns as well as the physical constraints of the existing NHSA infrastructure.

The flooding problems for both coastal flooding and rainfall-induced flooding can be attributed to several factors, including naturally low topography and proximity to waterways; impervious ground coverage and surface runoff; existing sewer infrastructure, sewershed interconnections and insufficient discharge capability particularly during high tide.

The topography of the Study Area is highest along the east-central portion abutting the coastline of the Hudson River at Castle Point (see **Figure 2**). From here, the land slopes gently downward to the north (towards Weehawken Cove), south (towards the Hoboken Terminal and Jersey City) and to the west (towards the foot of the Palisades). This topography reflects the Study Area's history; when originally settled, Castle Point was an island surrounded to the north, south and west by wetlands. These wetlands were gradually filled in as the area grew. Today, these areas – in particular those to the west – are still extremely low-lying, in some places no more than three feet above sea level.

Figure 2

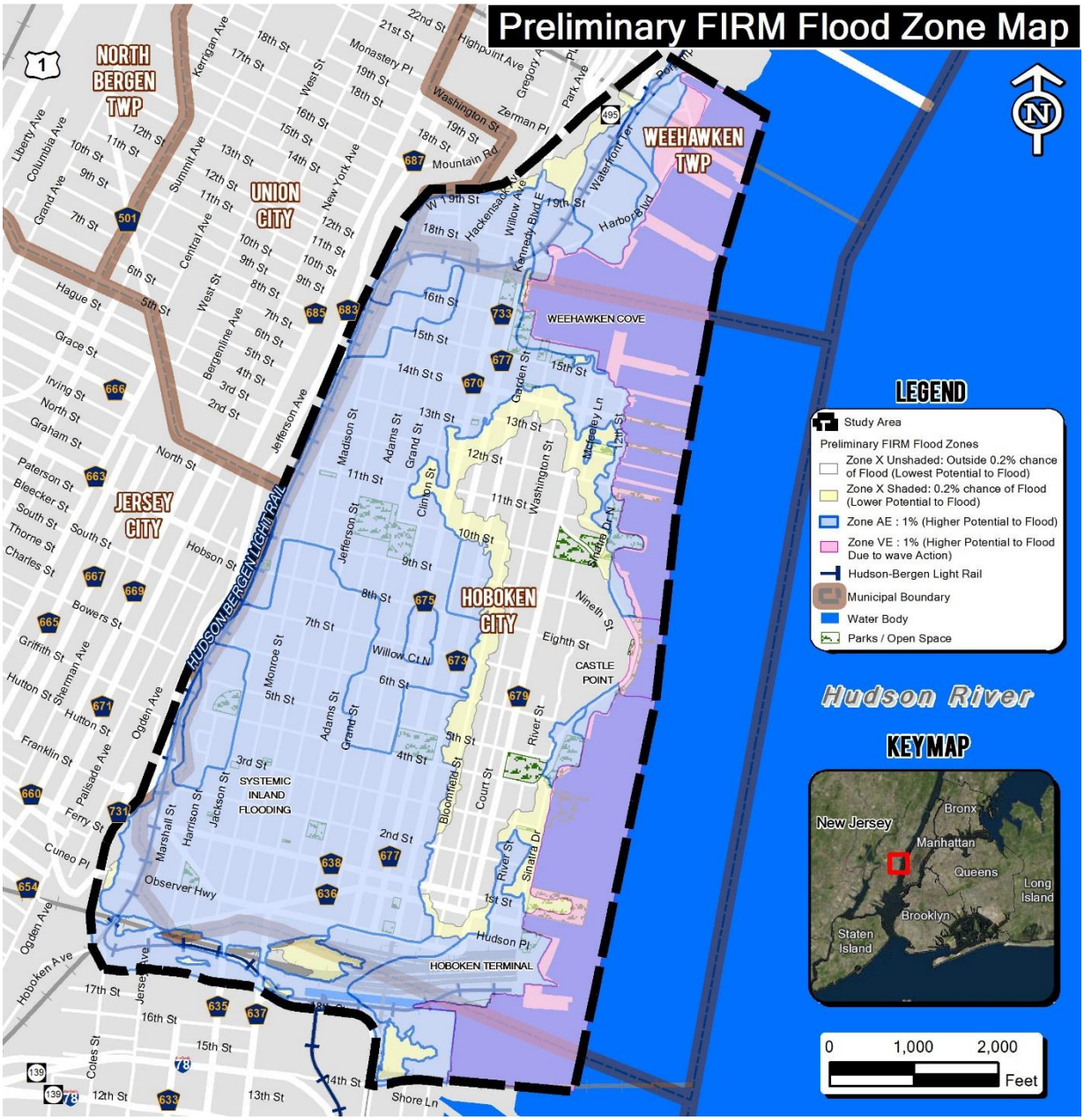


The land area within the Study Area is approximately 1,020 acres. Currently, approximately 16,800 parcels (or, approximately 745 acres of land or 73% of the overall Study Area) are within the Hudson River's one-percent (Zone AE/VE) annual-chance floodplain (see **Figure 3**). As stated in Section 2.3, the AE and VE zones are both 1% annual-chance floodplains, but the VE zone, which is usually along coastlines and typically does not extend beyond the waterfront streets and parks, is also subject to storm-induced velocity wave actions. About 4% of the land within the Study Area is within the VE zone and has base flood elevations (BFEs) of between 16 and 17 feet North American Vertical Datum (NAVD) 88 (the base flood elevation is the anticipated water level during a flood event). The majority of the Study Area (69%) is within the AE flood zone, with BFEs of between 10 and 12 feet NAVD 88. Much of Hoboken's

critical infrastructure is located in these low-lying areas, including its fire stations, hospitals, community centers, transit centers (rail, light rail and ferry), and waste water treatment plant.

The remaining portions of the Study Area (approximately 277 acres), which are on higher ground in the area of Castle Point, are located within either Zone X Shaded (the 0.2 percent annual chance, or 500-year flood zone) or Zone X Unshaded (outside of the 0.2 percent annual chance or 500-year flood zone).

Figure 3



The City of Hoboken's exposure to flood hazard risks is evident by the number of properties included in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). Mortgage lenders for properties within the Special Flood Hazard Area (SFHA) (i.e. AE and VE) require owners to obtain flood insurance from the NFIP. In addition, property owners receiving awards following

presidentially-declared disasters (such as Superstorm Sandy) are also often required to obtain NFIP insurance. According to NFIP statistics, as of June 30, 2015, the City of Hoboken had 9,269 NFIP policies in place (the highest in Hudson County), with premiums of $6,734,044 (the highest in Hudson County and fifth highest in New Jersey). In addition, the overall liability to the NFIP from property owners in Hoboken was over $2 billion (third highest in New Jersey) with an average claim amount of $26,243.

The interrelationship between coastal flooding and rainfall events contributes to the recurring flooding conditions throughout the Study Area. Each component represents challenges and will need to be addressed comprehensively in order to reduce the flood risk within the Study Area.

3.2.1 Coastal Flooding

The coastal communities of Hudson County have historically been vulnerable to coastal flood events. This can be in the form of abnormally high tides that occur roughly twice a month (coinciding with full or new moons), or from storm surges brought on by coastal storms. According to the FEMA's Preliminary Flood Insurance Study of Hudson County, New Jersey (FEMA, 2013), the most severe flooding for the coastal communities of Hudson County occurs from coastal storm surges during hurricanes. Surge water is brought into the area from the Upper New York Bay, New York Bay and Kill Van Kull, where it is then driven by winds upriver along the Hackensack, Passaic and Hudson Rivers, eventually overflowing onto the shoreline communities. The duration of coastal surges can be increased if the storm also brings about high amounts of rainfall. For example, in 2011, Hurricane Irene brought a five-foot storm surge to the Hudson River, flooding parts of Jersey City and Hoboken, along with 10 inches of rainfall. After the storm passed, flooding conditions remained because the vast amount of rainfall from the storm was draining through tributaries to the Hudson River, which was already swollen by the storm surge.

The coastal surge can be further exacerbated if it coincides with a high tide. For example, a strong storm surge on the Hackensack River on November 25, 1950 resulted in flood waters of 6.5 feet (nine feet above the low tide level). If this surge had occurred during high tide, flood levels would have reached 12 feet. A situation like this occurred during Superstorm Sandy; the storm surge coincided with a full moon, which caused an abnormally high tide that was 20% above the normal high tide level. This factor significantly contributed to Sandy's devastating flooding of the Study Area.

Superstorm Sandy exposed the vulnerabilities within the Study Area by flooding the coastal areas of Jersey City, Weehawken and Hoboken, as well as over two thirds of the City of Hoboken's low-lying interior areas. Surge waters flooded electric utility substations and transformers; power was not restored to many Jersey City and Hoboken residents for nearly two weeks. In addition, the surge flooded critical transportation infrastructure, including the Port Authority Trans Hudson (PATH) line at the Hoboken Terminal. Service on this line was not restored for several months.

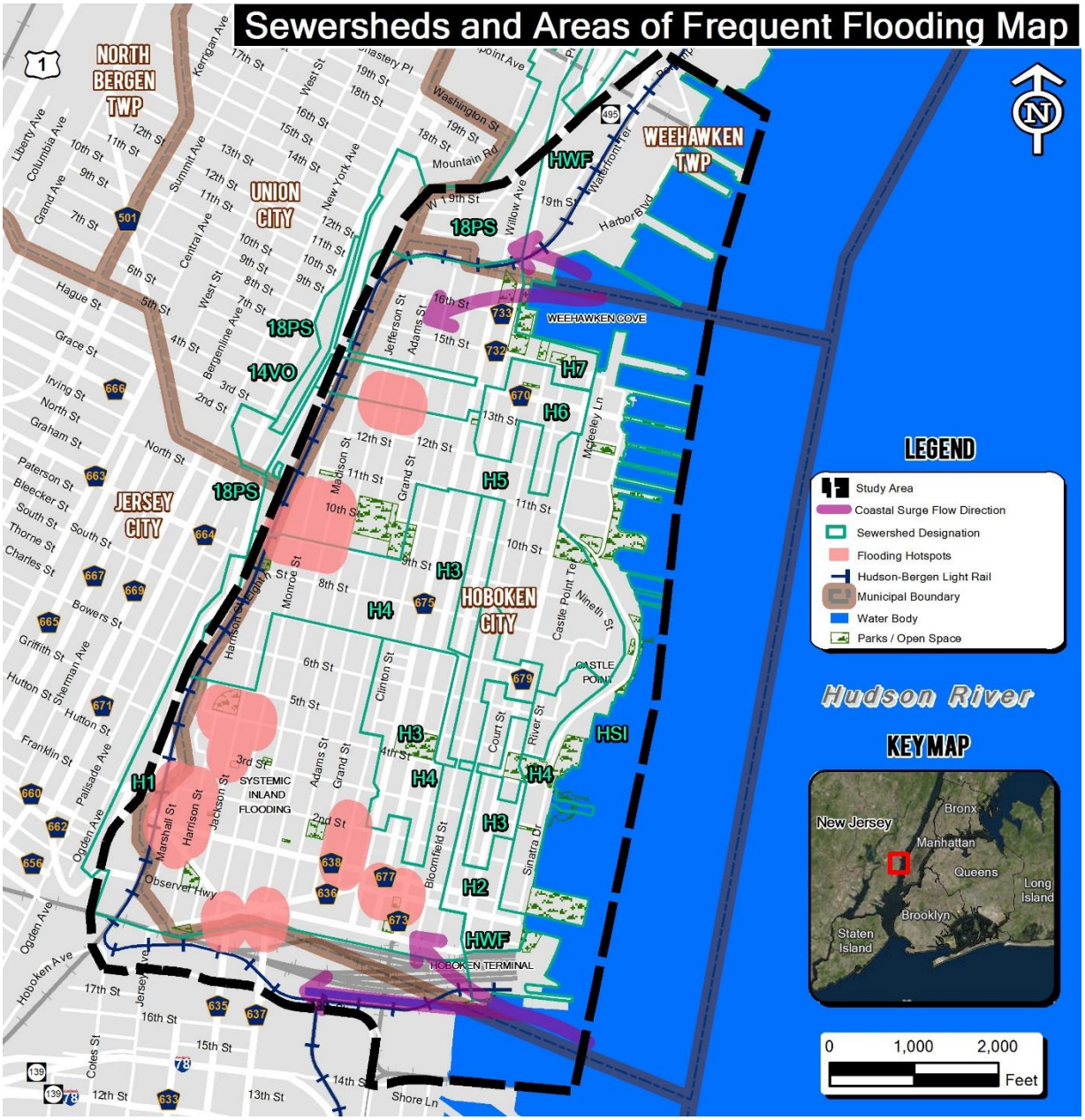
Studies conducted by the Stevens Institute of Technology Davidson Laboratory (Stevens Study) found that approximately 466 million gallons of water inundated the interior areas of Hoboken. The water entered at the lowest areas of elevation. Within the Study Area, there were two main entry points: the area around Long Slip Canal and Hoboken Terminal in the south of Hoboken, and Weehawken Cove in the north. In the south the surface elevation ranges between two and five feet above sea level in and around Warrington Plaza and the Hoboken Terminal. In the area around Weehawken Cove, the elevations range between six and seven feet above sea level. When these elevations are compared to the flood surge levels caused by Superstorm Sandy, the degree of flooding becomes apparent. Sandy brought approximately 11 feet of surge water into Warrington Plaza and Hoboken Terminal, resulting in flood waters of between six to nine feet above ground elevation.

The southern and northern low-lying areas of the Study Area, along the Hudson River, acted as an inlet for flood waters into western Hoboken (see **Figure 4**). During Sandy, according to the Stevens Study, approximately 232 million gallons of water entered at the southern breach point, to the south of the Hoboken Terminal. Approximately 78 million gallons of this water remained within the NJ Transit rail yard, the remainder (154 million gallons) entered the western portion of the Study Area. Of the portion that entered from the south, 98 million gallons flowed across the rail yard before entering Hoboken along Observer Highway at Park and Willow Avenue, and 56 million gallons moved through Long Slip Canal towards Marin Boulevard. Some water passed from southwest Hoboken into Jersey City via Marin Boulevard, Grove Street and Jersey Avenue, which run beneath the Hudson Bergen Light Rail and NJ Transit rail crossings. In addition, 191 million gallons of surge water entered through northern Hoboken, in and around Weehawken Cove. This water flowed to the west and then south, into the H7, H5, and ultimately H1 sewersheds, respectively (for a discussion of the combined sewer system, please see Section 3.2.2 and **Figure 4** below).

The ground elevation in western Hoboken is low-lying; the H1 sewershed (the southwestern area of Hoboken; see **Figure 4**) in particular is on average about three feet above sea level. This portion of the Study Area also happens to be home to many vulnerable communities; the H1 Sewershed is the location of several of the Hoboken Housing Authority's communities. Floodwaters were funneled in from the north and south, inundating this portion of Hoboken, as well as the western areas of the H4, H5 and H7 sewersheds. Because the surge prevented sewer outflow (the surge water elevation was above the outflow level), the surge waters had nowhere to flow and persistent inland flooding resulted. In addition, because the surge prevented sewer outflow, domestic sanitary sewage backed up in residences and businesses, posing a significant public health risk. Overall, Superstorm Sandy caused approximately $100 million in damages to private property and $10 million to City-owned property in Hoboken. Notably, Hoboken University Medical Center (the only hospital within the Study Area, located in south-central Hoboken) received significant flood damage; the hospital was forced to evacuate all patients the day prior to the storm and was not able to fully reopen until November 14, over two weeks after the storm hit. In the interim, patients were redirected to other nearby hospitals – many of which were also damaged by Sandy.

Sea level rise and high tides also represent distinct coastal flooding concerns. As sea level is expected to rise, the associated base flood elevations along the Study Area's coastline will likewise increase, further compounding the risk of flooding. High tides will increasingly overtop the existing bulkheads, particularly during storm surges, thereby inundating the low-lying areas of the community with much greater frequency. Studies have shown that in the mid-1800s, there was a 1% annual chance of a bulkhead being overtopped by a storm surge within the New York Harbor area; today there is a 20 to 25% annual chance (Blumberg et al, 2015). Rising sea level also means that the NHSA's outflows and other critical infrastructure will be closer to mean sea level, and will be inundated more frequently during high tides. As the vertical distance between the elevation of the water and the elevation of the outflows decreases, less intense storm surge (which happen with greater frequency than stronger storms) will have the ability to inundate the outflows, thereby reducing the ability of the system to properly drain storm waters. This means that over time, coastal flood events are expected to occur with greater frequency.

Figure 4



3.2.2 Systemic Inland Flooding

The NHSA, which provides storm and sanitary sewer utility service to the Study Area, has a combined sewer system that was built in two periods, during the 1850's and from the 1920s to the 1940s. The combined sewer system handles both sanitary sewerage as well as stormwater runoff. Hoboken is divided into seven main drainage areas (H1-H7, see **Figure 4**). Sewerage is conveyed through the system by gravity from its source (e.g., a residence or business) through combined sewer mains beneath street beds to the system's main interceptor pipelines. During dry conditions, a system of pump stations located within the NHSA's service area pump the sewerage to the NHSA's Adam's Street Wastewater Treatment Plant (WWTP). This WWTP serves Hoboken, Weehawken and Union City. During rainstorms, stormwater (i.e., rainfall runoff) flows into the combined sewer mains via street and curb inlets and combines with the sanitary sewerage. If the combined sewer flow volume exceeds the limited treatment volume capacity

(between 32 and 36 million gallons per day) of the WWTP, a portion of the combined sewer flow volume outflows into the Hudson River through the various outfalls located along Hoboken's waterfront.

Inland flooding occurs when the combined sewer system is unable to outflow excess water into the Hudson River. This typically occurs when high volumes of water are brought into the combined sewer system from medium (generally a 5-year, 24-hour) to high (generally over 10-year, 24 hour) rainfall events which coincide with a high tide and/or storm surge. Rainfall events of greater than two inches, combined with a high tide of four feet or greater, occurred 26 times in Hoboken from 2002 to 2012. This is expected to increase in frequency over time as sea levels rise; the National Oceanic and Atmospheric Administration (NOAA) estimates sea levels may rise from between 0.5 to 3.5 feet by the year 2075. As a result, high tides and storm surges are expected to block or obstruct the outfalls for increasingly longer periods of time.

Potential flooding can be further exacerbated if rainfall occurs during high tide and during the daytime hours, when sanitary flows are highest. During a high tide or storm surge, the water level of the Hudson River can rise above the level of the combined sewer outflows; as a result, the river traps the water inside the combined sewer system. Raw sewage and stormwater backs up through curb inlets and domestic interior plumbing, and floods streets as well as basements of homes and businesses. After flood waters recede, sewage residue (as well as residues from diesel, gasoline and other common roadside chemicals and contaminants) coats roadways, sidewalks, homes and businesses, representing a public health risk and necessitating cleanup subsequent to the storms.

The most significant inland flooding typically occurs in the H1 sewershed (see **Figure 4**). This sewershed is located in the southwest area of Hoboken and is bounded generally by Observer Highway to the south, Clinton Street to the east, 7th Street to the north and the NJ Transit Hudson-Bergen Light Rail to the west. The sewershed is extremely low-lying, generally less than three feet above sea level. The most frequent flooding in this sewershed occurs typically around Patterson Avenue and First Street (in the vicinity of the 2nd Street Light Rail Station) and Jackson Street and Fourth Street. This part of the Study Area is also home to several of the Hoboken Housing Authority's communities, including the Andrew Jackson Gardens and the Monroe Gardens senior housing center, whose residents (i.e., low income and/or elderly) are particularly vulnerable to the impacts from flooding.

The NHSA installed a 50 million gallon per day (MGD) wet weather pump for the H1 sewershed in 2012; however, analysis in 2013 by EmNet indicated that flooding still occurs in severe storms. The pump was activated 36 times between December 2012 and August 2013; of these, four storm events led to flooding. In addition to the H1 sewershed, the western areas of sewersheds H4 and H5 (just to the north of H1) also experience significant flooding, notably along Ninth Street between Monroe Street and Madison Street.

The Study Area's flooding is greatly exacerbated by its high degree of impervious surface coverage: the area is approximately 94% impervious, from building footprints or paved areas such as streets, sidewalks and parking lots. This is a product of the area's population density; with a population per square mile of 39,066, Hoboken is the nation's fourth densest municipality, after Guttenberg, NJ, Union City, NJ and West New York, NJ. The area's high impervious cover means that almost all the rainfall that reaches the ground is funneled rapidly into the combined sewer system through building downspouts and street-level storm drains, instead of being discharged into soils for gradual infiltration, as would be the case in areas with lower impervious coverage. This, coupled with the inability of the system to discharge during a high tide or storm surge, results in inundation of the combined sewer system during a rainfall event and backing up of the sewer system. Ultimately, this leads to the flash flooding events in low-lying areas, resulting in damage to buildings, residences, cars and infrastructure.

Ultimately, these various factors all contribute to the need to develop a comprehensive flood risk reduction strategy to safeguard against damage to people, property and infrastructure.

3.3 Goals and Objectives

A resilient community is able to resist and rapidly recover from disasters or other shocks with minimal outside assistance. The Project is a comprehensive urban water strategy whose overall purpose is to reduce flood hazard risks, flood-related public health risks, and which seeks to leverage resiliency investment to enhance the urban condition. The ability to meet this purpose will be measured in terms of Goals and Objectives. Goals (in italics below) are overarching principles that guide decision-making. Goals are measured in terms of Objectives, which are measurable steps to meet the Goal. The Goals and Objectives for the Project are:

- *Goal: Contribute to Community Resiliency*:
    - Objective: The Project will seek to integrate flood hazard risk reduction strategy with emergency, civic, and cultural assets (Hoboken's fire stations, hospitals, community centers, and transit centers). The Project will reduce flood risks within the Study Area, leading to improved resiliency and the protection of accessibility and on-going operations of services (including protecting physical infrastructure such as hospitals, fire stations and police department buildings; and roadways and transit resources). This would allow these key assets to support emergency preparedness and community resiliency during and after flood events.

- *Goal: Reduce Risks to Public Health*:
    - Objective: In addition to providing protection to critical healthcare infrastructure (such as local hospitals and emergency preparedness services), the Project will aim to reduce the adverse health impacts that result from combined sewage backups onto streets, and within businesses and residences, through a reduction in storm water infiltration into the existing combined sewer collection system.

- *Goal: Contribute to On-going Community Efforts to Reduce FEMA Flood Insurance Rates:*
    - Objective: The City of Hoboken's exposure to flood risks has resulted in some of the highest insurance premiums in the state. The City has long had a goal of reducing those rates through a number of comprehensive flood risk reduction programs, such as those identified in the City's Green Infrastructure Plan. The NFIP's Community Rating System (CRS) allows municipalities to reduce their flood insurance rates through implementation of comprehensive floodplain management. The Project will propose concepts and alternatives that are consistent with Hoboken's overall effort of reducing FEMA Flood Insurance Rates.

- *Goal: Delivery of co-benefits:*
    - Objective: Where possible, the project will seek to integrate the flood hazard risk reduction strategy with civic, cultural and recreational values. The Project will look to incorporate active and passive recreational uses, multi-use facilities, and other design elements that integrate the Project into the fabric of the community. In this way, the Project will complement local strategies for future growth.

- *Goal: Connectivity to the Waterfront:*
    - Objective: The Study Area's waterfront is currently the location of a vast length of interconnected parks and public walkways which contribute to the vibrancy of the community. The Project will aim to incorporate features that do not restrict access to the waterfront. Where feasible, the Project will build upon and enhance existing waterfront access points while providing flood risk reduction.

- *Goal: Activation of Public Space*:
    - Objective: The Project will develop concepts that reduce risks to private and public property from flood impacts while also incorporating design elements that activate public and recreational spaces, thereby enhancing quality of life for the community.

- *Goal: Consider Impacts from Climate Change:*
    - Objective: The Project will take into account the projected impacts from climate change, particularly as it relates to sea level rise and its impacts on the frequency and degree of flooding.

4.0 PROJECT CONCEPTS

The Project will involve the development of up to five flood risk reduction concepts that will address the Project's Purpose and Need. A feasibility analysis will be performed to determine what designs and strategies best address the impacts from the two types of flooding (coastal storm surge and systemic inland flooding). The next phase of the concept development process will be the evaluation of those concepts; the community will be engaged in this process. The concepts will then be screened through a matrix, ultimately leading to the selection of concepts to be advanced forward as the Project's Build Alternatives. The Build Alternatives will then be further refined within the feasibility study and analyzed in greater detail as part of the environmental analysis within the EIS.

4.1 Concepts

The concept development process will involve the identification of flooding sources, locations of flooding and the development of appropriate flood risk reduction concepts. As stated previously, the Study Area is subject to two sources of flooding – coastal storm surge events and systemic inland flooding from moderate to severe rainfall events. As part of the feasibility analysis, an integrated coastal and inland flooding model will be developed to identify the locations of flooding and evaluate the effectiveness of various flood risk reduction concepts to reduce flood impacts. Each concept will consist of *Resist, Delay, Store* and *Discharge* design elements.

The success of constructing a reliable and permanent comprehensive flood risk reduction system depends on designing project concepts that take into consideration existing infrastructure and environmental constraints. The key to the successful implementation of this project is to design the flood risk reduction system in accordance with the regulatory standards (such as FEMA flood elevation standards, the NJDEP Flood Hazard Area Control Act, and local floodplain ordinances), while verifying that it aesthetically blends in with and enhances the existing environment.

The location of existing infrastructure such as parks, roads, transit, stormwater systems, subsurface utilities, and foundation structures for various types of infrastructure will dictate the available footprint for constructing the various project elements. The size and availability of the footprint area would then dictate the type of potential project elements that could be constructed, such as earthen berms, floodwalls, deployable flood systems, streetside green infrastructure, etc. In certain areas, it may be feasible to relocate some infrastructure facilities; however, due to cost considerations and a desire to reduce construction impacts, the Project will seek to minimize the relocation of such facilities.

It is anticipated that the Project's concepts may consist of the following:

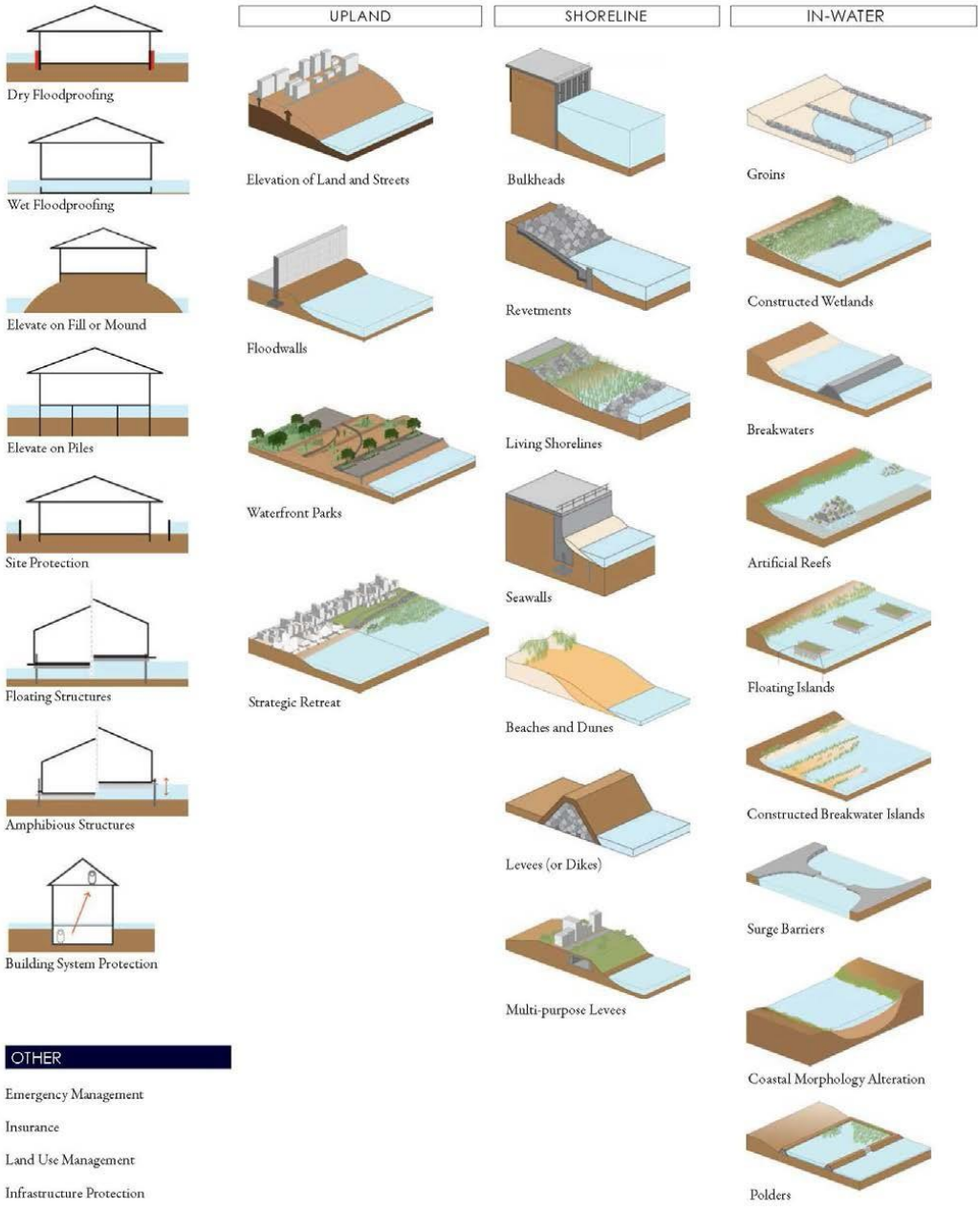
- One concept may consist of a *Resist* alignment constructed along a combination of in-water, waterfront, and upland locations with termination points at appropriate locations upland or on the waterfront.
- One concept may consist of a *Resist* alignment constructed primarily along the waterfront with termination points at appropriate upland or waterfront locations.
- One concept may consist of a *Resist* alignment primarily constructed upland with termination points located upland.

4.1.1 Coastal Flood Risk Reduction Concepts (Resist)

The New York City Department of City Planning's Urban Waterfront Adaptive Strategies report will be used as a reference toolset to identify various site- and reach-based mitigation strategies that would allow the use of "multiple lines of defense approach" and enable one or more of these strategies to tie-in with each other to create an integrated flood risk reduction system for the Study Area (see **Figure 5**). The site

based mitigation strategy is applicable to a building and uses building specific flood risk reduction strategy. The reach based strategy is applicable to a community or portions of a community with several types of flood risk reduction strategies. A subset of these strategies was used during the RBD competition to identify design options at suitable locations along the Study Area's waterfront. These approaches will represent the *Resist* element of the Project.

Figure 5



SOURCE: NYC Planning's Urban Waterfront Adaptive Strategies Report (2013)

4.1.2 Inland Flooding Concepts (Delay, Store, Discharge)

Applicable concepts for the *Delay, Store*, and *Discharge* elements of the Project will be evaluated. These elements will address inland stormwater in order to alleviate flooding from high intensity/longer duration rainfall events within the Study Area.

- The *Delay* element requires identification and evaluation of options to increase infiltration of stormwater into the soil by implementing various types of Green Infrastructure (GI) practices.
- The *Store* element requires identification and evaluation of options to construct surface and/or below grade detention/retention facilities or green roofs to temporarily store rainfall runoff.
- The *Discharge* element requires identification and evaluation of options to *discharge* rainfall-runoff from the Study Area into the Hudson River through grey infrastructure such as separate high-level stormwater pipes, outfall structures, and pump stations.

The feasibility of implementing each stormwater management concept will depend on several factors including, but not limited to, cost, effectiveness, ROW availability, utility impacts, subsurface conditions, maintenance needs, and life-cycle costs.

4.1.3 Environmental Mitigation Design Elements

Creation of tidal and freshwater wetlands, with associated riparian vegetation, as well as living shorelines located along the Hudson River waterfront may be options to mitigate environmental impacts from the construction of coastal flood risk reduction system.

4.1.4 Urban Design and Community Co-Benefit Design Elements

A flood risk reduction system will reduce flooding risks at critical infrastructure and for the entire community but also can be used as a catalyst for urban design and neighborhood improvement. In conjunction with flood reduction system concepts, we will attempt to tie these concepts with a larger, productive open space and urban design initiative that serves as a community resource.

4.2 Concept Screening

The culmination of the concept development phase will be an evaluation of the concepts through a screening matrix in a community workshop setting. The concept screening matrix will be developed with input from stakeholder groups informed by the team's Subject Matter Experts (SMEs) and will be used to evaluate each concept on its impacts to the many resources within the Study Area. This process will allow for the selection of concepts to be advanced into the alternatives analysis phase.

4.2.1 Screening Criteria/ Matrix

The concept screening matrix will include criteria that reflect the Project's Purpose and Need. Criteria will be utilized that address the Project's impacts to the natural environment, the community, as well as the Project's overall feasibility. This will include criteria such as flood risk reduction, environmental constraints (including, but not limited to, cultural resources, hazardous waste, and environmental justice), and community interests. Criteria will also include feasibility factors such as constructability and construction cost, and will focus on design criteria, with the inclusion of environmental mitigation and urban design and community co-benefit design elements. Metrics that will be measurable, either qualitatively or quantitatively, will be developed for each criterion. After the establishment of the metrics, a matrix will be developed to evaluate each concept. The completed matrix will allow for a qualitative ranking of each concept.

5.0 POTENTIAL REGULATORY APPROVALS

In addition to NEPA requirements (including HUD regulations at 24 CFR Part 58 and CEQ regulations at 40 CFR Parts 1500-1508), the Project will also be subject to numerous additional regulatory approvals. The following is a list of potential regulatory approvals that the Project will require. The EIS will discuss in detail the anticipated approvals that the Project will require.

5.1 Federal

- HUD: The project is subject to the funding disbursement and Action Plan Amendment requirements stated in 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11].
- U.S. Army Corps of Engineers (USACE): In-water activities will require Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits
- National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS): Essential Fish Habitat (EFH) review will be conducted. Depending on these findings and proposed in-water impacts, additional consultation may be required.
- U.S. Fish and Wildlife Service (USFWS): Depending on project impacts to threatened/endangered species, Section 7 consultation may be required.
- US Coast Guard (USCG): Construction of structures within navigable waters will require approval from the USCG.
- Federal Emergency Management Agency (FEMA): Review of seawall or other *Resist* component will require FEMA review for any potential changes to Flood Insurance Rate Maps (FIRM).
- National Historic Presentation Act of 1966. Section 106 of the Act states that prior to the approval of the expenditure of any Federal funds an evaluation must take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.

5.2 State of New Jersey

- New Jersey Department of Environmental Protection (NJDEP): The Project will likely require numerous permits from the NJDEP to demonstrate compliance with several acts/authorities, including Coastal Zone Management (Waterfront Development, N.J.S.A. 12:5-3 et. seq), Flood Hazard Area Control Act (N.J.A.C. 7:13-1.1 et seq), Freshwater Wetlands Protection Act (N.J.A.C. 7:7.A), Stormwater Management (N.J.A.C. 7:8), and Section 401 of the Clean Water Act. Coordination with the Bureau of Tidelands is also anticipated to be necessary, to determine if a Tideland Instrument will be required for any in-water impacts. In addition, a New Jersey Pollutant Discharge Elimination System Permit is required for any discharges to surface waters.
- New Jersey State Historic Preservation Office (NJHPO): The NJHPO will need to be consulted for the Project's compliance with Section 106 of the National Historic Preservation Act of 1966.
- New Jersey Register of Historic Places (N.J.S.A. 13:1B-15.128 et seq) will be reviewed as part of this project.

5.3 Local and Municipal

- The Project will require local municipal approvals, including zoning compliance, roadway and sidewalk opening/closing and other construction approval/permits from the Hoboken, Jersey City and Weehawken.
- Hudson Essex Passaic Soil Conservation District: Soil Erosion and Sediment Control Certification will be required for activities involving greater than 5,000 square feet of ground disturbance.

6.0 ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

Below is a discussion of the proposed sections of the EIS. The EIS document will consist of a description of the alternative analysis, the public involvement effort, a description of the existing conditions and a description of the affected environment based on the three Build Alternatives and No Action Alternative.

6.1 Alternatives Analysis

This section of the EIS will describe the technical analyses and public input that led from the initial concept designs to the selection of the Preferred Alternative.

6.1.1 Alternatives Development

This section will describe the development of the Build Alternatives from the initial project concepts. It will also include a description of the concept screening process. This will include an explanation of how the screening criteria and metrics for those criteria were selected and how they were used to evaluate each of the Project's concepts, ultimately leading to the recommendation of the three Build Alternatives.

6.1.2 Alternatives Analysis

Similar to the Concept Screening, this section will explain the Alternatives Analysis process that led to the recommendation of the Preferred Alternative. The Alternatives Analysis will begin with a review of the three Build Alternatives – as well as the No Action Alternative - and their environmental impacts (to be analyzed within the discipline studies in the EIS, pursuant to 24 CFR 58.5), as well as a comparison of the ability of each to meet the Project's Purpose and Need. This section will summarize the Alternatives Screening process which, similar to Concept Screening, will consist of the evaluation of Build Alternatives within a more refined screening matrix. This screening process will lead to the recommendation of the Preferred Alternative.

6.2 Public Involvement

Throughout the course of the engineering (feasibility) study and environmental analyses and documentation for the EIS, a public involvement plan will be implemented in accordance with the Project's Citizen Outreach Plan (COP) that includes input from involved agencies and members of the public. The COP was developed by NJDEP to provide a framework for public involvement throughout the entire lifetime of the Project, of which the environmental and feasibility studies are only one part. A copy of the COP is available on the Project website at http://www.rbd-hudsonriver.nj.gov.

The goal of the COP is to engage and collaborate with the general public, including vulnerable and underserved populations, racial and ethnic minorities, persons with disabilities, and persons with limited English proficiency, as well as municipal officials, community organizations and the academic community in the planning, design and implementation process of the Project. The purpose is to solicit relevant input and provide timely information throughout the environmental review. To meet these objectives the team will:

- Establish ongoing, inclusive and meaningful two-way communication with stakeholders, agencies, and the general public.
- Educate the public about the environmental review process and the role of government, stakeholders and the general public within this process.

The Public Involvement section of the EIS will summarize all of the public outreach efforts undertaken during the Project, with a focus on specific outreach efforts to low income and/or minority communities

(Environmental Justice communities) as well as those communities that are most impacted by flooding and/or directly impacted by Project activities. This section of the EIS will detail the public meetings held during the NEPA process, and describe the purpose and the outcome of each meeting.

The principal public involvement activities bracket the development of the EIS:

- Draft EIS scoping, which includes a public scoping meeting, at the start of the environmental review process to provide information about the proposed project and the environmental review process, and elicit agency and public input and comment; and
- Draft EIS public hearing, to present the results of the environmental review of the No-Build and project alternatives, and elicit agency and public comments for consideration in completion of the Final EIS.

Between Draft EIS scoping and public hearings various techniques will be used to gain input from the public and involved agencies. These include:

- Postings on the NJDEP Project website: (http://www.rbd-hudsonriver.nj.gov);
- Newsletters and fact sheets available online and at convenient public repositories (e.g., libraries, community centers) and electronically;
- Press releases;
- Three public meetings, will be held; one during the scoping process, one during the concept screening and one during the alternatives screening. In addition, one public hearing will be held after the Draft EIS is made available for public review. Each public meeting and hearing may be publicized with meeting announcements posted on the websites, Hoboken TV public Access Channel, press releases, mailings to the mailing list, and at public repositories including libraries and City/Town Halls; and
- A regional Citizen Advisory Group (CAG), which includes a cross-section of key stakeholders, organizations, and interests, from each of the three cities, will meet periodically to provide an open forum for discussion about the Project as it progresses. CAG members will bring their members' concerns to the attention of the Project team, and bring project information back to their membership. In addition, CAG members will conduct outreach to their constituents and with the public in their respective cities.
- Compliance with Section 106 of the National Historic Preservation Act (NHPA) also includes a significant public involvement process, which is described in greater detail in Section 6.3.5.

6.3 Technical Environmental Studies

Below is a description of the technical disciplines to be reviewed in the EIS. These sections represent the environmental analysis framework. Each technical discipline section will consist of a characterization of the affected environment, as it pertains to each discipline, followed by a detailed impact assessment for the Project's three Build Alternatives as well as the No Action Alternative. The impact assessments will identify impact intensity (i.e., no measurable impact, beneficial impact, or minor/major adverse impact) as well as direct and indirect impacts (i.e., impacts that occur as a direct result from the Project, or impacts that are caused by the Project but occur at a later time). The impact assessments will include temporary/construction impacts as well as long term impacts from project implementation. If impacts are identified, options for mitigation will be presented.

Detailed Technical Environmental Studies (TES's) will be prepared for disciplines as appropriate. These TES's will be provided as appendices within the EIS document. In order to provide a succinct EIS document, a summary of this technical information will be provided for each discipline discussed below.

The boundary of the *Study Area* is typically defined by the logical geographic termini, the project purpose and need, and the expected limits of potential impacts. Unless otherwise stated, the Study Area will be encompassed by the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south.

A *Secondary Study Area* will also be established to adequately address potential impacts that may occur beyond the primary Study Area. For example, the Socioeconomics and Environmental Justice disciplines rely on census data, some of which are obtained from census blocks and census tracts. These geographic census data levels may include areas outside of the above-described area. In addition, a buffer of 150 feet beyond the Study Area boundary will be added for the Natural Ecosystems Study Area. This buffer is intended to cover the maximum Wetland Transition Area width associated with potential wetlands that might be identified beyond the Study Area boundary. Furthermore, depending upon the results of the flood model, the Secondary Study Area for some disciplines may be defined to include additional areas of study, such as portions of the adjoining municipalities (Jersey City and Weehawken) that may be impacted by the Project.

In addition to the Study Area and Secondary Study Area, the *Project Area* will be defined to include the limits of disturbance where work is physically proposed (such as the waterfront as well as any identified interior areas). The Project Area will be further defined during the concept development and alternatives analysis phases.

6.3.1 Air Quality

The Project will be HUD-funded and will be performed pursuant NEPA. Hoboken is located within Hudson County which is in ozone (O_3) nonattainment, as well as carbon monoxide (CO) and particulate matter smaller than 2.5 microns ($PM_{2.5}$) maintenance. All other criteria pollutants are in attainment within Hudson County. Existing air quality levels documented by NJDEP O_3, CO and $PM_{2.5}$ monitoring stations will be addressed within the environmental document. EPA regulations relating to the Clean Air Act (CAA) require that federal actions conform to the appropriate state, tribal or federal implementation plan (SIP, TIP, or FIP) for attaining clean air (Transportation Conformity or General Conformity). Mobile-sources of air emissions will not be created or relocated as part of the proposed project therefore transportation conformity need not be addressed. However, since the RBD Hudson River project is HUD-funded and will likely require federal permits, it will be subject to the General Conformity requirements. The General Conformity Analysis will require that emissions of non-attainment pollutants conform to the SIP during construction and operation. Since the level of information necessary to quantify construction-related activities necessary in areas requiring federal permits will not be available, the General Conformity Analysis will be performed during the Final Design Phase, and not performed under the scope of this phase.

6.3.2 Noise

Below is a discussion of the Noise technical environmental studies that will be included in the EIS.

6.3.2.1 Mobile Source

Permanent roadways will not be created and existing roadways will not be permanently relocated as part of the proposed project; therefore mobile noise sources do not need to be addressed within the EIS.

6.3.2.2 Stationary Source

In order to discharge water, improvements include additional pumps within Hoboken. Proposed pump stations are subject to maximum permissible sound levels established within Chapter 29 of the New Jersey Administrative Code (N.J.A.C. 7:29) during weekly testing of emergency generators. Sensitive noise receivers (such as schools, hospitals and residences) adjacent to emergency generators will be identified. Stationary-source noise related to the pump stations will be qualitatively addressed and N.J.A.C. 7:29 compliance requirements will be included within the EIS.

6.3.2.3 Construction Source

Proposed improvements include major reconstruction of the Hoboken waterfront. Bulkheads, flood walls and other forms of coastal flood protection will require heavy, long-term construction activities. In addition, storm drain lines may be dug and installed throughout the Study Area. The New Jersey statewide noise control code (N.J.A.C. 7:29) does not regulate noise from construction activities; however, the statewide noise code includes a provision allowing municipalities to adopt a noise control ordinance, provided that the ordinance is more stringent or otherwise consistent with N.J.A.C 7:29.

The Study Area is located within Hudson County and thereby subject to the Hudson Regional Health Commission Noise Ordinance. According to this code, construction noise is exempt during weekday daytime hours. However, construction activities are not permitted on private or public right-of-ways on weekdays between 6 pm and 7 am (overnight) or at any time on weekends and legal holidays unless resultant levels are at or below 50 dBA and 65 dBA during overnight and daytime hours, respectively. The Study Area is a vibrant community, and due to the dynamic nature of the area, ambient noise levels within improvements area are most likely at, or above these noise restriction levels already. Therefore, it is unproductive to hold contractors to such stringent levels. Since non-emergent overnight and weekend construction activities related to this project may be necessary, it would be appropriate to address construction noise by developing a project-specific construction noise level limit based on identification of noise sensitive sites adjacent to construction areas.

A project-specific construction noise level limit will be based on actual background noise levels which will then determine an acceptable noise level limitation above baseline. The Team will provide background noise monitoring findings and recommended construction noise level limits to the Hudson Regional Health Commission for approval. By doing so, contractors will be allowed to perform necessary work while also being a good neighbor. The background noise level study will be performed in six (6) locations and reasonable project-specific construction noise level limits will be developed and detailed within the EIS. In addition, noise levels related to two (2) construction phases at each monitoring study will be predicted based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) in order to determine whether certain construction tasks can meet the criteria. In the event specific construction activities cannot meet established noise criteria, we will design mitigation measures, which may include a combination of path and source controls. However, there may be some major construction activities that cannot meet the project-specific construction noise level limit and therefore, will be restricted during overnights and weekends. Construction noise analyses and mitigation will be detailed within the EIS.

6.3.2.4 Aquatic Noise

In addition to construction activities throughout the Study Area, construction activities in order to construct sea walls will be performed along the shoreline. The NOAA National Marine Fisheries Service (NMFS) is currently revising the underwater noise exposure guidelines, which are expected by late 2015. Therefore, analyses will be based on current Fisheries Hydroacoustic Working Group (FHWG) criteria to assess the potential physiological effects upon sturgeon exposure to impulsive noise of 206 dBpeak and 150 dB RMS for behavioral modification. Based on general construction scenarios planned along the shoreline, we will

determine the most reasonable reference level for the construction method chosen to estimate underwater acoustic levels in order to compare with both aforementioned thresholds in one applicable location. In the event underwater noise levels are predicted to exceed acoustic thresholds established, mitigation measures such as bubble curtains, will be evaluated. Underwater acoustics analyses and mitigation measures will be detailed within the EIS.

6.3.3 Vibration

The proposed project does not include improvements which would cause operational vibration concerns. However, due to the heavy, long-term construction activities related to reconstruction of the Study Area's waterfront, historic and structurally sensitive properties, and densely populated Study Area, a construction-related vibration analysis will be performed. Vibration levels will be predicted based on Federal Transit Noise and Vibration Impact Assessment procedures at four (4) locations. No vibration standards are established by HUD; therefore, predicted vibration levels will be compared to structural damage criteria as well as perceivable and annoyance vibration level thresholds established by FTA. In addition, since construction activities will be performed along the shoreline, radiated vibration into the Hudson River from pile driving will be assessed in one location. In the event vibration levels, either on land or water, exceed established thresholds, mitigation will be evaluated. The vibration analyses and mitigation measures will be detailed within the EIS.

6.3.4 Hazardous Waste

The Study Area is in a heavily developed urban setting with land uses ranging from residential to industrial. Based on a review of NJDEP's GIS data layers, there are multiple Known Contaminated Sites (KCS), including parcels with soil and groundwater contamination, located within the Study Area. In addition, most of the Study Area is underlain by historic fill material, and it can be assumed that this material contains contaminants typical of historic fill including elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals. Contaminated soil is anticipated to be a concern during construction. No acquisitions of private land are anticipated as part of the Project; should it be determined that such acquisitions are required, further investigation into those properties may be warranted. No subsurface testing is included in this evaluation. The need for soil, sediment, and/or groundwater sampling will be determined based on the results of the hazardous waste screening and once the three build alternatives have been developed and selected.

In order to identify known contamination issues within the Project Area, a review of Environmental Data Resources (EDR) database search for the entire Study Area will be performed. Concurrently with review of the EDR data, NJDEP GIS data layers for KCS, Classification Exception Areas, and Deed Notices within the Study Area will be evaluated. A specific site and surrounding area reconnaissance will be conducted to obtain a better understanding of the potential soil and groundwater contamination concerns. Additionally, historical aerial photographs for the Study Area, as well as Sanborn Fire Insurance Maps for the specified concept/build locations will be reviewed to provide a history of potential contamination concerns in the Project Area. The properties that are identified as representing an environmental concern during the review process will be classified according to the ASTM International's (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-13 terminology as follows:

- Recognized Environmental Condition (REC) – "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

- Historic Recognized Environmental Condition (HREC) – "a past release of any hazardous substance or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls)."

- Controlled Recognized Environmental Condition (CREC) – "a REC resulting from a release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls)."

Where the anticipated improvements coincide with historic fill, it can be assumed that typical contaminants associated with historic fill, such as metals and PAHs, will be encountered. Should information indicate that contaminated sites coincide with the proposed improvements and have Recognized Environmental Conditions (RECs) beyond that of historic fill, or that non-coincident contaminated sites may impact the proposed project through the migration of contaminated groundwater, additional review of information and/or NJDEP and municipal file reviews of the contaminated sites will be conducted to identify specific impacts.

In 2009 the Site Remediation Reform Act (N.J.S.A. 58:10C-1 et seq.) established Licensed Site Remediation Professionals (LSRPs), to fulfill the role of the NJDEP to oversee the remediation of contaminated sites. LSRPs oversee the remediation of contaminated sites in accordance with the NJDEPs applicable standards, regulations and guidance documents for responsible parties and are subject to a strict code of conduct, ensuring that the remediation selected for a site is protective of human health and the environment. In cases where remediation of a site is overseen by an LSRP, attempts will be made to contact the LSRP of Record for site specific information, if warranted. If a site is overseen by the NJDEP, the case manager will be contacted.

During the file review process, requests will be sent to NJDEP for access to case files and available municipal information for identified contaminated sites that may be of concern in order to limit the need for further subsurface investigation. In particular, case files for the Hudson-Bergen Light Rail and Hoboken Rail Yard projects will be reviewed due to its potential use as a *Store* component of the Project.

Based on this data gathering process, a summary of RECs, HRECs, and CRECs that represent potential constraints to the proposed project will be compiled. As the design of the project concepts progresses and the locations and construction requirements for the project elements are further defined through the EIS process (i.e., the concepts are refined and the Build Alternatives are selected), the need for additional hazardous materials assessment, investigation, and analysis will be determined. Each Build Alternative will be evaluated relative to the identified RECs, HRECs, and CRECs. The Build Alternative locations will be mapped along with the areas of soil and groundwater contamination. Alternative evaluation will be based on the remedial status of the RECs and CRECs and the type and extent of the associated contamination. Based on the evaluation of the Build Alternatives, recommendations will be presented, potentially including additional site investigation, remediation/mitigation, alternative locations for the Build Alternatives, and the reasoning for the recommendations.

Participation in the LSRP program allows responsible parties to forward remedial activities in order to remain in compliance with NJDEP regulations and guidance. Because of the likelihood of encountering contamination and the amount of soil to be disturbed, the Hudson River RBD project meets the requirements of NJDEP's Linear Construction Program (LCP). As the project moves forward, an LSRP will be retained to oversee environmental issues encountered during construction. This program allows utilities, transportation agencies, or other infrastructure projects to properly address contaminated soil or groundwater encountered during construction, without requiring the linear construction entity (LCE) to investigate and or remediate contamination outside of the project limits. This approach was developed with the understanding that for many infrastructure projects, the LCE is not responsible for the contamination encountered during construction, thus alleviating this burden of a typical Site Remediation Program (SRP) project where the responsible party is obligated to delineate the full extent of and remediate the contamination.

Linear construction projects are overseen by LSRPs, retained for the duration of the entire project, providing oversight and assisting the LCE to remain in compliance with the LCP requirements. The LSRP makes sure that appropriate information is retained to document proper handling, reuse (if possible), and disposal (if necessary) of contaminated soil and groundwater in accordance with the material handling plan. The LSRP also ensures that any material imported for the project is either clean or at a minimum, is not contaminated to a level greater than that which was originally present within the project corridor. Any underground storage tanks that are identified within the construction footprint that require closure or removal will be managed under the supervision of an LSRP. At the end of the LCP, the LSRP oversees the preparation of a LCP report that provides the documentation that the above procedures to address suspect or confirmed contamination have been followed. The Linear Construction Report is ultimately submitted to the NJDEP along with various NJDEP required forms, thus providing a record of the material handling during the construction of the infrastructure project and documenting that the LCE followed the LCP requirements.

6.3.5 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to consider the impacts of their actions on historic or cultural resources. This includes impacts to properties identified as National Historic Landmarks (NHLs); properties or resources that are listed on or eligible for listing on the National Register of Historic Places (NR); or properties or resources that are listed on or eligible for listing on a state register of historic places. Because the Project is being funded by the U.S. Department of Housing and Urban Development, compliance with Section 106 must be demonstrated. The cultural resources analysis will be prepared in consultation with the NJHPO.

6.3.5.1 Consultation

The Section 106 process includes consultation between the lead federal agency (HUD), other involved federal agencies, representatives of local governments and federally recognized Indian Tribes (36 CFR 800.2(a)(4)); the public is also included in the consulting process. Consulting parties that will participate in this Project's Section 106 process will include at a minimum the NJHPO, other federal agencies with regulatory or permitting authority over the Project Area and federally recognized Indian tribes with an ancestral or traditional relationship with the project area. Dewberry will assist HUD in the preparation of consultation documents and will engage in a reasonable and good faith effort to identify Indian tribes that may attach religious and cultural significance to the Project Area. Consultation documents will be distributed to all identified consulting parties early in the process to ensure that all consulting parties are actively involved in the Section 106 process.

6.3.5.2 Cultural Resources Data Collection

As part of the data gathering task for cultural resources, several repositories will be visited to collect and review prior cultural resource studies from the Project Area. Published secondary sources, prior architectural surveys, and cultural resource reports, as well as available maps (including NOAA maps) will be reviewed to characterize the architectural, archaeological, and maritime history of the Study Area. The following data gathering steps are anticipated to be conducted: documentary and site file research at the New Jersey State Museum and the NJHPO, located in Trenton; review of historic maps and local histories available from the New Jersey State Library, located in Trenton; a review of files and information collected and maintained by other local libraries and repositories including the Hoboken Historical Museum, Jersey City Landmarks Conservancy and Weehawken Historical Society; and review online resources to summarize the project's land use history. As part of this task, data will be collected on previously identified historic properties in the Project Area. Multiple historic districts exist within the Project Area, including the *Old Main Delaware, Lackawanna and Western Railroad Historic District*; the *Southern Hoboken Historic District*; the *Stevens Historic District*; the *Central Hoboken Historic District*; the *Southern Hoboken Historic District Extension*; and, the *1200-1206 Washington Street Historic District*, in addition to nearly 50 individual historic properties either listed on or eligible for inclusion in the National Register of Historic Places (NRHP). As part of our data gathering, contextual studies will be prepared to provide a baseline upon which the significance of potentially important historic properties within the Study Area can be evaluated. Contextual studies will focus on both the prehistoric and historic use of the Project Area and may include the following: Precontact, Commercial, Residential, Institutional, Industrial, Cemeteries & Churches, Docks, Wharves & Landfill and Transportation.

Upon review of the Project's concepts, an Area of Potential Effects (APE) will be established for both archaeological and historical resources. This APE will be further refined through consultation with the NJHPO upon the selection of the three Build Alternatives, depending upon the ultimate location of proposed activities. The APE will include the geographic area within which the proposed Project may directly or indirectly cause changes in the character or use of historic properties. The APE for archaeological resources will be limited to the footprint of project-related ground disturbance. The APE for historic architectural resources will include properties identified to have green roofs as well as properties immediately adjacent to the areas of proposed improvement where visual impacts could occur. Data gaps will be identified, including areas of archaeological sensitivity and areas that warrant architectural survey for locations within the APE that were not evaluated as part of prior studies. As multiple historic districts are located in the Project Area, assessment of effects to these historic districts will be a key consideration. The specific studies to be conducted for archaeological and historic architectural resources are summarized below.

6.3.5.3 Archaeological Resources

As part of our evaluation of archaeological resources, a Phase IA Archaeological Assessment will be conducted. The APE will be divided into areas of archaeological sensitivity based upon previously identified cultural resources, the cultural history of the surrounding area, and a site-specific land-use history of the site. These sensitivity areas will then be used to provide recommendations for future testing and/or monitoring. The results of the Phase IA survey will be summarized in a final report that will be submitted to NJHPO. The findings of this report will be summarized in the EIS.

This study will be performed in accordance with the Secretary of the Interior (SOI) Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716) and the NJHPO Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources and Guidelines for Preparing Cultural Resources Management Archaeological Reports Submitted to the Historic Preservation Office (1996, 2000). All archaeological work will be conducted by and/or under the

supervision of individuals who meet the SOI Professional Qualifications Standards for archaeology (48 FR 44738-9).

As part of this effort, the following will be conducted:

- Summarize the background research conducted as part of the data gathering.
- Conduct background research on the environmental context of properties to inform the archaeological sensitivity assessment.
- Conduct a pedestrian reconnaissance to photo-document and visually inspect the APE for evidence of prehistoric or historic archaeological resources and to document current site conditions. The pedestrian reconnaissance will also identify areas of obvious disturbance that can be demonstrated as having little to no archaeological potential.
- Summarize areas of archaeological sensitivity and provide recommendations for future archaeological testing and/or monitoring.

6.3.5.4 Architectural Resources

The architectural resources analysis will consider whether construction of the Project would be likely to affect any historic architectural resources either directly through construction activities or indirectly through alteration of the context or visual environment of these resources. The following tasks will be undertaken as part of the architectural resources analysis.

A study of historic architectural resources will be prepared that will assess the Project's potential to affect historic resources within the Project APE. The APE will be expressed as the area viewed from the proposed Project elements. As part of this task, an intensive-level architectural survey will be conducted for previously unidentified properties within the APE. For purposes of this task, it is assumed that the architectural survey will be for up to 10 properties over 50 years of age that would be subjected to an intensive-level architectural survey in order to assess their potential eligibility for listing in the (NRHP). Following the NJHPO's Guidelines for Architectural Survey, each property will be recorded on a Base Survey Form, as well as a Building/Element Attachment Form. In addition, an Eligibility Worksheet Form will be prepared for each surveyed property. The results of the intensive-level architectural survey will be summarized in a final report that will be submitted to the NJHPO. The findings of this report will be summarized in the EIS.

As part of this task, background research conducted as part of the data gathering task will be summarized. Additional property-specific research may be necessary and would be conducted at various libraries and repositories in Hoboken, Jersey City, Weehawken and Hudson County. Specifically, historic maps, aerial photographs, published secondary sources, directories, and other pertinent research data will be reviewed. In addition, interested parties knowledgeable about the history of the Project Area will be contacted. As part of the background research conducted under this task, special emphasis will be placed on the identification of character defining features of the various historic districts located in the Project Area.

Upon completion of the intensive-level architectural survey, the Criteria of Adverse Effect will be applied to all identified properties. Consideration of impacts to the multiple historic districts in the Project Area will be an important part of this analysis as avoidance and minimization of impacts to these resources will be a key consideration. Working with the design team, the goal would be to develop designs that are in keeping with the SOI's Standards for the Treatment of Historic Properties in order to minimize the potential for adverse effects.

If adverse effects are identified, a list of potential mitigation measures will be recommended, but completion of mitigation work will be conducted in subsequent phases of this Project. Public outreach will be coordinated as required under Section 106 as part of this task, including the distribution of reports to the NJHPO as well as interested and consulting parties.

6.3.6 Natural Ecosystems

6.3.6.1 Floodplains, surface waters, wetlands and riparian zones

Relevant pre-existing data regarding the presence of natural resources in the Project Area will be gathered and/or reviewed, including the NJDEP GIS database of freshwater and coastal wetlands, floodplain maps, and soils maps to identify potential areas of concern and their associated constraints.

The existing natural features within the Project Area, including areas of open water, the littoral zone, flood hazard areas, the Mean High and Spring High Water elevations at the waterfront/shoreline and the intertidal/sub-tidal shallows zones, will be identified. Since it is anticipated that a coastal *Resist* element will be included in the Build Alternatives, and would involve impacts to open waters and/or wetlands, any coastal shoreline wetlands identified (i.e., in non-bulkhead areas) will be delineated, in accordance with NJDEP and USACE standards, for subsequent survey and mapping. Existing tidelands conveyances from the NJDEP Bureau of Tidelands, as well as those areas that have been filled, but do not have an existing tideland grant, lease, or license, will be reviewed. Historical aerial photographs and topographic maps will be reviewed to identify the historic wetland areas and stream channels that previously existed in the western portions of the City of Hoboken. These areas may be suitable for various green infrastructure features. Freshwater wetlands that may be located within these interior portions of the City, in the "footprint(s)" of proposed flood mitigation measures, will be delineated for subsequent survey and mapping.

For the three Build Alternatives to be identified, the proposed impact areas located within the "interior" portions of the City will be inspected and wetlands/open waters that may be affected by the footprint(s) of the alternatives will be delineated. Based on the delineation of the wetlands/open waters, impacted areas resulting from each of the three Build Alternatives will be calculated. Likewise, any wetlands present will be delineated along the shoreline of the Project Area and impacts, if applicable, due to a coastal *Resist* feature (dike, wall, revetment, breakwater, etc.) that may be proposed in the Build Alternatives will be calculated. The potential impacts on natural resources will be assessed, including upland (riparian buffers, if any) and/or in-water construction effects, such as temporary increases in suspended sediment during construction.

Riparian zone impacts to vegetation will be regulated by the NJDEP, typically requiring mitigation at a 2:1 ratio for permanent disturbances that exceed the allowable limits. Tidal water impacts will be regulated by both the USACE and the NJDEP, as are intertidal/subtidal shallows impacts. Freshwater wetlands found in the Project Area will be mapped; if there are impacts to these wetlands, mitigation would be required. Mitigation for impacts to tidal waters and any freshwater wetlands will be conducted based on the size and type of impacts, available options and likelihood of success, and the availability of approved mitigation bank credits (as per the 2008 Federal Rules on Compensatory Mitigation). Impacts to state-owned Tidelands, if any, will require authorization via a tidelands lease or grant, unless one has previously been issued by the State.

6.3.6.2 Terrestrial Ecology

A request will be sent for a database search to the NJDEP Natural Heritage Program (NHP); the USFWS Information, Planning and Conservation (IPaC) System for records of rare/threatened & endangered (T&E)/special concern species or their habitats in the Project Area will also be reviewed. If T&E/special

concern species or habitat records are identified within the Project Area, we will verify, to the extent practicable, whether those resources are present while performing a field assessment of the Project Area. If more detailed studies are required, the NJDEP will be informed of the need for any studies. If data gaps are identified in the existing, available data, recommendations will be provided as to whether the data is critical for future analysis and how the missing information can best be obtained. The information gathered during the data review process will be included in the EIS and used in future phases, including the securing of any required permits.

The existing natural resources within the proposed Project Area will be characterized in the EIS process. These resources will include upland and wetland/in-water habitats, ecological communities, and records of wildlife in the vicinity of the waterfront/shoreline and interior areas that have the potential to be affected by the proposed Build Alternatives.

Impacts to terrestrial resources will be evaluated, such as vegetation clearing activities, as well as visual and/or noise effects on any wildlife in the Project Area. The need for state and/or federal coordination and approvals/permits will be identified, including project evaluation and compliance in terms of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

6.3.6.3 Aquatic Ecology

The Study Area includes the waterfront of Hoboken, as well as small portions of the Jersey City and Weehawken shorelines. This waterfront area, part of the Lower Hudson River-Upper New York Bay, is a shallow estuary that contains habitat for shellfish, and marine, estuarine and anadromous fish. The Lower Hudson River-Upper New York Bay supports a diverse community of aquatic biota; however, it is an urban estuary that has been impacted by development and stormwater/combined sewer discharges to the waters, resulting in degraded water and habitat quality, including sediment contamination. A Comprehensive Restoration Plan has been developed for the Lower Hudson River-Upper New York Bay Estuary through the combined efforts of many agencies and organizations, including: the Harbor Estuary Program, the USACE, EPA, USFWS, NOAA, the Port Authority of New York and New Jersey (PANYNJ), Hudson River Foundation, NY/NJ Baykeeper, NYSDEC, NJDEP and other state and city agencies, and non-government organizations, to restore and protect habitat within the Lower Hudson River-Upper New York Bay Estuary.

The National Marine Fisheries Service (NMFS) will be contacted for information regarding fisheries resources within the Project Area. Based on a preliminary review, the Hudson River in this area is mapped as habitat for the federally endangered Shortnose Sturgeon *(Acipenser brevirostrum)*, so timing restrictions for certain construction activities in the open waters would be expected.

The shoreline protection *(Resist)* feature may result in impacts to the shallow waters of the existing waterfront area. Therefore, as requested by the NMFS, the existing aquatic ecology of this shoreline area will be evaluated. A review will be conducted of available desktop GIS data and web-based resources associated with the aquatic resources of the area; letters will be requested from the following agencies:

- NJDEP Natural Heritage Program for T&E species and critical habitat; and
- NMFS for marine species/habitats in the Project Area.

In addition, the Project Area will be reviewed for Essential Fish Habitat (EFH), as required by NMFS. A desktop review of available GIS data and web-based resources will be conducted to identify the aquatic resources of the Project Area. This will include a review of the USFWS IPaC System for species and

critical habitats, as well as the NMFS on-line EFH Viewer. This effort will include the database request letters to the NJDEP and NMFS for information on T&E species and critical habitats in the Project Area.

An EFH review will be conducted to evaluate the shoreline area for use by aquatic species to determine if portions of the shoreline area may be identified as EFH. A site visit and inspection of the Project Area will be conducted in regard to any EFH identified. The inspection will be conducted at low tide during fair weather conditions (minimal winds) to allow for the best viewing conditions. The Project Area will be evaluated in terms of its water depth, clarity, and site disturbance conditions. A Secchi Disk will be used to measure water clarity, and water depth within the Project Area will be sounded in at least four locations from the bulkhead along the shoreline.

Existing mapping of EFH prepared by NMFS will be reviewed for the Project Area. The mapping will be reviewed for potential use of the Project Area by the various species of fish mapped by the NMFS. The EFH review will include a "desktop" model of the Project Area conditions, using existing available information, including geology, bathymetry, latitude, and biogenic habitat in the Project Area. The model predicts the suitability of an area for potential EFH, based on existing environmental conditions and database information regarding fish distributions and habitat use. The EFH review includes an initial meeting/consultation with the NMFS, if requested, to discuss the EFH review protocols and preparation of the "desktop" model, as well as preparation of the NMFS EFH Worksheet.

An EFH review/assessment and a summary report of the findings will be prepared. The NJDEP and/or NMFS will be invited, if required, to review and discuss the findings. One round of comments from the agencies, if any, will be addressed, and a summary of the report will be prepared for inclusion in the DEIS.

The Aquatic Ecology evaluation will include a characterization of water quality conditions in the Project Area, using available existing regional and site-specific water quality information from, for example, the NJDEP, USACE, EPA, NOAA and the Harbor Estuary Program. The general characteristics of this portion of the Lower Hudson River-Upper New York Bay will be described in terms of currents, tidal range, water quality classification, sediments, pollutants and biological conditions. Potential effects to the aquatic ecology in the future, both with and without the proposed project, will be considered. Public initiatives intended to improve the water quality of the Lower Hudson River-Upper New York Bay area will be reviewed. The Project will be reviewed for compliance with the Endangered Species Act, specifically in relation to the Short-nosed Sturgeon potential spawning habitat and any other T&E species identified. The tasks will include consultation and coordination with USACE, USFWS and NMFS, as required, so that the EIS process will comply with the Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et seq. and the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265, as amended).

Mitigation measures will be evaluated to minimize potential adverse impacts to aquatic resources that may be identified. These mitigation measures may include relocation of any in-water features to avoid sturgeon spawning areas, designing any in-water features to minimize habitat modifications and to allow for adequate tidal flushing and fish movement, and conducting pre- and post-construction monitoring to ensure that the structures are performing as designed. Adaptive management measures should be considered if the structures are not performing as anticipated.

Aquatic ecological concerns will be outlined and the required environmental permit applications to the applicable federal, state, and local agencies identified. Solutions that result in a cost-effective, constructible design that avoids impacts to aquatic resources to the greatest extent practicable will be pursued. If the project results in excavation and/or placement of fill within tidal waters of the Hudson River,

the design will look to minimize the impacts and mitigate for unavoidable impacts, typically at a 1:1 ratio. Mitigation will be conducted in accordance with the 2008 Federal Rules on Compensatory Mitigation.

6.3.7 Socioeconomics

The Socioeconomic analysis will include demographic and economic data for the Project Area. Data analyzed will include Mod IV data for property assessments and characteristics (available from the New Jersey Department of the Treasury), records of property transactions, and information on revenue, profitability or employment levels of area businesses, if available.

The principal issues of concern regarding socioeconomics are whether the proposed project would result in significant adverse social, economic, or demographic impacts within the Study Area. Adverse impacts resulting from the build conditions may include the direct displacement of residents and/or businesses. Impacts to businesses would also include the loss or relocation of the any businesses and associated employees. Economic impacts for the No Action Alternative will also be assessed. These impacts may include operating losses, lost wages, loss of tax revenue from flooded uninhabitable buildings, and the cost to restore damaged buildings. In addition, impacts to emergency services will also be assessed. This may include disruptions to emergency services caused by construction activities, as well as potential impacts caused by the implementation of the Project alternatives (such as installation of flood gates across streets). Impacts to ingress/egress from the Study Area will also be examined as it relates to business impacts and emergency services.

In addition, indirect impacts on the Study Area will be assessed. Indirect impacts are those that are caused by the Project but may occur at a later point in time. Indirect impacts may result from changes in land use or population density that could, in turn, have an indirect impact on the Study Area. Impacts may include increases in residential rents or the indirect displacement of businesses due to changes in market conditions.

As discussed in Section 6.3, as the project concepts are developed and impacts to adjoining communities are identified, the Secondary Study Area for Socioeconomics will be developed. This will include those areas where additional significant impacts (beyond those that are included within the limits of the Study Area) are identified.

6.3.8 Land Use/Zoning

Land use and zoning in the Project Area will be mapped and described, and the impacts of the Build Alternatives on these land uses will be characterized. The analysis will also identify open space (local, county, state, and federal parkland) through the use of GIS data layers, Recreation Open Space Inventory (ROSI), and field verification. As part of this analysis, view corridors, building character, local landmarks and overall community character will be evaluated. Field reconnaissance surveys and interviews will be conducted to supplement and/or corroborate the findings of public documents, maps, and GIS data.

The EIS will describe the existing and proposed future land use and zoning within the Study Area and examine the impacts of each of the Build Alternatives. This section of the EIS will examine each alternative's consistency with the existing land uses as well as proposed land uses within the Project Area as described in local master plans (such as the Hoboken Master Plan, last revised 2010) and redevelopment plans for Jersey City, Hoboken, and Weehawken, including the Western Edge Redevelopment Plan (2015) and Hoboken Yard Redevelopment Plan (2014). This section will also evaluate the project alternatives' consistency with local and regional land use policies such as the City of Hoboken's Green Infrastructure Plan (2013).

6.3.9 Environmental Justice

The Environmental Justice (EJ) analysis will focus on low-income, minority, and Hispanic communities pursuant to the requirements of Executive Order (EO) 12898. Under EO 12898, federal agencies are required to determine whether proposed actions (those that are undertaken directly by the agency or are funded or approved by the agency) would have a disproportionate adverse environmental impact on EJ populations.

The analysis will evaluate the presence of EJ populations based on the U.S. Census Bureau's 2010 Census of Population and Housing, as well as data from the American Community Survey 2009-2013. Demographic data will be aggregated on the census block, census block group and census tracts for the Study Area and will be compared to the Hudson County and New Jersey as a whole. The analysis of impacts from the Project's Build Alternatives will follow the guidance and methods within the Council on Environmental Quality's *Environmental Justice Guidance under the National Environmental Policy Act.* (December 1997). The regional thresholds identified in the Regional Plan for Sustainable Development (RPSD) that was prepared by Together North Jersey (TNJ), a planning consortium established in part by the New Jersey Transportation Planning Authority, (NJTPA) the Metropolitan Planning Organization for North Jersey, will be followed to further identify EJ communities. The RPSD provides thresholds based on a variety of socio-economic characteristics including, but not limited to, income and poverty, race, age and physical mobility.

The Project's public participation program will also be summarized in this section, with a focus on the public participation of low-income and/or minority populations.

6.3.10 Visual/Aesthetic Resources

Potential impacts the Project may have on visual resources and viewers will be analyzed. View corridors and visual resources within the Study Area, such as the Hudson waterfront and views of historic resources such as the Hoboken Terminal will be identified. As part of this analysis, the level of impact to these resources for each of the three Build Alternatives with be determined. The study will also discuss practical design mitigation and enhancement elements for each alternative, in terms of construction and design-related mitigation measures. As part of the analysis, key consideration will include aspects of the Project that partially or totally block a view corridor or a natural or built visual resource.

6.3.11 Infrastructure

6.2.16.1 Structures

For the purposes of this EIS, the various types of structures within the Study Area have been divided into three major broad categories:

- All types of buildings and waterfront structures
- Streets
- Transit and Railway Structures

The location of the Project's three Build Alternatives may have impacts on either one or more of these three types of infrastructure categories. During the course of the Project, infrastructure information such as spatial location, type and other applicable features will be collected and documented either in a GIS database or in CAD basemap. Requests for information will be sent to a variety of sources such as Hoboken and Jersey City, Weehawken, NJ Transit, Port Authority of New York and New Jersey (PANYNJ), Department of Homeland Security (DHS), Hudson County, utility companies and others. This information will be screened to ensure that the most recent datasets are used to be included in the base GIS database or the CAD base map. It should be noted that due to security reasons, information on

certain critical infrastructure assets that will be assessed in the Project may not be available for public use. The data inventory for building and waterfront structures will include but will not be limited to critical infrastructure buildings/facilities such as hospitals, fire stations, utility substations; residential and commercial buildings; and type and condition assessment of the various types of waterfront structures such as bulkheads, seawalls, timber cribbing and others. The preliminary 2013 FEMA floodplain (with 2015 updates) will be utilized to understand the flooding risks from coastal storm surge for various types of buildings. Additionally, structures that have been flooded during past rainfall events will be identified.

The footprint of the three Build Alternatives will be placed into the CAD basemap and the impacts from each of these components will be analyzed for each of the applicable three major broad infrastructure categories. A condition assessment and load rating analysis will be performed for various segments of waterfront structures such as bulkheads, seawalls, cribbing structures and others to setup the baseline conditions for these structures. The load rating analysis of waterfront structures will inform and guide the development of various *Resist* components that can constructed safely on the existing waterfront.

During the course of the project, an integrated coastal and stormwater hydrodynamic model will be developed using Danish Hydraulic Institute's (DHI) MIKE model system to evaluate the flood depths from a combination of coastal storm surge and rainfall events in existing conditions. Coastal storm conditions for various recurrence intervals that were developed as part of the 2013 FEMA's Preliminary Flood Insurance Study for New York and New Jersey will be utilized. The model will incorporate appropriate hydrologic and hydraulic modeling methods for analyzing rainfall induced flooding within the Study Area. The MIKE model system will provide the flooding water depth at various types of infrastructure such as building, streets and critical infrastructure.

Upon development of the project's concepts and alternatives, the existing conditions model will be updated to reflect these components (also referred to as Proposed Conditions Model). The proposed condition model will provide the effectiveness of each concept in reducing flood levels at various types of infrastructure from coastal storm surge and rainfall events. The Project will also evaluate structural, geotechnical, traffic, urban design aspects such as access, views and quality of life impacts to affected building and waterfront structures for each of the proposed concept and build alternatives.

6.2.16.2 Utilities

The Study Area includes an existing utility network consisting of underground and overhead utility facilities comprising of PSE&G, United Water, North Hudson Sewerage Authority, Verizon, and Cablevision. The EIS will discuss utilities and consider the impacts to the existing utility network by the components of the proposed improvements. High risk utility impacts will be identified and evaluated as the potential flood risk reduction measures are further defined through the EIS process.

6.2.16.3 Circulation

A schematic plan will be prepared for the local road and transportation network that can be expected to be affected or involved by the flood risk reduction plans developed under this project. Subject to concurrence by NJDEP, a network of up to 48 intersections, which represents the primary roadways into and out of the Study Area as well as additional primary routes that provide circulation within the city has been identified. The schematic plan will be a clear and simple presentation of the affected street segments and access routes and how they are used and by what travel modes, including pedestrian and bicycle. It will also display important city destinations that generate significant traffic demand such as parks, transportation hubs and major private and public offices.

Intersection traffic volume data will be manually collected for the typical AM, PM and Saturday peak periods (3 hours each) at each of the Project intersections. Related traffic, signal and travel data from

city staff, NJ Transit and other transit/shuttle service providers. Transit data will include public transportation services and facilities in the Study Area, including bus service, ferry service, NJ TRANSIT passenger rail, PATH, and Hudson-Bergen Light Rail. The plan will include detailed traffic data (modal volumes by direction, ridership for transit) compiled for each of the travel modes. Input will be solicited from school bus service providers, emergency service providers, maintenance operators and utility companies regarding how they use the affected street segments. Input received from these stakeholders will also be presented in the schematic plan. If necessary to convey clear information, it may be necessary to develop more than one schematic plan to best convey the compiled data.

A Synchro/SimTraffic traffic analysis model will be prepared for the project network for use in evaluating the traffic impacts that can be expected during construction of each of the three Build Alternatives. A similar detailed traffic analysis to assess the traffic performance of up to six construction staging schemes, including mitigation measures, for the Preferred Alternative will be completed. The Synchro model will be constructed based on the collected vehicle, pedestrian and bicycle data as well as roadway, intersection and traffic control data anticipated from Hoboken. The model will be used to generate the appropriate traffic performance metrics that can inform the decision process under the Feasibility Assessment stage and the Design Development stage.

In addition to the traffic analyses, impacts on public transportation services and facilities in the Study Area will be identified and evaluated, including impacts to bus service, ferry service, NJ TRANSIT passenger rail, PATH, and Hudson-Bergen Light Rail.

Construction activities under the Project would likely require the need to close off a travel lane, a travel direction or a street segment under certain stages of construction. Such traffic impacts will affect motorized and non-motorized traffic including buses and commercial vehicles, and will require mitigation to the extent possible. To that end, construction management plans will be developed to ensure that affected users, including emergency services, are informed of traffic impacts related to construction work before and during commencement of construction activities, appropriate mitigation measures are developed and implemented to minimize inconvenience and delay to them, and schedules of lane or street closures are reviewed and approved by local officials beforehand.

This chapter of the EIS will be prepared to present (a) the traffic data that are compiled under this project, (b) the approach used for evaluating traffic and transit performance, and (c) the respective traffic performance conditions that can be expected for the scenarios analyzed.

6.3.12 Sustainability

Sustainable design aims to reduce pollutant emissions through the evaluation of multiple areas including noise and vibration, light pollution, air quality, greenhouse gases, and solid and hazardous waste. Data collected in other phases of the Project will be built off to determine areas of impact and identify ways that the alternatives impact sustainability principles. A qualitative review of emission sources will be conducted to identify design elements that can reduce pollutants. The evaluation of design alternatives will consider the effects on such pollutants. Strategies to employ green technologies in the buildings and structures, including but not limited to the use of LEED principles, green roofs and other green stormwater infrastructure, and solar power will be explored.

6.4 Indirect Effects and Cumulative Impacts

Indirect effects are caused by the action and occur later in time or farther removed in distance from the action, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and

related effects on air and water and other natural systems, including ecosystems. (40 CFR § 1508.8). The indirect effects of the proposed Project will be discussed under each discipline/topic and summarized in this section.

The analysis will also include an examination of Cumulative Impacts. Cumulative Impacts are incremental actions that, individually, may not represent a significant environmental impact; however, when taking into consideration other past, current, proposed, or reasonably foreseeable actions with similar impacts, the overall result may be significant. Often, individual actions do not result in adverse impacts; instead, adverse impacts arise from the aggregated incremental impacts of many separate actions over the course of time.

The Cumulative Impacts analysis will begin by identifying other nearby past, present and future actions that are reasonably foreseeable. In order to determine which projects will be included in this analysis, CEQ's guidance on Cumulative Impacts which identifies the following initial steps in Scoping for Cumulative Impacts will be followed:

- *Step 1: Determine the significant cumulative effects associated with the Project.* For each discipline of study, the resources (natural as well as the built environment) which may be affected from a cumulative impacts perspective will be determined.
- *Step 2: Establish the geographic scope.* The spatial extent (also known as the Project Impact Zone) in which to analyze cumulative impacts based on the issues identified in Step 1 will be determined,
- *Step 3: Establish the time frame for analysis.* The duration of the impacts identified in Step 1 will be determined (e.g., temporary during construction, or permanent impacts).
- *Step 4: Identify other actions affecting the resources, ecosystems and human communities of concern.* Other projects within the geographic extent identified in Step 2 that have impacts to the resources identified in Step 1, whose own impacts will occur within the same timeframe established in Step 3 will be identified.

The Alternatives Analysis and recommendation of the Preferred Alternative will consider the probable environmental impacts from other projects and evaluate that in conjunction with the anticipated direct and indirect impacts from the Project's Build Alternatives. A focus will be made on potential impacts to vulnerable communities, notably Environmental Justice areas and locations that have historically received significant amounts of flooding.

The Project's impacts to flooding will be examined in conjunction with other independent projects' (identified through the steps above) impacts on flooding patterns. Special consideration will be taken as to whether adjoining areas not protected by the Project (such as portions of northwestern Jersey City) are adversely impacted by the Project and other independent projects. The analysis will include coordination with other projects including those in the cities of Hoboken, Weehawken and Jersey City, as well as relevant regional projects, to help identify and address possible cumulative impacts.

Under the US Environmental Protection Agency (EPA) CSO Control Policy, the North Hudson Sewerage Authority was issued CSO permits for both the Adam Street Water Treatment Plant and the River Road Sewerage Treatment Plant on March 12, 2015 (modifications in October 2015). In accordance with the issuance of these permits, the NHSA is required to develop long term control strategies, as part of a Long Term Control Plan (LTCP) in compliance with the requirements of the Clean Water Act. The LTCP consists of nine elements including public participation and an implementation schedule. The LTCP will be developed over the course of 59 months commencing with the submittal of a Selection and

Implementation of Alternatives Report in the Final LTCP by June 1, 2020. The RBD Team will work with the NHSA throughout the development of the LTCP and the RBD process to provide consistency between the two efforts.

Ultimately, the DEIS will aim to recommend a Preferred Alternative whose combined efforts with other identified projects can best meet the Project's Purpose and Need while minimizing cumulative adverse environmental impacts to the community. If adverse cumulative impacts are identified, this analysis will aid in the identification of potential mitigation measures that can be employed or incorporated into the design of the Preferred Alternative.

6.5 Conclusion

The EIS conclusion will consist of a summation of the findings of each of the technical studies, identifying and providing the reasoning for the recommendation of the Preferred Alternative. This recommendation will be based on the alternatives analysis conducted for each discipline, taking into consideration a balance between constraints, including environmental and community impacts identified in each discipline, the anticipated cost of each alternative, engineering feasibility, and the ability to meet the Project's Purpose and Need.

7.0 REFERENCES

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http://www.web.edrnet.com/

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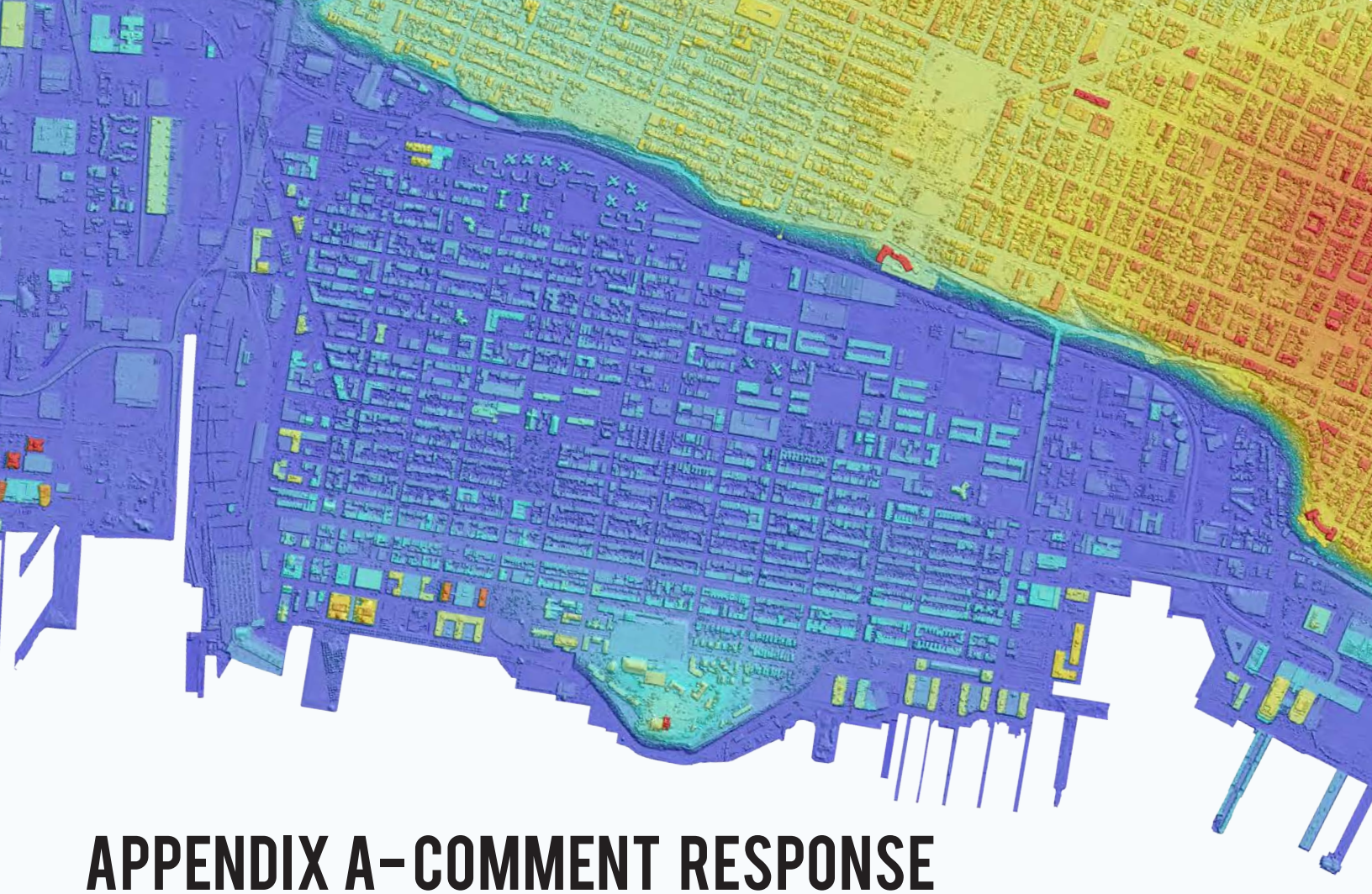


APPENDIX A–COMMENT RESPONSE DOCUMENT

SCOPING DOCUMENT RESPONSE TO COMMENTS

The Public Scoping Document was published/presented on the project website (www.rbd-hudsonriver.nj.gov) and a Notice of Intent (NOI) was published in the Federal Register on September 4, 2015 (80 FR 53555). The Public Comment Period began that day (September 4, 2015) and concluded on October 9, 2015. Scoping materials were presented to the Citizen Advisory Groups (CAG) on September 9, 2015 and October 8, 2015. A Public Scoping Meeting was held on September 24, 2015 where material was presented to the community. Two “drop-in” public sessions were also held on September 29, 2015 and October 1, 2015 for additional comment opportunities. Comments were received at all of these meetings as well as through the US mail. Additionally, comments were accepted through electronic mail throughout the comment period.

Below are response to comments received during the comment period. Not all comments are listed below; however, all comments received have been reviewed and considered. Where possible, comments below have been aggregated in order to assist the reader in understanding the major areas of interest and/or concern resulting from the Scoping process. The original comment number is indicated by bold font and italics (20) following the paraphrased comment in this response document. Original comments in their entirety can be found in the table in Appendix X and following attachments. Comments that have been noted without additional response have been designated with an asterisk (*) next to the comment number in the table (Appendix B). Comments can be found in Appendix C.

Scoping Document General Comments

Comment: Define "Scoping" and provide an alternate word (1)
Response: Scoping is a regulatory term which is defined in the Council on Environmental Quality National environmental Policy Act regulations at 40 CFR 1501.7 as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.”

Comment: Please provide links for the documents used as references in the Scoping Document (2)
Response: Hyperlinks have been provided in the reference section of the Final Scoping Document.

Comment: Comment on all maps - no sources? (142)
Response: A subsection has been added to the document’s reference section providing original data sources and methodology for developing mapping in the Final Scoping Document.

Comment: Make sure acronyms being used are defined first. Applies to both written material and presentations. (6 and 17)
Response: A list of acronyms is provided immediately following the table of contents on page iii of the Scoping Document.

Comment: The executive summary should be simplified and provide the reader with an understanding of what the scoping document will present. This includes a brief background (the impacts from Sandy, recurring flooding issues within the project area, the uncertainty of future flood events) which establishes the need for the project. The executive summary should also state the purpose of the project and the four project strategies (RESIST, DELAY, STORE, DISCHARGE). The executive summary should help the reader understand how the feasibility study and EIS will analyze alternatives and produce a preferred alternative based upon screening criteria. Part of the narrative uses language that sounds like the intent of this project is to prevent consequences similar to Sandy- when the objective of the project is better expressed in reducing flood risk to a yet to be specified level of protection. In places, the language used to summarize the project is difficult to understand. Perhaps an improved summary might be: The Project is a comprehensive urban water strategy to reduce flood hazard and flood-related public health risks while leveraging infrastructure investments to enhance urban livability. Amending the preceding sentence should occur throughout the document. (94)

Response: The executive Summary has been revised.

Comment: The project background should paraphrase and expand upon language from the executive summary. The background should provide the reader with the appropriate context to understand how the purpose and need for this project have been developed. This includes a history of flooding in the project area, as well as the Rebuild by Design competition. (95)
Response: Revisions have been incorporated.

Comment: The study area map should reflect current Hoboken Open Space. (9) (96)
Response: Subsequent to the publication of the Scoping Document, additional open space data was made available by the City of Hoboken and the applicable figures have been updated for the Final Scoping Document.

Comment: Provide schedule showing Draft and Final EIS, concept and alternative generation. (58) (159)
Response: A project process schedule was included in the Public Scoping Meeting presentation, which is publicly available for download from the project website at www.rbd-hudsonriver.nj.gov.

Comment: One commenter suggested that the design include an actual long term permanent solution, and not a devalued design to fit the constraint of the current proposed $230M budget. It is very important to the community that the design is "done right," and not just another temporary "band-aid." (72)
Response: The project seeks to design a comprehensive approach to flood resiliency that includes all four components of Resist, Delay, Store, and Discharge. The feasibility study and EIS will not limit the ultimate project design to the $230 million grant funding; if the funding amount does not cover the entire project, a phasing plan will be developed.

Comment: The scoping document should clarify how the preferred alternative will be memorialized and presented to the public. Specifically, this document should identify how the "master plan" for this project will address operations and maintenance, ownership, cost strategies for financing subsequent phases, and how long term plan amendments should be handled. (97)
Response: The scoping document has been revised to better describe how the Preferred Alternative will be presented to the public as part of the Record of Decision. Operations and maintenance, ownership, cost strategies for phasing, etc., will be explored as part of the feasibility study. The EIS will provide a brief summary of these topics.

Comment: Goals and objectives should be stated in terms that are clearly either a goal or objective. There should be stronger language in the goal statements that tie this project to the success of the resist strategy. (101)
Response: The Goals and Objectives section has been revised to better indicate goals/objectives. The goals and objectives are applicable to the entire comprehensive approach and address the four components (Resist, Delay, Store and Discharge).

Comment: The scoping document should address the impact to emergency services for ingress, egress, circulation or access as it relates to proposed changes to the project area during construction, following project closeout, and during an emergency deployment (104)
Response: Impacts to emergency services including ingress and egress will be addressed in the Draft environmental Impact Statement under the subject of Socioeconomics as well as Circulation. The Scoping Document has been updated to reflect this.

Comment: The concept screening matrix needs to be explicit in identifying project goals and who is benefiting. In addition, since residents and businesses will be most extensively affected by the project, these stakeholders should have the opportunity to provide input into the development of the matrix itself, not just the final rankings from the matrix. Co-benefits of flood control projects should be clearly articulated and quantified, and considered in cost benefit analyses. For example, by incorporating “green infrastructure” practices into efforts to control stormwater, communities and property developers

can reduce energy costs, diminish the impacts of flooding, improve public health, and reduce overall infrastructure costs. (126)
Response: The Citizen Advisory Groups, which includes residents, business owners and community leaders, will have input on the development of the matrix. The evaluation of co-benefits will be included as part of the concept screening.

Comment: The Draft Scoping Document has not clearly defined what might be the implementation part of Phase I. Recommend that the Scoping Document take into consideration other components that could be part of Phase I implementation and budget (beyond Resist). (5, 129 and 133)
Response: At this point, concepts have not yet been developed; therefore, it is not known how much the current allocation of HUD funding will cover. As the concepts and alternatives are further developed, a more detailed phasing plan will be created to reflect project cost.

Comment: A budget outline should be provided for the administrative, material, and construction cost of the project. An itemized list should be displayed on the Rebuild by Design website for public access for the overall project. (118 and 119)
Response: The estimated construction and maintenance costs of the project will be developed and included in the feasibility study. The RBD website will be updated with current RBD budget and schedule in the future.

Comment: Commenter asks specific questions regarding storage capacity and cost of the BASF site component of the project. Commenter recommends the resilient building guidelines developed by Princeton Hydro; and suggests an outreach/education and grant program for property owners to assist in implementing the guidelines as well as wet and/or dry flood proofing. Commenter asks why the Shades neighborhood in Weehawken is not identified as a “flooding hotspot”. (36 and 131)
Response: Storage capacity issues will be considered during concept and alternatives development. Regarding the “flooding hotspots” indicated on the figure within the Scoping Document, these areas were based on public input on inland flooding from rainfall events. The Shades neighborhood, which received flooding during Sandy, was not identified by the public as also having a systemic inland flooding issue from rainfall events; however, it is an area that is included within the Study Area (see Figure 1 within the Scoping Document).

Comment: I suggest that another measurement of success be added to 1.0 executive Summary and 3.2 Goals/Objectives: Long Term Cost effectiveness of the project. This is often missed at the beginning of a project. Hoboken residents may or may not be able to effectively pay for maintenance of a flood control district. (134)
Response: Long term cost effectiveness (maintenance needs and life-cycle costs) is a factor that will be considered in the evaluation of each alternative.

Comment: Quality of life is a key co-benefit not mentioned here (141)
Response: Quality of life will be taken into consideration during concept screening. The project will develop concepts that reduce risks to private and public property from flood impacts while also incorporating design elements that activate public and recreational spaces, thereby enhancing quality of life for the community.

Comment: Might be good to clarify this section [technical environmental studies] as the environmental analysis framework, so that the public has a clear understanding of affected environment --> impacts --> mitigation. Likewise, it would help up front here to define impacts and intensity (i.e., no measurable impacts, beneficial impacts, minor/major adverse impacts) and direct vs. indirect (146)
Response: Revisions have been incorporated.

Comment: There won't be a separate construction chapter? As different components may be built at different times, there may be a need for a construction worst-case scenario. (155)
Response: As noted in Section 6.2 of the Scoping Document, each impact analysis will include temporary/

construction impacts as well as long term impacts from project implementation.

Comment: Change term storm-sewer to "combined-sewer mains" or “combined sewer infrastructure” (157 and 144)
Response: Revisions have been incorporated.

Comment: Define "resiliency" - if "leveraging resiliency" is key, tell us what it is. (158)
Response: A resilient community is able to resist and rapidly recover from disasters or other shocks with minimal outside assistance. Source: National Disaster Resilience Competition Phase 2 Fact Sheet; HUD: June 2015. The Project seeks to leverage resiliency investment to enhance the urban condition. This definition has been incorporated into the Final Scoping Document.

Comment: Need for solutions are urgent. What promises you will do EIS thoroughly? How do you fund phase II, III… (160)
Response: The EIS will be conducted in accordance with the National environmental Policy Act as well as the applicable HUD regulations. Regarding funding and project phasing, these items will be further analyzed as part of the EIS and feasibility study and will be dependent upon the ultimate design of the preferred alternative. The statute requires currently appropriated funds to be expended by September 30, 2022.

Comment: Purpose and Need: add population Hoboken in 1990 was 33k, in 2010 50k on 1.2 sq miles of land. Project population to 2040 or 2050. What is time frame (duration) for effective solutions, Ph I, II, III (163)
Response: The population density of the study area is noted as a contributing factor within the Purpose and Need section of the Scoping Document. In addition, a phasing plan will be incorporated as part of the EIS and feasibility study.

Comment: Mitigation measures for inland flooding from rainfall events, not just coastal surge, must be integrated into the project if the goal of the funding is to create a comprehensive flood solution that will also address the flood risk that comes with precipitation. The document should explain explicitly how the funding will address interior flooding. (124)
Response: The feasibility study will design a comprehensive approach to flood resiliency. If the current funding does not cover the entire project, the feasibility study will also incorporate a phasing plan that will discuss how best to incorporate future project elements. The phasing will be summarized in the EIS.

Comment: The project Scope should consider creating any possible financial tools such as grants, revolving loan funds or other tools that could a) help to leverage additional public funds and or b) create public benefits on presently privately owned land through other tools such as deed restrictions, easements, or restrictive covenants. (177)
Response: Proposals for additional funding sources are beyond the scope of the EIS for this project.

Study Area and Flooding

Comment: Several commenters asked how the Study Area was defined and why the southern limit does not include more of Jersey City/Newport Area (7, 111, and 161)
Response: The Study Area was defined based on two factors – original RBD study limits and ability to tie-into high ground and existing on-going projects. The RBD project recommended to tie-in the “Resist” portion with the Long Slip Canal project at the southern limit. As noted in Section 6.2 of the Scoping Document, however, should the project result in impacts to areas outside of the Study Area, Secondary Study Areas for those disciplines will be established accordingly.

Comment: The project purpose should emphasize the need for protection from storm surges, spring tides, sea level rise and rainfall events. Suggested language: "The Study Area, comprising the entire City of Hoboken, and adjacent areas of Weehawken and Jersey City (see Figure1), is vulnerable to flooding from

high tides or spring tides, coastal storm surge and inland rainfall events. The purpose of the project is to reduce the short and long term flood risk to flooding areas within the Study Area. The project intends to minimize the impacts from surge, tidal and rainfall flood events on the community, including impacts to public health, while providing benefits that will enhance quality of life, recognizing the unique opportunities and constraints within a highly developed urban area.“ (99)
Response: We have further refined Section 3.1.1 (Coastal Flooding) of the Scoping Document to specify that tidal flooding and sea level rise are also independent coastal flooding concerns.

Comment: The coastal flow map (figure 4) in the Draft Scoping Document was light on arrows. If it was worth any value, I observed the live surge flooding event in Oct 2012 from 5th and Jackson. The river water came from the south traveling north towards me. (74)
Response: Adjustments to the map have been made.

Comment: Harrison Street routinely floods all the way up to First Street and frequently has sewage mixed in. (18)
Response: This location is within the study area and will be addressed in the EIS.

Comment: After Sandy, people were trapped in Hoboken because flooding blocked means of egress at both north and south ends of the city. Fencing along the light rail blocked egress to the west. Some people had to cut holes in fencing as a means of getting away from flood waters. (19)
Response: Egress during future flooding events, including access to light rail, will be considered during concept development and will be examined in the EIS.

Comment: During Sandy, flooding was particularly bad along the Shoprite at 9th Street. (20)
Response: This location is within the study area and will be addressed in the EIS.

Comment: What are the number of buildings that suffered structural damage from flooding? (8)
Response: It is our understanding that over 1,700 homes were affected by flooding during Superstorm Sandy within Hoboken. However, we do not have the exact number of buildings that had minor to major structural damage from Superstorm Sandy.

Comment: Distinguish between Ve and Ae zones (by percentage) on page 8 of the scoping document. It is important to note that these areas suffered from different types of flooding/damage. Was not wave action from surge causing most of the damage but rather water rushing into lower areas? (3) What do FEMA's flood zones indicate? Instead of using "AE 1%", etc, please explain what it means. Use plain english (in maps and in text). (29)
Response: The scoping document has been revised to include the definitions of VE and AE, and updated to show the percentage of Study Area that is in a coastal VE or AE zone. FEMA's flood zones map the inundation extent and elevations for a 1%-annual-chance event (has a 1% chance of occurring in any given year, also commonly referred to as the 100-year event). The Ae zone denotes a hazard zone where base flood elevations are determined and wave heights are less than 3 feet.

Comment: Might be beneficial to describe/define what we understand as "Flooding" (4)
Response: For the purpose of this project, flooding is defined by areas of the study area that are under water due to either the influx of coastal storm surge or rainfall event. Areas under water are subject to infrastructure/property damage.

Comment: Would you recommend that the three municipalities stockpile sandbags since the completion of the project is going to take years? (168)
Response: It is recommended that concerned citizens consult with their local jurisdiction regarding emergency preparedness and procedures.

Hazardous Materials

Comment: The PSeG site between 11th and 12th near BASF should be included in the screening. A pump station near Maxwell Place is also being built. (23)
Response: The PSe&G site located at 1124 Madison Street and BASF are among several sites being researched as part of the hazardous waste screening. The proposed pump station near Maxwell Place (being undertaken by the NHSA independently of this project) is also being evaluated during the hazardous waste screening and design process.

Comment: As part of the scope of work the project team should conduct a reasonable number of soil samples and tests in order to assess and verify potential levels of contamination. These should be focused particularly in areas that might be impacted as part of any build scenario. (87)
Response: The need for soil and/or groundwater sampling will be determined based on the results of the hazardous waste screening and once the three build alternatives have been developed and selected. Presently, soil and/or groundwater sampling are not included in this phase of the work.

Comment: The Draft Scoping Document should not be finalized until an amended Draft Scoping Document has been issued by NJDEP, and the public comment period has been reopened for an additional thirty days from the issuance of such amended Draft Scoping Document addressing both the impact of the BASF property facility to store excess storm water during times of potential inland flooding and the impact of the hazardous wastes potentially accumulating in the retention pond if all existing contamination is not removed or treated on site prior to its construction or contained after to its construction. (93)
Response: The scoping process used for this project is in full compliance with the applicable NePA regulations at 40 CFR 1501.7. By issuing a draft and a final scoping document, which responds the comments received during the scoping process, the scoping process for this project has exceeded typical scoping procedures. Prior to construction, the known soil and groundwater contamination at the BASF property will be addressed, as required, by the owner and the responsible party in accordance with NJDEP regulations and guidance. The construction of a storm water retention feature on this property will take into account the soil and groundwater conditions after the responsible party implements remedial actions at the site.

Comment: Hoboken includes 0.75 sq mile area in Hudson River "test but verify" should be part of EPA regulations. Sediment beyond 15th St in Weehawken Cove and beyond 14th St (JC) needs testing. (165)
Response: The need for sampling of Hudson River sediments will be determined based on the results of the hazardous waste screening and once the three build alternatives have been developed and selected. Sediment sampling may only be proposed should one of the build alternatives include construction within the Hudson River.

Comment: The project Scope should consider re-use of land-based soil and sediment as well as dredge material from the Cove and area marinas such as Lincoln Harbor and the Shipyard and marine facilities. This material could be used for berms or other project elements where elevation changes to the landscape might be considered. Incorporating some land-based sediment in berms could enable for the development of additional and larger scale green infrastructure on land. (170)
Response: Where possible, any excess soil and or/sediment from within the project footprint that meets the applicable physical construction requirements will be reused within the project area, in accordance with NJDEP regulations. The feasibility of soil and/or sediment reuse will be evaluated prior to construction. Soil imported from outside the project limits will be tested to ensure that it meets construction requirements and to ensure that contamination, beyond that which is already present within the project footprint, is not imported.

Comment: The project Scope should evaluate potential air and other environmental impacts from creating a local sediment washing/ screening facility to enable this local reuse/beneficial reuse. This facility could be based on land such as in the NJT Railroad yards or in water. (171)

Response: Soil and sediment stockpiling and management will be conducted in accordance with NJDEP and other State and Federal regulations as required to protect the health and safety of workers and the public. Measures such as air monitoring and soil wetting will be employed as needed. Aspects of sediment reuse will be considered should dredging of sediment from the Hudson River be required for the project.

Comment: Newport Associates Development Company states that LSRP costs are to be absorbed by the project and the owner must be contacted for information related to remedial activities. (114)
Response: As a Linear Construction Project, RBD remedial activities will be confined to the limits of the project impacts (footprint and depth). Because the RBD project will only remediate within the construction footprint, property owners will be aware of the scope of these activities. Responsible party/owner coordination will make sure that the completed project does not preclude the responsible party/owner from meeting their affirmative obligation to remediate their site.

Comment: Make sure all fuel tanks located underground are legally documented…Sandy caused some leaks/breaches of old tanks. (40)
Response: In the event that an underground storage tank (UST) is encountered within the RBD project footprint, any removal, abandonment, or replacement activities conducted as part of this project will be conducted in accordance with NJDEP regulations and guidance documents.The RBD project is not responsible for in-use or abandoned USTs outside of the project footprint, nor is the RBD project responsible for UST-related activities conducted by others.

Natural Resources

Comment: What are the potential impacts to wetland and aquatic habitats in terms of acres? Please segregate by freshwater, tidal and open water wetland and aquatic resource impacts. (30)
Response: The aquatic resources in the project area consist of the open waters/shoreline and adjacent shallows of the Hudson River. No freshwater or tidal wetlands were identified along the shoreline of the river within the project area. However, there are limited areas of freshwater wetlands found in the "interior" of the city, to be identified more closely based on the potential locations of the "storage/delay" features to be considered. The potential impacts to both these freshwater wetlands and the open waters of the river will be determined as the concepts are developed.

Comment: Please provide specific detail as to mitigation for such impacts as well as demonstration of proof of compliance with federal as well as state regulations regarding freshwater and tidal wetland and aquatic resource impacts. (31)
Response: Mitigation for impacts (if any) to both the freshwater wetland and (river) open waters will be conducted in accordance with both NJDEP and USACE requirements. Based on the specific types (wetlands vs open waters) and quantities of impacts of the build alternatives, the various mitigation options acceptable to the agencies will be evaluated. Mitigation options could include Mitigation Bank credits, wetland/open water creation, restoration, enhancement, land preservation, monetary contribution, or land donation. These options will be evaluated in regard to the project impacts, as well as the available and feasible mitigation options. See additional discussion on mitigation in the Response to Comment No. 32.

Comment: Regarding Section 4.0.3 environmental Mitigation Design elements: Wetland mitigation is performed in many ways with “creation” being only one type of mitigation and the most difficult and risky with higher failure rates. Other forms of wetland mitigation are restoration and enhancement. Mitigation should be conducted in accordance with the Federal Rules on Aquatic Mitigation of 2008. In those rules advanced mitigation via successful wetland mitigation banks is cited as the number one preferred alternative for wetland mitigation. The mitigation alternatives analysis should consider wetland mitigation banking. Please note there is a wetland mitigation bank that serves this watershed as well as another mitigation bank proposed. (32)
Response: As described in the Response to Comment No. 31, there are many potential mitigation options;

the options will be evaluated in terms of suitability for compensating for the impacts, feasibility and cost of implementation, and acceptability to the jurisdictional agencies. The Comment indicates correctly that the USACE mitigation regulations hierarchy includes the use of an approved Mitigation Bank as the preferred alternative; Mitigation Banking will be considered in the evaluation of suitable mitigation options. The Study Area is located within the service area of the MRI-3 Mitigation Bank. or other approved Bank) In summary, the mitigation options will be evaluated, based on size/type of impacts, available options and likelihood of success, and mitigation bank credit availability and costs.

Comment: Regarding Section 6.2.10: All permitted impacts pose mitigation constraints to permittees "given existing site conditions and constraints". However, this is not a federal or state mitigation alternative selection criteria to be cited as a basis to restrict "efficient and effective" mitigation alternatives to onsite and local alternatives solely. Mitigation should be performed in accordance with the Federal Rules of 2008, with the assessment of onsite existing condition constraints being only one parameter, but not the sole defining parameter. The document focuses on freshwater wetland impacts, which we agree may occur. Other wetland impact types (tidal, subtidal, coastal) are very likely. The cited "usual" mitigation ratio is misleading as a 2:1 ratio is only codified in NJDEP regulations for the category of creation. As commented above, creation is only one type of wetland mitigation. The 2:1 ratio is not applicable to mitigation for all wetlands or for federally regulated wetlands as the federal regulations do not codify specific ratios and all wetlands in the study and impact area are likely to be under federal jurisdiction. Wetland mitigation is required to replace lost wetlands based on wetland functions, services and values lost in concert with areal replacement of at least a 1:1 ratio. Compliance with the 2008 Federal Rules on Mitigation should be specified. Mitigation banking should be assessed in the alternatives analysis and provided weighting commensurate with the Federal Rules and the success of advanced mitigation versus other categories of wetland mitigation. (33)
Response: Mitigation, if required, will be conducted in accordance with both NJDEP and USACE requirements. As described in the Responses to Comments No. 31 and 32 above, there are several mitigation options that may be acceptable to both the NJDEP and the USACA. The goal will be to conduct any required mitigation in the most cost-efficient manner that meets the regulatory requirements of both agencies, i.e. replacing the lost functions and values of impacted wetlands/waters, at the required replacement ratios. Mitigation for any impacts to tidal/subtidal open water areas in the river from a "Resist" feature will be subject to both NJDEP and USACE mitigation requirements, including the 2008 Federal Rules on Compensatory Mitigation. The use of a Mitigation Bank will be considered in the evaluation of mitigation options.

Comment: Would it be possible to break this section into subheadings to address exactly what resource areas would be addressed - as if it were the outline for the DEIS - such as floodplains, surface waters and wetlands, terrestrial ecology, aquatic ecology... It is hard to follow right now with them all grouped together. (150)
Response: The Natural ecosystems section in the Final Scoping Document has been subdivided based upon the various resource areas to be addressed.

Comment: Due to the fact that the Hudson River is a shared regional resource, the project Scope should recognize and consider the State of NY regulations as they seek to protect marine habitat and aquatic species. (172)
Response: Many of the marine habitats and species found in the Hudson River are subject to federal agency jurisdiction, including the USFWS and NMFS; hence, they apply to the Hudson River waters in both NJ and NY State. We will review the species under the jurisdiction of these Agencies in regard to potential project impacts. However, since the impacts to the open waters of the Hudson River, if any, will likely be within the shallow waters adjacent to the NJ shoreline, the regulations of the USFWS and NMFS, as well as those of the NJDEP, will adequately protect the marine habitat and aquatic species found in the project area.

Socioeconomics, Land Use/Zoning and Visual Resources

Comment: What about potential beneficial impacts from construction jobs and economic benefits resulting from avoided losses/avoided impacts in future storms? (151)
Response: The commenter notes that the project will have a benefit for construction-related jobs, as well as economic benefits from a reduction in flooding. A discussion of the potential beneficial impacts from the three build alternatives will be included in the EIS.

Comment: This section is lacking a discussion of analysis methodology, and does not discuss urban design/neighborhood character. How will those be assessed? A key issue raised at the last CAG meeting was how the potential solutions would 'blend in' to the existing waterfront and community - how will that be assessed? (152)
Response: NEPA requires that consideration be given regarding the effects a proposed project will have on the quality of the human environment. Visual effects is an environmental factor which will be considered in the EIS. The EIS will identify the impacts to the existing visual resources (such as the waterfront); the relationship of the impacts to potential viewers of the project and from the project; as well as measures to avoid, minimize, or reduce the adverse impacts. This section of the EIS will include:

- Description of the Visual environment
- Identification of the Visual Quality of the Area
- Identification of Visually Sensitive Resources
- Environmental consequences
- Visually sensitive locations

Comment: There was confusion about "Minority" and "Hispanic" populations being two distinct classifications; some CAG members felt that all Hispanic persons would be considered minorities. (14)
Response: Our methodology is in accordance with the US Census Bureau, in that people who consider themselves Hispanic and/or Non-Hispanic Minorities are considered minority populations in our analysis. They are separate classifications because Hispanic is an ethnicity, not a race; people who consider themselves Hispanic may be of any race.

Comment: A lot of redevelopment is ongoing in Jersey City. Please make sure this is taken into account in the project, as well as increased height ordinance. (15 and 16)
Response: We are aware of the increased height ordinance, redevelopment plans and projects in Jersey City; a discussion of Jersey City's redevelopment zones will be included in the zoning section of the EIS.

Comment: Mention future population, density, economic development, tax abatements. (56)
Response: We will use future population projections, if available. Issues such as density, economic development and redevelopment zones will be discussed in the land use and zoning sections of the EIS.

Comment: Studies should be performed that document how many people are currently living in locations vulnerable to flooding, whether if, as a result of the implementation of the projects chosen, residents, particularly low- and moderate-income and other vulnerable populations, will be protected from sea-level-rise-based flooding projected for 2100.

- During the hazardous-waste investigation, risks specific to vulnerable populations should be analyzed, findings should be distributed to these communities as well as the public as a whole, and discussed at a public meeting.
- Given the fact that flooding problems are not just at the water's edge and that LMI and other vulnerable residents must be protected from flooding, funding should be allocated for both coastal and inland flooding and not be spent solely to protect high end housing along the Hudson River Waterfront.
- Social workers in the target areas should be contacted to assist with identification of vulnerable communities and with communicating information about the project. (127)

Response: As discussed at both the September 10th CAG meeting and the Public Scoping Meeting on September 24, 2015, the project team has identified Environmental Justice (EJ) populations in the study

area. The criteria used to identify environmental Justice (EJ) populations is based on the methodology of the Together North Jersey (TNJ) Planning Consortium, of which NJ Futures is a member. Our findings were presented and discussed at the September 24th public meeting: we identified that EJ communities are present in the western edge of the city where interior flooding most frequently occurs. As such, and as was stated at the meeting, the impact of doing nothing for this area (the “No Action” alternative), is likely greater than the potential impacts from the project. Regarding hazardous waste investigation results, findings will be discussed at public meetings as the project progresses and incorporated within the EIS.

Comment: New Jersey Future reiterates the recommendations we made for the draft COP. Citizen Advisory Groups (CAGs) must be truly inclusive and allow for genuine dialogue, through clarification of composition, authority and meeting structure. For example, not only must those residents recommended by local officials be included, all residents not on a CAG should be encouraged at least to observe the dialogue. This can be accomplished by making public all CAG meeting dates, times and places. It should be transparently stated how the Department of environmental Protection (NJDEP) and engineering consultant Dewberry will respond to comments and recommendations made by the CAG and the general public. As stated above, a proactive outreach and engagement program should be developed to ensure participation from vulnerable populations. (128)
Response: The project will follow the public involvement process as outlined in the Citizen Outreach Plan (COP). The COP is publicly available on the project website at www.rbd-hudsonriver.nj.gov.

Comment: The resultant evaluation of alternatives should consider the fact that Washington Street is a large berm and focus the protective measures north of 14th Street and south of Newark Street. Any protective measures / interventions recommended should be focused on low- and middle income housing, not market rate or luxury office buildings, apartments and hotels. (173 and 81)
Response: The degree of flood risk reduction on each area of the community will be a consideration during the concept screening and alternatives analysis.

Comment: Newport Associates Development Company states that no displacements are to occur in Newport. (115)
Response: The concept and alternatives development phases of the project will seek to focus proposed work on public land, such as city-owned parks and right-of-way.

Noise, Air Quality and Vibration

Comment: "Noise Receptors" on figure does not mean much; text should explain what this is and be more specific. (10)
Response: This comment refers to the display board used at the Public Scoping Meeting on September 24, 2015. “Noise Receptors” will be defined within the Final Scoping Document.

Comment: Please explain that different noise receptors are more sensitive than others (and why). (11)
Response: Noise sensitive land use is typically grouped into different categories, depending on the level of sensitivity to a noise source. While the sensitivity of a site is subjective, certain land use types may be more sensitive to a noise source than others, depending on what the intended use is of the site. Specifically, residential land uses are more sensitive to noise than office spaces in that there is the potential for multiple activities to be affected or disturbed, such as speech and sleep.

Comment: If any new pump stations are installed, and require generators, they may also require compliance with Reciprocating Internal Combustion (RICE). Worth noting in AQ, as with noise? The proposed generators would be subject to the stationary RICE Maximum Achievable Control Technology (MACT) regulations at 40 CFR 63 ZZZZ and the New Source Performance Standards (NSPS) at 40 CFR 60 III that govern emission limits and compliance requirements for new stationary RICe. (147)
Response: Compliance with federal and state air quality regulations (including RICE MACT and others) for pump stations and generators that will potentially be part of this project will be addressed during the NJDEP permitting process. For the purposes of the EIS, it is assumed that proposed equipment will

comply with these standards.

Comment: Is Air Quality is screened out? Typically we would do a worst case scenario analysis for the purposes of the EIS – not wait to do the analysis until sometime in the future. (148)
Response: Air Quality is not screened out; the General Conformity analysis will be conducted during the Final Design Phase of the project. At this point, not enough information is known regarding the preferred alternative to conduct this analysis.

Comment: Resident near current Maxwell water pump project complains that the technology they are using for the construction is not preventing vibration for nearby residents and needs further evaluation. (43)
Response: Due to the heavy, long-term construction activities related to reconstruction of the Study Area's waterfront, historic and structurally sensitive properties, and densely populated Study Area, a construction-related vibration analysis will be performed. Vibration levels will be predicted based on Federal Transit Noise and Vibration Impact Assessment procedures at four (4) locations. No vibration standards are established by HUD; therefore, predicted vibration levels will be compared to structural damage criteria as well as perceivable and annoyance vibration level thresholds established by FTA. In the event vibration levels exceed established thresholds, mitigation will be evaluated.

Cultural Resources

Comment: Be aware of unrecorded archaeological sites within Stevens Point. Apparently there are prehistoric sites scattered across Stevens Point that Stevens Institute is aware of but has not recorded nor reported to the New Jersey State Museum. (12)
Response: Existing condition data includes archaeological site data as reported to NJHPO and NJSM; additional archaeological site information at Stevens Point would be added to existing data if such information was publically available.

Comment: The entire City of Hoboken should be considered a historic property as there are historic resources present all over the city, not just within the previously identified historic districts. (13)
Response: A survey will be conducted to identify historic properties adjacent to or within the limits of proposed RBD elements.

Comment: Is there a separate schedule for meetings with Consulting Parties and list of Consulting Parties? (149)
Response: Consultation with consulting parties under Section 106 of the National Historic Preservation Act is advanced on a separate timeframe once the project's Area of Potential effect can be established following identification of the preferred alternative.

Concept and Alternatives Development

Comment: Shoreline along Long Slip was an access point for flooding. It is suggested that Long Slip be filled in as it currently serves no purpose and contains rotting timbers/bulkheads on the innermost portion of the slip. (24)
Response: Long Slip is a funded NJ TRANSIT Resiliency project.

Comment: Is filling in/constructing structures along the waterfront realistic, as this would pose problem for ferry service and others that use the near shore areas. (25)
Response: We will consider the need and feasibility of filling in/constructing structures along the waterfront as part of the concept development and alternative analysis. Impacts to waterfront accessibility and usage will be taken into consideration during concept development and concept screening.

Comment: How can the project be constructed given the urban nature of Hoboken and the complex manner in which the city floods (rainfall, surge)? The water comes in from all directions. (27)
Response: The commenter acknowledges several of the fundamental challenges to the project. We are conducting a comprehensive feasibility study to evaluate various options that would reduce the flood risk within the study area.

Comment: Given how many utilities are already in the ground, and the minimal open ground in the city, how is any drainage system going to be installed that will be large enough to convey flood waters out of the city? (28)
Response: We are conducting a comprehensive feasibility study to understand the various infrastructure constraints which will then inform us on the feasibility of improvements to the existing drainage system.

Comment: Will the project as finally conceived be able to prevent flooding from storm surge situations, at high tide, 5 year and 10 year rainfall events? (35)
Response: We are conducting a comprehensive feasibility study to evaluate the level of flood risk reduction benefits that can be achieved within the study area. This study will consider high tides, sea level rise, storm surge and rainfall events.

Comment: Protecting our public transit, which without it, disables the city and region. Both Hudson Bergen Light Rail and PATH/Hoboken Terminal are in the most vulnerable portions of the City. Beyond protection of the stations and tracks the power substations for both systems are in vulnerable locations. (37 and 122)
Response: The concept development, concept screening, and alternatives analysis will take into account varying degrees of protection to transportation infrastructure and power substations within the Study Area. The ability to protect critical infrastructure, including emergency services and public transportation, during flood events will be evaluated in the EIS.

Comment: electricity substations for Hoboken north and south are in some of the lowest areas. Hoboken also has an opportunity to bury its power lines once and for all. Many of us had flooding because our sump pumps couldn't be powered, and protecting power is key to flood pumping for the entire city. (38)
Response: Power substations are considered critical infrastructure. The EIS will analyze the capability of the alternatives to protect critical infrastructure.

Comment: What part does the Hoboken Sewer Authority play in the Resist, Delay, Store, Discharge Plan? (41)
Response: It is our understanding that this comment refers to North Hudson Sewerage Authority (NHSA). NHSA is a key stakeholder and they will be involved in the development of the "Resist, Delay, Store and Discharge" concept.

Comment: Around the Hudson Tea Buildings the promenade is very important to people living there. A lot of people who live on the first floor paid a lot for the views. If a wall must be built, can it be buried underground and rise up for a flood? Or if a low wall must be built the height of the railing can it be glass? The expansive views are key to the whole feel of the neighborhood even walking down 15th street. (44)
Response: The EIS will evaluate reasonable options for flood risk reduction. The EIS will evaluate impacts of the various alternatives on the view shed.

Comment: Commenter notes that there are two major locations where coastal surge has been known to enter Hoboken: (Hoboken Terminal and Weehawken Cove) and may require separate consideration and solutions. Commenter asks if the Lincoln and Holland tunnels contribute to the flooding in Hoboken and how new tunnel projects would impact Hoboken. Commenter suggests Project's consideration of porous concrete and water storage drainage solutions below sidewalks and streets. (46)
Response: The feasibility study will evaluate the options to address coastal storm surge risk reduction.

Comment: Add Hydrodynamics engineering/Coastal engineering. (47)
Response: Coastal engineering is a major element of the project.

Comment: Include modelling for piping and surge in EIS, show 2 pump locations, layout existing pipes on maps. (50)
Response: The ongoing modeling effort undertaken as an element of this project will include the existing discharge system which will be characterized in the feasibility study.

Comment: Does “resist” protect PATH, railroad, fire, police, electric, hospital, auto egress, EMS. (51)
Response: The feasibility study and EIS will evaluate the reasonable options for protection of critical infrastructure and circulation.

Comment: H9 zone should be included in “resist” phase this is ¼ of downtown, 1/3 of water from east Jersey City, ½ goes to Re-18,19/JC and into canal strip. (53)
Response: The Study Area boundary does include the H9 sewershed.

Comment: Use canal strip as storage for 1 mgd (643x1600’ X 100 wide) with lock and pumps (54)
Response: NJ Transit and Jersey City Municipal Utility Authority (JCMUA) are addressing various options for Long Slip Canal and those planning efforts will be considered in the EIS.

Comment: I think the hard barrier solution should be driven toward the permanent architectural alternatives in-line with riverfront "steps" rendering and not the traditional temporary flood wall solution. (71)
Response: Concepts and alternatives will be designed with community and visual aesthetics in mind.

Comment: We believe that the "Resist" component should not be the exclusive focus of initial concepts, and attention should also be provided to the other components of the RBD plan, which address protecting Hoboken from other flood related threats as well. In taking this position we have consulted with staff at US HUD who have advised us that the funding can be spent for a more comprehensive flood protection solution. We therefore advise the Consultant team, who have tasked us as a CAG, to represent a wide cross section of the community, to instead look at each element of the Resist, Delay, Store and Discharge as viable and acceptable elements of the project." (75)
Response: The alternatives in the EIS will not be limited to the “resist” component. Rather, each alternative will include elements of Resist, Delay, Store and Discharge.

Comment: The project goal should be to develop a comprehensive flood protection plan designed to address the risks from chronic tidal/high tide flooding, 500-year rainfall events, as well as periodic storm surge events. This analysis should consider the independent as well as interrelated risks of some of these conditions occurring at the same time, and over a period of time. (76)
Response: The EIS will evaluate flood risk associated with rainfall events as well as coastal storm surge. High tides and sea level rise are existing conditions which will be integrated into this analysis.

Comment: The project should further consider the opportunity if not necessity for redirecting some portion of these funds into operations and maintenance of any resultant infrastructure from the various Build scenarios. (77)
Response: The CDBG-DR funds provided for this project specifically exclude their use for operations and maintenance activities, as stated in the HUD Federal Register Notice published on October 16, 2014 (79 FR 62182). Operations and maintenance, ownership, cost strategies for phasing, etc., will be presented as part of the feasibility study. The EIS will provide a brief summary of these topics.

Comment: The Scope proposes to "consider impacts from climate change." Toward this end the Scope should acknowledge, identify, and plan for a specific sea level rise forecast such as one in use by the Intergovernmental panel on Climate Change and or the White House Climate Office. Planning for this Hudson River project should incorporate these more conservative projections into the project framework." (78)
Response: Based on discussions with HUD and FEMA, this project will use the National Oceanic and Atmospheric Administration Sea Level Rise scenarios.

Comment: The process should more clearly articulate and quantify what co-benefits a flood control process like this can help achieve such as improved mobility and improved air quality, expansion of non-vehicular transport by creating additional greenways, improved environmental quality through creation of green corridors with swales, engineered tree pits and more robust and thoughtful tree canopy, increased reliability of the electrical grid, improved public facilities such as upgraded water treatment plants, sewer lines, storage or containment tanks, pump stations, or improved public buildings that can serve dual purposes of shelters or others functional in emergency response or recovery. (79)
Response: The EIS will provide an evaluation of co-benefits under the various alternatives.

Comment: One of the goals of the project should be to protect the regional assets including existing and proposed mass transportation facilities (lines, terminal, station, and support facilities), water supply and sewage treatment, communications, and energy distribution in the project area. (80)
Response: The EIS will evaluate a range of reasonable options for reducing flood risk reduction at existing critical facilities.

Comment: The Scope should more clearly define the standards or goals we are trying to reach: xx inches of rain per yy hours sustained over 24 hours? ZZ feet of storm surge or flood tide? Perhaps the April 2007 rainstorm was more typical than the October 2012 storm… (82)
Response: The feasibility study will evaluate the levels of flood risk reduction benefits that can be achieved through various interventions.

Comment: The project scope should consider possibilities for allocating a portion of funds for near-term pilot projects at a variety of scales that, over the next decade or more, have the potential to be scaled up or applied across a broader area as new opportunities emerge. (85)
Response: Implementation and phasing will be considered during the feasibility study and summarized in the EIS.

Comment: As part of the Scope of Work the project should identify needed mechanisms for implementation, operations, and maintenance so as to most realistically ensure an ongoing “state of good repair” for any resultant infrastructure. This is especially important for those areas where the desired level of flood defense or water management cannot be adequately achieved in the public right of way alone. These mechanisms could include easements, restrictive covenants, or mechanisms such as PPPs, Associations, or "Improvement" "Resilience" or other "Water Management" districts. This could also include consideration of potential credits for property owners who undertake green infrastructure, water capture/detention projects on their site. For the overall plan to succeed there must be clear steps and alternatives to help bridge the gaps where public and private lands intersect. (86)
Response: These are items that are beyond the reach of the Scoping Document, but will be considered during the feasibility study.

Comment: As part of the analysis of potential alternatives, the Financial and Cost models should include a higher escalation cost for the waterfront and in-water work than for the land-based work. In addition, if there are seasonal restrictions on when this work can be done, such as due to nesting, breeding, or migration of aquatic life, then this should be factored into the Cost estimations as well. (91)
Response: The feasibility study will include a benefit-cost analysis which will consider these factors.

Comment: The Draft Scoping Document provides no information with as much specificity as to what countervailing measures the project engineers propose to take (i.e. resist, delay, store) to address such expected levels of floodwaters in the event of a storm of the magnitude of Sandy strikes the area again… But if such a large volume has to pass into the Hudson River outfalls, but those outfalls may not be available as the Draft Scoping Document also admits, when the increased level of the Hudson River during high tides and storm surges exceeds the distance of the outfalls from the normal high water mark of the Hudson River during non-storm conditions and low tides what is to be done with the huge volume of excess water under the Project. This seems to be unsolvable problem for preventing the flooding unless the Subject Matter Experts envision resist, store and delay measures as sufficient to offset the

immense volume of floodwaters that for all intents and purposes cannot be discharged through the Hudson River outfalls. The Draft Scoping Document neither addresses these issues qualitatively, much less quantitatively, despite the fact that in the latter case the Stevens Storm Inundation Report provides a true historic benchmark for the nature and magnitude of inland flooding during major storm events caused by this phenomenon. (92)
Response: The comprehensive feasibility study will evaluate reasonable options to reduce the flood risk from both coastal storm surge and rainfall events. The concepts will be developed as part of that study; until that time, no qualitative or quantitative information is available regarding what proposed measures will be taken.

Comment: The project need should be split into three interconnected types of flooding that characterize and differentiate between coastal storm surge and high tides, springs tides and sea level rise and rainfall flooding. The scope of work should also discuss and explore the interplay between groundwater elevation, nuisance flooding and coastal storm surge events. There should be sufficient data collected to understand if or when seepage, backflow or other types of underground water movement effects the interior project area (100 and 102)
Response: Section 3.1 of the Scoping Document's Purpose and Need statement is divided into two subsections: 3.1.1 Coastal Flooding and 3.1.2 Systemic Inland Flooding. The intent of this section was to also convey that these two types of flooding (coastal and inland) are further exacerbated by high tides and by sea level rise. We have further refined the language in Section 3.1.1 to specify that tidal flooding and sea level rise are also independent coastal flooding concerns. In addition, the feasibility study will include a detailed analysis of groundwater movement as part of concept development.

Comment: Provide a laymen's explanation of what "site and reach based" mitigation strategies mean to a member of the public un-informed on these terms. (103)
Response: Site based mitigation strategy is applicable to a building and uses building specific flood risk reduction strategy. The reach based strategy is applicable to a community or portions of a community with several types of flood risk reduction strategies.

Comment: Public access to and onto the water should be enhanced and be properly assessed as part of the environmental review and analysis. Segments of the Hoboken waterfront have still not returned to their pre-Sandy levels with respect to direct contact with the waterways for recreation and education… Yet among the five piers from the 14th Street Pier down to 12th Street, there is a significant lack of infrastructure that would enable visiting historic ships, research vessels, restoration work boats, and emergency service ships to dock…. (106)
Response: Public access to the waterfront is a factor that will be evaluated in the EIS.

Comment: NADC notes that it will carefully assess any and all proposed nearby measures to ensure that they do not adversely affect the health, safety and economic viability of Newport. NADC provides Newport statistics on FEMA insurance plans, asks for consideration of PATH and NJT facilities within Newport, and notes NJT project to fill Long Slip. NADC also notes its existing state Waterfront Development permits. (110)
Response: The alternatives analysis within the EIS will assess impacts to adjoining communities and public meetings will be conducted to gather feedback and comment regarding the concepts and alternatives developed. As a member of the CAG, NADC will be involved in these efforts.

Comment: NADC requests access to The New York City Department of City Planning's Urban Waterfront Adaptive Strategies report and other reference documents. (112)
Response: A copy of this report can be found on the New York City Department of City Planning's website at http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com7.shtml.

Comment: NADC asks what impact the regulatory process will have on Newport. (113)
Response: The regulatory requirements will be known in greater detail once the concepts and alternatives have been developed.

Comment: We recognize the importance of the Rebuild by Design Hudson River project and are pleased to be working collaboratively with the project team. While the purpose of the project is to reduce flood risk in Hoboken primarily, we feel that it is also important that the project recommendations do not have adverse impacts on the citizenry and economic development of Jersey City. Specifically, we respectfully suggest that the draft scoping document be revised to reflect the following goals:

- The project shall consider flooding in neighboring municipalities outside the study area, and no concept or alternative shall exacerbate flooding in those areas. No concept or alternative shall result in water displacement that will negatively affect land in Jersey City.
- No existing or currently-anticipated Jersey City land use shall be negatively impacted by construction related to this project.
- No concept or alternative shall negatively affect investment in Jersey City. (117)

Response: At this point it is not known what impacts the project may have on flood patterns to adjoining unprotected communities outside of the Study Area. The feasibility study will include the development of a flood model that will help identify this information. The alternatives analysis within the EIS will examine these impacts and recommend what mitigation measures, if necessary, should be employed.

Comment: Commenter wants to emphasize historical flooding in Hoboken, natural topography and lack of natural drainage- pumping is not sufficient. (120)
Response: The model being developed to help devise solutions for flood risk reduction in this project will consider these factors.

Comment: Commenter notes concerns regarding the participation of private property owners along the waterfront. (121)
Response: As part of the environmental planning process, several committees have been set up to provide input to the project. These committees are an executive Steering Committee which includes mayors from the three affected municipalities and Citizen Advisory Groups made up of interested members of the public. In addition, there will be public meetings where opportunities for public comment will be provided.

Comment: What type of manual or automatic flood control devices do we deploy across road and pathways which will remain open except for flood events? What is the reliability of these deployments and who is responsible for them? (123)
Response: The feasibility study will evaluate options to reduce the flood risk from both coastal storm surge and rainfall events which may include various types of flood control devices such as gates which can be closed in advance of flood events. Gates have proven to be effective flood control devices under many circumstances.

Comment: The document discusses rising sea levels and the potential for this phenomenon to result in greater frequency of coastal flood events; however, it fails to make clear what sea-level-rise projections are to be used to guide the project. Recommendation: To ensure that the project mitigates risks from coastal and inland flooding and stronger storms, New Jersey Future recommends including in the scope:

- An official adoption of sea-level-rise projections for 2075 and 2100
- A detailed analysis of the flooding vulnerabilities today, in 2075 and in 2100, incorporating a range of projected extents of sea-level rise (low, medium, high) and projections of future precipitation patterns.
- Articulation of methods to protect infrastructure, not just residences, from current and future flooding risks so that when evaluating alternatives, there is transparency in how vulnerable infrastructure, such as storm sewers and outfalls, will be addressed. (125)

Response: The Feasibility Study will be evaluating flood risk reduction alternatives with projected levels of sea level rise. We are using sea level rise projections that are distributed by NOAA (National Oceanic and Atmospheric Administration) and detailed in Global Sea Level Rise Scenarios for the U.S. National Climate Assessment. These projections are based on some of the findings and recommendations of the Intergovernmental Panel on Climate Change. As part of the Feasibility Study, we will evaluate in the feasibility and EIS two potential emission scenarios (intermediate-high and high) and the projected sea

level rise that would occur near the end of the expected design life for proposed concepts (year of 2075).

Comment: Green infrastructure should be emphasized as much as possible because I believe it has the largest co-benefits. Hoboken has some of the lowest green space per capita, even compared to other high density cities. (135 and 73)
Response: Use of green infrastructure for flood water storage will be evaluated in the feasibility study and EIS.

Comment: Need to clearly differentiate the difference between high tide flooding and storm surge (Hoboken floods during high tides and precipitation events) - would be safer to say "tidal flooding" than coastal storm flooding. (137)
Response: The language in the Purpose and Need statement has been revised to better clarify that tidal flooding is a component of coastal flooding.

Comment: The way this [executive Summary] is phrased sounds as though the goal is to prevent another Sandy - while that is the best case scenario, we don't know if it's possible until the feasibility study is complete - the document has not at this point stated that the design level is a Sandy event - is it 100 year, 500 year, or another design elevation? (139)
Response: The feasibility study will evaluate the potential design levels for flood risk reduction.

Comment: Shall we specify what kind of flood hazard? It's important to discuss whether the P&N is related to tidal flood mitigation, storm surge flood mitigation, or stormwater flood mitigation (namely - what problem are we trying to solve? above we say all three types of flooding) (140)
Response: The project is seeking to find a comprehensive solution to coastal flooding (inclusive of storm surges, high tides and sea level rise) and stormwater (from high intensity or long duration rainfall events).

Comment: "This is a very important part of the process which the CAG should be involved in - setting the screening criteria for both the Concept (Alternatives) screening as part of the environmental review and Feasibility Study. Would like to have more information about exactly what criteria or metrics are being considered." (145)
Response: The CAG will be involved in the development of the concept screening matrix.

Comment: The project Scope should discourage in-water intervention and construction that might lead to increased siltation or reduced navigability in the Weehawken Cove area. (169)
Response: Feasible options that meet purpose and need will be considered during concept development. Possible environmental impacts, as well as mitigation options, will be factors during concept screening and alternatives analysis.

Comment: The project Scope should consider the potential of creating green corridors linking existing open spaces such as:

- Stevens Park to Church Square Park to Mama Johnson Field to the Palisades (along 4th and 5th Streets east-west) and
- Elysian Park to Columbus Park to the Palisades (along 10th Street) as well as
- Wide streets such as Grand Street (from Columbus Park to Observer Highway).

These green corridors can help to create larger area-wide stormwater management approaches as well as important habitat corridors connecting the Hudson River ecosystem to the Palisades for threatened species such as Monarch Butterflies as well as critical ecosystem residents such as honeybees and pollinators. (174 and 175)
Response: The opportunities for co-benefits such as new open space and parkland, as well as enhancement/activation of existing parkland, will be examined during the concept and alternatives development.

Comment: The project Scope should consider the possibility of converting a street into linear stormwater catchment device such as a Canal or large swale. This linear intervention could flow with tidal water from the Hudson River, or be aligned, designed, and engineered to collect stormwater from areas that are known to suffer surface flooding. (176)
Response: Site specific ideas for concepts will be considered during concept development.

Comment: The Scoping Document is missing a discussion of bicycle-pedestrian circulation and analysis. (153)
Response: The "Circulation" section of the Scoping Document has been revised to state that an analysis of bicycle and pedestrian travel will be included in the EIS.

Indirect Effects and Cumulative Impacts

Comment: The Newport Associates Development Company (NADC) has provided a list of other initiatives dealing with Hoboken flooding that may impact the alternatives analysis and also states that the Newport master and redevelopment plan needs to be considered along with environmental impacts to Newport parks and recreation areas. (116 and 109)
Response: The EIS section on Indirect effects and Cumulative Impacts will take into consideration other past, current, proposed, or reasonably foreseeable actions within and adjacent to the study area.

Comment: Why is this [Hoboken Green Infrastructure Strategic Plan] referred to and no other ongoing City efforts? While I am of course a strong proponent of this plan, I would recommend either removing specific references to specific plans, or adding other City resiliency efforts. (143)
Response: The Draft EIS section on Indirect effects and Cumulative Impacts will take into consideration this plan as well as other relevant past, current, and reasonably foreseeable actions with similar impacts and as well as the overall project impacts as stated in Section 6.3 of the Draft Scoping Document. The Hoboken Green Infrastructure Strategic Plan was provided as an example but is not the only plan that will be evaluated.

Comment: The process, including the Screening Criteria and evaluation methodology, needs to be coordinated and considered with other plans such as those being developed by NJ Transit, North Hudson Sewerage Authority, PSE&G, PANYNJ, the City of Hoboken, as well as plans for Jersey City, Weehawken, Hudson County or other plans of Key Stakeholders. In addition, specific focus should be given to the interconnections between this project and the North Hudson Sewerage Authority's long term control plan (LTCP). There are results of tests from 20 weeks of sampling in 2015, and we also have the ability to access data here going 2-3 years back. http://www.nycwatertrail.org/water_quality.html" (83, 156, 21, 22, 34, and 42)
Response: The Project will be evaluated for consistency with other community planning and reasonably foreseeable projects in the evaluation of indirect effects and Cumulative Impacts in the EIS.

Comment: The Scope should consider proposed flood defenses and water management interventions across the range of public funded, owned or controlled land and right s of way in the project area including Hoboken Housing Authority, NJT Light Rail right of way, Hoboken Terminal and Yards, Hudson County Roads, Hoboken City Parks, Hudson County Parks, Hoboken Board of education land and buildings (such as the playground at 11th and Willow), as well as any area that has been a recipient of capital funding from local, state, and federal sources. (84 and 130)
Response: The Project will be evaluated for consistency with other community planning programs and reasonably foreseeable projects. These will be considered in the evaluation of indirect effects and Cumulative Impacts in the EIS.

Comment: In the consideration of items under "infrastructure," the EIS process should consider the potential impacts as well as potential benefits from the use, improvement, adaptation or other physical modification to public buildings and to public spaces such as parks, parking garages or lots, or community facilities or sites identified in the City's various plans or by Municipal Resolution for development for these

purposes. The fact these areas may provide important benefits, co-benefits, and be in the public domain suggest they may potentially help advance the project goals than simply walls at the waterfront. Much stronger language should be used to describe interconnections between this project, the Long Slip Canal project and the North Hudson Sewerage Authority's long term control plan (LTCP). (90 and 98)
Response: The relationship of this project to other ongoing and reasonably foreseeable projects will be considered in the evaluation of indirect effects and Cumulative Impacts in the EIS.

Comment: Include project build year and the potential for cumulative impacts over various build years.
Response: Current funding for this project must be expended by September 30, 2022. Through this Scoping process, the time frame for analysis of Cumulative Impacts is being further refined.

North Hudson Sewerage Authority (NHSA) Long Term Control Plan (LTCP)

Comment: Combined Sewage Overflows (CSOs) are a major problem in this town. They turn all flood events into a public health problem. This EIS should evaluate whether these problems are equal to or worse than the coastal flooding issues. Regardless, CSOs should be an elevated concern within the EIS moving forward. Maximizing some primary treatment throughput of H2O during high tides should be priority, allowing CSOs to remain unchanged for 25 years is not the intent of the EPA. (26, 166, and 132)
Response: The feasibility study and EIS will consider concepts that seek to limit or delay the quantity of storm water being conveyed into the combined sewage system and improvements required for flood risk reduction. Other improvements to the storm water system are beyond the scope of this project and are being undertaken separately by the North Hudson Sewerage Authority.

As a CSO permittee, the NHSA is required to reduce flooding, ensure proper operation, maintenance and management of existing infrastructure and provide opportunities for green infrastructure. A major component of the CSO permit process is the development of a Long Term Control Plan (LTCP) which will detail regional strategies to reduce the amount of storm water that flows into combined sewer systems and will consist of a separate public participation process hosted by NHSA.

The RBD Team will work with the NHSA throughout the development of the LTCP and the RBD process.

Comment: Combined Sewage system: Since it may be unfeasible to separate this, are you looking into increasing treatment capacity (and to tertiary levels) to reduce sewer outflow in the 1''-2'' etc. storm event? -Together with other storm water treatment strategies. (39)
Response: NHSA will be investigating stormwater treatment strategies as part of their LTCP.

Comment: The design has a plan for source reductions but only for reductions in stormwater contributions to the system. The DEP and the Rebuild by Design Team should not only evaluate the following options but should incorporate each into the plan for a holistic and comprehensive approach to reducing the multiple sources of flow and concurrently flooding during wet weather events within these combined sewer municipalities (a) Industrial and commercial users (b) Public Education and Outreach (c) Low flow toilets, fixtures and shower heads and (d) Potable Water Sources. The NYC sewer system has reported a flow reduction of 200 MGD utilizing items 3b through 3d above. I want to be sure that flow to the entire system is being evaluated. (45)
Response: Results from this effort are expected to be incorporated by NHSA into their LTCP to develop a holistic and comprehensive approach for the combined sewer system.

Comment: Is there BMP end of line treatment for 2 pumps/50mgd? (49)
Response: Specific questions regarding proposed work on the storm water system should be directed to the NHSA at info@nhudsonsa.com.

Comment: The Draft Scope is flawed by failing to identify the available information on the current sewage and storm water management system in the area. This data should include the following and be made available to the public:

- the capacity of the present storm water and combined sewer system, from the connections emanating from our businesses and households, corner drains, sewer pipes, all the way to the pump stations, treatment plant, and outfalls.
- a reasonable and responsible level of consideration must be given to the i. design capacity, ii.
- the age and physical integrity iii. and the actual operating capacity of the elements of the system. There is widespread anecdotal belief that many sewer lines are clogged or have other issues that limits their actual capacity to accomplish their task. (88)

Response: The feasibility study and EIS will consider concepts that seek to limit or delay the quantity of storm water being conveyed into the combined sewage system and improvements required for flood risk reduction. Other improvements to the storm water system are beyond the scope of this project and are being undertaken separately by the NHSA.

Comment: The actual causes of the Sandy flood are not widely understood within the population of the project area. As part of the due diligence, the planning team should conduct surveys in a reasonable number of blocks across the study area. As part of this survey the design team should seek to identify and verify:

- known connections into the sewer system
- any un-mapped or presently unknown connections
- percent of the customer's land or surface area that is impervious, is designed to allow or has the potential to allow for water infiltration

In addition, the due diligence for this project should include a reasonable number of subsurface sonar investigations (perhaps focused in flood prone areas) to help identify underground voids, collapsed pipes or potentially historic/old pipes that are not on any of the maps currently in use or available to the public.

Water efficiency can play a role in this project as well. It tends to be very low cost and effective at reducing CSOs. How much does this impact flooding? Please explore how much this impact has on flood events.

We don't know exactly what the system capacity issues are and where; where the specific choke points are (I am personally hoping that H&H modeling done through this study will clearly identify the capacity and I&I issues) - this may be too much detail for this section, but needs to be addressed in the scoping document. (89, 136 and 138)

Response: The feasibility study and EIS will consider concepts that seek to limit or delay the quantity of storm water being conveyed into the combined sewage system and improvements required for flood risk reduction. Other improvements to the storm water system are beyond the scope of this project and are being undertaken separately by the NHSA.

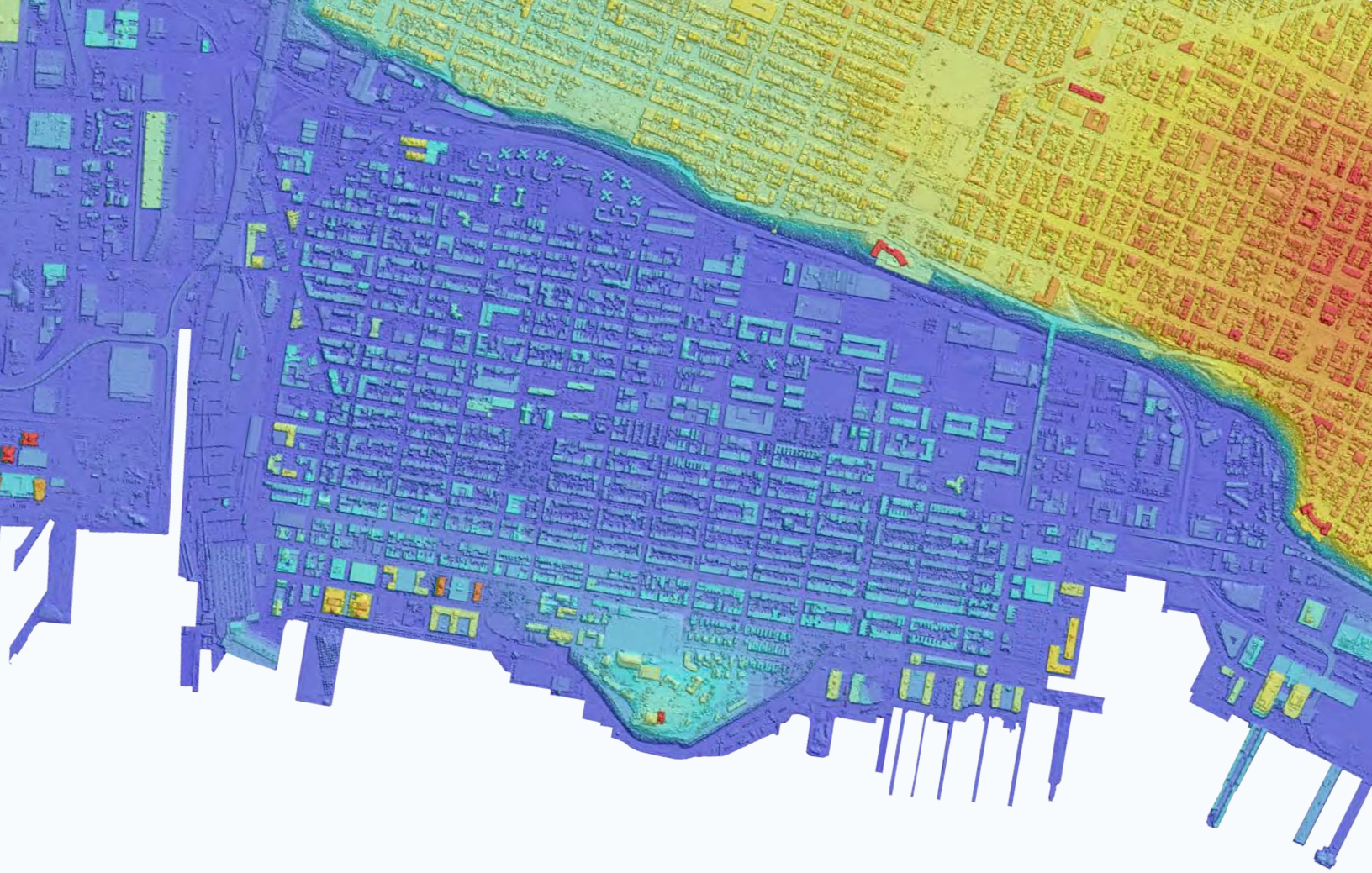
Comment: North Hudson Sewerage Authority - define secondary facility? What are the flow pipe dimensions and standards and how close are we to that maximum capacity? Do you have an inventory of their facility and underground pipes? Has NHSA considered an upgrade and how much would that expand their capacity to deal with storms and flooding? (167)

Response: As part of our design and outreach efforts, we have been coordinating with NHSA to obtain information about the existing combined sewage system, including capacity, flow directions and utility locations. These factors are used in our flood modeling. Comments or questions regarding efforts being considered by the NHSA should be directed to their office at info@nhudsonsa.com.

Map of Study Area

An interactive map of the Study Area of Hoboken was presented at two CAG meetings (September 10 and October 8, 2015) and at the EIS Public Scoping Meeting on September 24, 2015. The map was used to capture additional public input and allowed participants to offer thoughts and questions by writing directly on the map that was posted. While the majority of these thoughts were narrative and conversational, an effort was made to capture substantive comments and present them in this section. A copy of the map is available for download on the project website at www.rbd-hudsonriver.nj.gov. The comments have been recorded and will be considered as the project moves forward.

- Many comments were made expressing an interest in revitalizing the waterfront and the importance of providing public access and recreational activities at the piers. One comment noted that an old pier Hoboken 14th Street Pier has become a bird nesting site and that Osprey have been sighted.
- Several comments were made expressing concern of the water quality in the Hudson River after rain events and suggest more testing sites.
- One commenter noted that the next map should show public and private land along the waterfront.
- Several suggestions were made for improving the waterfront at Weehawken Cove. One commenter noted that the Hoboken Cove Development Corporation was in the process of repairing a bulkhead. Other notes include considering a “semi natural edge”, a “micro beach” and noting the site of the proposed future Weehawken Cove boathouse.
- Several notes were made regarding the Tea Building promenade height, sealing “openings” along the waterfront.
- Participants noted that flooding was minimal near Shipyard Park.
- Northeast: Notes were made regarding the importance of protecting transit infrastructure especially as HBLRT grows and expands at more vulnerable part of Hoboken. A potential HBLR
- Station at 15th or 17th was mentioned.
- Participants asked that if berms are considered, can reengineered local soil be used/re-used.
- Participants asked if people with substantial gardens can contribute (to Store).
- Several comments in the area of proposed SW Park/future Jackson Street Park note that the area is a low point that should be considered for water detention.
- At Church Square Park, it is noted that while most sidewalks in Hoboken are narrow and maintained by property owners; the sidewalks in this area are wide and could provide biofiltration opportunities.
- Notes were made all along the HBLR regarding the extreme flooding and need for mitigation, especially in the area of ShopRite and the 9th Street Light Rail Station.
- In the area of Maxwell Place Park, participants noted that there was no flooding, along with visual concerns and questioned whether coastal protection was worth the investment in this area.
- Participants asked if Frank Sinatra Drive can remain open. One note asks whether Maxwell Park could be improved and/or used for Delay and Store.
- Participants asked whether combined sewer overflow can be revised and updated as part of the RBD Project and note concerns with water quality in the Hudson River.
- Several notes were captured with regard to the consideration of Long Slip Canal and the cumulative impacts it will have on the RBD Project.



APPENDIX B – COMMENT RESPONSE LOG

Table 1: List of Comments

No.	Date	Comment	Commenter Category
1	9.10.15	Define "Scoping" and provide an alternate word	CAG Member
2	9/10/15	Please provide links for the documents used as references in the Scoping Document	CAG Member
3	9/10/15	Distinguish between VE and AE zones (by percentage) on page 8 of the scoping document. It is important to note that these areas suffered from different types of flooding/damage. Was not wave action from surge causing most of the damage but rather water rushing into lower areas.	CAG Member
4	9/10/15	Might be beneficial to describe/define what we understand as "Flooding"	CAG Member
5	9/10/15	Are we locked into Phase I for the project?	CAG Member
6	9/10/15	Please distill Scoping Document into more digestible language	CAG Member
7	9/10/15	How was the Study Area defined and why does the southern limit stop where it does and not include more of Jersey City/Newport Area?	CAG Member
8	9/10/15	What are the number of buildings that suffered structural damage from flooding?	CAG Member
9	9/10/15	Open Space on the map does not reflect all muncipal level parks in the Study Area	CAG Member
10	9/10/15	"Noise Receptors" on figure does not mean much; text should explain what this is and be more specific.	CAG Member
11	9/10/15	Please explain that different noise receptors are more sensitive than others (and why).	CAG Member
12	9/10/15	Be aware of unrecorded archaeological sites within Stevens Point. Apparently there are prehistoric sites scattered across Stevens Point that Stevens Institute is aware of but has not recorded nor reported to the New Jersey State Museum.	CAG Member
13	9/10/15	The entire City of Hoboken should be considered a historic property as there are historic resources present all over the city, not just within the previously identified historic districts	CAG Member
14	9/10/15	There was confusion about "Minority" and "Hispanic" populations being two distinct classifications; some CAG members felt that all Hispanic persons would be considered minorities.	CAG Member
15	9/10/15	A lot of redevelopment is ongoing in Jersey City. Please make sure this is taken into account in the project.	CAG Member
16	9/10/15	The City has recently passed an ordinance to allow for the increased height of buildings.	CAG Member
17	9/10/15	Make sure acronyms being used are defined first. Applies to both written material and presentations.	CAG Member
18	9/10/15	Harrison Street routinely floods all the way up to first street and frequently has sewage mixed in.	CAG Member

No.	Date	Comment	Commenter Category
19	9/10/15	After Sandy, people were trapped in Hoboken because flooding blocked means of egress at both north and south ends of the city. Fencing along the light rail blocked egress to the west. Some people had to cut holes in fencing as a means of getting away from flood waters.	CAG Member
20	9/10/15	During Sandy, flooding was particularly bad along the Shoprite at 9th Street.	CAG Member
21	9/10/15	Other projects are underway in the Study Area and should be taken into account by the project.	CAG Member
22	9/10/15	A team member (or members) should be advising the town government in order to be assured that other projects going on in the city are not at odds to the RBD project.	CAG Member
23	9/10/15	The PSEG site between 11th and 12th near BASF should be included in the screening. A pump station near Maxwell Place is also being built.	CAG Member
24	9/10/15	Shoreline along Long Slip was an access point for flooding. It is suggested that Long Slip be filled in as it currently serves no purpose and contains rotting timbers/bulkheads on the innermost portion of the slip.	CAG Member
25	9/10/15	Is filling in/constructing structures along the waterfront realistic, as this would pose problem for ferry service and others that use the near shore areas.	CAG Member
26	9/10/15	How are combined sewers going to be fixed to prevent raw sewage discharge into the Hudson River?	CAG Member
27	9/10/15	How can the project be constructed given the urban nature of Hoboken and the complex manner in which the city floods (rainfall, surge)? The water comes in from all directions.	CAG Member
28	9/10/15	Given how many utilities are already in the ground, and the minimal open ground in the city, how is any drainage system going to be installed that will be large enough to convey flood waters out of the city?	CAG Member
29	9/10/15	What do FEMA's flood zones indicate? Instead of using "AE 1%", etc, please explain what it means. Use plain english (in maps and in text).	CAG Member
30	9/19/15	What are the potential impacts to wetland and aquatic habitats in terms of acres? Please segregate by freshwater, tidal and open water wetland and aquatic resource impacts.	Public
31	9/19/15	Please provide specific detail as to mitigation for such impacts as well as demonstration of proof of compliance with federal as well as state regulations regarding freshwater and tidal wetland and aquatic resource impacts.	Public
32	9/19/15	4.0.3 Environmental Mitigation Design Elements Creation of tidal and freshwater wetlands, with associated riparian vegetation, as well as living shorelines located along the Hudson River waterfront may be options to mitigate environmental impacts from the construction of coastal flood risk reduction system.	Public

No.	Date	Comment	Commenter Category
		Comment: Wetland mitigation is performed in many ways with “creation” being only one type of mitigation and the most difficult and risky with higher failure rates. Other forms of wetland mitigation are restoration and enhancement. Mitigation should be conducted in accordance with the Federal Rules on Aquatic Mitigation of 2008. In those rules advanced mitigation via successful wetland mitigation banks is cited as the number one preferred alternative for wetland mitigation. The mitigation alternatives analysis should consider wetland mitigation banking. Please note there is a wetland mitigation bank that serves this watershed as well as another mitigation bank proposed.	
33	9/19/15	Freshwater wetlands found in the Project Area will be mapped; if there are impacts to these wetlands, mitigation would be required, usually at a 2:1 ratio. Required mitigation for project impacts will be evaluated, to determine the most efficient and effective type of mitigation, given existing site conditions and constraints. Comment: All permitted impacts pose mitigation constraints to permittees “given existing site conditions and constraints”. However, this is not a federal or state mitigation alternative selection criteria to be cited as a basis to restrict “efficient and effective” mitigation alternatives to onsite and local alternatives solely. Mitigation should be performed in accordance with the Federal Rules of 2008, with the assessment of onsite existing condition constraints being only one parameter, but not the sole defining parameter. The document focuses on freshwater wetland impacts, which we agree may occur. Other wetland impact types (tidal, subtidal, coastal) are very likely. The cited “usual” mitigation ratio is misleading as a 2:1 ratio is only codified in NJDEP regulations for the category of creation. As commented above, creation is only one type of wetland mitigation. The 2:1 ratio is not applicable to mitigation for all wetlands or for federally regulated wetlands as the federal regulations do not codify specific ratios and all wetlands in the study and impact area are likely to be under federal jurisdiction. Wetland mitigation is required to replace lost wetlands based on wetland functions, services and values lost in concert with areal replacement of at least a 1:1 ratio. Compliance with the 2008 Federal Rules on Mitigation should be specified. Mitigation banking should be assessed in the alternatives analysis and provided weighting commensurate with the Federal Rules and the success of advanced mitigation versus other categories of wetland mitigation.	Public
34	9/24/15	What are the adverse side effects of RBD?	CAG Member
35	9/24/15	Will the project as finally conceived be able to prevent flooding from storm surge situations, a high tide, 5 year and 10 year rainfall events?	CAG Member
36	9/24/15	Is the potential of a six acre retention facility at the base site (old Henkel/Cognis) property recently targeted by the Hoboken City Council on Sept 16, 2015 going to be ample to retain sufficient volumes of storm water to overcome the identified problems in the draft scoping document?	CAG Member
37	9/24/15	Protecting our public transit, which without it, disables the city and	Public

No.	Date	Comment	Commenter Category
		region. Both Hudson Bergen Light Rail and PATH/Hoboken Terminal are in the most vulnerable portions of the City. Beyond protection of the stations and tracks the power substations for both systems are in vulnerable locations.	
38	9/24/15	Electricity substations for Hoboken north and south are in some of the lowest areas. Hoboken also has an opportunity to bury its' power lines once and for all. Many of us had flooding because our sump pumps couldn't be powered, and protecting power is key to flood pumping for the entire city.	Public
39	9/24/15	Combined Sewage system. Since it may be unfeasible to separate this looking into increasing treatment capacity (and to tertiary levels) to reduce sewer outflow in the 1''-2'' etc. storm event? -Together with other storm water treatment strategies.	Public
40	9/24/15	Make sure all fuel are tanks located underground are legally documented. -When the surge of Sandy came through old tanks were broken/ breached causing leaks and contamination.	CAG Member
41	9/24/15	What part does the Hoboken Sewer Authority play in the Resist, Delay, Store, Discharge Plan?	CAG Member
42	9/24/15	I want to ensure that the efforts we are doing now as Mayor Zimmer stated are inclusive/coordinated with this team so we aren't doing something twice or maybe we're doing something now that isn't the best thing.	Public
43	9/24/15	As a resident at Maxwell where the water pump project is currently happening I just want to make you aware that the technology they are using for the construction is not preventing vibration and often residents feel the building might "collapse" during constructions. This team should evaluate what is being used at this location and not use what is being used at other locations.	Public
44	9/24/15	Around the Hudson Tea Buildings the promenade is very important to people living there. A lot of people who live on the first floor paid a lot for the views. If a wall must be built, can it be buried underground and rise up for a flood? Or if a low wall must be built the height of the railing can it be glass? The expansive views are key to the whole feel of the neighborhood even walking down 15th street.	Public
45		1. The design has a plan for source reductions but only for reductions in stormwater contributions to the system. However, stormwater is not the only source of flow to these collection systems during wet weather. It is counterproductive to solely target stormwater and seemingly ignore sanitary sewage sources when the system is combined. 2. In addition, reductions at the source makes more sense financially and logistically than building infrastructure to store, pump and treat after the fact. 3. The DEP and the Rebuild by Design Team should not only evaluate the following options but should incorporate each into the plan for a holistic and comprehensive approach to reducing the multiple sources of flow and	Public

No.	Date	Comment	Commenter Category
		concurrently flooding during wet weather events within these combined sewer municipalities: a. Industrial and commercial users – a targeted approach to prioritize the largest contributors of sanitary sewage to the system and to implement a plan to batch discharge or store flow until after wet weather events, through incentives, outreach, mutual agreement, City sewer use ordinances, pretreatment requirements etc.; b. Public Education and Outreach – implement an educational program both at schools and elsewhere regarding impacts of residents using showers, washing machines, dishwashers etc. during wet weather events (I frustratingly witnessed many residents haphazardly flushing toilets and showering while the streets of Hoboken were still flooded post-Sandy and not understanding the connection between the drains in their apartments and the flood-water in the streets they were walking through); c. Low flow toilets, fixtures and shower heads – implement incentives, cost-share initiatives, requirement for new development and public education and outreach to decrease water usage (see EPA's WaterSense program which states reductions in as much of 13,000 gallons per family per year by replacing old toilets with WaterSense models); and d. Potable Water Sources – implement electronic water main leak detection, install/update water meters. The NYC sewer system has reported a flow reduction of 200 MGD utilizing items 3b through 3d above. I'm unaware of any of these being considered and implemented in Hoboken. I understand that the focus of the Rebuild by Design is that, rebuilding and designing, but I want to be sure that flow to the entire system is being evaluated.	
46	9/28/15	During the presentation it was discussed that one of the projects milestones would be to get to 5 concepts, then 3 alternatives and finally to one preferred alternative. There are 2 major locations where coastal surge has been known to enter Hoboken: one at the south near the Hoboken Terminal; and the other in the north at Weehawken Cove. Will those two locations be treated separately and potentially have different solutions? --------- Could Hoboken make use of porous concrete? http://www.techinsider.io/rain-flows-through-permeable-concrete-topmix-2015-9 Tarmac has created Topmix Permeable, a porous concrete that allows rain water to flow though it. Up to 880 gallons of water can trickle through Topmix, which could eliminate flooding where it has been installed. I've seen porous pavers. This is the first time I've seen porous concrete.	Public

No.	Date	Comment	Commenter Category
		Could sidewalks and/or streets be excavated and then have water storage solutions and drainage implemented below? I clearly have no clue what is currently under the Hoboken streets/sidewalks. --------- There are discussions about the deteriorating state of the Hudson river tunnels. Are the Lincoln and Holland tunnels below the floor of the river? Do they currently contribute to the flooding in Hoboken? I'm just curious. If new tunnels were to be built, how would it be accomplished and would those tunnels impact Hoboken? I'd expect that new tunnels would have sections built elsewhere, floated into place and then sunk. --------- I hope to attend more of these upcoming meetings.	
47	9/29/15	Add Hydrodynamics engineering/Coastal engineering.	Public
48*	9/29/15	Is there comparable city you have solved?	Public
49	9/29/15	Is there BMP end of line treatment for 2 pumps/50mgd?	Public
50	9/29/15	Include modelling for piping and surge in EIS, show 2 pump locations, layout existing pipes on maps.	Public
51	9/29/15	In reference to Clean Water Act: paraphrase intent does “resist” protect PATH, railroad, fire, police, electric, hospital, auto egress, EMS.	Public
52	9/29/15	What would treatment plant in phase I add fig.2.2 of Jersey City storm water management plan (east of JFK north of 14th street) this shows RE 18,19/2009 M.Purine	Public
53	9/29/15	H9 zone should be included in “resist” phase this is ¼ of downtown, 1/3 of water from east Jersey City, ½ goes to RE-18,19/JC and into canal strip.	Public
54	9/29/15	Use canal strip as storage for 1 mgd(643x1600’ X 100 wide) with lock and pumps	Public
55*	9/29/15	Both EmNet reports in ref help understand problem photos of tide at full moon (18’’ above normal)	Public
56	9/29/15	Mention future population, density, economic development, tax abatements.	Public
57*	9/30/15	Commenter has provided a list of Hoboken street projects occurring in August and a 2014 map of Hoboken Road Resurfacing Program and PSE&G Gas Line Replacement suggesting possibility of below grade permanent installation of pipeline beneath same streets to aid in firefighting efforts using floodwater and USPS vehicles. See "Low Hanging Fruit" pdf and email	Public
58	10/1/15	Timeline (make it faster)	Public

No.	Date	Comment	Commenter Category
59*	10/1/15	Storm Surge (protect Weehawken & light rail) Interim measures	Public
60*	10/1/15	Combined sewer concerns for capacity with rapid growth.	Public
61*	10/1/15	Plant-based solutions	Public
62*	10/1/15	Add a statistician to the team	Public
63*	10/1/15	Change the emphasis to Irene (lt blue on map) 10" 24 has what's going on in Weehawken; Tunnel/ramps, topography up, water from Holland Tunnel, I-78, I-39, viaduct in model refer to vol. V CSO report HCUA C. 1980 (PIRNIE) value engineering vol. IV from Bayonne (PIRNIE) 9pgs. 1979.	Public
64*	10/1/15	More terms could be passed out: pretreatement, BOD, COD, dry weather flow, environment, inflow analysis, CSO, outlet, sludge disposal.	Public
65*	10/1/15	Include nautical chart with depths (.7 sq. mile water) / HOB show communities on Palisades, typical piping arrangement.	Public
66*	10/1/15	Use term Pimby = wind turbines in Weehawken Cove to emphasize 66% impervious; 64% NYC; push sustainable.	Public
67*	10/1/15	EmNet report Hob 2011 shows futility of interconnections (a-fib)	Public
68*	10/1/15	Portable barriers in parks = median precast jersey barriers; trench drain (plus large scale = 40'wide) on promenade streets/pump	Public
69*	10/1/15	Canal Slip inflow? 50'x900' x 20dp = .9mcf on September 29 comments.	Public
70*	10/1/15	Forced main follows railroad track; stop Jersey City dumping.	Public
71	10/1/15	1) I think the hard barrier solution should be driven toward the permanent architectural alternatives in-line with riverfront "the steps" rendering and not the traditional temporary flood wall solution.	Public
72	10/1/15	2) It was voices during the meeting, but one request is that the design include the actual long term permanent solution, and not a devalued design to fit the constraint of the current proposed $230M budget. It is very important to the community that the design is "done right," and not just another temporary "band-aid."	Public
73	10/1/15	3) Green green green! The more soft green delay and store solutions the better!	Public
74	10/1/15	4) The coastal flow map (figure 4) in the draft scoping doc was light on arrows. If it was worth any value, I observed the live surge flooding event in Oct 2012 from 5th and Jackson. The river water came from the south traveling north towards me.	Public

No.	Date	Comment	Commenter Category
75	10/8/15	We believe that the ""Resist"" component should not be the exclusive focus of initial concepts, and attention should also be provided to the other components of the RBD plan, which address protecting Hoboken from other flood related threats as well. In taking this position we have consulted with staff at US HUD who have advised us that the funding can be spent for a more comprehensive flood protection solution. We herefore advise the Consultant team, who have tasked us as a CAG, to represent a wide cross section of the community, to instead look at each element of the Resist, Delay, Store and Discharge as viable and acceptable elements of the project.	Hoboken CAG Official Response
76	10/8/15	The project goal should be to develop a comprehensive flood protection plan designed to address the risks from chronic tidal/high tide flooding, 500-year rainfall events, as well as periodic storm surge events. This analysis should consider the independent as well as interrelated risks of some of these conditions occurring at the same time, and over a period of time.	Hoboken CAG Official Response
77	10/8/15	We agree a goal of the project should be to improve the Community Rating for these areas in the FEMA framework in order to reduce the burden of costs for paying into the National Flood Insurance Program. The project should further consider the opportunity if not necessity for redirecting some portion of these funds into operations and maintenance of any resultant infrastructure from the various Build scenarios.	Hoboken CAG Official Response
78	10/8/15	The Scope proposes to consider impacts from climate change. Toward this end the Scope should acknowledge, identify, and plan for a specific sea level rise forecast such as one in use by the Intergovernmental panel on Climate Change and or the White House Climate Office. For instance, at a recent Climate Week event hosted by the Bank of America, the Deputy Director of Research on Climate for the White House announced that what we as society have long thought of as a “5-year storm” is now more of a 3- or 4-year storm. Planning for this Hudson River project should incorporate these more conservative projections into the project framework."	Hoboken CAG Official Response
79	10/8/15	The process should more clearly articulate and quantify what co-benefits a flood control process like this can help achieve such as improved mobility and improved air quality, expansion of non-vehicular transport by creating additional greenways, improved environmental quality through creation of green corridors with swales, engineered tree pits and more robust and thoughtful tree canopy, increased reliability of the electrical grid, improved public facilities such as upgraded water treatment plants, sewer lines, storage or containment tanks, pump stations, or improved public buildings that can serve dual purposes of shelters or others functional in emergency response or recovery.	Hoboken CAG Official Response
80	10/8/15	One of the goals of the project should be to protect the regional assets including existing and proposed mass transportation facilities (lines, terminal, station, and support facilities), water supply and sewage treatment, communications, and energy distribution in the project area.	Hoboken CAG Official Response

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81	10/8/15	We believe a more explicit goal should be to protect, secure and potentially improve lower and middle income housing stock, as well as other steps that can potentially reduce the vulnerability of the population that can be deemed "at risk."	Hoboken CAG Official Response
82	10/8/15	The Scope should more clearly define the standards or goals we are trying to reach: xx inches of rain per yy hours sustained over 24 hours? ZZ feet of storm surge or flood tide? Perhaps the April 2007 rainstorm was more typical than the October 2012 storm.	Hoboken CAG Official Response
83	10/8/15	The process, including the Screening Criteria and Evaluation methodology, needs to be coordinated and considered with other plans such as those being developed by NJ Transit, (particularly the Long Slip Canal project given that this $150M project has the potential to mitigate flooding effects if coordinated as a resiliency strategy as part of this plan.) North Hudson Sewerage Authority (any long range Capital or Control plans), PSE&G (Energy Strong or other plans for the project area, the Port Authority (PATH train, vehicle tunnels, ventilators, command centers or other structures), the City of Hoboken (Green Infrastructure Strategic Plan), as well as plans for Jersey City, Weehawken, Hudson County (Park or Willow Avenue Bridges, Observer Highway, Marin Blvd or Grove Street underpasses), or other plans of Key Stakeholders. In addition, specific focus should be given to the interconnections between this project and the North Hudson Sewerage Authority's long term control plan (LTCP). The combinations of water quality and quantity issues are systemic along urban coastal waterfronts, and the scoping document should speak to strategies and implementable goals and objectives that are consistent with the LTCP. The aquatic area of Hoboken Cove and Weehawken Cove is known for poor water quality and little circulation. Therefore this area might be an appropriate place to focus. It will be useful for the project team to review the Water Quality Data at this location and three other locations in Hoboken at the NYC Water Trail site. There are results of tests from 20 weeks of sampling in 2015, and we also have the ability to access data here going 2-3 years back. http://www.nycwatertrail.org/water_quality.html	Hoboken CAG Official Response
84	10/8/15	The Scope should consider proposed flood defenses and water management interventions across the range of public funded, owned or controlled land and rights of way in the project area including Hoboken Housing Authority, NJT Light Rail right of way, Hoboken Terminal and Yards, Hudson County Roads, Hoboken City Parks, Hudson County Parks, Hoboken Board of Education land and buildings (such as the playground at 11th and Willow), as well as any area that has been a recipient of capital funding from local, state, and federal sources.	Hoboken CAG Official Response
85	10/8/15	The project scope should consider possibilities for allocating a portion of funds for near-term pilot projects at a variety of scales that, over the next decade or more, have the potential to be scaled up or applied across a broader area as new opportunities emerge.	Hoboken CAG Official Response

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86	10/8/15	As part of the Scope of Work the project should identify needed mechanisms for implementation, operations, and maintenance so as to most realistically ensure an ongoing “state of good repair” for any resultant infrastructure. This is especially important for those areas where the desired level of flood defense or water management cannot be adequately achieved in the public right of way alone. These mechanisms could include easements, restrictive covenants, or mechanisms such as PPPs, Associations, or "Improvement" "Resilience" or other "Water Management" districts. This could also include consideration of potential credits for property owners who undertake green infrastructure, water capture/detention projects on their site. For the overall plan to succeed there must be clear steps and alternatives to help bridge the gaps where public and private lands intersect.	Hoboken CAG Official Response
87	10/8/15	As part of the scope of work the project team should conduct a reasonable number of soil samples and tests in order to assess and verify potential levels of contamination. These should be focused particularly in areas that might be impacted as part of any build scenario.	Hoboken CAG Official Response
88	10/8/15	The Draft Scope is flawed by failing to identify the available information on the current sewage and storm water management system in the area. For a project involving this large amount of money, focused on such a small geographic area, where the urban fabric is both dense and relatively old, any resultant Alternative must be based on a strong understanding of the existing system. Given the lack of understanding of many people, including residents and ratepayers, as to the myriad causes of the Sandy storm surge flood, it should be a clearly stated priority for Data Collection in any EIS for the project. People know the surge brought a huge volume of water, but many people also saw the water coming up through drains both inside and outside homes, not simply water coming down the street. In addition, verifying, and refining this baseline data is fundamental for the due diligence that is needed for any Build alternative to be potentially moved forward towards inclusion in a Record of Decision. This data should include: • the capacity of the present storm water and combined sewer system, from the connections emanating from our businesses and households, corner drains, sewer pipes, all the way to the pump stations, treatment plant, and outfalls. • a reasonable and responsible level of consideration must be given to the i. design capacity, ii. the age and physical integrity iii. and the actual operating capacity of the elements of the system. There is widespread anecdotal belief that many sewer lines are clogged or have other issues that limits their actual capacity to accomplish their task. This data must be made available to the public and interested stakeholders within a reasonable amount of time so that the evaluation of alternatives becomes a more transparent and comprehensible process."	Hoboken CAG Official Response

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89	10/8/15	The actual causes of the Sandy flood are not widely understood within the population of the project area. Did the flood waters come purely from overland flow across the surface topography? Were flood waters facilitated or propagated through the sewer system? Was there any role played by basement drains or other old pipes under the streets that may not recognized and accepted on any current basemap? As part of the due diligence, the planning team should conduct surveys in a reasonable number of blocks across the study area. As part of this survey the design team should seek to identify and verify: • known connections into the sewer system • any un-mapped or presently unknown connections • percent of the customer's land or surface area that is impervious, is designed to allow or has the potential to allow for water infiltration In addition, the due diligence for this project should include a reasonable number of subsurface sonar investigations (perhaps focused in flood prone areas) to help identify underground voids, collapsed pipes or potentially historic/old pipes that are not on any of the maps currently in use or available to the public.	Hoboken CAG Official Response
90	10/8/15	In the consideration of items under “infrastructure,” the EIS process should consider the potential impacts as well as potential benefits from the use, improvement, adaptation or other physical modification to public buildings and to public spaces such as parks, parking garages or lots, or community facilities or sites identified in the City’s various plans or by Municipal Resolution for development for these purposes. The fact these areas may provide important benefits, co-benefits, and be in the public domain suggest they may potentially help advance the project goals than simply walls at the waterfront."	Hoboken CAG Official Response
91	10/8/15	As part of the analysis of potential alternatives the Financial and Cost models should include a higher escalation cost for the waterfront and in-water work than for the land-based work. In addition, if there are seasonal restrictions on when this work can be done, such as due to nesting, breeding, or migration of aquatic life, then this should be factored into the Cost Estimations as well.	Hoboken CAG Official Response
92	10/9/15	Although a major report cited on page 12, under Article 3.1.2, Systemic Inland Flooding, entitled, Street Scale Modeling of Storm Surge Inundation along the New Jersey Hudson River Waterfront, Stevens Institute of Technology, Davidson Laboratory, October 2014, (hereinafter “Stevens Storm Inundation Report”) provides a measure of the total volume; source and directions of flow of floodwaters that entered the Study Area during the Hurricane Sandy storm surge; the Draft Scoping Document provides no information with as much specificity as to what countervailing measures the project engineers propose to take (i.e. resist, delay, store) to address such expected levels of floodwaters in the event of a storm of the magnitude of Sandy strikes the area again. For example, although it is admitted in the Draft Scoping Document that: “If the storm-sewer flow volume exceeds the limited treatment volume capacity of the WWTP” [(between 32 and 36 million gallons per day)” which it did by 430,000,000 gallons when 466,000,000 gallons of floodwaters, according to the Stevens Storm	CAG Member

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		Inundation Report, entered the interior areas of Hoboken,] “a portion of the storm-sewer flow volume outflows into the Hudson River through various outfalls located along Hoboken’s waterfront.” But if such a large volume has to pass into the Hudson River outfalls, but those outfalls may not be available as the Draft Scoping Document also admits, when the increased level of the Hudson River during high tides and storm surges exceeds the distance of the outfalls from the normal high water mark of the Hudson River during non-storm conditions and low tides what is to be done with the huge volume of excess water under the Project. This seems to be unsolvable problem for preventing the flooding unless the Subject Matter Experts envision resist, store and delay measures as sufficient to offset the immense volume of floodwaters that for all intents and purposes cannot be discharged through the Hudson River outfalls. The Draft Scoping Document neither addresses these issues qualitatively, much less quantitatively, despite the fact that in the latter case the Stevens Storm Inundation Report provides a true historic benchmark for the nature and magnitude of inland flooding during major storm events caused by this phenomenon.	
93	10/9/15	Since issuing the Draft Scoping Document the City of Hoboken has taken steps toward addressing the issue of inland flooding by proposing to purchase two parcels of land currently owned by BASF Industries, formerly the Cognis/Henkel Chemical Company, and build a large retention pond in the western area of Hoboken to store excess floodwaters when discharge through the Hudson River outfalls is prohibited by conditions described in point 1. Despite the fact that such proposal is fraught with issues concerning the presence of hazardous wastes leaching into the retention area as a result of documented on-site disposal of hazardous wastes by the previous owners, the Draft Scoping Document, in 6.24 Hazardous Waste, fails to consider the impact of such hazardous wastes on the overall Project or specifically the feasibility of the proposed retention pond and its impact, if any, on the handling of the excess storm water when the Hudson River outfalls are blocked as discharge points because “No acquisitions of private land are anticipated as ;part of the Project;.” Whether the proposed purchase of the BASF property indeed was not anticipated by Dewberry Engineers, Inc., the author of the Draft Scoping Document, or the State of New Jersey Department of Environmental Protection, as lead agency in the Project, is irrelevant now that the City of Hoboken has explicitly indicated its intention to proceed with the purchase and eventual construction of a park and underground retention facility to store excess storm water when the Hudson River outfalls operated and controlled by the North Hudson Sewerage Authority are not available. The Draft Scoping Document, therefore, should not be finalized until an amended Draft Scoping Document has been issued by NJDEP , and the public comment period has been reopened for an additional thirty days from the issuance of such amended Draft Scoping Document addressing both the impact of the BASF property facility to store excess storm water during times of potential inland flooding and the impact of the hazardous wastes potentially accumulating in the retention pond if all existing contamination is not removed or treated on site prior to its construction or contained after to its construction. In conclusion not only does the Draft Scoping Document fail to address the manner	CAG Member

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		in which these specific concerns are to be remedied, but also is incomplete in its scope by failing to take into account new facts that have surfaced since the draft was completed and despite the fact that the draft specifically provides that “should it be determined that such acquisitions are required, further investigation into those properties may be warranted.”	
94	10/9/15	The executive summary should be simplified and provide the reader with an understanding of what the scoping document will present. This includes a brief background (the impacts from Sandy, recurring flooding issues within the project area, the un certainty of future flood events) which establishes the need for the project. The executive summary should also state the purpose of the project and the four project strategies (RESIST, DELAY, STORE, DISCHARGE). The executive summary should help the reader understand how the feasibility study and EIS will analyze alternatives and produce a preferred alternative based upon screening criteria. Part of the narrative uses language that sounds like the intent of this project is to prevent consequences similar to Sandy- when the objective of the project is better expressed in reducing flood risk to a yet to be specified level of protection. In places, the language used to summarize the project is difficult to understand. Perhaps an improved summary might be: The Project is a comprehensive urban water strategy to reduce flood hazard and flood-related public health risks while leveraging infrastructure investments to enhance urban livability. Amending the preceding sentence should occur throughout the document.	Hoboken Mayor
95	10/9/15	The project background should paraphrase and expand upon language from the executive summary. The background should provide the reader with the appropriate context to understand how the purpose and need for this project have been developed. This includes a history of flooding in the project area, as well as the Rebuild by Design competition.	Hoboken Mayor
96	10/9/15	The study area map should reflect current Hoboken Open Space.	Hoboken Mayor
97	10/9/15	The scoping document should clarify how the preferred alternative will be memorialized and presented to the public. Specifically, this document should identify how the "master plan" for this project will address operations and maintenance, ownership, cost strategies for financing subsequent phases, and how long term plan amendments should be handled.	Hoboken Mayor
98	10/9/15	Much stronger language should be used to describe interconnections between this project, the Long Slip Canal project and the North Hudson Sewerage Authority's long term control plan (LTCP). North Hudson's LTCP will address water quality issues, while this project will focus on water quantity issues. The combinations of water quality and quantity issues are systemic along urban coastal waterfronts, and this topic should be addressed in the seeping document. The seeping document shou ld speak to strategies and implementable goals and objectives that are consistent with the LTCP. Moreover, the Long Slip Canal project has the potential to mitigate flooding effects if coordinated as a resiliency strategy as part of this plan.	Hoboken Mayor

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99	10/9/15	The project purpose should emphasize the need for protection from storm surges, spring tides, sea level rise and rainfall events. Suggested language: "The Study Area, comprising the entire City of Hoboken, and adjacent areas of Weehawken and jersey City (see Figure1), is vulnerable to flooding from high tides or spring tides, coastal storm surge and inland rainfall events. The purpose of the project is to reduce the short and long term flood risk to flooding areas within the Study Area. The project intends to minimize the impacts from surge, tidal and rainfall flood events on the community, including impacts to public health, while providing benefits that will enhance quality of life, recognizing the unique opportunities and constraints within a highly developed urban area.	Hoboken Mayor
100	10/9/15	The project need should be split into three interconnected types of flooding that characterize and differentiate between coastal storm surge and high tides, springs tides and sea level rise and rainfall flooding. The scope of work should also discuss and explore the interplay between groundwater elevation, nuisance flooding and coastal storm surge events. There should be sufficient data collected to understand if or when seepage, backflow or other types of underground water movement effects the interior project area	Hoboken Mayor
101	10/9/15	Goals and objectives should be stated in terms that are clearly either a goal or objective. A goal is an overarching principle that guides decision making while objectives are specific, measurable steps that can be taken to meet the goal. For example a priority goa l for this project is to reduce flood risk from storm surge. There should be stronger language in the goal statements that tie this project to the success of the resist strategy.	Hoboken Mayor
102	10/9/15	Project concepts should be developed to address the impacts from three types of flooding: • coastal storm surge • tidal flooding (high tides, spring tides and sea level rise) • and systemic inland flooding associated with rainfall	Hoboken Mayor
103	10/9/15	Provide a laymen's explanation of what "site and reach based" mitigation strategies mean to a member of the public un-informed on these terms.	Hoboken Mayor
104	10/9/15	The scoping document should address the impact to emergency services for ingress, egress, circulation or access as it relates to proposed changes to the project area during construction, following project closeout, and during an emergency deployment.	Hoboken Mayor
105*	10/9/15	We urge that this process thoroughly consider incorporating best practices from our Waterfront Edge Design Guidelines (WEDG) program. See Waterfront Alliance letter 10/9/15.	Waterfront Alliance
106	10/9/15	Improve public access for maritime use and on-water recreation Public access to and onto the water should be enhanced and be properly assessed as part of the environmental review and analysis. See Waterfront Alliance letter 10/9/15.	Waterfront Alliance

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107*	10/9/15	Review WEDG recommendations for technical guidance The WEDG Manual provides specific guidance for waterfront projects that should be incorporated into this project, where applicable: See Waterfront Alliance letter 10/9/15.	Waterfront Alliance
108	10/9/15	Commenter has provided a 2009 brochure produced by Joan Abel on the subject of flooding in Hoboken for consideration by the Project titled "Hoboken Wetland Project- Canals and Wetlands."	Jim Vance
109	10/9/15	The Newport Associates Development Company (NADC) has provided a list of other initiatives dealing with Hoboken flooding that may impact the alternatives analysis. See Newport letter 10/6/15	NADC
110		NADC notes that it will carefully assess any and all proposed nearby measures to ensure that they do not adversely affect the health, safety and economic viability of Newport. NADC provides Newport statistics on FEMA insurance plans, asks for consideration of PATH and NJT facilities within Newport, and notes NJT project to fill Long Slip. NADC also notes its existing state Waterfront Development permits. See Newport letter 10/6/15.	NADC
111		Study area needs to be extended South to 6th Street/Thomas Gangemi Drive and West to Washington Blvd. to include the entire Newport Development.	NADC
112		NADC requests access to The New York City Department of City Planning's Urban Waterfront Adaptive Strategies report and other reference documents.	NADC
113		NADC asks what impact the regulatory process will have on Newport	NADC
114		NADC states that LSRP costs are to be absorbed by the project and the owner must be contacted for information related to remedial activities.	NADC
115		NADC states that no displacements are to occur in Newport.	NADC
116		NADC states that the Newport master and redevelopment plan needs to be considered along with environmental impacts to Newport parks and recreation areas.	NADC
117	10/9/15	We recognize the importance of the Rebuild by Design Hudson River project and are pleased to be working collaboratively with the project team. While the purpose of the project is to reduce flood risk in Hoboken primarily, we feel that it is also important that the project recommendations do not have adverse impacts on the citizenry and economic development of Jersey City. Specifically, we respectfully suggest that the draft scoping document be revised to reflect the following goals: • The project shall consider flooding in neighboring municipalities outside the study area, and no concept or alternative shall exacerbate flooding in those areas. No concept or alternative shall result in water displacement that will negatively affect land in Jersey City.	Jersey City Mayors Office

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		• No existing or currently-anticipated Jersey City land use shall be negatively impacted by construction related to this project. • No concept or alternative shall negatively affect investment in Jersey City.	
118	10/9/15	Also, in the interest of the public, a budget outline should be provided for the administrative, material, and construction cost of the project. An itemized list should be displayed on the Rebuild by Design website for public access for the overall project.	Jersey City Mayors Office
119	10/9/15	In the interest of the public, a budget outline should be provided for the administrative, material, and construction cost of the project. An itemized list be displayed on the Rebuild by Design website and emailed to the Citizen Advisory Group for public access, providing the overall and estimated cost of the project.	Jersey City Environmental Commission
120	10/9/15	Commenter wants to emphasize historical flooding in Hoboken, natural topography and lack of natural drainage- pumping is not sufficient	John P Carey
121		Commenter notes concerns regarding the participation of private property owners along the waterfront.	John P Carey
122		Emphasizes need to protect and make resilient emergency services and public transportation including Hoboken Terminal and PATH in the case of Hoboken becoming isolated during an event and/or for emergency evacuation.	John P Carey
123		What type of manual or automatic flood control devices do we deploy across road and pathways which will remain open except for flood events? What is the reliability of these deployments and who is responsible for them?	John P Carey
124	10/9/15	Mitigation measures for inland flooding from rainfall events, not just coastal surge, must be integrated into the project if the goal of the funding is to create a comprehensive flood solution that will also address the flood risk that comes with precipitation. The document should explain explicitly how the funding will address interior flooding. See NJ Future letter section Funding Allocation 10/9/15.	NJ Future
125	10/9/15	To ensure that the project mitigates risks from coastal and inland flooding and stronger storms, New Jersey Future recommends including in the scope: • An official adoption of sea level rise projections for 2075 and 2100 • A detailed analysis of the flooding vulnerabilities today, in 2075 and in 2100, incorporating a range of projected extents of sea level rise (low, medium, high) and projections of future precipitation patterns. Articulation of methods to protect infrastructure, not just residences, from current and future flooding risks so that when evaluating alternatives, there is transparency in how vulnerable infrastructure, such as storm sewers and outfalls, will be addressed. See NJ Future letter section Incorporating Projections for Sea-Level Rise and Precipitation Events 10/9/15.	NJ Future

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126	10/9/15	Recommendation: The concept screening matrix needs to be explicit in identifying project goals and who is benefiting. In addition, since residents and businesses will be most extensively affected by the project, these stakeholders should have the opportunity to provide input into the development of the matrix itself, not just the final rankings from the matrix. Co-benefits of flood control projects should be clearly articulated and quantified, and considered in costbenefit analyses. For example, by incorporating “green infrastructure” practices into efforts to control stormwater, communities and property developers can reduce energy costs, diminish the impacts of flooding, improve public health, and reduce overall infrastructure costs. See letter section Concept Screening Matrix and Co-Benefits 10/9/15.	NJ Future
127	10/9/15	Studies should be performed that document how many people are currently living in locations vulnerable to flooding, whether if, as a result of the implementation of the projects chosen, residents, particularly low and moderate income and other vulnerable populations, will be protected from sea level rise based flooding projected for 2100. During the hazardous waste investigation, risks specific to vulnerable populations should be analyzed, findings should be distributed to these communities as well as the public as a whole, and discussed at a public meeting. Given the fact that flooding problems are not just at the water’s edge and that LMI and other vulnerable residents must be protected from flooding, funding should be allocated for both coastal and inland flooding and not be spent solely to protect high end housing along the Hudson River Waterfront. Social workers in the target areas should be contacted to assist with identification of vulnerable communities and with communicating information about the project. See NJFuture letter section Vulnerable Populations 10/9/15.	NJ Future
128	10/9/15	New Jersey Future reiterates the recommendations we made for the draft COP. Citizen Advisory Groups (CAGs) must be truly inclusive and allow for genuine dialogue, through clarification of composition, authority and meeting structure. For example, not only must those residents recommended by local officials be included, all residents not on a CAG should be encouraged at least to observe the dialogue. This can be accomplished by making public all CAG meeting dates, times and places. It should be transparently stated how the Dept of Environmental Protection (NJDEP) and engineering consultatn Dewberry will respond to comments and recommendations made by the CAG and the general public. As stated above, a proactive outreach and engagement program should be developed to ensure participation from vulnerable populations. See NJ Future letter section Public Involvement 10/9/15.	NJ Future
129	0/9/15	The Draft Scoping Document has not clearly defined what might be the implementation part of Phase I. See FBW letter 10/9/15.	Fund for a Better Waterfront

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130	10/9/15	Princeton Hydro, Hoboken City zoning amendments, Hoboken Terminal (FTA), PATH, Hboken Green Infrastructure Plan, etc. See FBW letter 10/9/15.	Fund for a Better Waterfront
131	10/9/15	Commenter asks specific questions regarding storage capacity and cost of the BASF site component of the project. Commenter recommends the resilient building guidelines developed by Princeton Hydro; and suggests an outreach/education and grant program for property owners to assist in implementing the guidelines as well as wet and/or dry flood proofing. Commenter asks why the Shades neighborhood in Weehawken is not identified as a “flooding hotspot". See FBW letter 10/9/15.	Fund for a Better Waterfront
132	10/8/15	Combined Sewage Overflows are a major problem in this town. They turn all flood events into a public health problem. This EIS should evaluate whether these problems are equal to or worse than the coastal flooding issues. Regardless, CSOs should be an elevated concern within the EIS moving forward.	Phil Jonat
133	10/8/15	Unless required by law, I recommend that the draft scoping document should remove the following language, "Phase 1 includes....funding for the implementation of the Resist component" of the project. This statement is included in 1.0 Exec Summary and 2.0 Background and 2.2 Proposed Project. The project that should be funded should be the most effective project as shown by the EIS, not just the Resist component of the OMA study.	Phil Jonat
134	10/8/15	I suggest that another measurement of success by added to 1.0 Executive Summary and 3.2 Goals/Objectives: Long Term Cost Effectiveness of the project. This is often missed at the beginning of a project. Hoboken residents may or may not be able to effectively pay for maintenance of a flood control district. Locally maintained flood control districts in New Orleans were not fully funded and maintained, causing further damage and destruction during Hurricane Katrina.	Phil Jonat
135	10/8/15	Green infrastructure should be emphasized as much as possible because I believe it has the largest co-benefits. Hoboken has some of the lowest green space per capita, even compared to other high density cities.	Phil Jonat
136	10/8/15	Water efficiency can play a role in this project as well. It tends to be very low cost and effective at reducing CSOs. How much does this impact flooding? Please explore how much this impact has on flood events.	Phil Jonat
137	10/8/15	At some point we need to clearly differentiate the difference between high tide flooding and storm surge (Hoboken floods during high tides and precipitation events) - would be safer to say "tidal flooding"" than "coastal storm flooding."	Jennifer Gonzalez
138	10/8/15	There is a big point missing here about unknowns - we don't know exactly what the system capacity issues are and where; where the specific choke points are (I am personally hoping that H&H modeling done through this study will clearly identify the capacity and I&I issues)	Jennifer Gonzalez

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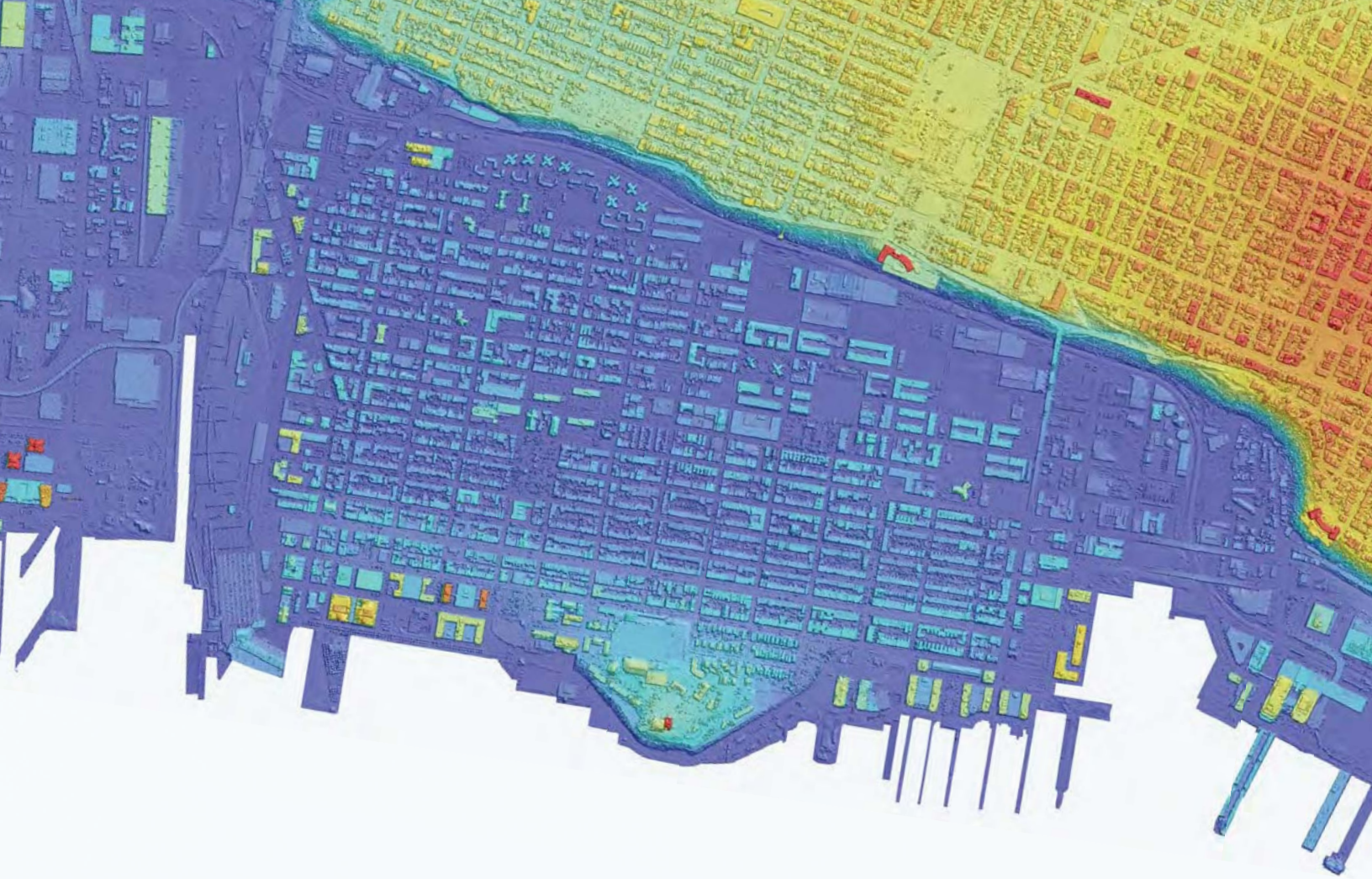
		- this may be too much detail for this section, but needs to be addressed in the scoping document.	
139	10/8/15	The way this is phrased sounds as though the goal is to prevent another Sandy - while that is the best case scenario, we don't know if it's possible until the feasibility study is complete - the document has not at this point stated that the design level is a Sandy event - is it 100 year, 500 year, or another design elevation?	Jennifer Gonzalez
140	10/8/15	Shall we specify what kind of flood hazard? it's important to discuss whether the P&N is related to tidal flood mitigation, storm surge flood mitigation, or stormwater flood mitigation (namely - what problem are we trying to solve? Above we say all three types of flooding).	Jennifer Gonzalez
141	10/8/15	Quality of life is a key co-benefit not mentioned here.	Jennifer
142	10/8/15	Comment on all maps - no sources?	Jennifer
143	10/8/15	Why is this referred to and no other ongoing City efforts? While I am of course a strong proponent of this plan, I would recommend either removing specific references to specific plans, or adding other City resiliency efforts.	Jennifer Gonzalez
144	10/8/15	Made several comments about changing this to combined sewer mains or combined sewer infrastructure, but alternatively you could use this phrase as long as it is defined (another case when a glossary at the beginning might help).	Jennifer Gonzalez
145	10/8/15	This is a very important part of the process which the CAG should be involved in - setting the screening criteria for both the Concept (Alternatives) screening as part of the environmental review and Feasibility Study. Would like to have more information about exactly what criteria or metrics are being considered.	Jennifer Gonzalez
146	10/8/15	Might be good to clarify this as the environmental analysis framework, so that the public has a clear understanding of affected environment --> impacts --> mitigation Likewise, it would help up front here to define impacts and intensity (i.e., no measurable impacts, beneficial impacts, minor/major adverse impacts) and direct vs. indirect.	Jennifer Gonzalez
147	10/8/15	If any new pump stations are installed, and require generators (as referenced in Noise below), they may also require compliance with RICE. Worth noting in AQ, as with noise? The proposed generators would be subject to the stationary Reciprocating Internal Combustion (RICE) Maximum Achievable Control Technology (MACT) regulations at 40 CFR 63 ZZZZ and the New Source Performance Standards (NSPS) at 40 CFR 60 III that govern emission limits and compliance requirements for new stationary RICE.	Jennifer Gonzalez
148	10/8/15	Confused here - so does this mean AQ is screened out? Typically we would do a worst case scenario analysis for the purposes of the EIS - not wait to do the analysis until some time in the future.	Jennifer Gonzalez

No.	Date	Comment	Commenter Category
149	10/8/15	Is there a separate schedule for meetings with Consulting Partiess and list of Consulting Parties?	Jennifer Gonzalez
150	10/8/15	Would it be possible to break this section into subheadings to address exactly what resource areas would be addressed - as if it were the outline for the DEIS - such as floodplains, surface waters and wetlands, terrestrial ecology, aquatic ecology... It is hard to follow right now with them all grouped together.	Jennifer Gonzalez
151	10/8/15	What about potential beneficial impacts from construction jobs and economic benefits resulting from avoided losses/avoided impacts in future storms?	Jennifer Gonzalez
152	10/8/15	This section is lacking a discussion of analysis methodology, and does not discuss urban design/neighborhood character. How will those be assessed? A key issue raised at the last CAG meeting was how the potential solutions would 'blend in' (stated above) to the existing waterfront and community - how will that be assessed?	Jennifer Gonzalez
153	10/8/15	Missing a discussion of bicycle-pedestrian circulation and analysis	Jennifer
154	10/8/15	This section should discuss potential for cumulative impacts over various build years (I didn't see the build year in the document previously either).	Jennifer Gonzalez
155	10/8/15	There won't be a separate construction chapter? As different components may be built at different times, there may be a need for a construction worst-case scenario.	Jennifer Gonzalez
156	10/8/15	This section should identify other infrastructure projects that we already know of which will be considered for the analysis, such as the BASF Stormwater Park, the Hoboken Terminal Long Slip Canal Project, the NHSA Long Term Control Plan, and note that additional projects will be considered as identified during the planning process.	Jennifer Gonzalez
157	10/9/15	Change storm-sewer to "combined-sewer."	Tom Hilmer
158	10/9/15	Define "resiliency" - if "leveraging resiliency" is key, tell us what it is.	Tom Hilmer
159	10/9/15	Provide schedule showing Draft and Final EIS, concept and alternative generation.	Tom Hilmer
160	10/9/15	Need for solutions are urgent. What promises you will do EIS thoroughly? How do you fund phase II, III…	Tom Hilmer
161	10/9/15	Need, add adjacent MUA RE18+19 impact low areas.	Tom Hilmer
162	10/9/15	32 and 36 mgd? From 1980 Bayonne study 11 mgd primary was capable of 80 mgd w/some treatment.	Tom Hilmer
163	10/9/15	Objectives, add population Hoboken in 1990 was 33k, in 2010 50k on 1.2 sq miles of land. Project to 2040 or 2050, what is time frame (duration) for effective solutions, Ph I, II, III?	Tom Hilmer

No.	Date	Comment	Commenter Category
164*	10/9/15	Screening criteria: value engineering in the 1980s for waste water projects in Bayonne, JC, Hoboken HCUA involved: reliability, redundancy, flexibility, operation, cost, replacement and environmental. They still are the criteria for selecting alternatives.	Tom Hilmer
165	10/9/15	Technical Env Studies: Hoboken includes 0.75 sq mile area in Hudson River "test but verify" should be part of EPA regulations. Sediment beyond 15th St in Weehawken cove and beyond 14th St (JC) needs testing.	Tom Hilmer
166	10/9/15	Sustainability (expanded): maximizing some primary treatment throughput of H2O during high tides should be priority, allowing CSOs to remain unchanged 25 yrs is not intent of EPA.	Tom Hilmer
167		North Hudson Sewerage Authority - define secondary facility? What are the flow pipe dimensions and standards and how close are we to that maximum capacity? Do you have an inventory of their facility and underground pipes? Has NHSA considered an upgrade and how much would that expand their capacity to deal with storms and flooding?	Susan O'Kane
168	10/9/15	Would you recommend that the three muncipalities stockpile sandbags since the completion of the project is going to take years?	Susan O'Kane
169	10/9/15	The project Scope should discourage in-water intervention and construction that might lead to increased siltation or reduced navigability in the Weehawken Cove area.	Carter Craft
170	10/9/15	The project Scope should consider re-use of land-based soil and sediment as well as dredge material from the Cove and area marinas such as Lincoln Harbor and the Shipyard and marine facilities. This material could be used for berms or other project elements where elevation changes to the landscape might be considered. Incorporating some land-based sediment in berms could enable for the development of additional and larger scale green infrastructure on land.	Carter Craft
171	10/9/15	The project Scope should evaluate potential air and other environmental impacts from creating a local sediment washing/ screening facility to enable this local reuse/beneficial reuse. This facility could be based on land such as in the NJT Railroad yards or in water.	Carter Craft
172	10/9/15	Due to the fact that the Hudson River is a shared regional resource, the project Scope should recognize and consider the State of NY regulations as they seek to protect marine habitat and aquatic species.	Carter Craft
173	10/9/15	The resultant evaluation of alternatives should consider the fact that Washington Street is a large berm and focus the protective measures north of 14th Street and south of Newark Street. Any protective measures / interventions recommended should be focused on low- and middle income housing, not market rate or luxury office buildings, apartments and hotels.	Carter Craft
174	10/9/15	The project Scope should consider the potential of creating green corridors linking existing open spaces such as:	Carter Craft

No.	Date	Comment	Commenter Category
		• Stevens Park to Church Square Park to Mama Johnson Field to the Palisades (along 4th and 5th Streets east-west) and • Elysian Park to Columbus Park to the Palisades (along 10th Street) as well as • Wide streets such as Grand Street (from Columbus Park to Observer Highway).	
175	10/9/15	These green corridors can help to create larger area-wide stormwater management approaches as well as important habitat corridors connecting the Hudson River ecosystem to the Palisades for threatened species such as Monarch Butterflies as well as critical ecosystem residents such as honeybees and pollinators.	Carter Craft
176	10/9/15	The project Scope should consider the possibility of converting a street into linear stormwater cachement device such as a Canal or large swale. This linear intervention could flow with tidal water from the Hudson River, or be aligned, designed, and engineered to collect stormwater from areas that are known to suffer surface flooding.	Carter Craft
177	10/9/15	The project Scope should consider creating any possible financial tools such as grants, revolving loan funds or other tools that could a) help to leverage additional public funds and or b) create public benefits on presently privately owned land through other tools such as deed restrictions, easements, or restrictive covenenants.	Carter Craft



APPENDIX C – COMMENTS

October 9, 2015

Mr. David Rosenblatt, Director
Office of Flood Hazard Risk Reduction Measures
401 East State Street, Mail Code 501-01A,
PO Box 420, Trenton, NJ 08625-0420.

Via email: rbd-hudsonriver@dep.nj.gov

re: Comments on Draft Scope of Work for Hudson River Rebuild By Design Project

- The project Scope should discourage in-water intervention and construction that might lead to increased siltation or reduced navigability in the Weehawken Cove area.

- The project Scope should consider re-use of land-based soil and sediment as well as dredge material from the Cove and area marinas such as Lincoln Harbor and the Shipyard and marine facilities. This material could be used for berms or other project elements where elevation changes to the landscape might be considered. Incorporating some land-based sediment in berms could enable for the development of additional and larger scale green infrastructure on land.

- The project Scope should evaluate potential air and other environmental impacts from creating a local sediment washing/ screening facility to enable this local reuse/ beneficial reuse. This facility could be based on land such as in the NJT Railroad yards or in water.

- Due to the fact that the Hudson River is a shared regional resource, the project Scope should recognize and consider the State of NY regulations as they seek to protect marine habitat and aquatic species.

- The resultant evaluation of alternatives should consider the fact that Washington Street is a large berm and focus the protective measures north of 14th Street and south of Newark Street. Any protective measures / interventions recommended should be focused on low- and middle income housing, not market rate or luxury office buildings, apartments and hotels.

- The project Scope should consider the potential of creating green corridors linking existing open spaces such as:
    - Stevens Park to Church Square Park to Mama Johnson Field to the Palisades (along 4th and 5th Streets east-west) and
    - Elysian Park to Columbus Park to the Palisades (along 10th Street) as well as
    - wide streets such as Grand Street (from Columbus Park to Observer Highway).

- These green corridors can help to create larger area-wide stormwater management

approaches as well as important habitat corridors connecting the Hudson River ecosystem to the Palisades for threatened species such as Monarch Butterflies as well as critical ecosystem residents such as honeybees and pollinators.

- The project Scope should consider the possibility of converting a street into linear stormwater cachement device such as a Canal or large swale. This linear intervention could flow with tidal water from the Hudson River, or be aligned, designed, and engineered to collect stormwater from areas that are known to suffer surface flooding.

- The project Scope should consider creating any possible financial tools such as grants, revolving loan funds or other tools that could a) help to leverage additional public funds and or b) create public benefits on presently privately owned land through other tools such as deed restrictions, easements, or restrictive covenenants.

Thank you for your consideration.

Carter Craft
608 Garden Street
Hoboken NJ 07030

Sliker, Laura

From: DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent: Thursday, October 01, 2015 1:45 PM
To: Smith, Lawrence
Cc: Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

5 of 5

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Dave Trzeciak [mailto:dtrzeciak@cmilc.com]
Sent: Friday, September 11, 2015 4:43 PM
To: DEP rbd-hudsonriver
Subject: Aspects of Proposed Project - Resist Phase

Mr. Rosenblatt,

I have been following the RBD Hudson River Project and had a question that I hope you can answer. The proposed project has the "Resist" component to reduce flooding by using a combination of hardened infrastructure, such as bulkheads, seawalls, and flood walls. I would like to know who will be engineering these structures. Do you have a list of engineering firms that you could provide me that are working on the project?

My company has an extensive record in providing structural products for State, Federal and Local infrastructure projects to resist shoreline erosion (bulkheads, seawalls, groins) and flood mitigation (levees, floodwalls). We have worked with many of the agencies listed in the proposal like the NJDEP, USACE, USFW and many others.

Besides the applications I mentioned above, we also provide water access solutions that allow the local community to enjoy their waterfront.
I believe we Crane Materials International can provide great value to the RBD Hudson River project by supplying sustainable, high performance, long life cycle, and low cost product for the project.
I would greatly appreciate your assistance in finding the correct parties to contact. I hope that you can help point me in the right direction.

For more information about our offerings, please visit the following links to our websites.

Civil Infrastructure

Bulkheads and Seawalls:
http://cmisheetpiling.com/applications/marine-structures/

Flood Protection:
http://cmisheetpiling.com/applications/flood-protection/

Waterfront Access
http://gatordock.com/

Thank you. I look forward to hearing from you.

Regards,

Dave Trzeciak
Regional Sales Manager
Crane Materials International
Direct: 770-933-8044 | Cell: 678-778-9077
cmilc.com

FBW
Fund for a Better Waterfront

PO Box 1965
Hoboken, NJ 07030
betterwaterfront.org
201.217.0500

October 9, 2015

David Rosenblatt, Director
NJDEP
Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail Code 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

RE: Comments on *Draft Scoping Document* for the *Hudson River Rebuild by Design*

Submitted via email to rbd-hudsonriver@dep.nj.gov

Dear Mr. Rosenblatt:

This letter contains our comments on the *Draft Scoping Document* for the *Hudson River Rebuild by Design* project.

Defining the Scope

HUD's $230 million block grant for this project will cover Phase 1 based on a HUD notice in the *Federal Register* from last October. The *Draft Scoping Document* states that the funds will be utilized for the feasibility, design and environmental analysis of the comprehensive *Resist, Delay, Store, Discharge* project. Obviously, these first steps need to take place first in order to inform how the project is to be implemented.

The *Draft Scoping Document*, however, has not clearly defined what might be the implementation part of Phase 1. In fact, the wording led many to believe that it would be restricted to the "Resist" component which consists of coastal barriers such as bulkheads, seawalls, berms and levees, thus only aiming to avert future surges like Superstorm Sandy. This, of course, would be a major shortcoming since the funding of the other components -- *Delay, Store and Discharge* -- are critical to addressing the other more common flooding that occurs in the Hoboken area. This is especially important in that future funding beyond Phase 1 is uncertain.

The OMA Team did address the phasing issue in more detail and the *Draft Scoping Document* should consider some of the items they proposed for Phase 1. Attached is copy of that portion of the OMA Team report to HUD. The OMA report, in addition to coastal defenses, also lists "pump station" and "greenbelt CSO wetland pilot." We recommend that the *Scoping Document* go beyond this by taking into consideration other components

that could be part of Phase 1 implementation. The analysis could determine that other remedies could be added to the Phase 1 budget.

How does this Project Interface with Others?

For us to fully understand how the *Rebuild by Design* project works, we also need to consider the projects that are being funded from other sources. For instance, the City of Hoboken obtained a $200,000 grant from the NJDEP. Part of this grant funded Princeton Hydro to develop a guidelines for building flood-resistance structures and retrofitting existing buildings. This firm also made recommendations to amend the Hoboken Zoning Code and Flood Ordinance to ensure greater resiliency to future storms. These amendments were adopted by the Hoboken City Council last winter. It is not clear if anything similar has been done for Weehawken and Jersey City.

Also, the Federal Transportation Administration awarded a $146 million grant to New Jersey Transit to protect the Hoboken Train Terminal and railyard from future flooding. Will this help pay for required seawalls at the south portion of the target area? How is this being coordinated with the *Rebuild by Design* project? What about the Hoboken PATH station? What funds are the Port Authority dedicating to protecting this important transportation asset?

The *Hoboken Green Infrastructure Strategic Plan* was released in October 2013. This plan includes place-based stormwater management. Again, it is not clear how this interfaces with the *Rebuild by Design* Project. There appears to be a great deal of overlap between this *Strategic Plan* and the OMA Team program. Since the $230 million grant is the largest source of funding for major infrastructure projects, will some of these funds be used to implement parts of this *Strategic Plan*? It is not clear if either of these projects or any other entity will address the fundamental issue of the combined sewer system. A plan to separate the lines, however long that might take, needs to be addressed. Large scale, multi-block residential or commercial development projects could be required to do this. Also, the idea of an independent sewer system for certain large development projects should be explored.

There are other programs as well but it is difficult to track them all and it would be helpful if a section of the *Scoping Document* addressed how all the various flood mitigation measures and projects will work together, be funded and coordinated as part of a comprehensive program.

This also raises the question about Phase 2 and what are its potential funding sources. Can the *Scoping Document* address this as well?

Additional Questions

Here are some additional questions concerning the project:

- Do stormwater-sewer outfalls not function at high tide? Don't they include flood-gates that prevent the Hudson River waters from backing up through the North Hudson Sewerage Authority's sewer system during high tide or if a surge occurs?
- According to the *Draft Scoping Document*, the 2011 storm Irene was both a major rain event and a surge. How much of the flooding was due to the rain vs. the surge?
- Why isn't the Shades neighborhood in Weehawken, which experienced some of the deepest flooding during Sandy, identified as a "flooding hotspot"?
- In addition to the new wet weather pump on Observer Highway, which can handle 50 million gallons/day, what is the capacity and function of other pump stations in the target area?

According to the *Draft Scoping Document*, a Stevens Institute of Technology study of superstorm Sandy estimated that 232 million gallons of flood waters breached along the Long Slip Canal south of the NJ Transit railroad tracks and 191 million gallons entered at the Weehawken Cove. A recent news report indicated that the six-acre BASF site that the City of Hoboken is seeking to acquire through eminent domain would create a stormwater storage capacity of one million gallons. What would the total storage capacity be if all of these stormwater facilities were built and what would be the cost?

The resilient building guidelines developed by Princeton Hydro are an excellent component of Hoboken's flood mitigation program. This needs to be built upon by creating an outreach/educational program for property owners, helping them to understand how they can protect their buildings against future storms. A grant and/or low interest loan program should be developed to enable these property owners to implement the recommended measures. This is a program that can be developed in the short-term at a modest cost. In the event of future major storms, these properties would be able to recover quickly with minimal damage. This makes sense for the Hoboken area in that during Sandy, properties that flooded were not along the coastline, but away from the wave action of the surge. Wet and/or dry flood proofing would offer protection against various storm events and could significantly lower what could otherwise be onerous insurance premiums. (In the next month or so, I would like to elaborate on this proposal after becoming more familiar with the various programs that are being developed.)

If you have any questions concerning our comments, do not hesitate to contact me at ron@betterwaterfront.org or 201.217.0500.

Sincerely yours,

Ron Hine
Executive Director

Attachments: OMA Implementation Plan

5. Implementation Plan

The comprehensive strategy addresses two direct flood challenges that need to be directly addressed in the coming years. These include catalytic coastal defense schemes, reducing the risk of storm surge flooding and the already scheduled first steps of Hoboken's green infrastructure plan. For swift implementation the conceptual design needs to be studied in more detail leading to a master plan that builds upon a flood risk analysis and an overarching strategy to address all water related challenges.

This leads to the following projects and actions to be implemented in the next 5 years (Phase 1):

- Master plan that details the components of the strategy
- Studies that provide analysis and expertise on various aspects of the strategy, and pilot-projects that test and develop the proposals
    - Flood Risk Analysis
    - Comprehensive Funding and Implementation Strategy for all aspects of the master plan
    - Marsh introduction study
    - Storm water management guidelines
    - Incentives, mandates, and zoning recommendations related to short-term resilience and green infrastructure
- Catalytic projects
    - Coastal defense at Hoboken Station complex and surroundings
    - Coastal defense at Weehawken Cove
    - Pump station
    - Greenbelt CSO wetland pilot

At 20 years the major pieces of the coastal defense are implemented and the co-benefits on and around these flood defense measures can be realized. Different from the construction of the flood defense structures, the green infrastructure measures can be realized flexible and fitting the phasing. The elements can be phased in over time, first focusing on obtaining sufficient storage capacity in the city.

The following projects are expected to be ready for implementation in 20 years (Phase 2):

- Programs
    - Roll-out of private and civic “delay” and “store” solutions
- Projects
    - Coastal defense – non-priority interventions
    - Realization of the Green Belt/ Blue Corridor/ Green Circuit
- Studies
    - Flood insurance exemption

Over the long term (Phase 3, 50 years), the strategy will contribute towards a continuous, maintained, and defended New Jersey shoreline. It will be a model for adapting urban centers to the complex challenges of climate change. It will define a parallel urban green infrastructure—separating rainwater management from the existing combined sewage system—and put the community on a sustainable path to living with water.

Green infrastructure

Specifically for the green infrastructure measures, the following elements can be considered to be implemented – in line with existing plans – in Phase 1 (0-5 years):

- Hoboken Green Infrastructure – Design Guidelines – Managing Urban Runoff Manual (incl. city wide policy stormwater BMP's).
- More comprehensive design of the Green Belt/ Blue Corridor/ Green Circuit.
- Green infrastructure pilot and demonstration projects.
- A Green infrastructure incentive plan.
- Green Street Steward Program (maintenance of green infrastructure facilities on “small and medium scale”).
- Realization of the twin Wet Weather Pump station (“Discharge”) will help limit flash floods on the short term.

During Phase 2 (5-20 years) of implementing our comprehensive strategy we suggest to consider scaling up green infrastructure measures and storm water BMP's (small and medium scale).

Phase 3 (20-50 years) of implementing our comprehensive strategy we propose:

- Continuing of scaling up green infrastructure measures and storm water BMP's (small and medium scale) as we expect some of today's extreme events have become "the new normal".
- Transitioning towards a blue-green city of Hoboken.

October 7, 2015

Mr. David Rosenblatt, Director
Office of Flood Hazard Risk Reduction Measures
401 East State Street, Mail Code 501-01A,
PO Box 420, Trenton, NJ 08625-0420.

Via email: rbd-hudsonriver@dep.nj.gov

Dear. Mr. Rosenblatt,

On behalf of the Hoboken Community Advisory group for the Rebuild By Design Hudson River Project we submit the following comments on the draft Scope of Work for the EIS.

Presentation of Initial Concepts/ p. 15

We believe that the "Resist" component should not be the exclusive focus of initial concepts, and attention should also be provided to the other components of the RBD plan, which address protecting Hoboken from other flood related threats as well. In taking this position we have consulted with staff at US HUD who have advised us that the funding can be spent for a more comprehensive flood protection solution. We therefore advise the Consultant team, who have tasked us as a CAG, to represent a wide cross section of the community, to instead look at each element of the Resist, Delay, Store and Discharge as viable and acceptable elements of the project.

Purpose and Need/ p.7

The project goal should be to develop a comprehensive flood protection plan designed to address the risks from chronic tidal/high tide flooding, 500-year rainfall events, as well as periodic storm surge events. This analysis should consider the independent as well as interrelated risks of some of these conditions occurring at the same time, and over a period of time.

Purpose(s): Reduce or Eliminate Need for Participation in NFIP Flood Insurance program/ p. 2

We agree a goal of the project should be to improve the Community Rating for these areas in the FEMA framework in order to reduce the burden of costs for paying into the National Flood Insurance Program. The project should further consider the opportunity if not necessity for redirecting some portion of these funds into operations and maintenance of any resultant infrastructure from the various Build scenarios.

Specify what Climate Scenario(s) we are Considering/ p.3

The Scope proposes to "consider impacts from climate change." Toward this end the Scope should acknowledge, identify, and plan for a specific sea level rise forecast such as one in use by the Intergovernmental panel on Climate Change and or the White House Climate Office.

For instance, at a recent Climate Week event hosted by the Bank of America, the Deputy Director of Research on Climate for the White House announced that what we as society have long thought of as a "5-year storm" is now more of a 3- or 4-year storm. Planning for this Hudson River project should incorporate these more conservative projections into the project framework.

Explore Additional Co-Benefits/ p.3

The process should more clearly articulate and quantify what co-benefits a flood control process like this can help achieve such as improved mobility and improved air quality, expansion of non-vehicular transport by creating additional greenways, improved environmental quality through creation of green corridors with swales, engineered tree pits and more robust and thoughtful tree canopy, increased reliability of the electrical grid, improved public facilities such as upgraded water treatment plants, sewer lines, storage or containment tanks, pump stations, or improved public buildings that can serve dual purposes of shelters or others functional in emergency response or recovery.

Goals and Objectives: Plan for a More Regional approach/ pp. 13-14.

One of the goals of the project should be to protect the regional assets including existing and proposed mass transportation facilities (lines, terminal, station, and support facilities), water supply and sewage treatment, communications, and energy distribution in the project area.

Goals and Objectives: Protect Vulnerable People/ pp. 13-14

We believe a more explicit goal should be to protect, secure and potentially improve lower and middle income housing stock, as well as other steps that can potentially reduce the vulnerability of the population that can be deemed "at risk."

Defining and Quantifying our Goals for Water Management/ p. 13-14

The Scope should more clearly define the standards or goals we are trying to reach: xx inches of rain per yy hours sustained over 24 hours? ZZ feet of storm surge or flood tide? Perhaps the April 2007 rainstorm was more typical than the October 2012 storm…

Screening Criteria and Cumulative Impacts: Coordination and, Where Possible, Integration/ p. 17, p. 35

The process, including the Screening Criteria and Evaluation Methodology, needs to be coordinated and considered with other plans such as those being developed by NJ Transit, (particularly the Long Slip Canal project given that this $150M project has the potential to mitigate flooding effects if coordinated as a resiliency strategy as part of this plan.) North Hudson Sewerage Authority (any long range Capital or Control plans), PSE&G (Energy Strong or other plans for the project area, the Port Authority (PATH train, vehicle tunnels, ventilators, command centers or other structures), the City of Hoboken (Green Infrastructure Strategic Plan), as well as plans for Jersey City, Weehawken, Hudson County (Park or Willow Avenue Bridges, Observer Highway, Marin Blvd or Grove Street

underpasses), or other plans of Key Stakeholders.

In addition, specific focus should be given to the interconnections between this project and the North Hudson Sewerage Authority's long term control plan (LTCP). The combinations of water quality and quantity issues are systemic along urban coastal waterfronts, and the scoping document should speak to strategies and implementable goals and objectives that are consistent with the LTCP. The aquatic area of Hoboken Cove and Weehawken Cove is known for poor water quality and little circulation. Therefore this area might be an appropriate place to focus. It will be useful for the project team to review the Water Quality Data at this location and three other locations in Hoboken at the NYC Water Trail site. There are results of tests from 20 weeks of sampling in 2015, and we also have the ability to access data here going 2-3 years back.
http://www.nycwatertrail.org/water_quality.html

Urban Design and Community co-Benefits: Consider the Widest Range of Publicly Owned or Controlled Land for Potential Implementation/ p. 17

The Scope should consider proposed flood defenses and water management interventions across the range of public funded, owned or controlled land and rights of way in the project area including Hoboken Housing Authority, NJT Light Rail right of way, Hoboken Terminal and Yards, Hudson County Roads, Hoboken City Parks, Hudson County Parks, Hoboken Board of Education land and buildings (such as the playground at 11th and Willow), as well as any area that has been a recipient of capital funding from local, state, and federal sources.

Screening Criteria/ Identify Near-Term and Scalable Opportunities/ p. 17

The project scope should consider possibilities for allocating a portion of funds for near-term pilot projects at a variety of scales that, over the next decade or more, have the potential to be scaled up or applied across a broader area as new opportunities emerge.

Alternatives Analysis: Policy, Financial, Legal, Organizational and Operational Mechanisms that can Facilitate Implementation/ p. 19

As part of the Scope of Work the project should identify needed mechanisms for implementation, operations, and maintenance so as to most realistically ensure an ongoing "state of good repair" for any resultant infrastructure. This is especially important for those areas where the desired level of flood defense or water management cannot be adequately achieved in the public right of way alone. These mechanisms could include easements, restrictive covenants, or mechanisms such as PPPs, Associations, or "Improvement" "Resilience" or other "Water Management" districts. This could also include consideration of potential credits for property owners who undertake green infrastructure, water capture/ detention projects on their site.

For the overall plan to succeed there must be clear steps and alternatives to help bridge the gaps where public and private lands intersect.

Hazardous Waste/ p. 23

As part of the scope of work the project team should conduct a reasonable number of soil samples and tests in order to assess and verify potential levels of contamination. These should be focused particularly in areas that might be impacted as part of any build scenario.

Data, Infrastructure and Utilities: Develop a Strong and Thorough Baseline Data Set/ p. 25, p. 32, p.33

The Draft Scope is flawed by failing to identify the available information on the current sewage and storm water management system in the area. For a project involving this large amount of money, focused on such a small geographic area, where the urban fabric is both dense and relatively old, any resultant Alternative must be based on a strong understanding of the existing system. Given the lack of understanding of many people, including residents and ratepayers, as to the myriad causes of the Sandy storm surge flood, it should be a clearly stated priority for Data Collection in any EIS for the project. People know the surge brought a huge volume of water, but many people also saw the water coming up through drains both inside and outside homes, not simply water coming down the street.

In addition, verifying, and refining this baseline data is fundamental for the due diligence that is needed for any Build alternative to be potentially moved forward towards inclusion in a Record of Decision. This data should include:

- the capacity of the present storm water and combined sewer system, from the connections emanating from our businesses and households, corner drains, sewer pipes, all the way to the pump stations, treatment plant, and outfalls.
- a reasonable and responsible level of consideration must be given to the i. design capacity, ii. the age and physical integrity iii. and the actual operating capacity of the elements of the system. There is widespread anecdotal belief that many sewer lines are clogged or have other issues that limits their actual capacity to accomplish their task.

This data must be made available to the public and interested stakeholders within a reasonable amount of time so that the evaluation of alternatives becomes a more transparent and comprehensible process.

Data Collection/ Data Gathering Requires "Ground Truthing"/ p. 25

The actual causes of the Sandy flood are not widely understood within the population of the project area. Did the flood waters come purely from overland flow across the surface topography? Were flood waters facilitated or propagated through the sewer system? Was there any role played by basement drains or other old pipes under the streets that may not recognized and accepted on any current basemap?

As part of the due diligence, the planning team should conduct surveys in a reasonable number of blocks across the study area. As part of this survey the design team should seek to identify and verify:

- known connections into the sewer system
- any un-mapped or presently unknown connections
- percent of the customer's land or surface area that is impervious, is designed to allow

or has the potential to allow for water infiltration

In addition, the due diligence for this project should include a reasonable number of subsurface sonar investigations (perhaps focused in flood prone areas) to help identify underground voids, collapsed pipes or potentially historic/old pipes that are not on any of the maps currently in use or available to the public.

Infrastructure/ Need to Consider Public Buildings and Public Spaces/ p.32

In the consideration of items under "infrastructure," the EIS process should consider the potential impacts as well as potential benefits from the use, improvement, adaptation or other physical modification to public buildings and to public spaces such as parks, parking garages or lots, or community facilities or sites identified in the City's various plans or by Municipal Resolution for development for these purposes. The fact these areas may provide important benefits, co-benefits, and be in the public domain suggest they may potentially help advance the project goals than simply walls at the waterfront.

Indirect and Cumulative Impacts/ p. 35

As part of the analysis of potential alternatives the Financial and Cost models should include a higher escalation cost for the waterfront and in-water work than for the land-based work. In addition, if there are seasonal restrictions on when this work can be done, such as due to nesting, breeding, or migration of aquatic life, then this should be factored into the Cost Estimations as well.

Thank you for the opportunity to provide this input into this very important project. We hope you and your team will make every effort to incorporate these perspectives. With such an ambitious schedule for this planning and evaluation we hope you will continue to provide additional opportunities for public input beyond the limited number of CAG meetings we have remaining.

With best regards,

Ravi Bhalla Carter Craft LaTrenda Ross
CAG Co-Chairs

Hoboken Wetland Project

Canals and Wetlands

Joan Abel

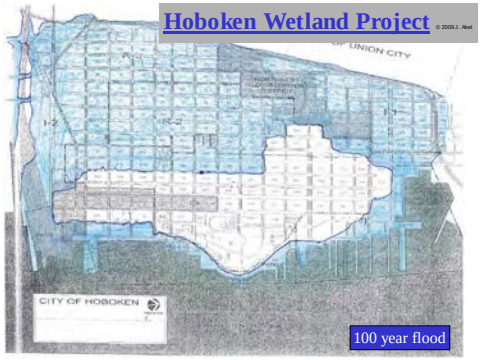
Joan Abel, MES, B.Arch.
107 Monroe St.
Hoboken, NJ 07030
201-610-0143
Abeldesign2000@yahoo.com

Have you forgotten that this place you live in is an estuarial marsh? These lands acted as sponges by soaking up rainwater and filtering pollutants before the water entered the Hudson River estuary. Large areas of Hoboken were originally tidal wetlands, rich spawning ground for all types of aquatic life. This proposal for environmentally sensitive solutions to flooding will present an overview the natural functioning of Hoboken's ecosystem, the history of human impact on the land and waterways, and will suggest ideas for alleviating flooding by restoring some integrity to our land.

Wetland restoration involves changing the hydrology, elevation, soils, and/or plant community of a currently degraded wetland or a former wetland. And by restoring these areas Hoboken natives will enjoy an enhanced daily urban quality of life with recreation, beauty of landscape, historic and ecological memory, and educational opportunities right here at our front doors.

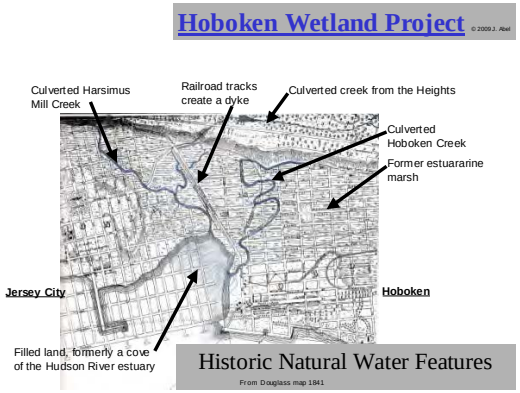
Waterfront and Marshland c.1879

Hoboken was once an island at high tide. Imagining an ecosystem restoration to alleviate flooding requires not only defining the problem, but also understanding the underlying natural history. Techniques of historical ecology and examination of old maps, surveys and other documents reveals some sense of the past natural waterways of the city.



This is the current configuration of high ground in Hoboken. A major storm event—such as the mega-hurricane that's predicted regularly—that arrived with Sandy in October 2012—and the city that we know and love will once again become an actual island. The sewers in Hoboken have to be big enough to cope with the amount of water that falls during extreme storm events. As more and more surfaces in the built-up areas are made impermeable, less and less water can percolate naturally into the soil. This means that the sewers get higher and higher loads. In Hoboken, we struggle with a combined sewer system. Wastewater from the household—sinks, toilets, washing machines, etc.—empties directly into the main sewer lines that also collect rainwater from the streets and rooftops. Each time we suffer from failure of the sewers to carry off rainwater we debate about the causes. Obviously, a number of conditions are allowing the streets to become lakes and rivers of human waste and toxic chemicals.

Imagining an ecosystem restoration to alleviate flooding requires not only defining the problem, but also understanding the underlying natural history. The former natural features that are now considered environmentally critical areas include a former stream from the Heights now culverted below the streets, and all of the western portions of town that were formerly salt marsh wetlands.

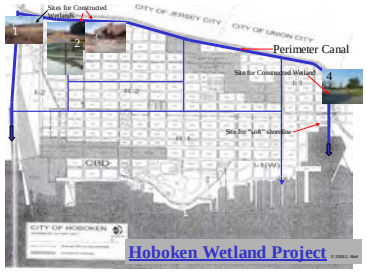


Our city struggles with the effects of ever-increasing impervious areas. Here's an 1841 image of the earlier city with planned streets overlaid on the south cove. Note that the railroad trestle has created high ground at the south end of town, effectively creating a dyke that prevents water from seeking its natural outlet

The city can install retrofits to improve existing stormwater infrastructure. The North Hudson Sewerage Authority has installed a wet weather pump station in the southeastern section of the city on Observer Highway. They are claiming an alleviation of the flooding problem in this section of Hoboken. The real goal should be not just to get approval for a development project or secure a stormwater permit, but rather to create a solution that will look good, perform well for many decades, and have a reasonable maintenance burden.

Much of Hoboken started as a tidal wetland with a creek meandering through the southwest part of town. Once generally viewed as land of little value and less use, wetlands were considered marginal and expendable. As a result, none of Hoboken's original wetlands remain intact. Surface streams also have been obliterated—diverted into underground pipes—and incorporated into the City's combined sewer system (CSS).

Here's an outline of a few blocks at the north of town. The City of Hoboken is considering redevelopment plans for this once low-lying, tidal marsh. I propose to link this site with the rest of the town and create a network of waterways, canals, and ponds that will start to identify our city as the one of the best places to call home for all creatures, great and small.



If Hoboken bites the bullet and decides to really solve the flooding problems a lot of thinking outside the box is going to be required. A series of canals can have a measurable positive impact by helping to capture rainwater and channeling it into ponds and into the Hudson River. Creating constructed wetlands will begin to return our wetlands to their original function: holding and cleaning stormwater runoff before it enters the ground and/or the river.

SOME LOCATIONS FOR WETLANDS

Site west of the Hoboken business center between Harrison and Marshall Streets.

Site south of Second Street and east of the lite rail on Marshall Street.

This site, adjacent to Second Street at Marshall Street, is slated for another 5-story residential building.

Site north of Second Street and east of the lite rail.

Site at the north of Hoboken and south of “the shades”. Note the lite rail in the background.

Infiltration basins or constructed wetlands can be used to reduce the impacts of increased runoff rates and remove pollutants contained in stormwater runoff. An infiltration basin is a shallow depression created by excavation or berming that captures stormwater and stores it until it can infiltrate into the soil. The principal advantages of infiltration basins are that they help restore the natural water balance of a site and they can be integrated into a site’s landscaping or open space. Infiltration basins also provide for some groundwater recharge if the soil conditions permit. Constructed wetlands carry stormwater runoff from paved surfaces and allow the water to percolate through the soil while providing habitat for wildlife such as birds and fish.

This image developed by the Nature Conservancy is a clear picture of the west shoreline of the Hudson River as it had been in 1609.

Amsterdam in the Netherlands . . .

South walk at Liberty State Park . . .

Like Hoboken, these areas have been built on marshes. Can our town look like this? I say YES.

Sliker, Laura

From:	DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent:	Tuesday, October 13, 2015 9:25 AM
To:	Smith, Lawrence
Cc:	Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject:	FW: Rebuild by Design Hudson River Project Scoping Document Comment
Attachments:	brochure wetlands project.pdf

Larry,

This is 1 of 10 additional public comments that the Department received by the close of the Scoping comment period.

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: James Vance [mailto:sweetstreets1@gmail.com]
Sent: Tuesday, October 06, 2015 8:36 PM
To: DEP rbd-hudsonriver
Cc: Steve Fahmie; Denise Fahmie; Ron Hine
Subject: Attn: David Rosenblatt

David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
Department of Environmental Protection
State of New Jersey

Dear Mr. Rosenblatt:

It is much appreciate that your offices are managing the Hudson River portion of Rebuild By Design. The public meeting at Hoboken's Multi-Service Center conducted by Dewberry Engineering last month speaks well of the entire team.

Joan Abel, my wife, would have been a great asset in helping develop the environmental impact statement and in other matters related to this important work. Having a degree in

architecture from Pratt and a masters in environmental studies from UPenn, Rebuild By Design was right up her alley.

Sadly, she is no longer here to participate. Joan died last May, but in 2009 she published a brochure related to flooding in Hoboken and put forward bold ideas as to how it might be mitigated. You will find it attached. It is my hope that this provides information and insights valuable to the study. In this way, she is continuing her participation. Joan would be pleased.

Sincerely, Jim Vance

Note: as the executor of Ms. Abel's estate I wave any and all copyrights pertaining to this document. Please use it as you see fit.

James Vance
443-994-0145
Hoboken Sweet Streets
Making Streets Safe for Bicyclist & Pedestrians

Sliker, Laura

From: DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent: Tuesday, October 13, 2015 9:33 AM
To: Smith, Lawrence
Cc: Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

7 of 10

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Gregg Lanez [mailto:greggielanez@gmail.com]
Sent: Thursday, October 08, 2015 3:40 PM
To: DEP rbd-hudsonriver
Subject: Scoping Document Comment

Hello,
My comment to be included to the Scoping document can be found below.

In the interest of the public, a budget outline should be provided for the administrative, material, and construction cost of the project. An itemized list be displayed on the Rebuild by Design website and emailed to the Citizen Advisory Group for public access, providing the overall and estimated cost of the project.

Thank you for your time.

Best regards,
Gregg Lanez
Jersey City Environmental Commission

1.0 EXECUTIVE SUMMARY

The municipalities of Hoboken, Weehawken, and Jersey City were inundated by Superstorm Sandy coastal flood waters in October 2012. With half of Hoboken underwater for several days, emergency services were unavailable, residents were evacuated, and the National Guard was deployed to rescue those who could not evacuate. The magnitude of Sandy's devastation, primarily attributed to a record-breaking storm surge during high tide, has somewhat dimmed the fact that little precipitation fell during that storm. Had matters been different, the Study Area's past history of flooding during heavy rainfall events suggests that flooding levels and property damages could have been even higher.

The Study Area (defined as the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue [in Weehawken] to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street [in Jersey City] to the south), is vulnerable to two interconnected types of flooding: coastal storm flooding (surge) and systemic inland flooding (rainfall) from medium (generally less than 5-year, 24-hour) to high (generally ~~over~~ 50-year, 24 hour) rainfall events that occur during periods of high tide. The flooding problems are attributed to several factors, including low topography and proximity to waterways; impervious coverage and surface runoff; existing relatively old sewer infrastructure, sewershed interconnections and insufficient discharge capability particularly during high tide.

As seen with Sandy, coastal storm flooding can devastate widespread areas of the Study Area and cause significant economic damage and safety concerns. In addition, systemic inland flooding associated with rainfall tends to be more localized to inland areas of lower elevation, but happens with much greater frequency than coastal surges. The systemic inland flooding typically occurs when high volumes of water are brought into the storm-sewer system from medium to high rainfall events which coincide with an approaching high tide and/or storm surge. During a high tide or storm surge, the water level of the Hudson River can rise above the level of the storm-sewer outflows; as a result, the river traps the water inside the storm-sewer system. Water then backs up within the system, flooding low-lying inland areas with storm and at times sanitary sewage.

To address the region's flood and resiliency vulnerabilities, the United States Department of Housing and Urban Development (HUD) launched a build by Design (RBD) competition inviting communities and designers to craft pioneering resiliency and flood damage prevention solutions. HUD awarded $230 million to the State of New Jersey for Phase 1 of the "Hudson River Project: Resist, Delay, Store, Discharge" ~~project~~ (the Project) which seeks to reduce flooding and enhance resiliency in the municipality of Hoboken, and parts of Weehawken and Jersey City. The Project is a comprehensive urban water strategy to reduce flood hazard and flood-related public health risks, which seeks to leverage resiliency investment to enhance the urban condition. As stated in HUD's Federal Register (FR) notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11], the award is to assist in the funding of Phase 1 of the Project. Phase 1 includes the feasibility, design and environmental analysis of the entire comprehensive project, as well as funding for the implementation of the *Resist* component, to avert a repeat of the widespread storm surge flooding that occurred during Sandy. The Project implementation strategy will recognize the need for a phased approach that will ultimately lead to a comprehensive flood damage prevention plan for the Study Area.

The Project's award comes in the form of Community Development Block Grant-Disaster Recovery (CDBG-DR) funding, which requires compliance with the National Environmental Policy Act (NEPA). Because of the Project's possible environmental impacts, NEPA requires the preparation of an Environmental Impact Statement (EIS). The Draft EIS will represent the culmination of the research and

Summary of Comments*

Submitted by J. Gonzalez, Resident of 1300 Clinton Street, Apt. 413, Hoboken, NJ 07030
*Only pages with comments are shown

Page: 6

Number: 1 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 11:17:09 PM
Universal comment on executive summary and introduction - why isn't it called the "proposed project" ?

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 6:27:15 PM
moderate to

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/7/2015 6:30:58 PM
would suggest either leaving this vague as "damages" (which could include damages of all kinds) or more specific "property damages, impacts to quality of life, public and environmental health" -- either way, it wasn't just property damage.

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/7/2015 6:33:25 PM
at some point we need to clearly differentiate the difference between high tide flooding and storm surge (Hoboken floods during high tides and precipitation events) - would be safer to say "tidal flooding" than coastal storm flooding.

Maybe a glossary?

Number: 5 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 6:33:03 PM
greater than

Number: 6 Author: jgonzalez Subject: Highlight Date: 9/7/2015 6:34:30 PM
relative to what? would recommend replacing "relatively old" with "aging"

Number: 7 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 6:36:55 PM
There is a big point missing here about unknowns - we don't know exactly what the system capacity issues are and where; where the specific choke points are (I am personally hoping that H&H modeling done through this study will clearly identify the capacity and I&I issues) - this may be too much detail for this section, but needs to be addressed in the scoping document.

Number: 8 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 6:37:54 PM

Number: 9 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 6:38:04 PM
, public health,

Number: 10 Author: jgonzalez Subject: Highlight Date: 9/7/2015 6:40:02 PM
combined stormwater - sewer system

the CS issue hasn't been brought up clearly yet - needs to be discussed

Number: 11 Author: jgonzalez Subject: Highlight Date: 9/7/2015 6:39:42 PM
glad that this acknowledges they are different - but should be clearly discussed earlier

Number: 12 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 9:59:05 PM
the

Number: 13 Author: jgonzalez Subject: Cross-Out Date: 9/7/2015 9:58:52 PM

Number: 14 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:23:52 PM
I know this was an RBD phrase - but "urban water strategy" doesn't convey the fact that the goal is urban water management - seems like it's missing a key word

Number: 15 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:00:18 PM
Need to define this earlier - or explain it here. Can this be replaced with the "urban quality of life"?

Number: 16 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:07:17 PM
the way this is phrased sounds as though the goal is to prevent another Sandy - while that is the best case scenario, we don't know if it's possible until the feasibility study is complete - the document has not at this point stated that the design level is a Sandy event - is it 100 year, 500 year, or another design elevation?

Number: 17 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:07:45 PM
HUD

J. Gonzalez, 10/8

analysis conducted for this project and will clearly identify the impacts of each project alternative on the environment.

Public scoping is a necessary component of NEPA. As part of the public scoping process, this Draft Scoping Document has been prepared and submitted for public comment. This Draft Scoping Document outlines the Project's purpose and need, the proposed project actions, as well as a description of areas of impact to be studied in the EIS. Once comments and input are received on the Draft Scoping Document from the public, the Final Scoping Document will be compiled. This will mark the beginning of the concept development and screening phase, which will invite input from the community and public stakeholders. The concept screening will lead to the selection of three Build Alternatives, which will then undergo further analysis and screening with additional community input. This screening process will then lead to the selection of the Preferred Alternative. The Draft EIS will be the culmination of this process. The Draft EIS will describe the alternatives analysis process, the public participation process, the affected natural as well as built environment, an evaluation of impacts and finally the selection of the Preferred Alternative.

The Draft EIS will be made available to the general public for comment, as well as circulated to stakeholders, groups and government agencies that have been identified as having particular interest in the Project. A Notice of Availability will be published in the Federal Register and local media outlets at that time in accordance with HUD and Council on Environmental Quality (CEQ) regulations. After the required comment period has elapsed (a minimum of 45 days), we will incorporate pertinent comments into the draft and compile the Final EIS. The Final EIS will be circulated in the same manner as the Draft EIS (including the publication of a Notice of Availability) and will have a comment period of 30 days. If, after the completion of the Final EIS comment period, no additional significant comments are received, the NJDEP will submit a Record of Decision (ROD) and Statement of Findings. The ROD designates the Preferred Alternative and identifies its environmental impacts and required mitigation measures.

The Project is a comprehensive urban water strategy whose overall purpose is to reduce flood hazard risks, flood-related public health risks, and which seeks to leverage resiliency investment to enhance the urban condition. The ability to meet this purpose will be measured in terms of:

- *Contribute to Community Resiliency:* The Project will seek to integrate flood hazard risk reduction strategy with emergency, civic, and cultural assets (Hoboken's fire stations, hospitals, community centers, and transit centers). The Project will reduce flood risks within the Study Area, leading to improved resiliency and the protection of accessibility and on-going operations of services (including protecting physical infrastructure such as hospitals, fire stations and police department buildings; and roadways and transit resources). This will allow these key assets to support emergency preparedness and community resiliency during and after flood events.

- *Reduce Risks to Public Health:* In addition to providing protection to critical healthcare infrastructure (such as local hospitals and emergency preparedness services), the flood risk reduction strategy will aim to reduce the adverse health impacts that result from combined sewage backups onto streets, and within businesses and residences, through a reduction in these types of flood events.

- *Contributing On-going Community Efforts to Reduce FEMA Flood Insurance Rates:* The City of Hoboken's exposure to flood risks has resulted in some of the highest insurance premiums in the state. The City has long had a goal of reducing those rates through a number of comprehensive flood risk reduction programs, such as those identified in the City's Green Infrastructure Plan. The NFIP's Community Rating System (CRS) allows municipalities to reduce their flood insurance

October 9, 2015

Mr. David Rosenblatt, Director
Office of Flood Hazard Risk Reduction Measures
401 East State Street, Mail Code 501-01A,
PO Box 420, Trenton, NJ 08625-0420.

Via email: rbd-hudsonriver@dep.nj.gov

re: Comments on Draft Scope of Work for Hudson River Rebuild By Design Project

- The project Scope should discourage in-water intervention and construction that might lead to increased siltation or reduced navigability in the Weehawken Cove area.

- The project Scope should consider re-use of land-based soil and sediment as well as dredge material from the Cove and area marinas such as Lincoln Harbor and the Shipyard and marine facilities. This material could be used for berms or other project elements where elevation changes to the landscape might be considered. Incorporating some land-based sediment in berms could enable for the development of additional and larger scale green infrastructure on land.

- The project Scope should evaluate potential air and other environmental impacts from creating a local sediment washing/ screening facility to enable this local reuse/ beneficial reuse. This facility could be based on land such as in the NJT Railroad yards or in water.

- Due to the fact that the Hudson River is a shared regional resource, the project Scope should recognize and consider the State of NY regulations as they seek to protect marine habitat and aquatic species.

- The resultant evaluation of alternatives should consider the fact that Washington Street is a large berm and focus the protective measures north of 14th Street and south of Newark Street. Any protective measures / interventions recommended should be focused on low- and middle income housing, not market rate or luxury office buildings, apartments and hotels.

- The project Scope should consider the potential of creating green corridors linking existing open spaces such as:
    - Stevens Park to Church Square Park to Mama Johnson Field to the Palisades (along 4th and 5th Streets east-west) and
    - Elysian Park to Columbus Park to the Palisades (along 10th Street) as well as
    - wide streets such as Grand Street (from Columbus Park to Observer

rates through implementation of comprehensive floodplain management. The Project will propose concepts and alternatives that are consistent with Hoboken's overall effort of reducing FEMA Flood Insurance Rates.

- *Delivery of Co-Benefits:* Where possible, the project will seek to integrate the flood hazard risk reduction strategy with civic, cultural and recreational values. The Project will look to incorporate active and passive recreational uses, multi-use facilities, and other design elements that integrate the Project into the fabric of the community. In this way, the Project will implement local strategies for future growth.

- *Connectivity to the Waterfront:* The Study Area's waterfront is currently the location of a vast length of interconnected parks and public walkways which contribute to the vibrancy of the community. The Project will aim to incorporate features that do not restrict access to the waterfront. Where feasible, the Project will build upon and enhance existing waterfront access points while still providing flood risk reduction.

- *Activation of Public Space:* The project will develop concepts that reduce risks to private and public property from flood impacts while also incorporating design elements that activate public and recreational spaces, thereby enhancing quality of life for the community.

- *Consider Impacts from Climate Change:* The project will take into account the projected impacts from climate change, particularly as it relates to sea level rise and its impacts on the frequency and degree of flooding.

2.0 INTRODUCTION

2.0 Background

The municipalities of Hoboken, Weehawken, and Jersey City were inundated by flood waters during Superstorm Sandy in October 2012. With half of Hoboken flooded for several days, emergency services were unavailable, residents were evacuated, and the National Guard was deployed to rescue those who could not evacuate. The magnitude of Sandy's devastation, primarily attributed to a record-breaking storm surge during high tide, has somewhat dimmed the fact that little precipitation fell during that storm. Had matters been different, the Study Area's past history of flooding during heavy rainfall suggests that flooding levels and property damages could have been even higher.

The Study Area (defined as the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue [in Weehawken] to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street [in Jersey City] to the south), is vulnerable to two interconnected types of flooding: coastal storm flooding (surge) and systemic inland flooding (rainfall) from medium (generally less than 5-year, 24-hour) to high (generally over 10-year, 24 hour) rainfall events that occur during periods of high tide. The flooding problems are attributed to several factors, including low topography and proximity to waterways; impervious coverage and surface runoff; existing relatively old sewer infrastructure, sewershed interconnections and insufficient discharge capability particularly during high tide.

To address the region's flood and resiliency vulnerabilities, HUD launched the RBD competition inviting communities to craft pioneering resiliency solutions. A comprehensive urban water strategy was developed that included hard infrastructure and soft landscape for coastal defense (Resist), policy recommendations, guidelines and urban infrastructure to slow stormwater runoff (Delay), green and grey

October 9, 2015

Mr. David Rosenblatt, Director
Office of Flood Hazard Risk Reduction Measures
401 East State Street, Mail Code 501-01A,
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2.0 Background

The municipalities of Hoboken, Weehawken, and Jersey City were inundated by flood waters during Superstorm Sandy in October 2012. With half of Hoboken flooded for several days, emergency services were unavailable, residents were evacuated, and the National Guard was deployed to rescue those who could not evacuate. The magnitude of Sandy's devastation, primarily attributed to a record-breaking storm surge during high tide, has somewhat dimmed the fact that little precipitation fell during that storm. Had matters been different, the Study Area's past history of flooding during heavy rainfall suggests that flooding levels and property damages could have been even higher.

The Study Area (defined as the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue [in Weehawken] to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street [in Jersey City] to the south), is vulnerable to two interconnected types of flooding: coastal storm flooding (surge) and systemic inland flooding (rainfall) from medium (generally less than 5-year, 24-hour) to high (generally over 10-year, 24 hour) rainfall events that occur during periods of high tide. The flooding problems are attributed to several factors, including low topography and proximity to waterways; impervious coverage and surface runoff; existing relatively old sewer infrastructure, sewershed interconnections and insufficient discharge capability particularly during high tide.

To address the region's flood and resiliency vulnerabilities, HUD launched the RBD competition inviting communities to craft pioneering resiliency solutions. A comprehensive urban water strategy was developed that included hard infrastructure and soft landscape for coastal defense (Resist), policy recommendations, guidelines and urban infrastructure to slow stormwater runoff (Delay), green and grey

Page: 8

Number: 1 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:42:10 PM
Quality of life is a key co-benefit not mentioned here

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:43:18 PM
seeks to

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 10:43:59 PM
Insert reference to Hudson Waterfront Greenway?

Number: 4 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:44:15 PM
seeks to

Number: 5 Author: jgonzalez Subject: Cross-Out Date: 9/7/2015 10:44:24 PM

Number: 6 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:46:25 PM
should be referenced above?

Number: 7 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:47:07 PM
consider impacts from is different than mitigating risk from, protecting against potential impacts from...

Number: 8 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:50:47 PM
same comments as above

Number: 9 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:55:57 PM

J. Gonzalez, 10/8

infrastructure improvements to allow for greater storage of excess rainwater (Store), and water pumps and alternative routes to support drainage (Discharge). The proposal was selected in the first round of RBD grants and HUD has awarded $230 million to the State of New Jersey for the "Hudson River Project: Resist, Delay, Store, Discharge" (the Project). As stated in HUD's Federal Register (FR) notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11], the award is to assist in the funding of Phase 1 of the Project. Phase 1 includes the feasibility, design and environmental analysis of the entire comprehensive project, as well as funding for the implementation of the Resist component.

The RBD Competition delivered conceptual strategies. Those concepts must be further developed and evaluated for feasibility. Each of the concepts will be reviewed against on-the-ground, real world conditions to verify that the strategies can be built and that they will be effective. Because the need for solutions is urgent, the feasibility analysis for the Project will occur simultaneously with an environmental review. This will make the process more efficient and offer a faster route to implementation.

2.1 Regulatory Framework

HUD's award comes in the form of CDBG-DR funds which require compliance with NEPA and its associated regulations as outlined in 24 CFR 58. When not otherwise accounted for by HUD's regulations, the Project is also subject to the CEQ NEPA regulations at 40 CFR ~~parts~~ 1500-1508. HUD has further outlined the Project's environmental review compliance requirements in FR notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11]. The Project's compliance with the environmental laws and authorities as stated in HUD regulations (24 CFR 58.5 and 58.6), including compliance with the National Historic Preservation Act (NHPA) of 1966, Floodplain Management and Wetland Protection Executive Orders (EOs) 11988 and 11990, Environmental Justice EO 12898, the Coastal Zone Management Act of 1972, and the Endangered Species Act of 1973 will also be demonstrated.

The State of New Jersey, acting through the New Jersey Department of Community Affairs, is the responsible entity that has assumed environmental responsibilities for the Sandy CDBG-DR programs in accordance with 24 CFR 58.1(b)(1). The ~~New Jersey Department of Community Affairs~~ has designated NJDEP to assist with the environmental review. NJDEP will prepare the EIS in accordance with HUD's procedures for NEPA found at 24 CFR Part 58, et al. A Notice of Intent to prepare an EIS (as defined at 40 CFR 1508.22) was prepared in accordance with CEQ regulations, and represented the beginning of the public scoping process as outlined in 40 CFR 1501.07. The NOI was published on September 8, 2015. As part of the public scoping process, this Draft Scoping Document has been prepared and submitted for public comment. The Draft Scoping Document outlines in detail the proposed Project actions as well as a description of areas of impact to be studied in the Draft EIS.

Once comments on the Draft Scoping Document have been compiled from the public, the Final Scoping Document will be developed. This will mark the beginning of the concept development and screening phase, which will invite input from the community and public stakeholders. The concept screening will lead to the selection of three Build Alternatives, which will then undergo further analysis and screening with additional community input. This screening process will then lead to the selection of the Preferred Alternative. The Draft EIS will be the culmination of this process. The Draft EIS will be the culmination of this process. The Draft EIS will describe the alternatives analysis process, the public participation process, the affected natural as well as built environment, an evaluation of impacts and finally the selection of the Preferred Alternative.

Upon completion, the Draft EIS will be and made available to the general public for comment, as well as circulated to stakeholders, groups and government agencies that have been identified as having particular interest in the Proposed Project. A Notice of Availability will be published in the Federal Register and local

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Number: 1 Author: jgonzalez Subject: Cross-Out Date: 9/7/2015 11:07:24 PM
remove (unless referring to "part" for all other regulations - e.g., 24 CFR part 58 - consistency)

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:59:27 PM
but not limited to,

(unless all laws, regulations and authorities in 58.5 and 58.6 are referenced in the following sections)

Number: 3 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:57:44 PM
, as amended

Number: 4 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:03:27 PM
(NJDCA)

Number: 5 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:03:22 PM

Number: 6 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:03:33 PM
NJDCA

Number: 7 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 11:10:06 PM
same comments as above

J. Gonzalez, 10/8

media outlets at that time in accordance with HUD and Council on Environmental Quality (CEQ) regulations. After the required comment period has elapsed (a minimum of 45 days), Dewberry will incorporate pertinent comments into the draft and compile the Final EIS. The Final EIS will be circulated in the same manner as the Draft EIS (including the publication of a Notice of Availability) and will have a comment period of 30 days. If, after the completion of the Final EIS comment period, no additional significant comments are received, the NJDEP will submit a Record of Decision (ROD) and Statement of Findings. The ROD designates the Preferred Alternative and identifies its environmental impacts and required mitigation measures.

Figure 1

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Number: 1 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 11:15:31 PM
Comment on all maps - no sources?

J. Gonzalez, 10/8

2.2 Proposed Project

The Proposed Project takes a multi-faceted approach intended to address flooding from both major storm surge and high tide as well as from heavy rainfall events. The Proposed Project will benefit flooding areas inside the Study Area, which encompasses the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south (see **Figure 1**).

The project's comprehensive approach to flood reduction and resiliency consists of four integrated components:

1. **Resist:** a combination of hard infrastructure (such as bulkheads, floodwalls and seawalls) and soft landscaping features (such as berms and/or levees which could be used as parks) that act as barriers along the coast during exceptionally high tide and/or storm surge events;
2. **Delay**: policy recommendations, guidelines and urban green infrastructure to slow stormwater runoff;
3. **Store**: green and grey infrastructure improvements, such as bioretention basins, swales, and green roofs, that slow down and capture stormwater, and which will complement the efforts of the City of Hoboken's existing Green Infrastructure Strategic Plan; and
4. **Discharge**: enhancements to Hoboken's existing stormwater management system, including the identification and upgrading of existing stormwater/sewer lines, outfalls and pumping stations.

While the funding allocation awarded in the CDBG-DR grant provides for the implementation of Phase 1 of the project, which includes the *Resist* component, the EIS and feasibility analysis will examine three Build Alternatives, as well as a No Action Alternative, for the entire comprehensive approach. Each of the three Build Alternatives will include elements of all four strategic project components: *Resist, Delay, Store* and *Discharge*. The three Build Alternatives will vary primarily by the *Resist* infrastructure's alignment and termination points. The possible *Resist* alignments will include: along the waterfront, in the water (in the Hudson River), and upland. The waterfront is defined as along the existing walkway/esplanade that runs along the eastern edge of the City of Hoboken and Township of Weehawken. The upland portion represents areas landward of the walkway/esplanade. The *Resist* structures will consist of a combination of multi-purpose levees, floodwalls and other features that will reduce the flood risk within the Project Area from future coastal storm surge events. In all three Build Alternatives, the *Delay, Store*, and *Discharge*, components will be located on the landward side of the *Resist* infrastructure and may consist of a combination of green infrastructure (bioswales, storage basins and others) and grey infrastructure (pumps, pipes and others).

Below is an example of three possible Build Alternatives, as well as the No Action Alternative:

- Alternative 1 may analyze a Resist alignment that is constructed along a combination of in-water, waterfront, and upland locations and terminates at appropriate locations upland or on the waterfront.
- Alternative 2 may analyze a Resist alignment constructed primarily along the waterfront with termination points at appropriate upland or waterfront locations.
- Alternative 3 may analyze a Resist alignment primarily constructed upland with termination points located upland.
- The No Action Alternative, which represents no improvements, will also be evaluated as part of the EIS.

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:23:49 PM
Good! Clarify that they can occur at the same time and exacerbate potential impacts?

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:24:21 PM
seeks to

Number: 3 Author: jgonzalez Subject: Cross-Out Date: 9/7/2015 11:24:32 PM

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:38:18 PM
May? Isn't the purpose of the feasibility study to determine the preferred alternative that will compose the project?

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:38:56 PM
seek to

Number: 6 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:42:08 PM
coastal storm surge or "tidal flooding" (to encompass high tide and storm surge flooding)

Number: 7 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:39:52 PM
such as

Number: 8 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:39:47 PM
such as

J. Gonzalez, 10/8

The alternatives analysis within the EIS will consist of a comparison of the four alternatives' impacts on the environment pursuant to 24 CFR Part 58, et al, as well as how well each alternative meets the Project's Purpose and Need. This process, which will be described in detail in the EIS, will lead to the recommendation of a Preferred Alternative.

The Project will integrate with the goals and recommendations of existing municipal planning efforts, such as the City of Hoboken Green Infrastructure Strategic Plan (October 2013). This plan outlines Hoboken's approach to potential green infrastructure improvements throughout the City. The Project will build upon the findings of this strategic plan and incorporate its recommendations wherever practical.

The Project will look at other nearby independent projects that may benefit the Project's goals and objectives. The impacts of these projects, in conjunction with the impacts from this project, will be considered during the cumulative impacts analysis, and will be accounted for wherever practical during the concept and alternatives development phase.

3.0 PURPOSE AND NEED

3.0 Purpose

The Study Area, comprising the entire City of Hoboken, and adjacent areas of Weehawken and Jersey City (see **Figure 1**), is vulnerable to flooding from both coastal storm surge and inland rainfall events. The purpose of the project is to reduce the flood risk to flooding areas within the Study Area. The Project intends to minimize the impacts from ~~surge~~ and rainfall flood events on the community, including adverse impacts to public health, while providing benefits that will enhance ~~the urban condition~~, recognizing the unique challenges that exist within a highly developed urban area.

3.1 Need

The Study Area is a very dense urban area of Hudson County that is situated along the Hudson River directly west of Manhattan, New York. The Study Area is vulnerable to two interconnected types of flooding: coastal (surge) flooding from storm surge and high tide, as well as systemic inland (rainfall) flooding from medium (generally a 5-year, 24-hour) to high (generally ~~over~~ 0-year, 24 hour) rainfall events.

- Coastal flooding happens with much less frequency, but can devastate widespread areas of the Study Area and cause significant economic damage and safety concerns.
- Rainfall-induced flooding occurs with significantly greater frequency than coastal flooding, and is caused in large part by the characteristics of the Study Area's topography and land use patterns as well as the physical constraints of the existing North Hudson Sewerage Authority (NHSA) infrastructure.

The flooding problems for both coastal flooding a[illegible]infall-induced flooding can be attributed to several factors, including low topography and proximity to waterways; impervious coverage and surface runoff; existing sewer infrastructure, sewershed interconnections and insufficient discharge capability particularly during high tide.

The topography of the Study Area is highest along the east-central portion abutting the coastline of the Hudson River at Castle Point (see **Figure 2**). From here, the land slopes gently downward to the north (towards Weehawken Cove), south (towards the Hoboken Terminal and Jersey City) and to the west (towards the foot of the Palisades). This topography reflects the Study Area's history; when originally settled, Castle Point was an island surrounded to the north, south and west by wetlands. These wetlands

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:43:45 PM
Why is this referred to and no other ongoing City efforts? While I am of course a strong proponent of this plan, I would recommend either removing specific references to specific plans, or adding other City resiliency efforts.

Number: 2 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 11:44:04 PM
Note Weehawken and Jersey City efforts?

Number: 3 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:44:37 PM
high tide flooding,

Number: 4 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:45:09 PM
tidal flooding

Number: 5 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:45:31 PM
quality of life

Number: 6 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:47:17 PM
to a point made previously - coastal flooding is not equal to storm surge flooding. Tidal Flooding can be high tide flooding and/or storm surge flooding.

Number: 7 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 11:47:32 PM
greater than

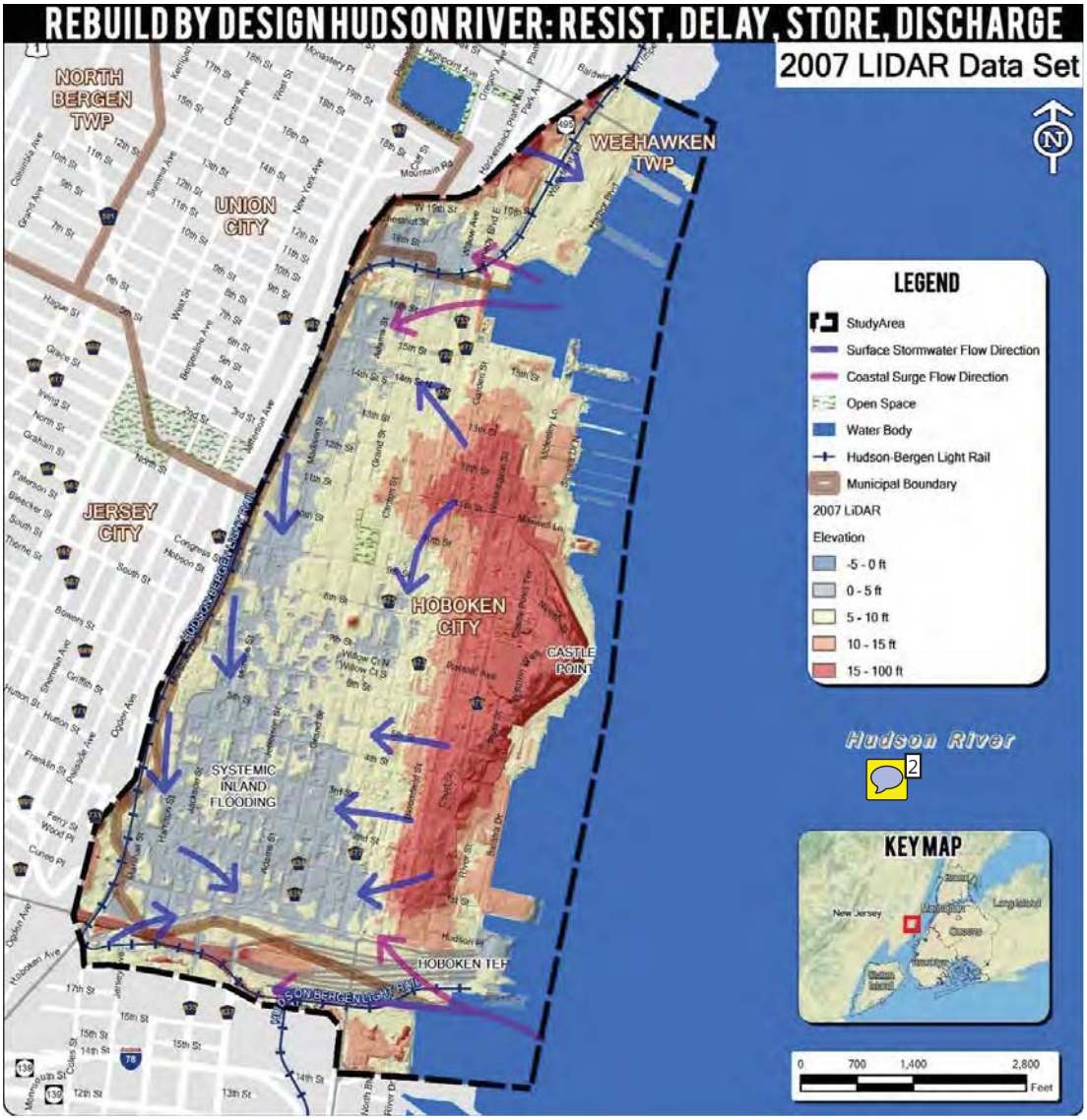
Number: 8 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:48:30 PM
Generally, but not entirely true - storm surge flooding occurs less frequently, high tide flooding occurs more regularly

Number: 9 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 11:48:51 PM
see comments from executive summary

J. Gonzalez, 10/8

were gradually filled in as the area ~~grew~~. Today, these areas – in particular those to the west – are still extremely low-lying, in some places no more than three feet above sea level.

Figure 2



Currently, approximately 16,798 parcels (or, approximately 810.7 acres of land and 66% of the overall Study Area) are within the Hudson River's one-percent (Zone AE/VE) or 0.2-percent (Zone X) annual-chance floodplains (see **Figure 3**). The majority of the Study Area is within the AE flood zone, with base flood elevations (BFEs) of between 10 and 12 feet NAVD 88. Furthermore, the areas immediately adjacent to the coastline are within the VE zone (areas subject to the one-percent-annual-chance flood as well as storm-induced velocity wave action) with BFEs of between 16 and 17 feet NAVD 88. The VE zone typically does not extend beyond the streets and parks along the waterfront. Much of Hoboken's critical

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developed

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missing sources

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:50:51 PM
no space between NAVD88 (universal change)

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/7/2015 11:51:20 PM
looks like a zero

J. Gonzalez, 10/8

fifth highest in New Jersey). In addition, the overall liability to the NFIP from property owners in Hoboken was over $2 billion (third highest in New Jersey) with an average claim amount of $26,243.

The interrelationship between coastal flooding and rainfall events contributes to the recurring flooding conditions throughout the Study Area. Each component represents challenges and will need to be addressed comprehensively in order to reduce the flood risk within the Study Area.

3.1.1 Coastal Flooding

The coastal communities of Hudson County have historically been vulnerable to coastal flood events. According to the FEMA's Preliminary Flood Insurance Study of Hudson County, New Jersey (FEMA, 2013), the most severe flooding for the coastal communities of Hudson County occurs from tidal surges during hurricanes. Surge water is brought into the area from the Upper New York Bay, New York Bay and Kill Van Kull, where it is then driven by winds upriver along the Hackensack, Passaic and Hudson Rivers, eventually overflowing onto the shoreline communities. The duration of coastal surges can be increased if the storm also brings about high amounts of rainfall. For example, in 2011, Hurricane Irene brought a five-foot storm surge to the Hudson River, flooding parts of Jersey City and Hoboken, along with 10 inches of rainfall. After the storm passed, flooding conditions remained because the vast amount of rainfall from the storm was draining through tributaries to the Hudson River, which was already swollen by the storm surge.

The coastal surge can be further exacerbated if it coincides with a high tide. For example, a strong storm surge on the Hackensack River on November 25, 1950 resulted in flood waters of 6.5 feet (nine feet above the low tide level). If this surge had occurred during high tide, flood levels would have reached 12 feet. A situation like this occurred during Superstorm Sandy; the storm surge coincided with a full moon, which caused an abnormally high tide that was 20% above the normal high tide level. This factor significantly contributed to Sandy's devastating flooding of the Study Area.

Superstorm Sandy exposed the vulnerabilities within the Study Area by flooding the coastal areas of Jersey City, Weehawken and Hoboken, as well as over two thirds of the City of Hoboken's low-lying interior areas. Surge waters flooded electric utility substations and transformers; power was not restored to many Jersey City and Hoboken residents for nearly two weeks. In addition, the surge flooded critical transportation infrastructure, including the Port Authority Trans Hudson (PATH) line at the Hoboken Terminal. Service on this line was not restored for several months.

Studies conducted by the Stevens Institute of Technology Davidson Laboratory found that approximately 466 million gallons of water inundated the interior areas of Hoboken. The water entered at the lowest areas of elevation. Within the Study Area, there were two main entry points: the area around Long Slip Canal and Hoboken Terminal in the south of Hoboken, and Weehawken Cove in the north. In the south the surface elevation ranges between two and five feet above sea level in and around Warrington Plaza and the Hoboken Terminal. In the area around Weehawken Cove, the elevations range between six and seven feet above sea level. When these elevations are compared to the flood surge levels caused by Superstorm Sandy, the degree of flooding becomes apparent. Sandy brought approximately 11 feet of surge water into Warrington Plaza and Hoboken Terminal, resulting in flood waters of between six to nine feet above ground elevation.

The southern and northern low-lying areas of the Study Area, along the Hudson River, acted as an inlet for flood waters into western Hoboken (see **Figure 4**). During Sandy, according to the Stevens Study, approximately 232 million gallons of water entered at the southern breach point, to the south of the Hoboken Terminal. Approximately 78 million gallons of this water remained within the NJ Transit rail yard,

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:15:34 AM
says 'flood events' but only talks about storm surge, not other instances of tidal flooding (high tide flooding)

Number: 2 Author: jgonzalez Subject: Cross-Out Date: 9/8/2015 12:03:40 AM

Number: 3 Author: jgonzalez Subject: Cross-Out Date: 9/8/2015 12:05:04 AM

Number: 4 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 12:05:21 AM
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J. Gonzalez, 10/8

The ground elevation in western Hoboken is low-lying; the H1 sewershed (the southwestern area of Hoboken; see **Figure 4**) in particular is on average about three feet above sea level. This portion of the Study Area also happens to be home to many vulnerable communities; the H1 Sewershed is the location of several of the Hoboken Housing Authority's communities. Floodwaters were funneled in from the north and south, inundating this portion of Hoboken, as well as the western areas of the H4, H5 and H7 sewersheds. Because the surge prevented sewer outflow (the surge water elevation was above the outflow level), the surge waters had nowhere to flow and persistent inland flooding resulted. In addition, because the surge prevented sewer outflow, domestic sanitary sewage backed up in residences and businesses, posing a significant public health risk. Overall, Superstorm Sandy caused approximately $100 million in damages to private property and $10 million to City-owned property in Hoboken. Notably, Hoboken University Medical Center (the only hospital within the Study Area, located in south-central Hoboken) received significant flood damage; the hospital was forced to evacuate all patients the day prior to the storm and was not able to fully reopen until November 14, over two weeks after the storm hit. In the interim, patients were redirected to other nearby hospitals – many of which were also damaged by Sandy.

As sea level is expected to rise, the associated base flood elevations along the Study Area's coastline will likewise increase, further compounding the risk of flooding. Storm surge and high tide will increasingly overtop the existing bulkheads, inundating the low-lying areas of the community. Studies have shown that in the mid-1800s, there was a 1% annual chance of a bulkhead being overtopped by a storm surge within the New York Harbor area; today there is a 20 to 25% annual chance (Blumberg et al, 2015). Rising sea level also means that the NHSA's outflows and other critical infrastructure will be closer to mean sea level. As the vertical distance between the elevation of the water and the elevation of the outflows decreases, less intense storm surge (which happen with greater frequency than stronger storms) ~~will have the ability~~ to inundate the outflows, thereby reducing the ability of the system to properly drain storm water. This means that over time, coastal flood events are expected to occur with greater frequency.

3.1.2 Systemic Inland Flooding

The NHSA, the agency that provides storm and sanitary sewer utility service to the Study Area, has a combined sewer system that was built in two periods, during the 1850's and from the 1920s to the 1940s. The combined sewer system handles both sanitary sewerage as well as stormwater runoff. Hoboken is divided into seven main drainage areas (H1-H7, see **Figure 4**). Sewerage is conveyed through the system by gravity from its source (e.g., a residence or business) through storm-sewer mains beneath street beds to the system's main interceptor pipelines. During dry conditions, a system of pump stations located within the NHSA's service area pump sewerage to the NHSA's Adam's Street Wastewater Treatment Plant (WWTP). This WWTP serves Hoboken, Weehawken and Union City. During rainstorms, stormwater (i.e., rainfall runoff) flows into the storm-sewer mains via street and curb inlets and combines with the sanitary sewerage. If the storm-sewer flow volume exceeds the limited treatment volume capacity (between 32 and 36 million gallons per day) of the WWTP, a portion of the storm-sewer flow volume outflows into the Hudson River through the various outfalls located along Hoboken's waterfront.

Inland flooding occurs when the storm-sewer system is unable to outflow excess water into the Hudson River. This typically occurs when high volumes of water are brought into the storm-sewer system from medium (generally a 5-year, 24-hour) to high (generally ~~over~~ 17-year, 24 hour) rainfall events which coincide with a high tide and/or storm surge. Rainfall events of greater than two inches, combined with a high tide of four feet or greater, occurred 26 times in Hoboken from 2002 to 2012. This is expected to increase in frequency over time as sea levels rise; the National Oceanic and Atmospheric Administration (NOAA) estimates sea levels may rise from between 0.5 to 3.5 feet by the year 2075. As a result, high tides and storm surges are expected to block or obstruct the outfalls for increasingly longer periods of time.

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:12:23 AM
outflow from the combined sewer system

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:12:07 AM
outfall

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:13:46 AM
outfalls

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:14:03 AM
outfalls

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:14:31 AM
less intense "tidal flooding"

Number: 6 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 7:14:13 AM
s

Number: 7 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 7:14:46 AM
could

Number: 8 Author: jgonzalez Subject: Cross-Out Date: 9/8/2015 7:14:54 AM

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utility

Number: 10 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:16:26 AM
Sewage

Number: 11 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:16:58 AM
combined stormwater-sewer mains

Number: 12 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:17:19 AM
sewage

Number: 13 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 7:17:12 AM
s

Number: 14 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:17:49 AM
shouldn't this be defined above, at the first instance?

Number: 15 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:19:14 AM
made several comments about changing this to combined sewer mains or combined sewer infrastructure, but alternatively you could use this phrase as long as it is defined (another case when a glossary at the beginning might help)

Number: 16 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:18:09 AM
sewage

Number: 17 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 7:19:54 AM
greater than

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Potential flooding can be further exacerbated if rainfall occurs during high tide and during the daytime hours, when sanitary flows are highest. During a high tide or storm surge, the water level of the Hudson River can rise above the level of the storm-sewer outflows; as a result, the river traps the water inside the storm-sewer system. Raw sewage and stormwater backs up through curb inlets and domestic interior plumbing, and floods streets as well as basements of homes and businesses. After flood waters recede, sewage residue (as well as residues from diesel, gasoline and other common roadside chemicals and contaminants) coats roadways, sidewalks, homes and businesses, representing a public health risk and necessitating cleanup subsequent to the storms.

The most significant inland flooding typically occurs in the H1 sewershed (see **Figure 4**). This sewershed is located in the southwest area of Hoboken and is bounded generally by Observer Highway to the south, Clinton Street to the east, 7th Street to the north and the NJ Transit Hudson-Bergen Light Rail to the west. The sewershed is extremely low-lying, generally less than three feet above sea level. The most frequent flooding in this sewershed occurs typically around Patterson Avenue and First Street (in the vicinity of the 2nd Street Light Rail Station) and Jackson Street and Fourth Street. This part of the Study Area is also home to several of the Hoboken Housing Authority's communities, including the Andrew Jackson Gardens and the Monroe Gardens senior housing center, whose residents (i.e., low income and/or elderly) are particularly vulnerable to the impacts from flooding.

The NHSA installed a 50 million gallon per day (MGD) wet weather pump for the H1 sewershed in 2012; however, analysis in 2013 by EmNet indicated that flooding still occurs in severe storms. The pump was activated 36 times between December 2012 and August 2013; of these, four storm events led to flooding. In addition to the H1 sewershed, the western areas of sewersheds H4 and H5 (just to the north of H1) also experience significant flooding, notably along Ninth Street between Monroe Street and Madison Street.

The Study Area's flooding is greatly exacerbated by its high degree of impervious surface coverage: the area is approximately 94% impervious, from building footprints or paved areas such as streets, sidewalks and parking lots. This is a product of the area's population density; with a population per square mile of 39,066, Hoboken is the nation's fourth densest municipality, after Guttenberg, NJ, Union City, NJ and West New York, NJ. The area's high impervious cover means that almost all the rainfall that reaches the ground is funneled rapidly into the storm-sewer system through building downspouts and street-level storm drains, instead of being discharged into soils for gradual infiltration, as would be the case in areas with lower impervious coverage. This, coupled with the inability of the system to discharge during a high tide or storm surge, results in inundation of the combined sewer system during a rainfall event and backing up of the sewer system. Ultimately, this leads to the flash flooding events in low-lying areas, resulting in damages to buildings, residences, cars and infrastructure.

Ultimately, these various factors all contribute to the need to develop a comprehensive flood risk reduction strategy to safeguard against damage to people, property and infrastructure.

3.2 Goals and Objectives

The Project is a comprehensive urban water strategy whose overall purpose is to reduce flood hazard risks, flood-related public health risks, and which seeks to leverage resiliency investment to enhance the urban condition. The ability to meet this purpose will be measured in terms of:

- *Contribute to Community Resiliency*: The Project will seek to integrate flood hazard risk reduction strategy with emergency, civic, and cultural assets (Hoboken's fire stations, hospitals, community centers, and transit centers). The Project will reduce flood risks within the Study Area, leading to

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:20:40 AM
outfalls

Number: 2 Author: jgonzalez Subject: Cross-Out Date: 9/8/2015 8:03:45 AM

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 7:23:37 AM
What about the environment? quality of life?

Number: 4 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 7:24:21 AM
Same comments as above on this entire section

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improved resiliency and the protection of accessibility and on-going operations of services (including protecting physical infrastructure such as hospitals, fire stations and police department buildings; and roadways and transit resources). This will allow these key assets to support emergency preparedness and community resiliency during and after flood events.

- *Reduce Risks to Public Health*: In addition to providing protection to critical healthcare infrastructure (such as local hospitals and emergency preparedness services), the flood risk reduction strategy will aim to reduce the adverse health impacts that result from combined sewage backups onto streets, and within businesses and residences, through a reduction in these types of flood events.

- *Contributing to On-going Community Efforts to Reduce FEMA Flood Insurance Rates:* The City of Hoboken's exposure to flood risks has resulted in some of the highest insurance premiums in the state. The City has long had a goal of reducing those rates through a number of comprehensive flood risk reduction programs, such as those identified in the City's Green Infrastructure Plan. The NFIP's Community Rating System (CRS) allows municipalities to reduce their flood insurance rates through implementation of comprehensive floodplain management. The Project will propose concepts and alternatives that are consistent with Hoboken's overall effort of reducing FEMA Flood Insurance Rates.

- *Delivery of co-benefits:* Where possible, the project will seek to integrate the flood hazard risk reduction strategy with civic, cultural and recreational values. The Project will look to incorporate active and passive recreational uses, multi-use facilities, and other design elements that integrate the Project into the fabric of the community. In this way, the Project will complement local strategies for future growth.

- *Connectivity to the Waterfront:* The Study Area's waterfront is currently the location of a vast length of interconnected parks and public walkways which contribute to the vibrancy of the community. The Project will aim to incorporate features that do not restrict access to the waterfront. Where feasible, the Project will build upon and enhance existing waterfront access points while still providing flood risk reduction.

- *Activation of Public Space*: The project will develop concepts that reduce risks to private and public property from flood impacts while also incorporating design elements that activate public and recreational spaces, thereby enhancing quality of life for the community.

- *Consider Impacts from Climate Change:* The project will take into account the projected impacts from climate change, particularly as it relates to sea level rise and its impacts on the frequency and degree of flooding.

4.0 PROJECT CONCEPTS

The Project will involve the development of up to five flood risk reduction concepts that will address the Project's Purpose and Need. A feasibility analysis will be performed to determine what designs and strategies best address the impacts from the two types of flooding (coastal storm surge and systemic inland flooding). The next phase of the concept development will be the evaluation of those concepts; the community will be engaged to help rank how well each of the five concepts meets the Purpose and Need, ultimately leading to the selection of the three highest ranking concepts as the Project's three Build Alternatives. The Build Alternatives will then be advanced for further environmental review within the EIS.

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:45:29 AM
tidal flooding (or just storm surge)?

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4.0 Concepts

The concept development process will involve the identification of flooding sources, locations of flooding and the development of appropriate flood risk reduction concepts. As stated previously, the Study Area is subject to two sources of flooding – coastal storm surge events and systemic inland flooding from moderate to severe rainfall events. As part of the feasibility analysis, an integrated coastal and inland flooding model will be developed to identify the locations of flooding and evaluate the effectiveness of various flood risk reduction concepts to reduce flood impacts. Each concept will consist of *Resist, Delay, Store* and *Discharge* design elements.

The success of constructing a reliable and permanent comprehensive flood risk reduction system depends on designing project concepts that take into consideration existing infrastructure and environmental constraints. The key to the successful implementation of this project is to design the flood risk reduction system in accordance with the regulatory standards (such as FEMA flood elevation standards, the NJDEP Flood Hazard Area Control Act, and local floodplain ordinances), while verifying that it aesthetically blends in with and enhances the existing environment.

The location of existing infrastructure such as parks, roads, transit, stormwater systems, subsurface utilities, and foundation structures for various types of infrastructure will dictate the available footprint for constructing the various project elements. The size and availability of the footprint area would then dictate the type of potential project elements that could be constructed, such as earthen berms, floodwalls, deployable flood systems, streetside green infrastructure, etc. In certain areas, it may be feasible to relocate some infrastructure facilities; however, due to cost considerations and a desire to reduce construction impacts, the project will seek to minimize the relocation of such facilities.

It is anticipated that the Project's concepts may consist of the following:

- One concept may consist of a *Resist* alignment constructed along a combination of in-water, waterfront, and upland locations with termination points at appropriate locations upland or on the waterfront.
- One concept may consist of a *Resist* alignment constructed primarily along the waterfront with termination points at appropriate upland or waterfront locations.
- One concept may consist of a *Resist* alignment primarily constructed upland with termination points located upland.

4.0.1 Coastal Flood Risk Reduction Concepts (Resist)

The New York City Department of City Planning's Urban Waterfront Adaptive Strategies report will be used as a reference toolset to identify various site- and reach-based mitigation strategies that would allow the use of "multiple lines of defense approach" and enable one or more of these strategies to tie-in with each other to create an integrated flood risk reduction system for the Study Area (see **Figure 5**). A subset of these strategies was used during the RBD competition to identify design options at suitable locations along the Study Area's waterfront. These approaches will represent the *Resist* element of the Project.

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:46:49 AM
again - would say either tidal or coastal flooding events and systemic inland flooding (or three sources of flooding: tidal flooding, storm surge, stormwater)

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:48:39 AM
does this refer to on-site stormwater BMPs here? if not, suggest calling it combined stormwater-sewer systems

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 7:51:51 AM
might want to address potential acquisition or easements in this sentence? conversely, if they are not under consideration, it seems the right place to rule them out.

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:59:42 AM
There seems to be a disconnect between these alternatives and sections 4.0.1-4.0.4 (it seems as though those sections seek to lay out the menu of elements that could be included in each concept bulleted here, but that isn't clearly stated)

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4.0.2 Inland Flooding Concepts (Delay, Store, Discharge)

Applicable concepts for the *Delay, Store*, and *Discharge* elements of the project will be evaluated. These elements will address inland stormwater in order to alleviate flooding from high intensity/longer duration rainfall events within the Study Area.

- The *Delay* element requires identification and evaluation of options to increase infiltration of stormwater into the soil by implementing various types of Green Infrastructure (GI) practices.
- The *Store* element requires identification and evaluation of options to construct surface and/or below grade detention/retention facilities or green roofs to temporarily store rainfall runoff.
- The *Discharge* element requires identification and evaluation of options to *discharge* rainfall-runoff from the Study Area into the Hudson River through grey infrastructure such as separate high-level stormwater pipes, outfall structures, and pump stations.

The feasibility of implementing each stormwater management concept will depend on several factors including, but not limited to, cost, effectiveness, ROW availability, utility impacts, subsurface conditions, maintenance needs, and life-cycle costs.

4.0.3 Environmental Mitigation Design Elements

Creation of tidal and freshwater wetlands, with associated riparian vegetation, as well as living shorelines located along the Hudson River waterfront may be options to mitigate environmental impacts from the construction of coastal flood risk reduction system.

4.0.4 Urban Design and Community Co-Benefit Design Elements

A flood risk reduction system will reduce flooding risks at critical infrastructure and for the entire community but also can be used as a catalyst for urban design and neighborhood improvement. In conjunction with flood reduction system concepts, we will attempt to tie these concepts with a larger, productive open space and urban design initiative that serves as a community resource.

4.1 Concept Screening

The culmination of the concept development phase will be an evaluation of the concepts through a screening matrix in a community workshop setting. The concept screening matrix will be developed with input from stakeholder groups informed by the team's Subject Matter Experts (SMEs) and will be used to evaluate each concept on its impacts to the many resources within the Study Area. This process will allow for the elimination of concepts that least satisfy the project's Purpose and Need. The three concepts that are ranked the highest will be advanced as the project's Build Alternatives, which will be analyzed further.

4.1.1 Screening Criteria/ Matrix

The concept screening matrix will include criteria that reflects the Project's Purpose and Need. Criteria will be utilized that address the Project's impacts to the natural environment, the community, as well as the Project's overall feasibility. This will include criteria such as flood risk reduction, environmental constraints (including but not limited to cultural resources, hazardous waste, and environmental justice), and community interests. Criteria will also include feasibility factors such as constructability and construction cost, and will focus on design criteria, with the inclusion of environmental mitigation and urban design and community co-benefit design elements. Metrics that will be measurable, either qualitatively or quantitatively, will be developed for each criterion. After the establishment of the metrics, a matrix will be developed to evaluate each concept. The completed matrix will allow for a ranking of each concept.

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:54:43 AM
recommend defining GI, if there is a glossary

Number: 2 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 7:53:28 AM
what about rainwater harvesting? cisterns?

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 7:57:09 AM
This is a very important part of the process which the CAG should be involved in - setting the screening criteria for both the Concept (Alternatives) screening as part of the environmental review and Feasibility Study. Would like to have more information about exactly what criteria or metrics are being considered.

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 7:55:03 AM
spell out right of way (first use)

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:00:03 AM
will seek to

Number: 6 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:02:28 AM
natural and

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5.0 POTENTIAL REGULATORY APPROVALS

In addition to NEPA requirements (including HUD regulations at 24 CFR Part 58 and CEQ regulations at 40 CFR Parts 1500-1508), the project will also be subject to numerous additional regulatory approvals. The following is a list of potential regulatory approvals that the Project will require. The EIS will discuss in detail the anticipated approvals that the Project will require.

5.0 Federal

- HUD: The project is subject to the funding disbursement and Action Plan Amendment requirements stated in 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11].
- U.S. Army Corps of Engineers (USACE): In-water activities will require Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits
- National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS): Essential Fish Habitat (EFH) review will be conducted. Depending on these findings and proposed in-water impacts, additional consultation may be required.
- U.S. Fish and Wildlife Service (USFWS): Depending on project impacts to threatened/endangered species, Section 7 consultation may be required.
- US Coast Guard (USCG): Construction of structures within navigable waters will require approval from the USCG.
- Federal Emergency Management Agency (FEMA): Review of seawall or other *Resist* component will require FEMA review for any potential changes to Flood Insurance Rate Maps (FIRM).
- National Historic Presentation Act of 1966. Section 106 of the Act states that prior to the approval of the expenditure of any Federal funds an evaluation must take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.

5.1 State of New Jersey

- New Jersey Department of Environmental Protection (NJDEP): The project will likely require numerous permits from the NJDEP to demonstrate compliance with several acts/authorities, including Coastal Zone Management (Waterfront Development, N.J.S.A. 12:5-3 et. seq), Flood Hazard Area Control Act (N.J.A.C. 7:13-1.1 et seq), Freshwater Wetlands Protection Act (N.J.A.C. 7:7.A), Stormwater Management (N.J.A.C. 7:8), and Section 401 of the Clean Water Act. Coordination with the Bureau of Tidelands is also anticipated to be necessary, to determine if a Tideland Instrument will be required for any in-water impacts. In addition, a New Jersey Pollutant Discharge Elimination System Permit is required for any discharges to surface waters.
- New Jersey State Historic Preservation Office (NJHPO): The NJHPO will need to be consulted for the project's compliance with Section 106 of the National Historic Preservation Act of 1966.
- New Jersey Register of Historic Places (N.J.S.A. 13:1B-15.128 et seq) will be reviewed as part of this project.

5.2 Local and Municipal

- The Project will require local municipal approvals, including zoning compliance, roadway and sidewalk opening/closing and other construction approval/permits from the Hoboken, Jersey City and Weehawken.
- Hudson Essex Passaic Soil Conservation District: Soil Erosion and Sediment Control Certification will be required for activities involving greater than 5,000 square feet of ground disturbance.

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Number: 1 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:05:53 AM
as amended

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:06:33 AM
as amended

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:07:26 AM
does this need to be specified, since it's already required for Section 106 compliance? if so, shouldn't the National register also be called out?

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:08:16 AM
What about County? Any improvements on a County road will require a road opening permit.

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6.0 ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

Below is a discussion of the proposed sections of the EIS. The EIS document will consist of a description of the alternative analysis, the public involvement effort, a description of the existing conditions and a description of the affected environment based on the three Build Alternatives and No Action Alternative.

6.0 Alternatives Analysis

This section of the EIS will describe the technical analyses and public input that led from the initial concept designs to the selection of the Preferred Alternative[1]

6.0.1 Alternatives Development

This section will describe the development of the Build Alternatives from the initial project concepts. It will also include a description of the concept screening process. This will include an explanation of how the screening criteria and metrics for those criteria were selected and how they were used to rank each of the Project's concepts through the concept screening workshops, ultimately leading to the recommendation of the three Build Alternatives.

6.0.2 Alternatives Analysis

Similar to the Concept Screening, this section will explain the Alternatives Analysis process that led to the recommendation of the Preferred Alternative. The Alternatives Analysis will begin with a review of the three Build Alternatives – as well as the No Action Alternative - and their environmental impacts[2] (to be analyzed within the discipline studies in the EIS, pursuant to 24 CFR 58.5), as well as a comparison of the ability of each to meet the Project's Purpose and Need. This process will lead to the recommendation of the Preferred Alternative.

6.1 Public Involvement

Throughout the course of the engineering (feasibility) study and environmental analyses and documentation for the EIS, a public involvement plan will be implemented in accordance with the Project's Citizen Outreach Plan (COP) that includes input from involved agencies and members of the public. The COP was developed by NJDEP to provide a framework for public involvement throughout the entire lifetime of the Project, of which the environmental and feasibility studies are only one part. A copy of the COP is available on the Project website at http://www.rbd-hudsonriver.nj.gov.

The goal of the Citizen Outreach Plan is to engage and collaborate with the general public, including vulnerable and underserved populations, racial and ethnic minorities, persons with disabilities, and persons with limited English proficiency, as well as municipal officials, community organizations and the academic community in the planning, design and implementation process of the project. The purpose is to solicit relevant input and provide timely information throughout the environmental review. To meet these objectives the team will:

- Establish ongoing, inclusive and meaningful two-way communication with stakeholders, agencies, and the general public.
- Educate the public about the environmental review process and the role of government, stakeholders and the general public within this process.

The Public Involvement section of the EIS will summarize all of the public outreach efforts undertaken during the Project, with a focus on specific outreach efforts to low income and/or minority communities (Environmental Justice communities) as well as those communities that are most impacted by flooding

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Number: 1 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 8:09:16 AM
What about alternatives considered and dismissed?

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:10:03 AM
potential

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and/or directly impacted by Project activities. This section of the EIS will detail the public meetings held during the NEPA process, and describe the purpose and the outcome of each meeting.

The principal public involvement activities bracket the development of the EIS:

- Draft EIS scoping, which includes a public scoping meeting, at the start of the environmental review process to provide information about the proposed project and the environmental review process, and elicit agency and public input and comment; and
- Draft EIS public hearing, to present the results of the environmental review of the No-Build and project alternatives, and elicit agency and public comments for consideration in selection of a preferred alternative and completion of the Final EIS.

Between Draft EIS scoping and public hearings various techniques will be used to gain input from the public and involved agencies. These include:

- Postings on the NJDEP Project website: (http://www.rbd-hudsonriver.nj.gov);
- Newsletters and fact sheets available online and at convenient public repositories (e.g., libraries, community centers) and electronically;
- Press releases;
- Three public meetings, will be held; one during the scoping process, one during the concept screening and one during the alternatives screening. In addition, one public hearing will be held after the Draft EIS is made available for public review. Each public meeting and hearing may be publicized with meeting announcements posted on the websites, Hoboken TV public Access Channel, press releases, mailings to the mailing list, and at public repositories including libraries and City/Town Halls; and
- A regional Citizen Advisory Group (CAG), which includes a cross-section of key stakeholders, organizations, and interests, from each of the three cities, will meet periodically to provide an open forum for discussion about the project as it progresses. CAG members will bring their members' concerns to the attention of the project team, and bring project information back to their membership. In addition, CAG members will conduct outreach to their constituents and with the public in their respective cities.
- Compliance with Section 106 of the National Historic Preservation Act (NHPA) also includes a significant public involvement process, which is described in greater detail in Section 5.3.5.

6.2 Technical Environmental Studies

Below is a description of the technical disciplines to be reviewed in the EIS. Each technical discipline section will consist of a characterization of the affected environment, as it pertains to each discipline, followed by a detailed impact assessment for the Project's three Build Alternatives as well as the No Action Alternative. The impact analysis will include temporary/construction impacts as well as impacts from project completion.

Detailed Technical Environmental Studies (TES's) will be prepared for disciplines as appropriate. These TES's will be provided as appendices within the EIS document. In order to provide a succinct EIS document, a summary of this technical information will be provided for each discipline discussed below.

The boundary of the *Study Area* is typically defined by the logical geographic termini, the project purpose and need, and the expected limits of potential impacts. Unless otherwise stated, the Study Area will be encompassed by the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:11:58 AM
Should this be 6.2.5?

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:50:14 AM
Might be good to clarify this as the environmental analysis framework, so that the public has a clear understanding of affected environment --> impacts --> mitigation

Likewise, it would help up front here to define impacts and intensity (i.e., no measurable impacts, beneficial impacts, minor/major adverse impacts) and direct vs. indirect

Number: 3 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:12:52 AM
potential direct and indirect

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Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south.

A *Secondary Study Area* will also be established to adequately address potential impacts that may occur beyond the primary Study Area. For example, the Socioeconomics and Environmental Justice disciplines rely on census data, some of which are obtained from census blocks and census tracts. These geographic census data levels will include areas outside of the above-described area. In addition, a buffer of 150 feet beyond the Study Area boundary will be added for the Natural Ecosystems Study Area. This buffer is intended to cover the maximum Wetland Transition Area width associated with potential wetlands that might be identified beyond the Study Area boundary. Furthermore, depending upon the results of the flood model developed during the concept development phase, the Secondary Study Area for some disciplines may be defined to include additional areas of study, such as portions of the adjoining municipalities (Jersey City and Weehawken) that may be impacted by the Project.

In addition to the Study Area and Secondary Study Area, the *Project Area* will be defined to include the limits of disturbance where work is physically proposed (such as the waterfront as well as any identified interior areas). The Project Area will be further defined during the concept development and alternatives analysis phases.

6.2.1 Air Quality

The project will be HUD-funded and will be performed pursuant NEPA. Hoboken is located within Hudson County which is in ozone (O_3) nonattainment, as well as carbon monoxide (CO) and particulate matter smaller than 2.5 microns ($PM_{2.5}$) maintenance. All other criteria pollutants are in attainment within Hudson County. Existing air quality levels documented by NJDEP O_3, CO and $PM_{2.5}$ monitoring stations will be addressed within the environmental document. EPA regulations relating to the Clean Air Act (CAA) require that federal actions conform to the appropriate state, tribal or federal implementation plan (SIP, TIP, or FIP) for attaining clean air (Transportation Conformity or General Conformity). Mobile-sources of air emissions will not be created or relocated as part of the proposed project therefore transportation conformity need not be addressed. However, since the RBD Hudson River project is HUD-funded and will likely require federal permits, it will be subject to the General Conformity requirements. The General Conformity Analysis will require that emissions of non-attainment pollutants conform to the SIP during construction and operation. Since the level of information necessary to quantify construction-related activities necessary in areas requiring federal permits will not be available, the General Conformity Analysis will be performed during the Final Design Phase, and not performed under the scope of this phase.

6.2.2 Noise

6.2.2.1 Mobile Source

Permanent roadways will not be created and existing roadways will not be permanently relocated as part of the proposed project; therefore mobile noise sources do not need to be addressed within the EIS.

6.2.2.2 Stationary Source

In order to discharge water, improvements include additional pumps within Hoboken. Proposed pump stations are subject to maximum permissible sound levels established within Chapter 29 of the New Jersey Administrative Code (N.J.A.C. 7:29) during weekly testing of emergency generators. Sensitive noise receivers (such as schools, hospitals and residences) adjacent to emergency generators will be identified. Stationary-source noise related to the pump stations will

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:15:29 AM
This paragraph discusses multiple secondary study areas, per specific disciplines (resource areas) but this sentence makes it sound like there is just one secondary study area - clarify that the secondary study area may vary by discipline

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:16:42 AM
an environmental analysis

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:25:40 AM
This assumes no major waterfront structures that would change transportation patterns on Sinatra Drive (same assumption as stated in 6.2.2.1 Mobile Source below - recommend making AQ and noise sections mirror eachother, with AQ having the same subheadings as noise for clarity)

Number: 4 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 8:25:12 AM
If any new pump stations are installed, and require generators (as referenced in Noise below), they may also require compliance with RICE. Worth noting in AQ, as with noise?

The proposed generators would be subject to the stationary Reciprocating Internal Combustion (RICE) Maximum Achievable Control Technology (MACT) regulations at 40 CFR 63 ZZZZ and the New Source Performance Standards (NSPS) at 40 CFR 60 III that govern emission limits and compliance requirements for new stationary RICE.

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:18:39 AM
Confused here - so does this mean AQ is screened out? Typically we would do a worst case scenario analysis for the purposes of the EIS - not wait to do the analysis until some time in the future.

Number: 6 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 8:21:42 AM
may

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reasonable reference level for the construction method chosen to estimate underwater acoustic levels in order to compare with both aforementioned thresholds in one applicable location. In the event underwater noise levels are predicted to exceed acoustic thresholds established, mitigation measures such as bubble curtains, will be evaluated. Underwater acoustics analyses and mitigation measures will be detailed within the EIS.

6.2.3 Vibration

The proposed project does not include improvements which would cause operational vibration concerns. However, due to the heavy, long-term construction activities related to reconstruction of the Study Area's waterfront, historic and structurally sensitive properties, and densely populated Study Area, a construction-related vibration analysis will be performed. Vibration levels will be predicted based on Federal Transit Noise and Vibration Impact Assessment procedures at four (4) locations. No vibration standards are established by HUD; therefore, predicted vibration levels will be compared to structural damage criteria as well as perceivable and annoyance vibration level thresholds established by FTA. In addition, since construction activities will be performed along the shoreline, radiated vibration into the Hudson River from pile driving will be assessed in one location. In the event vibration levels, either on land or water, exceed established thresholds, mitigation will be evaluated. The vibration analyses and mitigation measures will be detailed within the EIS.

6.2.4 Hazardous Waste

The Study Area is in a heavily developed urban setting with land uses ranging from residential to industrial. Based on a review of NJDEP's GIS data layers, there are multiple Known Contaminated Sites (KCS), including parcels with soil and groundwater contamination, located within the Study Area. In addition, most of the Study Area is underlain by historic fill material, and it can be assumed that this material contains contaminants typical of historic fill including elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals. Contaminated soil is anticipated to be a concern during construction. [1] No acquisitions of private land are anticipated as part of the Project; should it be determined that such acquisitions are required, further investigation into those properties may be warranted. No subsurface testing is included in this evaluation.

In order to identify known contamination issues within the Project Area, a review of Environmental Data Resources (EDR) database search for the entire Study Area will be performed. Concurrently with review of the EDR data, NJDEP GIS data layers for KCS, Classification Exception Areas, and Deed Notices within the Study Area will be evaluated. Dewberry will conduct a specific site and surrounding area reconnaissance to obtain a better understanding of the potential soil and groundwater contamination concerns. Additionally, historical aerial photographs for the Study Area, as well as Sanborn Fire Insurance Maps for the specified concept/build locations will be reviewed to provide a history of potential contamination concerns in the Project Area. The properties that are identified as representing an environmental concern during the review process will be classified according to the ASTM International's (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" ASTM Designation E 1527-13 terminology as follows:

- Recognized Environmental Condition (REC) – "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

- Historic Recognized Environmental Condition (HREC) – "a past release of any hazardous substance or petroleum products that has occurred in connection with the property and has been

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:27:23 AM
Would recommend discussing acquisition earlier in the document as well

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requirements of NJDEP's Linear Construction Program (LCP). As the project moves forward, an LSRP will be retained to oversee environmental issues encountered during construction. This program allows utilities, transportation agencies, or other infrastructure projects to properly address contaminated soil or groundwater encountered during construction, without requiring the linear construction entity (LCE) to investigate and or remediate contamination outside of the project limits. This approach was developed with the understanding that for many infrastructure projects, the LCE is not responsible for the contamination encountered during construction, thus alleviating this burden of a typical Site Remediation Program (SRP) project where the responsible party is obligated to delineate the full extent of and remediate the contamination.

Linear construction projects are overseen by LSRPs, retained for the duration of the entire project, providing oversight and assisting the LCE to remain in compliance with the LCP requirements. The LSRP helps ensure that appropriate information is retained to document proper handling and disposal (if necessary) of contaminated soil and groundwater in accordance with the material handling plan. The LSRP also ensures that any material imported for the project is either clean or at a minimum, is not contaminated to a level greater than that which was originally present within the project corridor. At the end of the LCP, the LSRP oversees the preparation of a LCP report that provides the documentation that the above procedures to address suspect or confirmed contamination have been followed. The Linear Construction Report is ultimately submitted to the NJDEP along with various NJDEP required forms, thus providing a record of the material handling during the construction of the infrastructure project and documenting that the LCE followed the LCP requirements.

6.2.5 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to consider the impacts of their actions on historic or cultural resources. This includes impacts to properties identified as National Historic Landmarks (NHLs); properties or resources that are listed in or eligible for listing in the National Register of Historic Places (NR); or properties or resources that are listed in or eligible for listing in a state register of historic places. Because the Project is being funded by the U.S. Department of Housing and Urban Development, compliance with Section 106 must be demonstrated. The cultural resources analysis will be prepared in consultation with the NJHPO.

6.2.6 Consultation

The Section 106 process includes consultation between the lead federal agency (HUD), other involved federal agencies, representatives of local governments and federally recognized Indian Tribes (36 CFR 800.2(a)(4)); the public is also included in the consulting process. Consulting parties that will participate in this Project's Section 106 process will include at a minimum the NJHPO, other federal agencies with regulatory or permitting authority over the Project Area and federally recognized Indian tribes with an ancestral or traditional relationship with the project area. Dewberry will assist HUD in the preparation of consultation documents and will engage in a reasonable and good faith effort to identify Indian tribes that may attach religious and cultural significance to the Project Area. Consultation documents will be distributed to all identified consulting parties early in the process to ensure that all consulting parties are actively involved in the Section 106 process.

6.2.7 Data Collection

As part of the data gathering task for cultural resources, several repositories will be visited to collect and review prior cultural resource studies from the Project Area. Published secondary sources, prior architectural surveys, and cultural resource reports, as well as available maps (including NOAA maps) will be reviewed to characterize the architectural, archaeological, and maritime history of the Study Area. The following data gathering steps are anticipated to be conducted: documentary and site file research at the New Jersey State Museum and the NJHPO, located in Trenton; review of historic maps and local histories

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:30:03 AM
Shouldn't 6.2.6, 6.2.7, 6.2.8, and 6.2.9 be subheadings within 6.2.5? Confusing as it sounds like they are new disciplines (resource areas)

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:31:32 AM
Is there a separate schedule for meetings with CPs and list of CPs?

J. Gonzalez, 10/8

3.2.10 Natural Ecosystems

Relevant pre-existing data regarding the presence of natural resources (including geology, hydrogeology, soils and sole source aquifers) in the Project Area will be gathered and/or reviewed, including the NJDEP GIS database of freshwater and coastal wetlands, floodplain maps, and soils maps to identify potential areas of concern and their associated constraints. The existing natural features within the Project Area, including areas of open water, the littoral zone, flood hazard areas, the Mean High and Spring High Water elevations at the waterfront/shoreline and the intertidal/sub-tidal shallows zones, will be identified. Since it is anticipated that a coastal *Resist* element will be included in the Build Alternatives, and would involve impacts to open waters and/or wetlands, coastal shoreline wetlands identified (i.e., in non-bulkhead areas) will be delineated, in accordance with NJDEP and USACE standards, for subsequent survey and mapping. Existing tidelands conveyances from the NJDEP Bureau of Tidelands, as well as those areas that have been filled, but do not have an existing tideland grant, lease, or license, will be reviewed. Historical aerial photographs and topographic maps will be reviewed to identify the historic wetland areas and stream channels that previously existed in the western portions of the City of Hoboken. These areas may be suitable for various green infrastructure features Freshwater wetlands that may be located within these interior portions of the City will be delineated for subsequent survey and mapping.

A request will be sent for a database search to the NJDEP Natural Heritage Program (NHP) and review the USFWS Information, Planning and Conservation (IPaC) System for records of rare/threatened & endangered (T&E)/special concern species or their habitats in the Project Area. The NMFS will also be contacted for information regarding fisheries resources within the Project Area. Based on a preliminary review, the Hudson River in this area is mapped as habitat for the federally endangered Shortnose Sturgeon *(Acipenser brevirostrum)*, so timing restrictions for certain construction activities in the open waters would be expected. If other species or habitat records are identified within the Project Area, we will verify, to the extent practicable, whether those resources are present while performing a field assessment of the Project Area. If more detailed studies are required, we will inform the NJDEP of the need for those studies, which could be provided as an out-of-scope extra work item. If data gaps are identified in the existing, available data, recommendations will be provided as to whether the data is critical for future analysis and how the missing information can best be obtained under a separate authorization. The information gathered during the data review process will be included in the EIS and used in future phases, including the securing of any required permits.

The existing natural resources within the proposed Project Area will be characterized in the environmental review process. These resources will include upland and wetland/in-water habitats, ecological communities, and records of wildlife in the vicinity of the waterfront/shoreline and interior areas that have the potential to be affected by the proposed Build Alternatives. The aquatic resources (e.g., water quality, sediment characteristics, and aquatic biota) of the Lower Hudson River-Upper New York Bay in the vicinity of a potential shoreline *Resist* feature will also be evaluated. The potential impacts on natural resources will be assessed, including upland and/or in-water construction effects, such as temporary increases in suspended sediment during construction. Potential permanent impacts also will be evaluated, including changes in circulation, sediment transport and impacts (both positive and negative) to aquatic biota due to a shoreline *Resist* feature.

Impacts to terrestrial resources will be evaluated, such as vegetation clearing activities, as well as visual and/or noise effects on [ar] wildlife in the Project Area. The need for state and/or federal coordination and approvals/permits will be identified, including project evaluation and compliance in terms of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:43:29 AM
Would it be possible to break this section into subheadings to address exactly what resource areas would be addressed - as if it were the outline for the DEIS - such as floodplains, surface waters and wetlands, terrestrial ecology, aquatic ecology...

It is hard to follow right now with them all grouped together.

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:36:59 AM
first person

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:37:12 AM
first person

Number: 4 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 9:12:06 AM
Floodplain management is discussed here and in infrastructure - clarify what will be covered in each section

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:38:35 AM
Isn't it already clear that an 8-step HUD floodplain management plan will be required?

J. Gonzalez, 10/8

For the three Build Alternatives, the proposed impact areas located within the “interior” portions of the City will be inspected and wetlands/open waters that may be affected by the footprint(s) of the alternatives will be delineated. Based on the delineation of the wetlands/open waters, impacted areas resulting from each of the three Build Alternatives will be calculated. Likewise, wetlands will be delineated along the shoreline of the Project Area and impacts, if applicable, due to a coastal *Resist* feature (dike, wall, revetment, breakwater, etc.) that may be proposed in the Build Alternatives will be calculated.

Natural ecological concerns will be outlined and the required environmental permit applications to the applicable federal, state, and local agencies identified. Riparian zone impacts to vegetation will be regulated by the NJDEP, typically requiring mitigation at a 2:1 ratio for permanent disturbances that exceed the allowable limits. Impacts to state-owned Tidelands will require authorization via a tidelands lease or grant. Freshwater wetlands found in the Project Area will be mapped; if there are impacts to these wetlands, mitigation would be required, usually at a 2:1 ratio. Required mitigation for project impacts will be evaluated, to determine the most efficient and effective type of mitigation, given existing site conditions and constraints.

3.2.11 Aquatic Ecology

The Study Area includes the waterfronts of Jersey City, Hoboken and Weehawken. This waterfront area, part of the Lower Hudson River-Upper New York Bay, is a shallow estuary that contains habitat for shellfish, and marine, estuarine and anadromous fish. The Lower Hudson River-Upper New York Bay supports a diverse community of aquatic biota; however, it is an urban estuary that has been impacted by development and stormwater/combined sewer discharges to the waters, resulting in degraded water and habitat quality, including sediment contamination. A Comprehensive Restoration Plan has been developed for the Lower Hudson River-Upper New York Bay Estuary through the combined efforts of many agencies and organizations, including: the Harbor Estuary Program, the USACE, EPA, USFWS, NOAA, the Port Authority of New York and New Jersey (PANYNJ), Hudson River Foundation, NY/NJ Baykeeper, NYSDEC, NJDEP and other state and city agencies, and non-government organizations, to restore and protect habitat within the Lower Hudson River-Upper New York Bay Estuary.

The shoreline protection *(Resist)* feature may result in impacts to the shallow waters of the existing waterfront area. Therefore, as requested by the NMFS, the existing aquatic ecology of this shoreline area will be evaluated. A review will be conducted of available desktop GIS data and web-based resources associated with the aquatic resources of the area; letters will be requested from the following agencies:

- NJDEP Natural Heritage Program for T&E species and critical habitat; and
- NMFS for marine species/habitats in the Project Area.

In addition, the Project Area will be reviewed for Essential Fish Habitat (EFH), as required by NMFS. A desktop review of available GIS data and web-based resources will be conducted to identify the aquatic resources of the Project Area. This will include a review of the USFWS IPaC System for species and critical habitats, as well as the NMFS on-line EFH Viewer. This effort will include the database request letters to the NJDEP and NMFS for information on T&E species and critical habitats in the Project Area.

An EFH review will be conducted to evaluate the shoreline area for use by aquatic species to determine if portions of the shoreline area may be identified as EFH. A site visit and inspection of the Project Area will be conducted in regard to any EFH identified. The inspection will be conducted at low tide during fair weather conditions (minimal winds) to allow for the best viewing conditions. The Project Area will be evaluated in terms of its water depth, clarity, and site disturbance conditions. A Secchi Disk will be used to

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:48:10 AM
Subheading within 6.2.10?

Seems to be some redundancy with 6.2.10, which could be resolved if both sections were combined/restructured.

J. Gonzalez, 10/8

6.2.12 Socioeconomics

The Socioeconomic analysis will include demographic and economic data for the Project Area. Data analyzed will include Mod IV data for property assessments and characteristics (available from the New Jersey Department of the Treasury), records of property transactions, and information on revenue, profitability or employment levels of area businesses, if available.

The principal issues of concern regarding socioeconomics are whether the proposed project would result in significant adverse social, economic, or demographic impacts within the Study Area. Adverse impacts resulting from the build conditions may include the direct displacement of residents and/or businesses. Impacts to businesses would also include the loss or relocation of the any businesses and associated employees. Economic impacts for the No Action Alternative will also be assessed. These impacts may include operating losses, lost wages, loss of tax revenue from flooded uninhabitable buildings, and the cost to restore damaged buildings. In addition, impacts to emergency services will also be assessed. This may include disruptions to emergency services caused by construction activities, as well as potential impacts caused by the implementation of the Project alternatives (such as installation of flood gates across streets).

In addition, indirect impacts on the Study Area will be assessed. Indirect impacts are those that are caused by the Project but may occur at a later point in time. Indirect impacts may result from changes in land use or population density that could, in turn, have an indirect impact on the Study Area. Impacts may include increases in residential rents or the indirect displacement of businesses due to changes in market conditions.

As discussed in Section 5.3, as the project concepts are developed and impacts to adjoining communities are identified, the Secondary Study Area for Socioeconomics will be developed. This will include those areas where additional significant impacts (beyond those that are included within the limits of the Study Area) are identified.

6.2.13 Land Use/Zoning

Land use and zoning in the Project Area will be mapped and described, and the impacts of the Build Alternatives on these land uses will be characterized. The analysis will also identify open space (local, county, state, and federal parkland) through the use of GIS data layers, Recreation Open Space Inventory (ROSI), and field verification. As part of this analysis, we will evaluate view corridors, building character, local landmarks and overall community character. Field reconnaissance surveys and interviews will be conducted to supplement and/or corroborate the findings of public documents, maps, and GIS data.

The EIS will describe the existing and proposed future land use and zoning within the Study Area and examine the impacts of each of the Build Alternatives. This section of the EIS will examine each alternative's consistency with the existing land uses as well as proposed land uses within the Project Area as described in local master plans (such as the Hoboken Master Plan, last revised 2010) and redevelopment plans for Jersey City, Hoboken, and Weehawken, including the Western Edge Redevelopment Plan (2015) and Hoboken Yard Redevelopment Plan (2014). This section will also evaluate the project alternatives' consistency with local and regional land use policies such as the City of Hoboken's Green Infrastructure Plan (2013).

6.2.14 Environmental Justice

The Environmental Justice (EJ) analysis will focus on low-income, minority, and Hispanic communities pursuant to the requirements of Executive Order (EO) 12898. Under EO 12898, federal agencies are required to determine whether proposed actions (those that are undertaken directly by the agency or are

J. Gonzalez, 10/8

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:51:10 AM
as mentioned above - if the scoping document is going to reference impact intensity, it should define those terms clearly

Number: 2 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 8:51:59 AM
what about potential beneficial impacts from construction jobs and economic benefits resulting from avoided losses/avoided impacts in future storms?

J. Gonzalez, 10/8

funded or approved by the agency) would have a disproportionate adverse environmental impact on EJ populations.

Our analysis will evaluate the presence of EJ populations based on the U.S. Census Bureau's 2010 Census of Population and Housing, as well as data from the American Community Survey 2009-2013. Demographic data will be aggregated on the census block, census block group and census tracts for the Study Area and will be compared to the Hudson County and New Jersey as a whole. The analysis of impacts from the Project's Build Alternatives will follow the guidance and methods within the Council on Environmental Quality's *Environmental Justice Guidance under the National Environmental Policy Act.* (December 1997). The regional thresholds identified in the Regional Plan for Sustainable Development (RPSD) that was prepared by Together North Jersey (TNJ), a planning consortium established in part by the New Jersey Transportation Planning Authority, (NJTPA) the Metropolitan Planning Organization for North Jersey, will be followed to further identify EJ communities. The RPSD provides thresholds based on a variety of socio-economic characteristics including, but not limited to, income and poverty, race, age and physical mobility.

The Project's public participation program will also be summarized in this section, with a focus on the public participation of low-income and/or minority populations.

6.2.15 Visual/Aesthetic Resources

We will evaluate and analyze potential impacts the Project may have on visual resources and viewers. We will identify view corridors and visual resources within the Study Area, such as the Hudson waterfront and views of historic resources such as the Hoboken Terminal. As part of this analysis, we will determine the level of impact to these resources for each of the three Build Alternatives. Our study will also discuss practical design mitigation and enhancement elements for each alternative, in terms of construction and design-related mitigation measures. As part of our analysis, key consideration will include aspects of the Project that partially or totally block a view corridor or a natural or built visual resource.

6.2.16 Infrastructure

6.2.16.1 Structures

For the purposes of this EIS, the various types of structures within the Study Area have been divided into three major broad categories:

- All types of buildings and waterfront structures
- Streets
- Transit and Railway Structures

The location of the Project's three Build Alternatives may have impacts on either one or more of these three types of infrastructure categories. During the course of the Project, infrastructure information such as spatial location, type and other applicable features will be collected and documented either in a GIS database or in CAD basemap. Requests for information will be sent to a variety of sources such as Hoboken and Jersey City, Weehawken, NJ Transit, Port Authority of New York and New Jersey (PANYNJ), Department of Homeland Security (DHS), Hudson County, utility companies and others. This information will be screened to ensure that the most recent datasets are used to be included in the base GIS database or the CAD base map. It should be noted that due to security reasons, information on certain critical infrastructure assets that will be assessed in the Project may not be available for public use. The data inventory for building

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:55:19 AM
This section is lacking a discussion of analysis methodology, and does not discuss urban design/neighborhood character. How will those be assessed? A key issue raised at the last CAG meeting was how the potential solutions would 'blend in' (stated above) to the existing waterfront and community - how will that be assessed?

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:53:10 AM
First person

Number: 3 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:53:14 AM
first person

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:53:22 AM
first person

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 8:53:30 AM
first person

Number: 6 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 9:06:44 AM
Hazus?

J. Gonzalez, 10/8

and waterfront structures will include but will not be limited to critical infrastructure buildings/facilities such as hospitals, fire stations, utility substations; residential and commercial buildings; and type and condition assessment of the various types of waterfront structures such as bulkheads, seawalls, timber cribbing and others. The preliminary 2013 FEMA floodplain (with 2015 updates) will be utilized to understand the flooding risks from coastal storm surge for various types of buildings. Additionally, structures that have been flooded during past rainfall events will be identified.

The footprint of the three Build Alternatives will be placed into the CAD basemap and the impacts from each of these components will be analyzed for each of the applicable three major broad infrastructure categories. A condition assessment and load rating analysis will be performed for various segments of waterfront structures such as bulkheads, seawalls, cribbing structures and others to setup the baseline conditions for these structures. The load rating analysis of waterfront structures will inform and guide the development of various *Resist* components that can constructed safely on the existing waterfront.

During the course of the project, an integrated coastal and stormwater hydrodynamic model will be developed using Danish Hydraulic Institute's (DHI) MIKE model system to evaluate the flood depths from a combination of coastal storm surge and rainfall events in existing conditions. Coastal storm conditions for various recurrence intervals that were developed as part of the 2013 FEMA's Preliminary Flood Insurance Study for New York and New Jersey will be utilized. The model will incorporate appropriate hydrologic and hydraulic modeling methods for analyzing rainfall induced flooding within the Study Area. The MIKE model system will provide the flooding water depth at various types of infrastructure such as building, streets and critical infrastructure.

Upon development of the project's concepts and alternatives, the existing conditions model will be updated to reflect these components (also referred to as Proposed Conditions Model). The proposed condition model will provide the effectiveness of each concept in reducing flood levels at various types of infrastructure from coastal storm surge and rainfall events. The Project will also evaluate structural, geotechnical, traffic, urban design aspects such as access, views and quality of life impacts to affected building and waterfront structures for each of the proposed concept and build alternatives.

6.2.16.2 Utilities

The Study Area includes an existing utility network consisting of underground and overhead utility facilities comprising of PSE&G, United Water, North Hudson Sewerage Authority, Verizon, and Cablevision. The EIS will discuss utilities and consider the impacts to the existing utility network by the components of the proposed improvements. High risk utility impacts will be identified and evaluated as the potential flood risk reduction measures are further defined through the EIS process.

6.2.16.3 Circulation

A schematic plan will be prepared for the local road and transportation network that can be expected to be affected or involved by the flood risk reduction plans developed under this project. Subject to concurrence by NJDEP, we have identified a network of 48 intersections, which represents the primary roadways into and out of the Study Area as well as additional primary routes that provide circulation within the city. The schematic plan will be a clear and simple presentation of the affected street segments and access routes and how they are used and by what travel modes. It will also display important city destinations that generate significant traffic demand such as parks, transportation hubs and major private and public offices.

J. Gonzalez, 10/8

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Number: 1 Author: jgonzalez Subject: Highlight Date: 9/8/2015 9:10:47 AM
Specify floodplain, Preliminary FIRMs?, including 100-year and 500-year?

Number: 2 Author: jgonzalez Subject: Highlight Date: 9/8/2015 9:14:26 AM
How will this model account for unknowns in the NHSA system?

Number: 3 Author: jgonzalez Subject: Inserted Text Date: 9/8/2015 9:44:26 AM
(also referred to as an Existing Conditions Model)

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 9:46:14 AM
Missing a discussion of bicycle-pedestrian circulation and analysis

Number: 5 Author: jgonzalez Subject: Highlight Date: 9/8/2015 9:44:55 AM
first person

J. Gonzalez, 10/8

6.3 Indirect and Cumulative Impacts

As required by NEPA, the analysis will also include an examination of Cumulative Impacts. Cumulative Impacts are incremental actions that, individually, may not represent a significant environmental impact; however, when taking into consideration other past, current, proposed, or reasonably foreseeable actions with similar impacts, the overall result may be significant. Often, individual actions do not result in adverse impacts; instead, adverse impacts arise from the aggregated incremental impacts of many separate actions over the course of time.

The Cumulative Impacts analysis will begin by identifying other nearby past, current or proposed and/or in-development independent projects, such as those identified in the NJDEP Action Plan Amendment 12 (published April 22, 2015). In order to determine which projects will be included in this analysis, we will follow the CEQ's guidance on Cumulative Impacts which identifies the following steps:

- *Step 1: Determine the significant cumulative impacts (direct and indirect) from the Project.* We will determine, for each discipline of study, what resources (natural as well as the built environment) will be impacted.
- *Step 2: Establish the geographic scope.* We will determine the spatial extent of the impacts identified in Step 1.
- *Step 3: Establish the time frame for analysis.* We will determine how long the impacts identified in Step 1 will last (e.g., temporary during construction, or permanent impacts).
- *Step 4: Identify other actions affecting the resources, ecosystems and human communities of concern.* We will identify other projects within the geographic extent identified in Step 2 that have impacts to the resources identified in Step 1, whose own impacts will occur within the same timeframe for those resources established in Step 3.

The Alternatives Analysis and recommendation of the Preferred Alternative will consider the probable environmental impacts from other projects and evaluate that in conjunction with the anticipated direct and indirect impacts from the Project's Build Alternatives. A focus will be made on potential impacts to vulnerable communities, notably Environmental Justice areas and locations that have historically received significant amounts of flooding. The Project's impacts to flooding will be examined in conjunction with other independent projects' (identified through the steps above) impacts on flooding patterns. Special consideration will be taken as to whether adjoining areas not protected by the Project (such as portions of northwestern Jersey City) are adversely impacted by the Project and other independent projects. The analysis will include coordination with other independent projects to help identify and address possible impacts.

Ultimately, DEIS will aim to recommend a Preferred Alternative whose combined efforts with other identified projects can best meet the Project's Purpose and Need while minimizing cumulative adverse environmental impacts to the community. If adverse cumulative impacts are identified, this analysis will aid in the identification of potential mitigation measures that can be employed or incorporated into the design of the Preferred Alternative.

6.4 Conclusion

The EIS conclusion will consist of a summation of the findings of each of the technical studies, identifying and providing the reasoning for the recommendation of the Preferred Alternative. This recommendation will be based off of the alternatives analysis conducted for each discipline, taking into consideration a balance between constraints, including environmental and community impacts identified in each discipline, the anticipated cost of each alternative, engineering feasibility, and the ability to meet the Project's Purpose and Need.

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Number: 1 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 9:50:06 AM
This section should discuss potential for cumulative impacts over various build years (I didn't see the build year in the document previously either).

Number: 2 Author: jgonzalez Subject: Sticky Note Date: 9/8/2015 9:50:15 AM
There won't be a separate construction chapter? As different components may be built at different times, there may be a need for a construction worst-case scenario.

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 10/8/2015 7:04:33 PM
This section should identify other infrastructure projects that we already know of which will be considered for the analysis, such as the BASF Stormwater Park, the Hoboken Terminal Long Slip Canal Project, the NHSA Long Term Control Plan, and note that additional projects will be considered as identified during the planning process.

Number: 4 Author: jgonzalez Subject: Highlight Date: 9/8/2015 9:48:11 AM
Note - either here or in alternatives analysis section above - that a table will be provided summarizing the different potential impacts of all alterantives

J. Gonzalez, 10/8

Sliker, Laura

From: DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent: Tuesday, October 13, 2015 9:33 AM
To: Smith, Lawrence
Cc: Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject: FW: Comments on RBD Hudson Draft Scoping Document

Larry,

6 of 10

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Naomi Hsu [mailto:HsuN@jcnj.org]
Sent: Friday, October 09, 2015 1:35 PM
To: DEP rbd-hudsonriver
Cc: Douglas Carlucci; Gregg Lanez
Subject: Comments on RBD Hudson Draft Scoping Document

Dear Mr. Rosenblatt,

We recognize the importance of the Rebuild by Design Hudson River project and are pleased to be working collaboratively with the project team.

While the purpose of the project is to reduce flood risk in Hoboken primarily, we feel that it is also important that the project recommendations do not have adverse impacts on the citizenry and economic development of Jersey City.

Specifically, we respectfully suggest that the draft scoping document be revised to reflect the following goals:

- The project shall consider flooding in neighboring municipalities outside the study area, and no concept or alternative shall exacerbate flooding in those areas. No concept or alternative shall result in water displacement that will negatively affect land in Jersey City.
- No existing or currently-anticipated Jersey City land use shall be negatively impacted by construction related to this project.

- No concept or alternative shall negatively affect investment in Jersey City.

Also, in the interest of the public, a budget outline should be provided for the administrative, material, and construction cost of the project. An itemized list should be displayed on the Rebuild by Design website for public access for the overall project.

Thank you.

Doug Carlucci, Office of the Mayor and Executive Steering Committee member
Gregg Lanez, Jersey City Environmental Commission and Citizen Advisory Group member
Naomi Hsu, Senior Planner and Executive Steering Committee member

Naomi Hsu, AICP, PP
Senior Transportation Planner
Direct: 201-547-5021
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Jersey City
City Planning Division
30 Montgomery Street Suite 1400
Jersey City, NJ 07302-3821
Phone: 201.547.5010
Fax: 201.547.4323

SOME NOTES FROM JOHN P CARE OF HOBOKEN REGARDING FLOOD PROTECTION AND HURRICAN SANDY

10/9/15

EMPHASIS PUBLIC UNDERSTANDING WE HAVE NO STREAMS WHICH WILL DRAIN OUR HEAVY RAIN OR SURGE WATERS AWAY.

OUR NATURAL DRAINAGE IS NOW OUR COMBINED STORM AND SANTITARY SEWERS WHICH HAVE A LIMITED CAPACITY

HIGH TIDES AND HEAVY RAIN EVENTS HISTORICALLY FLOOD HOBOKEN AND ADJOINING AREAS

DON'T CONFUSE WHAT HAPPENED WITH SANDY AND THINK WE CAN JUST PUMP WATER OUT WITH BIG ENOUGH PUMPS WE NEED TO PREVENT IT FROM GETTING IN THEN OPITIMIZE OUR SEWERAGE PLANT BY SLOWING DOWN TO DISCHARGE GETTING TO THE PLANT AND LENGHTING THE TIME TO PROCESS IT.

THE PUBLIC NEEDS TO UNDERSTAND THE FINANCIAL, ENGINEERING AND SPACE LIMITATIONS WHICH PREVENT THE SEWERAGE PLANT FROM EXPANDING

THEN PUBLIC SHOULD UNDERSTAND THAT THERE ARE MANY PARTS TO THE PUZZLE OF "FIXING" OUR FLOOD PROBLEM. SUCH AS THE BASF SITE, WORKING TOWARDS SEPARATING STORM RUNOFF AND SANITARY SEWERS IN THE NORTH AND WEST PART OF TOWN WHICH ARE BEING DEVELOPED

THE PUMBLIC NEEDS TO UNDERSTAND THAT JUST HAVING BIGGER PUMPS IS NOT GOING TO SOLVE EVERYTHING. YOU CAN'T PUMP THE ATLANTIC OCEAN OUT WHEN IT HAS BREACHED OUR SHORELINE AND THE IS A VOID TO FILL.

AS SOME POINT THERE MOST LIKELY WILL BE "A LINE" OF PROTECTION THAT YOU ARE EITHER ON THE RIVER SIDE OF INSIDE AND PROTECTED. THE DECISIONS AND COST BENEFIT ANALYSIS, THE POLITICS AND ENGINEERING WILL BE TRICKY. WHAT DO WE COLLECTIVELY OWE TO PRIVATE LAND LORDS. WHAT IS THE EXPECTED CONTRIBUTION OF THOSE THAT ARE NEAR THE WATER FRONT. IN PROTECTING A PIECE OF PROPERTY THAT IS NEAR THE RIVER ARE WE PROTECTING THE REST OF US.

IN LOOKING AT FLOOD PROTECTION WE NEED TO MAKE SURE OUR EMERGENCY SERVICES ARE RESILIANT. WE NEED TO MAKE SURE THERE ARE WAYS TO GET OF HOBOKEN IF IT BECOMES AND ISLAND AGAIN.

WE LIVE BY THE WATERFRONT BECAUSE WE ENJOY IT. WE WANT TO PROTECT OUR COMMUNITY FROM FLOOD RISKS BUT WHAT IS THE BALANCE BETWEEN THAT AND ATHETICS AND QUALITY OF LIFE. WHAT ARE THE COSTS.

WE NEED TO PROTECT OUR CRITICAL INFRASTRUCTURE. THE PATH TRAIN. LIGHT RAIL, TRANSIT TERMINAL, FERRY TERMINALS ARE ALL IMPORTANT TO OUR LOCAL AND REGIONAL NEEDS.

HOBOKEN AS A TRANSIT HUB NEEDS TO FUNCTION SO THE REGION (ie. NYC) CAN EVACUATE IN CASE OF AN EMERGENCY OR DISASTER (eg. 9-11).

WE ARE LOCATED BETWEEN THE HOLLAND AND LINCOLN TUNNEL AND MAINTAINING A CONNECTION BETWEEN THEM ON THE WEST SIDE OF THE HUDSON IS IMPORTANT FOR EMERGENCY NEEDS.

HOW DO WE TIE BACK OUT “RESIST” EDGE TO ADJOINING HIGHER TOPOGRAPHY.

WHAT TYPE OF MANUAL OR AUTOMATIC FLOOD CONTROL DEVISES DO WE DEPLOY ACROSS ROAD AND PATHWAYS WHICH WILL REMAIN OPEN EXCEPT FOR FLOOD EVENTS. WHAT IS THE RELIABILITY OF THESE DEPLOYMENTS AND WHO IS RESPONSIBLE FOR THEM

HOW IS THE TRAIN TERMINAL PROTECTED ALONG WITH THE PATH “TUBES”. WE CAN’T LET WATER GO DOWN INTO THAT SYSTEM AND CAUSE THE DAMAGE IT DID AGAIN AND AS WE SAW IT DO IN THE FLOOD IN 1992. WE PROPBABLY NEED TO GIVE INTO THE FACT THE TRAIN STATION WILL CONTINUE TO FLOOD ON A MORE FREQUENT BASIS. IT NEDS TO BE WET FLOODPROOFED SO THAT IT CAN BE UP AND GOING AGAIN. A LARGE PORTION OF IT IS ALSO OVER THE RIVER BEYOND THE BULKHEAD LINE.

IN FILLING IN THE LONG SLIP WHAT IS THE TOPOGRAPHY. WHAT DOES THE ENGINEER PROJECTIONS OF HOW WHAT CAN BE KEPT OUT.

THE LEFRAK PROPERTY JUST SOUTH OF THE RAIL YARD IN HERSEY CIT WHICH IS PRESENTLY UNDEVELOPED SHOULD BE BUILT TO A HIGHER ELEVATION IN THAT THIS IS THE SOUTH END OF THE PROECTIVE EDGE.

HOW SO YOU PLACE A FLOOD BARRIER ACROSS AN ACTIVE TRAIN YARD IS A DIFFICULT ENGINEERING CHALLENGE.

PEOPLE NEED TO UNDERSTAND THAT IN NJT AND THE NYNJPA PROTECTING THE TERMINAL IT OFFERS PROTECTION TO OUR SELVES. A LARGE PORTION OF THE WATER THAT FLOODED HOBOKEN CAME THROUGHT THE NJ TRANSIT YARD AND INTO THE SOUTH END OF OUR CITY.

IN THE NORTH END OF HOBOKEN WE HAVE AND OPPORTUNITY TO CHANGE THE TOPOGRAPHY IN THAT IT IS PUBLIC LAND AND WE CAN BE CREATIVE.

WE NEED PEOPLE TO BE PREPARED TO SHELTER IN PLACE.

THE FLOOD ZONE IN A DENSELY POPULATED URBAN AREA SUCH AS HOBOKEN IS NOT A NEAT LINE. “MICRO TOPOGRAPHIES” OF BACKYARDS, FRONT STOOPS AND AREAWAYS, IS YOUR NEIGHBORS BASEMENT WATER TIGHT, ARE YOU NEXT TO AN ALLEY, HOW HIGH YOUR NEIGHBORS BACK YARE IS ALL CONTRIBUTE TO BASEMENT, GARDEN LEVEL, GROUND FLOOD FLOODING.

THERE IS 14 BILLION DOLLARS OF TAX RATEABLE IN HOBOKEN. THE COST OF PROTECTING THE CITY COLLECTIVELY KEEPS PROPERTY VALUES HIGH AND MAINTAINS OUR QUALITY OF LIFE AND SAFETY.

REVIEW BACK CHECK VALVES AND OTHER MEASURE THAT CAN BE TAKEN.

THERE IS A MISCONCEPTION THE THE SEWER FLOODED SOME PEOPLES HOUSE. WHERE WATER CAME UP THROUGH BASMENT DRAINS “ ON THE EDGE” OF THE FLOODING IT WAS THE STORM SURGE THAT OVER CHARGED THE COMBINED STORM AND SANITARY SEWER SYSTEM. THE SANITARY SEWERAGE THAT CAME INTO PEOPLES HOMES WAS “THE TOP” OF WHAT WAS IN THE SYSTEM AND PUSH BACK INTO SOME HOMES THAT MAY NOT HAVE HAD WATER “POURING” INTO THEM. BUT THE PROBLEM IS

MISCONCIEVED BY SOME. THE SYSTEM BECAME SUPERCHARGED AND MANIFESTED ITSELF BY BACKING UP.

Page: 8

Number: 1 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:42:10 PM
Quality of life is a key co-benefit not mentioned here

Number: 2 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:43:18 PM
seeks to

Number: 3 Author: jgonzalez Subject: Sticky Note Date: 9/7/2015 10:43:59 PM
Insert reference to Hudson Waterfront Greenway?

Number: 4 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:44:15 PM
seeks to

Number: 5 Author: jgonzalez Subject: Cross-Out Date: 9/7/2015 10:44:24 PM

Number: 6 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:46:25 PM
should be referenced above?

Number: 7 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:47:07 PM
consider impacts from is different than mitigating risk from, protecting against potential impacts from...

Number: 8 Author: jgonzalez Subject: Highlight Date: 9/7/2015 10:50:47 PM
same comments as above

Number: 9 Author: jgonzalez Subject: Inserted Text Date: 9/7/2015 10:55:57 PM

J. Gonzalez, 10/8

infrastructure improvements to allow for greater storage of excess rainwater (Store), and water pumps and alternative routes to support drainage (Discharge). The proposal was selected in the first round of RBD grants and HUD has awarded $230 million to the State of New Jersey for the "Hudson River Project: Resist, Delay, Store, Discharge" (the Project). As stated in HUD's Federal Register (FR) notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11], the award is to assist in the funding of Phase 1 of the Project. Phase 1 includes the feasibility, design and environmental analysis of the entire comprehensive project, as well as funding for the implementation of the Resist component.

The RBD Competition delivered conceptual strategies. Those concepts must be further developed and evaluated for feasibility. Each of the concepts will be reviewed against on-the-ground, real world conditions to verify that the strategies can be built and that they will be effective. Because the need for solutions is urgent, the feasibility analysis for the Project will occur simultaneously with an environmental review. This will make the process more efficient and offer a faster route to implementation.

2.1 Regulatory Framework

HUD's award comes in the form of CDBG-DR funds which require compliance with NEPA and its associated regulations as outlined in 24 CFR 58. When not otherwise accounted for by HUD's regulations, the Project is also subject to the CEQ NEPA regulations at 40 CFR ~~parts~~ 1500-1508. HUD has further outlined the Project's environmental review compliance requirements in FR notice 79 FR 62182, published October 16, 2014 [Docket No. FR-5696-N-11]. The Project's compliance with the environmental laws and authorities as stated in HUD regulations (24 CFR 58.5 and 58.6), including compliance with the National Historic Preservation Act (NHPA) of 1966, Floodplain Management and Wetland Protection Executive Orders (EOs) 11988 and 11990, Environmental Justice EO 12898, the Coastal Zone Management Act of 1972, and the Endangered Species Act of 1973 will also be demonstrated.

The State of New Jersey, acting through the New Jersey Department of Community Affairs, is the responsible entity that has assumed environmental responsibilities for the Sandy CDBG-DR programs in accordance with 24 CFR 58.1(b)(1). The ~~New Jersey Department of Community Affairs~~ has designated NJDEP to assist with the environmental review. NJDEP will prepare the EIS in accordance with HUD's procedures for NEPA found at 24 CFR Part 58, et al. A Notice of Intent to prepare an EIS (as defined at 40 CFR 1508.22) was prepared in accordance with CEQ regulations, and represented the beginning of the public scoping process as outlined in 40 CFR 1501.07. The NOI was published on September 8, 2015. As part of the public scoping process, this Draft Scoping Document has been prepared and submitted for public comment. The Draft Scoping Document outlines in detail the proposed Project actions as well as a description of areas of impact to be studied in the Draft EIS.

Once comments on the Draft Scoping Document have been compiled from the public, the Final Scoping Document will be developed. This will mark the beginning of the concept development and screening phase, which will invite input from the community and public stakeholders. The concept screening will lead to the selection of three Build Alternatives, which will then undergo further analysis and screening with additional community input. This screening process will then lead to the selection of the Preferred Alternative. The Draft EIS will be the culmination of this process. The Draft EIS will be the culmination of this process. The Draft EIS will describe the alternatives analysis process, the public participation process, the affected natural as well as built environment, an evaluation of impacts and finally the selection of the Preferred Alternative.

Upon completion, the Draft EIS will be and made available to the general public for comment, as well as circulated to stakeholders, groups and government agencies that have been identified as having particular interest in the Proposed Project. A Notice of Availability will be published in the Federal Register and local

Sliker, Laura

From: DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent: Thursday, October 01, 2015 1:43 PM
To: Smith, Lawrence
Cc: Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

3 of 5

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Mceathron, Kimberly [mailto:McEathron.Kimberly@epa.gov]
Sent: Thursday, September 24, 2015 2:34 PM
To: DEP rbd-hudsonriver
Subject: FW: DEP Release: DEP Seeks Community Input on $230 Million Flood Resiliency Project for Hoboken, Jersey City and Weehawken

DEP and Rebuild By Design Team,

In my capacity as a Hoboken Resident, I hereby submit the following comments regarding the proposed project:

1. The design has a plan for source reductions but only for reductions in *stormwater* contributions to the system. However, stormwater is not the only source of flow to these collection systems during wet weather. It is counterproductive to solely target stormwater and seemingly ignore sanitary sewage sources when the system is combined.
2. In addition, reductions at the source makes more sense financially and logistically than building infrastructure to store, pump and treat after the fact.
3. The DEP and the Rebuild by Design Team should not only evaluate the following options but should incorporate each into the plan for a holistic and comprehensive approach to reducing the multiple sources of flow and concurrently flooding during wet weather events within these combined sewer municipalities:
    a. Industrial and commercial users – a targeted approach to prioritize the largest contributors of sanitary sewage to the system and to implement a plan to batch discharge or store flow until after wet weather

events, through incentives, outreach, mutual agreement, City sewer use ordinances, pretreatment requirements etc.;

b. Public Education and Outreach – implement an educational program both at schools and elsewhere regarding impacts of residents using showers, washing machines, dishwashers etc. during wet weather events (I frustratingly witnessed many residents haphazardly flushing toilets and showering while the streets of Hoboken were still flooded post-Sandy and not understanding the connection between the drains in their apartments and the flood-water in the streets they were walking through);
c. Low flow toilets, fixtures and shower heads – implement incentives, cost-share initiatives, requirement for new development and public education and outreach to decrease water usage (see EPA's WaterSense program which states reductions in as much of 13,000 gallons per family per year by replacing old toilets with WaterSense models); and
d. Potable Water Sources – implement electronic water main leak detection, install/update water meters.

The NYC sewer system has reported a flow reduction of 200 MGD utilizing items 3b through 3d above. I'm unaware of any of these being considered and implemented in Hoboken. I understand that the focus of the Rebuild by Design is that, rebuilding and designing, but I want to be sure that flow to the entire system is being evaluated.

Thank you,

Kim

~*~

Kimberly McEathron
DECA-Water Compliance Branch
U.S. Environmental Protection Agency
290 Broadway - 20th Floor
New York, NY 10007
Phone: (212) 637-4228
Fax: (212) 637-3953

From: Gutierrez, Claudia
Sent: Tuesday, September 22, 2015 9:18 AM
Subject: DEP Release: DEP Seeks Community Input on $230 Million Flood Resiliency Project for Hoboken, Jersey City and Weehawken

FYI

IMMEDIATE RELEASE
September 18, 2015

Contact: Caryn Shinske (609) 984-1795
Bob Considine (609) 292-2994
Lawrence Hajna (609) 984-1795

DEP SEEKS COMMUNITY INPUT ON $230 MILLION FLOOD RESILIENCY PROJECT FOR HOBOKEN, JERSEY CITY AND WEEHAWKEN
PUBLIC INVITED TO SEPTEMBER 24 MEETING AT HOBOKEN MULTI SERVICE CENTER

(15/P76) TRENTON - The Department of Environmental Protection (DEP) will hold a public meeting on Thursday, September 24, to receive community input on the scope and priorities of a $230 million flooding

resiliency project for Hoboken, Weehawken and Jersey City.

The proposed project is part of the U.S. Department of Housing and Urban Development's Rebuild by Design (RBD) competition to establish ideas to improve physical, ecological, economic and social resilience in areas affected by Superstorm Sandy in October 2012 and takes a multifaceted approach to address flooding from major storm surges and high tides as well as heavy rainfall events. The proposed RBD-Hudson River project would encompass all of Hoboken and parts of Weehawken and Jersey City.

The meeting, open to all interested residents, will be held from 7 p.m. to 9 p.m., September 24 at the Hoboken Multi Service Center, at 124 Grand Street. Residents may also submit comments to the DEP via email to rbd-hudsonriver@dep.nj.gov or by mail to David Rosenblatt, Director, Office of Flood Hazard Risk Reduction Measures, 501 East State Street, Mail Code 501-01A, Trenton, NJ 08625-0419. All comments should be received by October 9, 2015.

A copy of the draft scoping document for the RBD-Hudson River project, which the public can base their comments on, can be found online at: http://highpoint.state.nj.us/dep/floodhazard/docs/rbd-hudson-river-working-draft-scoping-document.pdf

"The Christie Administration is committed to using a comprehensive resiliency strategy to protect lives and property from the consequences of dangerous flooding," said DEP Commissioner Bob Martin. "The Rebuild by Design project for these communities is an important piece of this strategy by calling for a cooperative solution to flooding. It is a major undertaking that will require extensive input from leaders and residents in the three communities impacted by this project."

The U.S. Department of Housing and Urban Development (HUD) launched the RBD competition in the summer of 2013 and awarded the DEP with $230 million in Community Development Block Grants to plan, design and construct the proposed project Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken.

The award requires compliance with the National Environmental Policy Act (NEPA), which includes this public scoping process. The draft scoping document outlines the purpose and need of the project, its proposed actions and a description of areas of impact to be studied in an Environmental Impact Statement, which is also required by NEPA.

After comments and public input on the draft scoping document are received, a final scoping document will be compiled. This final scoping document will start the concept development and screening phase of the project.

The DEP, in conjunction with Hoboken, Jersey City and Weehawken, also held a public meeting on June 23 to engage community involvement and to introduce residents to meet contractor, Dewberry Engineers, Inc., which was hired to complete the project's Feasibility Study and Environmental Impact Statement.

Hoboken, Jersey City and Weehawken were hit hard by Sandy's storm surge but have also been susceptible to flooding in general. The proposed project calls for a combination of hard infrastructure and soft landscaping to defend against flood waters; interconnected green infrastructure to store and control stormwater runoff; and water pumps and other drainage projects to support controlled drainage during the storm and after it passes.

The project is part of $920 million HUD has approved for Rebuild By Design projects in New Jersey, New York City and New York State for resiliency projects funded by the agencies Community Development Block Grants- Disaster Recovery (CDBG-DR) program for Sandy-impacted areas.

For more information on the Hudson River project and the Rebuild By Design Meadowlands project, visit:

http://www.nj.gov/dep/floodhazard/index.htm

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http://www.nj.gov/dep/newsrel/unsub.htm

Sliker, Laura

From: Smith, Lawrence
Sent: Monday, October 05, 2015 10:44 AM
To: Doss, Gary
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Lawrence I. Smith PP, AICP
Senior Planner
Dewberry
600 Parsippany Road, Suite 301
Parsippany, New Jersey 07054
973.576.9647
973.428.8509 fax
www.dewberry.com

From: Sherman, Clay [mailto:Clay.Sherman@dep.nj.gov]
Sent: Monday, October 05, 2015 10:36 AM
To: Smith, Lawrence <lismith@Dewberry.com>
Cc: Spahn, Kenneth <kspahn@Dewberry.com>; Sears, Michael (NJ) <mpsears@Dewberry.com>; Parab, Rahul <rparab@Dewberry.com>; Reinknecht, Dennis <Dennis.Reinknecht@dep.nj.gov>; Schwarz, Frank <Frank.Schwarz@dep.nj.gov>; DEP rbdh-archive <rbdh-archive@dep.nj.gov>
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

Two more Scoping comments copied below.

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: tradetalks@aol.com [mailto:tradetalks@aol.com]
Sent: Friday, October 02, 2015 5:03 PM
To: DEP rbd-hudsonriver; constituent.relations@gov.state.nj.us; parinellolaw@gmail.com; housinglocator@yahoo.com
Subject: Public Comment on Sustainable Materials for Rehabilitation / Re-Development.

RBD,

In April of 2009 we and our co-sponsors presented to NJ Stakeholders the Draft NJ Energy Plan @ Stevens Institute of Technology.

A tour of the first Mult-Fam L.E.E.D. (Gold) rated structure in the U.S. was enjoyed by the panel participants and research on Sustainable Building materials continued.

We would encourage the use of life & property saving alternative materials for new construction, retro-fit and revitalizing storm ravaged communities.

For demonstrations, samples, cost-savings comparisons to traditional materials and continuing education (C.E.C 1.5) please contact Veridian Consultants.

Forwarding approved "working" plans of masonry pages is a good first step - enabling us to demonstrate R-valus, Accoustic Fire retardant (4 hour) UL rating and pricing.

Also, a letter detailing our Sustainable Education (Welcome Centers)
for NJ was given to Gov.Christie's representative, Sec Donovan and those from RBD and The Rockefeller Group.

Please comment on concept.
I know the Gov.of NJ has read it - he is using the Sustainable "Parks" idea in the local media and on the National campaign trail.

Regards,
E.R. Liberatore
757 645-6868
ernie@Veridianllc.com

&

From: Mark Jackson [mailto:majackso@gmail.com]
Sent: Thursday, October 01, 2015 9:24 AM
To: DEP rbd-hudsonriver
Subject: Hoboken Flood Reduction

David,

It was a privilege to be invited to the scoping meeting last week. I am a four year Hoboken resident. I have a BS degree in civil engineering and my occupation is construction manager. I was unable to leave a comment so I decided to write one!

1) I think the hard barrier solution should be driven toward the permanent architectural alternatives in-line with riverfront "the steps" rendering and not the traditional temporary flood wall solution.

2) It was voices during the meeting, but one request is that the design include the actual long term permanent solution, and not a devalued design to fit the constraint of the current proposed $230M budget. It is very important to the community that the design is "done right," and not just another temporary "band-aid."

3) Green green green! The more soft green delay and store solutions the better!

4) The coastal flow map (figure 4) in the draft scoping doc was light on arrows. If it was worth any value, I observed the live surge flooding event in Oct 2012 from 5th and Jackson. The river water came from the south traveling north towards me.

It is very exciting to see progress on this critically important matter.

Regards,

Mark Jackson
133 Grand St. #4

“Low Hanging Fruit” project(s) community will appreciate:

1. Possibility of below grade permanent installation of pipeline beneath streets:

Current Hoboken street construction ends soon [week of Aug. 10, 15]:

Milling Schedule

July 27 – Bloomfield Street (Observer Highway up to 4th Street)

July 28 – Bloomfield Street (3rd Street to 8th Street)

July 29 – Bloomfield Street (7th Street to 12th Street, Southerly half of Intersection)

July 30 – Bloomfield Street (11th Street, Northerly half of intersection to 14thStreet)

July 31 – 8th Street (Castle Point Terrace to Hudson Street) and 9th Street (Castle Point Terrace to Hudson Street)

Aug. 3 – Madison Street (13th Street to 15th Street)

Resurfacing Schedule

July 29 – Bloomfield Street (Observer Highway up to 4th Street)

July 30 – Bloomfield Street (3rd Street to 8th Street)

July 31 – Bloomfield Street (7th Street to 12th Street, Southerly half of Intersection)

Aug. 3 – Bloomfield Street (11th Street, Northerly half of intersection to 14thStreet)

Aug. 4 – 8th Street (Castle Point Terrace to Hudson Street) and 9th Street (Castle Point Terrace to Hudson Street)

Aug. 5 – Madison Street (13th Street to 15th Street)

Line Striping/Pavement Marking Installation Schedule

Aug. 3 – Bloomfield Street Installation (Observer Highway up to 4th Street)

Aug. 4 – Bloomfield Street (3rd Street to 8th Street)

Aug. 5 – Bloomfield Street (7th Street to 12th Street, Southerly half of Intersection)

Aug. 6 – Bloomfield Street (11th Street, Northerly half of intersection to 14thStreet)

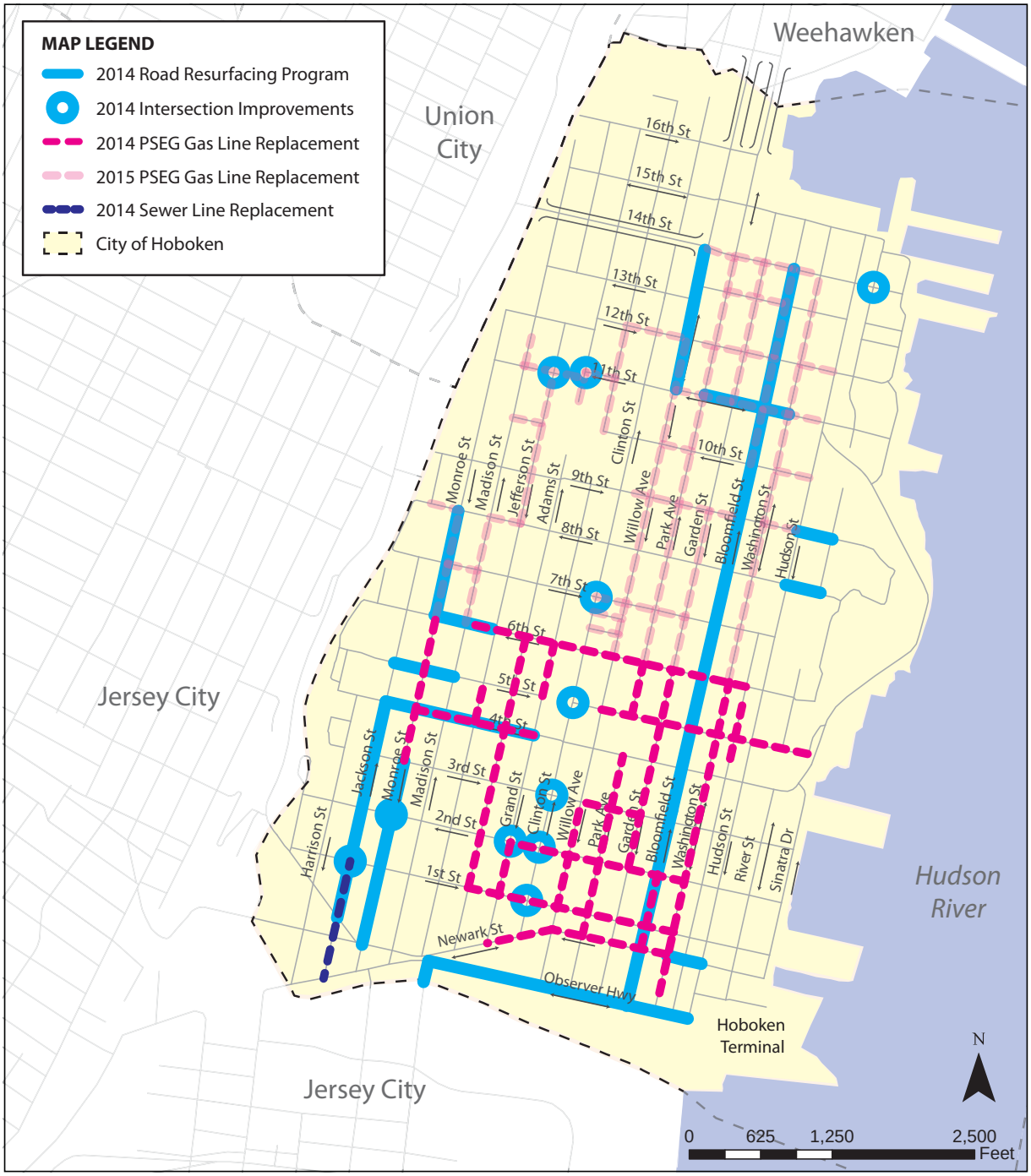
Aug. 7 – 8th Street (Castle Point Terrace to Hudson Street) and 9th Street (Castle Point Terrace to Hudson Street)

Aug. 10 – Madison Street (13th Street to 15th Street)

appears as though end of August some firm, maybe Dewberry, could open a street for plumbing fire truck pumper compatible pipelines / auxiliary hydrants for;

1] removal of flood waters.
2] supplemental fire suppression water delivery auxiliary to existing fire hydrants.

Following street map would indicate completed construction below street level that has yet to benefit from re-paving efforts. Although not ideal, in that scheduled below street level construction may have been completed, requiring re-opening any of these streets; the application of re-paving yet to occur opens a window to re-open a street for below described “one-off” project on a “trial basis” “low hanging fruit” project to install auxiliary pipeline below street grade to be accessed by appropriate sized hydrant at curb and upon higher grade level to pumping equipment to remove water from street.



Source: City of Hoboken, Hudson County, Public Service Electric & Gas, North Hudson Sewerage Authority

NOTE: Information outside of Hoboken city limits has not been verified.

June 24, 2014

2014 Road Resurfacing Program and PSE&G Gas Line Replacement

City of Hoboken
Department of Transportation & Parking

Result for Hoboken residents is witness “low hanging fruit” project that provides comfort toward any future inundation arriving prior to complete storm surge protection project(s) being ready for use.

North Hudson Sewerage Authority representative is aware of such a plumbing effort and is in favor of considering on a “trial basis”. Presumably there is at least one Hoboken street along which such auxiliary pipeline would contribute to fire fighting and be useful in speeding the removal of storm surge flood waters.

Such a small “one-off” project can be appreciated during next public meeting and compared in effectiveness, cost, etc. against entire project components in progress after the completion of said “one-off” project on a “trial basis”.

2. Fire Fighting within flood waters:

Commentary has circulated regarding damaged water mains, submerged hydrants and possible other damage to existing fire fighting water supply while knee deep flood water is plentiful.

The risk of damage to fire truck pump from ingesting trash laden flood water:

Surplus USPS delivery vehicle towed by fire truck to scene makes suitable flood water filter when;

a] glazing replaced by 1st layer of screen material, 2nd layer of finer grade installed interior to 1st layer.
b] additional screened water entry cut out of non-glazed area(s) if so desired
b] engine and driveline components upline of the suspension wheelbase removed.
c] towing package installed to front
d] fire pumper compatible pipe fittings installed
1] suitable flex/pivot finer grade screened interior pick-up tube installed

o] Optional pump installed within. See below.

Firefighters un-hitching, tipping off of wheelbase to lay in flood waters and connecting flexible, suction, hardline to, most likely “roof-top” connection enables filtered flood waters to be pumped for fire fighting.

3. Non-Fire Fighting within flood waters, ie. removal of flood water:

Non-fire fighting use of above modified surplus USPS vehicle(s) would be plumbed into the auxiliary hydrants for removal of flood waters understreet pipeline for fire truck pumping into existing drainage sump / Hudson river [or storm surge holding tank(s)].

Addition of a pump w/i the USPS vehicle will free up fire truck pump while adding power [electric] requirement. Like the Fire Truck use; flexible discharge hose required. No suction side hard line to be plumbed.

JOBs resulting from these equipment requirements:

Vocational Technical school students can modify USPS vehicle(s) for above purposes. At a rate of just one or two per school year there will be some for other communities to be sold to cover costs. Yet Open Sourcing will keep costs contained and profit motive out.

USPS vehicle laying on its side, while pumping, should be capable of ingesting a minimum of 2 inches of standing water so as to be useful in removing flood waters down to street surface level bounded by curbs and drains. Drains which can presumably be primed to handle 2 inch street water level at the curb. In consideration of 2 feet of more street level flood water at curb rending the drain system ineffective there is a need for suction side flexible hard line connection(s) from manual pickup wands to a removal suction side of either the above mentioned auxiliary street plumbing for such purpose, Fire Truck / USPSpump feeding discharge hose away from the area to fill appropriate reservoir/sump.

All plumbing shall be compatible with Fire Truck water connections.

It is hoped any of these 3 “test-projects” can be completed for use case testing during next flood surge event.

thanx,
steveb
7/29/15

Sliker, Laura

From: DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent: Thursday, October 01, 2015 1:44 PM
To: Smith, Lawrence
Cc: Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject: FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

4 of 5

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Mark Renna [mailto:mrenna@evergreenenv.com]
Sent: Saturday, September 19, 2015 11:21 AM
To: DEP rbd-hudsonriver
Cc: Jim Cannon (james.h.cannon@usace.army.mil); Lockwood, Susan
Subject: RBD Hudson - EIS Scoping Document Comments - Evergreen Environmental LLC 9-19-15

Dear David Rosenblatt, Director, Office of Flood Hazard Risk Reduction Measures:

What are the potential impacts to wetland and aquatic habitats in terms of acres? Please segregate by freshwater, tidal and open water wetland and aquatic resource impacts.

Please provide specific detail as to mitigation for such impacts as well as demonstration of proof of compliance with federal as well as state regulations regarding freshwater and tidal wetland and aquatic resource impacts.

Your documents make the following statements (Excerpted below in italics); please see our comments as follows:

4.0.3 Environmental Mitigation Design Elements
Creation of tidal and freshwater wetlands, with associated riparian vegetation, as well as living shorelines located along the Hudson River waterfront may be options to mitigate environmental impacts from the construction of coastal flood risk reduction system.

Comment: Wetland mitigation is performed in many ways with “creation” being only one type of mitigation and the most difficult and risky with higher failure rates. Other forms of wetland mitigation are restoration and enhancement. Mitigation should be conducted in accordance with the Federal Rules on Aquatic Mitigation of 2008. In those rules advanced

mitigation via successful wetland mitigation banks is cited as the number one preferred alternative for wetland mitigation. The mitigation alternatives analysis should consider wetland mitigation banking. Please note there is a wetland mitigation bank that serves this watershed as well as another mitigation bank proposed.

Freshwater wetlands found in the Project Area will be mapped; if there are impacts to these wetlands, mitigation would be required, usually at a 2:1 ratio. Required mitigation for project impacts will be evaluated, to determine the most efficient and effective type of mitigation, given existing site conditions and constraints.

Comment: All permitted impacts pose mitigation constraints to permittees "*given existing site conditions and constraints".* However, this is not a federal or state mitigation alternative selection criteria to be cited as a basis to restrict "efficient and effective" mitigation alternatives to onsite and local alternatives solely. Mitigation should be performed in accordance with the Federal Rules of 2008, with the assessment of onsite existing condition constraints being only one parameter, but not the sole defining parameter. The document focuses on freshwater wetland impacts, which we agree may occur. Other wetland impact types (tidal, subtidal, coastal) are very likely. The cited "usual" mitigation ratio is misleading as a 2:1 ratio is only codified in NJDEP regulations for the category of creation. As commented above, creation is only one type of wetland mitigation. The 2:1 ratio is not applicable to mitigation for all wetlands or for federally regulated wetlands as the federal regulations do not codify specific ratios and all wetlands in the study and impact area are likely to be under federal jurisdiction. Wetland mitigation is required to replace lost wetlands based on wetland functions, services and values lost in concert with areal replacement of at least a 1:1 ratio. Compliance with the 2008 Federal Rules on Mitigation should be specified. Mitigation banking should be assessed in the alternatives analysis and provided weighting commensurate with the Federal Rules and the success of advanced mitigation versus other categories of wetland mitigation.

We look forward to your response.

Sincerely,
Mark Renna

Mark Renna
Evergreen Environmental, LLC
www.evergreenenv.com
973/305-0643 (office)
973/356-7164 (cell)

NEW JERSEY FUTURE

137 West Hanover Street
Trenton, NJ 08618
(609) 393-0008 *Tel.*
(609) 393-1189 *Fax*
www.njfuture.org

Oct. 9, 2015

Office of Flood Risk Reduction Measures
NJ DEP
Attn. Dave Rosenblatt
501 E. State St.
Mail Code 501-01A
P.O. Box 420
Trenton NJ 08625-0420

Dear Mr. Rosenblatt:

Thank you for the opportunity to comment on the Draft Scoping Document for the Hudson River Rebuild By Design (RBD) project: Resist, Delay, Store, Discharge.

New Jersey Future is a nonprofit, nonpartisan organization that promotes responsible land-use policies to help revitalize cities and towns and create livable, resilient communities for all New Jersey residents. We are very interested in ensuring that this project maximizes the opportunity to keep people and property along the Hudson River safe from future natural disasters.

Our comments are focused on five main areas including the funding allocation, sea-level-rise projections, the concept screening matrix, vulnerable populations, and public involvement.

Funding Allocation

According to the draft scoping document, "[w]hile the funding allocation awarded in the CDBG-DR grant provides for the implementation of Phase 1 of the project, which includes the *Resist* component, the EIS and feasibility analysis will examine three Build Alternatives, as well as a No Action Alternative, for the entire comprehensive approach." Even if there is not enough funding for the entire project, the Phase 1 floodwall will not address flooding caused by smaller rainstorms, and perhaps could impede drainage.

Recommendation: Mitigation measures for inland flooding from rainfall events, not just coastal surge, must be integrated into the project if the goal of the funding is to create a comprehensive flood solution that will also address the flood risk that comes with precipitation. The document should explain explicitly how the funding will address interior flooding.

Incorporating Projections for Sea-Level Rise and Precipitation Events

The changing nature of flood risks, including risks that are associated with sea-level rise, demands conservative standards that will withstand the test of time and the forces of nature. The document discusses rising sea levels and the potential for this phenomenon to result in greater frequency of coastal flood events; however, it fails to make clear what sea-level-rise projections are to be used to guide the project.

Recommendation: To ensure that the project mitigates risks from coastal and inland flooding and stronger storms, New Jersey Future recommends including in the scope:

- An official adoption of sea-level-rise projections for 2075 and 2100
- A detailed analysis of the flooding vulnerabilities today, in 2075 and in 2100, incorporating a range of projected extents of sea-level rise (low, medium, high) and projections of future precipitation patterns.
- Articulation of methods to protect infrastructure, not just residences, from current and future flooding risks so that when evaluating alternatives, there is transparency in how vulnerable infrastructure, such as storm sewers and outfalls, will be addressed.

Concept Screening Matrix and Co-Benefits

To determine the goals and therefore the matrices used to evaluate alternatives, it is essential to decide from the beginning what is being protected (residents, businesses, the most vulnerable, private property, infrastructure such as hospitals, roadways, mass transportation facilities, water supply and sewage treatment, energy distribution, etc.) and how priorities will be set.

Recommendation: The concept screening matrix needs to be explicit in identifying project goals and who is benefiting. In addition, since residents and businesses will be most extensively affected by the project, these stakeholders should have the opportunity to provide input into the development of the matrix itself, not just the final rankings from the matrix. Co-benefits of flood control projects should be clearly articulated and quantified, and considered in cost-benefit analyses. For example, by incorporating "green infrastructure" practices into efforts to control stormwater, communities and property developers can reduce energy costs, diminish the impacts of flooding, improve public health, and reduce overall infrastructure costs.

Vulnerable populations

The Socioeconomics and Environmental Justice technical sections say that social, economic, and demographic factors will be analyzed to determine if the project will have a disproportionate adverse environmental impact on vulnerable populations.

Recommendations:

- Studies should be performed that document how many people are currently living in locations vulnerable to flooding, whether if, as a result of the implementation of the projects chosen, residents, particularly low- and moderate-income and other vulnerable populations, will be protected from sea-level-rise-based flooding projected for 2100.
- During the hazardous-waste investigation, risks specific to vulnerable populations should be analyzed, findings should be distributed to these communities as well as the public as a whole, and discussed at a public meeting.
- Given the fact that flooding problems are not just at the water's edge and that LMI and other vulnerable residents must be protected from flooding, funding should be allocated for both coastal and inland flooding and not be spent solely to protect high end housing along the Hudson River Waterfront.
- Social workers in the target areas should be contacted to assist with identification of vulnerable communities and with communicating information about the project.
-

Public Involvement
Section 6.1 of the document refers to the project's Citizen Outreach Plan (COP) as the public involvement plan that will be implemented.

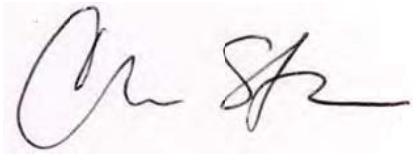
Recommendations:

- New Jersey Future reiterates the recommendations we made for the draft COP. Citizen Advisory Groups (CAGs) must be truly inclusive and allow for genuine dialogue, through clarification of composition, authority and meeting structure. For example, not only must those residents recommended by local officials be included, all residents not on a CAG should be encouraged at least to observe the dialogue. This can be accomplished by making public all CAG meeting dates, times and places.
- It should be transparently stated how the Dept. of Environmental Protection (NJDEP) and engineering consultant Dewberry will respond to comments and recommendations made by the CAG and the general public.
- As stated above, a proactive outreach and engagement program should be developed to ensure participation from vulnerable populations.

New Jersey Future looks forward to working with NJDEP, Dewberry, and the cities of Hoboken, Jersey City and Weehawken to assist in the design and implementation of a successful comprehensive resiliency initiative. We commend Hoboken Mayor Dawn Zimmer for her forward-looking flood resiliency initiatives and for creating a culture of openness that encourages inclusive community dialogue and outreach, and we hope her example is followed as the project moves forward.

Thank you for your consideration. If you have any questions, please don't hesitate to contact me at csturm@njfuture.org or 609-393-0008, x114.

Sincerely,



Chris Sturm
Senior Director of State Policy
New Jersey Future

NEWPORT

October 6, 2015

Via FedEx

Mr. David Rosenblatt
NJDEP
Office of Flood Hazard Risk Reduction Measures
401 East State Street
P O Box 420
Mail Code 501-01A
Trenton, New Jersey 08625-0420

Re: Rebuild By Design: Hudson River
Draft Scoping Document

Dear Mr. Rosenblatt:

We have reviewed the draft scoping document published September 8, 2015. An understanding and documentation of the overall strategy to fix Hoboken's flooding problem is needed in order to properly analyze alternatives. There are other initiatives that are aimed at dealing with the flooding within Hoboken and each of them will have an impact on the alternatives analysis for this project. Some of these initiatives are:

- A pump station in the H-1 drainage area was completed by the North Hudson Sewerage Authority in 2012 which allows for expelling water into the river, and it is has helped to alleviate, although not eliminate, flooding in Southwest Hoboken.
- A pump station is planned to be built in the H-5 drainage area of Hoboken.
- Development of Block 12 – an approximately one acre property which will be the first phase of a Southwest Park.
- NJ Transit is leading a project that will fill the Long Slip to an elevation above the FEMA base flood elevation. The project also includes construction on the filled area of six new tracks serving three high-level boarding platforms.
- Developer LCOR and NJ Transit have revised "The Crossing at Hoboken Terminal"[1] project plans, following Hurricane Sandy, adding new flood prevention

Newport
111 Town Square Place - Suite 1505
Jersey City, NJ 07310
Telephone (201) 626-2010
Fax (201) 626-2015

Newport Associates Development Co.
40 West 57th Street - 23rd Floor
New York, NY 10019
Telephone (212) 708-6600
Fax (212) 708-6641

SNP, Inc.
225 West Washington Street
Indianapolis, Indiana 46207
Telephone (317) 636-1600

measures which are aimed at protecting the city from flooding from the south, including the Long Slip Canal. Their plan is to raise the ground floor development by several feet, in accordance with the latest FEMA hundred-year flood level information, which would create a half-mile barrier on the south side of Observer Highway from the Hoboken Terminal to Marin Boulevard. Other changes include building a drainage system to divert rain water into a separate system from the North Hudson Sewage Authority's combined sewer system that serves Hoboken. The water would be pumped back into the Hudson River.

- Hoboken was one of three recipients of a grant from Together North Jersey for technical assistance to develop a Green Infrastructure Strategic Plan, which has been completed. The plan identifies stormwater management and flood control strategies, strategizes key updates to the aging water system, looks for ways to improve the resiliency of transit infrastructure, and identifies important steps to help plan for climate adaptation.

It is well understood that the City of Hoboken, specifically the area west of Bloomfield Street was constructed in a low lying area (formerly swamp) and regularly suffers flooded conditions during intense storm events. During Superstorm Sandy the impacts of the flooding in those areas was catastrophic when electrical and sanitary treatment systems were compromised. The Resist, Delay, Store and Discharge program is specifically designed to resolve issues specific to Hoboken, a key component of the plan ("Resist" component) being construction of a barrier to reduce the effects of tidal flooding, impacts that become acute when floodwater is able to reach landward into the low lying western areas of the community.

The Newport Associates Development Company (NADC) owns and operates Newport, a leading large scale mixed use community occupying nearly 200 acres and one mile of Hudson River shoreline in the northeast area of Jersey City.

It is important to protect our communities from significant adverse effects from tidal flooding but we should do so in a manner that is measured, economic, and preserves the special relationship of the community with the water. The benefits and impacts of a floodwall system as proposed for Hoboken have not yet been adequately studied. NADC will carefully assess any and all proposed nearby measures to ensure that they do not adversely affect the health, safety and economic viability of Newport. Tidal flooding within New York Harbor, Upper New York Bay and the Lower Hudson River while a regional threat, will in fact result in unique conditions in different locations. While the City of Hoboken may successfully isolate itself from tidal flooding through the construction of walls, berms and other similar features, these features have the potential to negatively impact life and utilization of the waterfront; these issues have yet to be understood and monetized.

"The Study Area (defined as the City of Hoboken, extending into Weehawken and Jersey City, with thefollowing approximate boundaries: the Hudson River to the east; Baldwin Avenue [in Weehawken] to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street [in Jersey City] to the south)"

The Study area needs to be extended South to 6th Street/Thomas Gangemi Drive and West to Washington Blvd. to include the entire Newport development. See site map attached[2].

3.0 PURPOSE AND NEED

3.1 Need

"The City of Hoboken's exposure to flood hazard risks is evident by the number of properties included in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP)."

The Newport development's exposure to flood hazard risk has been determined by FEMA. Coastal flooding at Newport has the potential to impaxt forty six buildings and over sixteen thousand residents. Accordingly, Newport holds seventeen Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) policies with building and property coverage in excess of $8.9 Million, in addition to private and excess policy coverage.

3.1.1 Coastal Flooding

"In addition, the surge flooded critical transportation infrastructure, including the Port Authority Trans Hudson (PATH) line at the Hoboken Terminal. Service on this line was not restored for several months."

Within the Newport development there are numerous PATH facilities including the Newport PATH Station, PATH electrical substation, PATH escape chamber and PATH and Holland Tunnel ventilation buildings as well as the New Jersey Transit Light Rail station. Some of these facilities were also impacted by Superstorm Sandy and need to be considered within the study area of the project.

"Within the Study Area, there were two main entry points for floodwater into interior portions of Hoboken]: the area around Long Slip Canal and Hoboken Terminal in the south of Hoboken, and Weehawken Cove in the north."

NJ Transit is moving forward with a project that plans to fill the Long Slip Canal to an elevation above the FEMA base flood elevation. The Long Slip Canal is a major contributor to interior flood waters in Hoboken. The Canal directly borders the most northern portions of Newport and any changes to it may impact how storm surge flood waters are directed to the interior areas of Newport. As the plans to fill Long Slip are conceptual at this time, the alternatives for this project cannot be fully analyzed until the impacts from the redirection of storm surges from the Long Slip Canal have been fully realized.

"Some water passed from southwest Hoboken into Jersey City via Marin Boulevard, Grove Street and Jersey Avenue, which run beneath the Hudson Bergen Light Rail and NJTransit rail crossings."

The volume of water taken into Jersey City via Marin Boulevard and any improvements to the sewer system need to be considered in detail as part of the alternatives analysis.

3.1.2 Systemic Inland Flooding

3.2 Goals and Objectives

"Contribute to Community Resiliency: The Project will seek to integrate flood hazard risk reduction strategy with emergency, civic, and cultural assets (Hoboken's fire stations, hospitals, community centers, and transit centers)."

Newport's PATH, Holland Tunnel facilities and Lightrail station need to be considered in the evaluation of the project's goals and objectives.

4.0 PROJECT CONCEPTS

4.0.1 Coastal Flood Risk Reduction Concepts (Resist)

"The New York City Department of City Planning's Urban Waterfront Adaptive Strategies report will be used as a reference toolset to identify various site- and reach-based mitigation strategies that would allow the use of "multiple lines of defense approach" and enable one or more of these strategies to tie-in with each other to create an integrated flood risk reduction system for the Study Area (see Figure 5)."

All stakeholders should be given access to this report as well as other reference documents used in the NEPA process.

4.0.4 Urban Design and Community Co-Benefit Design Elements

"A flood risk reduction system will reduce flooding risks at critical infrastructure and for the entire community but also can be used as a catalyst for urban design and neighborhood improvement. In conjunction with flood reduction system concepts, we will attempt to tie these concepts with a larger, productive open space and urban design initiative that serves as a community resource."

The master plan for Newport already includes urban design and public facilities. Newport is a master planned community with State of New Jersey Waterfront Development permits.

5.0 POTENTIAL REGULATORY APPROVALS

"In addition to NEPA requirements (including HUD regulations at 24 CFR Part 58 and CEQ regulations at 40 CFR Parts 1500-1508), the project will also be subject to numerous additional regulatory approvals. The following is a list of potential regulatory approvals that the Project will require. The EIS will discuss in detail the anticipated approvals that the Project will require."

What impact will the regulatory process have on Newport?

6.0 ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

6.2.4 Hazardous Waste

"In cases where remediation of a site is overseen by an LSRP, Dewberry will make attempts to contact the LSRP of Record for site specific information, if warranted. If a site is overseen by the NJDEP, the case manager will be contacted."

The Rebuild by Design Project is to absorb the cost of all associated LSRP activity and only information generally accessable to the public will be available.

"Participation in the LSRP program allows responsible parties to forward remedial activities in order to remain in compliance with NJDEP regulations and guidance."

The owner must be contacted for information related to remedial activities.

6.2.12 Socioeconomics

"Adverse impacts resulting from the build conditions may include the direct displacement of residents and/or businesses. Impacts to businesses would also include the loss or relocation of the any businesses and associated employees."

No displacement is to occur in Newport.

6.2.13 Land Use/Zoning

"This section of the EIS will examine each alternative's consistency with the existing land uses as well as proposed land uses within the Project Area as described in local master plans (such as the Hoboken Master Plan, last revised 2010) and redevelopment plans for Jersey City, Hoboken, and Weehawken, including the Western Edge Redevelopment Plan (2015) and Hoboken Yard Redevelopment Plan (2014)."

The Newport master and redevelopment plan needs to be considered.

6.2.16 Infrastructure

"For the purposes of this EIS, the various types of structures within the Study Area have been divided into three major broad categories:

- *All types of buildings and waterfront structures*
- *Streets*
- *Transit and Railway Structures"*

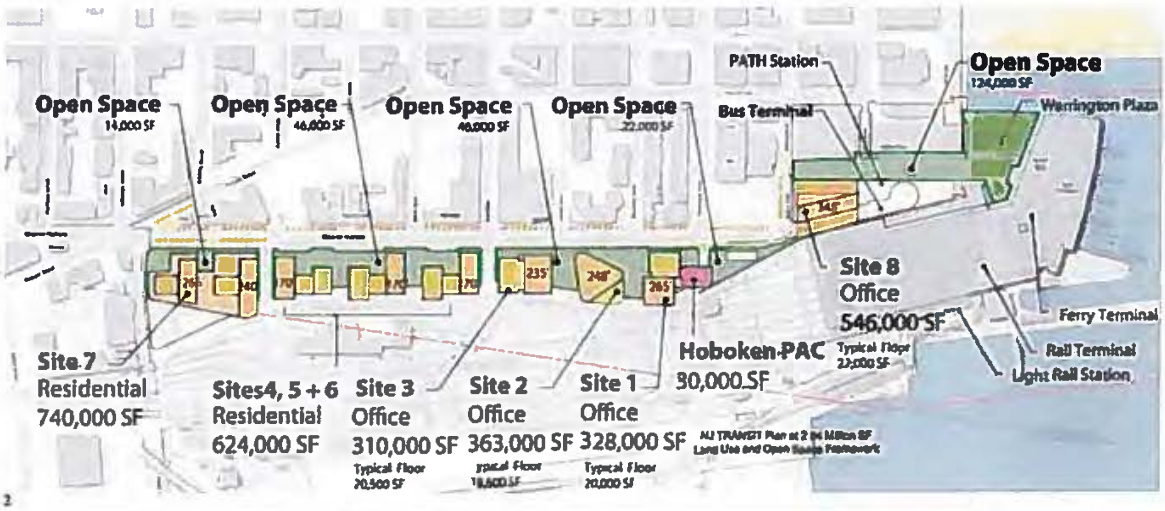
Environmental impacts to Newport Parks and recreation areas need to be considered. While open to the public, Newport Parks are privately funded, owned and maintained. These parks were built as a requirement of Waterfront Development permits.

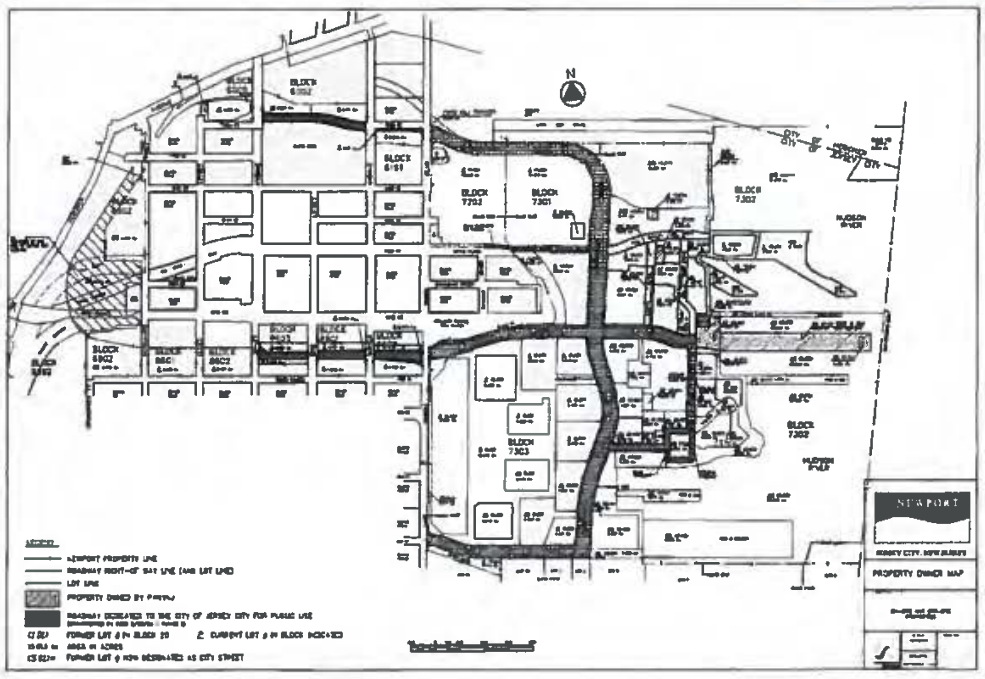
We look to see these considerations made in the final version of the scoping document. Please call me at (201) 626-2010 if you have any questions or require additional information.

Very truly yours,

Marsilia A. Boyle
Senior Vice President

Enclosures
cc:
Jessica Tribble
Michael Sabet
Kostas Svarnas
File


Open Space
14,000 SF
Open Space
46,000 SF
Open Space
40,000 SF
Open Space
22,000 SF
PATH Station
Bus Terminal
Open Space
124,000 SF
Warrington Plaza
Site 8
Office
546,000 SF
Ferry Terminal
Rail Terminal
Light Rail Station
Hoboken PAC
30,000 SF
Typical Floor
22,000 SF
Site 7
Residential
740,000 SF
Sites4, 5 + 6
Residential
624,000 SF
Site 3
Office
310,000 SF
Typical Floor
20,500 SF
Site 2
Office
363,000 SF
Site 1
Office
328,000 SF
Typical Floor
20,000 SF



7

Sliker, Laura

From:	DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent:	Tuesday, October 13, 2015 9:30 AM
To:	Smith, Lawrence
Cc:	Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject:	FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

4 of 10

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Phil Jonat [mailto:philip.jonat@gmail.com]
Sent: Thursday, October 08, 2015 9:21 PM
To: DEP rbd-hudsonriver
Subject: RBD Hoboken Draft Scope comments

October 8, 2015

Mr. David Rosenblatt, Director

Office of Flood Hazard Risk Reduction Measures

401 East State Street, Mail Code 501-01A,

PO Box 420, Trenton, NJ 08625-0420.

Via email: rbd-hudsonriver@dep.nj.gov

Dear. Mr Rosenblatt,

Below are my comments on the Draft Scoping document.

Combined Sewage Overflows are a major problem in this town. They turn all flood events into a public health problem. This EIS should evaluate whether these problems are equal to or worse than the coastal flooding issues. Regardless, CSOs should be an elevated concern within the EIS moving forward.

Unless required by law, I recommend that the draft scoping document should remove the following language, "Phase 1 includes....funding for the implementation of the Resist component" of the project. This statement is included in 1.0 Exec Summary and 2.0 Background and 2.2 Proposed Project. The project that should be funded should be the most effective project as shown by the EIS, not just the Resist component of the OMA study.

I suggest that another measurement of success by added to 1.0 Executive Summary and 3.2 Goals/Objectives: Long Term Cost Effectiveness of the project. This is often missed at the beginning of a project. Hoboken residents may or may not be able to effectively pay for maintenance of a flood control district. Locally maintained flood control districts in New Orleans were not fully funded and maintained, causing further damage and destruction during Hurricane Katrina.

Green infrastructure should be emphasized as much as possible because I believe it has the largest co-benefits. Hoboken has some of the lowest green space per capita, even compared to other high density cities.

Water efficiency can play a role in this project as well. It tends to be very low cost and effective at reducing CSOs. How much does this impact flooding? Please explore how much this impact has on flood events.

Finally, I would like to also add a second vote for the CAG's request for better data from North Hudson Sewer Authority. Open data is a key component to moving forward with alternatives and promoting future solutions (that can't yet be predicted).

Data, Infrastructure and Utilities: Develop a Strong and Thorough Baseline Data Set/ p. 25, p.32, p.33

The Draft Scope is fundamentally flawed by failing to address, consider, or improve the dearth of available and reliable data on the current sewage and stormwater management system in operation and controlled by North Hudson Sewerage Authority. For a project involving this amount of money, focused on such a small geographic area, where the urban fabric is both dense and relatively old, any resultant Alternative must be based on a strong understanding of the existing system. Given the lack of information held by the public, including residents and ratepayers, as to the myriad causes of the Sandy storm surge flood, it should be a clearly stated priority for Data Collection in any EIS for such a project

that obtaining, verifying, and refining this baseline data is fundamental to the most basic level of due diligence that is needed for ANY Build alternative to be potentially moved forward towards inclusion in a Record of Decision.

As part of this Scope of Work the process needs to develop a strong baseline of data relating to the existing wastewater and stormwater collection systems. This data should include:

- the capacity of the present stormwater and combined sewer system, from the connections emanating from our businesses and households, corner drains, all the way to the pump stations, treatment plant, and outfalls.
- a reasonable and responsible level of consideration must be given to the i. design capacity, ii. the age and physical integrity iii. and the likely operating capacity of the elements of the system.

This data must be made available to the public and interested stakeholders within a reasonable amount of time so that the evaluation of alternatives becomes a more transparent and comprehensible process.

Thanks!

Phil Jonat

607 1st St Apt 5

Hoboken, NJ 07030

Sliker, Laura

From:	DEP rbd-hudsonriver <rbd-hudsonriver@dep.nj.gov>
Sent:	Thursday, October 01, 2015 1:42 PM
To:	Smith, Lawrence
Cc:	Spahn, Kenneth; Sears, Michael (NJ); Parab, Rahul; Reinknecht, Dennis; Schwarz, Frank; DEP rbdh-archive
Subject:	FW: Rebuild by Design Hudson River Project Scoping Document Comment

Larry,

I am forwarding you the comments we have received so far on the Scoping Document. I will send them as five different emails just so you can keep them separate and straight. Additionally, could you let me know how you are progressing on the Scoping Document responses and when you may have some slides for us to review for the CAG meeting.

Thanks

Clay Sherman, Environmental Specialist 3

Project Manager - Hudson River Rebuild By Design
Office of Flood Hazard Risk Reduction Measures
501 East State Street, P.O. Box 420
Mail Code 501-01A
Trenton, NJ 08625-0420
(609) 984-7422

From: Robert Sternlieb [mailto:robert.sternlieb@gmail.com]
Sent: Monday, September 28, 2015 6:35 PM
To: DEP rbd-hudsonriver
Subject: Rebuild by Design Hudson River Project

Hello,

I attended the 9/24 meeting. It was very interesting. Thank you.

I have a couple of comments/questions.

During the presentation it was discussed that one of the projects milestones would be to get to 5 concepts, then 3 alternatives and finally to one preferred alternative.

There are 2 major locations where coastal surge has been known to enter Hoboken: one at the south near the Hoboken Terminal; and the other in the north at Weehawken Cove. Will those two locations be treated separately and potentially have different solutions?

Could Hoboken make use of porous concrete?
http://www.techinsider.io/rain-flows-through-permeable-concrete-topmix-2015-9

Tarmac has created Topmix Permeable, a porous concrete that allows rain water to flow though it. Up to 880 gallons of water can trickle through Topmix, which could eliminate flooding where it has been installed.

I've seen porous pavers. This is the first time I've seen porous concrete.

Could sidewalks and/or streets be excavated and then have water storage solutions and drainage implemented below? I clearly have no clue what is currently under the Hoboken streets/sidewalks.

There are discussions about the deteriorating state of the Hudson river tunnels. Are the Lincoln and Holland tunnels below the floor of the river? Do they currently contribute to the flooding in Hoboken? I'm just curious. If new tunnels were to be built, how would it be accomplished and would those tunnels impact Hoboken? I'd expect that new tunnels would have sections built elsewhere, floated into place and then sunk.

I hope to attend more of these upcoming meetings.

Thank you very much.

10-13-15

REBUILD BY DESIGN HUDSON RIVER
• RESIST • DELAY • STORE • DISCHARGE •

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

It is my understanding that the North Hudson Sewerage Authority is a secondary facility, what is the definition of a secondary facility and what are the flow & pipe dimensions & locations & how close are we to the maximum capacity? Do you have an inventory of their capacity & of their underground pipes? If the NHSA was to upgrade to a tertiary facility, how much would this expand their capacity to deal with storms & flooding? Has NHSA considered this upgrade?

Would you recommend that the three municipalities safely stockpile sandbags (as they have done in outlets along the Light Rail route) to be distributed to particular residential areas to safeguard their property in case of another Sandy event? Since the analysis of upgrades to the area is going to take years, this would be pretty appropriate.

Name: SUSAN O'KANE 201 583-8855
Address or Email: 35 Hackensack Ave Weehawken NJ 07086

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

Comments must be received or postmarked by October 9, 2015.

Additional Drop-In Open Houses:

September 29
4 pm – 8 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

October 1
6:30 pm – 8:30 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

609 984 1908 To: Clay Sherman Oct 9 (3)

REBUILD BY DESIGN HUDSON RIVER

RESIST · DELAY · STORE · DISCHARGE

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

(1) page comments (hand written attached) on specific pages and paragraphs of Draft Scoping Document.

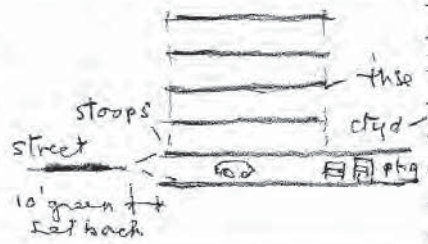
2 pages submitted Sept 29 and Oct 1 at open houses

HUD may be interested → used in Tidal Basin Redevel area / Paulus Hook Jersey City

Several projects since 2005 to preserve historic character.

Smallest site 100 x 100, Largest 400 x 200, have pics

4.0 Footnote to fig 5 pg 16 Combined dry and wet floodproofing



Name: Tom Hilmer

Address or Email: tomashilmer@aol.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

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94 Washington St., Hoboken

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Oct 9, 2015
from Tom Hilmer

Clay Sherman PM RBD NJ DEP
Fax 609 984-1908

Draft Scoping Doc't Rebuild by Design

1.0 ¶ 3 change storm-sewer to combined-sewer
4 define resiliency as return to functional or ≠ "seeks to leverage resiliency investment (B S!)"
This page could be reduced to 1/3, omit jargon
page 2 provide schedule showing draft EIS and final, concept and alt generation as in public scoping meeting
if "leveraging resiliency" is key, tell us what it is. Shorten bullet items 2 sentences each

2.0 ¶ 1 repeats 1st ¶ in 1.0; is this intentional?
Need for solutions are urgent. What promises you will do EIS thoroughly? How do you fund Ph II, III

2.1 3rd ¶ again if sched on page 2 applies, say so.
define or list some stakeholders,* FEMA? DOT PA RR MUA?

2.2 4 components, change word grey to comb. sewer, item 3 and below, last word with infrastructure. grey?
Last ¶, add study will keep track/ "sched" progress of designs by *

3.1 Need, add • adjacent MUA RE18 + 19 impact low areas

3.1.1 ¶ 1 add after tributaries and CSO's

3.1.2 32 and 36 mgd? from 1980 Bayonne study 11 mgd ~~secondary~~ primary was capable of 80 mgd w/ some treatment
¶ 2 add Irene (2011) 10" in (18 24 36) hours? and frequency.

3.2 Objectives, add • Population Hob in 1990 was 33K, in 2010 50K on 1.2 sq miles of land. Project to 2040 & 50
what is time frame (duration) for effective solutions Ph I, II, III

4.0 Concepts: see footnote / fig 5 dry and wet flood prfg

4.1 Screening criteria: Value Engineering in the 1980s for waste water projects in (Bayonne, JC Hoboken)/ HCUA involved; reliability, redundancy, flexibility, operation cost, replacement and Environmental. They still are the criteria for selecting alternatives.

6.2 Technical Env Studies: Hoboken includes 0.7 sq mile area in Hudson Ri. "Test but verify" should be part of EPA regulations. Sediment beyond 15th St in Weehawken cove; and beyond 14th St (JC) needs testing

6.2.17 Sustainability (expanded). Maximizing some primary treatment thruput of H_2O during high tides should be priority. Allowing CSO's to remain unchanged 25 yrs is not intent of EPA (Fed'l)

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

SEP 2 - 2015

REPLY TO
ATTENTION OF:

Regulatory Branch

SUBJECT: Environmental Impact Statement Draft Scope of Work for the Hudson River Rebuild by Design: Resist, Delay, Store, Discharge – Hoboken, Weehawken and Jersey City, New Jersey, dated August 2015

New Jersey Department of Environmental Protection
C/o Mr. Dennis Reinknecht
Office of Flood Hazard Risk Reduction Measures
501 East State Street - Mail Code501-01A
P.O. Box 420
Trenton, New Jersey 08625-0420

Dear Mr. Reinknecht:

On August 18, 2015, the New York District U.S. Army Corps of Engineers received the document entitled "Environmental Impact Statement Draft Scope of Work for the Hudson River Rebuild by Design: Resist, Delay, Store, Discharge – Hoboken, Weehawken and Jersey City, New Jersey", dated August 2015. Based on a review of this document, this office provides the following comments:

1. To aid in the formulation of an appropriate alternatives analysis and to form a basis for demonstrating the least environmental damaging practicable alternative(s), the basic purpose of the project should be clarified so that all alternatives that meet this basic project purpose can be evaluated.

2. All options associated with the project concept that include the discharge of fill into jurisdictional waters of the United States, including wetlands, should be included in the alternatives analyses in accordance with the Title 40 CFR, Part 230, of the Clean Water Act 404(b)(1) Guidelines. On-site specific design alternatives and modifications, including alternatives to avoid or minimize the placement of fill in waters of the United States should also be included;

3. It should be noted that the US Army Corps of Engineers does not permit permanent structures within the limits of a Congressionally-authorized Federal navigation channel or within its side slope (1vertical on 3 horizontal);

4. As part of the public interest review of any permit application, this office is required to coordinate with the New Jersey State Historic Preservation Office (NJSHPO) to ensure compliance with Section 106 of the Historic Preservation Act. It is therefore recommended that properties listed or eligible for listing in the National Register of Historic Places be identified within the project area, and that the NJSHPO be contacted to aid in determining the effect the project may have on these sites.

5. An endangered and threatened species assessment in accordance with the Section 7 of the Endangered Species Act (16 U.S.C. 1531), as well as an Essential Fish Habitat assessment under the Magnuson-Stevens Fishery Conservation and Management Act should be prepared to

SUBJECT: Environmental Impact Statement Draft Scope of Work for the Hudson River Rebuild by Design: Resist, Delay, Store, Discharge – Hoboken, Weehawken and Jersey City, New Jersey, dated August 2015

address all in-water activities. It is therefore recommended that the U.S. Department of Commerce National Ocean and Atmospheric Administration's National Marine Fisheries Service (NMFS) be contacted to provide information on the preparation of these documents;

6. Proposed compensatory mitigation plans and sites should be developed in accordance with Title 33 CFR, Part 325.1(d)(7) and Part 332.4(b), of the Final Rule for Compensatory Mitigation for Losses of Aquatic Resources, released on April 10, 2008 to compensate for any permanent and temporary impacts to aquatic resources. The mitigation plans should include detailed scientific data documenting the impact site's existing ecological value, the mitigation sites ecological suitability to achieve the mitigation objectives, the gain in aquatic resource area and function the proposed mitigation site would provide; the mitigation acre amounts and locations provided; the method of compensation, and the manner in which the resource functions of the compensatory mitigation project would address the needs of the watershed, or other geographic area of interest. The mitigation plan should additionally include how these sites would be maintained, monitored, and protected, as well as their long term management;

7. The conversion of any existing special aquatic site into another habitat type (i.e. open water/mudflat to emergent wetlands) for the purposes of developing project objectives or a compensatory mitigation site is generally discouraged. Therefore, the ecological suitability of this type of proposal should be addressed in detail. Consultation with NOAA NMFS is recommended;

8. This office has been made aware that the U.S. Department of Transportation's Federal Transit Administration has selected several public transportation resilience projects in response to Hurricane Sandy under the Emergency Relief Program. These projects are expected to be funded under the Disaster Relief Appropriations Act of 2013. One of the projects is the New Jersey Transit Long Rail and Enhancement Project. Projects such as these and how they will be incorporated into the National Environmental Policy Act review process for the subject scope of work should be addressed.

9. The project sponsor should be aware of any existing public and private Hudson River waterfront rehabilitation, storm water, or flood structure proposals within the project area that have been applied for or are in the process of being applied for through federal, state and local government review processes.

If you have any questions regarding this matter, please contact James Cannon, of my staff, at (917) 790-8412.

Sincerely,

Christopher S. Mallery, Ph.D.
Acting Chief, Regulatory Branch

Cf: Clay Sherman, NJDEP
Ken Spahn, Dewberry

WATERFRONT ALLIANCE

217 Water Street
Suite 300
New York, NY 10038

Tel: 212.935.9831
waterfrontalliance.org

October 9, 2015

Mr. David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
New Jersey Department of Environmental Protection
501 E. State Street, Mail Code 501-01A
PO Box 420
Trenton, NJ 08625-0420

Re: Rebuild by Design - Hudson River Project
Comments on Environmental Impact Statement Draft Scoping Document

Dear Mr. Rosenblatt,

On behalf of the Waterfront Alliance, I submit these comments on the Draft Scoping Document of the Environmental Impact Statement (EIS) for Rebuild by Design – Hudson River Project and thank you for seeking public feedback on the project's environmental review. We are a bi-state coalition of over 850 community and recreational groups, educational institutions, businesses, and other stakeholders committed to restoring and revitalizing the New York and New Jersey waterways.

We urge that this process thoroughly consider incorporating best practices from our Waterfront Edge Design Guidelines (WEDG) program. Similar in concept to LEED, WEDG is a ratings system, developed in close cooperation with regulators and technical experts, to evaluate the design of waterfront projects, promoting access, resiliency, and ecology. WEDG metrics and best practices can be used to "screen" certain aspects of future design alternatives.

The Waterfront Alliance applauds the commitment of the United States Department of Housing and Urban Development, the State of New Jersey, and the municipalities of Hoboken, Weehawken, and Jersey City to rebuild and strengthen coastal resiliency along the Hudson River, where Hurricane Sandy wrought tremendous damage. We recommend that this project incorporate the principles and tools outlined by our WEDG program, and offer the following comments on the Scope of Work:

Improve public access for maritime use and on-water recreation

Public access to and onto the water should be enhanced and be properly assessed as part of the environmental review and analysis. Segments of the Hoboken waterfront have still not returned to their pre-Sandy levels with respect to direct contact with the waterways for recreation and education. Kayaking, rowing, and stand-up paddle boarding have flourished in Maxwell Place Park thanks to a beach area that allows for public access. Yet among the five piers from the 14th Street Pier down to 12th Street, there is a significant lack of infrastructure that would enable visiting historic ships, research vessels, restoration work boats, and emergency service ships to dock.

The newly restored piers have very few cleats or bollards, and no fendering, and in some cases have obstructions added to the smooth face needed for docking. Two piers in this stretch do have deeper water and bollards on them, and while now in decay, represent an opportunity to re-establish maritime infrastructure that supports both community use and resiliency by enabling a variety of boats to dock in Hoboken. Shipyard Marina has not been able to re-open the majority of its berths for small boats, where damage from Sandy has complicated on-going maintenance needs. Yet the main pier, Pier 13, has expanded as a popular seasonal bar and restaurant. The

density of restaurant use on the pier now makes it even more challenging to use that space for vessel berthing. The overall effect not only reduces docking for boats, but exacerbates challenges to re-establishing maritime use on this waterfront.

Review WEDG recommendations for technical guidance
The WEDG Manual provides specific guidance for waterfront projects that should be incorporated into this project, where applicable:

- *Complete a water-dependent use assessment*. Encourage and measure the potential for increased water-dependent facilities. A "do no harm" approach to maritime uses should be followed and stakeholder engagement should incorporate future maritime uses, including local boating communities, vessel operators, and emergency responders, among others beyond the local community. Boat access as a means of redundancy during emergencies should be also assessed. Criteria for providing water-dependent infrastructure, including maritime amenities, can also be found in the public access section of WEDG. (Page 18)

- *Design for highest expected service life.* The re-design of the shoreline provides an opportunity to build for the highest expected service life, which should be at least 100 years. Designs and strategies should be built with consideration of rising sea levels and changing floodplains, with potential to be adapted in the future with modifications. (Pages 12 & 30)

- *Address resiliency through shoreline stabilization.* Incorporate shoreline stabilization techniques that provide a more graduated edge, provide more complexity, and avoid net fill. Sloped shorelines, rather than a hardened or more vertical shoreline, can progressively dissipate wave energy, reducing reflection and amplification while improving the aquatic habitat within the intertidal zone. WEDG promotes strategies that enhance shoreline design to resist flooding and storm surge events, while also balancing access and supporting habitat. (Page 29)

- *Support resilient ecosystems.* Design landscapes, green infrastructure, and ecosystems to withstand harsh coastal conditions, floods, and storm. Designs should seek the preservation of upland migration areas for wetlands where possible. Integrate designs and strategies that enhance complexity and performance through results-based objectives. (Page 36)

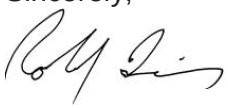
- *Prioritize environmentally sound materials.* Innovative uses of materials include ecologically-beneficial products with a chemical composition, alkalinity, toxicity, and pH that promote biological activity and attachment of marine organisms. Other methods include using precast tidal pools, habitat/reef modules, molds, or structural enhancements that provide enhancement to the aquatic environment. (Page 43)

- *Incorporate long-term local partnerships*. A partnership to study, assess, and/or monitor the effectiveness of the chosen alternative should be part of any long-term funding and program agreement. Local academic partnerships to train the next generation of engineers, planners, architects, etc. would benefit and participate in the advancement of the understanding of coastal hazards and waterfront areas. (Page 47)

- *Incorporate environmental education opportunities*. Design and programming should connecting the public to natural habitats by providing facilities and amenities that bring them close as possible, without creating disturbances. This can facilitate stewardship opportunities to volunteer, intern, and participate in research, data collection, and rehabilitation. (Page 27)

We thank you for your review of this important project, and look forward to providing additional comments as part of the next phase of the environmental review process. Please feel free to reach out to me directly at (212) 935-9831 x101 with any questions.

Sincerely,



Roland Lewis
President and CEO

Comments on NJDEP's Rebuild By Design Hudson River Project (Hoboken, Weehawken and Jersey City) Resist, Delay, Store and Discharge (Project) Environmental Impact Statement Draft Scope of Work(hereinafter "Draft Scoping Document") – released September 10, 2015

The Draft Scoping Document, consisting of 36 pages, while being comprehensive in stating the extent of the problem of flooding in the Study Area, defined on page 7, and setting forth generally "the Proposed Project actions" is deficient in the following respects.

1) Although a major report cited on page 12, under **Article 3.1.2, Systemic Inland Flooding**, entitled, Street Scale Modeling of Storm Surge Inundation along the New Jersey Hudson River Waterfront, Stevens Institute of Technology, Davidson Laboratory, October 2014, (hereinafter "Stevens Storm Inundation Report") provides a measure of the total volume; source and directions of flow of floodwaters that entered the Study Area during the Hurricane Sandy storm surge; the Draft Scoping Document provides no information with as much specificity as to what countervailing measures the project engineers propose to take (i.e. resist, delay, store) to address such expected levels of floodwaters in the event of a storm of the magnitude of Sandy strikes the area again. For example, although it is admitted in the Draft Scoping Document that: "If the storm-sewer flow volume exceeds the limited treatment volume capacity of the WWTP" [(between 32 and 36 million gallons per day)" which it did by 430,000,000 gallons when 466,000,000 gallons of floodwaters, according to the Stevens Storm Inundation Report, entered the interior areas of Hoboken,] "a portion of the storm-sewer flow volume outflows into the Hudson River through various outfalls located along Hoboken's waterfront." But if such a large volume has to pass into the Hudson River outfalls, but those outfalls may not be available as the Draft Scoping Document also admits, when the increased level of the Hudson River during high tides and storm surges exceeds the distance of the outfalls from the normal high water mark of the Hudson River during non-storm conditions and low tides what is to be done with the huge volume of excess water under the Project. This seems to be unsolvable problem for preventing the flooding unless the Subject Matter Experts envision resist, store and delay measures as sufficient to offset the immense volume of floodwaters that for all intents and purposes cannot be discharged through the Hudson River outfalls. The Draft Scoping Document neither addresses these issues qualitatively, much less quantitatively, despite the fact that in the latter case the Stevens Storm Inundation Report provides a true historic benchmark for the nature and magnitude of inland flooding during major storm events caused by this phenomenon.

2) Since issuing the Draft Scoping Document the City of Hoboken has taken steps toward addressing the issue of inland flooding by proposing to purchase two parcels of land currently owned by BASF Industries, formerly the Cognis/Henkel Chemical Company, and build a large retention pond in the western area of Hoboken to store excess floodwaters when discharge through the Hudson River outfalls is prohibited by conditions described in point 1. Despite the

fact that such proposal is fraught with issues concerning the presence of hazardous wastes leaching into the retention area as a result of documented on-site disposal of hazardous wastes by the previous owners, the Draft Scoping Document, in 6.24 Hazardous Waste, fails to consider the impact of such hazardous wastes on the overall Project or specifically the feasibility of the proposed retention pond and its impact, if any, on the handling of the excess storm water when the Hudson River outfalls are blocked as discharge points because "No acquisitions of private land are anticipated as ;part of the Project;." Whether the proposed purchase of the BASF property indeed was not anticipated by Dewberry Engineers, Inc., the author of the Draft Scoping Document, or the State of New Jersey Department of Environmental Protection, as lead agency in the Project, is irrelevant now that the City of Hoboken has explicitly indicated its intention to proceed with the purchase and eventual construction of a park and underground retention facility to store excess storm water when the Hudson River outfalls operated and controlled by the North Hudson Sewerage Authority are not available. The Draft Scoping Document, therefore, should not be finalized until an amended Draft Scoping Document has been issued by NJDEP , and the public comment period has been reopened for an additional thirty days from the issuance of such amended Draft Scoping Document addressing both the impact of the BASF property facility to store excess storm water during times of potential inland flooding and the impact of the hazardous wastes potentially accumulating in the retention pond if all existing contamination is not removed or treated on site prior to its construction or contained after to its construction.

In conclusion not only does the Draft Scoping Document fail to address the manner in which these specific concerns are to be remedied, but also is incomplete in its scope by failing to take into account new facts that have surfaced since the draft was completed and despite the fact that the draft specifically provides that "should it be determined that such acquisitions are required, further investigation into those properties may be warranted."

Presented by Richard M. Weinstein, Esq.

Justicemartin@msn.com

October 9, 2015

OFFICE OF THE MAYOR

DAWN ZIMMER MAYOR

CITY HALL
HOBOKEN, NEW JERSEY

October 9, 2015

Mr. David Rosenblatt
Director
Office of Flood Hazard Risk Reduction Measures
401 East State Street, Mail Code 501-01A
Trenton, NJ 08625-0420

Dear Director Rosenblatt,

Please accept the following scoping document comments on behalf of my administration.

Pg. 1: The executive summary should be simplified and provide the reader with an understanding of what the scoping document will present. This includes a brief background (the impacts from Sandy, recurring flooding issues within the project area, the uncertainty of future flood events) which establishes the need for the project. The executive summary should also state the purpose of the project and the four project strategies (RESIST, DELAY, STORE, DISCHARGE). The executive summary should help the reader understand how the feasibility study and EIS will analyze alternatives and produce a preferred alternative based upon screening criteria. Part of the narrative uses language that sounds like the intent of this project is to prevent consequences similar to Sandy – when the objective of the project is better expressed in reducing flood risk to a yet to be specified level of protection. In places, the language used to summarize the project is difficult to understand. Perhaps an improved summary might be: The Project is a comprehensive urban water strategy to reduce flood hazard and flood-related public health risks while leveraging infrastructure investments to enhance urban livability. Amending the preceding sentence should occur throughout the document.

Pg. 3: The project background should paraphrase and expand upon language from the executive summary. The background should provide the reader with the appropriate context to understand how the purpose and need for this project have been developed. This includes a history of flooding in the project area, as well as the Rebuild by Design competition.

Pg. 5: The study area map should reflect current Hoboken Open Space.

Pg. 6: The scoping document should clarify how the preferred alternative will be memorialized and presented to the public. Specifically, this document should identify how the "master plan" for this project will address operations and maintenance, ownership, cost strategies for financing subsequent phases, and how long term plan amendments should be handled.

Pg. 7: Much stronger language should be used to describe interconnections between this project, the Long

Slip Canal project and the North Hudson Sewerage Authority's long term control plan (LTCP). North Hudson's LTCP will address water quality issues, while this project will focus on water quantity issues. The combinations of water quality and quantity issues are systemic along urban coastal waterfronts, and this topic should be addressed in the scoping document. The scoping document should speak to strategies and implementable goals and objectives that are consistent with the LTCP. Moreover, the Long Slip Canal project has the potential to mitigate flooding effects if coordinated as a resiliency strategy as part of this plan.

Pg. 7: Section 3.0 - The project purpose should emphasize the need for protection from storm surges, spring tides, sea level rise and rainfall events. Suggested language: "The Study Area, comprising the entire City of Hoboken, and adjacent areas of Weehawken and Jersey City (see Figure1), is vulnerable to flooding from **high tides or spring tides**, coastal storm surge and inland rainfall events. The purpose of the project is to reduce the **short and long term** flood risk to flooding areas within the Study Area. The project intends to minimize the impacts from surge, **tidal** and rainfall flood events on the community, including impacts to public health, while providing benefits that will enhance **quality of life**, recognizing the unique **opportunities and constraints** within a highly developed urban area."

Section 3.1 – The project need should be split into three interconnected types of flooding that characterize and differentiate between coastal storm surge and high tides, springs tides and sea level rise and rainfall flooding. The scope of work should also discuss and explore the interplay between groundwater elevation, nuisance flooding and coastal storm surge events. There should be sufficient data collected to understand if or when seepage, backflow or other types of underground water movement effects the interior project area.

Pg. 13: Section 3.2 - Goals and objectives should be stated in terms that are clearly either a goal or objective. A goal is an overarching principle that guides decision making while objectives are specific, measurable steps that can be taken to meet the goal. For example a priority goal for this project is to reduce flood risk from storm surge. There should be stronger language in the goal statements that tie this project to the success of the resist strategy.

Pg. 15: Project concepts should be developed to address the impacts from three types of flooding:

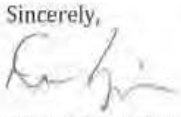
- coastal storm surge
- tidal flooding (high tides, spring tides and sea level rise)
- and systemic inland flooding associated with rainfall

Pg. 15: Provide a laymen's explanation of what "site and reach based" mitigation strategies mean to a member of the public un-informed on these terms.

Pg. 33 The scoping document should address the impact to emergency services for ingress, egress, circulation or access as it relates to proposed changes to the project area during construction, following project closeout, and during an emergency deployment.

As always, we are looking forward to working with your staff on implementing this tremendously important project.

Sincerely,



Mayor Dawn Zimmer

REBUILD BY DESIGN HUDSON RIVER

RESIST · DELAY · STORE · DISCHARGE

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

(2)

Oct 1 open hse
2nd page - see
also Sept 29

*OPINION ○CONCEPT Pt 2, 3

COMMENT/QUESTION FORM

☐ Add statistician to Team
CHANGE emphasis to IRENE (LT blue on map) 10" 24 hrs
what's going on in weehawken; Tunnel / ramps, topo ↑
water from H Tunnel, I-78, 139, viaduct in model
Refer to Vol V CSO Report HCUA c. 1980 (FIRNIE)
Value engineering section from Bayonne " 9 pgs '79
Vol IV

☐ More terms could be passed out: Pre treatment, BOD
COD, dry weather flow, environment, inflow analysis,
CSO, outlet, sludge disposal
Include nautical chart w/ depths (.7 sq mile H2O)/HOB
show communities on palisades, Typ piping arr.
Use term Pimby, = wind Turbines in Weeh Cove to
emphasize 66% imperv here; 64% NYC, push sustainable
Hob 2011

* Em Net report, shows futility of interconnects (a-fib)

○ Concept: portable barriers in parks & median precast
Trench drain (Fig scale = 40' rd) on promenade sta / pump

Name:

Address or Email: tomashilmer@aol.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

Comments must be received or postmarked by October 9, 2015.

Additional Drop-In Open Houses:

September 29
4 pm – 8 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

October 1
6:30 pm – 8:30 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

☐ canal slip 50'x900'x20dp = .9mcf on Sept 29 comments
inflow?

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

☐ forced main follows RR track., Stop JC dumping

REBUILD BY DESIGN HUDSON RIVER

▪ RESIST ▪ DELAY ▪ STORE ▪ DISCHARGE ▪

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

- Time line (Make it faster)
- Storm Surge (protect Weehawken & Light Rail)
- Interim Measures
- combined sewer concerns for capacity with rapid growth
- Plant based solutions

Name: Ann Louise Cooney
Address or Email: alcooney@yahoo.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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• RESIST • DELAY • STORE • DISCHARGE •

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

Discussions of approval of drugs go through a 2 point analysis are the drugs effective and what are the side effects of the drugs when administered to subjects and the public. In the context of the RBD I have the same questions

1- What are the side effects of RBD
- I guess outlined in the EIS
- Will the project as figally conceived be able to prevent flooding from storm surge situations in high tide and 10 year and ten year rainfall events.
- Is the potential of a six acre retention facility at the BASF site Cold Henkel/Cognis property recently targetted by the Hoboken City council on Sept 16, 2015 going to be applied to retain sufficient volumes of stormwater to overcome the identified problems in the Draft Scoping document (see last paragraph on page 12)

Name: R. Weinstein
Address or Email: justicemartin@

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
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REBUILD BY DESIGN HUDSON RIVER

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Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

I'm here representing the Hoboken Shade Tree Commission. Moving forward our committee is seeking ways that our mission and role can work w/in the Rebuild By Design Plan, as we slowly, sidewalk by block are ~~increasing~~ decreasing the impermeable ~~paving~~ pavement. ~~and increasing~~ (this may be too early in process obviously)

As a Hoboken resident, I think protecting infrastructure is key.
- Protecting our public transit, which without it, disables the city and region. Both Hudson Bergen Light Rail and PATH/Hoboken Terminal are in the most vulnerable portions of the city. Beyond protection of the stations and tracks the power substations for both systems are in vulnerable locations.
- Electricity. Substations for Hoboken - North and South are in some of the lowest areas. Hoboken also has an opportunity to bury it's power lines once and for all. Many of us had flooding, because our sump pumps couldn't be powered, and protecting power is key to flood pumping for the entire city.

Combined sewer system. ~~Looking into also~~ Since it may be infeasible to separate this, looking into increasing treatment capacity (and to tertiary levels) to reduce sewer outflow in the 1"-2" etc stormevent? - together w/other stormwater treatment strategies.

Name: Amy Sommer
Address or Email: atsommer@gmail.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
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State of New Jersey
Department of Environmental Protection

REBUILD BY DESIGN HUDSON RIVER

▪ RESIST ▪ DELAY ▪ STORE ▪ DISCHARGE ▪

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

Unknown Underground fuel oil Tanks

COMMENT/QUESTION FORM

Make sure all fuel oil tanks located Underground are legally decommissioned.
- When the surge of Sandy came through old tanks were / broken, breached
causing leaks + contamination.
E.g. Hoboken Catholic Academy
555 - Seventh St - Hoboken

Rose Perry CAG

Name: Rose Perry
Address or Email: Palmo1238@gmail.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
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DEPARTMENT OF ENVIRONMENTAL PROTECTION

REBUILD BY DESIGN
HUDSON RIVER
• RESIST • DELAY • STORE • DISCHARGE •

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

What part does the Hoboken Sewer Authority play in the RESIST, DELAY, STORE, DISCHARGE Plan?

Name: Raymond Guzman
Address or Email: 1130 Willow Ave, Hoboken, NJ 07030

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
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Mail code: 501-01A
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REBUILD BY DESIGN HUDSON RIVER

▪ RESIST ▪ DELAY ▪ STORE ▪ DISCHARGE ▪

Environmental Impact Statement Public Scoping Meeting

Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

I want to ensure that the efforts we are doing now as Major Zimmer stated are inclusive/ coordinated with this team so we aren't doing something twice or maybe were doing something new that isn't the best thing.

Name:

Address or Email: Dannie Murray gma@gmail.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
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State of New Jersey
Department of Environmental Protection

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Thursday, September 24, 2015
Hoboken Multi-Service Center

COMMENT/QUESTION FORM

As a resident at Maxwell where the interpump project is currently happening I just want to make you aware that technology they are using on the construction is not preventing vibration and often residents feel the building might "collapse" during construction. This team should evaluate what is being used at this location and not use what is being used at other locations.

Overall interesting stuff. I look forward to learning more.

Name: Bonnie Murray
Address or Email: bonnie.murray.gina@gmail.com

Please leave this form at the Sign-in table, or you can submit by :

Email: rbd-hudsonriver@dep.nj.gov

- or -

Mail: David Rosenblatt
Director, Office of Flood Hazard Risk Reduction Measures
401 East State Street
Mail code: 501-01A
P.O. Box 420
Trenton, NJ 08625-0420

Comments must be received or postmarked by October 9, 2015.

Additional Drop-In Open Houses:

September 29
4 pm – 8 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

October 1
6:30 pm – 8:30 pm
Hoboken City Hall, Basement Conference Room
94 Washington St., Hoboken

State of New Jersey
Department of Environmental Protection

REBUILD BY DESIGN
HUDSON RIVER
• RESIST • DELAY • STORE • DISCHARGE •

Environmental Impact Statement Public Scoping Meeting

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around the Hudson Tea buildings the promenade is very important to people living there. A lot of people live on the first floor & paid a lot for the views. If a wall must be built, can it be burried underground & rise up for a flood? Or if a low wall must be built the height of the railing - can it be glass? The expansive views are key to the whole feel of the neighborhood even walking down 15th St.

Thanx.

Name: Laura Edelman
Address or Email: Spacesbylaura@gmail.com

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COMMENT/QUESTION FORM

- Time line (Make it faster)
- Storm Surge (protect Weehawken & Light Rail)
- Interim Measures
- combined sewer concerns for capacity with rapid growth
- Plant based solutions

Name: Ann Louise Cooney
Address or Email: alcooney@yahoo.com

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(2)

Oct 1 open hse
2nd page - see
also Sept 29

* OPINION ○ CONCEPT Pt 2, 3

COMMENT/QUESTION FORM

☐ Add statistician to Team
CHANGE emphasis to IRENE (LT blue on map) 10" 24 hrs
what's going on in weehawken; Tunnel / ramps, topo ↑
water from H Tunnel, I-78, 139, Viaduct in model
Refer to Vol V CSO Report HCUA c. 1980 (FIRNIE)
Value engineering section from Bayonne " 9 pgs '79
Vol IV

☐ MORE TERMS could be passed out: PRE treatment, BOD
COD, dry weather flow, environment, inflow analysis,
CSO, outlet, sludge disposal
Include nautical chart w/ depths (.7 sq mile H2O)/HOB
show communities on palisades, Typ piping arr.
USE term Pimby, = wind Turbines in Weeh Cove to
emphasize 66% imperv here; 64% NYC, push sustainable
Hob 2011

* Em Net report, shows futility of interconnects (a-fib)

○ Concept: portable barriers in parks & median precast
Trench drain (Fig scale = 40' wd) on promenade sta / pump

Name:

Address or Email: tomashilmer@aol.com

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☐ canal slip 50'x900'x20dp = .9mcf on Sept 29 comments
inflow?

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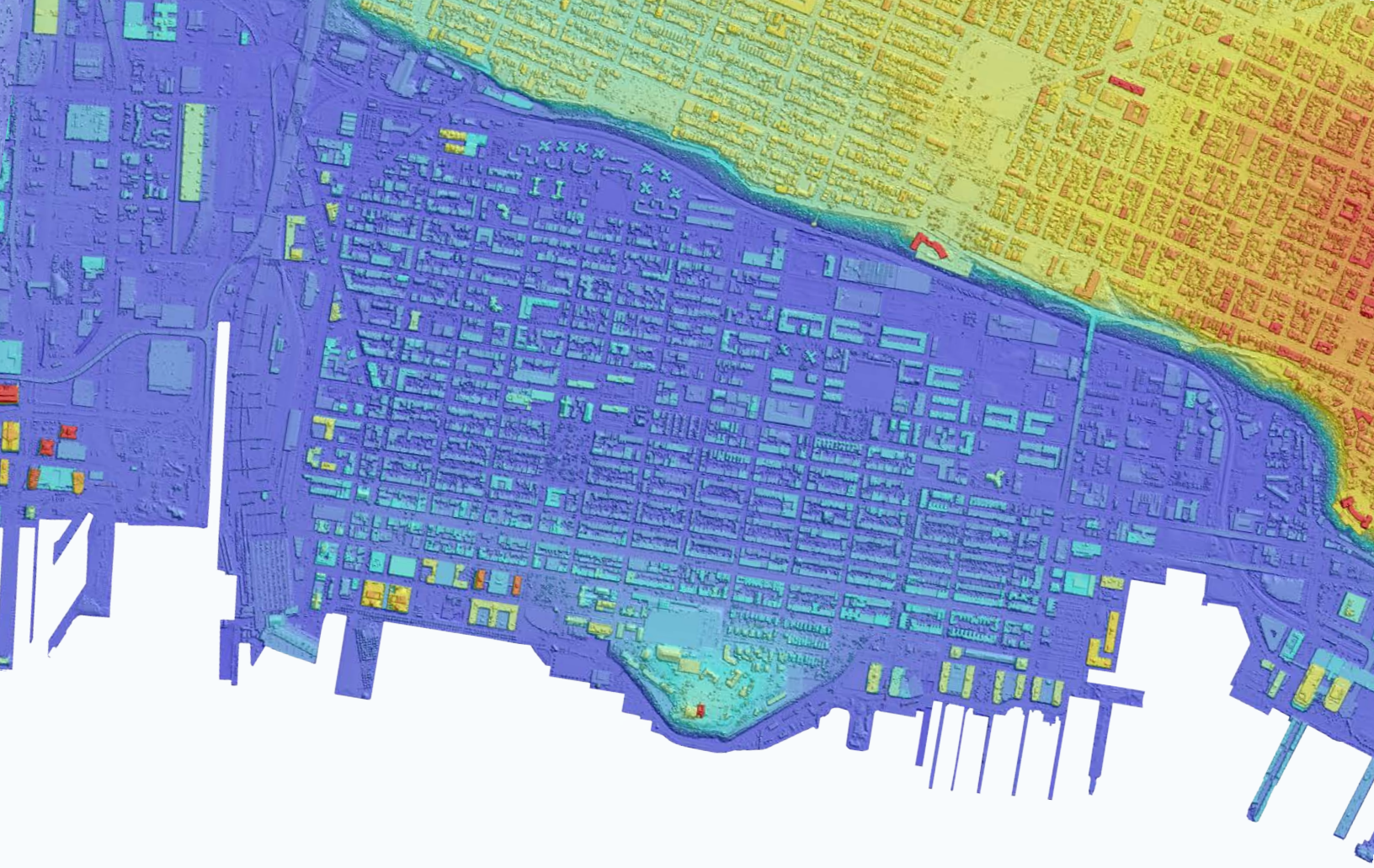
☐ forced main follows RR track., Stop JC dumping



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