REBUILDBYDESIGN

MEADOWLANDS

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) PUBLIC HEARING

JUNE 26, 2018

WELCOME / OPENING REMARKS

Dennis Reinknecht,
NJDEP Program Manager

AGENDA

Chris Benosky, AECOM

- NEPA Overview and Timeline
- Project Purpose and Need
- Summary of Build Alternatives
- Summary of Flood Reduction
- Summary of Environmental Impact Analysis
- Next Steps
- Public Comment Opportunity

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

OVERVIEW

NATIONAL ENVIRONMENTAL POLICY ACT

- Ensures the Federal Government considers environmental effects of projects prior to implementation
- Applied to all projects with a Federal connection (e.g., funding)
- Requires an Environmental Impact Statement (EIS) for "major Federal actions significantly affecting the quality of the environment"

ENVIRONMENTAL IMPACT STATEMENT

- EIS process has several procedural steps to ensure public input is obtained and considered

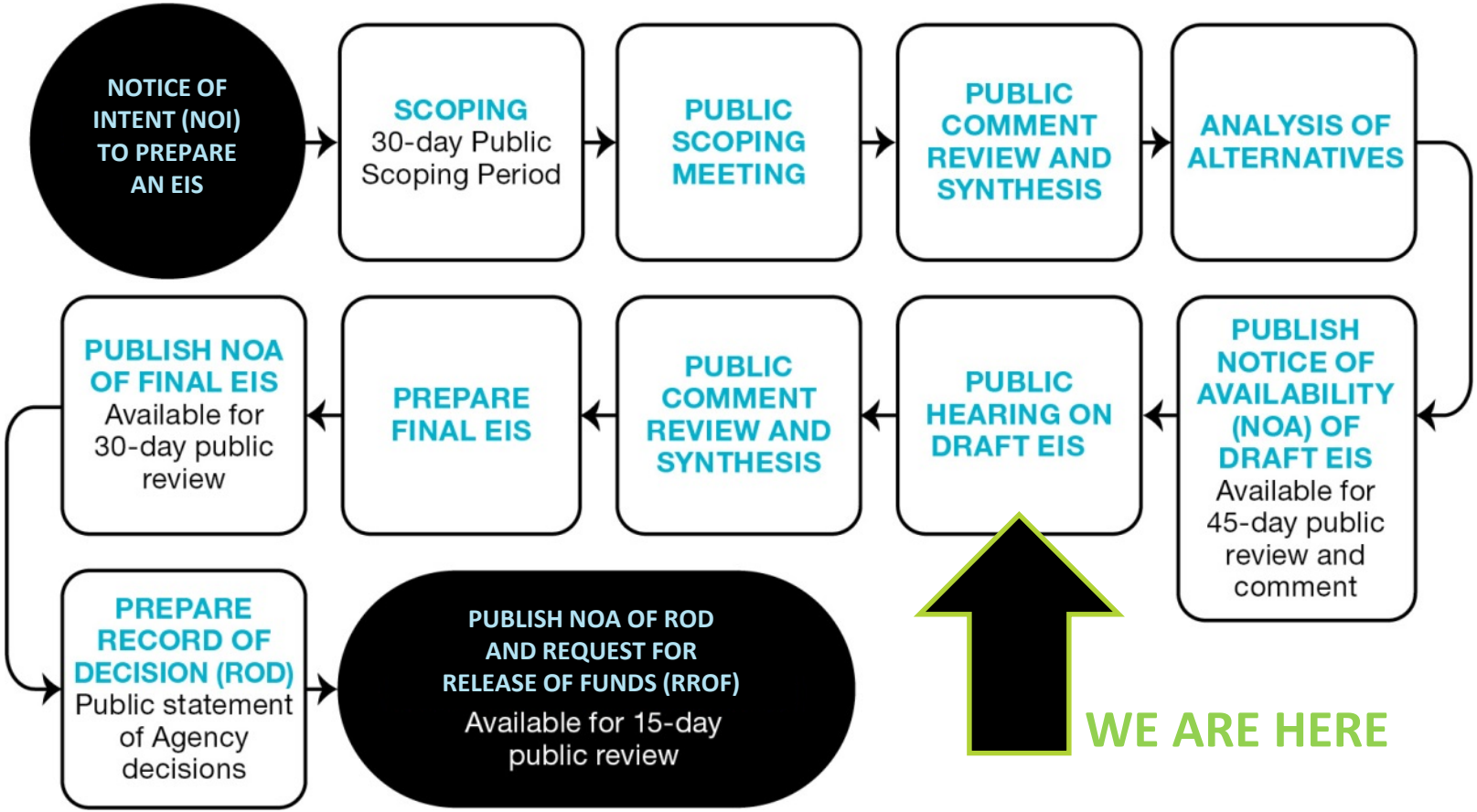
ENVIRONMENTAL IMPACT STATEMENT (EIS)

OVERVIEW

DRAFT ENVIRONMENTAL IMPACT STATEMENT

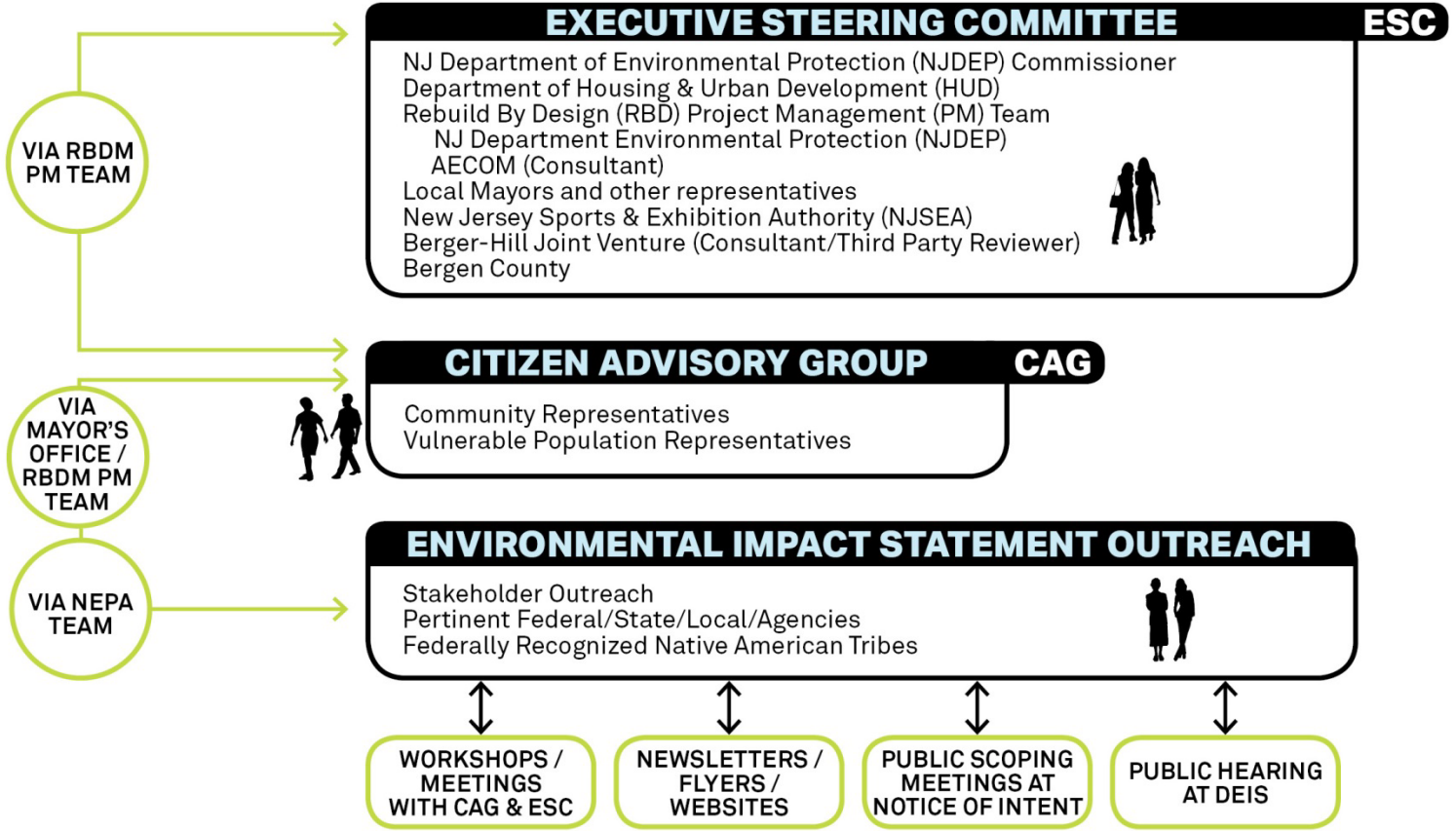
- **An EIS addresses the following related to a proposed Federal action:**
  - Purpose and Need
  - Description of Proposed Action and Alternatives
  - Consultation/Coordination Efforts
  - Existing Conditions of the Affected Environment
  - Environmental Consequences of the Considered Alternatives
    - Direct, Indirect, and Cumulative Impacts
    - Possible Best Management Practices (BMPs) and Mitigation Measures

NEPA TIMELINE



COMMUNITY ENGAGEMENT

EXECUTIVE STEERING COMMITTEE & CITIZENS ADVISORY GROUP



TONIGHT AND PUBLIC COMMENT PERIOD

WAYS TO COMMENT

- Provide oral comments at tonight's meeting
- Complete and submit a written comment card
- Email: rbd-meadowlands@dep.nj.gov
- Mail comments to:

  New Jersey Department of Environmental Protection
  c/o Dennis Reinknecht, Program Manager
  501 East State Street
  Mail Code 501-01A, PO Box 420
  Trenton, NJ 08625-0420

Comment Submission Deadline: July 15, 2018

PROJECT PURPOSE & NEED

CHRISTOPHER BENOSKY, AECOM

DEIS SECTION 1.4

THE PURPOSE

Reduce flood risk in the Project Area

Increase resiliency of the communities and ecosystems

Reduce impacts to critical infrastructure, residences, businesses, and ecological resources

DEIS SECTION 1.4.1

THE NEED

Address systemic **inland flooding** from heavy rainfall & **coastal** storm surges

Increase **community resiliency**

Reduce flood insurance **claims** from future events

Enhance water quality and protect ecological resources

Protect life, public health, and property

Incorporate flood hazard risk reduction strategy with **civic, cultural, & recreational values and amenities**

PROJECT GOALS

1. Create the **BEST POSSIBLE PROJECT** with the available funding

2. Meets the Project Mandate by providing **FLOOD REDUCTION & CO-BENEFITS** such as reducing sediment & improving water quality

3. Construct a project that provides **STORM PROTECTION** and allows for a **QUICKER RECOVERY**

PROJECT CONSTRAINTS

1. Construct a complete project that functions with **INDEPENDENT UTILITY** to meet purpose & need without relying on future projects

2. Use only **AVAILABLE FUNDS** without relying on future funding

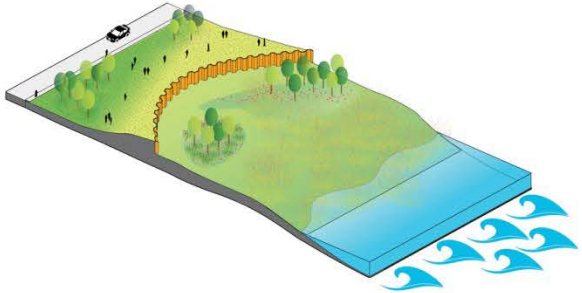
3. Construct a fully-functional project by **SEPTEMBER 2022**

4. Project must have a **POSITIVE BENEFIT COST RATIO**

5. **MINIMIZE ADVERSE** environmental **EFFECTS** to the extent possible

THE MEADOWLANDS - ALTERNATIVES

THREE BUILD ALTERNATIVES AND A NO ACTION ALTERNATIVE



Alternative 1:
Structural Flood Reduction

Alternative 2:
Stormwater Drainage Improvements

Alternative 3:
Hybrid Alternative (Preferred Alternative)

STRUCTURAL FLOOD REDUCTION

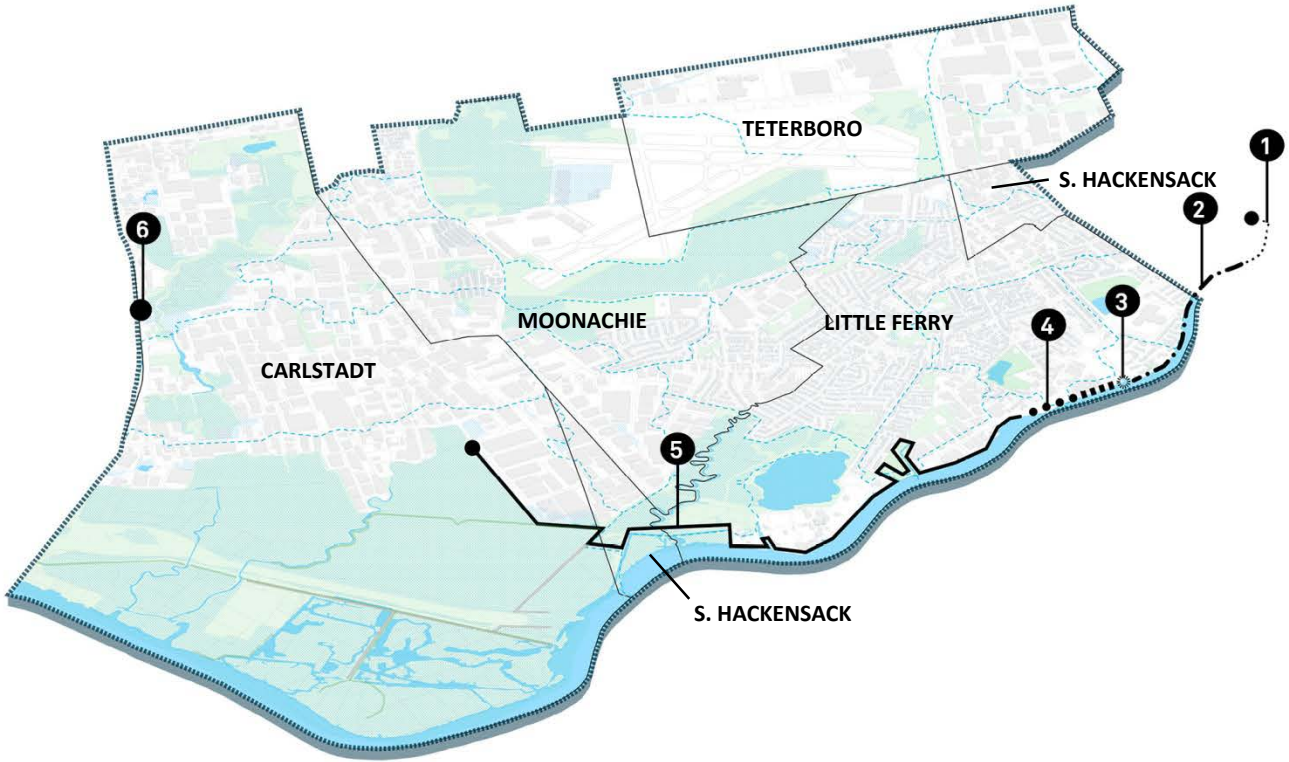
ALTERNATIVE 1 SUMMARY

LULU LOQUIDIS, AECOM

DEIS SECTION 2.5.2

ALTERNATIVE 1

STRUCTURAL FLOOD REDUCTION: PLAN



Provides a line of protection against storm surges to 7' NAVD88 (approximately a 50-year storm)

1. Existing Riverwalk
2. Sheet Pile Cantilever
3. Berms at Fluvial Park
4. Cantilever Walkway
5. Sheet Pile or Floodwall
6. Storm Surge Barrier

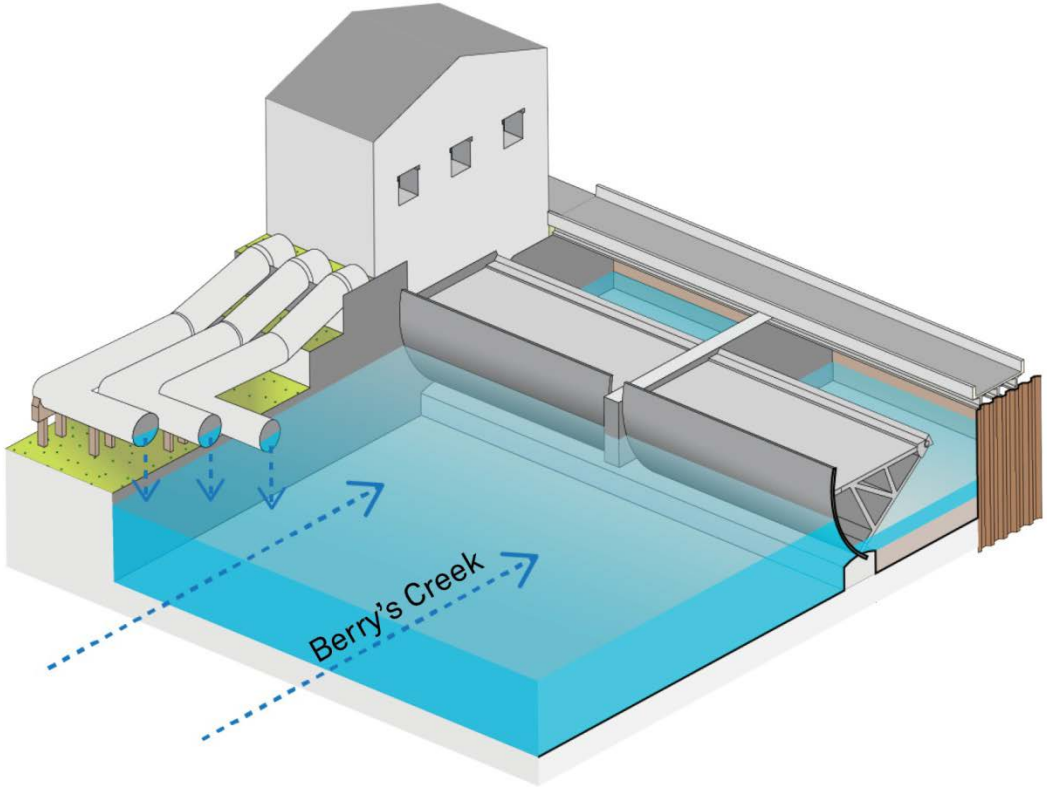
ALTERNATIVE 1

STRUCTURAL FLOOD REDUCTION: FEATURES

- ~19,700 linear feet (LF) of floodwalls
- ~900 LF of levees/berms
- 1 tide gate
- 8 closure gates

ALTERNATIVE 1

STRUCTURAL FLOOD REDUCTION: FEATURES



Berry's Creek storm surge barrier

- **1,000 cubic feet per second (CFS) pump station**
- **118 foot wide dual-gate opening with short t-wall and earthen berms to prevent flanking (water flowing around surge barrier)**

ALTERNATIVE 1

STRUCTURAL FLOOD REDUCTION: FEATURES

4 Proposed Parks (10.1 acres)

- **Riverside Park**
- **Fluvial Park**
- **K-Town Park**
- **DePeyster Creek Park**

Multiple open space features along the line of protection, including a continuous riverwalk from the Hackensack Riverwalk south to Riverside Park

STORMWATER DRAINAGE IMPROVEMENTS

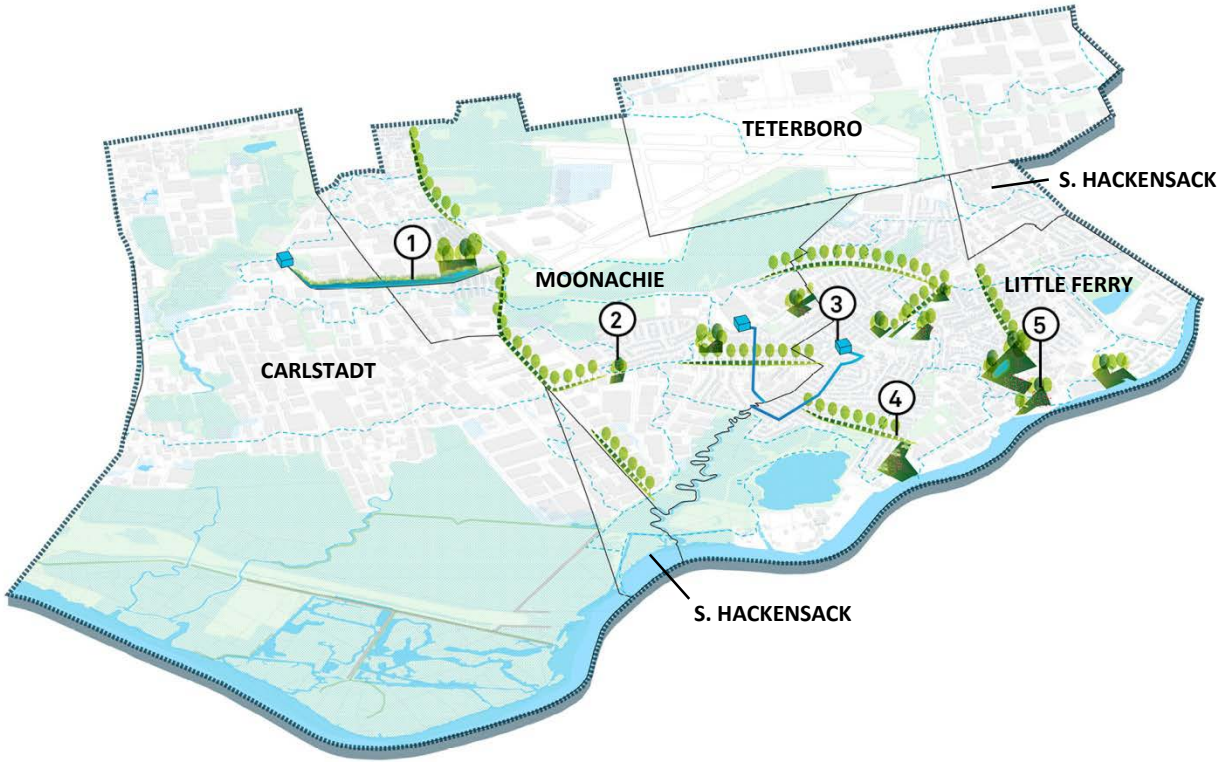
ALTERNATIVE 2 SUMMARY

LULU LOQUIDIS, AECOM

DEIS SECTION 2.5.3

ALTERNATIVE 2

STORMWATER DRAINAGE IMPROVEMENTS: PLAN



Provides improved stormwater drainage through construction of new and improved grey infrastructure and new green infrastructure throughout the Project Area

1. East Riser Channel Improvements + New Park
2. Green Infrastructure + New Park
3. Force Main + Public Facility Improvements
4. Green Infrastructure + New Park
5. Park Improvements + 3 New Parks + Green Infrastructure

ALTERNATIVE 2

STORMWATER DRAINAGE IMPROVEMENTS: FEATURES

3 New Pump Stations

- **(2) at Losen Slote**
- **(1) at East Riser Ditch**

2 New Force Mains

- **Both at Losen Slote**

ALTERNATIVE 2

STORMWATER DRAINAGE IMPROVEMENTS: FEATURES

East Riser Ditch Improvements

- **Channel dredging between existing tide gate and Moonachie Avenue**
- **Culvert replacements at Amor Ave and West Commercial Ave**
- **Replacement of the railroad bridge**

ALTERNATIVE 2

STORMWATER DRAINAGE IMPROVEMENTS: FEATURES

New Parks (20.0 acres)

- **Fluvial Park**
- **Riverside Park**
- **Avanti Park**
- **DePeyster Creek Park**
- **Caesar Place Park**

Improvements to 5 existing open spaces/public amenities

- **Willow Lake Park**
- **Little Ferry Municipal Properties and Library**
- **Joseph Street Park**
- **Robert Craig School**
- **Little Ferry Public Schools**

ALTERNATIVE 2

STORMWATER DRAINAGE IMPROVEMENTS: FEATURES

41 New Green Infrastructure Systems along Roadways

- **Bioswales**
- **Rain Gardens**
- **Storage/Tree Trenches**

HYBRID ALTERNATIVE

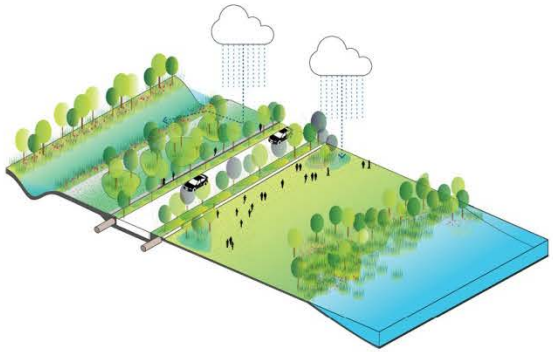
ALTERNATIVE 3 SUMMARY

LULU LOQUIDIS, AECOM

DEIS SECTION 2.5.4 (BUILD PLAN) & DEIS SECTION 5.0 (FUTURE PLAN)

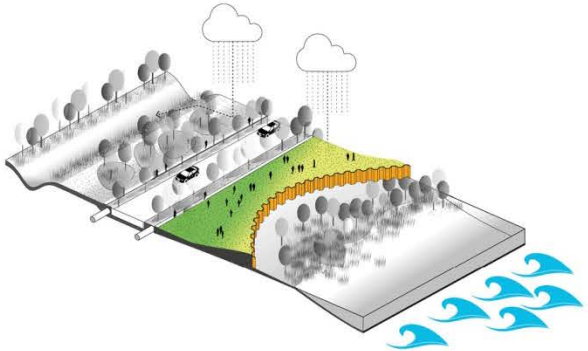
ALTERNATIVE 3 : PREFERRED ALTERNATIVE

HYBRID ALTERNATIVE: BUILD PLAN AND FUTURE PLAN



Build Plan

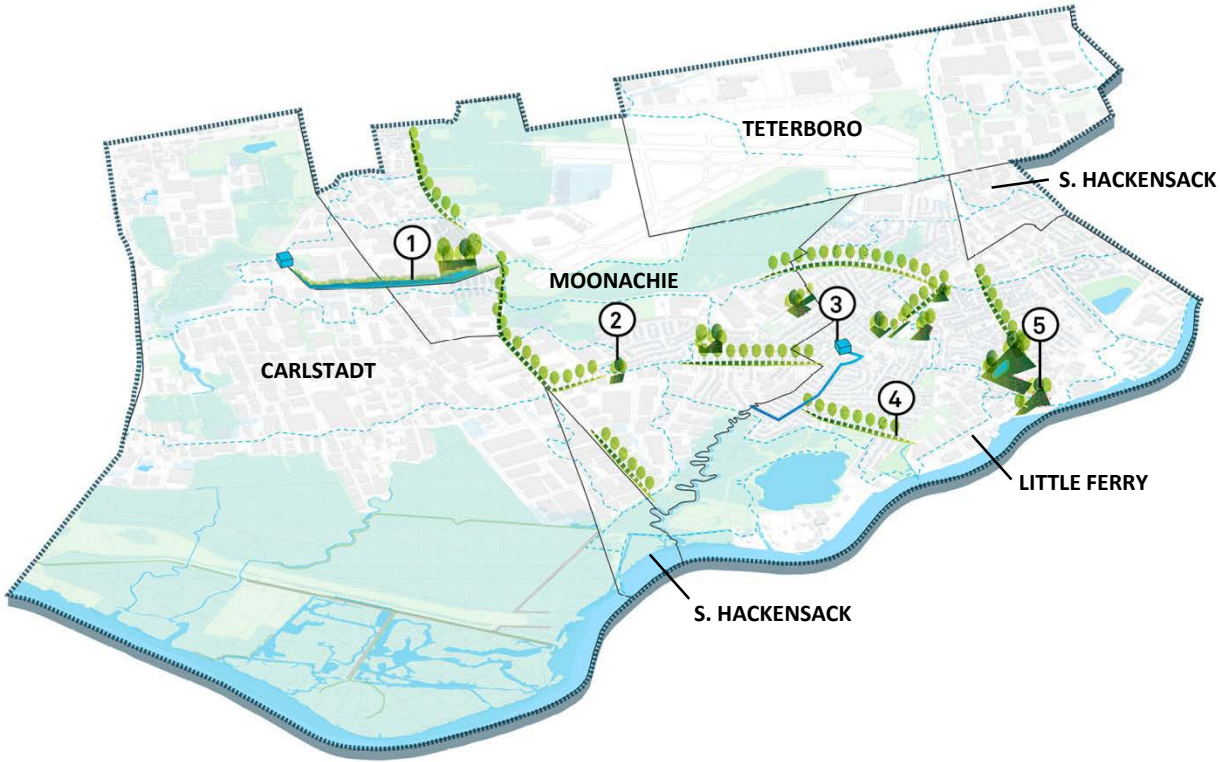
- The *Build Plan* represents a reasonable project with independent utility that can be **constructed by 2022.** Components include flood reduction strategies to address inland flooding (i.e., flooding)
- Analyzed in the DEIS (see Section 2.5.4)



Future Plan

- Additional flood reduction components, designed to provide both coastal and inland flood protection, became elements of a *Future Plan*. These elements could **be implemented** by others **over time** as new funding sources become available
- Analyzed in the Cumulative Impacts analysis in the DEIS (see Section 5.0)

ALTERNATIVE 3
BUILD PLAN



Provides improved stormwater drainage through construction of both grey infrastructure and green infrastructure similar to Alternative 2

Stormwater Management Features

1. East Riser: Channel Improvements + Enhanced Wetland Open Space
2. Avanti Park: Street Green Infrastructure + Enhanced Open Space
3. Losen Slote: Force Main + Public Facility Improvements
4. Green Infrastructure + Enhanced Wetland Open Space
5. GI Improvements to Willow Lake Park + 1 New Wetland / Open Space along Hackensack River

ALTERNATIVE 3

BUILD PLAN: FEATURES

2 New Pump Stations

- **(1) at Losen Slote**
- **(1) at East Riser Ditch**

1 New Force Main

- **At Losen Slote**

ALTERNATIVE 3

BUILD PLAN: FEATURES

East Riser Ditch Improvements

- **Channel dredging between existing tide gate and Moonachie Avenue**
- **Culvert replacements at Amor Ave and West Commercial Ave**
- **Replacement of the railroad bridge**

Proposed improvements are the same as Alternative 2

ALTERNATIVE 3

BUILD PLAN: FEATURES

New Parks (7.6 acres)

- Riverside Park
- Avanti Park
- Caesar Place Park

Improvements to 5 existing open spaces/public amenities

- Willow Lake Park
- Little Ferry Municipal Properties and Library
- Joseph Street Park
- Robert Craig School
- Little Ferry Public Schools

ALTERNATIVE 3

BUILD PLAN: FEATURES

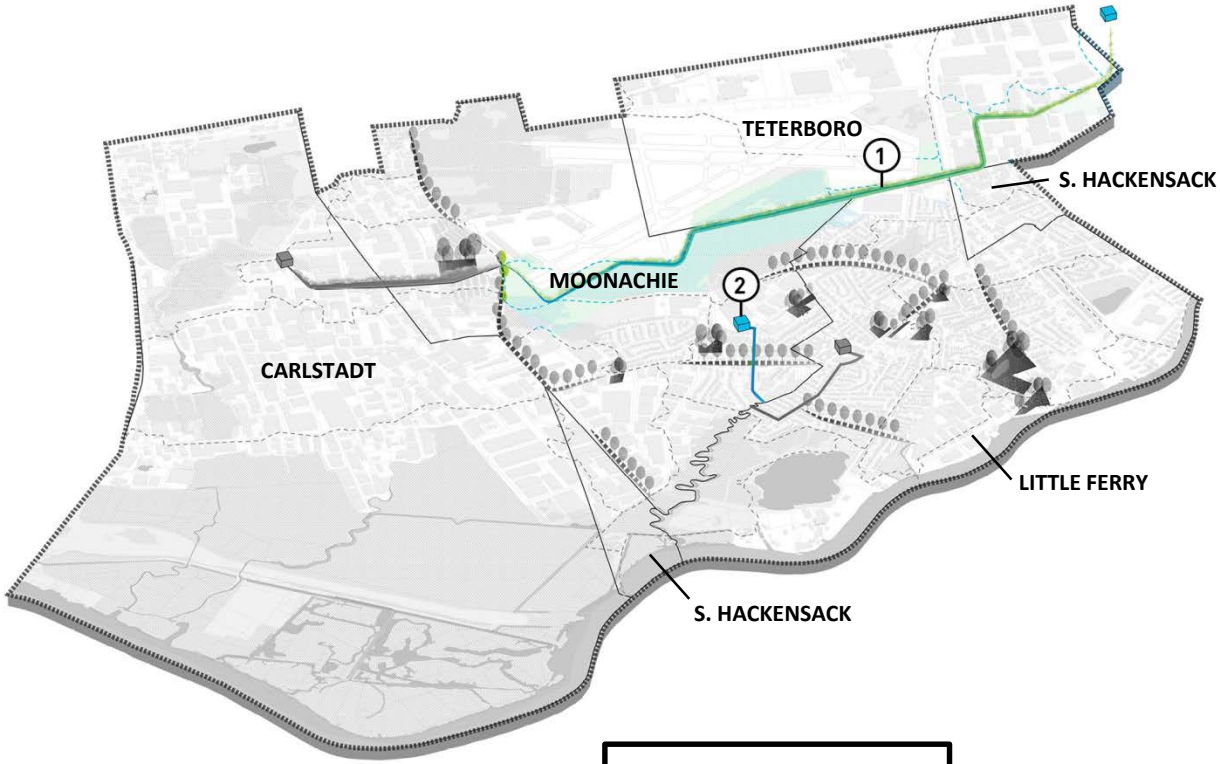
41 New Green Infrastructure Systems along Roadways

- **Bioswales**
- **Rain Gardens**
- **Storage/Tree Trenches**

Proposed improvements are the same as Alternative 2

FUTURE PLAN

ADDITIONAL STORMWATER DRAINAGE IMPROVEMENTS



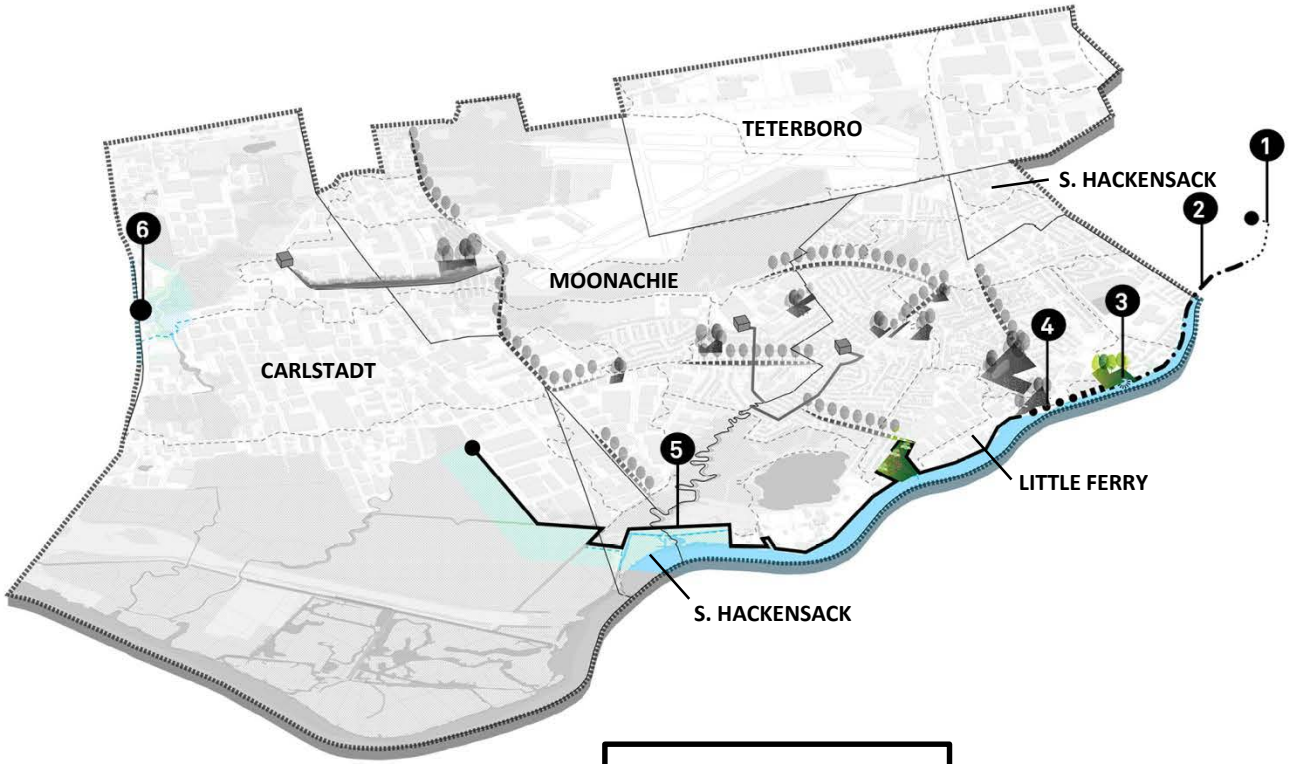
- These elements could **be implemented** by others **over time** as new funding sources become available
- Analyzed in the Cumulative Impacts analysis in the DEIS (see Section 5.0)

1. East Riser Channel Improvements Extension toward South Hackensack
2. A second Losen Slote Pump Station & Force Main (from Alternative 2)

DEIS SECTION 5.0

FUTURE PLAN

50-YEAR STORM SURGE PROTECTION FROM ALTERNATIVE 1



- These elements could **be implemented** by others **over time** as new funding sources become available
- Analyzed in the Cumulative Impacts analysis in the DEIS (see Section 5.0)

1. Existing Riverwalk
2. Sheet Pile Cantilever
3. Berms at Fluvial Park
4. Cantilever Walkway
5. Sheet pile or Floodwall
6. Storm Surge Barrier

DEIS SECTION 5.0

FLOOD REDUCTION SUMMARY

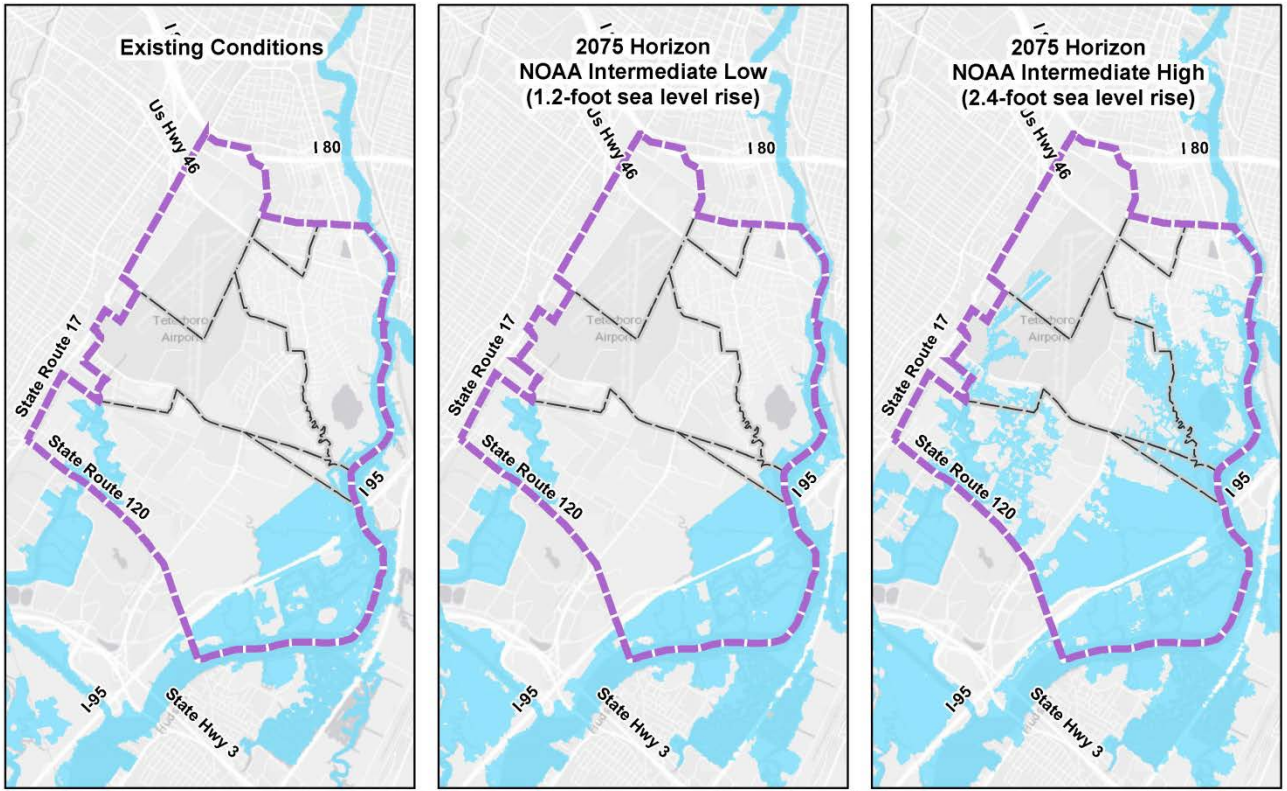
ALTERNATIVE 1

CHRISTOPHER BENOSKY, AECOM

DEIS SECTION 4.1.2

NO ACTION ALTERNATIVE

FLOODING DURING NORMAL TIDE



Anticipated flooding during a normal tide in the Project Area under the No Action Alternative

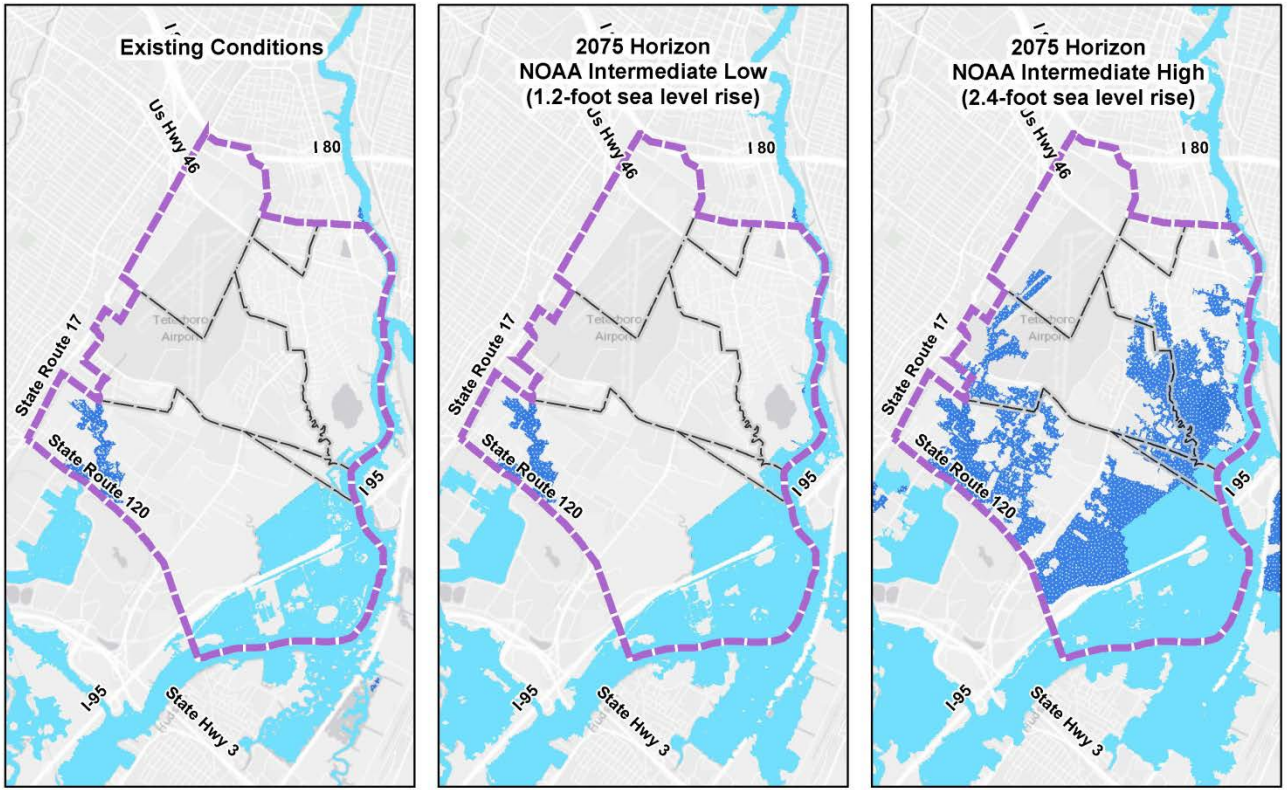
Two sea level rise scenarios (2075)

Area at Risk of Flooding Under the No Action Alternative

Project Area

ALTERNATIVE 1

COMPARISON OF FLOODING DURING NORMAL TIDE



Anticipated flooding during a normal tide in the Project Area with Alternative 1 compared to the No Action Alternative

Two sea level rise scenarios (2075)

- Area with Reduced Risk of Flooding under Alternative 1
- Area still at Risk of Flooding under Alternative 1
- Project Area

FLOOD REDUCTION SUMMARY

ALTERNATIVE 2

CHRISTOPHER BENOSKY, AECOM

DEIS SECTION 4.1.2

NO ACTION ALTERNATIVE

FLOODING IN EAST RISER DITCH SUB-WATERSHED

2-Year Storm (2023)

100-Year Storm (2023)

2-year and 100-year storm event projections

No Action Alternative

Area at Risk of Flooding Under the No Action Alternative

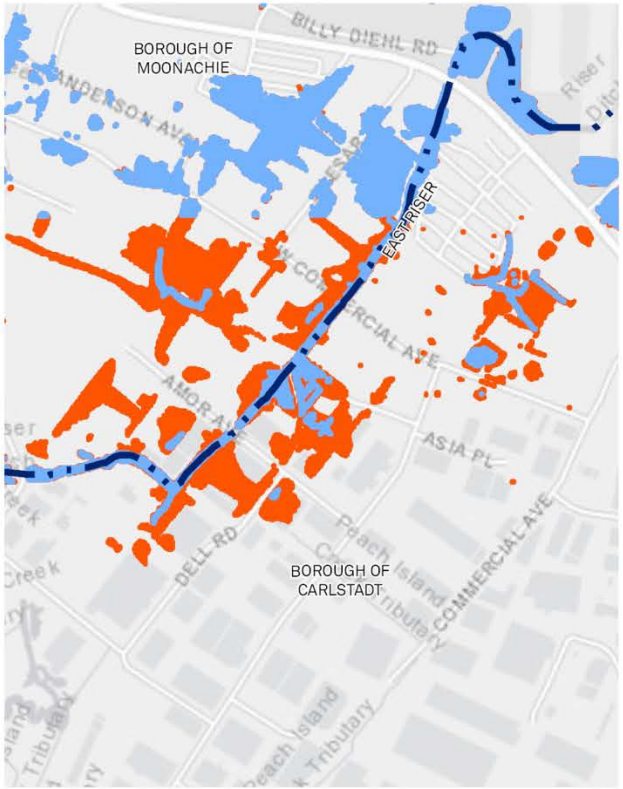
Channel Centerline

ALTERNATIVE 2

COMPARISON OF FLOODING IN EAST RISER DITCH SUB-WATERSHED

2-Year Storm (2023)

100-Year Storm (2023)



2-year and 100-year storm event projections

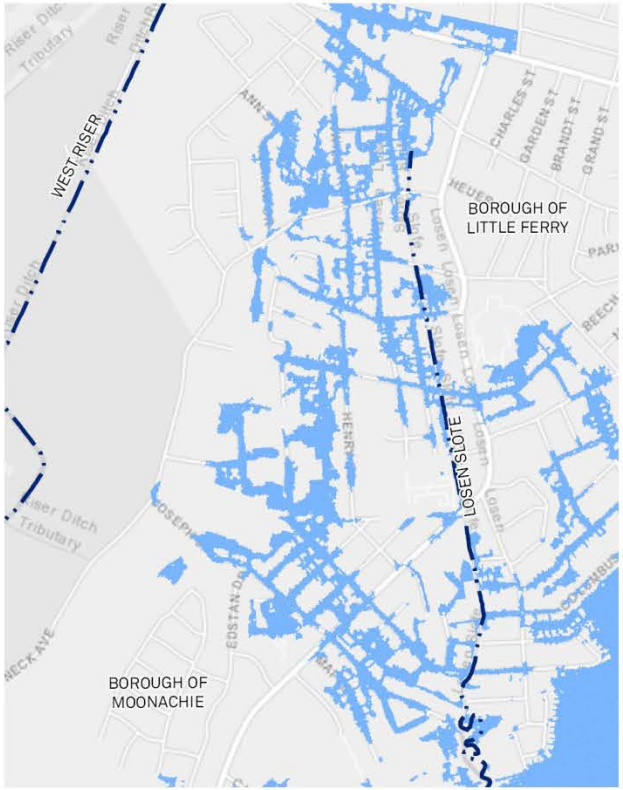
Each graphic compares the No Action Alternative to Alternative 2

- Area with Reduced Risk of Flooding under Alternative 2
- Area still at Risk of Flooding under Alternative 2
- Channel Centerline

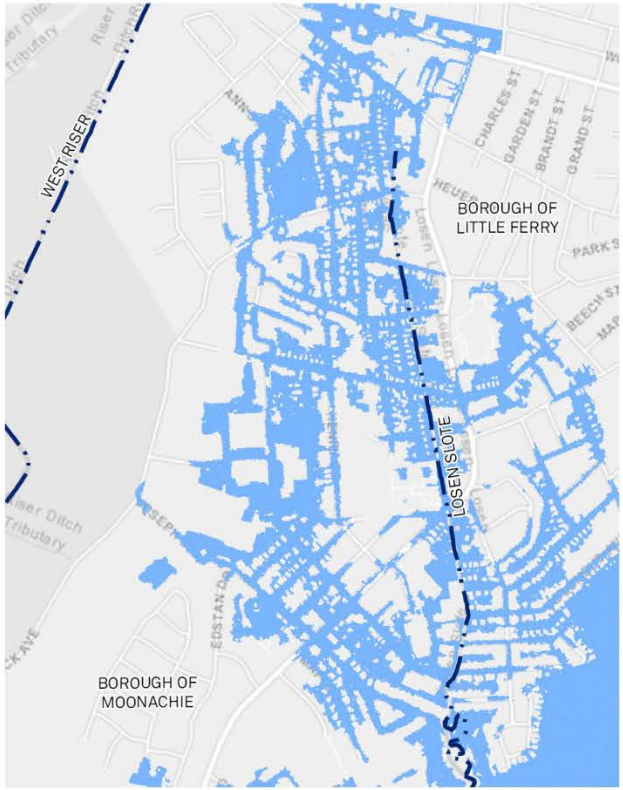
NO ACTION ALTERNATIVE

FLOODING IN LOSEN SLOTE SUB-WATERSHED

2-Year Storm (2023)



100-Year Storm (2023)



2-year and 100-year storm event projections

No Action Alternative

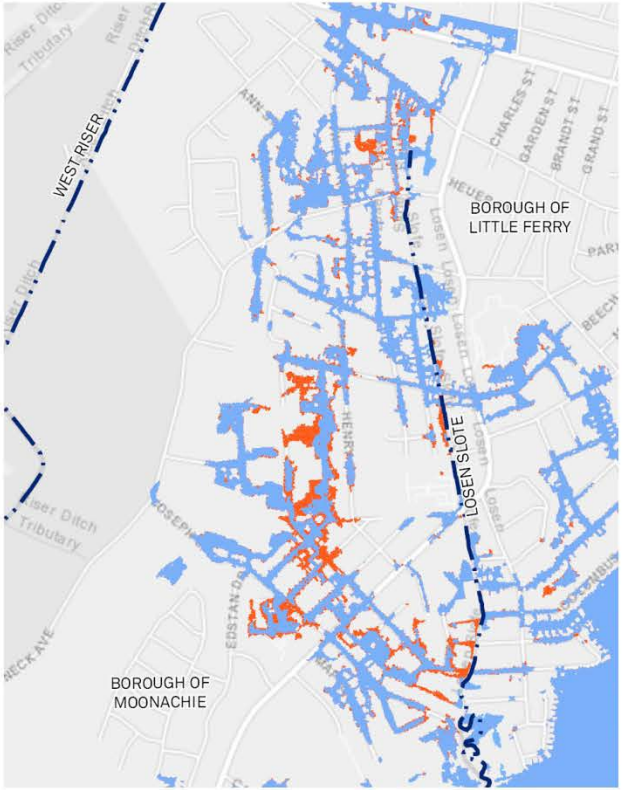
Area at Risk of Flooding Under the No Action Alternative

Channel Centerline

ALTERNATIVE 2

COMPARISON OF FLOODING IN LOSEN SLOTE SUB-WATERSHED

2-Year Storm (2023)



100-Year Storm (2023)

2-year and 100-year storm event projections

Each graphic compares the No Action Alternative to Alternative 2

- Area with Reduced Risk of Flooding under Alternative 2
- Area still at Risk of Flooding under Alternative 2
- Channel Centerline

FLOOD REDUCTION SUMMARY

ALTERNATIVE 3: BUILD PLAN

CHRISTOPHER BENOSKY, AECOM

DEIS SECTION 4.1.2

NO ACTION ALTERNATIVE

FLOODING IN EAST RISER DITCH SUB-WATERSHED: SAME AS ALT 2

2-Year Storm (2023)

100-Year Storm (2023)

2-year and 100-year storm event projections

No Action Alternative

Area at Risk of Flooding Under the No Action Alternative

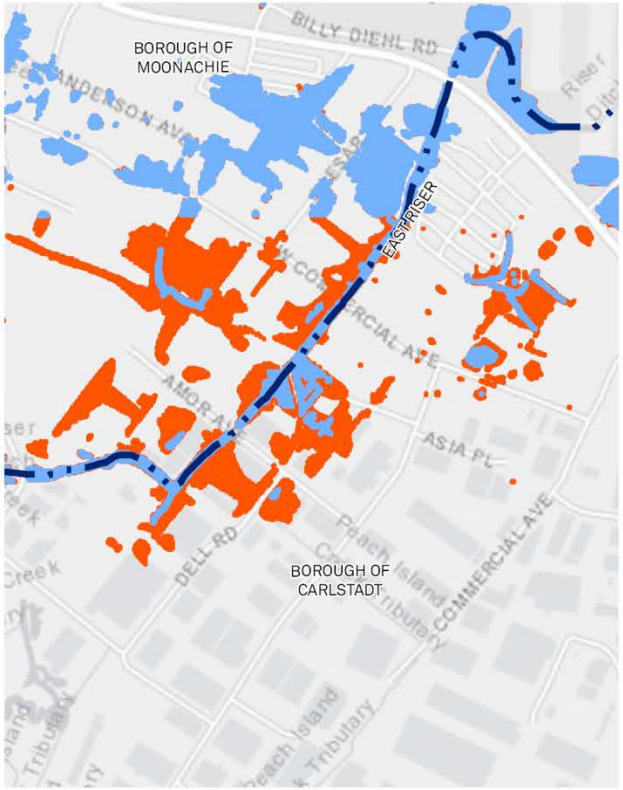
Channel Centerline

ALTERNATIVE 3: BUILD PLAN

EAST RISER DITCH SUB-WATERSHED FLOOD REDUCTION: SAME AS ALT 2

2-Year Storm (2023)

100-Year Storm (2023)



2-year and 100-year storm event projections

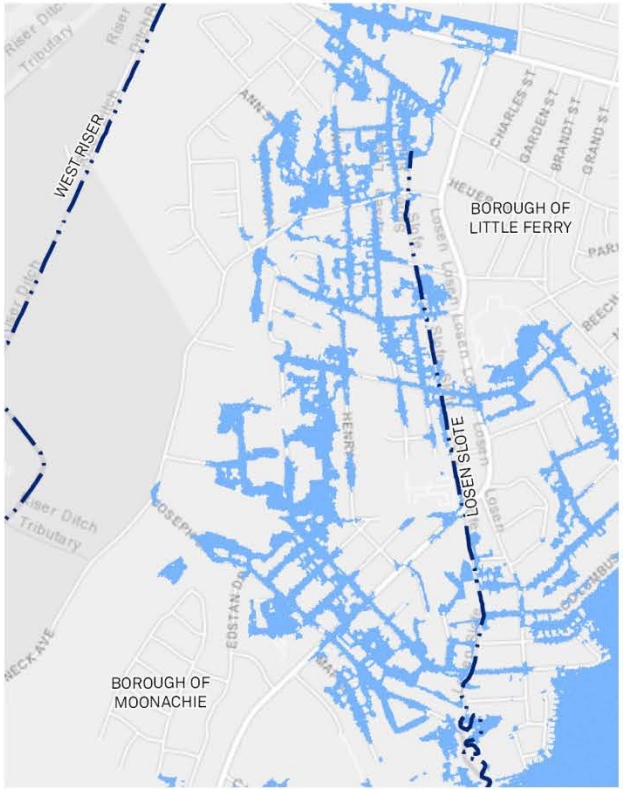
Each graphic compares the No Action Alternative to Alternative 3

- Area with Reduced Risk of Flooding under Alternative 3
- Area still at Risk of Flooding under Alternative 3
- Channel Centerline

NO ACTION ALTERNATIVE

FLOODING IN LOSEN SLOTE SUB-WATERSHED

2-Year Storm (2023)



100-Year Storm (2023)

2-year and 100-year storm event projections

No Action Alternative

Area at Risk of Flooding Under the No Action Alternative

Channel Centerline

ALTERNATIVE 3: BUILD PLAN

COMPARISON OF FLOODING: LOSEN SLOTE SUB-WATERSHED

2-Year Storm (2023)

100-Year Storm (2023)

2-year and 100-year storm event projections

Each graphic compares the No Action Alternative to Alternative 3

- Area with Reduced Risk of Flooding under Alternative 3
- Area still at Risk of Flooding under Alternative 3
- Channel Centerline

ENVIRONMENTAL IMPACT ANALYSIS

BRIAN BOOSE, AECOM

DEIS SECTIONS 4.0 & 5.0

21 TECHNICAL RESOURCE AREAS ANALYZED

- Land Use and Land Use Planning
- Visual Quality/Aesthetics
- Socioeconomics, Community/Populations, and Housing
- Environmental Justice
- Cultural and Historical Resources
- Transportation and Circulation
- Noise and Vibration
- Air Quality and Greenhouse Gas Emissions
- Global Climate Change and Sea Level Change
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Water Resources, Water Quality, and Waters of the US
- Hydrology and Flooding
- Coastal Zone Management
- Sustainability & Green Infrastructure
- Hazards and Hazardous Materials
- Mineral and Energy Resources
- Agricultural Resources and Prime Farmlands

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

STEP 1: DEFINE IMPACT SIGNIFICANCE CRITERIA

Impact Significance Criteria are based on CONTEXT and INTENSITY*

Context: portion of environment that could experience a meaningful change from the Proposed Project

- Local geographic area, society as a whole, etc.

Intensity: severity of the impact

- Based on type, quality, and duration (short-term vs. long-term) of impacts or the sensitivity of resources involved
- Often correlated with regulatory or permitting thresholds

Impact significance criteria are defined by Technical Resource Area in the DEIS

*(40 CFR § 1508.27)

DEIS SECTION 4.1.1

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

STEP 2: UNDERSTAND AND ANALYZE TYPES OF IMPACTS

No Impact

- No potential for effect or negligible impact

Less-than-significant, adverse

- Impact **below significance threshold**
- Measureable change on a local or regional level
- Mitigation measures or BMPs may be recommended

Potentially significant, adverse

- Impact **exceeds significance threshold**
- Measurable change on a local or regional level. If regulatory standards apply, standards would be exceeded
- Mitigation and/or BMPs are required. May or may not be able to be mitigated to *less-than-significant* levels

Beneficial

- Would cause a **positive change or improvement** in the environment
- No mitigation measures or BMPs necessary

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

STEP 3: IDENTIFY MITIGATION MEASURES AND BMPs

Design/Coordination/Pre-Construction

- Permitting and consultation/coordination with regulatory agencies and stakeholders
- Minimization through final design and construction planning

Construction

- Standard BMPs (stormwater, noise, dust, traffic, etc.)
- Compliance with applicable laws and regulations
- Continued coordination

Operation & Maintenance (O&M activities)

- Timing (e.g., outside peak traffic hours)
- Protocol (e.g., signage, types of vegetation, etc.)

A complete summary of Mitigation Measures and BMPs are included in Table 6.4-2 in the DEIS.

ALL BUILD ALTERNATIVES

LESS-THAN-SIGNIFICANT ADVERSE IMPACTS

18 RESOURCE AREAS

DEIS SECTION 4.0

LESS-THAN-SIGNIFICANT ADVERSE IMPACTS
ALTERNATIVES 1, 2, AND 3

SHORT-TERM CONSTRUCTION

- Noise / vibration
- Dust / emissions
- Traffic disruptions
- Property easement acquisitions
- Vegetation removal / soil disturbance
- In-water construction / wetland impacts
- Disturbance to contaminated sites
- Temporary upland and wetland habitat disturbance
- BMPs would be implemented during construction

A complete summary of Mitigation Measures and BMPs are included in Table 6.4-2 in the DEIS.

LESS-THAN-SIGNIFICANT ADVERSE IMPACTS
ALTERNATIVES 1, 2, AND 3

LONG-TERM OPERATIONS & MAINTENANCE

- Noise (pump station testing)
- Sediment transport (improved stormwater conveyance)
- Utility use
- Periodic maintenance / temporary road closures
- BMPs would be implemented during construction

A complete summary of Mitigation Measures and BMPs are included in Table 6.4-2 in the DEIS.

ALL BUILD ALTERNATIVES

POTENTIALLY SIGNIFICANT IMPACTS

POTENTIALLY SIGNIFICANT IMPACTS

UP TO 7 RESOURCE AREAS WITH POTENTIALLY SIGNIFICANT IMPACTS

- Land Use and Land Use Planning
- Cultural and Historical Resources
- Noise and Vibration
- Hydrology and Flooding
- Biological Resources
- Water Resources, Water Quality, and Waters of the US
- Hazards & Hazardous Material

DEIS SECTION 4.0

LAND USE AND LAND USE PLANNING

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• One (1) anticipated business displacement for the Berry's Creek storm surge barrier	**Yes**	No	No

Mitigation Measures

✓ **During Design/Coordination/Pre-Construction**, the affected property owners would be coordinated with to obtain mutually agreeable settlements.

DEIS SECTION 4.2

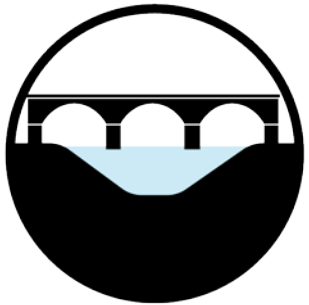
CULTURAL AND HISTORICAL RESOURCES

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Possible physical alteration and/or viewshed impacts to US Route 46 Bridge from Fluvial Park	**Yes**	**Yes**	No
• Possible disturbance to archaeological resources during construction (areas of high sensitivity)	**Yes** 5 Areas	**Yes** 3 Areas	**Yes** 2 Areas

Mitigation Measures

- ✓ **During Design/Coordination/Pre-Construction**, NJDEP would continue to consult with the New Jersey Historic Preservation Office (NJHPO) and implement mitigation measures in accordance with Section 106 of the National Historic Preservation Act.
- ✓ **During Construction**, archaeological monitoring may be necessary in high sensitivity areas.



DEIS SECTION 4.6

NOISE AND VIBRATION

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Impacts to properties/buildings during construction activities (e.g., pile driving)	**Yes**	**Yes**	**Yes**

Mitigation Measures

- ✓ **During Design/Coordination/Pre-Construction**, a noise mitigation plan and vibration monitoring plan would be developed.
- ✓ **During Construction**, the above listed plans would be implemented and noise reducing and/or the quietest practicable construction methods and equipment would be used.
- ✓ **During Operation**, stationary equipment (e.g., generators) would be enclosed and would use sound attenuators in these enclosures.

DEIS SECTION 4.8

BIOLOGICAL RESOURCES

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Aquatic habitat loss from dredge and fill activities associated with the Line of Protection and Berry's Creek storm surge barrier	**Yes**	No	No

Mitigation Measures

✓ **During Design/Coordination/Pre-Construction**

- ❖ Develop a compensatory mitigation plan to compensate for long-term unavoidable impacts to regulated wetlands and other Waters of the US.
- ❖ Coordinate with US Fish and Wildlife Service, NJDEP, Army Corps of Engineers (USACE), National Oceanic and Atmospheric Administration (NOAA), and others applicable regulatory agencies and obtain necessary permits.

DEIS SECTION 4.14

WATER RESOURCES

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Impacts to surface water quality, quantity, or flow from installation of pilings within and walkways over the Hackensack River	**Yes**	**Yes**	**Yes**
• Impacts to surface water quality, quantity, or flow from installation of floodwalls, a tide gate, and the Berry's Creek storm surge barrier in surface waters	**Yes**	No	No
• Localized sediment /contaminant transport from Losen Slote and East Riser Ditch pump stations	No	**Yes**	**Yes**
• Impacts to wetlands, open waters, and riparian zones from the placement of permanent fill	**Yes**	**Yes**	**Yes**

DEIS SECTION 4.16

WATER RESOURCES

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Impacted Resources	Alternative 1	Alternative 2	Alternative 3
	Permanent Impacts (Approx. Acres)		
Wetlands	1.2	0.3	0.3
Open Water	1.0	0.3	0.3
Riparian Zone	8.8	1.4	0.8

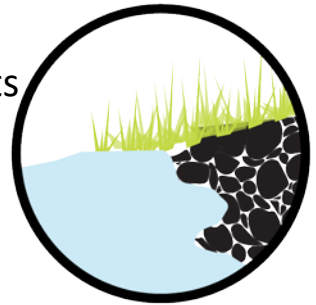
DEIS SECTION 4.16

WATER RESOURCES

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Mitigation Measures

- ✓ **During Design/Coordination/Pre-Construction**
  - ❖ Coordinate with USACE, US Coast Guard, NOAA, and other applicable regulatory agencies and obtain necessary permits.
  - ❖ Coordinate with the US Environmental Protection Agency (USEPA) and Berry's Creek Study Area (BCSA) Cooperating Potentially Responsible Parties (PRP) Group during the final design process.
  - ❖ Incorporate energy dissipation structures into the design at the Losen Slote and East Riser Ditch pump station discharge locations **(only applies to Alternatives 2 & 3)**
  - ❖ Develop compensatory mitigation plan for long-term unavoidable impacts to regulated wetlands, open waters, and riparian zones .
- ✓ **During Construction**, compensatory mitigation plan would be implemented.



DEIS SECTION 4.16

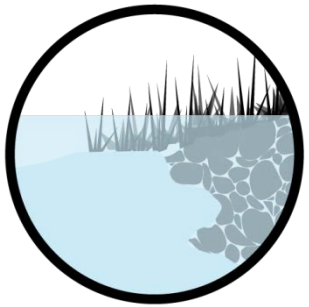
HYDROLOGY AND FLOODING

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Potential for induced flooding outside the Project Area in industrial areas downstream of Berry's Creek during coastal flood events	**Yes**	No	No

Mitigation Measures

✓ **During Design/Coordination/Pre-Construction Phase**, the design would be further refined to eliminate induced flooding or to reduce it to less-than-significant levels in accordance with regulatory requirements.



DEIS SECTION 4.17

HAZARDS AND HAZARDOUS MATERIALS

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potential Impact	Alternative 1	Alternative 2	Alternative 3
• Potential for direct and indirect impacts to contaminated sites	**Yes** 11 sites	**Yes** 20 sites	**Yes** 19 sites
• Potential disturbance to previously unknown hazardous materials during construction	**Yes**	**Yes**	**Yes**
• Potential mobilization of contaminants in soil or groundwater during construction, or from increased stormwater infiltration during operation	**Yes**	**Yes**	**Yes**
• Proximity to one aboveground storage tank	**Yes**	**Yes**	**Yes**
• Possible interference with future remedial investigations	**Yes**	**Yes**	**Yes**

DEIS SECTION 4.20

HAZARDS AND HAZARDOUS MATERIALS

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Mitigation Measures

- ✓ **During Design/Coordination/Pre-Construction**
  - ❖ Consult with HUD to ensure compliance with acceptable separation distance standards.
  - ❖ Notify parties responsible for completing remediation of properties adjacent to, or within 200 feet of, the Proposed Project footprint of the design/schedule.
  - ❖ Coordinate with the USEPA and BCSA Cooperating PRP Group during the final design process.
- ✓ **During Construction,** implement BMPs to ensure mitigation, if not prevention, of the release and spread of contamination.
- ✓ **During Operation,** O&M activities would comply with NJ Site Remediation and Reform Act requirements for contaminated sites.

DEIS SECTION 4.20

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

COMPARATIVE TABLE

Technical Resources Areas	Alternative 1	Alternative 2	Alternative 3
• Land Use and Land Use Planning	**Yes**	No	No
• Cultural and Historical Resources	**Yes**	**Yes**	**Yes**
• Noise and Vibration	**Yes**	**Yes**	**Yes**
• Biological Resources	**Yes**	No	No
• Water Resources, Water Quality, and Waters of the US	**Yes**	**Yes**	**Yes**
• Hydrology and Flooding	**Yes**	No	No
• Hazards and Hazardous Materials	**Yes**	**Yes**	**Yes**

ALL BUILD ALTERNATIVES

BENEFICIAL IMPACTS

DEIS SECTION 4.0

BENEFICIAL IMPACTS

19 RESOURCE AREAS HAVE BENEFICIAL IMPACTS

- Land Use and Land Use Planning
- Visual Quality/Aesthetics
- Socioeconomics, Community/Populations, and Housing
- Environmental Justice
- Cultural and Historical Resources
- Transportation and Circulation
- Global Climate Change and Sea Level Change
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Water Resources, Water Quality, and Waters of the US
- Hydrology and Flooding
- Coastal Zone Management
- Sustainability & Green Infrastructure
- Hazards and Hazardous Materials
- Mineral and Energy Resources
- Agricultural Resources and Prime Farmlands

DEIS SECTION 4.0

ALTERNATIVE 1

BENEFICIAL IMPACTS

19 RESOURCE AREAS

DEIS SECTION 4.0

BENEFICIAL IMPACTS

ALTERNATIVE 1

Increased coastal flood protection (50-year storm surge)

- Between 12 and 21% of Project Area, depending on future sea level rise

Creation of 4 new parks/open space (10.1 acres in total)

- Wide variety of park types and **amenities**
- New public **river access** and boating opportunities
- 1.8 miles of new **pedestrian paths**
- 1.1 acres of **wetland creation/enhancement**, plus other habitat enhancements
- 0.8 acre **decrease in impervious** surfaces
- 3.2M gallons **stormwater runoff reduction** per year

New jobs

- 990 construction job-years and 20 annual O&M **jobs**

ALTERNATIVE 2

BENEFICIAL IMPACTS

19 RESOURCE AREAS

DEIS SECTION 4.0

BENEFICIAL IMPACTS

ALTERNATIVE 2

Increased inland flood protection in East Riser Ditch and Losen Slote drainage basins

- East Riser Ditch: Approximately **182 buildings** would be protected during 100-year storm, totaling **$7.8M** in avoided damages
- Losen Slote: Approximately **60 buildings** would be protected during a 100-year storm, totaling **$1.1M** in avoided damages

Localized stormwater management improvements

- 41 new **green infrastructure** systems
- 3.4 acres of **impervious surface reductions**
- 24.9M gallons of **stormwater runoff reduction** per year
- **Water quality** benefits from total suspended solid and nutrient removal

BENEFICIAL IMPACTS

ALTERNATIVE 2

Creation of 5 new parks (20.0 acres in total) and improvement of 5 existing open space areas/public amenities

- Wide variety of park types and **amenities**
- **New public access** to the Hackensack River with viewing & boating opportunities
- 1.9 miles of new **pedestrian paths**
- 7.2 acres of **wetland creation/enhancement**, plus other habitat enhancements
- **Water quality** benefits from total suspended solid and nutrient removal

New jobs

- 1,000 construction job-years and 22 annual O&M **jobs**

ALTERNATIVE 3

BENEFICIAL IMPACTS

19 RESOURCE AREAS

DEIS SECTION 4.0

BENEFICIAL IMPACTS

ALTERNATIVE 3

Increased inland flood protection in East Riser Ditch and Losen Slote drainage basins

- East Riser Ditch: Approximately **182 buildings** would be protected during 100-year storm, totaling **$7.8M** in avoided damages
- Losen Slote: Approximately **44 buildings** would be protected during a 100-year storm, totaling **$0.6M** in avoided damages

Localized stormwater management improvements

- 41 new **green infrastructure** systems
- 3.7 acres of **impervious surface reductions**
- 9.0M gallons of **stormwater runoff reduction** per year
- **Water quality** benefits from total suspended solid and nutrient removal

BENEFICIAL IMPACTS

ALTERNATIVE 3

Creation of 3 new parks (7.6 acres in total) and improvement of 5 existing open spaces/public amenities

- Wide variety of park types and **amenities**
- New public **river access** and boating opportunities
- 1.2 miles of new **pedestrian paths**
- 3.5 acres of **wetland creation/enhancement**, plus other habitat enhancements

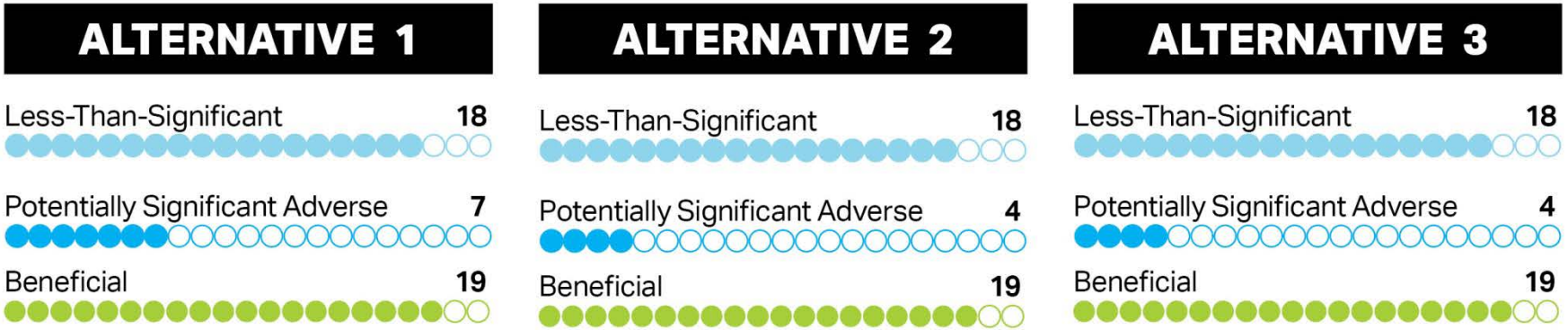
New jobs

- 640 construction job-years and 16 annual O&M **jobs**

SUMMARY OF IMPACTS BY ALTERNATIVE

Summary of Impacts

- Alternative 1 would generally result in greater adverse impacts than Alternatives 2 or 3.
- Alternatives 2 and 3 would result in approximately equivalent impacts. However, impacts would be slightly greater under Alternative 2 in some instances.
- Some resource areas would experience a range of effects from various Proposed Project components.



ALL BUILD ALTERNATIVES

CUMULATIVE IMPACTS

DEIS SECTION 5.0

CUMULATIVE IMPACTS ANALYSIS

METHODOLOGY

What are Cumulative Impacts?

"The impact on the environment which results from the incremental impact of a Proposed Project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (40 CFR § 1508.7)

Past, present, and reasonably foreseeable future projects within the Proposed Project's Region of Influence (ROI) were identified through:

- Review of numerous sources (e.g., news articles, local master plans, redevelopment plans, other publicly available planning data, etc.)
- Conversations with local government officials
- Information available from NJDEP
- Input from the Citizen Advisory Group (CAG) members

Over 120 relevant projects were identified as a result of this comprehensive effort (see **Appendix C** in the DEIS)

DEIS SECTION 5.0

CUMULATIVE IMPACTS ANALYSIS

METHODOLOGY

Past and present projects were assessed in the environmental baseline (i.e., Affected Environment) presented in **Section 3.0** of the DEIS.

Reasonably Foreseeable Future (RFF) projects were identified geographically and mapped.

- If a RFF project's effects would overlap with the ROI of the Proposed Project (under any Build Alternative) within the same timeframe, further analysis was conducted.
- If a RFF project's effects have no spatial or temporal overlap with the ROI of the Proposed Project, there would be no cumulative impact for that resource area because the effects would not occur within the same context (40 CFR § 1508.27(a)).

CUMULATIVE IMPACTS ANALYSIS

SUMMARY

Potentially significant cumulative impacts could occur during the **construction phase** of the Proposed Project for up to **4 technical resource areas**.

- Transportation and Circulation
- Noise and Vibration
- Biological Resources
- Water Resources, Water Quality, and Waters of the U.S.

No potentially significant cumulative impacts would be anticipated during the **O&M phase** of the Proposed Project

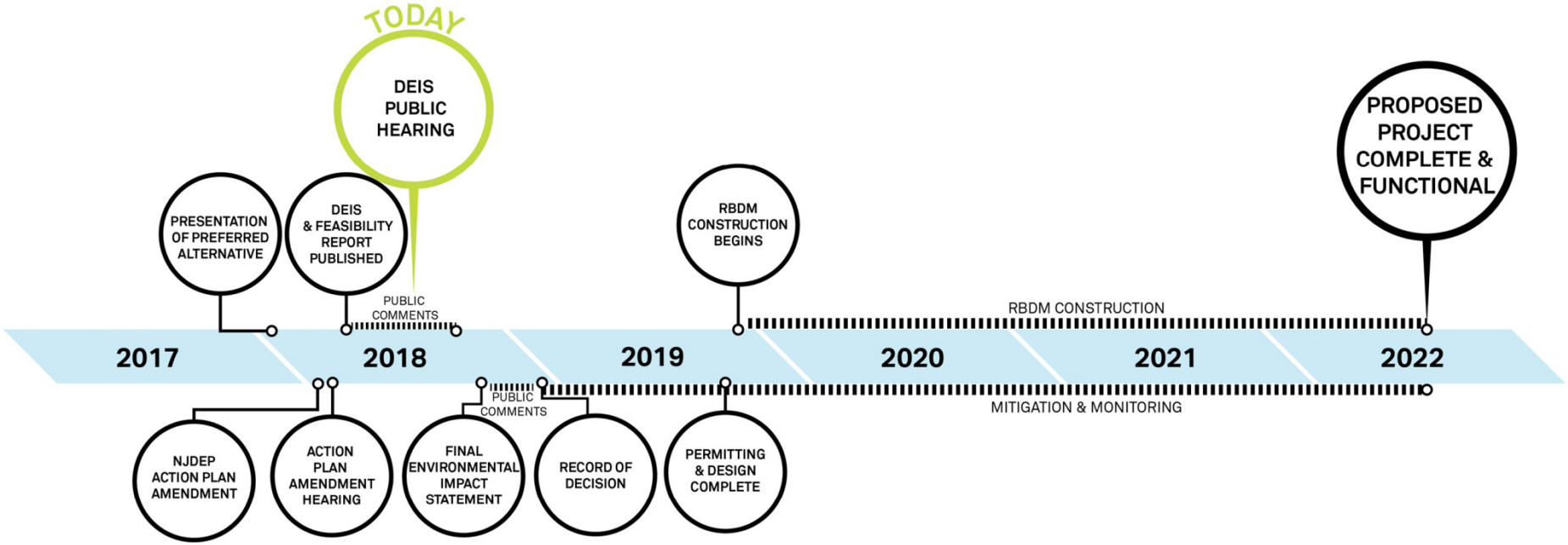
Mitigation Measures

- ✓ NJDEP and RFF project sponsors would proactively coordinate with local municipalities, service providers, planning boards, the Meadowlands Interagency Mitigation Advisory Committee (MIMAC), and others, as appropriate.
- ✓ Community stakeholders would be engaged during all phases of the Proposed Project in accordance with the Citizen Outreach Plan.

NEXT STEPS

CHRISTOPHER BENOSKY, AECOM

UPCOMING SCHEDULE + NEXT STEPS



AREAS OF ONGOING COORDINATION

NJDEP UPCOMING ACTIVITIES

- 45-Day DEIS public comment period: Ends July 15th
- Publish Final EIS: October
- Prepare ROD, Publish NOA, and Request Release of Funds: November
- Continue consulting with the USEPA and BCSA PRP Group, NJHPO, and other regulatory agencies
- Develop O&M Plan that identifies the entities performing routine, on-going maintenance

PUBLIC COMMENT PERIOD

WAYS TO COMMENT

- Provide oral comments at tonight's meeting
- Complete and submit a written comment card
- Email: rbd-meadowlands@dep.nj.gov
- Mail comments to:

  New Jersey Department of Environmental Protection
  c/o Dennis Reinknecht, Program Manager
  501 East State Street
  Mail Code 501-01A, PO Box 420
  Trenton, NJ 08625-0420

Comment Submission Deadline: July 15, 2018

OPEN COMMENT PERIOD

HOW TO PROVIDE ORAL COMMENTS

- **Open Comment Period:** ends at 8pm
- **Commenter Time Limit :** 3 Minutes

Your comments and questions are both sought and appreciated by NJDEP!

- **We ask that your comments be presented in a way that allows us to *consider, incorporate, and/or address* them fully and accurately – the following provides some guidance:**
  - State your Name and Affiliation
  - Be Clear and Concise
  - Be Constructive