• The PowerPoint slide presentation utilized at the meeting is attached to the meeting minutes (see Attachment 1).

• A CAG meeting packet was provided to all attendees and is also attached to the meeting minutes (see Attachment 2).

• Linda Fisher, New Jersey Department of Environmental Protection (NJDEP) Rebuild by Design Meadowlands (RBDM) Project Team Manager, started the meeting and provided a brief overview of the meeting agenda, and introduced Chris Benosky.

• Chris Benosky, AECOM’s RBDM Program Manager, provided an overview of the meeting agenda and the Meadowlands Challenge. The Meadowlands Challenge is two-fold. It includes the need to address flooding of the Project Area from two different sources: (1) storm surge (tidal) flooding from the Hackensack River due to low elevations throughout the Project Area; and (2) interior flooding from rainfall events due to undersized and underperforming interior drainages and infrastructure in the Project Area. The Proposed Project is examining three Build Alternatives to address the Meadowlands Challenge: Alternative 1 would protect against storm surge flooding (i.e., Challenge #1); Alternative 2 would protect against stormwater flooding (i.e., Challenge #2); and Alternative 3 would be designed to protect against both storm surge and stormwater flooding (i.e., Challenges #1 and #2).

• Garrett Avery, AECOM’s RBDM Project Manager, provided an overview of Alternative 1, which was last discussed during CAG Meeting #8. The RBDM Project Team is looking at ways to reduce construction costs, minimize disturbance to ecological systems, and enhance public park space, while providing a complete line of protection to protect the maximum amount of the Project Area.

• During the initial concept development phase of Alternative 1, eleven (11) alignment tie-in options were identified, which were presented at CAG Meeting #6. During the second phase of the concept development process, these concepts were reduced to 7 alignment tie-in options, and presented during CAG Meeting #8. The reduction was accomplished through a robust concept screening process that considered a variety of factors. Further screening of these 7 alignment tie-in options resulted in the identification of three final options.
As a result of the concept screening process, the following Alternative 1 concepts were identified to carry forward into the Feasibility Study: Northeast Option #3, Southeast Option #2, and Berry’s Creek Option #1. Northeast Option #3 provides approximately 1,500 linear feet more flood protection and allows the alignment to tie into the Riverwalk in the City of Hackensack. Southeast Option #2 extends along the south side of Commerce Boulevard. This option provides cost efficiencies and avoids impacts to the Kane Mitigation Bank berm. Berry’s Creek Option #1 includes the development of a surge barrier. Berry’s Creek Options #2 and #3 were screened out due to land acquisition costs and potentially significant environmental impacts.

Lulu Loquidis, AECOM’s RBDM Landscape Designer, provided an overview of Alternative 2, which was last discussed at CAG Meeting #7. Under Alternative 2, the RBDM Project Team is looking at ways to convey stormwater away from flood-prone areas within the Project Area by deepening and regrading existing channels, improving water quality and enhancing habitat through native plantings and natural channel design, and enhancing public parks and other municipal lands through the creation of new parks, open spaces, and recreational areas.

During the Alternative 2 concept development process, the RBDM Project Team analyzed the 7 initial Alternative 2 concepts presented at CAG Meeting #7 further, and examined the benefits associated with the specific components of each concept. Through this process, the Team identified several components from the original 7 concepts that are currently under consideration for inclusion in Alternative 2. These components include new park space, green infrastructure along roadways, channel improvements, and new pump stations from the original Main Street, DePeyster Creek, Losen Slote, Carol Place, and East Riser concepts.

Mr. Avery provided an overview of the considerations that went into building the Hybrid Alternative (Alternative 3), which included the results of hydraulic modeling, the Proposed Project timeline, and environmental impacts. The Team is developing the Hybrid Alternative from components previously assessed and screened under Alternatives 1 and 2. For Alternative 3, the Team is evaluating each component in conjunction with the Proposed Project timeline, which requires the Proposed Project to be complete by September 2022. Components that cannot be carried forward in the Build Plan due to timeline constraints could become elements of a Future Plan, and implemented by others over time as new funding sources become available.

The NJDEP Project Team is in the process of examining how different combinations of Alternative 1 and 2 components could work together as a larger system. The Team presented two examples of how these systems could work together hydrologically, while also meeting the goals of the Proposed Project.
• During the initial Alternative 3 concept development process, the Team determined that some components are fixed, while others are flexible. For example, the Alternative 1 alignment is fixed as it functions as one complete system, while the Alternative 2 stormwater strategies are flexible. This means that various Alternative 2 strategies can both function in a combined fashion or individually, with various combinations possible.

• Mr. Avery and Ms. Loquidis presented three Hybrid Alternative concepts, including the: Channel Focus Concept, Community Focus Concept, and Complete System Concept.

  1. The Channel Focus Concept emphasizes channel widening and deepening to improve conveyance capacity, and includes the addition of an ecological edge along these channels to improve water quality and habitat.

  2. The Community Focus Concept centers on improving public services and providing community benefits. It could include green infrastructure features (e.g., curb cutouts or bioswales) along the main roadways in conjunction with Hackensack River access and educational opportunities.

  3. The Complete System Concept would incorporate all of the above features. This concept would connect the various flood protection, stormwater management, habitat improvement, and open space features into one large, integrated system.

• Mr. Benosky then provided an overview of the next steps. The RBDM Project Team will continue to develop and refine the concepts, alternatives, and costs. The next CAG meeting will be in September 2017. CAG members were encouraged to continue to build interest in the Proposed Project and to visit the Proposed Project website at www.rbd-meadowlands.nj.gov or email questions to rbd-meadowlands@dep.nj.gov for more information. Mr. Benosky informed the CAG Members that the RBDM Project Team is interested in obtaining feedback from the CAG Members as the Proposed Project continues to move forward. Please provide all comments and input to NJDEP concerning CAG Meeting #10 by July 11, 2017.

• Following the completion of the presentation, the CAG Members posed the following questions and comments:

  1. Is the 7-foot elevation for the Alternative 1 line of protection final?

     Response: As a result of the Alternative 1 screening process, the 7-foot elevation (NAVD 88) line of protection was identified as the feasible solution based on cost, schedule, and the topography of the Project Area.

  2. Would Alternative 1 protect against another Hurricane Sandy?
Response: No. The Proposed Project would only protect the Project Area up to an approximately 50-year storm event (without sea level rise). However, it would also provide some interior drainage improvements (i.e., pump stations).

3. What’s the soonest we can expect to see something built?

Response: It is anticipated that construction bids would be issued in 2019. The Proposed Project would be completed by September 2022.

4. Where will the force main and pump station be located on Losen Slote under Alternative 2 (i.e., Component #3)?

Response: The location of the pump station and force main are still under development. The force main may be located below the channel or it may be routed on adjacent public roads to eliminate maintenance issues. The exact location and length of the force main will be determined based on the modeling results. However, it will likely be located upstream to push water downstream to the existing pump station.

5. I live on Chapman Drive near the downstream pump station along Losen Slote. I have never experienced flooding except during Hurricane Sandy. How would the downstream pump station be affected with the addition of a new upstream pump station?

Response: Operations and maintenance (O&M) measures would be put in place at the upstream pump station to prevent flooding downstream in the event the downstream pump station stopped working properly.

6. During a recent rain event, we noticed that Losen Slote had plenty of capacity downstream. However, water conveyance appeared to be restricted upstream.

Response: Alternative 2 is looking at solving this particular issue.

7. Have you considered using Mehrhof Pond as a bypass to detour excess water in the Project Area temporarily? This pond has additional storage capacity.

Response: The Project Team is exploring this option; it is still going through the screening process.

8. Do you coordinate with the Bergen County Utilities Authority (BCUA)? They were going to implement flood control measures for their facility. How is this being considered in the Proposed Project’s design?

Response: Yes. The NJDEP Project Team meets with the BCUA regularly. However, we are not sure if BCUA still intends to implement this plan and if this would occur prior to the Proposed Project being implemented.
9. Losen Slote is being kept purposefully low because they are dredging in the area, but the equipment is getting stuck. The drainage in the Project Area needs to be improved as soon as possible. The pipes, culverts, and drainages need to be cleared of sediment.

   Response: We understand and agree that drainage needs to be improved in the Project Area as soon as possible.

10. AECOM/NJDEP is doing a good job of looking out for us. Thank you for your hard work and willingness to help.

   Response: Thank you.

The meeting adjourned at 6:55 pm ET.
Attachment 1.
Power Point Slide Presentation (as delivered)
AGENDA

- Welcome
- The Meadowlands Challenge
- Concept Review
  - Alternative 1
  - Alternative 2
- Building the Hybrid
  - Development Process
  - Initial Ideas
  - Building Blocks
- Next Steps
- Question & Answer
THE MEADOWLANDS CHALLENGE

CHALLENGE 2: FREQUENT RAIN STORMS FLOOD INTERIOR

THE MEADOWLANDS CHALLENGE

FACTOR: UNDERSIZED & UNDERPERFORMING INTERIOR DRAINAGE
THE MEADOWLANDS CHALLENGE

FACTORS: INFRASTRUCTURE CHALLENGED TO PUMP & PROTECT

THE MEADOWLANDS CHALLENGE

PROJECT STRATEGY: DEVELOP 3 BUILD ALTERNATIVES

Alternative 1: Storm Surge Flooding

Alternative 2: Stormwater Flooding

Alternative 3: Storm Surge & Stormwater Flooding

Draft Meeting Minutes
Attachments
HYBRID BUILDING BLOCKS
ALTERNATIVE 1: STORM SURGE FLOoding
GARRETT AVERY, AECOM

HYBRID BUILDING BLOCKS // STORM SURGE
APPROACH & GOALS

FILL THE GAPS // MAXIMIZE PROTECTION
PROTECT
By connecting the existing topographical high points, the project can reduce construction costs and minimize additional grading of the Hackensack river edge.

INTEGRATE ECOLOGICAL SOLUTIONS
CULTIVATE
The ecological systems are essential to the Meadowlands. The approach will minimize disturbance, consider habitat improvements to fragmented systems, and creation of new ecological zones.

LEVERAGE PUBLIC LAND
ENERGIZE
With numerous public agencies in the project area, the project seeks to connect existing public parks as well as provide new park space on existing public land.
HYBRID BUILDING BLOCKS // STORM SURGE
CONCEPTS CONSIDERED DURING SECOND SCREENING

- 11 Alignment Tie-In options were presented at CAG Meeting #6
- 7 Alignment Tie-In options were presented at CAG Meeting #6

HYBRID BUILDING BLOCKS // STORM SURGE
SCREENING RESULTS: SELECTED LINE OF PROTECTION

Selected Line of Protection:
- Northeast Tie-In Option 3
- Southeast Tie-In Option 2
- Berry's Creek Option 1
HYBRID BUILDING BLOCKS // STORMWATER

APPRAOCH & GOALS

**IMPROVE CHANNELS**
Through deepening and regrading, the existing channels of the project area will have capacity to convey stormwater away from flood-prone areas.

**CULTIVATE**
Native plantings and naturalized channel edges provide habitat and improve water quality.

**ENERGIZE**
The creation of new public parks creates more opportunities for gathering and recreation. The public realm is enhanced by providing landscape and park improvements to existing public parks, municipal buildings, school yards, and libraries.

**PROTECT**

HYBRID BUILDING BLOCKS // STORMWATER

ALTERNATIVE 2: SCREENING FROM 7
HYBRID BUILDING BLOCKS // STORMWATER
ALTERNATIVE 2: COMPONENTS UNDER CONSIDERATION

Components of the 7 original concepts under consideration:

1. Main Street Green Features
   - River Park
   - Riverview Park
   - Willow Lake Gill
   - Street Gill

2. DeHoyster Features
   - New Pump Station
   - Channel Improvements
   - Open Space
   - Street Gill

3. Losen Erde Features
   - New Pump Station
   - Force Main
   - Municipal & School Improvements

4. Carol Place Features
   - Open Space
   - Street Gill

5. East River Features
   - New Pump Station
   - Open Space
   - Channel Improvements

BUILDING THE HYBRID
INTEGRATING STORM SURGE FLOOD REDUCTION AND STORMWATER DRAINAGE IMPROVEMENTS
GARRETT AVERY, AECOM
Draft Meeting Minutes

July 10, 2017
BUILDING THE HYBRID
BENEFITS // RIVER’S EDGE & NEIGHBORHOODS

1. SANTIE EVER WALKWAY
   Provides protection from coastal storm surge along the Hackensack River

2. NEW OPEN SPACE
   A new public park along the Hackensack River featuring native plantings, open space, and landforms that allow parkgoers to see the river beyond the cantilever.

3. RIVERFRONT ACCESS
   Creates publicly accessible riverfront with additional width for seating and planting amenities.

4. RECREATION
   Opportunities for passive and active recreation within new open space.

5. GREEN INFRASTRUCTURE
   Willow lake is enhanced with rain gardens and berms that are planted in a native palette. The majority of the park’s existing open space is maintained.

6. PUMP STATION & GREY INFRASTRUCTURE
   Stormwater is pumped from Willow Lake into improved grey infrastructure with increased capacity for flood prevention.

7. GREEN INFRASTRUCTURE
   Planted with native plantings, providing micro habitat zones and natural beauty.

INITIAL IDEAS
CONNECTING THE BUILDING BLOCKS
GARRETT AVERY & LULU LOQUIDIS, AECOM
BUILDING THE HYBRID
FIXED & FLEXIBLE

Fixed: Alt 1
- Protection height at 7’ elevation
- Alignment functions as a complete system
- Footprint remains the same with integrated public realm strategies

Flexible: Alt 2
- Stormwater strategies function together as one complete system and individually as an simple improvement
- Concepts can be broken into smaller projects based on system performance
- Costs vary by system configuration

BUILDING THE HYBRID
CHANNEL FOCUS CONCEPT

Maximize ecological and conveyance capacity along channels and public realm integration along structural protection corridors.

PROTECT
CULTIVATE
ENERGIZE

July 10, 2017
Building the Hybrid Channel Focus Concept

Features Included:

Alternative 1:
1. Hackensack Alignment
2. Surge Barrier @ Ferris Creek

Alternative 2:
1. All Main Street Green Features
2. Despoyester Creek Open Space
3. Upper Lehen Slope
4. Avonte Park
5. East Roller Mill Extension
6. Constable Place
7. Green Infrastructure Street Improvements
8. West Roller Extension

Hybrid Building Blocks // Stormwater Strategies: Channels

Access + Maintenance Path
Ecological Edge
Interior Channel
Existing Channel
Improved Convenance
HYBRID BUILDING BLOCKS // EQUIPMENT
ILLUSTRATIVE VIEW: NEW PUMP STATION & GREEN INFRASTRUCTURE

BUILDING THE HYBRID
COMMUNITY FOCUS CONCEPT

Focus benefits in the community cores with integrated access to the Hackensack River edge improvements.
HYBRID BUILDING BLOCKS // INFRASTRUCTURE
ILLUSTRATIVE VIEW: PROPOSED IMPROVEMENTS AT DEPEyster CREEK

PROPOSED

BUILDING THE HYBRID
COMPLETE SYSTEM CONCEPT
Incorporating all features, creating a network of flood reduction and stormwater management with connected green infrastructure, habitat improvements, and public parks.
BUILDING THE HYBRID COMPLETE SYSTEM CONCEPT

FEATURES INCLUDED

**Alternative 1:**
1. Hackensack Alignment
2. Surge Barrier @ Serry's Creek

**Alternative 2:**
1. All Main Street Green Features
2. All Main Street Green Features
3. Upper Lenis Blotke
4. DePeyster Creek Open Space
5. Fresh Water Wetland
6. Avon Park
7. East Rise Extension
8. Caesar Place Park
9. Green Infrastructure Street Improvements
10. Complete West Rise

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HYBRID BUILDING BLOCKS // STORMWATER STRATEGIES: WETLAND CREATION

WETLAND

IMPROVED HABITAT
NEXT STEPS

CHRISTOPHER BENOSKY, AECOM
NEXT STEPS

NJDEP / AECOM: UPCOMING ACTIVITIES

- Prepare Meeting Summary for CAG #10
- Continue developing and screening:
  - Hybrid Concepts, Alternatives, and Costs
- CAG #11 in September 2017
  - Alternative 1 – Structural Flood Reduction
  - Alternative 2 – Stormwater Drainage Improvements
  - Alternative 3 – Hybrid Alternative

NEXT STEPS

CAG: CALL TO ACTION

- Submit comments from CAG #10 meeting by July 11, 2017
- Share information from this meeting with friends and neighbors
- Continue to build interest in the Project
- Ensure the public knows about upcoming information (to be posted on Project website)
NEXT STEPS

Critical Information

Project Website
www.rbd-meadowlands.nj.gov

Project Email
rbd-meadowlands@dep.nj.gov

Question & Answer

THANK YOU
Attachment 2.
CAG Meeting Packet #10 (provided as handout at meeting)