# **REBUILD BY DESIGN**

MEADOWLANDS

CITIZEN ADVISORY GROUP (CAG) MEETING #7

ALTERNATIVE 2: STORMWATER DRAINAGE IMPROVEMENTS

**January 31, 2017** 







Español 中文:繁體版 Việt-ngữ 한국어 Tagalog Português العربية Kreyòl ગુજરાતી Italiano Polski www.renewjerseystronger.org





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# 1.0 List of Acronyms

#### **List of Acronyms**

BCR Benefit/Cost Ratio

CAG Citizen Advisory Group

CDBG-DR Community Development Block Grant - Disaster Recovery

EFH Essential Fish Habitat

EIS Environmental Impact Statement

HUD Department of Housing and Urban Development

NEPA National Environmental Policy Act

NJDEP New Jersey Department of Environmental Protection

RBD Rebuild by Design

RBDM Rebuild by Design Meadowlands





#### 2.0 Agenda

#### **Alternative 2: Stormwater Drainage Improvements**

6-8 PM January 31, 2017

Learning Center Room , 4th Floor One Bergen County Plaza Hackensack, NJ 07601

Project Website
www.rbd-meadowlands.nj.gov
Project email
rbd-meadowlands@dep.nj.gov

Welcome

Presentation

Opening Remarks (10 Minutes)

Welcoming (Linda Fisher, NJDEP)

Project Status Update and Alternative 2 Development (Chris Benosky, AECOM)

Alternative 2: Stormwater Drainage Improvements (10 Minutes)

Simplified Modeling Update (Chris Benosky, AECOM)

Frequently Flooded Areas (Chris Benosky, AECOM)

Stormwater Drainage Improvement Areas (40 Minutes)

Drainage Improvement concepts (Garrett Avery & Lulu Loquidis, AECOM)

Next Steps & Q&A/Closure (20 Minutes)

Next Steps (Chris Benosky, AECOM)

Question and Answers





#### 3.0 Power Point Presentation

# REBUILDBYDESIGN **MEADOWLANDS**

# **CITIZEN ADVISORY GROUP (CAG) MEETING #7**

STORMWATER DRAINAGE IMPROVEMENTS

# **WELCOMING**

#### Linda Fisher, NJDEP



Welcome & Opening Remarks



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# **AGENDA**

#### Chris Benosky, AECOM

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- Project Status Update and Schedule
- Alternative 2: Stormwater Drainage Improvements
  - Alternative 2 Development
  - Modeling Update
  - Frequently Flooded Areas
  - Stormwater Drainage Improvement Options
    - Collection and Conveyance



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# PROJECT STATUS UPDATE

#### **Chris Benosky, AECOM**



- Developed working draft Concept Screening Criteria
- Completed and published to Project Website:
  - Meeting Minutes from CAG Meeting #6
  - December 2016 Newsletter
- Developing Stormwater Drainage Options

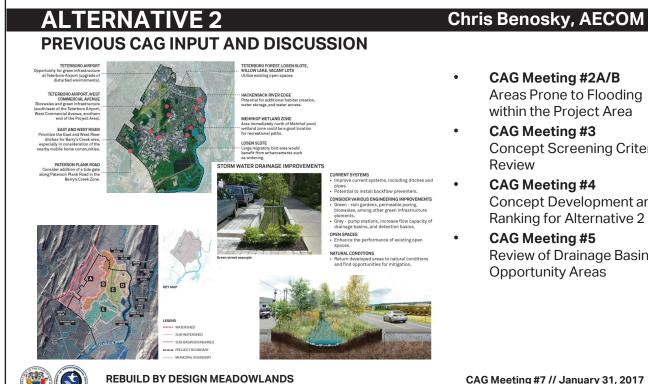


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CAG Meeting #2A/B Areas Prone to Flooding within the Project Area

- CAG Meeting #3 Concept Screening Criteria Review
- **CAG Meeting #4** Concept Development and Ranking for Alternative 2
- **CAG Meeting #5** Review of Drainage Basin **Opportunity Areas**

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**Chris Benosky, AECOM** 

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#### **DEVELOPMENT OF ALTERNATIVE 2 CONCEPTS**

Concept development process utilized the following to arrive at the 7 concepts:





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# **ALTERNATIVE 2:**

# STORMWATER DRAINAGE IMPROVEMENTS CHRISTOPHER BENOSKY, AECOM



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### **MODELING UPDATE**

SIMPLIFIED MODEL PROGRESS

Conducting modeling to better understand how each of the initial Alternative 2 concepts will function:

- a. Quantity of stormwater
- b. Movement of stormwater
- c. Control of stormwater

Currently, continuing to conduct stormwater system surveys to support more detailed drainage models of each of the concepts



- a. Assess each concept's hydraulic feasibility (to control and move stormwater volumes)
- b. Preliminarily determine the benefits each concept would provide relative to cost



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#### **MODELING UPDATE**

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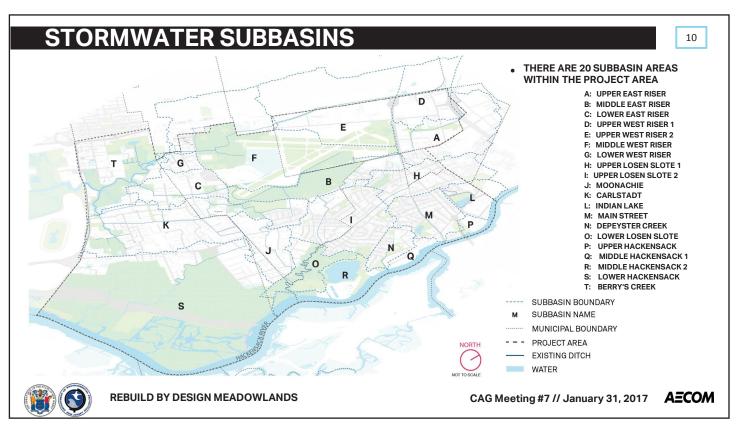
#### SIMPLIFIED MODEL PROGRESS

- Completed development and application of simplified models for:
  - East and West Riser
  - Main Street
  - Carol Place
  - East Carlstadt
  - Losen Slote
  - DePeyster Creek
  - Peach Island Creek

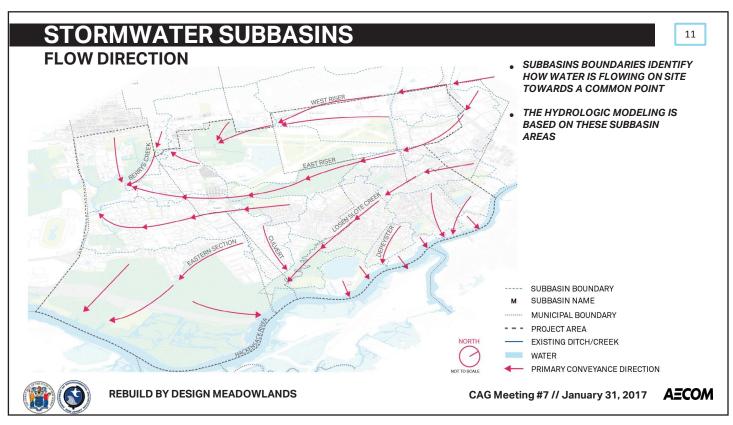


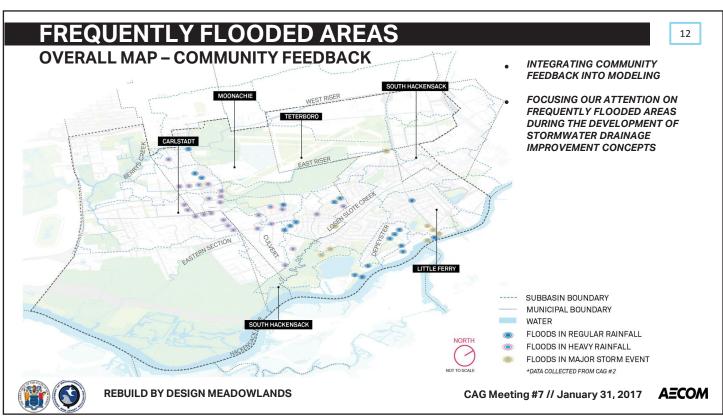
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# FREQUENTLY FLOODED AREAS

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#### LITTLE FERRY



**BRANDT STREET** 

Flood Event Date: **OCTOBER 14, 2005** 

Estimated Flood Elevation: **4.5 NAVD88** 



Image Source: Hackensack Meadowlands Floodplain Management Plan (Oct 24, 2005)



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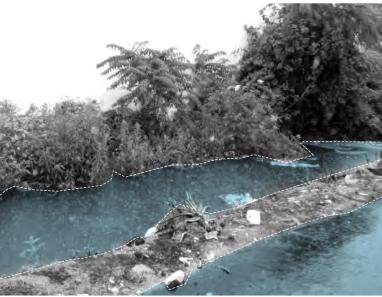
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# FREQUENTLY FLOODED AREAS

14





110 ASIA PLACE

Flood Event Date: **JUNE 10, 2005** 

Estimated Flood Elevation: 3.75 NAVD88



mage Source: Hackensack Meadowlands Floodplain Management Plan (Oct 24, 2005)

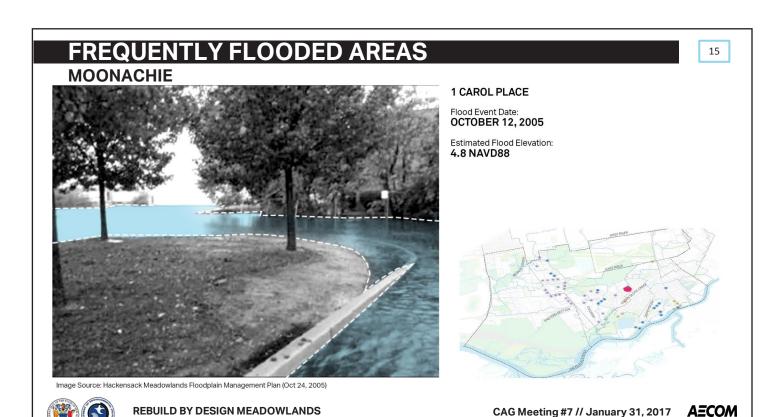


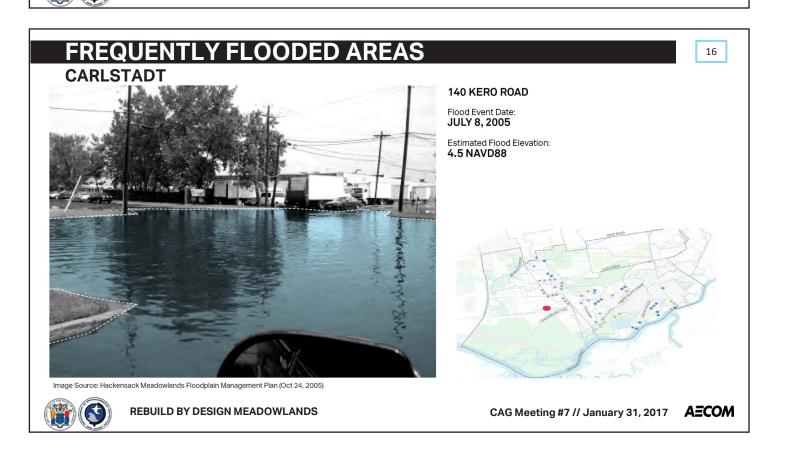


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# **PRELIMINARY**

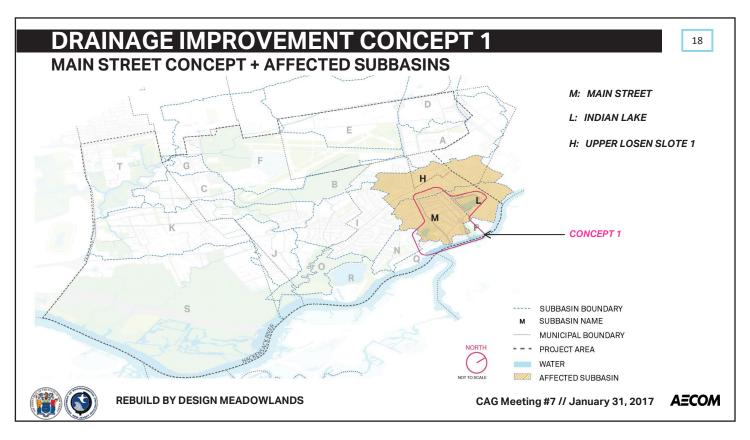
# STORMWATER DRAINAGE IMPROVEMENT AREAS

GARRETT AVERY, AECOM &
LULU LOQUIDIS, AECOM

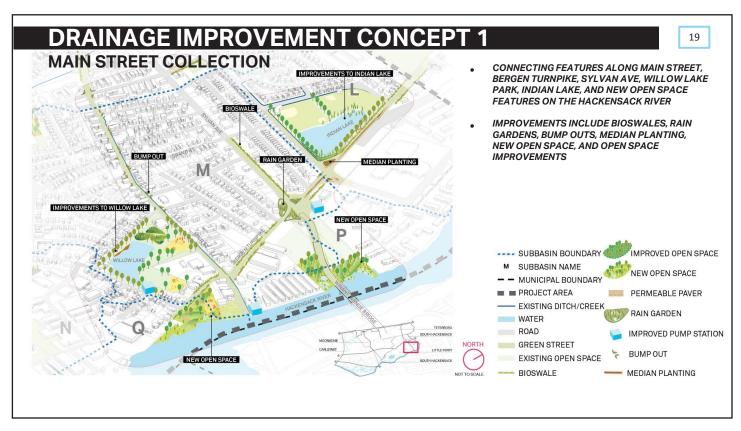


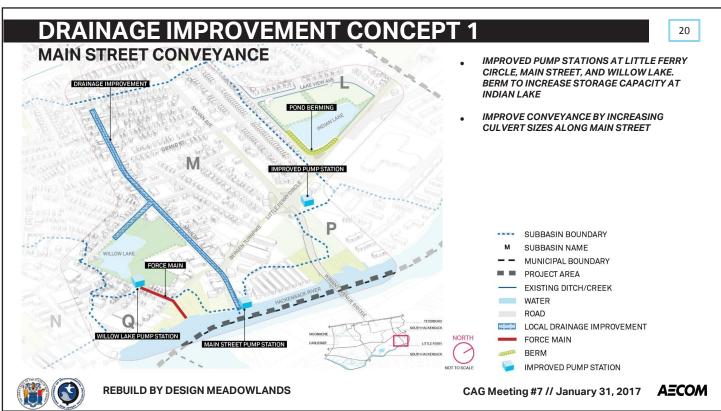
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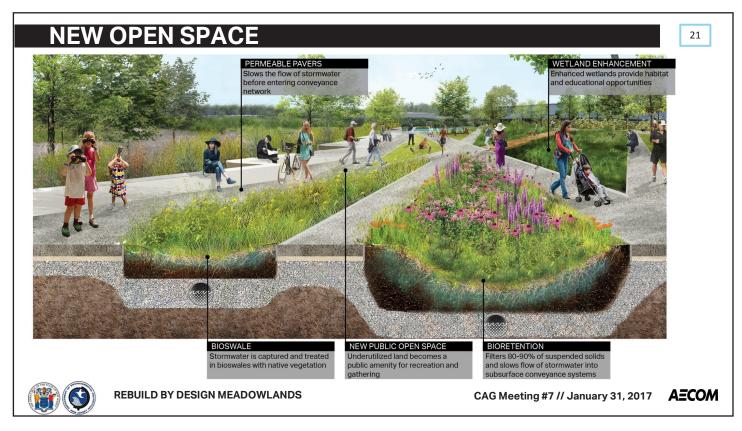


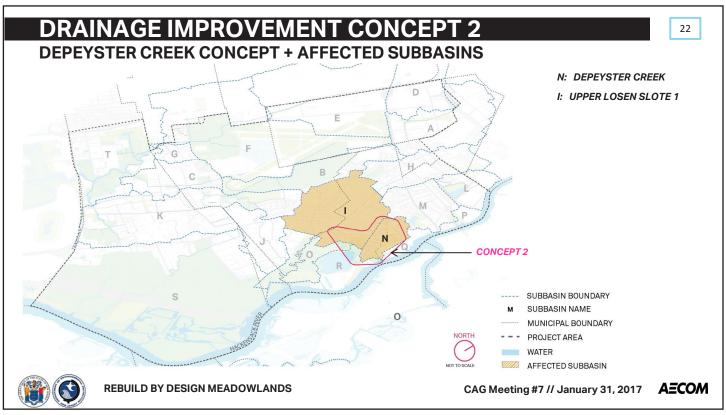




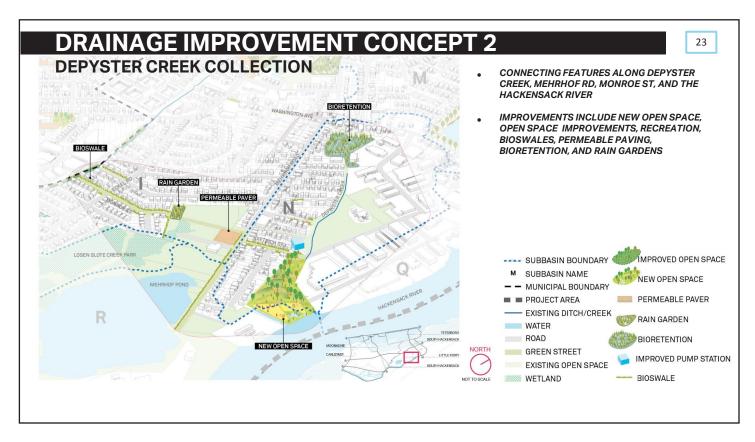


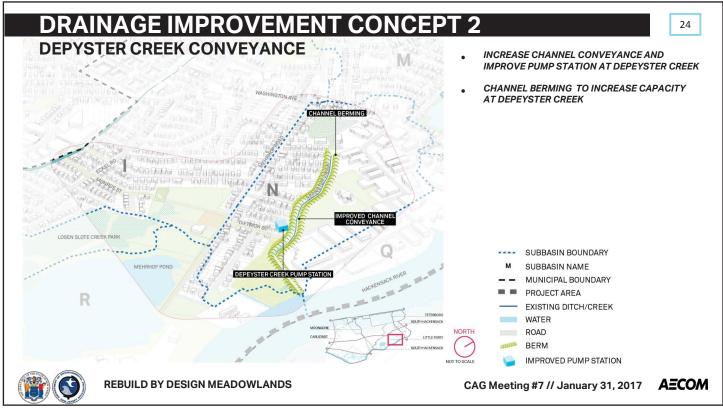




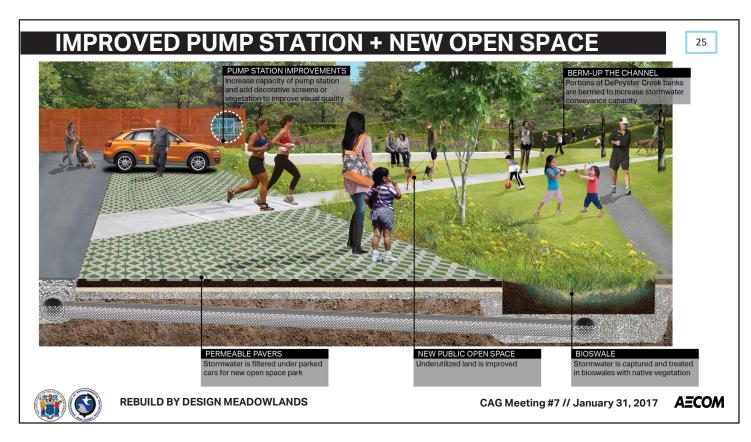


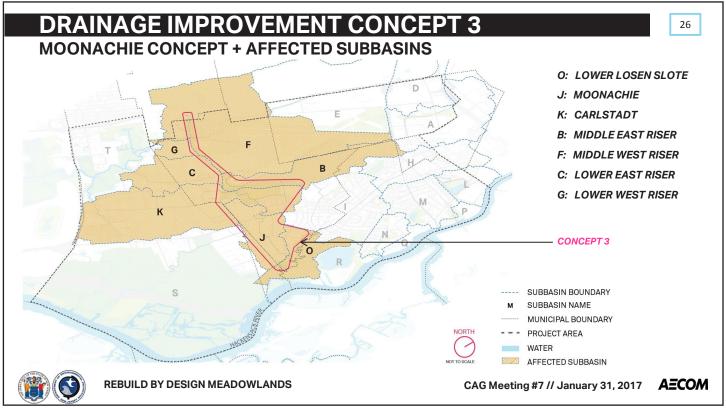




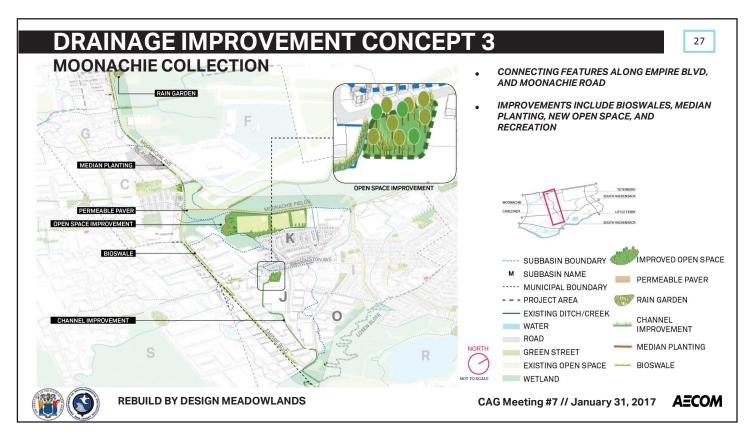


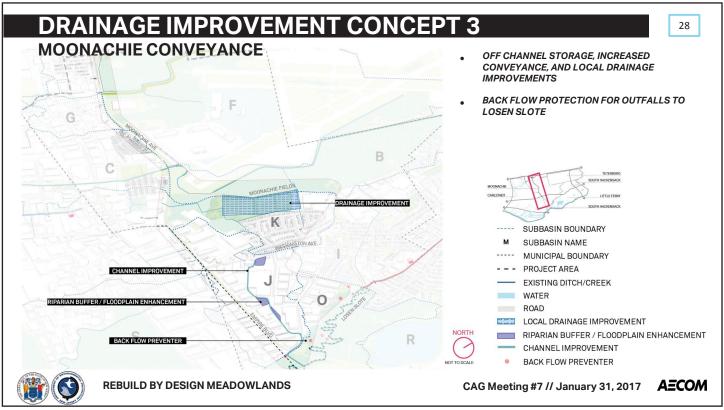






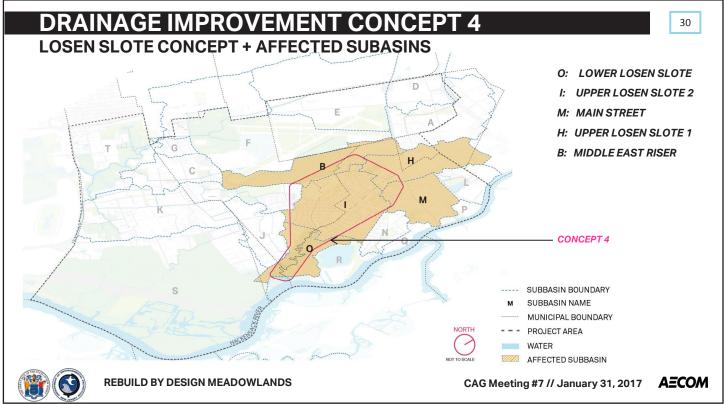




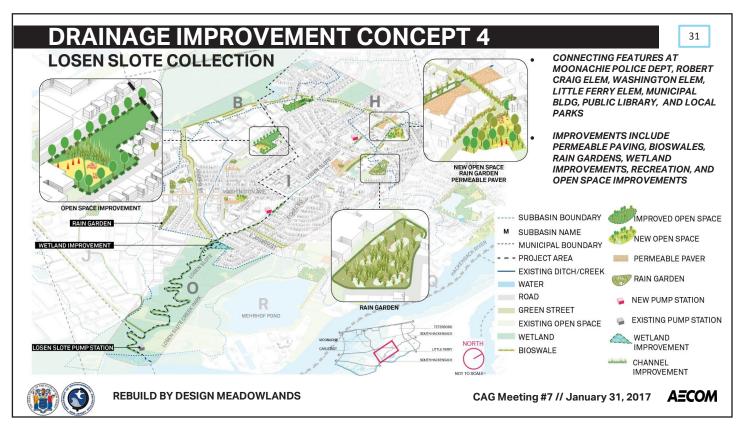


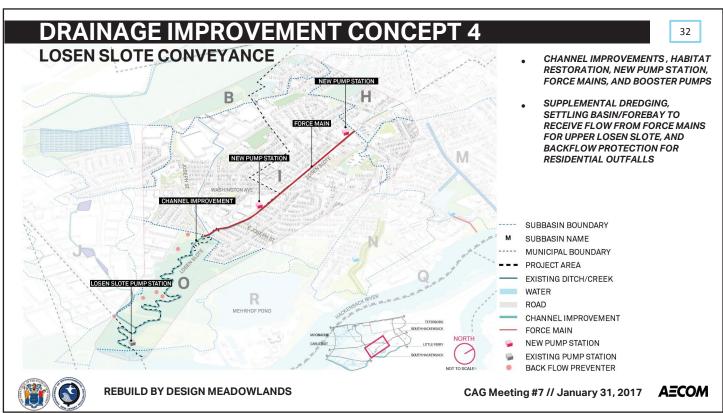






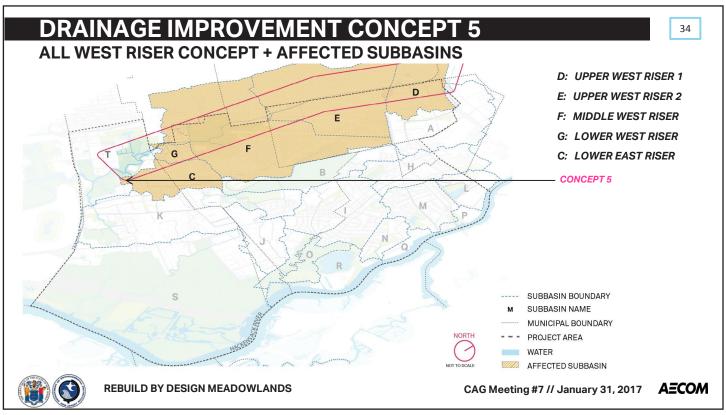




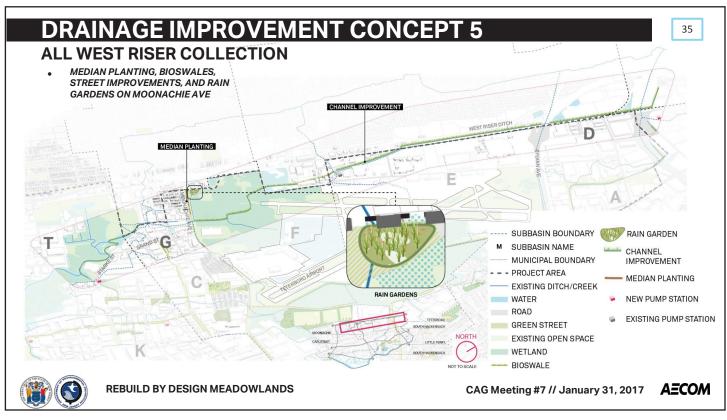


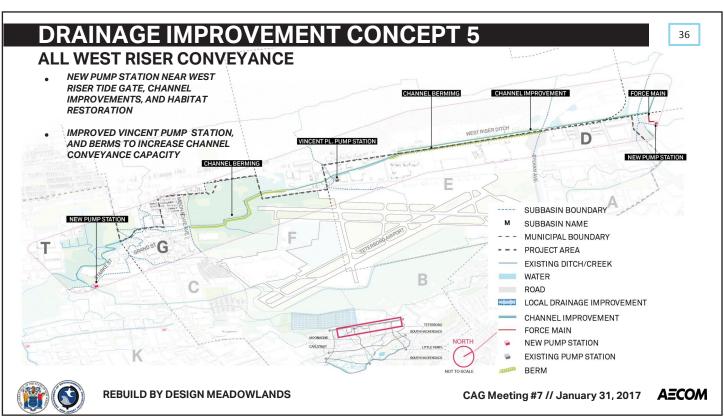




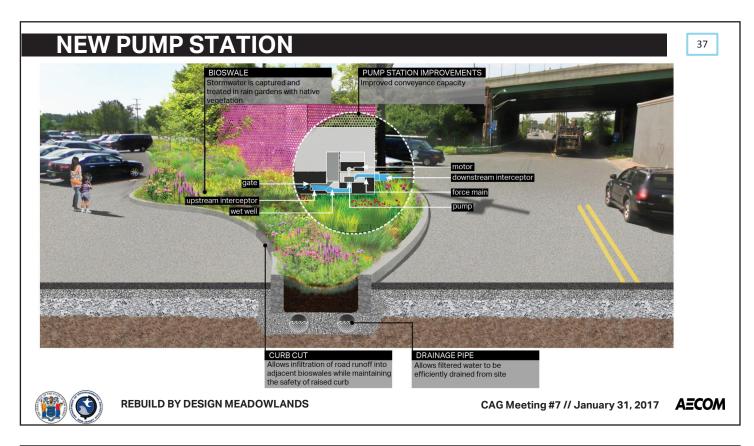






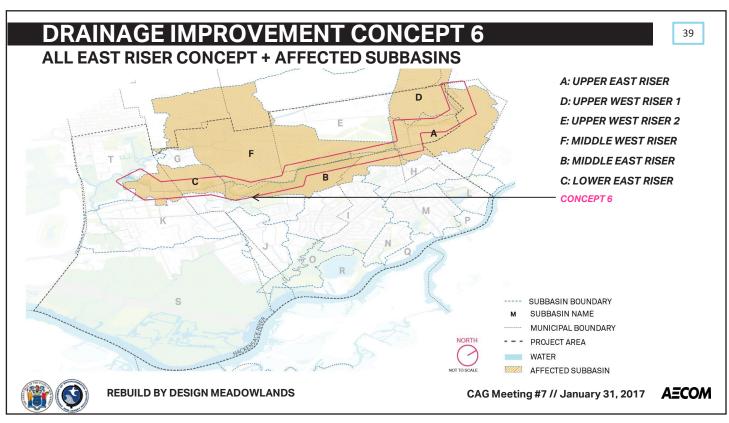


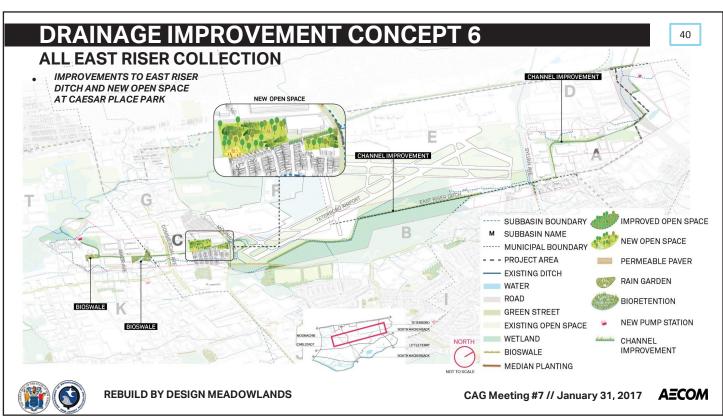




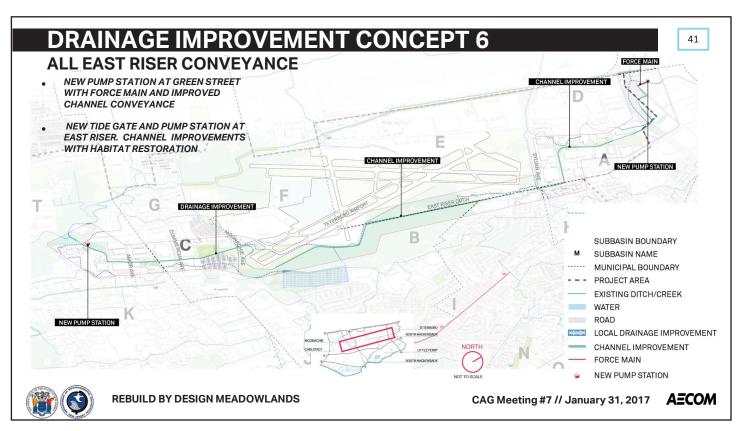






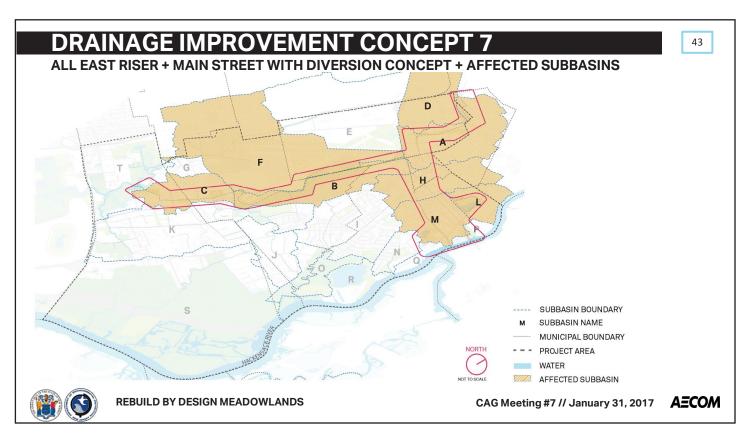


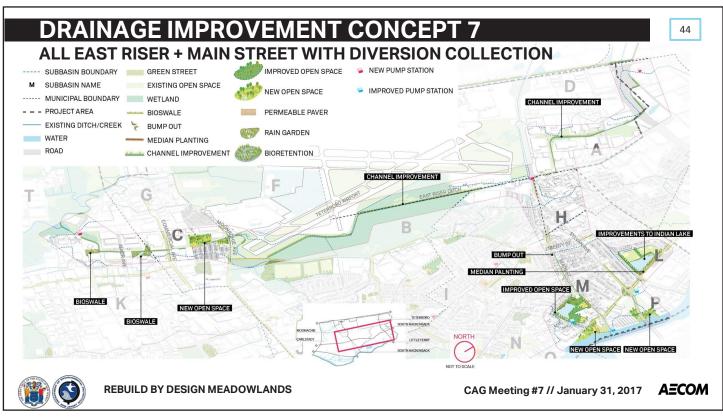




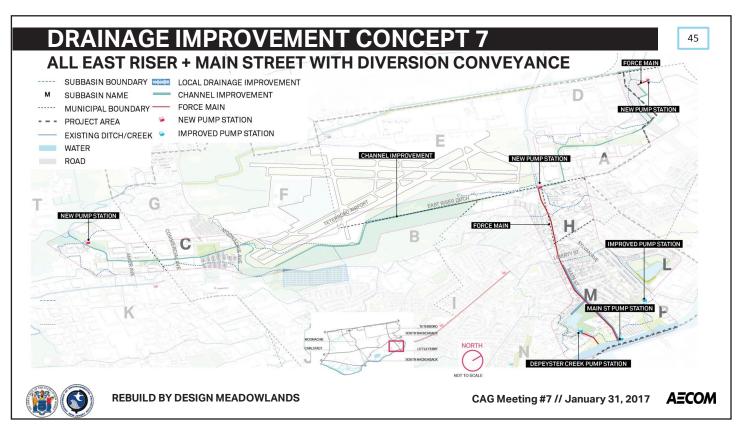


















# **NEXT STEPS**

#### **CHRISTOPHER BENOSKY, AECOM**



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# **NEXT STEPS**

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#### NJDEP / AECOM UPCOMING ACTIVITIES

- Prepare Meeting Summary for CAG #7
- Continue developing:
  - Concepts and Alternatives
- CAG #8 in March
  - Alternative 1 Structural Flood Reduction



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# **NEXT STEPS**

#### CAG: CALL TO ACTION

- Submit comments from CAG #7 meeting by **February 7, 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)



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#### **NEXT STEPS**

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#### **Critical Information**

March, 2017 - TBD

**CAG Meeting #8: Alternative 1: Structural Flood Reduction** 

**Project Website** 

www.rbd-meadowlands.nj.gov

**Project Email** 

rbd-meadowlands@dep.nj.gov

#### **Question & Answer**



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#### 4.0 Personal Notes



