

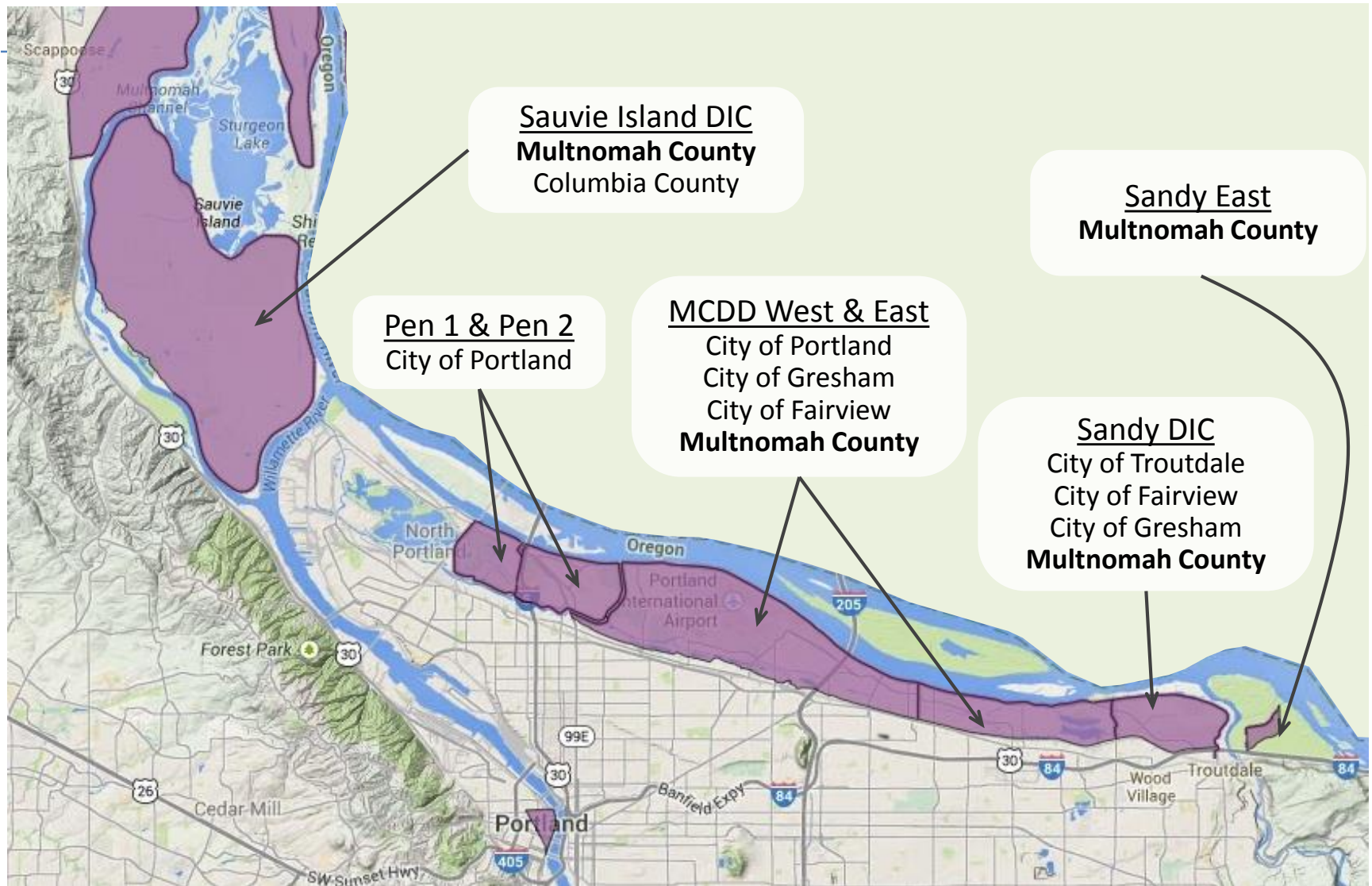


Levee Ready Columbia

Presented by:

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Communities within Multnomah County Levee System

**40% of Port of Portland
facilities**

*12 Million tons of goods move
through facilities*

**\$5.3 billion in assessed
property value**

Across four cities

**Residential
neighborhoods**

*Thousands of Oregonians flood
safety*

**10% of jobs in
Multnomah County**

*Majority in industrial,
manufacturing, and transport.*

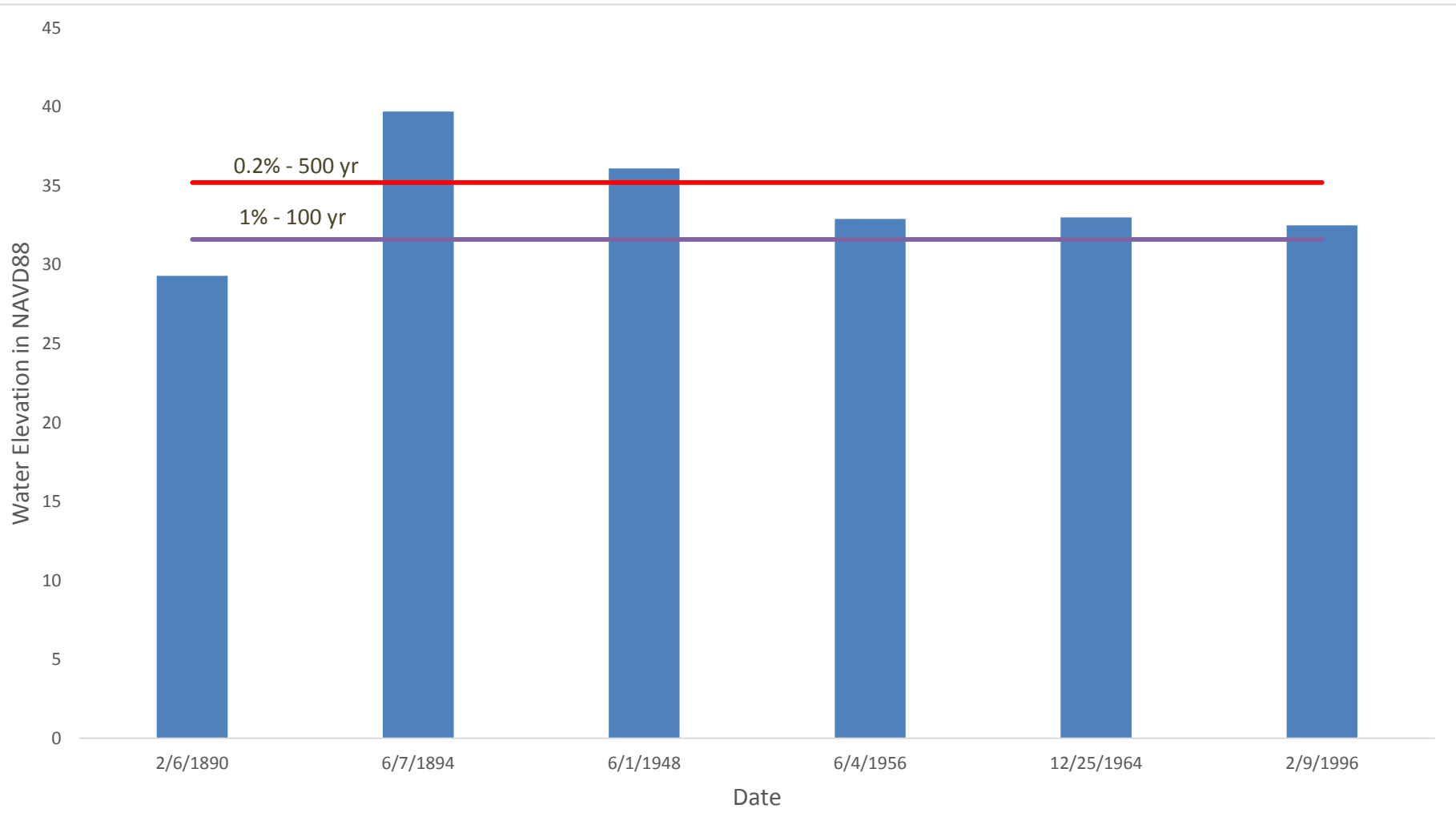
The Levees Protect Regional Assets





Levee Cross-Section along Marine Drive

Are we at risk?



High Water Events at Vancouver Gauge



1948 Vanport Flood



1996 High Water Event

FEMA

Map flood risk:
FIRM

Provide
Insurance: NFIP

Catalyze
community
conversation
about risk

USACE

Construct and
inspect levees
(RIP)

Partner with
communities to
flood fight

Partner with
communities to
repair levees

Local Agencies

Opt to
participate in
NFIP

Maintain Levees:
Certification,
Accreditation &
RIP

Flood fight

Public

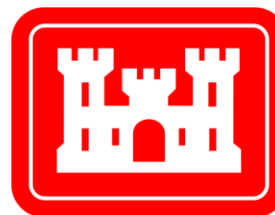
Understand risk

Buy flood
Insurance

Be prepared and
have a plan



FEMA



**Federal
Emergency
Management
Agency**

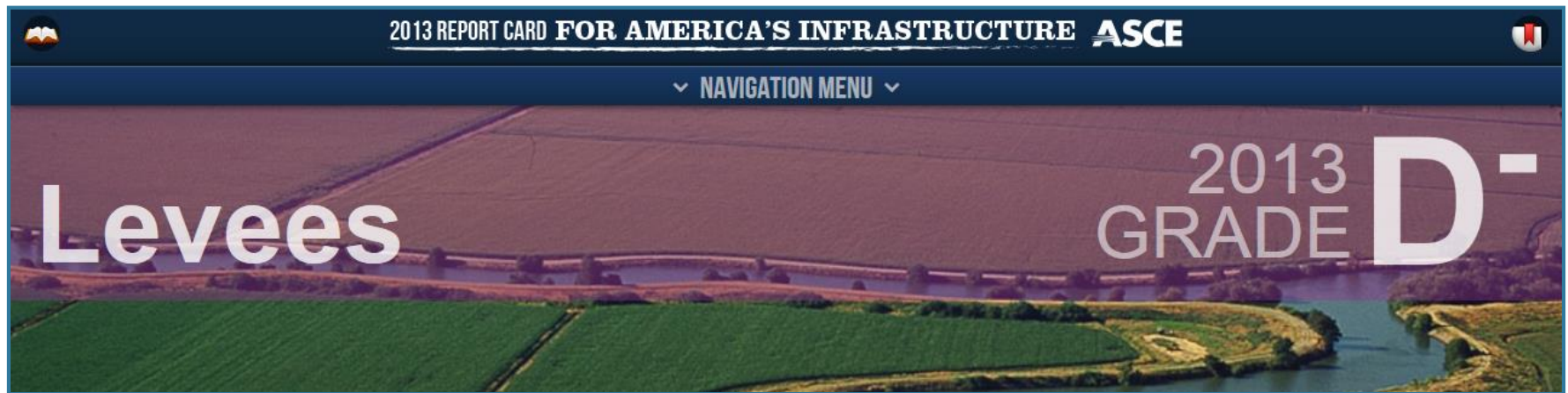
Accreditation,
Certification, &
NFIP

**US Army Corps
of Engineers**
Rehabilitation &
Inspection
Program

Two Federal Programs



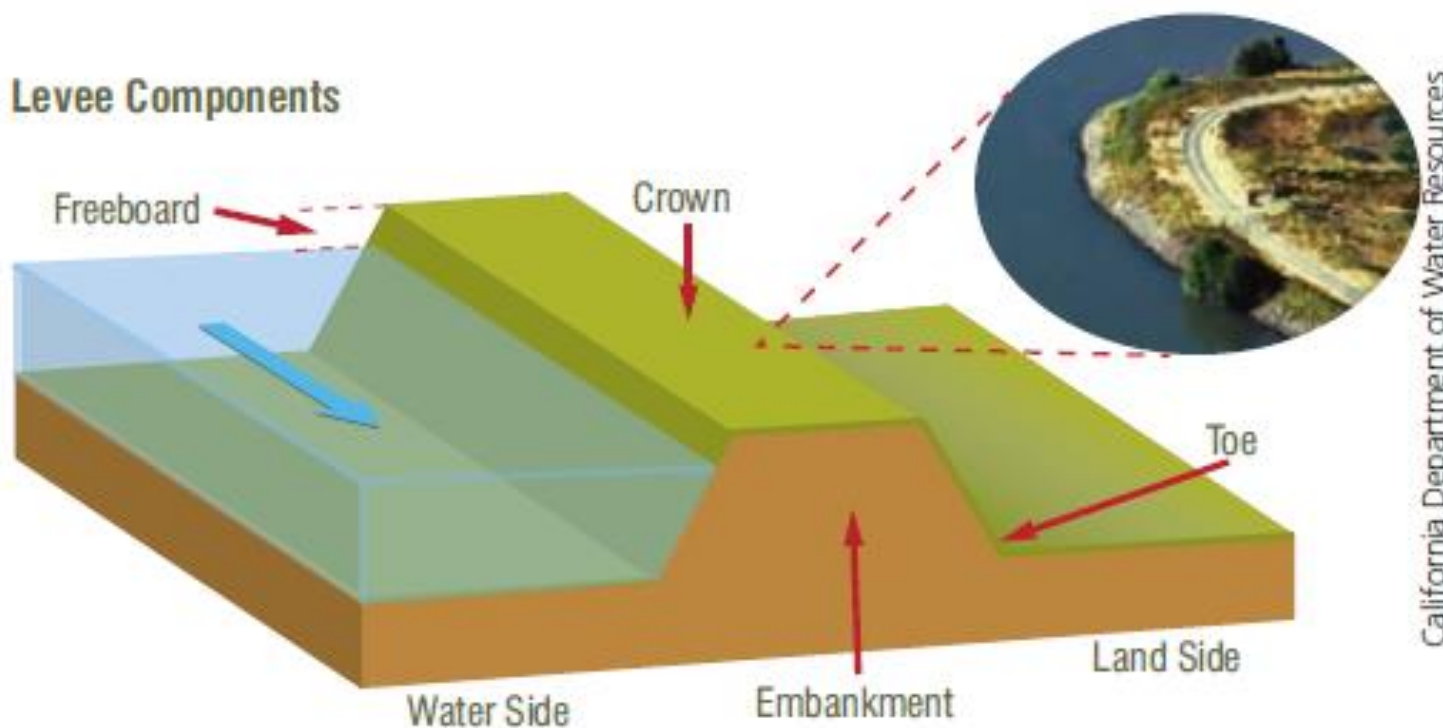
- ASCE Report Card gives levees D- nationally
- Historically, improvements have been reactionary
- Cities are learning that investments pay dividends

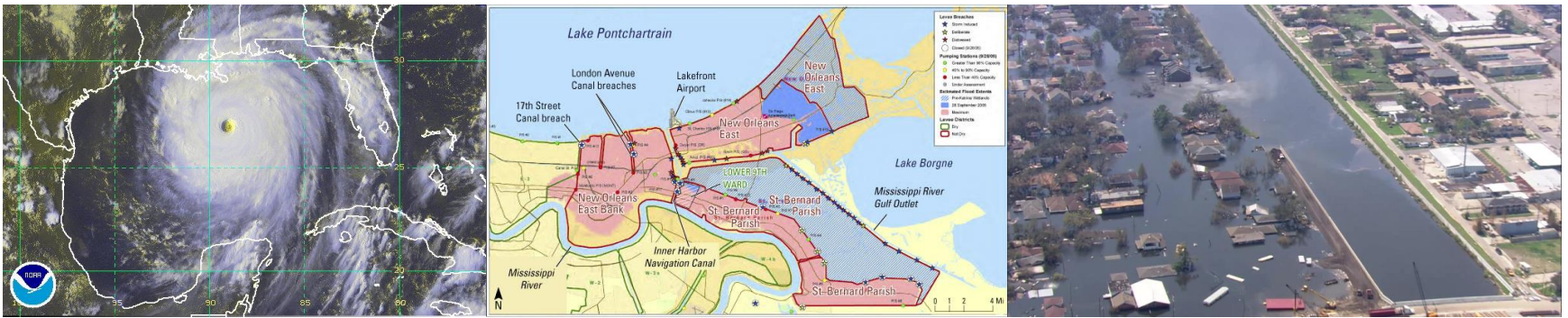


- Accreditation confirms the levees were constructed and are being maintained to protect against flooding.
- Any issues that prevent accreditation pose public safety risks to the people and property protected by the levees.



- Residents and businesses of a community that participates in the NFIP can purchase subsidized flood insurance.
- Participating in the NFIP qualifies the community to receive FEMA grants for emergency preparedness and mitigation.





- Hurricane Katrina and Sandy caused the USACE to review their levee policy and standards
- New USACE Engineering Circular caused certification expire early in PEN 1 and PEN 2.
- Oregon Solutions project triggered by cert. expiration
 - Have not yet lost accreditation because FEMA has not initiated remapping for the area.
- Oregon Solutions project goals:
 - Certification and accreditation for Columbia corridor levees administered by MCDD
 - Remaining active in the USACE RIP

Why now?

Collaborative Response



- Governor-designated
 - More than 20 partners
 - Convened by Portland Mayor Charlie Hales and Multnomah County Commissioner Jules Bailey
- Collaboratively funded
- Purpose: Provide level of protection appropriate to the assets in the districts and the costs of repairs or improvements

Preserving development conditions

Preserving public safety

Access to flood insurance

Access to emergency assistance

DISCOVERY PHASE 1 (2013-2015)

Levee Engineering Assessments (PEN 1 and PEN 2)

DISCOVERY PHASE 2 (2015-2016)

Levee Engineering Assessments (MCDD, SDIC, and SIDIC)
Inventories & Studies

ANALYSIS and PLANNING (2016-2017)

Risk Based Decision Model - Alternatives Analysis
System Wide Design and Finance Repairs

IMPMENTATION

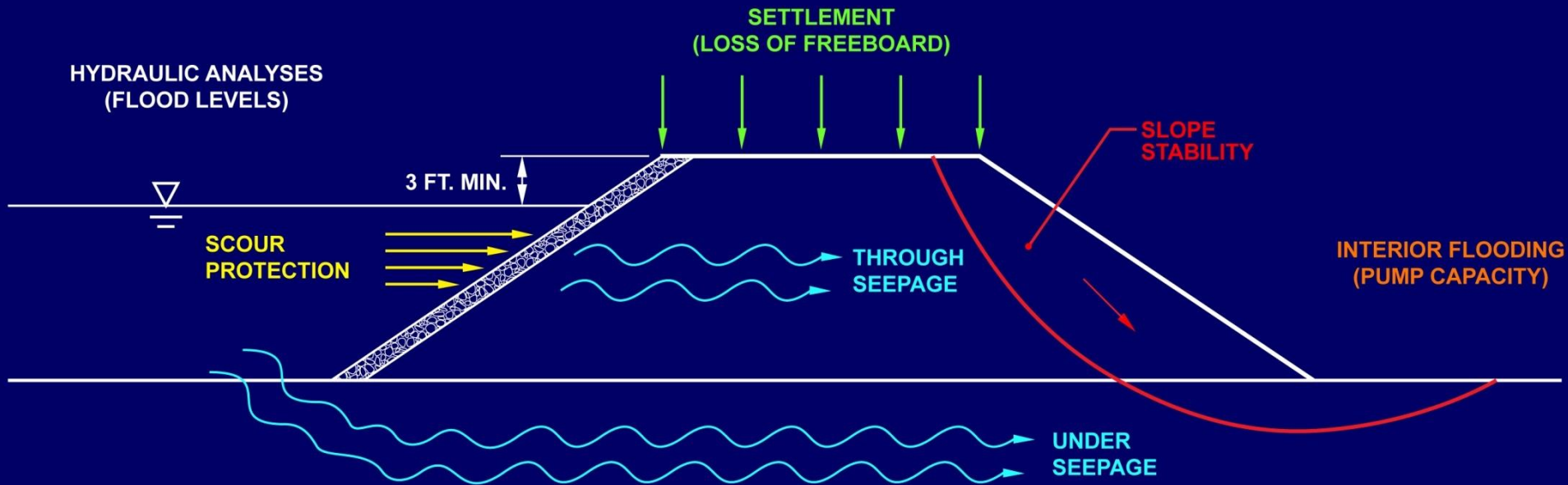
Implement Repairs System Wide

CERTIFICATION and ACCREDITATION

Certify & Submit Documentation for System Wide
Accreditation

- PEN 1 & PEN 2 – Levee Engineering Assessments
 - 1 % Annual Chance Flood (100 year)
 - USACE Authorized Design Water Elevation (470 year)
 - Encroachment Evaluations
- Funding Agreements
 - Infrastructure Finance Authority Loan #1 – PEN 1 & PEN 2
 - Business Oregon Levee Improvement State Funding
 - Approval for Infrastructure Finance Authority Loan #2 – MCDD & SDIC
- Geographic scope expansion to include MCDD, SDIC and SIDIC
- Signed Declaration of Cooperation
- Developing a funding model for FY15 - 16

44 CFR 65.10 CERTIFICATION REQUIREMENTS



ALSO

- CHECK CLOSURE STRUCTURE DESIGNS
- OPERATION AND MAINTENANCE MANUALS
- ENCROACHMENTS



MCDD & SDIC Levee Engineering Assessments



Climate Change



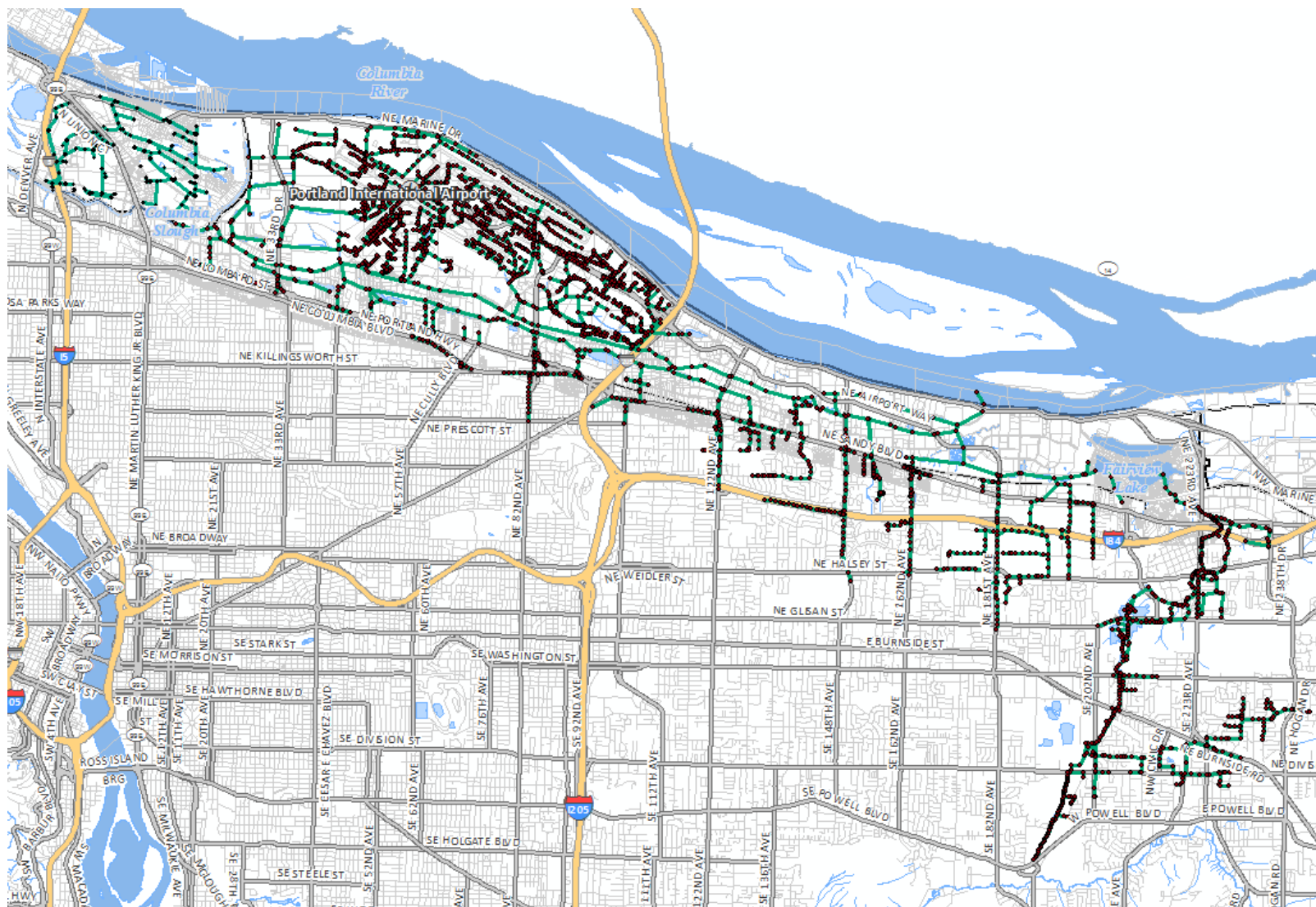
Economic
Inventory



Environmental
Inventory



Community Asset
Mapping



Interior Drainage Modeling



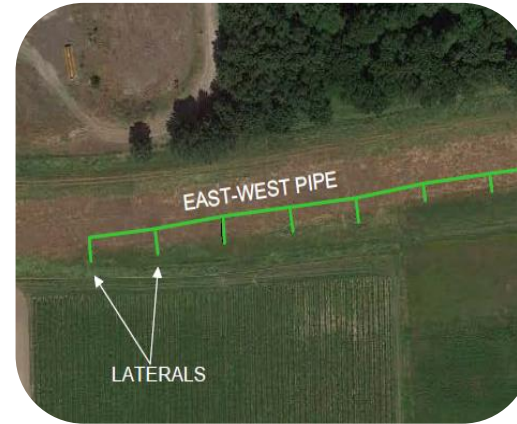
Pump Station
Inspections



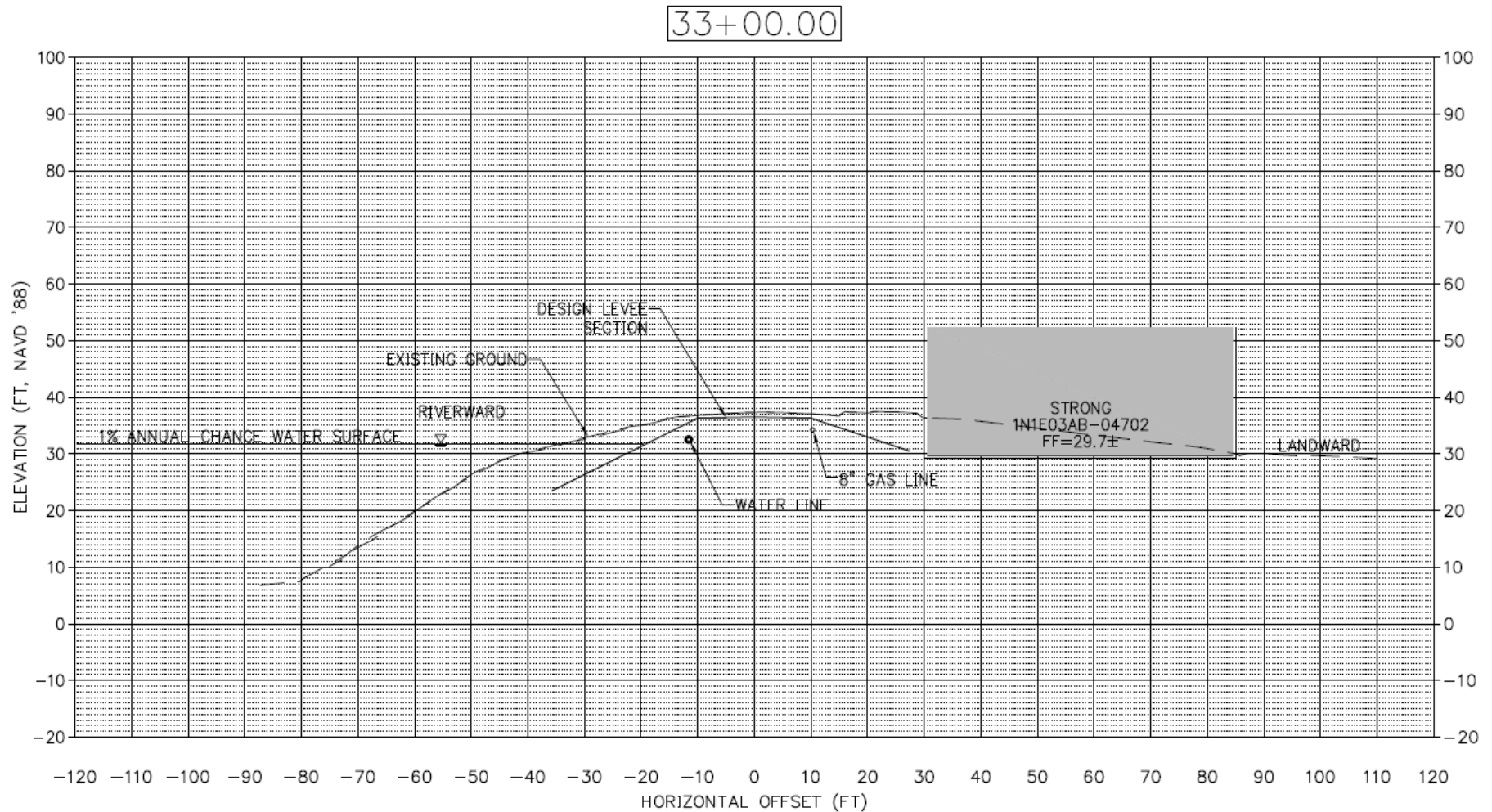
Outfall Video
Scoping



Relief Well
Inspection



Toe Drain Investigation





Questions?

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