



Levee Ready Columbia 2018 Update

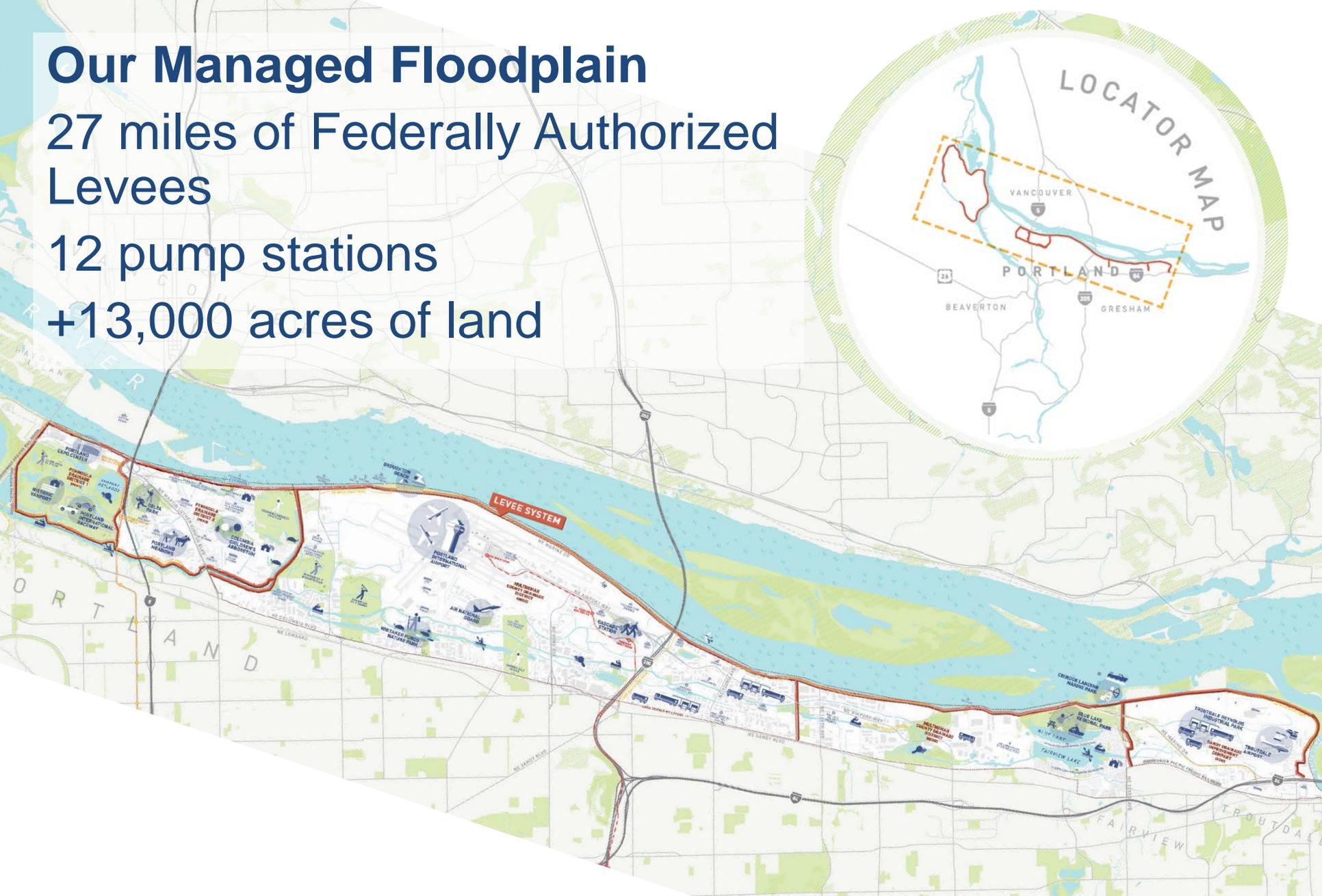
Presentation to the Multnomah County Board of Commissioners
December 11, 2018

Our Managed Floodplain

27 miles of Federally Authorized
Levees

12 pump stations

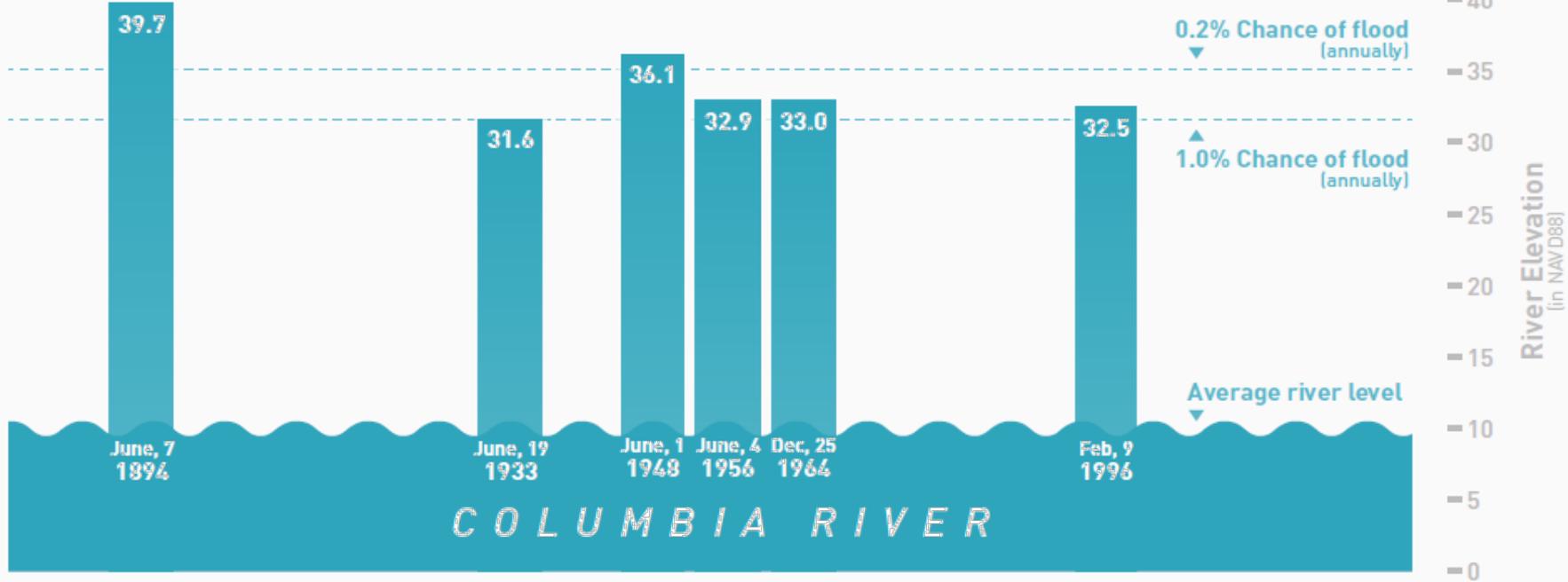
+13,000 acres of land



A History of Floods



507 COLUMBIA RIVER FLOOD 5/30/48 5:30 P.M.



Levee Ready Columbia Project Partners

- City of Portland
- City of Gresham
- City of Fairview
- City of Troutdale
- Metro
- Multnomah County
- Port of Portland
- Peninsula Drainage District #1
- Peninsula Drainage District #2
- Multnomah County Drainage District
- Sandy Drainage Improvement Company
- State of Oregon
- Representatives from neighborhood associations, business, environmental, and public interest non-profits



What's at Risk Behind the Levees?

- 8,000 residents
- +48,000 jobs
- Regional transportation nexus
- Our industrial core
- Parks, open space, and quiet places

Recreation & Culture

OVER **2,000** 
Acres of parks, open spaces, and recreational areas

 **17** MILES
Marine Drive multi-use path

 Ikea
Walmart
Target
Lowes
HomeDepot

15 Miles of 
water trails
FOR CANOES AND KAYAKS

8,000 
Residents served

Nature & Habitat

 Western Painted Turtle
Western Pond Turtle
Beaver

175 
Species of birds
IN THE WATERSHED

1.4 million
native trees and shrubs
PLANTED ALONG ENTIRE SLOUGH BY
CITY OF PORTLAND AND PARTNERS

Drinking Water

#2 Largest source of drinking water in Oregon 
#1 = BULL RUN RESERVOIR

Jobs & Economy

 **50%**
of region's manufacturing & warehouse jobs

\$16 billion
in annual economic activity

\$5.5 billion
in property value

 **20 million**
passengers annually at PDX

 **3** interstates
 **2** MAX lines
 **2** railroads
 **2** airports

Levee Ready Columbia Accomplishments

- Completed first-ever geotechnical evaluations
- Advocated for—and landed—the \$3M Feasibility Study
- Completed a series of investigations:
 - Risk Assessment
 - Climate Change Study
 - Environmental Conditions Assessment
 - Economic inventory
 - Encroachment study; securing legacy encroachment status
 - Supports inspection program compliance

...and Continued Conversations

- Long-term governance
- Feasibility study and certification project costs
- Participation in the Feasibility Study

Columbia Corridor Levee & Governance Modernization Timeline

2014-2018 Discovery Phase

- Facilitation
- Technical Investigation
- System Inventories
- Public Outreach and Education
- Governance research and analysis

2019-2024 Project Planning

- Feasibility Study Coordination
- Certification Projects & Levee Modernization
- Communication & Public Outreach
- Governance work

Modernized Governance Structure

New district established by the state legislature based on the legislative proposal developed by LRC partners

New Governance Structure

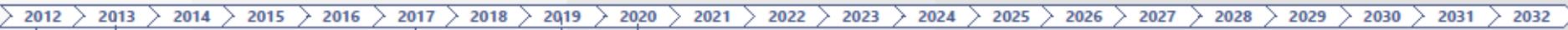
new district formed, no end date

IGA #1
2014-2015

IGA #2
2015-2017

Amendment
2017-2019

IGA #3
2019-2024



PEN 1 & 2 Cert. Expires | Oregon Solutions designation

Declaration of Cooperation Signed

MCDD & SDIC Cert. Expires

New Start Feasibility Study 2018-2021

\$

Completion of Corps & Locally Funded Capital Projects *estimated timeline*

Funding requested from USACE & Congress

Certification package submitted

Certification Continued Accreditation Maintained

Drainage Districts notified by USACE: levee certification set to expire without comprehensive evaluation demonstrating levees meet new federal safety standards

2019 Long Legislative Session

2020 Short Legislative Session

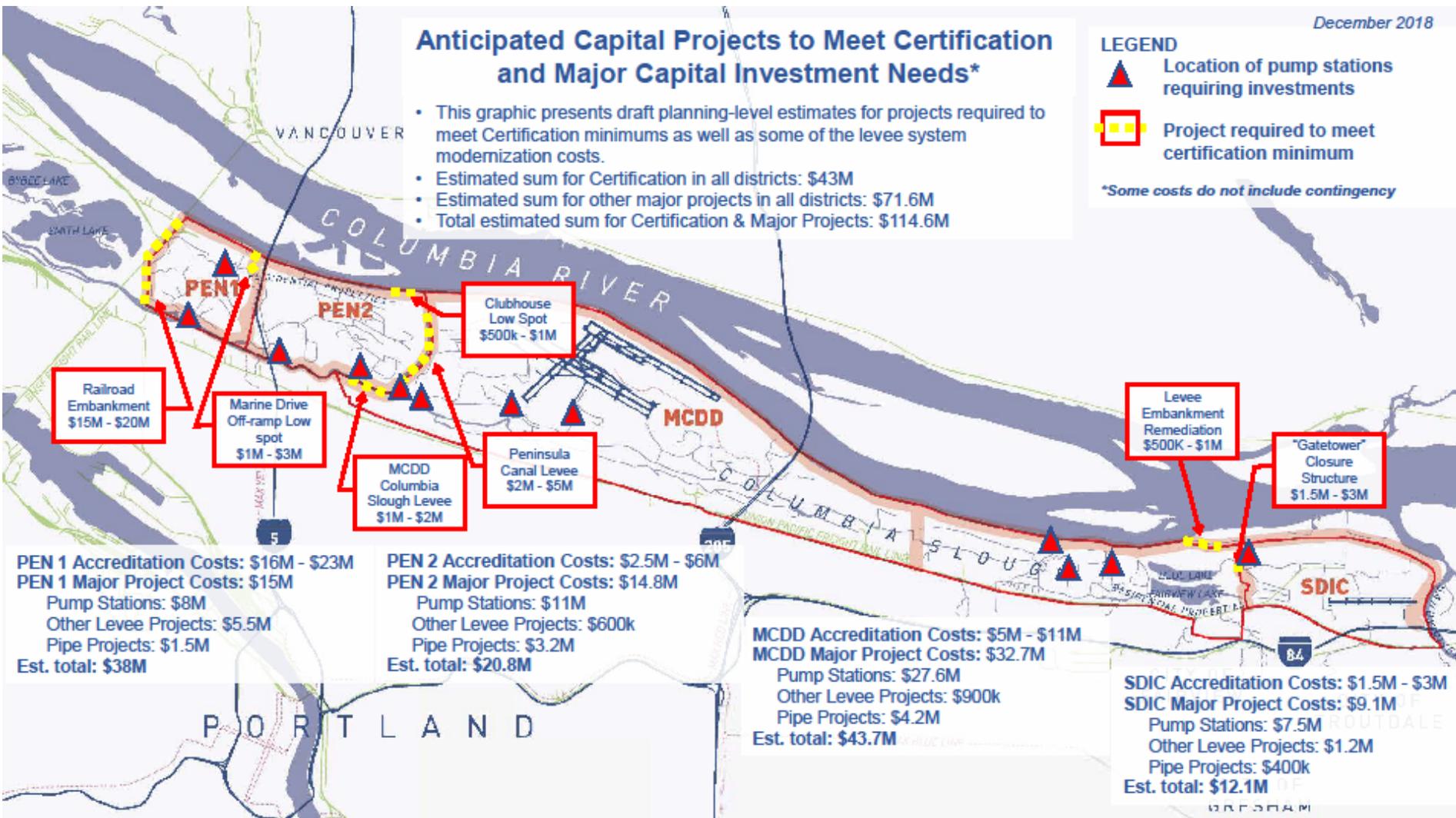
Anticipated Capital Projects to Meet Certification and Major Capital Investment Needs*

- This graphic presents draft planning-level estimates for projects required to meet Certification minimums as well as some of the levee system modernization costs.
- Estimated sum for Certification in all districts: \$43M
- Estimated sum for other major projects in all districts: \$71.6M
- Total estimated sum for Certification & Major Projects: \$114.6M

LEGEND

-  Location of pump stations requiring investments
-  Project required to meet certification minimum

*Some costs do not include contingency



PEN 1 Accreditation Costs: \$16M - \$23M
PEN 1 Major Project Costs: \$15M
 Pump Stations: \$8M
 Other Levee Projects: \$5.5M
 Pipe Projects: \$1.5M
Est. total: \$38M

PEN 2 Accreditation Costs: \$2.5M - \$6M
PEN 2 Major Project Costs: \$14.8M
 Pump Stations: \$11M
 Other Levee Projects: \$600k
 Pipe Projects: \$3.2M
Est. total: \$20.8M

MCDD Accreditation Costs: \$5M - \$11M
MCDD Major Project Costs: \$32.7M
 Pump Stations: \$27.6M
 Other Levee Projects: \$900k
 Pipe Projects: \$4.2M
Est. total: \$43.7M

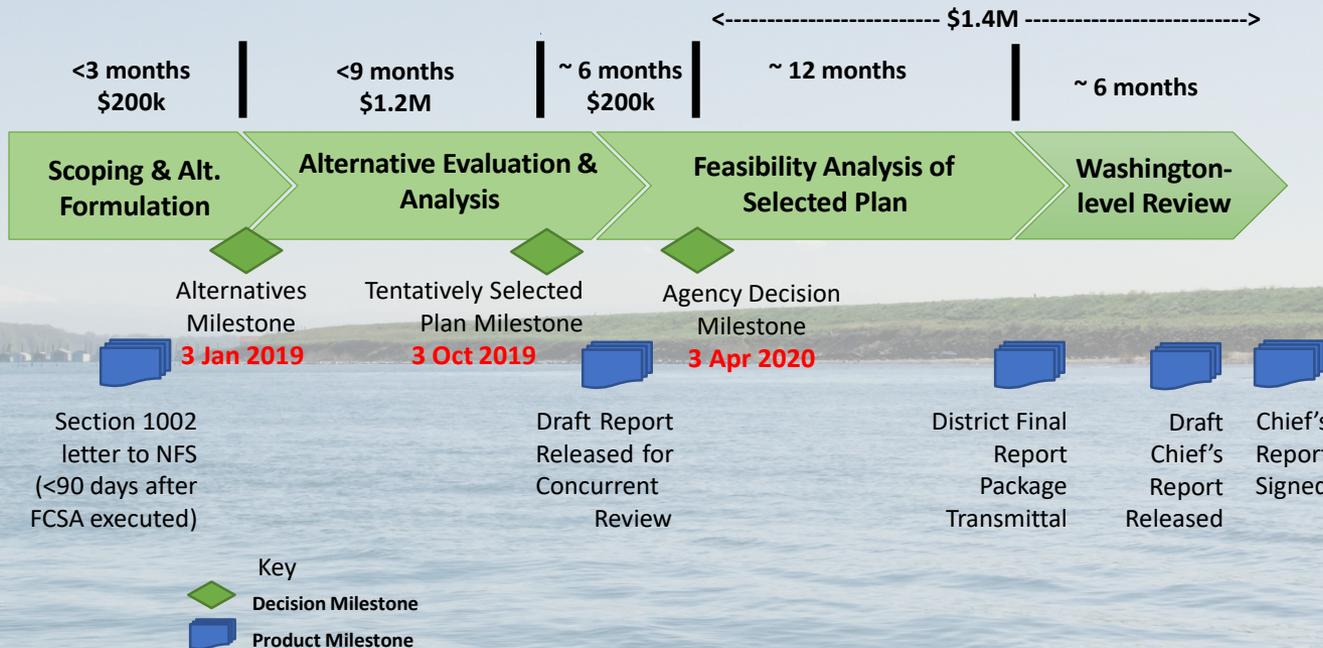
SDIC Accreditation Costs: \$1.5M - \$3M
SDIC Major Project Costs: \$9.1M
 Pump Stations: \$7.5M
 Other Levee Projects: \$1.2M
 Pipe Projects: \$400k
Est. total: \$12.1M

Portland Metro Levee System, GI Study

THE FEASIBILITY STUDY PROCESS:

KEY DECISION & PRODUCT MILESTONES IN A 3-YEAR, \$3M STUDY (3X3)

FY	2019	2020	2021
NWP Request	\$2.0M	\$0.8M	\$0.2M



2019-2024 LRC IGA's Purpose

1. Continues LRC Partners' work toward recertification
2. Establishes *temporary* decision-making and staffing structure
3. Continues public outreach and public information efforts
4. Funds coordination of the US Army Corps of Engineers' New Start Feasibility Study
 - Development of Locally Preferred Plan and Alternatives
 - Project management and coordination; communication and public outreach related to the Feasibility Study
5. Continues long-term governance work



Long-term governance challenge

- **Benefits and burdens:** The status quo does not equitably allocate costs of flood risk management in the Columbia Corridor to the many beneficiaries of the system.
- **Fragmented responsibility:** Responsibility and authority for vital functions are fragmented across several jurisdictions. No single entity is responsible for reducing flood risks.
- **Insufficient revenue:** The existing four drainage districts assessments are limited. Revenues will need to approximately triple to support the system.

Levee Ready Columbia Next Steps

- Parties to sign IGA to continue program
- New governance conversation continues
 - 2019 Legislative session update
- USACE New Start Feasibility Study timeline





Sauvie Island Levee System 2018 Project Update

Board Briefing
December 11, 2018
Department of Community Services



Sauvie Island Levee System

Completed in 1942

Local Sponsor: Sauvie Island Drainage Improvement Company (SIDIC)

18 miles of levee

35 miles of drainage canals

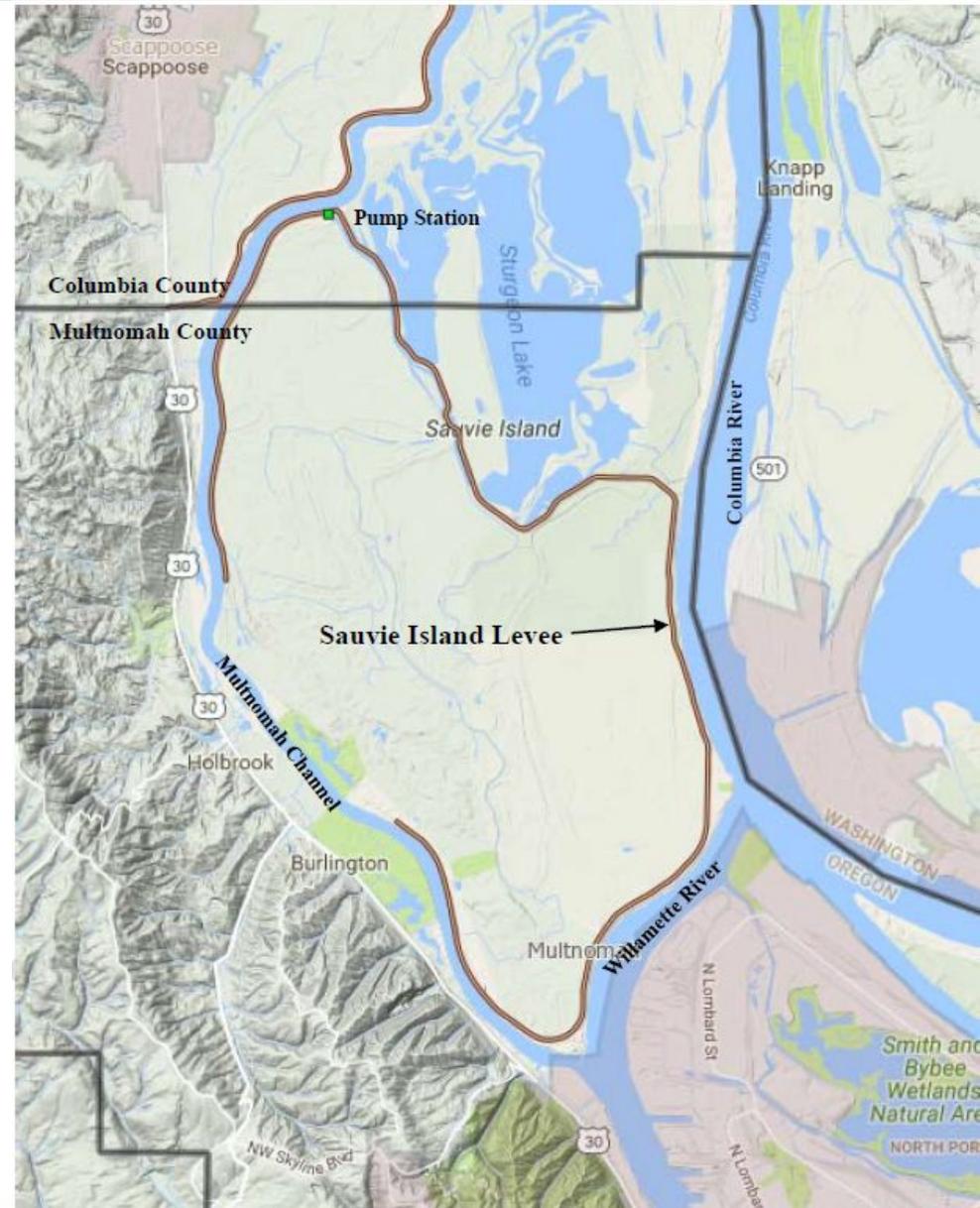
1 main pump station

3 internal drainage pump stations

Protects 640 residents

If a levee breach occurred during a 100-year flood, it is estimated that

- 60% of residents would be displaced
- 70% of buildings would be exposed to flood waters
 - Agricultural buildings flooded up to 8 feet
 - Residences flooded up to 5 feet



Levee Ready Columbia // 2018 Update

U.S. Army Corps of Engineers certification expired in 2017

- County and SIDIC joined Levee Ready Columbia in 2015
- Corps began levee system evaluation in 2016
- Final Step - Agency Technical Review currently underway

Funding:

- State grants
- Contributions from Multnomah County, Port of Portland, and Natural Resources Conservation Service
- 0% interest loan from State



As part of the evaluation:

- Raised levee in two locations
- Rebuilt two pump motors
- Inspected inlets
- Inventoried and inspected culverts
- Tested interior pumps
- Modeled all culverts for flow and restrictions
- Updated Operations Manual and Emergency Response Plan



Next Steps:

- Corps finalizes certification package
- SIDIC and County submit to FEMA for review
- FEMA determines if meets accreditation standards

