



FLOODPLAIN MANAGEMENT & THE NORTH REACH

EOA Collaborative Working Group
December 1, 2023

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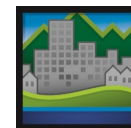
Engineering Supervisor, BDS

Kaitlin Lovell

Manager II, Regulatory Strategy &
Remediation, BES



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Agenda

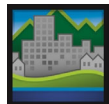
- I. Floodplain Management
 - a. Background
 - b. Zoning Code Considerations
 - c. Building Regulations Considerations
- II. Break
- III. The North Reach
 - a. Background
 - b. Future Considerations
- IV. Breakouts – Map Review & Group Feedback



Floodplain Management – Background



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National Flood Insurance Program (NFIP) Biological Opinion

- Determined 16 threatened and endangered salmon and steelhead impacted
- FEMA Implementation Plan to comply with the Biological Opinion released in October 2021



Multi-bureau Floodplain Management Update

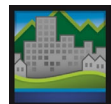
- 5-year work plan based on 2019 Implementation Agreement with:
 - BDS, BES, BPS, OGR, CAO, OMF, PP&R and Prosper Portland
 - PBEM and PBOT also on team
- Council-funded in FY18/19 & FY22/23

Project Goals

- Maintain access to FEMA flood insurance and disaster relief funds
- Reduce future flood risk
- Improve and expand habitat for Portland's threatened and endangered fish species

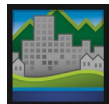
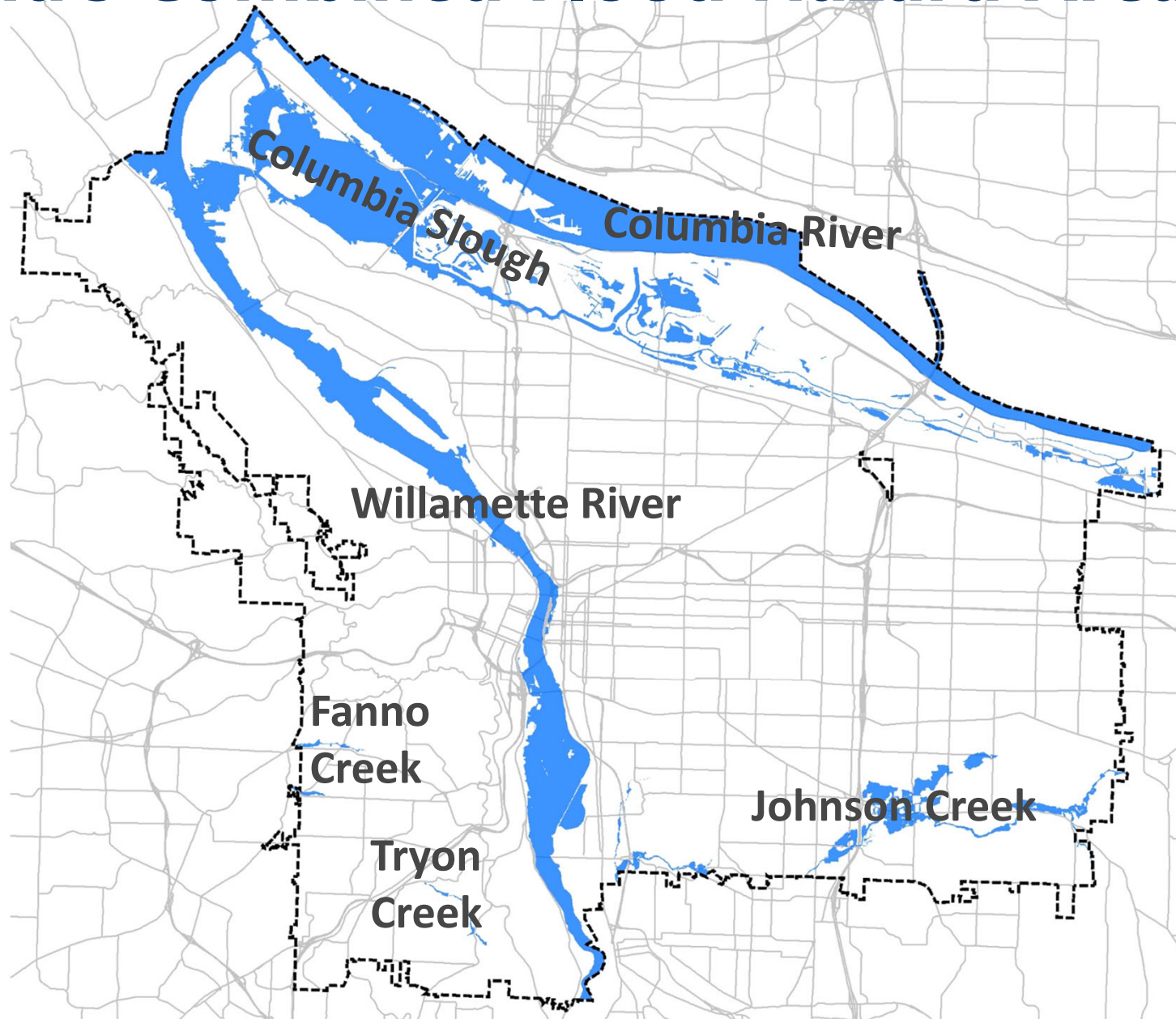


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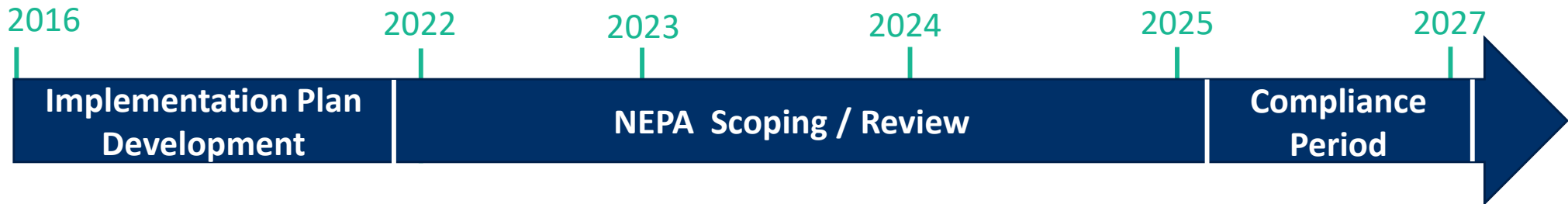
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Portland's Combined Flood Hazard Area

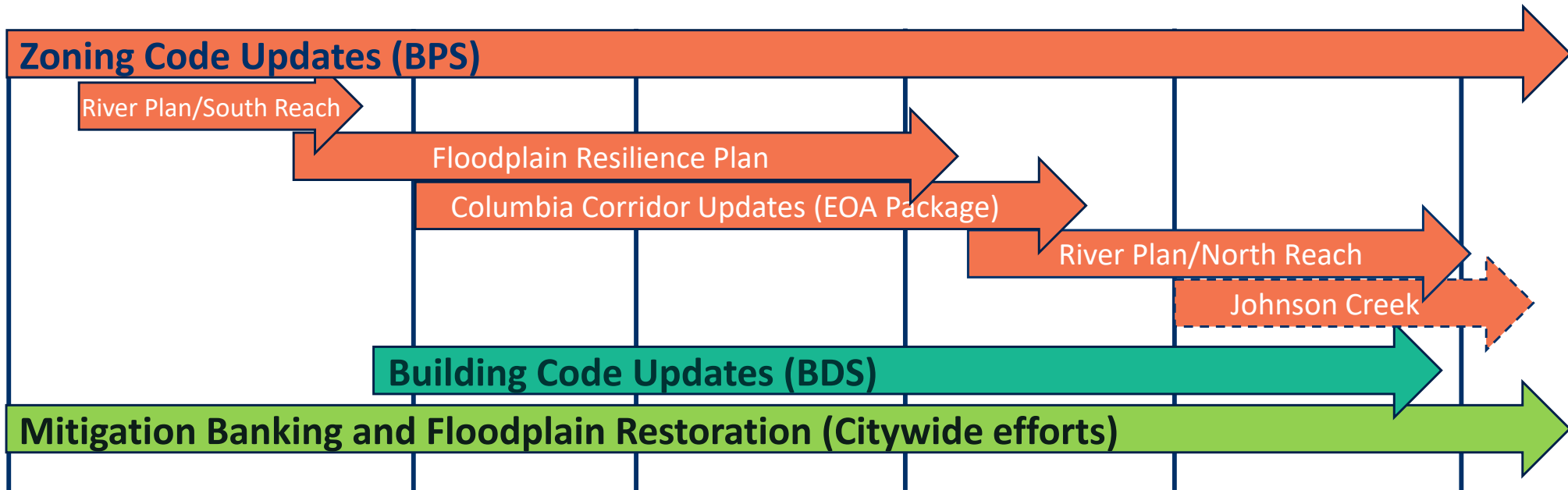


Responding to the 2016 Biological Opinion

FEMA's TIMELINE



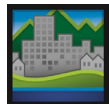
CITY WORK PLAN COMPONENTS & SCHEDULE



Floodplain Management: Zoning Code (Title 33) Considerations

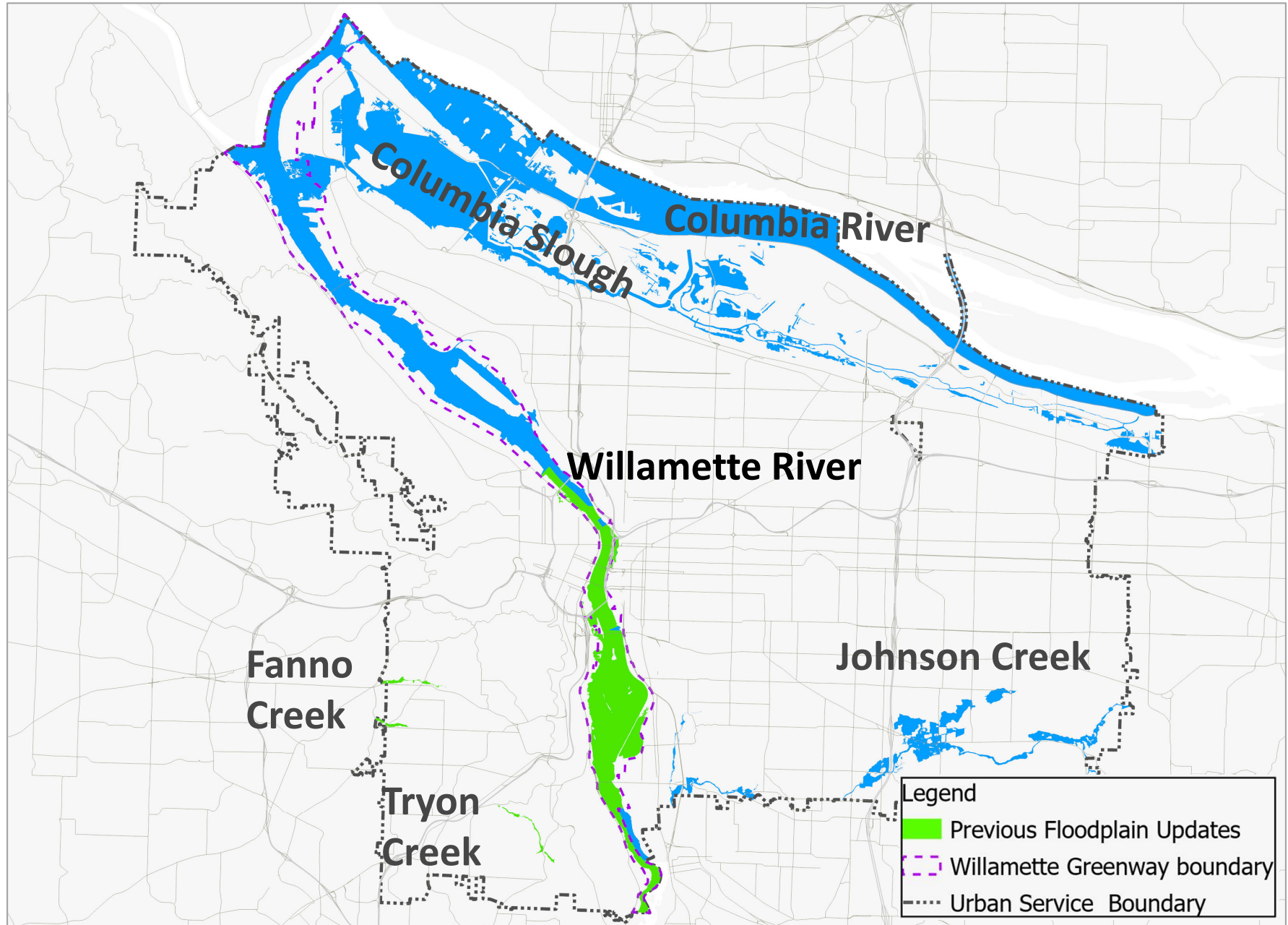


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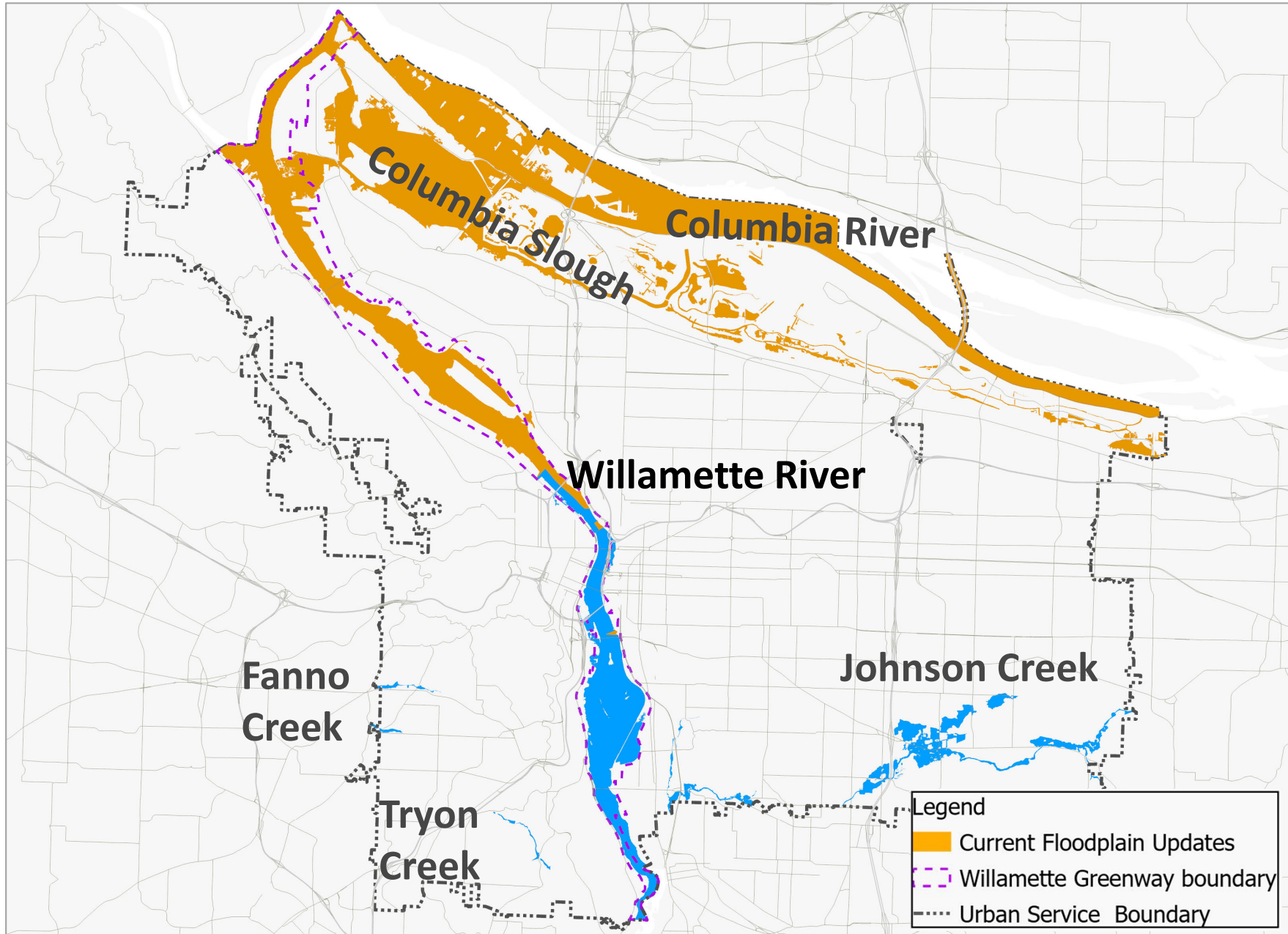


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Previous Floodplain Management Updates



Areas Addressed in this Phase



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Zoning Code (Title 33) Considerations

- Require additional fish habitat improvements as part of non-river-dependent/-related development close to river
- Apply environmental zones to ensure habitat protections for undeveloped floodplains
- Establish consistent tree and vegetation replacement in the city's floodplains



Zoning Code (Title 33) Considerations

Riparian Buffer Area

- May extend beyond required development setback
- Not a “no-build” zone but additional mitigation required
- Mitigation
 - Vegetation, trees and habitat improvements to offset development impacts
 - Can be located onsite or off-site
 - Extent/type of improvements depend on scale of impact



Riparian Buffer Area – Potential Mitigation

Removal of riprap, additional tree/veg planting, etc.



Photo: Google Maps



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Floodplain Management: Building Regulations (Title 24) Considerations



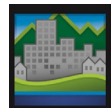
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Building Regs (Title 24) – New 1996 Flood Inundation Area Map

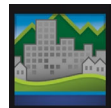
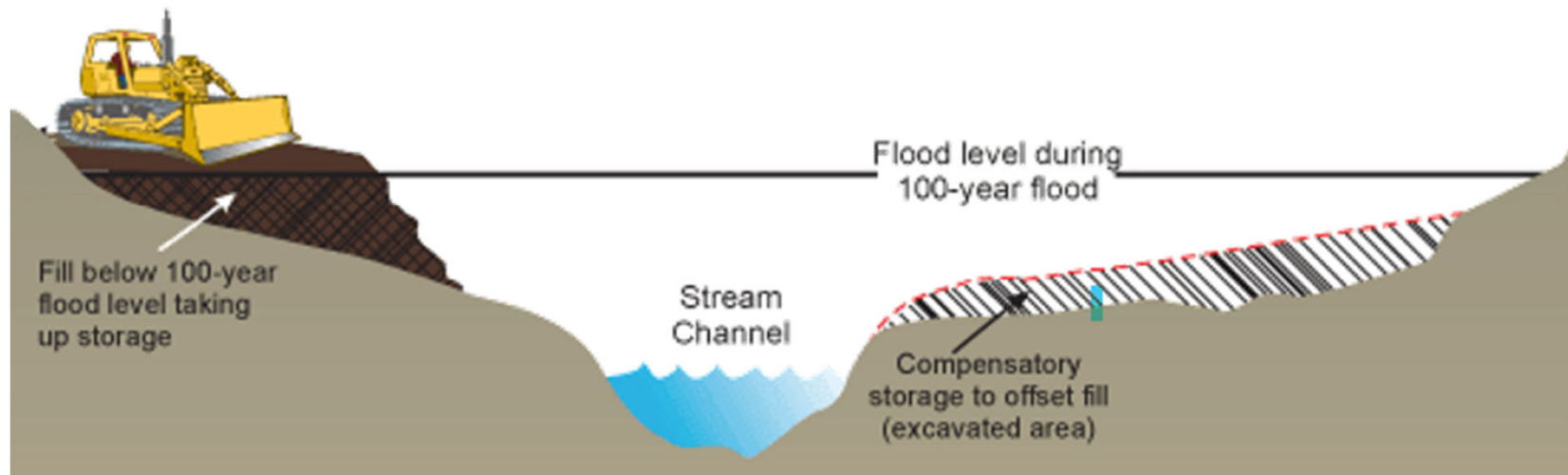
- City worked w/ US Army Corp of Engineers on a new model of the February 1996 Flood on the Lower Willamette River
- Based on the 1996 Flood Area on the Metro Title 3 Map
- Incorporated into a new Title 24 map that includes the model and the existing Metro 1996 Flood Inundation Area



Building Regulations (Title 24) Considerations

Responding to the FEMA Biological Opinion

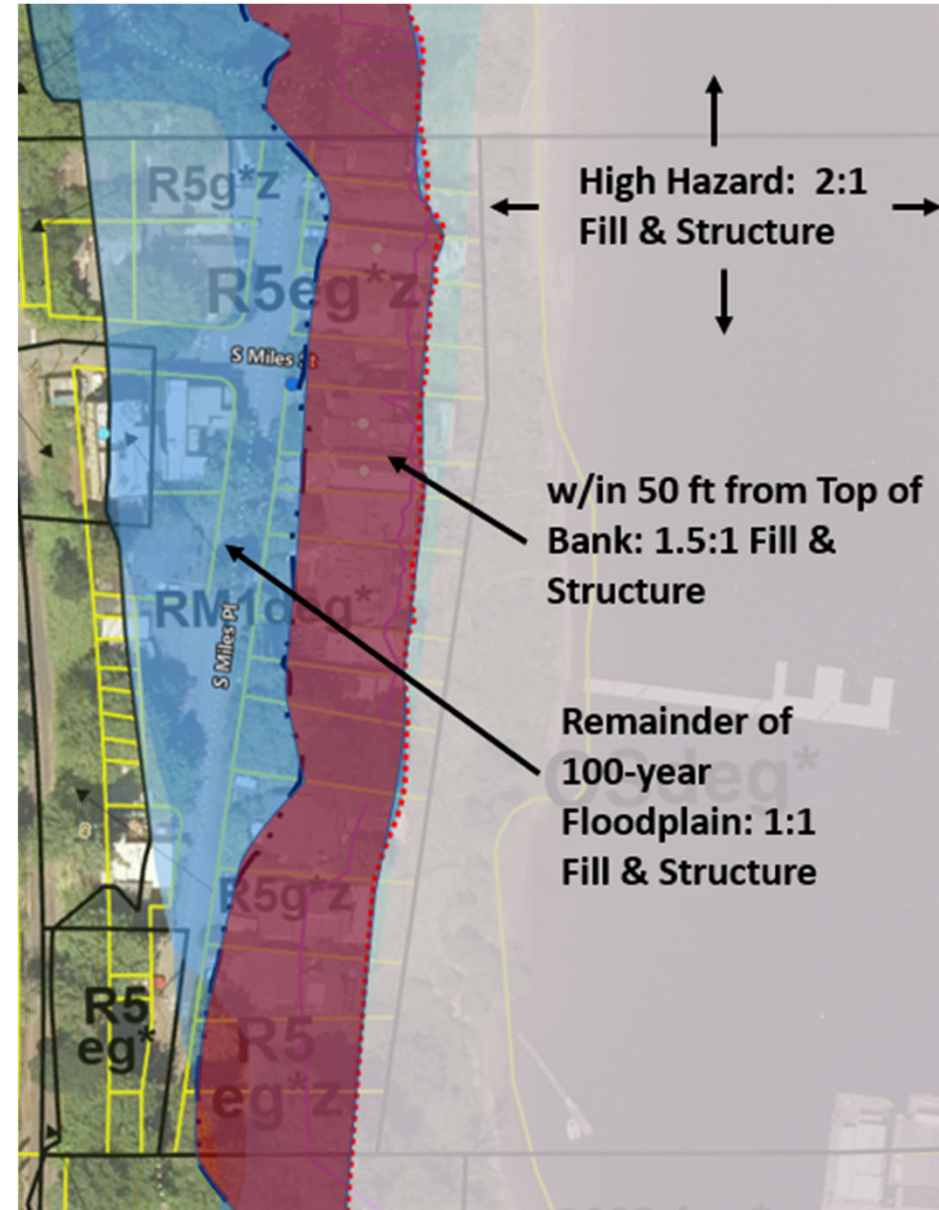
- Increase requirements for flood storage “compensation” within certain areas of the FEMA 100-year floodplain
- Flood storage compensation will be required for new fill and structure; including additions to existing structures



Building Regulations (Title 24) Considerations

Responding to the FEMA Biological Opinion

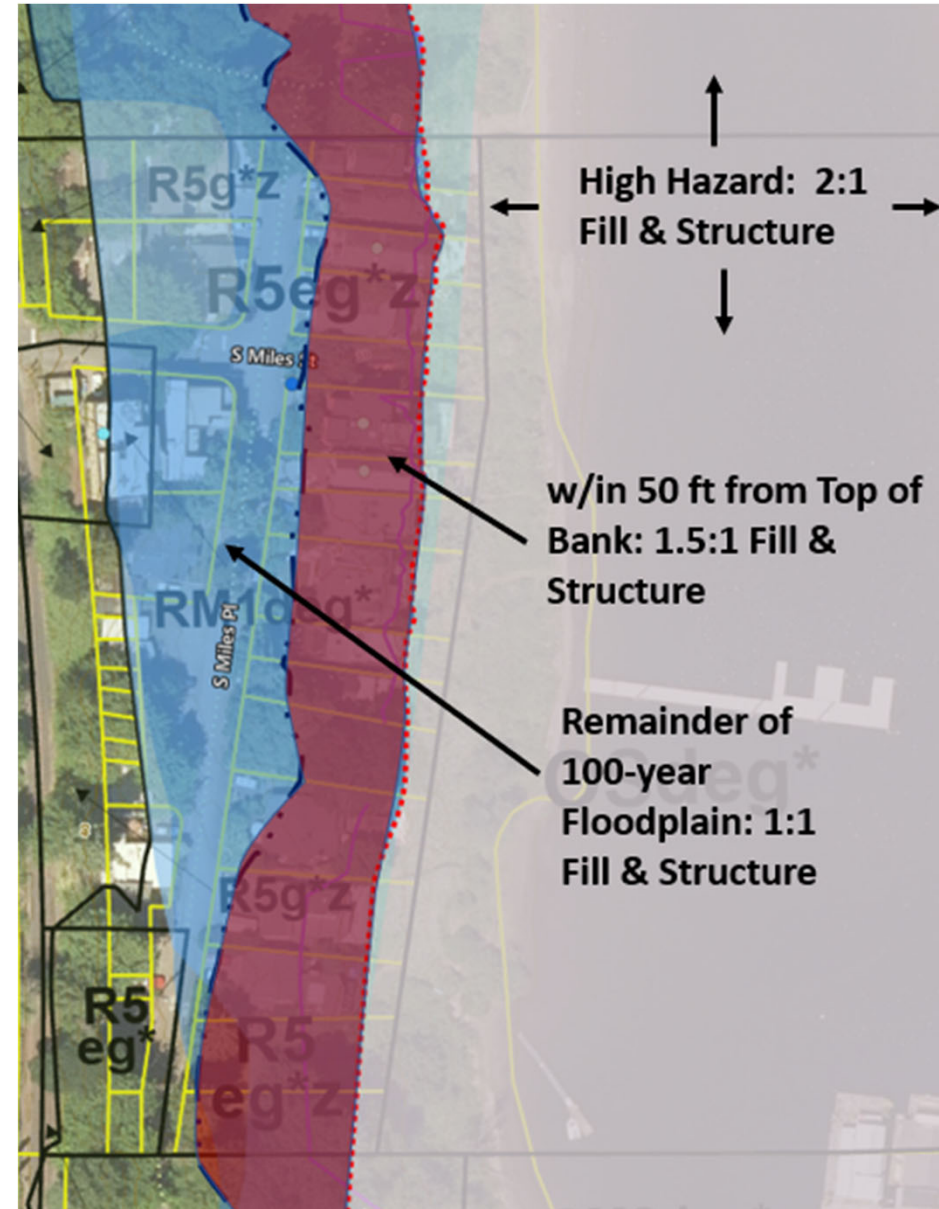
- Applies to development w/in FEMA 100-year Floodplain
- Volume of flood storage required based on location of development relative to the river
- Flood storage required for placement of fill and structure below the 100-yr flood elevation



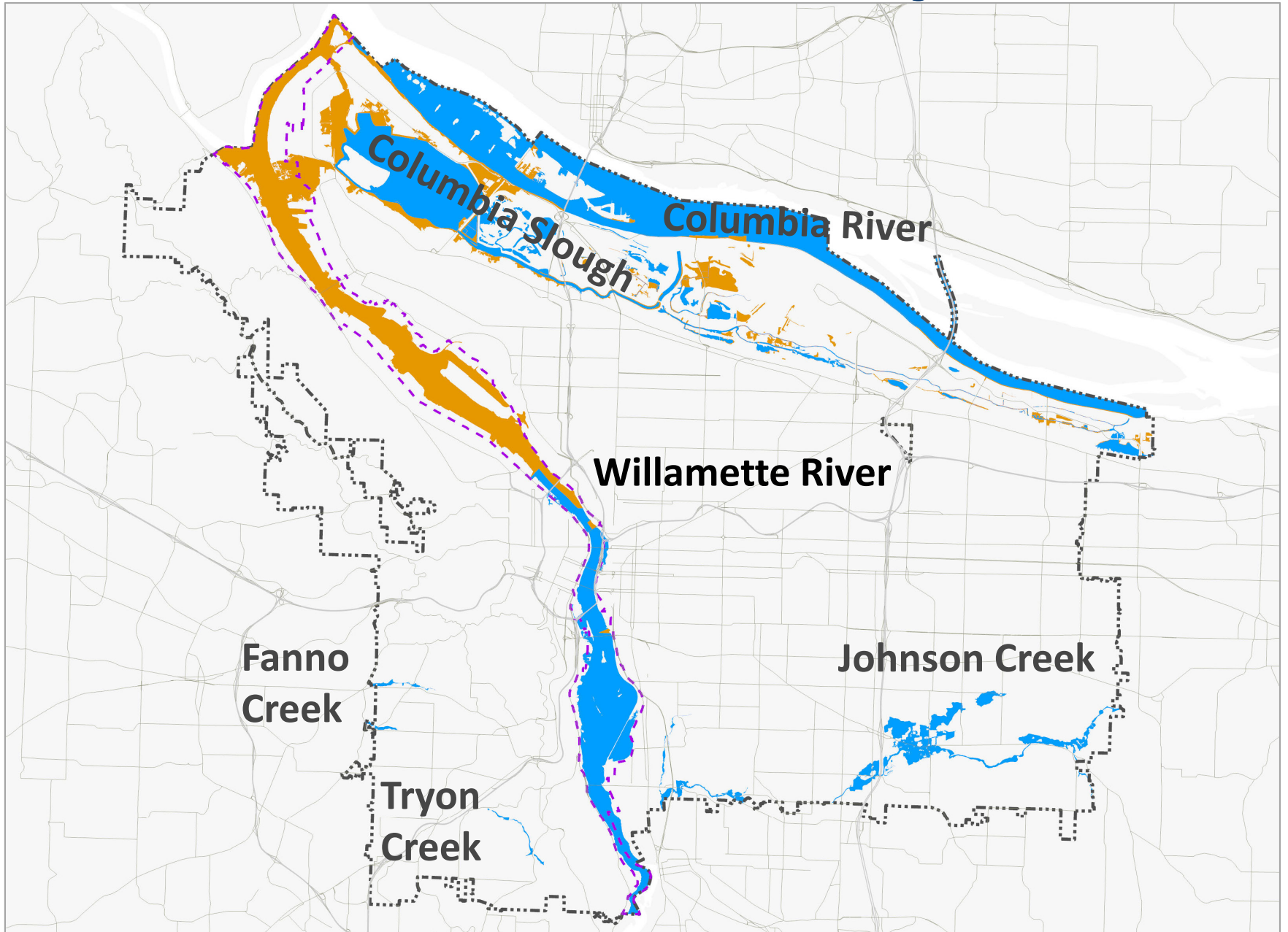
Building Regulations (Title 24) Considerations

Responding to the FEMA Biological Opinion

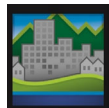
- Maintain current storage reqs within the new 1996 Flood Inundation map
 - Applies to placement of fill
 - Balanced cut and fill (ratio 1:1)
- Allow use of flood storage mitigation bank credits



Areas to be Addressed by EOA



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EOA Implications

River-dependent/-related uses and development

- Increased flood storage excavation most impactful to these uses

Non-river-dependent/-related uses and development

- Riparian buffer area reqs may be challenging

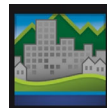
Mitigation banks for both habitat and flood storage will be key



Questions



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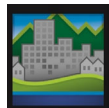


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The North Reach – Background



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Oregon's Statewide Planning Goals & Guidelines



Department of Land Conservation and Development
635 Capitol St. NE, Suite 150
Salem, Oregon 97301-2540
(503) 373-0050
www.oregon.gov/lcd

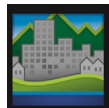
Oregon Department of Land Conservation and Development (March 12, 2010)

Goal 15, Willamette River Greenway

To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River.



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Oregon's Statewide Planning Goals & Guidelines

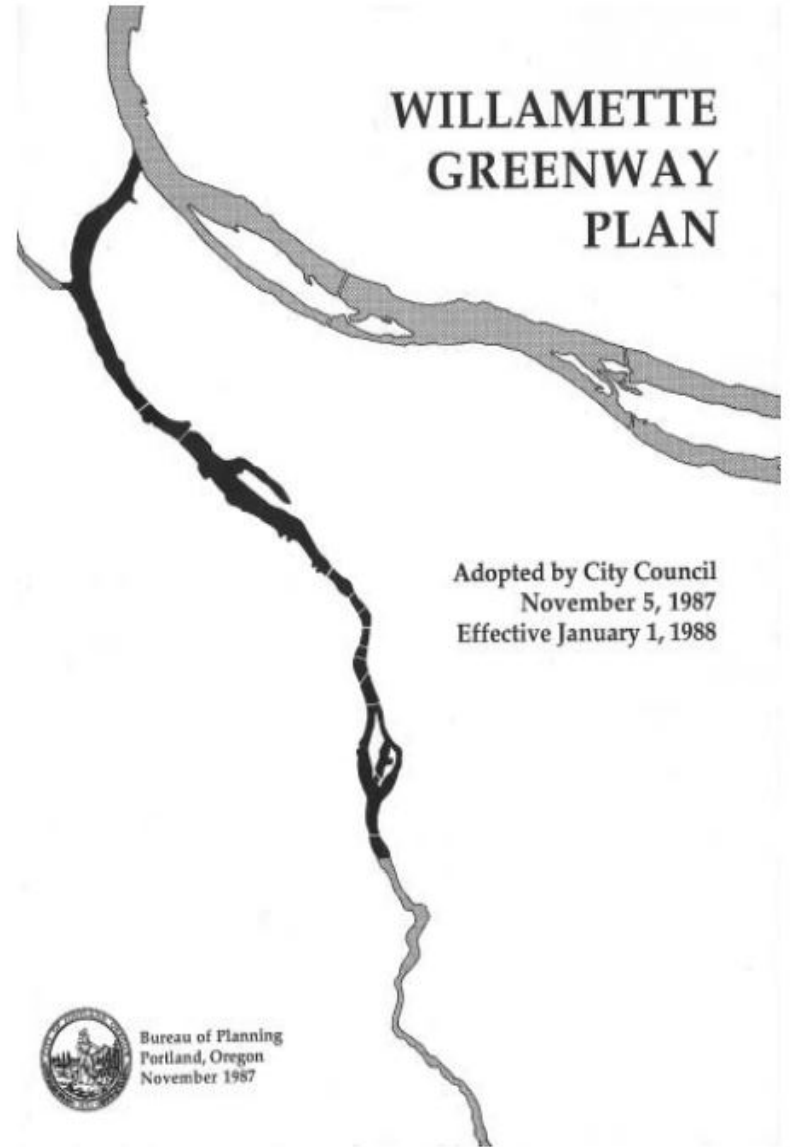


Department of Land Conservation and Development
635 Capitol St. NE, Suite 150
Salem, Oregon 97301-2540
(503) 373-0050
www.oregon.gov/lcd

Oregon Department of Land Conservation and Development (March 12, 2010)



WILLAMETTE GREENWAY PLAN



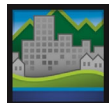
Adopted by City Council
November 5, 1987
Effective January 1, 1988



Bureau of Planning
Portland, Oregon
November 1987



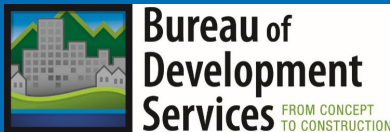
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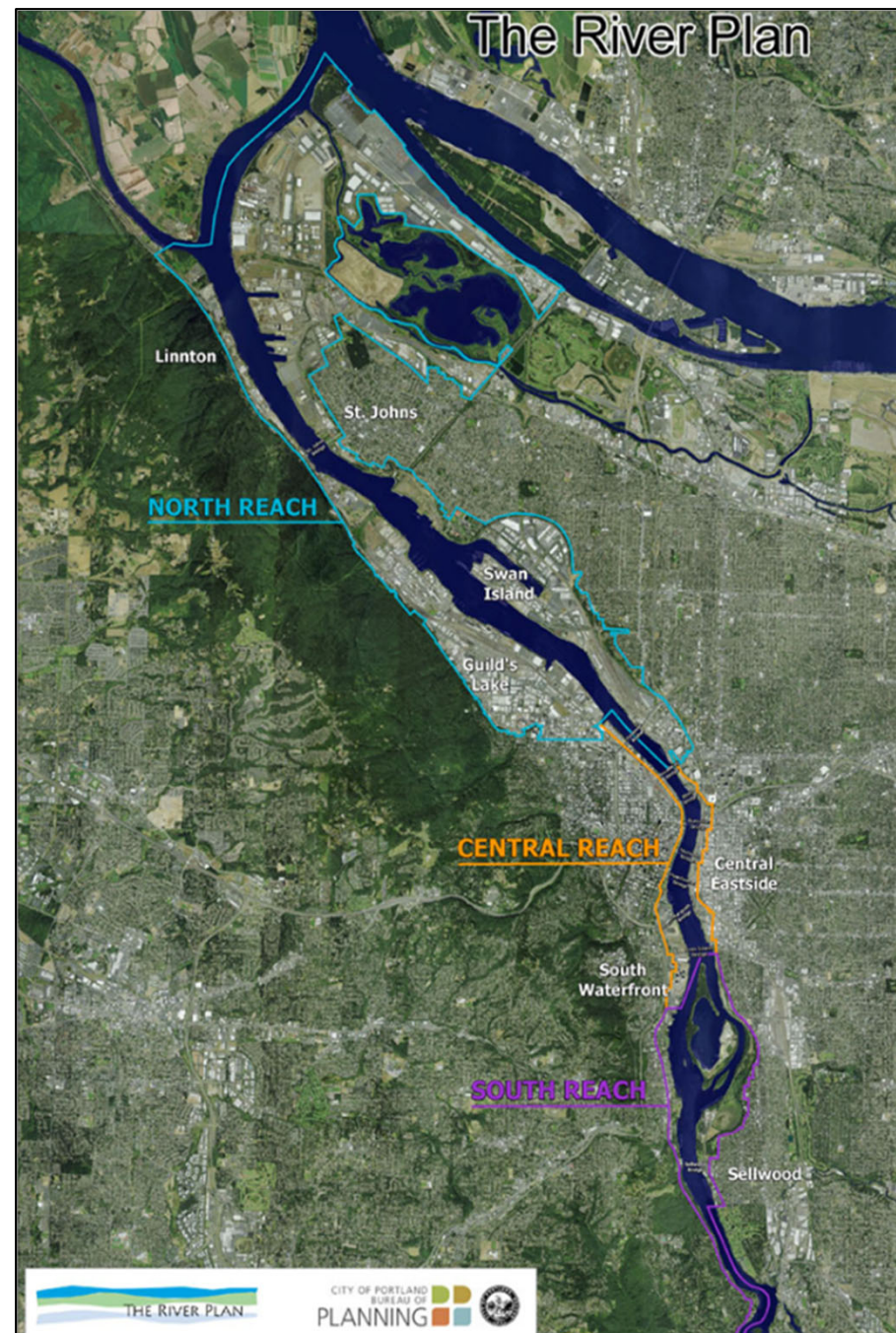
Current Requirements – Greenway Overlay Zone

- Largely unchanged since 1980s
- 25-foot setback for non-river-dependent/-related development
- Overlay zones:
 - River General (g), River Industrial (i) OR River Recreational (r)
 - Sometimes River Natural (n), River Water Quality (q)
- Some standards (e.g., landscaping), but Greenway Review required
- All development must meet Willamette Greenway Design Guidelines



Willamette River Planning - Reaches

- North Reach – Adopted 2010 (appealed)
- Central Reach – Adopted 2018 (& again in 2020)
- South Reach – Adopted 2020
- Floodplain Resilience Plan – Adopted in 2023



River Plan/North Reach (2010)

Relevant Components

- Applied River overlay zones
- Updated River Industrial overlay zone (river-dependent/-related focus)
- No setback for River Industrial; 50-foot setback elsewhere
- “Vegetation enhancement standard”
 - 15% of site vegetated
 - Cap on amount spent to comply
 - Fee-in-lieu option



River Plan/North Reach (2010)

Relevant Components

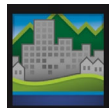
- Added number of standards in the River Environmental, including for:
 - Bulkheads
 - Cargo conveyors
 - Rail right of way
 - Site investigations
 - Tree removal
 - Mitigation
- Established standards for corrections to environmental violations



The North Reach



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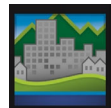
The North Reach

Overarching Goals

- Engage stakeholders to understand long-term vision
- Apply zoning code requirements and processes to be consistent with elsewhere in city
- Update the zoning code to:
 - Increase clarity and certainty
 - Allow for approval through standards
 - Incorporate consistent environmental regulations and review processes
 - Support economic development efforts in the reach



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The North Reach

River Overlay Zones

- Applied in Central and South reaches
- Existing zones
 - River General (g*)
 - River Recreational (r*)
 - River Environmental (e)
- 50-foot development setback
- Relevant standards include:
 - Landscaping in setback
 - Exterior lighting



The North Reach

River Environmental Overlay Zone

Draft River e applies to:

- 50 ft from Willamette River top of bank and any streams and wetlands
- Riparian buffer area, incl. all floodplain within 170 feet
- All high- and medium ranked riparian resources
- Special Habitat Areas



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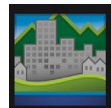
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River Environmental Overlay Zone

- Variety of activities exempt from requirements
- Variety of standards, including:
 - Rail ROW and utilities
 - Placement of piles
 - Site investigative work
 - Trees and vegetation
 - Mitigation
 - Land divisions and property line adjustments

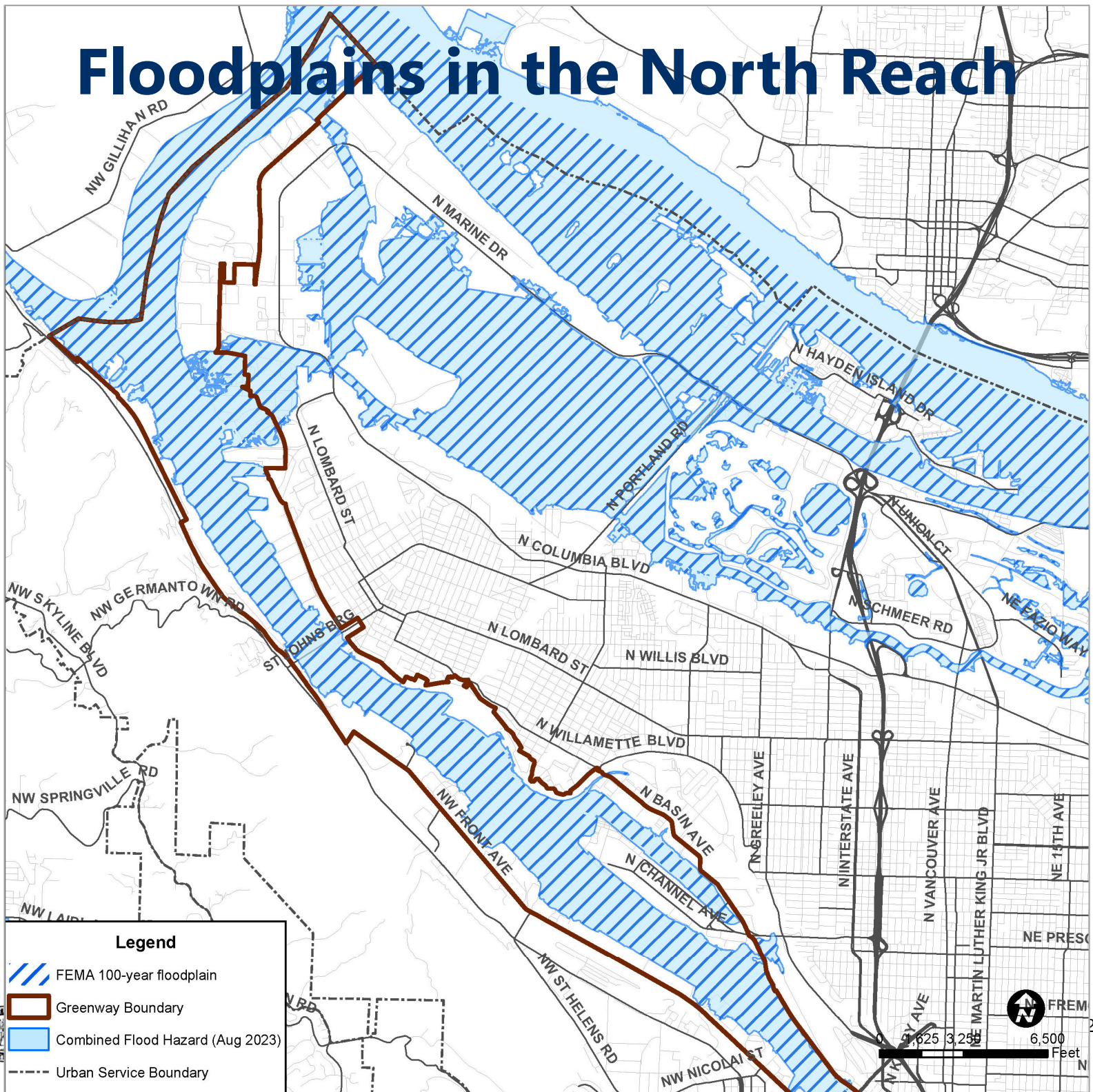


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Floodplains in the North Reach



Legend

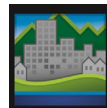
- FEMA 100-year floodplain
- Greenway Boundary
- Combined Flood Hazard (Aug 2023)
- Urban Service Boundary



Map of Draft River Environmental



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The North Reach

Summary of Potentially Regulated Areas

Area	Tax Lots	Acres	Combined Flood Hazard Area, Acres	%	50 ft Setback, Acres	%	Riparian Buffer Area, Acres	%	River e, acres	%
North Reach, Total	442	2,200	583.0	26.5	347.1	15.8	327.8	14.9	657.2	29.9
North Reach Industrial Zones (IH, IG2, EG2)	346	1,937	464.9	24.0	271.5	14.0	237.8	12.3	440.0	22.9

The North Reach

Other Potential Considerations

- Strategies to support economic development
- River Industrial function/requirements
- Role of Superfund remediation in land availability
- CEI hub
- Increased river access
- Trails, views and viewpoints
- Misc. zoning code and map clean up



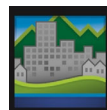
Mitigation Banks

Mitigation Requirements

- Avoid-minimize-mitigate
- On-site mitigation prioritized

Mitigation Banks

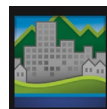
- 2 existing mitigation providing flood storage credits
- Potential future bank at OMSI/ Eastbank Crescent
- No available habitat mitigation banks



Off-Site Mitigation for Flood Storage and Habitat

MITIGATION BANKS

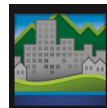
1. RestorCap at Linnton Plywood
 - Capacity: 16,000 cubic yards for flood storage
 - Est. \$135/cy (\$2.2 mil total)
2. PGE Harborton
 - Capacity: 57,000 cubic yards for flood storage
 - Est. \$240/cy (\$13.7 mil total)
3. Potential/Future: Eastbank Crescent
 - Capacity: ~10,000 cubic yards for flood storage & habitat ("stacked" credits)
 - Est. \$890/cy (\$8.9 mil total)



Map Review/Comment



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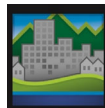


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