



# FLOODPLAIN MANAGEMENT UPDATE

## Lunch & Learn

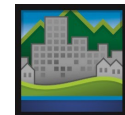
July 13, 2023

Jeff Caudill  
Environmental Planner, BPS

Jason Butler-Brown  
Site Development Section Manager, BDS



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# Agenda

- I. Background
- II. BPS Floodplain Resilience Plan
- III. BDS Building Regulation Update Project
- IV. Schedule/Next Steps
- V. Q & A

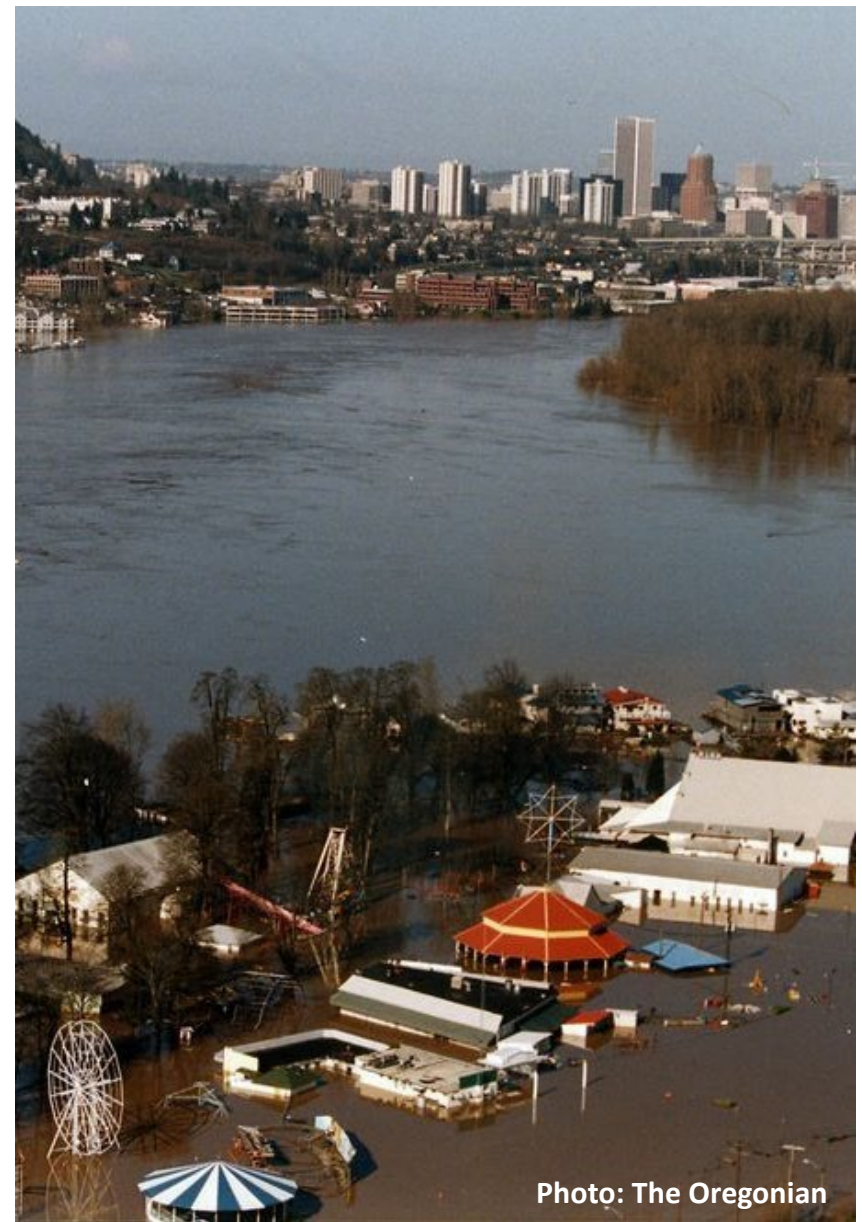
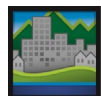


Photo: The Oregonian



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# Background



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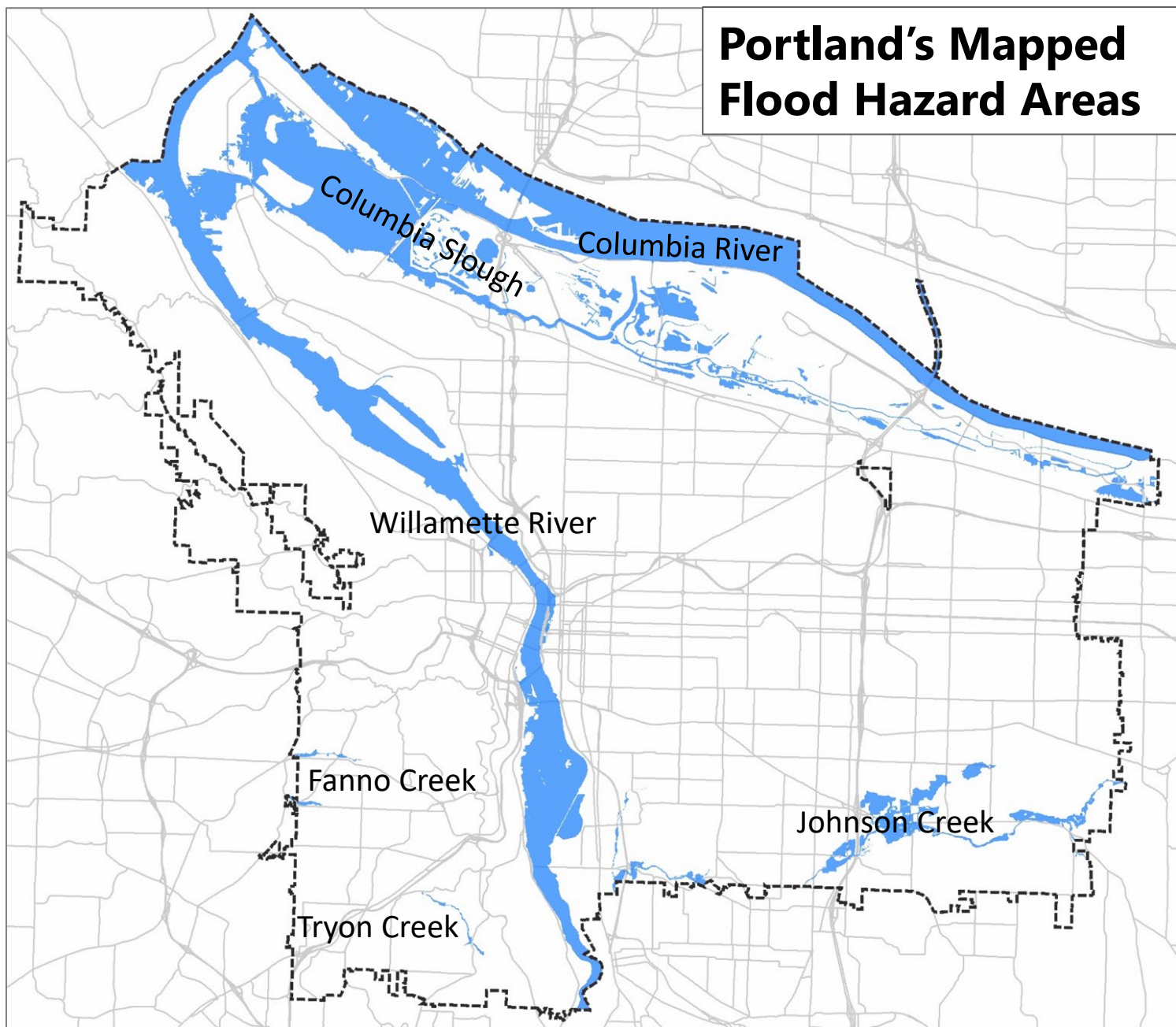
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# FEMA's National Flood Insurance Program (NFIP)

- Makes flood insurance available in participating communities
- Communities must adopt minimum floodplain development provisions
- Community Rating System (CRS) participation reduces insurance rates when additional floodplain protections are implemented



# Portland's Mapped Flood Hazard Areas

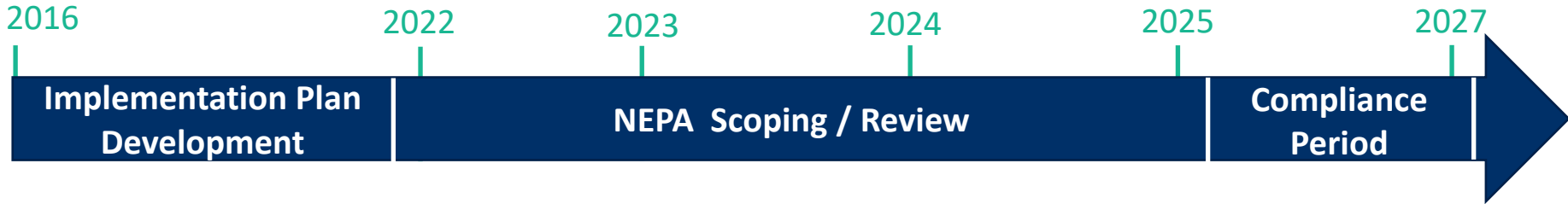


# NFIP Oregon Biological Opinion (FEMA BiOp)

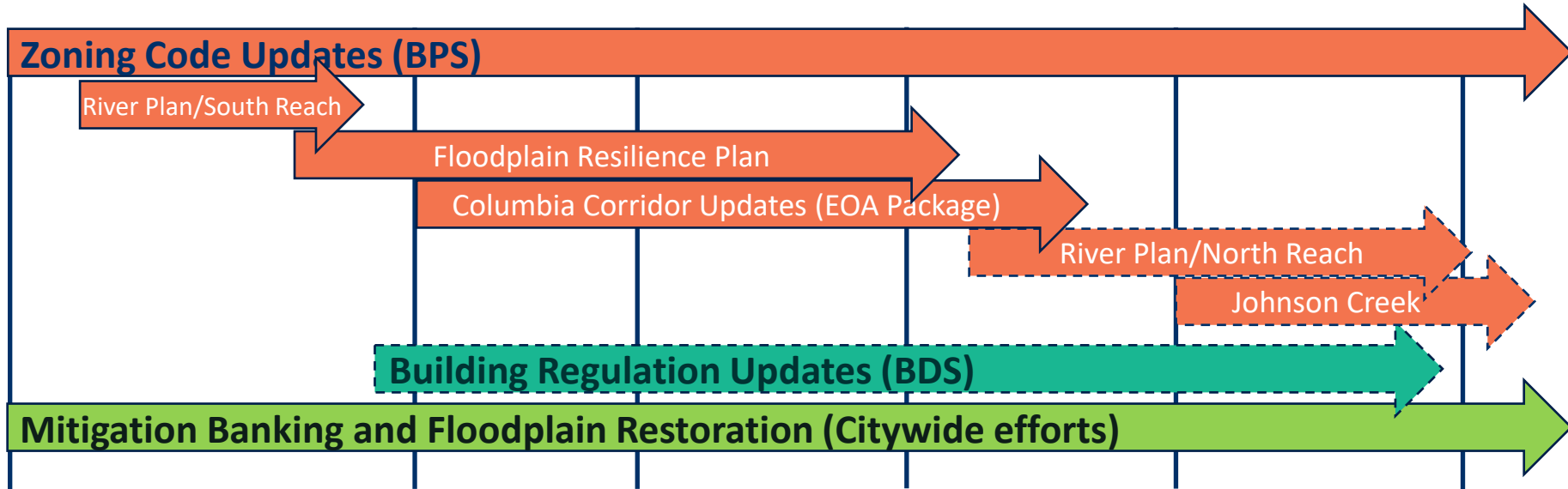
- Determined 16 threatened and endangered salmon and steelhead are impacted by the NFIP in Oregon
- FEMA's Draft Implementation Plan to comply with the Biological Opinion released in October 2021
- FEMA recently completed scoping phase of the National Environmental Policy Act (NEPA) Environmental Impact Statement



# FEMA BIOP TIMELINE

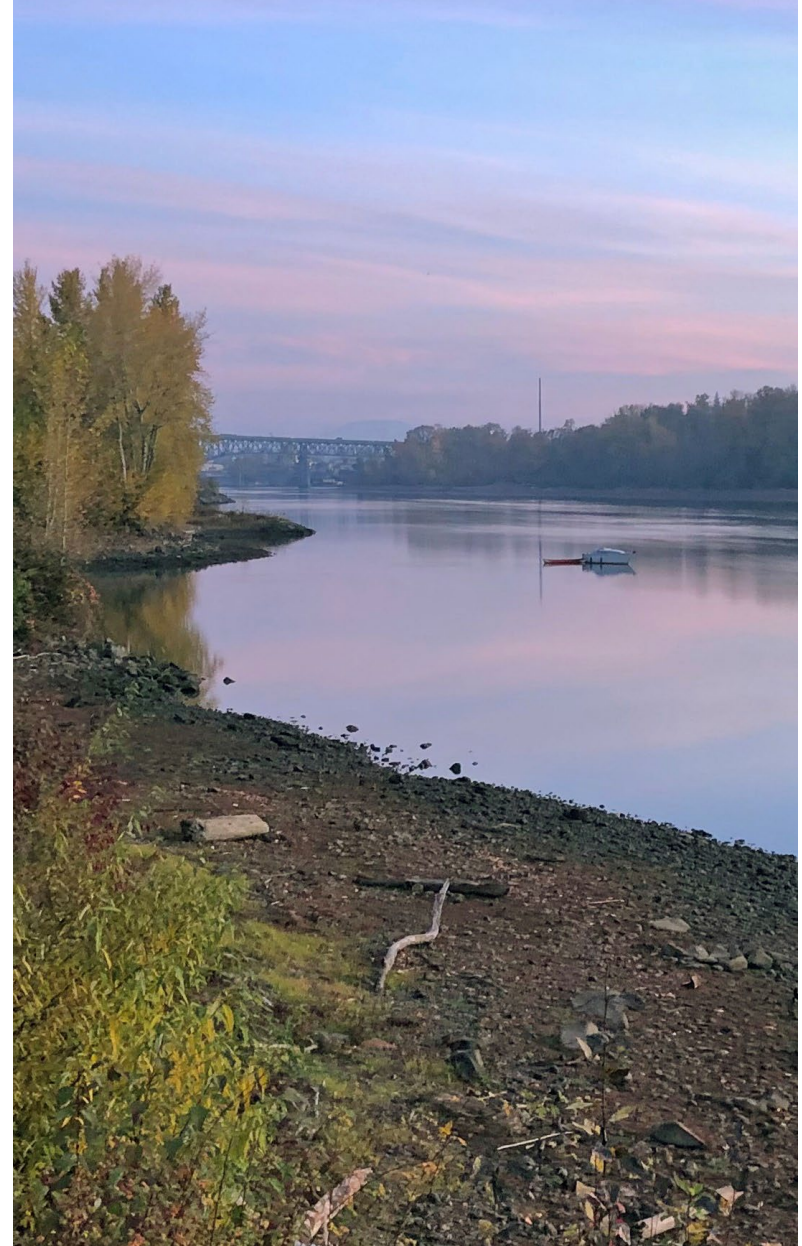


# CITY WORK PLAN COMPONENTS & SCHEDULE



# Project Goals

- Maintain participation in the NFIP: Access to flood insurance and disaster relief funds
  - Includes updates to floodplain regulations to better align with State model code
- Reduce future flood risk
- Improve and expand habitat for Portland's threatened and endangered species

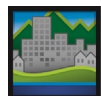




# Current Efforts

## Proposed regulations for development in the floodplain

- **Draft Title 24** – Building regulations updates related to flood storage requirements
- **PSC-recommended Title 33 Changes** – Zoning requirements for vegetation, trees and habitat improvements adjacent to rivers and streams



# Floodplain Resilience Plan Zoning Code Updates

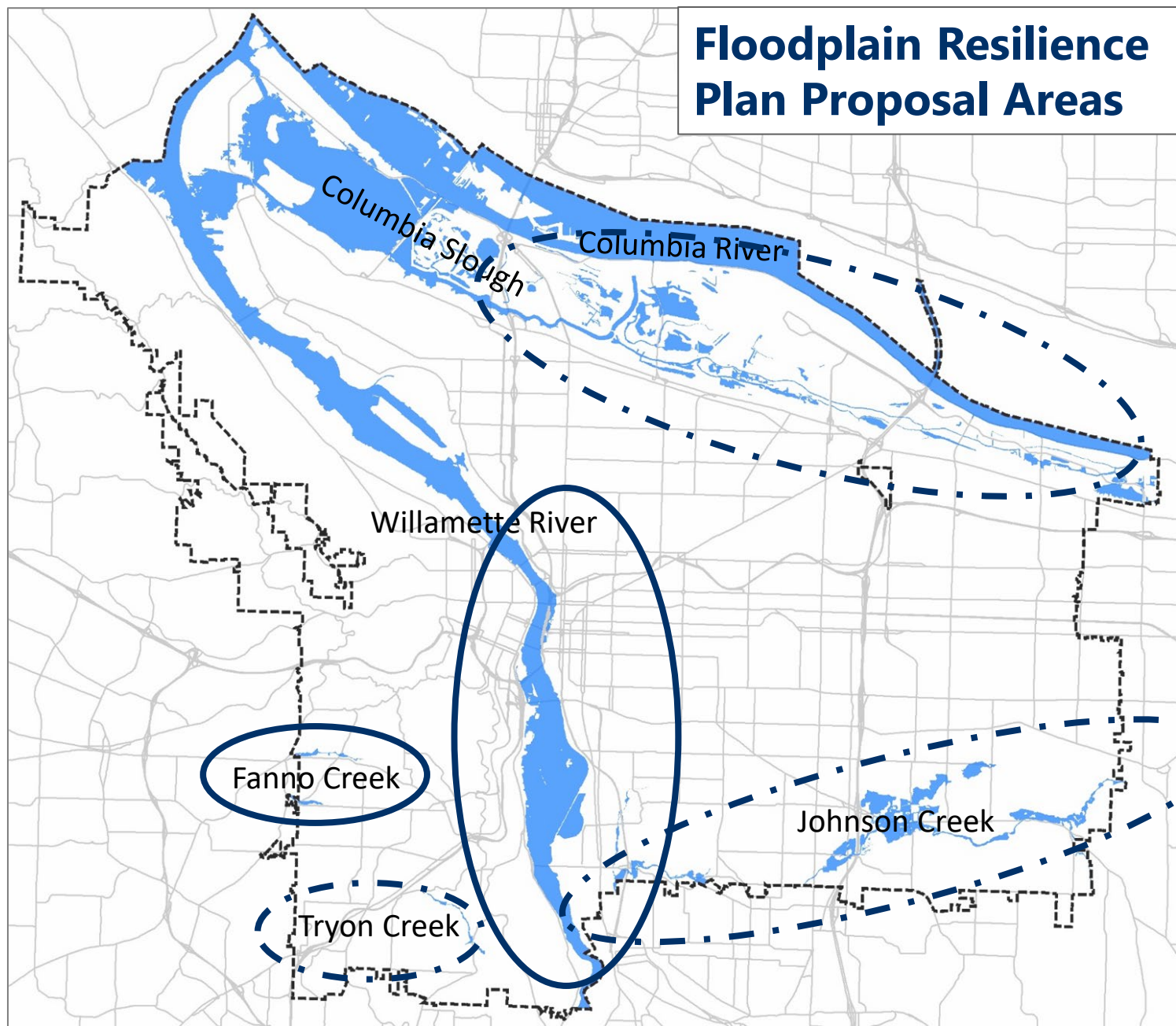


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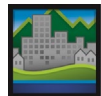


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# Floodplain Resilience Plan Proposal Areas



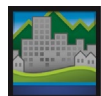
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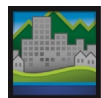
# Zoning Code (Title 33) Updates

- Improve fish habitat along the Willamette River Central Reach through riparian buffer area requirements
- Apply environmental zoning to undeveloped floodplains not already protected
- Establish consistent tree and vegetation requirements in the city's floodplains



# Riparian Buffer Area

- Often extends beyond required setback, but not always
- Not a no-build zone but additional mitigation required
- Mitigation
  - Vegetation, trees and habitat improvements onsite or off-site to offset development impacts
  - Extent/type of improvements depend on scale of impact



# Riparian Buffer Area – Mitigation Strategies

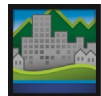
## Removal of structures, riprap, etc.



Riprap that could be removed



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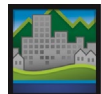
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# Riparian Buffer Area – Mitigation Strategies

## Laying back the bank



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# Schedule

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<b>Early Aug</b>	Release of Floodplain Resilience Plan Recommended Draft
<b>Aug 30</b>	City Council hearing for Title 33 and Title 24
<b>Sept–Oct</b>	Deliberations, amendments, and adoption

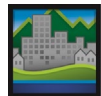
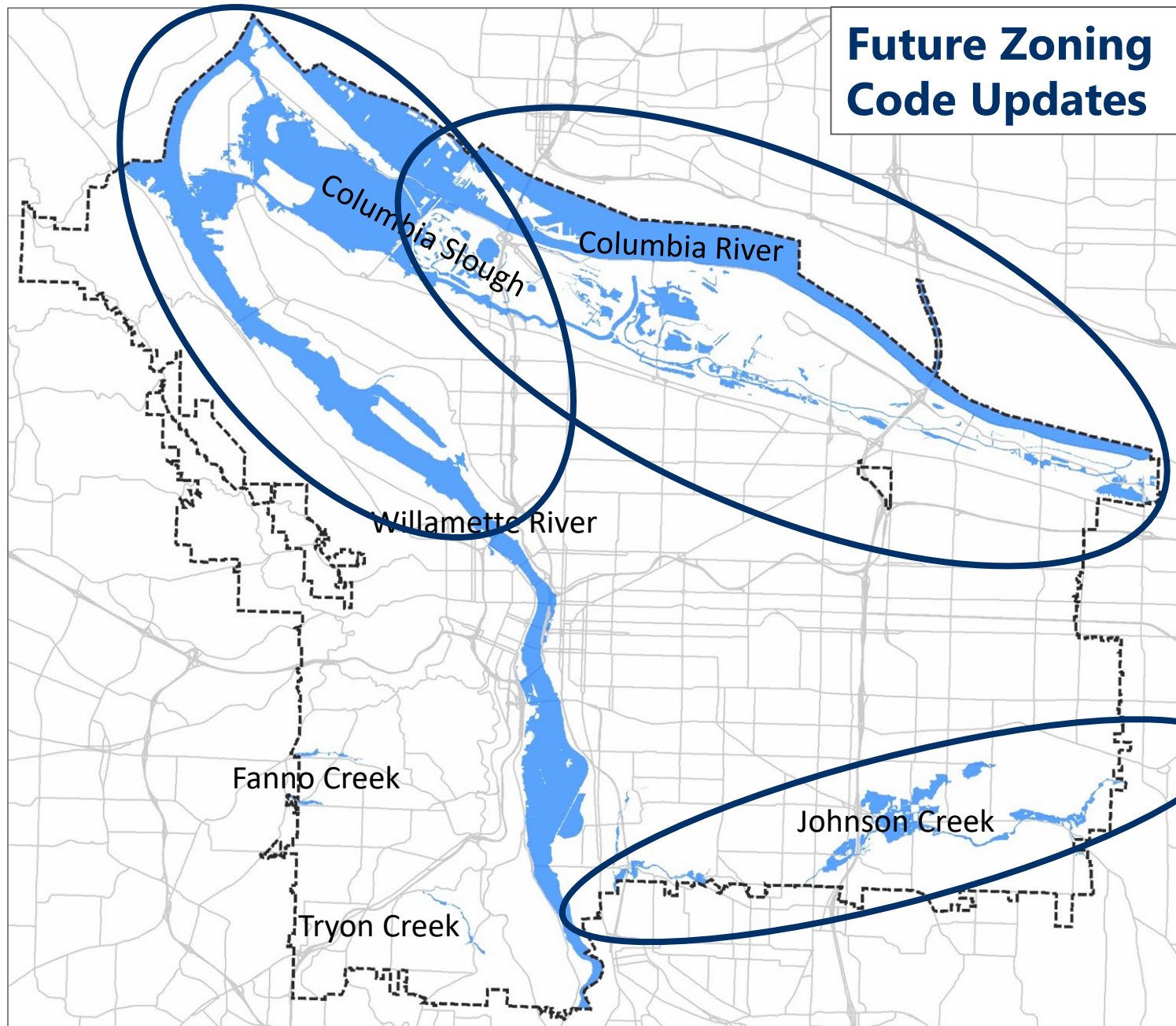
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**Next Engagement Opportunity:**  
August 30<sup>th</sup> City Council Hearing





# Future Zoning Code Updates



# Building Regulation Chapter 24.50 Updates



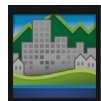
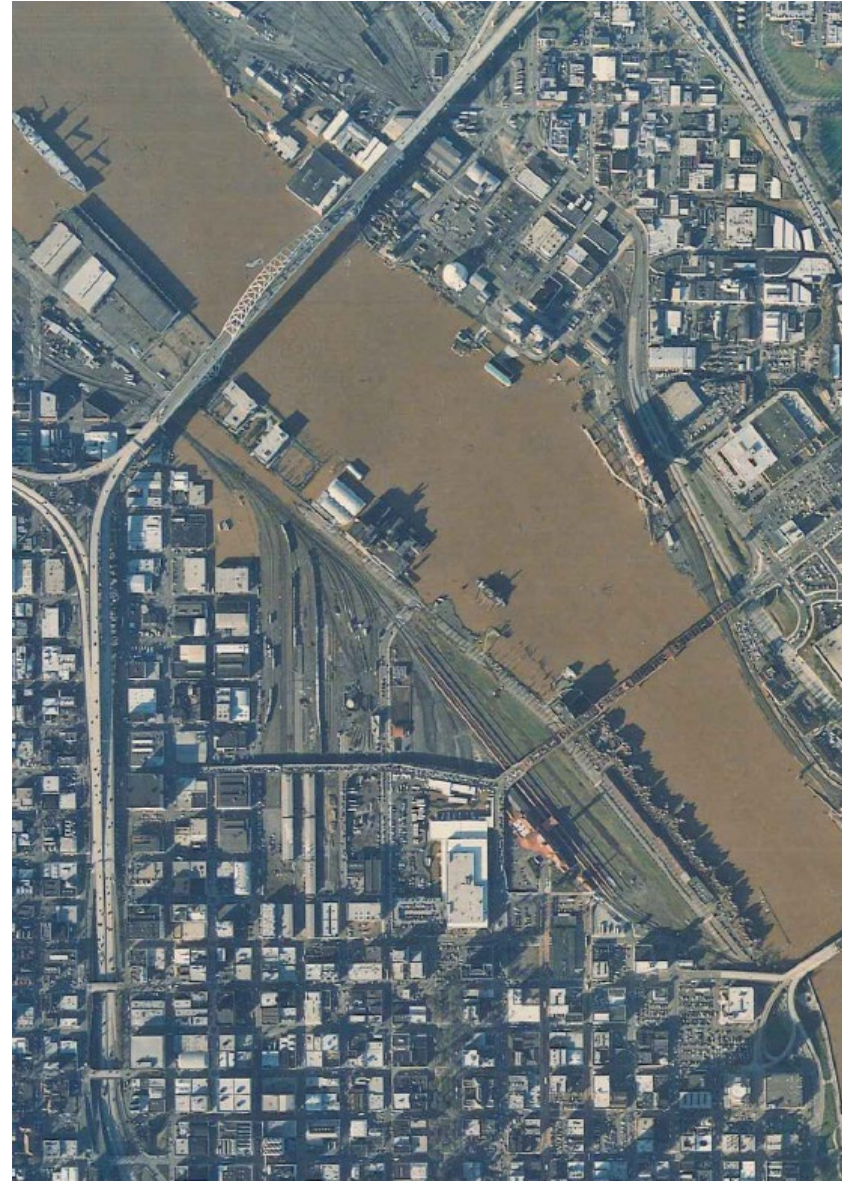
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# Chapter 24.50 Proposed Updates

- FEMA regulatory changes to align with the State of Oregon National Flood Insurance Program Model Ordinance
- Increases to flood storage requirements
- Adopt City of Portland February 1996 Flood Inundation Area map

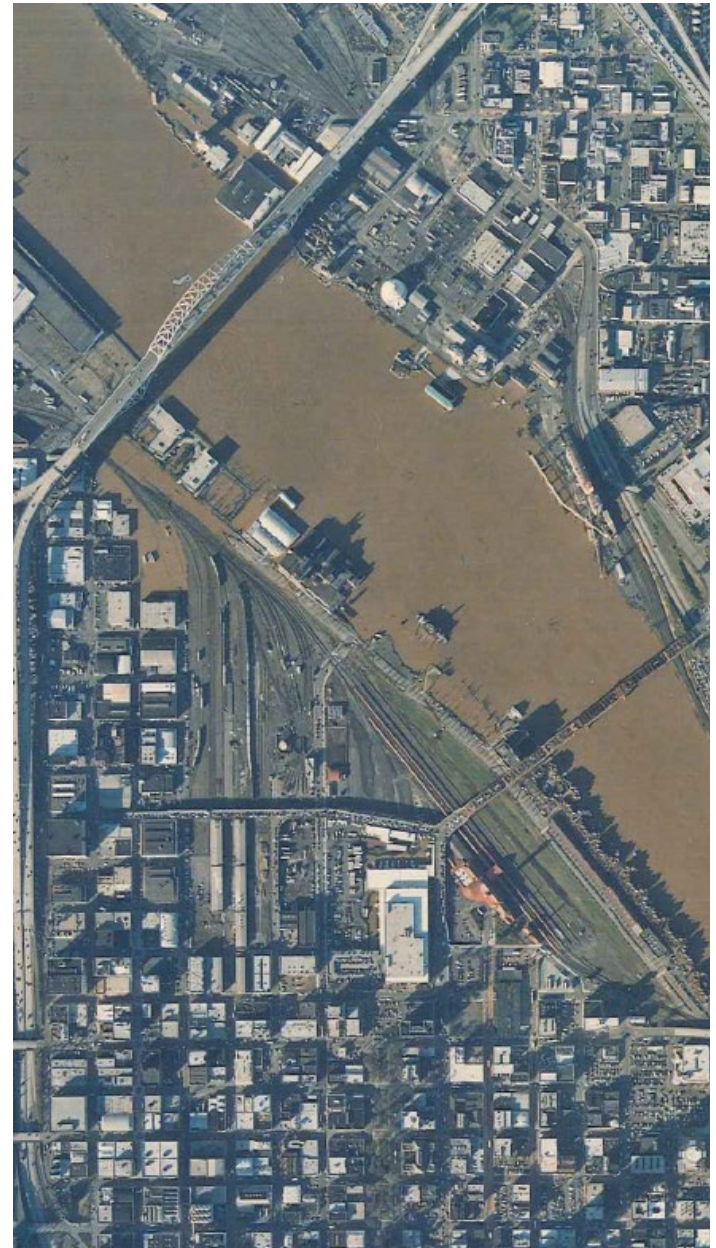


# FEMA Regulatory Updates

Required to maintain compliance with the NFIP

Changes include:

- Additional definitions.
  - Design Flood Elevation
- Clarifying permit submittal and inspection requirements.
  - Substantial Improvement/Substantial Damage documentation
  - During construction elevation certificate

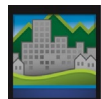
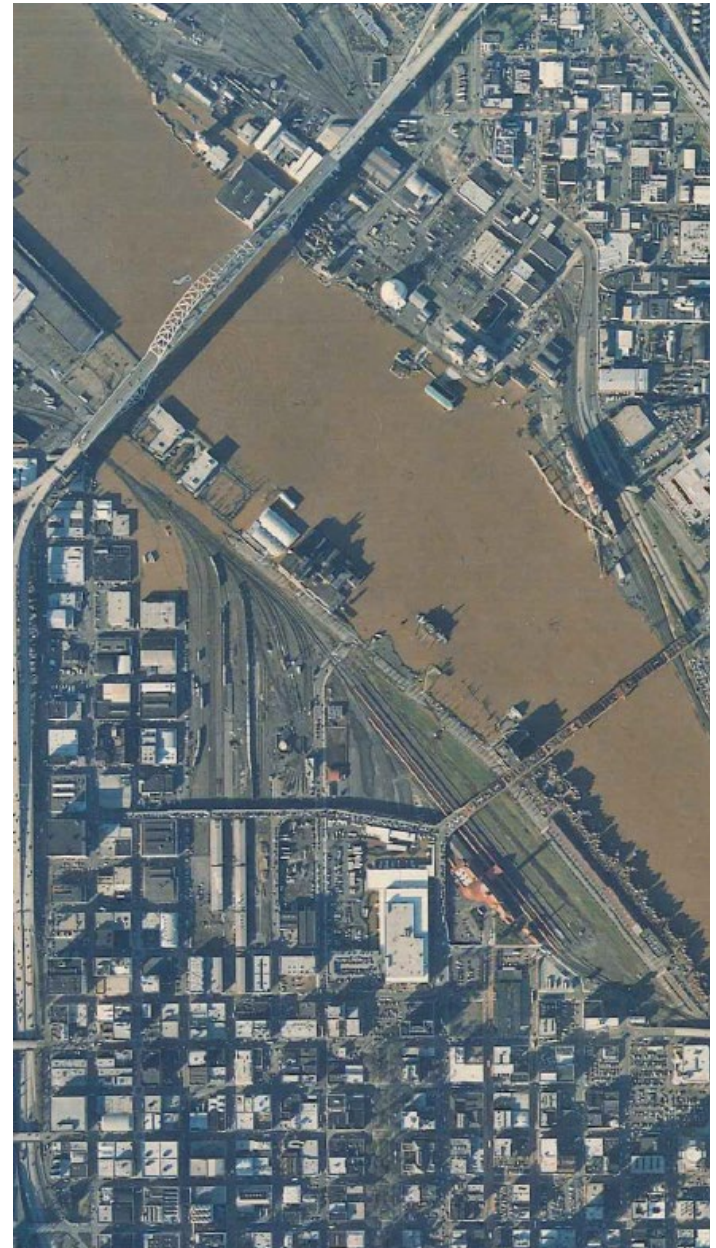


# FEMA Regulatory Updates

## Required to maintain compliance with the NFIP

Changes include:

- Requiring a covenant for certain enclosed spaces below the design flood elevation.
- Requiring a development permit for exempt (e.g. accessory) structures in the floodplain.



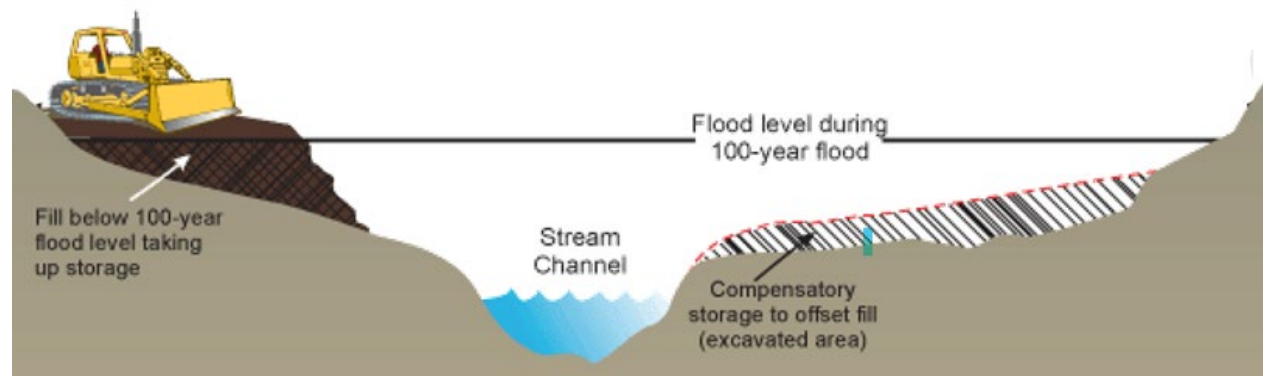
# Current flood storage requirements

## Current Grading and Excavation Requirements

“Balanced” cut and fill requirement applies to most of the city’s floodplain currently.

Compensation for lost flood storage volume from fill placement is required at a ratio of 1 to 1.

- Applies to the flood hazard areas shown on the Metro Title 3 map.
- Requires flood storage compensation within same flood hazard area. Except Johnson Creek Flood Zones which requires compensation on the same site.

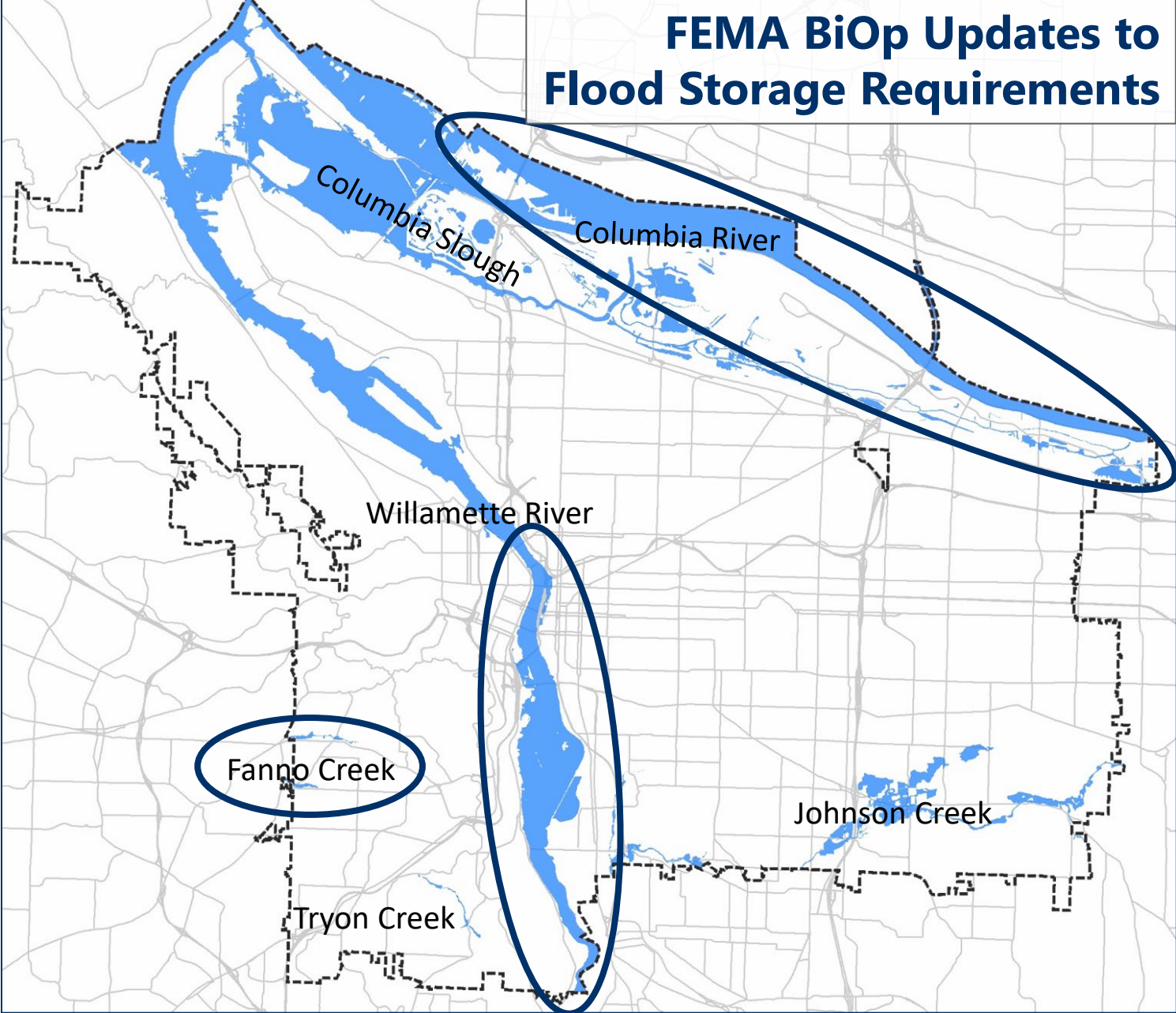


# Proposed Flood Storage Requirements

- Adopting compensation for lost flood storage volume from fill and structure placed below the 100-year flood elevation.
- Flood storage compensation means removal of soil, rock, or permanent structure below the flood elevation.
- Applies to
  - Columbia River Flood Zones,
  - Willamette River Central and South Reach Flood Zones, and
  - Fanno Creek Flood Zones.



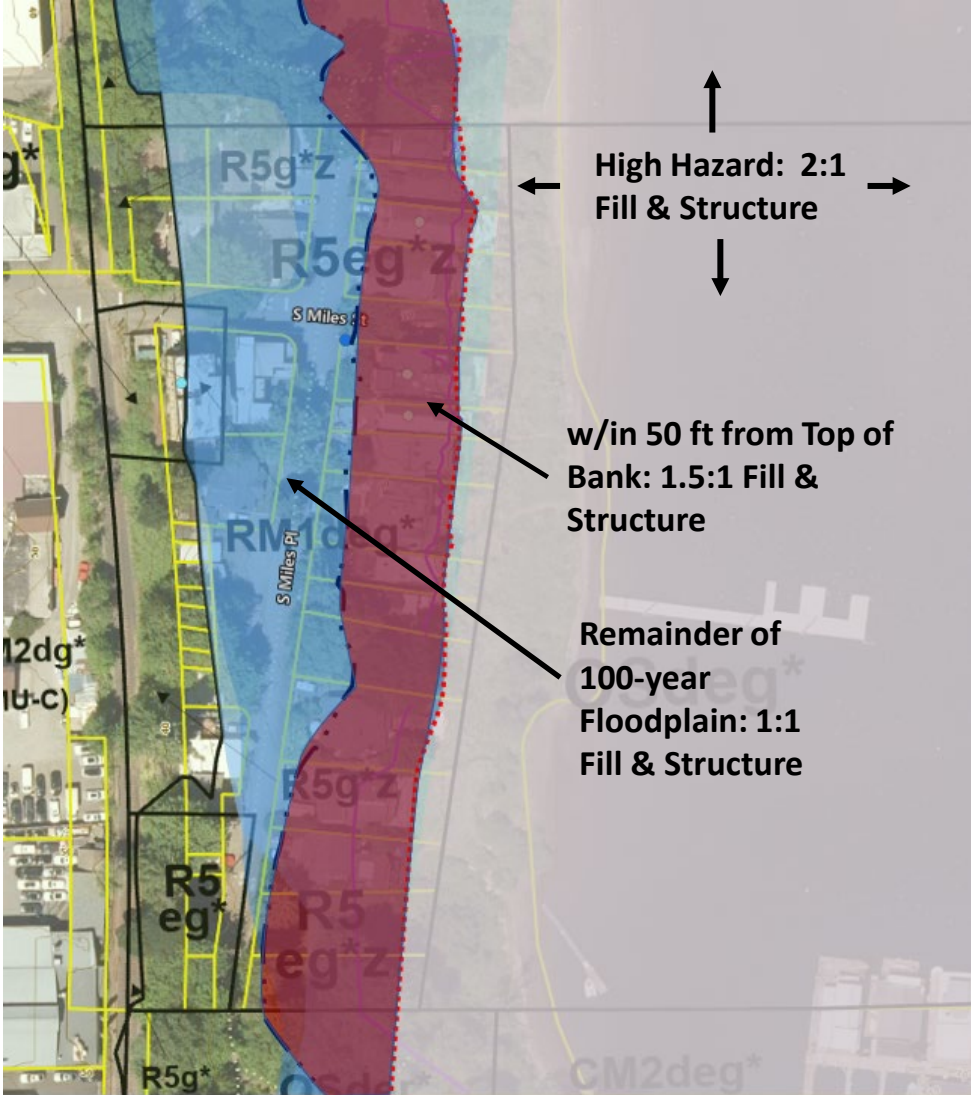
# FEMA BiOp Updates to Flood Storage Requirements





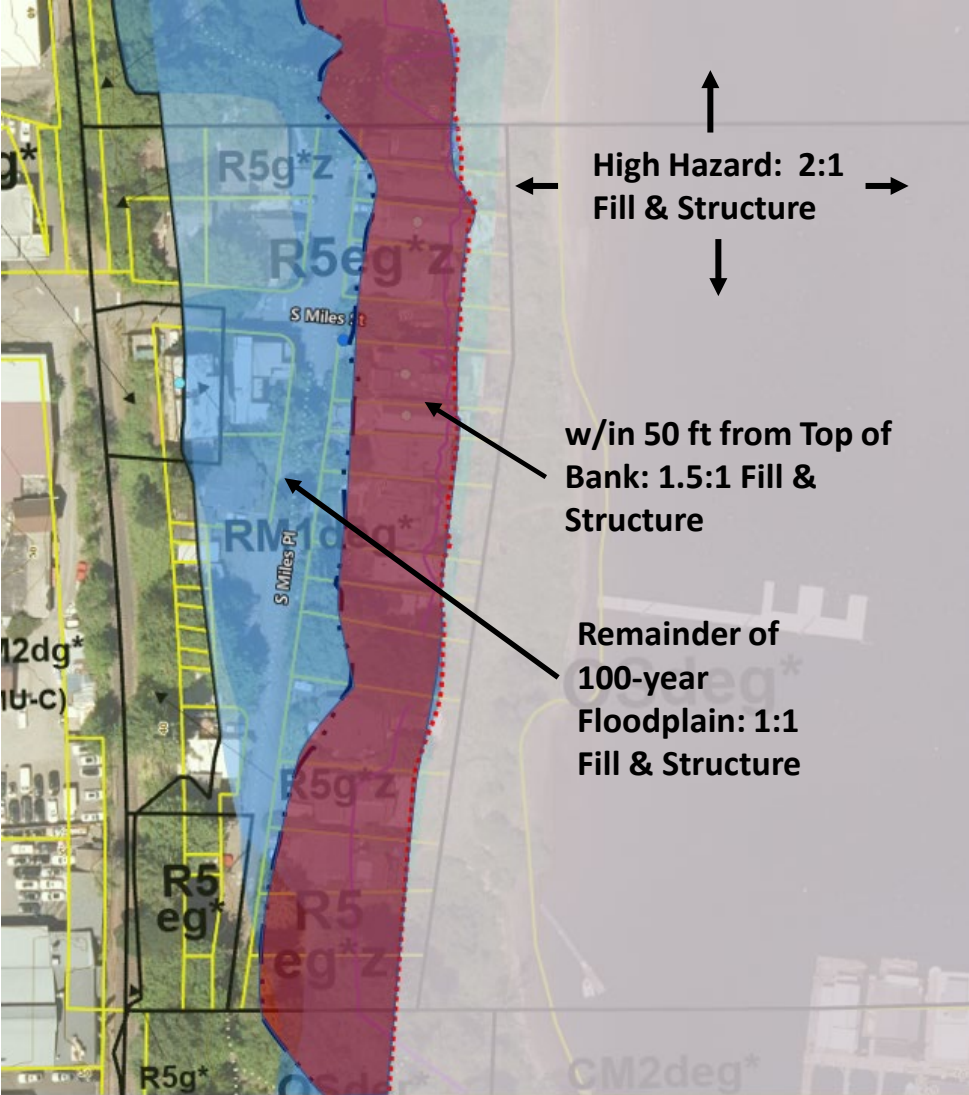
# Proposed Flood Storage Requirements

- Increased ratios of flood storage compensation in the 100-year floodplain:
  - High Hazard Area, the landward extent of 10-year Floodplain and the Floodway at a ratio of 2 to 1.
  - Within 50 ft of Top of Bank at a ratio of 1.5 to 1.
  - Within the remainder of the 100-year floodplain the ratio will be 1 to 1.



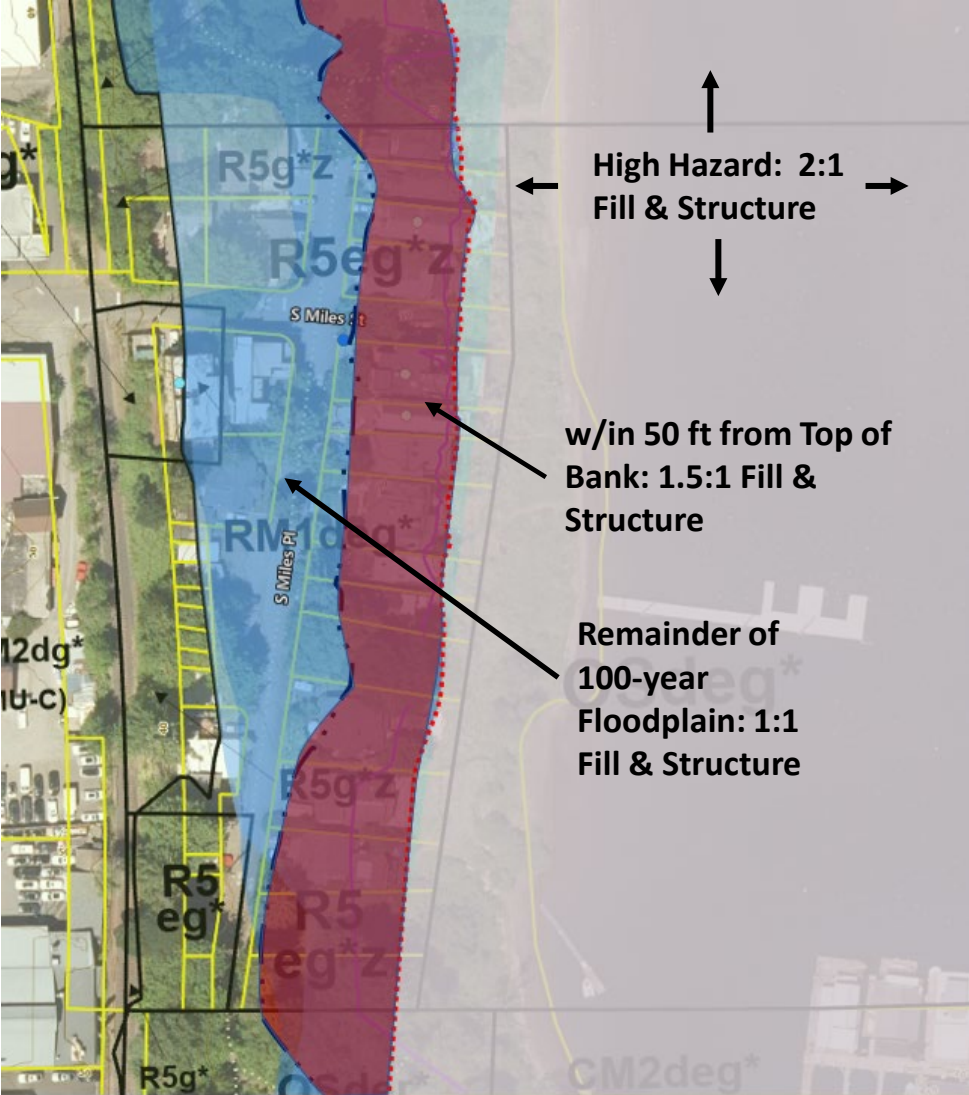
# Proposed Flood Storage Requirements

- Retain current requirements for February 1996 Flood Inundation Area for fill placement at a ratio of 1 to 1.
- Allow use of flood storage mitigation bank credits within the same flood hazard area.
- Does not apply to Industrial Lands: Heavy Industrial (IH), General Industrial 2 (IG2), or General Employment 2 (EG2) zoning.



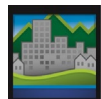
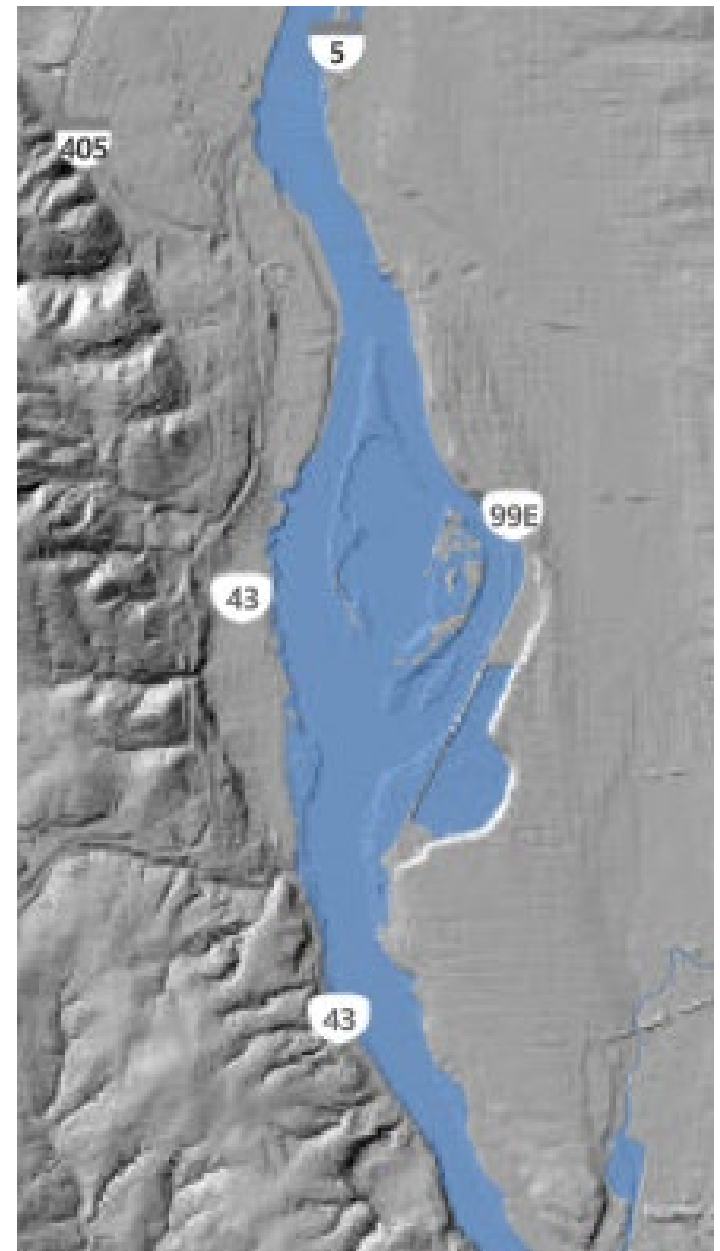
# Proposed Flood Storage Requirements

- Maintain current flood storage exemption for South Waterfront.
- Flood storage requirements in effect at the time of certain land use approvals will apply to the associated building or development permit.



# February 1996 Flood Inundation Area Map

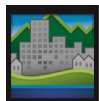
- Adopting a City of Portland February 1996 Flood Inundation Area Map which combines
  - Metro Title 3 Map
  - Modeled Willamette River 1996 Flood Inundation Area for the Central and South Reach
  - Industrial lands default to the Metro Title 3 boundaries



# Next Steps / Schedule

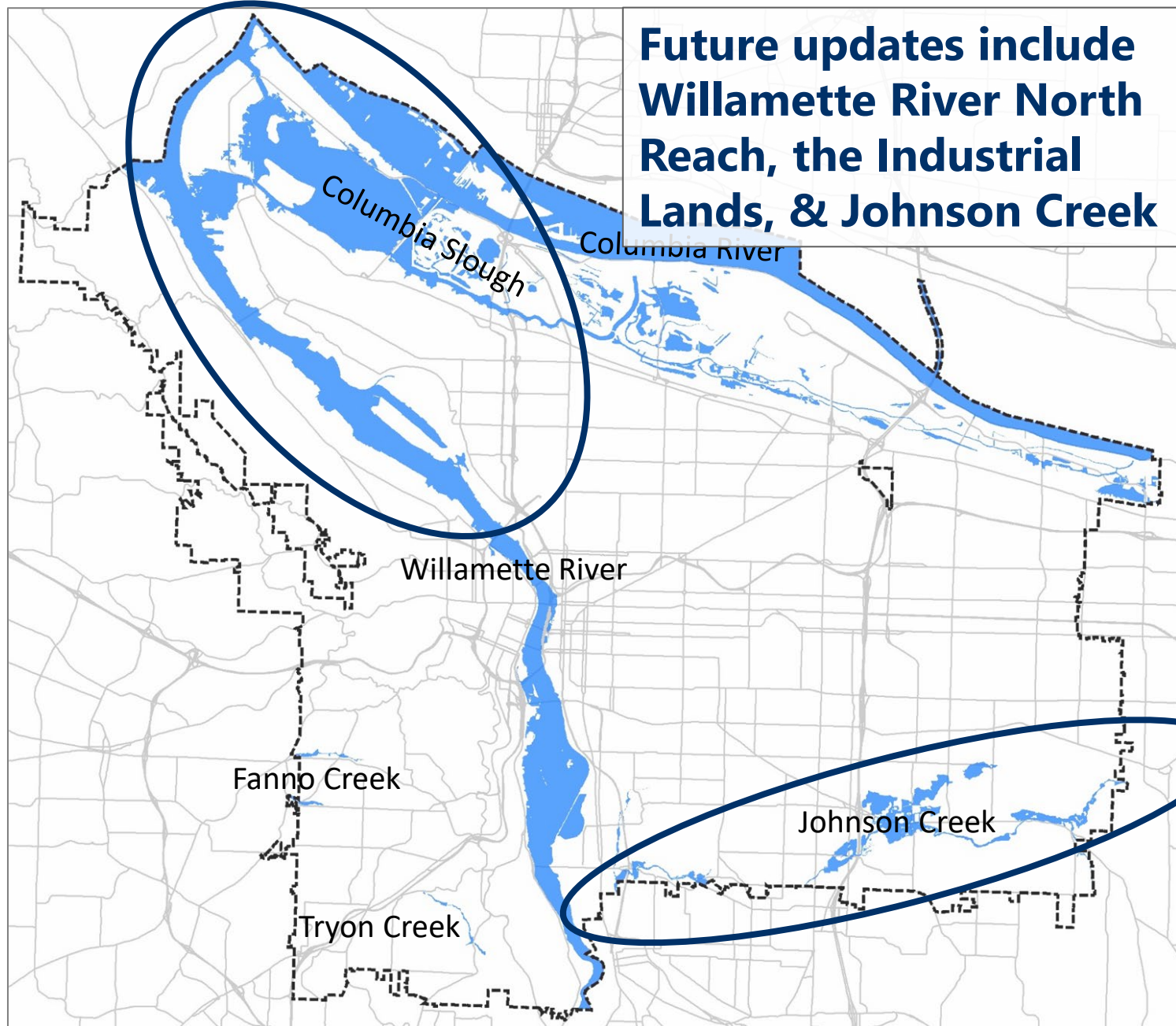


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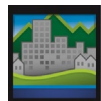
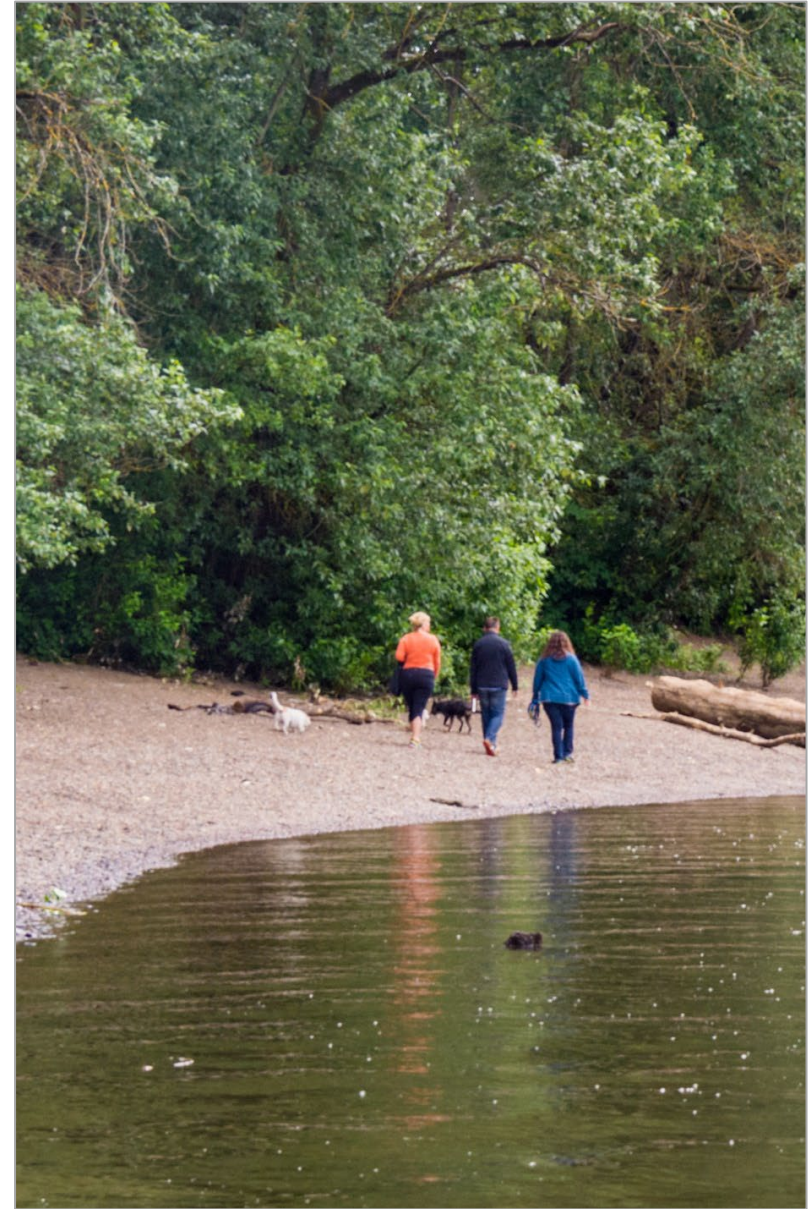
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# Future updates include Willamette River North Reach, the Industrial Lands, & Johnson Creek



# Schedule

<b>Jul 10-Aug 1</b>	Public comment on proposed Title 24 updates
<b>Early Aug</b>	Release of Floodplain Resilience Plan Recommended Draft
<b>Aug 30</b>	City Council hearing for Title 33 and Title 24
<b>Sept–Oct</b>	Deliberations, amendments, and adoption



# Anticipated Code Implementation

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**April  
2024**

Title 24 - Regulatory review changes and updates to February 1996 Flood Inundation Area map.

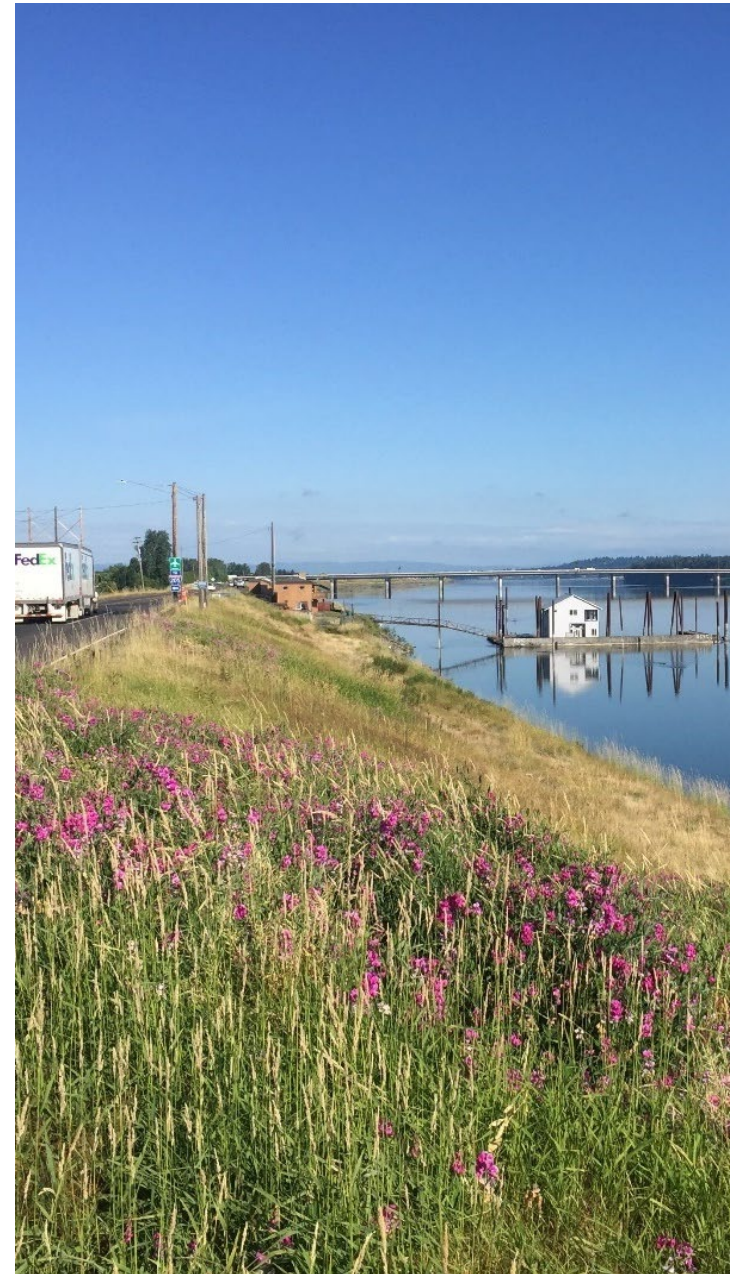
Title 33 – Technical code changes (“clean up”)

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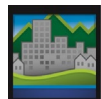
**October  
2025**

Title 33 and Title 24 FEMA BiOp changes

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# Provide feedback on Chapter 24.50

Chapter 24.50 Flood Hazard Areas Code Update Project Map App  
<https://www.portlandmaps.com/bps/title-24-flood/#/map/>



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# Property-specific Questions?

Please direct property-specific questions regarding the proposed Chapter 24.50 updates to Site Development:

Phone: 503-823-7300

Schedule a 15-Minute Appointment with Site Development using:

<https://www.portland.gov/bds/15-min>



# Questions?

