



FLOODPLAIN RESILIENCE PLAN

Planning and Sustainability Briefing
September 13, 2022

Jeff Caudill
Environmental Planner, BPS

Sallie Edmunds
Central City, River and Environmental
Planning Manager, BPS

Kaitlin Lovell
Manager II, Regulatory Strategy &
Remediation, BES



THE BUREAU OF
**PLANNING &
SUSTAINABILITY**

Agenda

- I. Background
- II. Floodplain Resilience Plan
- III. Schedule
- IV. Discussion

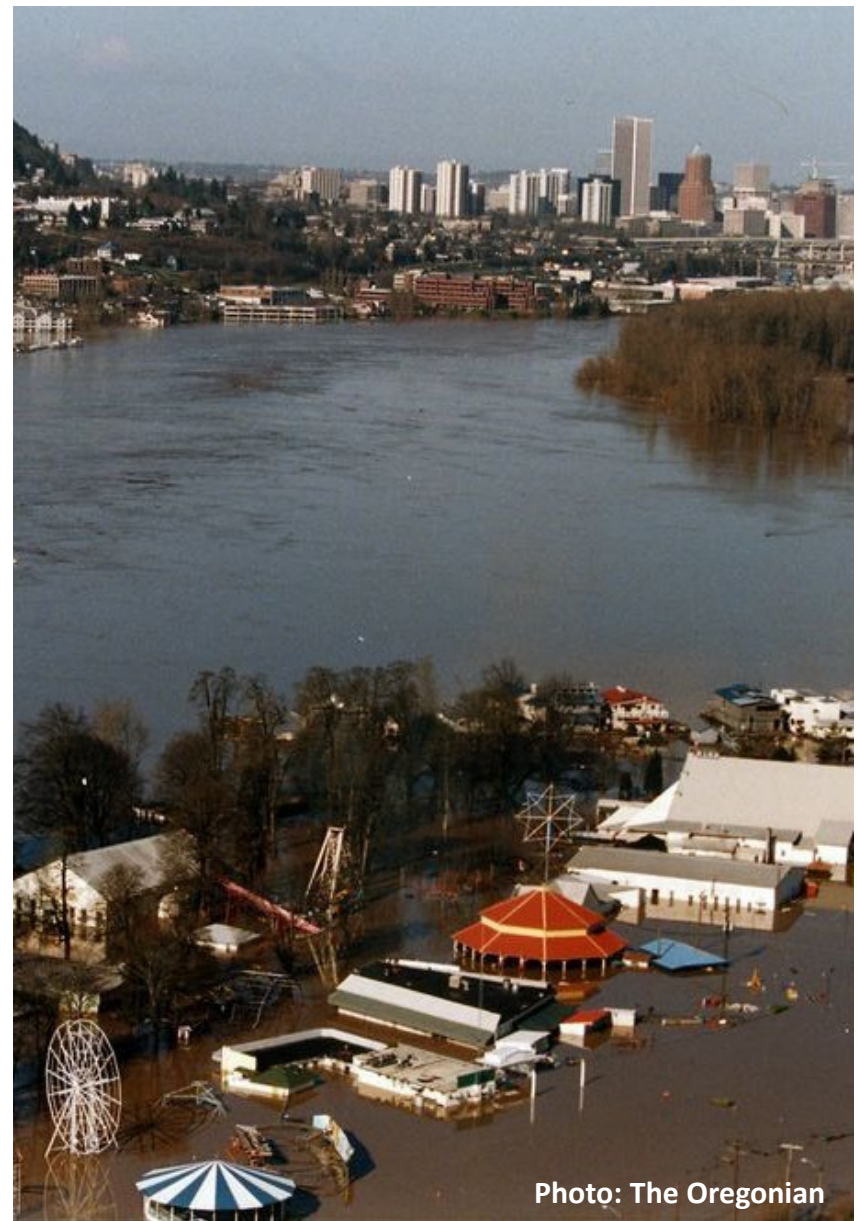


Photo: The Oregonian



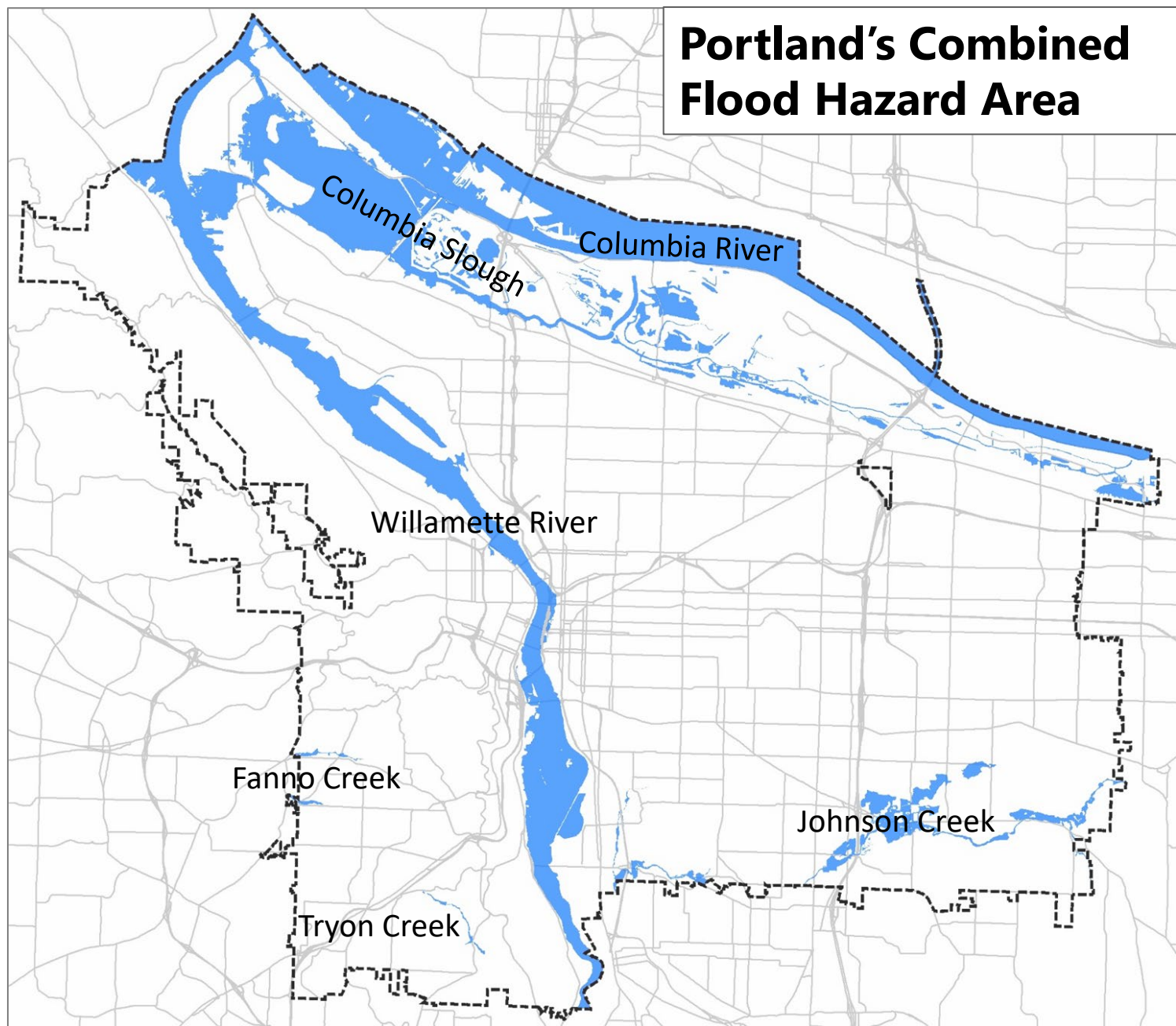
Background

Floodplains and their Benefits

- Slow and store floodwaters
- Reduce surface runoff and siltation into waterway
- Provide off-channel respite, refugia and diverse food sources for juvenile fish



Portland's Combined Flood Hazard Area



Combined Flood Hazard Area

Comprised of two areas:

- FEMA 100-year floodplain
- Metro 1996 Flood Inundation Area

Approx. 6,000 acres



FEMA's National Flood Insurance Program (NFIP)

- Provides flood insurance in floodplains
- Minimum requirements must be met
- Additional Community Rating System (CRS) participation reduces insurance rates



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



Floodplain Management Update 2019 Work Plan

Agreement signed by 8 bureaus

Three key task areas:

1. Regulations
2. Restoration
3. Mitigation banks



Public Engagement

Before Discussion Draft (Nov 2021)

- Community Involvement Committee (CIC)
- Outreach to tribal governments

Discussion Draft (Nov 2021 – July 2022)

- 3 virtual open houses
- Comments through Map App
- 3 focus groups, incl. 2 with BIPOC community members
- Presented to/met with neighborhood assoccs and stakeholder groups



Changes Since the Discussion Draft

- Split out proposed Building Code (Title 24) changes
- Incorporated new Modeled Willamette River 1996 Flood Extent
- Removed some developed floodplains
- Modified South Reach riparian buffer area and River Environmental overlay zones



Floodplain Resilience Plan: Proposed Draft

Plan Components

- Incorporate new Willamette River flood risk modeling into flood hazard maps
- Update the Zoning Code to address habitat impacts
- Support the City's mitigation and restoration efforts



Floodplain Resilience Plan

Modeled Willamette River 1996 Flood Extent

- Based on U.S. Army Corps of Engineers model of the Lower Willamette River
- City staff simulated a 1996 flood-like event with current conditions and development

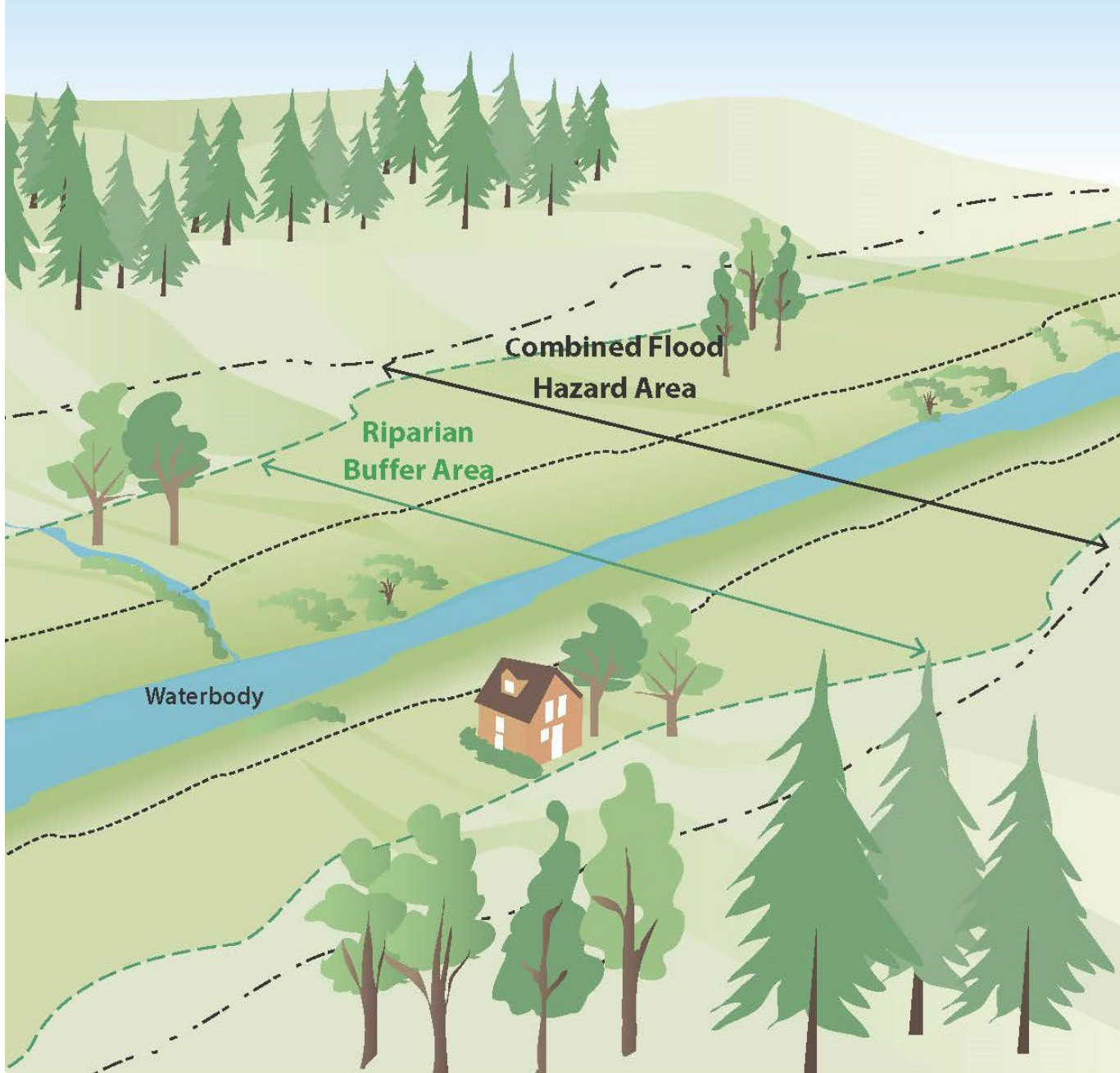


Photo: The Oregonian

Zoning Code Updates

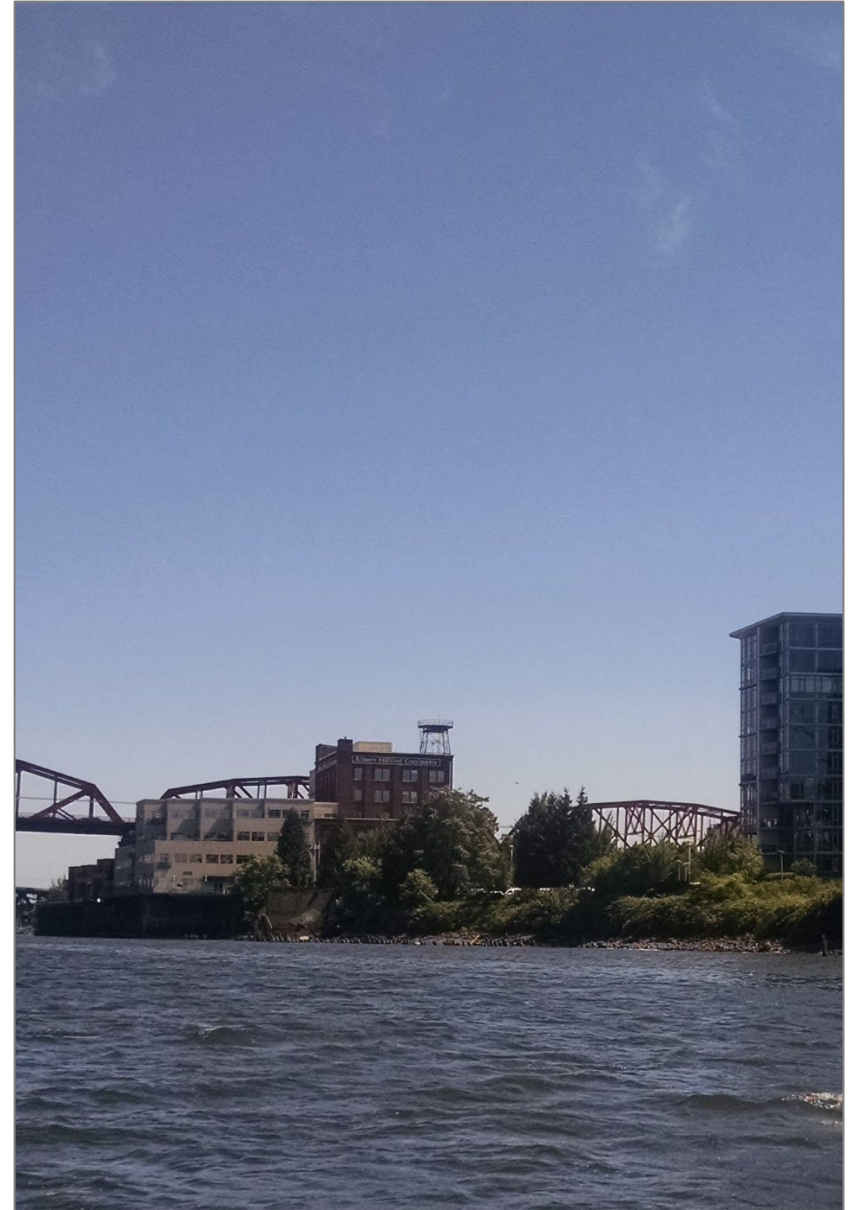
- Overall goal is to apply environmental protections to:
 - Willamette River and Columbia River riparian buffer areas
 - All undeveloped floodplains in combined flood hazard area
- Zoning Code requirements vary by location within the city
- Some technical amendments included



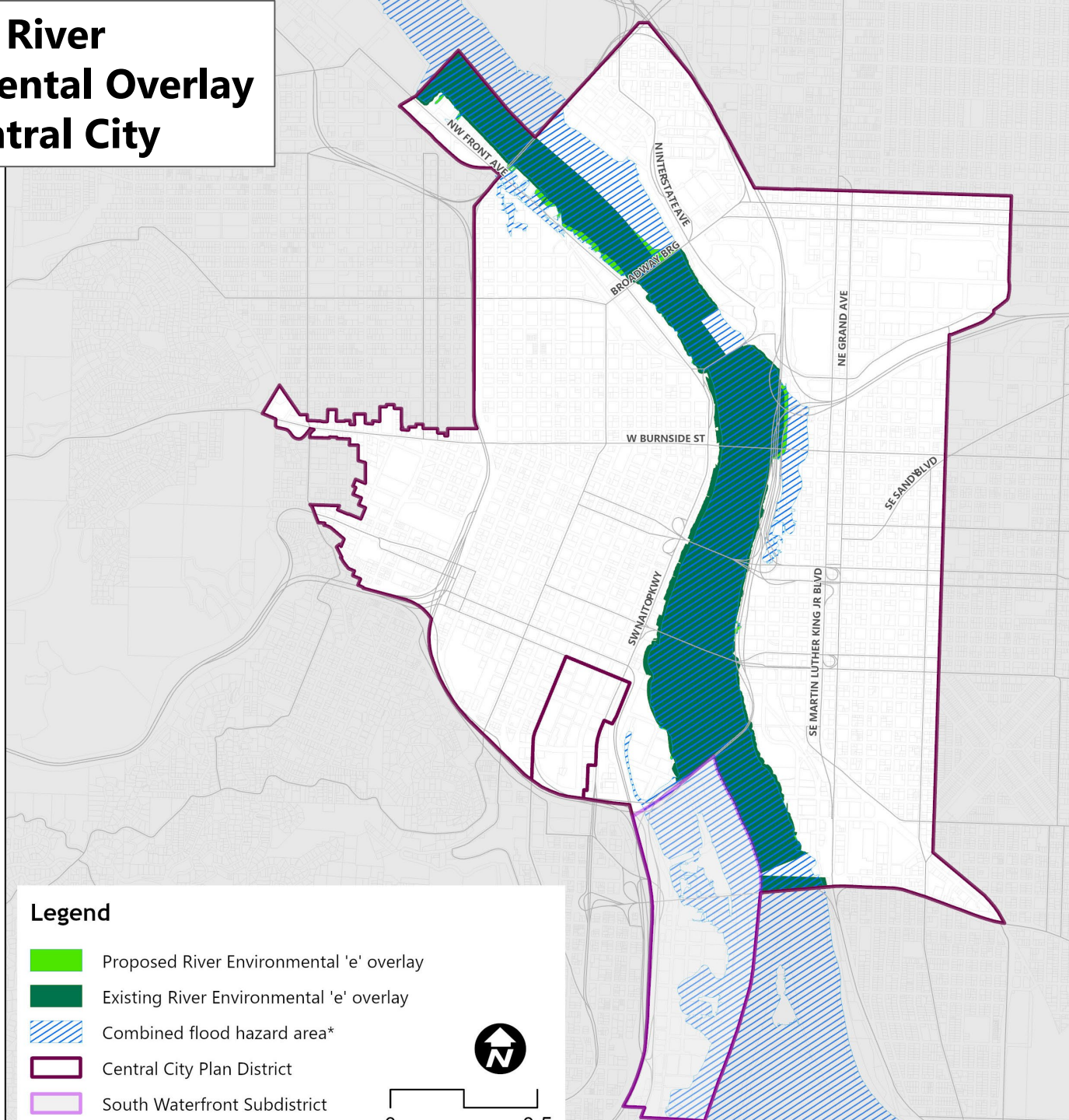


Willamette River Central Reach






- Add riparian buffer area requirements near Willamette
- Expand River Environmental to include riparian buffer area and undeveloped floodplains



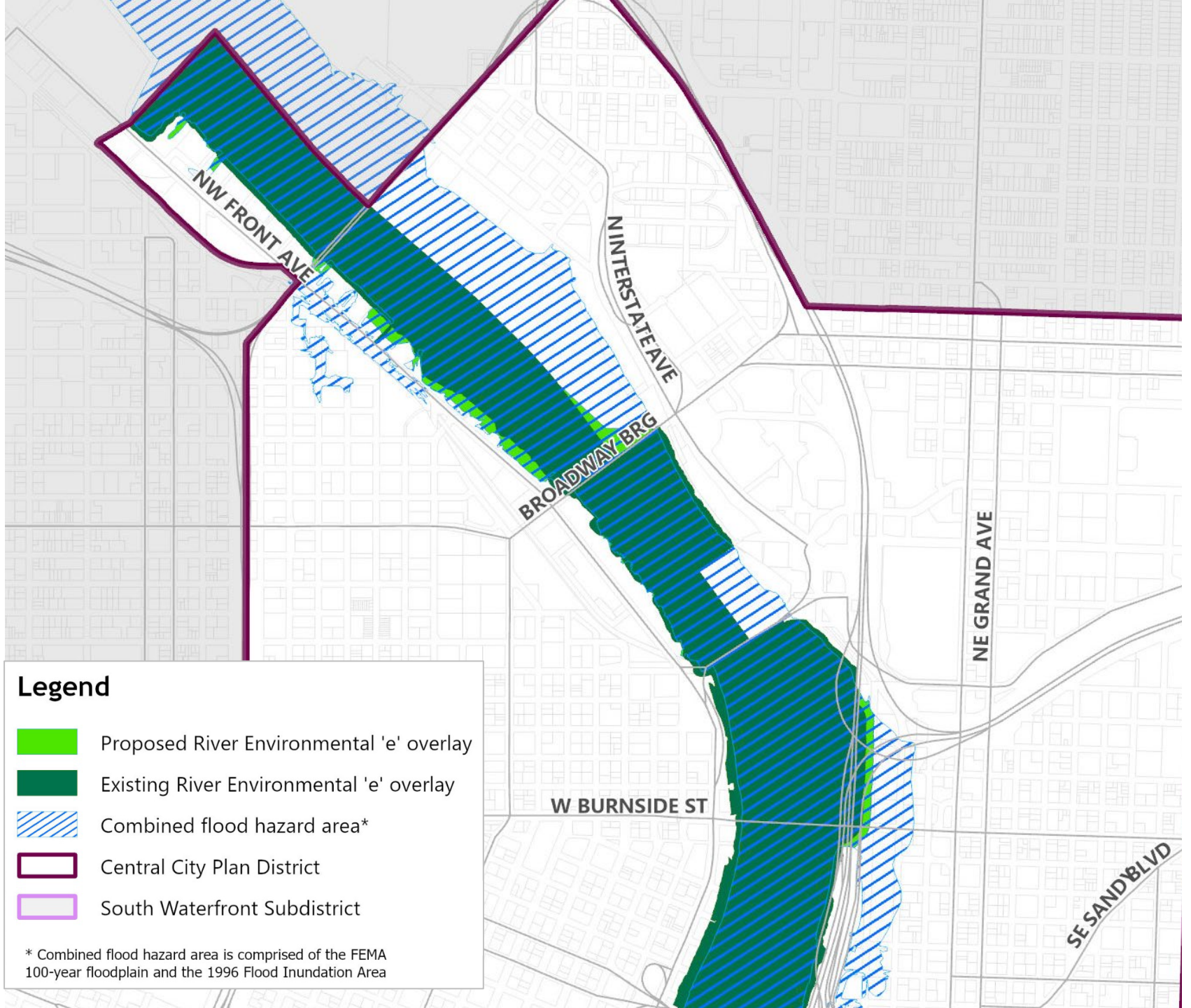
Proposed River Environmental Overlay in the Central City








Legend

-  Proposed River Environmental 'e' overlay
-  Existing River Environmental 'e' overlay
-  Combined flood hazard area*
-  Central City Plan District
-  South Waterfront Subdistrict





Legend

-  Proposed River Environmental 'e' overlay
-  Existing River Environmental 'e' overlay
-  Combined flood hazard area*
-  Central City Plan District
-  South Waterfront Subdistrict

* Combined flood hazard area is comprised of the FEMA 100-year floodplain and the 1996 Flood Inundation Area

South Waterfront

New Requirements/Allowances

- Tree replacement standards
- Minor updates to exterior lighting standards
- Adjustments and modifications for exterior lighting

Code Clean up

- Reorganization of South Waterfront Greenway Overlay Zone section for clarity



Willamette River South Reach

Modeled Willamette River 1996 Flood Extent

- Update extent of riparian buffer and River Environmental overlay

River Environmental

- Landward of riparian buffer area and 100 feet of top of bank



Elsewhere in the City

Floodplains in the Environmental
overlay zone

- Update tree and vegetation
replacement

Fanno Creek and Tryon Creek

- Apply Environmental Conservation
overlay to undeveloped floodplain



Related Floodplain Management Efforts

Building Code Updates

- Require excavation for fill *and* structures
- Increase excavation to offset development along the river



Related Floodplain Management Efforts

Mitigation Banks

- Potential future bank at OMSI/Eastbank Crescent
- Two existing potential sources for flood storage credits



Schedule

Sept 27, 2022 – Hearing

Oct 25, 2022 – Work session

Nov 22, 2022 – Work session/
Recommendation (tentative)

Spring 2023 – Recommended
Draft and City Council



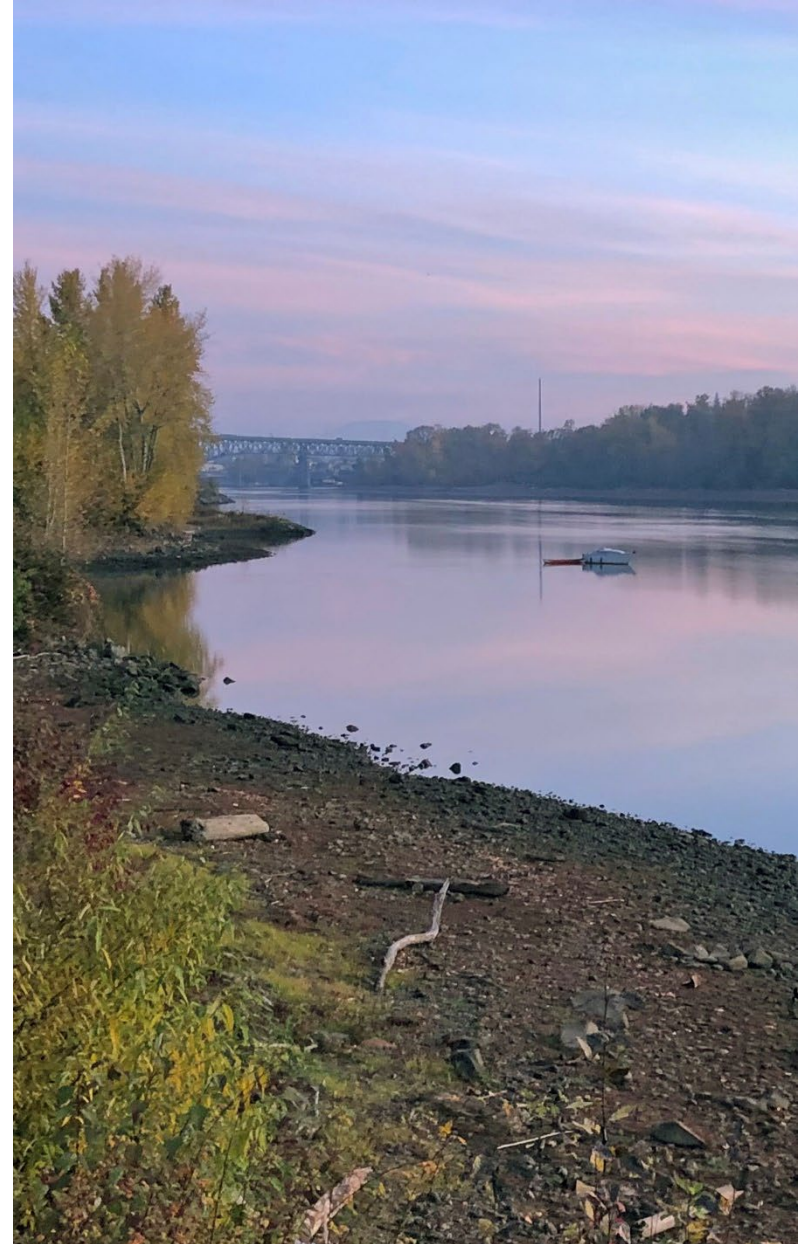
More Information

Visit our website :

<https://www.portland.gov/bps/environment-planning/floodplain-project>

Or get parcel-specific information on our Map App:

<https://www.portlandmaps.com/bps/floodplain/#/map/>

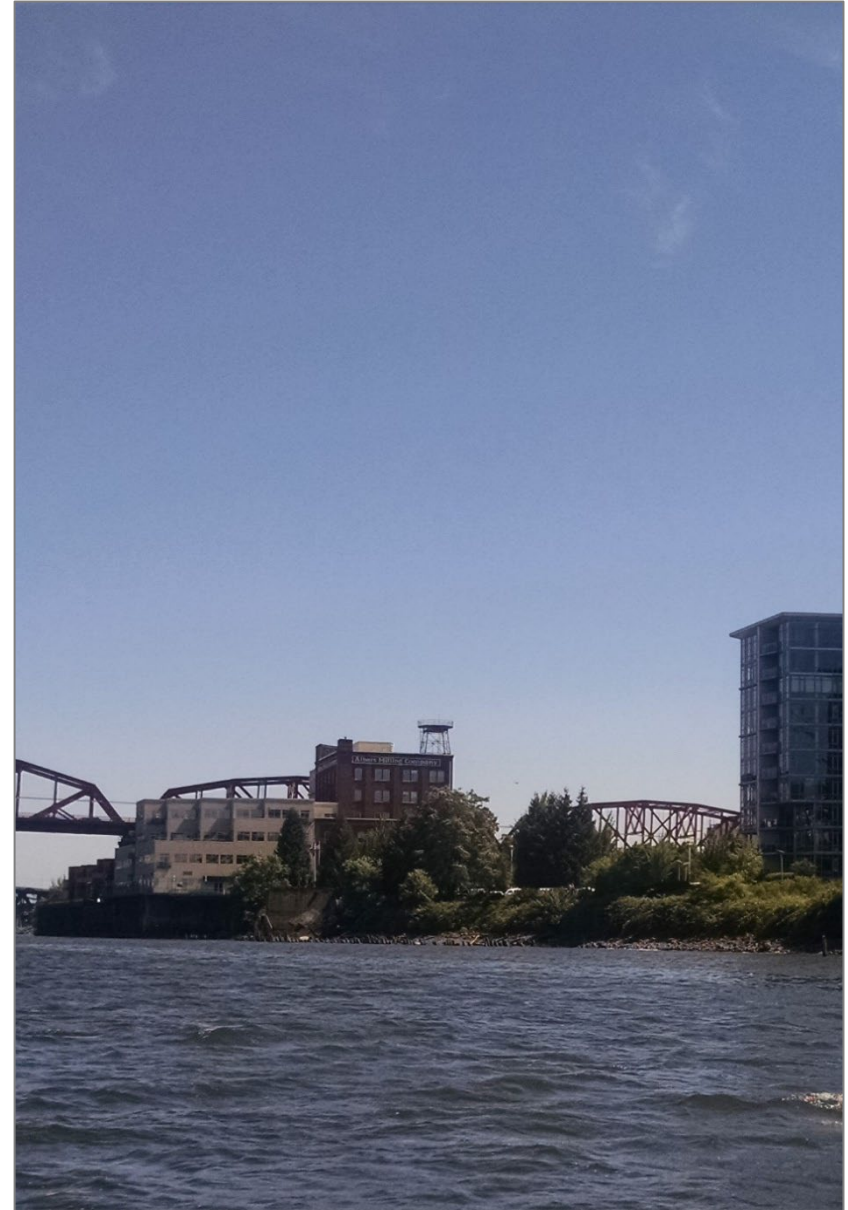


Questions

Zoning Code (Title 33)

Willamette River Central Reach

- Apply River Environmental overlay zone to all floodplains
- Increase mitigation required in a new riparian buffer area



Floodplain Resilience Plan

Building Code (Title 24) Updates

- Require excavation for fill *and* structures
- Increase excavation ratios along the river, in the riparian buffer area and on undeveloped floodplain



Floodplain Resilience Plan

Zoning Code (Title 33) Updates

- Apply environmental zones to riparian buffer area and undeveloped floodplains
- Establish riparian buffer area in Willamette Central Reach
- Update tree and vegetation requirements in floodplains



Building Code (Title 24)

Citywide (some exceptions)

- Increase excavation ratios
 - High hazard area (2:1)
 - Undeveloped floodplain and Riparian buffer area (1.5:1)
- Excavation required in rest of floodplain unchanged (1:1)



Floodplain Resilience Plan

Discussion Draft Issues/Concerns

- Difficulty of on-site excavation on contaminated sites (e.g., South Waterfront)
- Availability/capacity of mitigation banks by compliance deadline
- Appropriateness of environmental overlay on developed sites



Floodplain Resilience Plan

Mitigation Banks

- Two existing potential sources for flood storage credits
- City, led by BES, considering future bank at OMSI/Eastbank Crescent

