

# working for clean rivers



## Stormwater Management and 6PPD-q in Portland

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ENVIRONMENTAL SERVICES  
CITY OF PORTLAND

working for clean rivers

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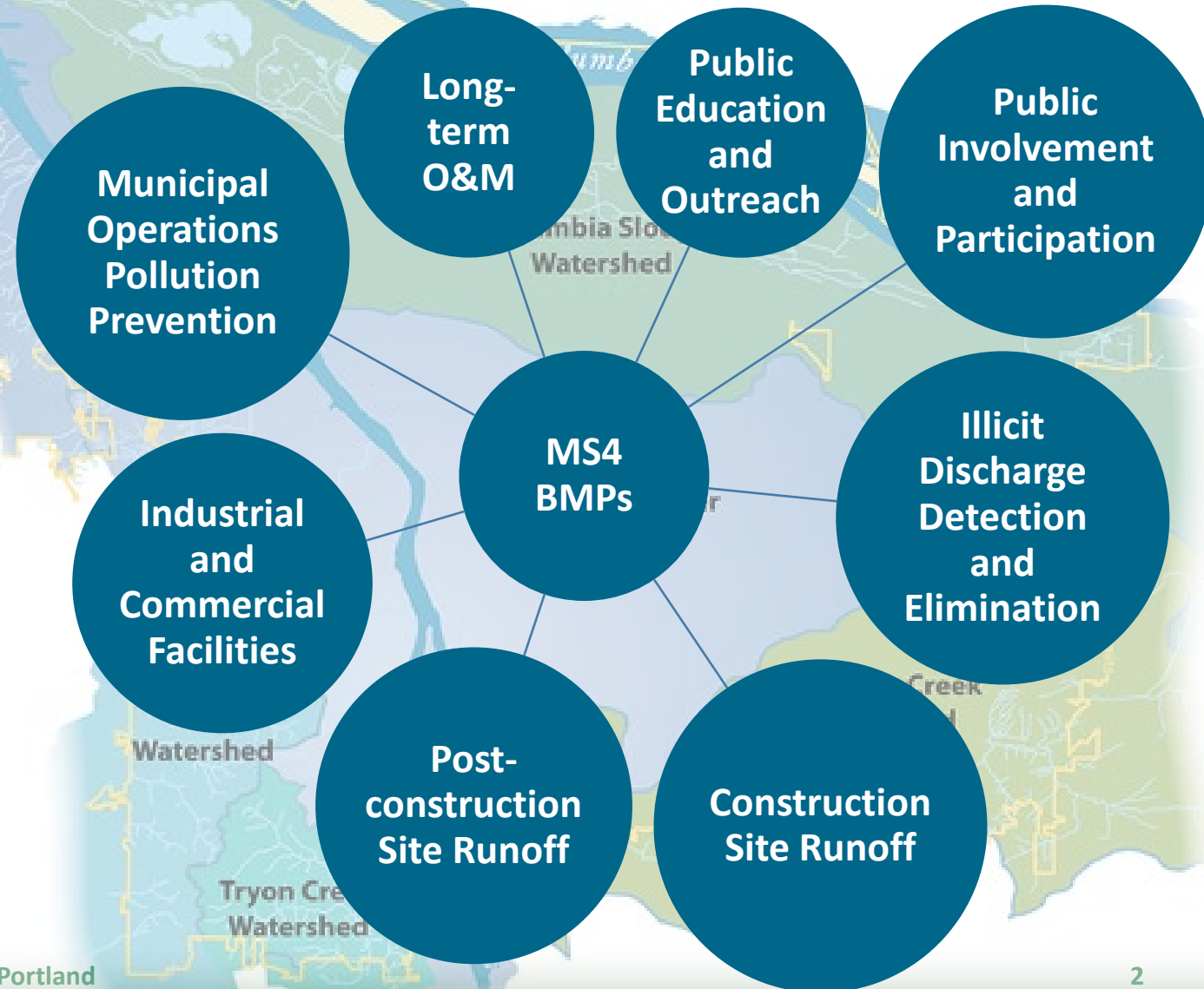
# Portland's Stormwater Management Approach

## GOALS:

- Protect public health and the environment, and
- Avoid further decline in watershed health

## AREAS OF FOCUS:

- Public-facing regulatory and incentive programs for commercial/industrial and residential partners
- Capital improvement and long-term operations and maintenance (O&M)










# FIGURE 1 Storm System Type Coverage Map

STORMWATER MANAGEMENT PROGRAM DOCUMENT  
Portland, Oregon

## LEGEND

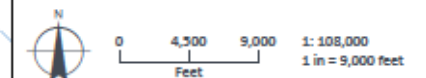
-  Piped Waterway
-  Waterway
-  City of Portland Boundary

## System Coverage

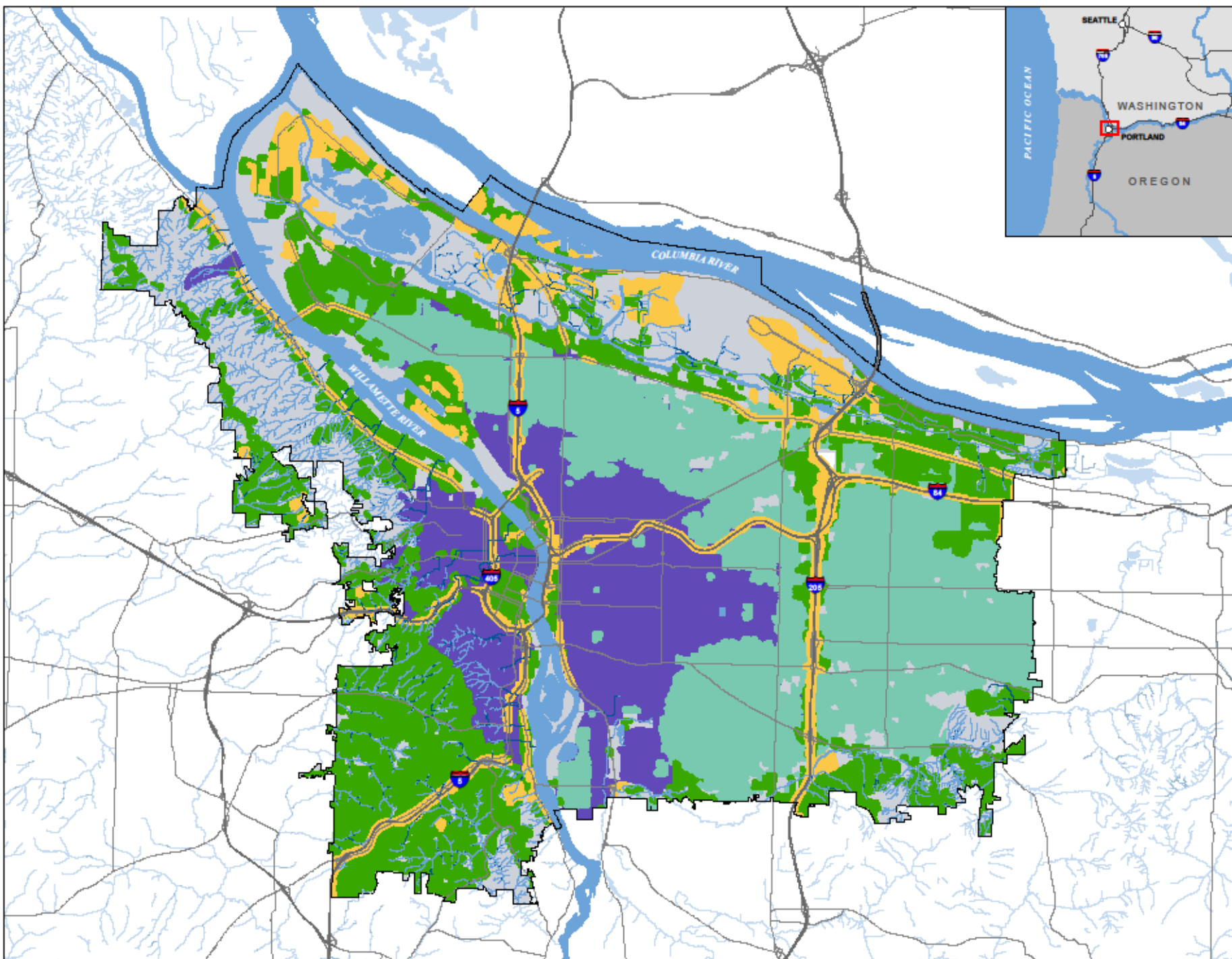
-  **City Municipal Separate Storm Sewer System (MS4)**  
This City system carries stormwater in pipes either directly to a local creek or stream, or to green infrastructure, where it can soak into the ground close to where the rain fell.
-  **City Combined Sewer**  
This City system carries both sewage and stormwater in the same pipes to the treatment plant. Many of Portland's older neighborhoods have a combined system.
-  **City Underground Injection Control (UIC) System**  
UICs are drywells, perforated pipes, or drain tiles that are used to discharge fluids underground. In Portland, this is generally a drywell system that collects and filters stormwater before allowing it to soak into the ground. The water then replenishes groundwater supplies.
-  **Non-City MS4**  
These MS4 systems are owned and/or operated by other jurisdictions, such as the Port of Portland, or the Oregon Dept. of Transportation.
-  **Non-Point/Private Drainage**  
This category includes areas of open water in addition to natural drainages, private pipes, private UICs, green streets, and open spaces.

Stormwater runoff is generated from rain and snowmelt that flows over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not naturally soak into the ground. As it flows, stormwater can pick up pollution along the way before it is managed by one of the Portland's three stormwater systems.

Resolution of GIS System Coverage data is 30 percent of actual and does not capture drainage at the property level.



<https://www.portlandmaps.com/bes/ms4monitoringsitesmap>



# Native salmon and trout are found in 125 miles of Portland's 300 miles of rivers and streams

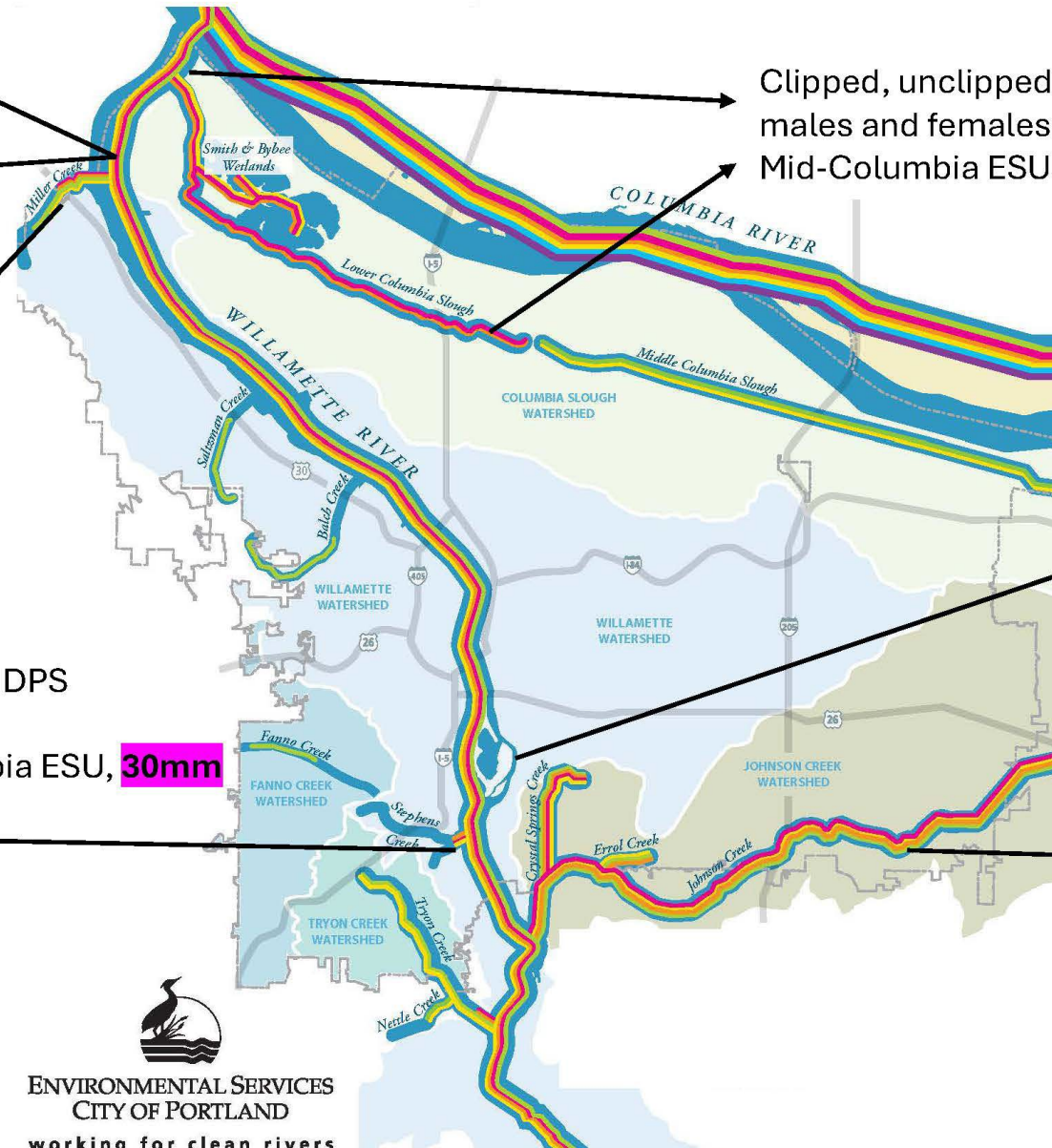
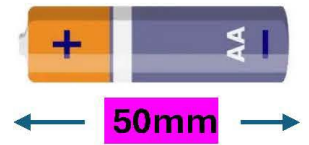
- CHINOOK SALMON
- COHO SALMON
- SOCKEYE SALMON
- CHUM SALMON
- CUTTHROAT TROUT
- STEELHEAD / RAINBOW TROUT

Unclipped chinook male & female,  
**YAKIMA RIVER ESU 60mm**

Unclipped chinook female,  
**75mm**  
**SNAKE RIVER ESU** (Clearwater R.)

Unclipped chinook male,  
**SNAKE RIVER ESU** (Salmon R.)

Clipped, unclipped chinook  
males and females,  
Mid-Columbia ESU

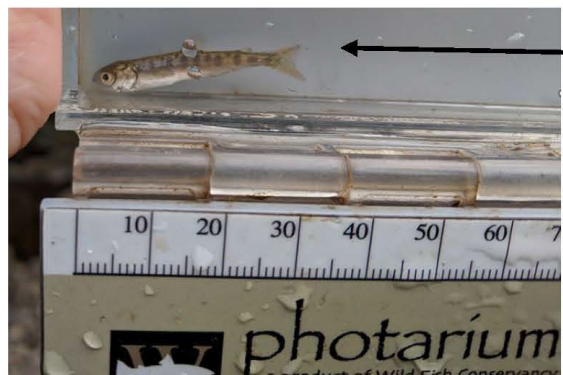


Unclipped chinook female,  
**80mm**  
Mid-Columbia ESU

Clipped steelhead male, mid-Columbia DPS

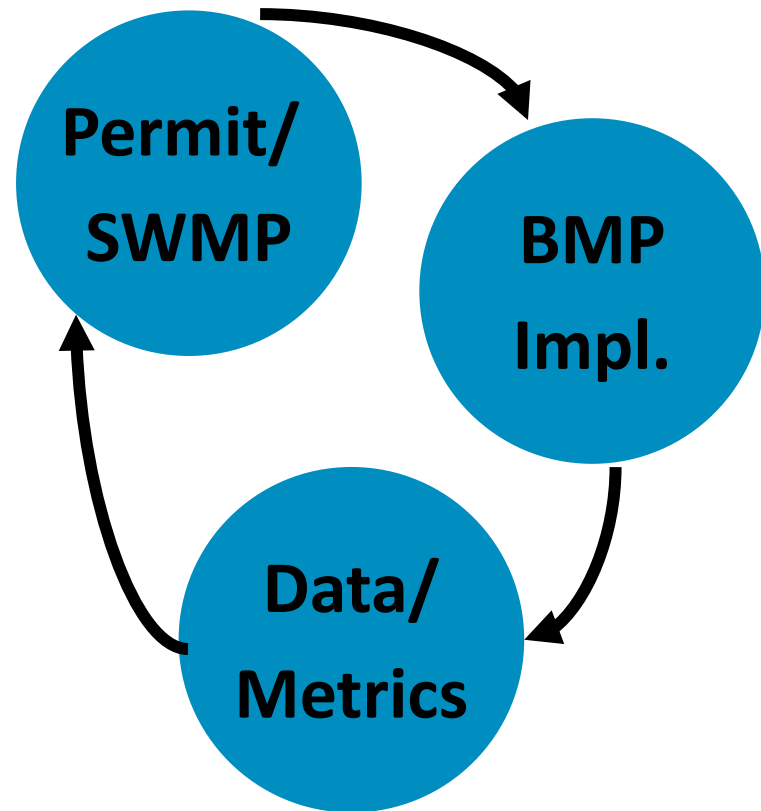
Unclipped chinook female, mid-Columbia ESU, **30mm**

Unclipped steelhead female,  
Jan 2020  
**75mm**  
**YAKIMA RIVER DPS**





# Adaptive Management



## Programs

Community

Regulatory

Municipal

## Current BMP Examples

Car washing  
Only rain down the drain

1200 Z permits

O&M

## Improvements for 6PPD-q Reduction

Don't wait to inflate  
Slow down/cycle for salmon

Incent use of green infrastructure

Strategic street sweeping

