

working for clean rivers



ENVIRONMENTAL SERVICES
CITY OF PORTLAND

working for clean rivers

TED WHEELER, MAYOR | MICHAEL JORDAN, DIRECTOR

City of Portland invasive species strategies and comprehensive policy framework; A synopsis

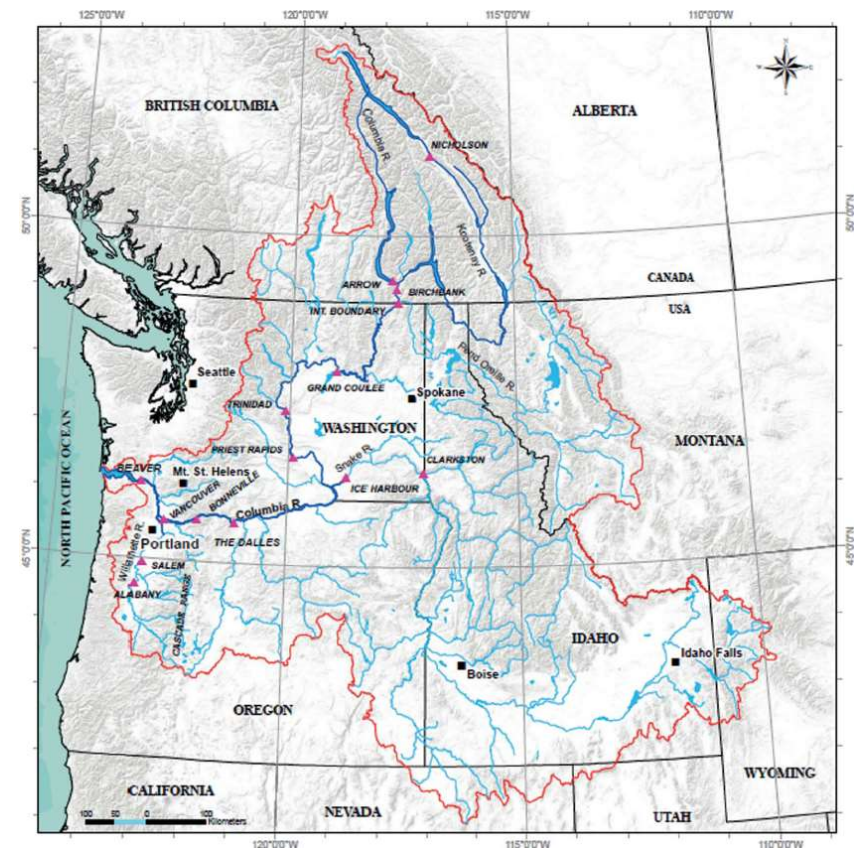
Dominic Maze,
City of Portland Environmental Services

Cal-IPC November 3, 2022

Context

Columbia Watershed

- 259,000 sq. miles
- 7 states, 1 province
- Snake, Deschutes, John Day, Umatilla and Willamette
- 198 million acre feet
- Tidal (in Portland)



Context

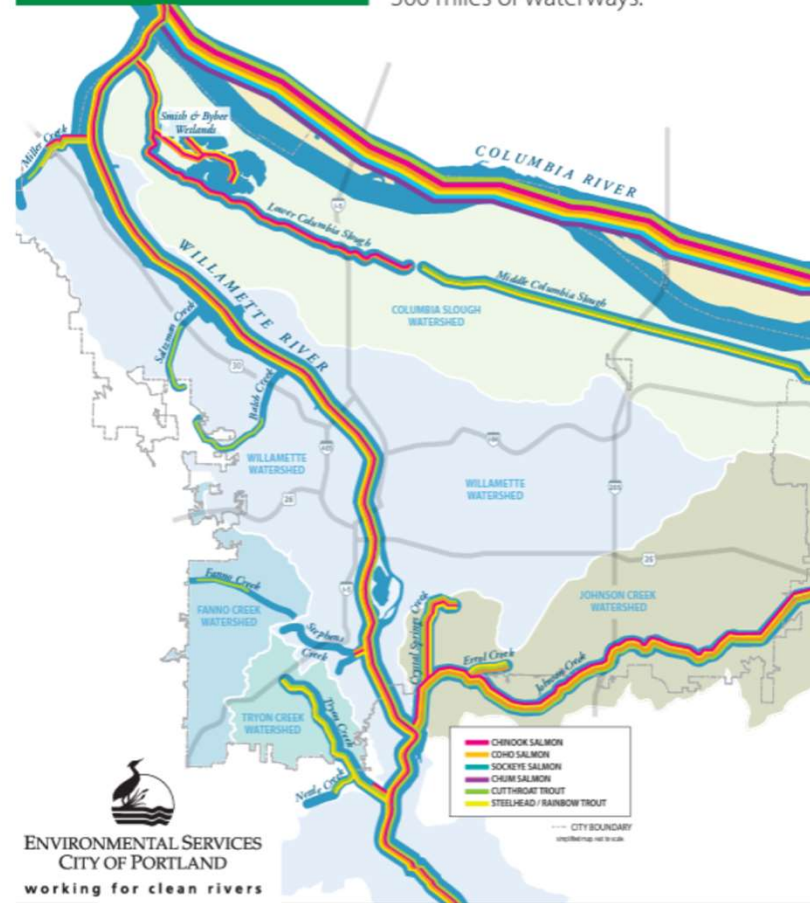
Portland

- 2 major rivers
- 5 listed salmonids



Salmon in Our City

Native salmon and steelhead are found in more than 125 miles of Portland's 300 miles of waterways.



Context

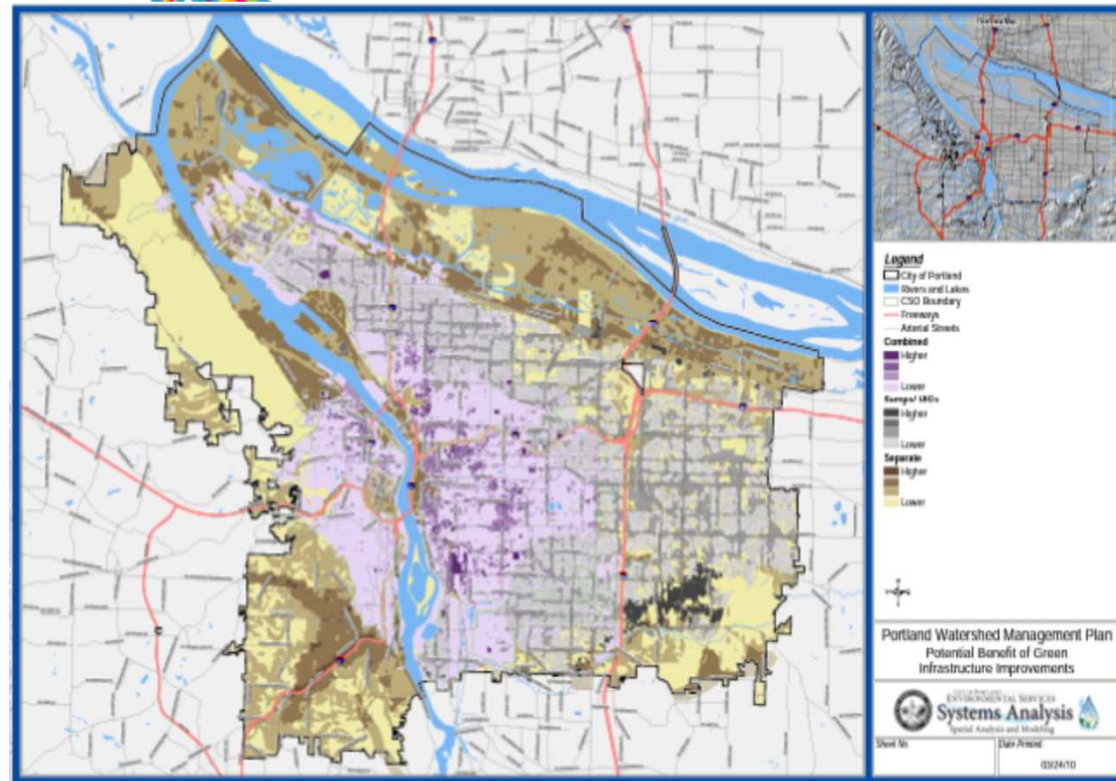
Portland

- 2 major rivers
- 5 listed salmonids
- 3 storm/wastewater systems
- Other regulatory commitments (MS4, TMDL, etc.)
- A strong focus on watershed health



Salmon in Our City

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Introduction

Longstanding Appreciation of IS Impacts

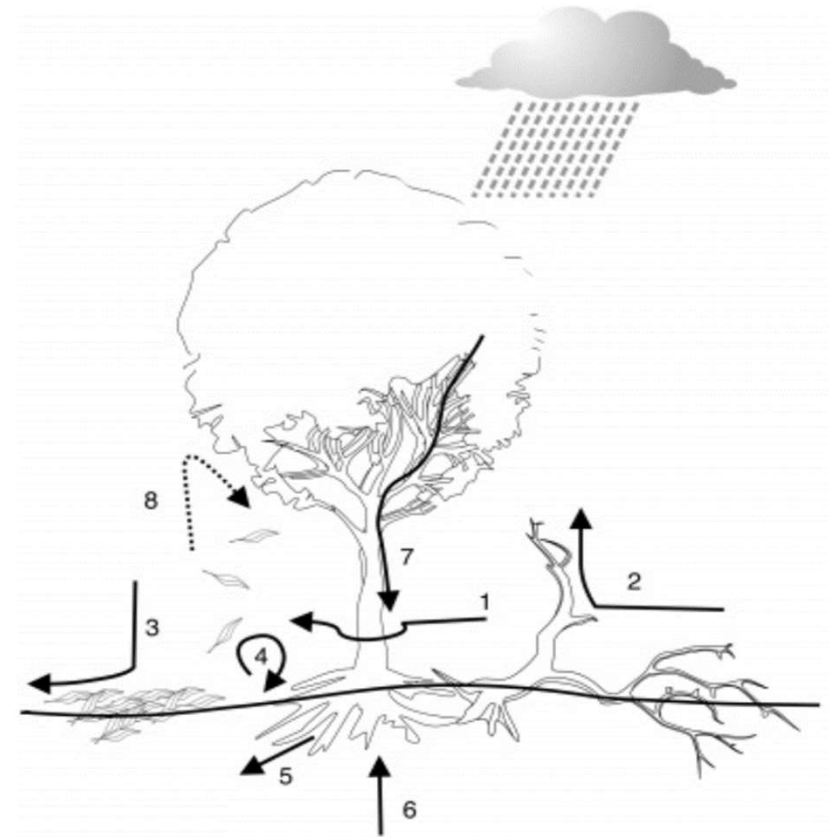
- Portland a leader in invasive species management *before* current policies
- Focused on habitat in natural areas (mostly plants)



Why BES (the “Sewer Bureau”)?

Impairment water quality/quantity

- Plant com. response to hydrologic disturbance well studied
- Emphasis on intercepting H₂O from basin to channel, dissipation of energy, pollutant trapping, etc.
- 3 broad categories
- Alters hydrology (flow, erosion, storage, turbidity, nutrient cycling, uptake, permeability, etc.)



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Invasive Plant Strategy

The City Identified...

- A need to address invasive species as a threat to watershed health (PWMP, Framework)
- Current policies (fed, state, city) wasn't sufficient to protect green assets (healthy functioning habitats)



Invasive Plant Strategy

- Invasives Town Hall – Nov. 2005
- Resolution No. 36360 – Nov. 2005
- PWMP-2005
- Invasive Plant Management Strategy – Nov. 2008
- Resolution No. 36726 – August 2009
- Summit – Nov. 2010
- Regulatory Improvement Project – code updates, July 2010, 2011, 2013



River View Natural Area



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River View Natural Area



Invasive Plant Strategy

10 Year Goals in 4 Categories

- Development
- Outreach, Ed, Coordination
- Inventory/Assessment
- Control
- Created the Invasive Species Program, updated Portland Plant List




Invasive Plant Strategy

10 Year Goals in 4 Categories


- Development
- Outreach, Ed, Coordination
- Inventory/Assessment
- Control
- Created the Invasive Species Program, updated Portland Plant List
- Revised our Titles 11 (tree), 29 (property), 33 (development)



City Council Report



Invasive Plant Policy Review and Regulatory Improvement Project



City of Portland
Bureau of
Planning and
Sustainability
Sam Adams, Mayor
Susan Anderson, Director



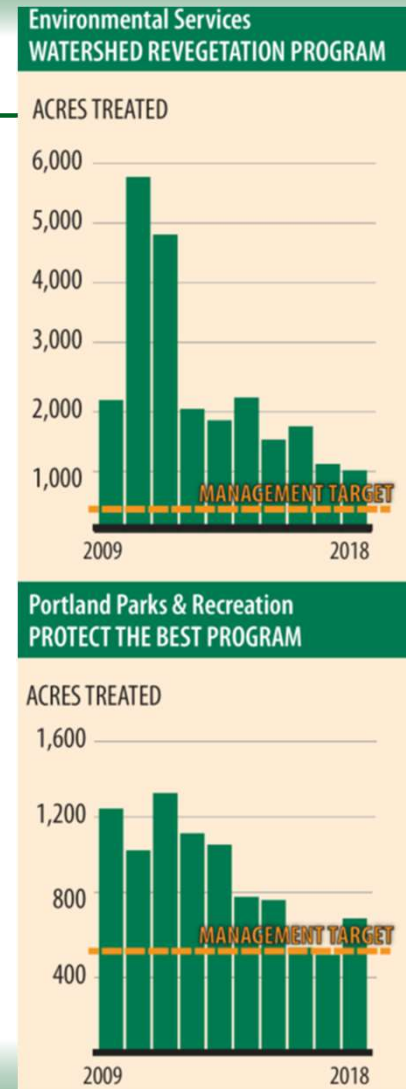
ENVIRONMENTAL SERVICES
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Ben Safford, Commissioner in Charge
Dean Morrison, Director

Adopted by City Council
Ordinance No. 183534
Effective July 1, 2010 and July 1, 2011

Examples of Invasive Plants of Portland

Organization

- Set goals within each of those 4 categories
- Created new programs (e.g. Early Detection, Rapid Response), bolstered existing, set management targets



Organization

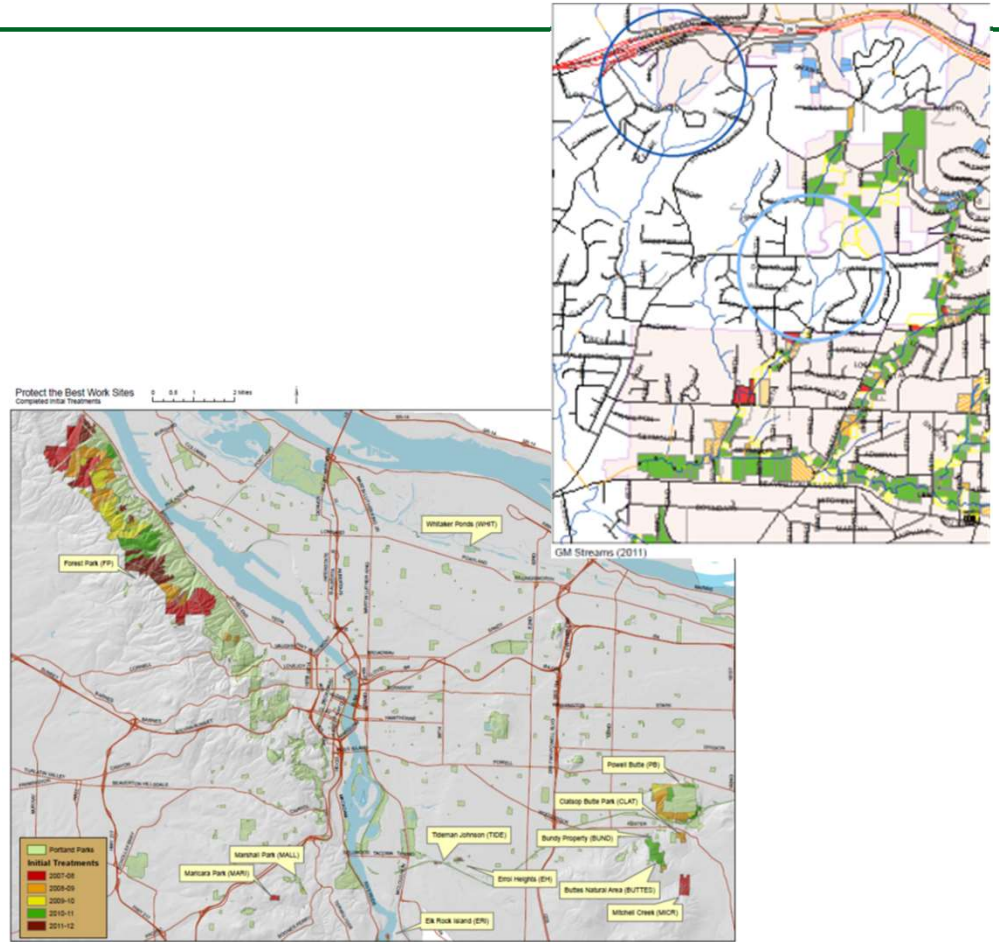
- Set goals within each of those 4 categories
- Created new programs (e.g. Early Detection, Rapid Response), bolstered existing, set management targets
- Workplans were 3 years, reevaluated, and reinitiated



Invasives 2.0

Much accomplished

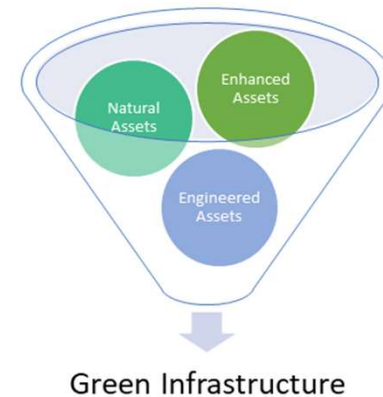
- These efforts shared across city bureaus
- Portland Plant List used extensively
- Strategy used by other entities, regional and otherwise



Invasives 2.0

Much accomplished, but...

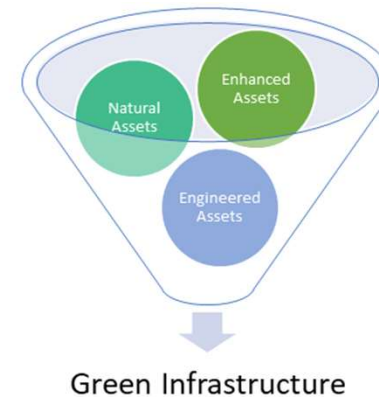
- New ideas and philosophies about invasive species have arisen
- Staff learned a lot after 10 years of work
- Animals and microorganisms
- How do we protect the investments we've made?
- Prepare for what's next/cost avoidance?



Invasives 2.0

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Invasives 2.0

What are the risks to what's next...

- To natural systems and green assets
- Grey assets?



Invasives 2.0

- Stormwater Asset Register (Risk Assessment)

Asset Classes	Stormwater Collection and Conveyance Services (Functions include collection, conveyance, detention, retention, and discharge)	Water Quality Protection and Treatment Services (Functions mechanical and natural filtration, retention/infiltration, and protection)	Habitat Provision and Protection Services (Functions include provision physical habitat - e.g. stream structure and complexity - and natural processes - e.g. nutrient cycling)
Inlets	X		
Curbs	X		
Ditches	X	X	
Pipes	X		
Outfalls	X	X	X
UICs	X		
Culverts	X		X
Drainageways	X	X	X
Streams (and Riparian Area)	X	X	X
Wetland	X	X	X
Mechanical SW facility - Sedimentation manhole, structure, cannisters, storm filters, flow control structure		X	
Vegetated SW Facility - green streets, planters, etc	X	X	X
Pond (constructed for detention)		X	X



Invasives 2.0

New policy package and strategy developed

- Chartered process
- Hired consultant
- SAG and TAC
- Held summit
- Extensive audit
- Report
- Executive report with budget projections
- Resolution



Invasives 2.0

Package adopted by City Council January 2020

- Pathways analysis w/stressors
- Budget analysis
- Regulatory framework for multi-taxa approach
- Tackled the green AM conundrum
- Binding policy

Table 1. Pathways of Invasive Species Threats to Portland's Green Assets.

Bull Run	Parks	Natural Areas	Urban Forest	Street trees	Watersheds	Recreation	Note: Pathways highlighted in yellow are considered priorities based on their risk of introduction, establishment, and spread as well as economic, environmental, and social costs once established. Medium priorities are highlighted in blue. Low priorities are highlighted in orange.	BMPs	City policies	Community Engagement	Incentives	State policies	Federal policies
X	X	X	X	X	X	X	Air transportation/cargo	X	X		X		
Water transportation							Ballast	X				X	X
X		X			X	X	Hull fouling			X		X	X
X	X	X	X	X	X	X	Stowaways					X	X
X	X	X	X	X	X		Structures above water line	X				X	X
	X	X	X	X	X		Dredge spoil material	X	X				
					X	X	Anglers	X		X			
Land transportation							Cars and trucks	X		X			
	X				X	X	ATVs	X		X			
	X				X	X	Boat trailers	X		X	X		
			X	X		X	Trains	X					
X	X	X	X	X		X	Equipment	X		X			
X	X	X	X	X	X	X	Hikers, horses, pets, recreationists	X		X			
X	X	X	X	X	X	X	Forest workers	X	X	X			
Items used in shipping							Port containers/crates	X			X		X
X	X	X	X	X		X	Wood packing material	X	X		X		X
							Seaweed	X		X			
Travel tourism/relocation							Travel/relocation		X		X		
	X	X			X	X	Baggage/gear		X				
X	X	X	X	X	X	X	Smuggling		X				



Invasives 2.0

Package adopted by City Council January 2020

- Pathways analysis w/stressors
- Budget analysis
- Regulatory framework for multi-taxa approach
- Tackled the green AM conundrum
- Prioritized actions to fulfill 10-year objectives

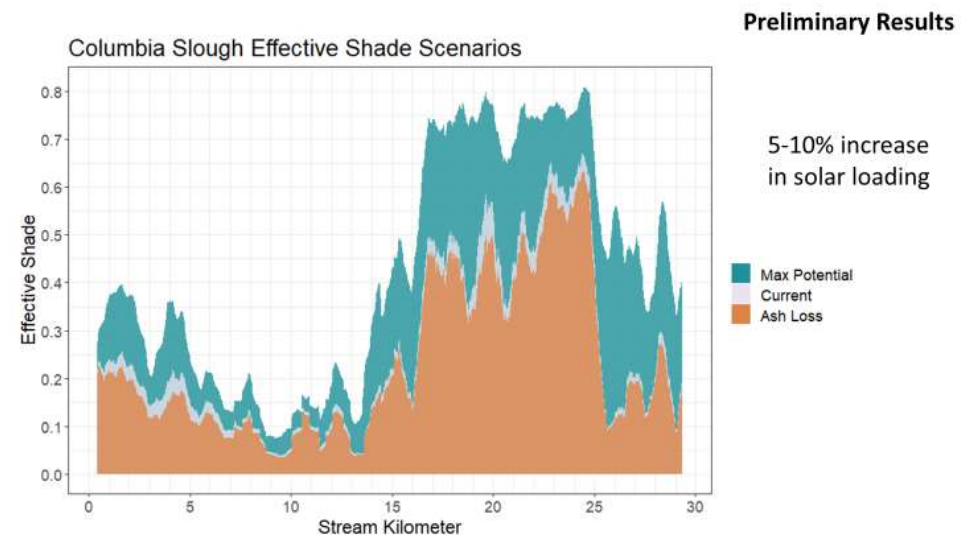
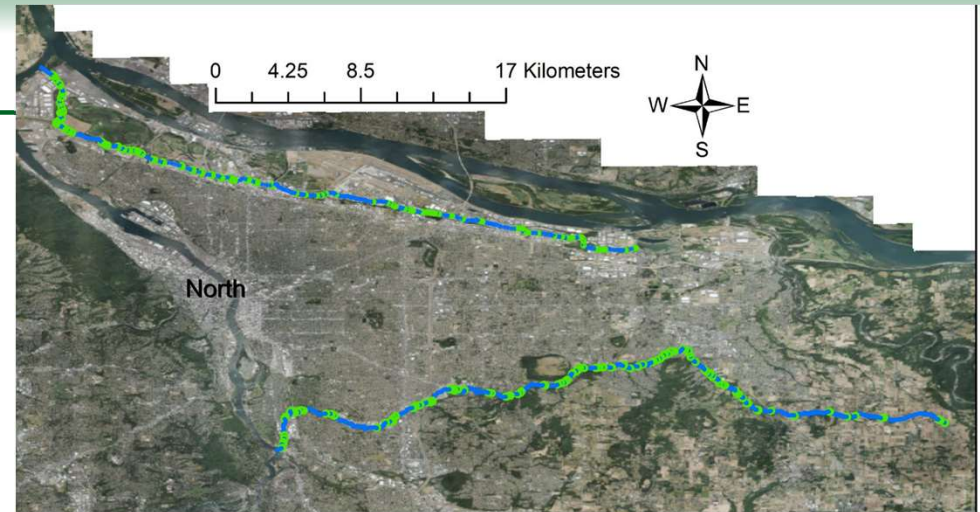
Invasives 2.0 Goals	10-Year Goal	5-Year Implementation Plan Actions Priority (high), (medium), (low)	Responsible Bureaus/Programs	Timeline	Cost	Performance Metric
VI. Continuously improve: Continually assess the ability to manage invasive species to achieve desired levels of service, implementing course corrections to ensure the latest science, best management practices, and approaches are being used.	Implement an adaptive management approach to achieve desired levels of service efficiently and effectively.	VIa. Review <i>Invasives 2.0</i> after 5 years of implementation, and revise to incorporate emerging issues, changes in policy, etc.	Lead: Bureau of Environmental Services Participants: All city bureaus that maintain green assets or provide supporting activities to natural asset management; regional partners	December 2023	\$50,000	<i>Invasives 2.0</i> is revised after 5 years.
		VIb. Review the process for updating Portland Plant List and recommend improvements to the process for updating future species lists that are inclusive of stakeholders.	Lead: Bureau of Environmental Services Participants: All city bureaus that maintain green assets; regional partners	July 2020	See Section VII	Revised process for updating the city's priority invasive species list.
		VIc. Review and recommend changes to regulatory mechanisms related to how invasive species are managed within the city, including Titles 11 and 33 of Portland City Code.	Lead: Bureaus responsible for implementing Titles 11 and 33 Participants: All city bureaus that maintain green assets	December 2021	See Section VII	Needed changes to Portland City Code are identified and implemented.



Invasives 2.0

Implementation highlights

- Emerald Ash Borer analysis/modeling
- Ludwigia species surveys and analysis
- Working with MS4/TMDL efforts
- Zebra and quagga mussel monitoring nested within state and regional/federal efforts



The background of the slide is a scenic landscape photograph. It features a calm body of water in the foreground, reflecting the sky and the silhouettes of trees. In the middle ground, there are several bare, dark trees. In the background, a mountain peak is visible against a sky with a warm, orange and pinkish glow, suggesting a sunset or sunrise. A semi-transparent white rectangular box is centered over the image, containing the text.

Questions?

- Most docs available at www.portlandonline.com/bes/invasives