

Upper Cowlitz-Cispus Habitat Strategy



LCFRB Meeting
December 6, 2019

Recovery Scenario



Region-scale success depends on local, watershed-scale successes.



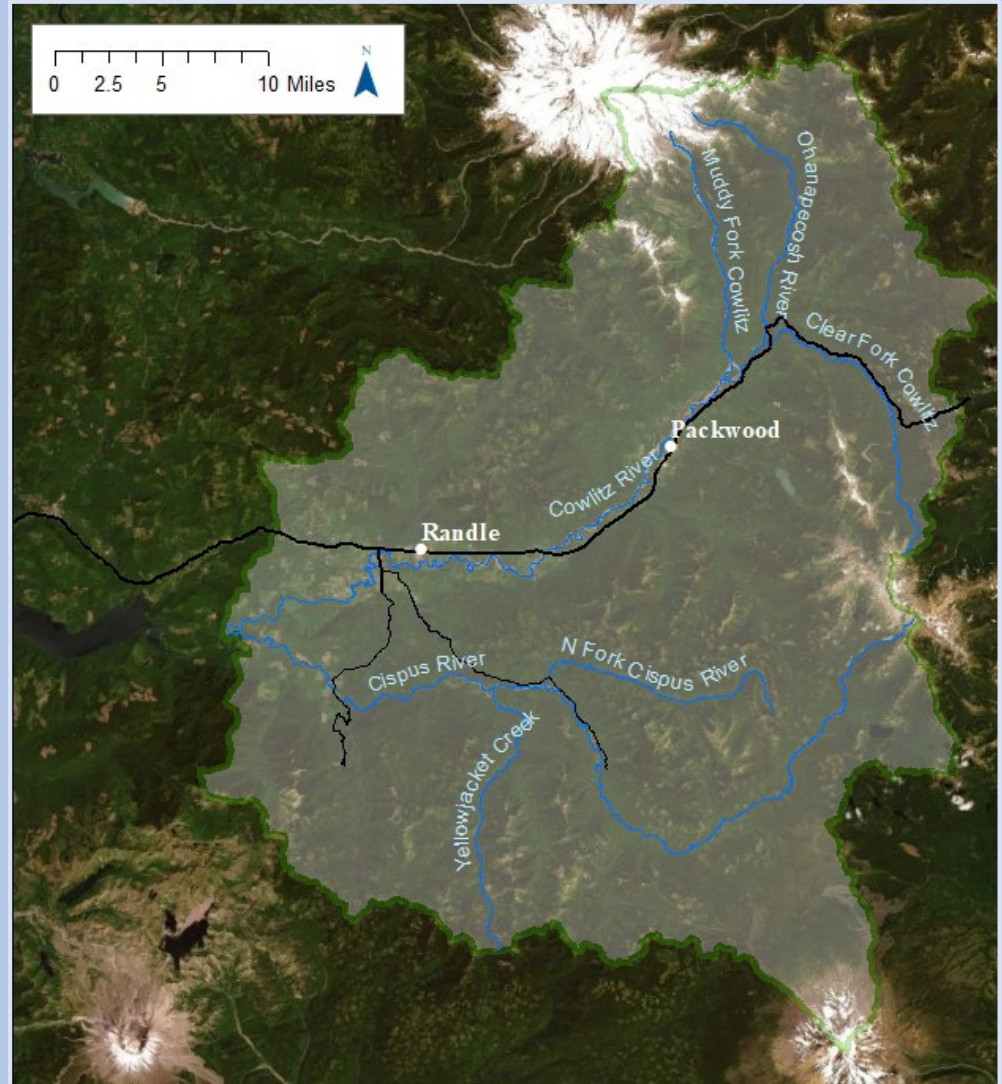
Coho Salmon



Spring Chinook



Winter Steelhead



Recovery Scenario



Region-scale success depends on local, watershed-scale successes.

Watershed	Population	Recovery Priority	2016 Species-Scale Viability	Recovery Viability Target
Upper Cowlitz	Spring Chinook ^{1, 2}	Primary	Very Low – Low	Very High
	Coho	Primary	Moderate	High
	Winter Steelhead ^{1, 2}	Primary	Moderate	High
Cispus	Spring Chinook ^{1, 2}	Primary	Very Low – Low	Very High
	Coho	Primary	Moderate	High
	Winter Steelhead ^{1, 2}	Primary	Moderate	High

¹ Historical core population

² Genetic legacy population

Habitat Strategy Overview



Strategy Vision

Develop a habitat restoration and protection strategy to support short (ESA delisting) and long (healthy and harvestable) term ESA-listed salmon and steelhead recovery needs in a way that works for fish and for people.



Habitat Strategy Overview



Strategy Goals

- Describe watershed processes that impact salmon habitat
- Identify the top salmon habitat needs, and any data gaps, for achieving salmon recovery
- Work with landowners to identify habitat opportunities
- Recommend and prioritize habitat opportunities to support salmon recovery
- Incorporate local input and knowledge
- Respect and incorporate local culture, economic interests, property rights, community values, and Tribal interests



Habitat Strategy Development



Workgroup – Led Process

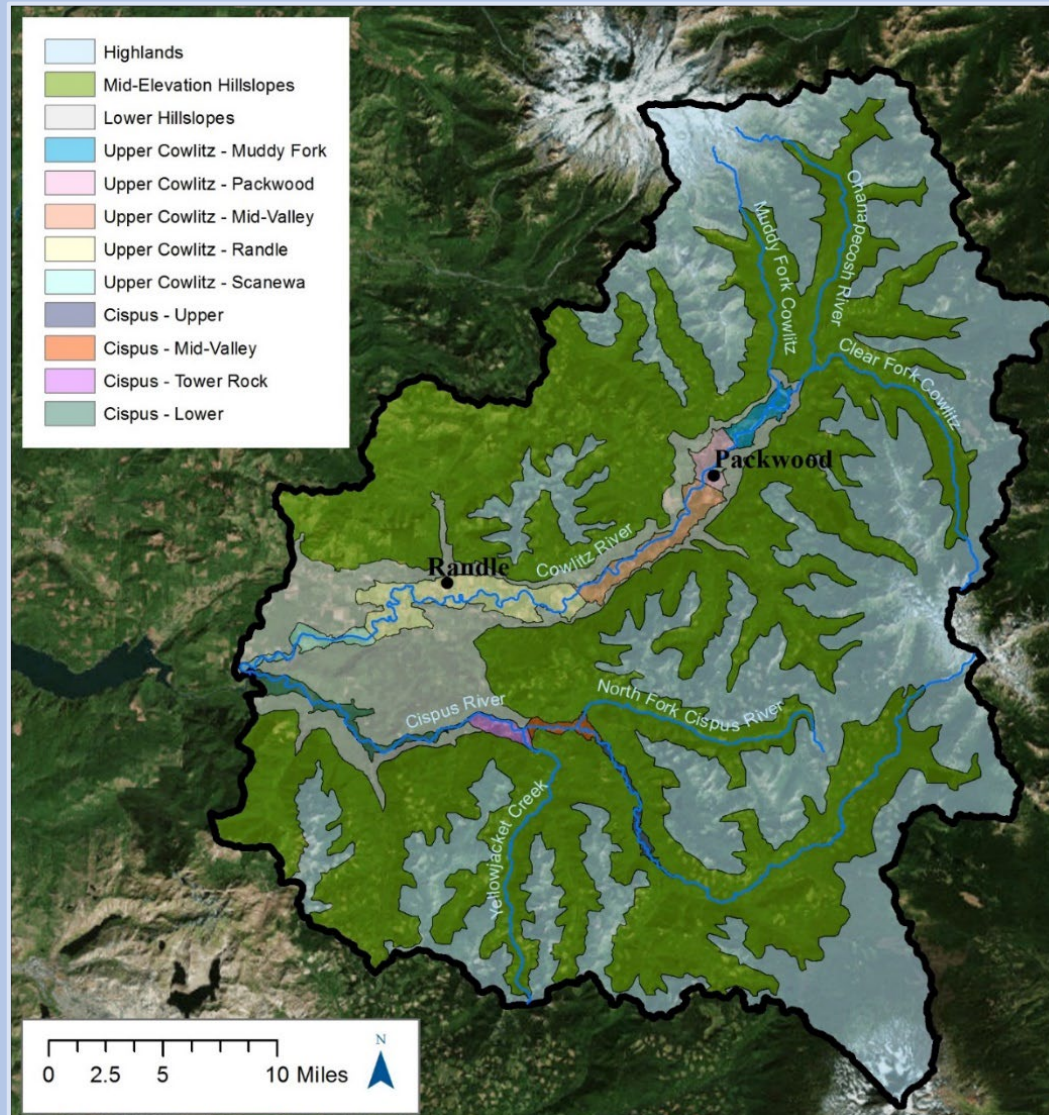
- Monthly meetings to review data sources and draft materials
- Work group representatives included:
 - Cowlitz Indian Tribe
 - Yakama Nation Fisheries
 - NMFS
 - USFS
 - WDFW
 - Tacoma Power
 - Lewis County
 - Lewis Conservation District
 - Lewis County PUD
 - Pinchot Partners
 - Forterra
 - Citizens/Local Landowners



Habitat Strategy Development



Identified Landscape Units



Habitat Strategy Development



Identified Habitat Action Types

Protection

Protect intact, functioning habitat and ecosystem processes



Strategic Actions

Implement strategic management actions or restore critical habitat and key processes that pose threats to other areas or that strategically link intact habitats



Reconnect and Restore

Reconnect isolated habitats and implement restoration actions that address the root causes of impairments to habitat-forming processes



Enhance and Create

Improve existing processes or habitat conditions or create new habitat features that address habitat needs

Habitat Strategy Development

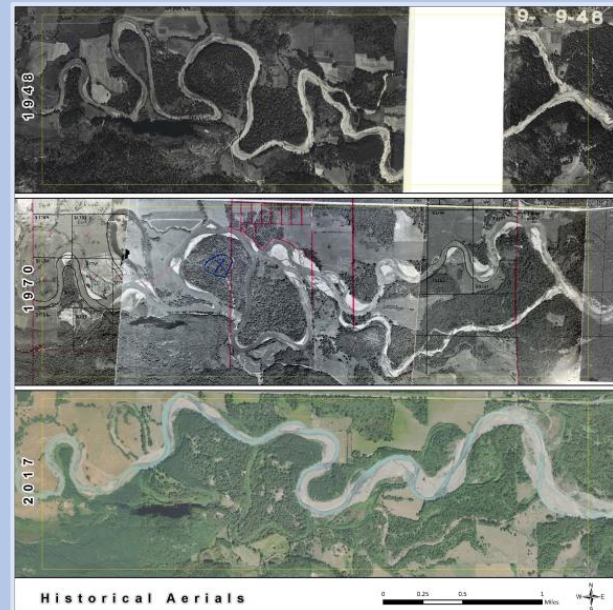
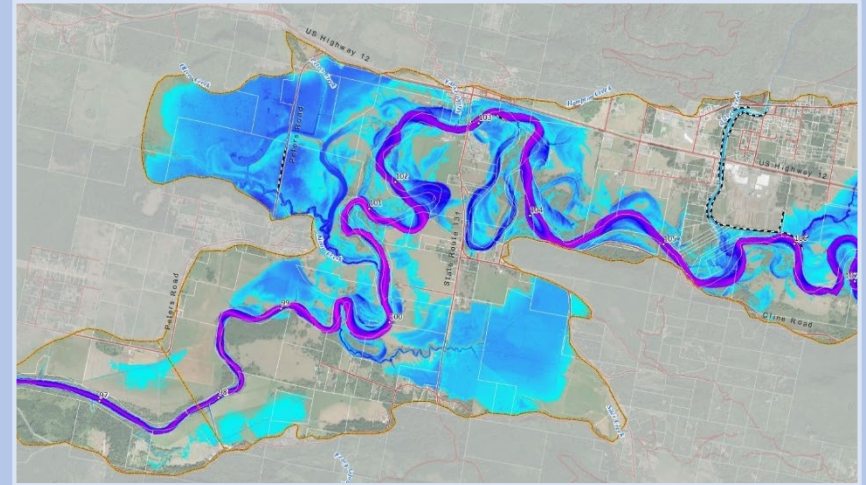


Collected Data



Upper Cowlitz-Cispus Habitat Strategy
Field Survey Extent

0 2.5 5 10 Miles



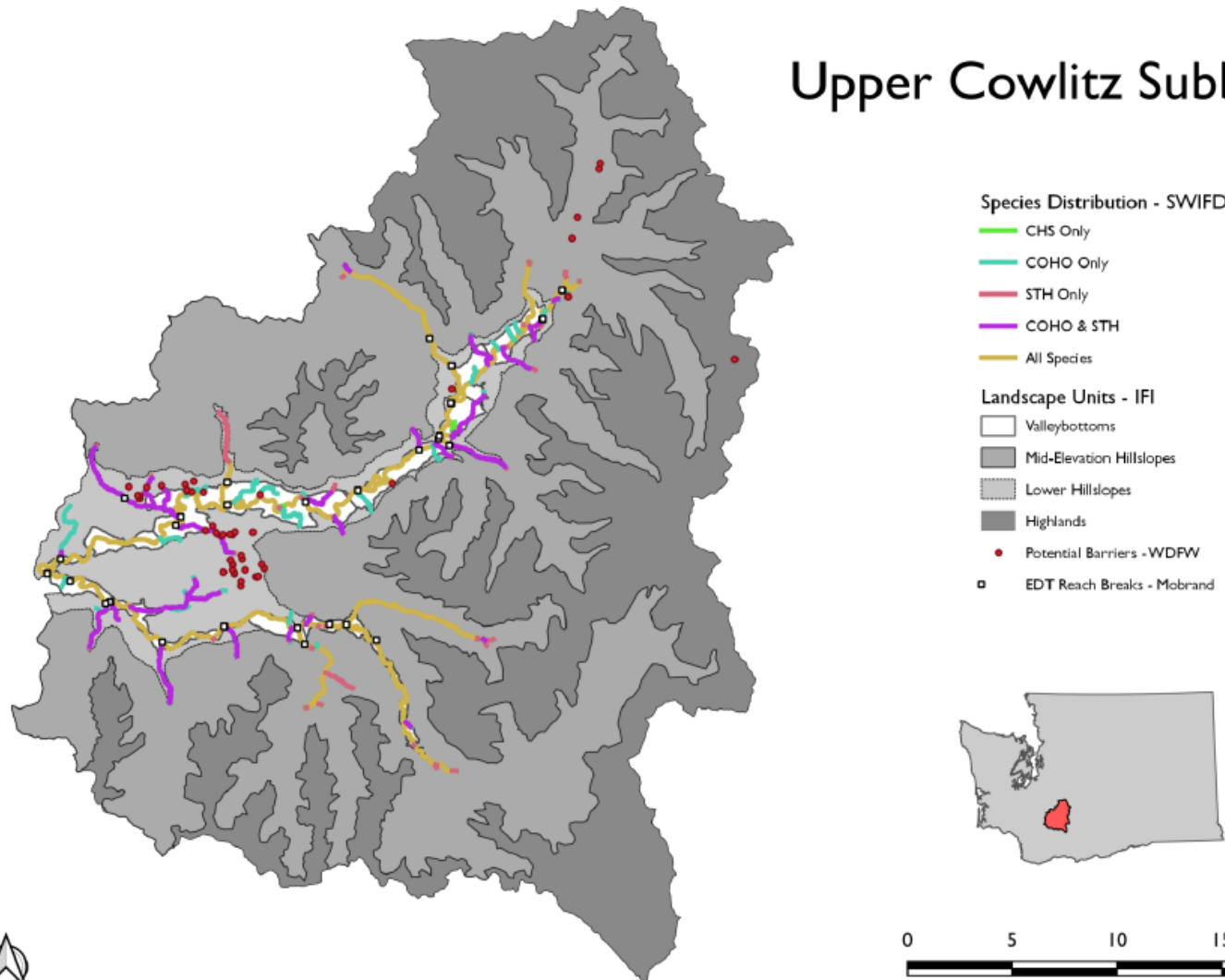
Historical Aerials

Habitat Strategy Development



Collected Data

Upper Cowlitz Subbasin



Habitat Strategy Results



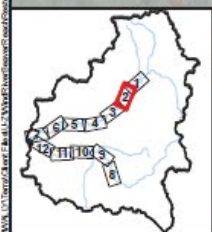
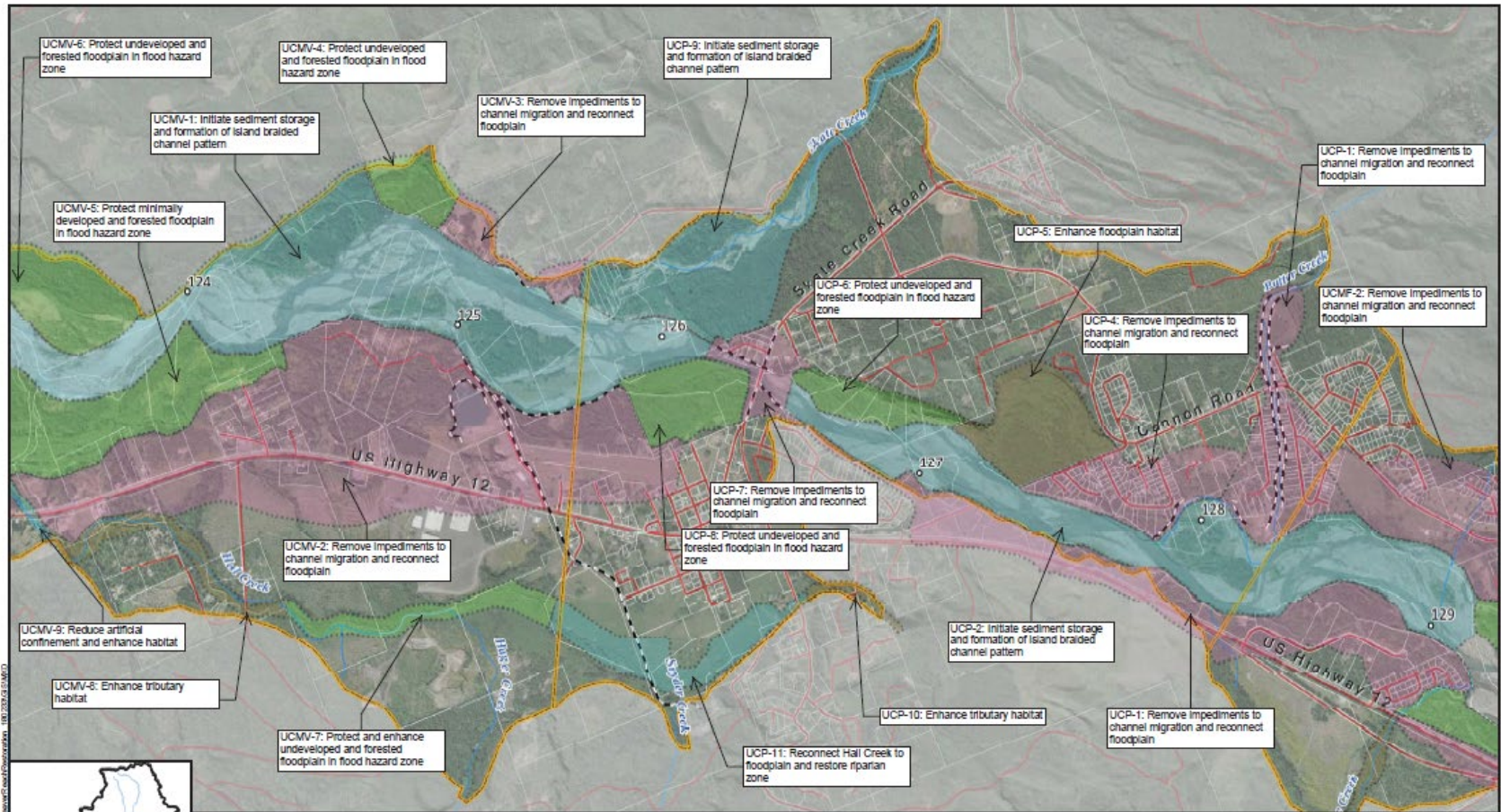
Landscape Unit Ecological Indicators

	Hillslopes			Cowlitz River Valley Bottom					Cispus River Valley Bottom			
	Highlands	Mid-Elevation Hillslopes	Lower Hillslopes	Muddy Fork Avulsion-Affected	Packwood	Mid-Valley	Randle	Scanewa	Upper	Mid-Valley	Tower Rock	Lower
Natural vs. Human Disturbance	Functional to Moderately Impaired	Functional to Moderately Impaired	Functional to Moderately Impaired	Functional to Moderately Impaired	Moderately Impaired	Moderately Impaired	Moderately Impaired to Impaired	Impaired	Functional to Moderately Impaired	Functional	Functional to Moderately Impaired	Functional to Moderately Impaired
Hydrologic Alteration	Functional	Functional to Moderately Impaired	Moderately Impaired to Impaired	Functional to Moderately Impaired	Functional	Functional	Functional	Impaired	Functional	Functional	Functional	Functional to Moderately Impaired
Sediment Processes	Functional to Moderately Impaired	Functional to Moderately Impaired	Moderately Impaired	Functional to Moderately Impaired	Moderately Impaired to Impaired	Functional to Moderately Impaired	Impaired	Impaired	Functional	Functional	Functional to Moderately Impaired	Functional to Moderately Impaired
Large Wood Processes	Functional	Functional to Moderately Impaired	Moderately Impaired to Impaired	Moderately Impaired to Impaired	Impaired	Impaired	Moderately Impaired to Impaired	Impaired	Functional to Moderately Impaired	Functional to Moderately Impaired	Moderately Impaired	Moderately Impaired
Channel Type and Form	Functional	Functional	Functional to Moderately Impaired	Moderately Impaired	Moderately Impaired to Impaired	Impaired	Moderately Impaired to Impaired	Impaired	Functional	Functional to Moderately Impaired	Moderately Impaired	Functional
Floodplain Connectivity	Functional	Functional	Functional to Moderately Impaired	Moderately Impaired	Impaired	Moderately Impaired	Impaired	Impaired	Functional	Functional to Moderately Impaired	Moderately Impaired	Functional
Lateral and Vertical Channel Dynamics	Functional	Functional	Functional to Moderately Impaired	Moderately Impaired	Impaired	Functional to Moderately Impaired	Impaired	Impaired	Functional	Moderately Impaired	Moderately Impaired	Functional
Off-Channel Habitat Connectivity and Refugia	Functional	Functional	Moderately Impaired	Moderately Impaired	Moderately Impaired to Impaired	Functional to Moderately Impaired	Moderately Impaired to Impaired	Moderately Impaired to Impaired	Functional	Functional to Moderately Impaired	Moderately Impaired	Functional
Riparian Processes	Functional	Functional to Moderately Impaired	Moderately Impaired	Moderately Impaired to Impaired	Moderately Impaired to Impaired	Moderately Impaired to Impaired	Impaired	Moderately Impaired to Impaired	Functional	Functional	Moderately Impaired	Functional to Moderately Impaired

Habitat Strategy Results



Habitat Actions



*Underlying hillshade calculated from multiple LIDAR datasets
 *Imagery from Bing Maps

0 1,000 2,000 4,000 Feet

Action Type		Landscape Unit Boundary		Roads	
	Protect		Landscape Unit Boundary		Roads
	Strategic Actions		Levee and/or Armoring		River Miles
	Reconnect and Restore		Parcel Boundaries		NHD Streams
	Enhance and Create				

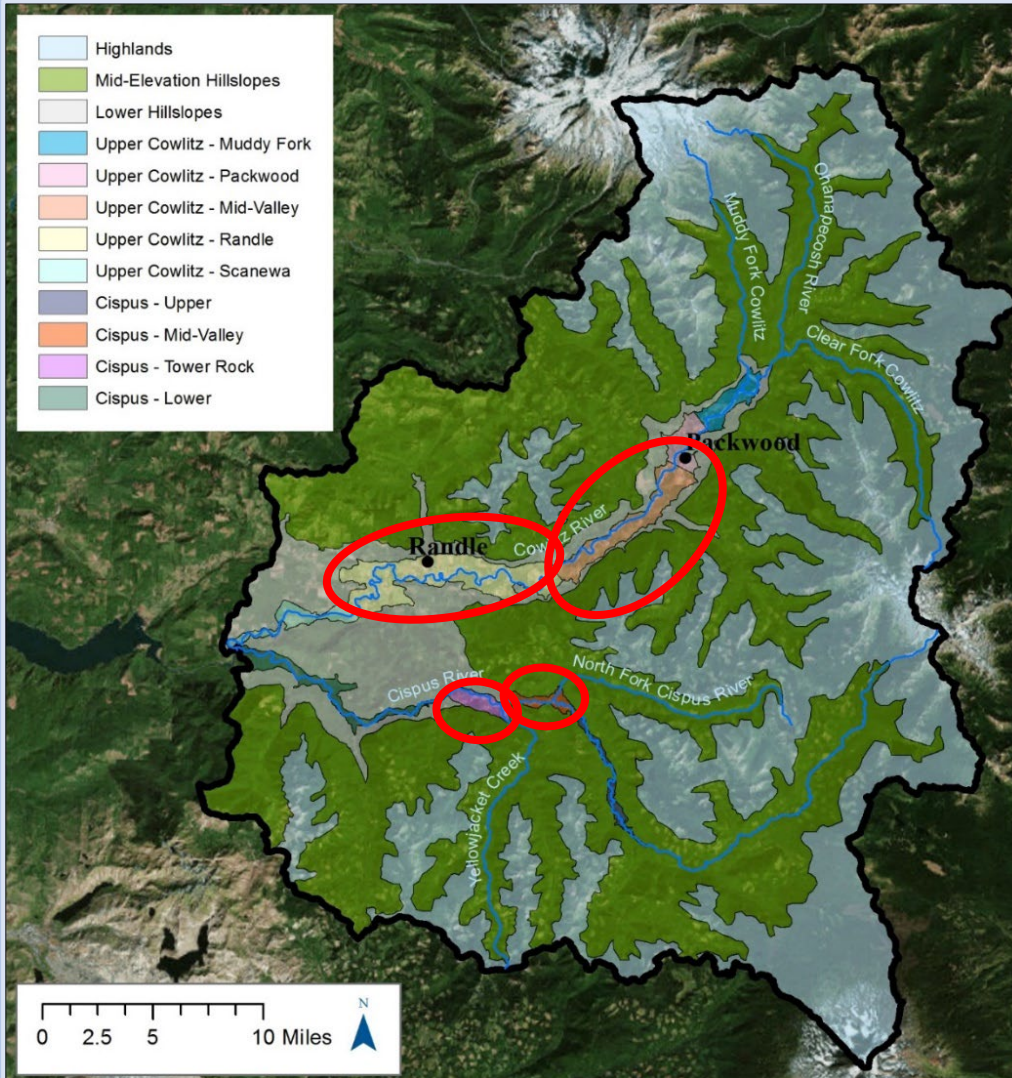
Landscape Unit(s):
 Upper Cowlitz - Mid-Valley
 Upper Cowlitz - Packwood
 Upper Cowlitz - Muddy Fork

TM5 - Actions
 Upper Cowlitz-Cispus
 Community-based Habitat
 Strategy Development

Habitat Strategy Results



Prioritized Implementation



Cowlitz Mid-Valley

Cowlitz Randle

Cispus Mid-Valley

Cispus Tower Rock

Lower Hillslopes

Habitat Strategy Results

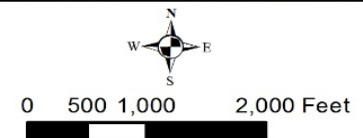


Conceptual Design to Support Implementation



Upper Cowlitz & Cispus Strategy
Kiona Creek Project Area

 Project Area



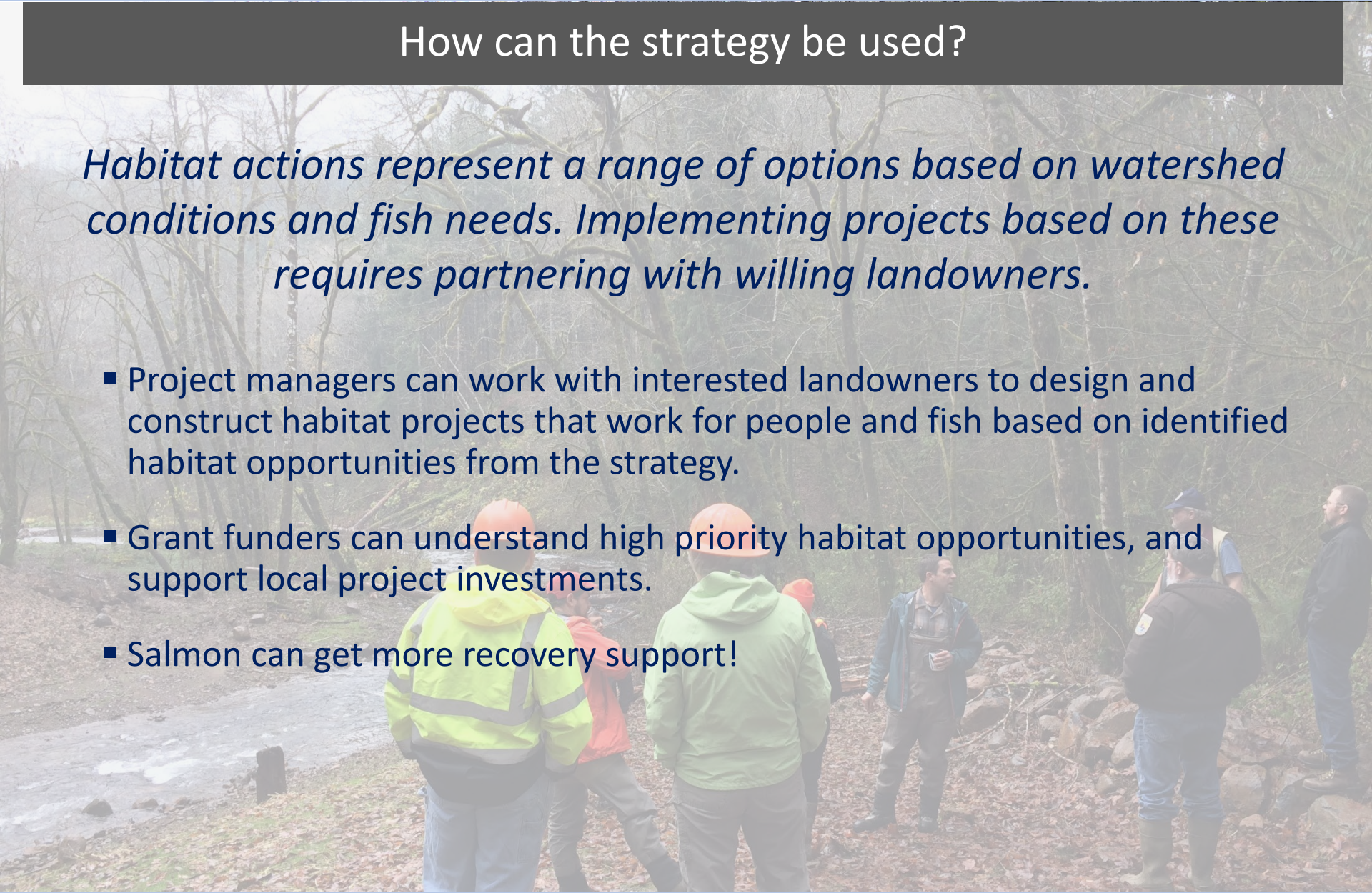
Habitat Strategy Overview



How can the strategy be used?

Habitat actions represent a range of options based on watershed conditions and fish needs. Implementing projects based on these requires partnering with willing landowners.

- Project managers can work with interested landowners to design and construct habitat projects that work for people and fish based on identified habitat opportunities from the strategy.
- Grant funders can understand high priority habitat opportunities, and support local project investments.
- Salmon can get more recovery support!



Questions?

