



ROSS Executive Committee

Puyallup-White (WRIA 10) Watershed Open Space Strategy (WOSS)

November 20th, 2013

CENTRAL PUGET SOUND
REGIONAL OPEN SPACE STRATEGY
ROSS



ROSS Does The Puyallup!

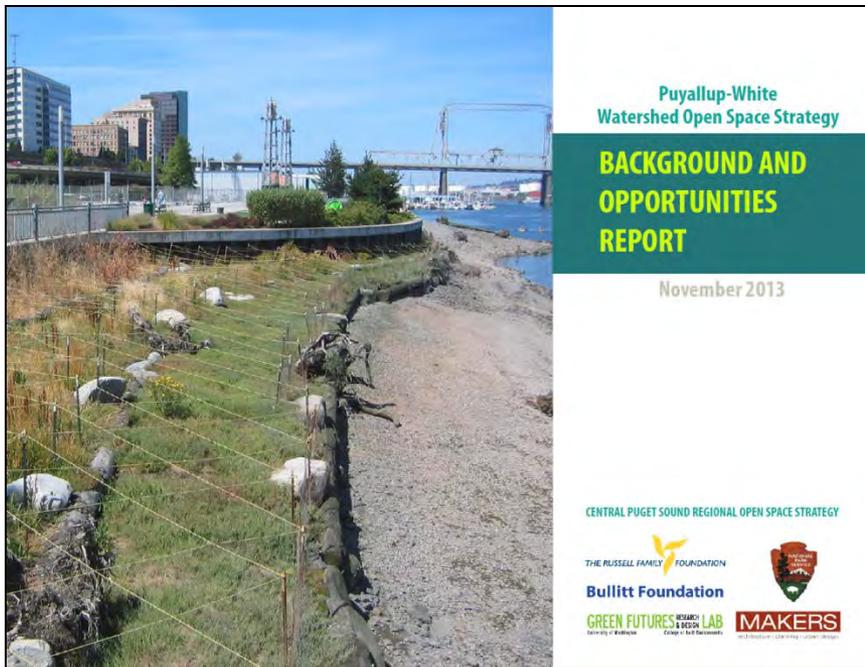
**An Open Space
Strategy For The
Puyallup-White**

Kiermer Nelson

What Can the WOSS Do For You?

- Building on past and current efforts
- Attracting wider investment & support
- Intersection of interests for collective advocacy
- Demonstrating natural benefits

Puyallup-White WOSS Background + Opportunities Report



- Watershed Advisory Group
- Ongoing GIS data collection and review of current initiatives/projects
- Watershed Listening Tour
- Preliminary synthesis to link opportunities
- Early concepts to form a criteria for regional prioritization



Data Collection + Plan Review

Watershed/County Plans/Programs:

- **County Comprehensive Plan** Update & Capital Investment Plan
- **10 Year OS Taskforce Priorities**
- PRWC Watershed Assessment
- DOE PS Watershed Characterization
- PWI Communities of Interest

Ecosystems

- **PSP WRIA 10/12 Salmon/Ecosystem Recovery Priorities** + NOAA
- County Surface/Storm Water Management Plan + WSU Puyallup LID
- **PC Biodiversity Network Management**
- GreenPrint for King County
- TNC Local Conservation & Flood Mgmt
- PC Sustainability: WQ Grading Rivers
- Shoreline Management Programs
- Critical Areas Ordinances

Recreation & Trails:

- Comp Plan: Parks, Recreation, OS Plan
- **PSRC Regional Bike Network**
- TPL, DNR & NPS proposals

Rural & Resource Lands:

- **American Farmland Trust's Intact Agriculture Assessment**
- Forterra's Conservation/Management Priorities

Urban & Community Development:

- County **Flood Hazard Mitigation Plans** & TNC Floodplain Management
- **TPCHD Environmental Health Trends**
- PSRC Vision 2040 RGC/MIC priorities
- **Growing Transit Communities**
- **Equity Network Opportunity Mapping**
- **WISAARD + other Cultural Mapping**



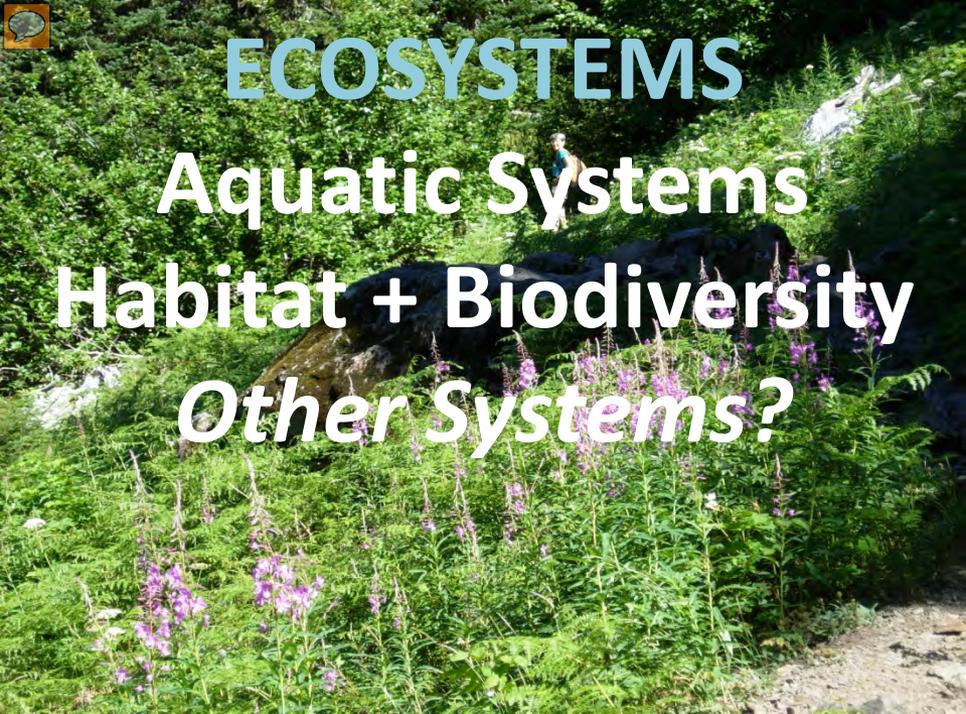
Watershed Listening Tour

- Engagement with Puyallup Watershed Initiative Communities of Interest.
- Gathered knowledge from pool of expertise on WAG along with other local partners.
- Focus on Desired Outcomes, Threats, Needs or Gaps, + Opportunities.
- Ask partners to identify where Opportunities might be linked with other OS interests.



ECOSYSTEMS

Aquatic Systems
Habitat + Biodiversity
Other Systems?



RURAL + RESOURCE

Agriculture
Forest
Fringe Lands



URBAN + COMMUNITY

Development
Social Equity
Public Health
Cultural Resources

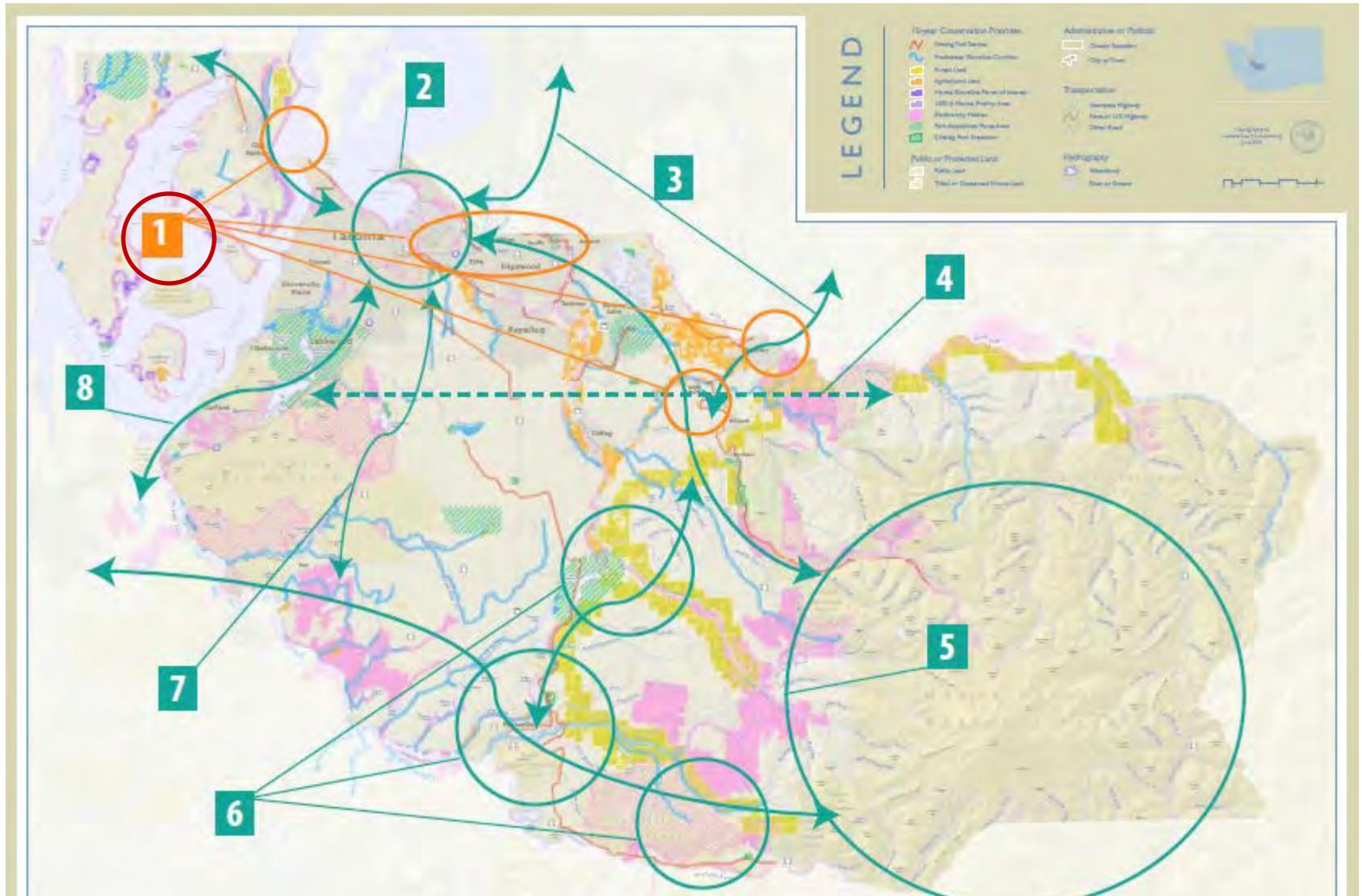


RECREATION + TRAILS

System of Parks/Trails
Recreation Facilities +
Programs



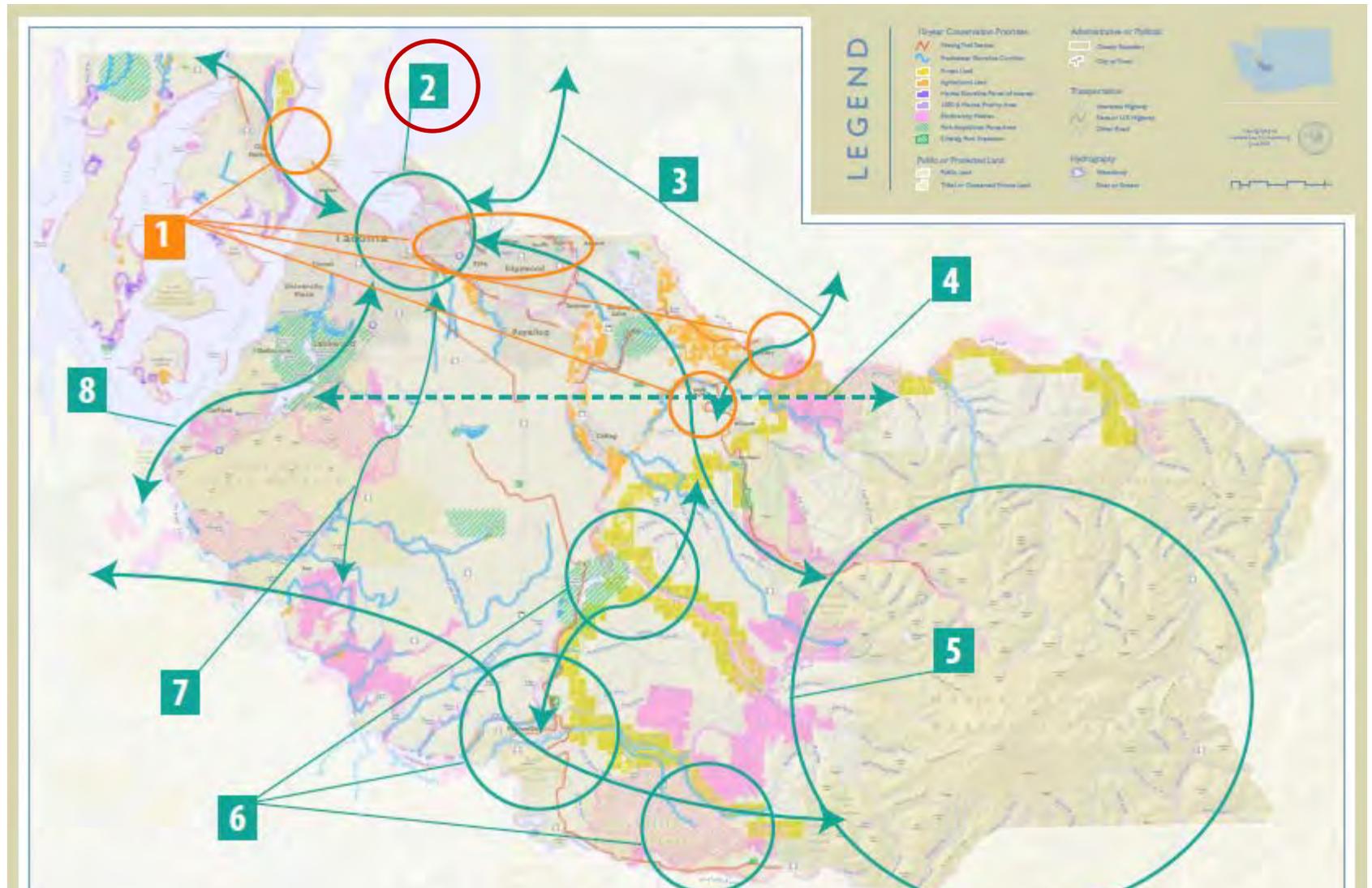
RECREATION + TRAILS: Gaps



1

Multiple gaps in regional recreation trail system (e.g. conflicts with other existing uses or landowners unable or unwilling to provide ROW).

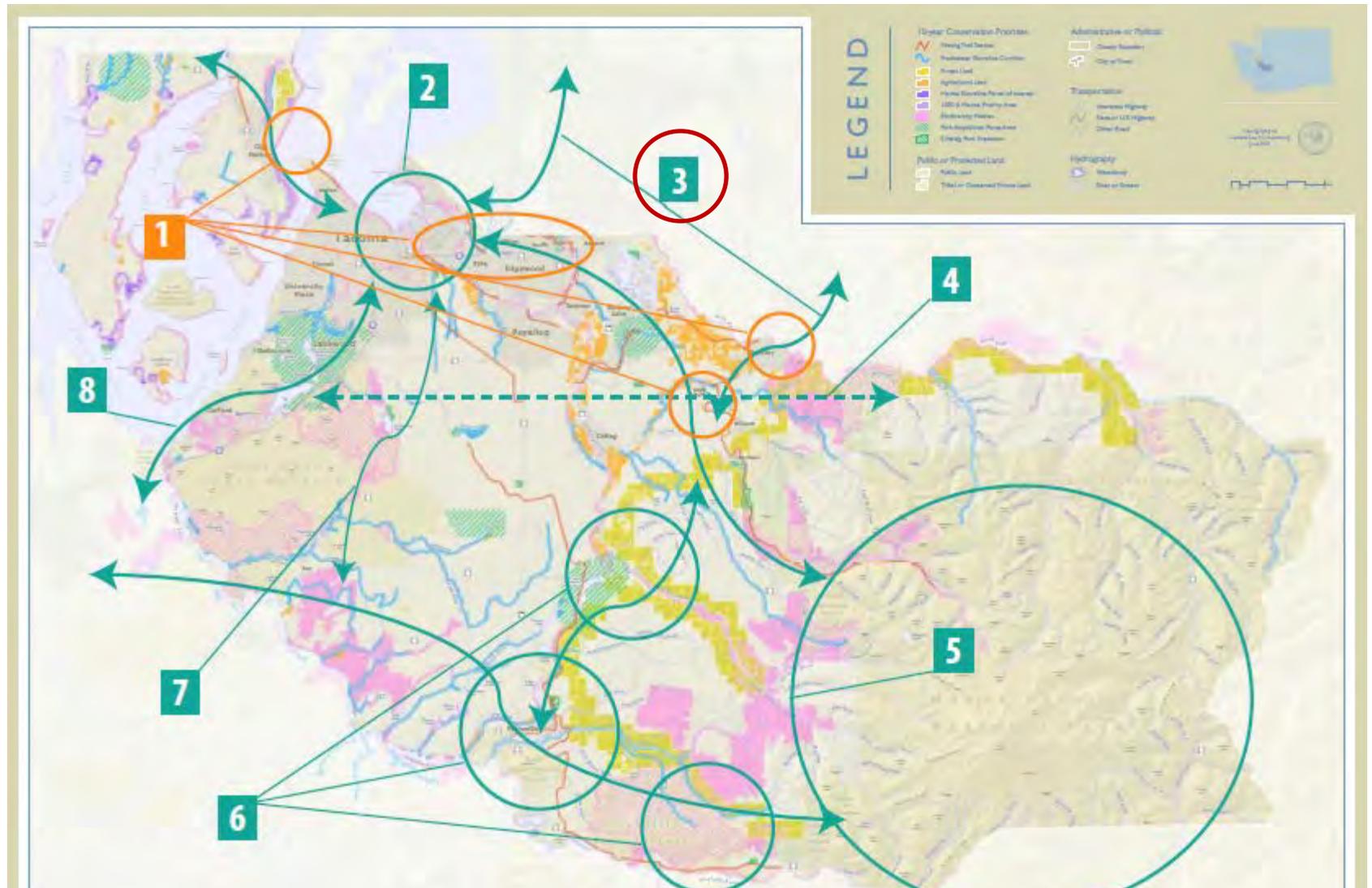
RECREATION + TRAILS: Opportunities



2

Freighthouse Square as a hub for the southern Puget Sound recreation trail system.

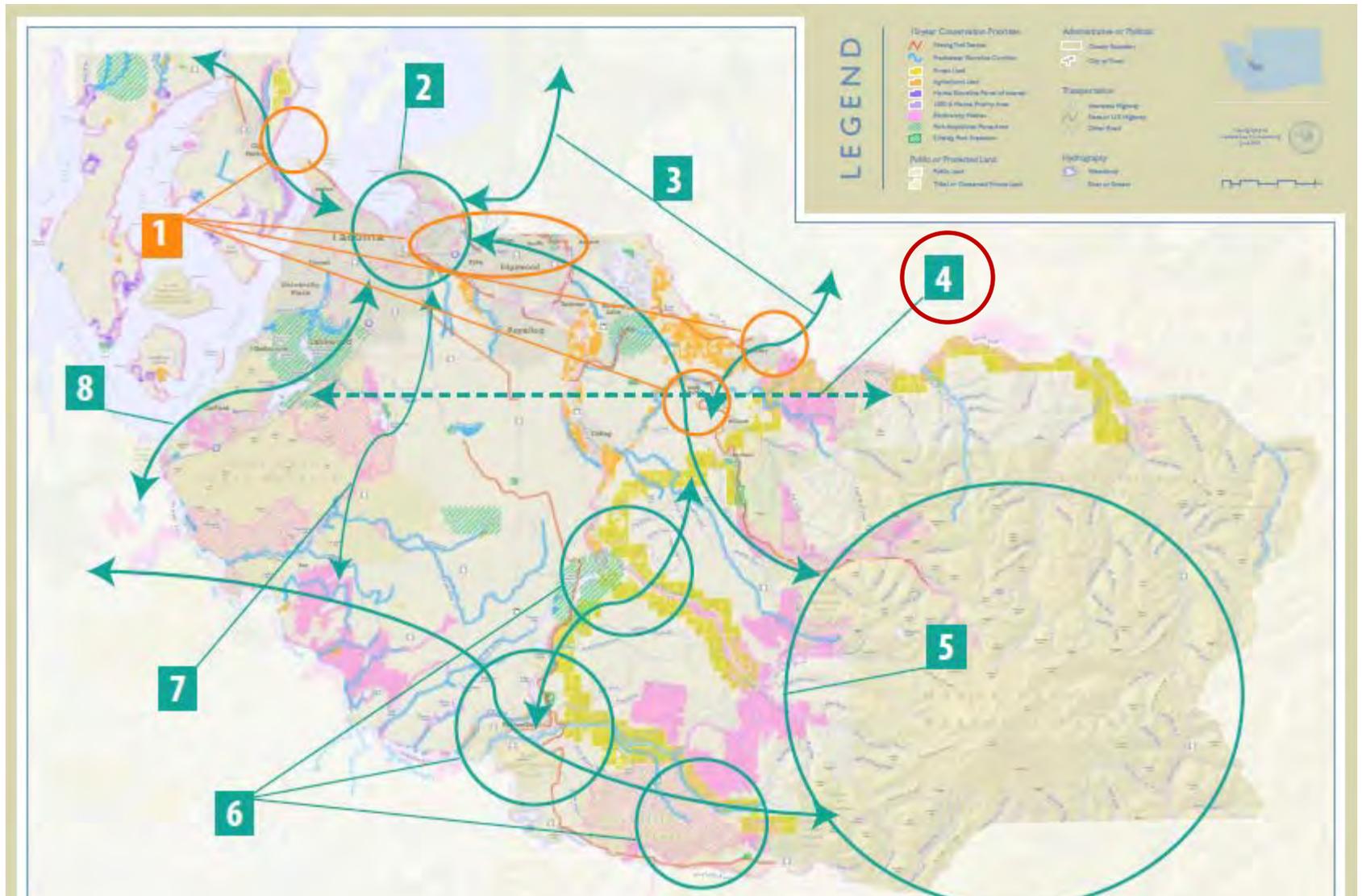
RECREATION + TRAILS: Opportunities



3

Form recreational trail corridors to other WRIsAs, CPS counties/cities, & Mountains-to-Sound Greenway (connect to Interurban Trail + Cedar River Trail).

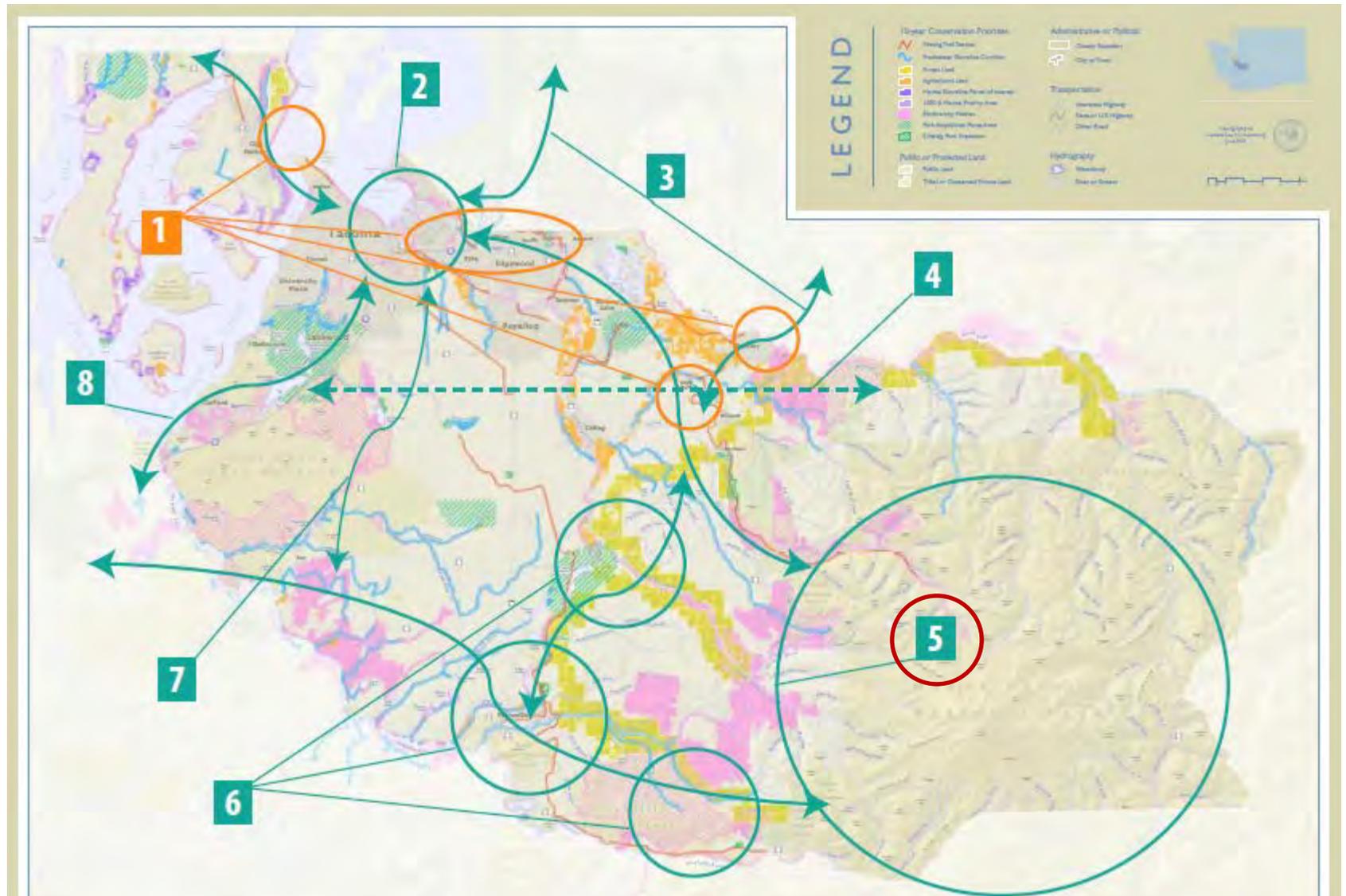
RECREATION + TRAILS: Opportunities



4

Historic Naches Trail - a branch of The Oregon Trail that could be developed into an interpretative trail system across the watershed.

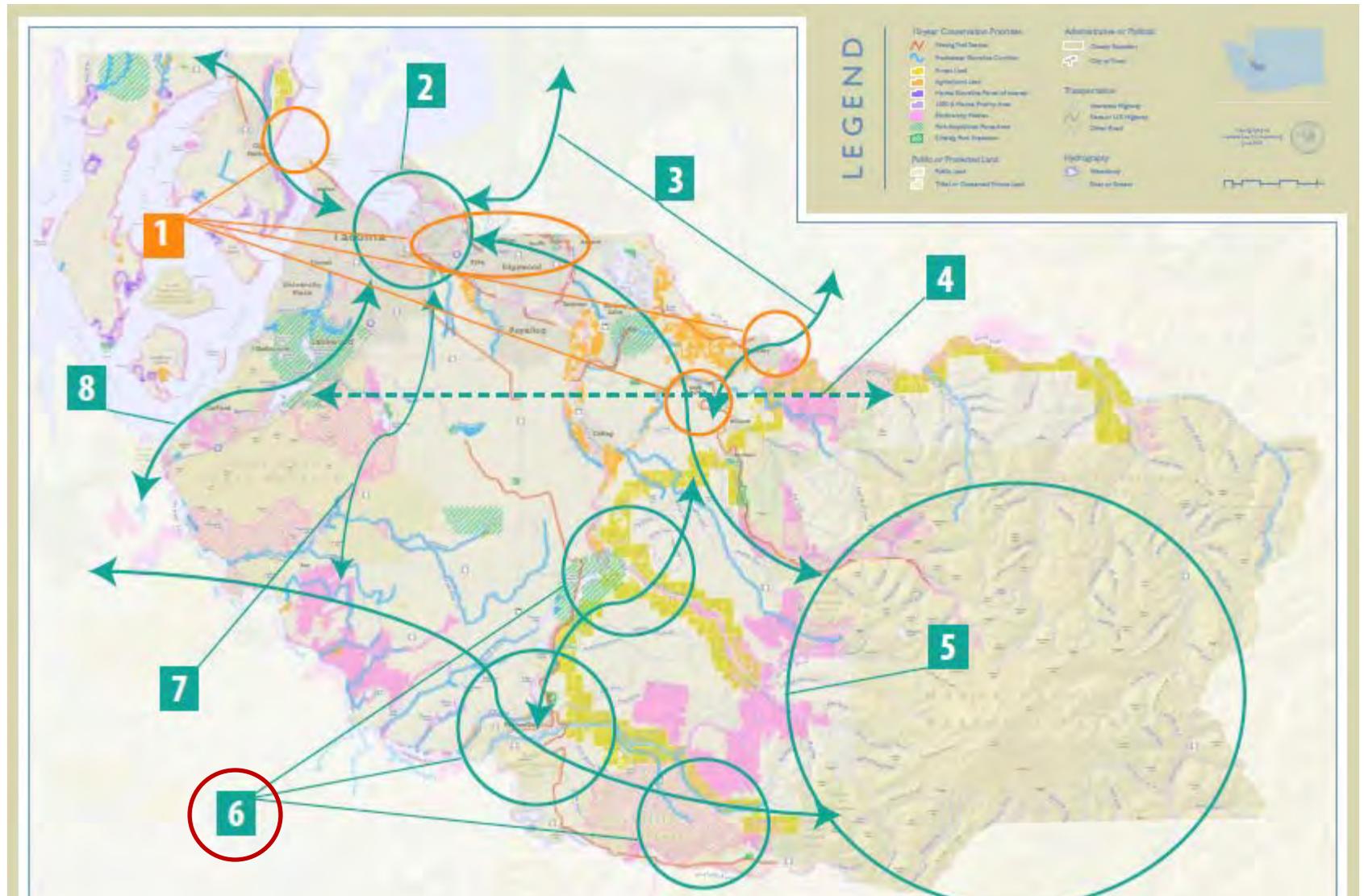
RECREATION + TRAILS: Opportunities



5

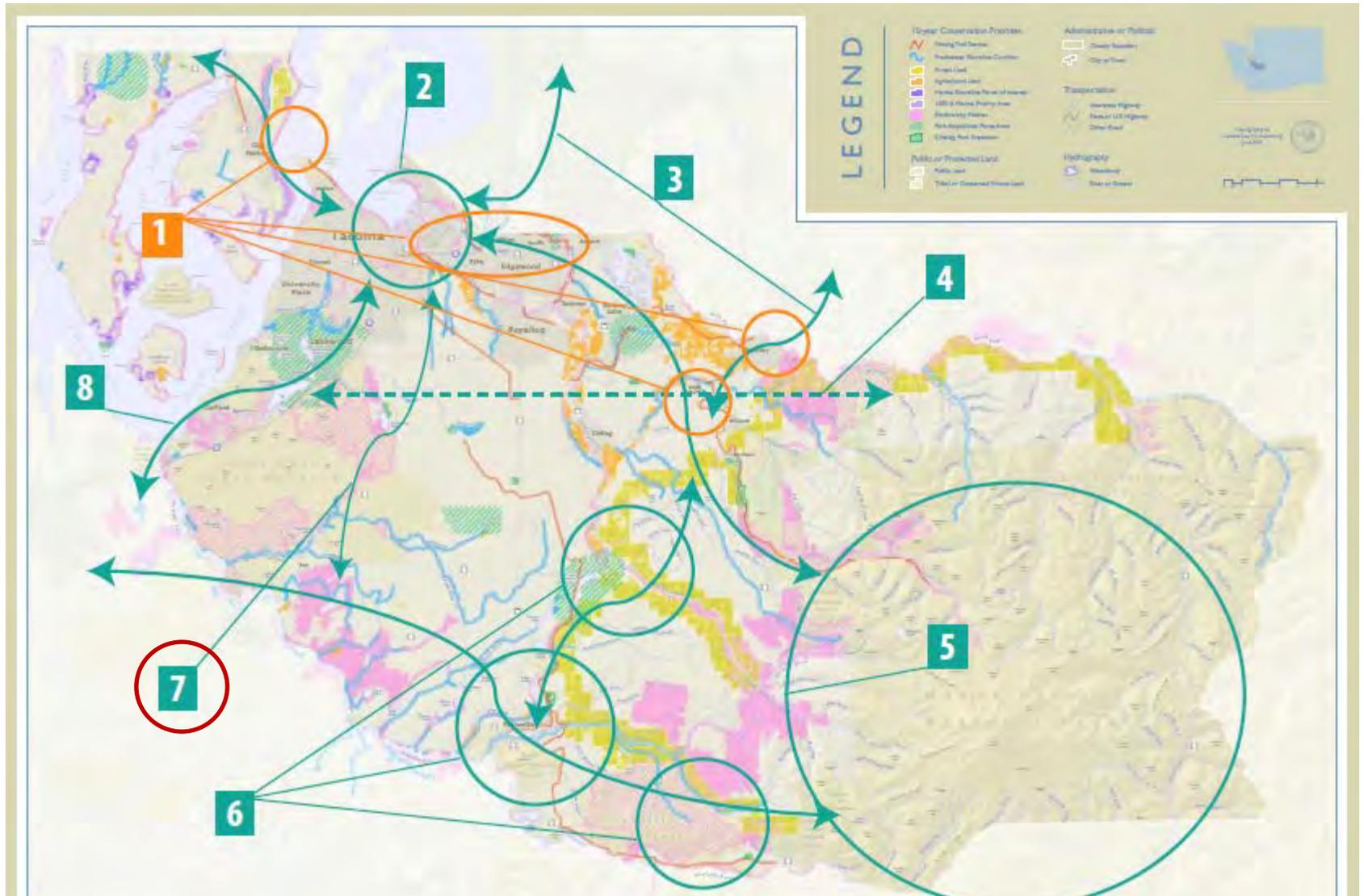
Use trails to form interstate recreation corridors by forming connections with trails extending from Mt. Rainier National Park to areas as far as Olympic National Park and Idaho.

RECREATION + TRAILS: Opportunities



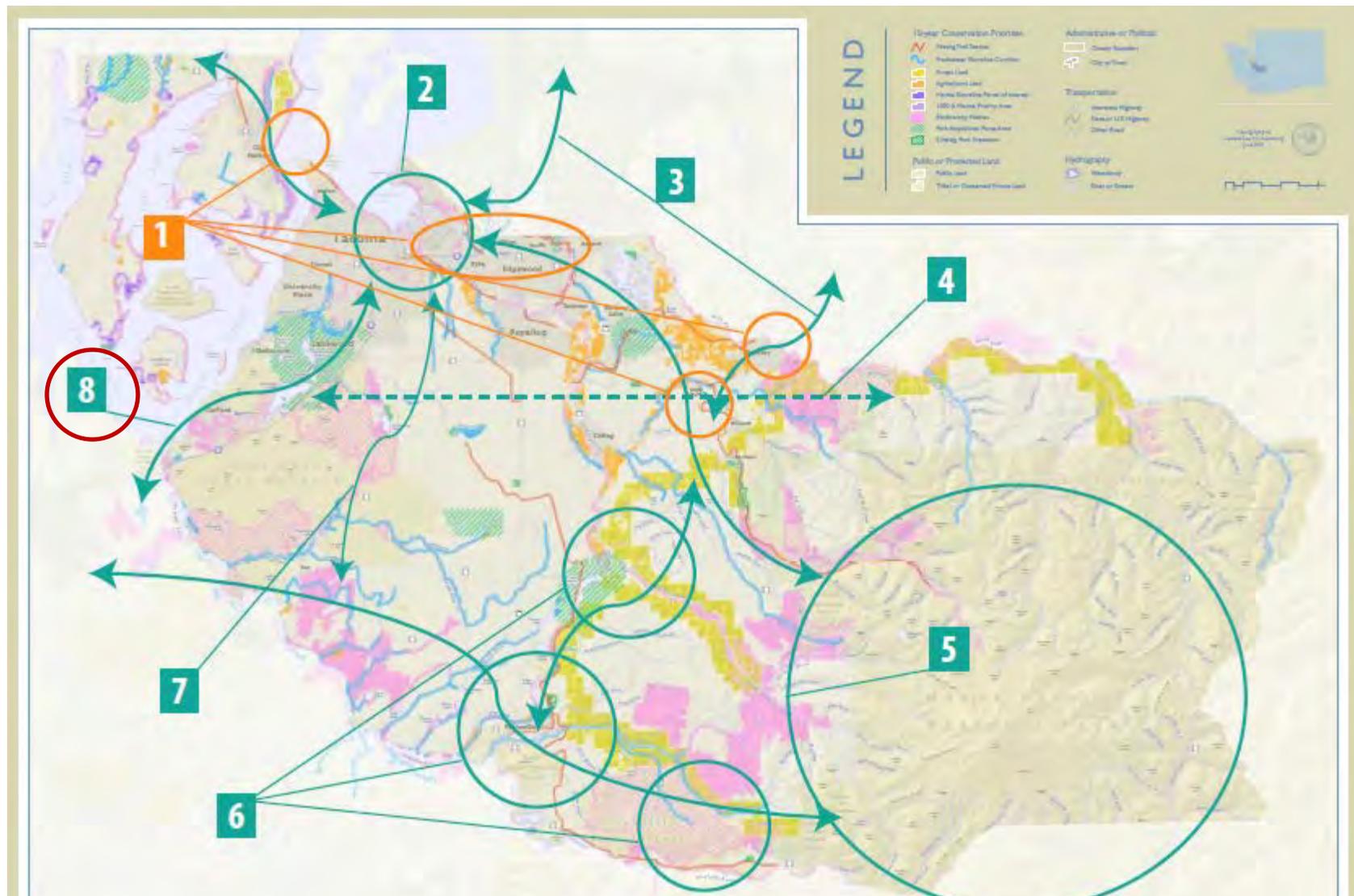
6 Multiple existing and proposed outdoor recreation lands and proposed Pierce County parks that could be pooled together into a major recreation corridor.

RECREATION + TRAILS: Opportunities



7 N-S rail corridor to link Tacoma and Mt. Rainier National Park with existing recreation trail to Tenino & Western Chehalis Trail to Yelm.

RECREATION + TRAILS: Opportunities



8

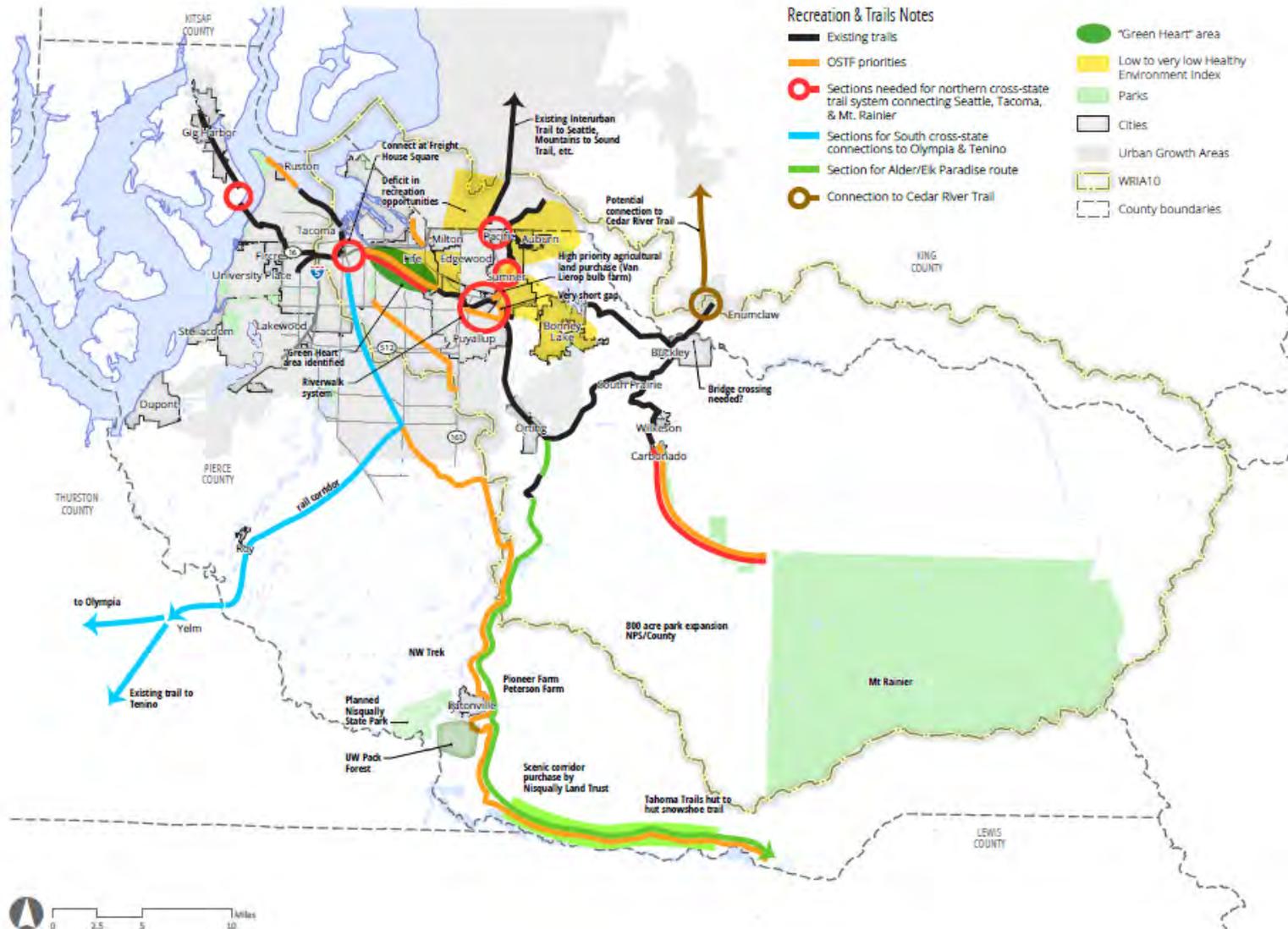
Proposed non-motorized linkages between Steilacoom and DuPont and along I-5 that could provide recreation trail connection between Tacoma and Olympia.



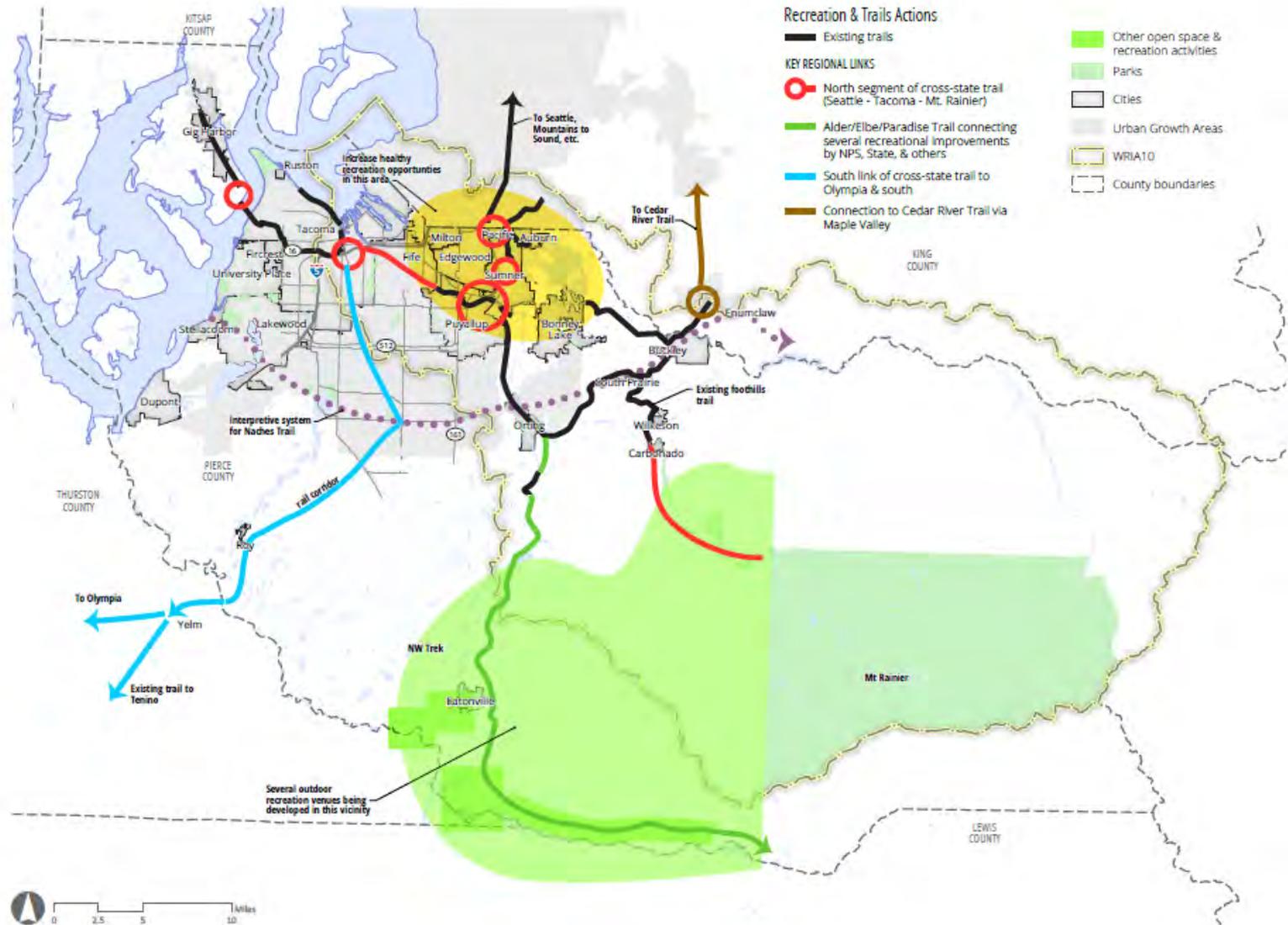
RECREATION + TRAILS: Early Findings

- Parks + Recreation are an entry point for a broader understanding of the value of open space.
- Need a clearly articulated vision for regional recreation.
- A coordinated approach to recreation between local, state, and national agencies.

Refined Notes on Recreation + Trails



Early Options for Recreation + Trails





AQUATIC SYSTEMS: Early Findings



- Notable impacts on Puyallup-White watershed due to climate change.
- Address regulatory barriers and permitting challenges.
- Stitch together Commencement Bay + estuary restoration activities.
- Implement Pierce County River Hazard Management Plan.
- Buckley Diversion Dam replacement + spring run of Chinook on White River.



BIODIVERSITY + HABITAT: Early Findings



- Pierce County Biodiversity Alliance – A model for the region.
- Fully incorporate biodiversity considerations into regional planning.
- Target at-risk habitat areas and BMAs with high proportion of private lands.
- Enact the full array of conservation tools to support habitat for biodiversity



FORESTRY: Early Findings



- Regional standards and tailored approaches to urban forest management.
- Build on efforts through the Community Forest Trust program.
- No net loss of Designated Forest Land (DFL).
- Protect + increase forest canopy cover in rural areas.
- Target land management improvements in riparian buffers and fringe of DFL.



AGRICULTURE: Early Findings



- Expand on protections for high value, high threat farmland with partners.
- A greater regional support network for new + challenged farmers.
- A more coordinated effort to brand local farming.
- Expand on conservation tools among smaller communities.
- Articulate the impact of farmland loss on rural communities.



COMMUNITY DEVELOPMENT: Early Findings



- How can OS support smart growth and community/economic development?
- Ensure equity and social justice are meaningfully included in the ROSS.
- Support existing cultures and preserve/restore cultural heritage through community and cultural mapping.
- Respond to “nature deficit disorder” + cultural disollution.



LINKING OPPORTUNITIES



- Demonstrate how OS actions connect to broader civic + community objectives.
- Develop models that demonstrate successful multi-benefit approaches..
- Enhance environmental management for urban areas
- More precise evaluation of threats + opportunities.
- Strategic spatial linkages between proposed actions.
- Expand on incentives + reduce regulatory barriers.



NEXT STEPS FOR WOSS

- **WAG #3 (February 2014) – Preliminary Actions**
 - Review + augment preliminary proposals
 - Guide refinement of proposed actions
 - Discuss ecosystem services work
- **WAG #4 (April 2014) – WOSS Outline + Refined Actions**
 - Evaluate refined actions
 - Direct WOSS development
- **WAG #5 (June 2014) – WOSS + Supportive Materials**
 - Review WOSS
 - Discuss next steps + implementation



ROSS Executive Committee

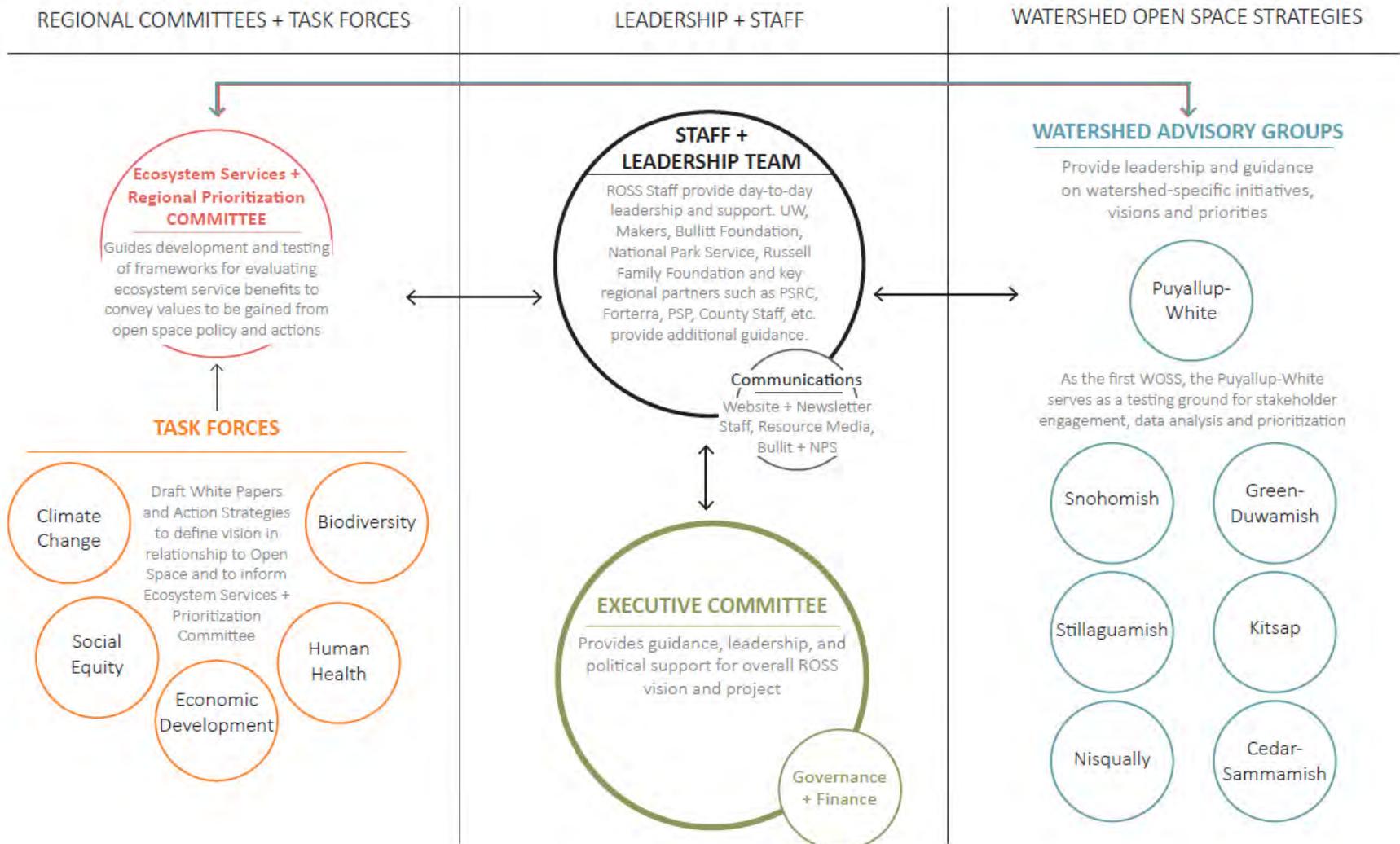
Leadership + Communications Update

November 20th, 2013

CENTRAL PUGET SOUND
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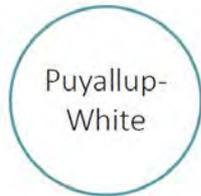
PROJECT LEADERSHIP



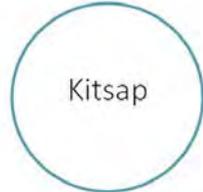
WATERSHED OPEN SPACE STRATEGIES

WATERSHED ADVISORY GROUPS

Provide leadership and guidance on watershed-specific initiatives, visions and priorities



As the first WOSS, the Puyallup-White serves as a testing ground for stakeholder engagement, data analysis and prioritization



- Watershed Advisory Group to ensure the ROSS builds on past and current activities and help identify local priorities that merit regional attention and investment.

TECHNICAL COMMITTEES + TASK FORCES



- Ecosystem Services + Regional Prioritization Committee
- Task Forces to inform the ROSS on how to articulate and track the linkage between open space and key ES benefits.

ROSS LEADERSHIP + STAFF



- Executive Committee – A forum to share key activities among partners and highlight ROSS implementation options.
- Project Leadership Team to establish a more direct link with key staff among partner organizations.
- Staff level Communications Team to support newsletter, website, and other communications needs.



ROSS Executive Committee

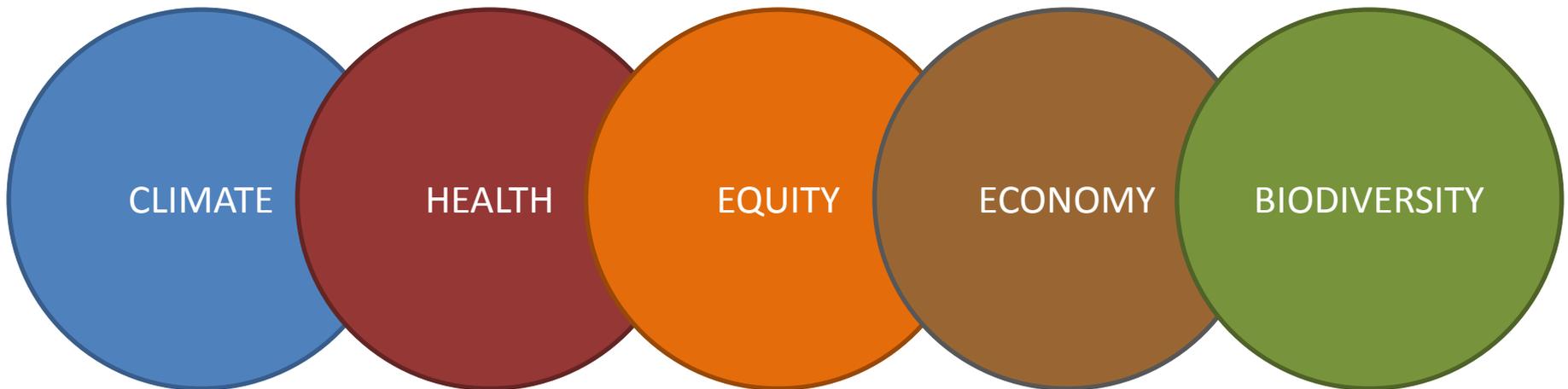
Ecosystem Services + Regional Prioritization

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FORMING A REGIONAL PRIORITIZATION CRITERIA

- Entry Criteria for WOSS projects
 - Unable to be advanced by a single jurisdiction.
 - Incorporates enhancements to key regional assets.
 - Provides a model for how to confront key contention points or provide multiple benefits.



HOW CAN ECOSYSTEM SERVICES ANALYSIS SUPPORT REGIONAL OS PRIORITIZATION?

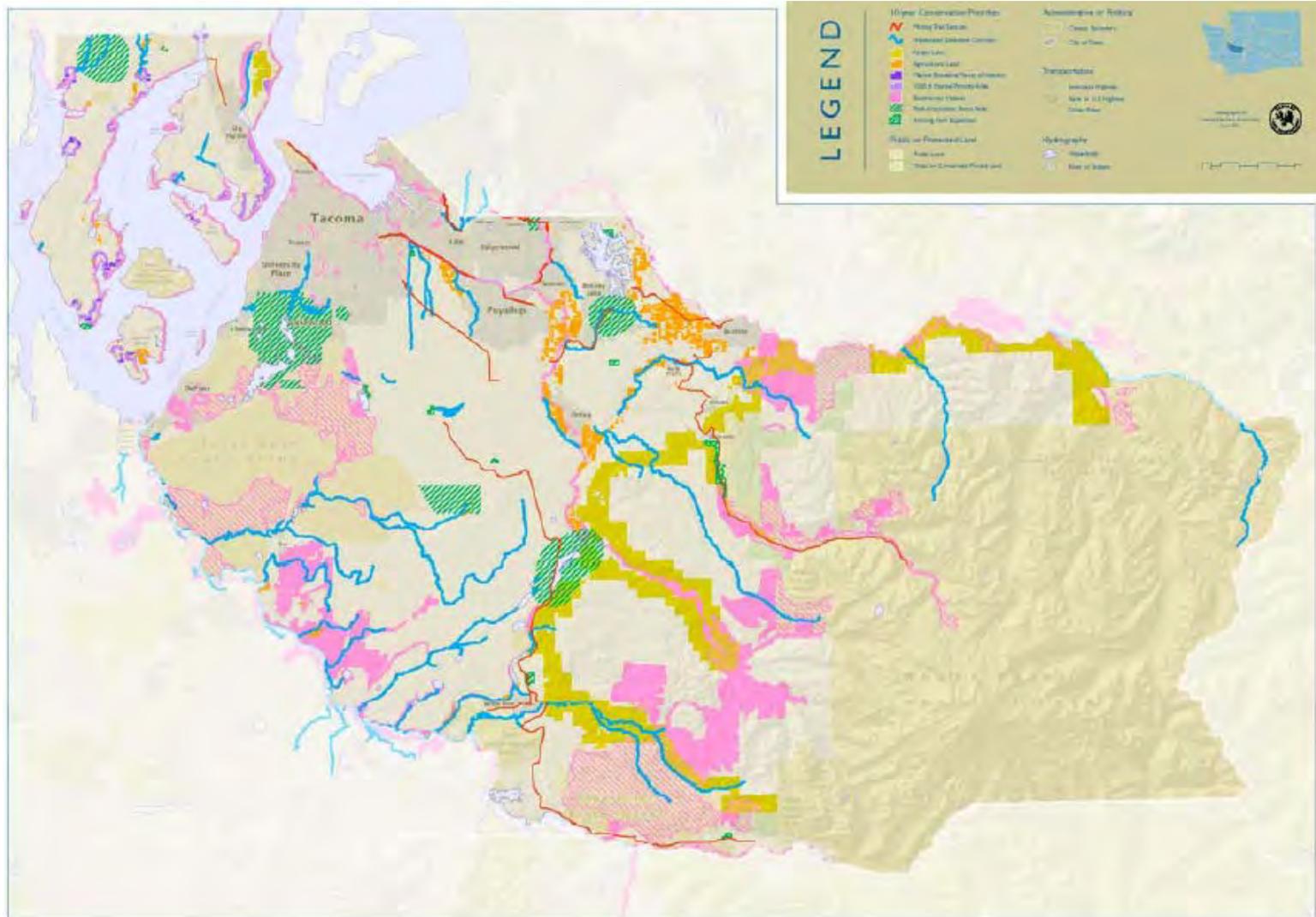
		ECOSYSTEM SERVICES			
		Supporting	Provisioning	Regulating	Cultural
OS Plans/Proposals	Biodiversity Management Area	<p style="color: red; text-align: center;">How do we fill in metrics to evaluate where a broad set/typology of proposals are hitting the mark for different sets of ES benefits?</p>			
	Specific Levee Setback				
	Trail Connection				
	Combined Farm + Fish Project				
	Community Forest Proposal				
	County PBRs program				
	TDR program				

Ecosystem Services + Regional Prioritization Committee

- Josh Baldi (WA Department of Ecology)
- Mark Buckley (ECONorthwest)
- Fletcher Beaudoin (PSU Institute for Sustainable Solutions)
- Bobby Cochran (Willamette Partnership)
- Brent Davies (EcoTrust)
- Tom Deluca (UW School of Environmental and Forest Sciences)
- Zach Ferdana (The Nature Conservancy)
- Anne Guerry (The Natural Capital Project)
- Kevin Halsey (EcoMetrix Solutions Group)
- Abigail Hook, Hook-Knauer
- William Labiosa (USGS)
- Josh Lawler (UW Landscape Ecology & Conservation Department)
- Nancy Rottle (UW Green Futures Research + Design Lab)
- Elaine Somers (EPA Region 10)
- Tracy Stanton (Earth Economics)
- Stephanie Suter (Puget Sound Partnership)
- Brian Walsh (Puget Sound Partnership)
- Steven Whitney (Bullitt Foundation)

Ecosystem Services Identification: UW Roles

Nancy Rottle, Jenny Duggan, University of Washington



Database and Ecosystem Services Identification

- Geography students collecting GIS data and organizing database

Database and Ecosystem Services Identification

- Geography students collecting GIS data and organizing database
- Environmental Management Certificate students (4):
 - Developing framework for evaluating ecosystem services related to the ROSS

Ecosystem Service Overlaps

	Forest Acquisition	Trail Building	Biodiversity	Farmland	Parks
Aesthetics					
Aquifer recharge					
Carbon emissions reduction					
Carbon Sequestration					
Climate adaptation					
Community					
Connectivity					
Consequential species					
Consumption					
Cultural					
Development					
Economics					
Education					
Equity					
Fires					
Flood Control					
Food security					
Functionality of ecosystem					
Habitat					
Heat islands					
Intrinsic values					
Jobs					
Medicinal					
Permeability					
Pollinators					
Pollution					
Property values					
Public Health					
Recreation					
Regionalism					
Resilience					
Species protection (Keystone)					
Storm Buffers					
Timber					
Transportation					
Water Quality					
Water usage					

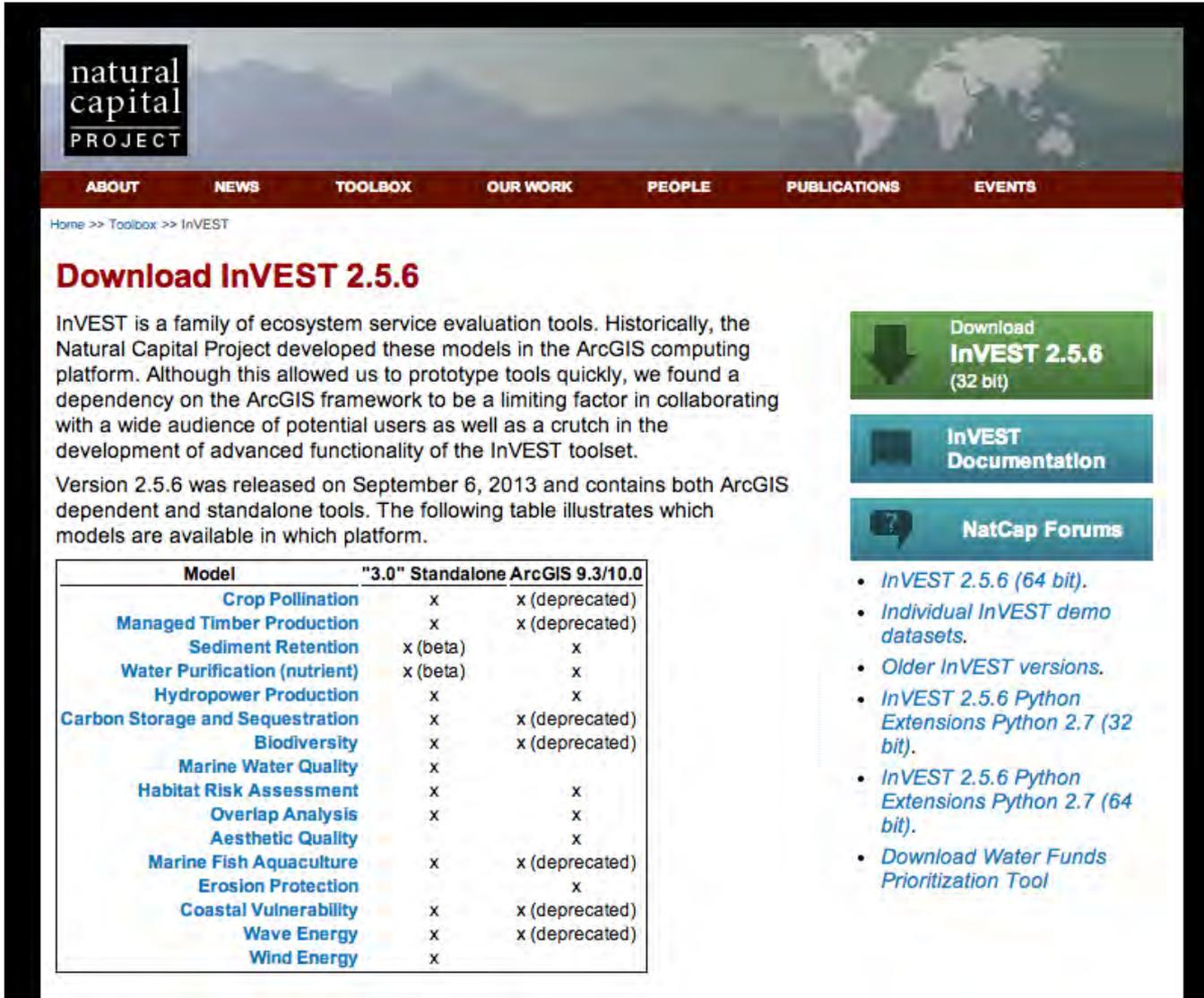
Key	
Positive	
Negative	
Both	
Identified without value	

Database and Ecosystem Services Identification

- Geography students collecting GIS data and organizing database
- Environmental Management Certificate students (4):
 - Developing framework for evaluating ecosystem services related to the ROSS
 - Identifying models for evaluating ecosystem services

Natural Capital InVEST Model

Integrated Valuation of Ecosystem Services and Tradeoffs



The screenshot shows the Natural Capital Project website. At the top left is the logo "natural capital PROJECT". A navigation bar contains links for ABOUT, NEWS, TOOLBOX, OUR WORK, PEOPLE, PUBLICATIONS, and EVENTS. Below the navigation bar, the breadcrumb "Home >> Toolbox >> InVEST" is visible. The main heading is "Download InVEST 2.5.6".

InVEST is a family of ecosystem service evaluation tools. Historically, the Natural Capital Project developed these models in the ArcGIS computing platform. Although this allowed us to prototype tools quickly, we found a dependency on the ArcGIS framework to be a limiting factor in collaborating with a wide audience of potential users as well as a crutch in the development of advanced functionality of the InVEST toolset.

Version 2.5.6 was released on September 6, 2013 and contains both ArcGIS dependent and standalone tools. The following table illustrates which models are available in which platform.

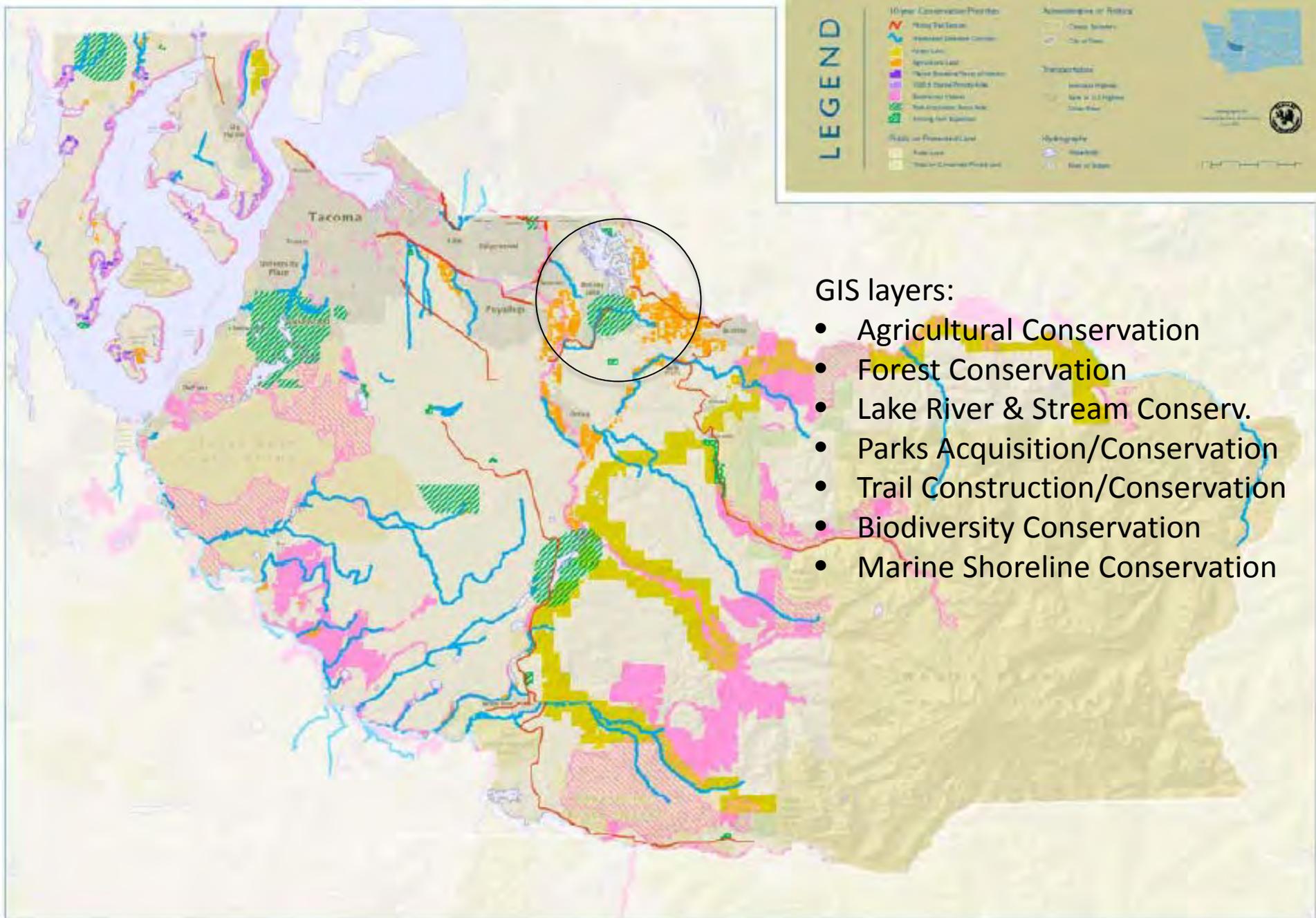
Model	"3.0"	Standalone	ArcGIS 9.3/10.0
Crop Pollination	x		x (deprecated)
Managed Timber Production	x		x (deprecated)
Sediment Retention	x (beta)		x
Water Purification (nutrient)	x (beta)		x
Hydropower Production	x		x
Carbon Storage and Sequestration	x		x (deprecated)
Biodiversity	x		x (deprecated)
Marine Water Quality	x		
Habitat Risk Assessment	x		x
Overlap Analysis	x		x
Aesthetic Quality			x
Marine Fish Aquaculture	x		x (deprecated)
Erosion Protection			x
Coastal Vulnerability	x		x (deprecated)
Wave Energy	x		x (deprecated)
Wind Energy	x		

On the right side of the page, there are three buttons: "Download InVEST 2.5.6 (32 bit)", "InVEST Documentation", and "NatCap Forums". Below these buttons is a list of links:

- [InVEST 2.5.6 \(64 bit\)](#).
- [Individual InVEST demo datasets](#).
- [Older InVEST versions](#).
- [InVEST 2.5.6 Python Extensions Python 2.7 \(32 bit\)](#).
- [InVEST 2.5.6 Python Extensions Python 2.7 \(64 bit\)](#).
- [Download Water Funds Prioritization Tool](#)

Database and Ecosystem Services Identification

- Geography students collecting GIS data and organizing database
- Environmental Management Certificate students (4):
 - Developing framework for evaluating ecosystem services related to the ROSS
 - Identifying models for evaluating ecosystem services
 - Testing use of Natural Capital's InVEST models, using the Pierce Co. 10-year Priorities data [vs. worst-case].



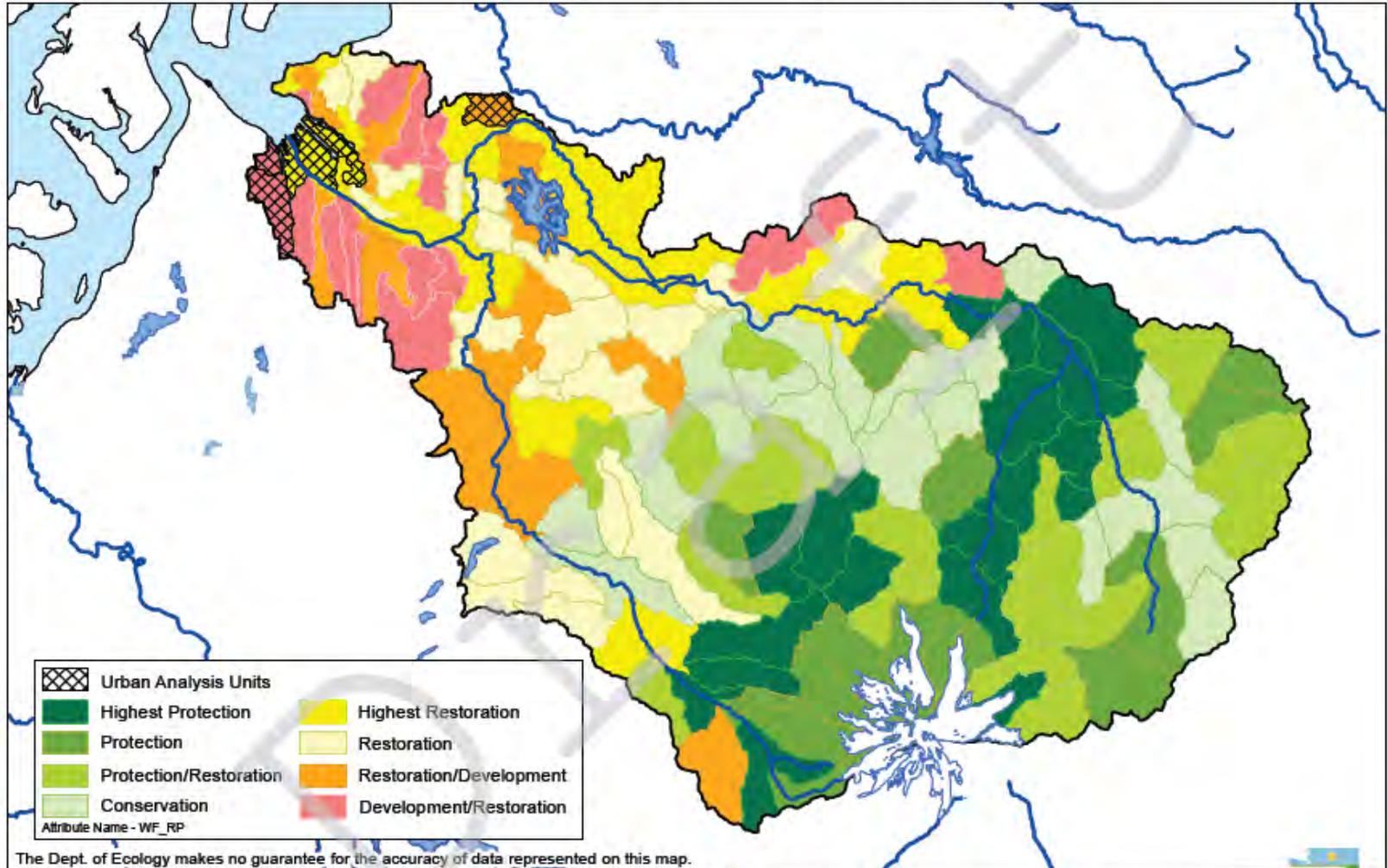
GIS layers:

- Agricultural Conservation
- Forest Conservation
- Lake River & Stream Conserv.
- Parks Acquisition/Conservation
- Trail Construction/Conservation
- Biodiversity Conservation
- Marine Shoreline Conservation

Pierce County Open Space Taskforce 10 Year Open Space Priorities

Basin Boundaries

Overall Protection & Restoration for Water Flow Puyallup/White Watershed (WRIA 10)



The Dept. of Ecology makes no guarantee for the accuracy of data represented on this map.

Produced by the Watershed Characterization
Technical Assistance Team

For more information on data and models used go to:
www.ecy.wa.gov/services/gis/data/puget_sound/characterization.htm



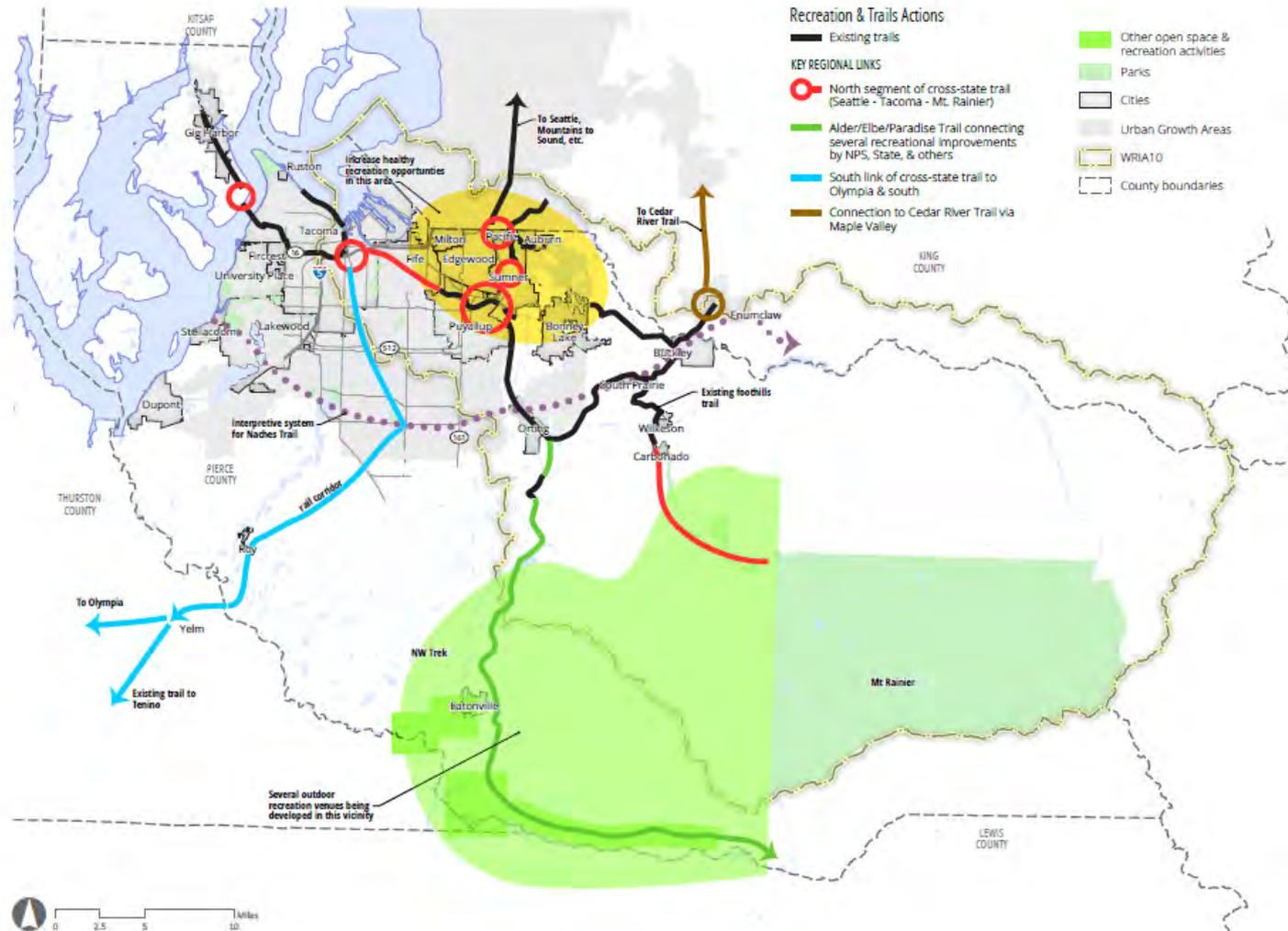
0 3 6 Miles



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 - Developing framework for evaluating ecosystem services related to the ROSS
 - Identifying models for evaluating ecosystem services
 - Testing use of Natural Capital's InVEST models, using the Pierce Co. 10-year Priorities data
 - Will test test new Puyallup-White WOSS priorities and draft open space investment Prioritization Criteria (Winter Term).

Goal: Testing Ecosystem Services on Updated WOSS



Database and Ecosystem Services Identification

- Geography students collecting GIS data and organizing database
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 - Identifying models for evaluating ecosystem services
 - Testing use of Natural Capital's InVEST models, using the Pierce Co. 10-year Priorities data
 - Will test test new Puyallup-White WOSS priorities and draft open space investment Prioritization Criteria (Winter Term).
 - Documented in Report to serve as a Roadmap for future ecosystem service valuation in WOSSes.

ROUNDTABLE DISCUSSION



QUESTIONS + COMMENTS

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University of Washington

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