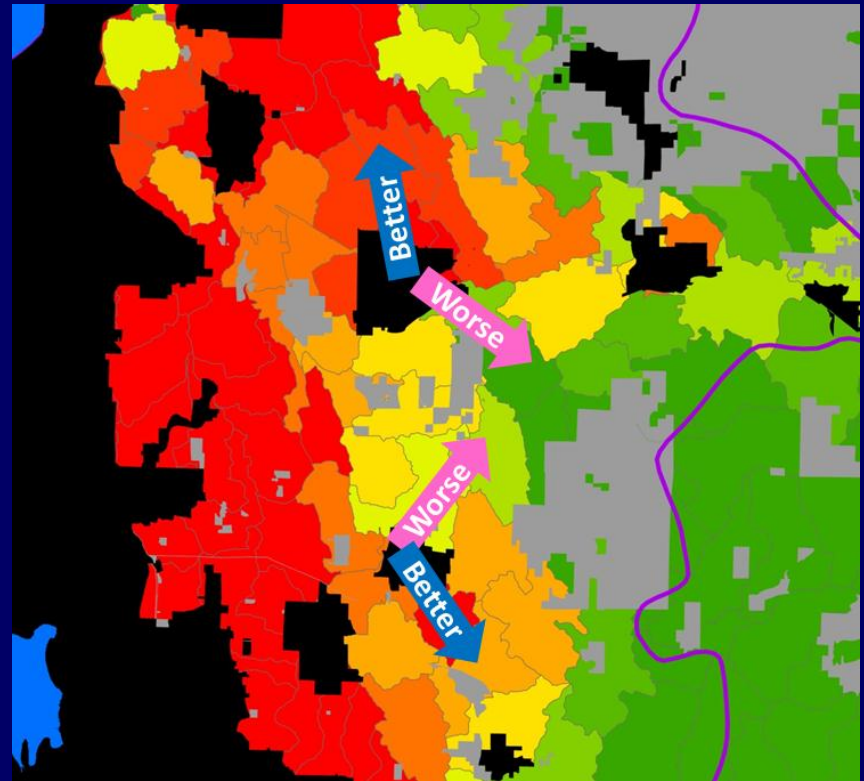
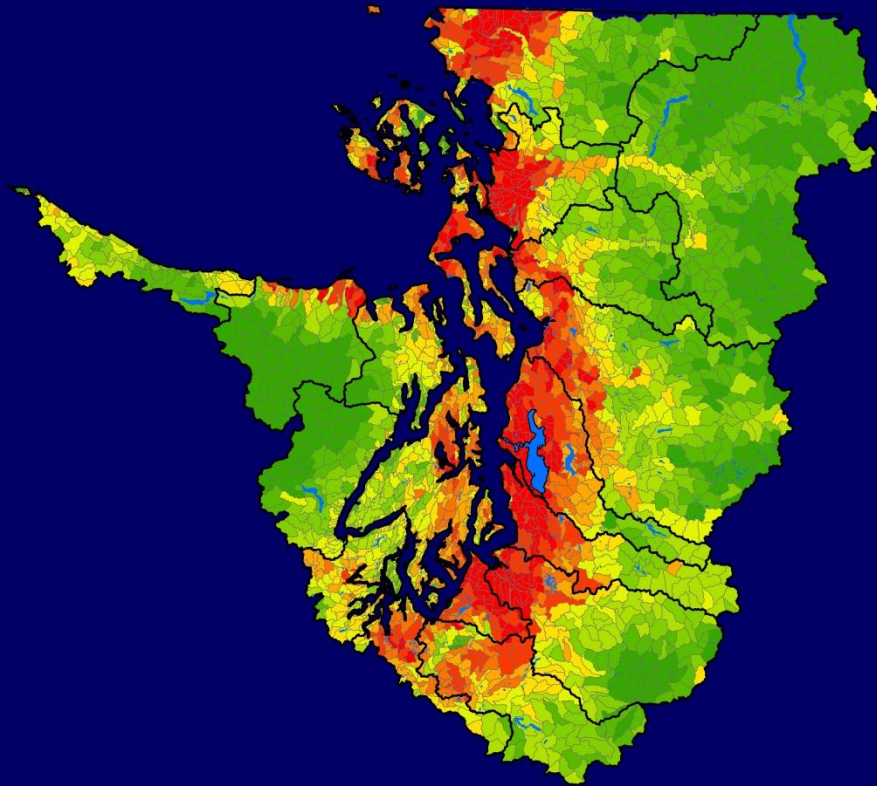


Watershed Characterization: Informing Landscape-scale Land use Decisions by Local Governments



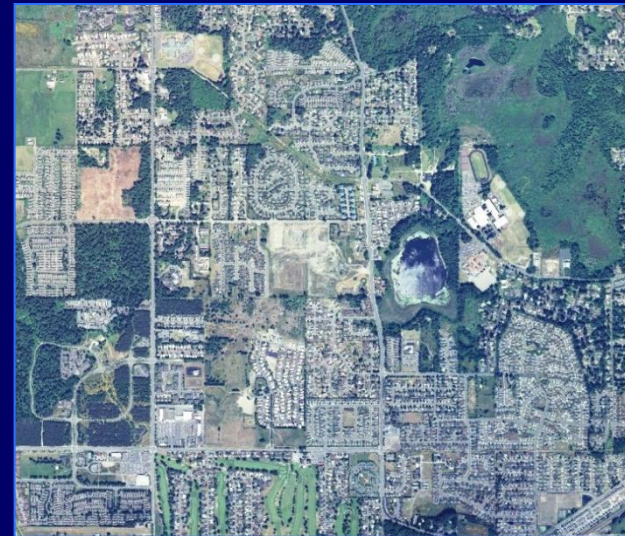
Key Points

- Urbanization is a major threat to fish and wildlife habitats.
- GMA and SMA require local governments to protect habitats.
- WDFW engages as partners in land-use planning under GMA and SMA.
- Watershed Characterization is WDFW's latest product for local planning.



Talk Outline

- Overview of Habitat Program's activities
- Review Priority Habitat and Species Program
- What's New – Puget Sound Water Characterization Project



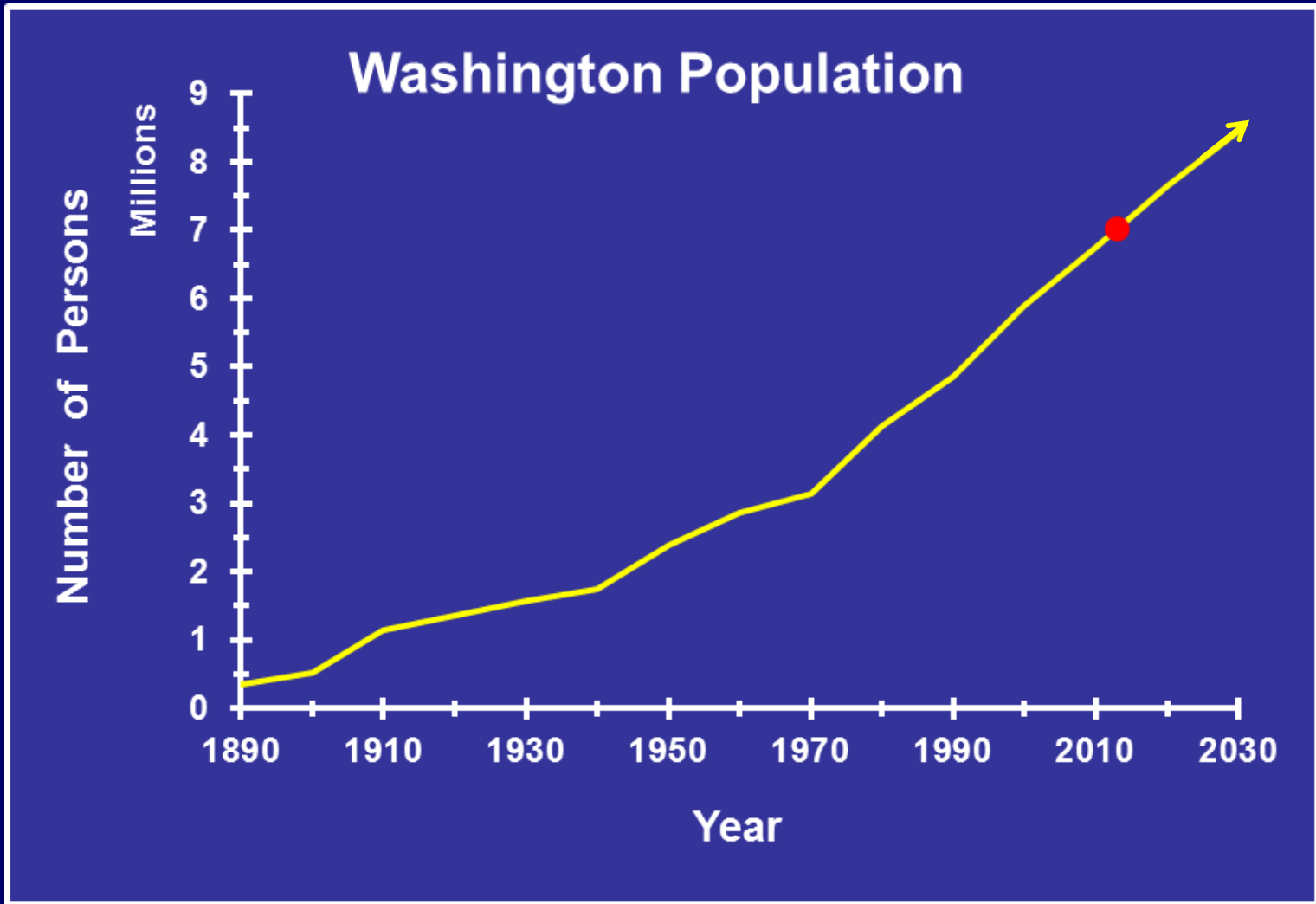
Habitat Program Affects Conservation via:

- Review and permit hydraulic projects
- Aquatic Habitat Guidelines for construction projects in state waters
- Mitigate renewable energy projects
- Habitat restoration programs (ESRP, Columbia MOU)
- Growth Management Act (GMA)
- Shoreline Management Act (SMA)
- Forest Practices Act (FPA)
- Science efforts to provide BAS under GMA and FPA
- Facilitating land acquisition
- Technical assistance to other agencies

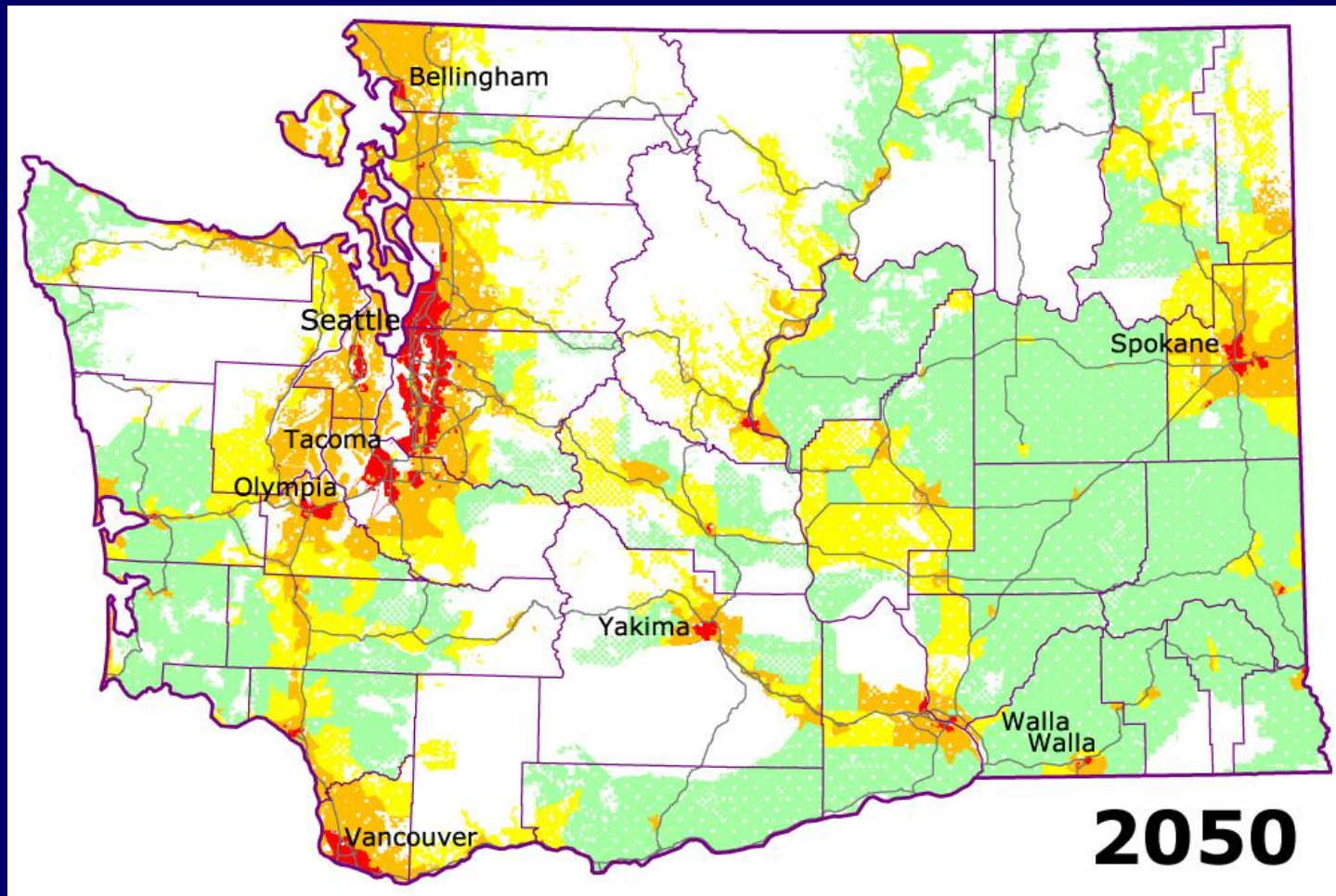
Habitat Program Affects Conservation via:

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Mixed Blessings



OFM (2004)



Center of the American West
 University of Colorado (2001)

Land Use Categories

- Urban/Suburban (>2 units per acre)
- Low Density Suburban (1 unit per 0.5 to 10 acres)
- Exurban (1 unit per 10 to 40 acres)
- Rural (less than 1 unit per 40 acres)
- Unbuildable (public land, open water, too steep)
- County Line
- Major Highway

Growth Management Act

WAC 365-190-130 Fish and wildlife habitat conservation areas.

(2) Fish and wildlife habitat conservation areas that must be considered for classification and designation include:

(a) Areas where **endangered, threatened, and sensitive species** have a primary association;

(b) Habitats and species of local importance, as determined locally;

(4) (a) Counties and cities should consult current information on **priority habitats and species** identified by the Washington state department of fish and wildlife.

Shoreline Management Act

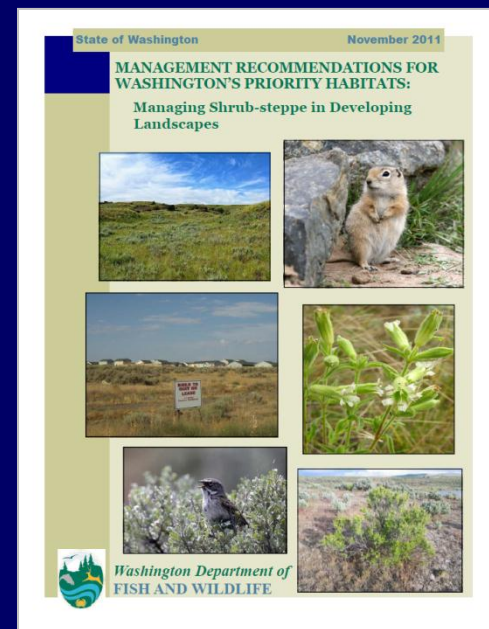
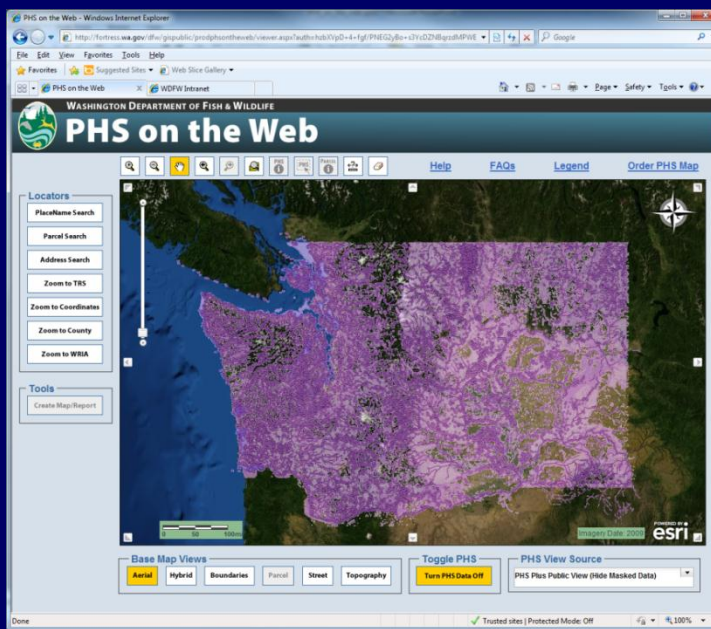
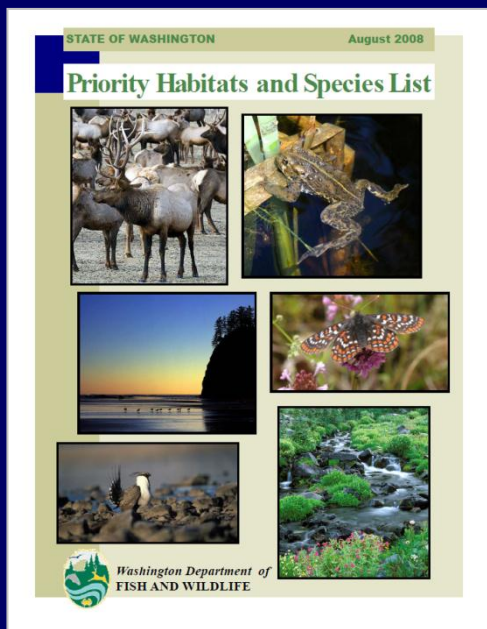
WAC 173-26-221 General master program provisions.

Shoreline master programs must provide for management of critical areas.

Local governments shall protect kelp and eelgrass beds, forage fish spawning and holding areas, and **priority species habitat** identified by the department of natural resources' aquatic resources division, the **department of fish and wildlife**, the department, and affected Indian tribes as critical saltwater habitats.

Priority Habitat and Species Program

Delivering essential information for habitat conservation



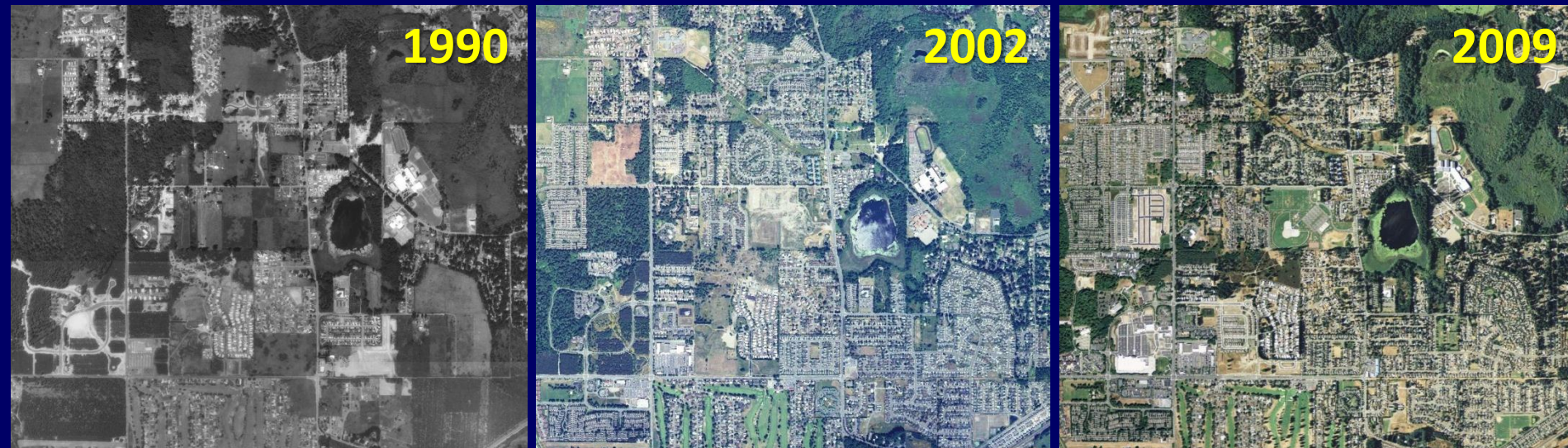
- Identify and define **what** species and habitats are priorities for conservation.
- Map **where** these habitats and species are located.
- Recommend **how** to protect these resources.
- WDFW staff **engages** in local planning as a partner.

PHS Authorizing Environment

Growth Management Act: land use planning, land use zoning, critical areas ordinances

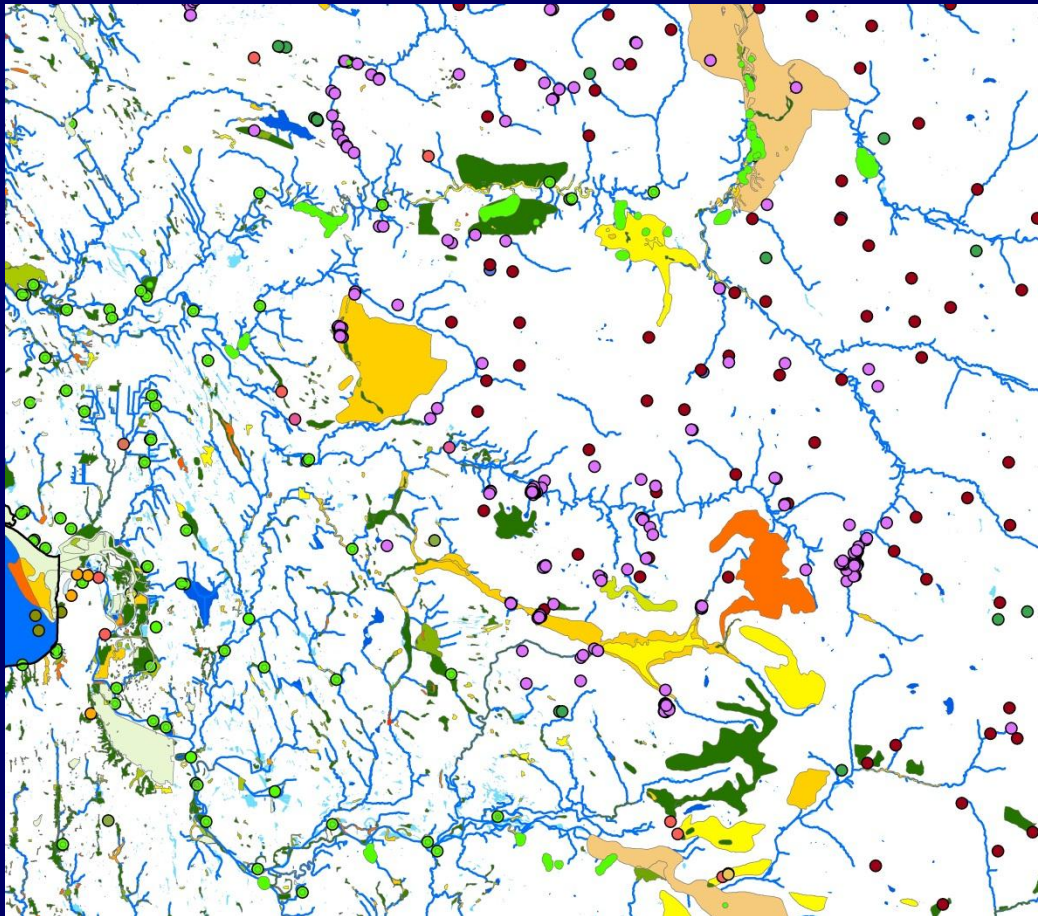
Shoreline Management Act: inventory shoreline areas, ensure no-net-loss of ecological function, adopt shoreline regulations

Recent growth of Lacey, Washington



1st Generation PHS Products

- Maps with points and polygons depict PHS locations
- Management rec's based on scientific literature



May
1991

Management Recommendations for Washington's Priority Habitats and Species

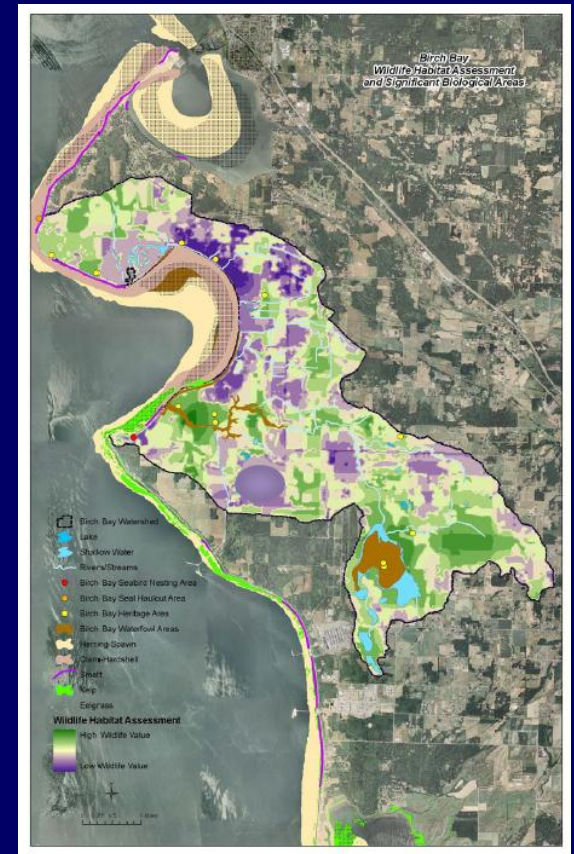
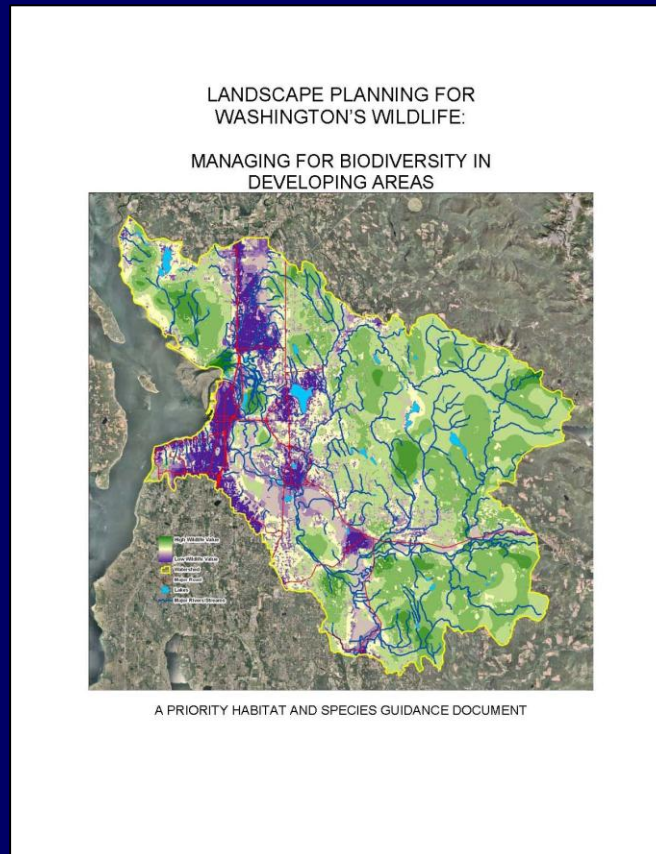
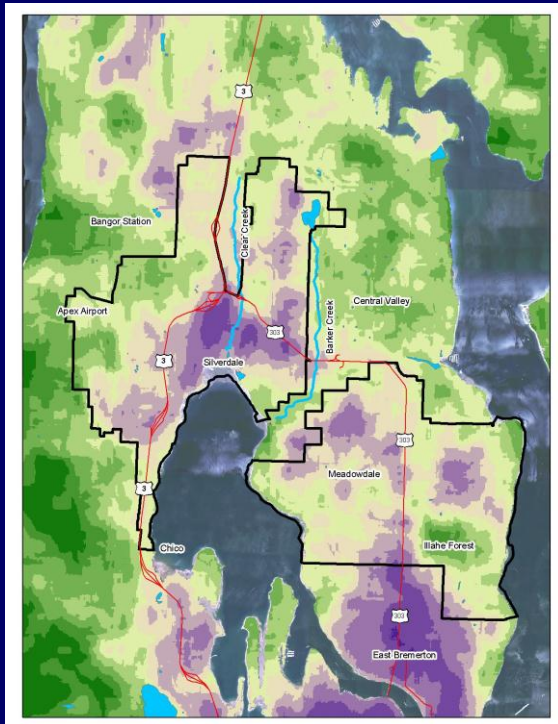
Elizabeth Rodrick and Ruth Milner, Technical Editors



Washington Department of Wildlife
Wildlife Management, Fish Management,
and Habitat Management Divisions

2nd Generation PHS Products

- PHS data and management recommendations
- Landscape-scale analyses of habitat conservation value
- Direct staff engagement in local land use planning



Watershed Characterization

WDFW People

George Wilhere

Tim Quinn

John Jacobson

Dale Gombert

Andy Weiss

Ken Pierce

Kirk Krueger

Dayv Lowry

Kevin Samson

John Pierce

Scott Pearson

Ken Warheit

Mara Zimmerman

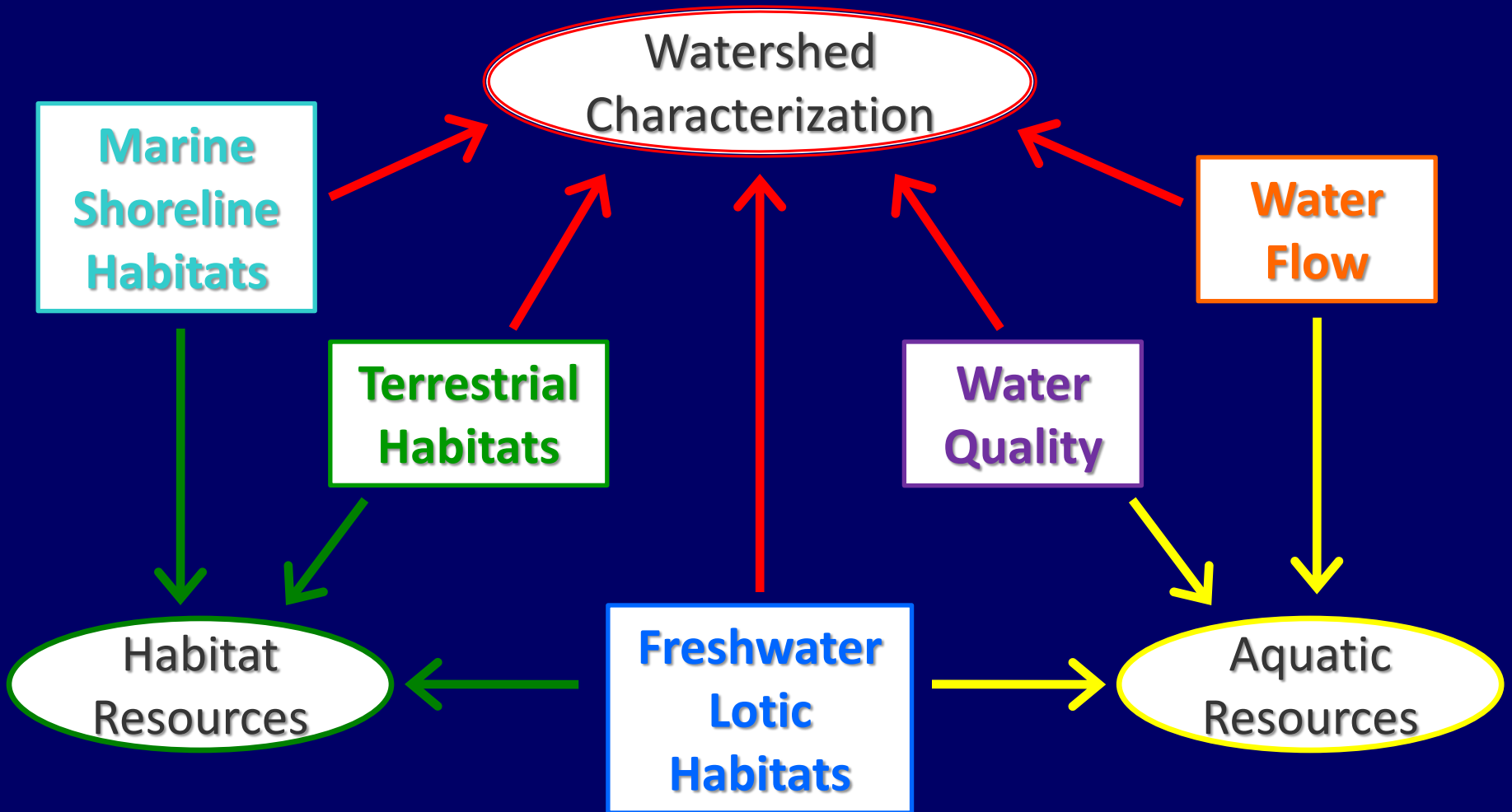
Paul Cereghino

Curtis Tanner

In a Nutshell

- We're developing coarse-scale information for local land use planning: **relative habitat conservation value**
- Our goal: **make land use planning a little smarter**
- The fish and wildlife habitats assessments will be **complemented by Ecology's water flow and water quality assessments.**
- **Local data and knowledge** must be incorporated during city and county land use planning.

Habitats & Water



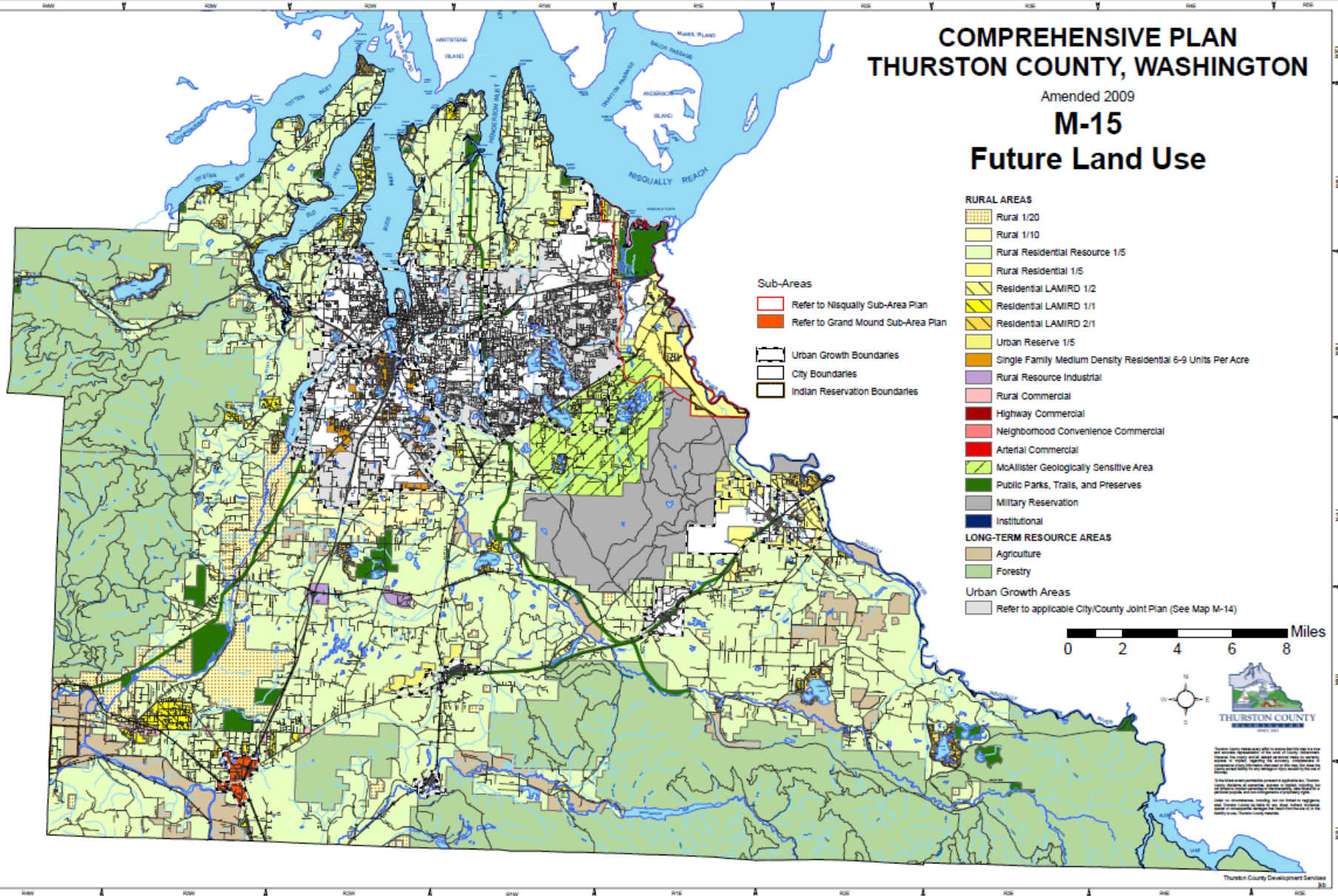
Landscape-scale Habitat Conservation

COMPREHENSIVE PLAN THURSTON COUNTY, WASHINGTON

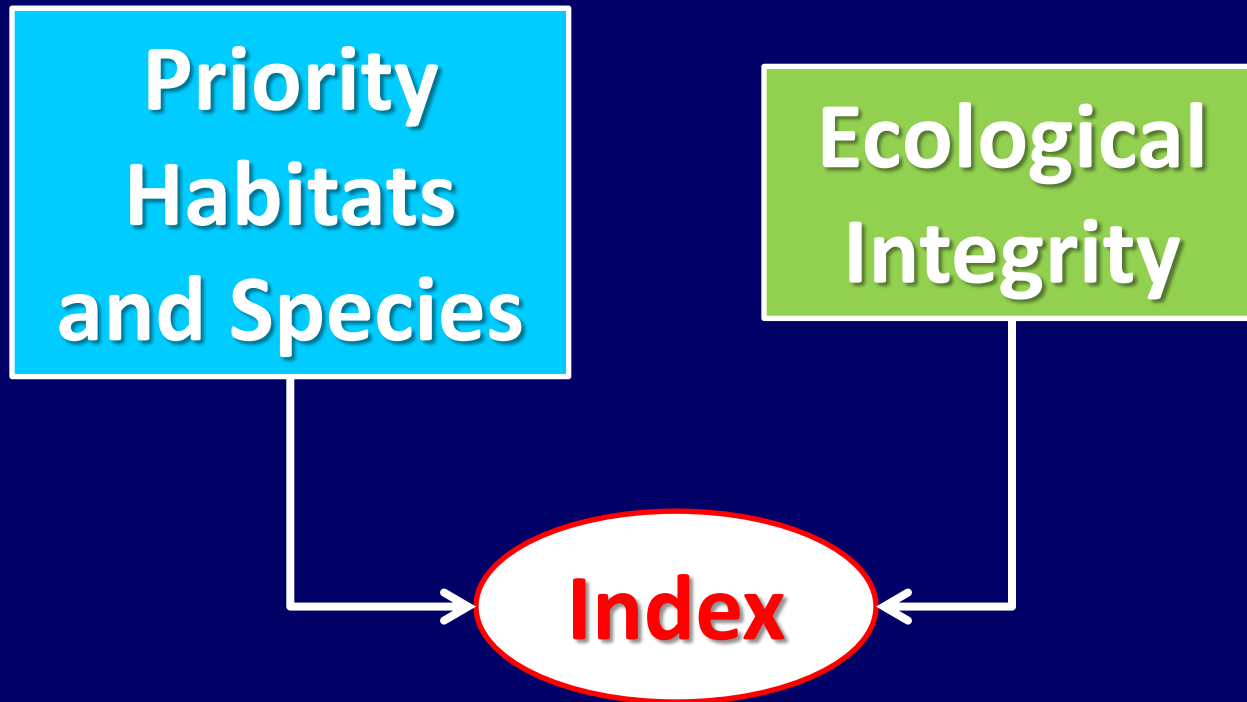
Amended 2009

M-15

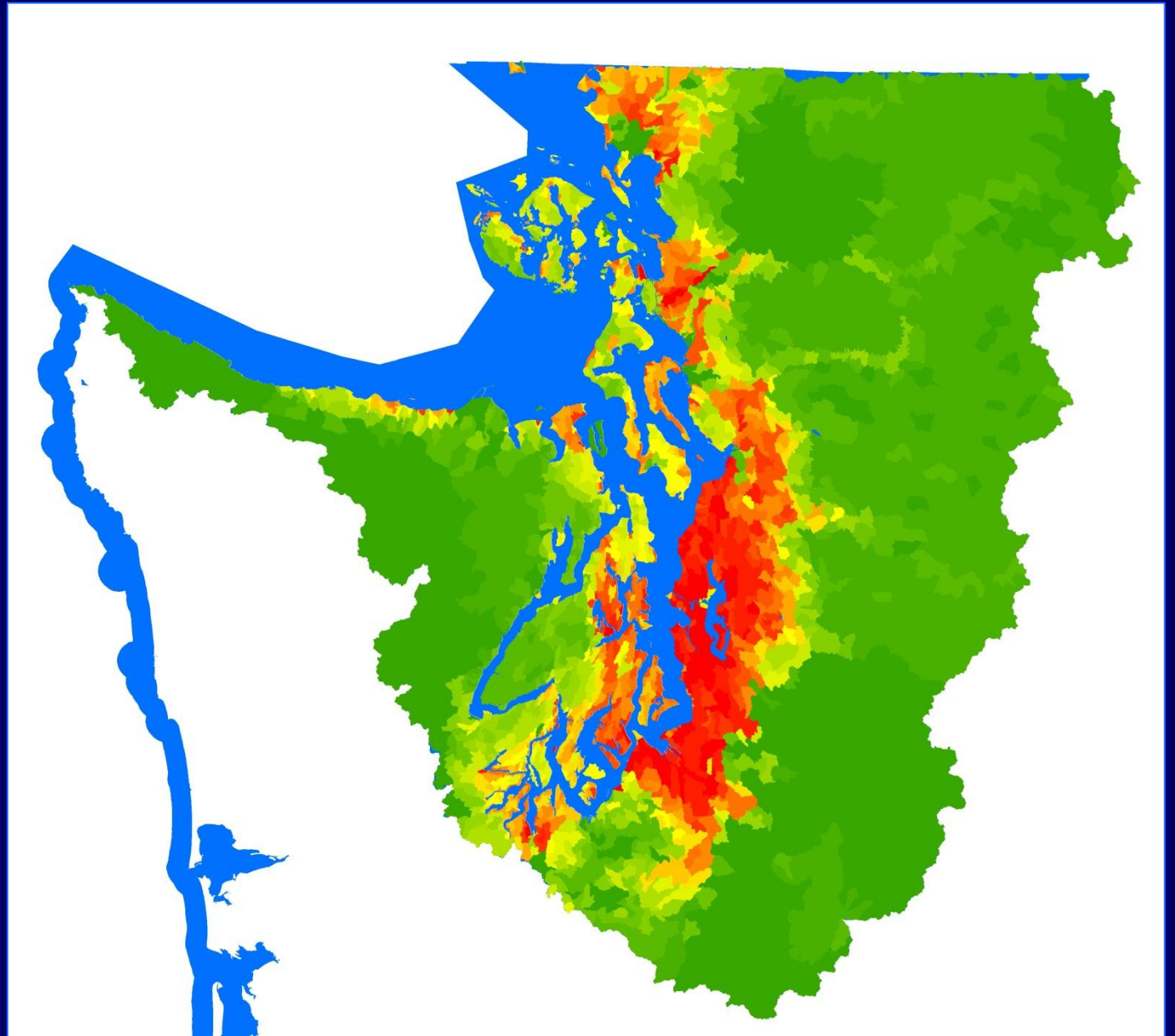
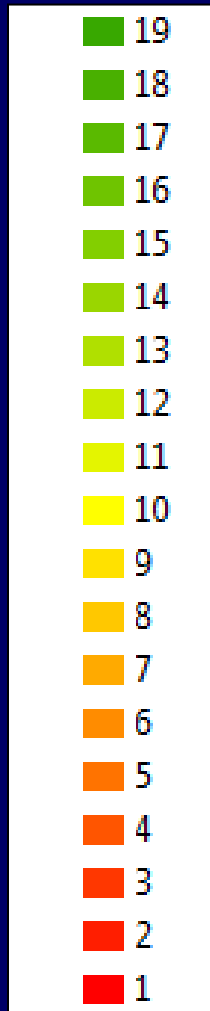
Future Land Use



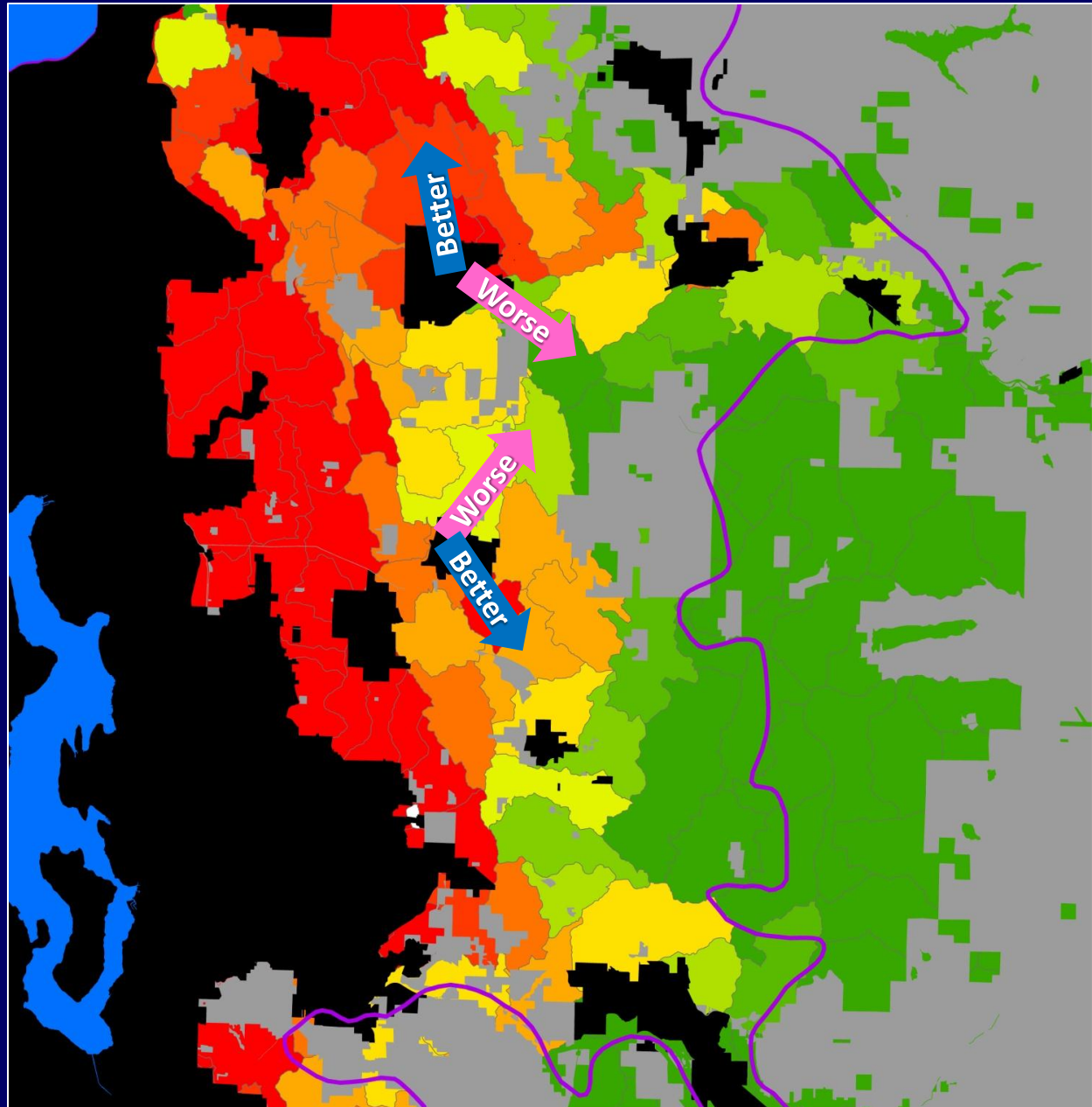
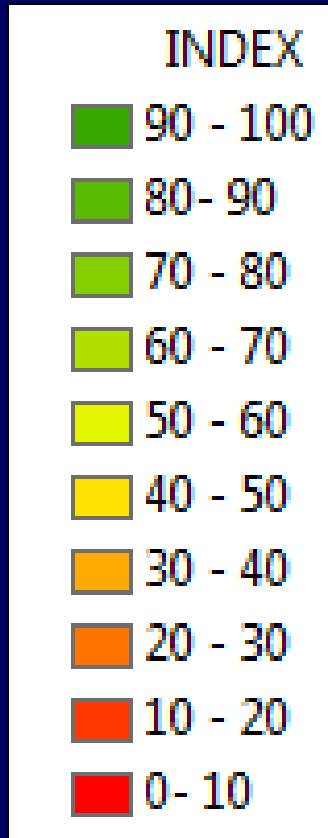
Terrestrial Index



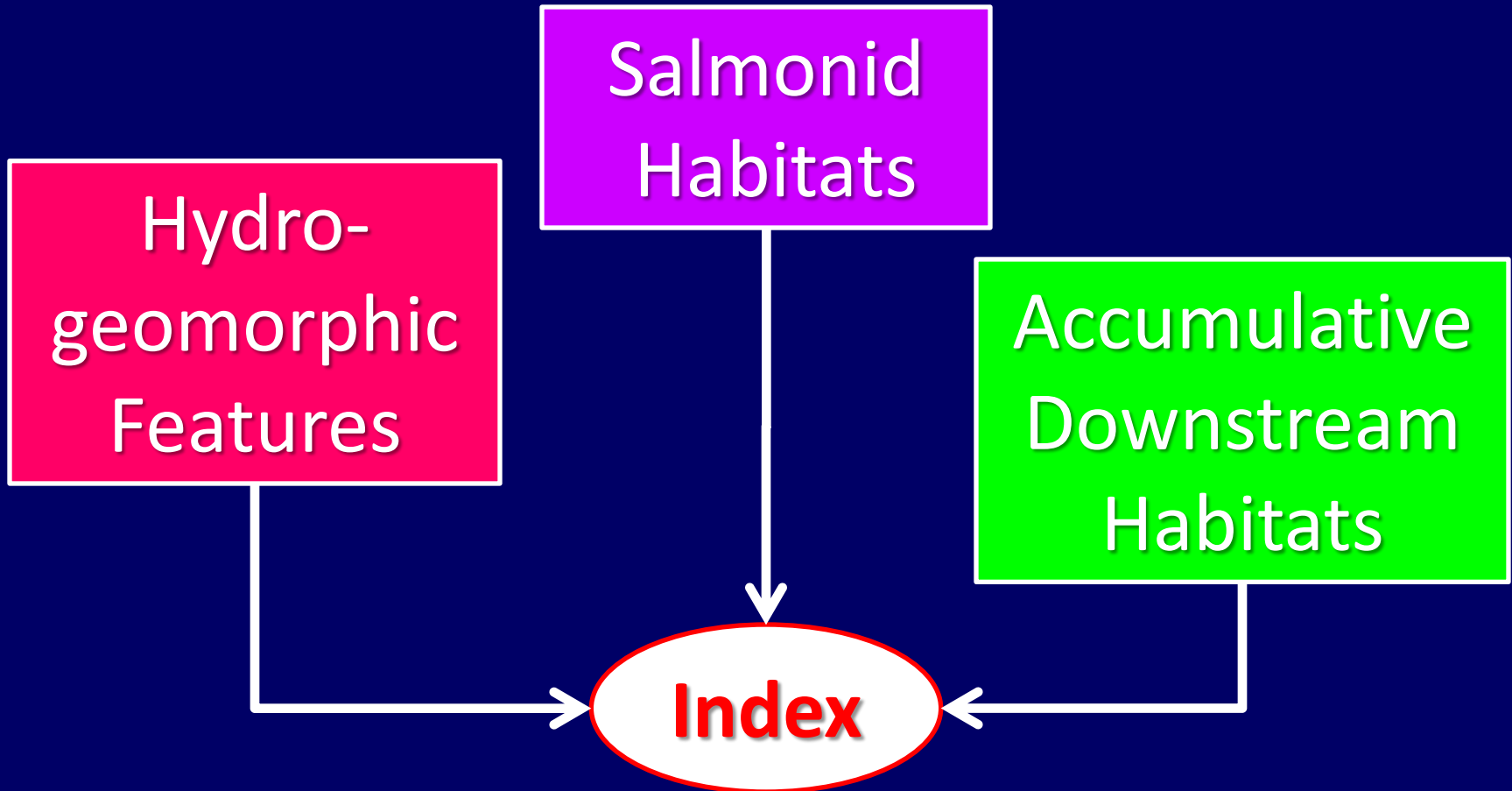
Terrestrial Index



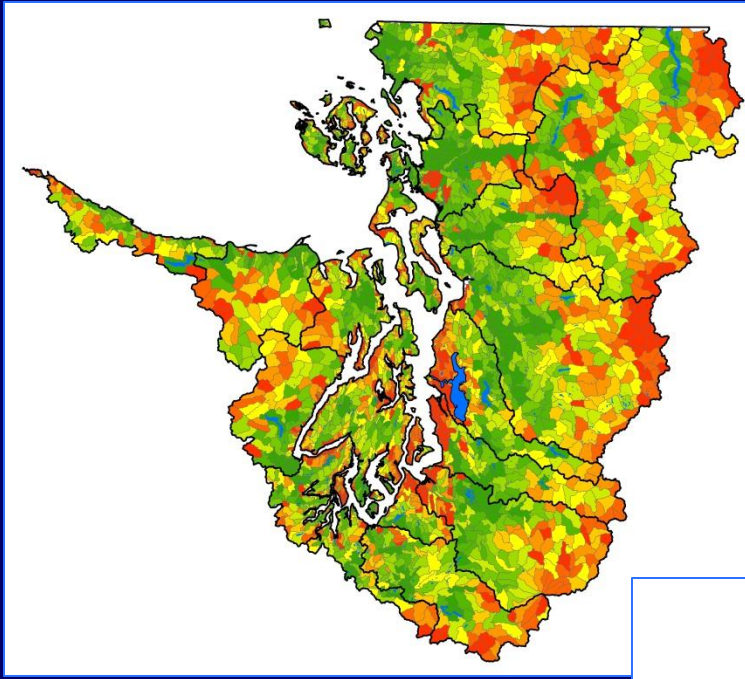
The "Decision Space"



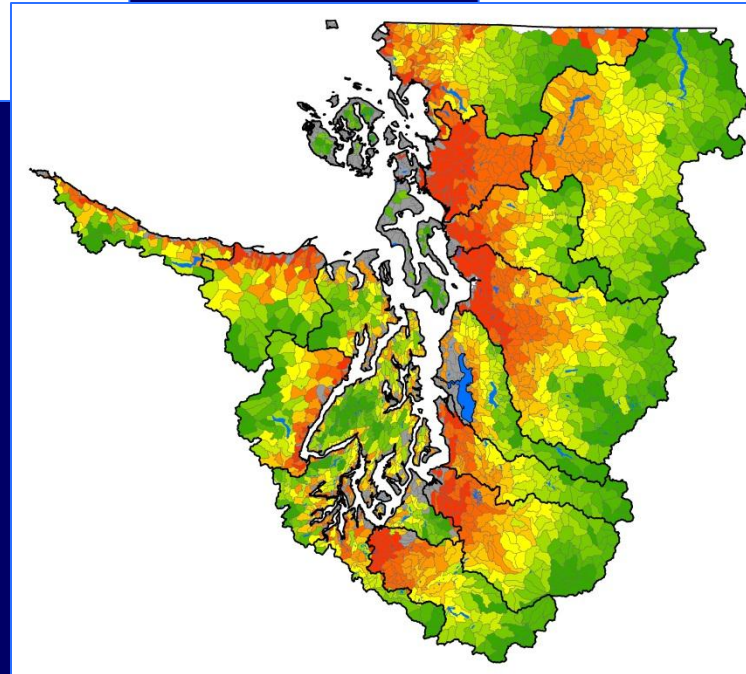
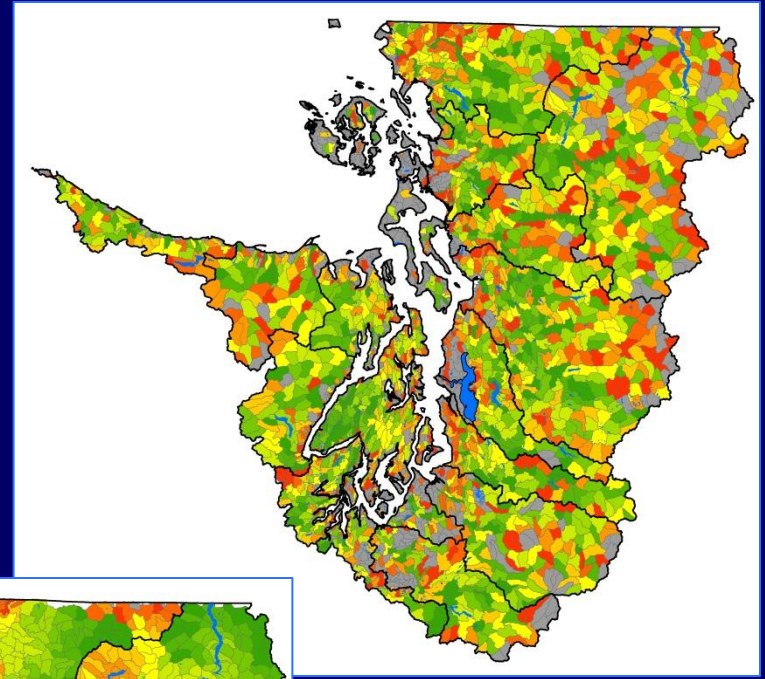
Freshwater Index



Wetlands & Floodplains

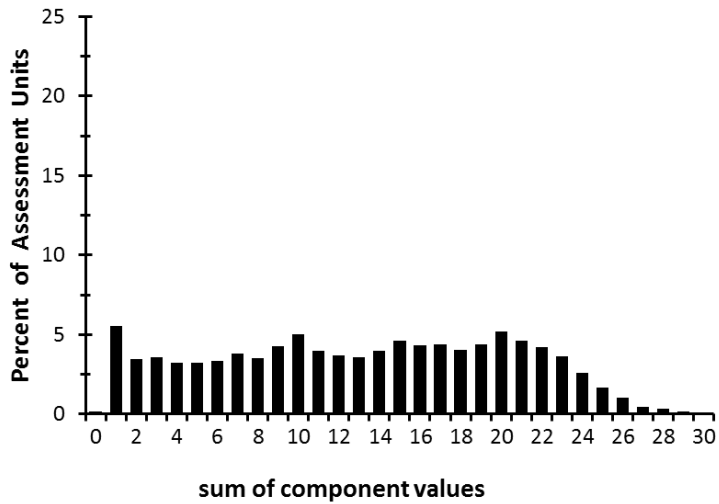
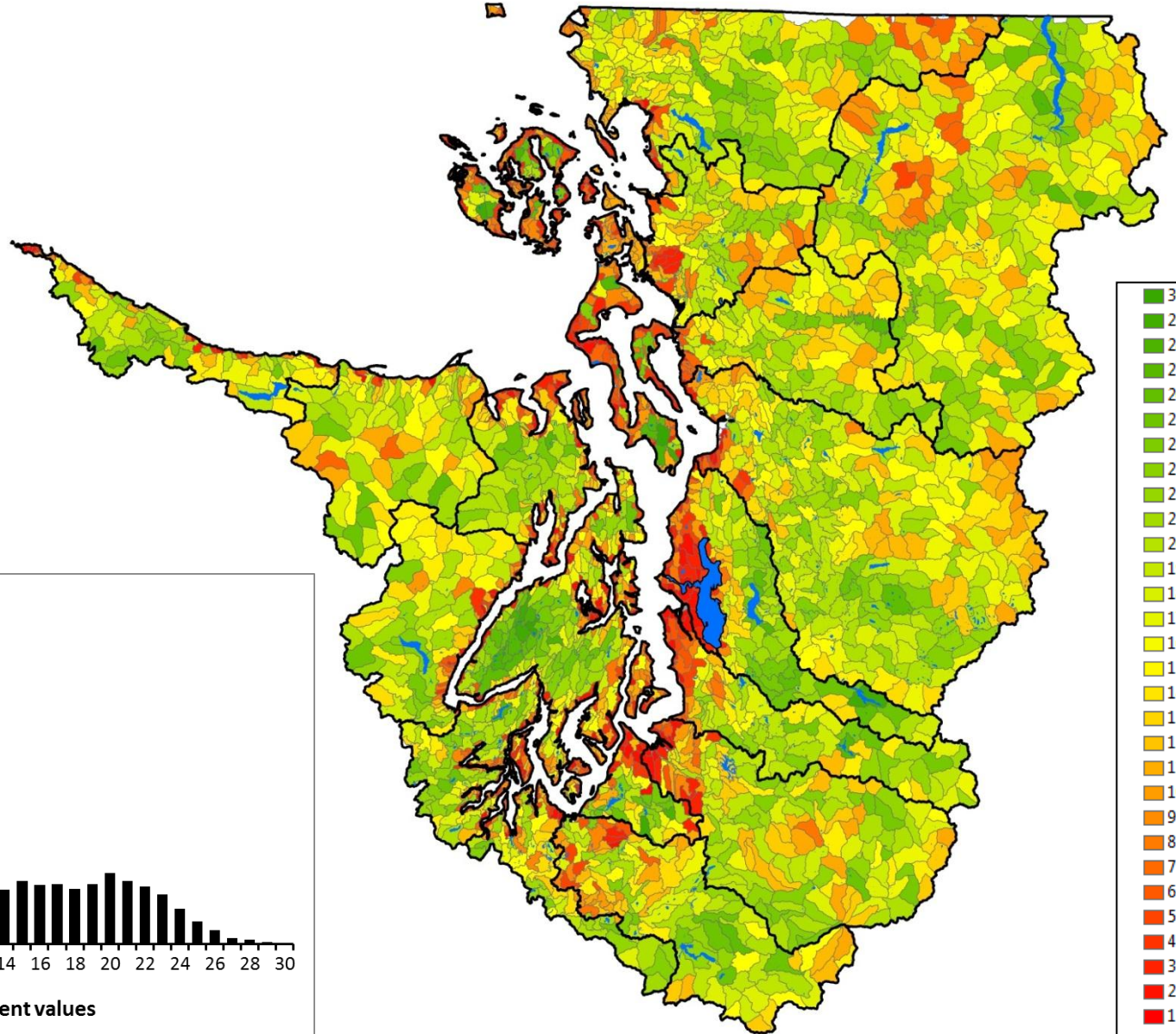


Local Salmonid Habitats

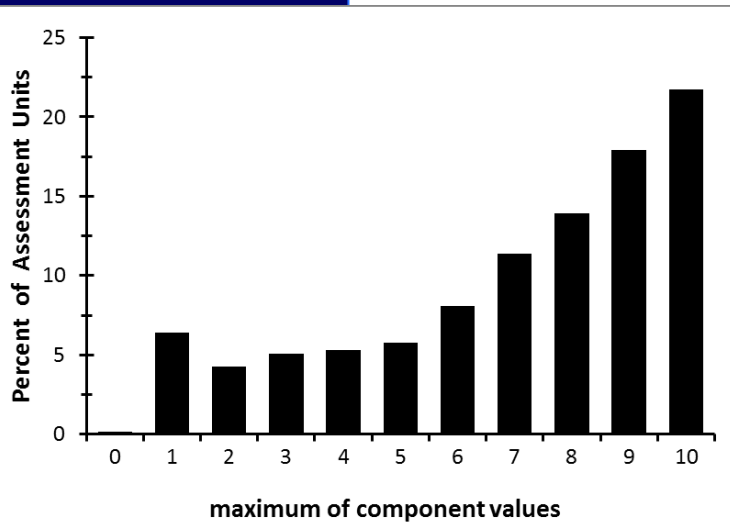
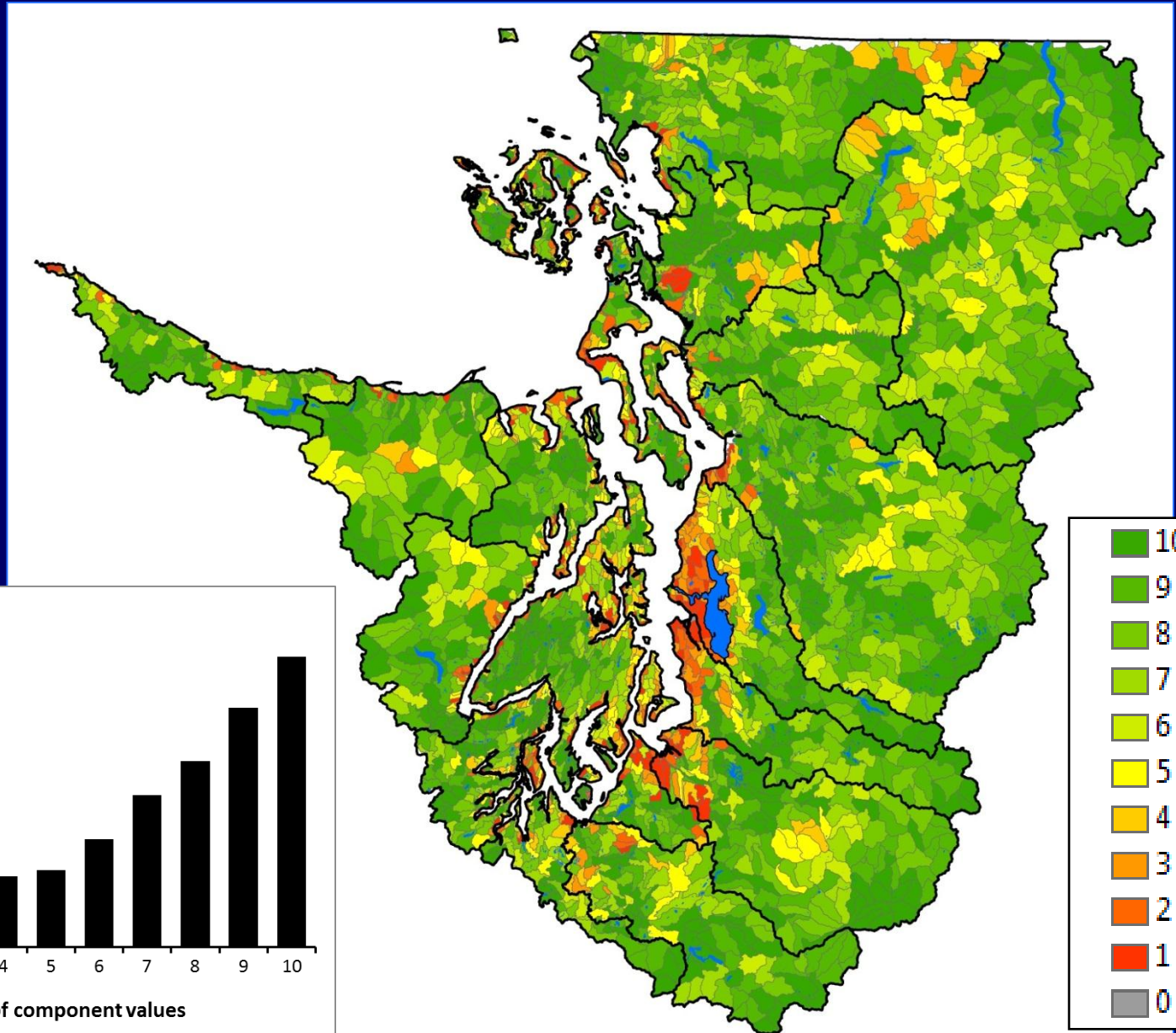


Accumulative Downstream Habitats

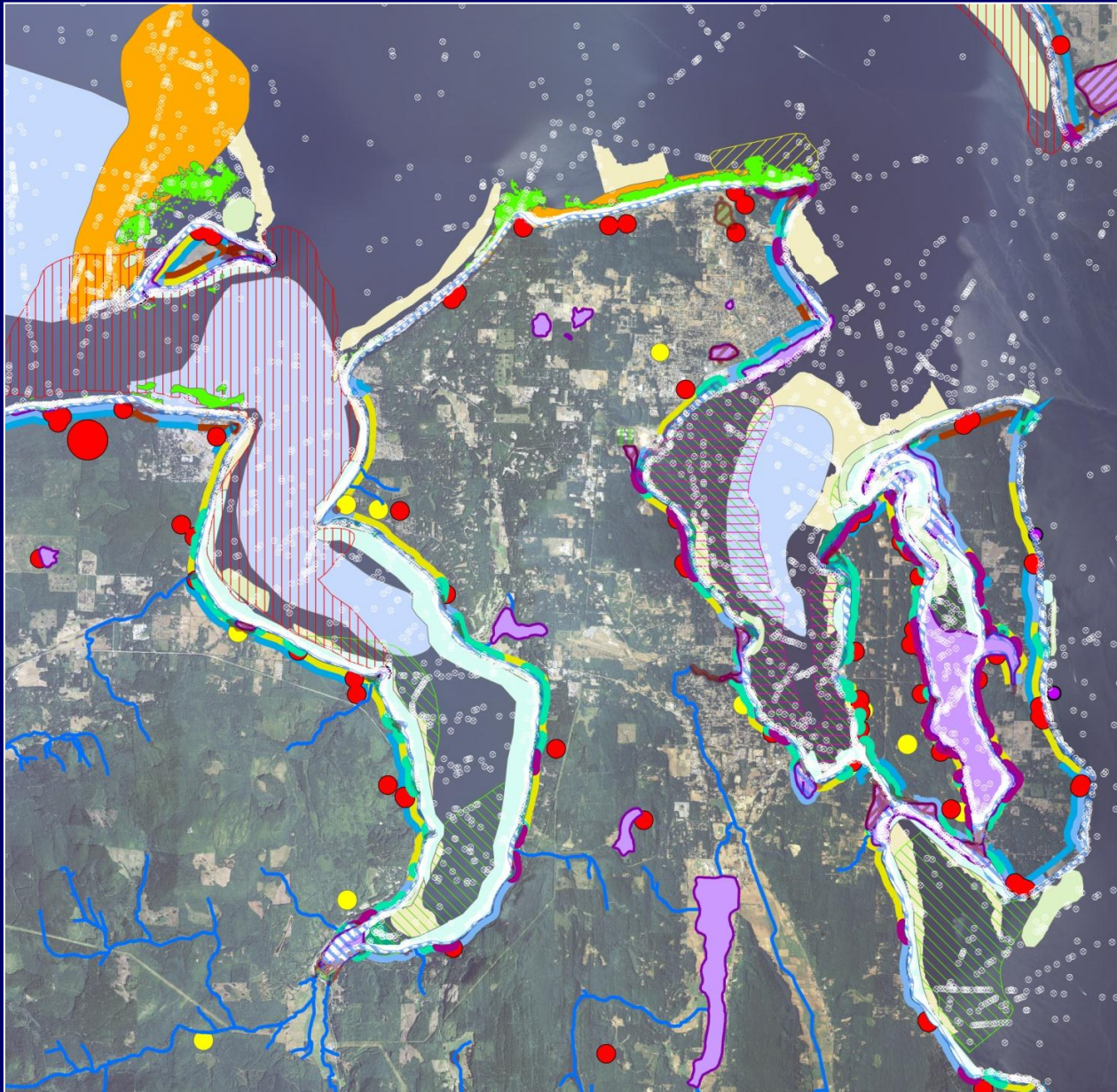
Sum of Components

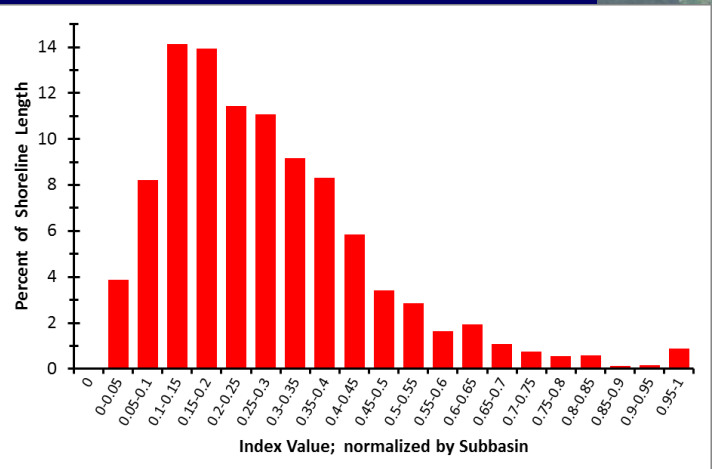
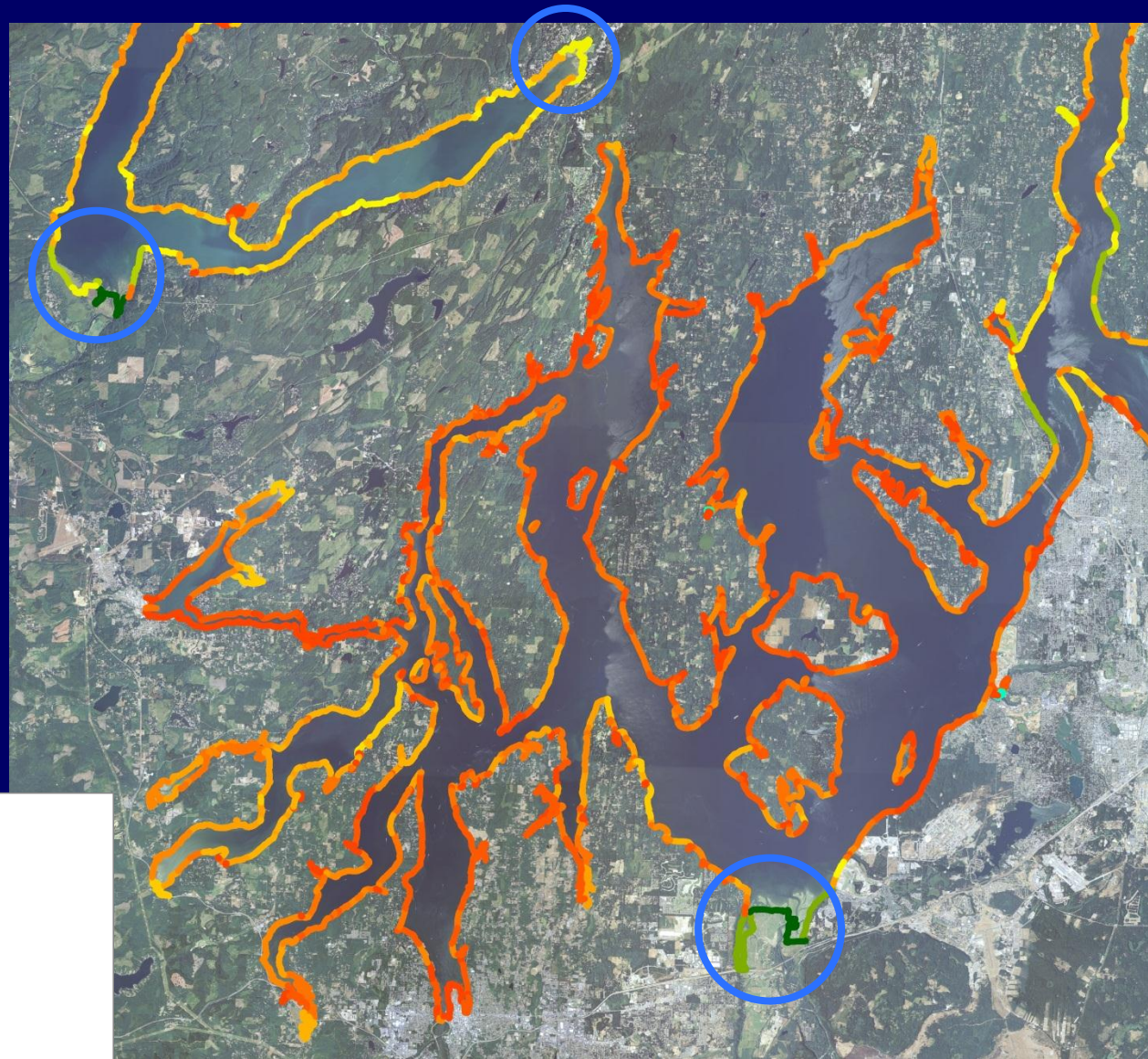
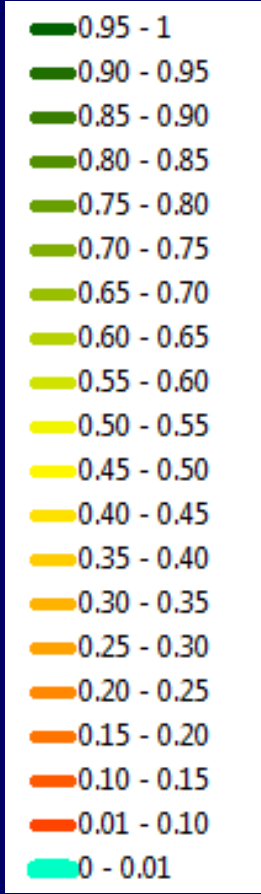


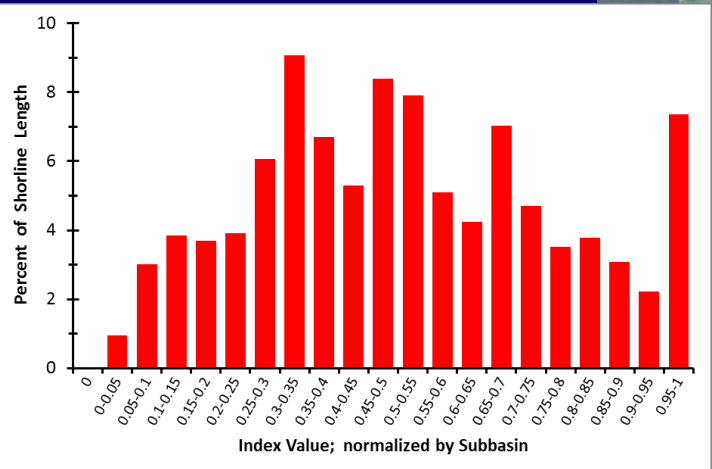
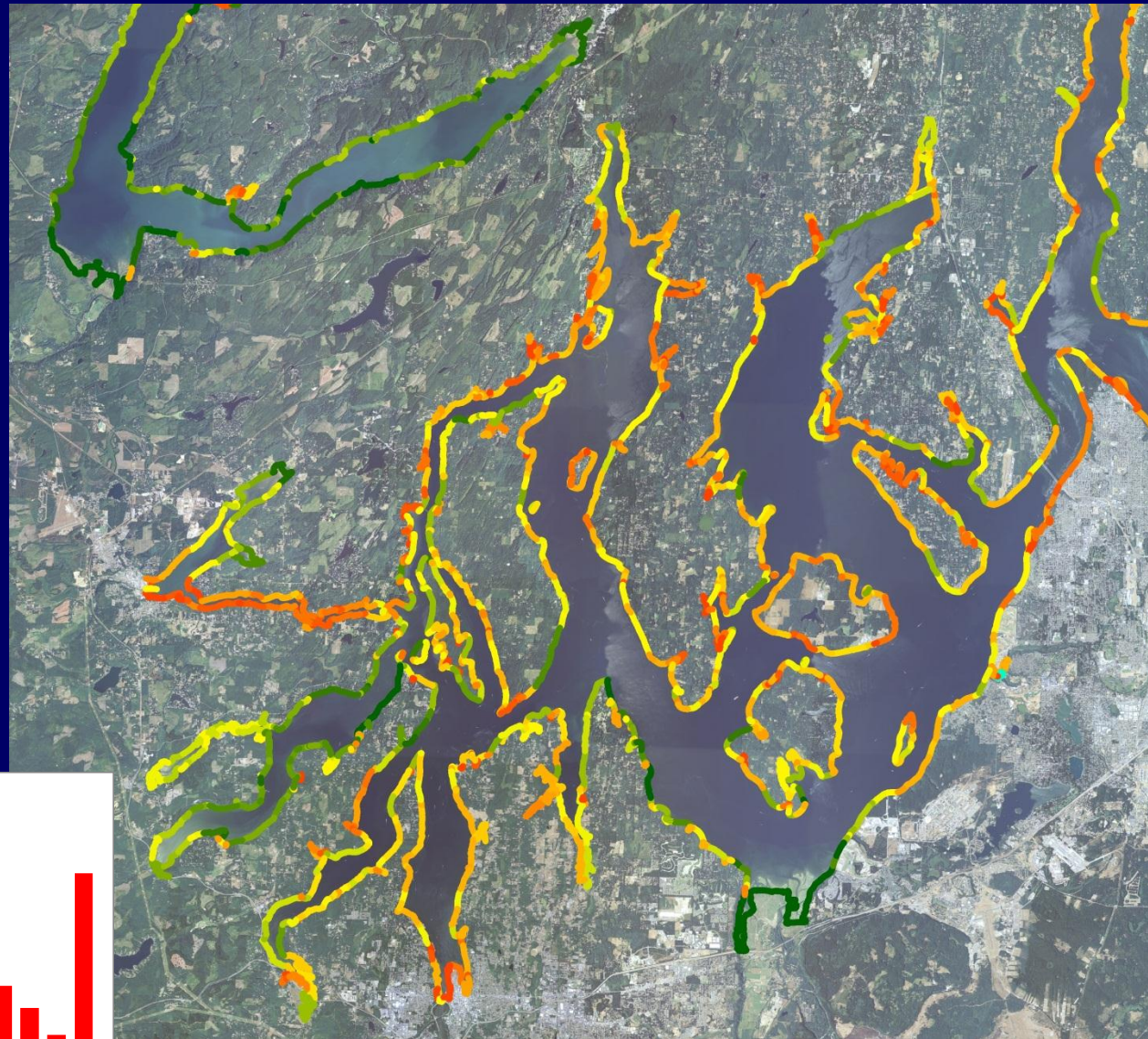
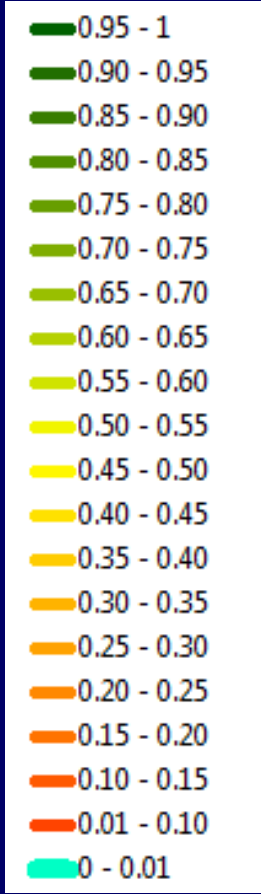
Maximum of Components



Marine Shorelines Index







Remember this:

- 3 separate habitats assessments (terrestrial, fresh-water, and marine shorelines) plus Ecology's
- **Coarse-scale** assessments for coarse-scale planning and decision making (such as land use zoning)
- Multiple results provide a **robust perspective**.
- **No easy answers**: integration of various information for land use planning will be challenging.

PHS More Information?

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click "Habitat"

