



Western Washington University
Western CEDAR

Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference
(Seattle, Wash.)

Apr 6th, 10:30 AM - 10:45 AM

Developing a nearshore geospatial framework for recovery assessment and planning

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<https://cedar.wvu.edu/ssec/2018ssec/allsessions/499>

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Nearshore Geospatial Framework

Jennifer Burke, Data Systems & GIS Manager
Puget Sound Partnership

April 6, 2018



The Framework Proposal

- Nearshore Salmon Recovery Chapter (Lead Entities)
- Strategic approach to Chinook recovery
- Spatially represent hypotheses about the types and locations of habitats
- Multiple scales
- Nexus of marine, nearshore, and upland

Framework

- **What is a framework?**

- Integrate spatial dataset
- Spatial analytical units
- Multiple nested units of analyses
- Test hypotheses
 - **Patterns** of degradation
 - **Risk** of future development
 - Nearshore habitat (shoretupes) **relationships** with other attributes; offshore, onshore, or upland

Foundation

- **Concept similar to PSNERP**
 - Framework structured around **drift cells**
- **Updated and consistent drift cell mapping**
 - Estuary and Salmon Restoration Program (ESRP)
 - Learning Projects grant to Coastal Geologic Services, Inc.
 - *More info in next presentation*
 - Incompatible with PSNERP spatial structure
- **Coordination**
 - ESRP and CGS to design the Nearshore Geospatial Framework
- **Improvement from PSNERP**
 - Higher Resolution/Smaller analytical unit – i.e. Shoretypes

NGF



Map credit: Coastal Geologic Services, Inc.

NGF – **HUC** – Hydrologic Unit (WA Ecology)



Integrating Upland

NGF – Basins – updated drift cells

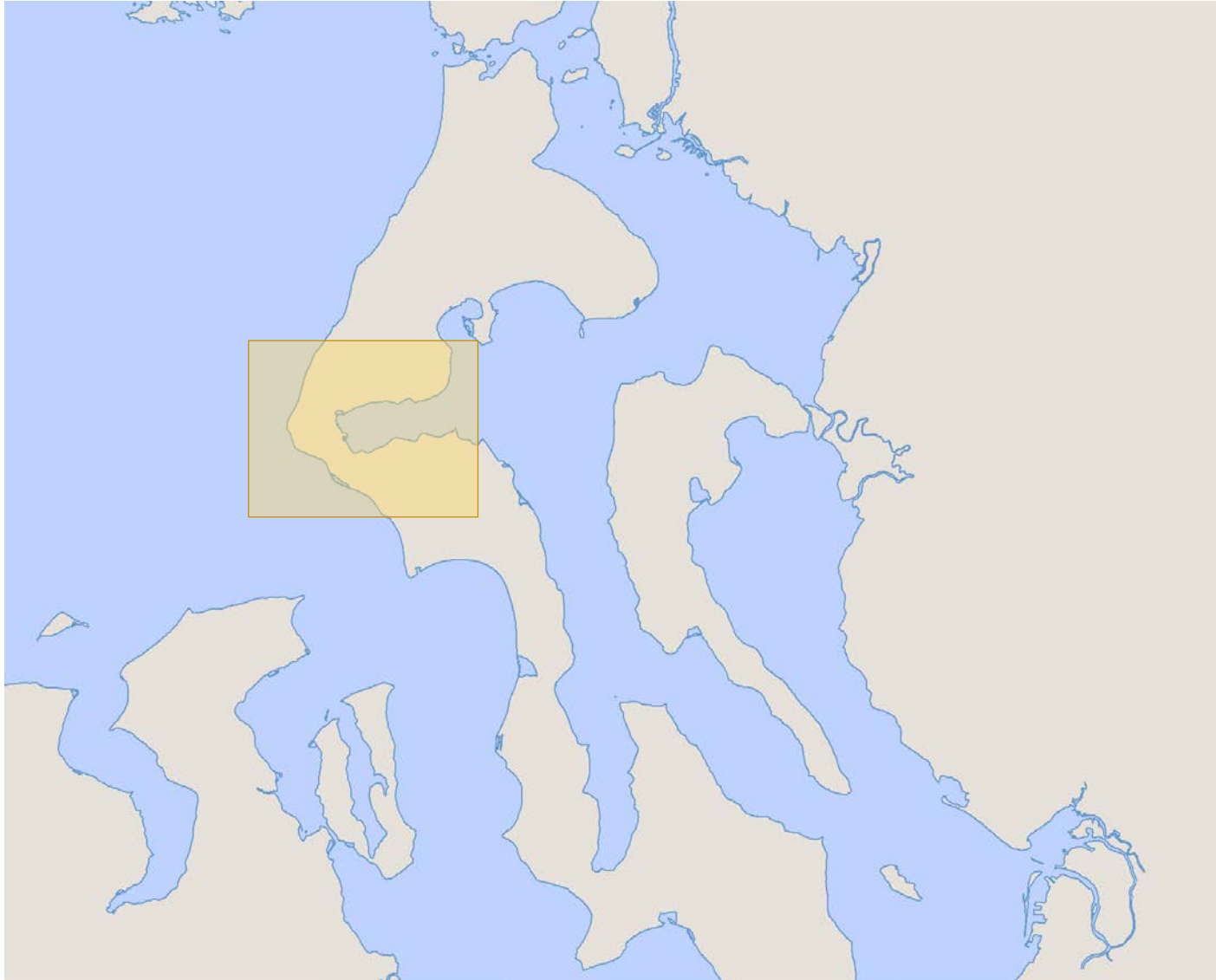


Integrating Upland



Map credit: Coastal Geologic Services, Inc.

NGF

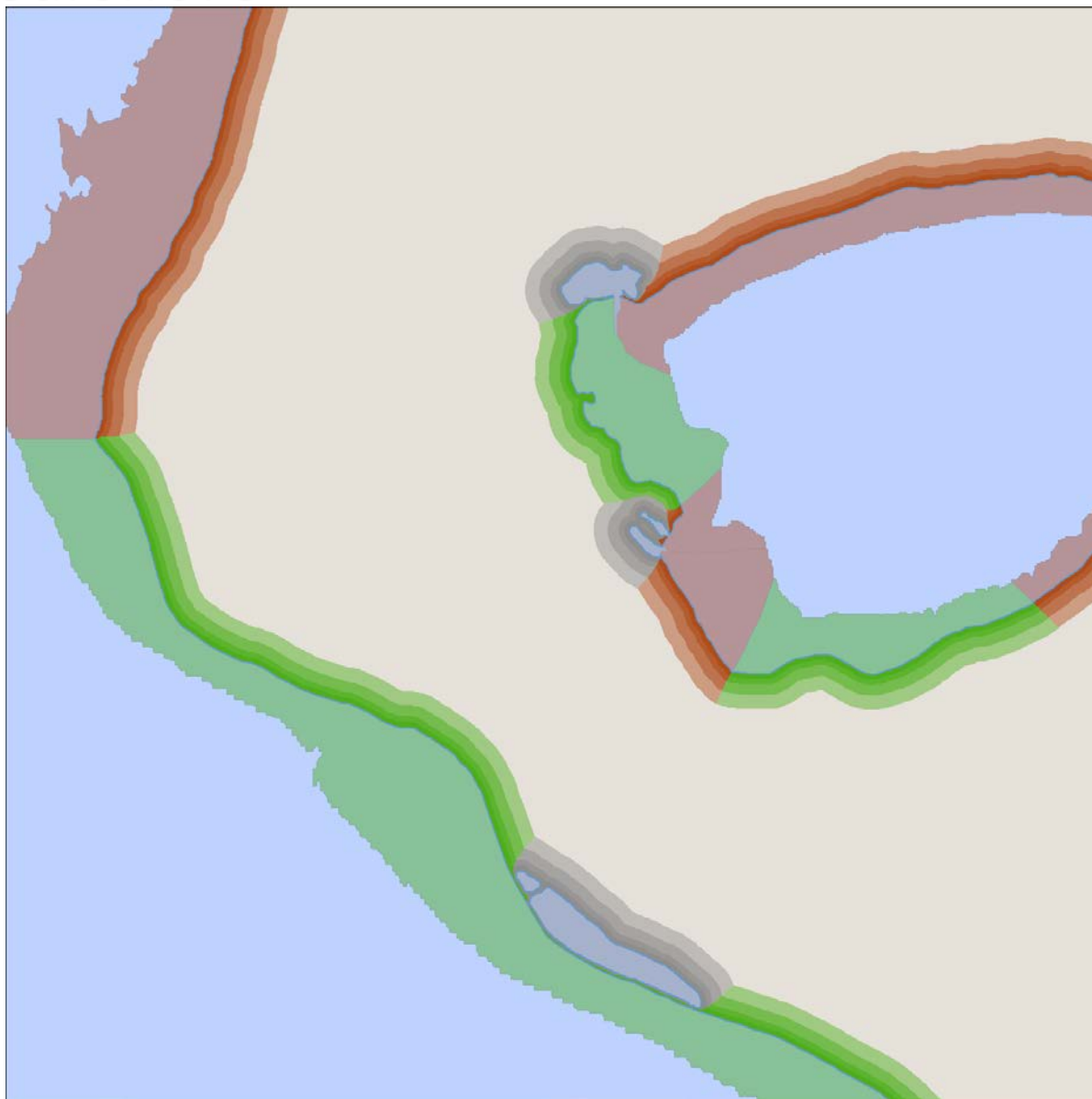


Map credit: Coastal Geologic Services, Inc.

NGF – Nearshore - Drift cell scale

100 ft
200 ft
400 ft
200 m

10m depth



Integrating
**adjacent
onshore**

Integrating
**adjacent
aquatic**

NGF – Nearshore – Shoretype Scale

100 ft
200 ft
400 ft
200 m
10m depth

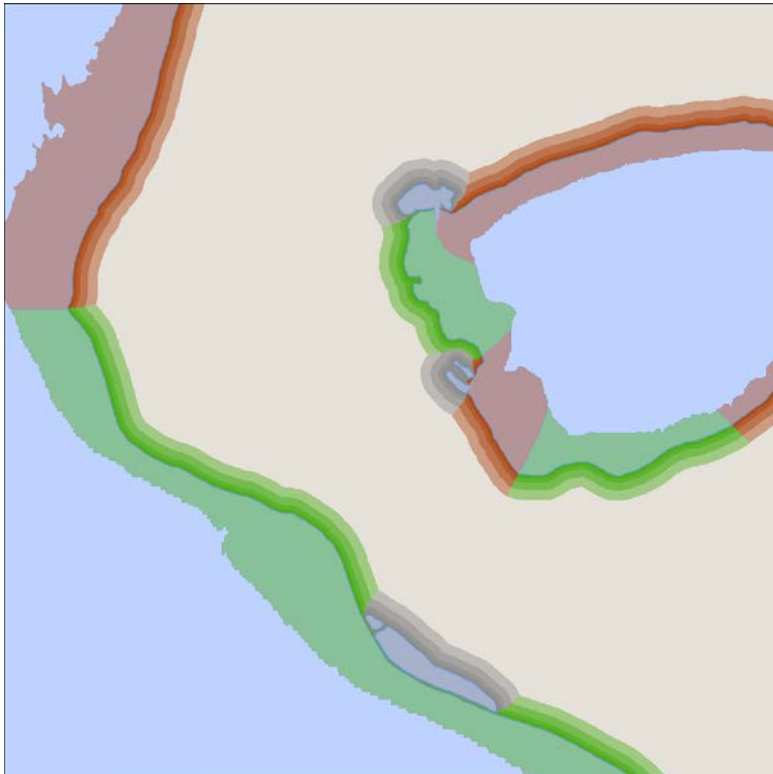


Integrating
**adjacent
onshore**

Integrating
**adjacent
aquatic**

NGF – Nearshore Units

Drift cells

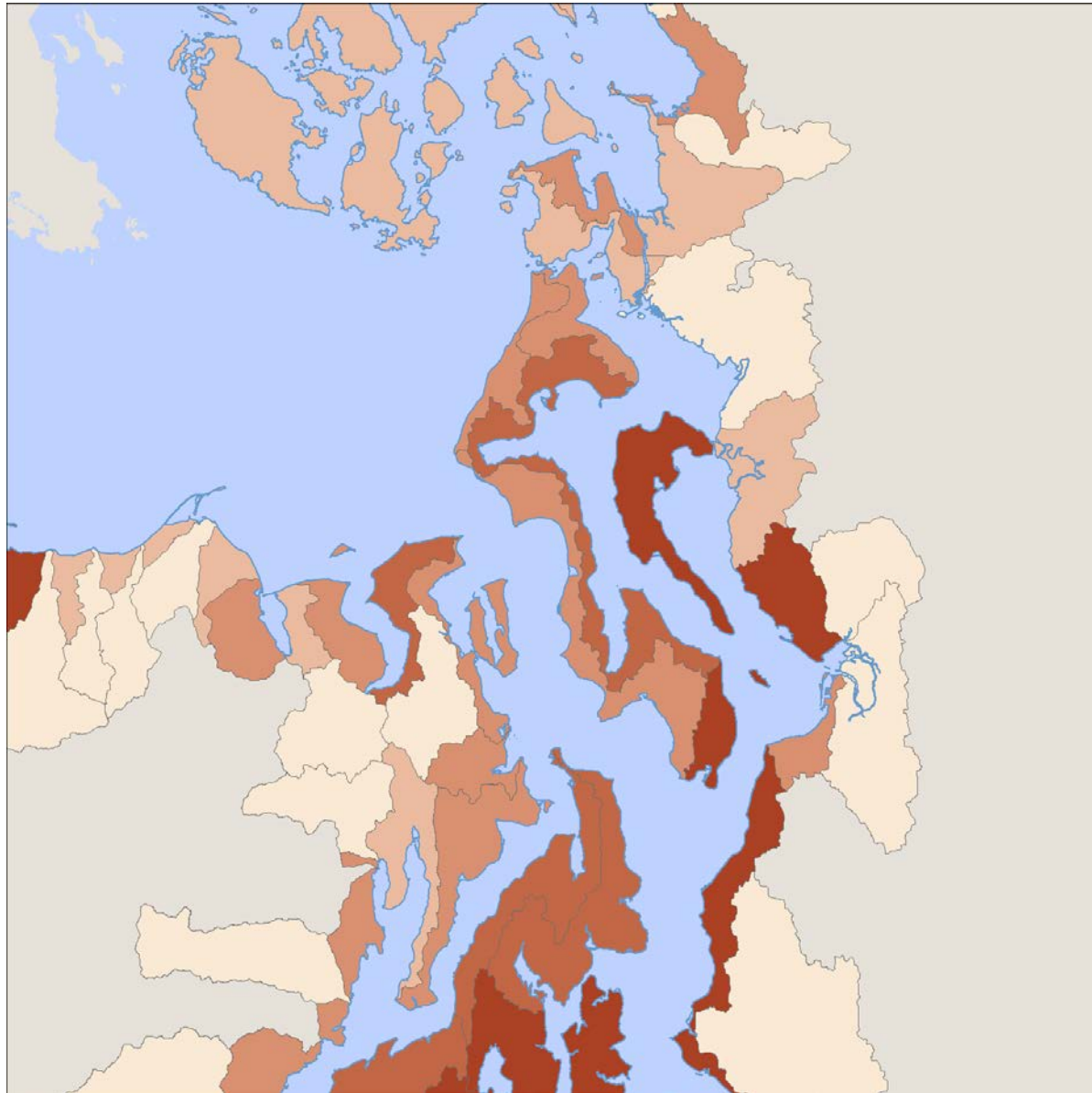


Shoretype




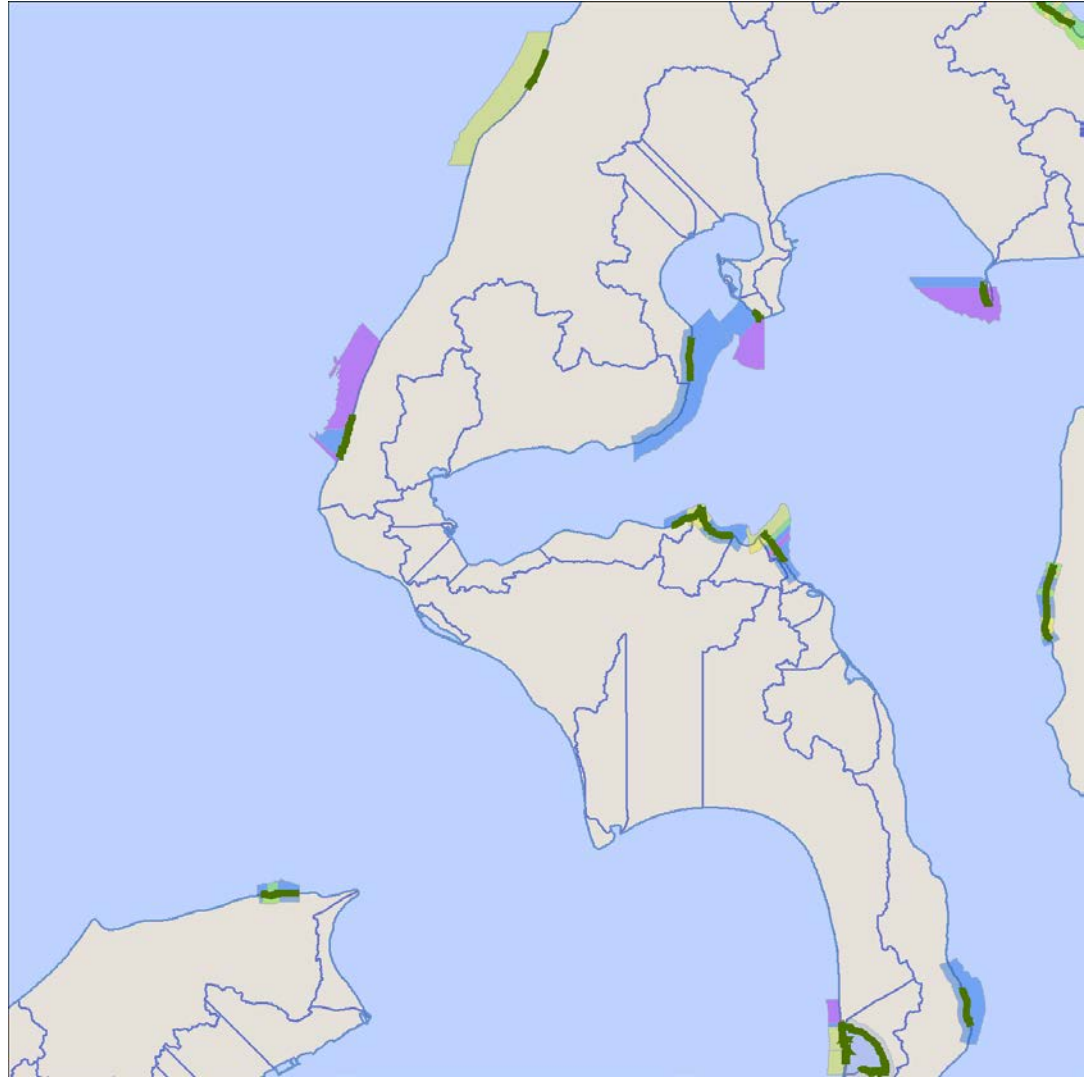
Armor Strategy – HUC Scale

HUC scale

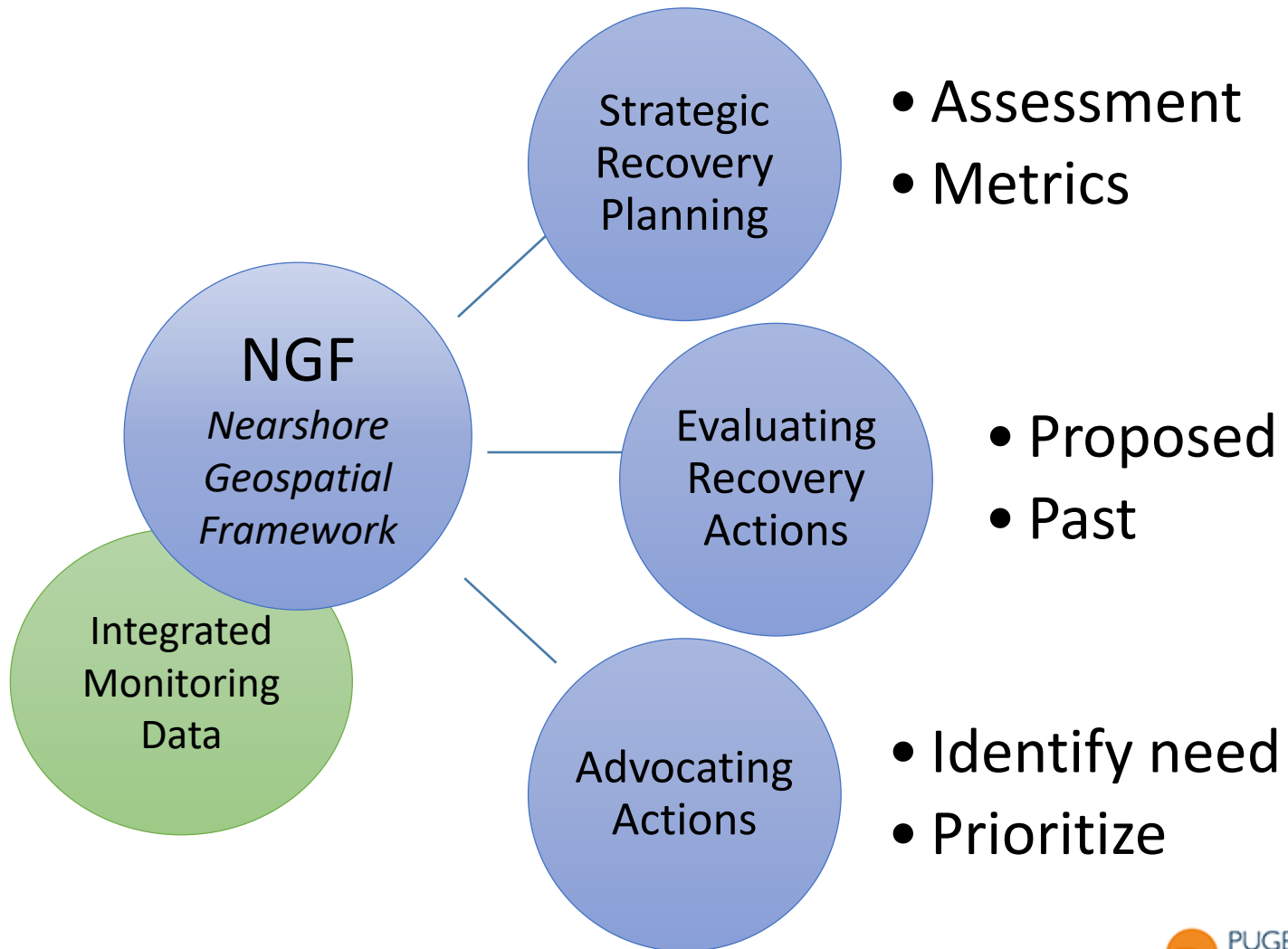


Biological Example – Shoretype and Drift call Scale

 **Drift Cell Upland
Drainage**



Purpose



Still in Development

- Phase 1 - project initiated
 - What do folks need in terms of scale?
 - What data to integrate?
 - How do folks need data to integrate?
- Phase 2 - Refine
 - Seeking funded
- Support Beach Strategies hypotheses
 - Please participate in Beach Strategies project
 - *More info in next talk*

Credits

- Funding: Thank you Salmon Recovery Council
- All things Geospatial : Coastal Geologic Services Inc.
- Host: Companion to ESRP's Beach Strategies
 - *Don't go anywhere – they are talking next!*