



Western Washington University  
Western CEDAR

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Salish Sea Ecosystem Conference

2014 Salish Sea Ecosystem Conference  
(Seattle, Wash.)

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May 1st, 10:30 AM - 12:00 PM

## Meta-Analysis of Project Effectiveness: Learning at the Regional Scale

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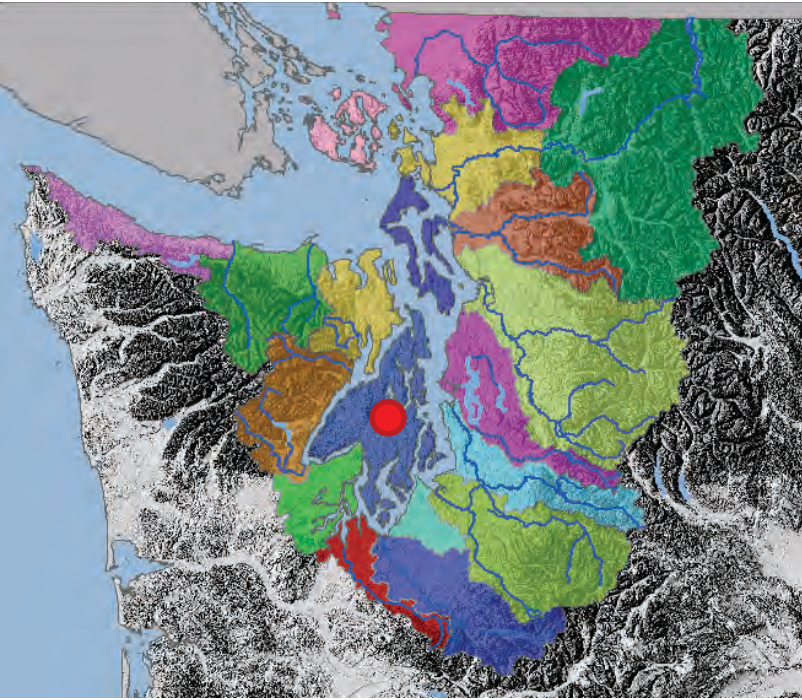


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Sullivan, Constance Amanda; Fore, Leska S.; and Collyard, Scott A., "Meta-Analysis of Project Effectiveness: Learning at the Regional Scale" (2014). *Salish Sea Ecosystem Conference*. 151.  
<https://cedar.wwu.edu/ssec/2014ssec/Day2/151>

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# Integrating Landscape-Scale Assessments into Local Planning:

## USING WATERSHED CHARACTERIZATION TO INFORM DEVELOPMENT STANDARDS IN GORST CREEK

APRIL 2014



**PugetSoundPartnership**  
our sound, our community, our chance



Washington  
Department of  
**FISH and  
WILDLIFE**



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

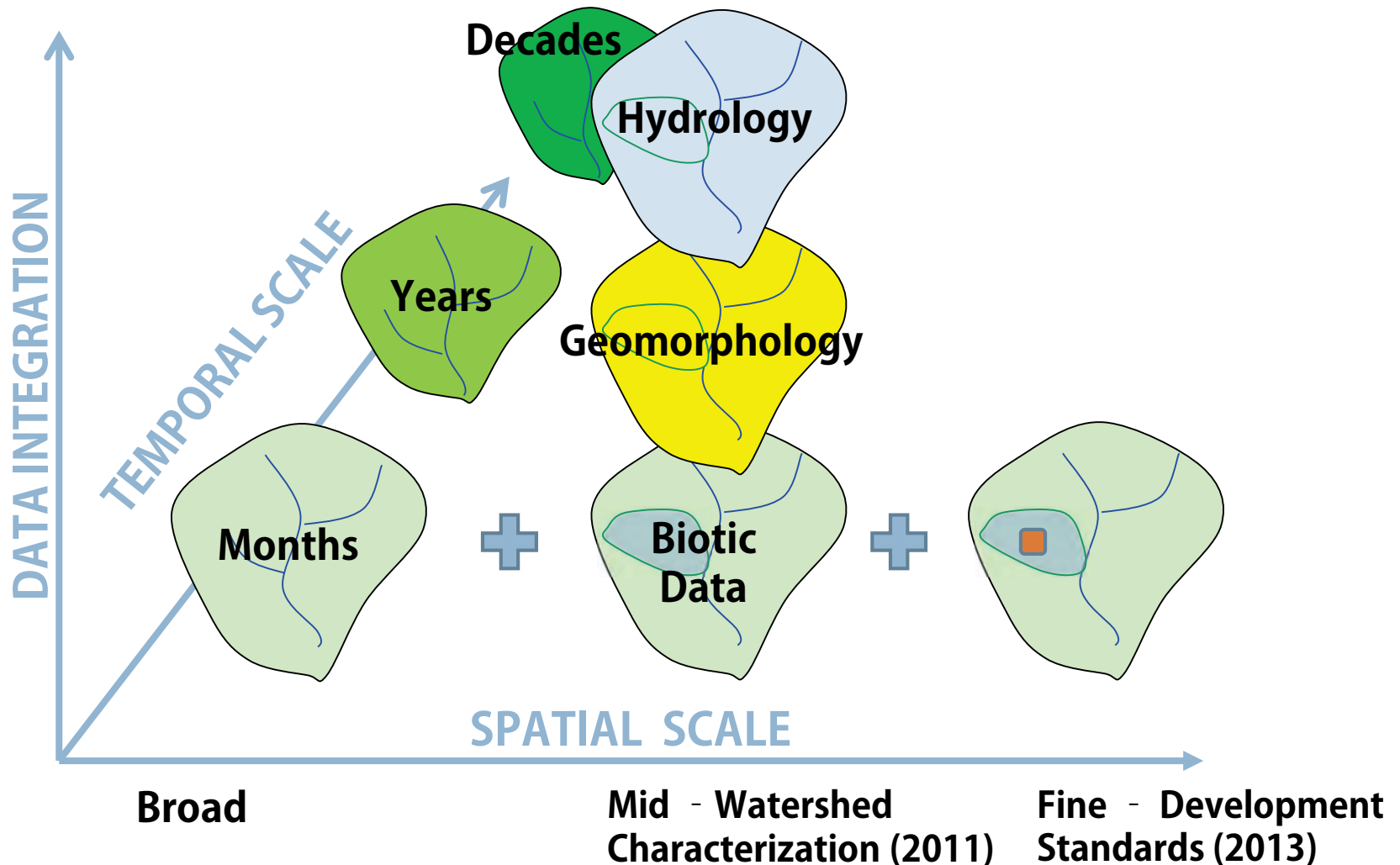


**AECOM**



**Parametrix**  
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

# INTEGRATING WATERSHED DATA ACROSS MULTIPLE TEMPORAL AND SPATIAL SCALE



# GORST CREEK PLANNING PROCESS – OVERVIEW

Where are the best areas for:

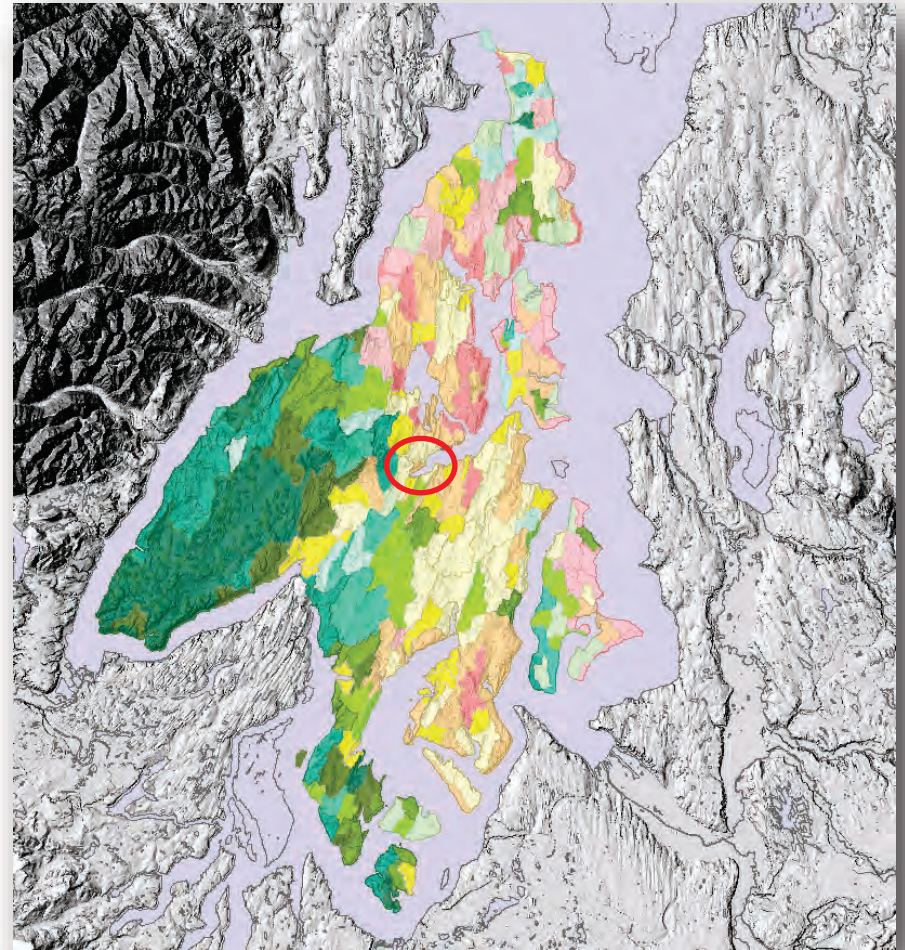
- Development
- Protection
- Restoration

**Volume 1:** Watershed  
Characterization (2011)

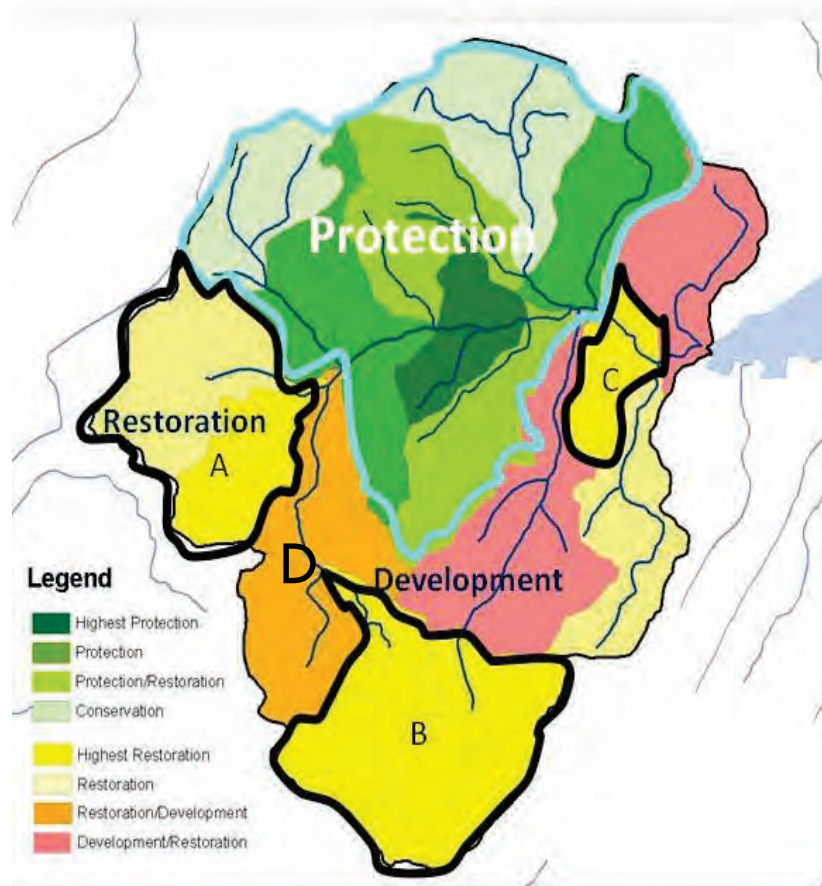
**Volume 2:** Gorst Planned Action EIS  
(2013)

**Volume 3:** Gorst Subarea Plan (2013)

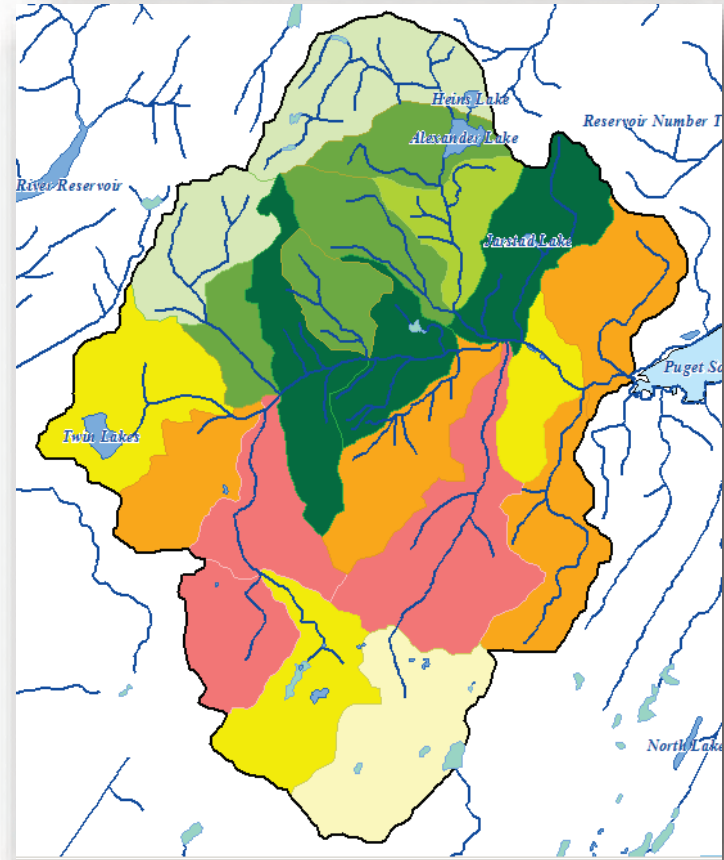
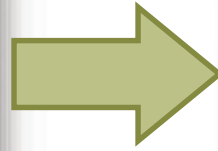
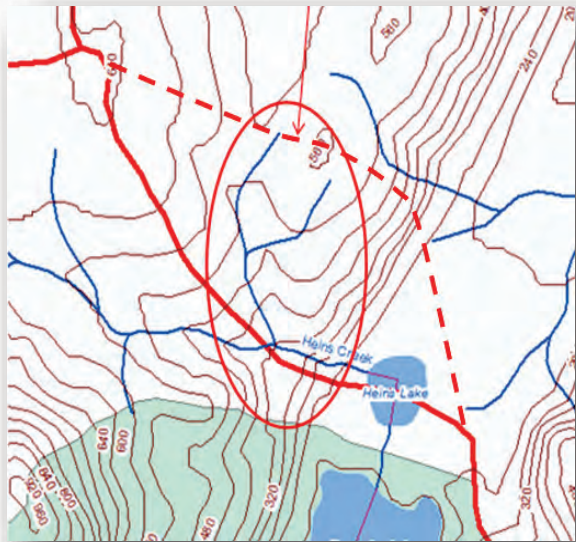
<http://www.ci.bremerton.wa.us/gorstwatershed/>



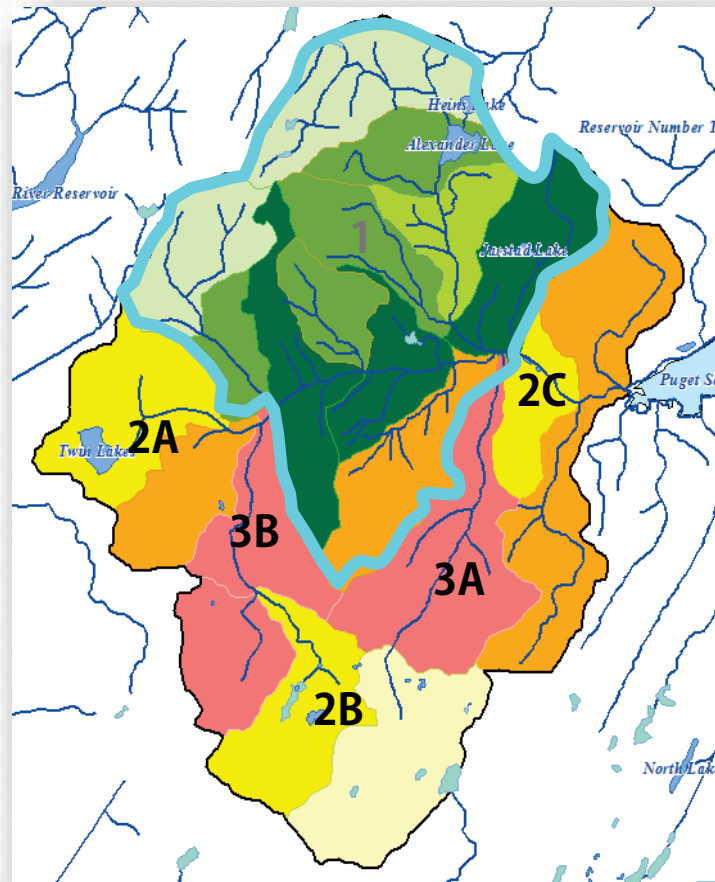
# WATERSHED CHARACTERIZATION STUDY RESULTS: 2011 (VOLUME 1)



# DEIS – JUNE 2013

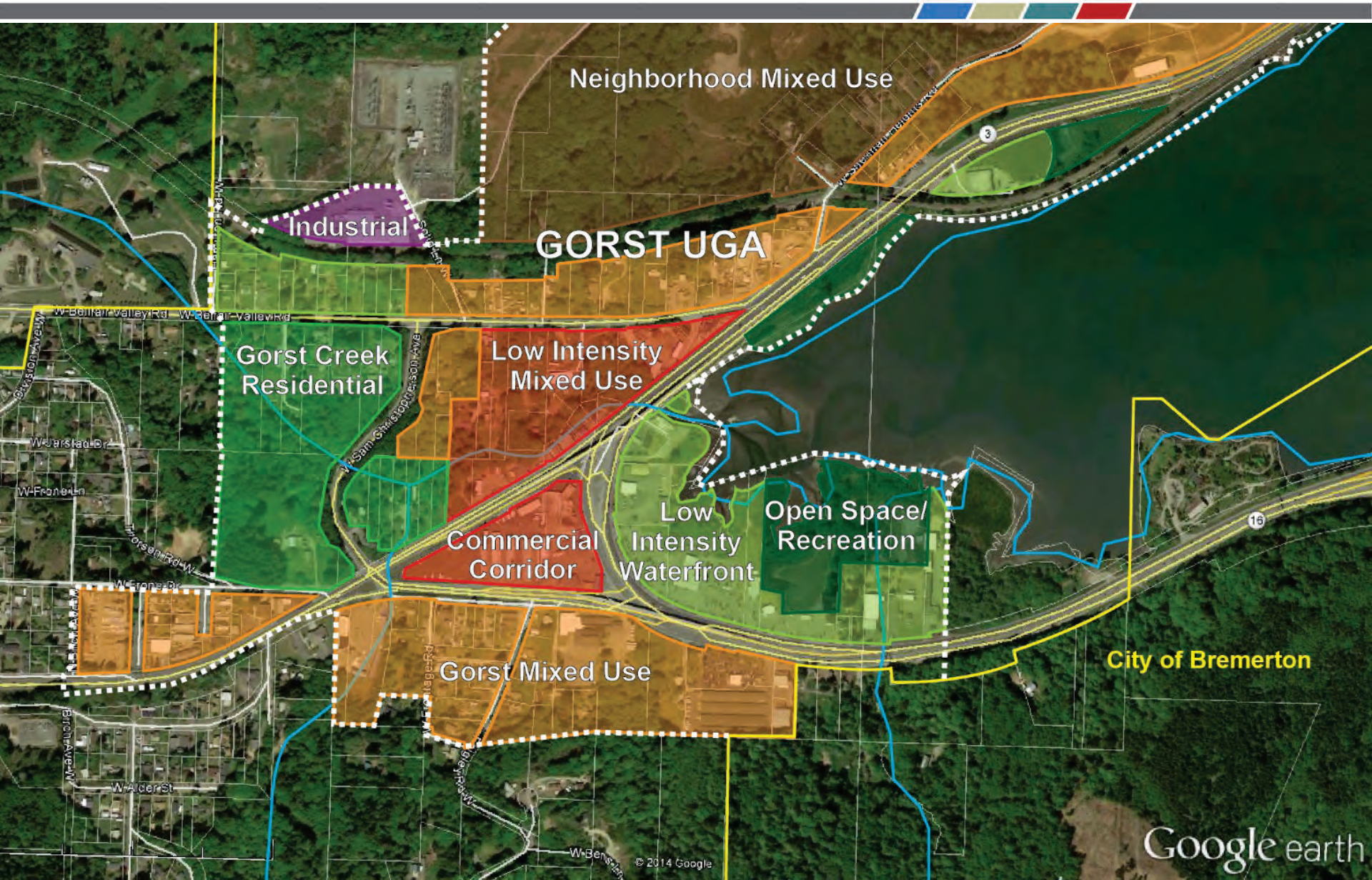


# REVISED MODEL RESULTS



1. Protection Zone (Green). This area is key to recharge and discharge processes for Gorst Creek. Permitted uses must preserve forest cover and not result in conversion.
2. Restoration Zone (Yellow). Lower intensity uses.
  - A - Restore recharge, discharge and delivery processes, limit urban development, maintain in open space uses.
  - B - Residential uses but protect/restore storage functions of wetlands.
  - C - Restore recharge/discharge processes using LID measures.
3. Development Zone (Pink and Orange). Moderate to higher intensity urban uses.
  - A - Protect against erosion and sediment export with adequate setbacks, buffers and vegetation cover. Cluster development.
  - B - Restore stream corridor; cluster development.

# FOCAL AREA: LOWER GORST CREEK





# GORST CREEK OVERLAY IN UGA

- Created 3 Zones: 50, 85, 150'
- In addition to SMP/CAO – more protective applies
- Provides incentive-based approach to riparian restoration for redevelopment
- Remove in-stream structures
- Retain native vegetation
- Restore with native trees, shrubs, groundcover at 2:1 ratio (hierarchy: native coniferous, deciduous, other native)

# HABITAT DEVELOPMENT STANDARDS

- Provide a landscape plan that demonstrates that at least 20% of the significant trees on the buildable area of the site are retained outside of buffers.
- Site plan includes a minimum 35-foot habitat corridor (not otherwise required by critical area or shoreline or management overlay regulations) vegetated with native trees, shrubs and groundcover that connect critical areas or permanently preserved natural areas within or adjacent to and across the project site.
- Site design shall ensure that lighting from adjacent development does not intrude on corridor.

# WATERSHED CHARACTERIZATION: A DECISION TO SUPPORT TOOL

- Uses Water Flow/Water Quality Process as Drivers to:
  - ID and prioritize areas for restoration/protection/conservation/development
- Scale-able:
  - Puget Sound
  - WRIA
  - Gorst Creek
- Provides High Level Guidance on Management Actions
- Fine Scale requires additional data and analysis

