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Development of an interactive web map to visualize a complex dataset

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Development of a web map to visualize a complex dataset

Lisa Ferrier, Pete Dowty
Nearshore Habitat Program
Washington Department of Natural Resources
Seagrass surveys

- Boat-deployed underwater video transects
- Veg classified at points at ~1 meter intervals.
- All species of seagrass within study area classified
Data record: 2000-2017 (18 years)

2467 sites
• 651 sampled
• 2230 site visits

• >32,000 transects
• ~12 million transect data pts
Objectives:

Provide interactive web access to site results

Allocate minimal effort to web application development

Provide option to download data for advanced users
Accessing the web map

Google search term: ‘Puget Sound Eelgrass Monitoring Data Viewer’
2000 – 2015 (16 years)

Boat-deployed underwater video transects

Veg classified at points at ~1 meter intervals.

Transect point layer: 30,000 transects with ~10 million points

Distribution dataset

Web map: 2000 - 2015

Interactive layers

Change basemap

Search by geographic location or SVMP site code

Puget Sound Eelgrass Monitoring

Legend

Seagrass Species

- Eelgrass
- Eelgrass and Z. japonica mix
- Eelgrass and Surfgrass mix
- Z. japonica
- Surfgrass
- No seagrass
Distribution dataset

Operational layers

Greyed out layers are scale dependent.
Accessing site-level summary information
Integration of Ecology’s shoreline orthophotos
Site-level operational layers

Survey data: bottom-most layer and slow to render
• Operational layer options
Data download

Washington Department of Natural Resource GIS Open Data

WA DNR GIS Open Data

Find Data

Keyword: Roads  Location: Olympia, WA

Explore Data Categories

Aquatics  Cadastre  Climatology  Forest Disturbance  Forest Practices  Geology
Data download
- To be used in tandem with geospatial database user manual

Puget Sound Eelgrass Monitoring - Transect Data

Eelgrass (Zostera marina) and surfgrasses (Phyllospadix) are submerged aquatic plants with recognized ecological value and management protection. These data from DNR’s monitoring program (Submerged Vegetation Monitoring Program) sample seagrasses at sites throughout Puget Sound using underwater video transects for both long-term monitoring and special

Attributes
- Chart
- Map Visualization
Next steps

Continue to maintain web map:
  • Update to include 2016 & 2017 data
  • Improve rendering speed of survey data

Fill in information gaps:
  • Collaborative sampling efforts

Feedback
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