

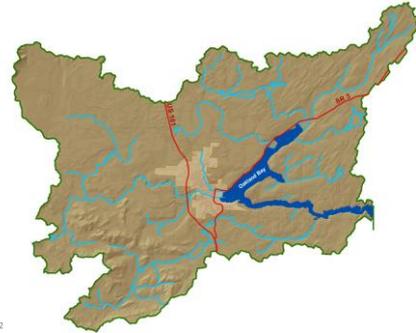
Oakland Bay Riparian Canopy Height Assessment

Mason Conservation District
Evan Bauder

1/30/2012

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Oakland Bay Watershed



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Stream, Buffer, and Parcels



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Clipped Parcels



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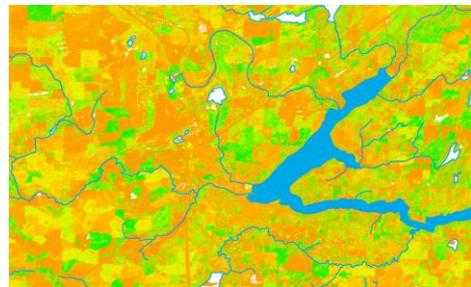
LiDAR

- Light Detection And Range
- Puget Sound LiDAR Consortium
- Bare Earth and Top Surface

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Canopy Height (Raster)



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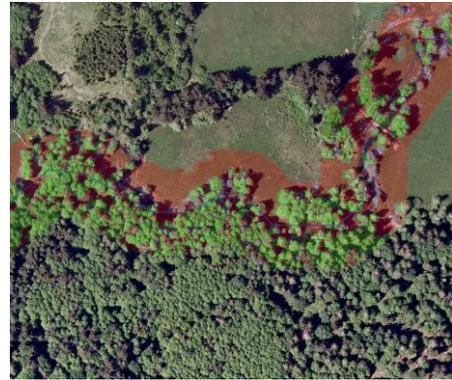
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Canopy Height

- Classes
 - Low Canopy Height (LCH)
 - 0-5 ft
 - Moderate Canopy Height (MCH)
 - 5-30 ft
 - Tall Canopy Height (TCH)
 - 30+ ft

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Attributes

- Parcel Data
 - With new parcel areas
- Area of Each Canopy Class
- Area of Buffers

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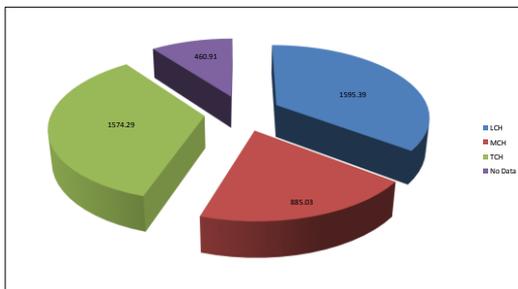
Results

- Tool for locating and prioritizing restoration efforts by parcel or tributary
- Mailing lists
- Overall watershed buffer health
 - Contribution of each tributary to the watershed's overall riparian buffer health

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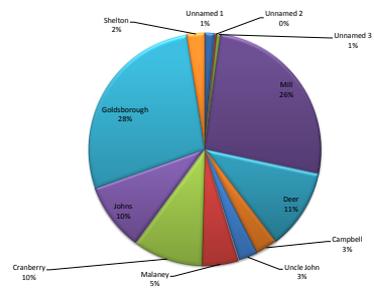
Overall Watershed Buffers



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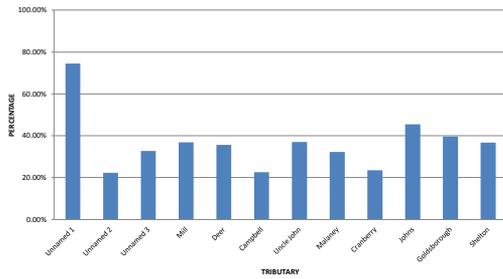
Contribution of Each Tributary to the Total Area of LCH



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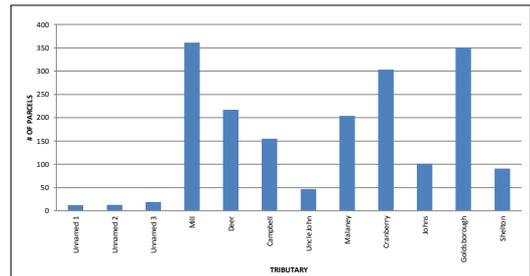
% of Each Tributary's Buffer Area Composed of LCH



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Number of Parcels Containing Greater than 500 Square Feet of LCH Buffer Area



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Individual Parcels



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Prioritization

- Each Tributary
 - Top 10%
 - Top 25%
- Entire Watershed
 - Small
 - Medium
 - Large

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Prioritization of Parcels Within Each Tributary



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Prioritization of Parcels Within Entire Watershed



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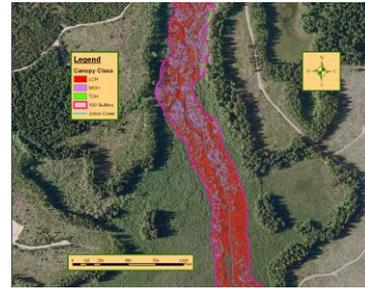
Limitations

- Stream Layer
 - Location/ Accuracy
 - Wetlands
- LiDAR
 - Time
 - Season
 - Age
 - No Data

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Wetlands



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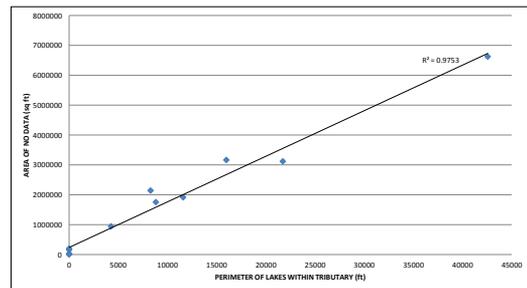
Open Water/ Lakes



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Lake Shoreline vs No Data



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Refinement of Methods

- Use a more comprehensive and “accurate” stream layer
- Combine streams and lake/wetland shorelines
- Use a more descriptive set of canopy heights
- Use two buffer widths to aid in prioritization and increase surveyed area
- Score parcels based on area of LCH in relation to the proximity of the stream, TMDL implementation plans, other 303(d) streams, and fish use
- Highest Priority- Parcels on TMDL implementation streams with a large area of restoration potential close to the stream.

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