Yellow Point & Cedar Watershed Model

Public Open House

Date: May 25th, 2015

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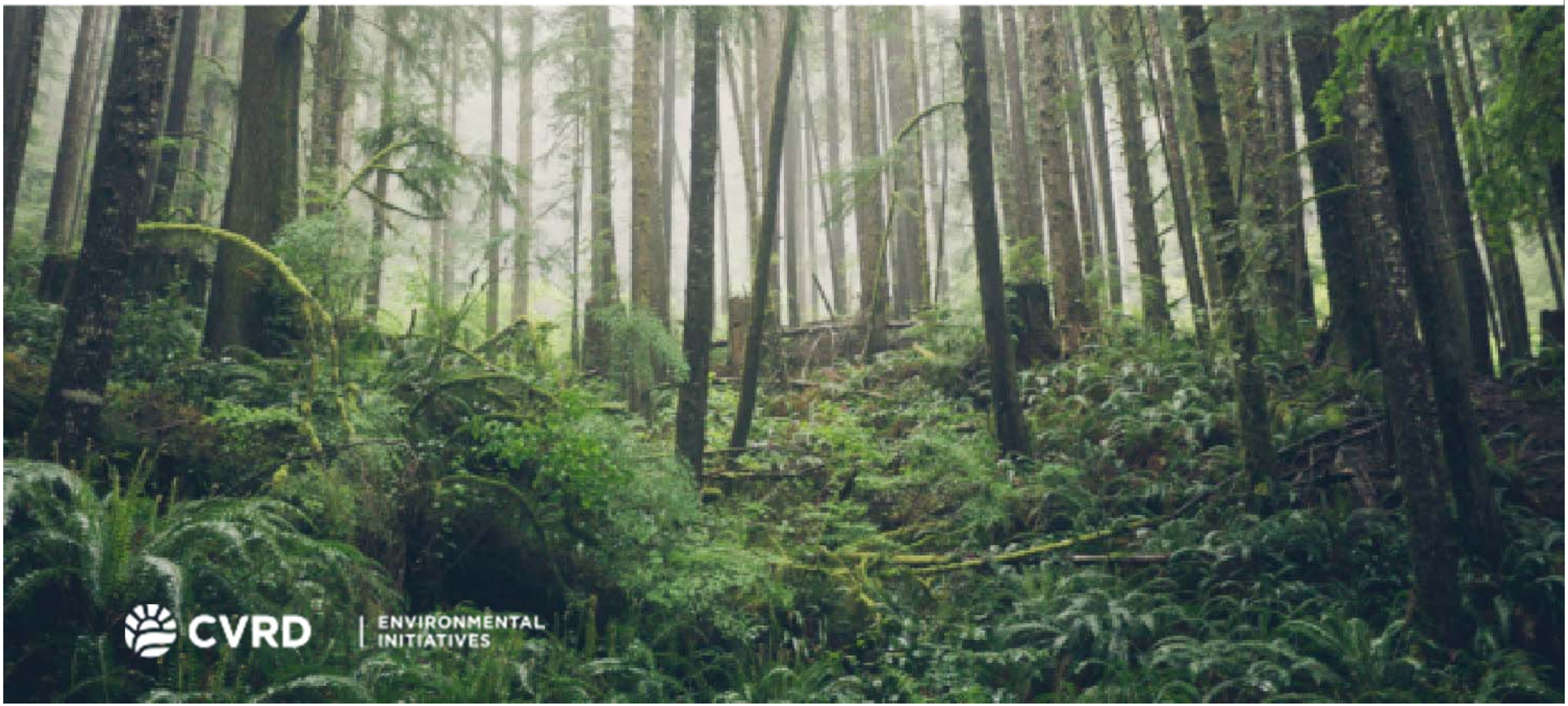
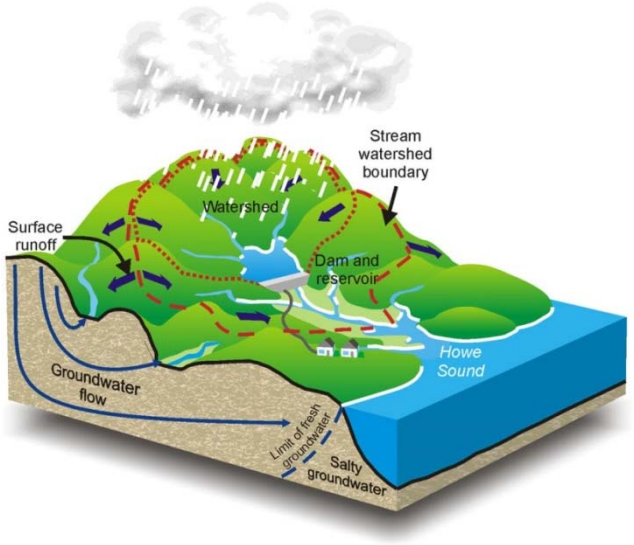
Watershed Model **Background**



Goal #1: Support the development of a watershed management plan

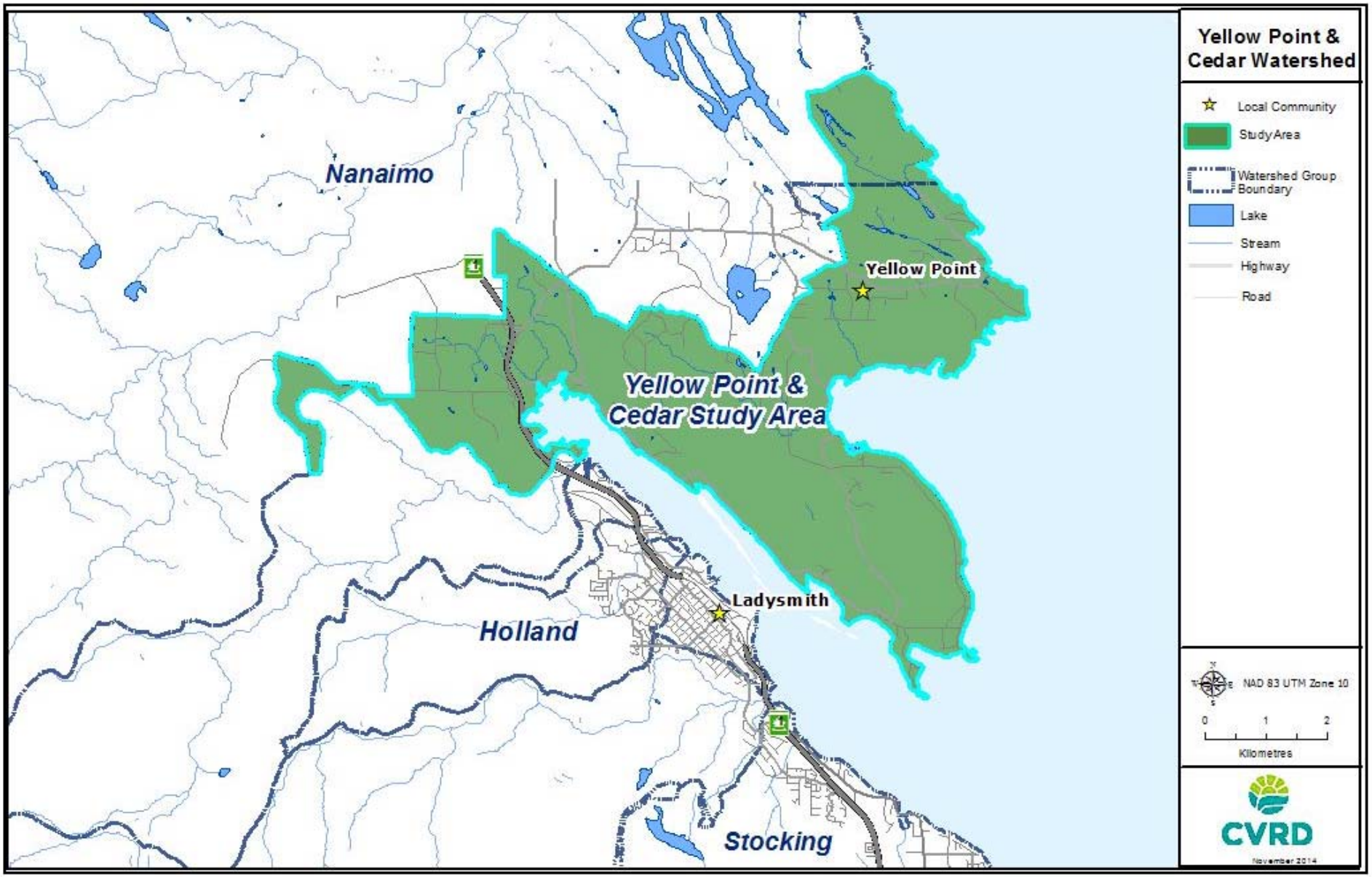
Establish the current ecological and hydrological function and use this information to:

- understand how much development can be supported in the watershed
- protect freshwater areas from degradation and contamination



Goal #2: Test the use of automated mapping to identify key ecological areas and surface water resources

Goal #3: Understand the connections between ecological function and water resource protection


Yellow Point &
Cedar Watershed
Local Community
Study Area
Watershed Group Boundary
Lake
Stream
Highway
Road
Nanaimo
Yellow Point
Yellow Point &
Cedar Study Area
Ladysmith
Holland
Stocking
NAD 83 UTM Zone 10
0
1
2
Kilometres
CVRD
November 2014

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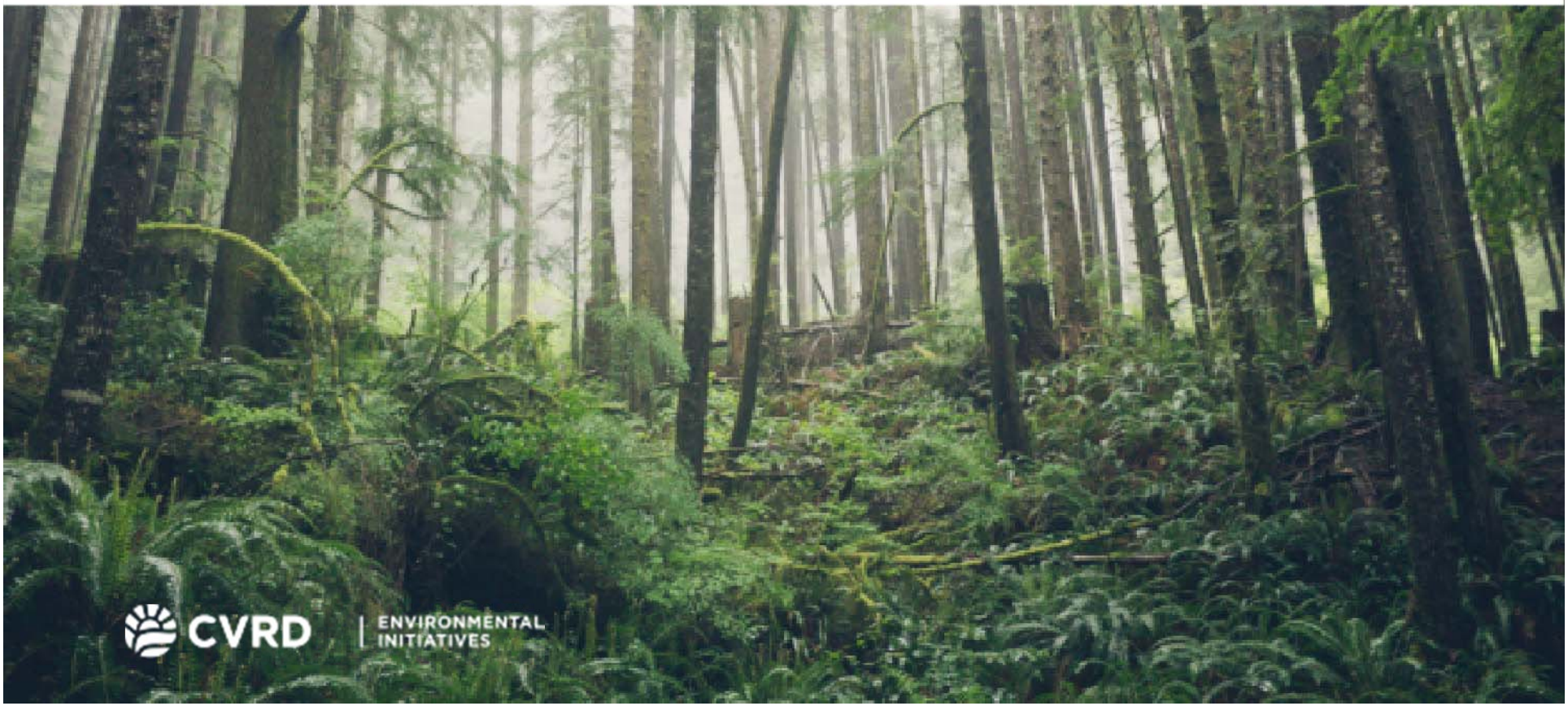
Watershed Model **Workplan**



Workplan components

1. Assemble existing data
   a) high-resolution LiDAR

Workplan components

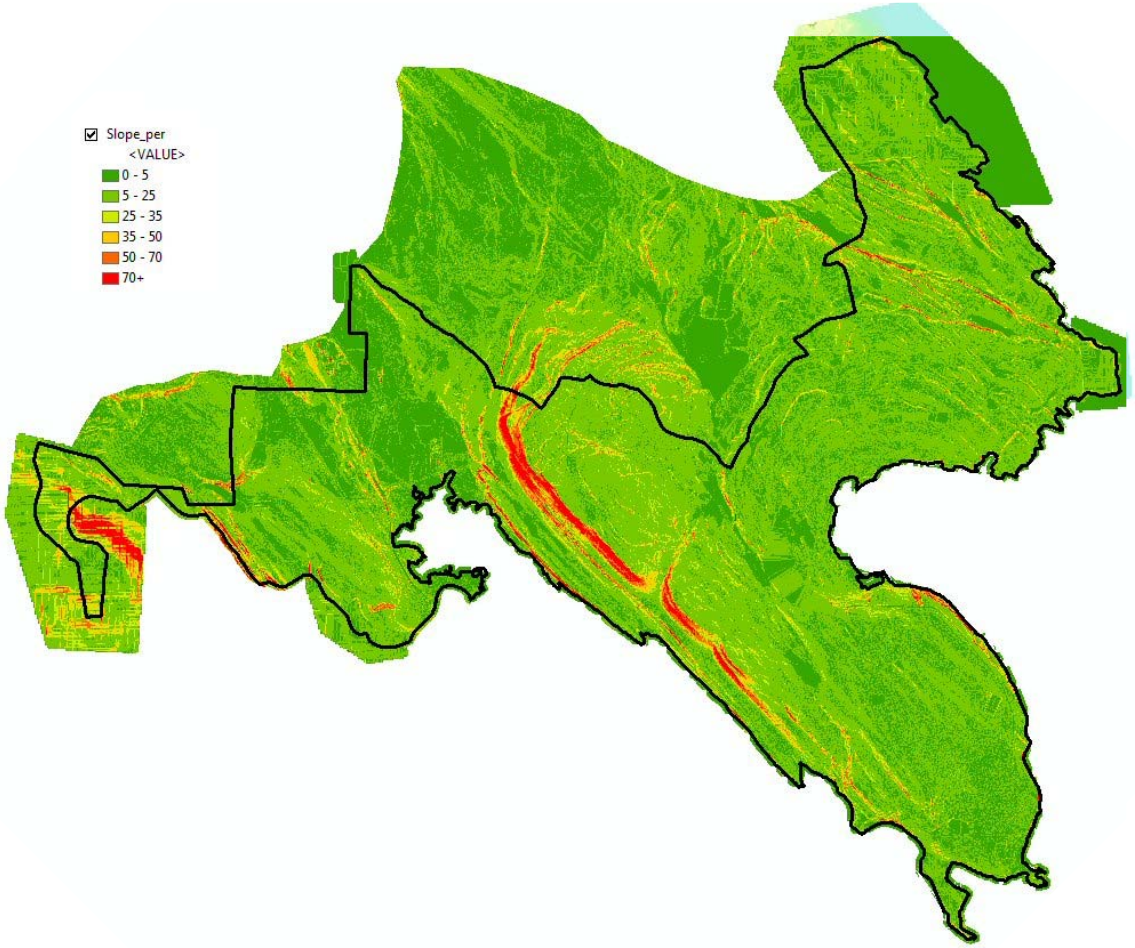
1. Assemble existing data

   b) Ecosystem mapping; and

   c) Land-use data

Workplan components

2. Generate derivative products for topography, vegetation, ecosystems, and hydrology



Workplan components

3. "Ground truth" mapping with help of the Cowichan Land Trust (and you!)
4. Analyze data to produce maps of ecosystems, water features, green infrastructure, and zones of impact on water resources

Workplan components

5. Integrate results in a web-based mapping and analysis tool

Field validation

Field Validation

Approach

- Train volunteer stewards
- Identified and validated key sites (>100)
- Completed fieldwork Mar 1st-13th

Additional Outcomes

- Community mapping process
- Build stewardship awareness

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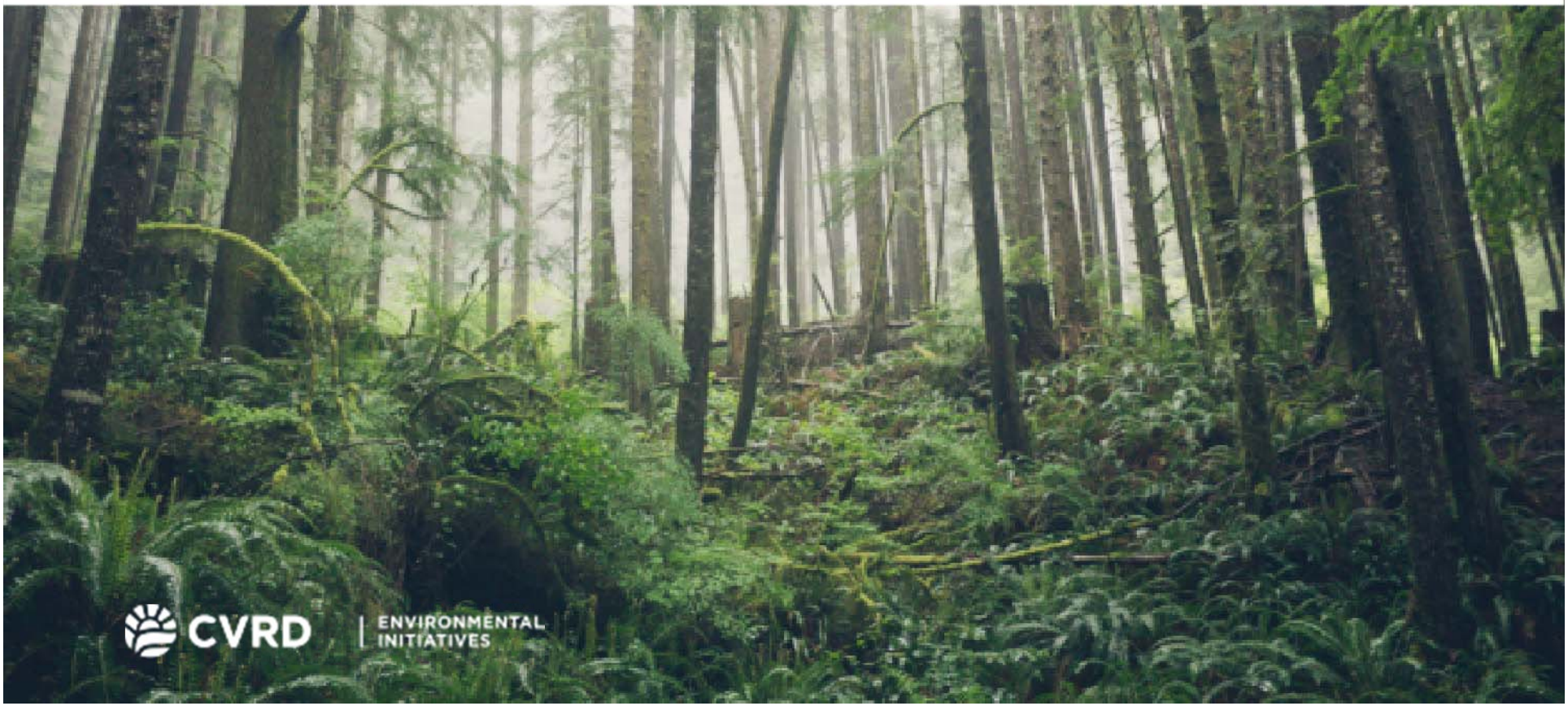
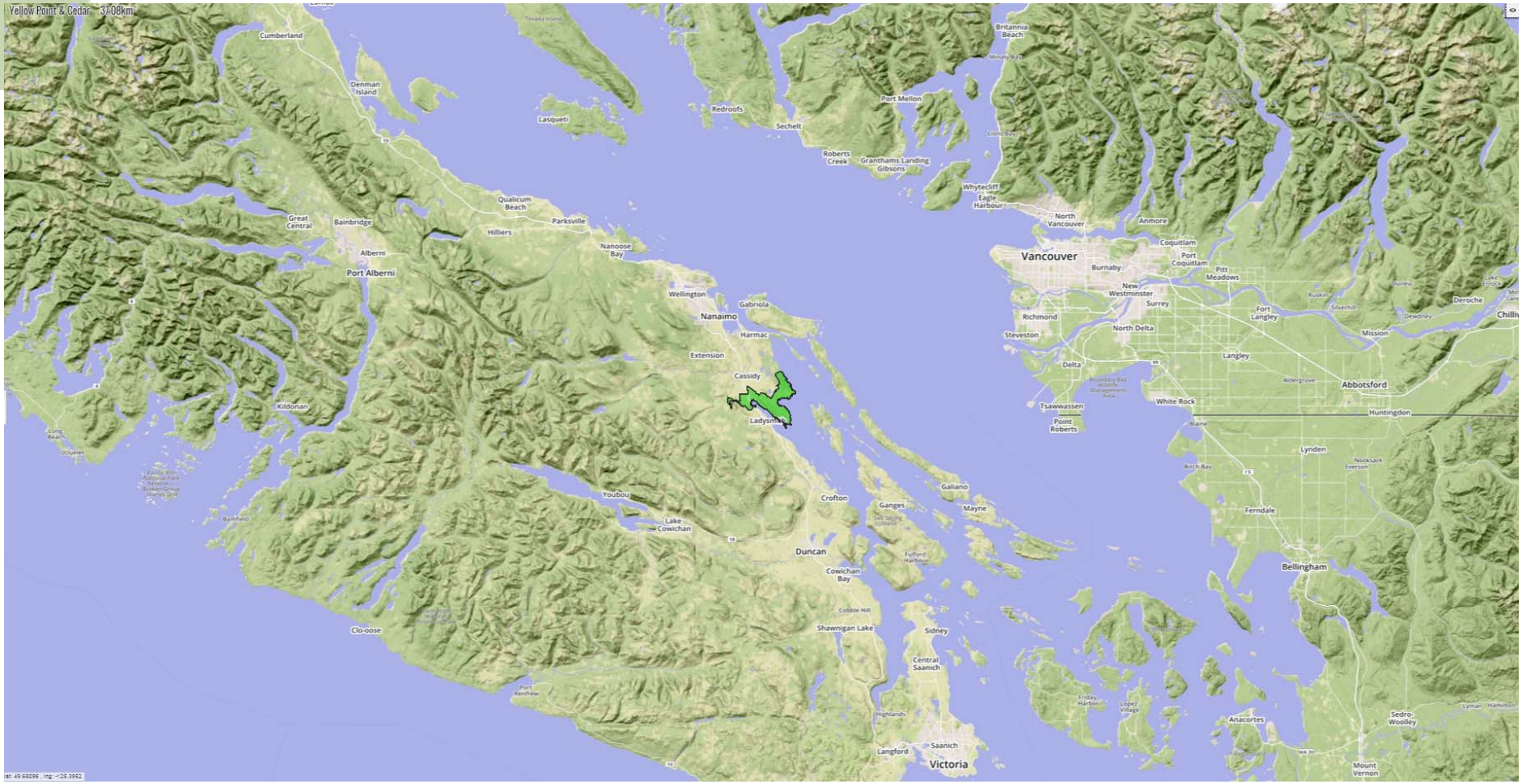
Watershed Model **Results**



Yellow Point – Cedar study area



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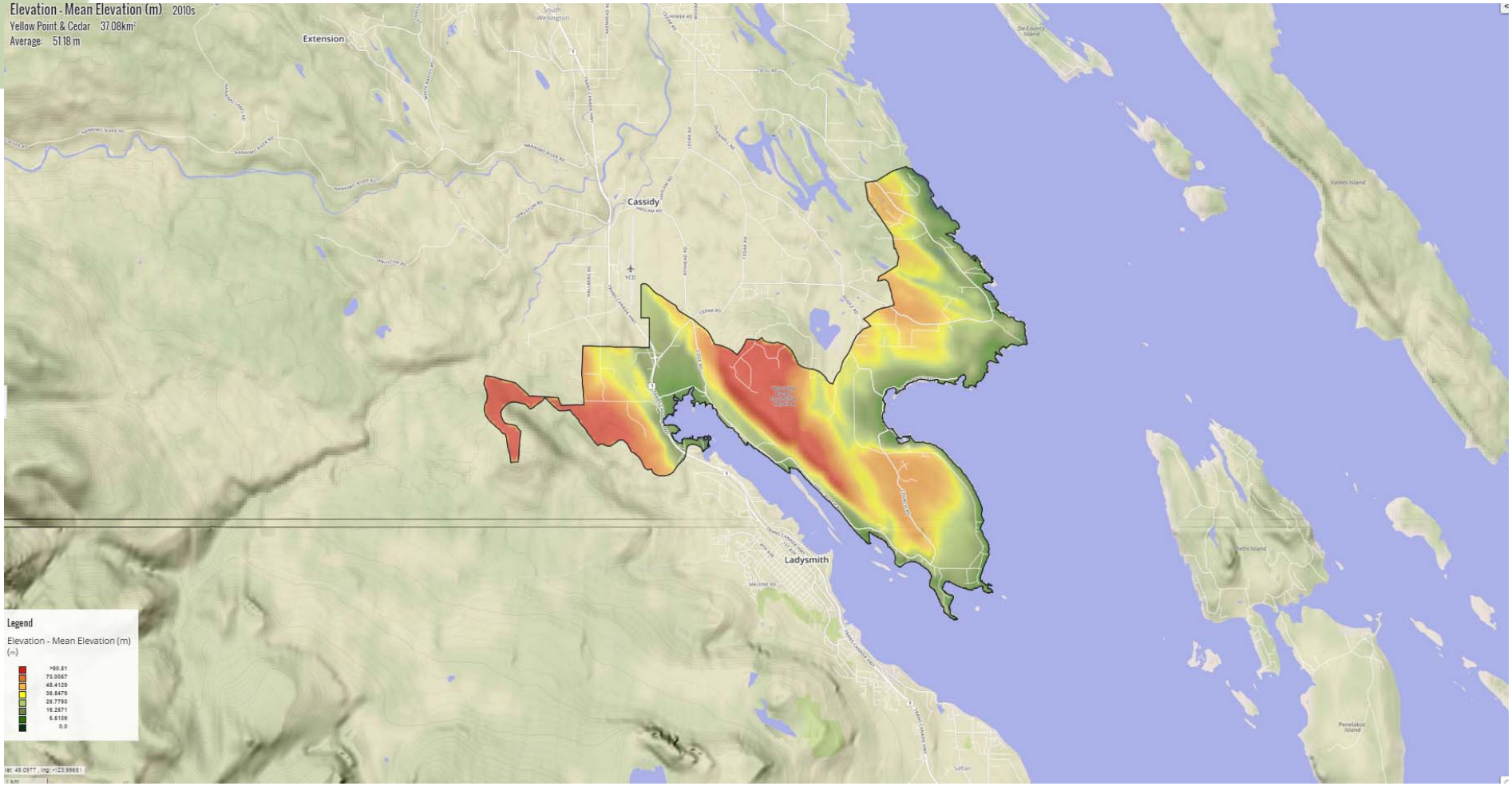
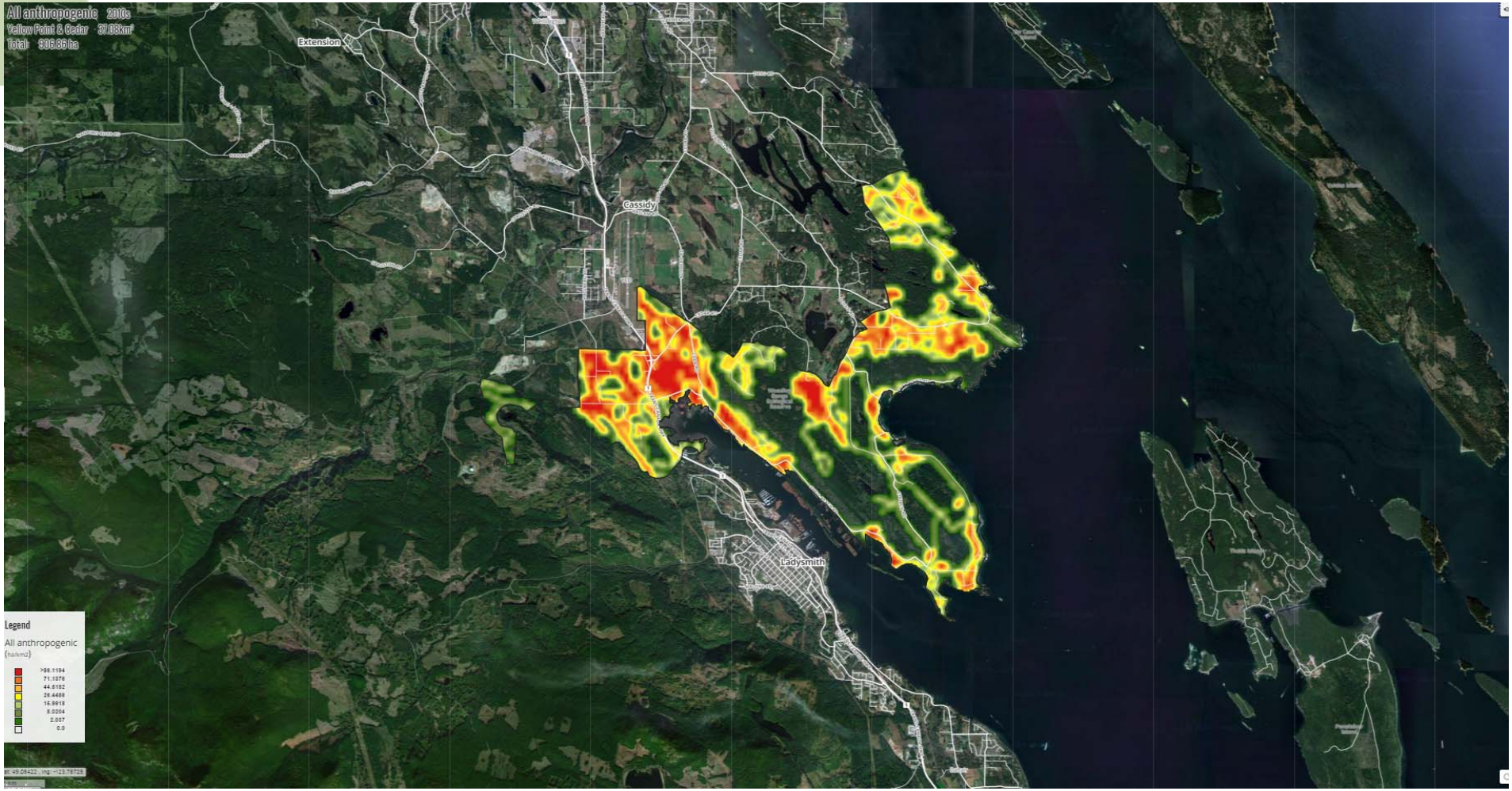
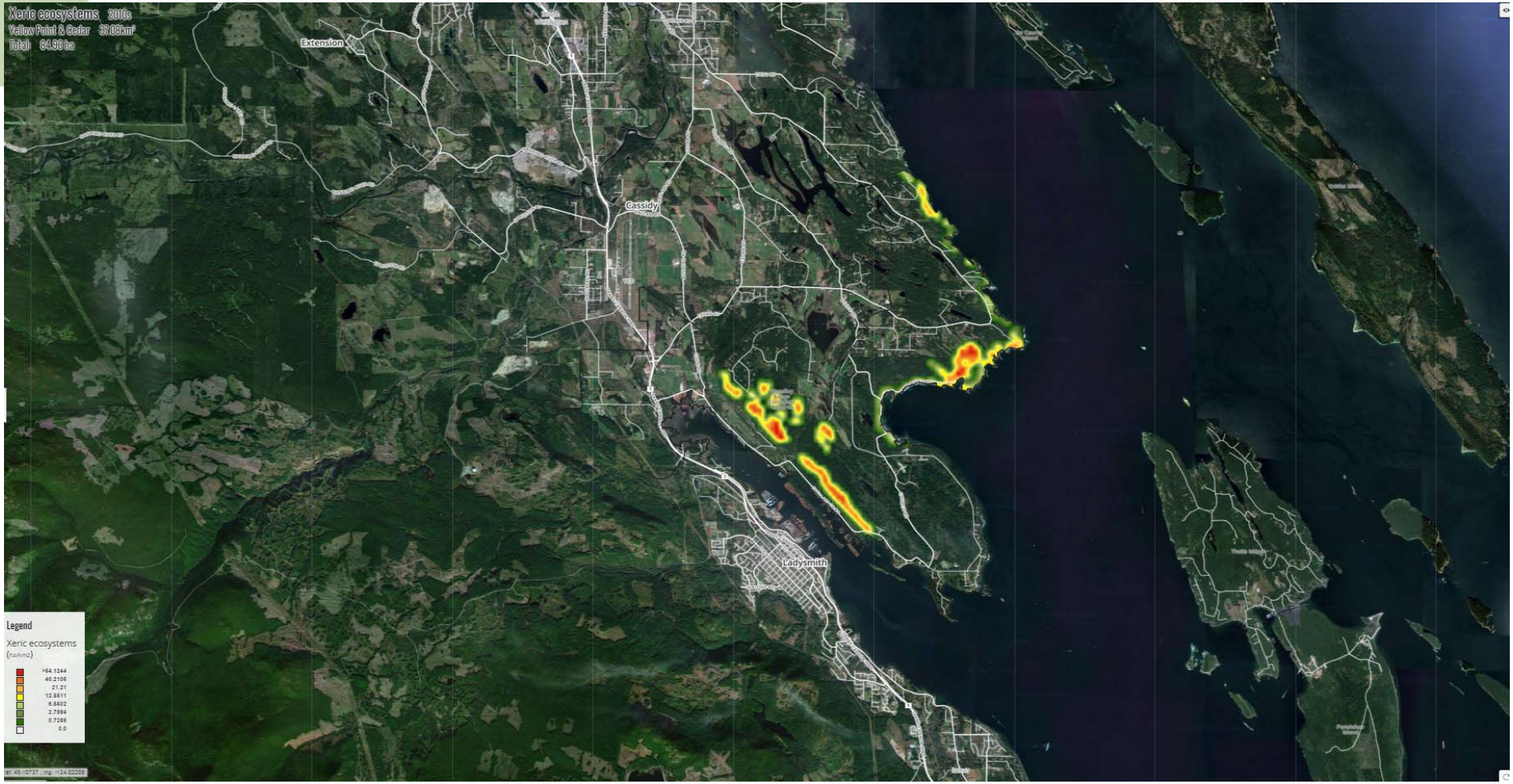
Elevation


Elevation - Mean Elevation (m) 2010s
Yellow Point & Cedar 37.08km²
Average: 51.18 m
Extension
Cassidy
Ladysmith
Legend
Elevation - Mean Elevation (m)
(m)
>90.81
73.0067
48.4129
38.6479
26.7793
16.2671
5.6138
0.0

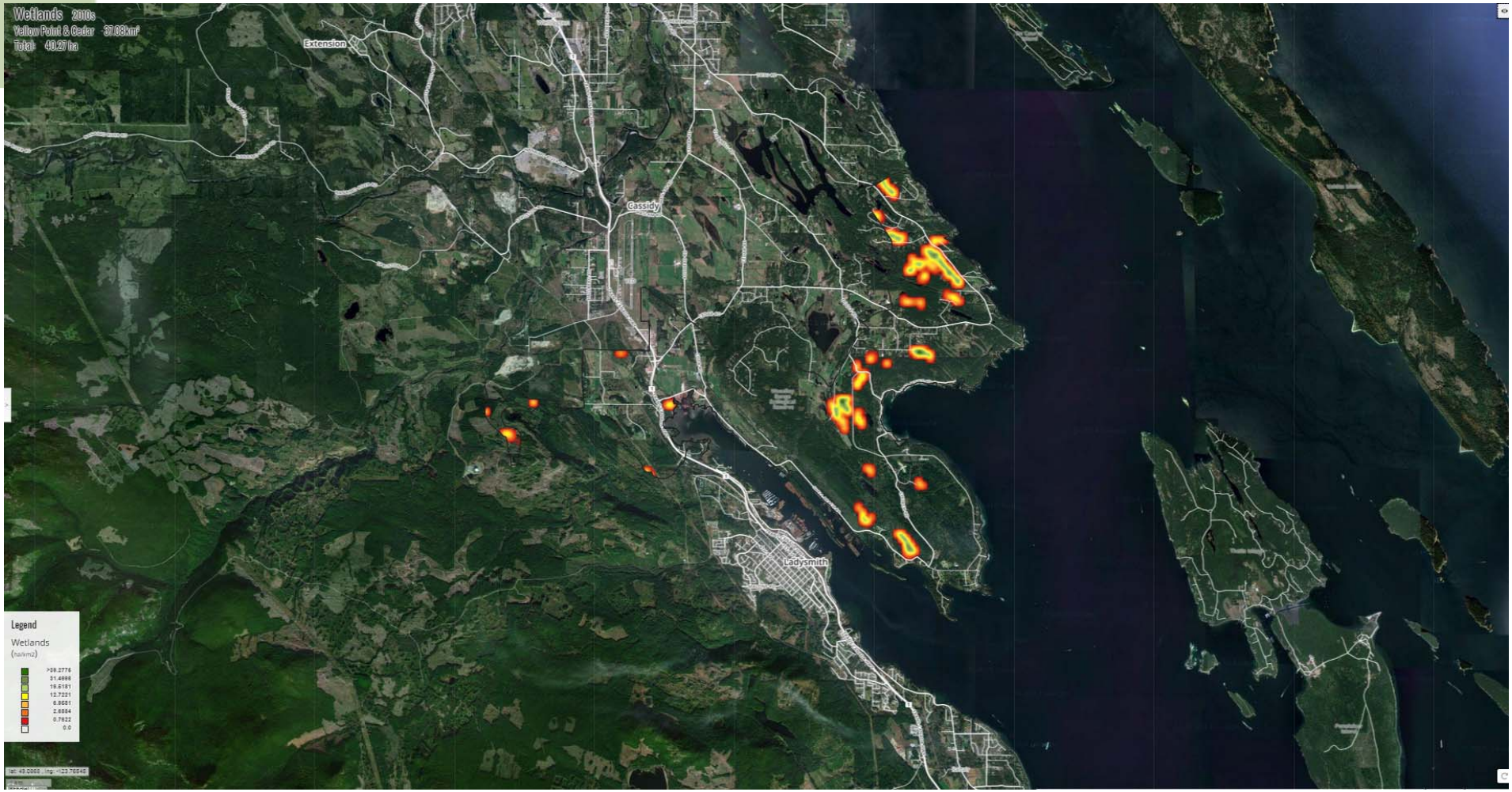
Human footprint and intact ecosystems



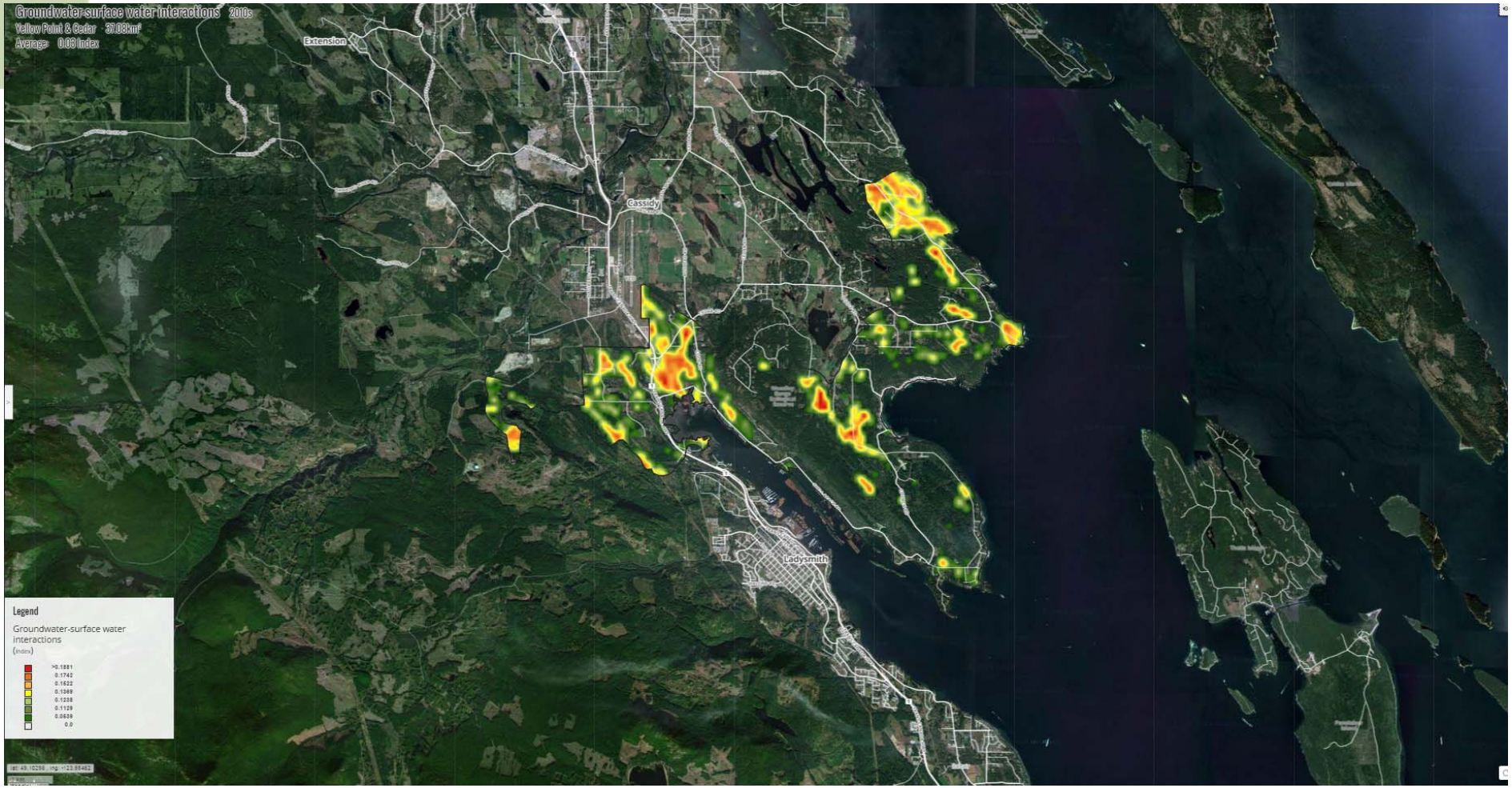
Xeric (dry) ecosystems



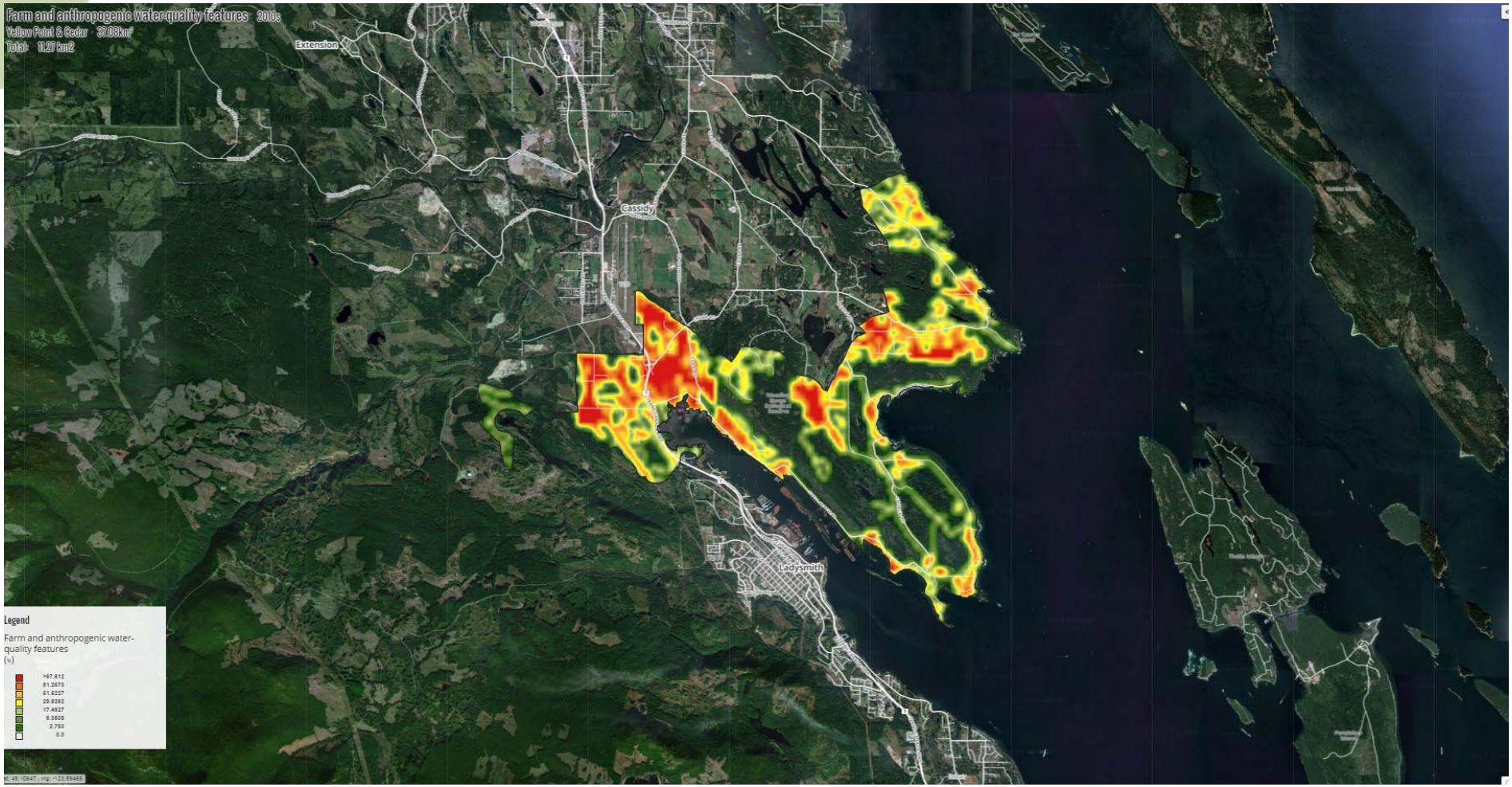
Wetland ecosystems



Areas of interactions of groundwater and surface water



Areas of increased human use and runoff



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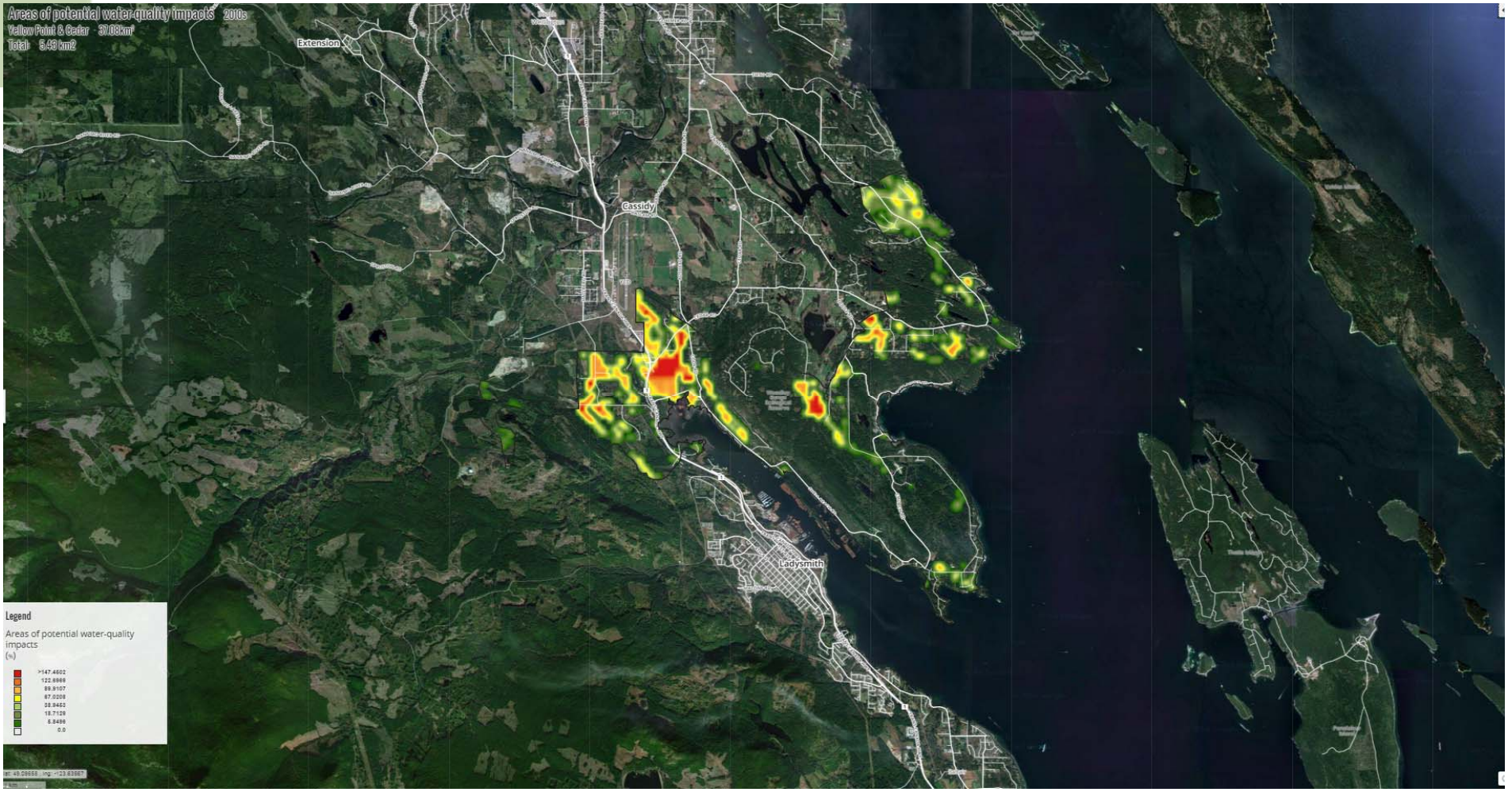
Potential groundwater quality impact areas



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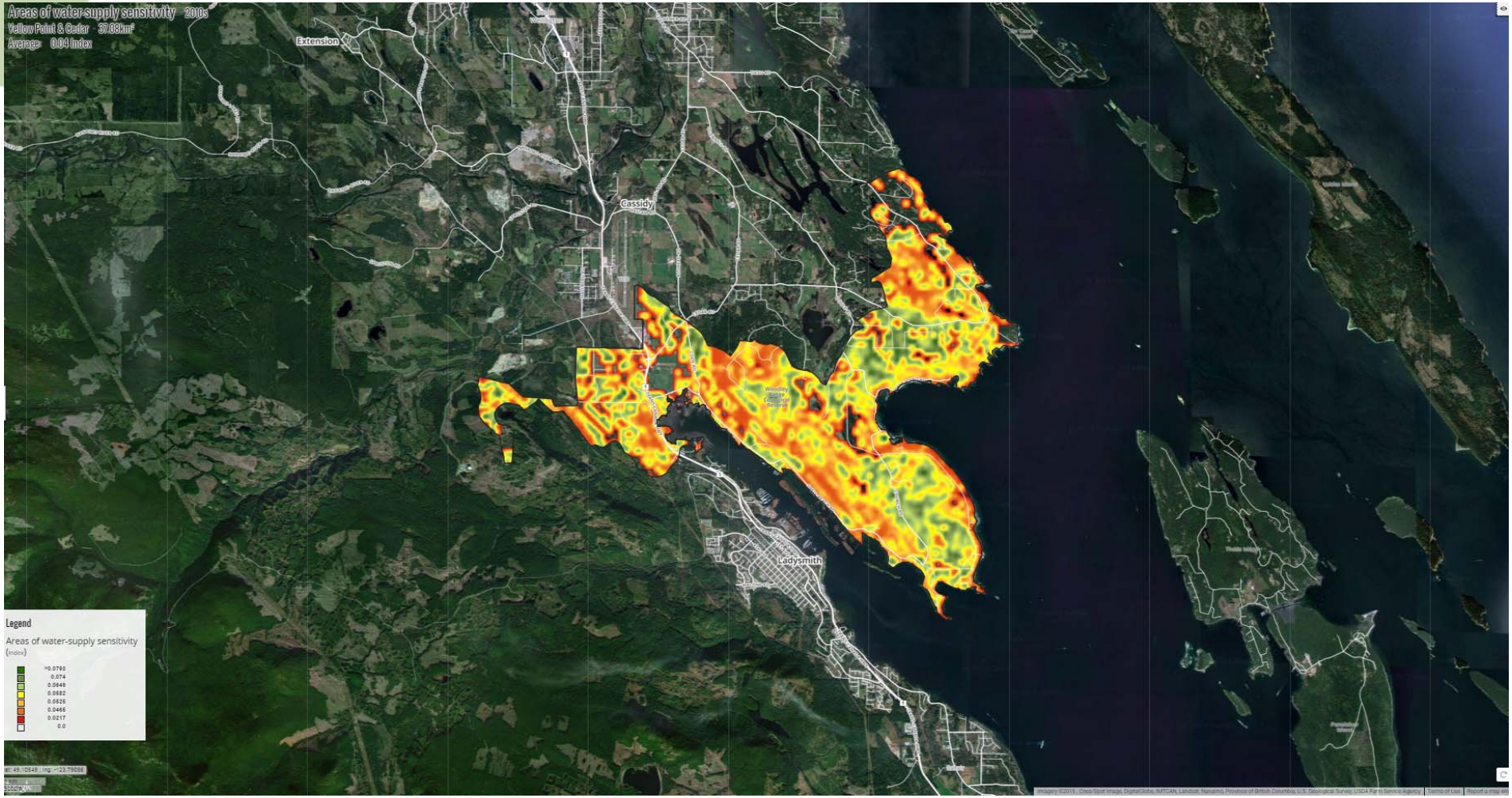
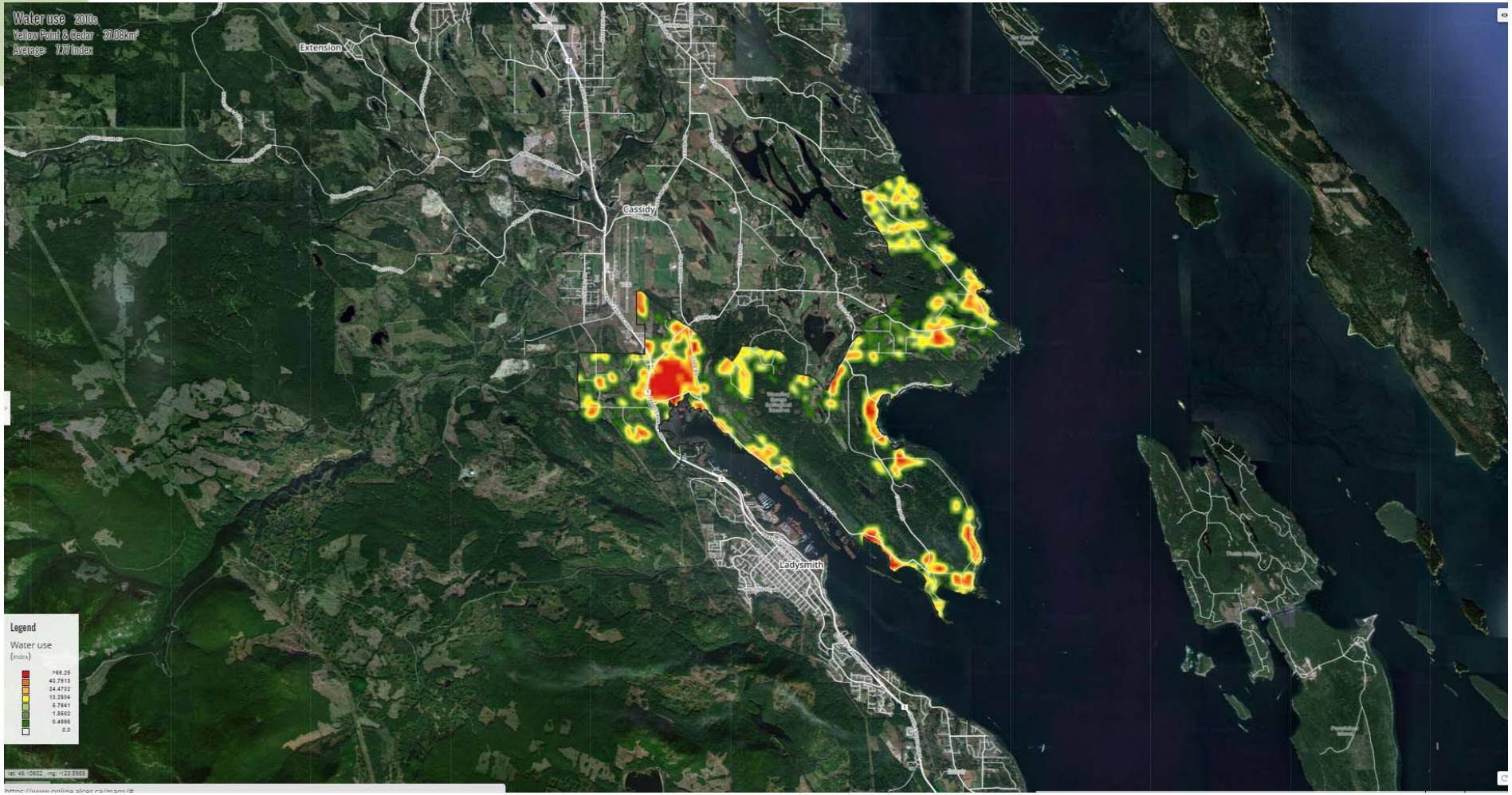
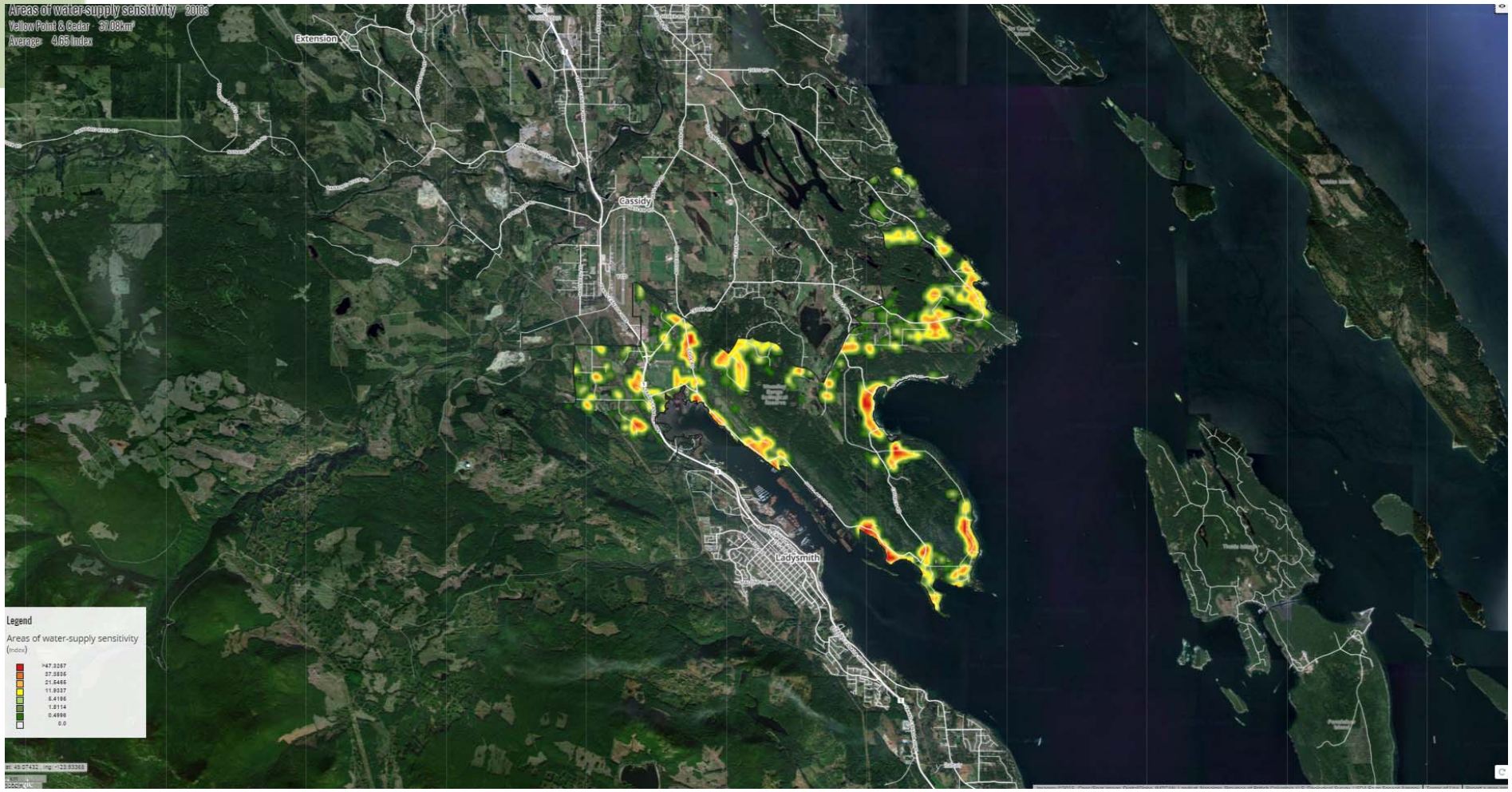
Areas of reduced groundwater recharge



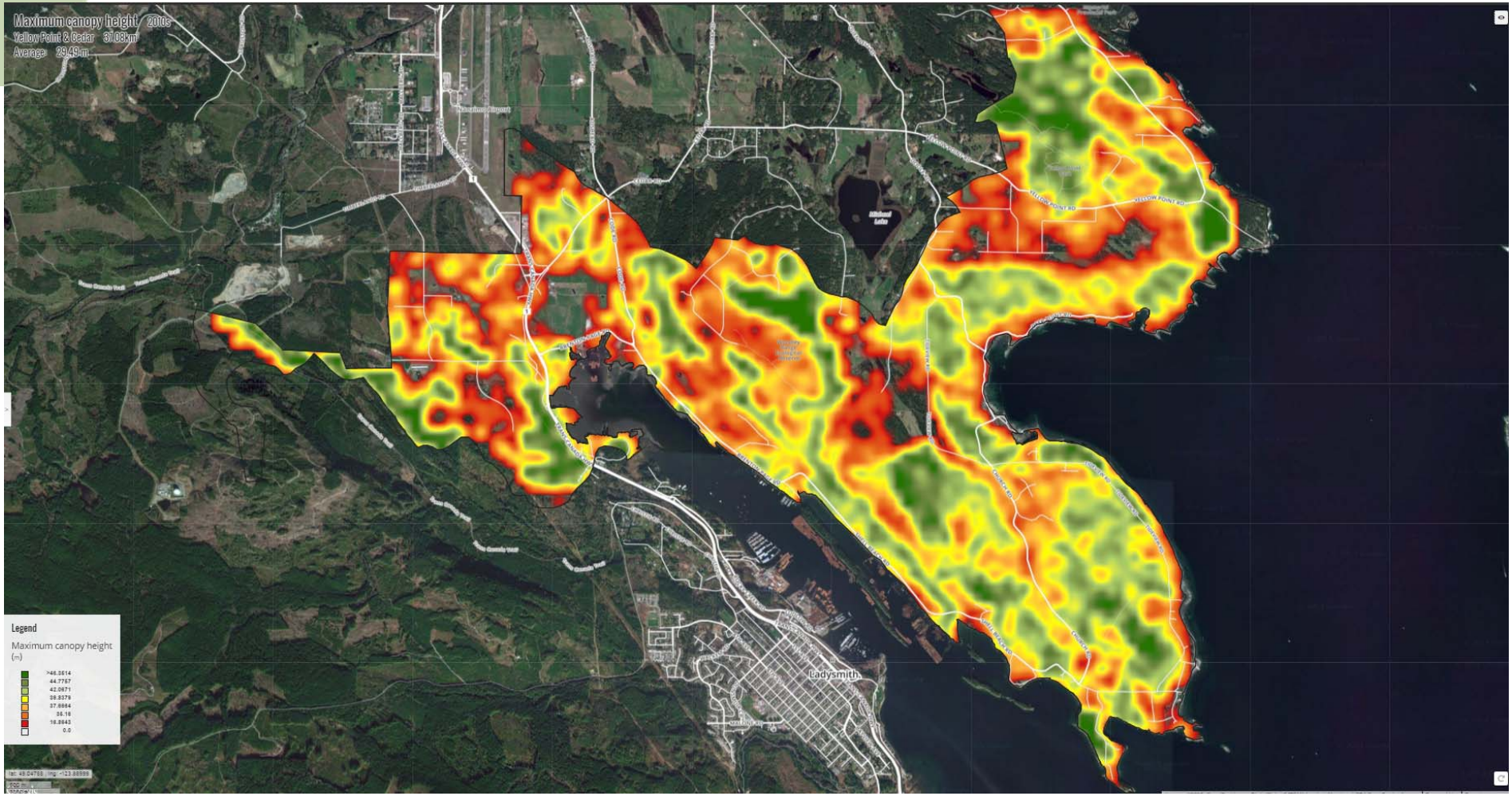
Areas of increased water use



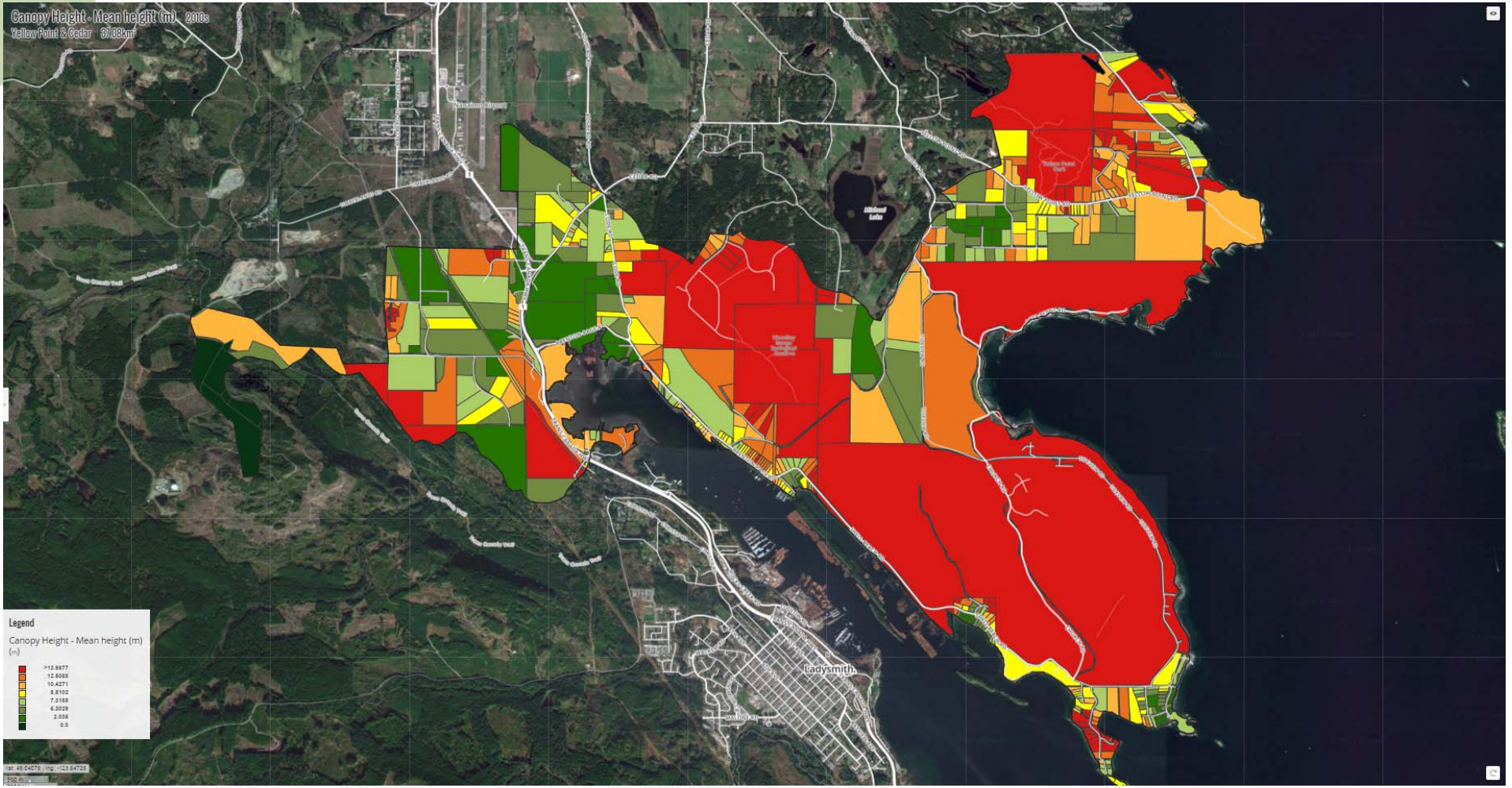
Areas of water supply sensitivity



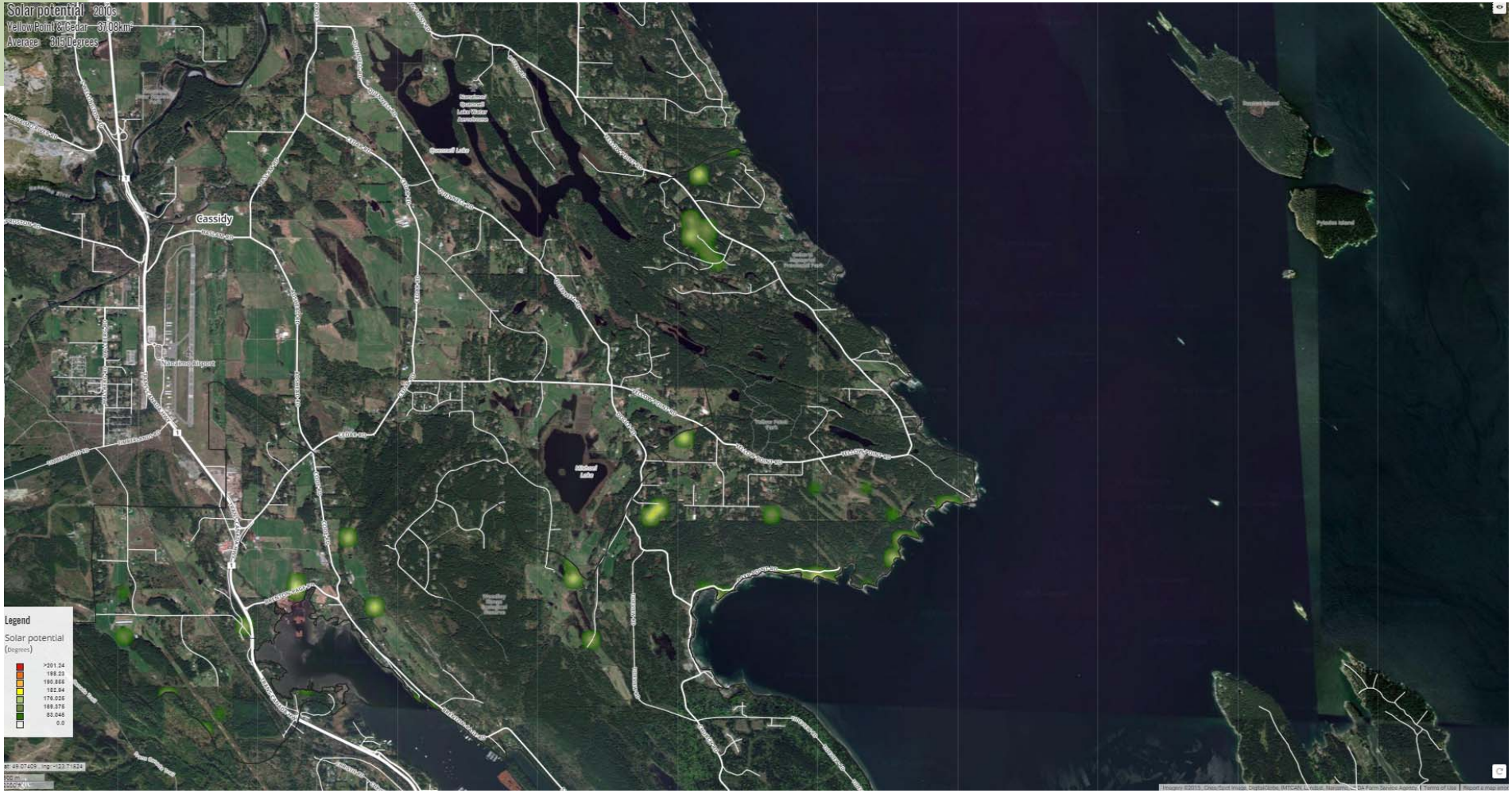
Maximum vegetation height



Mean vegetation height by lot/parcel



Solar potential



Next Steps

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Questions and Comments