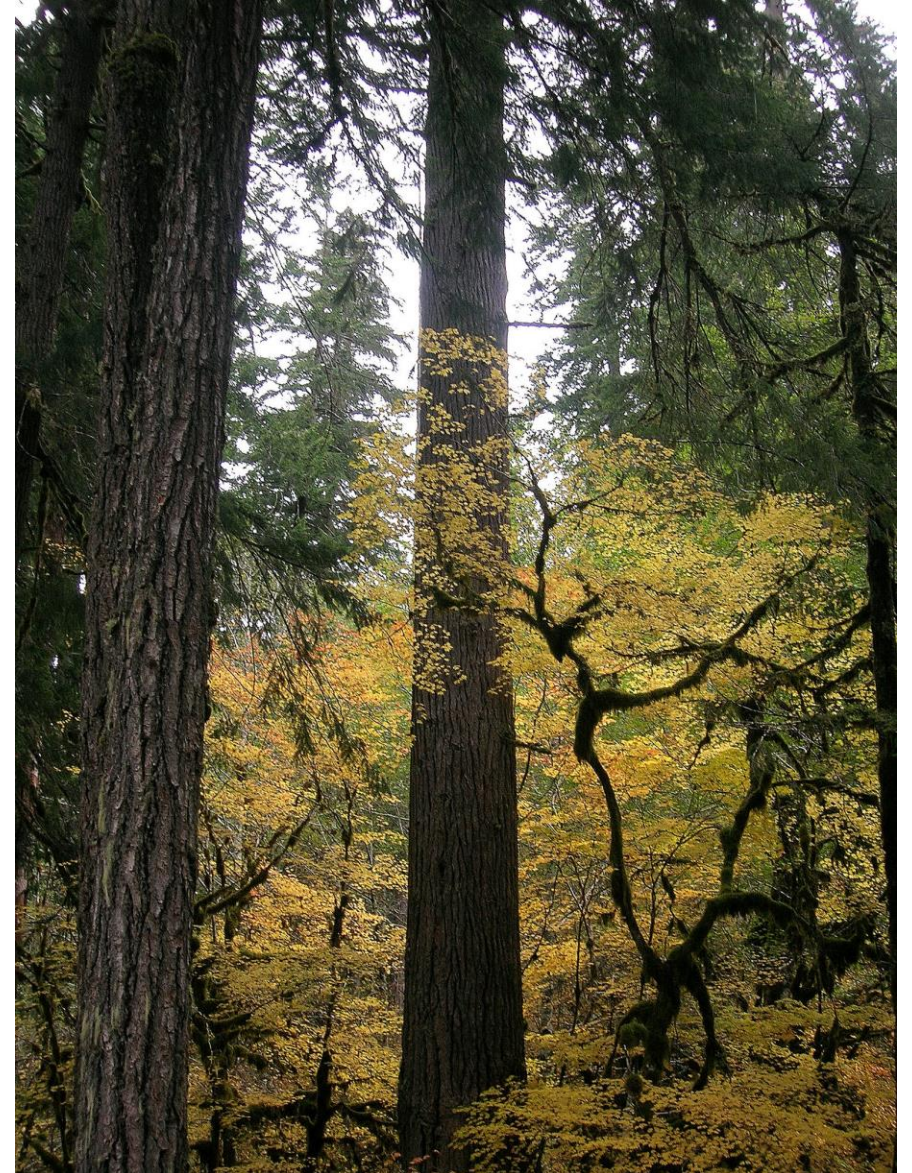




Jefferson County Forest Management

Meeting agenda

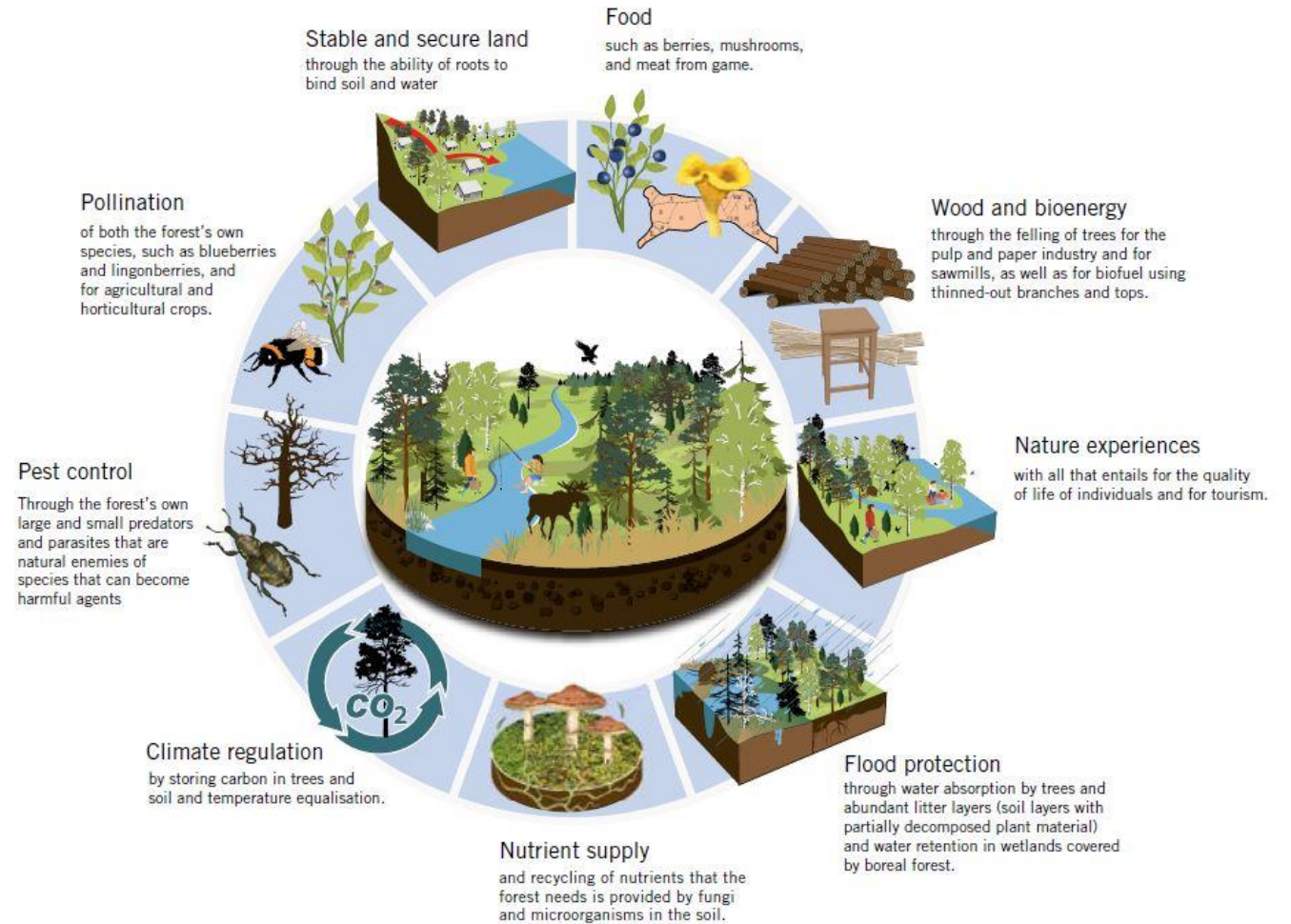
- Role of Forests
 - Forest ecology
 - Local considerations
 - Management options
- Overview of Jefferson County Forest Mgmt
 - Past work
 - Future work
- DNR and Jefferson County
 - Context
 - Management options comparison
 - Carbon Program
- Open comments



The Role of Forests

Forests provide many vital ecosystem services including;

- Take in and store atmospheric CO₂
- Regulate air temperature and moisture
- Absorb rainfall and store in soil
- Provide habitat for species of all sizes
- Recreation spaces
- Economic benefits



Forest structure and complexity



Figure 2. *An example of the birds that utilize the vertical diversity in a mature Douglas-fir forest. From Brown (1985)*

Large Woody Debris

Soil surface Litter

Prior to Euro-American settlement, forests dominated the landscapes of East Jefferson County



Recent period has been a time
of significant land
transformation

- From forests to other land cover
- Within forests
 - Declining structural complexity



Challenges facing forests

- Land conversion
 - Climate change
 - Increased temperatures
 - Changes to the timing/intensity of rainfall
 - Winter storms/floods
 - Summer drought
- ↻
- Declining forest health
 - Big leaf Maple and Western Redcedar Die back

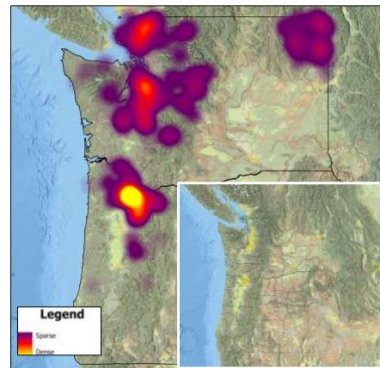
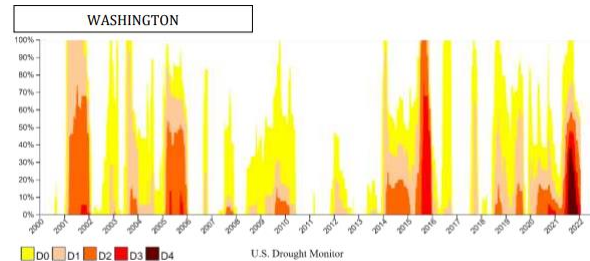
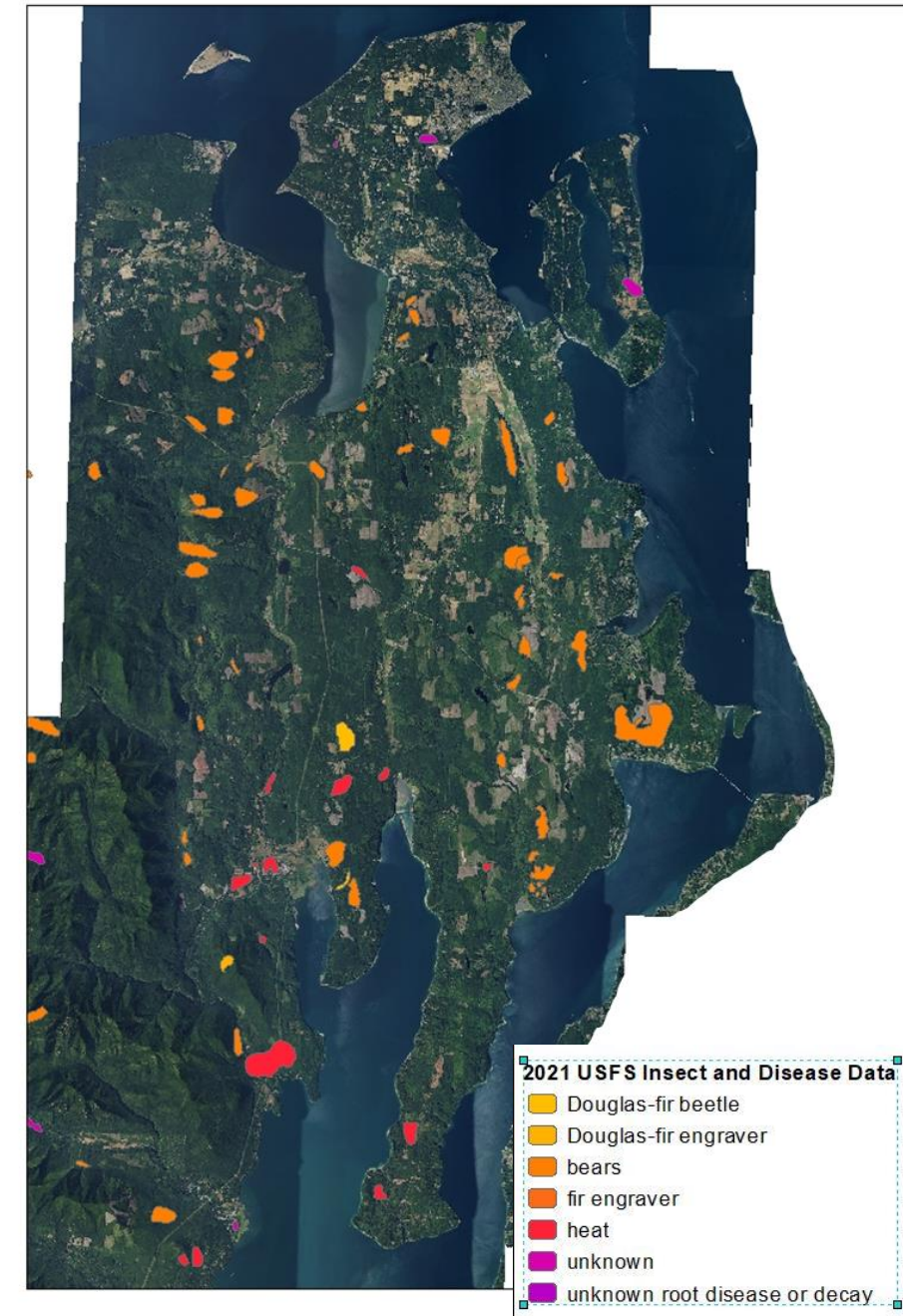
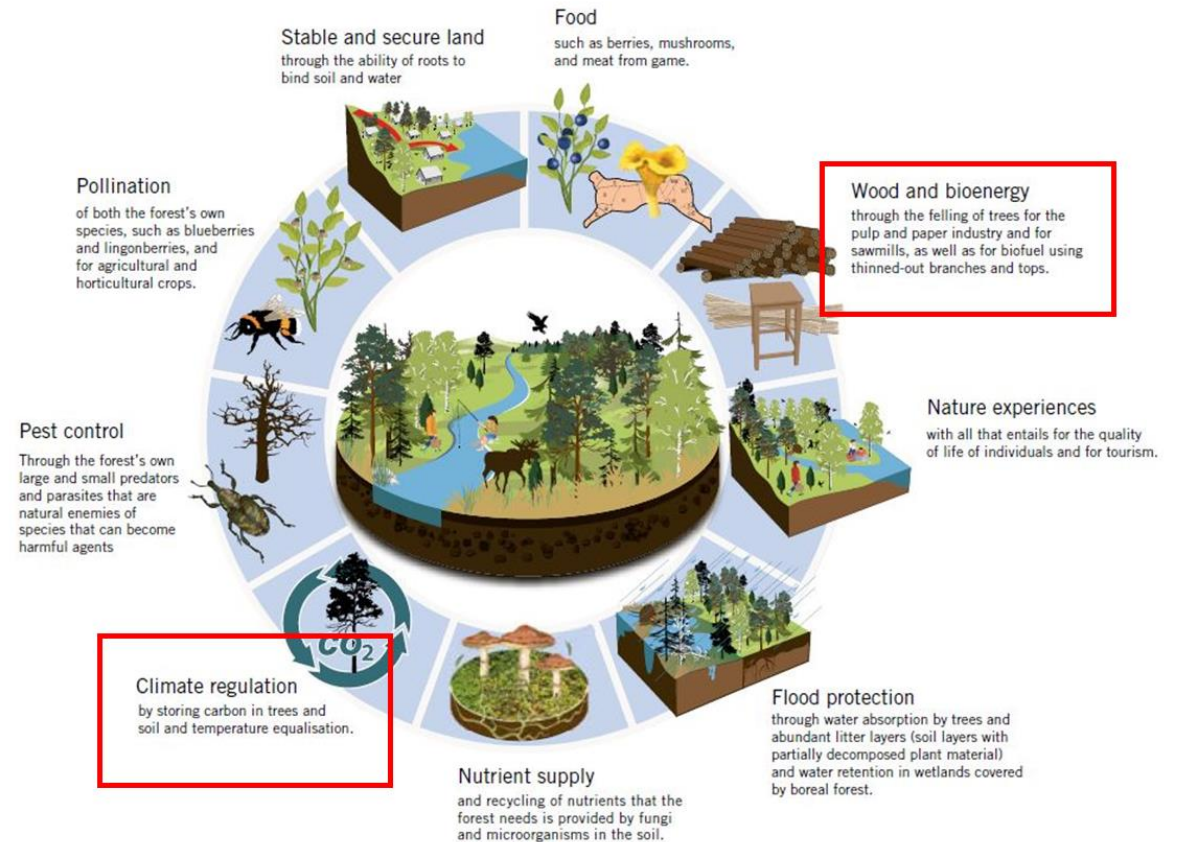


Figure 6. Heat map illustrating frequency of sites with ground verified WRC dieback indicating in highest (yellow) near metropolitan areas (especially west of the Cascade crest), possibly due to island effect (inset) which indicates higher temperatures (yellow) also in the metropolitan areas Portland and Seattle. Data include all Survey123 and iNaturalist dieback locations.



The important role of forests

Balancing elements of interconnected ecology and economics to reflect our values and desired future outcomes



Jefferson County Forestry Program

2019 Feasibility Study

- Focused on environmental (Jefferson County forest inventory), economic (financially viable), and community (dispersed parcels, how to manage for community benefits)

2020-2021 Pilot Project

Forest health improvement and ecological restoration

- Selective thinning in high-risk forests for forest restoration
- Forest management policy
- Economic stability and community development

Jefferson County Forestry Program

Arno Bergstrom, Forester, Kitsap County Forest Stewardship

Dr. Catharine Copass, Ecologist, Olympic National Park Service

Mike Cronin, retired Forester, DNR and Cronin Forestry

Owen French, Natural Resource Specialist, WA Dept of Ecology

Ross Goodwin, Forest Practices, Washington DNR

Ian Hanna, Consultant, Altruist Partners, formerly Forest Stewardship Council

Al Latham, Jefferson County Conservation District Supervisor

Tami Pokorny, Natural Resources Coordinator, Jefferson County Environmental Health

Denise Pranger, retired Director, Northwest Natural Resources Group

Matt Tyler, Director, Jefferson County Parks and Recreation

Jefferson County Forestry Program

Mission is a focus on ecological, social, and economic values to create a land management strategy that enhances these three categories. This will be achieved through the following guiding policies:

Restore and maintain forest health throughout the region

Protect and enhance soil, water quality, and fish and wildlife habitat

Forests are biologically, socially, and economically self-sustaining

Protect and enhance the recreational and aesthetic value of forest lands

Provide natural resources through sustainable forest management to the local community

Jefferson County Forestry Program

1800

Acres of land owned by
Jefferson County

300

Parcels of land, most under
10 acres each

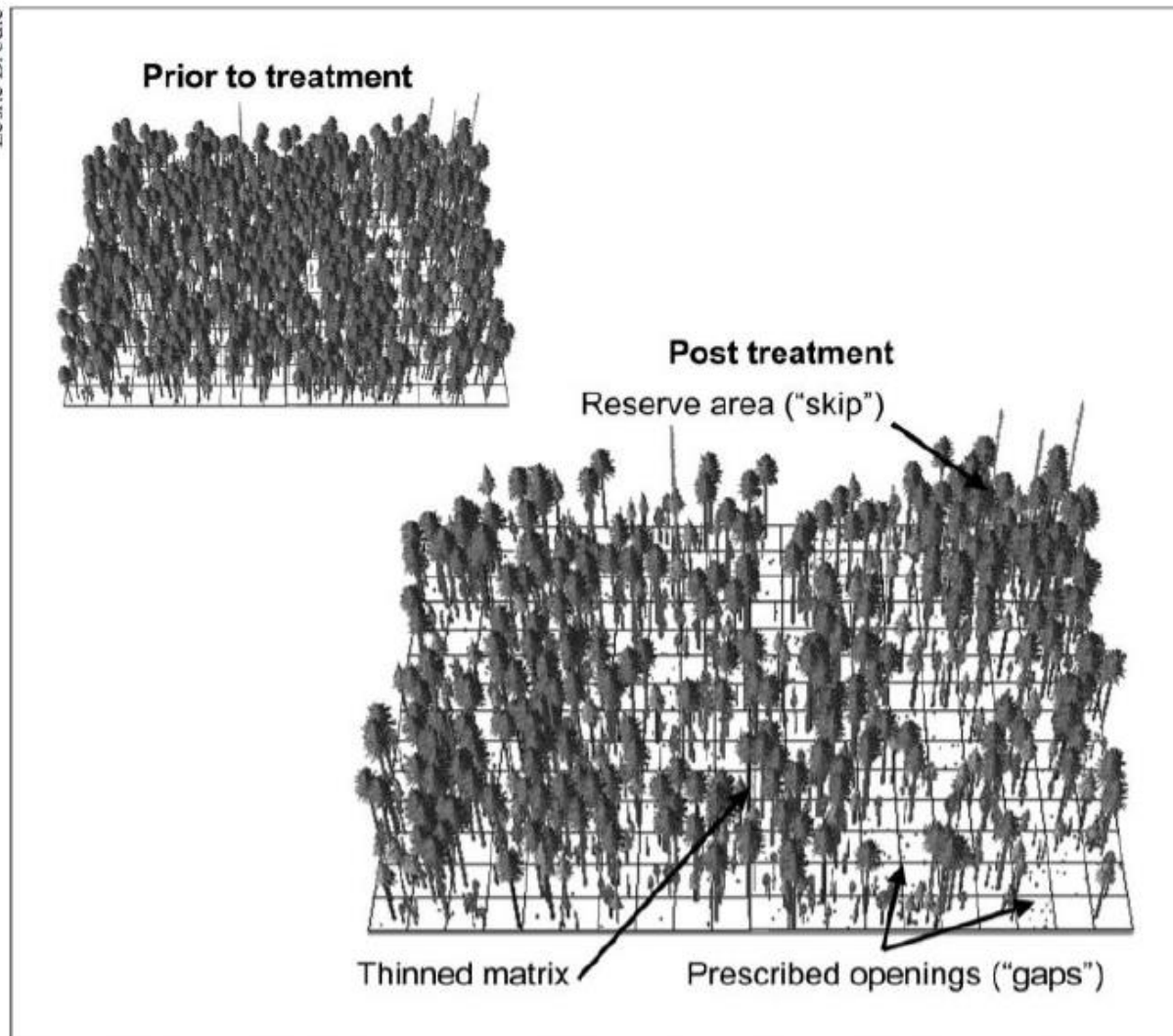
80%

Covered in forest

Jefferson County Community Partnerships

- Kitsap Forest Stewardship
- Parks dept, continued increase in use
- Fire dept, risk reduction/planning, CWPP
- Local jobs, internships, outreach (WSU)
- Local wood sales





A diagram of a stand before and after thinning with skips and gaps. Snag height is exaggerated for visibility.





Trailhead Park, Port Townsend



Chimacum Park, Chimacum



Chimacum County Park

36 acres forest

Commercially planted, DNR trade property

Approx 70+ yrs old

Average 20% crown ratios, mortality

270 Trees per acre, thin to 180 trees per acre

Avg 13' spacing, thin to avg 18' spacing

300+ MBF, mix of pulp and saw logs

Results:

40 acres forest restored, 376 MBF harvested, net revenue \$86k

300+ trees planted, park maintenance, hazard trees removed

Sign installation, DOR example, and Portland airport



Gibbs Lake County Park, Chimacum

Jefferson County Harvest Financial Summary

Site	Acres Harvested	MBF	Volume per Acre (MBF)	JC Total Revenue	JC Revenue/Acre
Chimacum Park	38	376	9.9	\$ 86,026.49	\$ 2,263.86
Beausite	100	377	3.8	\$ 28,374.05	\$ 283.74
CG Gravel	14	5.8	0.4	\$ 13,933.81	\$ 995.27
Trailhead	36	144	4.0	\$ (42,557.80)	\$ (1,182.16)
Totals	188	902.80	4.52	\$ 85,776.55	\$ 590.18

County has net revenue of \$85k from harvest revenue

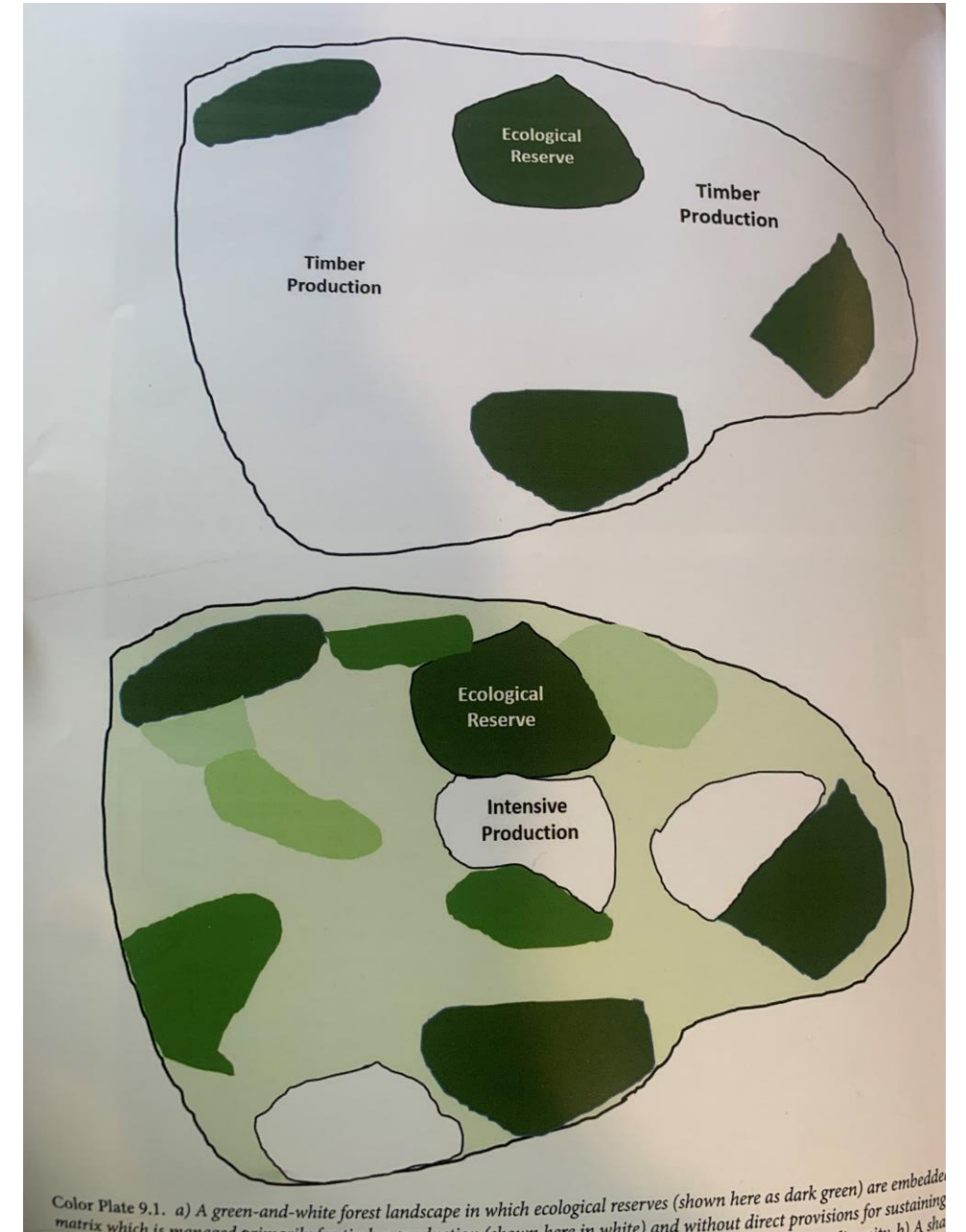
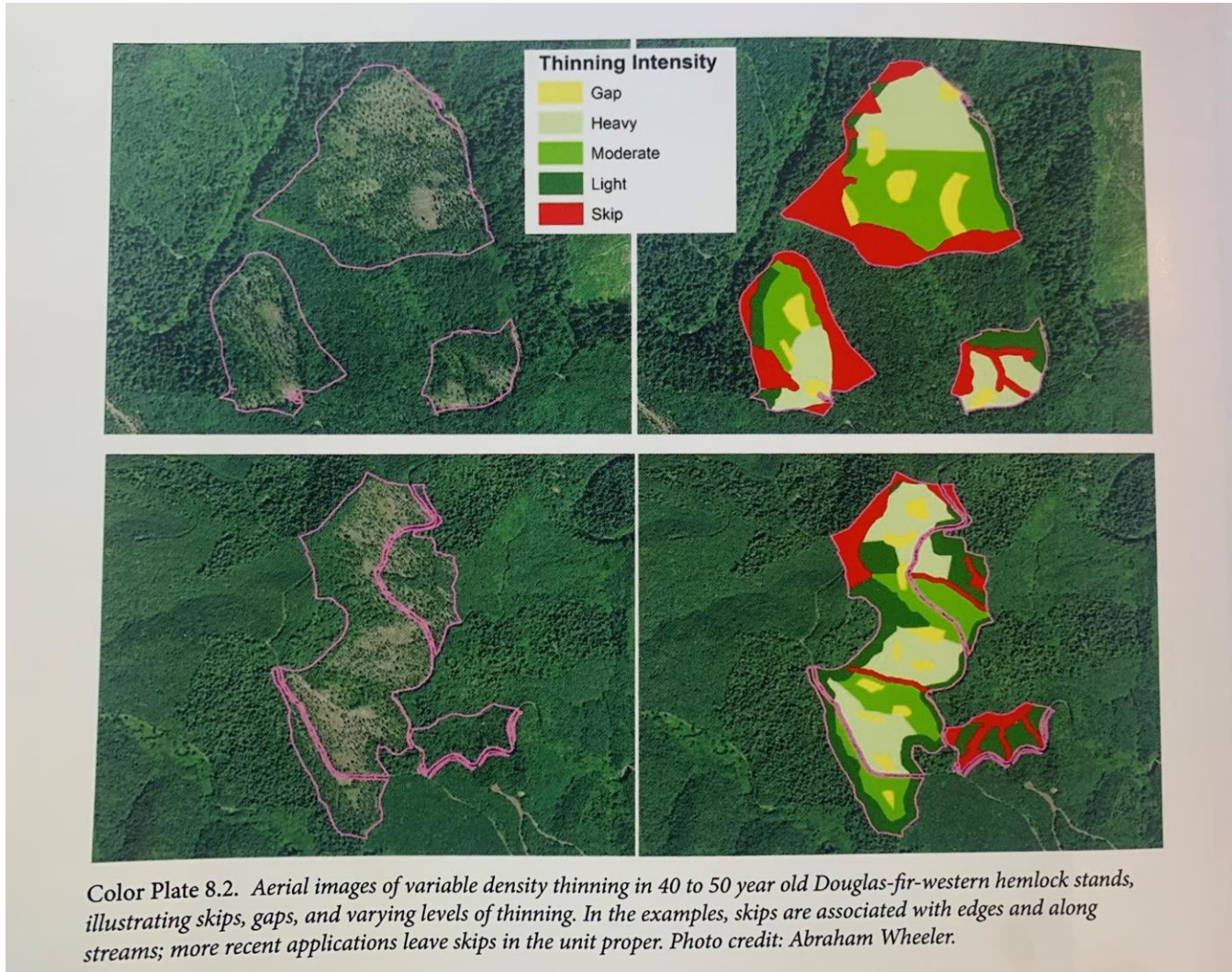
Chickadee Forestry contract over 2019-2021 totaled \$56k

Roughly \$29k profit margin for forest restoration to County to date

2022 Scope of Work Overview

- Forest Land Management and Financial Analysis
 - Financial analysis comparison of county management and DNR management
 - Review of Jefferson County lands, DNR lands, and private lands (large scale) for forest health, ecological value, and management needs (if any)
- Short and Long Term Management Scenarios
 - Land ownership: Jefferson County, DNR, or combination
 - Management options: carbon, selective thinning, recreation, mix
 - Public meeting and outreach

Variable Density Harvest

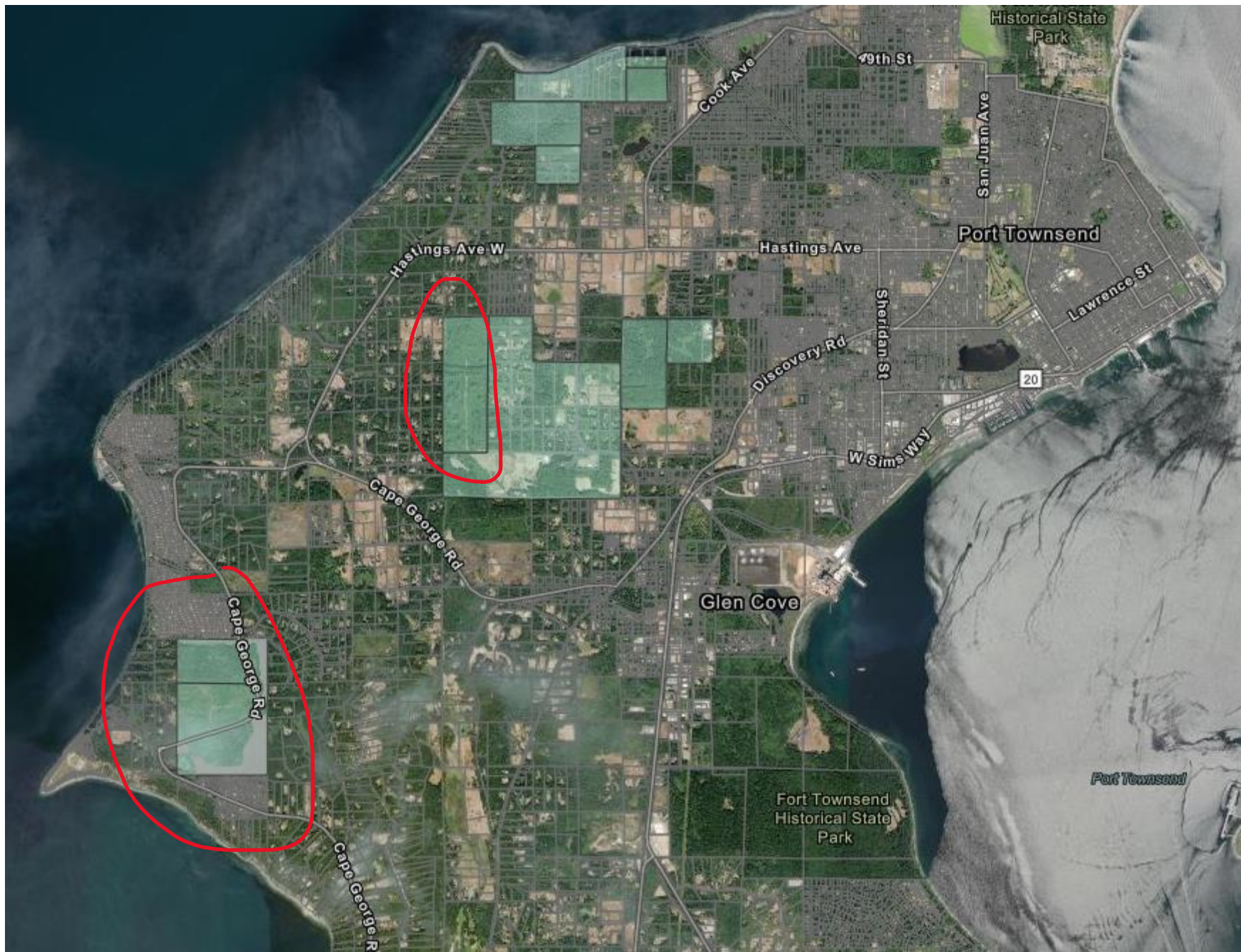


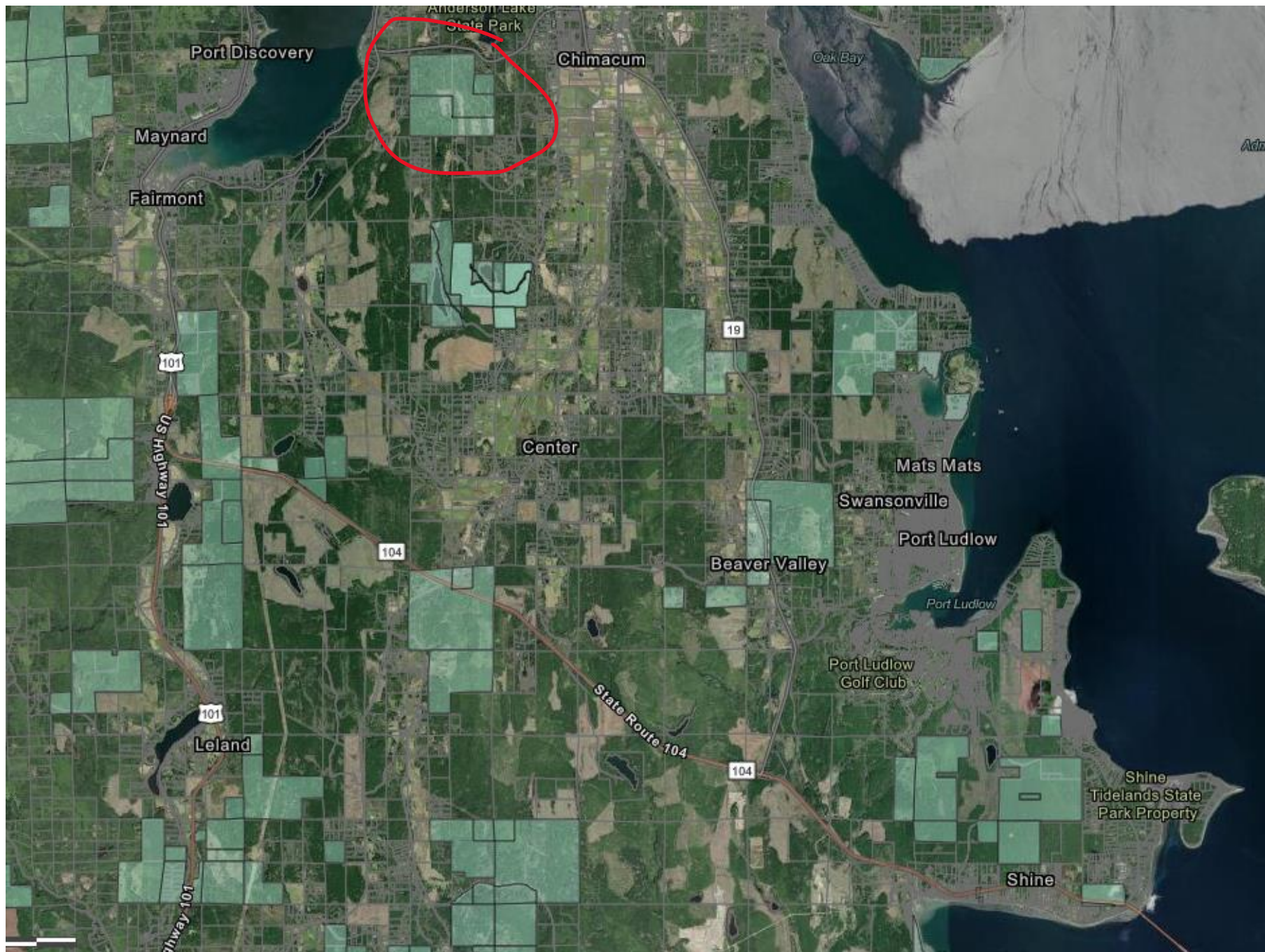
DNR and Jefferson County

- Beaver Valley – Proactive approach to collaboration with DNR
- Case study: Quimper/Cape George
- Carbon program

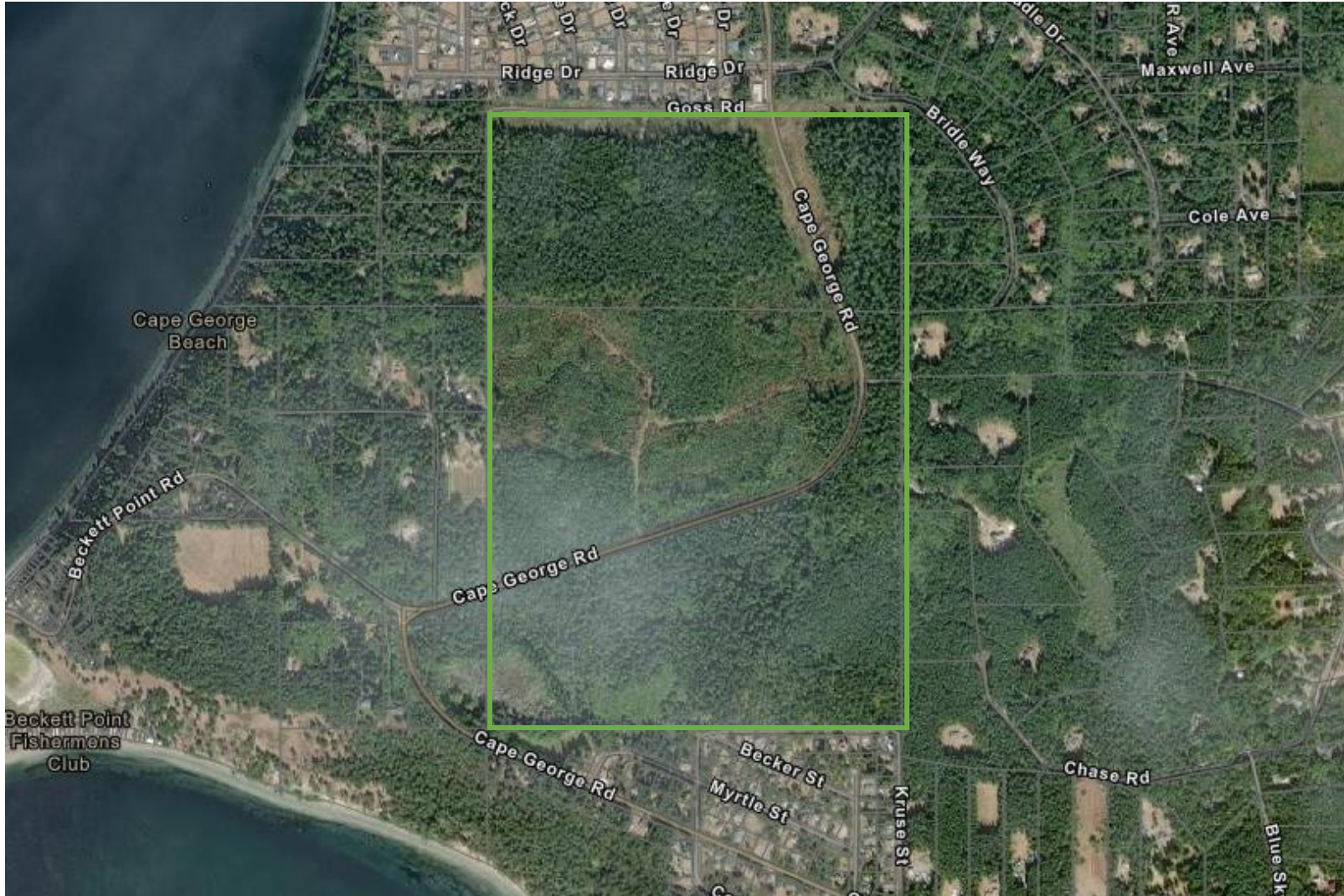
Forest Management Options

- Management strategies:
 - Carbon
 - No action (DNR keep)
 - Jeff co (mix, selective harvest)
- Types of DNR lands, options for Jeff co management/input:
 - TLT, reconveyance, carbon project, co-mgmt





Cape George/Quimper Case Study



Cape George Case Study - Carbon

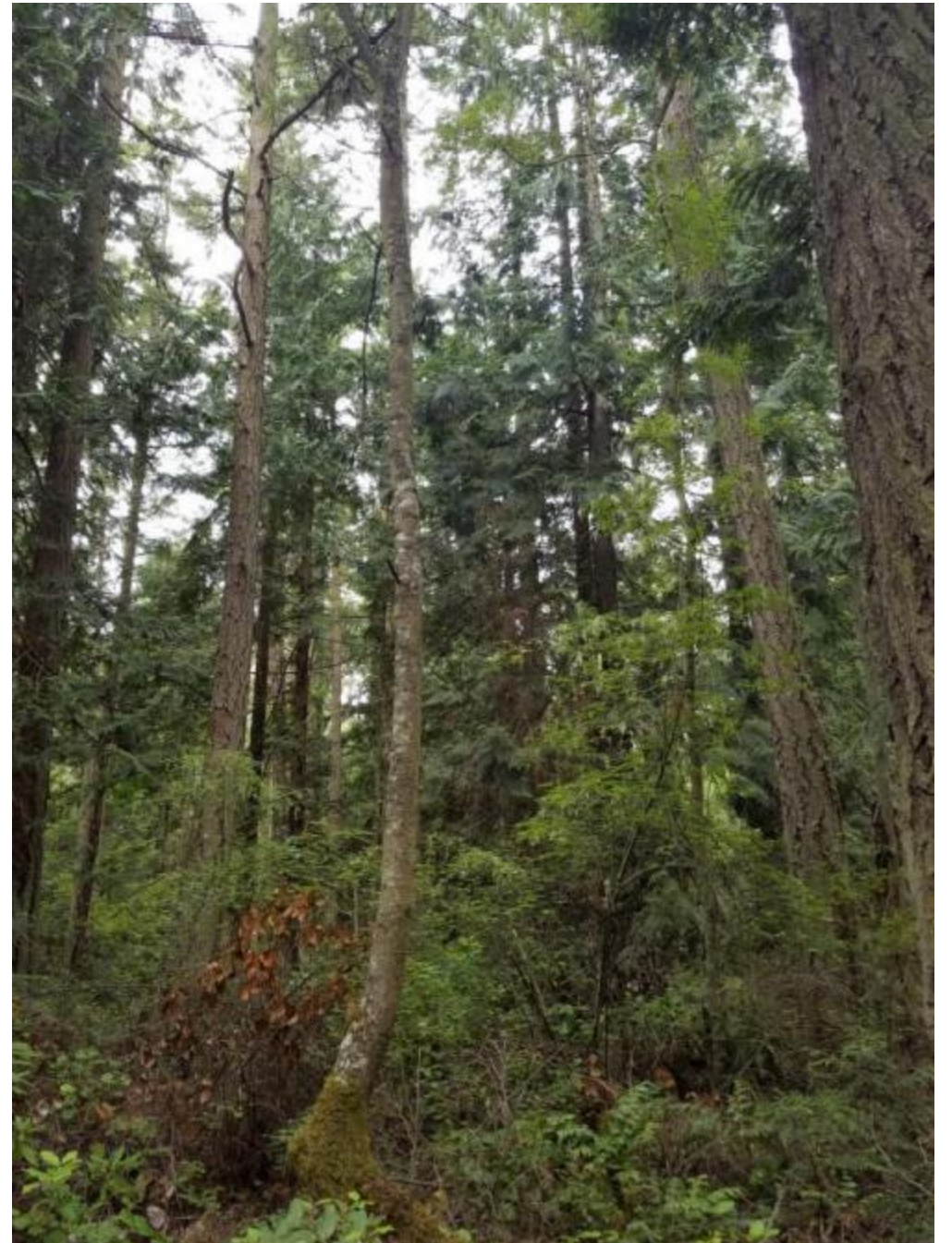


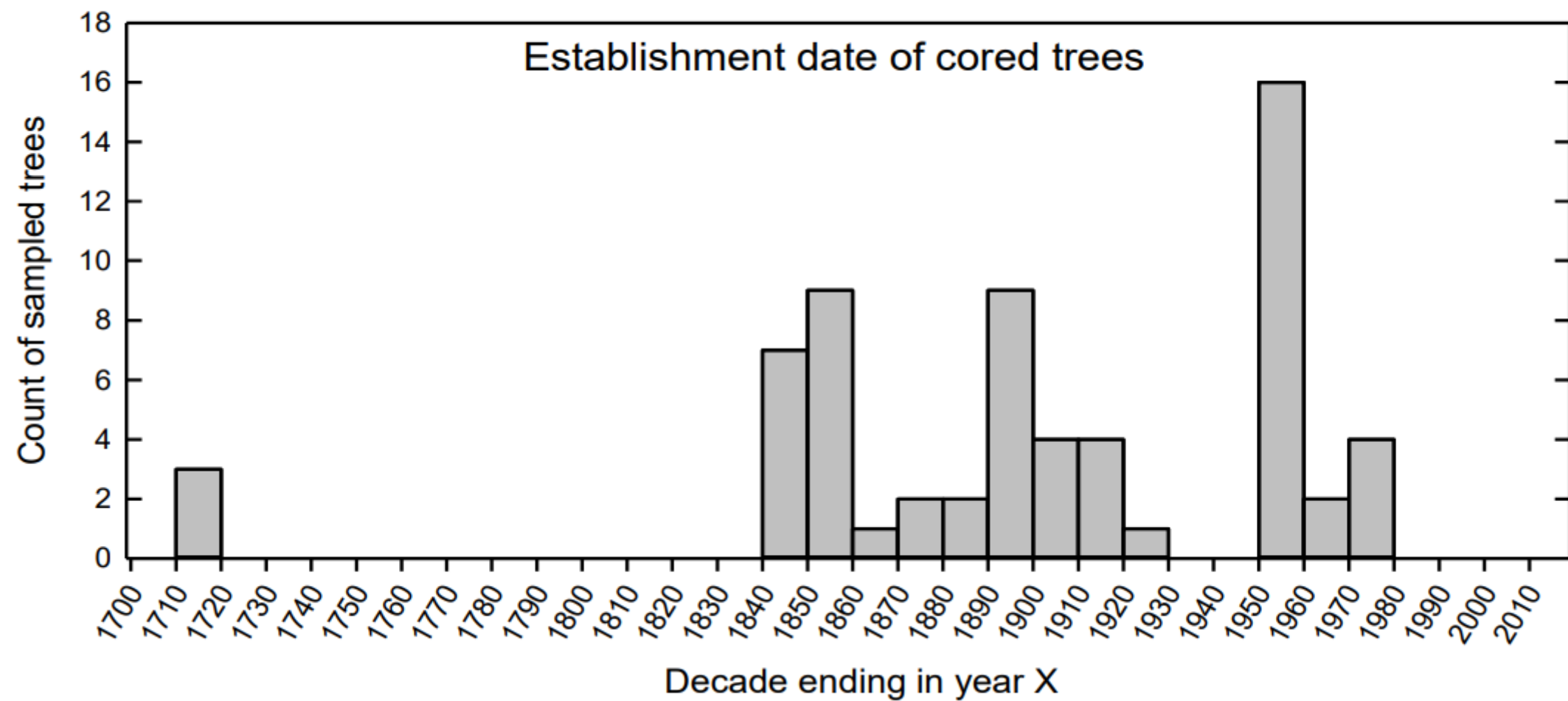
Cape George

Timber

Site Class 4

- Stand 1 111 acres, harvested 1992
- Stand 2 39 acres, harvested 1970's
- Stand 3 31 acres, some harvested pre-1900
- Stand 4 51 acres, harvested 2010





Quimper/Cape George Case Study

No Action

Stand 1: DNR planned sale in 2027, selective thinning 5 MBF/acre

Carbon Sale

DNR 50 acres planned, Stand 3

Selective Harvesting

Stand 1: 30% thinning of 70 acres 2025, 5 MBF/acre, 350 MBF, 50% pulp

Stand 4: PCT 25 acres in 2025, PCT 25 acres in 2028

Est cost/revenue through 2030:

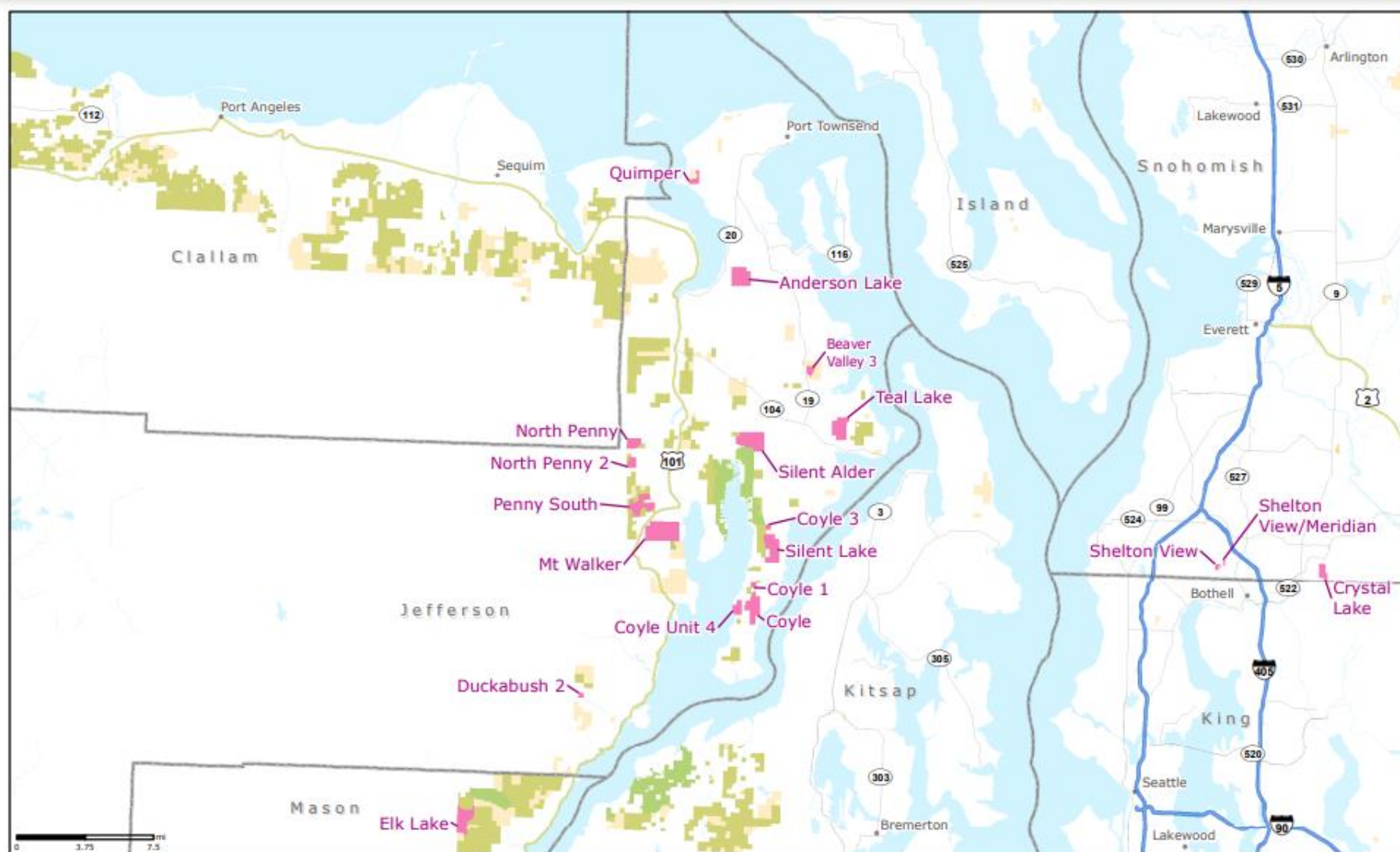
Stand 1: 175 MBF saw \$113k total, 175 MBF pulp \$40k. Est revenue (20%) \$30k

Stand 4: PCT \$500/acre, 50 acres. Est cost \$25k

Outcomes: Net gain ~\$5k, diversified forest management, trails, fire risk mitigation and local partnerships, future harvest revenue

Report Finished in January 2023





WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

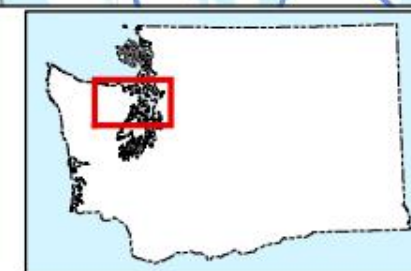
Phase II Carbon Project Candidate Parcels Jefferson

Draft Carbon Project Areas

- Phase I Carbon Project Areas
- Phase II Candidate Parcels

DNR-Managed Lands

- Granted Trust Lands
- Forest Board Trust Lands
- NAP / NRCA
- Other DNR-Managed Lands



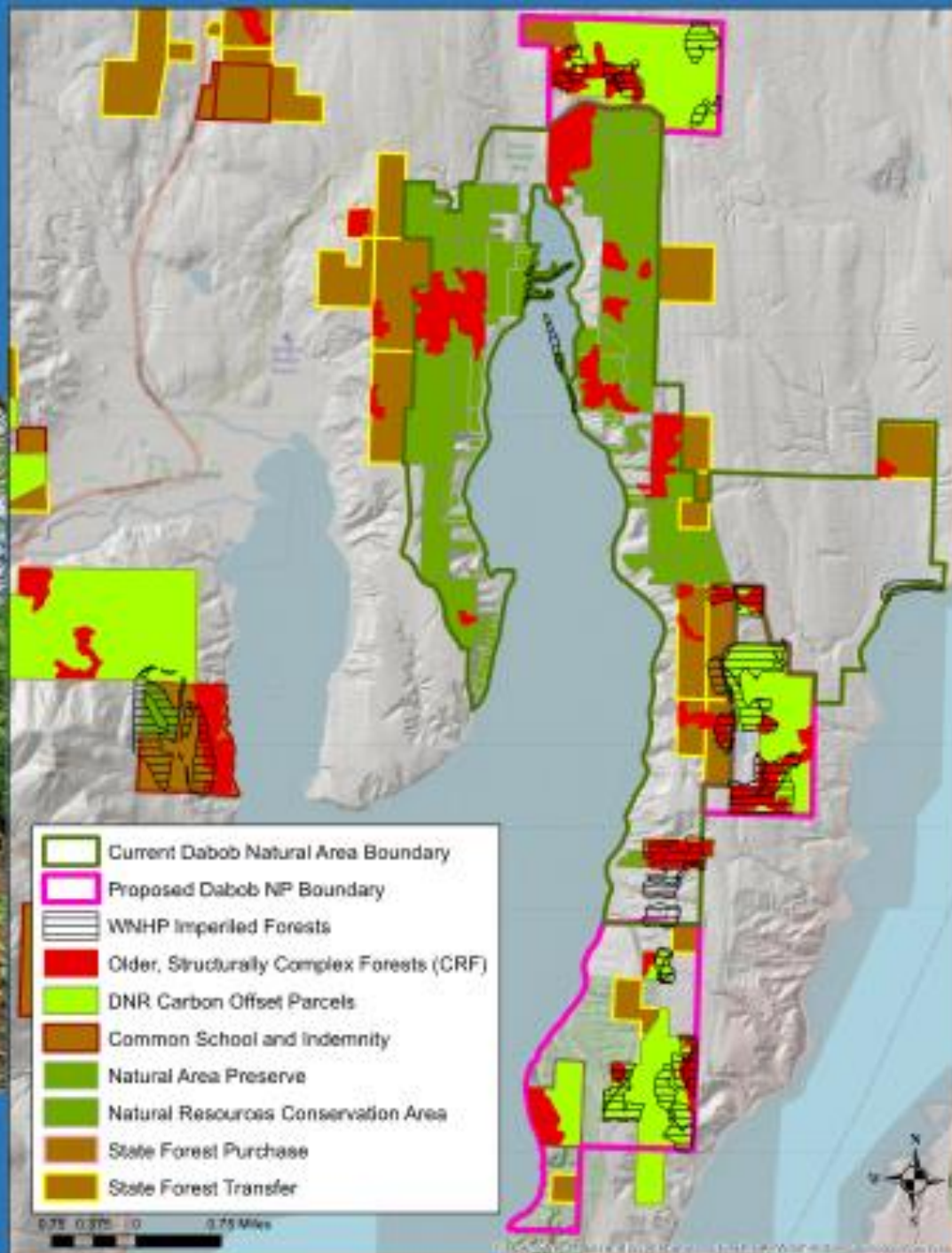
Disclaimer: All data are draft and subject to change.



Dabob Bay Natural Area



© 2022 Keith Lazelle Nature Photography



SUMMARY OF ECONOMIC ESTIMATE

TOTAL W. WA CARBON PROJECT (10,000 acres) FIRST 10 YEARS -

917,000 credits x \$20/carbon credit = \$18 M (rounded)

JEFF CO SHARE (3,911 acres or 39%) = $.39 \times \$18\text{M} = \7M

OVER 40 YEAR CARBON LEASE, assuming \$2 escalation in carbon credit price every 10 years

JEFF CO SHARE = \$33 M= 82% of original standing timber value

JEFF CO SHARE NOT INCLUDING G2 FORESTS– 101% of original standing timber value not including rare forest types that DNR protects

Standing timber value at end of 40 years, assuming $2x = \$80\text{M}$

Open Comment Period