

Mowich Huckleberry Enhancement Project

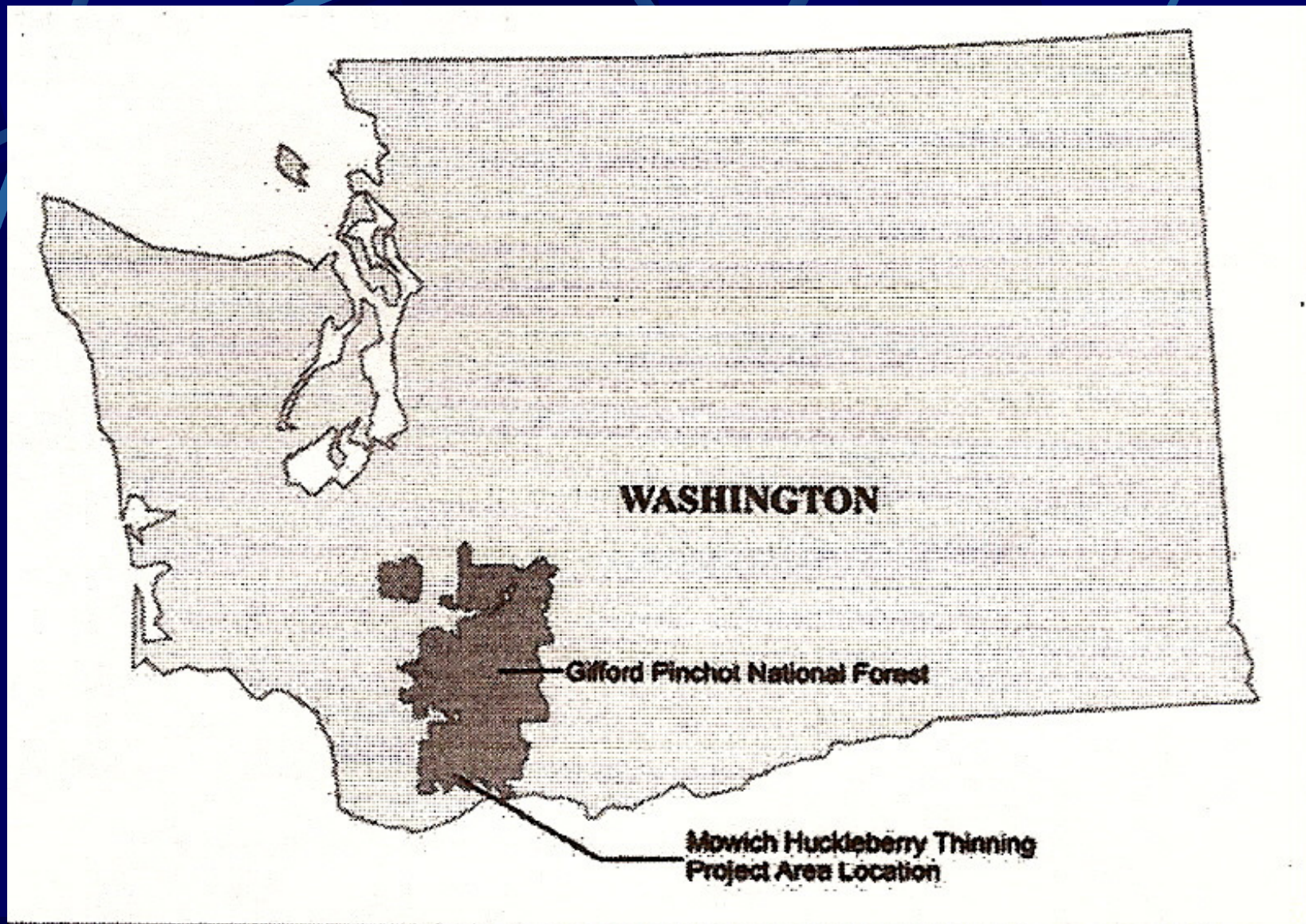


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**Enhancing and Restoring Huckleberry Areas in a
Healthy Watershed Approach to Management
Workshop**

VICINITY MAP



Land Allocation/Objectives

- **NW Forest Plan = Matrix**
- **Gifford Pinchot NF Plan = Roaded Recreation**

Roaded Recreation designated lands are meant to accommodate dispersed recreation, including hiking, fishing, berry picking, camping, and wildlife viewing beside or near roads.



**MOWICH
AREA**



Mowich - Stand Information

- **64 Acres**
- **75 years old (1927 Rock Creek Burn)**
- **4000 feet elevation**
- **Slopes <30%**
- **Western hemlock zone (western hemlock/Alaska huckleberry/dogwood bunchberry plant association).**



Stand Exam Summary

Acres	Ave. Dbh	TPA	BA	RD	Vol/ac	Age	%CC
64	14.7"	239	280	73	61,554	75	80%+

Dbh – Average stand diameter measured at breast height

TPA – Average number of trees per acre

BA – Average trees basal area measured in square feet per acre

RD – Relative Density (Curtis)

Vol/acre – Thousand board feet per acre

% - Percent canopy closure – ocular estimate



PURPOSE (Objectives)

- **To improve the production of native huckleberries (*Vaccinium membranaceum*), within the upland portions of the unit, in order to benefit local Native American tribes, recreational berry pickers and local communities, as well as the natural ecosystems associated with these berry fields.**



NEED

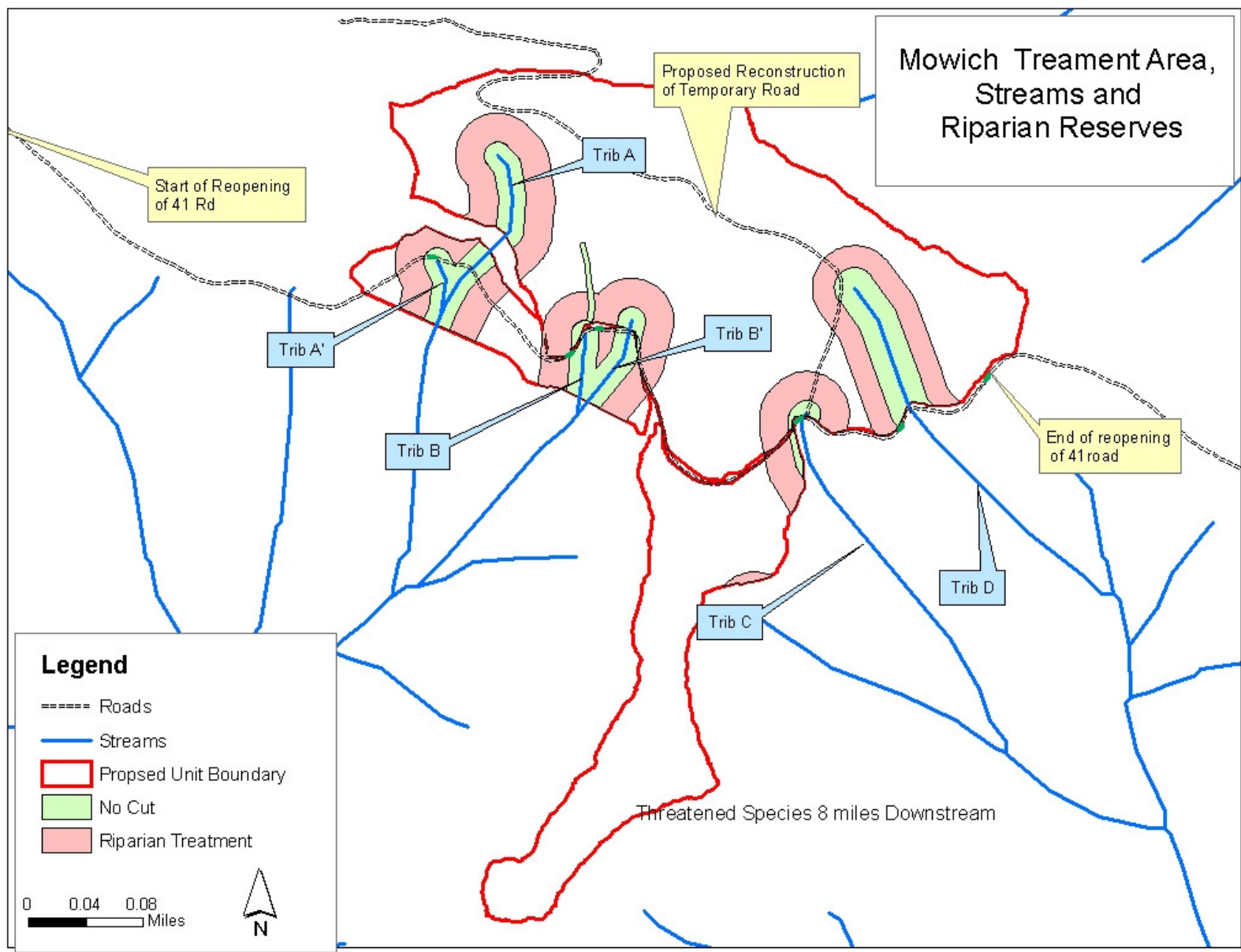
- **The huckleberry shrubs and fruit production are in decline due to increased shade from the overstory trees and competition with other shrub species, such as vine maple.**
- **These dense stand conditions, if not managed, will limit the future berry production of the huckleberry plants, a key characteristic of the desired future condition for this area.**





Photos by **JANET L. MATHEWS**/The Columbian

Mowich Treatment Area, Streams and Riparian Reserves



Start of Reopening
of 41 Rd

Proposed Reconstruction
of Temporary Road

Trib A

Trib A'

Trib B

Trib B'

Trib C

Trib D

End of reopening
of 41 road

Legend

- Roads
- Streams
- ▭ Proposed Unit Boundary
- ▭ No Cut
- ▭ Riparian Treatment

0 0.04 0.08 Miles

N

Threatened Species 8 miles Downstream

PROPOSED ACTION

- **Thin the trees to approximately 60 trees/acre (28' x 28') within the uplands.**
- **Thin the trees to approximately 110 trees/acre (20' x 20') within the treated portions of the Riparian Reserves.**
- **Unit A and B (52.5 acres) would be underburned after logging to stimulate plant re-growth and berry production. A percentage of the logging slash (limbs and needles) would be left on site to facilitate the burn.**
- **Unit C (4.4 acres) would be thinned and concentrations of slash would be hand piled and burned.**
- **Hand Fertilize Unit B (14 ac.) with 100 lbs/ac. ammonium sulfate (21-0-0).**

DESIGN CRITERIA (24)

- **Cut trees would be directional fell timber away from the stream channels and Riparian Reserves.**
- **Trees cut within the Riparian Reserves would have the top attached to the last log when removed to avoid enhancing the fuel load with the riparian areas.**
- **Known s/m sites of the Malone jumping slug would be protected with a no cut/burn buffer (120' radius circle), if required. Timber would be directional felled away from the buffers.**

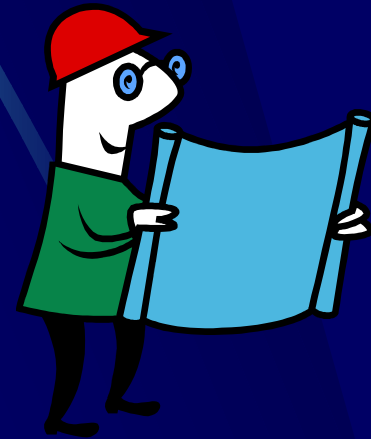


DESIGN CRITERIA (Con't)

- **Activity slash, within the units A and B, would not be piled, except at the designated landing locations. The purchaser would be required to yard tops attached down to a 4" diameter within the uplands.**
- **A Sale Area Improvement Plan would be prepared to slash vine maple, treat noxious weeds, create snags and coarse woody debris, and underplant conifers in the riparian reserves.**
- **A Brush Disposal Plan (BD) would be prepared to collect funds for the underburn (including dozer line/handlines rehab) and burn the hand piles.**
- **Prescribed burning periods are generally late spring (early May through June) and late fall (mid September through November).**

SALE INFORMATION

- **Decision Memo signed May 7, 2007**
- **No appeals**
- **765 mbf**
- **Awarded Sale on September 30, 2007 to High Cascade, Inc., Carson, WA.**
- **Minimum Bid Price - \$50.17 per mbf**
- **High bid - \$98.50 per mbf**
- **Bid Premium - \$48.33 per mbf (\$36,972)**



BRUSH DISPOSAL PLAN (BD)

Purchaser Responsibility:

- 1. Machine fireline construction (1.94 mi)**
- 2. Hand fireline construction (0.038 mi)**
- 3. Hand pile slash (4.4 ac.)**
- 4. Machine pile log landings (1 ac.)**



BRUSH DISPOSAL PLAN (BD)

Forest Service Responsibility:

1. Underburn (52.5 acres)
2. Burn Hand Piles (4.4 acres)
3. Burn Landing Piles (1 acre)
4. Seeding/Erosion Control – Firelines (1.98 mi)
5. Cost per mbf = \$50.78 – Total \$38,850



Sale Area Improvement Plan

(Enhancement Projects)

1. **Slash Vine Maple**
2. **Invasive Species Treatment (2x)**
3. **Snag Creation**
4. **Coarse Woody Debris Creation**
5. **Riparian Enhancement (underplanting)**
6. **Animal Control Damage**



Effectiveness Monitoring Plan

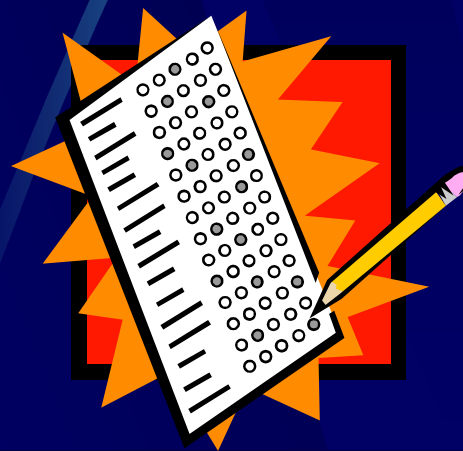
Management Objectives:

- **Maintain or improve health of huckleberry shrubs.**

Measurement = plant size (crown width and plant height).

- **Increase huckleberry production over time**

Measurement = weight of berries/plant.



Effectiveness Monitoring Plan

Methods:

- **Randomly select huckleberry plants using a systematic random sampling method.**
- **Measure huckleberry plant size; also measure berry production on same plants (collect all berries/sampled plants).**
- **10-30 plants per treatment.**
- **Sampled plants would be permanently marked.**



Mowich Huckleberry Enhancement Project

For more information go to:

www.fs.fed.us/gpnf

Projects and Plans

NEPA Projects Page

