



Hardwood Conversion Study Summary Report June 28, 2019

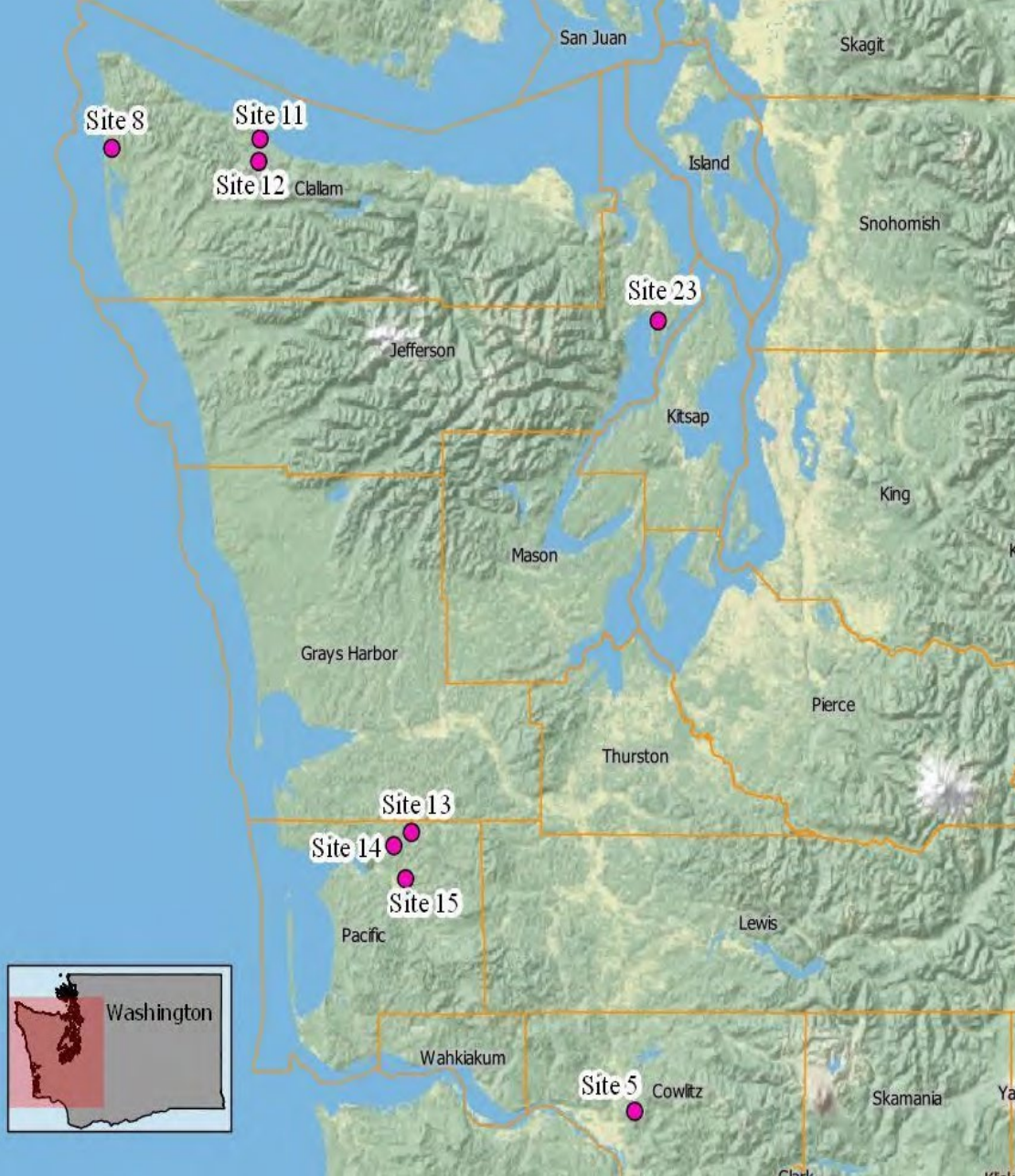
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Purpose of Study:

To evaluate the effectiveness, and operational and economic feasibility, of using hardwood conversion treatments to reestablish conifers in hardwood-dominated riparian stands.





Study Frame:

- Before-After Case Study Design
- Eight riparian study sites selected from a pool of twenty.



Eligible Sites:

- Hardwoods dominated conifers.
- The sites historically grew conifers.
- Landowners willing to share information about the sites and silvicultural practices.



Harvest Prescriptions:

- No harvest 25' feet from BF edge or CMZ.
- Retain all conifers in core and inner zones.
- Successfully re-establish a conifer stand.

Harvest and regeneration prescriptions were otherwise left to landowners discretion.



- Hardwood conversion treatments were implemented on a total of 20.5 acres across the eight study.
- 1.1 – 3.6 acres were converted at each of the sites.
- Recovery monitoring occurred at four and ten years post-harvest.



Results

Silvicultural Results:

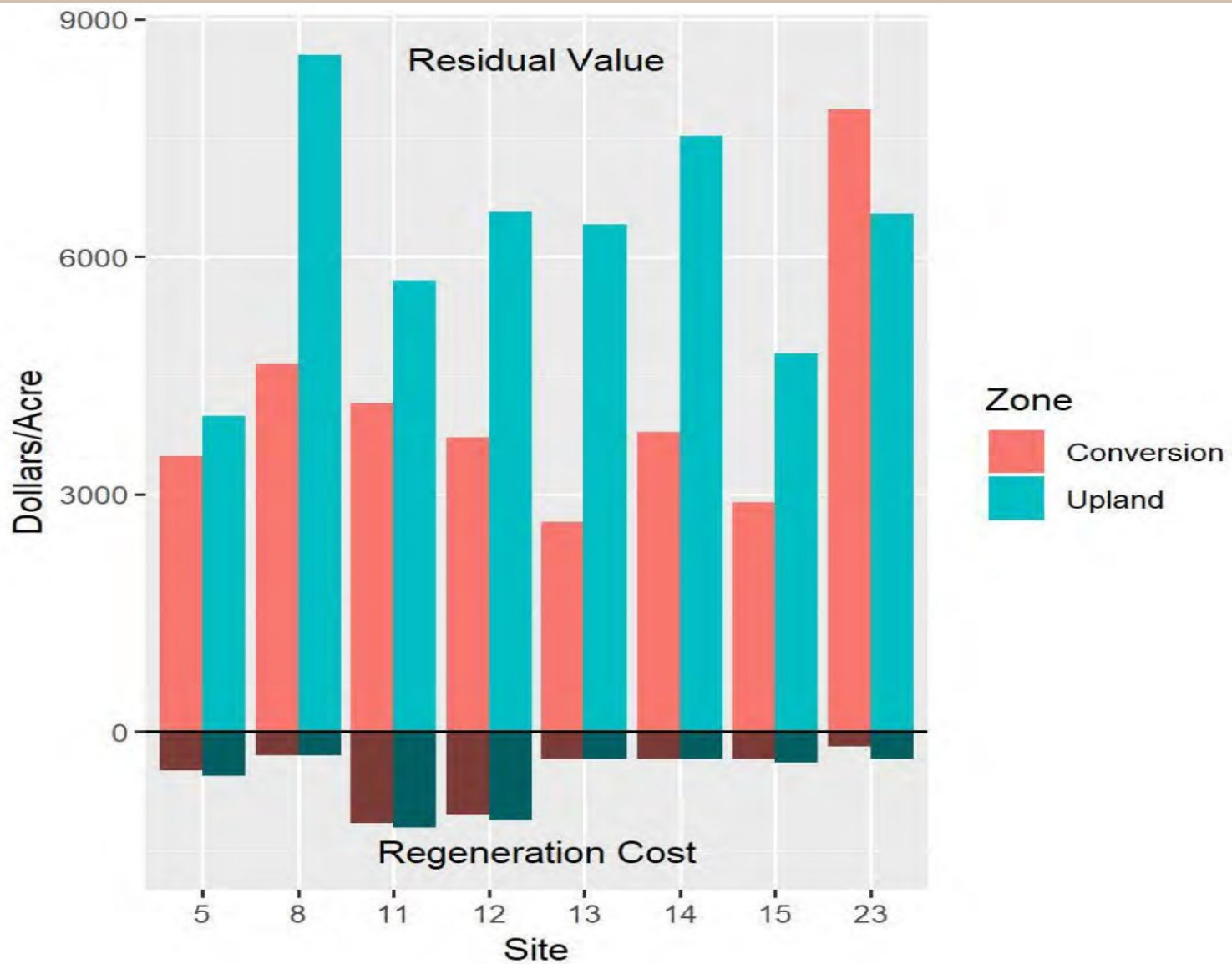
- Seedling survival higher when shade and moisture-tolerant species planted.
- Survival and growth higher with less competing veg., and larger seedlings.
- Height-growth greater with leaders of trees above competing vegetation.
- After 10 years, conversion areas do not meet restocking standard of 150 trees per acre greater than 8 inches dbh (WAC 222-30-021(1)(b)(i)(D)).
- All sites >150 conifer trees per acre, but no tree had reached 8 inches dbh.
- Competing vegetation is biggest challenge to conifer regeneration.



Economic Results:

- **Average stumpage values** were higher in the conversion areas, because of generally greater volumes of high-value red alder.
- **Per-acre stumpage values** were higher in upland areas, because more total volume could be harvested from each upland acre.
- **All conversion areas were profitable after deducting regeneration and administrative costs from stumpage values.**





The study does not tell us several things:

- Effect hardwood conversion treatments on shade, stream temperature, and LWD recruitment.
- When or if conversions will meet the regeneration criteria.
- If the case study findings are broadly representative of other hardwood conversion sites.



TFW Policy Recommendations:

No Action by the Board is recommended.

Policy recognized the study:

- Is a collection of case studies with limited ability to assess cause and effect or to identify BMPs.
- Did not examine the effectiveness of the HWC rules, or the effects of the harvests on riparian functions.
- Cannot be confidently extrapolated to other sites.



Policy is currently planning to consider:

- Resampling the eight sites to verify if and when they meet the approval standard.
- If a larger experimental study should be developed.



Questions?

