
Preventing Forest Conversion

1. Organizing Questions

Are there effective interventions to reduce conversion of forests to non-forest uses? Additionally, would a reduction in forest land conversion have any of the following effects:

1. increase forest-industry jobs
2. increase timber volume
3. increase trust revenue
4. provide conservation benefits to marbled murrelets
5. preserve forest lands

2. Background and Context

The declining size of quality forestland has negatively affected marbled murrelet populations and timber-dependent human communities. Though the decline in forest land base is not new, its effects on murrelets and these human communities have become acute. Conversion of forests to non-forest uses has contributed to this decline in land base, and is itself both a cause and an effect of the broader decline in regional forest product markets. As noted in the “Future of Washington’s Forests and Forestry Industries” Report (2007, p. 245):

Combine HBU (higher and better [use]) possibilities with conflicting values at the urban/rural interface, uncertainty of regulatory future, and changing timber market conditions, and more landowners may opt to sell their working forests.

The Retention Report

The “Retention of High-Valued Forest Lands at Risk of Conversion to Non-Forest Uses in Washington State.” Report (2009, the “Retention Report”) builds on this and argued that in order to reduce land conversion either the value of the working forests need to be increased and/or the value of alternatives needs to be decreased.

The Retention Report (2009) found that there was a positive conversion risk for 18 percent of the estimated 5.4 million acres of privately-owned forest land in Western Washington by 2080. The report found that this conversion would have a number of negative economic effects across the state. Data from the Forest Inventory and Analysis Database (2019) suggests that between 2007 and 2012, the area of private timberland fell by an average of 0.7 percent per year. However, that rate slowed between 2012 and 2017 to around 0.2 percent per year on average (see Table 2).

The Retention Report (2009) was a thorough review of the potential ways that the State Legislature might reduce the amount of conversion from forestlands to non-forest uses. Although this report was

crafted a decade ago, it provides a useful background to this topic and a good place to start to understand interventions that have been proposed and what has actually been implemented. In addition to the research about interventions, the report provided one main strategic recommendation along with five additional recommendations from the Northwest Environmental Forum. Briefly, these are:

1. Fund the maintenance and enhancement of the Land Parcel Database
 - a. The Land Parcel Database provided data for most of the work in the Retention Report. The report recommended ongoing support of the database to support later analysis. It appears that the database has been subsumed into the Washington State Parcel Database¹.
2. Establish right to practice forestry legislation.
 - a. The Forum found that nuisance type lawsuits were a major impediment to keeping lands in forestry and recommended that forestry be protected from them. It appears that the Legislature enacted this proposal in 2009 by amending the RCW 7.48.305.
3. Support Washington Farm Forestry Association and Washington State Department of Natural Resources (DNR) requests to fully fund the Family Forest Fish Passage Program (FFFPP) and Forestry Riparian Easement Program (FREP) programs, for DNR requests for expert forestry assistance for small landowners, and for landowner incentives to provide benefits for threatened and endangered species.
 - a. FFFPP and FREP were developed in the early 2000s to partially compensate for lost timber value as a result of the passage of the Forest and Fish agreement in 1999. However, these programs are oversubscribed and the budgets for these programs have been a fraction of what would be needed to fund all eligible applications.
4. Support the central Puget Sound Transfer of Development Rights (TDR) pilot project.
 - a. In areas that communities want to conserve, the development rights for timber and agricultural land can be transferred using the mechanism of TDR. There is a great deal of support behind the concept of TDR to conserve forestland by restricting development on certain parcels. By 2013, 27 programs had been adopted statewide with over 180,000 acres of farmland, forestland, and open space under conservation easement.
5. The Washington State Department of Natural Resources Forest Health Program works with federal and other partners to provide technical assistance to all types of public and private landowners. The DNRs forest health initiative helps to reduce fire danger and disease pressure, and improve habitat of eastern Washington forests.

¹ <http://depts.washington.edu/wagis/projects/parcels/>

- a. In 2017, the Washington State Legislature passed a new law, Chapter 248, Laws of 2017 (E2SHB 1711), which provides DNR with new tools and increased flexibility to address the growing forest health problem.
6. Create a Legislative Task Force to address in detail a full complement of additional issues such as tax reform, regulatory stability, incentives and ecosystem services payments.
- a. This was the key strategic recommendation of the Retention Report. It argued that such a task force be charged with developing an overall strategy to retain forests across the state and that a requirement for successful interventions is an integrated strategy. The report noted, for instance, that one of the issues driving conversion was the regulatory complexity of the Forest Practices Act. It is unclear if such a task force was ever created, nor what its outcome was. There is no readily available information on the legislative websites, nor DNR's. Further investigation into this could be part of a larger research project.

Current Programs in Washington

The forestland conservation incentive programs in Washington can be divided into those that fund conservation through working forests and those that support conservation of private non-timber forestlands. These programs provide landowners with incentives such as direct payments, technical assistance, and regulatory and tax relief that have helped to conserve thousands of acres of forestland in Washington state. Many of these programs however, are not available to or accessed by all forestland owners either due to restrictive program requirements, funding availability, or the complexity of navigating the application process. Additionally, there are numerous studies showing that programs to induce better management practices or conservation, including programs that provide financial or organizational support, have a number of barriers to their efficacy, including:

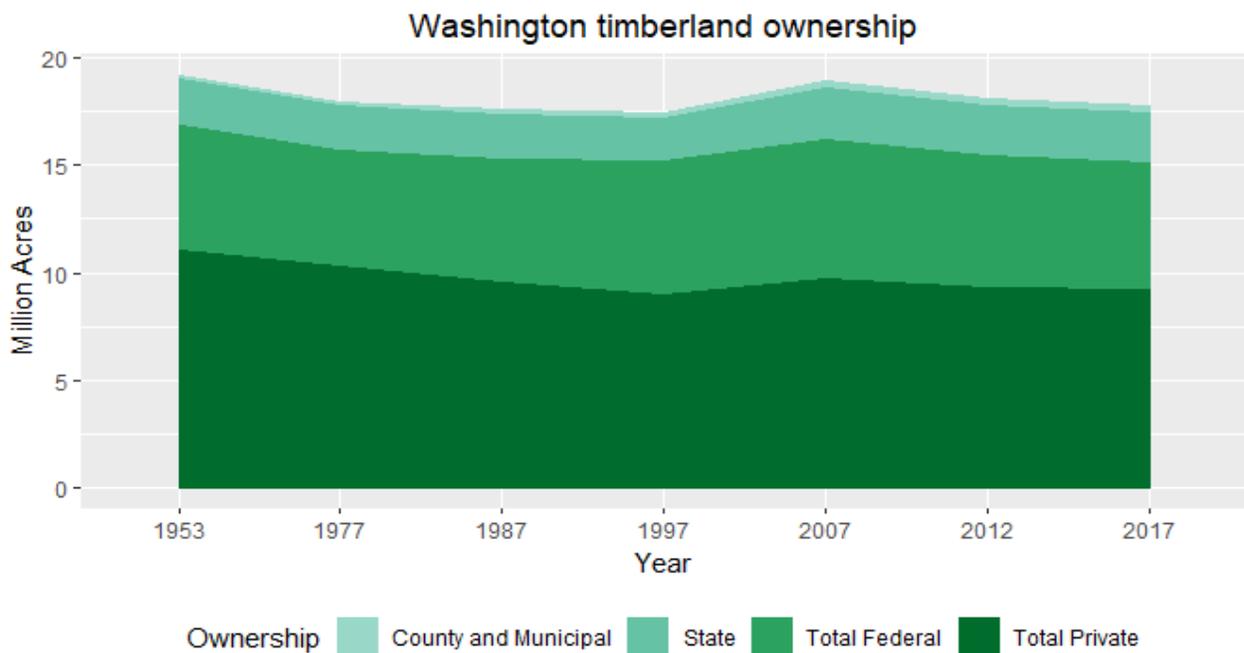
- low participation rates for smaller landowners (Song, Aguilar, and Butler 2014)
- externalities that influence landowner participation decisions (Vokoun et al. 2010)
- revenue implications of participation, owner preferences and other obstacles (Khanal et al. 2019)
- demographics, attitudes and behaviors of family forest owners (Ma et al. 2012, Butler et al. (2014))

According to the U.S. Forest Service's Forest Inventory Assessment, the number of acres of timberland held in private ownership has declined since 2007, but actually appears to be higher than it was in 1997².

Table 1: Timberland area by ownership in Washington (thousand acres; FIA 2019)

² Timberland in this data set are defined as "forest land capable of producing in excess of 20 cubic feet per year and not legally withdrawn from timber production, with a minimum area classification of 1 acre." ("Forest Inventory and Analysis Database" 2019)

Year	All Ownerships	Total Public	Total Private
2017	17,794	8,544	9,250
2012	18,081	8,745	9,335
2007	18,873	9,199	9,674
1997	17,418	8,464	8,954
1987	17,549	7,977	9,573
1977	17,922	7,648	10,274
1953	19,188	8,191	10,997



3. Potential Opportunities

The main opportunities associated with forest conversion are associated with better understanding the issue and how to structure effective interventions. Potential goals could include:

- Research private lands at risk of conversion to estimate acreage of land, volume available off that land, and revenue generated from the land.
- Additional research to determine what incentives might be effective at reducing conversion of forests owned by private landowners to non-forestry uses.

Investing in this research may help us:

1. understand trends in forestland conversion
2. identify how to make current interventions more successful

3. identify which additional interventions might help
4. identify how much these interventions can help

This discussion focuses on private forestlands, so it won't meaningfully affect trust revenues. As long as it focuses on conversion to *non-forestry uses*³, it won't meaningfully affect murrelet conservation. It is important to be clear, there will likely be trade-offs in retaining forestland. For instance, some land may be retained as forest by purchasing a conservation easement, which may benefit marbled murrelet, but may not contribute to harvest levels. Currently, it primarily addresses forest-industry jobs and timber volume.

4. Challenges/Uncertainties

Volatile and Strong Market Forces. The most direct way to prevent conversion is to make forest uses more valuable than other potential uses (cash payments for conservation, etc.). The large-scale, long-term, and volatile economic forces that affect these trade-offs are very difficult to overcome. We probably will only be able to tip the scale at the margins.

Potential Unintended Consequences. Market interventions making forestland more profitable may have adverse consequences for murrelet conservation, other conservation efforts, or other valuable economic activity.

Cost and Difficulty. One of the easiest issues raised in the Retention Report—the right to practice forestry—has already been implemented. The other issues in the report, and other potential interventions, that will directly influence forest retention are all more costly and more difficult to implement. Finally, a meaningful challenge to addressing the issue is the same that faced the Retention Report in 2009: inaction on the recommendations. A well-researched project with well-supported recommendations will not help reduce forest land conversion if those recommendations are not acted upon.

Limited information/study on incentives in the context of conversion. There are a great many programs providing incentives and support for smaller forest owners to better manage their forest and keep the land within forestry, both within the state of Washington, and across the country and the world. Forestry support programs are also fairly well studied in the literature. However, most of the literature focuses on issues other than conversion. Analysts who undertake this project will have to take great care in linking the literature to meaningful impacts on forestland conversion.

5. Potential Next Steps

Potential next steps focus on collecting and updating data and analysis from the Retention Report and, where possible, breaking these data and analyses apart by land ownership sizes.

³ We need to be certain this is the exact question we're trying to answer. Conversion to *non-forested states* is meaningfully different from conversion to *non-forestry uses*.

Research & Data analysis

Literature Review. Conduct a succinct review of the rich existing literature on what has been done before and the status of previous recommendations. In particular, this would include a review of the Retention Report (2009), as well as “The Future of Washington’s Forests and Forest Industries” Report (2007) and the “Forest Action Plan” (2016). Forestry support programs are fairly well studied in the literature. Although most of the literature focuses on issues other than conversion, there is likely meaningful overlap that could be capitalized on. The review would focus on examining: what has been tried in Washington and elsewhere and how effective has it been? What hasn’t been tried?

Spatial/Data Analysis. A spatial analysis could study the trends in forestland conversion to understand:

- a. Where has conversion happened? Why?
- b. Where hasn’t it happened yet? Why?
- c. Where are the current at-risk areas?
- d. What are the acreage, volume, and revenues (market value?) associated with the above?
- e. What are the conservation values associated with the above?

Other Actions

Draft and execute a plan to implement the recommendations arising from the above research.

References

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