# Riparian

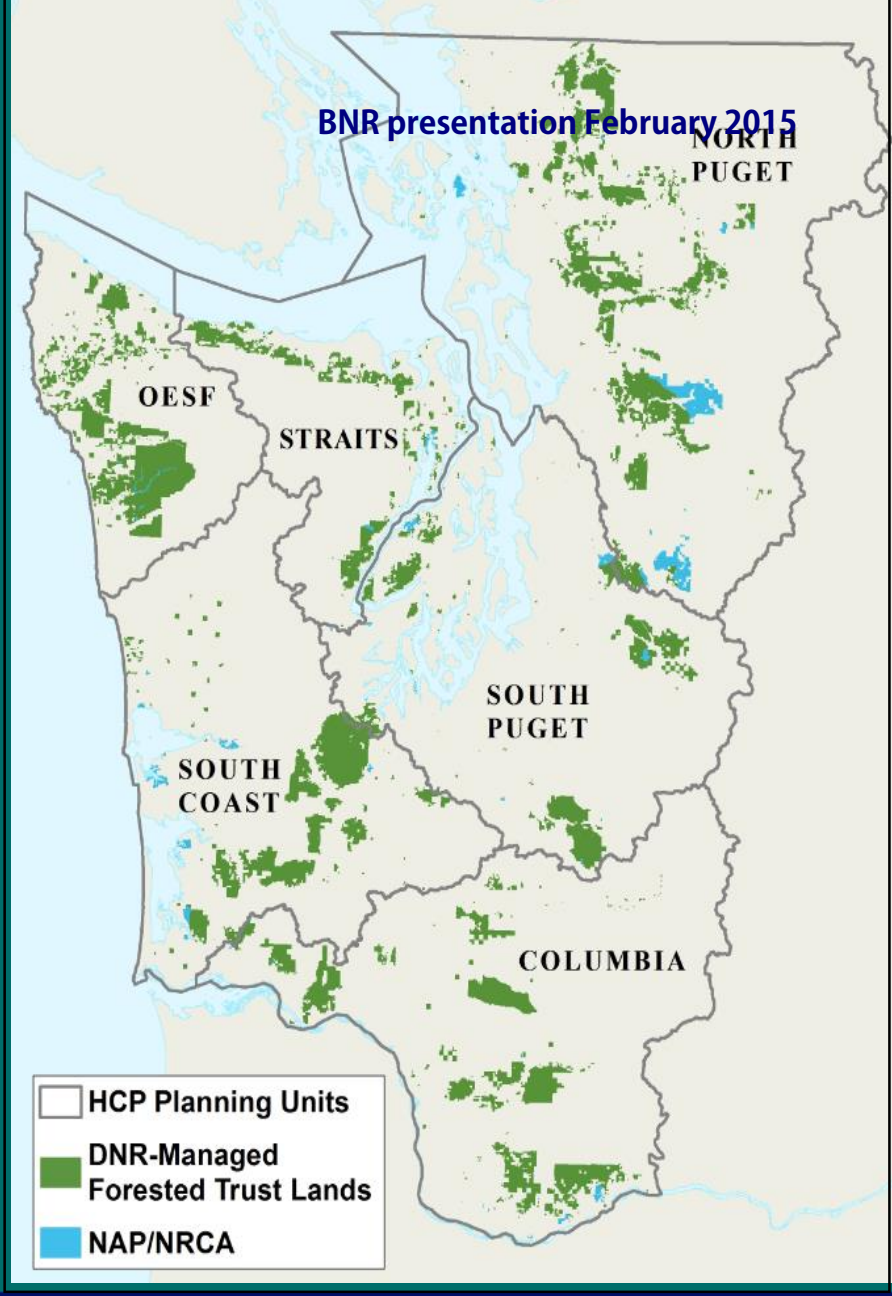
# Riparian Thinning

## Two Habitat Conservation Plan Strategies:

- Riparian Forest Restoration Strategy
- Olympic Experimental State Forest

# Riparian Habitat Conservation

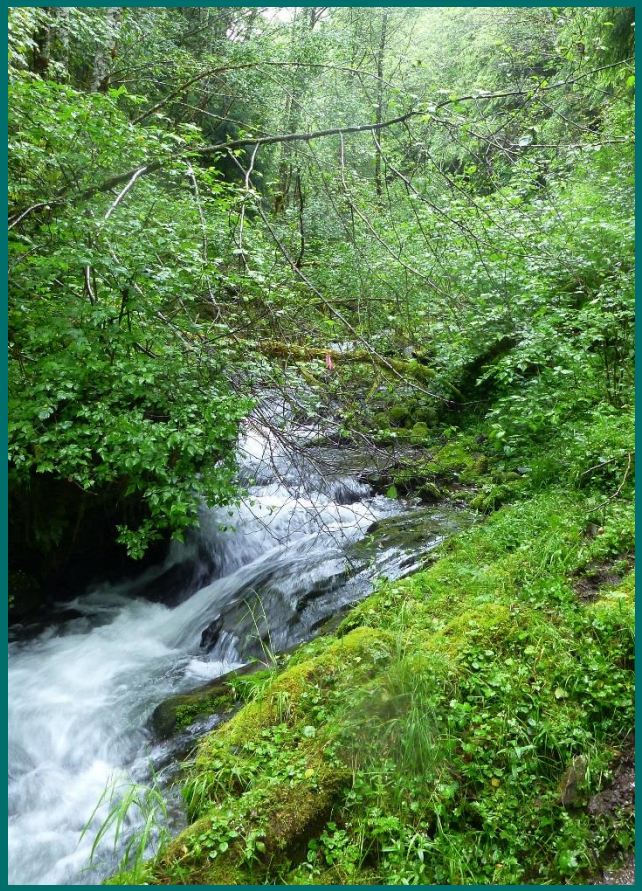
- Two Habitat Conservation Plan (HCP) strategies:
  - Riparian Forest Restoration Strategy (RFRS) applied to the 5 Westside HCP units
  - Olympic Experimental State Forest (OESF)



# Riparian Habitat Conservation



- Both strategies include:
  - Riparian management zones (RMZs)
  - Protection of potentially unstable slopes within the RMZs



# Riparian Habitat Conservation

- The two strategies (RFRS and OESF) differ:
  - RFRS has a desired future condition for the RMZ at the **stand scale**
  - OESF has an objective of restoring and maintaining riparian functions at a **watershed scale**

# Stop 5 – Riparian and Arrearage Options

**Speaker**: Padraic Callahan and Mike Buffo

**BNR field tour packet August 2017**

**Key Points:**

1. Riparian Objectives:
    - Maintain or restore salmonid freshwater habitat on DNR-managed lands.
    - Contribute to the conservation of other aquatic and riparian obligate species.

2. Riparian Implementation:
    - Five categories represent the most important components for developing the Fully Functional forest development stage, and therefore the long-term restoration goal:
        - Large conifer trees
        - Complex stand structure
        - Site-adapted tree species composition
        - Down wood (DWD and LWD)
        - Snags

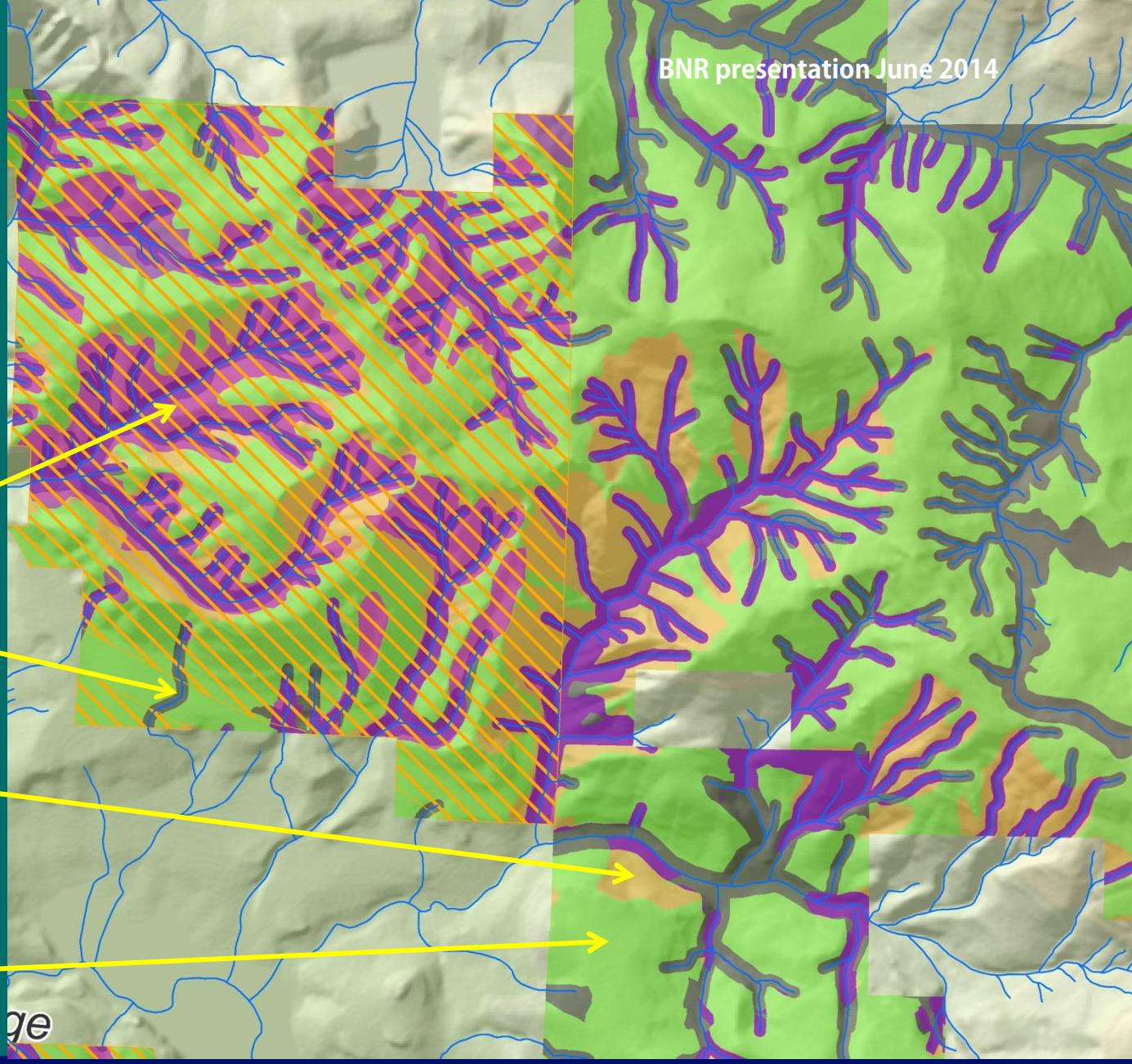
3. Riparian and Arrearage
    - Underperformance in achieving 2007 sustainable harvest level riparian targets contributed to ending the decade in arrears.

DNR management is directed towards meeting attainable intermediate objectives to put the forest on a trajectory to reach a structurally complex riparian forest type. Those intermediate goals are listed in the table below.

| **Riparian Desired Future Conditions** | |
|---|---|
| Basal area | ≥ 300 sq ft per acre |
| Quadratic mean diameter (trees >7 inches DBH) | ≥21 inches |
| Snags | Retain existing snags ≥ 20” DBH through no-cut zones. Maintain at least 3 snags per acre. |
| Large down wood | Maintain ≥2,400 cubic feet/ac.<br>Actively create down wood (contribute 5 trees from the largest thinned DBH class) during each conifer management entry. |
| Vertical stand structure | Maintain at least two canopy layers (bimodal or developing reverse J-shaped diameter distribution) |
| Species diversity | Maintain at least two main canopy tree species suited to the site. |

# Land Classes

- Deferrals
- Riparian
- Uplands with specific objectives
- Uplands with general objectives



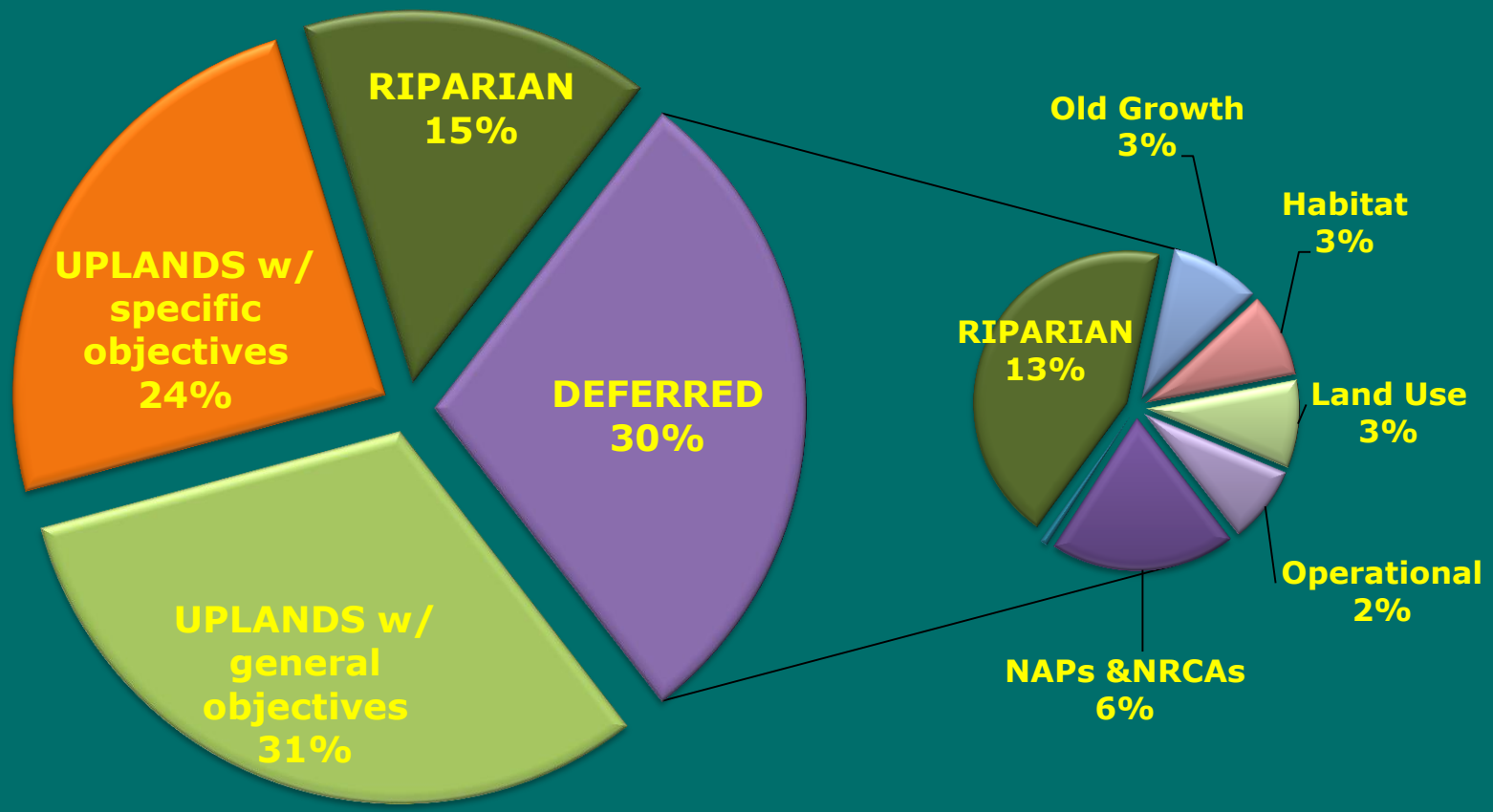
# Riparian Thinning

In the 2004 planning decade, riparian and wetland management zones of state trust lands on the west side was 470,000 acres or 32% of the land base.

Projected harvest was 10% of the area, 394 mmbf.
Only 39 mmbf was harvested.

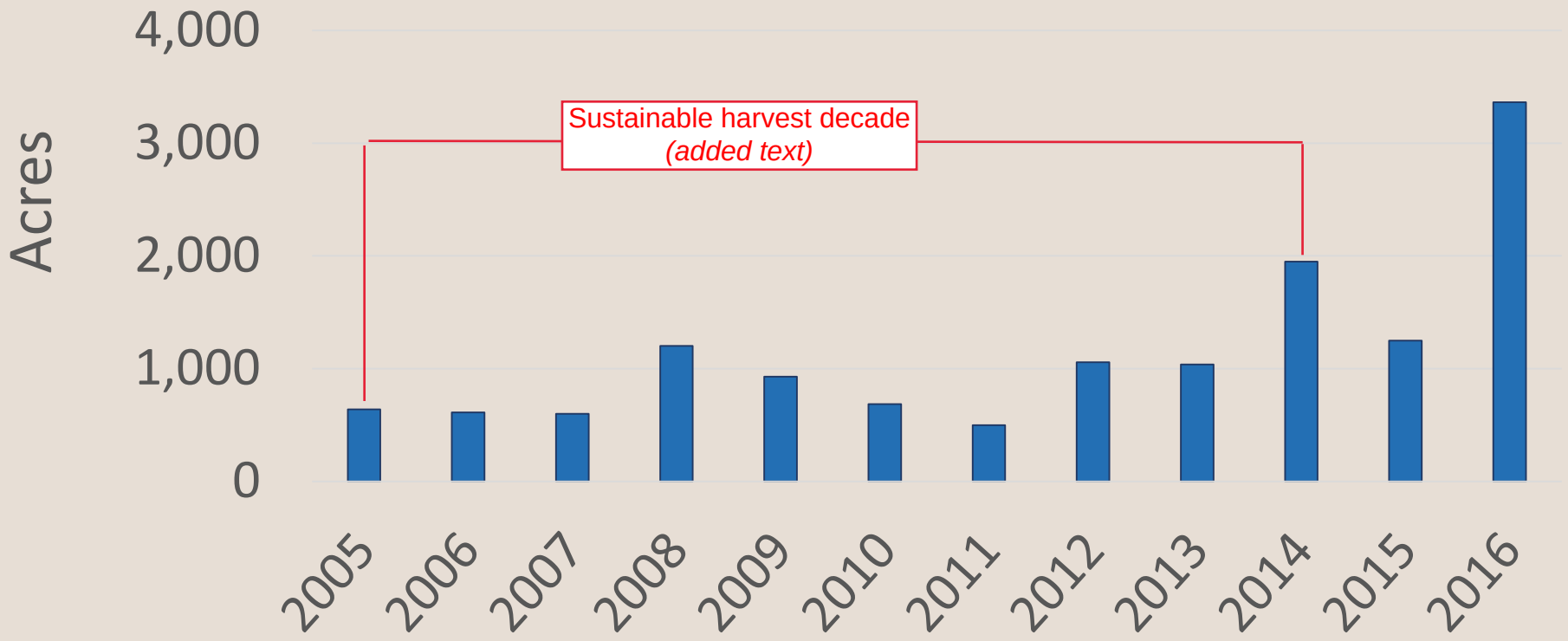
Sustainable Harvest Calculation

# Land Classes




Total forested area of DNR-managed lands in western Washington = 1.46 million acres
Includes Natural Area Preserves (NAPs) and Natural Resource Conservation Areas (NRCAs)

# Riparian Harvest Over Time



# Reported Harvest across Land Classes

| | Harvest Volume (MMBF) | | |
|---|---|---|---|
| **Land Classes** | Regen[1] | Thinning[2] | Total |
| **UPLANDS** | 4,604 (108%) | 386 (45%) | 4,991 (98%) |
| **RIPARIAN** | | 48 (20%) | 48 (12%) |
| **Total** | **4,604 (104%)** | **434 (40%)** | **5,038 (92%)** |

[1] Regen = Regeneration harvests including variable retention harvests, clear cuts, seed tree establishment and other harvest activities that retained between 5 and 25 percent of the stand after harvest and include a regeneration treatment of a new commercial cohort
[2] Thinnings represent all types of commercial thinnings.
[4] The percentage values in brackets corresponded to the level of attainment of the decadal target after 8 years. For example 125% percent s means the Department has harvested 4,604 MMBF out of the forecast level (4,256 MMBF) of regeneration harvest from the UPLANDS.

# Riparian Thinning

## Causes

- Late implementation of the Riparian Forest Restoration Procedure
- Financial crisis in 2007 -2009

# Riparian Harvest

# WHY | To set expectations and provide direction

DNR must recalculate a sustainable harvest level consistent with DNR policies, including the *Policy for Sustainable Forests*, the 1997 HCP, and applicable state laws.

# Options

**A. Not included in calculation.**

Treatment rates based on ecological and financial criteria.

**B. Up to 1% of harvest**

Maintains riparian thinning level at 2015-2016 level. Potentially contributes 1-2% (or 6-7 MMBF/year) of the total harvest during the first decade.

**C. Up to 10% of riparian area**

More than doubles level from 2015-2016 level. Potentially contributes 4-5% (or 16-20 MMBF/year) of the total harvest during the first decade.

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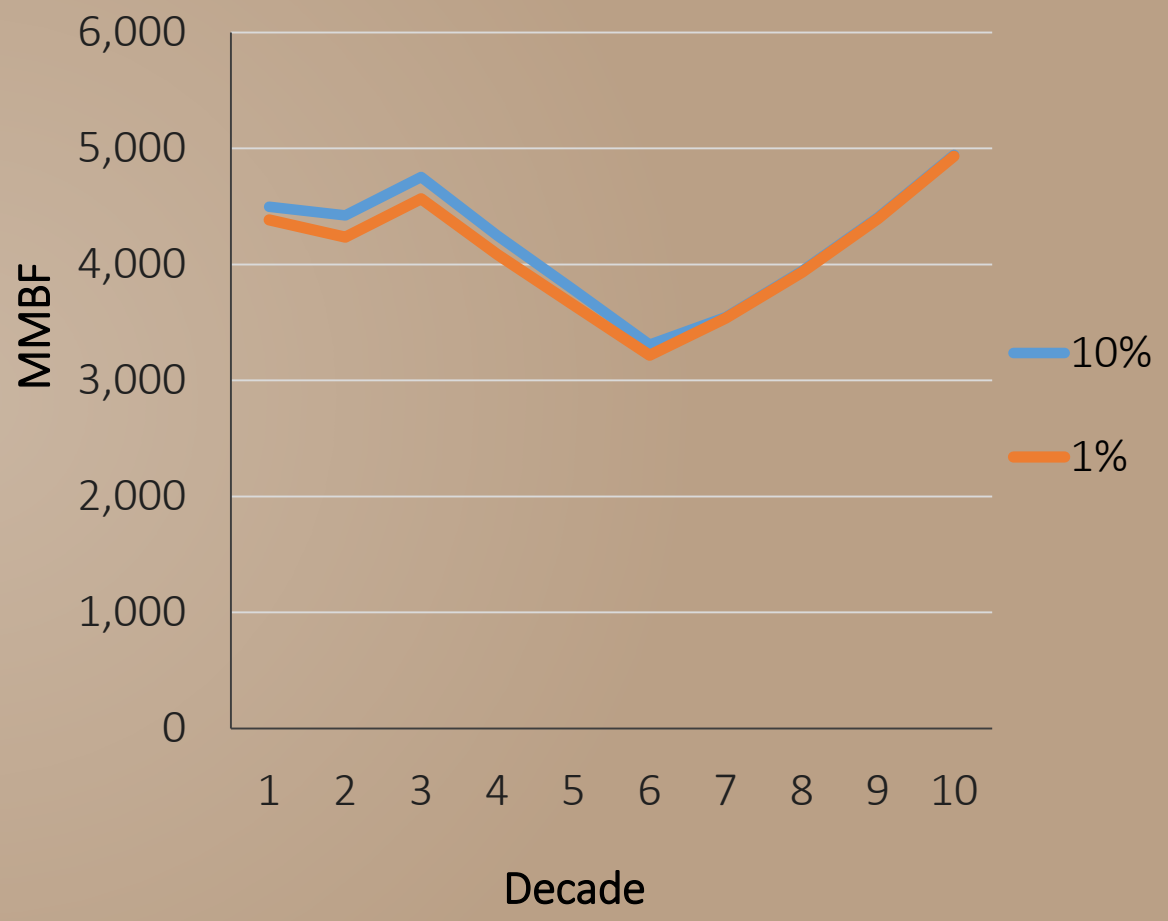
## Riparian options across 100 years

- MMLTCS: Alt A; Arrearage: Rolled in -



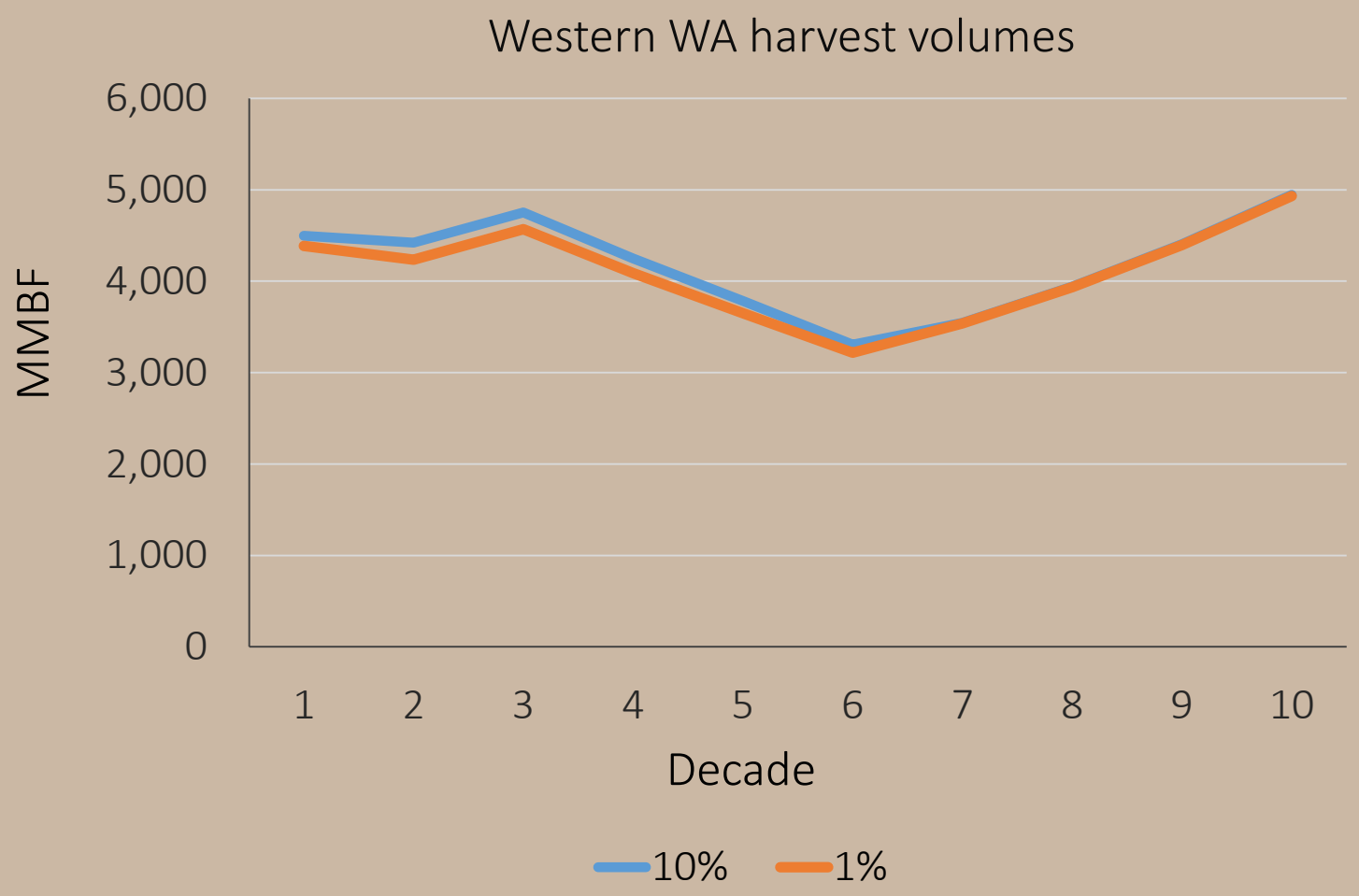
# Staff Recommendation

- The Board expects riparian harvests to be conducted based on their ecological value as intended as part of the State Lands HCP Riparian Forest Restoration Strategy
- Harvest volume from riparian areas will not be included in the calculation of the sustainable harvest level
- Timber volume obtained from harvests in riparian areas can count towards meeting the sustainable harvest target

# Arguments for separating riparian harvest volume from the Sustainable Harvest Level

- The primary purpose of the Riparian Forest Restoration Strategy is ecological.
- Treatment viability fluctuates greatly, based on forest conditions, markets, access, costs, and other factors. Conducting unviable treatments provide no benefit to the trusts.
- A target within the Sustainable Harvest Level may result in increased upland harvest to avoid arrearage, if riparian targets are unable to be met.

# Riparian considerations




## KEY MESSAGES

- Relative impact of 3% in planning decade
- Higher number comes with greater risk of target not being achieved