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# *Case Study: Double Duty Providing High Quality Fish Habitat and Drinking Water for Urban Use*

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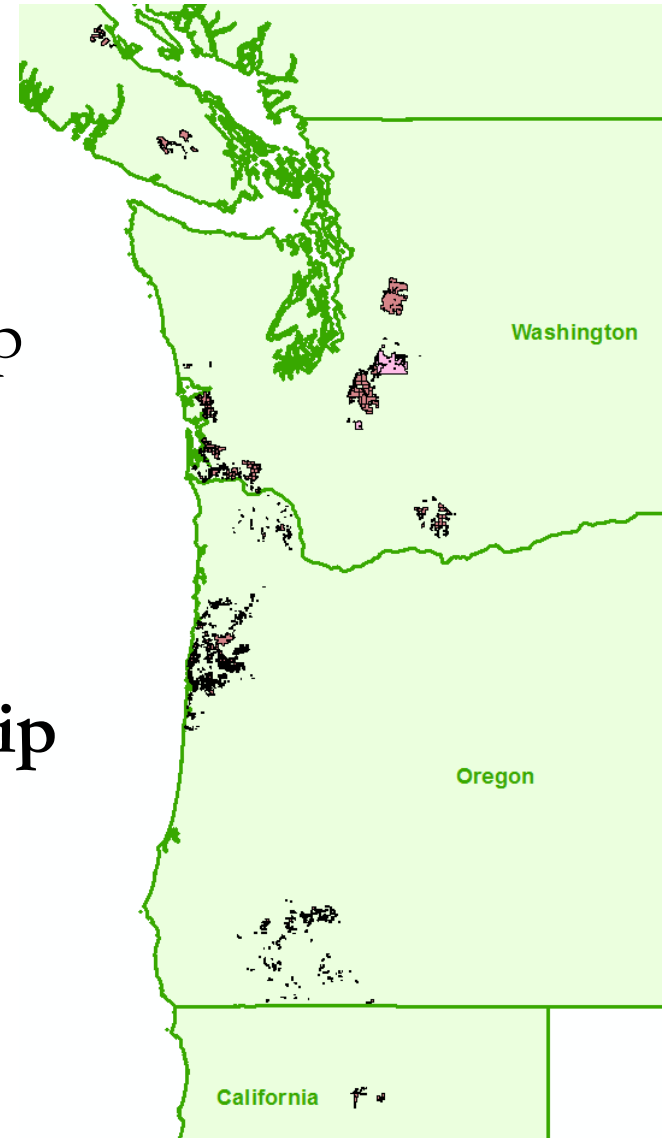


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# Hancock Forest Management

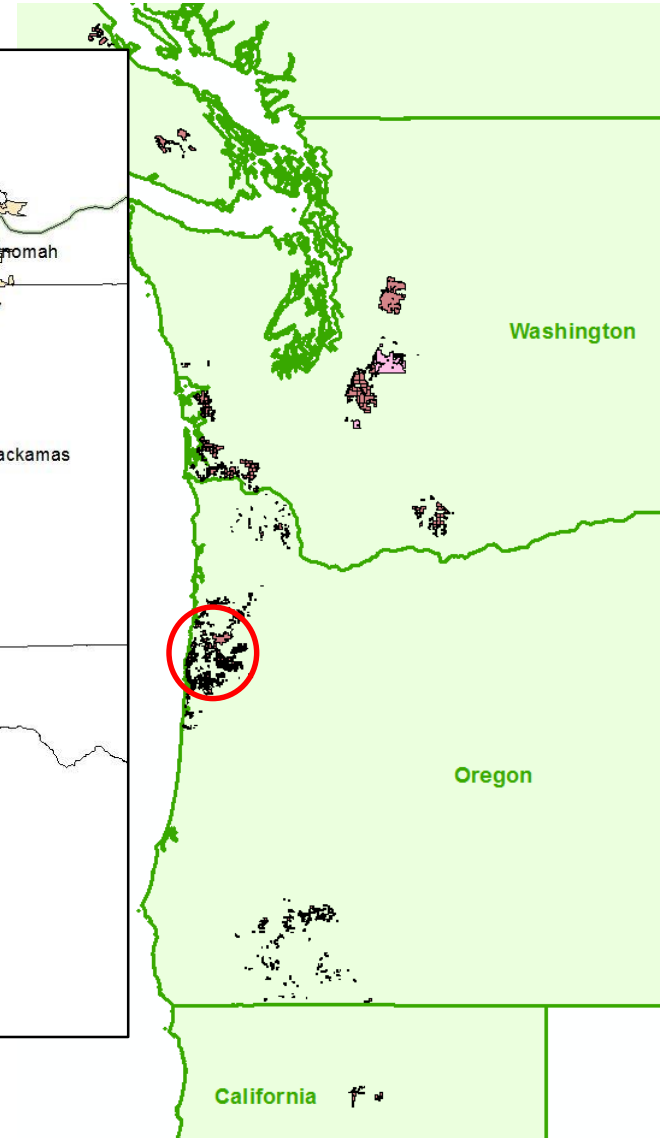
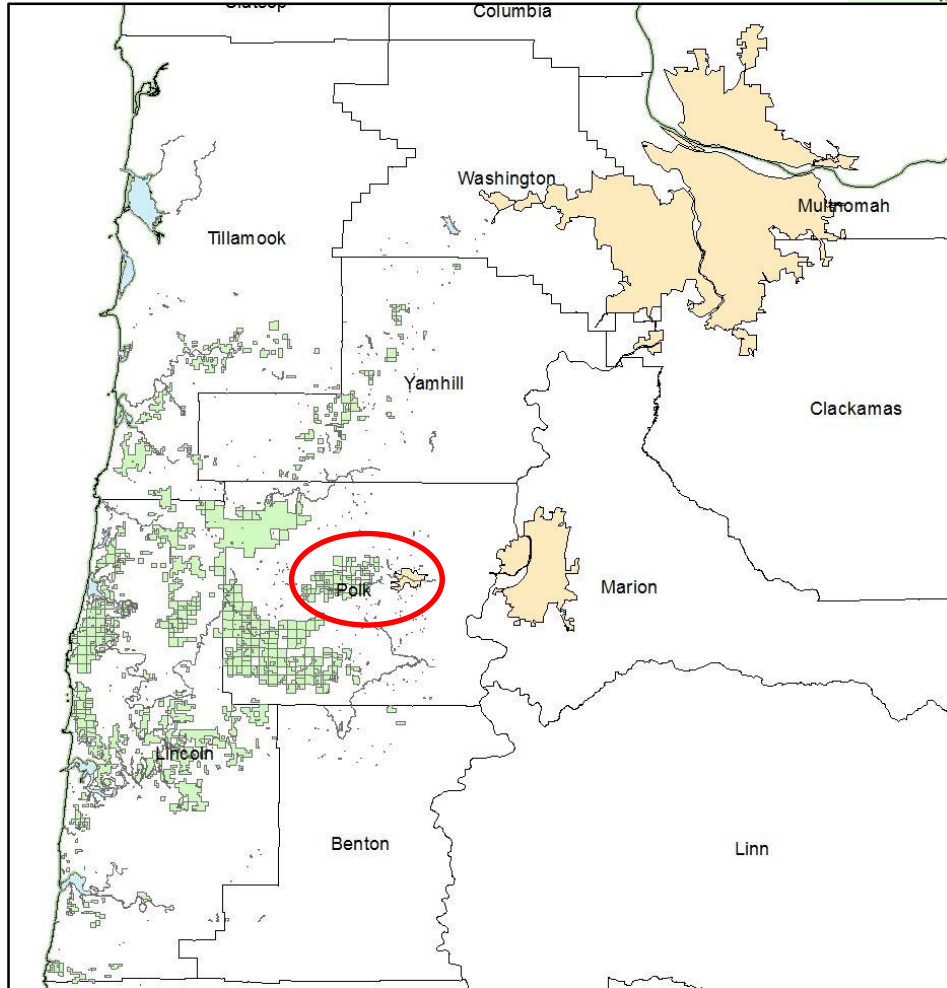
- Subsidiary of Hancock Natural Resource Group
- Manage ~900,000 acres industrial timberland
- **Balance economic return with stewardship principles**



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# Rickreall Watershed

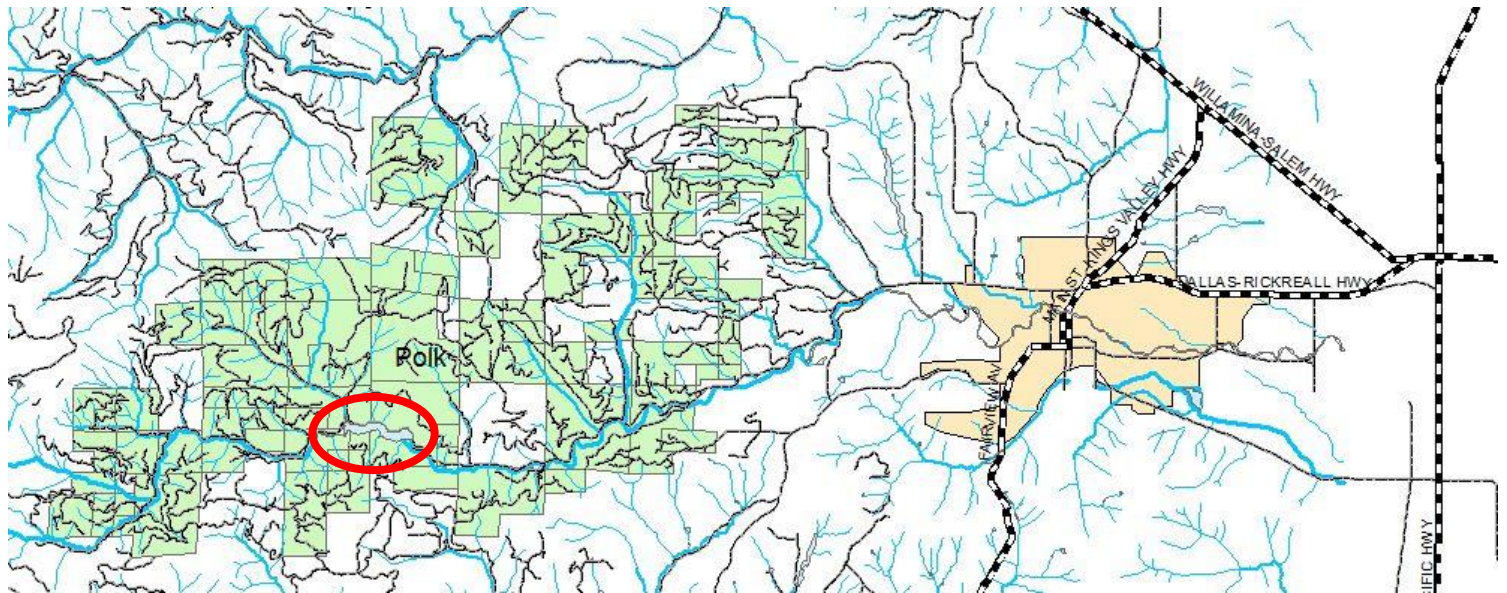


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# Rickreall Watershed



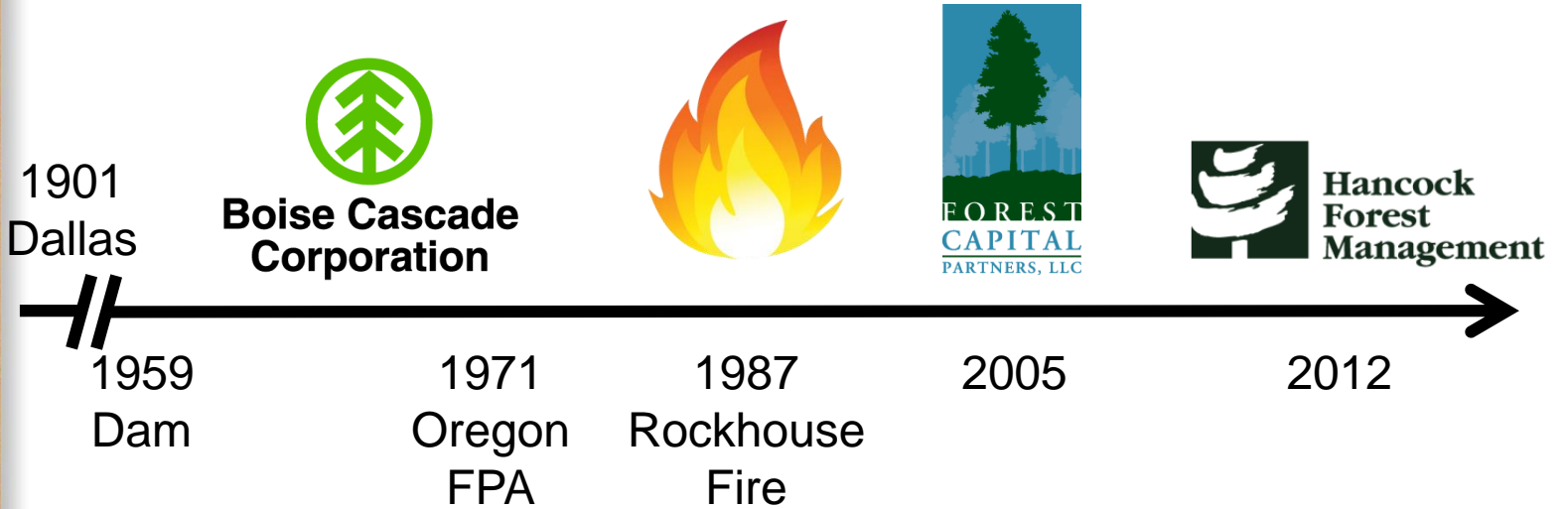
- 67" – Avg. Annual Rainfall (range = 40"-100")
- 80° F – Avg. July High
- 32° F – Avg. January Low



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# Watershed History



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# Partner Objectives in Watershed

## HFM Objectives

- No impediments to operations
- Abide by all rules, regulations and laws
- Provide recreation opportunities
- Balance economic return with strong stewardship principles



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# Partner Objectives in Watershed

- **Protect water quality and quantity**
- **Protect native fish & wildlife / watershed health**
- **Provide recreation opportunities**

**Stakeholder Objectives**



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# Partner Objectives in Watershed



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# Partner Objectives in Watershed

- **Objective – *Provide Recreation Opportunities***
  - Permit walk-in\* / drive-in access
- **Objective – *Abide all rules/regulations/laws***
  - Maintain proper buffer widths
  - Avoid steep slopes
- **Objective – *Meet or Exceed Stewardship Goals***
  - Restore fish passage / connectivity
  - Abandon roads, when possible
  - Release conifer within riparian areas



# Partnership Opportunities

- **Objective – *Improve Fish Passage***
  - Replace culverts, install bridges
  - **Trap & Haul Program**
  
- **Objective – *Improve Fish Habitat***
  - Proper road maintenance
  - CWD/LWD projects
    - **Upper Rickreall Habitat Enhancement**
    - **Directional felling**



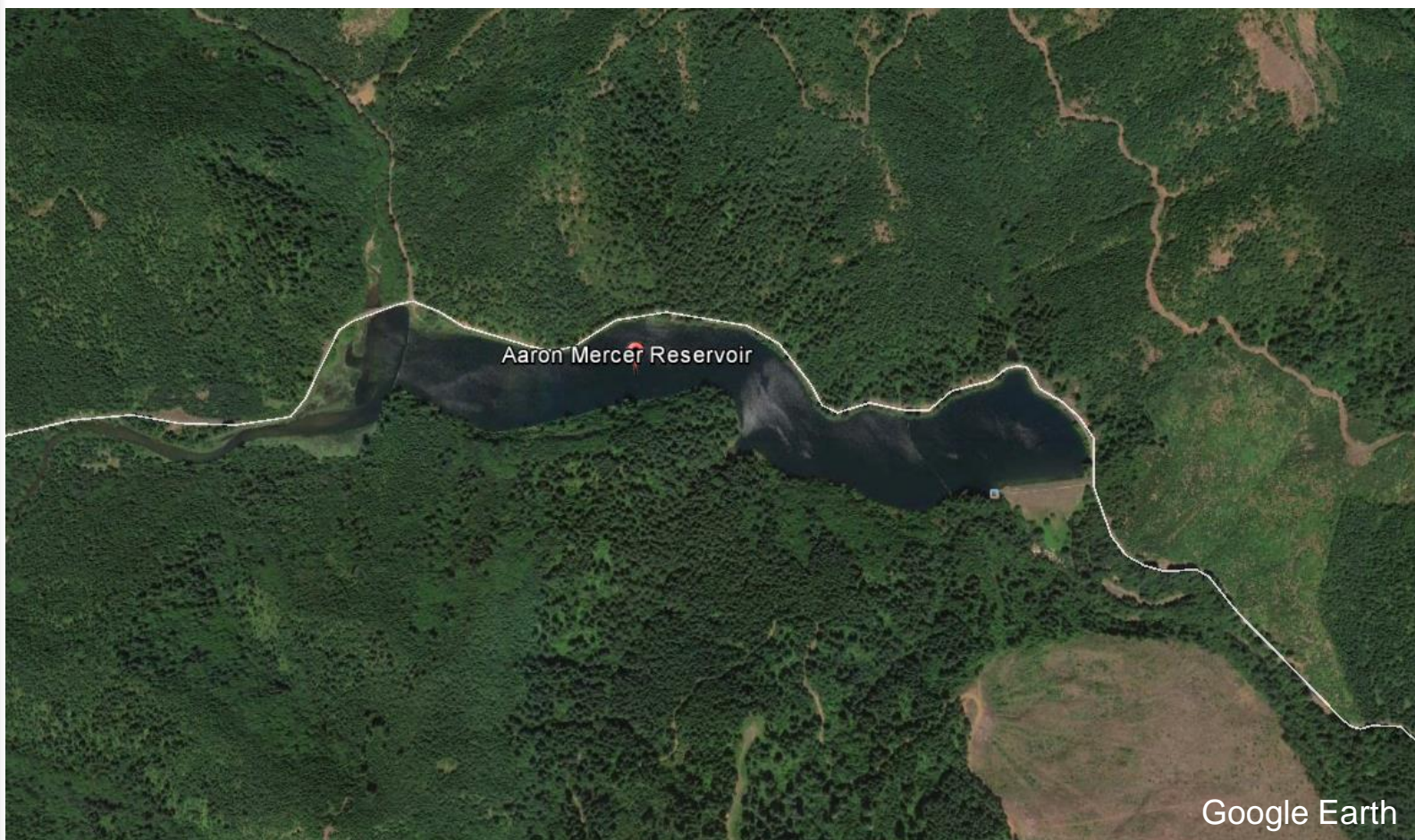
# Trap & Haul Program







# Trap & Haul Program



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# Trap & Haul Program



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# Trap & Haul Program

- **Utilize available fish habitat above dam**
  - ~11 miles in main stem and tributaries
- **‘Restore’ fishing resource above dam**
  - Coho salmon not native to system
- **Success relies on volunteers**
  - Daily trap checks
  - High flows
  - Drive coho to release sites



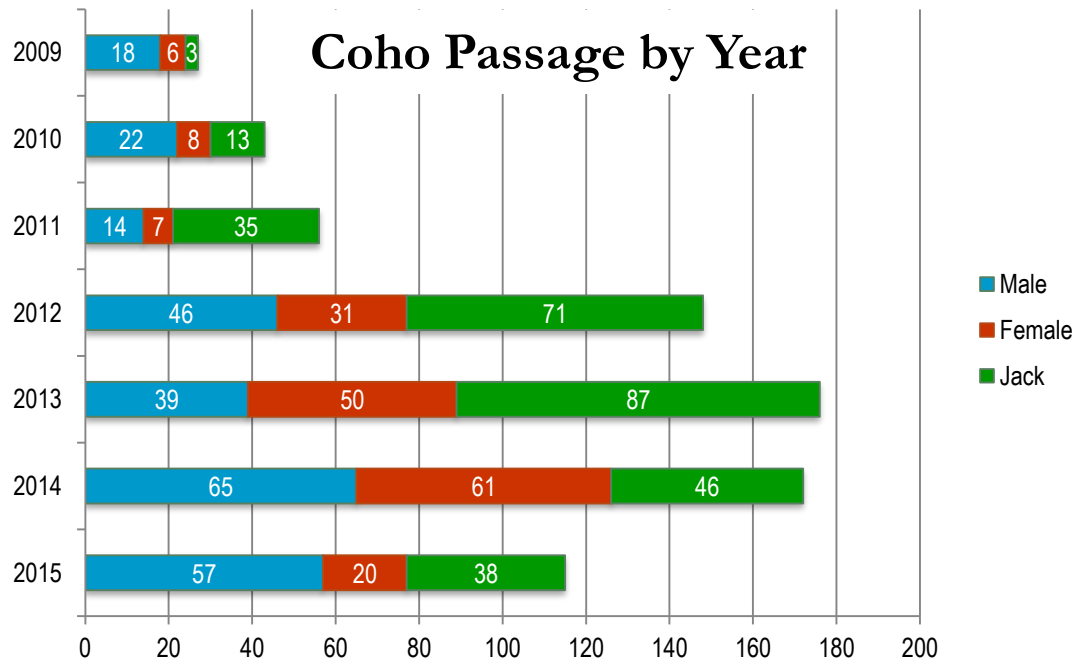
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# Trap & Haul Program

- Joint effort initiated in 2009 by Watershed Council and Sportsmen's Club
- Pass coho salmon and cutthroat trout



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# Upper Rickreall Habitat Enhancement

## ■ Project Background

- BLM initiated review of potential restoration and enhancement activities in upper watershed
  - Found LWD deficiency
  - Scoured stream channels
- Project goals
  - Improve stream function & increase channel complexity and floodplain interaction
  - Improve habitat for resident trout and coho



# Upper Rickreall Habitat Enhancement





# Upper Rickreall Habitat Enhancement



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# Upper Rickreall Habitat Enhancement



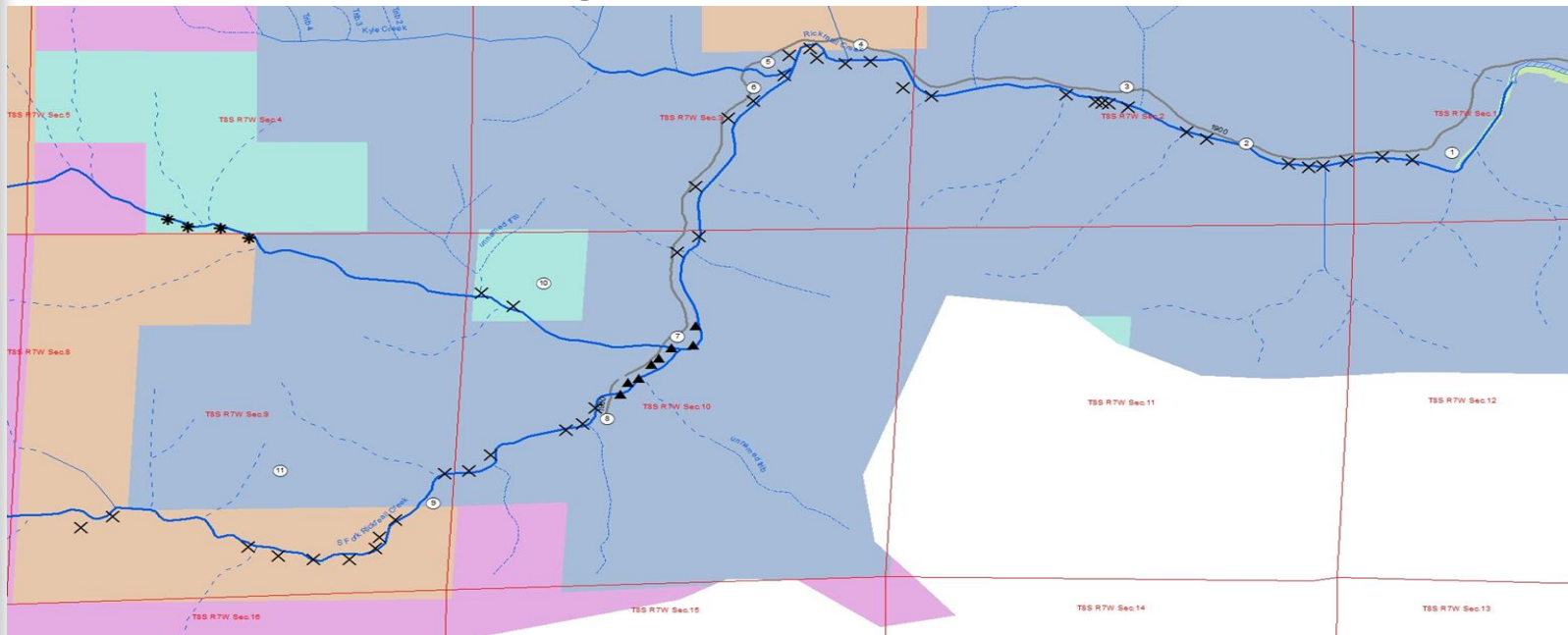
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# Upper Rickreall Habitat Enhancement

- **2010** – BLM developed the Rickreall Creek Watershed Enhancement Project(s)
  - **Project 1:** Mid and Late-Seral Enhancement
  - **Project 2:** Legacy Tree Release & CWD/Snag Creation
  - **Project 3:** Large Woody Debris Enhancement







# Upper Rickreall Habitat Enhancement

- 2010 – BLM developed the Rickreall Creek Watershed Enhancement Project(s)
- 2011 – Environmental Assessment completed & directional felling (BLM)







# Upper Rickreall Habitat Enhancement

- **2010** – BLM developed the Rickreall Creek Watershed Enhancement Project(s)
- **2011** – Environmental Assessment completed & directional felling (BLM)
- **2013** – Directional felling (HFM) and LWD placement via excavator



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# Upper Rickreall Habitat Enhancement







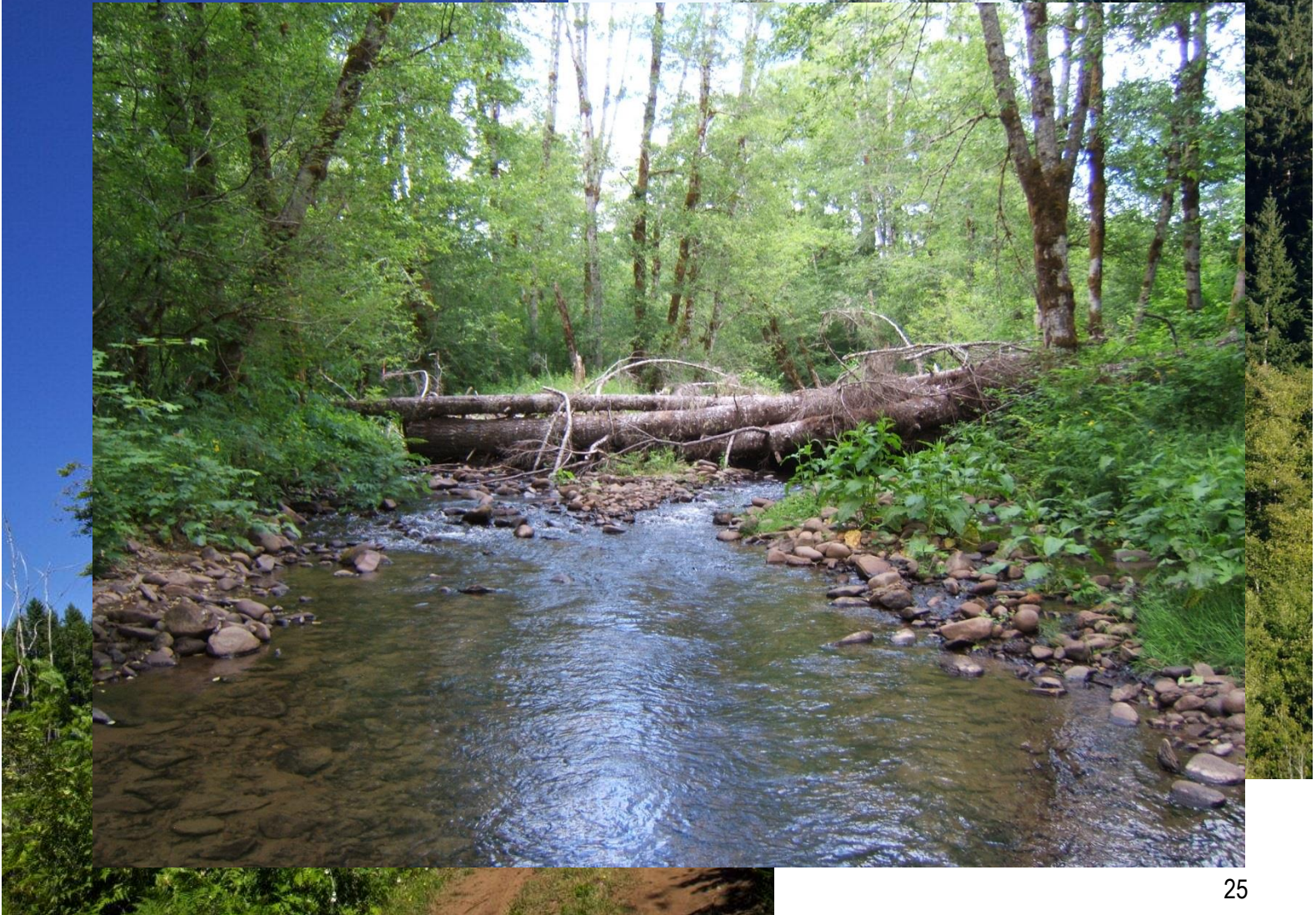
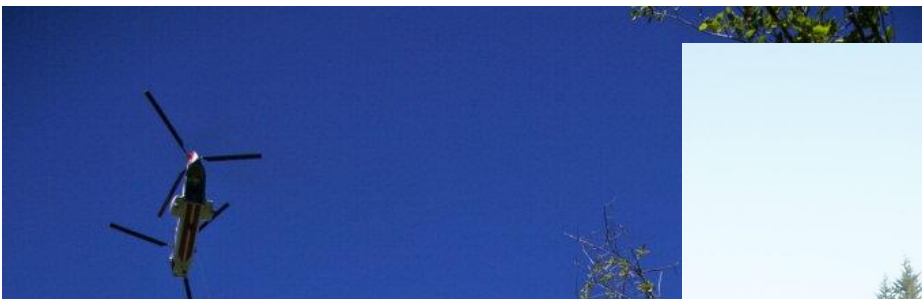
# Upper Rickreall Habitat Enhancement

- **2010** – BLM developed the Rickreall Creek Watershed Enhancement Project(s)
- **2011** – Environmental Assessment completed & directional felling (BLM)
- **2013** – Directional felling (HFM) and LWD placement via excavator
- **2016** – over 700 tree-length logs placed with helicopter



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# Partners & Stakeholders



Polk County Sportsmen's Club



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