

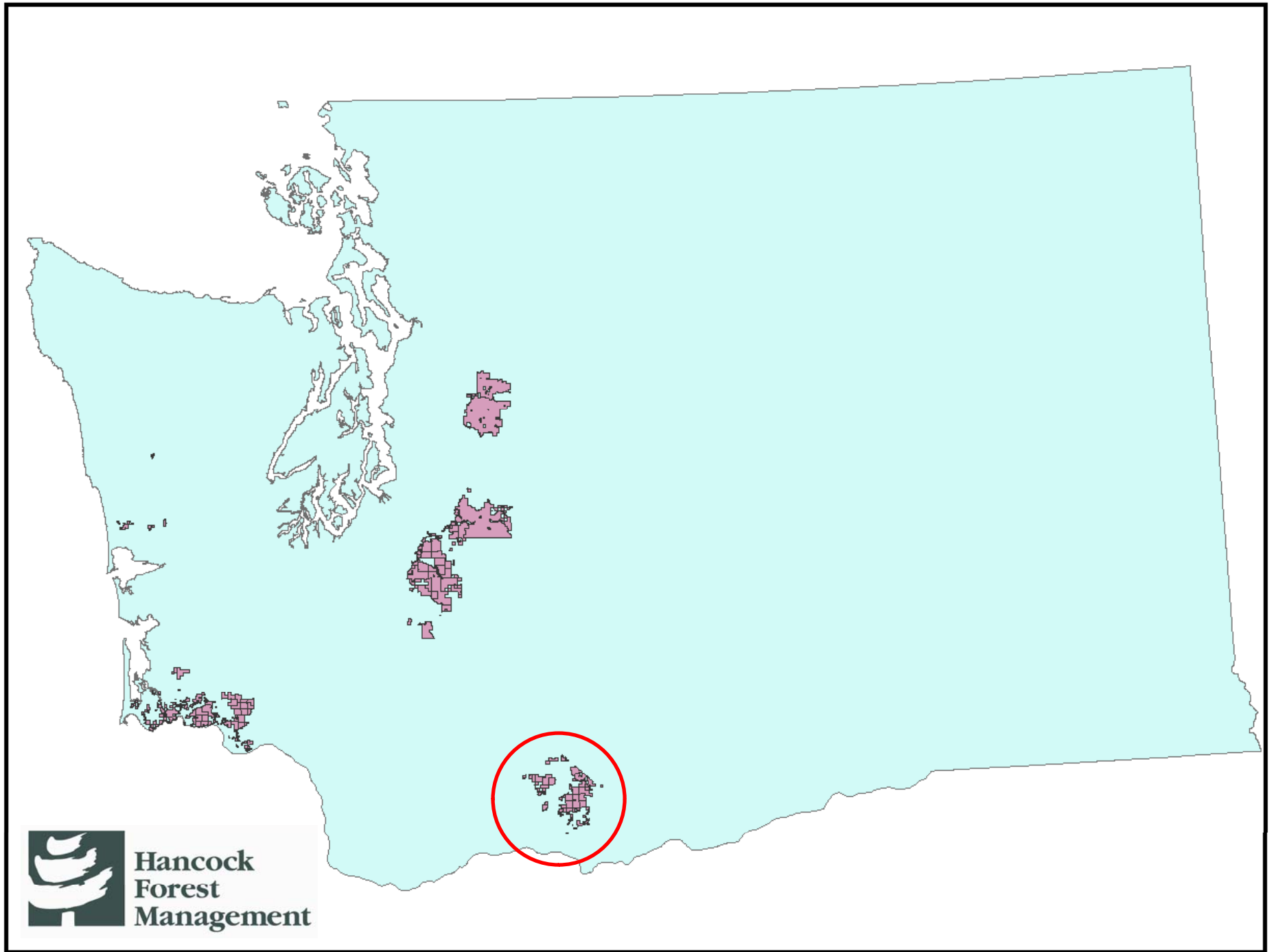


Maintaining Riparian Function In a Working Forest: Implementing the Forest and Fish Law

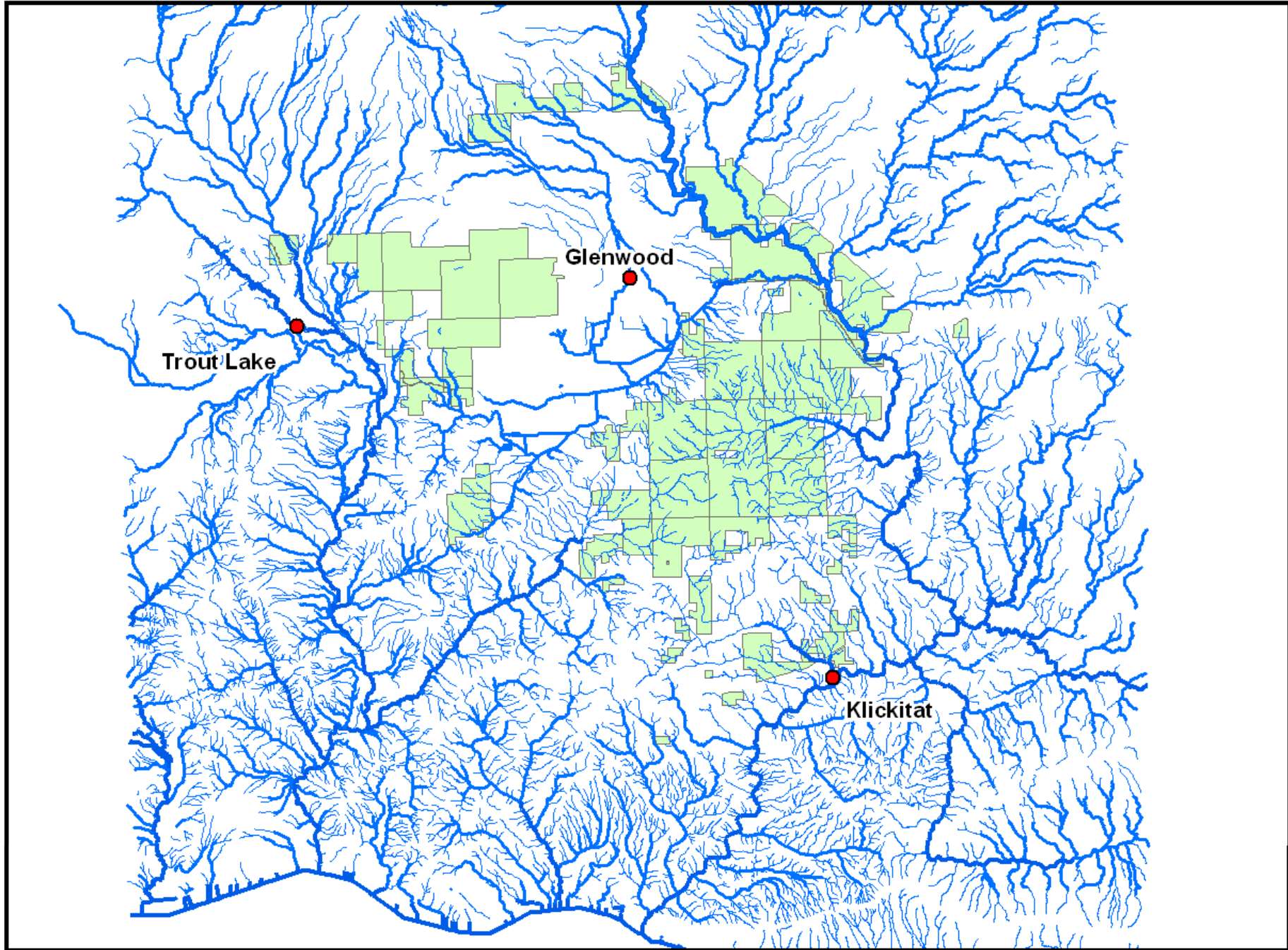
**Hancock Forest Management
Northwest Division**

**Nathan Putnam
Forest Engineer**





**Hancock
Forest
Management**





A Brief History of Progress

- 1974 – Washington’s Forest Practices Act
- Then came amendments...

Timber, Fish & Wildlife Agreement (TFW)



A photograph of a stream flowing over large, mossy rocks. In the background, there is a dense forest with many fallen logs and branches scattered across the ground and in the water. The scene is natural and somewhat overgrown.

Washington's Forest & Fish Law

Federal Endorsement through HCP

Resource Objectives Established

Achieved by Maintaining **Riparian Function**

- Shade
- Sediment filtering
- Woody debris
- Leaf litter and nutrient cycling
- Stream bank stability

Adaptive Management Process



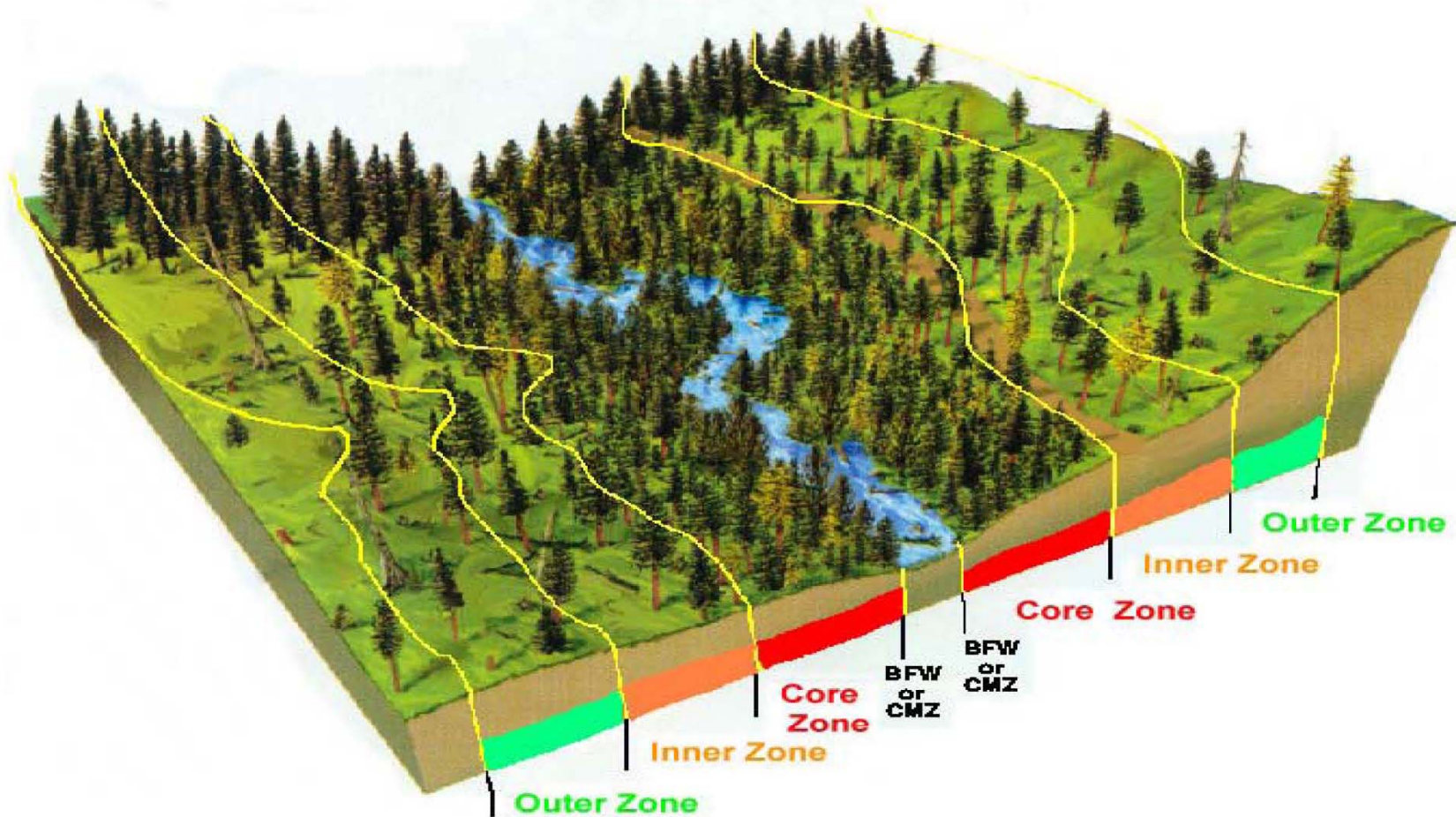
Washington's Forest & Fish Law

Forest Practice Rule Enhancements

- Streamside Buffer Zones
- Forest Roads and Culverts
- Locate and Manage Unstable Slopes

Riparian Management Zones

A Graphic Representation



A photograph of a stream flowing over large, mossy rocks in a forest. In the background, there is a large pile of fallen logs and branches, partially obscuring the trees. The water is clear and creates white foam as it flows over the rocks.

Forest and Fish Law

The Rules for Buffers are Complex

- Westside or Eastside
- Elevation
- Stream-Type Classification
- Bankfull Width
- Bull Trout Zone?
- Shade Nomographs
- Basal Area Specifications



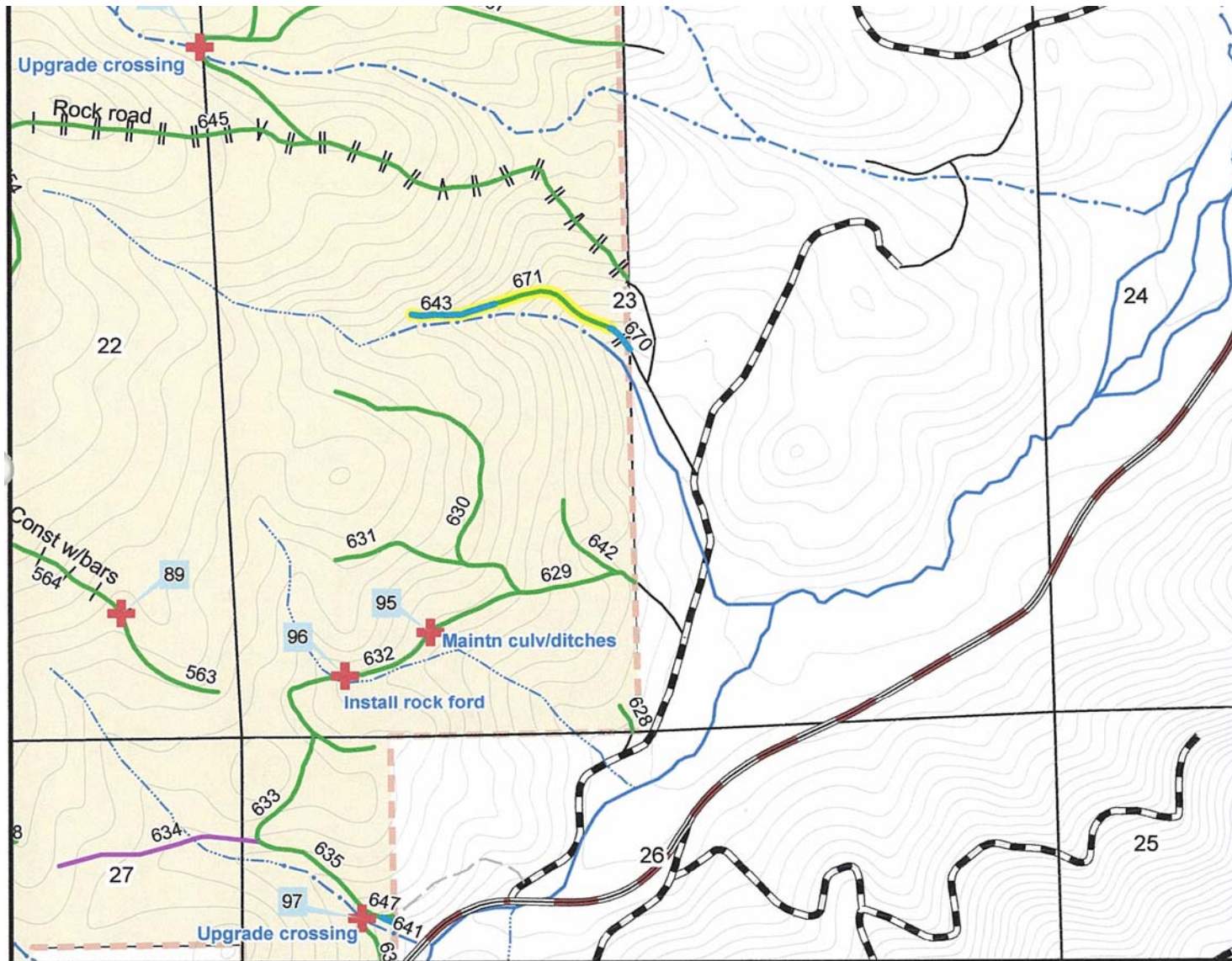
Washington's Forest & Fish Law

- **Forest Practice Rule Enhancements**
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Forest Roads and Culverts

- **Minimize New Roads & Build to Higher Standard**
- **Road and Stream Inventory and Assessment**
 - Map the road network, stream crossings, & fish distribution
 - Identify problem areas
- **Road Maintenance & Abandonment Plan (RMAP)**



Klickitat Tree Farm - 2004 RMAP Inventory

Gilmer RMB

05N11E23

Scale: 1" = 1,000'

Rainier Timber Company, LLC
 managed by: The Campbell Group, LLC

November, 2004

















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- **Road Maintenance & Abandonment Plan (RMAP)**
 - **Culvert upgrades: Fish passage & storm events**
 - HFM Klickitat: 11 Fish blockages; over 300 type N crossings
 - HFM NW Division: Annually 200 new pipes & 300 crossing upgrades
 - **Road Improvement for water quality**
 - Abandonment
 - Road rocking
 - Disconnect road & ditch water from stream network







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 - HFM NW Division: Annually 200 new pipes and 300 crossing upgrades
 - **Road Improvement for water quality**
 - Abandonment & Relocation: 24 miles (locally)
 - Road rocking: 90+ miles since 1984
 - Disconnect road & ditch water: Annually \$15 – 30k on waterbars & ditch relief culverts



Adaptive Management

- **Cooperative Monitoring Evaluation & Research Committee (CMER)**
 - Multidisciplinary science team with all interests represented
 - CMER's Goal: Advance the science needed to support adaptive management
- **Hancock's Participation in Ongoing Studies**
 - Eastside Riparian Shade & Temperature Study
 - Washington Road Effectiveness Monitoring (sediment study)
 - Bull Trout Overlay Project
 - Eastside Type F Instream Characterization Project



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