



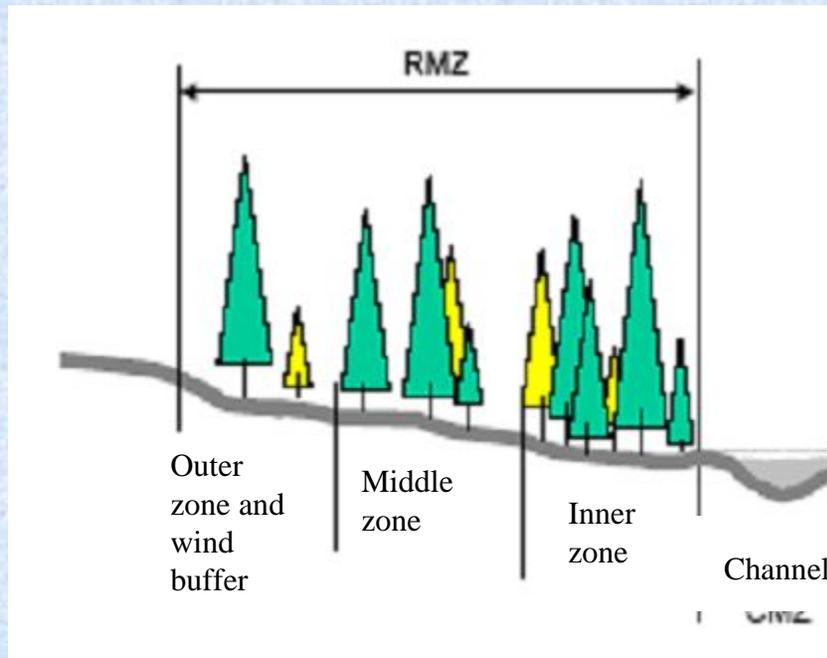
WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

# Introduction to the WADNR Riparian Forest Restoration Strategy (RFRS)

*Where are we going and how are we going to get there?*

Richard Bigley

May 23, 2005



*Where are we going  
and  
how are we going to get there?*

Context for the RFRS

Principles in the creation  
of the RFRS

Why the RFRS and this  
workshop?



## *Context for the RFRS*

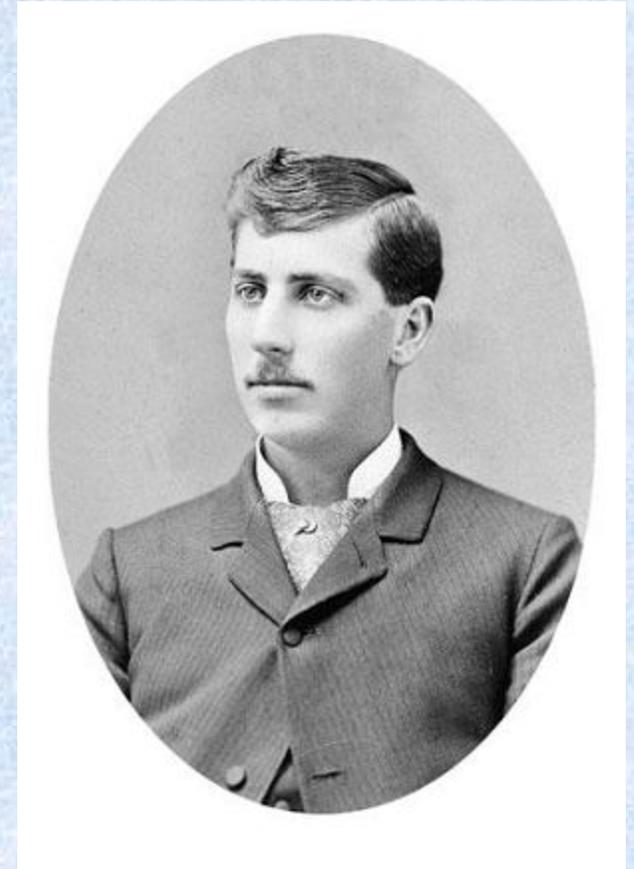
- What is our history of managing riparian ecosystems?
- How does the riparian restoration fit within the WADNR HCP Riparian Conservation Strategy?





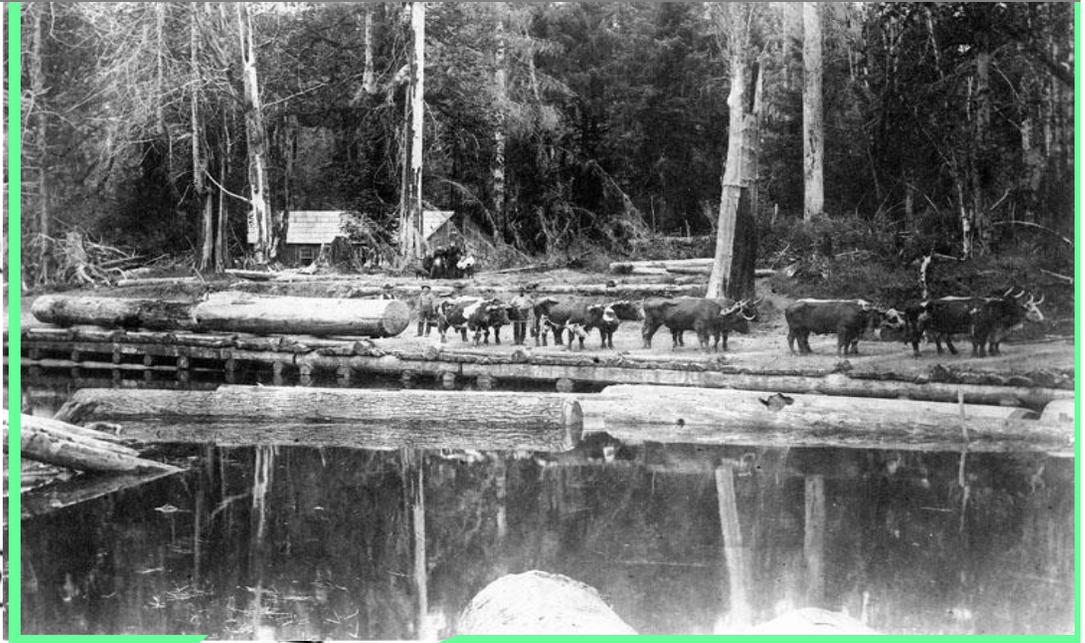
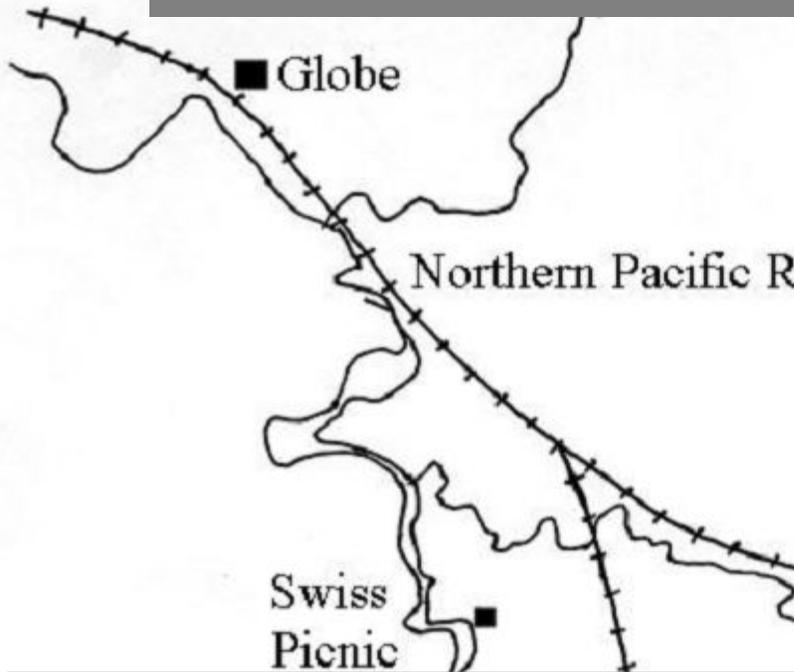
Frances logging Co., circa 1912

•Where have we come from?



S. A. "Forney" Soule, 1886

**S. A. Soule's oxen team, circa 1895, near Frances Washington.**



**Lifting logs from the pond for tail loading near Frances, circa 1912.**





Hoh river at mile 9.5 circa 1920



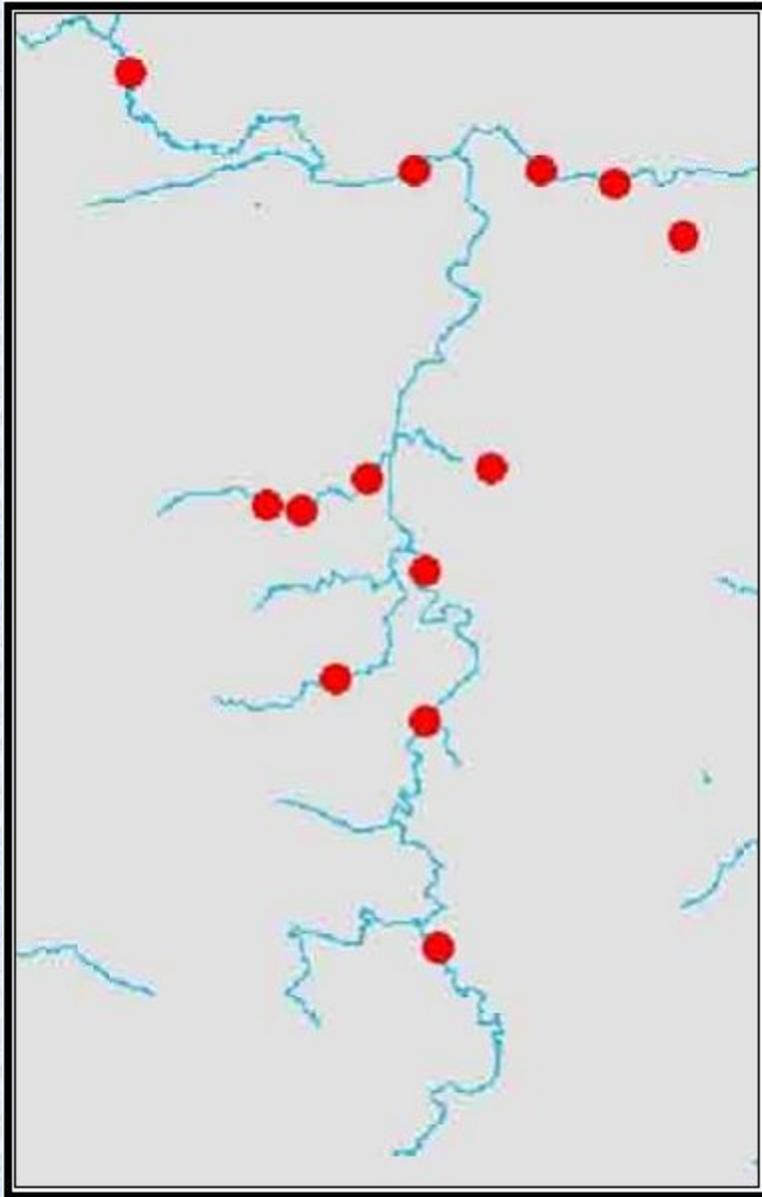
## *Splash Damming in SW Washington*

‘The state fisheries dept. strenuously objected to the effect of splashing logs on the fish in the river.

Most serious of all, the back country was becoming infested with people...  
....who may not realize the hazard along the streams and would be caught in a splash and killed.

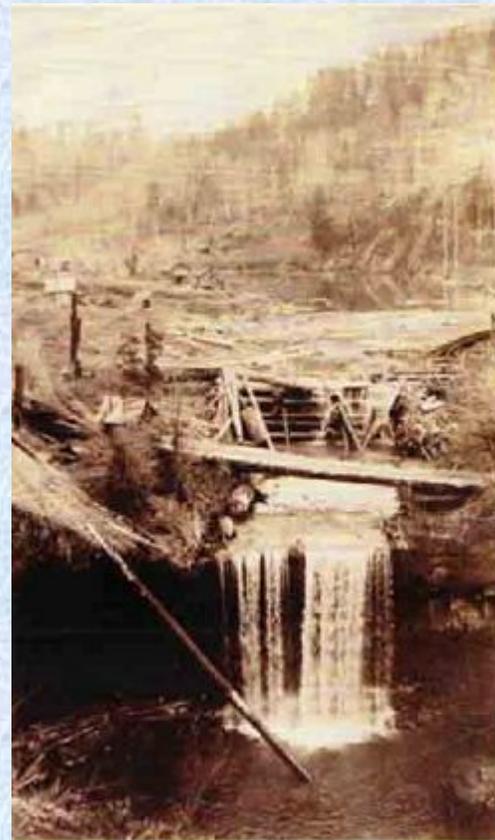
There was really little warning ahead of the sudden arrival of a 20 ft. freshet of water and logs.’

*1948 interview with Mike Gehrman*



## Splash dams along the Chehalis River near Pe Ell

1880-1910



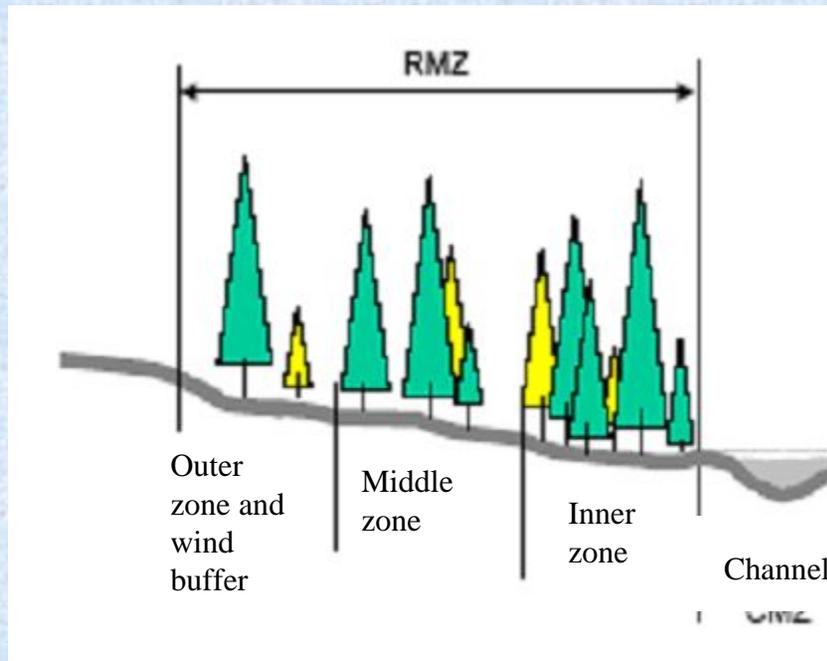
*Major Stages in the  
Development of  
Western Forestry,  
Kimmins 1992*



1. Unregulated Exploitation
2. Institutional Regulation by Central Authority
3. Development of Ecological Approach to Silviculture
4. Multiple Resource Management

*Where are we going and how are we going to get there?*

*Here comes another paradigm shift in stream side management - we have one foot in and another stepping out*



Connecting the RFRS to the HCP-

## *The Objectives of the Riparian Conservation Strategy*

The HCP identifies two riparian conservation objectives

(1) “to maintain or restore salmonid freshwater habitat on DNR-managed lands, and

(2) to contribute to the conservation of other aquatic and riparian obligate species”.



Connecting the RFRS to the HCP-

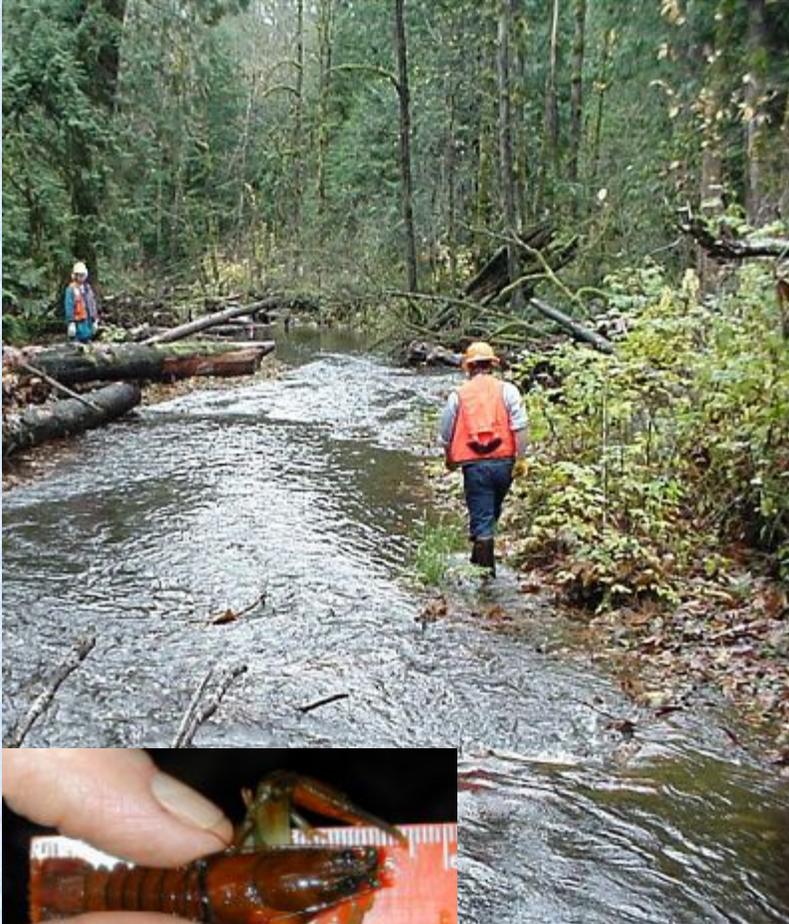
## Elements of the *Riparian Conservation Strategy*

- 1) Riparian Management Zones
- 2) Road Management
- 3) Unstable Slopes Identification and Management
- 4) Hydrology maturity of basins
- 5) Wetland Management Zones



Connecting the RFRS to the HCP-

## Implications of the Riparian Conservation Strategy

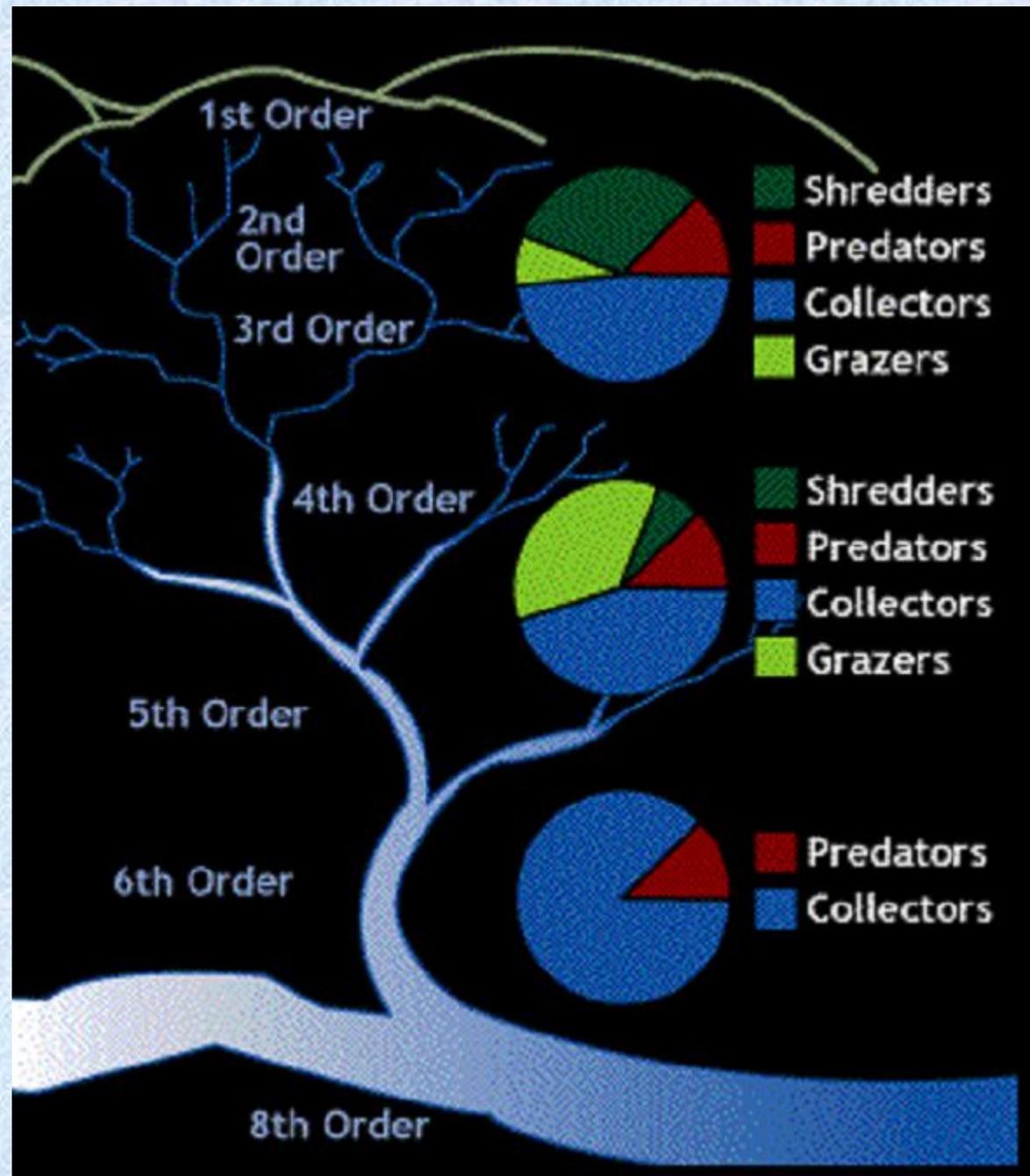


- Riparian Conservation is more than RMZs
- Watershed scale vision providing quality aquatic function and habitat continuity
- *Riparian conservation strategy operates on the watershed scale!*

# *Restoring Riparian Ecosystem Functions*

Understanding the  
Ecological role of  
different parts of the  
river continuum

Understanding  
Disturbance types,  
frequency and  
severity change  
within position in the  
watershed



Connecting the RFRS to the HCP-  
*Elements of the Riparian Conservation  
Strategy*

With the implementation of the RFRS, what strategy key riparian strategy remains missing?

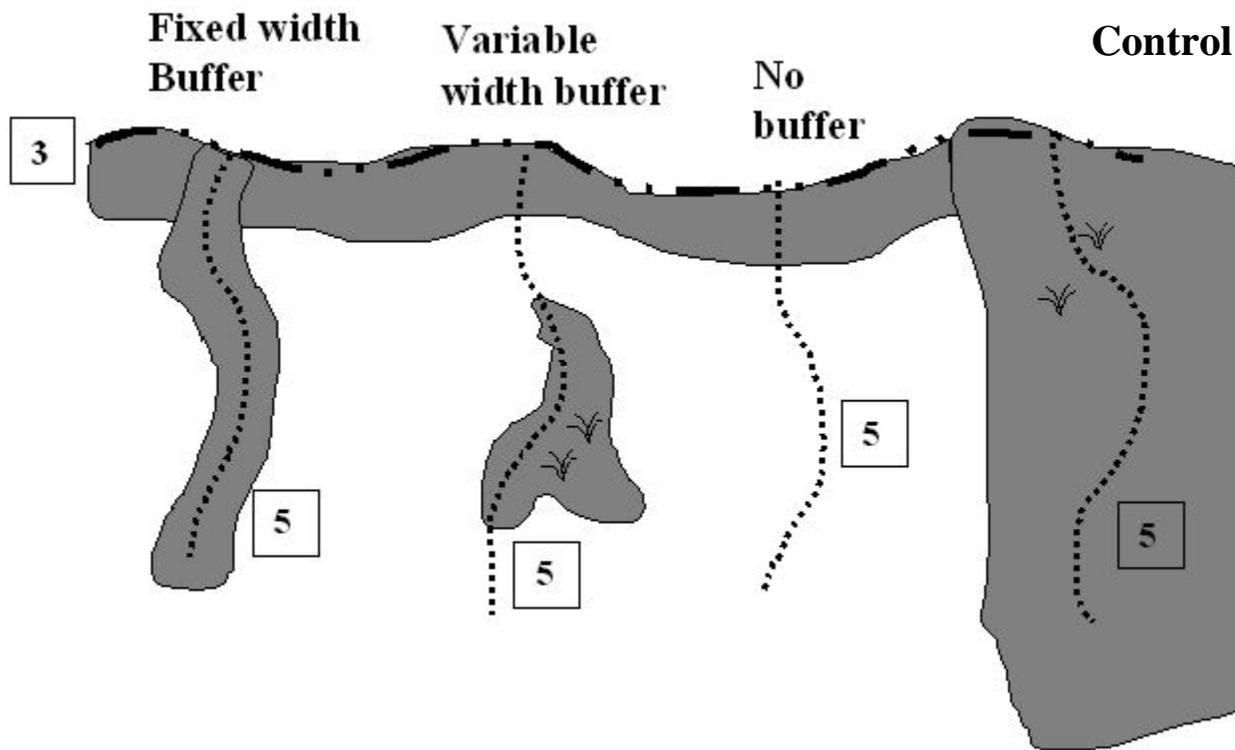
*What about the other half of the riparian system?*

*The Type 5 stream conservation strategy to be developed by the end of 2007*



# Overview of Type 5 stream Research

- Online Literature Review
- Buffer Experimentation
- Analysis of Interim Protections



Connecting the RFRS to the HCP-

## Expectations for the the Riparian Conservation Strategy

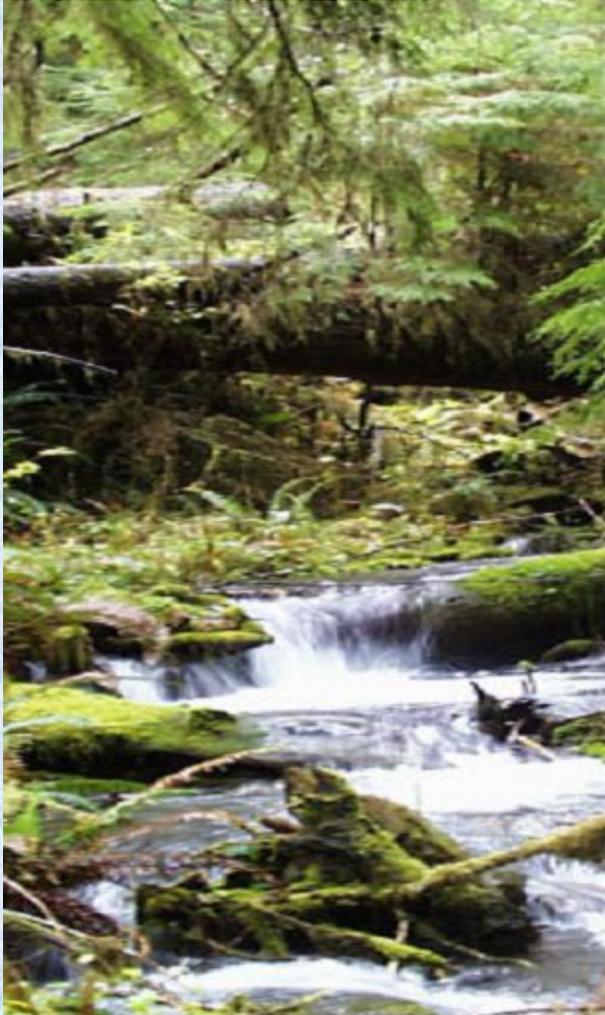
- 1) Deciduous and young conifer riparian forests will become older conifer forests
- 2) Young forests on unstable slopes will develop root strength
- 4) Basins will reach hydrologic maturity
- 5) Road impacts will be reduced by landscape based management.



# *Principles for the development of the RFRS*

- 1) The goal of restoring “fully functional” older forest conditions
- 2) Compatibility with other management under the HCP
- 3) Avoid risk to the resource





## *1) The Goal is to Restore Older Forest “Fully Functional” Conditions to Riparian Forests*

- This is a new goal for the department
- The goal is ambitious and a long way off
- Active management is consistent with the goal
- The RDFC focuses on minimal starting point for broad based ecological function

*The major challenge for managers is to efficiently blend different management goals for different parts of the landscape*

## *2) Compatibility with Other Management Under the HCP*



- Support and overlap with other conservation goals (owls, MM)
- Actively manage resources to meet goals (using state-of-the-art-thinking- i.e biodiversity thinnings)
- Modification and stratification of treatments by plant association and landscape context
- Balance conservation and timber production.
- Commitment to learning through research and monitoring
- Commitment to adaptive management of current strategies

*The major challenge is to streamline operations compatibility while maintaining consistency with the goal*

### *3) Avoid Risk to the Resource*

- Avoid sensitive sites
- Protect legacy structures
- Low priority for hardwood conversions that leave RMZ without canopy cover and no conservation benefit for decades
- Thin stands to maintain growth and increase wind stability
- Create down wood to jumpstart instream and forest floor function
- Passively manage stands past RDFC benchmark

*The major challenge for managers is to develop and trust in judgement to make treatments site specific*



*What was the motivation behind the writing of the RFRS?*

- Provide a strategy to implement restoration of RMZs
- The product of an effort that started in 1997
- Simultaneous emergence and maturing of riparian restoration perspective in NW
- Scope creep with extensive internal and external review



*Fishing the upper Pysht around 1920*

*What was the motivation  
behind the format of the  
RFRS?*

Document designed to meet requirements  
specified in HCP

- *Section 1*, Definition of the management  
goals for riparian zone activities

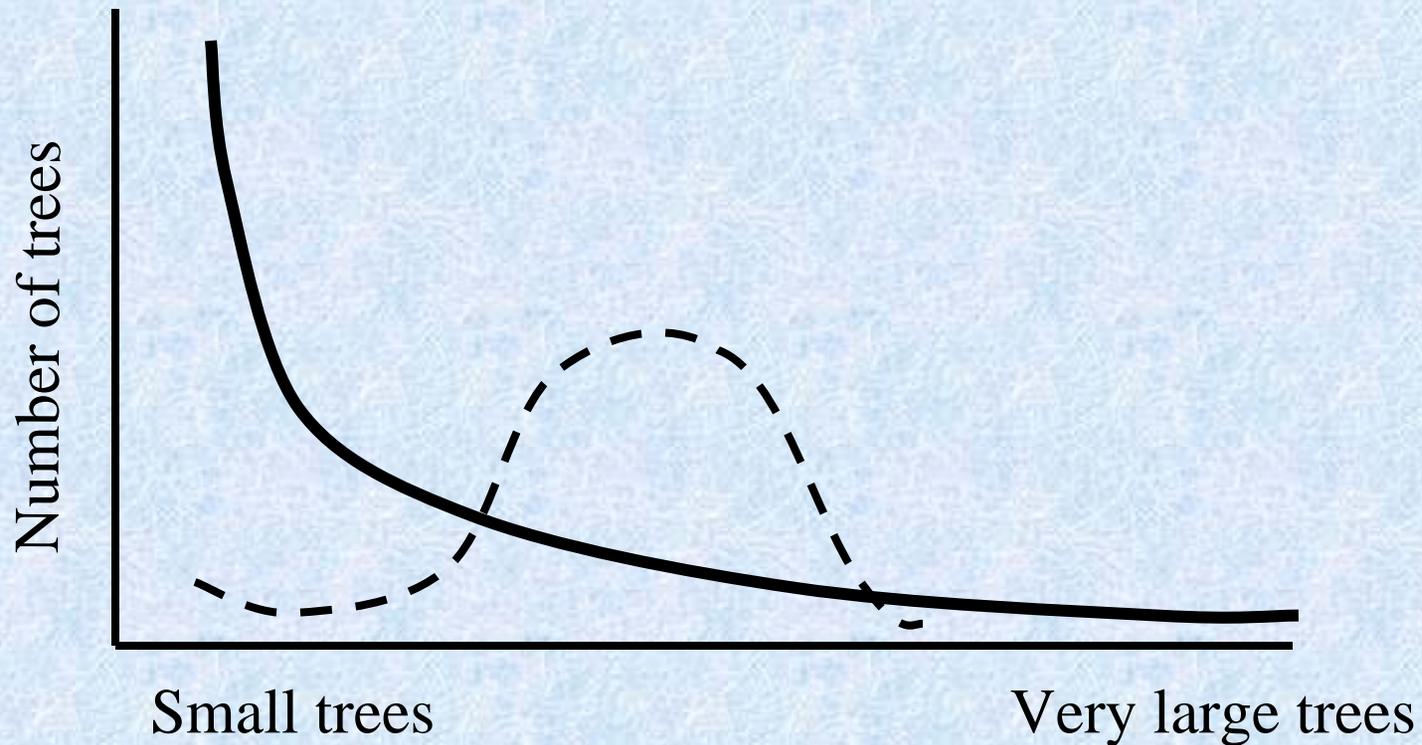
*Section 2* Specific guidance on the  
sequence of activities and prescriptions

- *Section 3* Details proposed monitoring



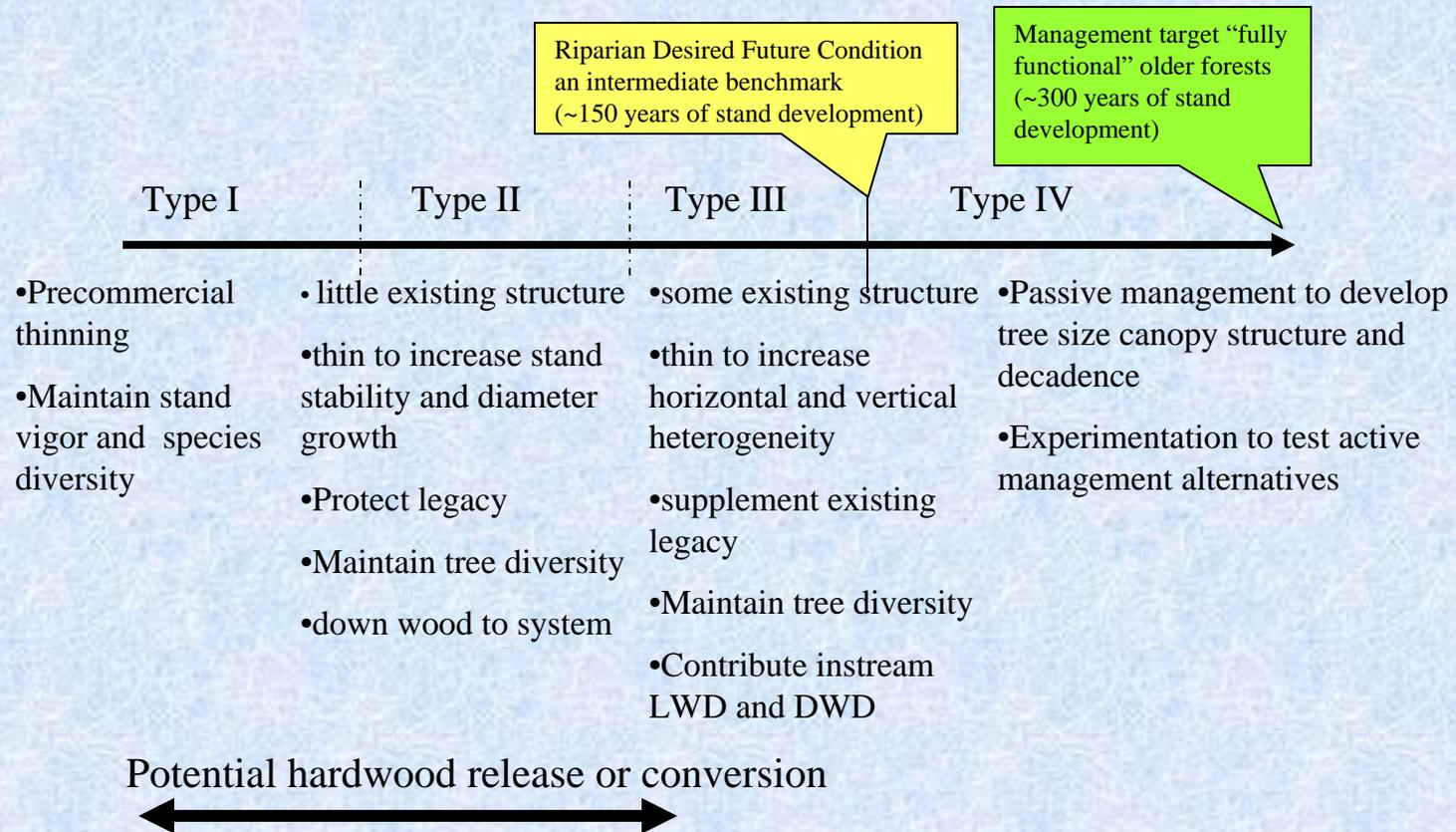
*RFRS Section 1*, Definition of the management goals

Hypothetical example: Tree diameter distribution competitive exclusion condition (dashed line), and an older stand



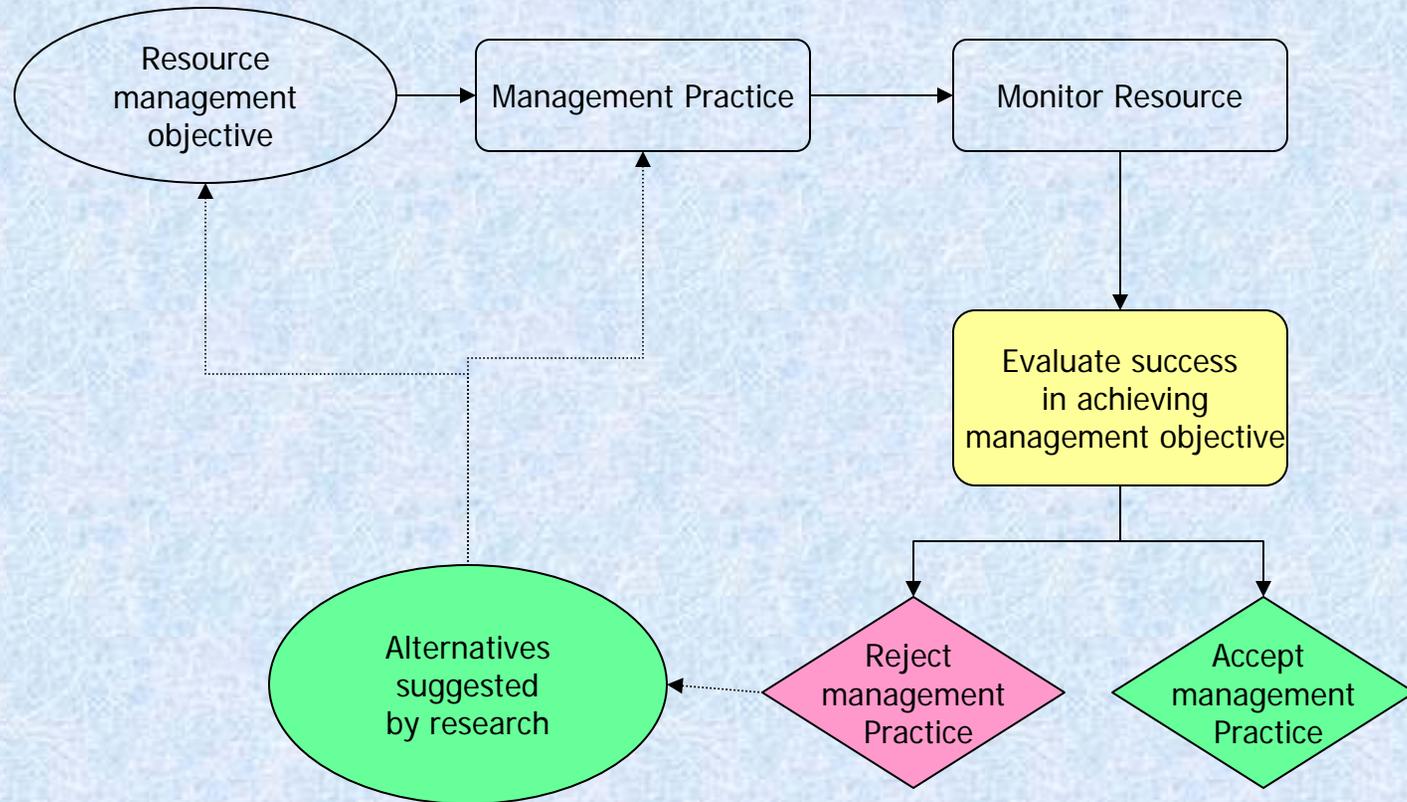
# *RFRS Section 2* Specific guidance to meet these strategy objectives

## *Summary of the WADNR Riparian Restoration Approach*

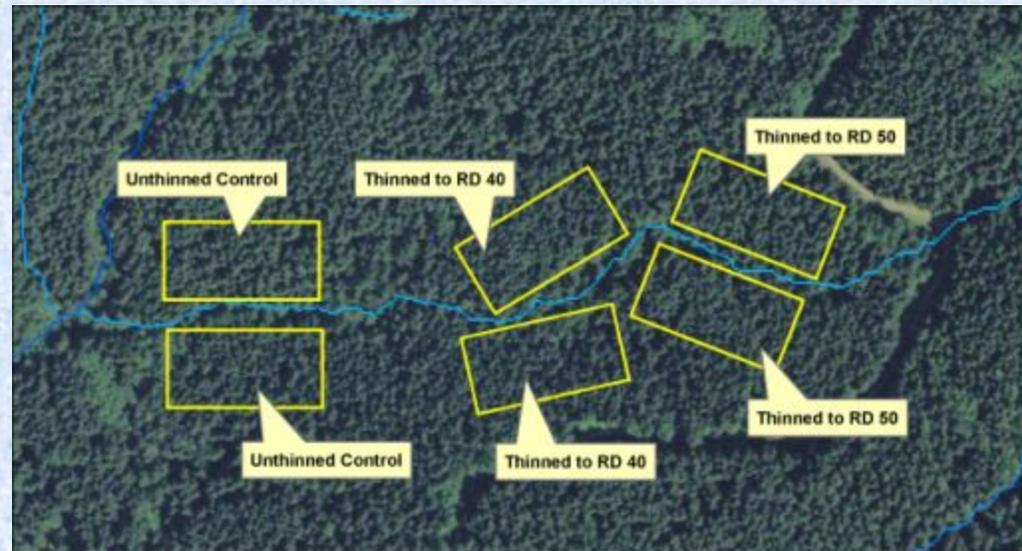


## *RFRS Section 3* Provides details of monitoring

Successful adaptive management allows conclusive statements concerning alternatives to management goals



## *Example Monitoring Topics*



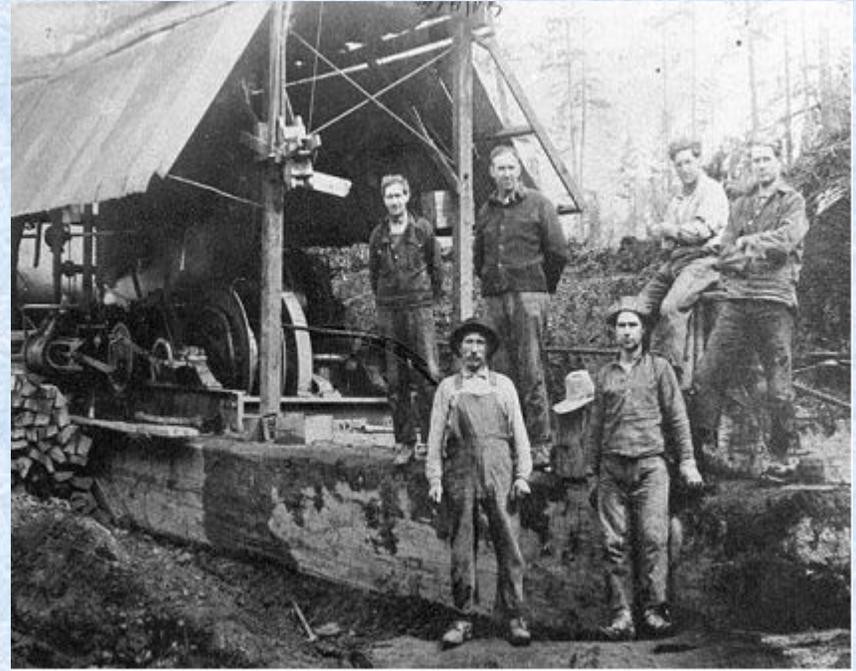
- Evaluate the need for *increased site-specificity* of thinning targets and prescriptions
- Evaluate *windthrow* associated with different thinning levels and site types
- Evaluate *Large Woody Debris recruitment rates* within RMZ's associated with active restoration vs. natural self-thinning



## *Expectations for the RFRS Workshop*

- Promote a common understanding of goal, strategy and tactics
- Provide a comprehensive background for the strategy and an introduction to tactics
- Start dialog with key riparian restoration resource staff
- Learn from each other
- Step into the future

*The Role of the  
Designated Region  
Riparian  
Restoration  
Coordinator*



- Make sure the goal and management latitude is clear
- Be the first line of resource for questions from the field
- Be a partner in research and effectiveness monitoring
- Be the key contact for revisions and clarifications
- Share the vision for management of State lands

## *What will be covered in the workshop?*

### *Monday- Context for the RFRS*

Riparian system as part of the landscape, Riparian system ecology

### *Tuesday- How applying the RFRS interfaces other Mgt.*

Increasing site specificity in determining the appropriate area to apply restoration. Introduction to class project

### *Wednesday- More on how the RFRS interfaces with Mgt.*

Focus on the management objective and design  
Collect data for class project

### *Thursday- Focus on Hardwood forests and operational constraints. Complete class project*

### *Friday- Review of class projects on site*

*Where are we going and how are we going to get there?*



*A. W. Lester.  
Showing part of 3,000,000 ft of Spruce  
ready to be loaded. G. Hines Photo  
North River, Grays Harbor.*

*No. 12*