

A photograph of a river flowing through a dense forest. The river is the central focus, with white water rapids. The banks are covered in lush green vegetation, including tall grasses and shrubs. Several large, fallen tree trunks and branches are scattered along the banks and in the water, indicating a natural process of forest succession or a disturbance event. The background is a thick wall of green trees.

# **HCP Riparian Forest Restoration Strategy**

**for all west-side HCP planning units  
(excluding the OESF)**

# What is The HCP's Riparian Conservation Strategy?



# The Riparian Conservation Strategy has Two Main Objectives:



# To Maintain or Restore Salmonid Freshwater Habitat on DNR-managed Lands



# To Contribute To The Conservation of Other Aquatic and Riparian Obligate Species



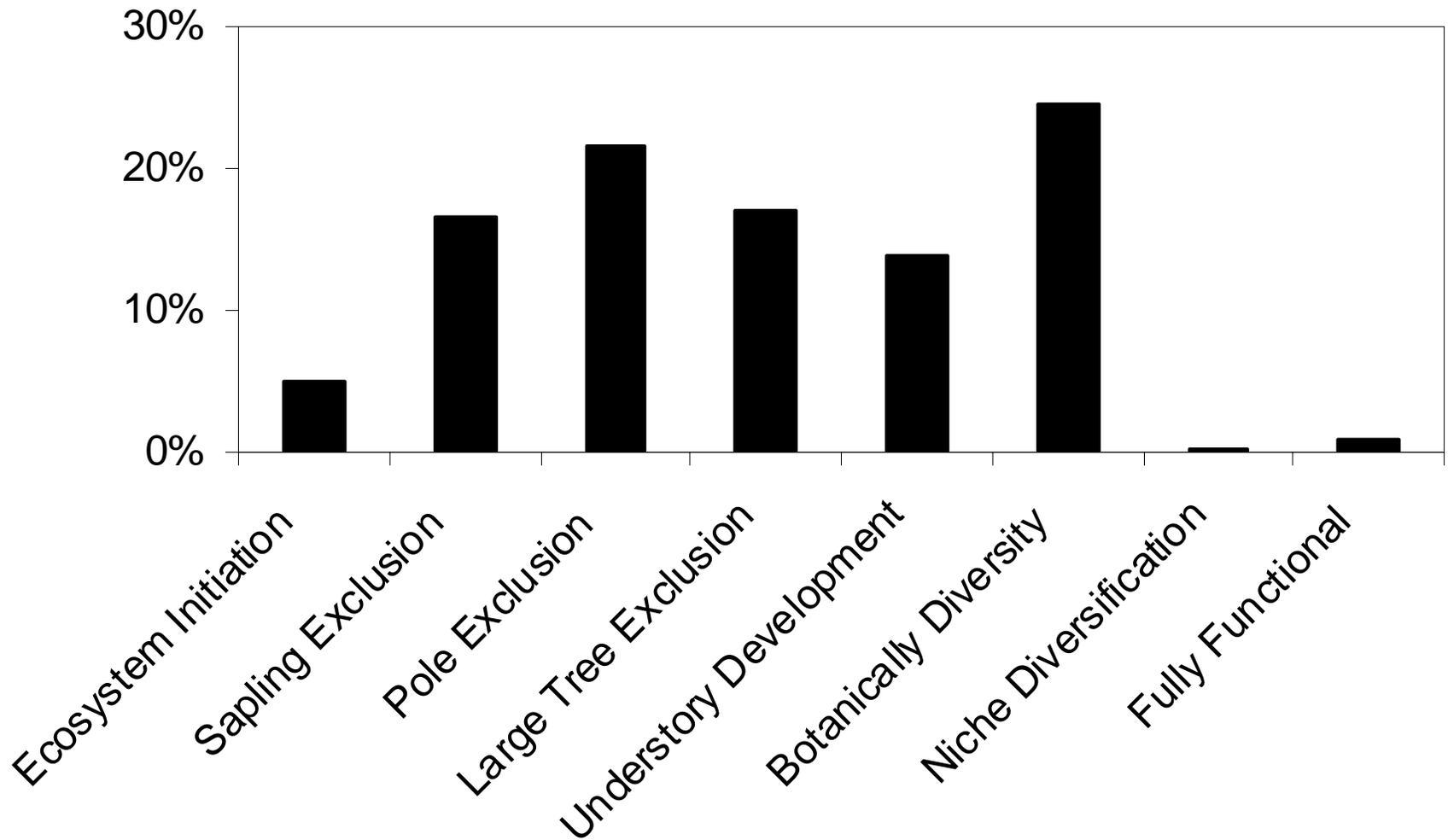
## Approximate Extent of Riparian Management Zones Outside the OESF:

HCP Unit	State Trust Land (acres)	Stream Miles by Adjusted Water Type				Total Miles of Stream	Percent Stream Miles
		1	2	3	4		
<b>North Puget</b>	381,516	154	52	1,144	1,744	3,094	28%
<b>South Puget</b>	141,844	41	14	271	845	1,171	10%
<b>Columbia</b>	267,530	101	7	715	2,519	3,342	30%
<b>Straits</b>	110,222	21	17	210	383	631	6%
<b>South Coast</b>	232,931	78	25	711	2,102	2,916	26%
<b>Total</b>	1,134,043	395	115	3,051	7,593	11,154	100%
<b>Percent</b>		<b>4%</b>	<b>1%</b>	<b>27%</b>	<b>68%</b>	<b>100%</b>	
Estimated Acres of RMZ		13,885	3,688	97,325	158,912		

# Current DNR Riparian Forest Conditions

Stand Development Stages (Carey and Curtis 1996)

Percent of Riparian Land Class in WWA





**Currently, About 55 percent of DNR riparian areas are within the “*Stem Exclusion*” development stages.**

# Implementation of the Riparian Conservation Strategy:

Forest management activities that maintain or restore quality salmonid habitat is allowed within the riparian management zone.



**Methods for making site-specific forest management decisions in the riparian management zone are described in DNR's Riparian Forest Restoration Strategy.**





**The three characteristics of riparian forests most needed to support riparian function are:**  
***Large Conifer Trees,***  
***Complex Stand Structure,***  
***Diverse Species Composition.***

**What types of silvicultural prescriptions are most effective for restoring riparian forests?**





# Silvicultural Treatments in the Riparian Management Area

Total of 5 scenarios:  
3 Coniferous scenarios  
2 Hardwood scenarios

# Type II (Young Stand) RMZ Thinning in Conjunction with Upland Thinning



**Highest Priority For Treatment**

# Type III (Older Stand) RMZ Thinning in Conjunction with Upland Thinning



**Second Highest Priority For Treatment**

# Type III (Older Stand) RMZ Thinning in Conjunction with Upland Regeneration Harvest



**Third Highest Priority For Treatment**

# Individual Conifer Release



# Hardwood Conversion



# Protection of Stand Structure



# Restoration Priorities



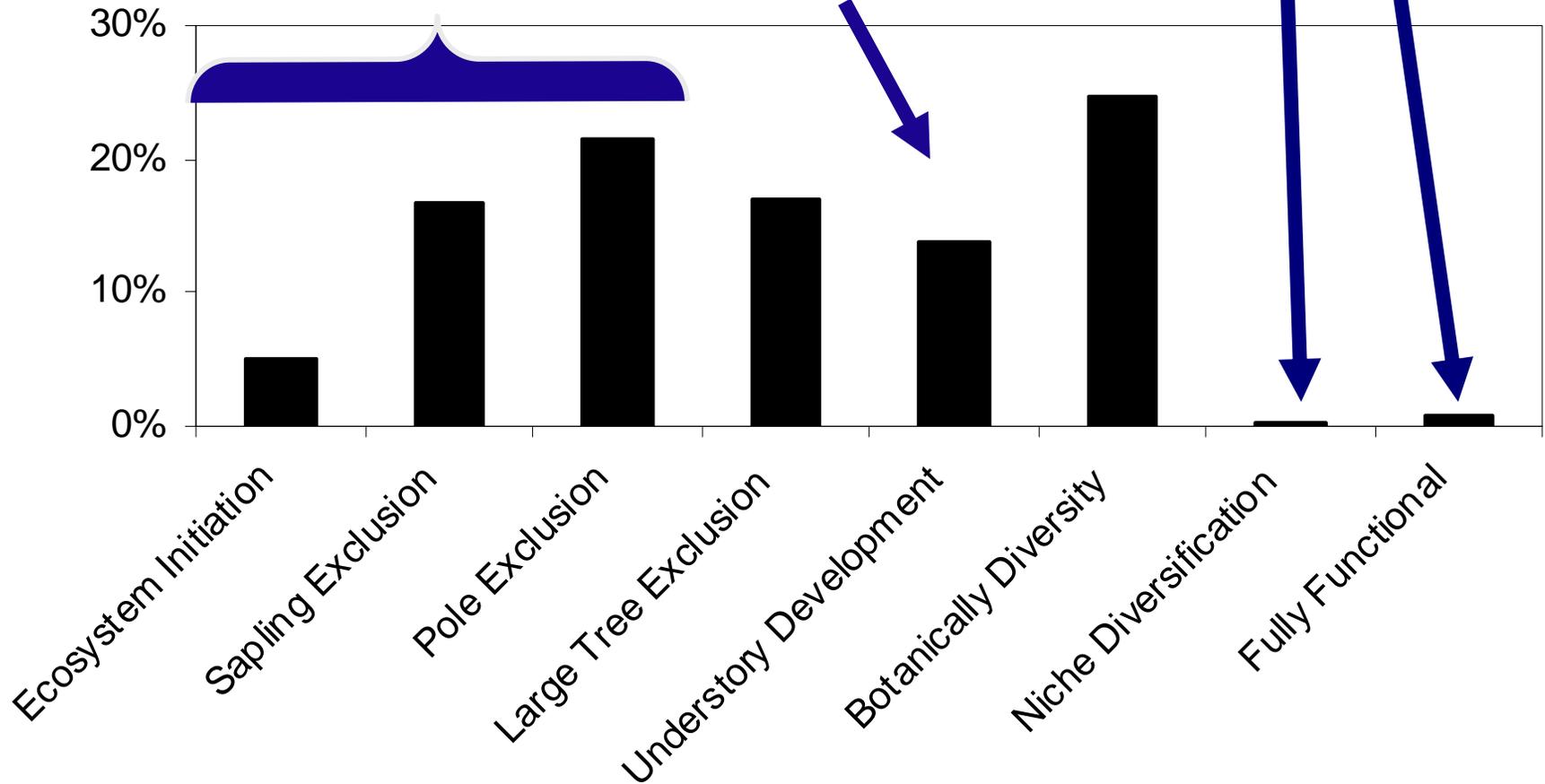
**Initial  
conditions**



**Riparian DFC**

**Restoration Goal:  
*Fully Functional  
Forests***

**Percent of Riparian Land Class in WWA**



# The management goals of the “Middle Zone” are applied throughout the managed portions of the RMZ

Buffer Area	Conifer Dominated	Hardwood Dominated
<b>Inner Zone</b>	<b>25 ft. from 100-year floodplain. No timber removal. Restoration limited to downwood placement</b>	
<b>Middle Zone</b>	<p>Typically thin to RD 35-50, (no lower than RD 30) min. tree count</p> <p>d/D – ratio &lt; or =1.0</p> <p>Maintenance of species diversity</p> <p>Create down woody debris</p>	<p>25+ conifer tpa: Conifer Release</p> <p>&lt;25 conifer tpa: Conversion</p>
<b>Outer Zone</b>	<b>Same as Middle Zone</b>	<b>Same as Middle Zone</b>
<b>Wind Buffer</b>	<b>Same as Middle Zone</b>	<b>Same as Middle Zone</b>

# Riparian Forest Restoration Strategy Training

- Riparian Ecology
- Channel Morphology
- Riparian Erosion Processes
- Wetland Ecology
- Stream Typing
- Riparian Stand Assessment Techniques
- Aquatic Measurement Techniques
- Class Project



# Riparian Forest Restoration Strategy

Questions?