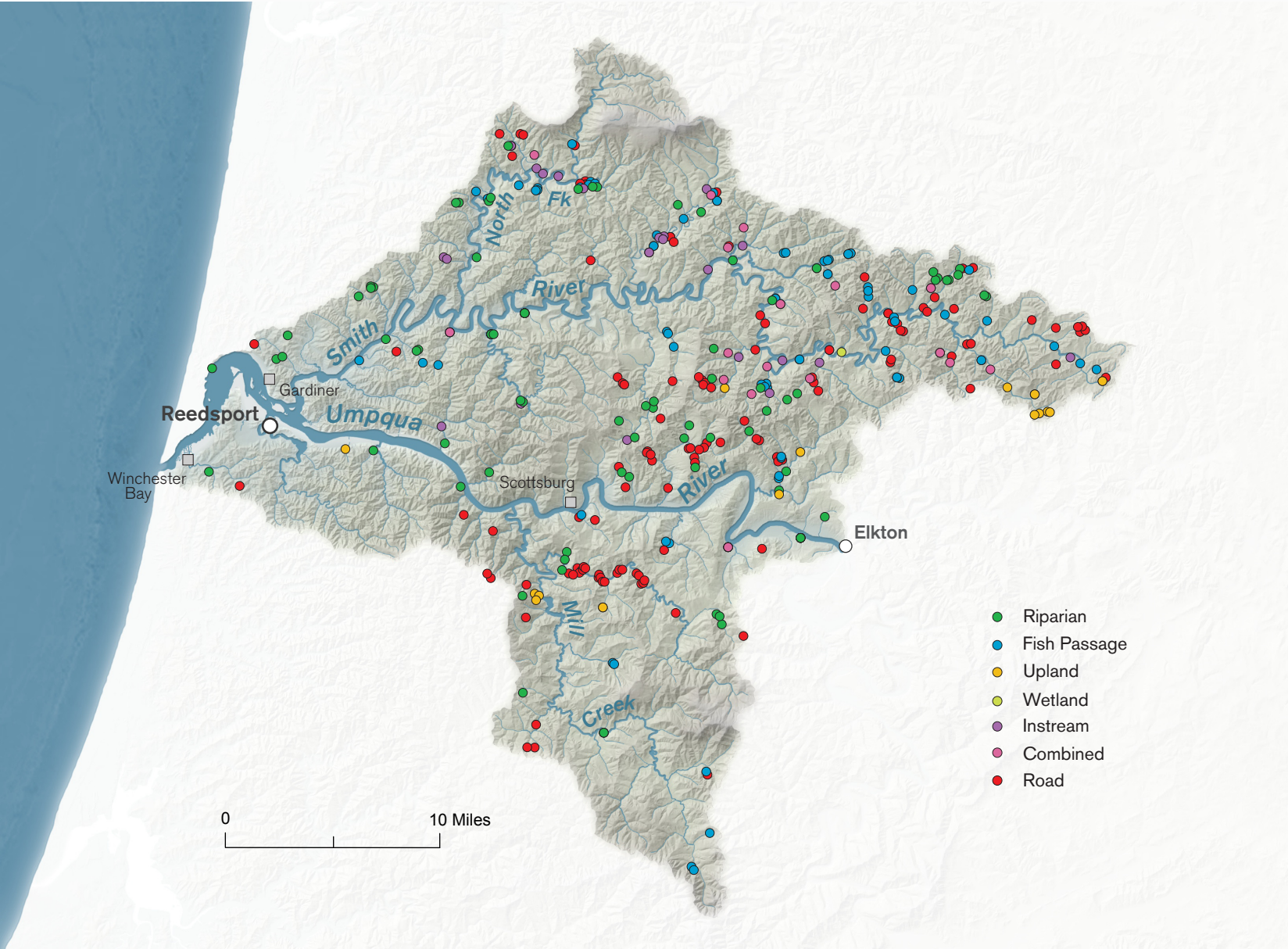


Lower Umpqua Population Unit

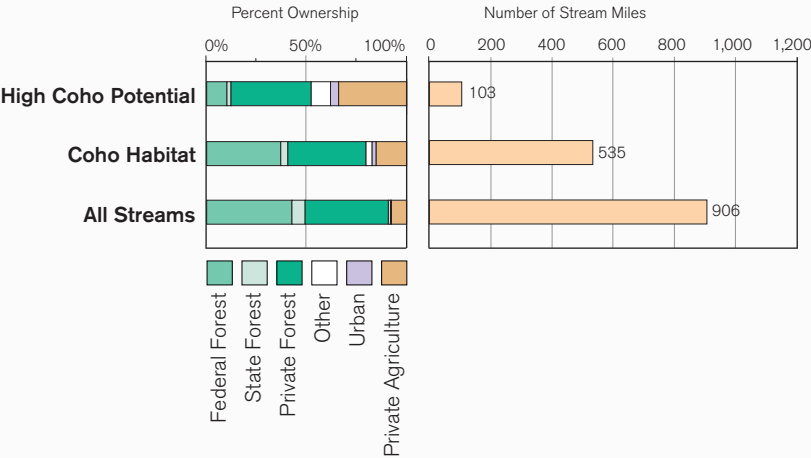
Watershed Assessments
Percent of Population Unit Completed
1997: 64.6%
2004: 97.2%



Restoration Completed and Reported 1997 - 2003



Characteristics of Coho Habitat



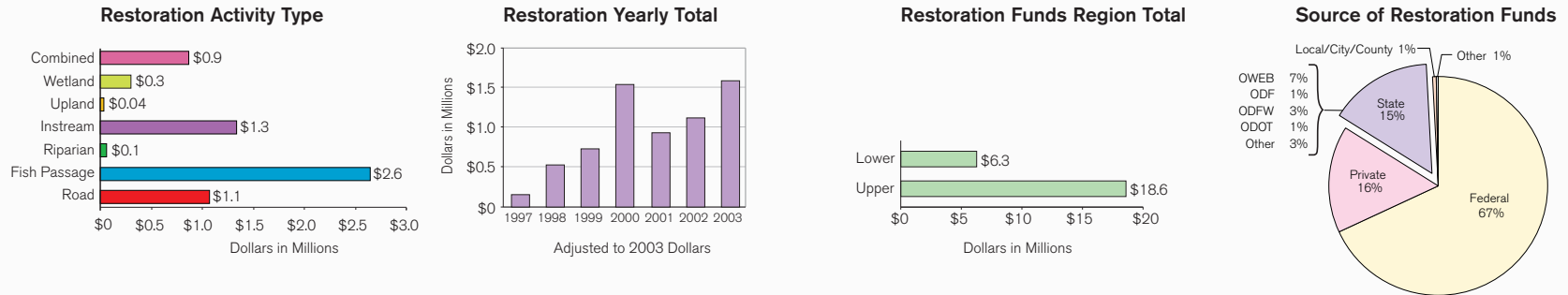
State/County Culverts with High Priority for Improvement



Historic Splash Dam Sites



Restoration Funding 1997 - 2003: \$6.3 Million



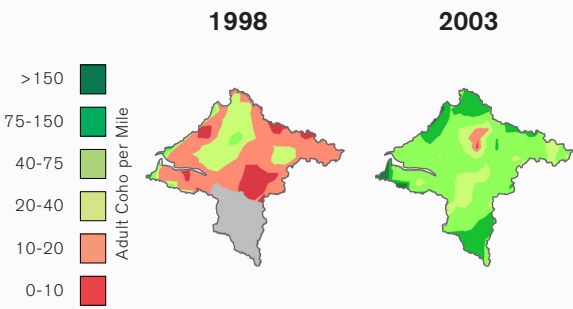
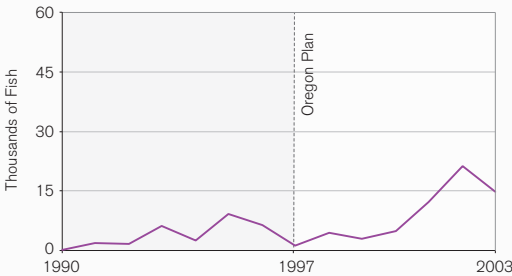
Biological Viability Status

PASS+

PASS

FAIL

Number of Wild Adult Spawners



Analysis of Potential Limiting Factors

FACTOR	OREGON PLAN ACTION	OBSERVATIONS	INTERPRETATION	PRIMARY LIMITING FACTOR*	NEED
MARINE HABITAT Data scale: ESU MA POP <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Hatchery Coho survival monitored at all hatcheries. Wild coho survival monitored at five lifecycle monitoring sites.	<div>HATCHERY </div> <div>WILD </div>	Marine survival rate of both hatchery and wild coho increased coincident with Oregon Plan implementation.	N/A	Adjust harvest levels consistent with marine survival, adult escapement and population needs.
FISHERY HARVEST Data scale: ESU MA POP <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Harvest rates dictated by PFMC Amendment 13 will constrain harvest of wild coho consistent with recovery needs.	<div>OCEAN </div> <div>RIVER </div>	High harvest rates on coho prior to Oregon Plan have been reduced by management action. Harvest rates are no longer limiting recovery.		Maintain PFMC Amendment 13 to restrain harvest consistent with population productivity.
HATCHERY IMPACTS Data scale: ESU MA POP <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Genetic Management Plans have been drafted for all hatcheries - awaiting approval by NOAA. Hatchery practices are managed consistent with local population status and recovery needs.	<div>RELEASES </div> <div>STRAYS </div>	Hatchery programs are not constraining coho recovery. The percent of hatchery coho in natural spawning areas has declined because of management action and is now within policy guidelines.		Continue implementing Native Fish Conservation Policy and Hatchery Genetic Management Plans.
STREAM COMPLEXITY Data scale: ESU MA POP <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<div>Regulatory programs: OR For. Practices, Fill and Removal, Federal For. Plan, Goal 5.</div> <div>Conduct restoration to recruit wood and increase complexity. Instream miles treated.....142 Riparian miles planted.....21 Riparian miles fenced.....49</div>	<div>Coho streams have less large wood, less gravel in riffles, and fewer streamside conifers than reference streams.</div> <div>No significant trend was detected in most habitat parameters over the last decade.</div> <div>Umpqua habitat conditions were generally ranked lower than in other areas of the ESU.</div>	Availability of complex stream habitat probably limits coho production.		Focus habitat restoration investments in areas of high intrinsic coho potential.
FISH PASSAGE Data scale: ESU MA POP <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<div>Fish Passage Law</div> <div>Improve fish passage at stream crossings. Counted.....4,413 Improved.....1,140 Mapped.....3,392 Assessed.....2,145 Unknown.....1,247</div>	<div>Improved access - result to date Non Coho Distribution.....+16% Non HIP Coho Distribution.....+10% HIP Coho Distribution.....+6%</div> <div>Improved Access - remaining opportunity Non Coho.....16% impaired - 40% unknown Non HIP Coho.....11% impaired - 32% unknown HIP.....10% impaired - 28% unknown</div>	It is unknown if coho have access to roughly one third of their potential habitat. Access can be improved 10% by correcting documented problems. Impact of tide gates has not been determined.		Opportunity to increase access to high quality habitat may exist in local areas. Focus passage inventory and restoration in these areas.
WATER QUALITY Data scale: ESU MA POP <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<div>Federal Clean Water Act</div> <div>Conduct restoration to reduce sediment, moderate temp.</div> <div>SB-1010 Plans have been completed</div> <div>TMDLs are being developed</div> <div>Road miles upgraded334 Road miles retired203</div>	<div>The Umpqua MA had the poorest overall water quality.</div> <div>This MA had the highest percentage of coho stream miles exceeding criteria for temperature, dissolved oxygen concentration, fine sediment, total solids, phosphorus, and vertebrate assemblage.</div> <div>1 of 9 larger river ambient sites had an improving trend; 56% fair, 22% good to excellent, and 22% poor water quality.</div>	Although not currently a significant constraint on coho recovery, water quality has the potential of limiting coho production at local spatial scales.		Take restoration action at local spatial scales as appropriate to maintain or improve rearing capacity.
WATER QUANTITY Data scale: ESU MA POP <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<div>Oregon Water Law</div> <div>800 miles of stream are protected (instream right).</div> <div>At an 80% exceedance flow, water is not available for new appropriations in August in 98% of the Umpqua MA.</div> <div>16 cfs of water has been restored in the Umpqua MA.</div>	<div>August consumptive use was highest in the MidSouth Coast and Umpqua MAs.</div> <div>Over 60% of the Umpqua MA had an August consumptive use less than 10% of the 80% natural exceedance flow.</div> <div>The Umpqua MA had up to 10% of watershed area with August consumptive use more than 100% of the 80% exceedance natural flow.</div> <div>90% of the Umpqua area had no change in August consumptive use between 1997 and 2004.</div>	Although not currently a significant constraint on coho recovery, water quantity has the potential of limiting coho production at local spatial scales.		Focus habitat restoration investments in areas of high intrinsic coho potential.
OTHER FACTORS Toxics, DO, pH, Stream fertility and shade, Spawning gravel, Hydro power, Illegal harvest, Disease, Estuaries, Wetlands, Exotic fish interactions, Predation by birds & pinnipeds	Assessed data, literature, and local observations.	Data, analyses, and interpretation of these limiting factors are available at www.oregon-plan.org .	Although not currently a significant constraint on coho recovery, each factor has the potential of limiting coho at local spatial scales.		Remain alert to detect future change in importance of these factors.

* Primary and secondary risk factor(s) that most limit the population. Supporting information can be viewed at www.oregon-plan.org/OPSW/cohoproject/coho_proj.shtml.