

Oregon Plan Coastal Coho Assessment: Integration of Biological Status with Factors for Decline

Factors for Decline

Describe the current status of the FFD relative to (as appropriate):

- Established standards
- Reference condition
- Biological needs of coho

Describe the programs that are in place to manage the FFD

Evaluate the effectiveness of management programs implemented to manage FFD

Outcome

Biological Criteria

Develop biological performance criteria for productivity, abundance, and distribution

Describe the current status of coho populations relative to the biological criteria

Outcome

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Oregon Plan Coastal Coho Assessment: Integration of Biological Status with Factors for Decline

Factors for Decline

Biological Criteria

Outcome

Outcome

FFD that limit
sustainability

FFD that do not
limit the
sustainability of
coho

Populations at risk

Secure Populations

Rank FFD scaled
to populations
(as feasible)

Describe the primary limiting
factors that cause the gap
between current and desired
status (as feasible)

Evaluate the implementation and
effectiveness of Oregon Plan
measures that have been
implemented to address the
primary limiting factors

Describe any additional short- and long-term
management strategies that are needed to
address the primary limiting factors

Coastal Coho Assessment

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Addressing the PECE Policy

1. The certainty of that the conservation effort will be implemented:

- Infrastructure
- Funding
- Legal framework

2. The certainty that the conservation effort will be effective:

- Addressing limiting factors
- Performance measures
- Monitoring and reporting

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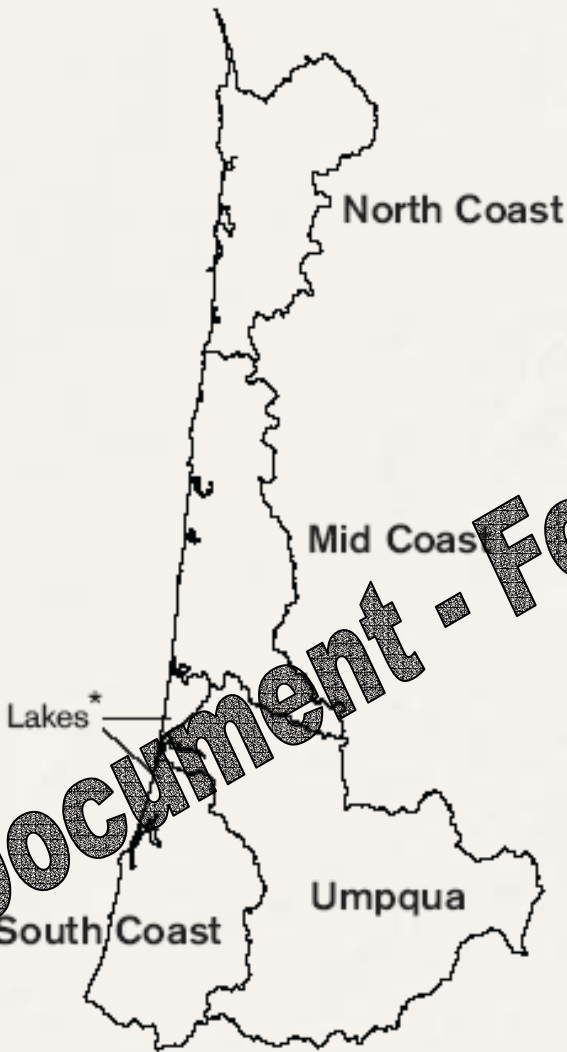
The certainty that the conservation effort will be effective.

- 1. The nature and extent of threats being addressed by the conservation effort are described, and how the conservation effort reduces the threats is described.**
- 2. Explicit incremental objectives for the conservation effort and dates for achieving them.**
- 3. The steps necessary to implement the conservation effort are identified in detail.**
- 4. Quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, standards for these parameters by which progress will be measured, are identified.**
- 5. Provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort provided.**
- 6. Principles of adaptive management are incorporated.**

Oregon Plan Coastal Coho Project: Assessing Factors for Decline and Oregon's Conservation Effort



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Biological Criteria Status

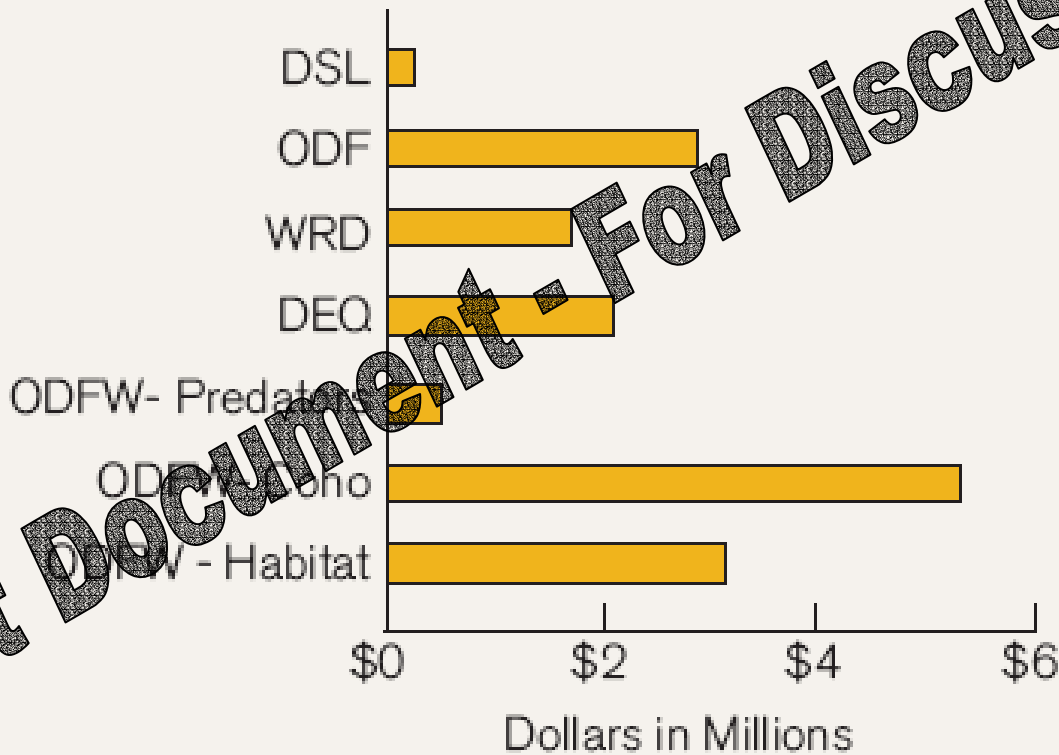
North Coast	
Mid Coast	
Umpqua	
Lakes*	
Mid-South Coast	

FAIL	PASS	PASS+
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* Lakes strata is part of the Mid-South Coast Monitoring Unit

Monitoring

Expenditures Related to Coho
1997 - 2003

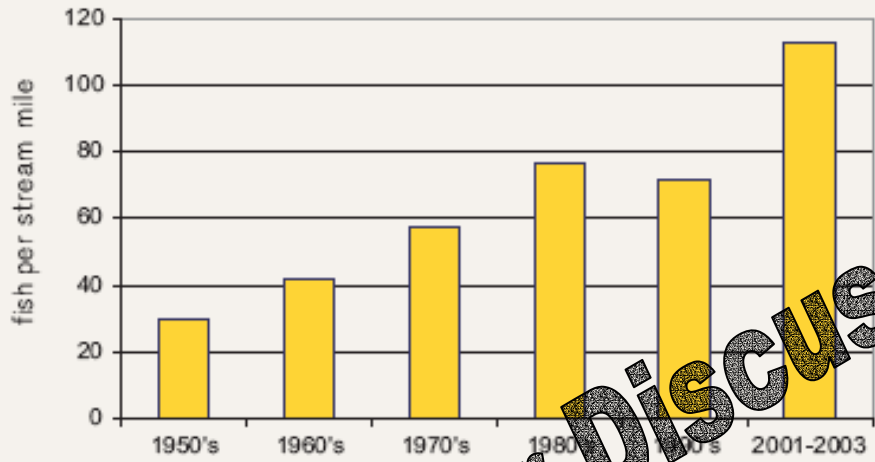


Total \$15,162,900

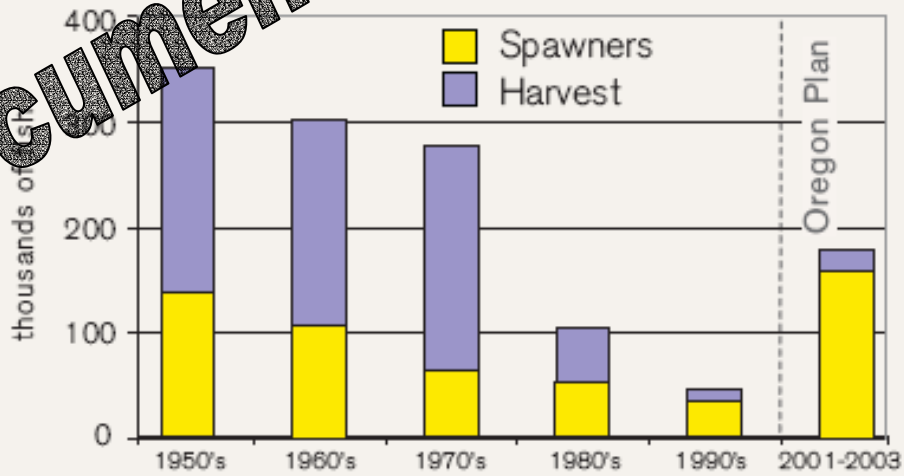
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Chinook Abundance

Spawners



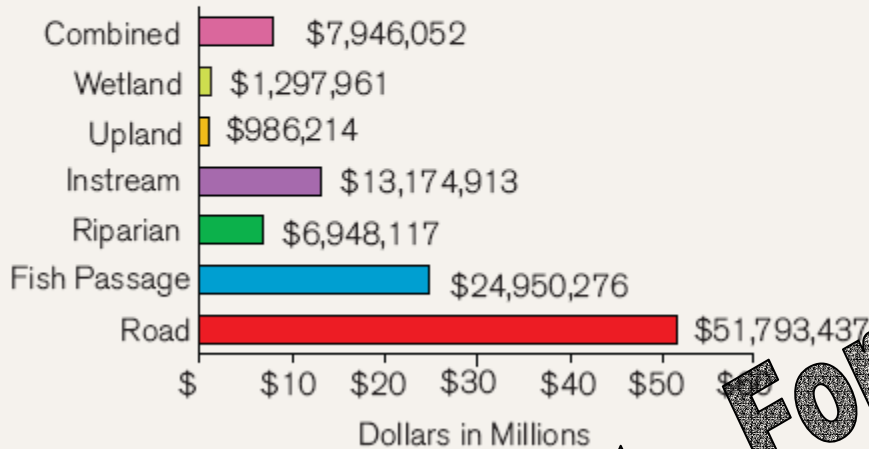
Chinook Abundance



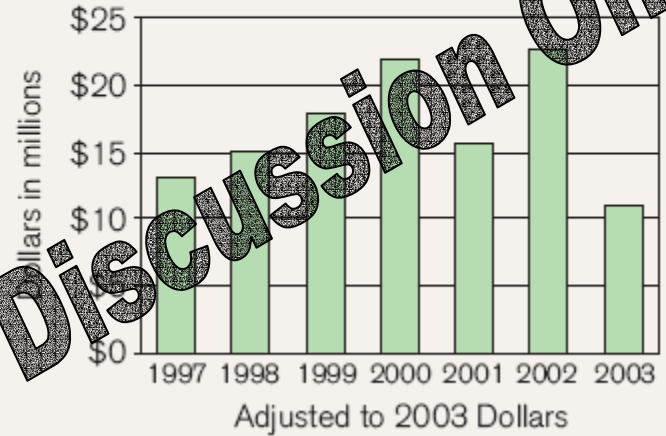
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Restoration Funding 1997-2003 - \$107 Million

Restoration Activity Type



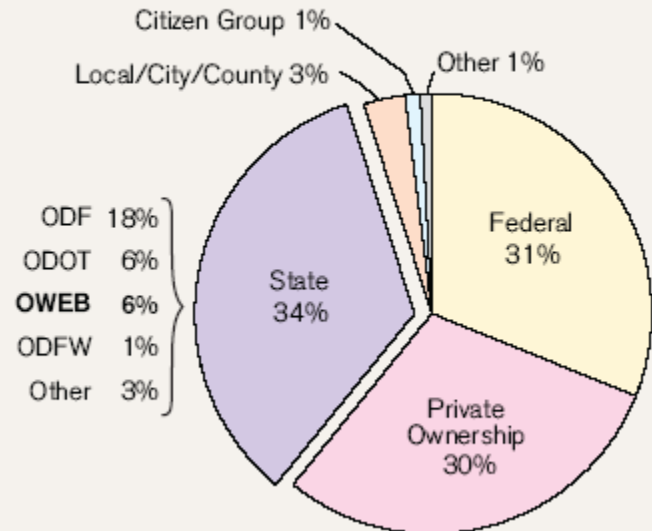
Restoration Yearly Total



Restoration Funds Region Total



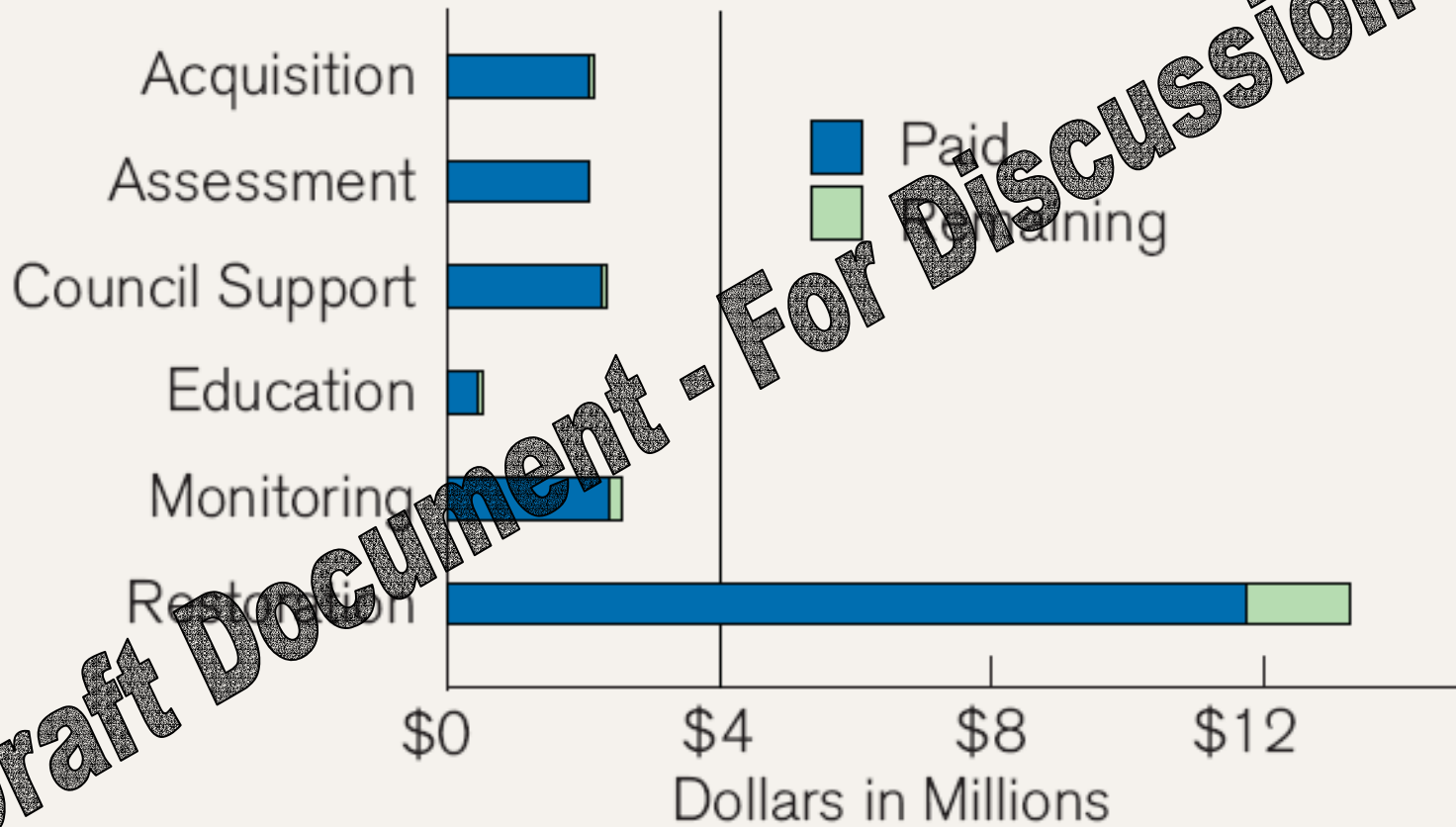
Source of Restoration Funds



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OWEB Grants

1997 - 2003



Total \$22,817,000

Watershed Assessments

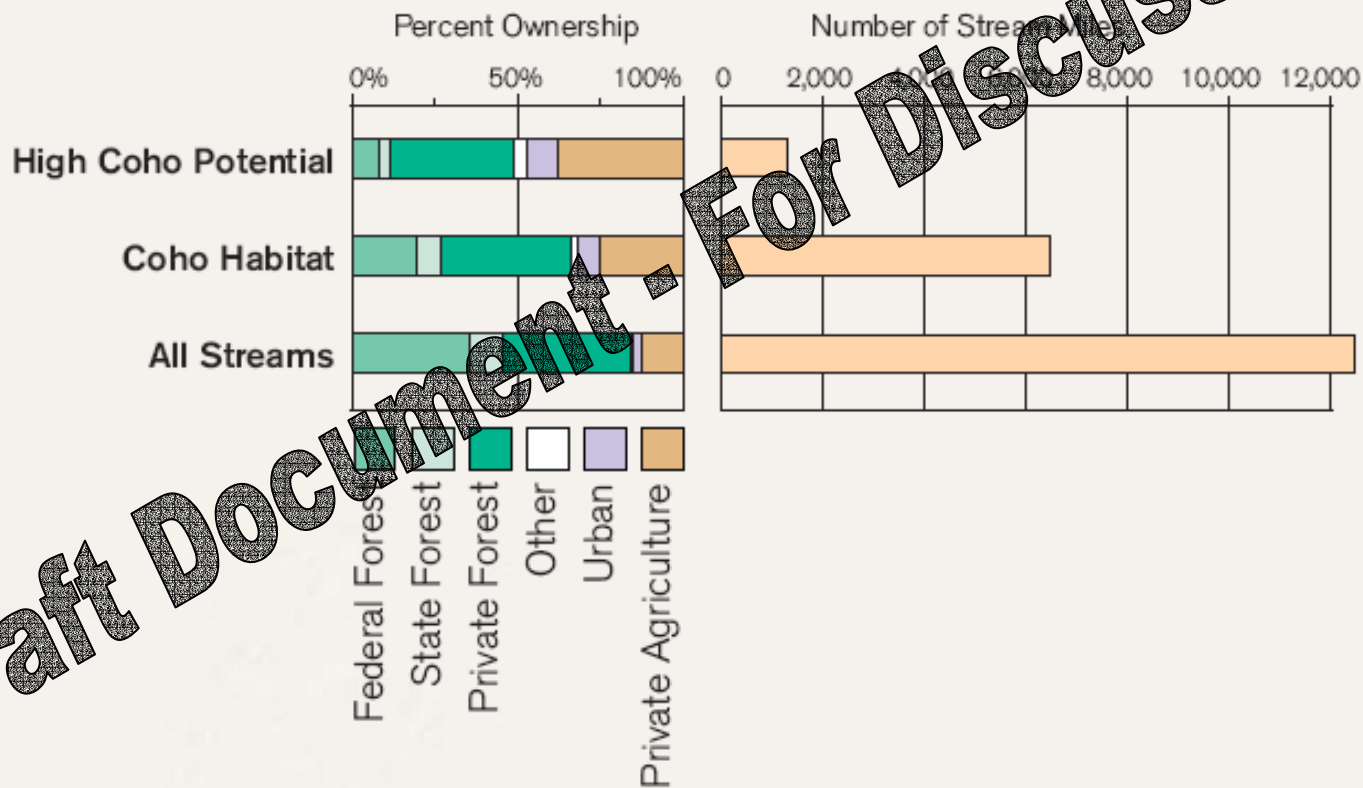
Percent of ESU

Pre - Oregon Plan: 29.5%

After Oregon Plan: 96.6%

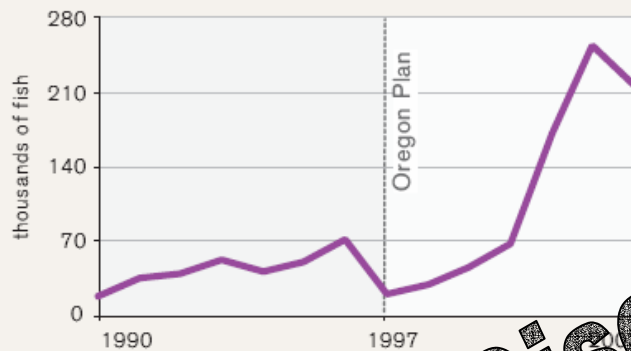


Characteristics of Coho Habitat



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Number of Wild Coho Spawners



1998

2002

Wild Adult Coho Spawners



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FACTOR

OREGON PLAN ACTION

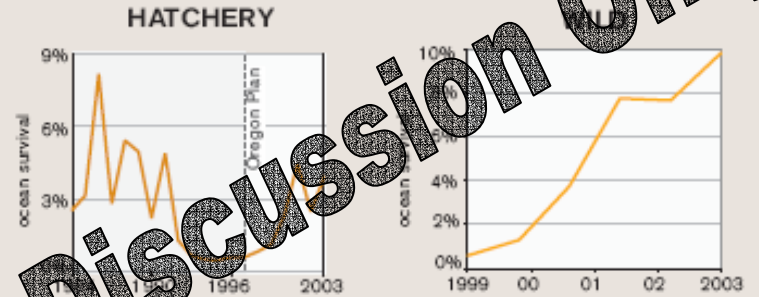
OBSERVATIONS

MARINE HABITAT

1997 Priority



Hatchery Coho survival monitored at all hatcheries.
Wild Coho survival monitored at five lifecycle monitoring sites.



INTERPRETATION **RELATIVE RESTORATION OPPORTUNITY** **NEED**

Marines... rate of both hatchery and wild Coho... Oregon Plan implementation.

N/A

Adjust harvest levels consistent with marine survivals, adult escapement and population needs.

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FACTOR

OREGON PLAN ACTION

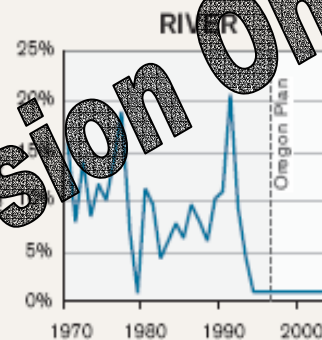
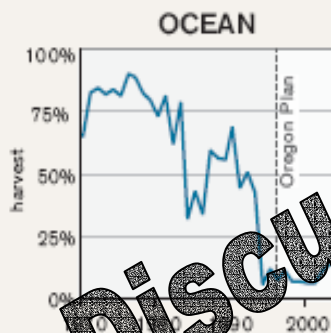
OBSERVATIONS

FISHERY HARVEST

1997 Priority



Harvest rates dictated by PFMC Amendment 13 will constrain harvest of wild coho consistent with recovery needs.



INTERPRETATION

RELATIVE RESTORATION OPPORTUNITY NEED

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.

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FACTOR

OREGON PLAN ACTION

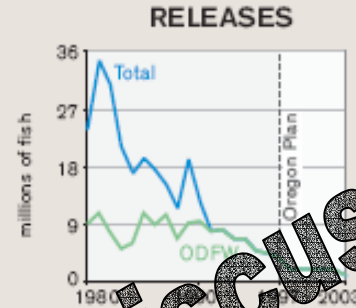
OBSERVATIONS

HATCHERY IMPACTS

1997 Priority



Genetic Management Programs have been drafted for all hatcheries - awaiting approval by NOAA. Hatchery practices are managed consistent with local population status and recovery needs.



INTERPRETATION


RELATIVE RESTORATION OPPORTUNITY NEED

Hatchery programs are not contributing to coho recovery. The percent of hatchery coho in natural spawning areas has declined and is now within policy guidelines because of ODFW management action and several private hatcheries ceasing operation.



Continue implementing Native Fish Conservation Policy and Hatchery Genetic Management Plans.

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FACTOR	OREGON PLAN ACTION	OBSERVATIONS
STREAM COMPLEXITY	Conduct restoration to reduce sediment, recruit wood, and increase complexity.	Coho streams have less large wood, more fine sediment, and fewer streamside conifers than reference streams.
1997 Priority	Instream miles treated.....524 Riparian miles planted.....380 Riparian miles fenced.....231	No significant trend detected in most habitat parameters over recent decades.
		The North Coast and South Coast areas tend to have better habitat conditions, the Umpqua tends to have worse conditions for coho.

INTERPRETATION	RELATIVE RESTORATION OPPORTUNITY	NEED
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Availability of complex stream habitat probably limits coho production.



Focus habitat restoration investments in areas of high intrinsic coho potential.

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FACTOR	OREGON PLAN ACTION	OBSERVATIONS
FISH PASSAGE	Improve fish passage at stream crossings.	Improved Access - result to date Non Coho Distribution..... 10% Non HIP Coho Distribution..... +10% HIP Coho Distrubution..... +6% Improved Access - remaining opportunity Non Coho..... 6% impaired - 40% unknown Non HIP Coho..... 11% impaired - 32% unknown HIP Coho..... 10% impaired - 28% unknown
1997 Priority	Crossings Counted.....4,413 Improved.....1,140 Mapped.....3,392 Assessed.....2,145 Unknown.....1,247	



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INTERPRETATION	RELATIVE RESTORATION OPPORTUNITY	NEED
It is unknown if coho have access to only one third of their potential habitat. Access can be improved 10% by correcting documented problems.		Opportunity to increase access to high quality habitat may exist in local areas. Focus passage inventory and restoration in areas of current high quality or of high potential.

FACTOR	OREGON PLAN ACTION	OBSERVATIONS
WATER QUALITY	<ul style="list-style-type: none"> -Conduct restoration to reduce sediment, moderate temperature -SB-1010 Plans completed -TMDL's are being developed 	<p>The North Coast Monitoring Area had the best water quality; the Umpqua Monitoring Area had the lowest.</p> <p>Most water quality parameters show no significant difference from reference streams in the ESU.</p> <p>No large river monitoring showed a declining trend in water quality during 1995-2002 (39% improving; 61% no trend).</p> <p>For large river monitoring sites, 42% had excellent to good, 39% fair, and 19% poor water quality.</p>
1997 Priority	<ul style="list-style-type: none"> Road miles upgraded1,557 Road miles retired521 Riparian miles planted.....380 Riparian miles fenced.....231 	




INTERPRETATION RELATIVE RESTORATION OPPORTUNITY NEED

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.


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FACTOR	OREGON PLAN ACTION	OBSERVATIONS
<p>WATER QUANTITY</p> <p>1997 Priority</p> 	<ul style="list-style-type: none"> · Over 3,700 miles of stream protected by instream water right · Voluntary streamflow restoration focused on Mid-South Coast and Umpqua. · At an 80% exceedance flow, water is not available for new water appropriations in August in 94% of the total ESU area. 	<ul style="list-style-type: none"> · Approximately 800 instream water rights currently exist. · August consumptive use was highest in the Mid-South Coast and Umpqua Monitoring Areas. · 70% of the ESU had an August consumptive use of water less than 10% of the 100% annual exceedance flow. · Over 90% of the ESU had no change in August consumptive use between 1997 and 2004.

INTERPRETATION RELATIVE RESTORATION OPPORTUNITY NEED

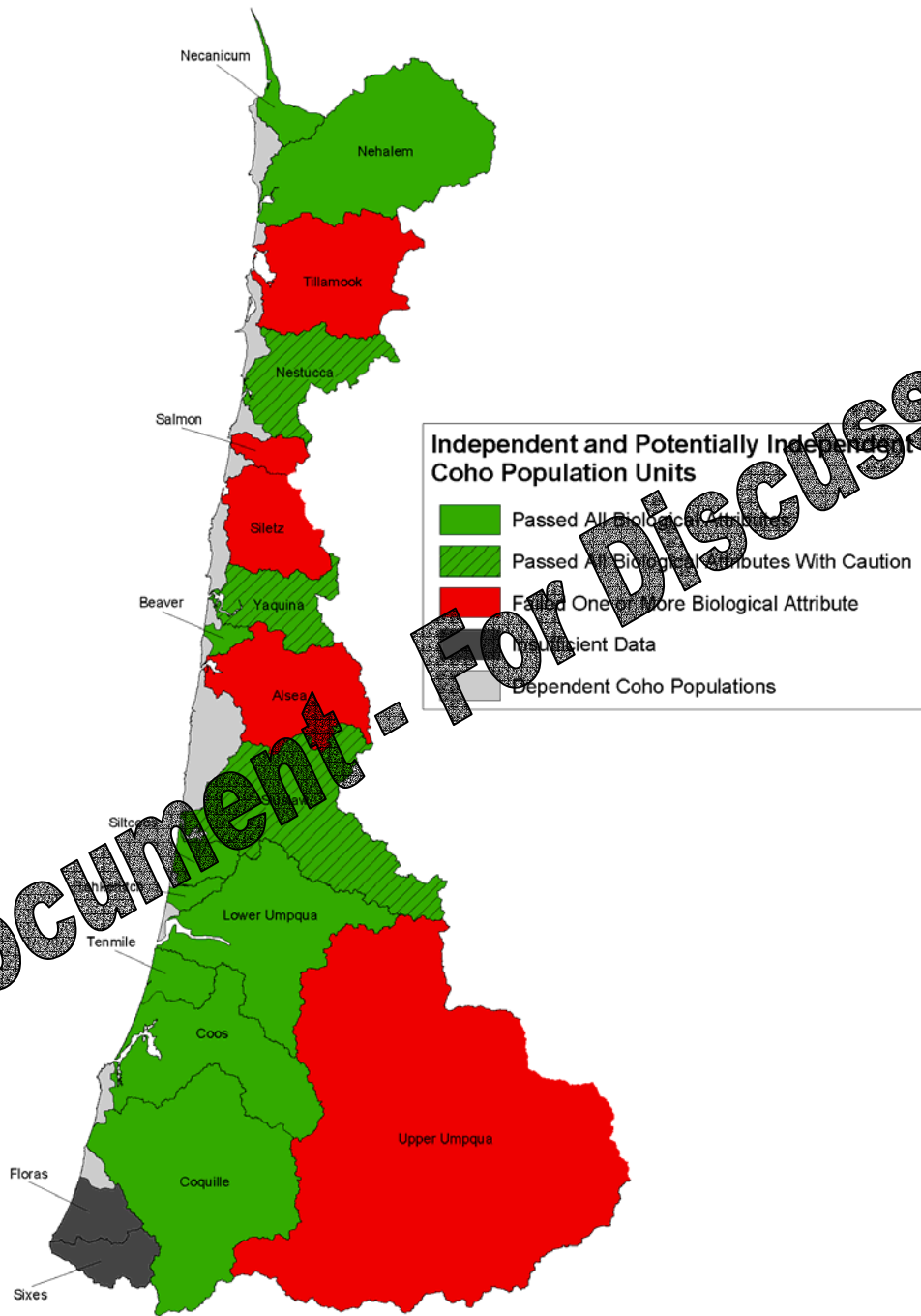
<p>Although currently a significant constraint on coho recovery, water quantity has the potential of limiting coho production at local spatial scales.</p>		<p>Take restoration action at local spatial scales as appropriate to maintain or improve rearing capacity.</p>
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FACTOR	OREGON PLAN ACTION	OBSERVATIONS
<p>OTHER FACTORS</p> <p>Toxics, DO, pH, Stream fertility and shade, Spawning gravel, Hydro power, Illegal harvest, Disease, Predation by birds, fish & pinnipeds</p>	<p>Assessed data, literature, and local observations.</p>	<p>Data, analyses, and interpretation of these limiting factors are available at www.dnr.com</p>
<p>INTERPRETATION</p>	<p>RELATIVE RESTORATION OPPORTUNITY</p>	<p>NEED</p>
<p>Although there is currently a significant constraint on coho recovery each year, this factor has the potential of limiting coho at local spatial scales.</p>		<p>Remain alert to detect future change in importance of these factors</p>

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POPULATIONS THAT FAIL - NEEDS



Tillamook Nestucca Salmon Siletz Alsea Upper-Umpqua

	Tillamook	Nestucca	Salmon	Siletz	Alsea	Upper-Umpqua
MARINE HABITAT	N/A	N/A	N/A	N/A	N/A	N/A
FISHERY HARVEST	●	●	●	●	●	●
HATCHERY IMPACTS	●	●	●	●	●	●
STREAM COMPLEXITY	●	●	●	●	●	●
FISH PASSAGE	●	●	●	●	●	●
WATER QUALITY	●	●	●	●	●	●
WATER QUANTITY	●	●	●	●	●	●
OTHER FACTORS/ SPAWNING GRAVEL	●	●	●	●	●	●

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POPULATIONS THAT PASS - OPPORTUNITIES



	Necanicum	Nehalem	Yaquina	Beaver	Siuslaw	Lower Um...
MARINE HABITAT	N/A	N/A	N/A	N/A	N/A	N/A
FISHERY HARVEST						
HATCHERY IMPACTS						
STREAM COMPLEXITY						
FISH PASSAGE						
WATER QUALITY						
WATER QUANTITY						
OTHER FACTORS/ SPAWNING GRAVEL						

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POPULATIONS THAT PASS - OPPORTUNITIES

	Siltcoos	Tahkenitch	Tenmile	Coos	Coquille	Floras	St...
MARINE HABITAT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FISHERY HARVEST							
HATCHERY IMPACTS							
STREAM COMPLEXITY							
FISH PASSAGE							
WATER QUALITY							
WATER VOLUME							
OTHER FACTORS/ SPAWNING GRAVEL	/	/	/				

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MONITORING UNITS

ESU

North Coast Mid Coast Umpqua Mid-south Coast

	North Coast	Mid Coast	Umpqua	Mid-south Coast	ESU
MARINE HABITAT	N/A	N/A	N/A	N/A	N/A
FISHERY HARVEST					
HATCHERY IMPACTS					
STREAM COMPLEXITY					
FISH PASSAGE					
WATER QUALITY					
WATER QUANTITY					
OTHER FACTORS/ SPAWNING GRAVEL					

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Analysis of ESU

Biological Criteria Status

PASS+

PASS

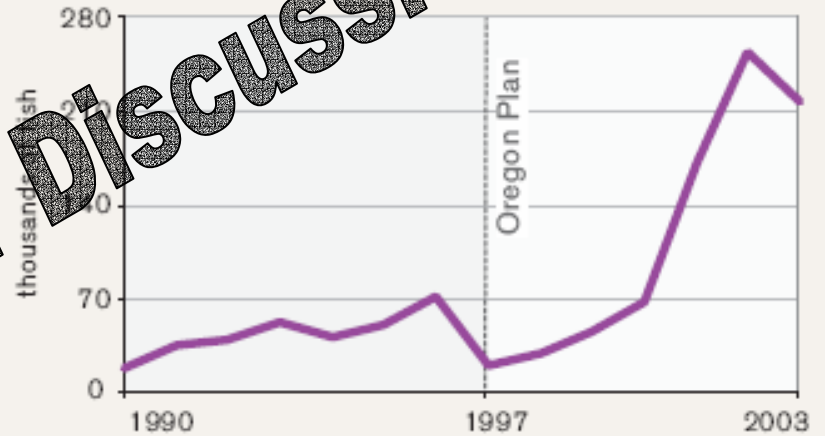
FAIL

ESA Listing Recommendation

DO NOT LIST

LIST

Number of Willamette Spawners



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