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**West Coast
Regional
Office**

Review of Southern Oregon / Northern California Coast coho status and recovery

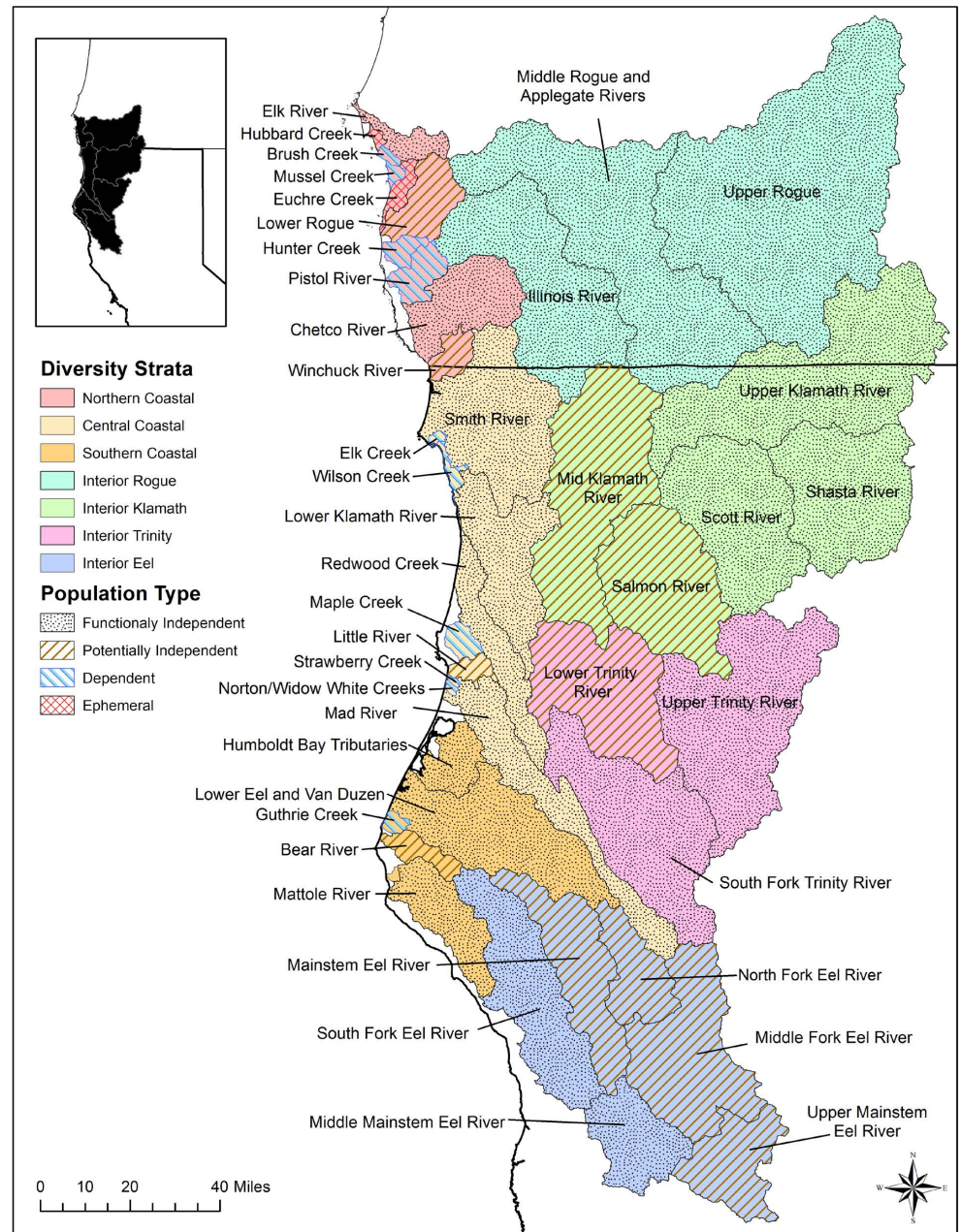
SONCC coho Workgroup

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Populations and Strata Diversity of SONCC coho ESU

The ESU includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon and Punta Gorda, California, plus three artificial coho propagation programs: Cole Rivers Hatchery, Trinity River Hatchery, and Iron Gate Hatchery.



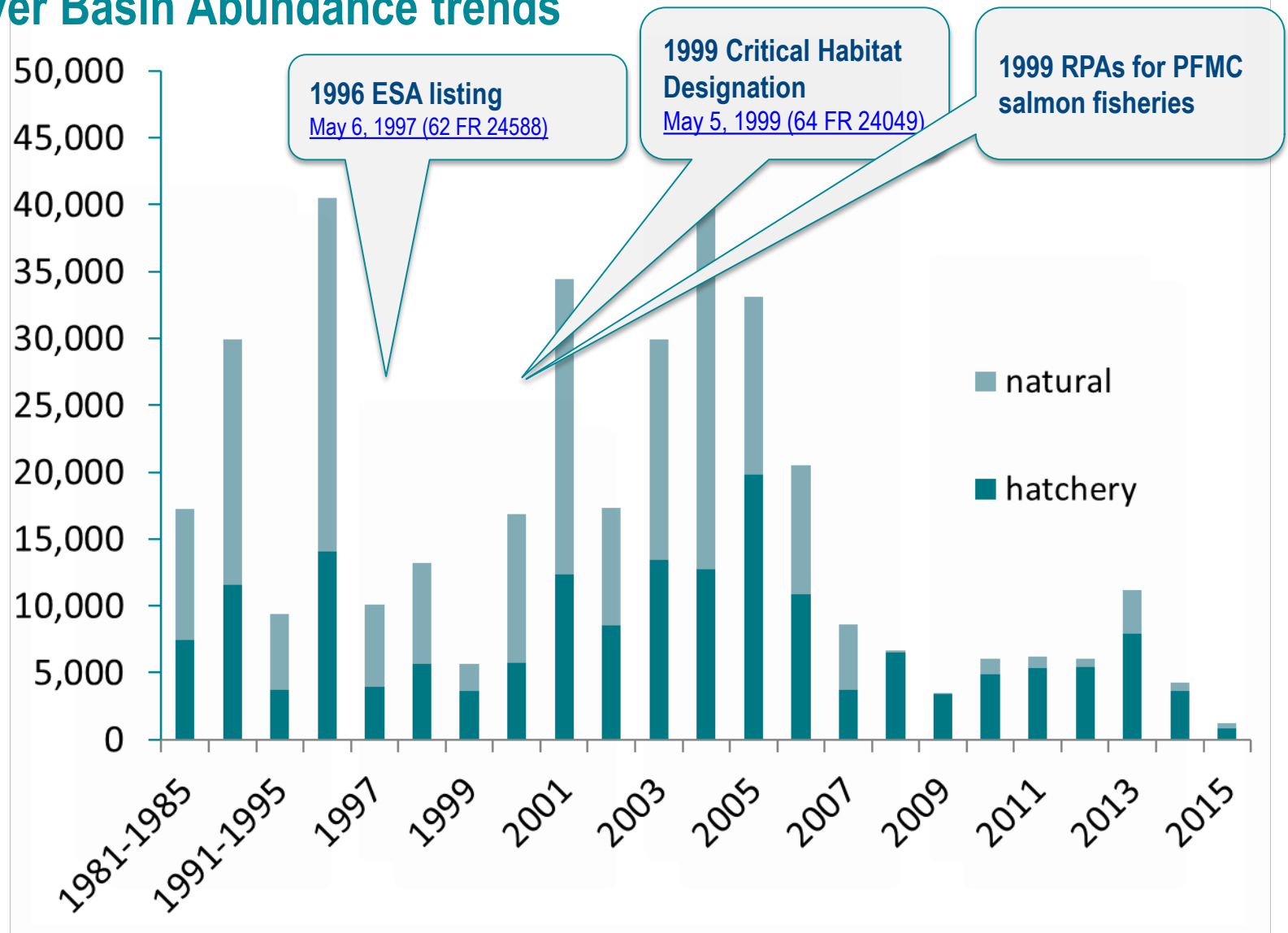
Strata diversity of SONCC coho ESU

- **7 Diversity stratum** across the forty populations
- Populations are classified into 3 categories:
 - 1. Functionally Independent Populations** are those with a high likelihood of persisting in isolation over a 100-year time scale and are not substantially altered by exchanges of individuals with other populations.
 - 2. Potentially Independent Populations** have a high likelihood of persisting in isolation over a 100-year time scale, but are too strongly influenced by immigration from other populations to exhibit independent dynamics.
 - 3. Dependent Populations** have a substantial likelihood of going extinct within a 100-year time period in isolation, yet receive sufficient immigration to alter their dynamics and extinction risk, and presumably increase persistence or occupancy.

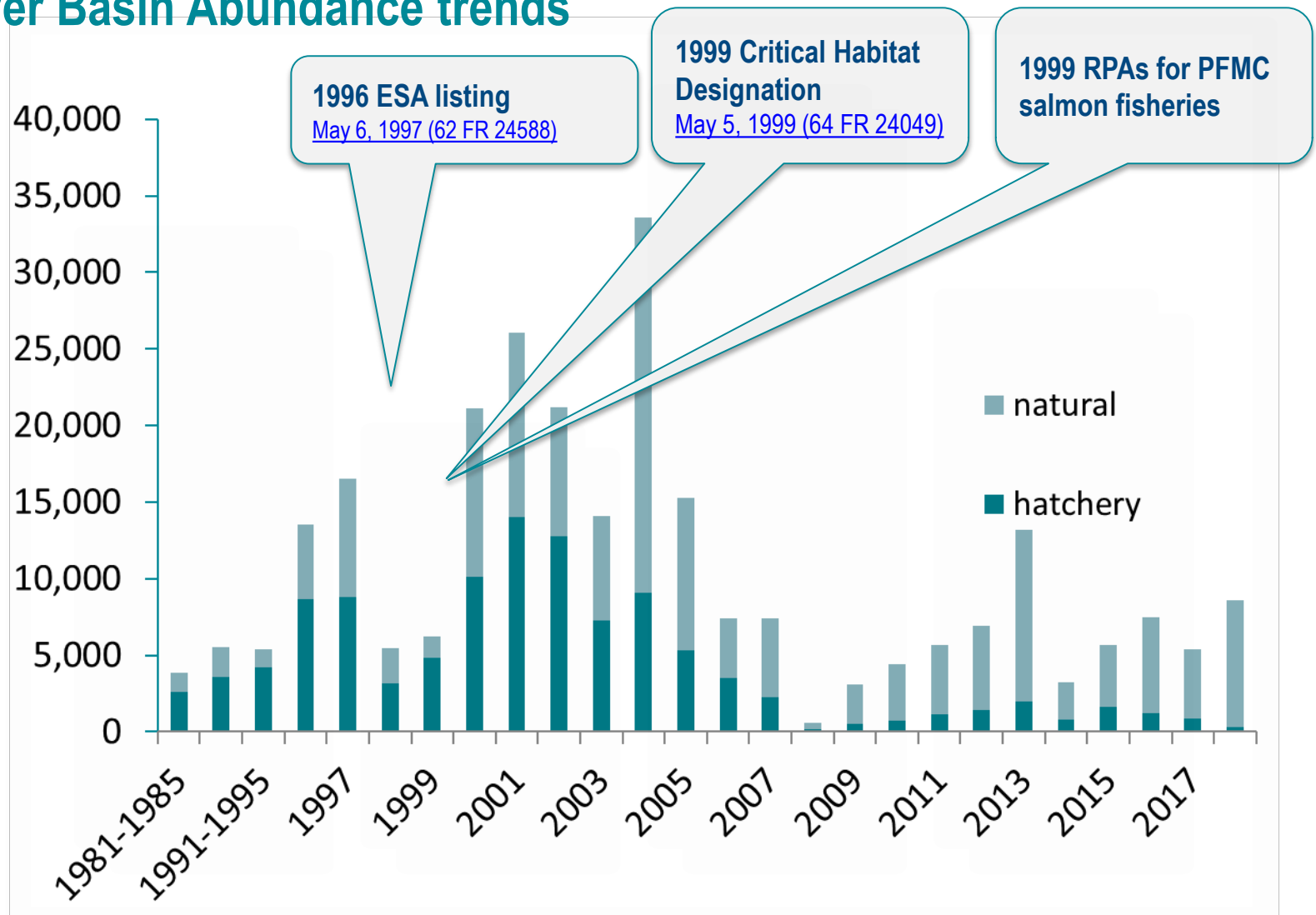
Diversity Stratum	Population Type	Population Unit
Northern Coastal Basins	F	Elk River
	P	Lower Rogue River
	F	Chetco River
	P	Winchuck River
	D	Brush Creek
	D	Mussel Creek
	D	Hunter Creek
Central Coast Basins	D	Pistol River
	F	Smith River
	F	Lower Klamath River
	F	Redwood Creek
	D	Maple Creek/Big Lagoon
	P	Little River
	F	Mad River
	D	Elk Creek
	D	Wilson Creek
Southern Coastal Basins	D	Strawberry Creek
	D	Norton/Widow White
	F	Humboldt Bay Tributaries
	F	Low. Eel/Van Duzen Rivers
	P	Bear River
Interior Rogue River	F	Mattole River
	D	Guthrie Creek
	F	Illinois River
Interior Klamath River	F	Mid. Rogue/Applegate Rivers
	F	Upper Rogue River
	P	Middle Klamath River
	F	Upper Klamath River
	P	Salmon River
Interior Trinity River	F	Scott River
	F	Shasta River
	F	South Fork Trinity River
Interior Eel River	P	Lower Trinity River
	F	Upper Trinity River
	F	South Fork Eel River
	P	Mainstem Eel River
	P	North Fork Eel River
	P	Mid. Fork Eel River
	F	Mid. Mainstem Eel River
	P	Upper Mainstem Eel River



Southern Oregon Northern California Coast (SONCC) coho Klamath River Basin Abundance trends



Southern Oregon Northern California Coast (SONCC) coho Rogue River Basin Abundance trends





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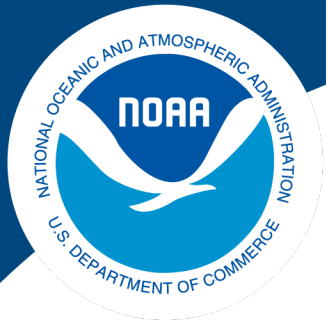
Harvest measures history related to recovery actions

1994 – California discontinued coho retention in marine commercial fisheries

1995 – California discontinued coho retention in marine recreational fisheries

Prior to ESA-listing all coho South of Cape Falcon, Oregon were part of the Oregon Production Index (OPI) and managed in marine areas according the the OPI framework matrix.

1996 – Post Listing: NMFS consults on implementation of the PFMC Salmon Fishery Management Plan



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Consultation History of the Salmon FMP

1997 – One year consultation and conference report dated April 30, 1997, considered the effects from the 1997 PFMC fisheries on newly listed SONCC coho.

1998 – Another one year supplemental biological opinion dated April 29, 1998, was issued for multiple new ESA listed salmonids, but included effects from the 1998 PFMC fisheries on SONCC coho.

1999 – A new opinion, per the newly ESA-listed Oregon Coast coho ESU was issued on April 28, 1999 evaluating Amendment 13 to the FMP.



1999 Biological Opinion



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NMFS found that the FMP and Amendment 13 did not provide protections that were specific to the California portion of the SONCC ESU.

As a result, despite appropriate and conservative actions taken in recent prior years, NMFS determined the proposed continuation of this framework was likely to appreciably reduce the likelihood of both the survival and recovery of SONCC coho resulting in a jeopardy finding.

1999 Reasonable and Prudent Alternatives

- NMFS developed a three part alternative to the proposed action. When taken together as an integrated action, the following Reasonable and Prudent Alternatives (RPAs) were not likely to jeopardize the SONCC coho ESU.

RPA	Location	Required Action
1	All marine PFMC fisheries	Management measures developed under the FMP must be designed to achieve an ocean exploitation rate on Rogue/Klamath hatchery stocks of no greater than 13%, the lowest exploitation rate specified under Amendment 13 for OCN sub aggregates.
2	California coast line	Coho-directed fisheries and coho retention in chinook-directed fisheries are prohibited
3	All marine PFMC fisheries	Ocean salmon fisheries were to be monitored and sampled for stock composition including the collection of CWTs in all fisheries and other biological information



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**Oregon
Coastal
Coho**

Other coho harvest controls for ESA-listed stocks

Parental Escapement		Marine Survival Index			
		Extremely Low	Low	Medium	High
High	> 0.75 full seeding	≤ 8.0%	≤ 15.0%	≤ 30.0%	≤ 45.0%
Medium	0.75 to 0.50 full seeding	≤ 8.0%	≤ 15.0%	≤ 20.0%	≤ 38.0%
Low	0.50 to 0.20 full seeding	≤ 8.0%	≤ 15.0%	≤ 15.0%	≤ 25.0%
Very Low	0.20 to 0.10 of full seeding	≤ 8.0%	≤ 11.0%	≤ 11.0%	≤ 11.0%
Critical	< 0.10 of full seeding	0 – 8.0%	0 – 8.0%	0 – 8.0%	0 – 8.0%



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Other coho harvest controls for ESA-listed stocks

Lower Columbia Coho

	Marine Survival Index				
Parental Escapement (percent of full seeding)	Very Low	Low	Medium	High	Very High
	$\leq 0.06\%$	$\leq 0.08\%$	$\leq 0.17\%$	$\leq 0.40\%$	$> 0.40\%$
Normal	$\leq 10\%$	$\leq 15\%$	$\leq 18\%$	$\leq 23\%$	$\leq 30\%$
Very Low	$< 10\%$	$< 15\%$	$< 18\%$	$< 23\%$	$< 30\%$

Thank You

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