

Management Strategies and Actions (MSAs) ODFW Draft Concepts

Rogue-South Coast Multi-Species Conservation and Management Plan (RSP)

Stakeholder Team Meetings June 3-4, 2020

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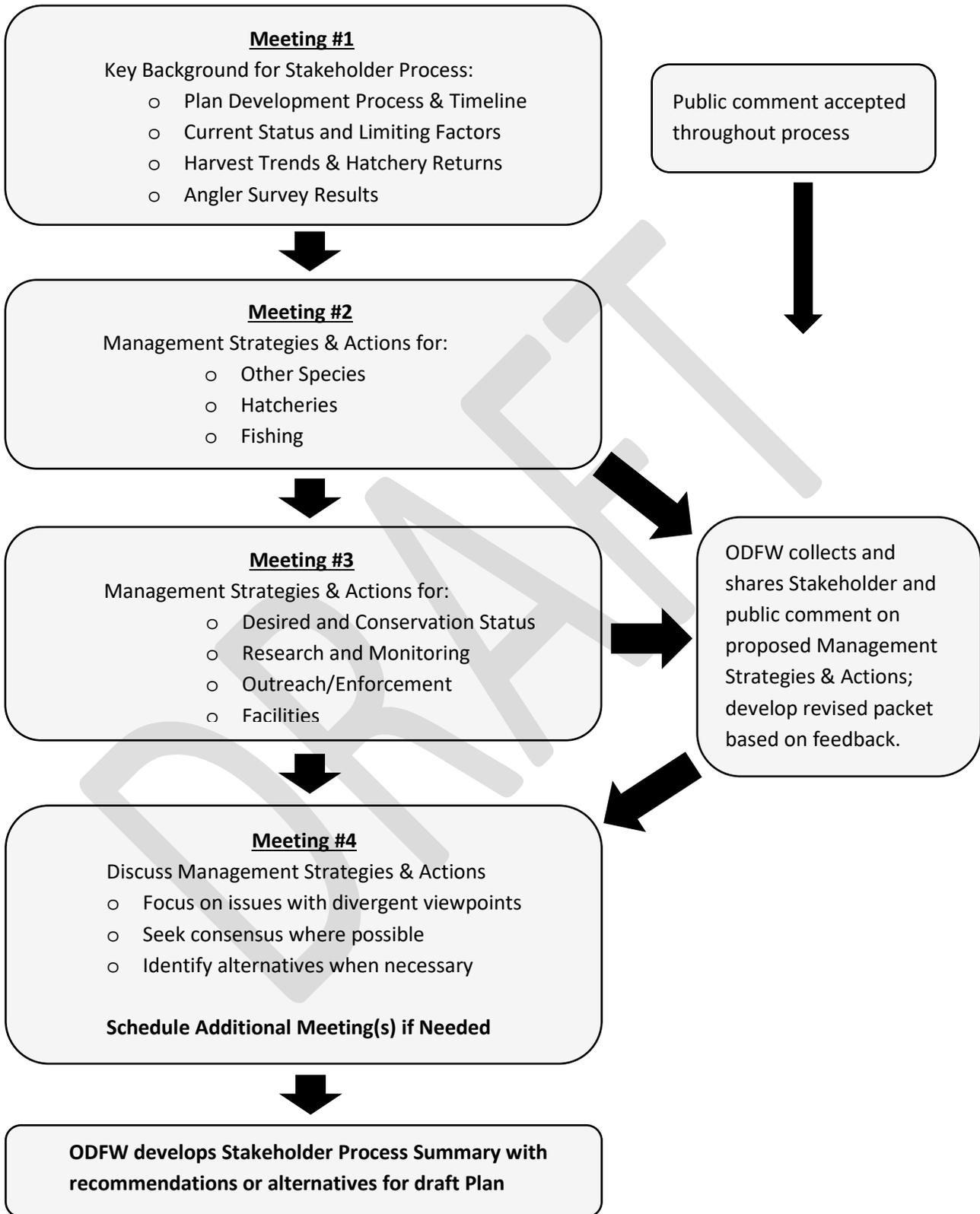
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I. RSP Development Overview

	ODFW	Stakeholders	Habitat Work Group	Tribes	NMFS	Science	Public	Commission
DEVELOPMENT of PLAN COMPONENTS (prior to first full draft)								
I. Species and Populations	develop 1st draft	presented	presented	presented	presented			
II. Current Status Assessment	develop 1st draft	presented	presented	presented	presented			
III. Future Status	develop 1st draft		presented	presented	presented			
IV. Desired and Conservation Status	develop 1st draft	advise	advise	advise	advise			
V. Limiting Factors	develop 1st draft	presented	advise (habitat)	advise	advise			
VI. Management Strategies and Actions								
· Other Species	develop 1st draft	advise		advise	advise			
· Hatcheries	develop 1st draft	advise		advise	advise			
· Fishing	develop 1st draft	advise		advise	advise			
· Outreach/Enforcement	develop 1st draft	advise		advise	advise			
· Facilities	develop 1st draft	advise		advise	advise			
· Research & Monitoring	develop 1st draft	advise		advise	advise			
· Habitat	develop 1st draft	advise (through HWG -->)	advise	advise	advise			
VII. Implementation	develop 1st draft							
<i>TIMEFRAME:</i>	<i>June 2020</i>		<i>July 2020</i>	<i>July 2020</i>	<i>July 2020</i>			
REVIEW of FULL DRAFT PLAN	develop full draft(s)	REVIEW #1 (2-4)	REVIEW #1 (2-4)	REVIEW #1 (2-4)	REVIEW #1 (2-4)	REVIEW #2	REVIEW #2 (3-4)	REVIEW #3, 4
<i>TIMEFRAME:</i>		<i>September 2020</i>	<i>September 2020</i>	<i>September 2020</i>	<i>September 2020</i>	<i>November 2020</i>	<i>November 2020</i>	<i>December 2020, January 2021</i>

RSP Stakeholder Process



II. Desired and Conservation Status

A. Elements of status in native fish populations

Desired status

As outlined in the Native Fish Conservation Policy, each conservation plan should describe a desired status for the SMU that reflects the ecological, economic and cultural benefits to be sought from the naturally produced fish. This is the goal which management actions in the plan are trying to attain or maintain.

Current/Observed

Current/Observed values report the recently observed performance of the population, in metrics that are directly relevant to metrics included in the desired status statement. This is our starting point. Multiple timeframes of current/observed values for a metric are presented, as they provide different information about where a species is relative to the desired or conservation thresholds for the metric.

Conservation Status

Measurable criteria are needed as indicators of a significant deterioration in SMU status. Conservation status is a low value below which long-term persistence becomes uncertain. Abundance and spatial structure levels at conservation status are intended to be high enough to allow time for management actions to be implemented to improve a population's status before risk becomes too great, but not too high that they unnecessarily constrain fisheries when viability is not at risk. If metrics indicate that a population or group of populations is at the conservation status, this would trigger, in order to improve performance, a modification of or renewed focus to management actions that are guided by this conservation plan, and potentially a review and revision to the management strategies contained within the plan.

Metrics used for Desired and Conservation Status are measurable criteria that: 1) were used in the current status assessment; and/or 2) are based on long-term monitoring expected to continue in the future as described in the [Research and Monitoring Strategies and Actions](#) section below.

As new [Research and Monitoring Strategies and Actions](#) are implemented and have generated an adequate time series of data, additional relevant or population-specific Desired and Conservation Status metrics and thresholds may be added. Additionally, if new analytical methods provide different historical data for any metrics, the thresholds in the table below will be revised accordingly at the time of plan re-assessment.

The following sections describe the Desired and Conservation Status metrics and thresholds. Other management triggers (wild mortality limits, hatchery releases, pHOS, hatchery harvest targets) are contained in the strategies and actions for the respective management category.

Desired and Conservation Status Metrics:

Abundance Metrics

- **Late-Run Summer Steelhead Abundance at Huntley Park** – abundance estimate based on Huntley Park seining project catch and a river flow-based expansion for late-run portion of wild summer steelhead return to the Rogue Basin. This represents the aggregate of Middle Rogue-Applegate and Upper Rogue populations, **but does not include early-run summer steelhead abundance**.
- **Elk River Adult Coho Spawner Abundance** – abundance estimate based on peak counts in spawning ground standard surveys and a habitat-based expansion.
- **Adult Coho Abundance at Huntley Park** – abundance estimate based on Huntley Park seining project catch of hatchery and wild adult coho, and coho returns to Cole Rivers Hatchery. This abundance estimate represents the aggregate of Illinois, Middle Rogue-Applegate, and Upper Rogue populations.
- **South Coast Stratum Winter Steelhead Parr Abundance and Cutthroat Trout Abundance** – abundance **indices** based on visual underwater snorkel pool counts of Age 1+ juvenile steelhead or Age- 1+ cutthroat trout in randomly selected sites. The sites are located in wadeable streams within steelhead distribution, which does not include the entire distribution of cutthroat trout. Cutthroat trout counts include juvenile and adult fish due to the life history diversity of this species. This metric is paired with the site occupancy metric.

Note: The sampling frame for juvenile abundance index surveys includes some NADOTs (small direct ocean tributaries), but the NF Smith is not currently monitored within the sampling frame. Habit conditions and remoteness of the NF Smith watershed currently do not warrant the additional monitoring effort. ODFW District staff and USFS have and will periodically monitor fish populations in the watershed as time and funding allow. There is no indication that fish status would be any different than nearby monitored watersheds.

- **Wild Half-Pounder Steelhead Count at Huntley Park** – unexpanded Huntley Park seining project catch of wild half-pounder steelhead (an abundance **index**). This represents the aggregate of Rogue stratum populations.

Spatial Structure Metric

- **Site Occupancy** – percentage of South Coast Stratum randomly selected snorkel survey sites (same sites used for abundance indices described above) with observed presence of Age-1+ juvenile winter steelhead or Age-1+ cutthroat trout. This metric measures the loss of historic steelhead or cutthroat distribution due to fish passage barriers, habitat loss (including habitat loss associated with climate change), and low abundance.

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Table 1. Proposed Desired and Conservation Status Metrics and Thresholds											
SMU	Stratum	Population	Adult Abundance			Juvenile Abundance			Site Occupancy (Juveniles)		
			Desired Status	Current/ Observed*	Conservation Status	Desired Status	Current/ Observed*	Conservation Status	Desired Status	Current/ Observed*	Conservation Status
Winter Steelhead	South Coast	Elk	**	**	**	<i>Parr (Age-1+) Index</i> 80,000	<i>Parr (Age-1+) Index</i> 63,645 (52,930)	<i>Parr (Age-1+) Index</i> 30,000	≥ 90%	97% (94%)	50%
		Euchre Cr	**	**	**						
		Hunter Cr	**	**	**						
		Pistol	**	**	**						
		Chetco	**	**	**						
		Winchuck	**	**	**						
		NADOTs									
	NF Smith				See note in metric description (Page 5)						
	Rogue	Lower Rogue				<i>Huntley Wild Half-Pounders</i> 1,000	<i>Huntley Wild Half-Pounders</i> 650 (988)	<i>Huntley Wild Half-Pounders</i> 200			
		Illinois									
M Rogue / Applegate											
Upper Rogue		**	**	**							
Summer Steelhead	Rogue	M Rogue / Applegate	<i>Late-Run</i> 11,000	<i>Late-Run</i> 7,681 (8,706)	<i>Late-Run</i> 3,250						
		Upper Rogue									
Coho Salmon	S Coast	Elk	800	267 (297)	100						
	Rogue	Illinois									
		M Rogue / Applegate	10,000	5,497 (5,746)	1,300						
Cutthroat Trout	South Coast	Elk				<i>Age-1+ Index</i> 28,000	<i>Age-1+ Index</i> 18,469 (30,772)	<i>Age-1+ Index</i> 6,500	≥ 90%	94% (95%)	50%
		Euchre Cr									
		Hunter Cr									
		Pistol									
		Chetco									
		Winchuck									
		NADOTs									
	NF Smith				See note in metric description (Page 5)						
	Rogue	Lower Rogue									
		Illinois									
M Rogue / Applegate											
Upper Rogue											

* Current/Observed includes 50th percentile for data period used in Current Status assessment (**bold**) and most recent 5-year average (parentheses).

** Metrics that may be developed with additional proposed monitoring

1. Desired Status

Abundance

Desired Status for abundance is the mean future wild abundance goal which actions across Management Categories in the RSP are trying to attain. Unless otherwise indicated, desired abundance is equivalent to the 75th percentile of the log-normal distribution of the metric for the data period used in the Current Status assessment, which is generally a 25-50% increase in the Current/Observed abundance for the same data period (**see Table 1 on previous page**). Achieving desired abundance will strengthen populations, provide greater resiliency of the populations to future threats such as climate change and development associated with human population growth or expansion, and provide consistent and improved fisheries.

Progress toward Desired Status will be evaluated based on a 5-year running average for each metric. **For a given population or stratum to achieve Desired Status, the value of the abundance metric must meet or exceed the threshold listed in Table 1 on average over a 5-year period.**

Coho Abundance and the Federal Recovery Plan

As the 75th percentile for Coho Salmon in the Interior Rogue Stratum, ODFW proposes 10,000 as the desired level of abundance in the Rogue watershed. The methodology used to identify this desired status is consistent in approach with ODFW's *Coastal Multi-Species Conservation and Management Plan* (CMP), but the resulting objective is significantly lower than the viability criterion of 28,000 identified by NOAA in the Final Recovery Plan for the Southern Oregon/Northern California Coast (SONCC) Evolutionarily Significant Unit (ESU) of Coho Salmon.

The viability criteria in the Recovery Plan were based on a GIS-based "intrinsic potential" (IP) model of the amount of historic habitat for Coho Salmon within the ESU. ODFW provided comments, and continues to believe, that model results are unrealistically high given the geology and climate of much of the Oregon portion of the SONCC Coho ESU, which would not have historically supported widespread distribution and persistence of juvenile Coho Salmon. ODFW's perspective is also mirrored in current monitoring and modeling, where densities of juvenile Coho tend to be low in the SONCC ESU relative to the Oregon Coast ESU, and species distribution modeling indicates a patchy distribution with a low probability of Coho occurrence in most streams.

The federal recovery plan acknowledged ODFW's concerns and the uncertainty in the IP model, describing the resultant spawner density criteria as "an initial framework that can be adjusted or replaced" as new information becomes available with respect to SONCC Coho habitat use and viability requirements. The plan also states that NMFS "intends to work with partners to reevaluate the population structure, and associated recovery criteria within the Northern Coastal and Interior Rogue diversity strata as part of a conservation planning process." ODFW feels that the RSP and its development process can serve as a framework

for partnering with NOAA to reevaluate recovery criteria and continue to hone the array of management actions needed to recover the species in the Oregon portion of the ESU.

ODFW also considered other approaches to determine the desired level of abundance. An estimate of S_{msy} (spawner abundance that produces maximum sustainable yield) for Rogue Coho Salmon was produced from the stock-recruit analysis in the Current Status assessment. However, this value is fairly low and ODFW staff do not consider S_{msy} a good tool for management of Coho Salmon in the Rogue because of uncertainty about the contribution of component populations to aggregate abundance and productivity. Furthermore, S_{msy} is lower than the spawner abundance that gives maximum recruitment. This metric should not be the benchmark for achieving a healthy, self-sustaining population of Coho on the Rogue that contributes to removal from listing under the federal ESA.

For the Elk River coho salmon population, Desired Abundance is a three-fold increase in spawner abundance, consistent with the *Strategic Action Plan (SAP) for the Recovery of the Elk River Population of Wild Coho*.

Summer Steelhead

For late run summer steelhead the Desired Status is 11,000. This figure is very similar to a population health goal (identified during the Klamath Mountains Province Steelhead Project) that annual returns to the Rogue River should be a minimum of 10,000 wild late-run adult summer steelhead. The KMP health goal was developed from a comparison of a fry abundance index with the numbers of parents estimated to have passed Huntley Park during the previous year, although only eight years of data composed the analysis at the time.

Spatial Structure

Desired Status for spatial structure is the mean future site occupancy percentage for juvenile steelhead or cutthroat trout in randomly selected snorkel surveys in the South Coast Stratum. Percent site occupancy is determined using observed species presence in a site, but a species may be present in low numbers even when not observed by a surveyor. In addition, the sampling frame used to select random sites includes streams that may not have sufficient water or other habitat conditions to support juvenile rearing every year. Recognizing that observed site occupancy may not be 100% even when steelhead or cutthroat trout are utilizing all available habitat, Desired Status for spatial structure is 90% or greater site occupancy. Similar to abundance, achievement of Desired Status for spatial structure will be evaluated based on a 5-year running average.

2. Current/Observed

Current/Observed abundance is generally calculated as the 50th percentile of the log-normal distribution of the metric for the data period used in the Current Status assessment (**see values in bold in Table 1 above**). For the Elk River coho salmon population, mean adult spawner abundance for the data period was used. For spatial structure, current/observed values are average site

occupancy for the data period used in the Current Status assessment (2002-2019). The most recent 5-year averages for all status metrics are also presented in Table 1 (see values in parentheses).

3. Conservation Status

Conservation status is a threshold below which long-term persistence becomes uncertain. Abundance and spatial structure criteria are intended to be high enough to allow time for management actions to be implemented to improve a population’s status before risk becomes too great, but not too high that they unnecessarily constrain fisheries when viability is not at risk. Abundance levels are generally calculated as the 5th percentile of the log-normal distribution of the metric for the data period used in the Current Status assessment (**see Table 1 on page 6**). For Elk River adult coho salmon abundance, the 25th percentile of the log-normal distribution of the metric was used due to the small number of spawners in this population.

A two-year running average will be used to determine when an abundance or spatial structure metric has dropped to the Conservation Status threshold. The life history of steelhead and cutthroat trout and the monitored metrics of juvenile abundance and spatial structure will allow managers to respond promptly to expected critical adult abundance. When any metric has reached Conservation Status, managers will use the weight of evidence approach with other metrics to evaluate management actions. If metrics indicate that a population or group of populations is at the conservation status, this would trigger, in order to improve performance, a modification of or renewed focus to management actions that are guided by this conservation plan, and potentially a review and revision to the management strategies contained within the plan.

III. Research and Monitoring Strategies and Actions

Table 2. Current Monitoring						
Stratum	Population	River Seine	Fall Spawning Surveys	Juvenile Surveys	Habitat	
South Coast	Elk	---	CCRMP Surveys	Annual random site surveys (stratum)	Annual random site surveys (stratum)	
	Euchre Cr		District Surveys			
	Hunter Cr		District Surveys			
	Pistol		District Surveys			
	Chetco		District Surveys			
	Winchuck		District Surveys			
	NADOTs		---			
Rogue	Lower Rogue	Huntley Park	ChS carcass survey	Annual random site surveys (stratum)	Annual random site surveys (stratum)	
	Illinois					
	Middle Rogue/Applegate					
	Upper Rogue					
Field Staff	4	5	6			
Purpose	status/trend; ChF mgmt	ChS/ChF mgmt; Coho trend	status/trend	instream physical status/trend		
Species/Timing	Fall Chinook, Coho, Summer Steelhead, Half-pounders	Spring Chinook, Fall Chinook, Coho	Coho, Steelhead, Cutthroat Trout	summer		

Table 3. Overview of Proposed Fish and Habitat Monitoring (Bold = Not Currently Funded)							
Stratum	Population	River Seine	Adult Count Station	Fall Spawning Surveys	Winter Steelhead Spawning Surveys	Juvenile Surveys	Habitat
South Coast	Elk	---	---	CCRMP surveys	Rotating basin surveys (non-Chetco) + Annual pHOS monitoring in Chetco	Annual random site surveys (stratum)	Annual temp/flow monitoring (stratum)
	Euchre Cr		---	District surveys			
	Hunter Cr		---	District surveys			
	Pistol		---	District surveys			
	Chetco		Sonar*	District surveys			
	Winchuck		---	District surveys			
	NADOTs		---	---	---		
	NF Smith		---	---	---		
Rogue	Lower Rogue R	Huntley Park	---	ChS carcass survey	---	---	Rotating basin hab surveys + Annual temp/flow monitoring
	Illinois		---				
	Middle Rogue/Applegate		---				
	Upper Rogue		Trap and/or Sonar		Annual surveys		
Field Staff	4	4	5	3 + District	4		
Species/Timing	Fall Chinook, Coho, StS, Half-pounders	Winter Steelhead	Spring Chinook, Fall Chinook, Coho	Winter Steelhead	Coho, Steelhead, Cutthroat Trout	summer	

* Collaborate with California Fish and Game with the Smith River, CA DIDSON project and share equipment and experience

Proposed Research and Monitoring:

To complete all of the efforts outlined in this section, ODFW will need additional staff or a shift in the priorities of current staff, additional funding, and coordination with other entities. Prioritization of evaluation and research needs will be completed through the plan development by ODFW and stakeholders. After adoption of the final version of this conservation plan, evaluation and research priorities will be completed by ODFW and guided by the adopted suite of management strategies. As the adaptive management process begins with this plan, it is likely that additional monitoring, evaluation and research needs will be identified in future years.

Category	Proposed Work	Currently Funded?	Species	Population or Stratum	Purpose	Field Staff
Fish Monitoring	Huntley Park Seining Project	Yes	Fall Chinook Summer Sthd Coho Half-Pounders	Rogue Stratum	Monitor Rogue River Fall Chinook status metrics (see Rogue Fall Chinook Conservation Plan). Monitor Rogue River Summer Steelhead, Coho Salmon, and steelhead half-pounders status metrics (for RSP).	4
Fish Monitoring	Fall salmon spawning ground surveys in South Coast Stratum	Yes	Fall Chinook Coho	Elk Euchre Hunter Pistol Chetco Winchuck	Monitor Fall Chinook status metrics (see Rogue Fall Chinook Conservation Plan). Monitor Elk River Coho Salmon status metrics (for RSP). Monitor coho spawning abundance in dependent/ephemeral populations.	4
Fish Monitoring	DIDSON sonar counting station in lower Chetco River	No	Winter Sthd	Chetco	Evaluate efficacy of using sonar to estimate abundance of winter steelhead returning to the Chetco River.	2
Fish Monitoring	Winter steelhead spawning surveys in South Coast Stratum	Partial	Winter Sthd	Elk Euchre Hunter Pistol Winchuck	Survey smaller coastal basins on a rotating basis to estimate current spawning escapement and harvest rate. Would be paired with South Coast pHOS research.	District Staff + 1

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Category	Proposed Work	Currently Funded?	Species	Population or Stratum	Purpose	Field Staff
Fish Monitoring	Winter steelhead spawning surveys in upper Rogue	Yes	Winter Sthd	Upper Rogue	<p>Conduct spawning surveys in an upper Rogue sub-population to estimate spawner escapement and track relationship with Huntley Park half-pounder count (validate status metric). Elk Creek will be a focal area (history of extensive monitoring and use for monitoring pHOS; other surveys will be conducted as time allows).</p> <p>*ODFW will look for funding to add spawning surveys for coho and summer steelhead, combining with spring chinook spawning survey positions to create contiguous 8-9 month seasonal positions. This could be an alternative to Didson for community funding.</p>	2
Fish monitoring	Adult trapping	Partial*	Winter Sthd	Upper Rogue	<p>ODFW proposes to construct at least one adult trap in upper Rogue tributary to evaluate efficacy as abundance monitoring tool. May collect scales and genetic samples for age and genetic information. *Requires funding of infrastructure.</p>	District staff + spawning survey crew (see previous)
Fish monitoring	DIDSON sonar pilot project for upper Rogue steelhead	No	Winter Sthd	Upper Rogue	<p>Evaluate the efficacy of using sonar to estimate abundance of winter steelhead entering upper Rogue tributaries through a three year pilot project if funding available. May be combined with Elk Creek spawning surveys. If successful, may be applied to other Rogue tributaries. Requires additional positions or funding to allow ODFW to hire contractor. Workload may not allow concurrent DIDSON surveys and adult trapping.</p>	2

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Category	Proposed Work	Currently Funded?	Species	Population or Stratum	Purpose	Field Staff
Fish Monitoring	Summer juvenile snorkel surveys in South Coast Stratum	Yes	Winter Sthd Coho Cutthroat Trout	South Coast Stratum	Monitor juvenile abundance and spatial structure status metrics.	2
Fish Monitoring	Incorporate sea-run cutthroat trout monitoring in South Coast Stratum juvenile snorkel surveys	Yes	Cutthroat Trout	South Coast Stratum	Track counts as an index of abundance and potential indicator of status.	Snorkel Survey Crew (see previous)
Habitat Monitoring	Incorporate additional flow and temperature monitoring in summer surveys; Identify and track relevant marine productivity indicators	Yes	All	South Coast Stratum Rogue Stratum	Identify environmental indicators of freshwater rearing conditions and marine productivity (e.g. upwelling) that can improve forecasts of adult returns (winter steelhead, summer steelhead, and coho salmon) and/or trigger additional conservation measures. Look for opportunities to share resources and data with California.	Summer Field Crews
Habitat Monitoring	Conduct physical habitat surveys within populations, rotating between populations annually	Yes	All	Rogue Stratum	Monitor status and trend in physical habitat, especially in relation to stream/watershed restoration work. Note: juvenile fish snorkel surveys will occur at all or a subset of these sites. Sampling design TBD.	2
Habitat Monitoring	Dam removal effectiveness monitoring	TBD	All	Rogue Stratum	Support continued barrier removal, along with similar project-related monitoring. Look for opportunities for synergy with population monitoring. This may be the primary role for volunteers in ODFWs Salmon Trout Enhancement Program (STEP).	District staff, STEP

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Category	Proposed Work	Currently Funded?	Species	Population or Stratum	Purpose	Field Staff
Harvest Monitoring	Conduct statistical creel surveys after plan adoption	No	Winter Sthd	Chetco Rogue Stratum	Determine current baseline for catch and effort and validate harvest data collected through ODFW's Electronic Licensing System (ELS). Additional creel surveys may be conducted in future years to validate and refine ELS harvest estimates. Collect scale samples and genetic samples. As part of project, investigate use of creel surveys in lower Applegate for abundance monitoring of wild steelhead (CPUE and mark:capture estimate with hatchery returns; compare both with past estimates)	6
Harvest Monitoring	Investigate options for using ELS to collect angler effort and catch data	No	Winter Sthd Summer Sthd	All	Collect angler effort and catch data (fish harvested and released) to calculate catch per unit effort (CPUE) as an index of abundance for steelhead.	N/A
Harvest Monitoring	Survey for angler effort during Illinois StW fishery (Dec-Mar)	Partial	Winter Sthd	Illinois	ODFW will partner with the USFS and others to develop and implement protocol for estimating angler effort in the winter steelhead fishery between Briggs Creek and Pomeroy Dam. Compare to previous surveys and monitor trend. May include creel checks and/or collection of scales and genetic samples.	District with partner assist needed
Research	Investigate ongoing surveys (such as fry trapping, smolt traps) as index survey or other for monitoring abundance	TBD	Coho Winter Sthd Summer Sthd	Rogue Stratum	ODFW proposes to investigate the opportunity to add value to ongoing surveys by adapting/improving for use in abundance monitoring. May include addition of PIT tagging; may include monitoring to meet KMP population health goals. May include STEP volunteer assistance.	District, STEP
Research	Snorkel surveys for evaluating pHOS	Partial	Winter Sthd	Chetco	Determine whether annual snorkel surveys in select holding and spawning reaches can provide more robust information about hatchery/wild ratios than traditional spawning surveys, which often result in few observations.	District staff + 1

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Category	Proposed Work	Currently Funded?	Species	Population or Stratum	Purpose	Field Staff
Research	Investigate genetic techniques for status monitoring	No	Winter Sthd Summer Sthd Coho	TBD	Track emerging methods for measuring population size and diversity and determine if genetic monitoring can provide cost-effective alternatives to traditional population monitoring. Look for opportunities to share resources and data with California portion of Klamath Mountains Province Steelhead DPS or SONCC Coho ESU.	TBD
Research	Determine proportion of summer and winter steelhead among wild half-pounders captured at Huntley Park	No	Winter Sthd Summer Sthd	Rogue Stratum	Continue genetics research investigating contribution of summer- and winter-run steelhead to wild half-pounder abundance at Huntley Park. If successful, could be monitored over time as a status indicator and/or harvest management trigger.	Huntley Crew
Research	Investigate possibility of genetically assigning fish captured at Huntley Park to populations within the Rogue basin	No	Summer Sthd Coho Fall Chinook	Rogue Stratum	Genetic assignment of individuals captured at Huntley could provide population abundance estimates that are currently lacking and support development of population-specific status metrics.	Huntley Crew
Research	Conduct marking/tagging study of fish captured at Huntley Park to determine contribution of different populations to total estimate	No	Summer Sthd Coho	Rogue Stratum	If individuals captured at Huntley Park cannot be genetically assigned to populations, a multi-year radio tag study for summer steelhead and/or coho could be used to estimate contribution of each population to total abundance. Compare/investigate changes in summer steelhead distribution compared to 1970s data (Everest)	District Staff and Huntley Crew
Research	Investigate marine distribution of steelhead	No	Summer Sthd Winter Sthd	South Coast Stratum Rogue Stratum	Explore whether there are opportunities to learn more about ocean distribution of steelhead. Look for opportunities to share resources and data with California portion of Klamath Mountains Province Steelhead DPS.	TBD

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Research	Investigate options for using wild steelhead harvest to collect biological samples	No	Winter StW	Rogue Stratum	Investigate opportunities to collect of scale and genetic samples from wild steelhead harvest. Most applicable if new methods of harvest reporting are adopted (such as mandatory reporting).	District staff
Research	Conduct marking/tagging study of adult sea run cutthroat to determine upstream distribution	No	Cutthroat trout	Rogue Stratum	Pending available resources and ability to collect adults in the lower river, marking/tagging study will be implemented to verify the upstream distribution extent of sea-run cutthroat trout distribution in the Rogue River.	District staff + 1
Evaluation	Mark hatchery coho captured at Huntley Park (e.g. opercle punch, floy tag) and record marked fish at Cole Rivers Hatchery	Yes	Coho Salmon	Rogue Stratum	Investigate key assumption about hatchery coho harvest and stray rate that determines Huntley Park wild coho estimate, and implement improvements if applicable	Huntley Crew

Adaptive management is an acknowledged key component of this conservation plan. Survey plans may be modified as new techniques or other improvements become available, under the principle of adaptive management. ODFW will also coordinate with other entities conducting monitoring work in RSP watersheds to better align efforts and look for opportunities to develop additional status metrics.

IV. Outreach / Enforcement Strategies and Actions

A. Angler Stewardship

Background

This section addresses the need to inform and educate anglers on how to handle wild salmon and steelhead prior to release, as well as reduce disturbance of spawning salmon and steelhead. Some angling practices that can be observed regularly on rivers and lakes pose a risk for salmon, steelhead, and trout. Poor handling can result in significant mortality if many fish are caught and released, and disturbing actively spawning salmon and steelhead can affect spawning success.

Proposed Actions

1. Informational Outreach.

- a. Work with agencies, cities, counties, and others to place educational signage at popular angler access sites and seek funding opportunities to support initiatives
- b. Encourage use of fish friendly landing nets
 - i. Seek grant funding to provide rubber nets for Rogue coho estuary fishery
- c. Investigate additional techniques to minimize hooking mortality
- d. Explore use of advisories during periods of low Rogue Coho abundance asking anglers to change practices, with a focus in the estuary fishery
- e. Update catch and release guidelines in ODFW Sport Fishing Regulations as conservation concerns develop
- f. Develop and distribute video clips on proper catch and release techniques via social media

2. Reduce disturbance of spawning salmon and steelhead.

- a. Consider partnering with tackleshops, angling groups and guides to educate anglers on avoiding spawning fish, especially during low flow conditions.
 - i. Spring Chinook spawning in the upper Rogue in September is a primary focal area. Explore use of advisories asking anglers to change practices in September between Dodge Bridge and Cole Rivers Hatchery
 - ii. Fall Chinook in the middle Rogue near Grants Pass is another focal area

B. Distribution of Fish Management Information to Public

Proposed Actions

- 1. Provide link to Rogue and South Coast data (fish counts, etc) in ODFW Recreation Report and social media posts.**
- 2. Investigate sending annual informational updates by email or social media to license holders.**
- 3. Implement Rogue District Update e-newsletter on monthly/quarterly basis.**
- 4. Explore additional opportunities to provide information on fish and ODFW actions to produce more fish, including Rogue website development.**

C. Improve Data Collection from ODFW’s Electronic Licensing System

Proposed Actions

- 1. Encourage use of e-tagging through outreach to POS agents and the public.**
- 2. Explore possible incentives to increase adoption of e-tagging.**
- 3. Align tag location codes with Management Areas where practical.**
 - a. ODFW will evaluate harvest within the planning area to simplify regulations, improve data collection, and align with management areas
 - b. An additional harvest tag code will be added to the Chetco River. The proposed new harvest code will be from Nook Creek to Headwaters. This will allow ODFW to monitor hatchery steelhead harvest and pHOS in the WEA, and will provide insight into wild steelhead harvest in the WEA

D. Continue Outreach to Enlist Public Help with Enforcement

Proposed Actions

- 1. Work with guides and angling groups to thank prosecutors and judges for help with enforcement.**
- 2. Encourage guides and angling groups to contact OSP with observations of illegal behavior and concerns about enforcement.**
- 3. Encourage anglers to report observations of illegal behavior and be willing to testify.**
 - a. Signs at tackle stores
 - b. Social media—observe, report, and be willing to testify if needed
- 4. Continue working with OSP to enforce snagging rules.**
- 5. Continue to participate in annual Cooperative Enforcement Program team meetings with ODFW and OSP to prioritize enforcement within the South Coast and Rogue stratum**
- 6. Continue to support Oregon State Marine Board, Sheriff Departments, OSP, and fishing guides to monitor illegal guiding.**

E. Habitat Protection and Restoration Outreach

Proposed Actions

- 1. Implement targeted outreach on fish needs and stewardship to planning and road department staff in all municipalities, landowners, as well as specific businesses.**
 - a. Examples where information sharing would be focused in the interior Rogue include arborists, culvert installers, irrigation suppliers, and well drillers
 - b. Partner with watershed councils to direct outreach to private landowners
- 2. Continue and strengthen outreach on the importance of riparian vegetation in the interior Rogue.**
 - a. Share information on the multiple benefit of native trees and shrubs in riparian areas:
 - i. Keeping streams clean and cool
 - ii. Keeping streams cool to reduce impacts of non-local invasive minnows

- iii. Reducing risk of erosion
 - iv. Encouraging beavers and beaver dams by providing food source
 - v. Promoting wildlife diversity
 - vi. Dead trees just as important as live trees for fish and wildlife
 - b. Continue to recruit STEP volunteers to participate in the Small Stream, Urban Stream, Intermittent Stream project to create awareness of fish use in streams that are too often ignored
 - c. Develop and implement recognition award recognizing good stewardship of riparian habitat by private landowners (STEP)
 - d. Look for opportunities to promote other existing programs that foster good stewardship practices
 - e. Explore ways to encourage citizen involvement in implementation and enforcement of riparian land use law
- 3. Working with partner agencies/entities, develop or encourage the development of training on proper culvert sizing and construction for use by homeowners, contractors, and developers.**
- 4. Explore the development of agricultural stewardship symposium/publications**
- b. Cannabis/hemp stewardship – partner with Oregon Sun growers Guild or similar organization
 - c. Continue working with Oregon State Extension Service on agricultural or land stewards outreach programs and/or symposia as a STEP project
 - d. Look for opportunities to promote other existing programs that foster good stewardship practices
- 5. Implement targeted outreach on habitat and habitat restoration planning to Rogue guides on at least an annual basis.**
- a. Have quarterly Rogue District newsletter in local tackle shops
 - b. Look for funding partners for printing costs

G. Rogue-South Coast Angler Survey

Proposed Action

- 1. Repeat online survey conducted in 2019 on a regular basis (approximately every 5 years) to understand angling practices and preferences, and gauge angler satisfaction with fishing opportunities.**

H. Plan Implementation Reporting and Review

Proposed Actions

- 1. Complete annual reports and post them on the RSP website or other Rogue-specific website.**

- a. Reports will consist of *Wild Fish Monitoring Summaries* (including metrics for Desired and Conservation Status), *Hatchery Program Summaries*, and updates on implementation of management actions
 - b. Create an internal database to more efficiently aggregate status metrics and develop reports
- 2. Consolidate Rogue and South Coast annual reporting for all conservation plans.**
 - 3. Acknowledging differences in life history, the first post-plan return year will be four years following the first year of plan implementation. A minimum of four generations are ideal before plan effectiveness can be evaluated. The first re-assessment of status and review of the plan will be scheduled for 20 years following plan approval by the Commission.**

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V. Facilities Strategies and Actions

A. Hatchery Infrastructure Improvements

1. Improve Rogue mitigation hatchery infrastructure.

Background

The most urgent infrastructure need in the Rogue watershed is repair and renovation of Cole Rivers Hatchery.

Proposed actions

- a. Renovate hatchhouse and hatchhouse water supply
 - b. General repairs and renovation at Cole Rivers Hatchery
 - c. Upgrade collection facility at Applegate Dam
 - i. Add ability to acclimate smolts and sort adults onsite
 - d. Improve infrastructure or support needed to grade summer steelhead
 - e. Purchase new liberation truck to improve handling of recycled ChS and StS
 - f. Improve I&E materials at Cole Rivers Hatchery kiosks (STEP and I&E)
- #### **2. Infrastructure improvement at acclimation sites**

Background

Acclimation in the Middle Rogue is aimed at improving fishery contribution of hatchery fish from existing hatchery mitigation production for winter steelhead.

Proposed actions

- a. Various actions are needed to facilitate acclimation at existing sites (Greens, Skunk) and potential new sites.
 - b. May include signage or map of acclimation sites, and available access points to help anglers target returning fish (distribute to tackle shops)
- #### **3. Elk River Hatchery**

Background

Adult winter steelhead for the Chetco River winter steelhead program are transported to Elk River Hatchery to be held until spawned. Eggs are kept on site and juvenile steelhead are reared to smolt size the following year. Smolts are transported back the Chetco River for release.

Proposed Actions

- a. Refurbish adult holding raceway. Reduce pre-spawn mortality.
- b. Coded wire tag smolts prior to release. This will assist with monitoring survival and stray rates. This may provide information on ocean distribution of KMP steelhead.
- c. Purchase UTV to transport supplies, spawning equipment, and steelhead eggs
- d. Support innovative approaches and associated costs to improve rearing strategies for fry, such as indoor rearing pond, shade cloth, and egg treatments.

B. Expand Port of Gold Beach Fish Cleaning Station Carcass Program

Background

Actions are identified to align with the conditions of the Rogue River sea lion hazing program. The program addresses the issues that contribute to increased interactions between anglers and pinnepeds.

Proposed Actions

- 1. Private fish cleaning facilities in Lower Rogue**
 - a. Encourage businesses to work with the Port of Gold Beach to assist with the disposal of salmon and bottomfish carcasses.
 - b. Encourage businesses to install carcass grinders

- 2. Educate anglers about carcass disposal at dispersed boat ramps attracting pinnipeds**
 - a. Cleaning salmon and steelhead along streams is legal, but often times habituates pinnipeds to areas where salmon and steelhead are more vulnerable to predation. Signs can be placed at high use areas asking anglers to not clean or dispose of carcasses streamside

C. Angler Access and Opportunity

Proposed Actions

- 1. Improve existing middle and upper Rogue river access properties**
 - a. Improve boat access and/or road surface at Doughten Falls and Sardine Creek ODFW properties
 - i. Work to facilitate development of Doughten Falls through agreement with Jackson County Parks
 - b. Investigate improvements at other ODFW river access properties
 - c. Work with Marine Board and State Parks to improve boat ramp at Touvelle State Park
 - d. Develop partnerships with local groups to help with volunteer maintenance of river sites

- 2. Develop new universal access sites**
 - a. Continue to implement projects at Expo Pond (Jackson County Fairgrounds)
 - b. River Bridge Campground on upper Rogue
 - c. Investigate improvements at other river access sites
 - d. Work with I&E to publicize sites

- 3. Encourage acquisition of old Savage Rapids Park property by Oregon State Parks or Jackson County Parks**
 - a. Develop bank fishing access

4. Pursue land acquisition or easement on Pistol River

- a. This watershed is primarily private with limited access. Land acquisition or an easement would improve boat and bank access, increase angler utilization, and provide wildlife viewing opportunities

5. Develop new Elk River boat ramp

- a. The watershed is private from Elk River hatchery downstream to ODFW’s Ironhead boat ramp, approximately 8 river miles. Additional boat access midway between Elk River Hatchery and Ironhead boat ramp would increase harvest of hatchery Chinook salmon and reduce hatchery Chinook impacts on wild salmon.
- b. This action was also identified in the *Coastal Multi-Species Conservation and Management Plan (CMP)*

6. Port of Port Orford recreational angler boat ramp

- a. ODFW maintains a state waters terminal Chinook fishery off the mouth of Elk River to encourage the harvest of hatchery fall Chinook. This fishery takes place most years when the forecasted number of fall Chinook reaches a high enough level. Recreational boat anglers can only access this fishery from the Port of Port Orford commercial dock by boat lift. This severely limits access. The proposal in this plan is to support efforts to improve boat launching at the Port, which would increase fishing opportunity and reduce hatchery impacts on the spawning grounds by increasing harvest of hatchery Chinook salmon.
- b. This action was also identified in the *Coastal Multi-Species Conservation and Management Plan (CMP)*

D. Infrastructure for Research and Monitoring

Proposed Actions

1. Pursue funding for facilities and equipment to facilitate Research and Monitoring.

- a. DIDSON sonar sites on lower Chetco River and potentially in the upper Rogue
- b. May include other adult trapping sites, infrastructure to facilitate monitoring at irrigation diversions, or fry trapping sites
- c. Equipment for genetic analysis and/or scale analysis