

Management Strategies and Actions (MSAs) ODFW Draft Concepts

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

Stakeholder Team Meetings June 24-25, 2020

Table of Contents

links to sections:

[I. Other Species](#)

[II. Hatcheries](#)

[III. Fishing](#)

I. Other Species Strategies and Actions

A. Rogue Bay Sea Lion Hazing

Proposed Actions

1. **Continue three-pronged approach (barriers on docks, hazing with non-lethal noise makers, and removal of easy food sources) to reduce pinniped-angler interaction.**
2. **Continue to modify private cleaning stations so that fish carcasses are not disposed of in the estuary.**

Rationale:

Marine mammal predation is not currently considered a limiting factor for species covered by this plan, but interactions between sea lions and anglers can strongly affect fishing experience. As a conservation and management plan, the RSP is intended to address conservation needs while also improving angling opportunities and experience. The Rogue Bay sea lion hazing program has been successful, and additional work to remove easy food sources could further reduce pinniped-angler interaction.

B. Pinniped Research

Proposed Actions

1. **Continue South Coast Pinniped Food Habits Study in 2021 to look at year to year variations in diet as ocean and river conditions change.**
2. **Conduct genetic work on salmonid bones recovered from seal scat samples to identify which species of salmonids are being consumed by seals in the Rogue River.**
3. **Determine potential impacts to returning salmonids and other prey and focus future collections to evaluate these issues.**
4. **Coordinate with Districts and hatchery managers to focus scat collection around hatchery releases to evaluate juvenile salmonid consumption.**
5. **Conduct statewide aerial survey of Pacific harbor seal breeding population during May and June 2021 contingent on funding and available staff.**

Rationale:

As noted above, predation by pinnipeds (seals and sea lions) is not currently considered a limiting factor for species covered by this plan. Nevertheless, pinnipeds do consume juvenile and adult salmonids and further research is warranted to understand potential impacts on wild and hatchery fish. Future work, including genetic analysis of pinniped scat samples collected in 2019-2020, is contingent on additional funding.

C. Avian Predation

Proposed Actions

- 1. Continue monitoring the abundance and distribution of avian predators in the lower Rogue River and estuary.**
- 2. Continue monitoring avian predators across the Oregon Coast.**
- 3. Continue removing barriers to fish passage in the interior Rogue to minimize avian and other predation.**

Rationale:

Predation of juvenile salmonids by avian predators (fish-eating birds) has been implicated as a potential limiting factor for populations of anadromous salmonids across North America and Eurasia, particularly for those stocks that are declining as result of other causes, such as habitat degradation. However, the impacts of avian predation on abundance of salmonids available for harvest or spawning escapement remain unclear, largely because of the tremendous complexity associated with freshwater, estuarine, and marine food webs, and numerous complex factors that influence survival across the salmonid life cycle. Despite this uncertainty, avian management is ongoing at certain locations in the Pacific Northwest, but the intended benefits of these activities have been difficult to verify. Continued monitoring at local and regional scales is needed to understand population trends, estimate potential impacts, and determine where active management may be beneficial and feasible. Long-term monitoring of double-crested cormorant colonies near the lower Rogue River indicates that abundance has decreased since the late 1970s. Increased monitoring in the middle and upper Rogue River would be costly and is unlikely to result in management changes.

Avian predators are frequently observed at barriers to fish migration. Juvenile salmonids jump repeatedly at poorly designed culverts and other barriers that block upstream migration into smaller tributaries in fall and winter. In addition, densities of juveniles in winter have been documented to be much higher below surveyed barriers than above these barriers. Restoration eliminates the risk of predation at passage bottlenecks.

D. Non-Native Fish Monitoring and Removal

Background

ODFW considers non-native fish, primarily non-local minnows that have been introduced into the Rogue watershed, to be a limiting factor or potential limiting factor for several populations. Redside shiners and pikeminnow are native to other coastal rivers in Oregon, but not to the Rogue. Through competition, these species are considered a secondary limiting factor in the middle Rogue and Applegate River, and a possible limiting factor in the Illinois and upper Rogue. Through predation, pikeminnow are considered a possible limiting factor throughout the interior Rogue.

Proposed Actions

- 1. Riparian protection and restoration.**

Rationale:

ODFW will discuss riparian protection and restoration in more detail in the habitat section of the conservation plan, but includes the topic here because of the cooling benefits provided by riparian vegetation. ODFW believes that keeping streams flowing as cool as possible is the best way to decrease the distribution and abundance of non-local minnow populations. ODFW will support all efforts to protect and restore riparian vegetation in the Rogue watershed. ODFW recognizes the work done by watershed councils, and has partnered with several fishing clubs to restore riparian habitat in projects conducted by our Salmon Trout Enhancement Program (STEP). The district specifically recognizes the Middle Rogue Steelheaders for their focused effort at riparian restoration, work that will directly produce more fish as this vegetation grows and matures over the next 10-20 years.

ODFW will recommend changes to existing practices for riparian restoration on the Rogue. Work completed since the Oregon Plan for Salmon and Watersheds as often been done in a “shotgun pattern” that cannot be evaluated effectively using aerial photos or Google earth. ODFW recommends that once work begins on a stream, the lead entity completes work with all willing landowners along the stream as part of project completion.

2. Coordinate with Oregon DEQ on Middle Rogue monitoring and surveillance.

Rationale:

This is an existing DEQ survey in the middle Rogue River near the town of Rogue River. ODFW believes that the fish data collected will have value over time (decades?) as a survey of fish in this reach of river, and the existing survey is a low cost tool available to managers. A significant change in the ratio of non-local minnows to juvenile steelhead in this survey could be an indicator of broadscale changes in the watershed. On years in which this survey is completed, ODFW proposes to include the fish data in the annual report for the conservation plan. The most likely management response to significant changes in species composition would be consideration of additional research and monitoring to verify whether there has been a significant change in non-local minnow populations.

3. Encourage Pikeminnow removal in the Rogue River by angling

- a. Conduct outreach and organize pikeminnow fishing events similar to one conducted in 2019.
- b. Include outreach to educate public about native suckers in the Rogue (Rogue District) and native pikeminnow in the Umpqua (Umpqua District).

Rationale:

This action is already being implemented as part of the spring Chinook conservation plan, and was included in the RSP because this illegally introduced species is considered by ODFW to be a limiting factor or possible limited factor in specific reaches of the river. ODFW acknowledges that pikeminnow in the Rogue are native to the neighboring Umpqua watershed (and illegally introduced redbreasted shiners are native to much of western Oregon). Our mission statement calls for protecting and enhancing Oregon’s fish and wildlife species for the benefit of present and future generations, and that means that we manage native species for sustainability in the long term, including pikeminnow and redbreasted shiners in their native watersheds. But sustainability does not preclude management, such as in cases

where habitat has changed river systems to favor one native species at the expense of others (i.e. Columbia basin dams) or where native species have been illegally introduced outside their native range (i.e. tui chub in Diamond Lake). ODFW is concerned that efforts to encourage angling mortality on pikeminnow in the Rogue will affect the native Klamath smallscale sucker. Actions directed at other species must not result in harm to native suckers in the Rogue. ODFW outreach will emphasize the need to protect suckers.

A stakeholder proposal to move pikeminnow from the Rogue to the Umpqua poses logistical and genetic concerns. Disease risk is another reason that frequently precludes returning introduced populations back to their native range. Another stakeholder proposal called for an active eradication program for pikeminnow. ODFW believes that the Jump off Joe Creek proposal of removal is a better approach, with monitoring over time to see if this type of work can be effective.

4. Lower Jump off Joe Creek non-local minnow survey and removal.

Rationale:

ODFW plans a summer survey and collection of non-local minnows on lower Jump Off Joe Creek. The ratio of pikeminnows to shiners will be monitored, and minnows collected within the survey reach will be destroyed. Based on findings in a June 2019 survey to scope this project, redbreast shiners are present in large numbers in lower Jump off Joe Creek and constitute the primary target for removal in this subbasin. This could be expanded to other streams through ODFW's STEP program.

This project is focused on active removal. If minnow abundance does not decrease and native fish abundance increase, this work will be dropped. ODFW will add the collection of water temperatures to the project. While we do not propose additional riparian restoration in this project, Jumpoff Joe has been the site of planting by the watershed council, and many of these trees should be over 10 years old and above blackberry dominance now.

5. Raft electrofishing for pikeminnow removal on the lower Applegate River.

Rationale:

ODFW considers this a "test" or pilot project. The results will provide insight into the abundance of pikeminnow in the Applegate River. ODFW currently collects data on all fish species, including pikeminnow, during summer snorkel surveys and STEP fish surveys. Because current funding is not sufficient to fund all proposals listed in the Research and Monitoring section, ODFW does not plan a specific survey of pikeminnow in all tributaries. In the plan, ODFW will summarize pikeminnow presence from fish surveys in the last five years.

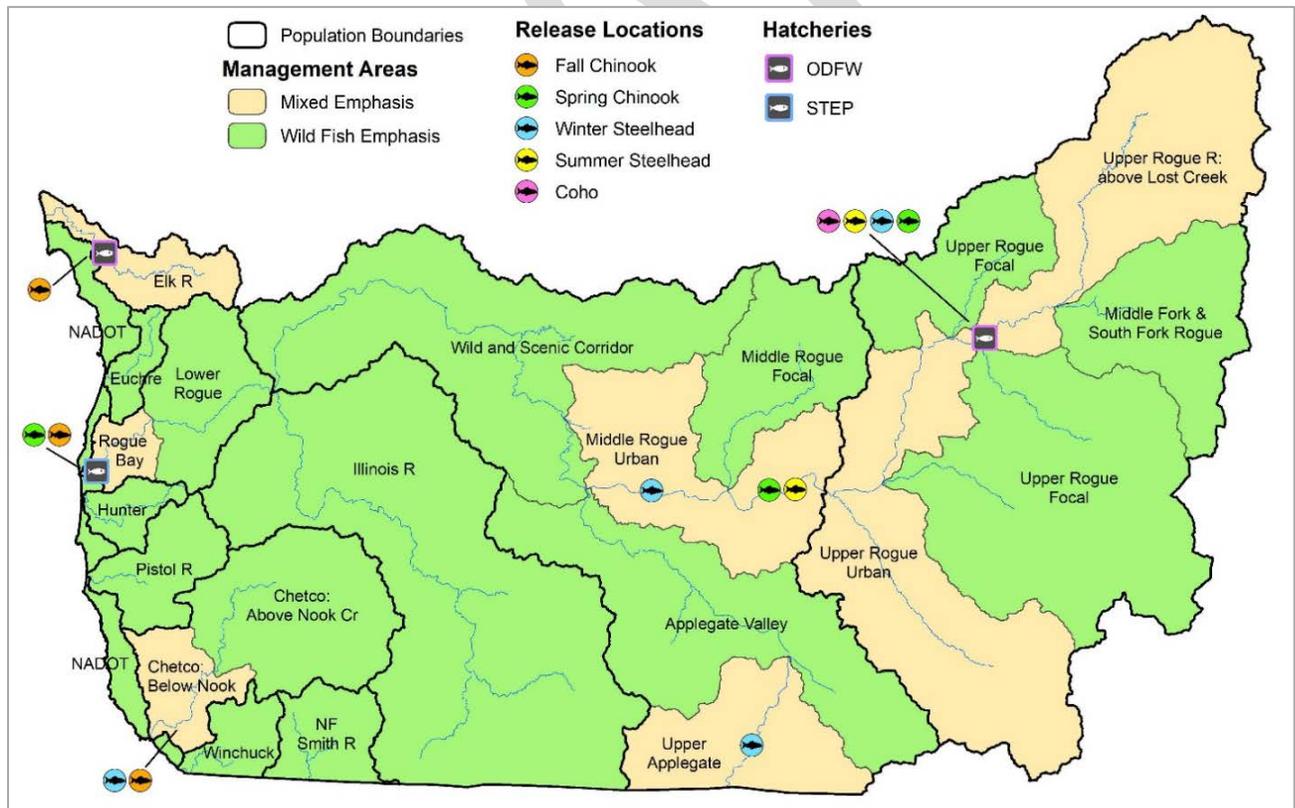
Note: ODFW will discuss beavers in more detail in the habitat section of the plan, including: data on beaver presence from habitat surveys; ODFW's proposal for beaver emphasis areas in specific watersheds; and helping landowners learn to live with beavers.

II. Hatchery Strategies and Actions

A. Designate Wild Fish and Mixed Emphasis Areas

Proposed Action:

1. **Indicate where hatchery fish will (Mixed Emphasis Areas = MEA) and will not (Wild Fish Emphasis Areas = WFEA) be stocked (see map below)**
 - a. Management areas are composed of one or more 5th field Hydrologic Units (federal watershed classification system), except where these do not align with population boundaries
 - b. Commission action will be required to add a hatchery program to a Wild Fish Emphasis Area or remove a hatchery program from a Mixed Emphasis Area
 - c. MEAs may have higher pHOS, but will be managed to maintain population-scale pHOS below 10% (see Hatchery Proposal 2 below)
 - i. For the Chetco River MEA, winter steelhead pHOS will be monitored on a yearly basis and managed at $\leq 15\%$. Monitoring will be conducted in SF Chetco, Emily Creek, and NF Chetco.
 - ii. Elk River is listed as an MEA due to hatchery Chinook salmon releases; pHOS limits are described in the CMP
 - d. temporally-limited, non-harvest hatchery programs (i.e., education, research, conservation/reintroduction programs) may occur in WFEAs



Rationale:

Designating areas where hatchery fish will and will not be stocked provides surety of management for both conservation and utilization interests. Designation of a WFEA does not imply that hatchery fish are absent. Instead, it indicates that an area will be managed to reduce risk from hatchery fish for all species by not having hatchery releases there.

ODFW emphasizes that all parts of the watershed within the range of the species in this plan are managed for natural production. This is accomplished through a variety of actions intended to either protect or restore habitat. Hatchery production is implemented for specific purposes consistent with native fish conservation.

B. Establish Hatchery Management Targets and Limits

Proposed Action:

- 1. Hatchery programs will be managed to meet smolt release targets in Table 1, as well as stay within limits and meet hatchery harvest/mitigation targets in Table 2.**

Table 1. Hatchery Smolt Program Overview and Proposed Changes								
Stratum	Population	Management Area	StW	StS	Coho	ChS	ChF	
Coastal Stratum	Elk	Elk R					275,000	
	Euchre	Euchre Cr						
	Hunter	Hunter Cr						
	Pistol	Pistol R						
	Chetco	Chetco R: below Nook Cr		50,000				200,000
		Chetco R: above Nook Cr						
	Winchuck	Winchuck R						
	NF Smith	NF Smith						
NADOTs	NADOTs							
Rogue Stratum	Lower Rogue	Rogue Bay				78,000	90,000	
		Lower Rogue						
	Illinois	Illinois R						
	Middle Rogue/ Applegate	Wild & Scenic Corridor						
		Middle Rogue Urban		20,000 to 35,000	37,000	25,000	91,000	
		Middle Rogue Focal						
		Applegate Valley						
	Upper Rogue	Upper Applegate		111,000 to 96,000*				
		Upper Rogue Urban		132,000	183,000	75,000	1,430,877	
		Upper Rogue Focal						
Upper Rogue R: above Lost Creek								
Middle Fork & South Fork Rogue								
		Total	313,000	220,000	75,000 to 100,000	1,599,877	565,000	

Highlighted Cells = Program change proposed (details follow)

*Number of smolts released. Additional release of pre-smolts above Applegate Dam will continue.

Table 2. Hatchery Management Targets and Limits

Stratum	Population	Winter Steelhead			Summer Steelhead			Coho Salmon		
		pHOS limit	Harvest target	Mitigation Target	pHOS limit	Harvest target	Mitigation Target	pHOS limit	Harvest target	Mitigation Target
South Coast	Elk R									
	Euchre Cr									
	Hunter Cr									
	Pistol R									
	Chetco R	10%	1,000	-	-	-	-	-	-	-
	Winchuck R									
Rogue	Lower Rogue R & Bay									
	Illinois R									
	M Rogue / Applegate	10%	-	2,000	10%	-	-	10%	-	-
	Upper Rogue R	10%	-	2,000	10%	-	500	10%	-	500

Rationale:

Population-scale pHOS limits in Table 2 are consistent with other salmon and steelhead conservation and recovery plans in Oregon, including the CMP. pHOS will be evaluated over a multi-year time frame as monitoring allows. New methods for evaluating interactions between wild and hatchery fish may be implemented in the future with metrics that complement or replace pHOS as an indicator of risk.

Rogue hatchery mitigation targets have been in place for several decades. Federal agency surveys dating to the 1950s provided supporting data, and the final targets were developed through an iterative process that included ODFW. An additional change happened in the 1990s, when production for summer steelhead at Cole Rivers Hatchery was increased by 70,000 smolts following a public process initiated by a Governor-appointed task force. In future work with the Corps, ODFW believes that best approach is focusing on the areas of biggest need: continued cooperation/collaboration on reservoir management to meet the Corps’ fishery enhancement obligation; hatchery renovation and repairs and improved spring chinook returns; and spawning gravel replenishment.

C. Chetco Winter Steelhead Acclimation

Proposed Action:

- 1. Establish an acclimation site on the lower Chetco River (downstream of Loeb State Park).**

Rationale:

An acclimation site would increase survival, possibly reduce straying, provide additional volunteer outreach, and improve catch rates. The acclimation site would be utilized for winter steelhead prior to release. Acclimation time frame would be February to early March.

D. Minimizing Risk From Rogue Mitigation Production

Proposed Actions:

- 1. Promote harvest of adipose fin-clipped rainbow trout in summer in the upper Rogue River.**
- 2. Survey for the relative abundance of hatchery steelhead in the upper Applegate in summer. If prevalent, promote angler harvest similar to upper Rogue.**
- 3. Genetically test hatchery steelhead in the upper Rogue to determine composition by run type (summer vs. winter steelhead) to inform broodstock collection protocols.**
- 4. Periodically collect wild winter steelhead broodstock in upper Rogue at locations other than the hatchery.**
- 5. Implement additional PHOS monitoring, including monitoring associated with steelhead smolt acclimation in the Middle Rogue (see Research and Monitoring proposals) .**

Rationale:

While many hatcheries in Oregon are operated to augment fisheries, Cole Rivers Hatchery is almost exclusively a mitigation hatchery. Hatchery production is described as the “restitution” portion of the Rogue Basin Project approved by Congress, as described by the Corps of Engineers. Hatchery fish are not considered a primary or secondary limiting factor for Rogue populations, but hatchery smolts may pose some risk to naturally produced juveniles through predation and competition.

As genetic techniques improve and funding is available, additional projects will be considered to continue efforts to simultaneously improve the hatchery product for anglers and minimize risk for wild fish. An example is projects is evaluating whether winter or summer steelhead smolts are residualizing in the upper Rogue, and investigating changes in the hatchery to reduce this behavior. Genetic testing of the hatchery steelhead broodstock may implemented as part of a broader review of genetics in multiple hatcheries for cost efficiency.

The effectiveness of angler caught brood is being evaluated by ODFW at the Hatchery Research Center. ODFW does not plan new programs on the Rogue until the results of the study are available, as they will help guide decisions about how to collect wild broodstock at locations other than Cole Rivers hatchery. Caution is needed to ensure that the hatchery stock maintains the life history of the upper Rogue and Applegate populations that the hatchery programs are intended to mitigate.

E. Increase Rogue Coho Release

Proposed Actions:

- 1. Increase release target from 75,000 to 100,000 smolts.**
- 2. Move a portion of the release (25,000 smolts) downstream.**

Rationale:

A larger smolt release will provide additional angling opportunities and improve wild coho population estimates without significantly increasing risk to wild coho salmon populations. Current methods for estimating wild coho salmon abundance in the Rogue basin depend on accurately determining the proportion of hatchery and wild fish passing the Huntley Park seining site. Low hatchery returns can

result in very low numbers of hatchery coho being captured at Huntley Park, reducing confidence in wild estimates. This has happened frequently in recent years since coho production at Cole Rivers Hatchery was shifted to spring Chinook. To reduce predation risk on naturally produced spring Chinook and other juvenile salmonids in the upper Rogue, the additional smolt production will be released in the Gold Hill area (as currently occurs with summer steelhead). Because they are spawned, incubated and reared at Cole Rivers Hatchery until smolting, coho released at Gold Hill are not expected to have a significantly higher stray rate than fish released directly from the hatchery.

F. Rogue Community Involvement Projects

Proposed Actions:

- 1. Continue winter steelhead hatchery smolt acclimation in Skunk Creek and Greens Creek.**

Rationale:

A portion of the Applegate winter steelhead production was diverted to acclimation releases in Grants Pass to increase angler harvest of the hatchery fish and help address fishery concerns in the middle Rogue. A project will be implemented to evaluate harvest and pHOS associated with middle Rogue acclimation sites.

- 2. Establish a new winter steelhead hatchery smolt acclimation in a tributary of Jump Off Joe Creek; shift 15,000 smolts from Applegate release to acclimation and release at Jumpoff Joe.**

Rationale:

If a suitable site can be found, an additional portion of the Applegate winter steelhead production is proposed to be diverted to acclimation releases in Jumpoff Joe Creek to increase angler harvest of the hatchery fish and help address fishery concerns in the middle Rogue. Requires approval by Corps of Engineers. A project will be implemented to evaluate harvest and pHOS associated with middle Rogue acclimation sites.

G. Hatchery Releases to Explore Restoration of Production Above Large Dams

Proposed Actions:

- 1. Continue releasing differentially marked winter steelhead pre-smolts upstream of Applegate Dam.**
- 2. Explore options for restoring production of summer steelhead upstream of Emigrant Dam.**

Rationale:

In a special project, ODFW plans to continue to release differentially marked winter steelhead presmolts upstream of Applegate Dam to evaluate expected returns from natural production in the habitat that remains upstream of the reservoir. Recaptures of marked half pounders at Huntley Park and marked adults at the Applegate trap several years later will provide data on survival rates that can be expected from restored natural production. A previous project found that hatchery smolts released above the dam are able to migrate downstream and return as half pounders and adults. ODFW

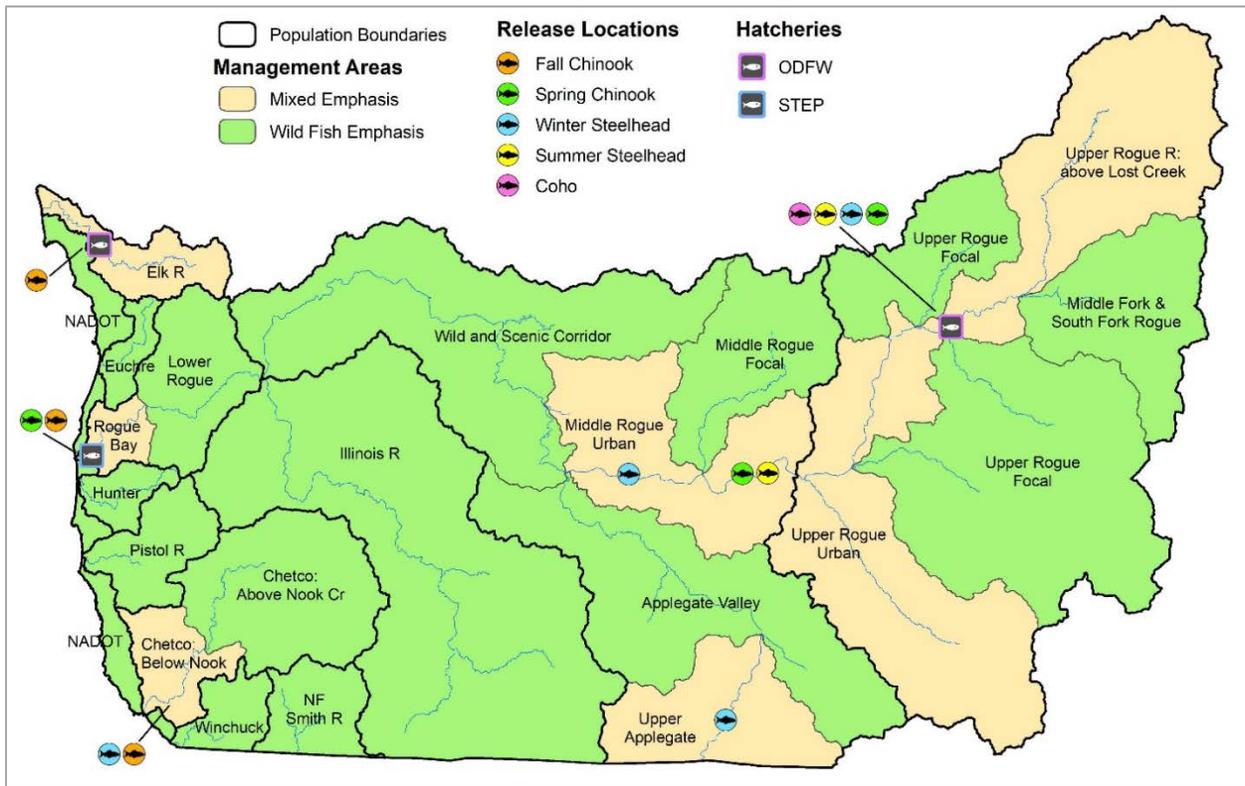
estimates that at least 30 miles of quality habitat remain available. Production of other native migratory fish species may be possible.

Pending resources and community interest and partnership, ODFW also plans to explore restoring production of summer steelhead upstream of Emigrant Lake and Dam. Many miles of habitat are believed to remain available for fish production.

These projects provide some ecological restoration benefits as well, in a small way restoring marine nutrients to tributaries isolated by dams for decades. Winter steelhead functioned as the keystone species in upper Applegate habitat historically; summer steelhead the keystone species in upper Emigrant Creek. Streams above dams may also be able to provide critically needed cold water habitat in response to climate scenarios.

DRAFT

III. Fishing Strategies and Actions



Wild Fishing Overview and Proposed Changes								
Stratum	Population	Management Area	StW	StS	Coho	CCT and/or Resident RBT	ChS	ChF
Coastal Stratum	Elk	Elk R	Retention	---	N	Retention	---	Retention*
	Euchre	Euchre Cr	Retention	---	N	Retention	---	N
	Hunter	Hunter Cr	Retention	---	N	Retention	---	Retention
	Pistol	Pistol R	Retention	---	N	Retention	---	Retention
	Chetco	Chetco R: below Nook Cr	Retention*	---	N	Retention	---	Retention*
		Chetco R: above Nook Cr	Retention	---	N	Retention	---	N
	Winchuck	Winchuck R	Retention	---	N	Retention	---	Retention
NF Smith	NF Smith	N	---	N	Retention	---	N	
NADOTs	NADOTs	N	---	N	N	---	N	
Rogue Stratum	Lower Rogue	Rogue Bay	Retention*	N*	N*	N	Retention*	Retention*
		Lower Rogue	Retention*	N*	N*	N	Retention*	Retention
	Illinois	Illinois R	Retention	---	N	N	---	N
	Middle Rogue/ Applegate	Wild & Scenic Corridor	Retention*	N*	N*	N	Retention*	Retention
		Middle Rogue Urban	Retention*	N*	N*	N	Retention*	Retention
		Middle Rogue Focal	N	N	N	N	---	N
		Applegate Valley	N*	N	N	N	---	N
		Upper Applegate	N*	N	N	N	---	N
	Upper Rogue	Upper Rogue Urban	Retention*	N*	N*	N	Retention*	Retention
		Upper Rogue Focal	N	N	N	N	N	N
Upper Rogue R: above Lost Creek		---	---	---	Retention	---	---	
Middle Fork & South Fork Rogue		---	---	---	Retention	---	---	

Retention = wild harvest allowed in some portion of the management area (generally only in mainstem rivers)
 N = no retention of wild fish, but angling may be allowed (catch-and-release, hatchery harvest, or other species)
 --- = species not present in the Management Area
 * = hatchery fish available for harvest
 Highlighted Cells = Fishery change proposed (details follow)

A. Winter Steelhead Fishing

Proposed Actions:

1. Implement mandatory reporting and improved fishery data.

- a. *Steelhead Endorsement* required for all anglers fishing for winter steelhead in open areas from the Sixes River to the Winchuck River, including the Rogue basin; cost for endorsement minimal (\$2 for residents, \$4 for non-residents)
- b. *Wild Steelhead Harvest Card* can be purchased (cost \$10 for residents, \$20 for non-residents) with *Steelhead Endorsement*; card required for all anglers (resident and non-resident, annual and daily) if harvesting wild steelhead (only one wild harvest card for the year provided to daily license holders)
- c. Anglers selecting paper tagging would be required to return *Wild Steelhead Harvest Card* before purchasing endorsement/card the following year. ODFW will seek to implement online reporting options to facilitate reporting.
- d. Current wild harvest opportunity on some streams would be changed to begin on January 1st (February 1st for Rogue River above Hog Cr Boat Ramp) to ensure that ODFW receives harvest data prior to following season and to facilitate enforcement
- e. Net proceeds dedicated to RSP monitoring

Rationale:

Accurate data on steelhead harvest, particularly in smaller basins, requires mandatory reporting, which can be implemented most effectively with a new, separate harvest card for wild steelhead. With a separate *Wild Steelhead Harvest Card*, anglers could be required to return the tag prior to purchasing a tag the following year. This mechanism cannot be used with the Combined Angling Tag because most anglers do not return their tag until after the calendar year is over (coastal fisheries for fall Chinook and steelhead are active throughout December), and many anglers purchase their license and tags for the upcoming year prior to January 1. Implementing a new *Wild Steelhead Harvest Card* and changing the start date for winter steelhead fisheries to January 1 would allow for a mid-year reporting deadline for *Wild Steelhead Harvest Card* while allowing anglers to continue to use the Combined Angling Tag through the end of the year. **The *Wild Steelhead Harvest Card* would also ensure that anglers purchasing daily or multi-day licenses comply with annual bag limits.**

The purpose of implementing a *Steelhead Endorsement* in combination with the *Wild Steelhead Harvest Card* is to gain insight into total angler participation in the fishery, including catch-and-release-only anglers. A nominal fee for the *Steelhead Endorsement* would result in better information about fishery participation (compared to offering it for free), help cover costs of implementation, and potentially generate net proceeds for monitoring.

2. Maintain opportunity and be responsive to steelhead population fluctuations.

a. Manage wild steelhead harvest through a sliding scale with following tiers and sub-bag limits:

Sliding Scale Tier	Proportion of Time in Tier*	Bag Limit
High	~15%	<u>Elk, Pistol, Chetco, Winchuck, Rogue, Illinois:</u> 1 fish per day/5 fish per year <u>Euchre, Hunter:</u> 1 fish per day/1 fish per year
Medium**	~60%	<u>Elk, Pistol, Chetco, Winchuck, Rogue, Illinois:</u> 1 fish per day/3 fish per year <u>Euchre, Hunter:</u> 1 fish per day/1 fish per year
Low	~25%	All: Catch & Release

*based on stratum-specific criteria in tables below for 2005-2020 return years, which would remain the baseline into the future

**permanent regulation; high and low tiers implemented as temporary rules

Winter Steelhead Monitoring Overview:

Population	Proposed Monitoring (bold = new monitoring)
<i>Sixes (covered by CMP)</i>	<i>Stratum-level spawning surveys (see CMP); Population-scale abundance and harvest monitoring in 2020; additional years contingent on funding</i>
Elk, Euchre, Hunter, Pistol, Winchuck	South Coast Stratum juvenile steelhead (Age-1+) surveys; Rotating adult abundance estimates (spawning surveys)
Chetco	South Coast Stratum juvenile steelhead (Age-1+) surveys; Annual pHOS monitoring; Sonar counting station; Creel survey
Lower Rogue, Illinois, Middle Rogue/Applegate	Huntley Park Half-Pounder Count; Creel survey
Upper Rogue	Huntley Park Half-Pounder Count; Annual monitoring in Upper Rogue with spawning surveys and adult fish trap

b. Implement sliding scale in South Coast Stratum and Rogue Stratum separately using criteria that will be updated as new monitoring information becomes available. Current criteria (see tables below) identify the sliding scale tier approximately 2 years in advance of the angling regulation change. The change would be implemented through emergency rule changes, not a change in the angling regulation synopsis. Sliding scale tiers for the two strata were the same in 13 of 16 years from 2005-2020.

Sliding Scale Metrics and Thresholds:

South Coast Stratum		Marine Indicator <i>Rogue Hatchery Half-Pounder Return Rate (Return Year – 2)</i>		
		Return Rate ≤ 4%	4% < Return Rate < 12%	Return Rate ≥ 12%
Juvenile Abundance <i>Steelhead parr (age-1+) abundance index based on surveys in wadeable streams in South Coast Stratum (Return Year – 3)</i>	Index ≤ 40,000	Low Tier	Low Tier	Low Tier
	40,000 < Index < 80,000	Low Tier	Medium Tier	Medium Tier
	Index ≥ 80,000	Medium Tier	Medium Tier	High Tier

Rogue Stratum		Wild Half Pounders <i>Huntley <u>Unexpanded</u> Count (Average of Return Year – 2 and Return Year – 3)</i>		
		Count ≤ 400	400 < Count < 1,200	Count ≥ 1,200
		Low Tier	Medium Tier	High Tier

- c. Sliding scale criteria establish a baseline for managing harvest based on recent conditions. Directional change in freshwater or ocean conditions, particularly due to climate change, may alter the proportion of time in each tier. Future updates to improve the sliding scale will strive to maintain the baseline established by current criteria
- d. Consider additional, undefined harvest actions if either Desired Status (additional opportunity) or Conservation Status (additional restrictions) are met for individual monitoring units
- e. Site-specific modification of angling regulations will be implemented to address conservation or fishing needs, including relative to population health, environmental conditions, site-specific angling practices, and others. This includes any feasible regulation changes, such as adjusting open locations or season, gear, size limits, or other angling regulations
- f. 5 years after implementing *Steelhead Endorsement*, *Wild Steelhead Harvest Card*, and proposed wild steelhead adult monitoring, evaluate fishery impacts and adjust sliding scale harvest framework through a public process if average harvest exceeds 15% for any population or monitored unit; adjustment of harvest framework can include revising the sliding scale bag limits, implementing harvest or catch quotas/limits, limiting harvest tags or endorsements, managing in-season based on CPUE, or other approaches

Rationale:

Based on current status assessment results, winter steelhead can and have supported limited wild harvest in southwest Oregon rivers. Winter steelhead harvest management needs to account for uncertainty in adult spawner abundance, particularly in smaller basins, and be responsive to poor returns due to ocean conditions and/or deteriorating freshwater conditions (i.e., climate change). Sliding scale bag limits are the most feasible short-term approach for maintaining opportunity and providing additional protections when population metrics indicate they are needed. As improved harvest and population monitoring data becomes available, other methods for managing harvest may be preferable and would be implemented through a public process.

The most recent adult abundance and harvest rate data available for RSP basins, collected when a 1 fish per day/5 fish per year bag limit was in effect, indicate that average harvest rates were at or below 15% in all populations (see Meeting #2 Packet, pages 24-25). Monitoring results from the 2019-20 Sixes River winter steelhead fishery (season ended on March 31, 2020; final report in preparation) are consistent with assumptions about wild steelhead abundance and harvest rates in the Meeting #2 Packet. The estimated number of wild steelhead spawners (post-harvest) in the Sixes River basin in 2020 was 1,779 fish. Spawning surveys ended on April 21, 2020, before all steelhead spawning activity ended, so this is a minimum estimate. Wild winter steelhead harvest was estimated at 111 fish based on creel surveys, a harvest rate of 6%. Creel surveys indicated that an additional 168 wild steelhead were caught and released in the fishery. Creel surveys ended two weeks before the end of the season due the COVID-19 outbreak and some additional harvest may have occurred, but fishery participation appeared to be quite low during this time.

ODFW has received comments that population estimates in the Meeting #2 Packet significantly underestimate spawner abundance, particularly in the Rogue basin (Tom Satterthwaite, personal communication). As noted in the packet, there is uncertainty associated with the spawning survey estimates and average spawner abundance in the Rogue basin is likely considerably higher than the value reported in the table (2005-2009 included several years with **lower** returns). As one stakeholder commented, this could indicate that data in the table overestimates harvest impacts.

Furthermore, changing the start date for wild steelhead harvest to January 1st to implement mandatory reporting would reduce wild harvest to some degree in all coastal streams. The largest effect would be in the Chetco River, where the change would reduce harvest by nearly 20% based on past harvest card returns. The change helps ensure that fishery impacts on the coastal streams remain below 15%.

B. Coho Salmon Fishing

Proposed Actions:

- 1. ODFW will begin a process working collaboratively with NOAA to identify a framework that would allow a limited opportunity for wild coho harvest.**

Rationale:

Wild coho salmon could support limited harvest in high abundance years if status improves. This opportunity would require a forecast to be developed and would have to be consistent with progress toward Desired Status. Current population monitoring and hatchery returns could be combined with ocean indicators to forecast returns. Harvest caps would account for expected hooking mortality during the current mark selective fishery in the estuary.

C. Summer Steelhead

No changes in harvest regulations are proposed for wild summer steelhead in the Rogue basin.

D. Cutthroat Trout

No changes in harvest regulations are proposed for coastal cutthroat trout.