

Truncated Implementation schedule for the SONCC Coho ESU

HSA	TASK	TASK	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
PRIORITY	LEVEL	NUMBER				
ROGUE RIVER AND WINCHUCK RIVER HUS						
Winchuck River HSA						
5	E	WR-SF-01	Develop a short-term plan to increase LWD until natural recruitment can be restored.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, USFS, County, Watershed Groups	Interim	WR-SF-01
5	D	WR-SF-02	Implement the short-term plan to increase LWD.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, USFS, County, Watershed Groups	Interim/ Continual	WR-SF-01b
5	E	WR-SF-03	Develop a long-term plan to restore a mature coniferous riparian zone to South Fork Winchuck River.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, County, Watershed Groups	Interim	WR-SF-02
5	D	WR-SF-04	Implement the long-term plan to restore a mature coniferous riparian zone to South Fork Winchuck River.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, County, Watershed Groups	Long-term	WR-SF-02b
5	E	WR-SF-05	Assess sources of sediment and prioritize treatment areas.	Potential Lead: CDFG, NCRWQCB Others: CDF, CCC, NOAA Fisheries, Landowners, County, Watershed Groups	Interim/ Continual	WR-SF-03
5	D	WR-SF-06	Prioritize and treat sources of sediment.	Potential Lead: CDFG, NCRWQCB Others: CDF, CCC, NOAA Fisheries, Landowners, County, Watershed Groups	Long-term	WR-SF-03b
SMITH RIVER HU						
	E	SR-HU-03	Assess and prioritize barriers and impediments to passage (including water diversions), especially those on smaller tributaries, including Cedar, Clarks, Morrison, Peacock, Sultan, and Little Mill creeks.	Potential Lead: USFS, DPR, RNSP Others: NOAA Fisheries, Caltrans, County, CDFG, CDF, Private Landowners	Interim/ Ongoing	SR-HU-02
	E	SR-HU-05	Develop a plan to restore the effectiveness and use of off-channel areas, sloughs, and wetlands	Potential Lead: CDFG Others: NOAA Fisheries, USACE, California Coastal Commission, DPR, County	Interim	SR-HU-03

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Wilson Creek HSA						
5	E	SR-WC-01	Develop a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: Private Landowners Others: CDF, CDFG, NPS, NOAA Fisheries	Interim/ Ongoing	SR-WC-01

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5	D	SR-WC-02	Implement a short-term plan to add LWD and a long-term plan to promote recruitment of LWD.	Potential Lead: Private Landowners Others: CDF, CDFG, NPS, NOAA Fisheries	Interim/ Continual	SR-WC-01b
5	D	SR-WC-03	Increase connectivity of riparian habitat through fencing and planting.	Potential Lead: Landowners Others: CDF, CDFG, Caltrans	Interim	SR-WC-02
5	D	SR-WC-04	Implement the plan to increase connectivity of riparian habitat through fencing and planting.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim	SR-WC-02b
5	D	SR-WC-05	Assess and prioritize the sources of sediment.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim/ Ongoing	SR-WC-03
5	D	SR-WC-06	Prioritize and treat the sources of sediment.	Potential Lead: Private Landowners Others: CDF, CDFG	Interim/ Ongoing	SR-WC-03b
KLAMATH RIVER HU						
	E	KR-HU-02	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage.	Potential Lead: CDFG Others: RWQCB, NOAA Fisheries, USFS, Yurok Tribe, CDF, Caltrans, Private Landowners	Interim	KR-HU-03
	E	KR-HU-05	Complete comprehensive flow study activities (e.g., Hardy Phase II) and use them to educate water managers on how to reduce impacts to coho salmon.	Potential Lead: BIA, USFWS Others: NOAA Fisheries, CDFG	Interim	KR-HU-08
	E	KR-HU-08	Improve water quality coming into the Klamath River mainstem from the Upper Klamath Basin through ongoing efforts.	Potential Lead: CDFG Others: USBR, USFWS, NOAA Fisheries	Interim/ Ongoing	KR-HU-10
	E	KR-HU-13	Develop a plan to address water quality and quantity in Klamath River tributaries that exacerbate mainstem water quality problems.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Private Landowners	Interim/ Ongoing	KR-HU-15
	E	KR-HU-15	Assess hatchery operations in terms of coho salmon recovery in accordance with the policies and guidelines included in this document.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS, USBR	Interim	KR-HU-16
	E	KR-HU-16	Continue disease monitoring of juvenile salmon emigration in the Klamath River mainstem so that major disease outbreaks can be identified and their causes evaluated.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS	Interim/ Ongoing	KR-HU-17
	E	KR-HU-17	Conduct disease monitoring of migrating adult Chinook and coho salmon during fall migration.	Potential Lead: CDFG Others: NOAA Fisheries, USFWS, USBR	Interim/ Continual	KR-HU-18

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
KLAMATH RIVER HU (continued)						
Klamath Glen HSA						
5	E	KR-KG-01	Resume estuary investigations to better understand the estuary's role in the survival of Klamath Basin River coho salmon.	Potential Lead: CDFG Others: NOAA Fisheries, Yurok Tribe, Coastal Commission, NPS	Interim/ Ongoing	KR-KG-01
5	D	KR-KG-02	Develop a plan to restore off-channel estuarine, wetland, and slough habitat in the Klamath River estuary and adjoining lower tributary reaches that includes: a. Determining if key properties, conservation easements, or development rights need to be purchased and the work with willing landowners; and b. Determining the need and installation of livestock exclusion fencing to protect restored areas.	Potential Lead: CDFG Others: Yurok Tribe, Private Landowners	Interim	KR-KG-02
5	D	KR-KG-03	Implement the plan to restore off-channel estuarine, wetland, and slough habitat in the Klamath River estuary and adjoining lower tributary reaches	Potential Lead: CDFG Others: Yurok Tribe, Private Landowners	Interim	KR-KG-02
5	D	KR-KG-04	Develop a plan to maintain Blue Creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River. The plan should emphasize that: Sediments from upslope activities do not impact the refugia; a. Upslope stabilization and restoration activities continue, including road assessment and treatment; b. In-channel and riparian restoration efforts (target riparian retention efforts) continue; and c. Feral cattle are removed.	Potential Lead: Yurok Tribe Others: Simpson, USFS, NOAA Fisheries, CDFG, USFWS	Interim/ Ongoing	KR-KG-03
5	D	KR-KG-05	Implement the plan to maintain Blue creek watershed tributaries as key thermal refugia for their cool water contributions to the mainstem Klamath River.	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-03b

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Klamath Glen HSA (continued)						
5	D	KR-KG-06	Develop a plan to protect and restore Klamath River mainstem tributaries, even those that do not support populations of coho salmon but that provide cool water and which improve mainstem Klamath water quality, particularly during warm summer months. Plan should emphasize the: a. Protection and/or restoration of riparian habitat; b. Stabilization of upslope areas to prevent sedimentation and aggradation of tributaries at their mouths; and c. Improvement of Federal land management activities to reduce impacts to riparian corridors and decrease sediment loads. d. Finalize and/or refine the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) that focuses on the tributaries to the Lower Klamath within the Klamath Glen HSA.	Potential Lead: Yurok Tribe Others: Simpson, USFS, NOAA Fisheries, RWQCB, Yurok Tribe, Hoopa Valley Tribe, USFWS	Interim/ Ongoing	KR-KG-04
5	D	KR-KG-07	Finalize and Implement the Lower Klamath Sub-Basin Watershed Restoration Plan (Gale and Randolph 2000) to protect and restore Klamath River mainstem tributaries.	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-04b
5	D	KR-KG-08	Reduce sediment input from upslope sources, including activities such as: a. Decommissioning skidtrails and unmaintained roads, where possible; b. Upgrading roads and maintenance practices; c. Stabilizing slopes to minimize or prevent erosion and to minimize future risk of eroded material entering streams, and d. Minimizing alteration of natural hillslope drainage patterns.	Potential Lead: Yurok Tribe, Simpson Others: USFS, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-05
5	E	KR-KG-09	Review existing inventory and assessment of barriers (Gale 2003) and prioritize barriers impeding migration of adult and juvenile coho salmon throughout the Lower Klamath River tributaries.	Potential Lead: Yurok Tribe Others: Simpson, Del Norte County, Caltrans, CDFG, CCC, SCC	Interim/ Ongoing	KR-KG-06
5	D	KR-KG-10	Treat prioritized barriers impeding migration of adult and juvenile coho salmon throughout the Lower Klamath River tributaries.	Potential Lead: CDFG Others: County, Tribes, NOAA Fisheries, USFWS, Landowners, Caltrans	Interim/ Ongoing	KR-KG-06a
5	D	KR-KG-11	Investigate temporal and spatial magnitude of tributary deltas and seasonal subsurface flow reaches to determine impacts to juvenile and adult coho migration and to quantify seasonal loss of lower tributary habitat. Investigation should include assessment of long-term delta size trends, annual variation in coho salmon access periodicity by tributary, quantification of seasonal habitat loss and fish stranding, and the relation of delta and subsurface flow formation to upslope erosion, river and tributary flow, mainstem bedload deposition and other causative factors.	Potential Lead: Yurok Tribe Others: Simpson, CDFG, CCC	Long-term	KR-KG-06b

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Klamath Glen HSA (continued)						
5	D	KR-KG-12	Conduct feasibility study to re-establish adult coho salmon passage above major barriers in lower Roaches and Tully creeks and the Middle and North Forks of Ah Pah Creek.	Potential Lead: CDFG, Yurok Tribe Others: Simpson, CCC, NOAA Fisheries	Interim	KR-KG-06c
5	D	KR-KG-13	Treat sediment sources and improve riparian and instream habitat conditions to provide adequate and stable spawning and rearing areas for coho salmon.	Potential Lead: Yurok Tribe, Simpson, CCC Others: USFS, CDFG, SCC	Interim/ Ongoing	KR-KG-07
5	D	KR-KG-14	Develop a plan to restore in-channel and riparian habitat in tributaries to address: a. Revegetating riparian zones with native species (e.g., conifers) to stabilize stream banks and promote a long-term supply of LWD; b. Providing adequate protection from development, grazing, etc; and c. Relocating roads out of riparian areas when feasible.	Potential Lead: Yurok Tribe, CDFG Others: Landowners, CCC, CDF, SCC, NOAA Fisheries	Interim/ Continual	KR-KG-08
5	D	KR-KG-15	Implement the plan to restore in-channel and riparian habitat in tributaries.	Potential Lead: Yurok Tribe, Simpson, CCC Others: NOAA Fisheries, CDFG, CDF, SCC, Landowners	Interim/ Continual	KR-KG-08b
5	D	KR-KG-16	Develop a plan to provide suitable accumulations of woody cover in slow-velocity habitats for coho salmon winter rearing on a short-term basis by placing wood in needed areas until natural supplies become available.	Potential Lead: CDFG Others: Tribes, Landowners, USFS	Interim	KR-KG-09
5	D	KR-KG-17	Implement the plan to provide suitable accumulations of woody cover in slow-velocity habitats for coho salmon winter rearing on a short-term basis by placing wood in needed areas until natural supplies become available.	Potential Lead: CDFG Others: Tribes, Landowners, USFS	Interim	KR-KG-09b
5	D	KR-KG-23	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through planting and release of conifers, and control of alders, blackberries, and other competitors; and d. Provide technical support as an incentive for landowners.	Potential Lead: CDFG Others: USFS, NOAA Fisheries, Yurok Tribe, CDF, Landowners	Interim/ Ongoing	KR-KG-13

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Klamath Glen HSA (continued)						
5	D	KR-KG-24	Provide technical and financial support to implement riparian restoration throughout alluvial reaches in lower Blue, Terwer, Hunter and Salt creeks.	Potential Lead: CDFG Others: Landowners, CCC, Yurok Tribe	Interim/ Continual	KR-KG-14
5	E	KR-KG-27	Support continued implementation of the Coho Salmon Regional Abundance Inventory throughout the lower Klamath River subbasin.	Potential Lead: CDFG	Interim/ Ongoing	KR-KG-18
Hornbrook HSA						
4	D	KR-HB-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HB-02
4	E	KR-HB-03	Improve coho salmon passage at stream and road crossings, including measures to: a. Replace culverts on both the USFS and Caltrans roads with structures allowing coho salmon passage; b. Treat coho salmon passage problems associated with the USFS roads; c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.	Potential Lead: CDFG Others: USFS, Caltrans	Interim/ Ongoing	KR-HB-03
4	D	KR-HB-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors; and d. Incentives to landowners, such as technical support.	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-HB-05

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Hornbrook HSA (continued)						
4	E	KR-HB-05	Study the likely benefits to instream flow of increasing the efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet actions that are given a high priority.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-HB-09
4	E	KR-HB-06	Identify water diverters; request that the SWRCB review and/or modify water use based on the needs of coho salmon and authorized diverters.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	KR-HB-10
Iron Gate HSA						
4	D	KR-IG-01	Develop a plan to protect and restore tributaries, even those that do not support populations of coho salmon that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months. The plan should: a. Improve land management to reduce impacts to riparian corridors, reduce sediment loads, and protect water resources; b. Request that the SWRCB review existing water appropriations for compliance; c. Petition the SWRCB to designate streams with critical summer flows as fully appropriated streams during the appropriate period; and d. Provide measures that reduce hydrologic connectivity between streams and roads where feasible.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-01
4	D	KR-IG-02	Implement the plan to protect and restore tributaries, even those that do not support populations of coho salmon, that provide cool water, improve mainstem Klamath River water quality, and provide thermal refugia for coho salmon, particularly during warm summer months.	Potential Lead: USFS Others: NOAA Fisheries, RWQCB, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-02
4	E	KR-IG-03	Improve coho salmon passage at stream and road crossings, including measures to: a. Replace culverts on both USFS and Caltrans roads with structures allowing coho salmon passage; b. Treat coho salmon passage problems associated with the USFS roads; c. Prioritize crossings for upgrade to accommodate 100-year storm runoff and associated bedload and debris; and d. Encourage the USFS, County and State agencies to provide adequate budgets basin-wide for road maintenance and upgrades.	Potential Lead: USFS, Caltrans Others: CDFG,	Interim/ Ongoing	KR-IG-03

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Iron Gate HSA (continued)						
4	D	KR-IG-04	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: <ul style="list-style-type: none"> a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through plantings, release of conifers, and control of alders, blackberries, and other competitors; and d. Incentives to landowners, such as technical support. 	Potential Lead: USFS Others: NOAA Fisheries, CDFG, CDF, Landowners	Interim/ Ongoing	KR-IG-05
4	E	KR-IG-05	Study the likely benefits to instream flow of increasing the efficiency of water diversions and delivery systems where feasible and appropriate. Provide funding and incentives to landowners where necessary to meet actions that are given a high priority.	Potential Lead: SWRCB Others: CDFG, DWR	Interim	KR-IG-09
TRINITY RIVER HU						
	E	TR-HU-01	Implement the Trinity River Record of Decision (ROD), which would provide: <ul style="list-style-type: none"> a. Variable annual instream flows for the Trinity River from the Trinity River Dam (TRD) based on forecasted hydrology for the Trinity River Basin as of April 1st of each year, ranging from 369,000 acre-feet in critically dry years to 815,000 af in extremely wet years; b. Physical channel rehabilitation, including the removal of riparian berms and the establishment of side-channel habitat; c. Sediment management, including the supplementation of spawning gravels below the TRD and reduction in fine sediments which degrade coho salmon habitats; d. Watershed restoration efforts, addressing negative impacts which have resulted from land use practices in the Basin; and e. Infrastructure improvements or modifications, including rebuilding or fortifying bridges and addressing other structures affected by the peak instream flows provided by the ROD. 	Potential Lead: USBR Others: USFS, NOAA Fisheries, USFWS, CDFG	Interim	TR-HU-01

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Douglas City HSA						
5	E	TR-DC-02	Restore coho salmon passage and instillation of screens to Department-NOAA Fisheries standards. Provide incentives to landowners when necessary to reach this goal.	Potential Lead: CDFG Others: SWRCB, NOAA Fisheries	Interim	TR-DC-01
5	D	TR-DC-03	Increase riparian function in lower Reading, Indian, Browns creeks with conservation easements or landowner incentives that reduce agricultural and grazing impacts.	Potential Lead: CDFG Others: RCD, Landowners	Interim/ Ongoing	TR-DC-02
5	D	TR-DC-04	Implement sediment reduction plans consistent with County plans and policies.	Potential Lead: CDFG Others: RCD, County, Landowners	Interim/ Ongoing	TR-DC-03
MAD RIVER HU						
	E	MR-HU-03	Work with landowners and other entities to: a. Protect existing LWD recruitment potential through the retention of mature coniferous trees in the riparian zone; b. Establish adequate streamside buffer areas; c. Increase the amount of in-channel LWD; d. Continue to review THPs; and e. Continue riparian management projects.	Potential Lead: CDFG Others: CCC, CDF, Landowners, NOAA Fisheries, County, Watershed Groups	Interim/ Continual	MR-HU-03
	E	MR-HU-07	Assess barriers to coho salmon passage, prioritize barriers for removal, and develop a plan to treat the barriers, with Warren Creek given a high priority for treatment.	Potential Lead: CDFG Others: Caltrans, Landowner, County, NOAA Fisheries	Interim	MR-HU-07
	E	MR-HU-08	Develop a plan to restore and maintain tributary and mainstem habitat connectivity where low flow or sediment aggradation is restricting coho salmon passage. This is a known problem at Cañon Creek, Dry Creek, and North Fork Mad River. The plan should: a. Evaluate management techniques; b. Implement the identified strategy; and c. Address permitting complexity for identified implementation measures.	Potential Lead: CDFG, NOAA Fisheries, Landowners	Long-term	MR-HU-08
	E	MR-HU-13	Encourage Federal, State, and county agencies and private landowners to reduce impacts to coho salmon habitat from public and private road systems.	Potential Lead: CDFG Others: USFS, CDF, Caltrans, County, Landowners	Interim	MR-HU-1

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Butler Valley HSA						
5	D	MR-BV-01	Establish adequate streamside buffer areas to promote appropriate water temperatures for coho salmon.	Potential Lead: Humboldt County, Landowners Others: CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-01
5	E	MR-BV-04	Assess and prioritize the road-related sources of input of fine and coarse sediments into streams.	Potential Lead: Humboldt County, Landowners, CDFG, NOAA Fisheries, CDF	Interim	MR-BV-02
5	D	MR-BV-05	Address priority sources of fine and coarse sediments into streams.	Potential Lead: Humboldt County, Landowners Others: CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-02b
5	E	MR-BV-07	Identify and prioritize culverts that are passage barriers to suitable habitat for juvenile or adult coho salmon.	Potential Lead: Humboldt County, Caltrans, Landowners Others: CDF, CDFG, NOAA Fisheries	Interim	MR-BV-03
5	D	MR-BV-08	Upgrade prioritized culverts that to allow access to suitable habitat for juvenile or adult coho salmon.	Potential Lead: Humboldt County, Caltrans, Landowners Others: CDF, CDFG, NOAA Fisheries	Long-term	MR-BV-03b
REDWOOD CREEK HU						
	E	RC-HU-01	Work with Redwood National and State Parks (RNSP), private landowners, and interested parties to improve habitat conditions of the estuary while protecting Highway 101 and the Town of Orick. These plans should aim toward restoring the historic form and function of the estuary/lagoon and slough channels, riparian forests, and adjacent wetlands. This includes providing for: a. Unconfined channels by modifying levees; b. Restoration of riparian vegetation, tree cover, wetlands, and off-channel and rearing habitat; c. Increased sediment transport, pool depth, and LWD; d. Restoring natural drainage patterns from adjacent wetlands; and e. Improving the conditions of sloughs and tributaries to the estuary (Strawberry, Dorrance and Sand Cache creeks).	Potential Lead: RNSP, USACE, County Others: RNSP, CDF, NOAA Fisheries, Landowners, County, CCC, Watershed Groups, Coastal Conservancy, CDFG	Interim	RC-HU-01
	E	RC-HU-03	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; b. Management to promote conifer recruitment; c. Improvement of existing riparian zones through plantings, release of small, suppressed conifers, and where appropriate, control of alders, blackberries, and other competitors; and d. Incentives to landowners, such as funding and technical support.	Potential Lead: CDFG Others: CCC, CDF, NOAA Fisheries, Landowners, RNSP, County, Watershed Groups	Interim	RC-HU-03
REDWOOD CREEK HU (continued)						
	E	RC-HU-06	Develop measures to protect existing LWD recruitment potential	Potential Lead: CDFG	Interim	RC-HU-05

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			through retention of mature trees in the riparian zone, establishing adequate near stream buffer areas protected from vegetation removal, and increasing the amount of in-channel LWD (Root wads should be left on LWD).	Others: CCC, CDF, NOAA Fisheries, Landowners, RNSP, County, Watershed Groups		
	E	RC-HU-08	Coordinate a long-term, concerted effort between land owners, interested parties, and responsible agencies to determine the current population size and trends of coho salmon of Redwood Creek.	Potential Lead: RNSP, CDFG Others: NOAA Fisheries, USFWS, Landowners	Interim/ Ongoing	RC-HU-06
TRINIDAD HU						
	E	TP-HU-01	Assess and prioritize sediment sources, particularly roads that have not been assessed, and acknowledge progress that has been made in addressing sediment sources.	Potential Lead: County, Landowners, Caltrans Others: CDF, CDFG, CCC, NCRWQCB, Watershed Groups, NOAA Fisheries,	Interim	TP-HU-01
Little River HSA						
5	E	TP-LR-01	Develop a plan to improve the functioning of the lower river and estuary by re-establishing: a functional flood plain, and a more complex instream habitat and riparian zone. The plan should include the release of conifers, exclusion fencing where necessary, and riparian planting.	Potential Lead: Landowners, Watershed Groups Others: CDFG, CCC, NOAA Fisheries, County	Interim	TP-LR-01
5	D	TP-LR-02	Implement the plan to improve the functioning of the lower river and estuary.	Potential Lead: Landowners, Watershed Groups Others: CDFG, CCC, NOAA Fisheries, County	Interim	TP-LR-01b
EUREKA PLAIN HU – Eureka Plain HSA						
5	D	EP-HU-01	Support implementation of Humboldt County's provisions to protect Stream Management Areas and evaluate their effectiveness; recommend revisions as necessary.	Potential Lead: CDFG Others: Humboldt County	Interim/ Continual	EP-HU-02
5	E	EP-HU-02	Work with agencies and landowners, to re-establish estuarine function.	Potential Lead: CDFG, NOAA Fisheries Others: Coastal Commission, USACE, U.S. Coast Guard, City of Eureka, City of Arcata, Landowners	Interim	EP-HU-03
5	E	EP-HU-04	Assess and prioritize sources of sediment and implement remediation projects.	Potential Lead: CDF Others: County, CDFG, Landowners, California Conservation Corps	Interim/ Ongoing	EP-HU-05
5	D	EP-HU-05	Implement the prioritized remediation projects for the sources of sediment.	Potential Lead: CDF Others: County, CDFG, Landowners, California Conservation Corps	Interim/ Ongoing	EP-HU-05b
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	E	EP-HU-06	Identify gaps in recent coho salmon habitat survey data	Potential Lead: CDFG	Interim	EP-HU-06a
5	E	EP-HU-07	Conduct coho salmon habitat surveys in identified areas lacking data.	Potential Lead: CDFG	Interim	EP-HU-06a
5	E	EP-HU-08	Identify and prioritize rearing habitat reaches for protection.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06b

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5	D	EP-HU-09	Improve quality and quantity of deep pools and spawning gravels.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06c
5	D	EP-HU-10	In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels and salt marsh.	Potential Lead: CDFG Others: Coastal Commission, Landowners	Interim/ Continual	EP-HU-06d
5	D	EP-HU-11	Maintain and protect channel conditions important for all life stages of coho salmon.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06e
5	D	EP-HU-12	Restore channel conditions important for all life stages of coho salmon.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06e
5	D	EP-HU-13	Identify and maintain reaches where naturally functioning channel and flood-plain conditions exist.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06f
5	D	EP-HU-14	Restore a functioning flood plain and natural channel processes where practicable.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06f
5	E	EP-HU-15	Identify impacted reaches where a functioning flood plain could be re-established: a. Prioritize areas that are not naturally functioning for restoration potential; and b. Develop site specific project objectives to protect and restore naturally functioning channel and flood-plain conditions where feasible.	Potential Lead: CDFG Others: Landowners	Interim/ Continual	EP-HU-06g
5	E	EP-HU-16	Conduct hydrologic analysis for all Humboldt Bay tributaries.	Potential Lead: CDFG Others: NOAA Fisheries,	Interim	EP-HU-06h
5	E	EP-HU-17	Establish access for both adult and juvenile coho salmon to suitable habitat where practicable.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Ongoing	EP-HU-06i
5	E	EP-HU-18	Prioritize and upgrade for repair all county culverts already identified as coho salmon passage barriers.	Potential Lead: CDFG Others: County, Landowners	Interim/ Ongoing	EP-HU-06j
5	E	EP-HU-19	Conduct an inventory and prioritize for treatment migration barriers other than county culverts (private roads, tide gates), including Rocky and Washington gulches.	Potential Lead: CDFG Others: Landowners, Coastal Commission, NOAA Fisheries	Interim	EP-HU-06k
5	D	EP-HU-20	Conduct LWD surveys and identify locations of existing LWD structures and areas for potential recruitment and/or placement of LWD structures.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-21	Protect and maintain habitat associated with instream LWD.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	D	EP-HU-22	Increase the amount of LWD in rearing reaches.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-23	Establish adequate streamside buffer areas that are protected from vegetation removal ensuring retention of mature trees in the riparian corridor	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-24	Increase canopy by planting appropriate conifer and hardwood	Potential Lead: CDFG	Interim/	EP-HU-06m

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
			species composition along the stream where the canopy is not at acceptable levels. In many cases, planting will need to be coordinated to follow bank stabilization or upslope erosion control projects.	Others: CDF, Landowners	Continual	
5	D	EP-HU-25	Map areas where large conifer riparian habitat exists for future recruitment.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06m
5	D	EP-HU-26	Maintain functional riparian habitat.	Potential Lead: CDFG Others: CDF, County, Landowners	Interim/ Ongoing	EP-HU-06n
5	D	EP-HU-27	Conduct assessment of historic and present riparian conditions	Potential Lead: CDFG Others: CDF, County, Landowners	Interim/ Ongoing	EP-HU-06n
5	E	EP-HU-28	Develop site specific riparian restoration plans to: a. Restore degraded riparian habitat; b. Establish a monitoring program to evaluate success of restoration projects.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06o
5	D	EP-HU-29	Prioritize and implement the site specific riparian restoration plans.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06o
5	D	EP-HU-30	Establish a monitoring program to identify turbidity and suspended sediment levels outside the beneficial range for all life stages of coho salmon.	Potential Lead: CDFG Others: CDF, Landowners	Interim/ Continual	EP-HU-06p
5	E	EP-HU-31	Reduce input of fine sediments into stream systems by: a. Conducting comprehensive road inventory b. Carry out priority road related sediment reduction c. Implement priorities for road-related sediment reduction projects identified in existing road inventories projects d. Identify areas still needing road/erosion inventories; e. Identify on-going road maintenance needs; f. Identify landslide hazard areas such as steep unstable slopes, stream crossings,(other than those identified in the road inventory) and inner gorge area; g. Implement pre-project geological surveys and/or reducing management activities within these areas, especially road construction, grading, intensive timber harvests; and h. Identify and treat bank erosion sites.	Potential Lead: CDFG Others: CDF, Landowners	Interim	EP-HU-06q

HSA	TASK	TASK	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
PRIORITY	LEVEL	NUMBER				
EUREKA PLAIN HU – Eureka Plain HSA (continued)						
5	D	EP-HU-32	Establish temperature parameters beneficial to coho salmon during all life stages by: a. Evaluating temperature ranges in all tributaries; b. Review of existing temperature data; c. Identifying data gaps and establish a watershed-wide temperature monitoring program; and d. Determining if temps are a concern for coho salmon.	Potential Lead: CDFG Others: Landowners	Interim	<i>EP-HU-06r</i>
5	D	EP-HU-37	Facilitate and sustain a well informed watershed community with regards to coho salmon habitat issues.	Potential Lead: RCDs, Watershed Groups Others: CDFG, NOAA Fisheries	Interim/ Continual	<i>EP-HU-06y</i>
EEL RIVER HU						
	E	ER-HU-06	Develop a plan to restore an adequate migration corridor in the mainstem Eel River.	Potential Lead: CDFG Others: NOAA Fisheries, State Lands Commission	Interim	<i>ER-HU-08</i>
	E	ER-HU-08	Assess and prioritize sediment sources, including roads.	Potential Lead: CDFG Others: Landowners, Watershed Groups, RCD, NOAA Fisheries	Interim/ Ongoing	<i>ER-HU-09</i>
	E	ER-HU-12	Assess, prioritize, and treat culverts that are barriers to passage on Highway 101. Identify barriers to passage and prioritize them for removal, through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: County, Landowners, California Conservation Corps, CDFG	Interim	<i>ER-HU-13</i>
Weott HSA						
5	E	ER-WE-03	Assess and prioritize culverts that are barriers to coho salmon passage along Avenue of the Giants through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: CDFG, County, Landowners, California Conservation Corps	Interim	ER-WE-03
5	D	ER-WE-4	Treat the prioritized culverts that are barriers to coho salmon passage along Avenue of the Giants, through collaborative efforts with other agencies.	Potential Lead: Caltrans Others: CDFG, County, Landowners, California Conservation Corps	Interim	<i>ER-WE-03b</i>
Benbow HSA						
5	D	ER-BE-01	Conduct a watershed assessment.	Potential Lead: CDFG Others: CDF, Counties, Landowners, NOAA Fisheries	Interim	<i>ER-BE-01</i>
Laytonville HSA						
5	D	ER-LA-01	Continue watershed restoration efforts, including measures to reduce temperatures in Ten-mile Creek.	Potential Lead: CDFG Others: Watershed Groups, Landowners, California Conservation Corps	Interim/ Ongoing	<i>ER-LA-01</i>
5	E	ER-LA-02	Prioritize culverts on county roads that are coho salmon barriers.	Potential Lead: County Others: CDFG	Interim/ Ongoing	<i>ER-LA-02</i>
5	E	ER-LA-04	Work with the county to coordinate with landowners on the removal of	Potential Lead: CDFG	Interim/	<i>ER-LA-03</i>

HSA PRIORITY	TASK LEVEL	TASK NUMBER	TASK DESCRIPTION	IDENTIFIED ACTION ENTITIES	ESTIMATED DURATION	ORIGINAL IDENTIFIER
			coho salmon barriers on private property.	Others: County, CDF, Landowners	Ongoing	
5	D	ER-LA-06	Recommend that cities, counties, and Caltrans adopt maintenance manuals that protect coho salmon habitat (e.g., standards for side-casting of spoils and identification of spoils disposal sites).	Potential Lead: CDFG Others: Cities, Counties, Caltrans	Interim/ Ongoing	ER-LA-06
5	E	ER-LA-07	Minimize and reduce the effects of water diversions by: Addressing the season of diversion, installing off-stream reservoirs; requiring bypass flows protective of coho and natural hydrograph; and Avoiding adverse impacts caused by water diversion.	Potential Lead: CDFG Others: SWRCB, Landowners	Interim	ER-LA-07
Outlet Creek HSA						
5	E	ER-OC-01	Prepare a technical assessment and prioritization of the Outlet Creek watershed, developing recommendations to restore long-term function.	Potential Lead: CDFG Others: NOAA Fisheries, RCD	Interim/ Ongoing	ER-OC-01
5	D	ER-OC-02	Work with the City of Willits in coho salmon recovery planning to: a. Assess, prioritize, and treat barriers to passage; b. Address water quality issues; c. Modify facility maintenance practices as necessary; and d. Evaluate land use planning and revise plans as appropriate.	Potential Lead: CDFG Others: City of Willits	Interim/ Ongoing	ER-OC-02

CAPE MENDOCINO HU

E	CM-HU-01	Supplement on-going efforts to provide short-term and long-term benefits to coho salmon by restoring LWD and shade through: a. LWD placement; and b. Improvement of existing riparian zones through plantings, release of conifers, and manage of alders, blackberries, and other competitors; and c. Bank stabilization and fencing projects.	Potential Lead: CDFG Others: California Conservation Corps, CDF, USFS, DPR, Landowners	Ongoing	CM-HU-01
E	CM-HU-02	Assessment and prioritization of sources of sediment including roads.	Potential Lead: CDFG, Others: CDF, Landowners, CCC, NCRWQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-HU-02
E	CM-HU-04	Investigate feasibility of restoring estuarine function to maximize habitat for coho salmon.	Potential Lead: CDFG Others: Coastal Conservancy, NOAA Fisheries, Landowners	Interim/ Ongoing	CM-HU-04
E	CM-HU-05	Prioritize and upgrade all county culverts identified as passage barriers.	Potential Lead: CDFG, County Others: Landowners	Interim/ Ongoing	CM-HU-05
E	CM-HU-06	Conduct an inventory and prioritize for treatment migration coho salmon barriers other than county culverts.	Potential Lead: CDFG Others: Landowners, Coastal Commission, NOAA Fisheries	Interim	CM-HU-06

Mattole River HSA – Southern Subbasin

5	D	CM-MS-07	Study herbicide use with respect to impacts on coho salmon.	Potential Lead: CDFG Others: Landowners, CDF, Caltrans, County	Interim	CM-MS-05
5	D	CM-MS-10	Monitor summer water and air temperatures and flow in cooperation with landowners using Department-accepted protocols.	Potential Lead: CDFG Others: UCCE, Landowners, Watershed Groups	Interim/ Ongoing	CM-MS-07
5	D	CM-MS-11	Continue and expand on-going temperature monitoring efforts.	Potential Lead: CDFG Others: UCCE, Landowners, Watershed Groups	Interim/ Ongoing	CM-MS-07b

Mattole River HSA – Western Subbasin						
5	D	CM-MW-01	Assess current levels of LWD in the western subbasin, and determine amount necessary for improved flushing, pooling and habitat conditions for coho salmon.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01
5	D	CM-MW-02	Facilitate immediate placement of LWD in areas where lacking	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01b
5	D	CM-MW-03	Develop and implement a plan for long-term recruitment of LWD	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim	CM-MW-01c
5	D	CM-MW-04	Establish monitoring stations at appropriate locations (e.g., Squaw, Honeydew, and Bear creeks) to monitor in-channel sediment and track aggraded reaches in the lower basin and in the lower reaches of major tributaries.	Potential Lead: CDFG Others: Landowners, CDF, Watershed Groups	Interim/ Ongoing	CM-MW-02
5	D	CM-MW-14	Develop incentives for landowners and communities to reduce summer water withdrawals and enhance habitat.	Potential Lead: Watershed Groups Others: NCRWQCB, Counties, NOAA Fisheries	Interim	CM-MW-10
5	E	CM-MW-16	Map unstable soils and use the information to guide land-use decisions, road design, and other activities that can increase erosion.	Potential Lead: NCRWQCB Others: CDF, CDFG, CGS, Watershed Groups, NOAA Fisheries	Interim	CM-MW-12
Mattole River HSA – Eastern Subbasin						
5	E	CM-ME-01	Continue to conduct road and erosion assessments, especially in Middle, Westlund, Gilham, Sholes, Blue Slide, and Fire creeks.	Potential Lead: CDFG Others: CDF, Landowners, CCC, NCRWQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-ME-01
5	D	CM-ME-02	Continue to implement road and erosion assessments, especially in Middle, Westlund, Gilham, Sholes, Blue Slide, and Fire creeks.	Potential Lead: CDFG Others: CDF, Landowners, CCC, NCRWQCB, County, Watershed Groups, NOAA Fisheries	Interim/ Ongoing	CM-ME-01b