

### 6.3.5 Strategies and Actions for the Mid-South Coast Stratum

#### Mid-South Coast Stratum for Oregon Coast Coho Salmon

**Independent Populations:** Coos, Coquille, Floras/New, and Sixes

**Dependent Populations:** Johnson and Twomile

**Current Status:** Moderate level of certainty that the Mid-South Coast Stratum is sustainable

**Primary Limiting Factor:** Stream complexity (all Mid-South Coast Stratum independent populations)

**Secondary Limiting Factors:** Water quality (all Mid-South Coast Stratum independent populations)

#### Recovery Strategy for the Mid-South Coast Stratum

The basic recovery strategy for coho salmon populations in the Mid-South Coast Stratum aims to protect freshwater and estuarine reaches that currently contain high quality habitat, and restore reaches with potential for additional high quality habitat. Actions will particularly focus on increasing the amount and quality of winter and summer rearing habitat by improving stream and estuarine habitat complexity—including increasing amounts of large wood and pool habitat, and connecting side channels, wetlands, and other off-channel areas. Collaborative actions will also focus on improving water quality, especially by reducing summer water temperatures, increasing water availability by reducing water withdrawals, reducing fine sediment levels, and increasing the amount of, and connectivity to, tidal wetland habitat.

The following actions illustrate the types of actions that could be implemented to improve Mid-South Coast Stratum coho salmon populations and habitats. Other approaches could also be implemented to achieve the desired results. The actions will be further refined, sequenced, and scheduled in coordination with other agencies and local stakeholders.

#### Key Strategies and Potential Actions for the Mid-South Coast Stratum

- Implement and, as necessary, revise local regulatory mechanisms, voluntary and incentivized efforts to protect and restore watershed processes that promote winter and summer rearing habitats (e.g., wood recruitment, habitat complexity, floodplain connectivity). Examples of regulatory programs include the Oregon Agricultural Water Quality Management Act, Oregon Forest Practices Act, FEMA National Floodplain Insurance Program, and state beaver statutes and administrative rules. Develop and approve scientifically credible, thorough Strategic Action Plans for the Coos, Coquille, Floras/New, and Sixes populations, consistent with ESU-level common framework. (See actions identified in Section 6.2.1.2 under Listing Factor A1, habitat actions at the ESU level.)
- Implement the Strategic Action Plans to protect and restore ecosystem processes and functions and coho salmon habitats. Actions identified in SAPs will likely include activities such as restoring habitat capacity for rearing juvenile coho salmon by increasing large wood loading, beaver pond habitat, and wetland/ off-channel connectivity, and by increasing native riparian vegetation to provide bank stability and shade stream reaches.

- Collaborate with governmental and non-governmental organizations and others to identify, and implement, actions that will protect and restore watershed processes, provide stream complexity for juvenile rearing, connect side channels, wetland and off-channel habitats, and reduce fine sediment levels.
- Coordinate with ODEQ, ODF, ODA, SWCDs, and others to improve water quality, especially water temperatures, to increase carrying capacity and provide high quality summer rearing habitat for juvenile coho salmon.
- As resources allow, develop and approve scientifically credible, thorough Strategic Action Plans for the Johnson and Twomile populations, consistent with ESU-level common framework.
- Provide and support public outreach, education and volunteer actions to protect and restore ecosystem process and functions, encourage beaver conservation and beaver dam analogues, and improve juvenile coho salmon rearing habitats.
- Re-establish connectivity of tidal and freshwater wetlands, especially during winter. Examples include the Bandon Marsh (Ni-les'tun Tidal Marsh) restoration and the Winter Lake area, both in the Coquille basin.
- Establish increased riparian buffers with native riparian vegetation on agricultural and forestry lands.
- Reduce or eliminate new road development on private and federal timberlands and decommission existing roads.
- Reduce existing infrastructure in floodplains and limit future development.
- Reduce water withdrawals, especially in gravel-bedded tributaries.
- Re-establish streams to their floodplains.
- Monitor predation by non-native fish in the Coquille and Coos Rivers.
- Reduce predation rates by reducing populations of non-native fish in the Coquille River.

## Priority Watershed Actions

### *State and Private Timber Lands*

1. Increase protection of riparian forests with no-touch buffer widths.
2. Eliminate the construction of permanent new roads, unless constructed to relocate another permanent road which has greater impacts on Oregon Coast coho salmon habitat.
3. Limit placement of temporary roads and decommission roads where practicable.
4. Increase voluntary landowner placement of large wood into stream channels.

### *Rural (including residential and agricultural) Lands*

1. Plant, restore, and protect riparian areas adjacent to stream channels using voluntary actions with regulatory backstops in place.
2. Improve lateral connectivity from the stream channels to adjacent wetlands.
3. Seek opportunities to improve tidegates or floodgates to flood adjacent floodplains during the winter flows.

4. Improve natural stream channel form and function by discontinuing stream channelization and armoring of stream banks, and by placing large wood into stream channels.
5. Conserve water usage to allow more instream water.

#### *Federal Lands*

1. Maintain a strong aquatic conservation strategy of some form within future management plans that protects ecological processes that form high quality coho salmon habitat.
2. Improve the transportation network that includes reducing the road network, minimizing the hydrologic connection of the roads to streams, reducing road-related fish passage barriers, and minimizing any new road development, especially in riparian zones.

#### *Beaver Management*

1. Include strategies to increase beaver, beaver ponds, and beaver dam analogues in strategic action plans.
2. Seek agreements with state and federal agencies and others to pursue non-lethal means of beaver removal (see Section 6.2.1.2, A1-1.2 above). If necessary, revise regulatory mechanisms to prohibit killing beaver within the range of Oregon Coast coho salmon unless property or infrastructure damage is occurring and only when all other options are exhausted.
3. Create a program to educate landowners, managers, policymakers and the public in general about the benefits of beaver ponds to the health of our ecosystems, with a focus on benefits to salmonids. Include opportunities to conserve and manage beaver through cost effective, non-lethal management practices (Pollock et al. 2015).
4. Implement the Beaver Restoration Guidebook (Pollock et al. 2015) to incorporate beaver, beaver ponds, and beaver dam analogues into restoration actions.

#### *Estuary and Tidal Lands*

1. Update estuary assessments of tidal habitats important for coho salmon rearing and development to assess status and guide future development and implementation of restoration activities.
2. Develop an estuary lowlands restoration strategy that considers improved access to historical floodplains through tidegate elimination, management, and operations; levee removal; and overwater structure modifications.

#### *Instream Flows*

1. Organize an interagency stream flow assessment team to evaluate and identify:
  - a. Refugia areas that have adequate stream flow, water temperature, and riparian protections to support coho salmon.
  - b. Existing stream flow needs.
  - c. A strategy to address flow restoration, which will protect existing refugia, expand refugia to adjacent reaches, and provide a connection to a larger network of refugia areas.

## Secondary Watershed Actions

### *Fish Passage and Access*

1. Continue efforts to improve fish passage at dams, bridges, culverts, and other identified fish passage barriers. Assess remaining fish passage barriers and develop and implementation strategy and schedule.

### *Management of Fine Sediment*

1. Identify upstream sources of fine sediment loads.
2. Relocate streamside roads.
3. Reduce soil compaction.
4. Identify high debris flow hazard areas (Sixes population).
5. Identify soils with high turbidity potential (Sixes population).

### *State Lands*

1. Coordinate with NMFS to develop a Forestry Habitat Conservation plan(s) to protect and restore Oregon Coast coho salmon habitat.

**Table 6-8.** Habitat component specific actions to restore high quality coho salmon habitat in the Mid-South Coast Stratum.

Action ID	Habitat component	Strategy	Action	Area	Priority
MSCS-1	Tributaries	Improve instream flows	Improve water quality by developing water conservation strategies on the upslope agricultural areas with the intent of transferring conserved water to instream flows.	Coquille, Sixes	High
MSCS-2	Tributaries	Improve water quality	Improve water quality by improving instream flows, channel complexity, stream shade, and substrate retention.	All Populations	High
MSCS-3	Tributaries	Improve wood recruitment to support long-term increases in habitat complexity	Improve timber harvest activities (increased harvest buffers on private industrial timberlands, reduce road densities on private and federal timberlands)	All Populations	High
MSCS-4	Tributaries	Improve wood recruitment to support long-term increases in habitat complexity	Improve state agricultural practices (grazing and hay production buffers on ag land adjacent to ESA-listed streams)	All Populations	High
MSCS-5	Tributaries	Increase habitat complexity	Improve state agricultural practices (disallow stream channel dredging in ESA-listed streams flowing through or adjacent to ag lands)	All Populations	High
MSCS-6	Tributaries	Increase habitat complexity	Increase large wood, boulders, or other instream structure	All streams where coho would benefit immediately	High
MSCS-7	Tributaries	Increase habitat complexity	Increase large wood, boulders, or other instream structure	All Populations	Medium

Action ID	Habitat component	Strategy	Action	Area	Priority
MSCS-8	Tributaries	Increase habitat complexity	Conduct riparian planting projects on streams that flow through or adjacent to ag lands to increase wood recruitment to streams	All streams where coho would benefit immediately;	High
MSCS-9	Tributaries	Increase habitat complexity	Reconnect historical off channel habitat	All Populations	High
MSCS-10	Tributaries	Improve riparian forests to increase shade and reduce stream temperatures	Improve agricultural practices by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	All Populations	High
MSCS-11	Tributaries	Improve riparian forests to increase shade and reduce stream temperatures	Improve timber management activities, including road management, by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	All Populations	High
MSCS-12	Tributaries	Increase water quality by reducing fine suspended sediment loads	Improve water quality by increasing harvest buffers on private industrial timberlands and by reducing road densities on private and federal timberlands to reduce chronic erosion and sediment inputs	Sixes	High
MSCS-13	Tributaries	Increase water quality by reducing fine suspended sediment loads	Improve agricultural practices (grazing and hay production buffers on ag land adjacent to ESA-listed streams) to reduce chronic erosion and sediment inputs	Sixes	High
MSCS-14	Tributaries,	Increase habitat complexity	Improve gold placer and gold suction dredge regulations to minimize or prevent impacts to OC coho salmon; consider special closed areas, closed seasons, and restrictions on methods and activities.	Sixes, Coquille	High
MSCS-15	Off-Channel	Increase habitat complexity and connectivity to side-channels	Increase large wood, boulders, or other instream structure	All streams where coho would benefit immediately	High
MSCS-16	Off-Channel and Wetlands	Increase habitat complexity and connectivity and access to alcoves, off-channel ponds, floodplains, and wetlands	Increase beaver pond abundance	All streams where coho salmon would benefit immediately	High

Action ID	Habitat component	Strategy	Action	Area	Priority
MSCS-17	Off-Channel	Increase habitat complexity and connectivity to side-channels	Increase large wood, boulders, or other instream structure	All Populations	Medium
MSCS-18	Off-Channel and Wetlands	Increase habitat complexity and connectivity and access to alcoves, off-channel ponds, floodplains, and wetlands	Increase beaver pond abundance	All Populations	Medium
MSCS-19	Wetlands	Improve direct and indirect wetland connectivity to streams	Reduce existing and limit development of channel-confining structures including roads and infrastructure in the floodplain that disconnect wetlands from tributaries and mainstems.	All streams where coho salmon would benefit immediately	High
MSCS-20	Mainstem	Improve instream flows	Improve water quality by developing water conservation strategies on the upslope agricultural areas with the intent of transferring conserved water to instream flows.	Coquille, Sixes	High
MSCS-21	Mainstems	Improve marginal and streambank habitat complexity	Increase large wood and marginal and streambank habitat structure	All streams where coho salmon would benefit immediately	High
MSCS-22	Mainstems	Improve marginal and streambank habitat complexity	Increase large wood and marginal and streambank habitat structure	All Populations	Medium
MSCS-23	Mainstems	Improve wood recruitment to support long-term increases in habitat complexity	Improve timber harvest activities (increased harvest buffers on private industrial timberlands, reduce road densities on private and federal timberlands)	All Populations	High
MSCS-24	Mainstems	Increase habitat complexity	Reconnect historical off channel habitat	All Populations	High
MSCS-25	Mainstems	Improve riparian forests to increase shade and reduce stream temperatures	Improve agricultural practices by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	Sixes, Floras	High
MSCS-26	Mainstems	Improve riparian forests to increase shade and reduce stream temperatures	Improve agricultural practices by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	Coos, Coquille	Medium

Action ID	Habitat component	Strategy	Action	Area	Priority
MSCS-27	Mainstems	Increase water quality by reducing fine suspended sediment loads	Improve water quality by increasing harvest buffers on private industrial timberlands and by reducing road densities on private and federal timberlands to reduce chronic erosion and sediment inputs	Sixes	High
MSCS-28	Mainstems	Increase water quality by reducing fine suspended sediment loads	Improve agricultural practices (grazing and hay production buffers on ag land adjacent to ESA-listed streams) to reduce chronic erosion and sediment inputs	Sixes	High
MSCS-29	Mainstems	Increase habitat complexity	Improve gravel mining practices making them consistent with other streams in Oregon (Chetco River and Hunter Creek) by implementing standard best management practices to state and federal regulations and permitting of gravel mining (retain gravel bar form and function (per Federal Interagency Working Group 2006). Explore upland rock/gravel sources for similar quality rock for quarrying, rather than removing from river bottom.	Coquille	High
MSCS-30	Mainstems	Improve riparian forests to increase shade and reduce stream temperatures	Improve timber management activities, including road management, by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	Sixes, Floras	High
MSCS-31	Mainstems	Improve riparian forests to increase shade and reduce stream temperatures	Improve timber management activities, including road management, by protecting riparian forests and providing stream buffers sufficient for OC coho salmon recovery through protection and enhancement of shade to reduce stream temperatures and improve water quality.	Coos, Coquille	Medium
MSCS-32	Mainstem	Increase habitat complexity	Conduct native riparian tree planting projects on streams that flow through or adjacent to ag lands to increase wood recruitment to streams	All Populations	High
MSCS-33	Mainstem	Improve water quality	Improve water quality by improving instream flows, channel complexity, stream shade, and substrate retention.	All Populations	High
MSCS-34	Mainstems	Improve wood recruitment to	Improve agricultural practices (grazing and hay production buffers	All Populations	High

Action ID	Habitat component	Strategy	Action	Area	Priority
		support long-term increases in habitat complexity	on agricultural land adjacent to ESA-listed streams)		
MSCS-35	Mainstem	Increase habitat complexity	Conduct native riparian tree planting projects on streams that flow through or adjacent to ag lands to increase wood recruitment to streams	All Populations	High
MSCS-36	Estuary	Increase access to sloughs, side channels, and floodplains	Reduce fish passage barriers to floodplains by managing tidegate presence and operations.	Coos, Coquille	High
MSCS-37	Estuary	Increase habitat complexity	Seek to restore winter habitat refuge areas in the floodplains in the freshwater ecotone of the upper tidal area of the estuaries.	Coos Watershed: Palouse Creek, Larson Creek, Kentucky Creek, Willanch Creek, Catching Slough, South Slough, and tidal areas above the Millicoma River and South Coos River confluence	High
MSCS-38	Estuary	Increase habitat complexity	Seek to restore winter habitat refuge areas in the floodplains in the freshwater ecotone of the upper tidal area of the estuaries.	Coquille Watershed: from the confluence of the South Fork and North Fork below Myrtle Point downstream to Bear Creek	High
MSCS-39	Estuary	Increase access to sloughs, side channels, and floodplains	Reduce fish passage barriers to floodplains by reducing or setting dikes back.	Estuary wide	High