

Limiting Factors for Coho: Sixes River, Floras Creek and New River

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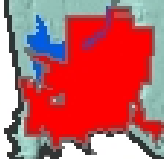
South Coast Coordinating Watershed Council



New River

Floras Creek

Sixes River



Known limiting factor, high priority restoration

Suspected limiting factor, but need more information

Need more information

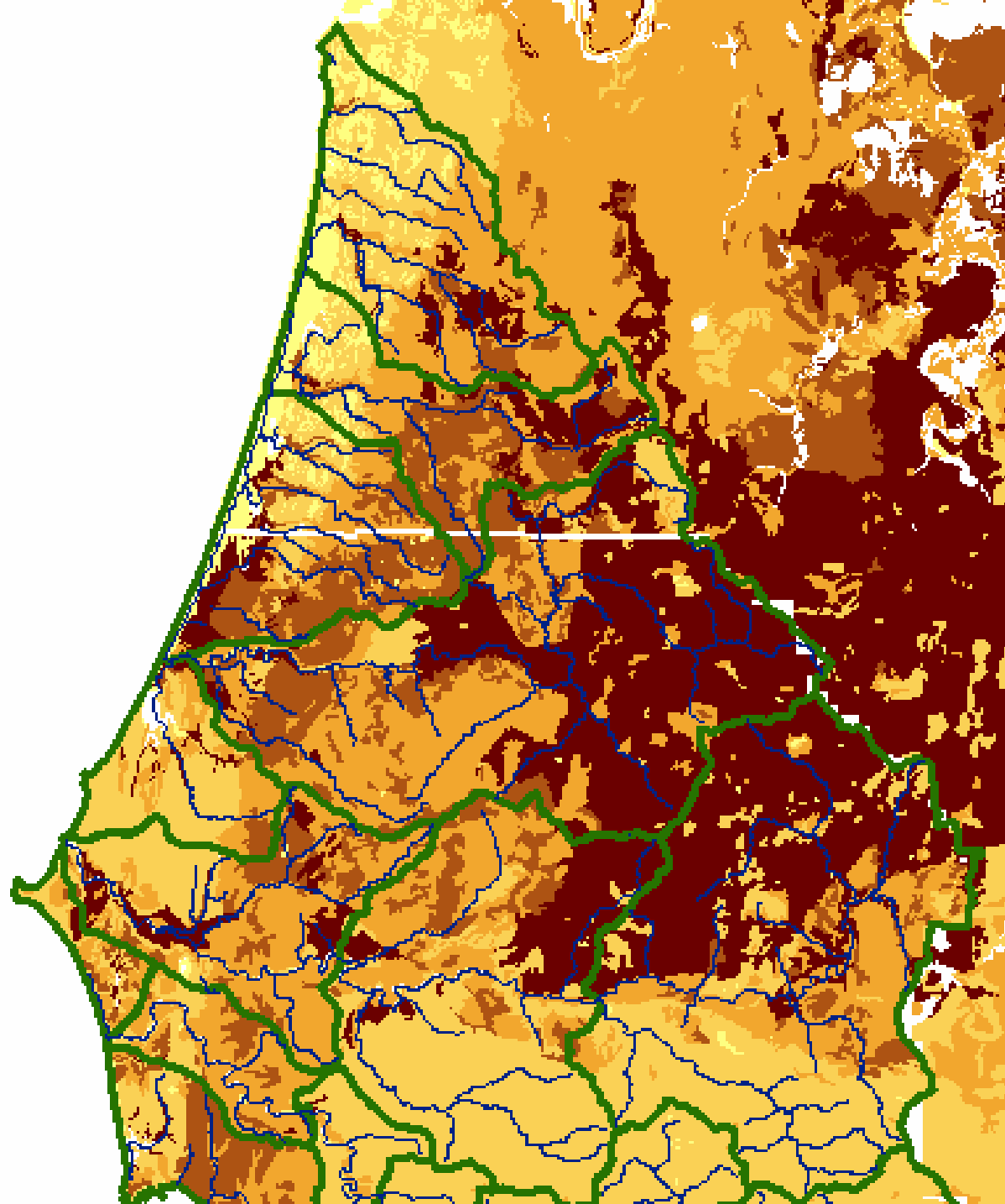
	Estuary	Wetland	Migration Barriers	Water Quality	Water Quantity	Channel Modification	Hydrologic Function	Riparian Shade	Large Wood (Potl & Stored)	Sediment (Potl & Stored)	Noxious Weeds
New River	Beach grass and breaching complicating water exchange	Need assessment of high value wetlands	No known barriers in Morton, Butte, Bethel	High Temp; suspect nutrients from Croft Lake	Irrigation withdrawals unknown on ranch and farm lands	Straightened, loss of beaver, effects of breach	Periodically bar-bound	Potential shade inc on Morton, Langlois, Butte	Tribs lacking wood to help store sediment	Suspected upland sources; investigate Morton & Bethel	Aquatic weeds, Reed Canary Grass
Floras Creek	PFC analysis completed	Field check function. Restore potl veg & water connection	Investigate barriers in upper watershed	High Temp, Sediment & nutrients. Constructed wetlands to treat runoff.	Instream rights not met. Opportunities w/ 80% of rights junior to instream.	Channel straightened & armored, loss of beaver, assessment incomplete	ID critical rds, ditches, floodplains, wetlands. Restore wetland/floodplain Willow Ck	Willow Ck critical to cool mainstem. Hi potl inc on Willow, N Fk & mainstem. Planting & riparian silv	Willow Ck, wood for sed storage & fish habitat	Earthflows, rd drainage in Willow, N, E & W Forks, U. Mainstem; potl in M mainstem	Aquatic weeds in Floras Lake
Sixes River	Reduce nutrient inputs from ranches	High value wetlands in lower watershed (Brophy Report)	Unknown in upper watershed	High Temp, Sediment & nutrients. Mercury reports	Instream rights not met: Crystal Edson, mainstem opportunities	Lack of off-channel habitat, esp below 101	Unknown potl for improved connection of lwr mainstem to floodplain	Some potential for lower mainstem; also Crystal Creek	Most tribs and mainstem lack adequate large wood	Potl in Big/Otter, Dry Ck, Elephant Rock & N Fk. Stored: ch widening	Gorse; blackberries

Sixes Watershed

- Low gradient to headwaters
- Unconfined, floodplain overwintering
- Several tributaries, water clarity is critical
- Soil type and earthflows affect turbidity, peak flows and summer flows
- Relatively complex estuary
- Nutrient levels high

Water Quantity – Summer Flow

	cfs/sq mi
Floras Creek mainstem	0.13
North Fork	0.05
East Fork	0.03
South Fork	0.19
West Fork	0.36
Willow Ck	0.29
Sixes River mainstem	0.19
South Fork	0.38
Edson Ck	0.27
Crystal Ck	0.26
Elk River mainstem	0.75
North Fork	0.54
Panther Ck	0.77



Off-channel habitats on Sixes

- Historic spruce swamp
- Formed by flood overflow channels, wall-base channels, floodplain tributaries simplified
- Beaver
- Runoff pollutants – local sources of sediment, possibly agricultural runoff
- Food – macroinvertebrate community impaired
- Tributaries vary in gradient, habitat quality









Floras Creek

- Upper watershed – clayey soils, earthflows yield high runoff & turbidity like Sixes
- Some low gradient habitat high in watershed
- South Fork and West Fork important for water yield, shade and large wood supply
- Unconfined reach downstream of confined gorge is sensitive to erosion – history of bank stabilization, aversion to beaver

Off-channel habitats on Floras

- Connected with New River
- Channel deeply disconnected with floodplain, bridge constrictions
- Willow Creek is an important tributary
 - Potentially a thermal refuge
 - Confined by rip rap, not able to trap sediment and build connection to floodplain
- Lower mainstem straightened
- Irrigation and hyporheic flow through bars



Off-channel habitats on New River

- High value coastal lakes trapped behind dunes
- Complex wetland/lake/channel/ditch connections
- New River captures tributaries that drain uplands, straightened/incised/depositional
- Ditches dug to drain wetlands more rapidly, but very low gradient
- Water quality concerns
- Complex issues surrounding artificial breach







Management Actions

- Livestock Exclusion
- Riparian improvements
- Fish passage
- Large wood placements
- Upland sediment treatments
- Gorse management
- Constructed wetlands for cranberries
- Conservation Reserves



