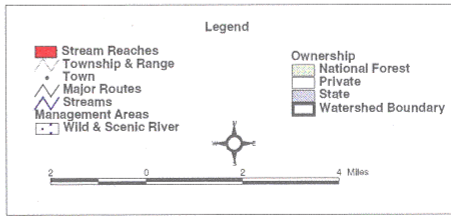
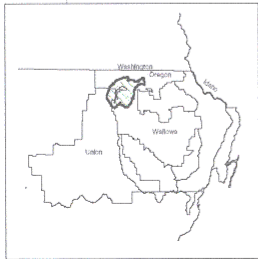
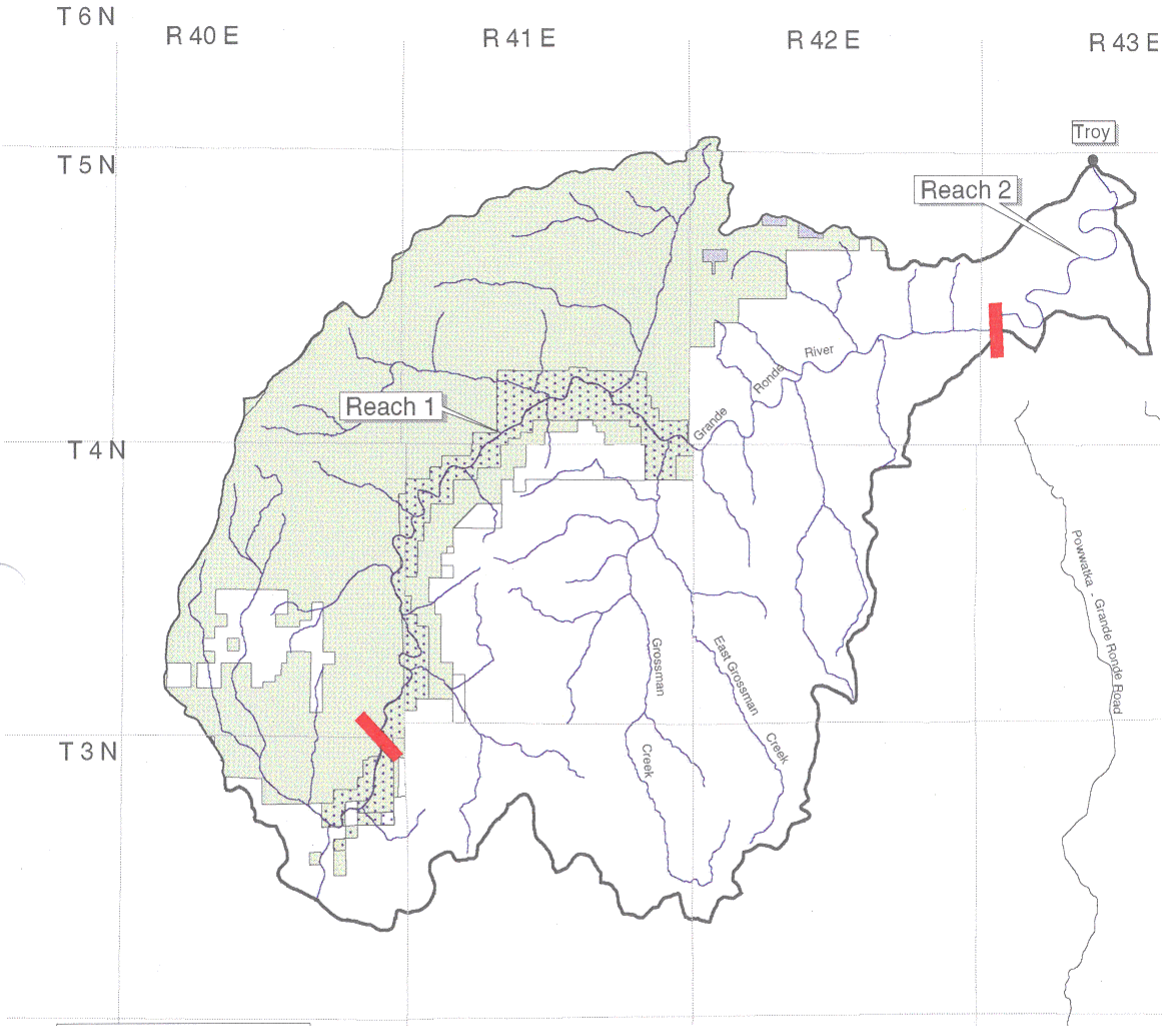


Grande Ronde Watershed

(2 Reaches)



GRANDE RONDE RIVER¹⁰

The Grande Ronde River was analyzed in two reaches:

1. Rondowa to Wildcat Creek
2. Wildcat Creek to State line

The Grande Ronde River rises to the west and south of Wallowa County and enters the northwest part of the County at Rondowa near the confluence of the Wallowa River (Grande Ronde River rivermile 81.4). The river flows about 43 miles northeast to exit the northern boundary of the County. After exiting the County and entering Washington State, the river flows easterly to join the Snake River.

The Grande Ronde River from the Wallowa River confluence to the Snake River is classed under the National Wild and Scenic Rivers system as wild, scenic, or recreation and classed as a scenic river under the Oregon State system. Resource use of the watershed includes grazing, logging, and recreation; a small amount of irrigated agriculture is located along the reach from Wildcat Creek to the State line.

Water quality and flow problems in the Wallowa County reach of the Grande Ronde River are the result of upstream watershed use. There are two USGS stream gauging stations. The gauging station at Rondowa (500 feet downstream from the confluence with the Wallowa River and active since 1926) recorded a maximum flow of 24,700 cfs on January 30, 1965; a minimum flow of 179 cfs was recorded on August 24, 1977. The gauging station at Troy recorded a maximum flow of 42,200 cfs on December 23, 1964, and a minimum flow of 344 cfs on August 19-21 and 23, 1977.

There are no records of spring chinook spawning in the Wallowa County portion of the Grande Ronde River mainstem. Fall Chinook enter the Grande Ronde in late October and November and spawn in November and December. Spawning ground surveys have been conducted since 1986 from the mouth of the Wenaha River downstream to the confluence with the Snake River. Fall chinook redd counts have increased from 0 in 1986 to 49 in 1993, 55 in 1997, and 24 in 1998.

Grande Ronde River--Rondowa to Wildcat Creek

Water Quantity

No problems were identified.

Water Quality

Temperature (High Priority).--Lack of riparian vegetation and shade, as well as low flow levels, contribute to rises in water temperature. Temperature problems will need to be addressed upstream (in the Grande Ronde Valley in Union County) and in the local tributaries.

¹⁰See also Watershed Management - Approaches to Implementing Solutions

Provide riparian shading by planting new shrubs and trees, as well as protecting existing shade. Protect (and possibly increase) flow from springs by enhancing groundwater recharge (limit surface runoff from roads, etc). The temperature of springs is generally ground temperature (around 45-50⁰F). Plant and/or protect conifers in riparian area to provide thermal cover in winter, although allow for biodiversity with deciduous vegetation. Limit amounts of warm irrigation return flows.

Excess Fine Sediments (High Priority).--*There is excess fine sediment in this reach, which creates water quality and other problems for the salmon. Excess fine sediment can smother eggs of fall chinook.*

Work on road design and maintenance to avoid quick surface runoff. Limit dust from roads with lignosulfonate, water, chip seal, or asphalt. Relocate roads to better sites if sediment input to river cannot be mitigated by road maintenance. Avoid using roads or ground skidding when the soil is wet. Use of roads when dry or frozen avoids soil and vegetation disturbance. Water bar and/or revegetate skid trails. Educate fishermen and campers about effects of riparian erosion and compaction. Limit recreational use of roads and trails which results in sediment input to river. Prevent bank erosion and destruction by livestock by fencing riparian area and providing water corridors or alternate water sources. Protect water corridors with rock of appropriate size. Avoid devegetation in the upper watershed to the extent that it would result in extreme peak flows and cause bank erosion.

Excess nutrient loading (Study).--*Excess nutrient loading can result in excessive algal growth and related water quality problems.*

If there is a problem with nutrient loading, it needs to be addressed at upstream sources.

Stream Structure

Ice Flows (Low Priority).--*Ice flows occur during many winters. Ice flows scour the streambed and destroy stream structure.*

Substrate

Excess Fine Sediment (High Priority).--*Excess fine sediment in the substrate smothers eggs and fills intergravel hiding places (cover) for juvenile fish.*

See "Water Quality" in this reach.

Physical Barriers: --

NOTE: Since the original plan was completed in 1993, a bottomless arched culvert has been placed at the mouth of Grouse Creek to facilitate fish passage.

Habitat Requirements

No problems were identified.

Grande Ronde River--Wildcat Creek to State Line

Water Quantity

Compaction (Low Priority).--*Soils on this reach generally have higher clay content, and are more compactable than younger soils formed on more silicic bedrock (such as that in the high Wallowas). Soil compaction results in greater surface runoff and less groundwater recharge.*

Work on road design and maintenance to avoid quick runoff and let precipitation and snowmelt recharge aquifer. Limit compaction from roads, campgrounds, and trails (human and livestock). Site various uses on less compactable soils to promote infiltration and recharge aquifer.

Flushing Flows (Low Priority).--*Flushing flows (high peak flows or freshets) are needed to wash fine sediments from the gravel and to trigger the migration instinct in juvenile salmon.*

Do not impound or divert needed flushing flow. In some cases it may be possible to release impounded water for flushing flow. Limiting tree density and vegetative cover can increase peak flows, but this should be balanced against bank erosion caused by excess peak flow (and done within the framework of a productive, healthy watershed ecosystem).

Water Quality

Temperature (High Priority).--*Lack of riparian vegetation and shade, as well as low flow levels, contribute to rises in water temperature. Temperature problems will need to be addressed upstream (in the Grande Ronde Valley) and in the local tributaries.*

See "Grande Ronde--Rondowa to Wildcat Creek."

Excess Fine Sediment (High Priority).--*There is excess fine sediment in this reach, which creates water quality and other problems for the salmon. Excess fine sediment smothers eggs of fall chinook.*

See "Grande Ronde--Rondowa to Wildcat Creek."

Weeds/Erosion (Low) – See Countywide Issues.

Septic (Study).--*Study effects of leakage from septic systems on water quality and salmon habitat.*

If there is a problem with septic systems, limit future development using the county's comprehensive land use plan, and improve current septic system (the ODEQ has information on improving septic systems).

Feedlots (Low Priority).--*Nutrient runoff, sedimentation, and riparian devegetation from*

feedlots are detrimental to water quality.

Prevent bank erosion and degradation by livestock through physical or electric fencing of the riparian area. Use watering corridors or supply alternative water source for livestock. Wetlands and/or filter strips should be provided for feedlot runoff. Monitor elk and herd away from "feedlots" if they are a problem.

Herbicides/Pesticides (Low Priority).—See Countywide Issues

Excess Nutrient Loading (Study).--*Excess nutrient loading can result in excessive algal growth and related water quality problems.*

If there is a problem with nutrient loading it needs to be addressed at upstream sources.

Stream Structure

Woody Debris (High Priority).--*This reach is lacking large woody debris to provide diversity of stream structure.*

Add and preserve large woody debris. Establish a good riparian plant community to provide a source of future large woody debris.

Bank Form (Low Priority).--*Deterioration of the streambank results in excess sedimentation.*

Prevent bank erosion and destruction by livestock by physical or electric fencing of watering corridors or supply alternative water sources for livestock. Avoid excessively high peak flows and resultant bank erosion by keeping enough watershed vegetation to slow runoff and allow infiltration to groundwater. Provide large trees and other vegetation on the banks whose root systems provide stability.

Ice Flows (Low Priority).--*Ice flows occur during many winters. Ice flows scour the streambed and destroy stream structure.*

See "Grande Ronde--Rondowa to Wildcat Creek."

Substrate

Excess Fines (High Priority).--*Excess fine sediment in the substrate smothers eggs and fills intergravel hiding places (cover) for juvenile fish.*

See "Grande Ronde--Rondowa to Wildcat Creek."

Habitat Requirements

Riparian Vegetation (Low Priority).--*Riparian vegetation is lacking on this reach.*

Plant/protect conifers in riparian area to keep thermal cover in winter and

deciduous trees and shrubs to provide habitat diversity. Preserve and restore riparian vegetation.

Harassment (Low Priority).--*Recreational use of this reach results in harassment of spawning fall chinook.*

Relocate campgrounds away from spawning areas (improve campground design). Limit recreational use of roads, trails, and campgrounds in spawning season. Seasonal sport fishery closures may reduce harassment potential. Educate recreational users about salmon harassment.

Diversion Screens (Study).--*Irrigation diversions and return flows should be screened to prevent the loss of fish.*

Make sure diversions and irrigation returns are screened, monitored, and maintained.

