

OVERARCHING GOAL

Restore and sustain natural production of adult anadromous fish populations downstream of Lewiston Dam to pre-dam levels, to facilitate dependent tribal, commercial and sport fisheries full participation in the benefits of restoration via enhanced harvest opportunities.
The TRRP strategy for accomplishing this goal restores and perpetually maintains fish and wildlife resources (including T&E species) by restoring the processes that produce a healthy alluvial river system.

FUNDAMENTAL OBJECTIVES

Restore the processes and attributes of a healthy alluvial river system.

Restore and sustain natural production of anadromous fish populations *in the Trinity River basin* downstream of Lewiston dam to pre-dam levels.

MEANS OBJECTIVES

Rehabilitate and protect wildlife habitats and maintain or enhance wildlife populations following implementation.

Establish and maintain riparian vegetation that supports fish and wildlife.

Create and maintain spatially complex channel morphology.

Increase physical habitat diversity and availability for all life stages of anadromous salmonids in the upper 40 miles of the Trinity River to meet fundamental objectives.

Improve riverine thermal conditions for growth and survival of natural anadromous salmonids.

Minimize impacts of predation, competition, and genetic interactions between and among hatchery and natural anadromous fish.

-AND-

Adapt timing of hatchery release to alter distribution of avian predators and minimize predation on natural fry and smolts.

Fisheries Fundamental Objective(s)	
Fundamental Objective	Species Specific Fundamental Objective
Restore adult anadromous fish numbers to pre-Trinity River Dam levels in order to facilitate dependent tribal, commercial, and sport fisheries full participation in the benefits of restoration via enhanced harvest opportunities	Increase naturally produced fall-run Chinook salmon adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity
	Increase naturally produced spring-run Chinook salmon adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity
	Increase naturally produced coho salmon adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity
	Increase naturally produced steelhead adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity
	Increase naturally produced green sturgeon adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity
	Increase naturally produced Pacific lamprey adult production to the extent necessary to meet or exceed escapement objectives and facilitate expanded harvest opportunity

Attributes of Alluvial River Ecosystems:

1. Spatially complex channel morphology.
2. Flows and water quality are predictably variable.
3. Frequently mobilized channel-bed surface.
4. Periodic channelbed scour and fill.
5. Balanced fine and coarse sediment budgets.
6. Periodic channel migration or avulsion.
7. A functional floodplain.
8. Infrequent channel-resetting floods.
9. Self-sustaining diverse riparian plant communities.
10. Naturally fluctuating ground-water table.

Increase freshwater production (abundance, physical condition, and health) of fry, juvenile and outmigrant anadromous fishes from baseline conditions in the mainstem Trinity River within 3-4 brood cycles following rehabilitation of fluvial river processes	Limit redd superimposition by increasing suitable spawning habitat areas throughout the restoration reach.
	Minimize fry stranding in the upper 40 miles of the mainstem Trinity River
	Reduce brown trout population to decrease predation on native naturally produced fish in the mainstem Trinity River.

1. Create and maintain spatially complex channel morphology	1.1. Increase physical habitat diversity and availability (to achieve Fish Habitat objective 2.1, Riparian objectives 5.1 & 5.2, and Wildlife objectives 6.4.1 & 6.5.1)
	1.2 Increase coarse sediment transport and channel dynamics
	1.3 Increase and maintain coarse sediment storage
	1.4 Reduce fine sediment storage in the mainstem Trinity River

Increase physical habitat diversity and availability for all life stages of anadromous salmonids in the upper 40 miles of the Trinity River to meet fundamental objectives.	Increase/maintain salmonid fry and juvenile rearing habitat
	Increase/maintain spawning habitat quantity and quality
	Maintain or increase adult holding habitat from baseline conditions in the mainstem Trinity River

6. Rehabilitate and protect wildlife habitats and maintain or enhance wildlife populations following implementation	6.1 Maintain Trinity populations and species diversity of birds using the riparian zone in the Program area
	6.2 Maintain Trinity River riverine bird populations and species diversity in the Program area
	6.3 Minimize impacts of riverine bird predation on fry and smolts
	6.4 Increase population size, survival, distribution, and recruitment success of Foothill Yellow-legged Frogs (FYLF)
	6.5 Increase population size, survival, distribution, and recruitment success of Western Pond Turtle (WPT)
	6.6 Minimize adverse impacts to additional native riparian or aquatic associated wildlife from Program activities. Focus on wildlife species associated with a healthy river ecosystem, not necessarily all species

Improve riverine thermal conditions for growth and survival of natural anadromous salmonids	
	Improve thermal regimes for rearing growth and survival of juvenile steelhead, coho salmon and Chinook salmon
	Improve thermal regimes for outmigrant salmonid growth and survival (dependent on water year)
	Provide optimal temperatures to minimize pre-spawning mortality, protect in-vivo egg viability, and improve spawning success of spring and fall-run Chinook

5. Establish and maintain riparian vegetation that supports fish and wildlife	5.1 Promote diverse native riparian vegetation on different geomorphic surfaces that contribute to complex channel morphology and high quality aquatic and terrestrial habitat (achieve Fish Habitat objective 2, Fish Production objective. 3.1, and Wildlife objective 6.1)
	5.2 Prevent riparian vegetation from exceeding thresholds leading to encroachment that simplifies channel morphology and degrades aquatic habitat quality (achieve Fish Habitat objective 2.1, Wildlife Objectives 6.2 & 6.4)
	5.3 Recover riparian vegetation area equal or greater than disturbed by physical rehabilitation (achieve Wildlife Objective 6.1)

Minimize impacts of predation, competition, and genetic interactions between and among hatchery and natural anadromous fish	Increase proportion of Natural Influence (pNI) used as a surrogate for genetic interactions = mixing of hatchery and natural fish
	Predation - NEED (TO DEVELOP LANGUAGE FOR THIS OJECTIVE
	Competition = NEED (TO DEVELOP LANGUAGE FOR THIS OJECTIVE
Adapt timing of hatchery release to alter distribution of avian predators and minimize predation on natural fry and smolts	FWG considering eliminating this. Pass on to wildlife WG to consider.