

STREAM MANAGEMENT PLAN

Updated April, 2018 – Bill Baker and Brian Walker

Water(s): Smalle Creek (Pend Oreille Co.)

Location: The Smalle Creek treatment area is located approximately 5 miles west of Cusick.

	Distance:	Max Depth:	Discharge:
Smalle Creek	~7.5 miles	N/A	Up to 2.65 cfs

Water Source: Numerous springs and seeps, rainfall and snowmelt run-off.

Outflow: Tributary to Calispell Creek (tributary to the Pend Oreille River).

Management History:

Westslope Cutthroat Trout (WCT) *Oncorhynchus clarki lewisi* are native to the Pend Oreille River watershed in Washington, but have declined in abundance and range. Cooperative efforts between the Washington Department of Fish and Wildlife (WDFW) and the Kalispel Tribe of Indians Natural Resource Department (KNRD) to restore native WCT to selected stream reaches within Pend Oreille County are underway. Smalle Creek was historically stocked with Eastern Brook Trout *Salvelinus fontinalis* (1933-1938, 1980-1981). Surveys conducted in 2014 confirmed that Eastern Brook Trout was the only fish species present above Smalle Creek Falls.

Upper Smalle Creek (above Smalle Creek Falls) is well-suited to WCT restoration due to the presence of a natural barrier to prevent reinvasion by non-native fish, excellent habitat, and a monoculture of Brook Trout in the project area. Upper Smalle Creek was rehabilitated (treated with rotenone) once annually between fall 2015-fall 2017. It is anticipated that following non-native fish eradication in Smalle Creek, reintroduced WCT will establish self-perpetuating populations and re-occupy the treated area.

Smalle Creek has been managed under WDFW general stream regulations, including a 10 fish limit with no size restrictions for Eastern Brook Trout, and a 2 fish limit with 8" minimum size for all other trout (Daily bag limit = 10 fish total). Beginning July 1, 2018, WDFW regulations will change to no daily limit and no size restrictions for Brook Trout in streams statewide.

T&E Flora and Fauna: Professionals from many resource agencies have visited this site over the last 50 years. No known report exists of any threatened or endangered species habitually found in or near this stream. Occasional visits from both bald *Haliaeetus leucocephalus* and golden *Aquila chrysaetos* eagles occur, although no nests of these two species are known in the area. The Smalle Creek treatment area is located within the Dirty Shirt Pack of wolves *Canis lupus* home range, but wolves are unlikely to be in/stay in the area during treatment due to increased human presence, traffic, and activity in the days surrounding treatment.

Current Management Objectives:

This project has two objectives:

1. Eradicate non-native Eastern Brook Trout from Upper Smalle Creek and its tributaries.
2. Establish a self-sustaining, healthy population of WCT in Upper Smalle Creek and its tributaries.

The successful achievement of Objective 1 would be readily apparent following the final rotenone treatment when no fish carcasses are observed by drip can operators or found in post-treatment surveys of the treated reach. Environmental DNA (eDNA) sampling will be utilized throughout the Smalle Creek watershed to confirm the complete eradication of Eastern Brook Trout. A reproducing population of WCT, expanding both in population size and spatial distribution, would indicate successful completion of Objective 2. Successful achievement of Objective 2 may take multiple years.

1. Fishery Objectives:

None - Species restoration and conservation are the main goals of this action. WCT size will be small (generally < 6 inches in length), and the fishery will not likely receive much interest from the general public.

2. Angler use objective: 0 days

3. Stocking Objectives:

Stream	Species	Number of Fish Stocked			Planting Month
		Total	/Acre	/Pound	
Smalle Creek	WCT	300 – 500	N/A	N/A	Summer/Fall 2019; translocation from wild source populations.
Smalle Creek	WCT	1000 – 15,000	N/A	Fry	Summer/Fall 2019; remote site incubation (RSI) of fertilized gametes.
Smalle Creek	WCT	TBD	N/A	N/A	Additional translocation or RSI production as needed from 2020-2025.

Management Strategy:

1. Ensure that non-native fish have been eradicated (or have not been illegally reintroduced).
2. Translocate 300-500 genetically pure wild WCT from geographically proximate populations to Smalle Creek following successful eradication of Eastern Brook Trout. If necessary (depending on the number of donor fish available), produce WCT fry from fertilized gametes in RSI's to augment the number of translocated fish.
3. Monitor the restored WCT population through electrofishing to assess population size, spatial distribution, and genetic metrics.