

Native Fish Subcommittee Meeting
December 7, 2010, 10 AM - 2 PM
Swan Ecosystem Center Conference Room

Participants: Jim Bower, DNRC; Andrea Stephens, NwC; Ryen Neudecker, TU; Leo Rosenthal, FWP; Beth Gardner, Flathead NF; Gordon Luikart, UM Flathead BioStation; Mike Palladini, SEC; Betsy Spettigue, SEC; Adam Lieberg, NwC; Anne Dahl, SEC

Ryen Neudecker, Blackfoot Chapter of Trout Unlimited

The Blackfoot Chapter of Trout Unlimited has created:

- Blackfoot Native Fish Plan
- Restoration Priorities
- Restoration Action Plan, updated 2008
- Biological scoring
- Social scoring
 - Agreement with landowner
 - Affordable
 - Serve as model

Habitat improvements have cooled streams 15 degrees, making several streams available to native fish that were presumed to be only acceptable to non-natives.

Goals/Strategies

- Land protection, conservation easements
- Radio-telemetry
- Management improvements
- Restoration
- Education
- Working with private landowners

Project funds funneled through TU.

- Permitting
- Most qualified vendors list: in-stream and structural contractor lists.
 - In-stream contractors: two years experience, first year of Rosgen training
 - In-stream consultants: 1-4 levels of Rosgen training
 - Construction consultants: principle engineer PE
- Contractors and consultants have separate contracts

Ryen will share copies of Blackfoot TU's contracts, monitoring plan and her Power Point presentation. Please send electronically to SEC.

Swan Watershed Issues

The problem for cutthroat trout in the Swan seems to be mainly exotic fish, rather than poor habitat. Yet we have habitat problems, such as failing culverts and effects of logging. Yet improvements are being made on national forest and state lands.

Beth is on the national forest Collaborative Forest Landscape Restoration Plan (CFLRP) monitoring committee. She recommends that the Native Fish Committee act as her oversight committee for CFLRP projects in the Swan watershed.

The Native Fish Subcommittee should collaborate to determine priorities, data collection, and conceptual design for all projects in the watershed. We should check into national forest funding available through the Wyden Act for projects adjacent to national forest.

Swan Basin Restoration Plan (SBR) (Watershed Restoration Plan)

The Native Fish component of the SBR Plan is satisfactory; no additional work on the plan is needed now.

Swan Lake Watershed Westslope Cutthroat Restoration Strategy

Joel Tohtz, FWP, BPA coordinator, needs this sort of document for laying out restoration plans. The Flathead NF also needs this sort of document.

FWP has concerns about brook trout suppression. Replace “brook trout suppression” with “evaluate feasibility of brook trout suppression.”

Whitetail Creek

Whitetail Creek is a cold spring-fed stream, so cold that it appears to have low productivity and unique adaptation by cutthroat trout. There is a natural barrier between two culverts. The natural barrier protects the upstream population of native cutthroat from brook trout found below. DNRC added a permanent barrier (culvert) below the natural barrier and is restoring the stream above. DNRC will remove the natural barrier and the culvert barrier to extend the pure cutthroat distribution. DNRC is reducing the brook trout by electro-fishing. More electro-fishing will be needed. The stream is too woody for easy shocking. But the cutthroat count is going up. The upper culvert was removed. Quite a few recaptures indicate the fish are staying put.

Questions:

Do cutthroat need nutrients from moderate fire to enable them to out-compete brooks?

Could cutthroats in Whitetail Creek, which can tolerate colder water, be moved to re-found other cold streams?

GIS Data

Jim adapted the multi-states cutthroat assessment data sheets for the Native Fish Committee by adding fields so the Native Fish Committee can add and update Swan data, such as indicating more precisely the locations of barriers.

The multi-state data is available on the Idaho Fish and Game server, with a password. The assessment should be updated every two years. Jim has made it possible to link Word reports to the spatial data on the Native Fish Committee datasheets. Anyone can update the reports. Jim added a column for Swan Native Fish Subcommittee (SNFS) updates on the multi-state data sheet. Jim will make further updates this winter.

Cutthroat Map Changes

Peterson and Bear creeks (north of Swan Lake, east of river) have cutthroat. A small natural barrier in Peterson Creek prevents brooks/hybridization. The barrier is just a debris jam and does not provide long-term security. Bear Creek has an in-stream pond that goes subsurface on private land. The private landowner altered the pond complex legally and caused considerable damage. This pond seems to be the barrier for upstream invasion, however, surveys of fish species composition do not exist. The land is for sale and there is concern about the security of this barrier. Leo proposes we do not yet add Peterson or Bear to the conservation population list until genetics are confirmed.

Lower Fork of Lost: culverts were removed.

Most Flathead National Forest culvert barriers now replaced, except on Cold Creek.

Cold Creek

North Fork of Cold has a large population of cutthroat that extends down to the confluence with Middle Fork. Fish may be out-migrants from Cold Lake or may be residents. **Frozen Creek** is a small reach with a very, very small population. Genetic testing could help determine the risk to this population. **South Fork of Cold** is a long reach with good looking habitat but a sparse cutthroat trout population. Brook trout colonization ends rather abruptly at one area but no obvious reason why they haven't colonized past that.

Northwest Connections' (NwC) electro-shocking and monitoring was extremely useful. NwC gathered samples for genetic testing; results are not yet available. Group agreed to wait on any recommendations for Cold Creek until results are available.

Genetic data questions and comments

Begin by compiling all genetic data already available. Genetic diversity and connectivity can be determined through sampling/testing.

DNRC and FWP can collect samples to determine the composition of cutthroat in the Swan basin. However, current funding strategy limits FWP to analysis on just a few populations per year. Some speculation if CFLRP monitoring could boost the data analysis rate.

If a stream lacks diversity, moving a few individual fish that have been genotyped from another watershed could be a test for rebound. Follow-up monitoring would be needed. But moving fish is hard to accomplish, due to worries about disease. Is diversity among watersheds good? What are the consequences of homogenizing the whole watershed?

Divergence is likely between the watersheds in the Swan.

Mark Boyer could conduct a 5-year genetics study: Is genetic rescue good or possible in populations isolated by barriers for less than 50-100 years.

Data about the river population of cutthroat in the Swan is insufficient. It is not likely that cutthroat will rebound in the Swan. The Swan is very difficult to electro-fish effectively. Beth

thinks we have no hope of restoring a fluvial population and should focus on just conserving a suite of isolated, resident populations.

Six Mile Creek

Six Mile Creek remains pure, even though Swan Lake has rainbow. Six Miles Estates structures have created two barriers that have protected the upstream cutthroat population. The structures are quite old and beginning to fail. We may want to help fund repairs for a permanent fix, hire a consultant.

On the multi-state assessment, the “?” about the purity of the population can be removed. Groom and Bond Creek samples are old or insufficient in sampling numbers. The “?”s should remain.

If we install barriers on private lands, let’s be sure we have conservation easements protecting them. A similar project on Wyman Creek in the 1990’s failed because we had no easement.

Kraft Creek questions, comments and concerns

The Kraft Creek watershed has the largest cutthroat population in the Swan.

Hybrids and brooks are threats. Brooks are moving upstream. Brooks are going up Hemlock Creek. Data suggest that the brook trout invasion is starting to pick up stream (but data is not robust enough to be sure) and there is urgency to add now to conserve the cutthroat.

According to 2004 surveys, the headwaters of Red Butte and Kraft have pure populations. But at the proposed barrier location, several F1 hybrids were captured and one pure rainbow.

Pure westslope cutthroat were stocked in Hemlock Lake as recently as 2009.

Installing a barrier is an opportunity in two places. Below Hemlock Creek, there is a narrow canyon, but brooks, hybrids and at least one pure rainbow have been found above in Hemlock Creek. Upstream of Hemlock Creek in Kraft Creek is another potential barrier location but the stream is unconfined. Leo thinks we should focus only on the canyon area below Hemlock since it is the most feasible channel type. We can only afford to survey 1 site. Group also discussed if there are other options nearer the WCT strongholds in Red Butte and Kraft. The unconfined channels do not lend themselves to a barrier there except at stream crossings. We could possibly remove the 2 new bridges at Red Butte and Kraft to make into barriers at about the same cost of 1 new barrier downstream. But then we have 2 isolated populations instead of 1 big one.

An analysis could be accomplished during the upcoming Forest Service Glacier Loon timber sale NEPA process. CFLRP can fund an A&E firm to complete a survey and design for the barrier.

Population estimates for non-natives are inconsistent. It would be useful to do new genetic analysis at the two potential dam sites.

Leo is concerned about long-term unknown consequences if barriers are installed where brooks already exist. In other words, he wonders if this is really the best place to spend money to

conserve cutthroat trout. What are the consequences of barriers for frogs, insects? Are passages available for these small creatures? This could be a good research opportunity.

Leo is not willing to do chemical removals at this time, due to social issues associated with other pesticide projects and the lake trout suppression project going on.

Kraft Creek has miles of cutthroat habitat and 12,000 fish.

The group briefly pondered other restoration needs. How do they compare to Kraft Creek.

Other restoration options to consider:

- North Fork Lost.
- Owl Creek eradication. Cutthroat are above the restoration work planned on private land.
- Frozen Creek
- Six Mile Creek.

Monitoring option

A basin-wide genetics analysis would help determine the viability of genetically isolated cutthroat populations? This would help us make tough decisions.

Genetics could answer questions about: spread of hybridization, diversity, number of breeders, purity. We need this information as soon as possible.

Sampling as many of the 17 cutthroat populations in the Swan as possible would be useful to help with prioritization

DECISIONS

The subcommittee recommends conducting NEPA analysis (survey and design) for the barrier in the Kraft Creek drainage as part of the timber-sale analysis, and continuing to gather fish data, recognizing that we may decide in the end not to construct a barrier after reviewing the results of the analysis. Due to the urgency of the Glacier/Loon opportunity enabling us to accomplish the analysis, we are willing to take the risk.

Gather the basin-wide genetics data to fill the gaps in knowledge and determine how at risk or secure are the 17 cutthroat populations. Collect genetic samples from streams with both brook trout and cutthroat. Tie the work to the CFLRP monitoring. Labor would be donated by the agencies (utilize the allocated sampling funding in FWP and DNRC budgets). CFLRP funds would pay for the analysis.

Jim will finish correcting GIS layer data in the multi-state assessment this winter.

By March committee members will look at maps and divide populations among members to gather samples for genetics testing.