Q&A for Flathead Lake Fisheries Co-management

Montana Fish, Wildlife and Parks, June 2013

Background: Mysis shrimp were introduced into the upper Flathead Drainage in 1968 and appeared in Flathead Lake in 1981. That led to an increase in non-native lake trout, collapse of the kokanee fishery and declines in native fish including bull and cutthroat trout. Since then, aggressive sport fishing has reduced lake trout abundance, and bull trout have stabilized at half the pre-Mysis numbers. Unfortunately, Mysis have permanently changed the ecology of the lake. The CSKT and FWP adopted the Flathead Lake and River Fisheries Co-Management Plan in 2000 to coordinate fisheries management of the lake and river system. The Plan expired in 2010 but FWP continues to follow the principles and strategies in the Plan. The Confederated Salish and Kootenai Tribes (CSKT) have proposed using gill nets to remove large numbers of lake trout from Flathead Lake to potentially reduce their impacts on native fish. CSKT released their draft EIS on June 21, 1013. Though Fish, Wildlife and Parks (FWP) supports efforts to conserve native fish in the Flathead Lake and River System, FWP is not joining CSKT in their proposed lake trout gillnetting suppression effort due to concerns regarding the public involvement process and uncertain outcomes of the proposed effort.

The Confederated Salish and Kootenai Tribes have plans to gillnet large numbers of lake trout in Flathead Lake. FWP has pulled out of this planning process. Can the Tribes pursue lake trout suppression without FWP support and can FWP influence the tribes to alter these plans?

In March 2012, FWP removed itself from the Tribe's EIS. The Confederated Salish and Kootenai Tribes are a sovereign nation with management authority for fish and wildlife resources on the Flathead Indian Reservation and could pursue this program alone. FWP co-manages Flathead Lake fisheries with the Tribes and will continue to discuss fisheries management and try to create a shared vision for future management.

How does the CSKT's plan to suppress lake trout with gill nets in Flathead Lake fit with the CSKT/FWP Flathead Lake and River Fisheries Co-management Plan? Does the co-management plan include FWP gillnetting? Do CSKT and FWP work well together under this plan or do they disagree on everything in the plan?

The Flathead Lake and River Co-Management Plan contains five strategies to address fisheries and lake management. The CSKT and FWP successfully work together on four of these which include fisheries monitoring, fishing access, water quality and habitat protection, educational and informational activities. Disagreement between co-managers arises in the fifth strategy, which specifically addresses fish population management. This strategy contains the potential to consider using agency gillnetting and other aggressive methods if native trout numbers fall to dangerously low levels. Native trout have not fallen to these specified levels. FWP questions the purpose and need for the proposed level of lake trout suppression, which does not adhere to the

guiding principles of the co-management plan. At this time, FWP will continue to improve native trout habitat, allow anglers to harvest lake trout, and monitor the status of fish populations.

What is FWP's position on suppressing lake trout with gill nets in Flathead Lake at the levels proposed by CSKT?

The Flathead Lake and River Co-Management Plan provides guidance for management actions. Dependent on the status of both native fish populations and the recreational fishery for non-native fish, there are prescriptions for how co-managers would address declines in native fish or the recreational fishery. Native fish have not fallen to the dangerously low levels that would call for agency gillnetting. To date, lake trout reduction and suppression has relied on recreational angling. Lake trout suppression at the proposed levels will likely reduce the recreational fishery to levels below the established objective of a viable fishery, 50,000 angler days per year. Under current conditions, FWP and the Co-Management Plan do not support suppressing lake trout with gill nets in Flathead Lake as proposed by CSKT.

Will the CSKT be able to gillnet lake trout on the north half of Flathead Lake?

The CSKT has authority to manage fishery resources on the Flathead Indian Reservation, which includes the south half of Flathead Lake. Whether or not the Tribes have the authority to gillnet the north half of the lake is a legal question that is unresolved at this time. This question will likely be resolved if the CSKT proposes to net the north half.

What about the problem of "by-catch"—bull trout being caught in nets set for lake trout? Is this a serious potential problem?

By-catch of bull trout is an additional source of mortality for bull trout in Flathead Lake, which could lead to reduced numbers of bull trout. Gill net lake trout suppression projects on Yellowstone Lake, Lake Pend Oreille and Swan Lake indicate that significant by-catch mortality of native fish occurs, including bull trout and cutthroat trout. Bull trout are currently listed as "Threatened" under the Endangered Species Act so it is the responsibility of the U.S. Fish and Wildlife Service to determine what level of bull trout mortality would be acceptable.

How would the CSKT proposed project affect fishing on Flathead Lake?

The levels of lake trout reductions proposed by the CSKT will reduce angler catch rates and the size of lake trout caught. The number of lake trout caught per hour, the size of lake trout, and the number of trophy sized lake trout in Flathead Lake will go down. The catch rates of lake trout over 25 inches long and of trophy lake trout over 30 inches long will decline at greater rates than the percent suppression levels. These reductions will result in reduced numbers of anglers fishing on Flathead Lake. The current harvest of over 70,000 lake trout per year in Mack Days and the general season may already be impacting fishing. The most recent angler use survey conducted

in 2011 shows the lowest number of angler days (33,631 angler days) in over 15 years and the second lowest estimate in the 30-year record. The Flathead Lake and River Co-Management Plan established a recreational fishery objective for a viable fishery at 50,000 angler days per year.

Why is there a slot-limit fishing regulation for lake trout that protects the largest fish when you are trying to get rid of lake trout?

The Flathead Lake and River Co-Management Plan balances conserving native fish and providing a viable recreational fishery, which includes fishing for lake trout. The trophy lake trout fishery is important to angler groups and draws anglers to Flathead Lake who will hopefully harvest smaller lake trout while they are fishing. The slot limit protects only the largest and oldest fish, many over 25 years old, and allows for catch and release angling with limited trophy harvest. These large fish make up only a small proportion of the lake trout population and contribute little to predation or reproduction. Anglers may harvest most spawning adult lake trout and predatory lake trout which are under the slot. The slot limit regulation does not prohibit the Co-management Plan from achieving native fish goals and helps reach recreational fishery goals.

Are Mack Days events helping or hurting bull trout in Flathead Lake? Why not just focus on these events rather than use gill nets to control lake trout?

Mack Days events are reducing the number of lake trout in Flathead Lake and may be helping bull trout. In each of the last two years, roughly 40,000 to 50,000 lake trout were harvested in Mack Days events and an additional 30,000 lake trout were harvested in the general fishing season, resulting in over 70,000 lake trout harvested each year. It is too early to see the results of this level of lake trout harvest in the number of spawning bull trout. FWP counts bull trout spawning sites and it will take another two to three years to determine if the current angler harvest level leads to increases in adult bull trout numbers. There is a very low by-catch of bull trout with these fishing events.

CSKT has been running Mack Days and has done a great job in organizing and structuring the events for the most benefit but at a significant cost.

If the CSKT goes forward with gillnetting large numbers of lake trout, will this effort help or hurt the bull trout population in Flathead Lake?

The gillnetting proposal assumes reducing lake trout abundance will reduce predation on bull trout. But if there is a high level of by-catch of bull trout in gill nets, then gillnetting could offset the possible gains and hurt the bull trout population. If the CSKT decide to net large numbers of lake trout, there will be large numbers of other species captured and killed in the nets, including bull trout, lake whitefish, native minnows and others. Removing hundreds of thousands of fish will change the entire aquatic community in Flathead Lake and may lead to reductions in some species including bull trout. There is a high level of uncertainty as to how this gillnetting suppression effort would impact the overall fish community.

What is the current status of bull trout in Flathead Lake?

CSKT and FWP have concluded that bull trout populations are currently stable; that is, the total number of bull trout spawners in the Flathead River tributaries is neither increasing nor decreasing over the last 14 years of surveys. In 2012, FWP completed a count of all spawning habitat used by Flathead Lake bull trout and found 500 redds (a location where a female bull trout deposits her eggs). This number of redds is less than was observed in the 1980's prior to changes brought on by Mysis, but more than observed in the early to mid 1990's after lake trout rapidly increased in abundance in the Flathead system. Bull trout continue to spawn in all historically used streams in the North and Middle forks. In 2002, in a report titled Native Trout Security Levels for the Flathead System, CSKT and FWP determined "secure" levels for bull trout. The current bull trout population meets all three criteria of the secure level detailed in this document.

What about by-catch of lake whitefish? Wouldn't they be netted at even greater numbers than lake trout?

The by-catch of lake whitefish will also be a problem since many more lake whitefish will be killed than lake trout. In past netting surveys, gill nets catch two to seven times more lake whitefish than lake trout. In some years lake whitefish produce a popular recreational fishery. Lake whitefish also eat Mysis shrimp. At this time, there is a high level of uncertainty as to what impacts the proposed gillnetting will have on lake whitefish, other fish species, and the aquatic food web.

Will removing lake trout and lake whitefish in large numbers affect the Mysis shrimp numbers in Flathead Lake?

Removing large numbers of lake trout and lake whitefish will affect Mysis shrimp numbers. Mysis numbers are controlled by predation from lake trout and lake whitefish. Reducing lake trout and lake whitefish numbers will result in an increase in Mysis abundance and a decrease in tiny zooplankton, which serves as food for Mysis and juvenile fish.

What will happen in the lake if Mysis shrimp numbers increase?

If Mysis numbers increase, they will increase the predation on zooplankton populations. Reduced zooplankton levels could result in higher phytoplankton (algae) levels, which at very high levels could lead to algae blooms and reduced water quality. At this time, there is a high level of uncertainty as to what will be the response of the food web to gillnetting suppression efforts in Flathead Lake.

How is the proposal to gillnet Flathead Lake any different than the current effort to net lake trout in Swan Lake that FWP is leading and why does FWP support one effort and not others?

The current effort on Swan Lake is an experiment to assess our ability to enhance bull trout through gillnetting suppression of lake trout. FWP has completed four years of an eight year study. Swan Lake is a much different lake than Flathead Lake. Swan Lake is 1/33 the size of Flathead Lake, the lake trout population is the result of a recent introduction and is not well established, no lake whitefish are present, and lake trout are believed to spawn in only one small area in Swan Lake. Lake trout in Flathead Lake are well established and have been in Flathead Lake for over one hundred years, spawn in numerous areas all around the lake, and provide a popular recreational fishery. To date, the suppression effort in Swan Lake has removed an average of 7,500 lake trout per year, whereas anglers alone in Flathead Lake remove over 70,000 lake trout per year. At the end of the eight year study, FWP will determine the efficacy of the Swan Lake effort, including the impacts to lake trout and bull trout populations and whether success criteria were met to justify continued netting.

Similarly, Idaho Fish and Game is removing lake trout in Lake Pend Oreille, and the National Park Service is removing lake trout in Glacier National Park and Yellowstone National Park – how does FWP view these efforts in relation to similar proposed efforts Flathead Lake?

Although every lake is different, FWP continues to follow and learn from these experimental projects. To date, these ongoing projects continue to modify techniques and strategies. These projects have cost millions of dollars and are proposed to continue for years into the future. To date, these projects have not clearly benefitted native fish. More time is needed to determine if these efforts can be successful and maintained. In terms of Flathead Lake, the proposed gillnetting project will be expensive, would have to go on in perpetuity and results are unpredictable.

Likewise, how is the proposal to gillnet lake trout in Flathead Lake any different than FWP's project to remove hybrid trout in high mountain lakes?

FWP is conducting a number of experimental projects to protect existing native fish populations. The South Fork Westslope Cutthroat Trout Conservation Project to remove hybrid trout from mountain lakes in the headwaters of the South Fork of the Flathead River and then restock these lakes with pure westslope cutthroat trout will protect the entire drainage from the potential for these other trout species to hybridize with native westslope cutthroat trout. The South Fork Flathead represents about half the remaining westslope cutthroat populations in Montana. This project is a one-time effort to replace hybrid trout populations with pure populations over a ten year period, in a simpler system containing fewer species of fish. Chemical treatments allow complete removal of targeted fish populations, and generally after one year of treatment the projects are completed and no additional suppression effort is required. The South Fork westslope cutthroat trout project is about 75% completed, and the earliest treated lakes are restored and fishing well. In terms of Flathead Lake, the proposed gillnetting project will be expensive, would have to go on in perpetuity, and results are unpredictable.

Does FWP agree with the conclusions of the panel of outside fisheries biologists that CSKT convened in March?

FWP attended the meeting and observed the discussion and process. CSKT should be commended for convening a meeting in an attempt to further investigate and answer difficult questions. Unfortunately, the panel had limited time and incomplete information on which to deliberate. The questions and answers were not fully developed. Regional FWP staff does not fully agree with the conclusions of the panel and will address these concerns through assessment of all information.

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