

Kootenai Valley Resource Initiative
October 15, 2018 – 7:00 p.m.
Board Meeting – University of Idaho Extension Office

Board Members in Attendance:

David Sims, Mayor, City of Bonners Ferry & KVRI Co-chair
Dan Dinning, Boundary County Commissioner & KVRI Co-chair
Gary Aitken, Jr., Kootenai Tribe of Idaho Chairman & KVRI Co-chair
Sandy Ashworth, Social/Cultural/Historical Interests
Dave Wattenbarger, Soil Conservation/Landowner
Kevin Knauth, (Alt.) US Forest Service (USFS), Bonners Ferry Ranger District-District Ranger
Chip Corsi, (Alt.) Idaho Fish & Game Commission
Bob Blanford, Business/ Industry
Kennon McClintock, (Alt.) Conservationist/Environmentalist
Jim Cadnum, Industrial/Forest
Sherrie Cossairt, KVRI Recording Secretary & Kootenai Tribe of Idaho (KTOI)

Agency/Others in Attendance:

Wayne Kasworm, US Fish & Wildlife Service (USFWS), Grizzly Bear Biologist,
Tim Dougherty, (Alt.) Business/Industry
Dave Gray, (Alt.) Social/Cultural/Historical Interests
Angela Cooper, Kootenai Tribe of Idaho Vice-chair, (Alt.) KVRI Co-chair
Karen Roetter, Senator Mike Crapo's office
Sid Smith, Senator Jim Risch's office
Ryan Hardy, Idaho Department of Fish & Game (IDFG)
Kurt Pavlat, Bureau of Land Management (BLM)
Nathan Jensen, Kootenai Tribe of Idaho (KTOI)
T.J. Ross, Idaho Department of Fish & Game (IDFG)
Greg Hoffman, US Army Corp of Engineers (USACE)
Shawn Young, Kootenai Tribe of Idaho (KTOI), Aquaculture Program Manager
Alice Hanley, US Fish & Wildlife Service (USFWS), Acting Manager of Kootenai National Wildlife Refuge
Jessie Grossman, Y2Y
Carol Kriebs, Kootenai Tribe of Idaho (KTOI), Environmental Director
Sue Ireland, Kootenai Tribe of Idaho (KTOI)
Norm Merz, Kootenai Tribe of Idaho (KTOI)
Jim Woodward, Candidate for State Senate
Wally Cossairt, Citizen
Marty Martinez, Citizen
Ed Kriebs, Citizen
Georgia DeGon, Citizen

Opening:

Co-Chair, Dan Dinning opened and welcomed everyone to the meeting; introductions followed.

The September 17, 2018 KVRI Board Meeting Draft Notes were approved by consensus.

Cabinet Mountains Grizzly Bear Augmentation Program Presentation (Current Bear Management News, Capture & Monitoring results from the Selkirk Mountains) : Wayne Kasworm, Grizzly Bear Biologist, US Fish & Wildlife

Wayne began his presentation noting the similar goals in the Recovery Plans for both the Selkirk and Cabinet-Yaak Recovery areas.

- A population of 90-100 bears in each of these areas
- Judged by number and distribution of females with cubs
- Human caused mortality limits
- Interchange with adjacent populations for genetic diversity

The Recovery Plan gathers information on the number of females with cubs over 2 reproductive cycles, the number of BMU's occupied by females in a 6 year cycle, the target of human-caused mortality is less than 4% and the female mortality rate should not exceed 30% of total mortality. The loss of females cut into the reproductive potential for the population.

Selkirk Recovery Area

2012-17

- Females with cubs average 3.0 per year
- 11 human caused mortalities, under the 4% goal; 9 of 11 mortalities occurred in BC
- 5 of 11 were female; that is a high percentage of female mortality in the population (45%)
- 7 of 10 BMU occupied (meeting the goal) maybe 2/3 to ¾ of the way to recovery targets
- 2 mortalities in the last 6 years within the US (train kill, mistaken identity during hunting season)
- No known mortalities in 2018 so far

The data seems to show years of low numbers of females with cubs and then there is an increase. That increase can be attributed to more funding, resources invested and effort. Not necessarily a product of more females actually out there. Because of more funding we can look a little harder and are finding more. Approximately half of the recovery area is in British Columbia but due to limited resources their monitoring effort is lacking.

Cabinet Yaak Recovery Area

2012-2017

- Females with cubs average 2.7 per year
- 6 human caused mortalities, also under the 4% goal
- Only 1 of 6 was a female, lower female mortality than the Selkirks
- 11 of 22 BMU's occupied goal of 18/22, ½ way there for recovery target
- No known mortalities in the last 2 years
- 2 mortalities in 2018, 1 male & 1 female, under investigation at this time

The Cabinet/Yaak Recovery area does not include British Columbia. There is not a recovery program in British Columbia but they are doing things to manage their bear population and minimize mortality.

Since the 1983, in Northwest Montana and North Idaho, they have certainly seen some changing public attitude when it comes to Grizzly Bear. They now have Grizzly Bear management specialists that do public outreach, they have programs for electric fencing, and the Kootenai Tribe helps with that program as well. There are loaner garbage can programs around Libby and the fencing and consolidation of county waste sites have lessened the economic demands with the garbage system as well as lessening the opportunity for wildlife to come in conflict with the garbage.

Cabinet Mountain Grizzly Bear Augmentation

- 4 bears were added in 1990 as a test; it was successful and continued the program in 2005
- 20 bears added since 1990, 13 females and 7 males
- 5 bears left the target area since but one returned
- 6 bears are known dead (one female died at 18-19 years old after having produced a number of young, even though she died, she contributed a lot to that population going forward prior to her death)
- 2 bears are known to have reproduced

The Augmentation Program started by adding only females but later males were introduced as well for genetic diversity in the population. Wayne shared a family tree showing a female born in 1990 mating and producing at least 3 known generations (approximately 25 offspring) before dying in 2009. The Augmentation bears have come from the Flathead River Drainage and are back country individuals with no history of conflicts with humans. They have been moving some males to try to broaden the gene pool in the populations.

Wayne shared travel patterns of augmentation bears since 1990 and more recent movement of bears in our area. There are two things you can expect from a program that transplants animals from one place to another; they don't all stay where you put them and they don't all survive. A successful transplant program needs to have that in the back of their mind.

Technology has helped this data collection immensely. Bears are collared for a variety of reasons; to get survival and mortality rates, reproduction and calculate population trends as well. Newer radio collars are set up to attempt a location every 2-3 hours in the mountains and every 30 minutes in the valleys, the more locations it takes the more the drain on the batteries. Data is downloaded via satellite every couple of days. Older radio collars still require flights to download the location data. Flights are still important to see if a female has young and if so how many. Being able to track the bear movements show females tend to expand in concentric circles near their mother's home range and males travel longer distances and return.

Genetics testing is providing useful information to support the efforts in the recovery plan. Hair samples from captures, rub trees and corrals with cameras result in species, sex individual genotype and parentage information. It helps to evaluate changes in genetic diversity over time, document gene flow and effective linkage in support of eventual delisting for both the Selkirks and the Cabinet –Yaak area.

Huckleberry production is monitored as the bear's food supply. Isotope analysis on hair, tissue, and blood samples is used to determine the fractions of meat, vegetation & fish in the bear's diet. Identifying the proportion of fruit or berries in the bear's diet in the future will shed light on reproduction information as the females enter their dens. Females need at least 20% body fat to reproduce and much of that fat comes from the consumption of huckleberries.

**Wayne's complete slide presentation is available on the KVRI website at www.kootenai.org
Burbot Recovery Program Update**

Introduction: Sue Ireland, Kootenai Tribe of Idaho

The importance of the Agency, Tribal and Community collaboration that has happened to help restore the Burbot species is unique and an important model for others to be able to follow. The Burbot had such an important cultural significance to the Kootenai Tribe for subsistence and spiritual purposes and to the local community as a social fishery. It brought people together on the Kootenai River.

The Burbot population estimate in 2000 was less than 50 fish in the Kootenai River. Idaho Department of Fish and Game (IDFG) found no evidence of successful spawning or recruitment. That concern initiated an effort to look at what was going on and to figure out what the threats were to the Burbot population. They began looking at winter flow management, water temperature, reduced productivity and habitat changes. Law suits from environmental groups were suing the US Fish & Wildlife Service (USFWS) to list this fish as endangered.

In the meantime something big was happening here in Boundary County. The Kootenai Tribe was recognizing that there could be a role for everybody to work together and do an innovative approach to the recovery of Burbot in the lower Kootenai River that did not include a listing but included a commitment on the part of all the stake holders. The tribe proposed that idea to the USFWS in Nov 2001.

In Oct 2001 the Mayor of the City of Bonners Ferry, the County Commissioner and the Kootenai Tribe of Idaho Chairman came together under the Joint Powers Agreement forming the Kootenai Valley Resource Initiative (KVRI). The formation of KVRI brought together member representation and partnership between the community and agencies and brought key players to the table. It was well supported by our US Congressmen and Senators. In Jan 2002, US Senator, Mike Crapo, visited Boundary County to encourage the Community, the Agencies and the Tribe to work together and encourage this KVRI effort. Collaboration wasn't well known back then and especially in real contentious natural resources issues. No one really won especially the creatures they were trying to restore.

In Feb. 2002 KVRI formed the Burbot Sub-committee to develop a conservation strategy for restoration. Lots of work sessions were held, they had interviews with Burbot fisherman from the community and monthly reports to the KVRI board members were all part of the process.

The Burbot conservation strategy included habitat restoration, conservation aquaculture, alternative hydro operations plan, monitoring and evaluation, education and outreach. As a commitment by participants to implement the strategy together, a Memorandum of Understanding was created. It helped secure funding, and they did a periodic check in with KVRI. This MOU was signed by 16 agencies and entities in 2005.

Burbot Program Major Milestones, Shawn Young, Aquaculture Manager for KTOI

- **2003:** University of Idaho Aquaculture Research Institute (ARI) started research that eventually linked all the life stages together to produce Burbot in a hatchery setting. While that was going on the conservation strategy was signed and everybody agreed that that was the direction to go.

- **2009:** First Hatchery Burbot released into the Kootenai River.
- **2009-2014:** the University of Idaho ARI reared all the Burbot for the program. A lot of those fish are the pioneers out in the current population.
- **2012:** A series of planning documents for Bonneville Power Administration (BPA) was completed to expand the program to its current status that included constructing and operating the Twin Rivers Hatchery.
- **2015:** Twin Rivers Hatchery became fully operational and they have released 4 years classes of Burbot from that facility.

They have increased their numbers to satisfy population rebuilding and to do large scale experimental life stage release of early larvae, feeding larvae and juveniles to try to figure out what the recruitment bottlenecks are in the Kootenai River and Kootenay Lake.

In the last few years, there has been support for a line of research at the University of Idaho to investigate the different potential recruitment bottlenecks, temperature regimes, and bioenergetics under the current altered river situation. Idaho Department of Fish & Game's (IDFG) continuous monitoring and evaluation has played a huge part in getting the results back from all of these activities and guiding them in the adaptive management framework they are operating under. Without that M&E, they wouldn't be where they are today.

The original KVRI Burbot Conservation strategy is still their guiding document, however, some of the long term goals have changed. BPA (Step Document 2) asked them to have a venue where all the collaborating and co-managing agencies and biologists could come together and use science to guide their restoration decisions. The first Annual Program Review (APR) was in 2013. At this venue they review results and agree on how to proceed and/or make changes to the program.

The two changes to their long term goals were; to increase the number of spawning adults from 2500 to 17,500 to jump start spawning and natural recruitment. This goal was adopted at the first APR meeting in 2013 and the expansion of the recovery area to all of Kootenay Lake along with the Lower Kootenai River.

Sue added that the number of 2500 adults in the original conservation strategy was based on the hope that they would be able to develop conservation aquaculture techniques to restart a population. It had never been done before so they were thinking if they even hit 2500 they would be doing great. As they learned more it seemed much more important to start putting it into terms of what the population numbers should be to be a sustainable population.

Shawn explained that biologically the fish aren't mixing as readily as they had anticipated so they are going to treat them as two populations to rebuild through the hatchery program simultaneously. The target in the Kootenai River is still 17,500 spawning adults and in the Lake will be 20,000 spawning adults. The hatchery operations will support both of those objectives simultaneously.

Shawn's complete presentation PowerPoint is available on the KVRI website at www.kootenai.org

Burbot Conservation Aquaculture at Twin Rivers Hatchery, Nate Jensen, Kootenai Tribe of Idaho

Nate Jensen gave an overview of Burbot production at the new Twin Rivers Hatchery.

Review of what it takes to produce these fish:

- Burbot are the only freshwater cod
- Adults are group spawners
- Eggs are very small and the Larvae when they hatch are the size of an eyelash, 3-4 mm
- Cannibalism is something they deal with in the hatchery through the different life stages especially once they start feeding
- Brood source is Moyie Lake

Nate shared Hatchery plan views and explained the Aquaculture Program phases and rearing spaces at the Hatchery and details about the program challenges they face each year. He stated that this is only the second year they have captured adults from the Kootenai River and actually produced progeny from those adults.

Program Challenges:

- The production of Burbot is really variable from year to year
- Live feed production is required for Larval Burbot
- Procedures are time sensitive and they have to hit the critical life stages accurately
- Dealing with 2 brood sources (Kootenai River, and Moyie Lake)

Eggs from the Kootenai River Adults

- Hoping to target 200 adults, last year they brought in 167
- Fish are sorted by size and eggs collected daily during Feb, simultaneously with the collection in Moyie Lake

Eggs from Moyie Lake BC

- Adults are angled and netted through the ice. Eggs are transferred through US customs to the hatchery daily
- Adults used are given a unique code and tissue sampled for genetic ID, over the last 14 years they have done this, they have only reused 5 fish

Egg incubation

- 150 incubators are used to keep families separate
- This year's target is 5 million eggs from Moyie Lake and 15 million eggs from Kootenai River stock
- Target temps are very cold, 2-3 degrees C and it takes about 40 days to hatch

Nate explained that the swim bladder inflation is probably the most critical phase for survival; losing approximately 50% of the hatchery at that phase.

The Live feed Culture includes raising live prey of Rotifers and Artemia at high densities. They are also starting to experiment with other 'native' freshwater species of live prey. Biosecurity is a huge component to their program and is important for all the life stages. The worst case scenario is if they were to get some sort of pathogen at the hatchery they would have to kill the whole year class; it is very serious.

Highlights:

- If Burbot are released as larvae they do not need to transition to a dry diet
- After feed training is complete the mortality subsides
- Target number of 6 million eggs in the hatchery to arrive at 126,000 6 month juveniles
- After Twin Rivers Hatchery came on line the releases were expanded to into British Columbia as well as Idaho
- Since 2009 they have released 647,000 Burbot into the system

Summary of the Program:

- Expect high mortality and variability among year classes
- Live feeds required
- Hatchery Burbot larvae will survive release in the Kootenai system
- Currently have to raise juvenile for releases in BC because of disease testing , fish have to be a certain size to meet the requirements for disease testing and for IDFG modeling exercises

Nate's complete presentation PowerPoint is available on the KVRI website at www.kootenai.org

Burbot in the Kootenai River, Idaho: A story of Success, TJ Ross, Idaho Department of Fish & Game

TJ Ross, IDFG, began his presentation and explained that the overarching objective is to restore a naturally reproducing and harvestable Burbot population in the Kootenai River. The role that Idaho Department of Fish and Game plays in this process is monitoring and evaluating the population, spawning characterization (where and when they are spawning), movement and habitat use (in the lake, river and tributaries), recruitment limitation testing and monitoring , success of various stocking strategies, and Fishery opening and regulations.

The primary means of meeting the objective is conservation aquaculture and habitat restoration projects. The Kootenai Tribe of Idaho raises the Burbot, releases them into the river and then IDFG enter into the phase of trying to understand what happens to them once they go into the river. Are the Hatchery Burbot surviving and spawning, what is the population status? Are the Burbot naturally reproducing, if not, what is holding them back? These are just a few of the questions they research. And are they beginning to approach any of the restoration targets outlined in the conservation strategy? If they can answer all these questions and have definitive answers there is a natural feedback loop that brings them to the idea of a fishery; that's the phase the co-managers entered into a couple of years ago.

Activities used to answer those questions:

- Hoopnetting in the winter from Dec 1 to March 31 annually, at 38 sites on the river, 82 total hoop nets
- Collecting genetic samples, implanting telemetry tags
- Also work in Tributaries historically used for spawning

Population status updates (All have been satisfactorily checked off)

- Increasing catch rates
- Consistent spawn timing
- Comparable growth rates

- Diverse age and size structure
- Reasonable survival rates
- Natural reproductions (documented for the first time in 2017-18 winter season)
- Met restoration targets for adults

TJ explained the with what the projections look like for the next 20-30 years based on the survival estimates and target stocking numbers the number of Burbot in the Kootenai River could level off at 50,000.

Burbot Fishery

TJ stated that they will never consider anything that would interfere with the restoration target of 17,500 spawning adults and the highest fishing mortality threshold would be 15%. That would equal between 6000-8000 adult Burbot that could potentially be harvested in a given year.

Fishery Proposed Rules:

- Daily bag limit of six fish, any size
- Season will be open all year on the Kootenai River and its tributaries
- All of the same rules apply to Bonner Lake (stocked with 4000 fish since 2014)
- If these rules are approved they will take effect on January 1, 2019 and run through 2021
- Rule change mechanisms are in place, if necessary (Emergency and Mid-cycle changes)

Fishery Status (all proposed Fishery rules in the Panhandle, not just Burbot)

- March 2018- two public scoping meetings were held
- Feb-March 2018-scoping comments could be submitted online
- Early summer 2018-fishing rules drafted
- July 2018- IDFG Commission viewed and approved release of draft rules for public comment
- Sept 7 to Oct 7, 2018-Online survey to get input on proposed rules-77% support, 20% neutral, 3% opposed
- Sept 19, 2018- Open house at Region Office
- Currently- comments being reviewed, rules will be revised if necessary
- Nov 2018- IDFG Commission to view and approve/ modify rules
- Final rules will be printed and take effect January 1, 2019. Rules will be in effect for three years.

This Burbot Fishery is a resource lost to the community since 1992 will once again be available for recreational and consumptive use.

Fishery Monitoring will include; extensive creel survey to monitor-harvest numbers, angler effort, catch rates, composition of catch, law enforcement support with crews on the river.

Summary

- All indicators suggest the Burbot population is growing
- Extensive modeling efforts indicate the fishery is sustainable
- Clear stakeholder support for the fishery
- Jan 1, 2019 isn't too far away

TJ's full slide presentation is available on the KVRI website at www.kootenai.org

Idaho Fish & Game Commission Update: Chip Corsi, IDFG

Chip C. stated that the next public meeting for the Commission is in Coeur d'Alene on November 13, 2018 and is one more opportunity to provide input on the Fishery Rules.

Forestry Field Trip Update

The KVRI Forestry Sub-committee field trip is on Wednesday October 17, 2018. They will meet at the Forest Service office at 8:30am and remember to bring a lunch. Water and cookies will be provided.

WAC Committee Meeting update, Kennon McClintock

Kennon M. reported that the committee agreed to sell the radar back to Bryce Sloan, the system has been taken down, and the money received will go to the ITD for maintenance on the signs they have.

KVRI 2019 Meeting Dates- Sherrie Cossairt

The 2019 Meeting dates were distributed to the Board with January and February dates to be decided. Dan D. suggested January 14 and February 11 and all agreed.

Boulder Creek Update, Kevin Knauth

Kevin K. reported that one objection was received, it went through the panel at the Regional office, with no instruction to make any changes. A decision should be signed on Friday or early next week.

Next KVRI Meeting

The next meeting is scheduled for November 19, 2018 at 7:00 p.m. at the Boundary County Extension Office. There will be a retirement cake for Judy Morbeck.

Meeting was adjourned at 9:20 p.m.

Sherrie Cossairt,
KTOI/KVRI Admin. Assistant