

Kootenai Valley Resource Initiative
November 21, 2016 – 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 Chair (KTOI) & KVRI Co-chair
Sandy Ashworth, Social/Cultural/Historical Interests
Bob Blanford, Business/Industry
Don Allenberg, (Alt.) Corporate Agriculture/Landowner
Kevin Knauth, (Alt.) Bonners Ferry Ranger District, U.S. Forest Service (USFS)
Dave Wattenbarger, Soil Conservation District/Ag Landowner
Chip Corsi, Idaho Department of Fish & Game (alt.)
Kennon McClintock -Conservationist/Environmentalist (alt.)
Patty Perry, KVRI Facilitator & KTOI
Sherrie Cossairt, KVRI Recording Secretary & KTOI

Agency/Others in Attendance:

Ryan Hardy, IDFG
Nathan Jensen, KTOI
Shawn Young, KTOI, Aquaculture Program Manager
TJ Ross, IDFG
Kevin Greenleaf, KTOI, Environmental Director
Brad Smith, Idaho Conservation League
Steve Helfert, Private Citizen
Karen Cathey, USFWS
Sid Smith, Senator Jim Risch's office
Karen Roetter, Senator Mike Crapo's office
Dave Wenk, Boundary Co. Weed Dept.
Stephen Howlett, Resident
Dianna Ellis, Kootenai National Wildlife Refuge
Tim Dougherty, IFG

Opening:

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

The October 17, 2016, KVRI meeting draft notes were approved by consensus.

Forestry Committee Update- Patty Perry/Kevin Knauth

The Forestry Committee met on Nov. 10, 2016. The purpose of the meeting was to talk about the 5 Year Plan and KVRI's projects going forward and what that might look like. The committee reviewed the District map representing the recent treatment areas, where we are now and the areas where we still have some things we can accomplish. Kevin Knauth gave an update on the status of all the CFLR projects. That report will be presented at the January KVRI meeting.

Kevin gave a quick overview of the Grouse Mountain Project. The purpose of that project is to address the road situation (Forest Plan Access Amendment) and manage the road storage to bring the BMU into compliance with the Grizzly Bear Access Amendment standards by 2019.

By storing the roads we still have the opportunity to reopen the roads 10 years from now when vegetation opportunities are there, as well as emergency fire access. The Forest Service presented the proposed action to the Forestry Committee, Dan had asked us to show the alternatives being considered to get to those standards and we are working on that. The challenge in this area is the amount of private lands and the limited access. Discussion followed.

TMDL Committee Update: Kevin Greenleaf, Kootenai Tribe (TMDL Citizen Monitoring)

Kevin presented the two charts that he shared with the TMDL Committee. One chart showing the compilation of the last 4 years of monitoring and one for the monitoring season of 2016. KVRI has monitored the following streams: Hell roaring Creek, Skin Creek, Snow Creek, Upper Mission Creek, Copper Creek, Trail Creek, Canyon Creek (Long Canyon), Boundary Creek, Myrtle Creek, Boulder Creek and Deep Creek. Copies of the results were distributed to the Board.

He reported that seldom do any of the creeks meet the temperature requirements set by the U. S. Fish and Wildlife Service for Bull Trout. We monitor Long Canyon (Canyon Creek) because it is our reference drainage, which means it has not had any management activity in the drainage. Canyon creek temperatures show it is in the middle of the pack for temperature of the creeks we monitor. Deep creek is the warmest creek followed by Myrtle creek as the next warmest.

Patty reported that the TMDL Committee, after looking at these results, thought it would be of interest, to take one system and place monitors from the top of the drainage to the bottom to monitor temperature gradient throughout. Myrtle Creek was chosen since it has higher than average temperatures. Kevin, Jerry and Dave will be placing monitors in Myrtle Creek on Wednesday, Nov. 23rd.

The temperature TMDL's we have been writing with IDEQ are based on reducing stream temperatures by increasing (potential) natural vegetation. Using this method avoids having to meet the numeric temperatures that USFWS indicates.

In order to meet the potential vegetation criteria for the temperature TMDL's, we have been looking at what vegetation would have shaded those streams before management then trying to recreate the natural vegetation along those streams.

A concern is that Oregon has had a similar process to the IDEQ "potential natural vegetation" temperature TMDL method which was recently challenged in court and which was struck down by the court. Oregon DEQ/ USEPA is deciding whether or not to appeal that decision. We are in contact with EPA to see if we can support them in that effort.

Neighborhood Weed Program-Letter of Support-Patty Perry

At the last KVRI meeting Dave Wenk, Boundary County Weed Superintendent, asked for a letter of support for the Neighborhood Weed Program & that it be sent to the new Invasive Weeds Director, Adam Schroeder. The board agreed and the letter was composed and read by Patty to the Board. The co-chairs signed it and it will be mailed as requested.

Correspondence:

Starry Goat Project Letter-Patty Perry

KVRI agreed at the last meeting to send a letter that mentioned that our Boulder project was adjacent to that project and there were opportunities for partnering on recreation and other activities as the Troy District put together their project.

KVRI received a letter from the District Ranger, Kirsten Kaiser, which acknowledged receipt of our letter and stated that they will consider our comments when developing the alternatives for the Starry Goat Project. It also stated that they are in communication with the Bonners Ferry Ranger District and coordinating with them on their Boulder Creek Project.

Kate MacAlister Mailer-Patty Perry

Kate MacAlister attended our last KVRI meeting and she listed KVRI on her election mailer that went out to everyone.

News from the Montana Fish, Wildlife & Parks –Patty Perry

Patty shared a letter stating that aquatic invasive mussels have been detected in Montana in one of the reservoirs. This is a reminder to be diligent and that it is closer than we once thought.

A to Z Project Court Decision- Patty Perry

Patty reported on the status of the suit filed by the Alliance for the Wild Rockies Conservation Group. The 9th Circuit Court has ruled in favor of the Forest Service and Vaagen Brothers Lumber can continue work on the A to Z Project.

Presentation: Annual Burbot Recovery Update: Patty Perry

Patty began the Burbot Annual Report with a slide presentation providing the history of the start of the program (2001) and its significance to the Tribe, local community and Canada and the steps it took to get the conservation strategy to where it is today.

Concerns:

- There was no evidence of successful spawning or recruitment
- Proposed for listing
- The Tribe and the community wanted to see the fish recovered

Threats to Burbot Population:

- Winter Flow Management and Winter Temperature Change
- Reduced Productivity
- Habitat Changes
- Low Population Size

The Tribe's proposal to the US Fish & Wildlife Service was to develop, with the Service and additional stakeholders, an integrated and innovative approach to recovery of lower Kootenai River Burbot even before listing. KVRI was formed in 2001. Sen. Crapo helped to secure a grant through U. S. Fish & Wildlife Services to the Tribe to help fund and put the project together.

Agency, Tribal & Community Collaboration included work sessions to develop conservation strategy; interviews with Burbot fisherman from community; and monthly report to KVRI board members.

The goal was to reestablish a native Burbot population in the lower Kootenai River, committees worked on habitat restoration, conservation aquaculture, alternative hydro operations plan, monitoring and evaluation and education & outreach. The Memorandum of Understanding (MOU), signed in 2005 by 16 agencies and entities, guides implementation of Burbot conservation strategy.

This is how KVRI got involved.

Burbot Conservation Aquaculture at The Kootenai Tribe of Idaho's Hatchery 2-Twin Rivers Hatchery: Nathan Jensen

Nate began working with the program in 2001 while working at the University of Idaho. He is the Burbot specialist at the KTOI Twin Rivers Hatchery 2. He oversees the Burbot aquaculture operations and a crew of 4 technicians. His background is in Aquaculture and Fisheries Resources.

Nate shared samples of Burbot eggs, first feeding larvae, and the larvae released in 2015 with the group. Nate's focus is on the aquaculture side of the project.

The goal of the Burbot Conservation Strategy is to restore self-sustaining, harvestable Burbot populations in the Kootenai River and Kootenay Lake.

The key challenges to this program are: large scale aquaculture of Burbot is a new concept; larval life-stage requires live feed; there are multiple levels and types of permitting required releasing the fish; the aquaculture procedures are time sensitive and labor intensive; and individual family separation is required for the conservation program.

The spawning window is only 2 weeks in February. They have 2 weeks to get all the eggs fertilized, do all the crosses, track all males and females and that sets the stage of the entire production season. Individual family separation is required for the conservation program and they track it throughout the whole production cycle. The goal is to increase genetic diversity in the system.

Nate showed slides of the program components and hatchery lab in the new hatchery. The process begins in February and the juveniles are released in October, an eight month program cycle.

Burbot are the only member of the cod family that completes life in fresh water. The adults are communal spawners. The eggs are semi-buoyant because they have an oil globule and are very small (1mm in diameter). Larvae are 3-4mm in length at hatch with no mouth for two weeks, if that 2 week feeding window is missed they will die; juveniles and adults will cannibalize each other if they do not have enough food.

Egg Collection & Incubation:

Adults are angled and netted through ice; each adult is given a unique name/code; eggs are fertilized and disinfected on the ice; eggs are transferred through US customs to KTOI-H2 daily; adults are not. The incubation target is 6-7 million eggs and a temperature target of 3 degree Celsius. It takes 35-40 days to hatch.

Burbot Larviculture, Live Feed Culture, & Live Diet:

Densities vary by family, intense cleaning required. The live feed culture laboratory raises rotifers & artemia, hatched daily during production season. Target 200 million organisms a day.

Juvenile Rearing:

Bottom dwelling; numbers of fish vary by tank due to family separation; size of fish will vary by family; specific pathogen free (s.p.f.) certification is required to release. Cannibals are separated, tagged for release and also used for disease testing.

Survival Assumptions, Estimated Survival, Release Locations & Numbers for 2015 & 2016:

The 5 year production goal is 125,000 juveniles; met that goal 2 years in a row. Start with 6 million eggs. Numbers tend to decline throughout the life stages.

Showed fish stocking sites and discussed the release numbers. So far they've released almost 400,000 juveniles in the last 2 years. At this time there is no indication of natural recruitment.

Discussion followed.

Nate's complete slide presentation is available at www.kootenai.org

Kootenai River Burbot Release Strategy: Shawn Young

Shawn is the Aquaculture and Fisheries Program Manager for KTOI. He oversees the co-manager relations, oversees arranging the yearly program review, dissemination of the hatchery production, permitting process, gathering the monitoring and evaluation results and applying them back to the program, and sets annual production targets, etc. Shawn worked as a technician on the Burbot project for Fish and Game in the winter of 1997-98. He stated he handled maybe 20 fish the entire winter. From his previous experience and his current position, he understands the past, present, and future of the Burbot restoration.

The process begins with the annual planning review meeting which works in the same fashion that KVRI operates. MOU signers and stakeholders get together once a year for two days and discuss all aspects of Burbot production and conservation strategy. At the end of the 2 days they have a mutual agreement of all co-managers detailing hatchery production, monitoring and evaluation activities, and research.

Shawn discussed Burbot release sites from 2009-2014 of fish produced at the University of Idaho- Larvae or juveniles released from the Confluence of the Moyie River down river to Kootenay Lake. Kootenay Lake only received extra surplus larvae during that time frame. In 2015 & 2016 all fish were produced at the KTOI Twin Rivers Hatchery 2 and the release sites remain the same.

In 2015 they had excess larvae, more than anticipated to meet the annual production, as a result they released 300,000 Larvae at Ambush Rock and 300,000 at the Porthill release site (for the support of early life stage evaluations with Fish & Game). These 2 locations are historically known Burbot areas.

In 2016 saw increased mortality rate therefore no larvae were released for experimentation. They hope to remedy that with 2017 class. Each of the release sites were discussed for 2015 and 2016. Most of

these release sites have received 50,000-80,000 Burbot juveniles in the last 2 years, meeting long term targets already. British Columbia receives about 1/3 of the juvenile fish released.

There is tracking of over 56 individual families from the beginning at the Hatchery. Fish & Game and British Columbia can track genetics to parents at Moyie Lake (brood source). It shows genetic contribution, helps with post release information and can track migration in the future.

Discussion followed.

Shawn's complete slide presentation is available at www.kootenai.org

Restoring Burbot in the Kootenai River: Monitoring & Evaluation: T.J. Ross

T.J. Ross is a Senior Fishery Research Biologist with the Idaho Department of Fish & Game since 2012. He has worked on the Burbot program for 2 years and is also the Fish & Game nutrient restoration representative that is co-managed with KTOI.

T.J. stated he has worked with several other agencies in other states and really appreciates the collaborative nature of the Burbot program of the Tribe and KVRI. It is a unique setting. Kudos to everyone involved.

The objective is to restore a naturally reproducing and harvestable Burbot population in the Kootenai Basin.

IDFG Roles -Monitoring and Evaluation: We do the field work and try to understand how the population is responding to all the efforts.

- Population characterization (growth, relative abundance)
- Spatiotemporal characteristics of spawning-(when and where, what time of year, locate spawning grounds)
- Movement & habitat use (understanding how and when they use the tributaries, up and down the river, & Kootenay Lake)
- Success of various stocking strategies
- Academic Research- funded multiple grad students
- Setting angling regulations, ultimately

Field Efforts:

- All fish produced at the hatchery have a genetic tag, extremely rare, very valuable to this program and the future, all due to the family separation done in the hatchery. They are still doing Pit tagging for now.
- Baited Hoop netting occurs from Dec 1 to March 31; they are baited with dead fish and set at the bottom of the river.
- Winter sampling sites: 15 total sites, 36 total hoop nets; they are checked every other day throughout the winter cycle; these sites have been sampled since 2010-11.
- Index locations: There are Five (5) sites consistently sampled since 1996; they are comparing apples to apples; can also get trend information through time because it's consistent.

- Putting Vemco sonic tags into fish and using passive array receivers; detection and download receivers, all the way to Kootenay Lake and into Montana; picks up fish moving throughout the system.

Population updates:

- Graph of catch rates in hoop nets; shows year and effort (# of days we fish in the river), number of fish captured per day when nets are set; the trend is the indication of abundance of Burbot in the river.
- The same nets have been used since 1996, size of mesh may have been a ¼ inch difference otherwise the nets or catching strategy has not changed.
- Also track the growth of Burbot comparing before and after Libby Dam, shows their growth rate is good, no cause for concern.
- Look at spawn timing, to make recommendation to the Corp at Libby Dam is the ultimate goal, incubation period is crucial, looked at Ambush Rock, known historical spawning location for Burbot (large boulder substrate area for spawning) charting weekly catch rates, peak occurred on Feb 18 for 2 years in a row, concludes that Feb is peak spawn time, also peaked at Porthill at the same time.

Stocking Strategies:

- Number of fish released, larval and juveniles; juvenile release is the primary restoration strategy.
- Why tracking is important, tracking fish through time through genetic tagging.
- Like to see several year classes of fish contributing to spawning adult population, indicating that fish from all years are surviving ; over 16 inches, largest fish last year 33 inches 10 ½ lbs.

Survival Estimates:

- Survival estimate for each age of Burbot in the river from genetic tag and pit tag information.
- They are finding that juveniles released at 6 months to age 1 have a 10 % survival rate and a 79-97% survival after that first year to 4 + years.
- This information helps to decide how many fish should be released each year to get to the ultimate target of adults in the river.
- Survival rates at different release locations were discussed; Porthill & Deep Creek confluence is the area of highest survival release locations, at a 15-16% rate of survival.
- This is important to better understand fish population and the fishery potential look like. Take survival estimates apply to release estimates to estimate amount of adult fish will be in the river.

Tributary assessment: How Burbot are using tributaries

- Deep Creek, Boundary Creek and Smith creek have anecdotal information, IDFG pit tag array on Deep Creek, final interpretations available from graduate student work in Deep Creek.
- Revisited Smith Creek, because according to the past KVRI interviews, Burbot was abundant there. Zero fish caught this year in February. Will try again in 2017.
- Boundary not documented since 1960's, captured 29 mature adult Burbot from 2/17to 2/24 included ripe and spent males and females. (51 % stocked at Porthill of the 29 caught fish, good year class representation)

- Deep Creek; only 5 fish captured but the pit tag array told an entirely different story; showed they were using Deep Creek during the spawning window, year classes from 2011 to 2015 were represented; all release sites were represented also
- Most encouraging piece of information is that this is a line of evidence that supports the idea that Burbot may pioneer the tributaries on their own (arrays are located 5-6 miles up the creek)
- Graduate study on Deep Creek: 88% of fish stayed within 1 km of release location and the survival estimates of juveniles in Deep Creek were 19%.

Looking ahead:

- First year (2016) of running larval light traps
- Hoop netting in the canyon above town this winter: to see how Burbot are using the canyon; refine Moyie River survival estimate; and to see how they are using the KRHRP sites.
- Relocating pit tag arrays in the tributaries-Boundary Creek, Smith Creek, Myrtle Creek, Ball Creek
- Trying to understand at what point is it appropriate to consider opening fishery in the Kootenai River (we know that a lot of Burbot are surviving from every age class, they are growing well and everything is indicating a growing and healthy population but we don't want to pull the trigger too quickly, but want to provide it if the opportunity is there)
- Bonner Lake considered as a possible back up resource for adult Burbot and ice fishery in the future

Summary

- Catch rates are climbing; survival estimates are on-target with restoration goals
- Year class representation, shows survival rate to adult
- Burbot pioneering into the tributaries
- New projects- new field efforts
- Discussions about future fishery continuing

Discussion and comments followed.

T.J.'s complete slide presentation is available at www.kootenai.org

Announcements:

Sid Smith: Senator Risch's office

Sid gave a quick update on the Energy bill which has forestry provisions including fire borrowing. It had passed both the house and senate. There was early optimism to get the bill passed but that is waning. There had been hope for fire borrowing solutions and to get some forestry changes passed.

Dan asked about continuing resolutions and SRS. Sid stated their bosses are looking for any vehicle they can to get SRS attached to and reauthorized, but a continuing resolutions is probably the least likely vehicle, lawmakers like continuing resolutions to be fairly clean, not a Christmas tree type bill.

Patty explained SRS is Secure Rural Schools; provide funding to counties with diminished timber receipts for roads and schools.

Idaho Fish & Game News - Chip Corsi

Scoping is going out for the semi-annual big game rules; starting next month; asking the public their thoughts on status and management of big game herds; Idaho Fish & Game have a pretty good idea on status since they've been tracking the population and hunting success. Depending on the winter, they may propose some restoration of the general hunt, either sex, elk harvest; excited about that since it has been about a 6 year hiatus.

Next KVRI Meeting:

The next KVRI meeting will be on January 9, 2017 at 7 p.m.

Meeting was adjourned at 9:10 p.m.

Sherrie Cossairt

KTOI/KVRI Admin. Assistant