

## **Jarbidge Bull Trout Recovery Team Meeting**

**Great Basin College, Elko, NV**

**December 9-10, 2008**

### Attendees:

Dan Armichardy	Bureau of Land Management
John Elliott	Nevada Department of Wildlife
Kate Forster	Bureau of Land Management
Gary Johnson	Nevada Department of Wildlife
Maija Meneks	US Forest Service
Allen Taylor	US Fish and Wildlife Service

### 1. Changes to Agenda and Membership

No changes proposed, although agenda items were not discussed in order described here. Rob Ryan with IDFG has accepted another position and will no longer be the IDFG representative on the Jarbidge Bull Trout Recovery Team (RT). Interim representative is Doug Megargle.

### 2. USGS 2006-2007 Survey Report

### 3. Abernathy 2006-2007 Genetics Report

Excellent report, provides an estimate of effective population size for all populations with adequate samples collected. Dave Cr is genetically most distinct. Jack Creek had very low  $N_e$ , perhaps due to bottleneck caused by culvert barrier in place from 1980's until 1998, and it was too recent for genetics to respond. Probably are more spawners in the population, but the fish are closely related. There is good movement between Jack Cr and the West Fork. Bottleneck test didn't show it had bottlenecked yet. Jack Cr habitat conditions are not similar to other streams in the watershed. We are planning to repeat the mark recap on Jack Cr in 2012. If we do mark-recap on other streams we may be able to extrapolate results to other Jarbidge populations.

Genetics report found more movement from West Fork tributaries than the East Fork tributaries. East Fork fish moved less between tributaries than occurred in the West Fork and tributaries. This may be due to the distance between patches of spawning habitat. We're not sure what the West Fork fish are doing once they enter the East Fork; they seem to be going there but not necessarily spawning, and mostly returning to the West Fork.

#### 4. What Have We Learned, How Will We Apply It, Where Are The Gaps?

We need a usable scientific population estimate. We also need a monitoring plan capable of discerning trends in distribution if not abundance. Our recent work updating bull trout information for the status review highlights these needs. All of the monitoring, surveys, and genetics work to date doesn't really give us that. Is population number more important than age class and distribution for understanding population status? Pine or Jack Creek would be best to do population estimate on. Recovery criteria for the range wide plan would determine what we focus our data collection on, if our core area is lumped in with others.

Trends in bull trout distribution would be good to have, not just population numbers. We won't be able to tell trend if focus on distribution alone. Trends in distribution are probably most important. Long-term trends in fish distribution are relatively easy to determine; trends in populations are less easily determined. Many of the streams are in wilderness and not managed other than for protection.

We may need to monitor for connectivity maintenance and trends in distribution and not have population estimate. Monitor elevation band of 7200 ft where streams shift from redband to bull trout dominance (5 year rotation) for trends in distribution. Shift in water temp would be a factor for this (54F). Every five years, redo mark recap on Jack Cr. and Dave Cr. Water temp monitoring should be expanded to assist with distribution timing and climate trend. Next year, we'll do Dave Cr and West Fork distribution. Place thermographs where redband drop out.

2008 water temperature data: Gary has temp data for Slide Cr, East Fork one mile below Slide Cr, West Fork; BLM temperature data in Dave Cr (lost) , Jack Creek (lost), lower Jarbidge (lost) Murphy (lost). Due to these losses, BLM will re-evaluate monitoring water temperature through high water. Maija will have six more for 2009. **Action Item:** Need a map of temp sites and what we have so we can develop comprehensive water temp monitoring plan.

Should we use three reproducing age classes over a five year time period (like YCT)? USGS was not able to identify age classes for bull trout. Should be determined from YOY to when they spawn; We had good length frequencies for the first two years; future East Fork data and recaps should tell us size for three year old and four year old fish. **Action Item:** Kate or Dan to check to see if Rieman has any literature on age classes for bull trout or other possible literature sources. Also check with Tim Burton for ideas.

**Decision:** Continue to try to get enough genetic samples from Slide and Cougar to be able to develop genetic profile. Send to Abernathy lab when we have enough samples. Also do distribution trend for Slide Cr and Cougar Cr. We would do this in 09 if possible. Fall Cr is already known as population. Allen will check on genetic sample storage methodology.

Allen checked the RMEG report which would likely be recommended for rangewide monitoring once finalized. The report suggests we should be monitoring patch distributions to ensure reproduction is occurring every year. However recommendations in the USGS Jarbidge report match what we are currently discussing.

**Action Item:** Allen will distribute the RMEG Report so the RT can see if we want to use it for monitoring. They use distribution, abundance, habitat conditions and genetic diversity/exchange.

Surveys in Slide and Cougar Cr would help us determine if there is reproduction occurring and if genetics are distinct enough to be a local population. Redd surveys could be an option to confirm the presence of spawning. A drawback is it is labor intensive; adding a week of surveys to NDOW's schedule.

#### Monitoring would include:

Monitor species dominance transition zone (point where bull trout become dominant = bull trout rearing area). We also want to monitor changes where dominance occurs because it will help determine if habitat is warming and redband are expanding over the long-term (i.e. climate change). Sampling would have to occur at the same times of the year (July or August), every year we sample. We may want to stay out of the East Fork burned areas for a few years. It may be efficient to conduct the mark recap the same year we do monitoring in the respective forks. We should also validate assumptions of monitoring plan; options include monitoring back to back years in the same reach to determine annual variation, and monitoring back to back months in the same reach to determine monthly variation.

We estimate 30% (?) dominance would be an assumption centered around 7200 feet or whatever number the USGS data suggests would be appropriate based on their surveys. We may not need to use a percentage and just say "dominance". We don't need to know the upper end of distribution for bull trout. We would monitor species dominance on a five year interval. We draw a line where we think the change occurs, identify any assumptions we make in drawing the line (or transition zone) and move forward with it. Statistical significance probably is not critical to this exercise.

Water temperature data could be influencing the distribution and we may want to increase the number of thermographs for each stream to see what water temp tells us about fish distribution and dominance.

We decided to talk with other people and revisit the monitoring plan at our next meeting. Finalizing a rough monitoring plan by early March would allow NDOW to include actions in their annual section 6 work plan. Questions to resolve include - **Does the extent of spawning and rearing habitat increase or decrease over time? Do we need to do something different between managed and wilderness watersheds? How is distribution changing, if at all?**

Bull Trout use in the Jarbidge River: Data gaps include how much bull trout are using the mainstem Jarbidge River. Antenna efficiency at the Forks site is not good enough to discern bull trout use of the mainstem with any certainty. A weir would give us the data we need. **Action Items:** Kate to check with Megargle on who IDFG contact is for BTRT, and if they would be up for setting up a weir in Nov-Dec. Confluence of Jarbidge and Bruneau River would be best. Indian Hot springs is other possibility of trapping site. Screw trap is possibility at the confluence of East and West Fork. Jack and Pine Creek have had fish hold over the PIT tag detectors and had multiple detections at the same time. Daytime snorkel in first few miles of mainstem is

possibility. Afterthought – what about operating an antenna array downstream of the Forks in 2010 from July to December?

Why are so few fish leaving Dave Creek? Thermal springs could be providing refugia so fish don't move into warmer habitats. There could be a migration barrier at some flows at the mouth of Dave Creek (alluvial fan of bedload material that causes the stream to fan out). It could be a low flow barrier during July or August. **Action Item:** Dan will check to see if we have photos of the area. Also will check with Jim Klott to see if he knows when it formed (rain on snow in 1995?). BLM will also check R1R4 data to see if we can identify channel conditions in lower Dave Creek and in the East Fork Jarbidge just below the confluence of Dave Creek. Lower reach of Dave Creek may only be suitable for juvenile rearing during the cooler months.

#### 5. Antenna Operation – 2008 and 2009

USGS is pulling the PIT tag detector electronic equipment this week. Unfortunately we didn't have a resolution for the noise problem on the Jack and Dave Cr detectors (cheese block style; less than 1 inch detection range) until October 2008. Moving equipment configuration improved efficiency of antennae.

USGS is pulling monitoring equipment this week. 2009 probably will be the last year we operate the PIT tag detector stations, so we will have three years of detections, unless we're getting really great new data. We could also potentially scale operation back to fewer antennas or shorter period of time. It would be best to have someone closer to maintain batteries. USGS will be leaving antennae in the water again this winter, tied off to the bank at a location we can get to. It took a lot of time and effort to reinstall the detectors in 2008. Should we leave them in through high water? Most detections are from July to December (roughly 65) and roughly 5 before July. We can pull antennae in March if it looks like we'll have a big runoff. One of the battery boxes at the West Fork site was broken into and all 4 batteries stolen. Batteries will need to be replaced. It probably is ok to use Mahoney guard station again next year. Allen applied for 25K for USGS to do more surveys, but didn't get the grant. Do we want to move Dave Creek antenna? No, its location will tell us if fish are moving from the system, which is what we want to know. NDOW could use section 6 monies to extend period that they maintain antennas – perhaps from September through November.

#### 6. Bull Trout Range-Wide Status Review

It is unlikely that the status review will result in the RT recommendation that the Jarbidge Core Area be designated as an individual DPS. The most likely DPS scenarios divide U.S. bull trout populations into larger population assemblages which would group the Jarbidge Core Area with Upper Snake River populations. A final decision has not been made yet, and the FWS DPS policy does allow some flexibility, however the RT has done all we can to influence the designation process. Status review technical staff are concerned that designating DPSs throughout the U.S. bull trout range at scales similar to the Jarbidge Core Area could result in some populations/DPSs being uplisted to Endangered status, with an increased likelihood of jeopardy. If the DPS is defined as Upper Snake River (Malhuer, Weiser, Payette, Boise,

watersheds above Hells Canyon), we have minimal likelihood of achieving recovery for the overall DPS. Significant portion of the range (SPR) methodology will be applied to DPSs. The timeline for the DPS proposed rule is to publish in 2009; the final rule would be completed about a year later. Our core area was ranked as one of the watersheds with the best information.

FWS Field Supervisors are compiling info from technical staff and will recommend how DPSs will be broken out at a meeting January 23<sup>rd</sup>. The FWS Region 1 Director will ultimately make the DPS decision; the affected states will have a chance to provide input.

We expect to receive the final USGS 2006-2007 Jarbidge Bull Trout Survey Report and final Genetics Report within the next 2 months. Allen will use that information to update the Conservation Status Assessment Core Area Template for our core area and will send out to the RT to review. **Action Item:** Need to figure out who is Rob Ryan replacement and get them tied into recovery planning (Kate will do). Sometime at end of January, Allen will be sending out version for us to review with a short turn around.

## 7. Recovery Plan Revised Recovery Criteria

We reviewed draft recovery criteria and RT comments from the December 2007 meeting to get up to speed on this effort. Allen mentioned discussion he had with NDOW chief of fisheries and FWS field supervisor, where they proposed that if all recovery criteria for the three greatest threats are met, and 80 percent of recovery criteria for the other threats are met, then we could consider delisting. The three greatest threats (big three) as determined through recent status review work include forest roads, livestock grazing, and non-point source water quality impairment. The RT thought this sounded reasonable, especially considering source of proposal. We then reviewed our draft recovery criteria to see how this approach would look and see what all we could accomplish (Allen's 12/19/07 version). Allen captured the changes directly in the draft document. Allen will email out the revised threats table again, and will clean up our changes to the recovery criteria and email that out as well.

**Action Item:** Kate to check on Buckaroo ditch ongoing consultation.

**Action Item:** Each agency needs to develop a list of items accomplished since listing for the recovery of bull trout and their habitat.

**BLM action Items:** Are there grazing impacts to Deer Creek on the BLM, grazing impacts to Jarbidge River from Buckaroo to Indian hot springs, fencing at Morgan Draw (Little Island), Buck Creek, capture everything we have done for bull trout recovery so far (since listing), look at situation with Murphy Hot Springs campground and OHV crossing the stream; draft Recovery Plan identified need for corrective action on all these items.

## 8. East Slide Rock Ridge Fire

Most of Slide and Upper East Fork burned (cool burn). Basically burn was in East Fork spawning habitat. USFS had several allotments affected by the fire and several boundary fences were destroyed. Most of the burned areas are not in a grazing allotment, Dave Cr not affected, Raker Creek not affected, Pole Creek allotment is affected. Affected allotments will be rested for several years. Robinson C&H allotment was also affected but will be rested for at least two years. Robinson Hole had several reaches that burned hot.

## 9. Post-Fire Bull Trout Surveys

FWS has obtained funds to do surveys and has contracted with USGS again to determine impacts of fire on bull trout and their habitat. USGS will use PIT Packing (roughly 33% efficiency; 6" to 1 ft detection distance) to see where previously tagged fish are. Minimally invasive, and may help find many fish that we haven't yet detected on antennas. Rough plan is to focus on East Fork first and move to West Fork as time and resources allow.

**Action Item:** Allen will send the BTRT a paper on the use of this methodology. Habitat component would also be a good data set post fire. We discussed attributes of USGS, BLM, USFS, and NDOW methodologies. Sediment and temperature would be primary emphasis. BLM protocol is measured and USGS was not. NDOW 1993 and Paramatrix 2001 (pools LWD, sediment) and USFS 2003 did surveys in East Fork (sediment, pools LWD). There could be some values in collecting habitat data in burn (few transects) to have fire affects data for the watershed, but staffing and time is limited. Water temperature would be most important to collect. What was the affect of fire on fish habitat? Fire burned hottest between Robinson Cr and Slide Cr. **Action Item:** Maija will send Allen a SAT imagery map of the fire severity (on CD). BLM speed survey is tiered from R1/R4 and could be a possible survey protocol to use. **Action Item:** BLM can send the protocol to the BTRT.

### The questions we discussed are:

Do we want USGS to repeat the same habitat data (No).

Do want USGS to collect something different habitat data (Yes).

What parameters (Canopy cover, LWD, others?) and methodology (measured).

Can it be repeatable and well distributed with a minimum of effort (Yes, we believe).

Will it overlap with USFS R1R4 (Yes, we believe; Maija will follow up).

Do we have a clear description of the USGS stream survey methodology (No).

Allen will ask USGS for the raw data sheets for the East Fork and West Fork and will forward to Maija.

Which agency protocol do we want to use? Undecided

Are we ok with USGS doing fewer PIT Pack surveys to collect habitat data? Undecided, but probably not

Should PIT pack surveys be done in East Fork and West Fork or just in East Fork with habitat surveys? No; have NDOW do reach surveys based on burn severity map with ESA Section 6 money (FWS \$ for state agencies to accomplish recovery actions).

**Action Item:** Maija will do leg work on finding someone to pack crew in to do surveys.

## 10. Entrix Contract

Remaining obligated funds need to be spent by Sept 30, 2009. Not enough time between now and then to accomplish large scale stream restoration plan, so we are going to do riparian planting along private property on east and west sides of river in downtown Jarbidge. James Harter (FWS) will take lead for project and will have Entrix get a crew to collect shoots and start them in FS grow-out nursery. FWS and Jim Harvey will work on details of timing and logistics. Trying to get land owner agreements but slow going. The big plan is not going to happen because their conceptual designs were too far along before we could comment on. Rip rap was not what RT wanted to see done and the thalweg relocation option was highly disruptive to the stream (need a lot of equipment in river). The RT wanted a more green option but couldn't get one lined out with Entrix. Allen will let the RT know when the planting date is selected.

Kate gave an update on Dorsey Creek willow planting project, with a methodology that could be followed for the Jarbidge planting project. The BLM and Shoshone-Paiute Tribes had an Assistance Agreement to use 16 people (the tribe Type 2 fire crew) to plant willows in two one-half mile sections of Dorsey Creek that were burned during the Murphy Fire. There were approximately 3,200 willow cuttings that were planted into these two stream reaches. The willows were cut on the Duck Valley reservation and soaked in water for approximately 10 days; **Action item:** Kate to get Allen a copy of the GTR we used for planting protocol.

## 11. General Updates

**Jarbidge RMP:** Kate gave an update on the Jarbidge RMP. The BLM did not accept the draft Chapter 4 from a contractor and now is working to prepare the Chapter Four (Analysis of Affects). The timeline is very aggressive for getting the assessment completed; Dan and Kate are supposed to have the Special Status Aquatics, Riparian, Native Fish and Water Resources sections completed by January 6<sup>th</sup>. They have been working with Tim Burton to analyze the 2006 habitat and riparian data, and it is taking a long time to analyze the data. The RMP Core Team will be working through March to get Chapter Four completed and through the BLM state office review. The state director will then select a Preferred Alternative. If an alternative already fully analyzed is selected, then we can start to draft a BA for the RMP. If a "pick and choose" alternative is selected, it will take about six weeks to fully analyze the alternative, get it reviewed by the SO and move forward with the draft RMP. There probably won't be a draft BA for review until fall 2009.

**West Fork Jarbidge R. Stream Gauge:** The gauge was solely funded by the FS until September 2008, when they decided they could no longer fund operation. FWS and FS will fund gage cooperatively for FY09 since the flow data is needed for South Canyon Road work monitoring

and bull trout research. The East Fork gage has not been operational for some time (stopped in 1998).

South Canyon Road Project: Maija gave an update on the Jarbidge centennial celebration. Mike Balen is working on some additional South Canyon road work and is checking to see if it is covered by the existing EIS. The Lower Bluster campground and bridge are being threatened by the river in an overflow channel. Mike is looking at some manipulation points to protect the bridge and use an alternative overflow channel. South canyon road work is basically done except for a few additional areas. A settlement agreement which stipulated preparation of Road Management Plans and maintenance by Elko County and the Three Creek Road District has been vacated. Allen will follow up with Jim Harvey on how that will affect implementation of road maintenance.

Dave's Island Appraisal: NDOW appraisal came in a lot lower than Brackett's wanted and they are considering whether to take the offer. Land can't be appraised for wildlife values; it has to appraise for building values. **Action Item:** BLM to make sure Wilkins Island is still closed to grazing.

Western Native Trout Initiative: We haven't requested money for bull trout projects through WNTI yet, and it is a good source of funds, so the RT should be thinking about projects we could do with these funds. Maija has some ideas on fencing projects that could be done (fences burned in Murphy Fire). Bull trout and redband trout would benefit.

FWS Partners Program Coordinator: Chris Jasmine is new FWS Partners Program staff in Elko. Buck Creek Ranch and the Diamond A (Simplot) have livestock holding facilities on private land immediately on major creeks in the Jarbidge watershed. We may be able to get Chris involved and relocate the holdings.

DNOW Update: Gary is working on summarizing fishing data for the Jarbidge for 2008. Bull trout YOY surveys occurred in Dave, Jack, Pine, and upper West Fork. Upper West Fork and Pine Cr still look strong, Jack Creek not finding YOY (looking above Jenny). YOY surveys in Dave but may need to be closer to FS boundary.

