

**PACFISH/INFISH FIELD REVIEW**  
**Little Lost Sub-basin**  
October 2006

**Field Review Team Members**

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## **General Field Review Objectives**

1. Determine if the Biological Opinions have been implemented in accordance with the mechanisms, terms and conditions.
2. Determine if on-the-ground management decisions are consistent with the Biological Opinions, and PACFISH and INFISH Goals and Objectives.
3. Determine if PACFISH and INFISH Standards and Guides have been correctly interpreted and implemented on the ground.
4. Determine if grazing implementation monitoring activities have been evaluated to eliminate duplication between the PACFISH/INFISH Grazing Implementation Monitoring Module and other grazing implementation monitoring activities.
5. Improve communication and coordination between agencies. Strengthen interagency commitment to watershed management under the management direction of PACFISH/INFISH.

## **Specific Local Objectives**

To address questions concerning the interpretation of specific standards and guidelines in INFISH.

To address the Little Lost Basin bull trout status relative to INFISH.

## FINDINGS

**Commendations:** There is good coordination and exceptional integration of project planning and implementation between the Forest Service and BLM. Local biologists have longevity and a good working relationship. These factors are part of the reason for local successes with respect to management and restoration of fish in the Little Lost drainage. It will be important for the agencies to maintain the continuity of this coordination in the future.

**Commendations:** Both agencies have made good progress in grazing management and compliance with the standards and guidelines, since the previous INFISH review.

**Commendations:** Many innovative and effective actions have been taken to restore bull trout habitats in the Little Lost by both agencies. The Warm Creek re-connection, riparian grazing strategies, and culvert replacements in Sawmill Creek are just a few examples.

**Commendation:** The agencies have done a good job to apply cost-effective and creative measures and techniques to restore bull trout habitats and to correct problems.



**Figure 1.** Wet Creek in the Little Lost Basin, where good livestock management is achieving the RMOs.

## MacKay Ranger District – US Forest Service

### OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS

**I. Questions and Answers:** The Forest provided a list of questions concerning interpretations of INFISH for the Team to answer. Following is a list of the questions with answers from the Team.

**Question 1.** What specific native species are addressed by the INLAND NATIVE FISH Decision?

**Answer.** See the INFISH Record of Decision. “Inland native fish species within the scope of this decision have been identified by state, private and federal agencies as being at risk due primarily to habitat degradation, introduction of exotic species, over-fishing, and loss of migratory form.” The key here is fish at risk. Such fish are likely those currently listed as threatened or endangered under the ESA, or fish listed by the agencies as “sensitive species”, “species of concern”, and “species of interest”, and therefore at risk of being listed under ESA. We recommend that the Forest Service Regional Forester provide a clarification letter to the field regarding the agency’s intent with respect to the applicability of INFISH for other species such as native sculpins, suckers, dace, pikeminnow, etc.

**Question 2.** Since GM-1 requires modification of grazing practices that prevent attainment of an RMO, or that retards recovery below the near-natural rate, does this mean that livestock cannot graze adjacent to streams? The temperature RMO, for example is not attainable in many waterbodies in the Little Lost.

**Answer:** The interim RMOs of INFISH were default variables and local units were encouraged to develop locally appropriate RMO’s. Since the INFISH Decision in 1995, the bull trout matrix was developed and represents a significant improvement and likely more applicable to at least the bull trout habitats of the Little Lost. RMOs can further be refined locally to reflect attainability in a particular water body. INFISH requires watershed analysis or to use stream-reach specific data to make the change. The Deputy’s clarified the intent of watershed analysis.”We want to emphasize that watershed analyses can be a very simple and straightforward process taking a few days or weeks to develop or a complicated process. The complexity is intertwined with the issues and questions being addressed.”(letter of July 9, 2004) We believe that an analysis focused upon RMO changes would be simple and straightforward. Grazing should not be suspended if the RMO’s can be attained naturally in the presence of livestock. With respect to temperature, see attachment 1.

**Question 3.** Does the geographic application of the Standards and Guidelines apply to streams that do not connect to a water body containing inland native fish?

**Answer.** As stated on page 4 of the INFISH decision: “This management direction... applies to...activities ...that might pose an unacceptable risk to inland native fish”. In accordance with this policy, the standards and guidelines typically require that agency actions “avoid adverse effects to inland native fish”. Furthermore, as summarized in the answer to question 1, the scope of INFISH is focused upon native fish at risk. Therefore, in our opinion S&G’s, and therefore the delineation of RHCAs, does not apply to stream systems that are not connected to, or have no influence on waterbody’s containing inland native fish at risk from habitat degradation, introduction of exotic species, over-fishing, and loss of the migratory form.

**Question 4.** Since PACFISH standards and guidelines apply to bull trout in the PACFISH geographic area, and INFISH does not, how do we apply those S&G’s that address only anadromous fish?

**Answer.** The Standards and Guidelines of PACFISH and INFISH are generally identical, only that the words “anadromous fish” are replaced by the words “inland native fish” in INFISH. Since PACFISH addresses bull trout within the geographic range of anadromous fish, application of the standards and guidelines to bull trout could simply use the standards and guidelines in INFISH, even though that ACS is limited to the geographic area outside the range of anadromous fish (See 1998 Bull Trout BO).

**Question 5.** There is evidence that bull trout in the Little Lost are introduced (not native inland fish). Does this void the requirement to implement INFISH in that area?

**Answer.** No. The Bull Trout Biological Opinion requires implementation of INFISH with respect to listed bull trout. Until the Little Lost unit is de-listed, INFISH still applies. De-listing is the responsibility of the USF&WS, therefore we suggest that the Forest formally communicate the evidence to that agency. Another option is to re-initiate consultation on land use plans with the intent to address the recovery unit as less important to bull trout recovery and minimize or preclude application of INFISH to this unit.

## II. Wet Creek Riparian Management (FS)

**Observation:** After taking grazing management actions to restore habitat on upper Wet Creek, habitat conditions improved dramatically. The Bull Trout population declined after improvement, but then rebounded. Temporal dynamics, in very small bull trout populations like the one in upper Wet Creek, are often large and influenced by factors other than habitat. Climatic conditions can have dramatic effects. Regardless of the population responses, the federal agencies have an obligation to implement INFISH and work to attain the riparian management objectives of good habitat.



**Observation:** It was stated that road relocation in Coal Creek was being implemented to reduce the existing excess fine sediment impacts.

**Recommendation:** Evaluate other factors that may be contributing to the substrate condition and take appropriate action to achieve RMOs.

**Observation:** It was stated that emphasis in good riparian management has been prioritized in basins with listed fish, like the Little Lost. Other basins without listed fish have lagged behind in restoration due to lower priority for the fish in those areas. Agency resources are limited to the extent that lower priority risks may receive little or no attention.

**Recommendation:** The agencies might investigate a strategy to begin pulling back resources from areas that are beginning to achieve restoration goals and divert some attention to the next priority basins. This, of course, would need to be done while assuring that the priority basin maintains its status.

### III. Squaw Creek DMA (FS)



**Observation:** The audit shows full compliance with the PIBO Monitoring requirements at the Squaw Creek DMA, except the downstream end of the DMA was not monumented.

**Recommendation:** The downstream end should be permanently monumented to be compliant with the protocol and to assure that PIBO monitors the same reach.

**Observation:** In discussing the IIT Monitoring Module, it was indicated that monitoring data are entered into two data bases: INFRA and the IM Module, and that such redundancy seems unnecessary and inefficient.

**Recommendations:** The Team agrees that it would be best to input data just one time. The Region will explore the opportunity to develop a system to communicate data entry to both databases.

**Observation:** The Forest has developed an IIT Monitoring Report for summarizing findings from DMA data collection. This report is generated external to the IIT Monitoring Module. The report is presented to the L1 Team annually. It is not known if the report satisfies consultation requirements or the needs of F&WS.

**Recommendation:** The L1 Team's annual report should be derived from information in the IIT Monitoring Module database. An ACCESS Database query and report could be generated to make preparation of future reports easy for field units. The monitoring team will develop a strategy to facilitate field unit queries and reports.

#### IV. Mill Creek Campground and Trailhead (FS)

**Observation:** The District has been compliant with the INFISH standard to “Relocate recreation facilities where... adverse effects on inland native fish cannot be avoided.” The relocated facility can be relocated back into the RHCA as long as it is compliant with RM-1: “Design, construct, and operate recreation facilities... in manner that does not retard or prevent attainment of the Riparian Management Objectives and avoids adverse effects on inland native fish.” Our observation is that the new facility is compliant with the INFISH standard and has been designed to attain the RMOs, is sensitive to recreational visitor needs, and at a relatively low cost.



#### V. Jackson Creek Culvert replacement (FS)



**Observation:** It appears that the project would effectively pass fish. The monitoring program and design of the project appears to be consistent with the requirements of the new programmatic biological opinion, but additionally diverted sump waters/sediment off-site. This added measure to minimize fine sediment increases is commendable. The creative use of staff focused on barrier removal was commendable, as was the minimization of the ESA compliance process.

## VI. Smithie Fork

**Observation:** Burned in 1988. It contains the strongest population of bull trout in the Basin. Adult population of 1300. The habitat condition 7 years post-fire was excellent: Max pool depth .5 m, w/d = 12, LWD/mi=8, bank stab = 98%, Surface fines = 12%, %Pools=50. Temp = 5 to 15 degrees C, in summertime, average about 10. This suggests that fire has had a positive effect on fish. In 1988 75% of the Smithie Fork drainage burned. Prior to the wildfire, 95% of the riparian area was timbered and only 5% after the burn.



Connectivity is the key to restoration of bull trout populations after intense fire and severe alterations of habitat. Refounding may not have been possible if barriers to migration existed downstream of the burned watershed.

**Recommendation: The Deputy Team should address this recommendation.** It is likely that there will be more intense fires in the northwest. Pre-fire data should be collected in areas that are predicted to have such fires so that more information on the effects of fire on fish can be better documented. Also, there is a need to compile existing information of pre- and post- fire habitat and population conditions, perhaps through a graduate research project.

The observations here seem to be in conflict with the common understanding or belief of intense fire effects on fish. More research is needed in this area.

The monitoring team will pursue a project proposal through the Joint Fire Science program.

## VII. Badger Creek restoration (FS)



**Observation:** INFISH requires that fish improvement projects be designed in a manner that contributes to attainment of the Riparian Management Objectives (RMOs). RMOs describe good habitat for inland native fish. Our observation is that the LWD placements would enhance stream habitat structure and that few enough trees were felled to avoid significant reductions of shade, thereby maintaining water temperatures so important to bull trout.

**Recommendation:** Continue monitoring and evaluating changes resulting from this important and valuable restoration project.

**Observation:** It was indicated that beaver are expanding in the Little Lost Basin. There was evidence of old beaver occupation in Bunting Creek. Possibly the stream entrenchment in this stream is partly caused by down-cutting into incompetent sediments from the historic beaver deposits. Beaver activity may be helpful

to restoration of early rearing habitats in this area.

**General Observation:** The Fishery Biologist recommended that the trespass in the Badger Creek area should not be tolerated and the District Ranger accepted and implemented the recommendation. The position that the District took to restrict trespass was appropriate in this situation given the extinction risks to this local population.

## Upper Snake River Field Office, BLM

### OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS

#### I. Wet Creek DMA (BLM)

**Observation:** The audit shows full compliance with the PIBO Monitoring requirements at the Wet Creek DMA.

**Observation:** The Wet Creek DMA appears to be meeting management objectives for bank stability, riparian vegetation ecological status, wetland index, hydric vegetation, and woody species regeneration, as estimated using the MIM method. Such indicators, if used as riparian management objectives (RMOs) for livestock grazing, would suggest that RMOs are being achieved by the present grazing system.



**Recommendation:** Make sure that the INFISH RMO's are appropriate and helpful to adaptive management by modifying the Interim RMO's using the process described above. Good livestock management requires setting and making progress towards achieving desired conditions of the appropriate indicators. Such desired conditions should be defined by indicators that are consistent with the INFISH RMO's. Also, make sure that monitoring applies to those same indicators so that adaptive management changes can be informed by the appropriate information. Using such information places the agency in a stronger position to defend adaptive management actions (See "Decision Tree" and agency policy respecting the implementation of the Stubble Height Review Team findings).

**Observation:** The issue of trespass grazing was mentioned as a potential concern. The FO has done a good job permitting grazing and control late season drift back into the riparian pasture, as evidenced by the good condition of riparian indicators.

**Recommendation:** For future consultation issues related to unauthorized livestock grazing, refer to the Regional Technical Team's recent report and conclusions regarding how to handle this issue in BA's and BO's (cite....). See attachment.

## II. Warm Creek Reconnection (BLM)



**Observation:** The project was innovative and resourceful. Use of the fire crew to effectively complete the rock berm is commendable. The action was particularly impressive given the insignificant costs to accomplish significant results for bull trout. The availability of data, to know in advance where such improvements would be effective, was important to understanding the recovery value of this success. Bart indicates how large the fish are that now ascend Warm Creek.

## III. Wet Creek Fish Ladder and Screen (BLM)



**Observation:** The Field Office did an innovative and cost-efficient barrier and entrainment removal on Wet Creek.

**Recommendation:** The Field Office should identify adult trout screening criteria and see that they are being applied at this site and other sites used by adult bull trout. The agencies should not be restricted by juvenile screening criteria where juveniles are clearly not using the habitat.

**Observation:** The Land mgt agencies are making progress on habitat issues. One outstanding concern regards issues related to brook trout, which is primarily the responsibility of USF&WS and Fish and Game. Given the ineffectiveness of brook trout removal methods and the cost and social challenges of using toxic chemicals, the habitat restoration approach is likely the best alternative for addressing this issue.

## IV. Little Lost River Flood Control Project

**Observation:** No cost-effective and timely solution has been agreed upon to address fish entrainment, given the existence of barriers upstream and diversions risking entrainment only 1 mile downstream of the project. The fish management agencies (F&WS and F&G) should be providing more leadership on this issue. There are some fluvial bull trout loss to entrainment at this structure. The fluvial component is important to the whole population, but it was obvious that we don't yet know the significance of the entrainment risks.



**Recommendation:** Because of the content of the BO requiring consideration of various alternatives for reducing the impact of the structure, BLM should go to the F&WS with the information they have gathered, and seek guidance for future evaluation of the fluvial fish, and seek opportunities in coordination with the fish management agencies on methods to conserve fluvial fish in this area. Some solutions may best be addressed by the fish management agencies with input from the recovery team.

## V. Badger Creek DMA (BLM)



**Observation:** The discussion of grazing modifications at this site describes the effectiveness of the adaptive management approach and the intent of GM-1 to modify grazing practices that prevent attainment of RMOs, such as bank stability. The question was asked, whether or not a 20% standard is appropriate to achieving the RMO. The answer depends on the rate of year-to-year recovery. The concern was that if the site experiences 20% alteration every year, bank stability may decline.

**Recommendation:** In the short-term perhaps the monitoring team can examine similar streams in the PIBO database to evaluate implementation data against bank stability trends to assess alteration standards. Future monitoring of bank stability at this site will help to answer the question locally. If bank stabilities are improving under a 20% standard, then apparently the standard is appropriate.

## Forest Service and BLM - Combined

### I. Badger Creek reconnection (BLM & FS)

**Observation:** Replacement of the corrals off-stream and removal of the diversion on lower Badger Creek..... new water from river..... improves quality of water in the river. In the new diversion on Little Lost River, fish can be entrained in the channel leading to the fish screen. It was indicated that the outlet to the approach channel will be lowered so that fish will return to the river when the diversion is shut-off. This is a very significant contribution to bull trout recovery and increased habitat connectivity/availability. This is a good land owner partnership model that could be touted state-wide.



**Recommendation:** F&WS should use the best resources and guidance available to design diversion bypass structures.

### II. ESA Consultation

**Observation:** Local L1 consultation appears to be working well. We don't know how well L2 is working. Use of the informal communications to expedite consultations, when needed on low-risk actions has been effective. It was indicated that there have been consultation challenges on some actions and that there could be better use of the informal and formal elevation processes, and more use of the counterpart regulations and National Fire Plan design criteria. As level 1 and 2 teams gain new members, new challenges are created depending on their knowledge of the local resources, understanding of Streamlining, and understanding and trust of other team members.

**Recommendation:** It might be helpful to local consultations if non-Level 1 biologists become more comfortable with informal communications with Fish and Wildlife Service. The ICS memo #2 recommends a management liaison to support Level 1 (Regional Execs memo of May 27, 2003). This mechanism may help managers communicate better with Level 1, nurture new members, and more quickly address elevations.

## **ATTACHMENT 1 – Addressing the attainability question for water temperature**

### **COMMENTS ON PROPOSED IDAHO WATER QUALITY STANDARDS FOR TEMPERATURE**

Tim Burton  
June 27, 2006

Don, Michael, and Johnna,

I really appreciate your invitation to attend the Temperature Summit. You all gave excellent presentations on the water quality standards and the dilemmas we face in their application in Idaho. I was sorry to have to leave for the afternoon and suspect, given the participants, that you received a lot of good feedback there at the meeting. Here, in addition, are my thoughts on the issue. In addition to the briefing you provided the other day, I took some time to study the Oregon water quality standards, as they have been highly recommended by some of my counterparts over there.

My first inclination is to go back to the original purpose of water quality standards. Basically they are a way to ensure that the goals of the Act will be met. The water quality criteria selected are supposed to realistically protect the beneficial uses. If we are to use the water quality standards as a benchmark for establishing whether a water body is impaired, then those standards must not be flawed. Thus, in whatever criteria are ultimately adopted, the issues of attainability, natural variability, and human influence must be addressed.

We recently convened a group of scientists and managers to evaluate our approach to stubble height criteria for riparian grazing. In some respects we were facing similar dilemmas respecting natural variability and attainability. In the end we canned the idea of a long-term numeric criterion or criteria. We decided to accept that there is just too much natural variability – weather, varying plant growth potential, plant community interactions, and so forth. Thus we settled on a process to establish criteria locally. We decided on using an adaptive management process where existing information would be used to establish the initial criterion at a site, and that criterion would be subject to change through time based upon the feedback from monitoring. I realize that this would not be easy in the regulatory arena of criteria development and approval by EPA, but it does correlate somewhat with Oregon's "Site-Specific Criteria" approach. This approach seems to address some of the dilemmas you identified at the meeting. Basically, criteria developed in this way can consider stream flow, riparian vegetation potential, channel morphology modifications, cold water tribs and ground water, natural features and geology influencing stream temperatures, and other relevant technical data.

It seems to me that a reasonable approach would be to identify some broad criteria that would be in place until site-specific criteria could be developed. In the development of broad-based criteria, it would be cost-effective to default to the EPA biologically based numeric criteria, like Oregon did, but we know that these are not attainable in many areas – thus the need for the site-specific option. Another aspect of the Oregon criteria that I like is that where natural conditions exceed the EPA criteria, the natural thermal potential temperatures would supersede the

biologically-based criteria. We have a lot of wilderness/roadless watersheds in Idaho, and others minimally developed where the natural potential standard would be better than the biologically based standard. But those places would not be the priority for restoration, so I would concentrate on site-specific criteria development in areas where temperature issues are known or suspected – places of significant vegetation alteration, flow reduction, and channel modification. In other words, go back to the purpose of water quality standards – to meet the goals of the Clean Water Act and protect the beneficial uses, or where lacking make the waters “fishable”.

With respect to the broad level criteria, it does not make sense to continue to apply the one-size-fits-all values. Idaho is too diverse for this to be useful. Dorene’s idea of application to eco-regions would certainly be better. I do believe we can do a lot better than that. One aspect of the stream continuum approach that Oregon used, is that at least the biologically based criteria would be closer to home. What I mean by this is that the colder bull trout criteria would be in the colder headwaters where bull trout occur, and the moderate salmon criteria in the mid elevations where salmon occur, and the warmer salmon migration criteria in the lower elevations where that use is concentrated. To me this approach is more useful because eco-regions are not organized according to fish species life histories, which are as much elevationally as latitudinally controlled. I believe we have the data to identify these areas in Idaho. At a minimum we have the Idaho Fish Database at Fish and Game. But we also have a lot of information in the Bull Trout Recovery Unit Plans, the BPA Subbasin Assessments and Plans, and your BURP program. No doubt there is still some data that only exists in the minds of local biologists, but most of the information has been compiled in one way or another.

In summary, I support a combination of the EPA guidance and the site-specific criteria. But I further support the adaptive approach to local criteria determination. This means developing broad criteria subject to change via site-specific criteria development. In my mind this approach is more useful to achieving Clean Water Act goals. It may take more time and investment up front, but the alternative of flawed criteria would just divert limited resources to places where they may be wasted.