

PACFISH/INFISH FIELD REVIEW
John Day, Oregon

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IIT 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, 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.

FINDINGS

Central Oregon Resource Area - BLM

Commendations: There appears to be a comfortable relationship between consulting and action agencies in this area. Good job developing community support for the project. Provided good documentation, maps, organization of materials and good field examples of management issues related to PACFISH. Good coordination with the FS on the review. There was good integration between specialists and agencies. It was a good idea to take advantage of the opportunity to combine watershed restoration with fuels reduction projects. Restoration of South Fork John Day riparian conditions has been significant over the last 25 years.

OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS

Little Canyon Mtn Fuels Reduction Project

Observations: The project includes fuels reduction, road relocation, road surfacing, road closures, fence construction, RHCA conifer felling, closure of a “pit” created by historic hydraulic mining, and one culvert replacement. Fuels reductions are being accomplished by one timber sale on 500 acres and a stewardship contract on an estimated 2000 acre area. The stewardship contract includes reducing stand density by harvesting products that may have commercial value. Some of the proceeds are used to pay for road restoration work. Additional fuels treatments are paid from National Fire Plan funds. All RHCA’s are excluded from the fuels treatments. A stream enhancement project is planned along a 300 foot section of Little Pine Creek by felling about 50 trees into the stream channel to open the understory to more sunlight, enhance hardwood production, and increase recruitment of LWD designed to achieve increased channel stability. Some trees will also be used to block access to closed roads. Historic mining effects caused channel incision and ultimate instability that adversely affected steelhead and cutthroat trout habitat. Road closures and relocation are designed to reduce sediment delivery to Little Pine Creek. Local publics and agencies argued against the road closures, claiming jurisdiction under RS-2477. BLM personnel convinced local officials of the need to relocate the road and to reduce sedimentation to the stream. PACFISH was helpful in explaining the need to protect the stream zone and reduce road sedimentation. Substrate fines are 4 times reference stream levels, and may be limiting to salmonids. There are other factors limiting salmonids in this watershed, including downstream diversions and higher levels of water surface exposure to solar radiation. This project was presented to the Level 1 Team where the consulting agencies offered conservation measures for the culvert replacement and road closure projects. The Stewardship contract is based upon a “results-oriented” Statement of Work. As such, specific measures are not provided. Any specific measures are offered as part of the contractors proposal. The number of proposals submitted was limited, so the selected proposal may not contain all of the specific desired measures, or design specifications needed to accomplish the conservation measures. These must be handled through contract negotiations and change orders agreed-to by the contractor.

Recommendations: This is an excellent opportunity for the public to view the results of a Stewardship project, and represents an opportunity to organize some public outreach, showing how the project will benefit adjacent landowners in the urban interface. The plan to improve aquatic resources, linked to the fuels reduction project, is another public outreach and education opportunity. Overall this project could be called a watershed restoration project – forest treatments combined with erosion reductions. We recommend that BLM take advantage of opportunities to partner with organizations that might provide financial and political support to road restoration/closures and culvert replacement work in this and other projects. Examples are: OWEB, Oregon Trout, Back Country Horsemen, Oregon Hunter’s Association, (Ron will look up the name of the OHV users group in Oregon). Other potential sources of funding for the culvert replacements include: GAO culvert barrier removal funds, CCI, CCS, RAC, BPA, and CWWR.

Our observations on the stewardship contracting program raised a few concerns. The ten-year timeframe seems counter-effective. Achieving the watershed restorations may be delayed many years. The contractor may wait for timber values to be more favorable before accomplishing the work. There was concern that the non-revenue producing components may be delayed and possibly not implemented if timber values limit revenues. There is also concern that detailed specifications for watershed restoration measures may not be a legally binding component of the contract. The outcome-based approach assumes that conservation measures will be implemented satisfactorily, however without contract specs there are no guarantees. There is a need to determine if the Stewardship contracts can be modified to include measures that assure overall effectiveness and timeliness of the project.

TM1a requires a watershed analysis for fuels treatments in the RHCA. Arguably the felling components of the project are not a fuels treatment, however the purpose is to meet future woody debris needs, therefore an analysis using the 6-step process could be appropriate. This analysis can be issue-specific and geographically focused. A watershed or site-specific analysis would have been helpful in identifying limiting factors and design considerations for the improvement work. This analysis was conducted, in part, by the Wolman Pebble count comparisons to a reference stream. Any RHCA treatment should be supported by an analysis that identifies specifically how it will benefit fish, e.g. will this stream support only small wood, or does it need large wood of the type in the current overstory based upon flood energy potentials? The BLM’s Aquatic Habitat Enhancement and Restoration course includes stream habitat hydraulics, and a limiting-factors analysis approach to assess the need for restoration, and to design appropriate instream improvements. The statement in the Deputy’s memo of 7/29/04 (attached): “We want to emphasize that watershed analysis can be a very simple and straightforward process taking a few days.... The complexity is intertwined with the issues...being addressed.”, suggests that a focused analysis is appropriate. In this context the analysis consists of application of the 6-step analysis process on a single project or just one or two issues. Part of the analysis could include an assessment of prescribed burning to achieve the desired LWD recruitment objectives. We recommend that the project be further assessed to determine if the felling treatment is the best approach to resolving issues limiting the population. A limiting factors analysis might point to other priorities that should be addressed before removing the overstory and opening up the understory to added sunlight. A watershed analysis would help to address silvicultural factors that might enhance longer-term recruitment to the stream system.

With respect to monitoring, the Aquatic-Riparian Framework, implementing the Interior Columbia Basin Strategy for aquatic resources, requires that monitoring be focused on key questions that inform decision making. The Stewardship contract is outcome-based. This approach relies heavily upon implementation monitoring and adaptive management for success. We suggest that the IIT Implementation Monitoring module be applied to this project (submodules: timber, watershed, riparian, local form).

Big Baldy Allotment:

Observations: It was obvious that management of this allotment is consistent with the requirements of the PACFISH Standards and Guidelines. Riding appears to be an effective method for controlling riparian grazing use in this area. The greatest challenge for management here is controlling horse use late in the season. The BLM's Upper John Day Grazing Program Biological Opinion runs from 2004 to 2008. The expiration of the consultation apparently has as its purpose to allow periodic review of compliance with the BO's reasonable and prudent measures and terms and conditions. Use of a solar pump to water livestock off-site is an innovative idea that was of interest to the Team. We observed recent storm erosion and sediment deposits along the road in this allotment and discussed the proposal to transport those sediment deposits to the mill site on SF John Day River. The healthy, functioning riparian vegetation was effective at filtering sediment associated with this event as very little actually traveled to the stream. We discussed monitoring and livestock use standards on the allotment. Monitoring indicators include stubble height, streambank alteration, and riparian shrub browsing. Members of the team familiar with this allotment observed significant improvement in riparian conditions (add before after photos here).

Recommendations: Monitoring in this allotment could be enhanced by implementing the same protocol being used by the FS in this area, including the bank alteration method. The DMA is located in a riparian complex composed of mixed shrubs and herbaceous plants. We observed several sections that appeared to have mostly herbaceous vegetation communities where grazing use appeared to be higher. These may represent areas of late season horse use. An additional DMA might be included in one of these areas to assess horse management. These areas represent only a small proportion of the entire South Fork, which overall appears to be mostly in excellent condition. (email the DMA selection write-up to John and Brian). The RA should continue to monitor the cross-sections that were established in the early 80's, every 10 to 15 years or after significant flood events, to document trends in channel profile in relation to the riparian recovery in this area. If additional long-term monitoring is needed (e.g. greenline vegetation, bank stability, etc.), it would be best to locate it at the DMA, and link it to implementation monitoring.

With respect to placing storm sediment deposits into the RHCA within the Mill Site, such actions must be consistent with the basic premise of RHCA management. Basically the action must not "retard or prevent attainment of Riparian Management Objectives and avoid adverse affects on anadromous fish (or bull trout)". To "retard" attainment of RMO's means to measurably slow recovery of any RMO indicator below the near natural rate. If the deposits were to be placed where fine sediments would have little or no potential for transport and delivery to the stream,

clearly the action would not retard or prevent attainment of the RMOs. There is an opportunity here to use the material to re-shape old excavations to a more naturally-appearing profile within the mill site. Also use the material to replace areas of weed-infestation within the mill site.

Refer to the Stubble Height Report for recommendations on the within season vs end of season riparian monitoring measurements. Usually both are needed. End of grazing period is the best time to assess bank alteration from current seasons grazing use. The end of the growing season is the best time to assess residual vegetation heights. End of growing season is also a good time to assess whether drift, unauthorized use, horses, etc. are affecting riparian conditions.

Monitoring used to trigger livestock movement can and should be done by the permittee, and can be at much lower precision than end-of-season monitoring.

Malheur NF

Commendations: There was obvious integration between specialists and a positive approach to management and monitoring of the allotments and recreation sites. The field review stops were excellent and generated a lot of good discussion on relevant issues. The Forest has made a good effort at collecting and using allotment monitoring data helpful to adaptive management. FS should be commended for the changes they made this year in the Murderers Creek Allotment. Having the Forest Supervisor and Rangers on portions of the review are indicative of management support and priority placed upon implementing PACFISH, INFISH and the Biological Opinions. It was also apparent that the Forest is doing a good job communicating with permittees, resulting in improved compliance and positive changes in recent years. The Forest has taken a good interdisciplinary approach to recreation and grazing management. There is also a positive relationship with the consulting agencies. The recreation program has been proactive with user groups and implementing actions needed to meet PACFISH goals and objectives.

Murderers Creek Allotment:

Observation: We discussed the litigation currently going on in this allotment. Attaining riparian management objectives is a significant component of the litigation. Monitoring is key to this determination. We observed that the Forest is using appropriate monitoring indicators for the stream types and grazing uses in the allotment. DMA selection appeared to be consistent with the direction. Using separate DMA's in different riparian complexes is appropriate. Horse use, particularly in the late season aggravates the ability to meet RMO's. We discussed some local concerns about redd trampling early in the season when steelhead spawn in Deer Creek. Trailing livestock back and forth across the stream when cows were being gathered, particularly in the early season when steelhead alevins are still in the gravel, was identified as a concern. Overall, modifications made to the grazing strategy this year significantly improved riparian conditions. There was some discussion about the timing of end-point monitoring, whether it should be at the end of the growing season or end of the grazing season. Utilization cages were being used to monitor upland utilization, but these are not used to trigger livestock movements. We had a discussion about the value of monitoring upland riparian types away from the channel, and did not de-emphasize its importance. These are important from an erosion and soil productivity standpoint.

Recommendations: While it is apparent that the Forest is using an effective approach to monitoring, it was also evident that additional field-level training would be helpful. Through time, the monitoring protocols are being refined and enhanced. As has been recommended in previous Field Reviews, the Region/State level monitoring coordinator should be trained to provide up-to-date field orientation annually. A train-the-trainers session should be provided to the coordinators, who should then carry the new techniques and refinements to the field units. Training should be hands-on, out on the stream, by field unit.

The permittees are making substantial progress in this allotment. This accomplishment should be acknowledged and further encouraged. Specific accomplishments and improvements, along with the specific goals, objectives, and desired future conditions, should be noted in a letter or

attachment to the AOI. As described in the Stubble Height Report, compliance and non-compliance should not be based upon meeting monitoring criteria, but on compliance with required numbers, timing, and duration of grazing. Monitoring indicators should be used as a prompt to assess future refinements in the grazing strategy. The reasons why monitoring indicators are not appropriate as permit performance standards are documented in the University of Idaho Stubble Height Report. The previous standards would be replaced with adaptive management as the means to make changes. Obviously these need to be simple and understandable by the permittee. We recommend that the Stubble Height Implementation Team assure that this is the case.

Redd trampling may or may not be a real issue in the Deer Creek spawning area. The stream size may preclude cattle access during high spring runoff periods in most years. The potential for redd trampling might be assessed using a modification of the method recently developed in Idaho (Bart Gammett, Lost River RD, Salmon-Challis NF). Modifications would have to account for the timing of redd presence in the stream during high flows.

Refer to the University of Idaho Stubble Height Report for recommendations on the within season vs end of season measurements. Usually both are needed. End of grazing period is the best time to assess bank alteration from current seasons grazing use. The end of the growing season is the best time to assess residual vegetation heights. End of growing season is also a good time to assess whether drift, unauthorized use, horses, etc. are affecting riparian conditions. Monitoring used to trigger livestock movement can and should be done by the permittee, and can be at much lower precision than end-of-season monitoring.

Monitoring Protocol refinements: updates to the Cowley/Burton monitoring protocol were provided electronically (CD).

Selection of the Designated Monitoring Area (DMA): the method recommended by the University of Idaho Stubble Height Study Team was provided (Tim to email to Brian) during the review.

Bluebucket Allotment

Observations: Livestock use along riparian areas in this allotment was 50% less than the previous year. Two of the three permittees are using utilization triggers to move livestock, but not in the unit we reviewed. There was a question about whether the “key areas” are representative of the whole riparian area. There was an observation that hydric species are lacking, outside of the enclosure, on Cougar Creek. It was also noted that watering was being accomplished almost exclusively within the riparian area. We observed a watering tank located within the stream channel on an adjacent pasture in the allotment. The location of the DMA on Cougar Creek is at an appropriate location.

Recommendations: A concise (less than 2 pages) report, written for both agency personnel and permittees, explaining how to set criteria for annually evaluating the requirement to achieve the near-natural rate of recovery, will be prepared and distributed to the Field Units. It will be based upon the discussions with Ron Wiley during the review of this allotment, Stubble Height Study

Team results, PACFISH Attachment 2, and Cowley's criteria for assessing proper streambank alteration. Basically, there is a need to leave adequate amounts of key riparian vegetation, and a need to minimally disturb streambanks adequate to allow natural recovery after disturbance, before the next grazing season.

Off-site watering should be considered wherever possible to attract cattle away from the riparian areas. We recommend that the Forest look for opportunities to use fuels reduction projects in conjunction with opening overstocked stands, to increase understory vegetation in the uplands for livestock forage. National Fire Plan funds could be used for ecosystem improvement and restoration as well as reducing fire hazards in these upland forested areas of the allotment.

Cougar Creek: non-hydric species are dominant and the hydric species are either not present or not dominant: Statement from Stubble Ht Report:

“For stream/riparian areas where non-hydric species dominate because of past disturbance, the objective of livestock management should be to increase the herbaceous stabilizer species on the greenline. Often, small patches of hydrophilic vegetation remain and can respond to management. Recovery of hydric riparian vegetation will vary according to the availability of water, but an upward trend toward recovery would normally be expected with proper livestock management, or rest on the greenline, and changes should be detected within 5 years, if livestock management is the primary source of impact. The moist areas that recover first will hold more water and over time help to rewet adjacent drier streambanks. Hydric species would be among the Key species monitored for stubble height, but since these are not present in numbers adequate to control bank stability, use on the existing non-hydric stabilizers would also be monitored. In this situation, because of the lack of stabilizers, and because criteria for non-hydric species have not been developed, monitoring should also include direct observations of bank disturbance or alteration. Grazing use should be maintained at levels that minimize bank disturbance and contribute to rebuilding the banks and regenerating hydrophilic species.”

The enclosure is useful to assessing desired future conditions, but given that the enclosures were installed many years ago, unless there has been adequate monitoring over the years, they would not provide precise information about the near-natural rates of recovery. Given that one enclosure is 40 years old and the other 20 years old, the long-term progression of recovery can be inferred. This provides not only the potential plant species, but some idea about what direction and time frame will be required for recovery. The development of flood plain and channel structure within these enclosures provides some evidence of the morphological changes that may be needed before full expression of riparian conditions can be achieved. This expression reflects almost full exclusion of livestock over time. The near-natural rate of recovery should be able to reflect these same results within approximately the same time frame. Check the Charley Johnson plot data for additional information on these enclosures.

What does it mean to slow the near-natural rate of recovery in riparian areas? Ron Wiley provided a description of the conclusions of riparian experts on this subject. Basically, current season's disturbance from livestock grazing must minimize bank alteration and leave adequate vegetation heights on key riparian species to result in: 1). Increasing trends for degraded riparian areas, or 2). Stable trends in functional riparian areas. The amounts of bank alteration/disturbance and stubble heights on key riparian species may vary locally according to

site potentials. Adaptive management, using the results of multiple-indicator monitoring, should be used to determine the appropriate criteria for bank alteration and stubble height. Initially the criteria could be based upon Forest Plan standards (4-6 inch stubble height and 10% bank alteration), but refined through time as monitoring validates or refines the default criteria. Not meeting the criteria repeatedly over multiple years, depending upon climatic conditions, would effectively constitute slowing the near natural rate of recovery. Monitoring streambank stability and composition of desired vegetation types along the greenline every 3 to 5 years would help to validate rates of recovery. (put Ron's powerpoint slides here).

Murray Campground

Observations: Units in this campground encroach upon bull trout habitats in Lake Creek. This attracts people into a bull trout spawning area creating the potential for harassment and direct take. Large fish spawning near concentrations of people creates a poaching risk. Educational information is being used in an attempt to mitigate the problem. There was obvious soil compaction and loss of riparian vegetation adjacent to the stream. The Forest has already placed boulders in the units to try to move use away from the stream, and has removed two leaky vault toilets. Additional improvements are planned to relocate units well away from the stream. A watershed analysis was completed in 2000, but it did not address potential recreational effects and compounding factors associated with this campground, and others in the watershed. This bull trout population is also adversely affected by stream diversions, culvert barriers, brook trout competition, and recent flash flooding following wildfires of 2002. Current spawning is not located in an active grazing allotment.

Recommendations: The requirement for using watershed analysis in RM1 would be to place the project in context with all factors limiting production of the local bull trout population. Watershed analysis should not be viewed as a one-time product, but as an iterative process, updated as new information is received and activities are implemented. An analysis focused upon this one key issue, recreation, would constitute an update to the existing Watershed Analysis and fulfill the intent of RM1. This is consistent with deputy's letter on the subject (Directive of July 29, 2004). The analysis could also be used to address priorities for funding with respect to flood damage repair, culvert replacements, recreational improvements, brook trout suppression treatments, etc.

The Forest should consider providing campfire talks when the campgrounds are full, to provide the public with additional educational information about bull trout identification and the importance of protecting redds during the hunting season. Where there is a campground host, provide orientation that the host can use to educate the public on a continuing basis. The educational information could include an explanation of the reasons why campground units were re-designed and moved away from the stream.

With respect to the brook trout competition problem, it appears obvious that brook trout conversion will be necessary in High Lake before this issue will be resolved. The Forest might work with local agencies (ODF&W) to find a way to safely suppress brook trout in this waterbody. Winter gill nets might kill fish without adversely affecting amphibians in the lake. These have been effective at removing large proportions of fish from small, high mountain lakes.

We recommend bull trout as the preferred stock in this cold lake, and as a means of enhancing the local bull trout population.

Sheep Creek Trail Relocation

Observations: We were impressed by the information about bull trout effects that was acquired by the Forest and the Malheur Bull Trout Working Group, and the efforts to protect the habitat and prevent potential conflicts with users. Efforts to prevent ATV use and to constrain the trail width were put into place to protect resources and to conform to the Forest Plan. We observed that sheep use on the trail helped to relocate them away from the riparian areas. Northwest Youth Corps from Eugene was used to help build the trail relocations. Conversion from cattle to sheep appears appropriate in this area.

Recommendations: There may be an opportunity to partner with public groups to help with enforcement and maintenance costs on this trail. Such groups may adopt the trail to help protect and manage it according to goals of the project and the Forest Plan.

Sheep going down the trail and not the stream is a resource benefit that should be explained to public groups, particularly those competing with sheep for use of the trail.

Use of the youth programs to rebuild the trail is an excellent education opportunity.

It would be good to include at the trailhead a map with a different color for ATV trails to clearly display areas recommended for ATV recreationists.

GENERAL

Consultation: With respect to the expiring consultations, periodic re-initiation of consultation on grazing allotments and other ongoing activities is probably an in-efficient approach to assuring BO compliance. We suggest that local agencies follow a template similar to that developed in Idaho (copy to be attached) which provides for periodic review of existing consultations, but does not require consultation unless the re-initiation triggers have been met. Basically, there would be periodic review of the consultation actions to determine if changed conditions, inadequate implementation of the terms and conditions, or results of monitoring suggest that the determination on any indicator in the MPI matrix would be less than previously determined (i.e. “improve” reduced to “maintain”, or “maintain” reduced to “degrade”). The IIT drafted an interpretation of Mechanism 2c for application across the Northwest. The Review Team will recommend to the Deputy Team that they complete the clarification and distribute to all field units. This issue might also be addressed by the Stubble Height Implementation Team through its efforts to address consultation and adaptive management.

Monitoring: This review found that additional field-level training in implementation monitoring is needed. Through time, the monitoring protocols are being refined and enhanced. As has been recommended in previous Field Reviews, the Region/State level monitoring coordinator should be trained to provide up-to-date field orientation annually. A train-the-

trainers session should be provided to the coordinators, who should then carry the new techniques and refinements to the field units. Include a half-day for managers as a synopsis of the techniques and uses.

Working with Permittees – compliance/non-compliance: We found improvements are being made in some grazing allotments. These accomplishments should be acknowledged and further encouraged. Specific accomplishments and improvements, along with the specific goals, objectives, and desired future conditions, should be noted in a letter or attachment to the AOI. As described in the Stubble Height Report, compliance and non-compliance should not be based upon meeting monitoring criteria, but on compliance with required numbers, timing, and duration of grazing. Monitoring indicators should be used as a prompt to assess future refinements in the grazing strategy.

FEEDBACK FROM THE UNITS TO THE REVIEW TEAM AND THE IIT

Collaboration: Units are collaborating on some projects adjacent to the other agencies area of jurisdiction, but little is being done to accomplish joint watershed analyses, environmental baseline updates, or interagency multi-species consultations.

Batching/bundling BA's: Mechanism 2c, in the Steelhead Biological Opinion requires BLM and FS to bundle projects by watershed at least every two years, to review them by January 15, and to update the environmental baseline information for the watershed. Little, if any of these biannual reviews are being implemented.

IIT Restoration Report: Not being used by either agency.

IIT Roads binder and Low Road Density analysis: Not being used by either agency.

Modification to RHCA widths: None have been modified by either agency.

Step-down products: Subbasin assessments: BLM is not using these, FS prioritized watersheds in 2002. RMO, RHCA, and Standard and Guideline changes are not being made through Watershed Analysis. The FS would do this through Forest Plan revision and BLM through Basin Plan updates.

IIT Monitoring: Both agencies are implementing the IIT monitoring module, primarily in allotment management. Both agencies are refining their approach to achieve increased consistency. There continue to be questions about specific protocols and the agencies indicated that there is “a lack of specific instruction and training on survey techniques, and use of the database for reporting IIT monitoring results and other monitoring data for consultation purposes.”

Summary feedback from Field Units: “Better communication and individual unit training. We need to develop a one-stop shopping survey so the units aren’t forced to conduct different surveys for three different requirements, i.e., IIT, Forest Plan, and consultation BO requirements.

Stay focused on monitoring that addresses impacts and that can lead to management changes that will better protect listed species and habitats. The FS doesn't have the budget and resources to continue conducting the mass monitoring being required." It would be good to prepare a guide that integrates stubble height, utilization, and trend for adaptive management.

Review Team's Response:

Local field units can and should design an efficient monitoring strategy that combines purposes of IIT, Forest Plan, and local BO requirements. The monitoring strategy should be focused upon the set of key issues and monitoring questions that overlap these requirements, and avoid duplication. Select monitoring indicators that overlap resource issues and more efficiently assess multiple resource objectives. One example is evaluation of recreation, and livestock grazing – both effect riparian vegetation and trampling. This same issue may apply to basic aquatic inventory. PFC can be used to gather basic physical stream function that overlaps multiple resource issues. PFC can be used to focus monitoring on indicators that reflect specific issues. Monitoring needs to be issue focused and address specific key questions. Formulate the key questions first, then design the monitoring strategy. Use an ID Team approach to developing the monitoring strategy.

The Opinion requires that both BLM and Forest Service develop or update 1 watershed analysis per year. As with monitoring, the analysis selected in any given year should focus on priority issues and key questions. The analysis may be issue-specific and scaled appropriate to the key question(s). The fact that local units have not been using step-down products is evidence that the benefits are not well known or understood. Examples of useful watershed analyses exist, analyses that have led to accomplishing effective, high priority restoration and recovery actions