MEETING SUMMARY
Natural Resources Working Group
New World Mining District Response And Restoration Project
Bozeman Public Library
June 19, 2002

Attendees at the meeting included the following:

- Mary Beth Marks (MB) - *USDA - FS - GNF*
- Frank Ehernberger (FE) - *USDA - FS - GNF*
- Bob Kirkpatrick (BK) - *USDA Rep*
- John Koerth (JK) - *MDEQ*
- Mary Hektner (MH) - *Yellowstone NP*
- Henry Shovic (HS) - *USDA FS - GNF*
- Bill Olsen (BO) - *USFWS – Helena*
- Mark Story (MS) – USDA-*FS - GNF*
- Joe Gurrieri (JG) - *USDA-FS B-D*
- Marion Cherry (MC) - *USFS - GNF*
- Allan Kirk (AK) - *Maxim Technologies*
- Jim Olsen (JO) - *MFWP*
- Scot Schuler (SS) USDA-*FS - GNF*
- Michael Cormier (MC) - *Maxim*
- Jim Harris (JH) - *EPA*

SUMMARY

The Natural Resources Working Group met to discuss several items concerning natural resources restoration as part of the New World Mining District Response and Restoration Project. The items discussed included the definition of natural resources in terms of the Consent Decree, the categories of injured resources, how restoration of natural resources will be integrated into the project, what restoration work has been done to date, the available information that characterizes natural resource injuries, and natural resource injuries that the group wants to prioritize.

The meeting began with introductions and a discussion of the direction of natural resources restoration. An agenda and discussion paper that were discussed at the meeting are attached to this meeting summary. Key to natural resource restoration is the definition of work that is allowed under the Consent Decree. After much discussion by the group, all agreed that there are two categories of natural resource work that can be done:

- Category A – hazardous substances (i.e. mine waste) that are on District Property and non-hazardous substances (e.g. principally sediment from roads) on District Property. Work can be done prior to the Notice of Certificate of Completion is received from the United States Government.

- Category B - after receipt of the Notice of Certificate of Completion, work can address other hazardous and non-hazardous sources on non-District Property.

Following the discussion of the categories of work, information from members of the group was presented on restoration actions that have been completed to date and the existing conditions and available data on natural resources in the District. An open discussion was held during these presentations on the group's concerns, followed by concluding statements on the consensus reached by the group during the meeting.

Key understandings that were reached by the group include the following:

- Formal Natural Resource Damages Assessment (NRDA) is not being done for this project.

- Roads are the main source of sediment to Fisher and Miller Creeks; 90% of sediment in Miller Creek is from roads; 80% of sediment in Fisher Creek is from roads. We can improve water quality and still might not see an aquatic response. In general fish are sensitive to the load (amount) of sediment; aquatic insects are sensitive to the combination of the sediment load and sediment quality. Because of this, the consensus of the group was closing roads and/or fixing erosion problems on roads is a proper response from a natural resources perspective.

- A consensus approach on natural resource work is the preferred method of achieving results. The Forest Service will carefully document the different types of work (response work and restoration work) that are done during the project, solicit comment and get consensus on natural resources work from agency cooperators, and if there is a change in the approach to natural resources work, this change would be documented and consensus for the change would be solicited from the natural resources working group. If dispute resolution is required, disputes are covered in the Memorandum of Understanding between the cooperating agencies to allow discussion of issues that cannot be rectified.

- Natural resource restoration work will be included in Response Action Engineering Evaluation/Cost Analysis (EE/CAs). Natural resource work will focus on District Property.

- This is a key time to provide input to the Como Basin (EE/CA) for any possible natural resources restoration work.

INTRODUCTIONS

DISCUSSION OF NATURAL RESOURCES DIRECTION

(MB) Consent Decree Definitions of "work". State agrees that work includes continuing discharges or releases of hazardous substances from existing point or non-point sources.

- District vs. District Property defined; requires physical work on the ground; District Property to be restored first;

- Integrating money to do both response action and restoration work at the same time, where reasonable and financially prudent.

(JH) Restoration is different than EPA approach under CERCLA in that restoration is not done under normal CERCLA remedial actions. Restoration actions come from Consent Decree and MOU. Many times there is a fine line between response actions and restoration work. Response actions may lead to restoration work that benefits the overall cleanup. $2.5 million is a lot of money. What work do we want to do? Accounting for restoration/response is difficult and we must recognize that some response may be on fine line between restoration/ response and we may end up spending more than $2.5 million because response enhances ability to manage post-removal site control (PRSC).

(BK) USFS is a land management agency. Forest Service works a bit differently since no PRP involved; that is why language for restoration was included; efficient use of funds is important. Considers revegetation and construction of meanders in streams to be restoration work (for example); in the past the agency has dealt with pure response action. To have these two types of actions going on at the same time makes sense, and frequently does not cost more (or that much more) and is really effective use of the funds.

(JK) Abandoned Mine program uses similar process (mimics it), but doesn't involve CERCLA; have to get permits; e.g. permitters won't allow just hard banks, require both response actions and restoration work; expectation is for more work to be done rather than less (other than just response action activities); should look natural, and work with the system, etc.

(BK) That is why we do it the way we do; CBMI had expectation for Certificate of Completion that takes care of liability; CBMI will be watching expenditures on natural resources restoration work.

(HS) One aspect of CERCLA is hazardous substance, not pollutants or contaminants; restoration work goes beyond that requirement.

(BK) McLaren Tailings is in pollutant category; sediment is pollutant but no quantity has been defined to determine the level where sediments can be cleaned up.

(SS) How does sediment fit in? Is it a pollutant or contaminant? Does it meet requirements for a CERCLA action?

(BK) When sediment contains metals and acid, it is a hazardous substance; pollutant definition is vague. Definition is not clear and may include exceedance or turbidity standards.

(JH) Sediment is probably considered restoration where it limits fisheries by limiting fish reproduction; improvement may be considered restoration. First clean up mine waste under CERCLA and on District Property; then do restoration or do restoration as part of response action.

(MS) Mark estimates that $350,000 in total road work will be required to take care of sediment issues on roads in the District; $200,000 is probably linked to mineral-rich soils.

(MH) Consent Decree vs MOU definition of money; would CBMI complain that all money should have been spent on response, not restoration?

(BK) Company expects response and restoration to be done, but expects that the $22.5 million will go to response actions that remove companies liability; MOU with Federal agencies, USDA, Justice, F&WS, EPA, the 2.5 million was agreed to as the limit for restoration funding in order to get company to buy into it. First priority is District Property, approval, and certification of completion. Dollars get blurred at the boundaries between response actions and restoration of natural resources. USFS is actually cleaning up to a lower concentration of contaminants during response actions for aquatic concerns rather what would be done under a typical removal action.

(MH) Does company review work being done?

(BK) No, only paper company left. Battle Mountain Gold is now Newmont.

(BK) Formal Natural Resource Damages Assessment (NRDA) not being done; is the Department of Interior Fish and Wildlife Service okay with this?

(BO) Yes

CATEGORIES OF INJURED RESOURCES

(MB) Review Categories of injured resources impacted from mining activities (see attached Natural Resource Restoration Discussion handout):

A. District Property - result of hazardous substances – prior to issuance of the Notice of District Property Work Completion (notice)

B. District Property – not a result of hazardous substances – work after the issuance of the notice

C. Non-District Property – both related to a hazardous substance and not a result of hazardous substance - work after the issuance of the notice

- Use existing data and identify targets for natural resources in categories B and C.
- Settlement document says District Property cleanup with Notice of Certificate of Completion prior to work on non-District property.

(BO) If a response action involves only an incremental increase in protection to the environment from a cleanup for a considerable cost versus a much greater benefit to the environment from a restoration action for the same cost, then Bill suggests doing the natural resource restoration rather than the removal action.

(BK & JH) Need to reserve some money for long-term maintenance.

Break

RESTORATION WORK THAT HAS BEEN DONE

FRANK EHERNBERGER

Restoration Work included in Response Actions (1999-2001):

Como Basin Erosion Control		$12,000
Soda Butte Tails Type A Channel		750
Middle Tredennic Stream banks		5,500
Rommel Type A	4,125	
Rommel Type B	81,000	
Rommel Wetland (1.0 acres)		0
Total Restoration Work		**$104,247**
Total amount spent on Response Actions - (to date; includes restoration work)		**$2,070,000**

Examples of Restoration Work done:

- Permanent Bridge crossings represent a reduction of long-term sediment loading (as opposed to temporary bridge)

- There are many other aspects of response actions that are implemented that benefit natural resources at no additional cost (e.g. using lower cleanup levels for protection of aquatic habitat).

- Other possible (future) restoration actions that can be coordinated with response actions: Lake Abundance road, drainage channels below the McLaren Pit ($80-100K), Lulu Pass switchbacks, Como Basin drainage.

EXISTING INFORMATION

MARK STORY

< About $350,000 of total road work needed to take care of sediment issues along roads in District
< TMDL Process underway
< 8 miles of recontoured roads in the District
< 90% of sediment in Miller Creek is from roads
< 80% of sediment in Fisher Creek is from roads
< Mineralized areas or soil along roadways would be done under CERCLA; $200,000; committed to do work for TMDL
< Transportation planning process is on-going
< Lulu Pass Road needs work; west side of Henderson Mountain area of metal rich soils.

HANDOUT FROM HENRY SHOVIC ON ROADS

For roads analysis, a report was produced (handout) to identify roads that crossed potentially acid- and metals-bearing geologic formations. In this initial analysis, using the definitions for hazardous substances, only 10% of all roads in the District are classified as crossing potentially hazardous soils. This will be revisited this year to more accurately characterize roads that have sediment-producing segments and that may cross acid- and metals-bearing soils.

(JK) Is there bond money available from CBMI for exploration road reclamation? Initial response is that the bonds have been released. John will check with DEQ hardrock permitting staff and report back to the group.

(BO) Couldn't roads that do not contain hazardous materials be done as restoration work?

(JK) Not going to get argument from State if roadwork were done to abate sediment.

(JH) Suggests that Rick Baird (EPA lawyer) be consulted as an original author of Consent Decree as to the status of road work if materials are not hazardous; JH will contact Rick and report back.

HENRY SHOVIC ON WETLANDS AND RECLAMATION ISSUES

- Henry presented the reclamation issues map that combines GIS layers of soils, elevation, slope, and roads to show potential problem areas.

- Crown Butte Mining did produce a wetlands map for the District, but this map has not been proofed for accuracy. The Spatial Analysis Center will pull the wetlands information from the CBMI maps and do some field GPS verification to rectify inconsistencies of scale and location.

JOE GURRIERI

- Stillwater river is non-District Property. Joe was involved with the synoptic sampling of 25 miles of the stream from its headwaters and through the wilderness. Collected samples of water, sediment, periphyton, and macro-invertebrates. Results show that the river is heavily impacted in Daisy Creek and the Upper Stillwater. Below the mouth of Goose Creek, conditions improve dramatically, mainly as a function of dilution. Below Goose Creek: water quality good, but sediment is highly contaminated (300 parts per million copper in stream sediment as far downriver as the Stillwater Mine. Copper concentrations appear to be affecting macro-invertebrates.

  Stillwater marsh (actually wetland area in lower Daisy Creek) is probably a CERCLA site; contaminated sediments are deposited in wetland. This marsh has not been extensively mapped or inventoried for contaminated sediments.

(JK) To extent that temporary standards cover Stillwater River, the distinction between District Property and non-District Property is irrelevant. Temporary standards apply at the mining District boundary.

(SS) How do temporary standards/notice of completion meld together, there are narrative standards as well ... need to monitor bugs and fish to measure and document success; propagation of fishes, bugs in relation to sediment and substrate is going to be the problem; sediment and substrate difficult to deal with in restoration; compelling reason to address other things as well, need to do the road work.

We can improve water quality and still might not see an aquatic response. In general, for fish it is the load (amount) of sediments but for aquatics is it a combination of the load and quality of the sediments. Roads are the most important source of sediment. Completing roadwork is a good insurance policy for sediment control and loading

(JK) The State Superfund Act (CECRA) sign-off is based on analysis of compliance with environmental requirements, criteria, or limitations (ERCLs). Sign-off from the State will be done based on water quality standards. Temporary standards allow the reclamation work to be done, but macroinvertebrates are not specifically referenced in the standards. Macroinvertebrates may be included in narrative standards (B1 classification).

What would be process if we don't meet these standards? State could allow site-specific standards. State could also determine that the stream was misclassified and adopt site-specific standards.

SCOTT SHULER

< Draft Environmental Impact Statement prepared for the proposed mine has all the fisheries data. Page Chamberlain: has sediment data.

< Miller Creek: fish barrier at culvert where water crosses under the road; above this barrier is a steep gradient reach; there are no fish in stream. The use-attainability as far as the Forest Service is concerned is met for fish because of limited habitat.

< Need to add habitat to natural resource damage areas, and address this in response actions

< Daisy Creek: likely never habitat for fish pre-mining.

< Stillwater river: there is a barrier falls just above Goose Creek; likely never any fish above this point.

< Fisher Creek: never was blue ribbon trout stream because there is very little habitat. Water quality is probably the limiting factor. Lower in Fisher Creek, there is some habitat. Depositional reach at CFY-2; start picking up aquatic insects at this point along with some; fish present below Lady of the Lake tributary.

< Clarks Fork: fish have high metals in tissues; upper reach has high gradient but is not sediment limited.

< Habitat potential for fisheries are not just affected by water quality; in many areas physical habitat is lacking. Sediment tends to limit macro-invertebrates.

< Response actions addressing water quality will improve habitat to some degree. Water quality issues do not address depositional reaches of the streams, barriers to fish migration, or lack of habitat.

(JK) Scot, would you excavate sediment?

(SS) I don't know. Not a huge difference in periphyton species composition between unimpacted (Lady of the Lake) and low impacted reaches.

(BK) Suggests we have metals concentrations in periphyton because in other areas they are finding that fish tissue enrichment in metals is tied to periphyton metals concentration.

JIM OLSEN

- Background data on fish counts are available. Fish population estimates for the years 1974, 1990, and 1994.

MARION CHERRY

< Ray Brown methodology important and importance of white bark pines

< On wildlife, grizzly bear and lynx are the important species.

< Road closures are the best protection; high density of roads = dead bears. Road improvements aid access but impact habitat.

< Lynx: winter use impacts, snowmobile access

< On roads with closure (to improve habitat), the Forest Service gets credit for each mile of road closed. Latest road density 1998, road inventory at project area important. Sometimes closing roads somewhere allows building road elsewhere.

< Nothing done on amphibians

(JK) State's concern - groundwater and groundwater standards; groundwater control area may be needed and may satisfy concerns if conditions (standards) are not met. Groundwater control area to control risks results in withdrawal of groundwater from use.

(MH) Reserve Water Rights Compact has controlled groundwater area; domestic use okay, only applies if use affects Soda Butte Creek.

(JH) Idaho Pole is an example where groundwater standard is exceeded; a groundwater control district and a well ban.

WETLANDS

(JH) Question to group - Is anyone concerned from damage or lost use; physical damage to wetlands; if we are worried, then we need wetland delineation; it is an ARAR. Includes physical reduction of wetland areas and loss of use. Not assume responsibility for downstream or past loss of use. Decide now if a delineation is necessary to measure impact, may not be the most efficient use of money.

(BO) Bill doesn't think wetland delineation is best use of money.

(MH) McLaren Tailings is big impact to wetlands.

(JH) May want to be looking for cleanup rather than wetland replacement.

(BO) If we start looking for lost use and injured resources specifically with wetlands, wetlands delineation is a lot of work and expensive and doesn't think it is the best use of dollars, although it might be worthwhile to do some field work associated with wetlands. Page Chamberlain has wetland information for Fisher Creek. Depositional areas are of concern to Bill, such as the wetlands below the Glengarry Adit.

(MH) Is there an approach that we can use for wetlands where we can document our thought process to put to bed issues regarding wetlands? Inventory wetlands reports? Map wetland areas contaminated by sediments? EIS states that concerns of the National Park Service were not addressed in wetlands delineation (not all wetlands identified); organic wetlands (peats and ferns) the main types of wetlands in the District.

(BK) Lots of data in the draft EIS that can be our basis for analyzing impacts to resources.

(JG) For Stillwater wetland, wouldn't do anything until contaminant extent is known. If we mapped contaminated soils in wetland, a possible response action could be to reroute the stream into a clean area and bypass contaminated sediments.

WRAP UP

(BK)
- Gallatin National Forest road analysis is about 2 years out.
- Groundwater issues in the District may be incorporated with Adit Discharge EE/CA.
- Roads on west side of Henderson Mountain as sediment source may be included in Miller Creek EE/CA.

- Response and restoration actions are going on at the same time as the EECAs are being written; EECA process identifies problems and proposes action.
- Group agrees that Category B (of the three categories presented in the Agenda) can be done under Category A. This leaves two categories of natural resource work that will be done.
- Natural resource restoration work will be included in Response Action EE/CAs.
- Natural resource work will focus on District property.

Meeting Adjourned

AGENDA
NATURAL RESOURCES WORKING GROUP
June 19, 2002 10AM

10AM to 11AM - NATURAL RESOUCES DIRECTION

- Review language and intent of Consent Decree, Settlement Agreement, Federal Agencies MOU and State-Federal Agencies MOA relative to natural resources and restoration.

- Discuss why we are not doing a Natural Resource Damage Assessment (NRDA).

- Categories of injuried resources impacted from mining activities

  A. District Property - result of hazardous substances – prior to issuance of the Notice of District Property Work Completion (notice)

  B. District Property – not a result of hazardous substances – work after the issuance of the notice

  C. Non-District Property – both related to a hazardous substance and not a result of hazardous substance - work after the issuance of the notice

11AM to 2PM - NATURAL RESOURCES INDENTIFICATION

- **DISCUSS RESTORATION WORK THAT HAS BEEN COMPLETED OR IS PROPOSED IN CONJUNCTION WITH RESPONSE ACTIONS. LOOK AT ESTIMATED COSTS.**

    - Rommel Tails stream restoration
    - Middle Tredennic stream restoration
    - McLaren Pit – Drainage and road work - 2002
    - Como Basin – Drainage and road work - 2003
    - Others?

- **EXISTING INFORMATION –**

    - Scot Shuler Invertebrates/Fisheries
    - Mark Story/Henry Shovic – Roads
    - Henry Shovic – Soils and Wetlands
    - Joe Gurrieri – Stillwater Study
    - Jim Olsen - Fisheries

- **THE GROUP'S CONCERNS?**

    - Wetlands
    - Contaminated Sediments
    - Erosion of Disturbed Areas
    - Invertebrates

- Fisheries
- Wildlife
- Others

- **NATURAL RESOURCES RESTORATION IDENTIFICATION --- BRAINSTORMING (REGARDLESS OF CATEGORIES)**

    - Injured Natural Resources?
    - How are these being included in plans?
    - What needs to be included that is not?
    - Prioritizing amongst the actions?

Natural Resource Restoration Discussion – New World

CONSENT DECREE LANGUAGE:

Purpose of the Consent Decree (page 1) – The Consent Decree resolved the actions filed against Crown Butte by the United States and the State of Montana pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Montana Comprehensive Environmental Cleanup and Responsibility Act (CECRA).

II. A. The Governments' Action seeks (i) injunctive relief, (ii) reimbursement of response costs incurred and to be incurred by the United States or the State for response actions, and (iii) recovery for damages for injury to, destruction of, or loss of natural resources, in connection with the release or threat of release of hazardous substances at or from the District property. (page 6)

Consent Decree Definitions:

X. "Response and/or Restoration Actions" means those actions selected by the United States to respond to the release or threatened release or discharge of hazardous substances, pollutants or contaminants, or to assess, restore, replace, or acquire the equivalent of natural resources that have been injured, destroyed or lost as a result of, the release or threatened release or discharge of hazardous substances, pollutants or contaminants, including Post Response/Restoration Site Control. (page 5)

CC. "Work" means all of the Response and/or Restoration Actions that are selected by the United States to be performed at the Site, and includes continuing discharges or releases of hazardous substances, pollutants or contaminants from existing point or non-point sources that are to be addressed by Response and/or Restoration Actions. (page 6)

OTHER DOCUMENT'S LANGUAGE:

- Several documents discuss addressing injuries to natural resources in the New World Mining District Response and Restoration Project. These documents include the Settlement Agreement, Consent Decree, Federal Agency MOU and the MDEQ and Federal Agencies MOA.
- All of these documents mention the restoration of natural resources. The common verbiage is to identify and restore injuries to natural resources impacted from mining activities as a result of the release or threatened release of hazardous substances related to the District properties. These documents also emphasize the integration of response and restoration activities to achieve the greatest efficiency and results from the monies.
- The Federal MOU states that approximately $2,500,000 will be spent to address injuries to natural resources.

PRACTICALITY:

- The Natural Resources Damage Assessment is a process to determine injuries and seek compensation for restoration. This case has been settled through the Settlement Agreement and the Consent Decree for both CERCLA and NRDA. Since it has been stated what amount of money is available to address injuries to natural resources, a Natural Resource Damage Assessment (NRDA) will not be performed nor is it judicial use of the funds available.

- Goal of overall response and restoration is efficient use of the process to achieve the best water quality practicable.
- The consent Decree does not change the “laws” or give other authorities.