

# Memorandum

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**To:** Molycorp Trustee Group  
**From:** Hillary Browning, Diana Lane, David Chapman, Stratus Consulting Inc.  
**Date:** 7/8/2005  
**Subject:** Potential Project Screening and Evaluation

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In the current phase of restoration planning, we recommend that the Trustees proceed with screening and evaluating proposed projects according to specific criteria. This process will result in ranking the potential projects, identifying projects that will proceed to a full scaling analysis, and ultimately selecting the projects that will be implemented.

Draft criteria were presented in two previous memoranda [Proposed Project Selection Criteria (draft), January 24, 2005, and Restoration Planning Project Descriptions, May 25, 2005]. The current list of criteria incorporates Trustee comments on the draft criteria.

This memorandum provides an introduction and guide to beginning the screening and evaluation process and describes the suggested approach to implementing the criteria.

## 1. Project Screening

Screening criteria are used as the first step in a project evaluation. Projects must pass screening criteria before they can be considered further in the evaluation process. The following screening criteria were accepted by the Trustees. For a proposed project to meet minimum standards of acceptability it must:

- ▶ Address the type of resources potentially injured by releases from the Molycorp facility.
- ▶ Comply with applicable and relevant federal, state, and local laws and regulations
- ▶ Be protective of public health and safety
- ▶ Be technically and administratively feasible
- ▶ Not conflict with any ongoing or planned response or remediation work
- ▶ Provide a net environmental benefit.

A spreadsheet listing the potential projects and the screening criteria is attached (proposed.screening.criteria.application.xls). There are three worksheets in the workbook: one labeled "Readme" that gives a brief description of the spreadsheet, and two others that contain

the projects and criteria. To assist the Trustees with the screening process, we applied the criteria to the potential restoration projects and screened out projects that appeared not to meet the minimum criteria. As a next step, we suggest that the Trustees review our preliminary application of the screening criteria, and if desired, conduct their own independent application of the screening criteria on the blank worksheet page that has been set up for this purpose.

### 1.1 Preliminary Project Screening Results

Stratus Consulting conducted a preliminary screening of the projects against the criteria on a “Yes/No” basis. It should be noted that in the results of this analysis (see the associated spreadsheet), there are several entries marked as “Yes\*.” This indicates that the project meets a given criterion but that there are certain conditions or issues that may need further consideration. An explanation of these considerations is provided in the last column of the spreadsheet in the “Comments” field. A collective determination of whether a project generally meets the screening criteria is assigned in the “Acceptability” field. Projects with a “Yes” in this field are recommended to be carried forward to the evaluation phase, and projects with a “No” are recommended to be omitted from any further evaluation. Recommendations based on Stratus Consulting’s analysis are shown in Tables 1 and 2.

**Table 1. Projects meeting screening criteria according to preliminary analysis**

Upper Cabresto Creek cutthroat trout enhancement via pond creation	Stream crossing improvements — Comanche Creek and North Ponil Creek
Fawn Lakes — habitat improvements	Forest Service Road reconstruction near ranger station
Potato Patch Spring habitat creation	Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek
Goathill Pond habitat creation	Mitigation of off-road vehicle impacts to the watershed
Eagle Rock Lake habitat improvement and creation	General Road improvements in the watershed
Hunts Pond improvements	Rio Grande box recreational facilities development
Shuree ponds improvement Valle Vidal area	Cebolla Mesa trail improvement
Cabresto fish barrier to benefit cutthroat trout	Sunshine Valley/Anderson Ranch wetland site
Lower Cabresto water augmentation	Improve winter range for bighorn sheep
Red River habitat improvements in the town of Red River	Land acquisition of LaBelle property
State fish hatchery fish ladder construction	Alluvial fan habitat enhancement along the Red River
Questa Ranger Station fish barrier removal	Fawn Lakes riparian improvement (revegetation)
Village of Questa Red River habitat improvements	Village of Questa water distribution improvement

**Table 1. Projects meeting screening criteria according to preliminary analysis (cont.)**

Upper Cabresto Creek cutthroat trout enhancement via pond creation	Stream crossing improvements — Comanche Creek and North Ponil Creek
Mainstem Red River Embeddedness Treatment/Study	Development of water conservation programs
Rio Costilla aquatic enhancement	Village of Questa WWTP upgrade
McCrystal Creek headgate	Red River WWTP sludge-drying basin lining
Comanche Creek cutthroat migration barrier	Septic system concerns in Lama or San Cristobal
Restore Rio Grande cutthroat trout in Comanche Creek	Public education about beavers and restoration
Columbine Park pond complex habitat creation	

**Table 2. Projects not meeting screening criteria and recommended to be removed from further consideration**

Bitter Creek drainage improvements
Construction of acid drainage capture systems
Well and distribution system for Lama
Clower Springs groundwater protection
Red River underground storage tank remediation
Construction of small retention dams for groundwater storage
Funding for promotion of outdoor activity-related tourism

## 2. Project Evaluation

Projects that meet the screening criteria will be carried forward and subjected to evaluation criteria to further assess and rank the potential projects. These criteria reflect the Trustees' priorities for restoration and are divided into three categories: relevance to the NRDA, degree of benefit, and feasibility and cost criteria. Priority is placed on projects that are highly relevant to the natural resource injuries and service losses that are the focus of this NRDA; provide significant, long-term, quantifiable, and desirable benefits; and use NRDA funding wisely and with a high likelihood of success. The specific criteria, broken down by category, are listed below.

**Relevance to the NRDA**

- ▶ Location in, or nearby, the Red River watershed
- ▶ Nexus to injured resources
- ▶ Provision of benefits to multiple natural resource categories, or multiple resources within a resource category.

**Degree of benefit**

- ▶ Acceptability to the public
- ▶ Scalability: the project has quantifiable benefits so that it can be “scaled” to offset a certain amount of resource injury or service loss
- ▶ Provision of benefits rapidly after project implementation
- ▶ Project longevity
- ▶ Net environmental benefit
- ▶ Maintenance needs.

**Feasibility and cost criteria**

- ▶ Expected cost-effectiveness compared to similar project benefits
- ▶ Expected costs for operation, maintenance, and monitoring
- ▶ Need for NRDA funding for project implementation
- ▶ Potential for success, from engineering and/or biological points of view
- ▶ Ability to be monitored and measured.

**2.1 Scoring System and Guidelines for Criteria**

In this memorandum, we propose for your discussion a numeric framework for applying the evaluation criteria to proposed projects in a fair, unbiased, and impartial manner. In this approach, projects are scored on a scale of 1 to 5 on each criterion, with a value of 1 representing

poor performance and a value of 5 indicating excellent performance of the project in relation to the criterion.

In the section below we propose guidelines for assigning numerical scores for each criterion so that the process is as objective and impartial as possible. For some criteria, each of the 5 levels of performance is defined. In other cases, only 3 levels: the highest, middle, and lowest scores are defined. The other 2 levels are assumed to be on the continuum between the defined levels. We propose to develop a series of spreadsheets that uses this scoring system to evaluate each project against each criterion. Criteria would be grouped by category (relevance to NRDA, degree of benefit, and feasibility and cost) so that category scores, as well as a total score, can be calculated. Scoring guidelines for each criterion are presented in the following sections for the categories of "Relevance to NRDA" and "Degree of Benefit." Guidelines have not yet been developed for criteria in the "Feasibility and Cost" category because not enough information is known about the specific costs associated with each project at this point in the process.

### **2.1.1 Relevance to NRDA**

#### **Location in, or nearby, the Red River watershed**

This criterion evaluates each potential project's proximity to the site of injury along the mainstem of the Red River between Questa and the town of Red River; projects located closest to this area are most desirable.

- 5 = mainstem Red River, town of Questa, village of Red River, or location where terrestrial injures have occurred.
- 4 = off-channel along the Red River (e.g., pond development at Eagle Rock or Fawn Lakes)
- 3 = Red River watershed
- 2 = adjacent to Red River watershed (e.g., Valle Vidal)
- 1 = not in vicinity of Red River watershed

#### **Nexus to injured resources**

Ideally, a restoration project will directly benefit the same types of resources that have been injured by improving the quantity or quality of that resource. Projects with the most direct connection between injured and restored resources are most desirable (e.g., loss of resident trout in the river compensated for by improved populations of in-stream resident trout).

- 5 = project benefits the same kind of resources that have been injured (in-stream aquatic biota; uplands, riparian, wetland; groundwater saving)
- 3 = project benefits similar kinds of resources (pond aquatic biota)
- 1 = project provides auxiliary benefits not directly related to injury (recreation only; development of groundwater resources; education)

**Provision of benefits to multiple natural resource categories, or to multiple resources within a resource category**

Project actions that provide benefits to multiple resource categories, or that benefit multiple species or communities within a resource category, are preferable to projects with a more limited scope of benefits. Note that this criterion is not very relevant to projects that focus solely on groundwater. All of these projects would receive a score of “1,” but this would not affect the relative ranking of groundwater projects against each other.

- 5 = benefits provided to all three resources (surface water, groundwater, terrestrial)
- 4 = benefits provided to any two resources
- 3 = benefits provided to entire communities (multiple species) in any one resource category
- 2 = benefits provided to one or two species in any one resource category
- 1 = benefits provided to one resource without benefit to communities (groundwater projects)

**2.1.2 Degree of benefit**

**Acceptability to the public**

This criterion evaluates the likely degree of public support or opposition to potential projects.

- 5 = significant public support expected
- 4 = some public support expected
- 3 = public neutral, mixed opinions expected
- 2 = some public opposition expected
- 1 = significant public opposition expected

**Scalability: project has quantifiable benefits and can be “scaled” to offset a certain amount of resource injury or service loss**

Scaling is the process of determining how much restoration is required to compensate for a given injury. Projects are preferred if they can vary in size to match a given injury or if they have easily quantified benefits.

- 5 = project can vary in size to match debit (e.g., many acres of habitat are available for restoration, either a portion or all may be successfully restored to provide benefit)
- 3 = benefits can be quantified but size does not vary
- 1 = difficult to quantify benefits

**Provision of benefits rapidly after project implementation**

This criterion is scored on the time it will take for full benefits to be achieved. The time to full benefits is the estimated time it will take for both implementation (including all planning, approval, and regulatory processes) and ecosystem recovery to take place.

- 5 = full benefits in < 3 years
- 4 = full benefits in 3-5 years
- 3 = full benefits in 5-7 years
- 2 = full benefits in 7-10 years
- 1 = full benefits in > 10 years

**Project longevity**

This criterion evaluates the number of years over which a project is expected to provide benefits.

- 5 = benefits provided for > 50 years
- 4 = benefits provided for 20-50 years
- 3 = benefits provided for 10-20 years
- 2 = benefits provided for 5-10 years
- 1 = benefits provided for < 5 years

## **Maintenance needs**

This category evaluates each potential project's dependence on regular maintenance to ensure continued benefits. It is purely a frequency based criterion and does not consider the degree or type of maintenance required.

- 5 = project is indefinitely self-sustaining following implementation
- 3 = project requires regular maintenance every 5-10 years
- 1 = project requires annual, or more frequent, maintenance

## **2.2 Weighting of Criteria/Categories**

Certain criteria or categories may be more or less important to the Trustees than others. Therefore, our proposed evaluation framework allows for a weighting of criteria in the calculation of both category and total scores. Relative weights of criteria or categories would need to be discussed and defined.

## **3. Next Steps**

We anticipate discussing and identifying our next steps during the July 8 conference call and propose the following items:

- ▶ Trustee application of screening criteria, agreement on list of accepted projects to be carried forward for evaluation
- ▶ Trustee review of scoring system guidelines, incorporation of criteria/category weighting and additional Trustee input to framework
- ▶ Stratus Consulting completion of "straw-man" project evaluation scoring using agreed upon framework
- ▶ Trustee review of Stratus Consulting scoring and selection of preferred projects to carry forward for in-depth review and cost analysis.