

Memorandum

To: Molycorp Trustee Group
From: Diana Lane, Hillary Browning, and David Chapman, Stratus Consulting Inc.
Date: 8/11/2005
Subject: Revised evaluation benchmarks and project scoring for the “feasibility and cost” category

As a follow-up to our conference call on August 8th, we have incorporated Trustee decisions into the evaluation benchmarks and project scores for the “feasibility and cost” evaluation category that were presented in the August 4 memorandum titled “Preparation for August 8th conference call – finishing first round of project evaluation.” The scoring results are presented below; the same information is also presented in the accompanying Excel file. The Trustees agreed that these scoring values could change to reflect new or revised project information.

The criteria that the Trustees agreed at the July 26th meeting to include in the “feasibility and cost” category are the following:

- ▶ Costs for operation, maintenance
- ▶ Need for NRDA funding for success of the project
- ▶ Potential for success, from engineering and/or biological points of view, based on past results from similar projects
- ▶ Ability to be monitored and measured for success evaluation cost effectively
- ▶ Cost effectiveness compared to similar project benefits

The Trustees agreed that the “potential for success” and “cost effectiveness” categories would receive a “plus” weighting, while the other categories would receive neutral weightings.

Costs for operation, maintenance

The Trustees agreed on the following scoring benchmark:

5 = Self sustaining

3 = Some maintenance needed but cost incurred is minimal (infrequent and low-cost actions required)

1 = Regular Maintenance required is either frequent or expensive

Note: incorporates both cost and frequency of necessary maintenance actions

Table 1 shows the project scoring agreed upon by the Trustees for this category.

Table 1. Project scores for “Costs for operation and maintenance”

Score of “5”	Score of “3”	Score of “1”
Questa Ranger Station fish barrier removal	Upper Cabresto Creek trout enhancement via pond creation	Lower Cabresto water augmentation
Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek	Fawn Lakes -- habitat improvements	Mainstem Red River Embeddedness Treatment/Study
Improve winter range for bighorn sheep	Potato Patch Spring habitat creation	Rio Grande box recreational facilities development
Land acquisition of LaBelle property	Goathill Pond habitat creation	Public education about beavers and restoration
Alluvial fan habitat enhancement along the Red River	Eagle Rock Lake habitat improvement and creation	
Village of Questa water distribution improvement	Hunts pond improvements	
Village of Questa WWTP upgrade	Shuree ponds improvement; Valle Vidal area	
Red River WWTP sludge-drying basin lining	Cabresto fish barrier to benefit cutthroat trout	
Development of Water Conservation Programs	Columbine Park Pond Complex habitat creation	
Septic system concerns in Lama or San Cristobal	Red River habitat improvements in the town of Red River	
	State fish hatchery fish ladder construction	
	Village of Questa Red River habitat improvements	
	Rio Costilla aquatic enhancement	
	McCrystal creek headgate	
	Comanche Creek cutthroat migration barrier	
	Stream Crossing Improvements -- Comanche Creek and North Ponil Creek	
	Forest Service Road Reconstruction near ranger station	

	Mitigation of off-road vehicle impacts to the watershed	
	General Road improvements in the watershed	
	Cebolla Mesa trail improvement	
	Sunshine Valley/Anderson ranch wetland site	
	Fawn Lakes riparian improvement (revegetation)	
	Restore Rio Grande cutthroat trout in Comanche Creek	

Need for NRDA funding for success of the project

The Trustees agreed on the following scoring benchmark:

- 5 = NRDA money would leverage existing funds to enable increased project size or benefits
- 3 = NRDA would be the sole source of funding
- 1 = Project has access to currently available funds, could be completed without NRDA funding

Note: Are there other sources of funds that could be identified to leverage increased project benefits for certain projects?

Table 2 shows the project scoring agreed upon by the Trustees for this category.

Table 2. Need for NRDA funding for success of the project.

Score of "5"	Score of "3"	Score of "1"
Hunts pond improvements	Upper Cabresto Creek trout enhancement via pond creation	
Village of Questa water distribution improvement	Fawn Lakes -- habitat improvements	
Village of Questa WWTP upgrade	Potato Patch Spring habitat creation	
Red River WWTP sludge-drying basin lining	Goathill Pond habitat creation	
	Eagle Rock Lake habitat improvement and creation	
	Shuree ponds improvement; Valle Vidal area	

	Cabresto fish barrier to benefit cutthroat trout	
	Lower Cabresto water augmentation	
	Columbine Park Pond Complex habitat creation	
	Red River habitat improvements in the town of Red River	
	State fish hatchery fish ladder construction	
	Questa Ranger Station fish barrier removal	
	Village of Questa Red River habitat improvements	
	Mainstem Red River Embeddedness Treatment/Evaluation	
	Rio Costilla aquatic enhancement	
	McCrystal creek headgate	
	Comanche Creek cutthroat migration barrier	
	Restore Rio Grande cutthroat trout in Comanche Creek	
	Stream Crossing Improvements -- Comanche Creek and North Ponil Creek	
	Forest Service Road Reconstruction near ranger station	
	Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek	
	Mitigation of off-road vehicle impacts to the watershed	
	General Road improvements in the watershed	
	Rio Grande box recreational facilities development	
	Cebolla Mesa trail improvement	
	Sunshine Valley/Anderson ranch wetland site	
	Improve winter range for bighorn sheep	
	Land acquisition of LaBelle property	
	Alluvial fan habitat enhancement along the Red River	

	Fawn Lakes riparian improvement (revegetation)	
	Development of Water Conservation Programs	
	Septic system concerns in Lama or San Cristobal	
	Public education about beavers and restoration	

Potential for success, from engineering and/or biological points of view, based on past results from similar projects

The Trustees agreed on the following scoring benchmark:

- 5 = 90-100% chance of success, existing documentation of success of project type
- 4 = strong (75-90%) chance of success, potential problems could be solved with adaptive management, documentation of performance of projects
- 3 = ~75% chance of success, some risk but potential problems could be solved with adaptive management
- 2 = 25-75% significant risk, only partial or no solution by adaptive management
- 1 = low chance (<25) of success

Note: Ability to use adaptive management to address and remedy any problems that might arise is a consideration for this criterion. The existence of previous studies or documentation of the success (or failure) of similar projects should also be considered.

Table 3 shows the project scoring agreed upon by the Trustees for this category.

Table 3. Potential for success, from engineering and/or biological points of view, based on past results from similar projects.

Score of "5"	Score of "4"	Score of "3"	Score of "2"	Score of "1"
Fawn Lakes -- habitat improvements	Upper Cabresto Creek trout enhancement via pond creation	Columbine Park Pond Complex habitat creation		Hunts pond improvements
Shuree ponds improvement; Valle Vidal area	Potato Patch Spring habitat creation	Goathill Pond habitat creation		Lower Cabresto water augmentation

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State fish hatchery fish ladder construction	Restore Rio Grande cutthroat trout in Comanche Creek	Public education about beavers and restoration		Mainstem Red River Embeddedness Treatment/Evaluation
Questa Ranger Station fish barrier removal	Eagle Rock Lake habitat improvement and creation			
Rio Costilla aquatic enhancement	Red River habitat improvements in the town of Red River			
McCrystal creek headgate	Village of Questa Red River habitat improvements			
Stream Crossing Improvements -- Comanche Creek and North Ponil Creek	Comanche Creek cutthroat migration barrier			
Forest Service Road Reconstruction near ranger station	Mitigation of off-road vehicle impacts to the watershed			
Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek	Development of Water Conservation Programs			
General Road improvements in the watershed	Cabresto fish barrier to benefit cutthroat trout			
Rio Grande box recreational facilities development	Improve winter range for bighorn sheep			
Cebolla Mesa trail improvement				
Sunshine Valley/Anderson ranch wetland site				
Fawn Lakes riparian improvement (revegetation)				
Land acquisition of LaBelle property				
Alluvial fan habitat enhancement along the Red River				
Village of Questa water distribution improvement				

Ability to be monitored and measured for success evaluation cost effectively

The Trustees agreed on the following scoring benchmark:

- 5 = benefits are obvious and easily demonstrated or measured
- 3 = benefits can be quantified but extensive data collection would be required
- 1 = difficult to distinguish effect of project versus natural variability, or information required to demonstrate benefit is infeasible to collect.

Table 4 shows the project scoring agreed upon by the Trustees for this category.

Table 4. Ability to be monitored and measured for success evaluation cost effectively

Score of "5"	Score of "3"	Score of "1"
Upper Cabresto Creek trout enhancement via pond creation	Stream Crossing Improvements -- Comanche Creek and North Ponil Creek	Public education about beavers and restoration
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	Village of Questa WWTP upgrade	
Lower Cabresto water augmentation	Red River WWTP sludge-drying basin lining	
Columbine Park Pond Complex habitat creation	Septic system concerns in Lama or San Cristobal	
Red River habitat improvements in the town of Red River		
State fish hatchery fish ladder construction		
Questa Ranger Station fish barrier removal		
Village of Questa Red River habitat improvements		
Mainstem Red River Embeddedness Treatment/Study		

Rio Costilla aquatic enhancement		
McCrystal creek headgate		
Comanche Creek cutthroat migration barrier		
Restore Rio Grande cutthroat trout in Comanche Creek		
Sunshine Valley/Anderson ranch wetland site		
Improve winter range for bighorn sheep		
Land acquisition of LaBelle property		
Alluvial fan habitat enhancement along the Red River		
Fawn Lakes riparian improvement (revegetation)		
Village of Questa water distribution improvement		
Development of Water Conservation Programs		

Cost effectiveness compared to similar project benefits (based on HEA calculation of credits generated per amount of \$\$)

The Trustees agreed on the following scoring benchmark:

- 5 = high credit per dollar ratio
- 3 = medium credit per dollar ratio
- 1 = low credit per dollar ratio

For now, we are assigning a "5" or a "1" to projects that are most likely to have a high or low cost-effectiveness. Projects assigned a "3" should be the focus of further costing analysis before we can distinguish between them. This criteria is being evaluated here in a preliminary fashion that will be replaced when we have calculated HEA credits and estimated costs.

Table 5 shows the project scoring agreed upon by the Trustees for this category.

Table 5. Cost effectiveness compared to similar project benefits

Score of "5"	Score of "3"	Score of "1"
Fawn Lakes -- habitat improvements	Questa Ranger Station fish barrier removal	Lower Cabresto water augmentation
Upper Cabresto Creek trout enhancement via pond creation	Potato Patch Spring habitat creation	Rio Grande box recreational facilities development

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Alluvial fan habitat enhancement along the Red River	Goathill Pond habitat creation	Cebolla Mesa trail improvement
Fawn Lakes riparian improvement (revegetation)	Eagle Rock Lake habitat improvement and creation	Village of Questa WWTP upgrade
	Hunts pond improvements	Red River WWTP sludge-drying basin lining
	Shuree ponds improvement; Valle Vidal area	Septic system concerns in Lama or San Cristobal
	Cabresto fish barrier to benefit cutthroat trout	Public education about beavers and restoration
	Columbine Park Pond Complex habitat creation	
	Red River habitat improvements in the town of Red River	
	State fish hatchery fish ladder construction	
	Village of Questa Red River habitat improvements	
	Mainstem Red River Embeddedness Treatment/Evaluation	
	Rio Costilla aquatic enhancement	
	McCrystal creek headgate	
	Comanche Creek cutthroat migration barrier	
	Restore Rio Grande cutthroat trout in Comanche Creek	
	Stream Crossing Improvements -- Comanche Creek and North Ponil Creek	
	Forest Service Road Reconstruction near ranger station	
	Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek	
	Mitigation of off-road vehicle impacts to the watershed	
	General Road improvements in the watershed	
	Sunshine Valley/Anderson ranch wetland site	
	Improve winter range for bighorn sheep	
	Land acquisition of LaBelle property	

	Village of Questa water distribution improvement	
	Development of Water Conservation Programs	

Time Frame for Implementation

In addition to the feasibility and cost categories, the Trustees also agreed to add a criterion to the “degree of benefit” category, that would cover the time frame for implementation.

The Trustees agreed on the following scoring benchmark:

- 5 = <1 year
- 4 = 1 - 2.9 years
- 3 = 3 - 4.9 years
- 2 = 5 – 7.9 years
- 1 = >8 years

Note: Includes expected time for regulatory process and approval, project design, and construction.

Table 6. Time Frame for Implementation (no scores of “1” were assigned)

Score of “5”	Score of “4”	Score of “3”	Score of “2”
Comanche Creek cutthroat migration barrier	Upper Cabresto Creek trout enhancement via pond creation	Lower Cabresto water augmentation	Land acquisition of LaBelle property
	Fawn Lakes -- habitat improvements	Restore Rio Grande cutthroat trout in Comanche Creek	
	Potato Patch Spring habitat creation	Village of Questa WWTP upgrade	
	Goathill Pond habitat creation	Red River WWTP sludge-drying basin lining	
	Eagle Rock Lake habitat improvement and creation	Shuree ponds improvement; Valle Vidal area	
	Hunts pond improvements	Cabresto fish barrier to benefit cutthroat trout	
	Columbine Park Pond Complex habitat creation	Improve winter range for bighorn sheep	

	Red River habitat improvements in the town of Red River		
	State fish hatchery fish ladder construction		
	Questa Ranger Station fish barrier removal		
	Village of Questa Red River habitat improvements		
	Mainstem Red River Embeddedness Treatment/Evaluation		
	Rio Costilla aquatic enhancement		
	McCrystal creek headgate		
	Stream Crossing Improvements -- Comanche Creek and North Ponil Creek		
	Forest Service Road Reconstruction near ranger station		
	Obliterate road and return to natural contours – Chuck Wagon Creek and Gold Creek		
	Mitigation of off-road vehicle impacts to the watershed		
	General Road improvements in the watershed		
	Rio Grande box recreational facilities development		
	Cebolla Mesa trail improvement		
	Sunshine Valley/Anderson ranch wetland site		
	Alluvial fan habitat enhancement along the Red River		
	Fawn Lakes riparian improvement (revegetation)		
	Village of Questa water distribution improvement		
	Development of Water Conservation Programs		
	Septic system concerns in Lama or San Cristobal		

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	Public education about beavers and restoration		
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