EDWARDS EAGLE RIVER RESTORATION PROJECT

FINAL PLAN AND APPLICATION FOR EAGLE MINE NATURAL RESOURCE DAMAGE RECOVERY FUNDS

DESCRIPTION OF THE APPLICANT ORGANIZATION

Eagle River Watershed Council, Inc.
The Eagle River Watershed Council, Inc. advocates for the health and conservation of the Upper Colorado and Eagle River basins through education, research, and projects. We provide a forum in which everyone can participate and gain a greater understanding of the Eagle River environment.

The Eagle River Watershed Council is a registered charitable not-for-profit organization in the state of Colorado and is funded by donations and grants from individuals, corporations, government, and foundations. Proof of registration and IRS 501(c) 3 determination letter are included in the Attachments to the Edwards Eagle River Restoration Final Plan (Attachments). The organization has three full time staff, governed by an eight member volunteer board of directors and supported by a respected team of technical consultants including Grand River Consulting, River Restoration.org, Hydrosphere Consultants, TDS and Walsh Environmental Scientists and Engineers, LLC (Walsh Environmental). Many of our projects are made possible by over 1,000 dedicated volunteers who do all sorts of things from picking up trash to cutting tamarisk to monitoring beaver dams.

In addition to working effectively with individuals and businesses across the community, the Eagle River Watershed Council collaborates closely with many of the key local organizations in the watershed, including Eagle County Government, the Eagle River Water & Sanitation District, the Upper Eagle Regional Water Authority, Eagle Valley Land Trust and the towns of Vail, Avon, Eagle and Gypsum. We have established strong and productive working relationships with the Colorado River Water Conservation District, Colorado Department of Public Health and Environment, the Colorado Division of Wildlife, the Colorado Department of Transportation, the Colorado Water Conservation Board, Trout Unlimited and The Nature Conservancy. On a regional and national level, we are supported through effective and productive relationships with staff from the Environmental Protection Agency and River Network to Viacom, Denver Water and the City of Aurora.

In short, we work hard to get along with everyone, respect differences and work together to get things accomplished. This open and thoughtful approach is the fundamental reason the Eagle River Watershed Council has grown into an effective local watershed protection group with the humility and confidence to advocate for such a significant restoration project.

Our partnership with the Eagle River Water & Sanitation District
The Eagle River Water & Sanitation District is our primary partner for the restoration project. Their role is the fiscal contracting agent for the project and they have already taken on this responsibility with the preliminary design process to date. The District is a quasi-municipal corporation and a political subdivision of the state. The District encompasses approximately 54,400 acres in Eagle County and includes within its boundaries the towns of Vail, Minturn, and Avon, and encompasses the mixed-use developments served by Arrowhead, Beaver Creek, Berry Creek, Eagle-Vail, Edwards, Bachelor Gulch, and Cordillera Metropolitan Districts, as well.

How does the Water & Sanitation District's interest "mix" with the Watershed Council?
The District has a significant interest in the success of this restoration and enhancement project.

Their most downstream waste treatment facility is located at the lower end of the Edwards project across the street from the dirt parking/boat launch area. The District also owns an employee housing development on the south bank just east of the trailer park. The ERWSD Board of Directors and staff are all committed to ensuring the best water quality and the highest proper functioning condition of the Eagle River we can achieve.

Both the Watershed Council and the District have concerns about the nutrient loading and effluent mixing zone from the Edwards treatment facility at the downstream end of the project. The restored channel configuration will directly improve the capacity of the mixing zone and result in better water quality now and as this plant serves more people over time. The District recognizes the direct benefits of the project to their ability to meet state water quality standards and therefore, has committed to pay their full share of all improvements directly related to improving the mixing capacity of this reach.

History of combining resources and expertise
The District has the most water-related project, infrastructure and construction experience of any organization in our area. They have acted as the fiscal agent for our collaborative work on Black Gore Creek and have supported the Watershed Council with project management, grant administration and oversight on sediment source reduction projects on Vail Pass for the past four years. They bring a level of project management experience and cash flow management to this and other joint projects that complements the Watershed Council's facilitation, outreach, education and fundraising experience. This ensures the necessary combination of resources to successfully implement a project of this scope as planned with the maximum level of community support and awareness.

Our collaborative work on the Black Gore Creek/Vail Pass project has resulted in over $4.5 million being raised and spent from local, state and federal sources to protect the creek from further degradation due to traction sand.

Picking the most experienced team for a complex project
Working together in a 7-member team of advisors, the Eagle River Watershed Council and ERWSD staff selected the nationally recognized firm of Walsh Environmental to design and oversee implementation of the restoration project in an open, competitive selection process. The Walsh team has significant experience and success in restoration projects of a similar scale and complexity. We also selected RiverRestoration.Org to be our "Owner's Rep" on the project as an added assurance of success in a project of this complexity. Resumes are included in the Attachments.

While the Eagle may not be the "Big Muddy" Missouri, it is true that members of the Walsh team have worked on successful Missouri - Mississippi restoration projects in the past. In addition, Grant Gurneé was the project manager for the restoration of Maloit Park, the most important and impressive wetland restoration completed in the Eagle River Watershed!

RESPONSE TO THE EVALUATION CRITERIA

We use multiple approaches to achieve our goals
The Edwards Eagle River Restoration project optimally combines restoration, enhancement, and protection approaches to achieve the most technically and ecologically sound and cost effective restoration project.

The Edwards Reach of the Eagle River main stem, which has overly high width to depth ratios under current conditions, will be restored to geomorphically appropriate hydraulic geometry (i.e.,

bankfull widths, depths, and channel planform). Mature trees are lacking along the Eagle River's riparian corridor in this reach. Functional overhead canopy and understory vegetation will be restored for the reach. Enhancements will be achieved for wildlife habitat throughout the adjacent floodplains and along the river corridor.

Stream health and function will be improved through stabilization of the prevalent eroding banks throughout the reach. Bank stabilization will have a secondary enhancement of improving water quality for the project reach, as well as downstream reaches, due to the reduction of a notable source of fine sediment to the system. Lastly, protection measures including managed trail use, education, and vegetation protection are integral components of our approach. The existing wetland complexes and the currently sparse willow populations located on the floodplains will be protected as part of the overall project.

Multiple natural resources will be improved as a result of this approach
The following natural resources that were lost or injured from the historical contaminant releases from the Eagle Mine will be improved by the Edwards restoration project, with the following specific objectives to be met:

- **Surface Water Quality** Reduce the overly high instream temperatures and raise dissolved oxygen levels during summer months
- **Sediment Control** Reduce fine sediment supply and fine sediment accumulation zones, which are conducive to whirling disease vectors
- **Stream Health** Improve channel form and function
- **Aquatic Habitat** Improve instream fishery habitat
- **Riparian and Wildlife Habitat** Improve riparian, terrestrial, and avian habitat
- **Land Use Management** Improve current land use practices to reduce impacts to the river corridor and provide managed educational and recreational opportunities along the river corridor

Quantification of natural resource improvements totals approximately thirty acres of instream/aquatic habitat, including specifically enhanced fish habitat, and approximately fifty acres of riparian/wildlife habitat.

This overly wide reach of the Eagle River accumulates sediment and is devoid of cottonwoods and other native vegetation due to historic grazing practices on this popular trout fishing stream.
In summary, the natural resource improvements to be realized by the Edwards restoration project include enhanced surface water quality via reduced temperatures, increased dissolved oxygen levels, and reduced land use impacts (e.g., from existing recreational areas or due to grazing activities), **enhanced sediment control** via reduction of fine sediment accumulations and reduced fine sediment supply, **restored stream health and function** via appropriate channel geometry, concentration of low flows, increased sinuosity for riffle-pool development, and reduced tubifex worm habitat, **enhanced aquatic habitat** via newly created instream habitat cover and woody debris component, **restored riparian corridor** via new streamside plantings, and **enhanced wildlife habitat** via riparian and floodplain woody plant installations, increased diversity of species and strata, enhancement of existing wetlands, and increased nesting opportunities and habitat utilization.

TECHNICAL FEASIBILITY/SOUNDNESS

The Edwards Eagle River Restoration Technical Report (Technical Report), which is included in the Attachments, provides in detail the design analyses conducted to ensure system understanding, applicable constraints and opportunities in the Edwards Reach, the basis of design for the proposed restoration work, and the specific methods and treatments that are proposed to achieve the goals of the restoration project. The Technical Report includes detailed

site maps, plan and profile information, hydraulic characteristics, including graphs, and typical details for proposed treatments.

The right team for the job
The Edwards restoration project is undeniably a large and complicated project with its share of technical and logistical challenges. The successful implementation of the project will require that many diverse issues are addressed and resolved. While this requires concerted effort and coordination, it is typical of construction – and particularly stream restoration projects.

Evaluations conducted, including those reported in the Technical Report attachment, shows that the challenges of this project are anticipated and can be addressed by the experienced team of experts assembled for this project. The Walsh project team is extensively experienced in both the technical and logistical aspects presented by this particular project. The team has successfully completed many other large and complex riparian and wetland restoration projects.

What do we need to know to keep the deep holes, deep?
One of the larger technical challenges on this project is the unique geologic condition presented by the two evaporite sink holes located along the channel. The sink holes require additional analysis and design considerations (refer to Section 4.1 of the Technical Report, which is included in the Attachments, for information on the sink holes). The proposed restoration activities will likely include the use of various sizes of boulders to help "train" flow direction, each weighing several tons.

To ensure that the river bed can support the boulders where appropriate, investigation into the extent and the physical properties of the evaporite will be required. Investigations will be conducted during the construction design phase and are likely to include site-specific assessments by qualified geologists, review of any available geologic data (i.e., previous drilling efforts), or possibly an onsite drilling program. If found to be necessary, alternate techniques for controlling flow, which have less bearing pressure, (e.g., log bins filled with finer materials) can be implemented.

The project will be "sediment neutral"
The issue of increased sediment mobilization is a major issue that we are addressing with this project. Although localized increases in fine sediment mobilization will be realized, the extent of the increased mobilization is such that this is a "sediment neutral" project in terms of sediment transport balance in this reach of the Eagle River. Sediment mobilization will primarily occur during smaller flows and will be coupled with reductions in fine sediment supply throughout the project reach. When the eroding banks are stabilized, there will be less fine sediment eroding in the reach and being transported downstream.

Most reaches include the goal of reducing fine sediment accumulations. Reductions will be achieved by improving channel hydraulics to keep sediments moving through the reach during low flows rather than falling out and accumulating. There are two important issues relative here. First, any sediments that are mobilized in reaches upstream of the sink holes will be captured in large part by the sink holes (i.e., the very low velocities through these pool-like features will cause particles (up to a certain size) to drop out into the pool and therefore not continue downstream). Therefore the length of channel with the potential to deliver more sediments to downstream reaches is limited to the lower 300 feet of the project reach (i.e., not the entire 1.6 miles).

After extensive discussion regarding sediment loading across the entire Eagle River Watershed at stakeholder meetings held in October, our team received agreement and assurances from local DOW staff Bill Andree and Craig Wescoatt that a single summer thunderstorm can flush as

much sediment into the Eagle River at Wolcott as this restored project reach might transport all summer. We are dedicated to ensuring the restored reach improves conditions locally *and downstream,* as well.

Did you say Bulldozers in the river?!
A related issue to the sediment mobilization is construction management and proper notification and education for downstream landowners and stakeholders, as well as the public. Appropriate construction best management practices (BMP), both structural and non-structural will be implemented to handle the temporary increase in suspended sediments during construction activities. Optimal timing relative to trout spawning windows is an important non-structural BMP, and project phasing will be implemented as necessary for compliance.

Proposed activities, expected impacts, and timing of work will be coordinated with downstream landowners and stakeholders, including those Red Sky Ranch drinking water intakes. In addition to phone calls to key partners, we will have articles in the local paper and regular meetings in Edwards with the neighbors to keep everyone in the loop before, during and after construction.

It has been the experience of the project team that it is imperative to describe to landowners, stakeholders, and the general public that the nature of stream restoration work is such that the stream “looks worse, or muddy before it looks better”. Some “muddy water” is unavoidable in order to effect the critical improvements that restore the system to a healthy and functional status.

Talking to the neighbors
Community outreach and coordination is a critical component of this project. Adjacent residents and landowner, agencies, other stakeholders, and the general public must be consulted and informed throughout the planning, design, and construction phases of the project. In the past three years, dozens of meetings involving residents, landowners, agencies, and stakeholders have already been conducted, and many more neighborhood gatherings meetings are planned to keep everyone in the loop. We have gone door to door to involve the neighbors in the project. All final improvements will be coordinated with and approved by the landowners, including written agreements on all issues, including details such as line of sight decisions for tree installations.

We have put together an open and fluid team of informal advisors and members of the broader neighborhood that have worked with us to ensure that all aspects of the project have significant and transparent public involvement.

We will have all permits required secured during the timeline of the project
Anticipated permits required for the project include:
- Clean Water Act, Section 404 through U.S. Army Corps of Engineers (2007)
- Construction Stormwater Permit through the Colorado Discharge Permit System (CDPS) (2007)
- Construction Dewatering Permit through the CDPS (2007)
- Local Grading Permit and Engineering Review through Eagle County (2007)
- Floodplain Permit and potential for remapping through FEMA (CLOMR/LOMR processes) (2007 - 2008)

Depending on the results of the final hydraulic modeling, a CLOMR/LOMR process may not be required. Information on permit costs is provided in the cost estimate included in the Attachments. Construction documents will be reviewed and approved by a registered professional engineer.

A project timeline, including project phasing, has been prepared and is included in the Attachments.

FISCALLY SOUND RESTORATION APPROACH

A detailed cost estimate has been prepared for the Edwards Eagle River Restoration Final Plan and is included in the Attachments. Information on cost breakdowns, including funding and inkind matching, is also provided in subsequent sections. A quarter by quarter project timeline for each year is also included in the attachments.

In addition, at the request of the NRDF Work Group, priority phasing of the restoration project has been outlined in two construction years, 2007 and 2008, with additional plantings in 2009.

Project Priority Phasing "Putting first things first"
Due to the large scope of the proposed restoration for the Edwards Reach, the Watershed Council has worked diligently with our consultants to separate the project into two priority phases based on the total number of natural resource benefits to be realized and achieved. This includes enhanced surface water quality, reduced nutrient loading, enhanced sediment control, restored stream health and function, enhanced aquatic habitat, and enhanced riparian and wildlife habitat. The first priority for the restoration (Year 1) occurs in the most downstream reaches with plantings in the most upstream reaches. The second priority for the restoration (Year 2) is the remaining stream work and plantings in the most upstream reach with additional planting the following year.

1. Eagle River Restoration Year 1 (2007)
All work in Reaches 1 and 2 (including work that extends into Reach 3), the most downstream reach, and 50% of the floodplain vegetation plantings in Reach 4 and Reach 5, the upstream portion of the reach, are scheduled in the first construction year. This phasing completes 68% of the total revegetation and 20% of the total instream work planned for the entire Edwards reach.

Our consultants estimate this first year phasing will cost $2.2 million of the total project cost of $4.3 million.

2. Eagle River Restoration Year 2 & 3 (2008 - 2009)
The second construction year includes finishing the remaining portion of the stream and revegetation work in Reach 4 and 5 (final instream work and revegetation) with the work completed in 2009 to include the final plantings. The cost for the second construction phase is the balance from the first construction year, estimated at $2.1 million of the total $4.3 million.

DEMONSTRATION OF PAST FUNDRAISING SUCCESS

For three years, the Eagle River Watershed Council has been working with the community to identify appropriate funding sources for several of the top priority issues and restoration projects identified in the Eagle River Inventory and Assessment. We have a successful track record for getting specific projects funded and implemented in cooperation with a wide variety of partners. Our focus on following up on the recommendations in the research is demonstrated by the following actions that have directly followed from CSU's research report:

Tamarisk Eradication: All 28 acres of tamarisk were cut and sprayed with cooperation and funding from Eagle County, DOW's HPP, BLM, Colorado River Water Conservation District and volunteers on private and public parcels upstream of Glenwood Canyon on the Colorado River and tributaries. The project was valued at over $75,000.

Camp Hale Restoration Study: We brought together the interests and concerns of water developers, USFS, CWCB, 10th Mountain Division Vets, historical and environmental concerns, outfitters, guides, media and citizens to work through the issues associated with the restoration concepts provided by CSU. All through this process, we have engaged diverse interests to tackle the significant expected AND unexpected issues identified by the process.

Waste Rock/Cribbings: Based on CSU's research, the EPA has designated this site as a time sensitive removal action and with CDPHE support and cooperation, will likely take remedial action at the estimated to cost $1.5 million by EPA beginning in 2007. These funds have been encumbered. We raised the necessary operating and technical support to form a broad based community group and we provide a forum to keep open communication among all parties. EPA estimates Union Pacific Rail Road will spend $150,000 to remove a segment of tracks at Belden to enable access for trucks to the site.

River Access/Recreation Master Plan: By doing a preliminary inventory of the status of degradation of all the formal and informal access sites along the river, we brought together a stakeholder group to encourage Eagle County to allocate over $50,000 to fund and undertake a thorough river access master planning process. This is underway now.

Nonpoint Source Pollution: In addition to our successful efforts on Vail Pass to reduce loads from the traction sand pollution, we have worked with Town of Vail, USFS and Vail Resorts to improve Best Management Practices and significantly reduce sediment loads from access roads on Vail Mountain. We also work with builders on an ad hoc basis and Eagle County to address individual building sites that may not comply with Stormwater Management Plan permit requirements. Town of Vail and Eagle County have implemented new, stricter requirements for setbacks and stormwater management that will improve practices that reduce Nonpoint-source pollution.

A GOOD DEAL FOR THE RIVER AND A GREAT RETURN ON INVESTMENT

The Eagle River Watershed Council understands that this project is large and comes with a big price tag. We believe the river environment will benefit proportionally to what we put into the project. The Natural Resource Damage Fund deserves to be leveraged to this extent! Anything less would seem to leave money on the table that could have been spent to the benefit of the Eagle River environment through this process. The Eagle River Watershed Council procured independent cost estimates from two experienced environmental firms based on similar concept plans. The estimates were almost identical, providing a high confidence level for the estimates.

Apples to apples

While any straight unit costing will be subject to the same limitations as the "cost per mile" approach (i.e., project specifics will bear on the applicability), for this project a "cost per area" approach is more reasonable and appropriate for comparison purposes. The project covers approximately 168 acres although restoration will occur only on about half of this area. **At 80 acres (30 acres of instream/aquatic habitat and 50 acres of riparian/wildlife habitat restoration), the Edwards Eagle River Restoration costs approximately $54,000 per acre, providing a great return on our investment!** At an estimated $4.3 million for 1.6 miles of restoration and enhancement, this project costs more—and provides more benefits—than other river restoration projects in Colorado.

The Edwards Eagle River Restoration project significantly exceeds the usual (average) scope of restoration projects in Colorado in four categories.

1. This is a big river! A wide floodplain will be restored vs. a narrow riparian fringe
This reach of the river is larger with a more extensive active floodplain than many well-known stream projects in the region. For example, according to USGS gage data, when the Eagle River in Edwards is flowing 1,000cfs, the Eagle River in Minturn is only 200cfs and the Blue River is only 80cfs. Portions of the Eagle River are over 300 feet wide and almost 10 feet deep in Edwards. The larger system carries a larger price tag due to the substantially higher construction material quantities that are required to effect changes to the system, e.g., volume of fill material to create wide alternating bars or terraces – especially in excessively deep areas, native plantings to cover several hundred feet of deep floodplain expanse rather than the narrow riparian fringe only 10-15 feet from the water's edge seen in other projects in Colorado.

2. "Starting from scratch"
The riparian corridor in the Edwards Reach is beyond severely degraded – it is completely lacking appropriate, healthy native vegetation! Current aerial photographs show the marked break from a healthy riparian canopy upstream and downstream of the reach, to the in-reach conditions where no trees and very minimal woody species exist. Whereas many restoration projects must augment a degraded riparian corridor that has some gaps in coverage, missing layers, and/or low diversity, this project starts from scratch. Figure 2.1 of the Technical Report, which is included in the Attachments, illustrates the massive extent of proposed riparian and floodplain plantings. Additionally, the cost estimate included in the Attachments shows the $1.5 million estimate for revegetation. This amount for revegetation alone exceeds the total project cost for many river restoration projects of this length.

3. Unique geologic challenges
The Edwards Reach faces a unique geologic challenge in the two evaporite sink holes that are located within the reach (refer to Section 4.1 of the Technical Report, which is included in the Attachments, for information on the sink holes). The presence of the large sink holes necessitates additional analysis and design costs, as well as extra costs associated with construction.

4. "Extras" funded by matching dollars include boat ramps to cattle fencing
The Edwards project is multi-faceted and includes major efforts to improve land use practices - including informal trails, boat access, and cattle grazing, as well as provide educational and recreational opportunities. The project cost includes over $200,000 for these improvements, as can be seen on the cost estimate included in the Attachments.

MATCHING FUNDS – HEAVILY LEVERAGING EAGLE MINE MONEY!

The Eagle River Watershed Council has committed to raising over half of the funds, 54%, to implement this project from matching sources. This is a significant undertaking and demonstrates our long-term commitment to leveraging Natural Resource Damage Funds for our community. Our plan includes matching funds from many different sources including private individuals, property owners in the reach, local businesses, organizations and significant public grants. With the support of many partners, the Watershed Council has shown an unparalleled commitment to improving the natural resources in our watershed by systematically implementing the many of the recommendations of the Inventory and Assessment.

For the past three years, we have invested significant staff time and technical resources in

meeting with neighbors and consulting a wide variety of technical experts including participating in workshops and hosting dozens of site visits seeking feedback. Significant in-kind professional advice has been received by the Watershed Council from staff of the USFS, CDOW, USGS, CDPHE, EPA, CWCB, Eagle County, CSU professors and students, BLM, the Soil Conservation District, and agricultural property owners.

This project application includes some limited recreation and access components that we recognize are not eligible for funding by Natural Resource Damage Funds. These elements will be paid for by various matching fund sources. Due to the significant size and scope of this project, matching funds from many sources will support all elements. A breakdown of which source of revenue will pay for which line item expense will be provided as final designs are matched with final matching fund commitments.

This project requires significant outreach and education across disciplines and across the community to be successful. The Eagle River Watershed Council's project manager, Maria Pastore will dedicate over 60% of her time to managing the project with our partners and the property owners throughout the reach for the active construction period during the project. All staff time is tracked on project time sheets. This is included in our project budget and will be paid for with matching funds and a small portion of the Eagle Mine fund. This dedication to outreach, public education and community education enhances our project's success and sets our approach apart from other restorations.

MATCHING SOURCES FUNDRAISING PLAN

EPA Targeted Watershed Grant Application pending Fall 2006 cycle: $1,000,000
We submitted our application October 13, 2006, as did three other Colorado groups. All four proposals are being reviewed by Governor Owens who will make a recommendation to Region 8 by November 15, 2006. Although this is a very competitive grant process with approximately 10 projects funded nationwide each year, we have been encouraged of our chances for funding in the upcoming cycle in fall 2006. The application needs support from CDPHE, CWCB and Governor Owens who then recommends the project to Region 8 EPA. Region 8 selects one to three projects for consideration at the national level and, in past years, the $19,000,000 national award fund was spread out with one or two projects awarded per EPA region. While this award may sound overly optimistic, we are very encouraged by key decision makers at all levels. Russell George and the Eagle County Commissioners are supporting this proposal.

Eagle County Pending 2007 Open Space budget request: $600,000
Eagle County has supported Eagle River Watershed Council projects in the past through general fund contributions. Eagle County Open Space Funds are recommended by the Open Space Committee and approved by the Commissioners. Eagle River Watershed Council has requested support for this project between $500,000 and $1,000,000 and received positive feedback from the Eagle County Commissioners. Financial support is determined through the budget process during fall 2006 with final decisions by end of year. Open Space Fund allocations can be made throughout the year. In order to give themselves maximum flexibility in this process, the Commissioners plan to set aside funds for riparian restoration during the 2007 budget process and can make the decision about how to use those funds through out the year rather than all at once. For example, for the past four years, Eagle County has funded the Nonpoint source erosion work of the Watershed Council on Vail Pass at approximately $100,000/year.

Eagle River Water & Sanitation District June 2006 pledge: $380,000
The Eagle River Water & Sanitation District board of directors passed a resolution in June 2006

to partner with the Watershed Council as the fiscal contracting agent on the full restoration project proposed in the Edwards reach, to provide funding for the necessary preliminary design work needed to secure other funds, to contribute cash to the implementation of the project and to provide in-kind staff support. The ERWSD noted the project will provide the added direct benefit of improving the mixing zone at the Edwards plant as well as improve the natural resources on the dirt lot across the street. Attorney Jim Collins is also providing pro-bono legal support as needed for working out the conservation protection and contracts between the property owners, Watershed Council and the Eagle Valley Land Trust. ERWSD and ERWC signed a signed letter of agreement outlining these items that is available for your review.

Great Outdoors Colorado Pending grant cycles June 07: $200,000
GOCO has funded two previous projects of the Watershed Council including the CSU research that prioritized the Edwards project for implementation. GOCO offers strong support for funding implementation of projects that are proposed as a result of a GOCO planning grant.

Portions of the project that are ineligible for NRDs funding can be funded through matching dollars from GOCO including the parking, access, boat launch, trails, toddler park and educational signage components in the lower reach. Additional components eligible for GOCO Open Space funding include conservation easement survey expenses and the endowment contribution necessary for any permanent protection. We are working with GOCO staff to determine which components of the project best match each of the various GOCO funds. Funds from the December application cycle will be awarded in summer 2007.

Metro District/HOA's/Property owners 2007 cycle requests pending: $250,000
Through the process of working with a wide variety of organizations across the community who have different interests in the project, we have raised the level of awareness, interest and willingness to participate in funding the restoration over the past two years. In spring of 2006, we contacted each individual property owner, Home Owner Association, Metro District and commercial property owner in the reach with additional information about the project. Since then we have made dozens of public and private presentations, given public site tours, hosted a "Proper Functioning Condition" workshop on the site and distributed information to a variety of prospective funding partners and their representatives. Throughout this process, we have been positively received when we told every property owner and organization that we want 100% participation on some level financially. The reception to this outreach and fundraising approach has been very positive.

The commitment process for these local agencies and organizations is to add a specific line item to their 2007 and 2008 budgets, which will be formally approved in the fall of each year. We anticipate the collective amount of funding from these Edwards based sources to be approximately $250,000. Specific organizations include:

Edwards Metropolitan District
Cordillera Mountain Club Homeowners Association/Metro District
Cordillera Valley Club Homeowners Association/Metro District
South Fork Meadows Homeowners Association
Brett Ranch Homeowners Association
Corum Real Estate Group (Lake Creek Village Apartments)
B & B Excavating / The Midtown Group
Eagle River Village Trailer Park

Fishing is Fun Dec. 2006 Cycle for Award July 2007: $150,000
The Fishing Is Fun grant program is ideally suited to the many fishing improvements and Watchable Wildlife opportunities we will be enhancing in the project reach. Our application will

be submitted during December 2006 for the winter cycle. Awards are made in June 2007 and are on a reimbursable basis. Contracting with the US Fish & Wildlife Service can take several months so the timing may be tight for the 2007 construction season, but would be fine for work that is constructed during Phase 2 in 2008. ERWSD Board member Bill Heicher, retired DOW Eagle District Ranger, will be shepherding our application through the process.

Colorado Water Conservation Board Pending Spring 2007 cycle: $50,000
This **Floodplain Restoration** grant request may be presented to the board for approval at the January 2007 meeting. This depends upon Chief Tom Browning's recommendations for the grant guidelines being accepted. The CSU research was funded in part in cooperation with CWCB. We are working with Floodplain protection staff to a grant to implement the Edwards project. Heavily influencing the support is the work we are doing throughout the valley to implement the Eagle River Watershed Management Plan and the recommendations of the Eagle River Inventory and Assessment. As focus during the Inter Basin Compact Committee and Colorado Roundtable process is on watershed groups that have already done the necessary research to identify priorities ready for implementation, the Watershed Council fits this preferred profile and hence has a higher chance for an award in 2007.

Tax Check Off Fund Pending grant cycle Summer 2007: $20,000
The Colorado Tax Check Off funded the CSU research that identified the Edwards reach as a priority through a planning grant. Based on feedback from the decision makers for the fund, there is a strong likelihood that our application will be very favorably received in April 2007. In 2006, four applications were received for $85,000 available. The Eagle River Watershed Council is one of the statewide organizations that actively supported creation of this fund with the Legislature and assists with marketing and advertising to encourage Coloradoans to make donations when they file their Colorado State Taxes. The awards for this fund cycle are made in late summer 2007.

Volunteer and discounted labor Specific Value Overall $ TBD
Outreach/Community Relations Value Huge
Colorado Mountain College students $40,000
As an organization with a strong history of volunteer involvement, the Eagle River Watershed Council will coordinate with our established volunteer cadre as well as **Trout Unlimited, Betty Ford Alpine Gardens Internship program, the Youth Conservation Core, Colorado Mountain College** and others to ensure that we leverage the enthusiasm and expertise of local volunteer groups with an interest in participating in the site preparation, noxious weed eradication, riparian plantings, trail building and monitoring components of the project. This broad community participation will be recognized and celebrated through our media outreach and education efforts.

Educating Students for Careers in Natural Resource Management
We will be providing opportunities for Leadville's Colorado Mountain College students to identify, record and monitor vegetation before and after project implementation. This will extend for a period of five years monitoring, providing an extended period of learning and outreach for both the students and the Watershed Council. We intend to hire CMC and use the paid internship program for students during implementation to provide learning opportunities through discounted labor for our project.

COLLABORATION / PARNERSHIPS "We work well with others"

The Eagle River Watershed Council has a strong track record of building effective partnerships through inclusive forums with open communication. Outreach and education is a vital element in

any river restoration project and will be a strong component of the Eagle River Watershed Council's approach in Edwards. While the local property owners are the most important component of successful partnerships, this particular segment of the river is both visually and socially critical to the wider community.

It is estimated that over 5,000 people live in this reach in single family homes, apartments, town homes and trailers. While there are only thirteen different parcels, these are primarily large homeowner associations, property management firms and developers who we are working with to ensure everyone can have a voice in the project.

The Eagle River Watershed Council will continue regular communication with all stakeholders in the valley and with funding partners and regional agencies with a role in natural resource management of our watershed. We will continue with quarterly presentations to groups of residents, associations and boards and to the public at large throughout the design and fundraising phase as well as through construction. We will use the Eagle County Health Service District as a regular site for the public meetings and will continue to use local print and radio to communicate information about the project on a bi-weekly basis throughout construction. Our outreach with other groups to involve volunteers in the project implementation is also evidence of our collaborative, open process. Working with the Eagle Valley Land Trust, Edwards Metro District, Eagle River Water & Sanitation District, Eagle County and the property owners to determine the most appropriate mechanism(s) for permanent protection for the restored reach is also evidence of our collaborative approach to complicated questions posed by this project.

Our formal partnerships in the restoration are with Eagle River Water & Sanitation District and Colorado Mountain College as well as all the property owners in the reach. All other relationships may be better described as stakeholders, funders or in-kind collaborators and will include those organizations such as B&B Excavating who will be providing in kind boulders for the project and the radio stations that will provide in-kind progress report radio spots during the project.

COORDINATION WITH OTHER NEARBY PROJECTS

Immediately adjacent, upstream of our project reach is the impressive Eagle River Preserve reclamation and restoration project. The Eagle River Watershed Council is a member of the Vail Valley Foundation's steering committee for the project. Design and implementation of both projects will continue to be coordinated. Educational signage will be coordinated throughout the reach to provide a seamless educational opportunity for the public to learn about the benefits of wetlands and healthy river systems.

Another important relationship nearby is with B&B Excavating. They will continue to fill and contour the adjacent Eagle River Preserve property while stockpiling boulders excavated from large development projects in Vail which they will provide to both projects in Edwards at no cost. Immediately downstream of the reach an enhancement project by the Cordillera Mountain Club is being implemented to improve private fly fishing access and prevent degradation of the riparian natural resources from overuse. All three of these projects provide a unique opportunity for coordinated natural resource enhancement. Eagle River Watershed Council staff are the liaison between these complimentary, yet distinctly separate projects.

NATURAL RESOURCE BENEFITS TO BE REALIZED

The Edwards restoration project is ideally suited for restoring lost resource values for three primary reasons.

1. Unique location of the Edwards Reach.
Situated between long stretches of high quality riparian and aquatic habitats on its upstream and downstream ends, investment in this 1.6 mile project reach will yield almost 50 miles of continuous high quality riparian and aquatic habitat. Investment in a small piece therefore benefits a vastly larger area both directly and indirectly, so that the "whole is greater than the sum of the parts".

2. Edwards Eagle River restoration potential.
Conditions in the Edwards Reach are some of the most severely degraded in the valley. The Eagle River Inventory and Assessment (ERIA) report, completed in 2005 by the Colorado State University, Engineering Research Center, prioritized possible restoration activities in the Eagle River watershed based on the potential for improvement of the integrity of the river system. The ERIA identified the Edwards Reach as one of three projects with the highest potential to offer wide-ranging benefits and to reestablish wetland and riparian functions on a large scale (CSU, 2005). The more severe degradation of aquatic and riparian habitats in this reach makes it an optimal target for restoration of lost resource values. Again, investment in this reach yields greater system benefits than are achievable in less degraded reaches anywhere else in the watershed.

3. "Loving the river to death".
The Edwards Reach is a highly used and loved resource and amenity for all of Eagle County. Access to the river from adjacent residents is random and consists of an excessive number of social trails. Access for boaters is also unsystematic, causing greater impacts than would be sustained in a controlled setting. The reach is heavily used by the local boating communities, including river rafting and kayaking enthusiasts. Local DOW staff have estimated that nearly 800 people utilize the boat ramp every summer weekend day in front of the sewer plant. The high visibility and usage of this reach make it an ideal location for the investment of resources with the goal of restoring lost resource values. The restoration project will provide well-managed educational and recreational opportunities that will benefit not only the public, but also the natural habitats and the river corridor itself.

What will the Eagle River restoration accomplish?
The Eagle River Restoration project will make significant improvements to the Eagle River by reconnecting high quality natural resources that are present upstream and downstream. Restoration, enhancement, and protection activities are proposed on both north and south banks, in the stream channel, as well as within the floodplain. In addition to direct river improvements, the project will reduce current land use impacts throughout the corridor, improving bank conditions and water quality for the river, both within the project reach and for downstream reaches.

The restoration project utilizes a coordinated program of bank stabilization, stream channel improvements, riparian vegetation establishment, and improved land use management. These coordinated improvements will emphasize the use of natural materials and processes and will serve to:

- **reduce width to depth ratios**
- **reduce overly high instream temperatures (during critical summer months)**
- **raise dissolved oxygen levels (during critical summer months)**
- **reduce fine sediment accumulations**
- **reduce fine sediment supply**
- **improve channel function and aquatic habitat**
- **enhance riparian and terrestrial habitat**
- **improve impactful land use practices**

- **provide managed recreational and educational opportunities for the river corridor**

Where are the trees?!
The Edwards Reach of the Eagle River completely lacks a mature riparian corridor and contains areas of poor quality aquatic habitat. These degraded conditions effectively disconnect high quality riparian and aquatic habitats that are present upstream and downstream. Channel conditions and aquatic habitat have been degraded by past agricultural land use practices coupled with increasing development linked with non-point source pollution supply. The most significant impacts are from fine sedimentation, livestock grazing and denuded riparian vegetation.

Get rid of the worms…
In this lowest gradient reach of the Eagle River, where the valley abruptly widens and flattens, the channel has an extremely high width to depth ratio and an insufficient capacity to transport fine sediment at lower flows, which causes the fine sediment accumulations visible in sections of the river. The fine sediment accumulations have been identified as significant habitat for the tubifex worm *(Tubifex tubifex)*, an organism associated with the occurrence of whirling disease *(Myxobolus cerebralis)* in trout. Further, the fine sediment accumulations choke the channel bed substrate, reducing insect populations and hiding cover and food supply for trout. Reduced sedimentation via mobilization of fine sediments during low flows is particularly important for reducing the potential for suitable habitat for the tubifex worm, which is a known vector of whirling disease. A reduced amount of fine silt can also enhance spawning opportunities and improve populations of aquatic insects, which are a food source for fish.

Warm water is not good for a cold water fishery!
High instream temperatures and low dissolved oxygen levels occur in the Edwards Reach during low flow periods and are detrimental to aquatic habitat. The overly high width to depth ratios in the reach contribute to poor aquatic habitat and the reach lacks both mature overhead canopy and instream cover for shading and cooling.

Descriptions of existing conditions, proposed restoration treatments, and the natural resource benefits expected to result from the restoration are provided in the Technical Report, which is part of the Attachments, for each project reach.

PROXIMITY OF PROJECT BENEFITS TO INJURED NATURAL RESOURCE

The Eagle River restoration project at Edwards is 13.5 miles downstream from the Cross Creek/Eagle River confluence. System-wide benefits will include reduced whirling disease, reduced temperatures, increased dissolved oxygen levels, detritus input and overall improved aquatic and riparian habitat connectivity recognized throughout the Eagle River watershed. Investment in this 1.6-mile project reach will yield 50 miles of continuous high quality riparian and aquatic habitat from the top of the Black Gore Creek headwaters on Vail Pass to the Eagle River confluence with the Upper Colorado River in Dotsero.

PUBLIC BENEFITS

The project offers significant public benefits by enhancing passive recreation access to a healthy riparian area by means that will not become degraded with normal projected use. River recreation will be improved by installing an appropriate boat ramp changing screens, bathrooms, bear proof trash service, and a ADA mobility path. The environmental integrity of the project site is enhanced by accommodating demand with appropriate facilities, concentrating

use, improved landscaping, and implementing maintenance.

Further, educational / interpretive signs will be installed to identify the restoration area and benefits to aquatic resources, such as wildlife viewing, swimming and fishing.

Other great public benefits include the enhancement of watchable wildlife opportunities and the preservation of rare riparian openspace. Incidental passive recreation enhancements from this project promote river stewardship. Further, visual enhancement of the project's transformation as the riparian plantings mature will be a significant educational component to the public. The Edwards project area is highly noticeable not only from property owners in the vicinity, but from I-70 interstate traffic and Hwy 6 motorists. This is the heart of the commercial and residential core of this valley and this project will focus significant attention on ecological health as the view from Interstate 70 and Highway 6 will be transformed over time as the vegetation matures.

OPERATION AND MAINTENANCE PLAN

The Eagle River Watershed Council takes responsibility for ensuring the operation and maintenance of the project meets the requirements of each funding organization. The instream portion of the restoration project will not require long-term operations and maintenance as it is designed to restore geomorphic function that naturally maintains the project. All structures that are subjected to fluvial forces are expected to adjust, and may require repair. Repair costs are associated with realigning any features that become significantly displaced by fluvial processes or that are causing adverse effects on the local hydraulics. Structural contingencies are included in the cost estimate. In order to maximize planting survival, project cost includes vegetation contingency to be used for repair, replacement and rehabilitation as necessary.

Warranty inspections will be conducted by Walsh Environmental and RiverRestoration.Org and reported to the State at 6 months, 12 months and 24 months after construction of each phase of the restoration work. The Watershed Council will ensure these reports are also made available to the property owners and the public.

We are committed to long term protection of these improvements
Trail enhancements will require long-term operations and maintenance by the individual property owners and will be the ongoing responsibility of several large homeowner associations in the reach. This will be formalized in written agreements prior to construction of the improvements. The boards of these organizations are enthusiastic participants in the project and will provide the permanent protection measures necessary by each landowner. These include Brett Ranch HOA, Corum Real Estate/Eagle River Village Apartments, South Fork Meadow HOA, Eagle River Village Trailer Park, and B&B Excavating (or subsequent owner of their parcel.) Cordillera Valley Club is the owner of the cattail wetland on the north side of the project and will be responsible for the bird watching enhancements and the ADA trail at this site. All of these entities have significant unencumbered financial resources to ensure the necessary operations and maintenance of the project.

Noxious weed inventory and control will be conducted in cooperation with Eagle County Weed & Pest Control and the Eagle River Watershed Council. We have worked together successfully on other weed control projects and will apply the same long-term approach on this site. Labor is provided through a combination of volunteers, Rifle Correctional Facility inmates, Eagle County community service workers and Eagle County Weed & Pest Control staff.

The Eagle River Watershed Council will provide the Annual Report to the State documenting the operation and maintenance of the restoration project as well as the monitoring activities

conducted by Colorado Mountain College students and other qualified professionals.

SUPPORT AND PROTECTION OF PROJECT AFTER FUNDING

The Eagle River Watershed Council is committed to ensuring permanent protection of all restoration efforts that are built using public funds on private property. We are working with the Eagle Valley Land Trust, attorney Jim Collins, Great Outdoors Colorado and the property owners to explore the most appropriate long-term conservation protection strategy for the restored reach. There are no local models of this kind as permanent easement with multiple landowners was requested but not required on Minturn's Round One NRDs project. We have not found a statewide model for the joint protection of a "new" common parcel created by the restoration of adjacent properties under separate ownership.

Conservation Easement and/or Covenants, Conditions and Restrictions

We are working proactively to determine if a new Sub-district of either the ERWSD or the Edwards Metropolitan District could be formed for the purpose of entering into a conservation easement with the cooperation of all landowners in the reach and the Eagle Valley Land Trust. This may be too complicated and burdensome for the Eagle River Watershed Council and the property owners. For this to happen, each individual landowner would have to actually transfer fee title ownership of the portion of the restored property to the new sub-district that would then donate the conservation easement to the Land Trust.

A more workable solution may be to develop one common set of Covenants, Conditions and Restrictions regarding the protection of the restored natural resources in the whole project reach which would then be adopted by each of the Homeowner's Associations along this reach of river in Edwards. These various options are being discussed with the neighbors and will be formalized to the satisfaction of GOCO and other funding partners as the project moves forward. With the almost certain knowledge that the portion of the reach known as the B&B Gravel pit on the south side will have large scale future commercial development between Highway 6 and the wetland floodplain, it is our intention to work out a formal riparian conservation easement with the developer to be put in place on completion of the restoration work—prior to commercial development of the site. This particular property crosses the river and includes a large parcel on the north side of the river where the conservation easement is intended to be in place prior to any development on this site as well.

The Eagle River Watershed Council in cooperation with Eagle County, Eagle River Water & Sanitation District and the Eagle Valley Land Trust will ensure that the protection of the restoration components will be upheld. Annual monitoring to ensure compliance with any written protection agreements in place will be conducted and reported to the State. If violations are found and are not able to be corrected through negotiation with the responsible party, the Eagle Valley Land Trust or Eagle County Land Trust will take any necessary legal steps to enforce the easements held by the respective party.

PLAN FOR MONITORING AND EVALUATION OF PROJECT GOALS

The overall goal of the Edwards Eagle River Restoration Project is to improve habitat and function in the Edwards reach of the Eagle River and its floodplain. This section explains how the project will meet its goals and objectives and how success will be made quantifiable and measurable. The methods by which the Edwards Eagle River Restoration project will be measured to determine success are described below and are categorized by the project goals that they address. Monitoring efforts will be implemented for a five-year period and the results

will be reported to the appropriate funding partners and publicly available from the Eagle River Watershed Council.

1. Reduce high instream temperatures, raise dissolved oxygen levels in summer.
Temperature loggers will be installed at a minimum of four locations throughout the project reach, concentrating on the known problem reaches (i.e., those with the highest width to depth ratios under existing conditions). The loggers will be installed and monitored prior to project implementation to supplement data collected to date on instream temperatures.
Dissolved oxygen levels will be documented at the same locations as temperature readings. Monitoring will begin with the new temperature logger program.

Success will be defined as documentation of temperatures and dissolved oxygen levels within tolerable ranges for brown and rainbow trout.

2. Reduce fine sediment accumulation zones, conducive to whirling disease vectors.
Depths of fine sediment accumulation will be measured at a minimum of 6 locations throughout the steep reaches within the Edwards Reach. Hydrometer testing will be completed on samples collected at each location to document particle size gradations. The first round of measurements will occur just prior to the start of restoration construction. Subsequent sampling events will compare both sediment depths and gradations to the pre-restoration conditions.
A post-project bank assessment will be completed to allow comparison of bank conditions throughout the project reach to pre-restoration conditions, as documented during the construction design phase. Documented conditions will include bank slope, percent vegetation, type of vegetation, saturation, and any problematic conditions.

Success will be defined as documented reductions in sediment depths and/or a coarsening of the substrate present in the samples and stabilized bank conditions.

3. Improve channel form and function.
A post-project survey will be conducted by a professional land surveyor (PLS). The survey will be scheduled during low flow conditions to maximize accuracy and obtainable detail. The survey will include water surface elevations and current discharge estimates such that the project's hydraulic model can be calibrated. Additionally a current aerial photograph will be obtained.

Low flow and bankfull channel sinuosity will be documented using both the survey and the current aerial photograph. Post-project sinuosities will be compared to the existing conditions documented by cross-sectional surveys conducted for design, as well as on the September 2004 aerial used in design.

Post-project width to depth ratios will be obtained from the survey and compared to documented pre-project ratios. Additionally, a high flow water surface elevation survey will be conducted to provide information on flows closer to the bankfull discharge and to provide a second calibration for the hydraulic model.

Success will be defined as documented increases in sinuosity and reduced width to depth ratios.

4. Improve instream conditions for fish.
A post-project bank assessment will be completed to allow comparison of overhead and instream cover conditions, including the presence of woody material, throughout the project reach to pre-restoration conditions, as documented during the construction design phase. Documented conditions will include density, location, and types of available cover, and any

problematic conditions.

Success will be defined as documented increases in overhead and instream cover, including the presence of woody material in the channel.

5. Improve riparian and terrestrial habitat.
Existing, pre-project conditions will be documented via onsite vegetation transects, representative photographs and low-altitude aerial photographs. A baseline conditions report will be prepared to allow comparison and evaluate success.

After the site has been restored and planted, a representative sampling of riparian and montane trees and shrubs will be located via GPS and tagged for monitoring. The representative woody plants will be located on a site map for future monitoring reference.

Post-project measurements of growth and vigor of each of the representative woody species will be documented on an annual basis such that growth and survival rates may be assessed. In addition, noxious weeds will continue to be surveyed and mitigated on an annual basis to ensure success of the restored native vegetation. The goal for noxious weed mitigation is three-fold: (1) to prevent additional species from invading the site as a result of restoration activities, (2) limit the spread of species already present and (3) actively control existing populations to prevent their expansion.

Annual monitoring will also include observations of wildlife usage, including osprey platforms and bird boxes.

Success will be defined as documented increases in native vegetation coverage and a minimum 85 percent survival rate of installed plants.

6. Improve current land use practices to reduce impacts to the river corridor and provide managed educational and recreational opportunities along the river corridor.
Impacts associated with cattle grazing, trail usage, and the boat launch and park area, as well as an assessment of educational and recreational opportunities will be documented postproject. Comparisons to pre-project conditions will be made using information gathered during the construction design phase.

Success will be defined as documented improvements to the listed land use practices and good maintenance of educational and recreational structures and signs.

SUMMARY

The Eagle Mine Natural Resource Damage Fund was set up many years ago with parameters that allowed the equivalent of the natural resources damaged by the Eagle Mine to be restored in the Eagle River watershed after the major mine clean up was completed. Back then the river was stained orange and there was hope, but little faith, that the Eagle River would ever reach the level of clean up that we see in the river today. Thanks to great vigilance and persistence by the people at EPA, CDPHE and Viacom for almost 20 years, we are witness to an amazing recovery in the river. For this, we are all deeply grateful.

While it’s true that the Eagle River is many, many, many times cleaner now than at the beginning of this process, the Eagle Mine continues to pollute the Eagle River today—and likely always will to some extent. This spring zinc spikes of 900 parts per billion (ppb) were measured in the Eagle River. [For comparison, the tolerance level for a healthy native Sculpin population is

somewhere less than 100 ppb while the Table Value Standard (legal maximum amount allowed in a healthy river) is 106 ppb at this hardness.] Clearly, we still have a metals problem in the river near the Eagle Mine. The dedicated people who were working hard to clean up this site almost 20 years ago have been joined by many others over the years in this continuing effort. Thankfully, the folks at CDPHE and EPA are still hard at work trying to understand how to technically and legally ensure Viacom stops the continuing pollution—however small by comparison to days gone by.

And during all this time, the settlement seed money of $1,700,000 has been growing and growing. After a portion of the fund was allocated in 2002, the Eagle River Watershed Council decided our community needed more science-based tools to be able to responsibly allocate the amazing amount of resources available to our community for restoration and conservation work. At the time, a new Open Space Fund was just being created while regional and national conservation organizations seemed willing to fund projects in our area. But we didn't really know—from a science based perspective balanced by community input—what efforts would give us the best ecological return on our financial investment. After a three-year research project, we now have those tools in hand with the Eagle River Inventory and Assessment (2005, CSU).

Our challenge is to ensure that all the money, time and the effort of over 150 people that created the tool for prioritizing our opportunities is actually used by decision makers when allocating limited resources in the Eagle River watershed.

The Eagle River Inventory and Assessment identified the Edwards reach as a significant opportunity for natural resource enhancement on a watershed wide scale. We want to implement this project with wide support from the community. The Eagle River Watershed Council wants to honor the opportunity leverage these last remaining NRDs funds as fully as possible against other local, regional and national dollars on a one to one basis. We respectfully ask the Eagle Mine Work Group recommend our full request for $2,000,000 to the Trustees.

LETTERS OF SUPPORT

John Woodling, Ph.D
Trustees of the Eagle Mine Natural Resource Damage Fund
C/O Ms. Wendy Naugle
CDPHE, HMWMD
4300 Cherry Creek Blvd., South
Denver, CO 80246
RE: SUPPORT FOR EAGLE RIVER, EDWARDS RESTORATION PROJECT

Trustees of the Eagle Mine Fund,
This letter is written in support of the Eagle River Restoration project in Edwards, Colorado. The Eagle River Watershed Council (Council) has requested $2,000,000 for this project. To be honest, I was hesitant when the Council initially asked me to write a letter in support of this project due to the high cost. I asked that some retired Colorado Division of Wildlife biologists review the project to get their perspective in their areas of expertise. These individuals all believed the project provides substantial improvements in the Eagle River Ecosystem. As a result of both their reviews of the project and my own I strongly encourage you to award the full $2 million requested from the Eagle Mine Natural Resource Damage Fund by the Eagle River Watershed Council.

Tens of millions of dollars have been spent to improve the water quality of the Eagle River. As a result, the brown trout fishery has been greatly improved during the last ten to 15 years in much of the Eagle River. However, serious issues still limit the health of the Eagle River aquatic ecosystem. One such location is the area for which the Eagle River Watershed Council has requested funds. As I will describe below, the Eagle River Restoration project in Edwards offers significant benefits to the natural resources of the area and the river in areas other than water quality. The benefits of this project extend upstream and downstream of the project area.

This is not a habitat improvement project in the normal use of the term. To their credit, the project proponents do not make strong claims that the project will greatly enhance the fishery of the river. The project addresses the morphology and function of a portion of the Eagle River. The Eagle River in the proposed project area is much wider and shallower than other portions of the river in the stream reach. In my opinion, the existing habitat in the project reach is not appropriate for healthy trout populations. Little instream cover is present and much of the stream substrate is covered with silt. During the fall and winter the water is relatively shallow compared to upstream and downstream locations and does not provide optimal trout habitat like much of the rest of the river through this reach.

This restoration will improve two general components of the Eagle River, channel morphology and whirling disease. The proposal calls for a narrower channel that by definition will be deeper. Banks will be stabilized decreasing potential for erosion. Deeper water with stable banks would provide habitat suitable to trout populations of the Eagle River. The riparian vegetation

associated with this type of restoration plan will also enhance terrestrial wildlife in the area.

The water velocity will increase through the project area since depth would be greater and width decreased. Increased water velocities decrease the amount of streambed covered by silt. Decreasing silt may well have ramifications that impact much of the Eagle River not just the project area. Silt provides habitat for the worms that are the intermediate hosts for whirling disease. Reducing the number of worms may well result in a lower level of whirling disease infectivity in the Eagle River. Rainbow trout are very susceptible to whirling disease. Removing this area of optimal worm habitat may well reduce the spore level in this entire river reach, benefiting the rainbow trout population in the entire river reach, not just the project area.

Silt reduction has another benefit. A silt free stream substrate provides the habitat required by most of the aquatic macroinvertebrates that inhabit the Eagle River. A cobble bottom free from silt would increase the amount of food available to trout both in the project area and in the section downstream of the project area.

Rainbow trout in the past provided a fishing resource in the Eagle River from Vail downstream to the confluence of the Eagle and Colorado Rivers. Whirling disease has been documented in this portion of the Eagle River. The number of rainbow trout has decreased, as has the amount of natural reproduction of this species. Rainbow trout in the Eagle River appear to grow to a larger size than brown trout. Enhancing the rainbow trout will attract more anglers to the area and provide a larger fish for these anglers.

This proposal is the best use of the money in the Eagle River watershed of which I am aware. The trout populations in the Eagle River are a tremendous economic boon to the area. Several flyfishing shops operate in the area and fishing in the area attracts many anglers that spend a lot of money. A few years ago, one of the flyfishing shops employed 28 guides during the summer. Improving the quality of fish populations through the entire river reach from Vail to the confluence of the Eagle and Colorado Rivers is a wise use of these funds. Although the cost of this project indeed is high the benefits will enhance other portions of the Eagle River Ecosystem. This project addresses issues are not addressed by other restoration projects in the Eagle River Valley. Again I recommend that this project be funded in full.

Sincerely, Oct 31,2006
John Woodling, Ph.D.
woodling@colorado.edu

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Eagle Valley Land Trust

August 6, 2006
Eagle Mine Natural Resource Damage Fund Work Group
C/O Ms. Wendy Naugle
CDPHE, HMWMD
4300 Cherry Creek Blvd., South
Denver, CO 80246

RE: SUPPORT FOR EDWARDS RIPARIAN CONSERVATION PROJECT
Dear Members of the Eagle Mine NRDs Work Group,
The Eagle Valley Land Trust supports of the Eagle River Watershed Council's application for $2 million in funding from the Eagle Mine Natural Resource Damage Fund. We believe this restoration and conservation project provides an outstanding opportunity to Eagle Mine Natural Resource Damage Funds. The project will enhance the proper functioning condition of the riparian and aquatic habitat in the Edwards reach and will enhance the long term conservation of this important wetland floodplain.

The Trust looks forward to working with the Eagle River Watershed Council and the property owners to explore the best mechanisms for ensuring the long-term protection of the improvements made possible by this project. We know this will be a complicated undertaking from a conservation perspective because so many property owners are involved; however, we are encouraged by the support and involvement that has already been demonstrated by so many groups.

Finally, we want to reiterate our gratitude to the NRDs work group for the significant funding for the Westermann Conservation Easement on Tennessee Pass. This funding was a valuable component in our ability to purchase these development rights.

Best regards,
Cindy Cohagen
Executive Director
Eagle Valley Land Trust