Stream and Wetland Ecological Enhancement Program (SWEEP)

Memorandum of Understanding

I. Background

This Memorandum of Understanding (MOU) is made and entered into this 4th day of January, 2011, among the Colorado Department of Transportation (CDOT); the Federal Highway Administration (FHWA); the US Fish and Wildlife Service (USFWS); the USDA Forest Service (USFS), Rocky Mountain Region, Arapaho and Roosevelt National Forests and White River National Forest; the USDOI Bureau of Land Management (BLM); Colorado Division of Wildlife (CDOW); Clear Creek County, Clear Creek Watershed Foundation; Upper Clear Creek Watershed Association (UCCWA); and Colorado Trout Unlimited, hereinafter referred to as "Parties."

The Parties to this MOU recognize that the existing I-70 Mountain Corridor and the proposed future improvements pass through several watersheds that support numerous aquatic resources. While all Parties recognize that the I-70 transportation system provides important benefits to Colorado citizens, the local communities, and economic interests on a statewide level, they also acknowledge that the I-70 Mountain Corridor impacts the water quality and viability of watershed ecology in these watersheds. Therefore, the benefits derived from a transportation system may come at a cost to other resources, including water quality and aquatic resources, unless appropriate actions are taken to consider these resources during each step of CDOT's I-70 Mountain Corridor Context Sensitive Solutions (CSS) Decision Making Process.

The Parties desire to improve stream and wetland conditions in the I-70 Mountain Corridor. To meet that need, CDOT convened the Stream and Wetland Ecological Enhancement Program (SWEEP) Committee, an advisory committee consisting of fisheries biologists, hydrologists, and other watershed and water quality-related technical experts, community representatives, and other potentially-affected parties. The SWEEP Committee will identify and recommend appropriate mitigation strategies, including design, implementation and monitoring, for anticipated environmental impacts likely to occur as a result of redevelopment of the I-70 Mountain Corridor. The SWEEP Committee will coordinate with the A Landscape Level Inventory of Valued Ecosystem Components Committee (ALIVE), whose goal is to increase the permeability of the I-70 Corridor to terrestrial and aquatic species to provide and maintain long-term protection and restoration of wildlife linkage areas, improve habitat connectivity, and preserve essential ecosystem components.

The I-70 Mountain Corridor extends through three major hydrologic drainage basins: Clear Creek, the Blue River and the Eagle/Colorado Rivers. Historic human practices, not solely related to I-70, have significantly degraded the quality of these streams. This MOU establishes agreement around SWEEP and forms the foundation of mitigation for aquatic resource impacts during Parties' projects along the I-70 Mountain Corridor and its communities.

II. Purpose and Intent

The primary purpose of the SWEEP Committee and MOU is to assist the parties with means by which to effectively and efficiently comply with applicable federal, state, and local laws regarding water quality, stream and riparian habitats, and aquatic wildlife; and where applicable, improve stream conditions associated with past, ongoing, and future planning, construction, and maintenance actions in the I-70 Mountain Corridor. All applicable federal and state laws apply to these actions, such as the Clean Water Act, Endangered Species Act, CERCLA, RCRA, Colorado Water Quality Control Act, and Senate Bill 40. Local laws, regulations, and legislative actions may also apply to the extent authorized by state and federal legislation and regulation. The Parties agree to work within the decision making structure of the I-70 Mountain Corridor CSS Guidance to consider and expand the menu of mitigation strategies and develop standards, quality control and assurance, and processes for future studies.

Whereas the Parties intend to use the SWEEP MOU as guidance when considering the following potential activities:

1. Enhance stream and wetland ecology using the watershed context.
2. Develop more sustainable ways of maintaining transportation systems while avoiding and minimizing future impacts to watersheds within the Corridor.
3. Protect aquatic and amphibian communities.
4. Sustain and restore aquatic communities supporting species for their intrinsic, ecological, and recreational value.
5. Address stream stability and functionality.
6. Compile historic information on changes to stream geometry from community development and transportation-related activities and explore logical strategies for restoring stream functions, such as bank stabilization and flood control.
7. Support and coordinate with ALIVE (A Landscape Level Inventory of Valued Ecosystem Components).
8. Work with the ALIVE recommendations to coordinate actions that support the ALIVE MOU.
9. Establish a foundation of baseline information for water-related state and federal permits along the I-70 Mountain Corridor.
10. Relate CDOT and FHWA state and federal permitting procedures to current laws and regulations and determine potential impact of SWEEP recommendations.
11. Support delisting 303(d) waterways.
12. Understand factors contributing to water quality impaired segments within the Corridor and base certain goals on specific pollutant reduction.

The intent of this MOU is to establish a framework for cooperation to:

1. Create a system for management and mitigations over the life of the projects.
2. Follow the CSS Decision Process in developing mitigation procedures based on SWEEP recommendations.
3. Outline a process for collaboration and defining specific strategies for avoidance and mitigation.
4. Determine appropriate people and data resources to develop strategies. Expand Tier 1 recommendations to avoid, minimize, and compensate for impacts during Tier 2.
5. Identify issues to be considered.

6. Use diversity of data resources and stakeholders to recognize Corridor issues related to streams and wetlands. Allow for dynamic nature of diverse experiences and ideas.
7. Address cumulative impacts.
8. Collect data on past corridor activities and future growth projections to predict potential impacts on water quality.
9. Prioritize and specify aquatic, riparian, and amphibian resources.
10. Assemble Corridor studies and information on species with special designation to identify those species and habitats that should be priority while establishing mitigation recommendations.
11. Define the process for developing mitigation for Tier 2 documents.
12. Determine SWEEP Committee involvement in Tier 2 and how mitigation recommendations will be incorporated into project development.
13. Identify parties and how they work together.
14. Agree to work together effectively and outline expectations, including general and specific roles and responsibilities.
15. Pool resources, when resources are available, and in accordance with provision # 12 of this instrument.
16. Maintain collaboration as an efficient way to use individual expertise, gather agency/group information, and concentrate the focus while allowing room for innovative solutions.
17. Identify realistic opportunities for specific issues and sustainability.
18. Promote the development of mitigation recommendations specific to a watershed, community, or project with future needs and resources in mind.
19. Compare past activities and apply lessons learned to recommendations for future mitigation strategies.
20. Develop standards, quality control and assurance, and processes for future studies.
21. Expand existing standards to fit future Tier 2 needs and support activities that meet or exceed these standards.

III. Issues of Concern

This MOU identifies three areas of concern that should be addressed in all subsequent phases of development – water quality, natural habitat, and information. Other concerns may be identified and will need to be addressed.

A. Water Quality

1. Sediment Management

Because I-70 Mountain Corridor experiences severe weather during the winter, CDOT and local agencies use significant amounts of traction sand to keep the roadway open and safe. CDOT has developed Sediment Control Action Plans (SCAP) to identify solutions to sedimentation, but not all basins have been studied. SCAPs should be developed and implemented in coordination with ALIVE to minimize linkage interference.

SWEEP will support the development of SCAPs in areas where they are needed. Existing SCAPs should be updated to reflect completed projects and water quality features, modifications, and lessons learned.

2. Clean Water Act, Section 303(d) Listing of Stream Segments

A number of stream segments along I-70 are listed as impaired waters of the United

States. The impairment is due to heavy metals and/or sediments that exceed levels of chronic standards. Sources for these issues include past mining activities and the operation and maintenance of I-70.

SWEEP will support strategies, including but not limited to restoration and remediation, toward de-listing the segments in the Corridor from the 303(d) list.

3. Mine Workings in the I-70 Corridor
The I-70 corridor contains shafts, drifts, stopes, and other mine workings often filled with contaminated water. The groundwater hydrology of these workings is not known, but evidence indicates that these workings contain significant quantities of acid mine waters.

SWEEP will support the identification of these underground mine locations, avoid intercepting these pollutants to the extent practicable, and remediate exposed contaminated mine water, where practicable and particularly those near impaired waters within the Corridor.

4. Highly Mineralized Rock Formations within the I-70 Mountain Corridor
The geology through the I-70 Mountain Corridor includes certain sections of heavily mineralized bedrock, mainly in Clear Creek County. Historic construction practices required significant excavation through rock walls that exposed entrained heavy metals. Over time these minerals have leached from the rock walls and have likely found their way to local water courses, contributing to their toxicity.

SWEEP will recommend means by which these potential threats can be abated.

5. Previous Construction Practices Using Mine Waste as Roadbed Material
Several miles of the current I-70 alignment run through areas of historic and active mining, mainly in Clear Creek County. Original construction of I-70 through Clear Creek County used mine waste as road bed material which, even today, has quantities of toxic metals (and other materials) that represent significant threats to water quality should that material be disturbed.

SWEEP will recommend strategies for dealing with these potential threats on a site-specific basis, using expertise and sound science.

B. Natural Habitat

1. Wetlands Protection
Wetlands perform many important functions, including providing wildlife habitat and filtering stormwater runoff. The location of I-70 adjacent to creeks and rivers makes it difficult to completely avoid wetland impacts during transportation improvements, and locating mitigation property within the same watershed as impacts can be a challenge.

SWEEP will support avoidance and minimization measures during project development and identify ways of restoring and enhancing wetlands, preferably in the same watershed, to compensate for unavoidable impacts.

2. Aquatic Species with Special Status Designation under State and Federal Rule
Clear Creek, Blue River, and the Eagle/Colorado Rivers are home to aquatic species of special designation, as defined by the Colorado Division of Wildlife, U.S. Fish and Wildlife Service, Bureau of Land Management, and U.S. Forest Service. In each case

these species have suffered through a significant loss of habitat, and each species is currently being studied under recovery efforts.

SWEEP will identify mitigation that will encourage no further degradation to, and where possible improve, stream systems containing species of special designation and show that transportation improvements and other community developments will be consistent with the efforts of these recovery strategies.

3. Aquatic Species as a Recreational Resource

Each of the river basins in the I-70 Mountain Corridor contains populations of introduced species of trout that provide significant recreational resources to both in-state and out-of-state visitors. In some instances, whole reaches of these rivers were rendered unusable for aquatic life as creeks were channelized, inundated with sediment, heavy metals, and/or chemicals were introduced.

SWEEP will develop recommendations that protect, and where possible improve, aquatic systems in each of the phases of development identified in the Context Sensitive Solution process. These recommendations should be consistent with the protection or recovery of special status species.

C. Information

1. Information and Research Needs

Development of mitigation is hampered by a lack of information germane to watershed health.

SWEEP will identify relevant information needs and take steps to acquire that information.

IV. Implementation

Implementation of SWEEP Committee recommendations will be subject to the respective Parties' planning, NEPA, and decision-making requirements. SWEEP activities and recommendations should be coordinated with the ALIVE committee and be consistent with the ALIVE recommendations.

1. Project-specific SWEEP teams

The development of specific recommendations and mitigations for projects will be developed collaboratively with a project specific SWEEP team. Establishment of a SWEEP team will follow the CSS guidelines for establishing issue teams based on the specific needs and issues of the project.

2. Define the process for developing mitigation for Tier 2 documents

CSS guidance will determine SWEEP Committee involvement in Tier 2 and how mitigation recommendations may be incorporated into project development.

3. Implementation Matrix

The Implementation Matrix provided in the Appendix should be used as guidance for developing recommendations at each life cycle phase of projects on the corridor. The matrix outlines inputs, considerations, and outcomes for each phase of a project, consistent with the phases used by the CSS decision-making process.

4. Development and implementation of SCAPS
Sediment Control Action Plans (SCAPs) will be used to address sediment management and meet Total Maximum Daily Loads (TMDLs). Parties will work collaboratively to implement SCAP recommendations.

V. Cooperation

The Parties propose to develop mechanisms that focus resources on results. All Parties, within their statutory and regulatory authority, agree to work together toward the long-term protection of water quality and restoration of wetlands and aquatic resources within the I-70 Mountain Corridor. All parties recognize that neither CDOT nor FHWA has a mission to enhance water quality and aquatic resources and that they cooperate with and rely on resource and regulatory agencies to further these efforts. Based on this understanding, all Parties agree to reasonably cooperate in the implementation of this MOU, based on the parties' expertise and as authorized under applicable laws, regulations, and policies. Such cooperation would include:

1. Supporting the concepts identified in this MOU.
2. Providing transportation and stream and wetland expertise, data, and technical support to the SWEEP Committee for planning and project review that will mitigate impacts on, or provide betterments for, water quality, wetlands, and aquatic resources within the I-70 Mountain Corridor.
3. Considering the SWEEP Committee's program and recommendations when the opportunity to construct improvements arises, with the expectation that additional analyses may be needed prior to any investment in stream and wetland improvements. Analysis may include evaluations of the effectiveness of previous improvements.
4. Identifying specific programs or actions that could result in the long-term protection, restoration and enhancement of stream and wetland ecology in the I-70 Mountain Corridor.
5. Working with the SWEEP Committee, local governments, and other stakeholders as appropriate to:
   - pursue potential partnerships and funding mechanisms;
   - identify and promote opportunities and resources to enhance stream and wetland ecology; and
   - sustain partnerships for the long-term protection and restoration of stream and wetland ecology in the I-70 Mountain Corridor.
5. All Parties agree that when opportunities for grants and appropriated funds are available, recommendations developed by the SWEEP Committee will be considered.
6. Existing planning and funding mechanisms for transportation projects can create limitations to the programmatic approaches envisioned by this MOU. Full implementation of a successful SWEEP, through the accomplishment of the above cooperative actions, requires the participation by all Parties and other stakeholders.

VI. Roles and Responsibilities

Cooperation by CDOT shall include:

1. Leading the primary effort to initiate the SWEEP, thereby helping to achieve the environmental goals of the Tier 1 PEIS and subsequent Tier II decisions, which extend beyond the legal requirements of CDOT and FHWA.

2. Facilitating open discussions and working relationships to accomplish corridor wetland and stream mitigation goals.
3. Providing technical support to the SWEEP, primarily involving wetlands, water quality, wildlife, and transportation engineering.
4. Providing funding mechanisms to support mitigation strategies, primarily through project budgets and applying for state and federal grant programs.

Cooperation by FHWA shall include:

1. Providing technical assistance, assisting in resolving disputes, and engaging in other appropriate activities as identified on a case-by-case basis.

Cooperation by the USFS and BLM shall include:

1. Considering the recommendations of SWEEP in the review of Tier 2 NEPA documents, considering granting of any land actions or other use permits germane to aquatic/amphibian wildlife movement corridors and other aquatic resources including water quality and riparian habitat, and reviewing biological reports for consideration of approval and participating in Section 7 consultation under the ESA so that transportation projects and associated conservation measures can proceed in a timely manner.
2. Encouraging the cooperation and support of land authorization holders and other entities with legal interest on public lands to ensure the realization of the objectives of the MOU, which could include their active participation in achieving the goals of SWEEP.
3. Exercising Forest Service and BLM regulatory requirements and authorities to protect aquatic/amphibian wildlife and riparian vegetation species and their habitats. Accordingly, the USFS and BLM, by means of ordinary and established planning and subsequent NEPA processes, will consider lands in proximity to I-70 for their aquatic/amphibian wildlife and riparian vegetation habitat and aquatic/amphibian wildlife movement attributes, among other multiple use considerations. They will treat installed aquatic/amphibian wildlife passages consistent with their intended purpose of connecting functional aquatic /amphibian wildlife movement corridors, and will strive to maintain the associated aquatic and amphibian wildlife movement corridors.
4. Informing the CDOT Environmental Programs Branch, Transportation Regions 1 and 3 by letter of all requested land actions, special use permits, USFS and BLM plan amendments, or other pertinent actions that could affect an identified aquatic or amphibian habitat linkage and/or could potentially conflict with a planned aquatic/amphibian wildlife passage area.
5. Seeking to acquire lands along the I-70 Corridor through donation, exchange, or legislation to maintain or improve aquatic, riparian, and amphibian habitat connectivity adjacent to the I-70 Corridor, as opportunities arise and in compliance with the Forest Service and BLM land adjustment policy.

Cooperation by USFWS shall include:

1. Providing fish passage and aquatic wildlife expertise.
2. Considering SWEEP recommendations during Tier 2 review and ESA Section 7 consultation.
3. Providing technical review of water quality and contaminants sampling plans, and data analysis.
4. Assisting with water quality and contamination sampling, as time allows.

5. Assisting with identifying additional data sources and provide coordination with these sources.

Cooperation by CDOW shall include:

1. Providing in-kind support through cooperation and consultation with other Parties, jurisdictions, and landowners to facilitate a Corridor-long perspective and understanding of aquatic wildlife needs and conservation measures.
2. Providing aquatic wildlife data and management expertise.
3. Assist with monitoring the effectiveness of aquatic wildlife mitigation.

Cooperation by Clear Creek County shall include:

1. Support the concepts and activities identified in this MOU.
2. Through adoption and implementation of Best Management Practices, protect water quality and riparian areas.
3. Through partnerships, act to enhance stream and wetland ecology.
4. Through their budgetary process, strive to continue to support the acquisition of data relating to Clear Creek.
5. Through outreach efforts, raise public awareness of and support for actions that protect and enhance stream and wetland health.

Cooperation by Upper Clear Creek Watershed Association (UCCWA) shall include:

1. Supporting the concepts identified in this MOU and working to actively implement this MOU as authorized under applicable laws, regulations, and policies.
2. Providing Clear Creek water quality expertise, data, and support to the SWEEP Committee for planning and project review that will mitigate impacts on, or provide betterments for, Clear Creek water quality across the I-70 Mountain Corridor.
3. Identifying programs or actions that could result in the long-term protection, restoration, or enhancement of water quality in Clear Creek along I-70 Mountain Corridor. Implementation of SWEEP Committee recommendations would be subject to the respective Parties' planning, NEPA, and decision-making requirements.
4. Working with the SWEEP Committee, local governments, and other stakeholders as appropriate to:
    a. pursue potential partnerships and funding mechanisms; and
    b. identify and promote opportunities and resources to improve water quality in Clear Creek along the I-70 Mountain Corridor.
5. Being a signing party to the MOU along with other signing parties.
6. Soliciting volunteer and donated efforts among its members and affiliates for providing data, in-kind labor, or other volunteer or donated efforts.
7. Acting as a conduit for information sharing and communication between CDOT, the I-70 PEIS, and UCCWA members

Cooperation by Clear Creek Watershed Foundation (CCWF) shall include:

1. Promoting and managing Good Samaritan projects that advance watershed sustainability.
2. Bringing potential funding for projects that enhance watershed sustainability through grants and other resources.

3. Sharing data and expertise concerning water quality for the Clear Creek Watershed. CCWF is the repository for continuous data and analysis dating from 1994 to the present.
4. Aiding in public outreach and education through our existing outlets; including our website (www.clearcreekwater.org) and the Clear Creek Watershed Exhibit, housed in the Idaho Springs Heritage Museum & Visitor Center.
5. Being a signing party to this MOU with other cooperating signatories.

Cooperation by Colorado Trout Unlimited (CTU) shall include:

1. Supporting the concepts identified in this MOU and working to actively implement it as authorized under applicable laws, regulations, and policies.
2. Identifying opportunities for enhancement of aquatic species in those river systems likely to be adversely affected by activities associated with the redevelopment of the I-70 Mountain Corridor.
3. Identifying programs or actions that could result in the long-term protection, restoration, or enhancement of aquatic species in riparian systems along I-70 Mountain Corridor. Implementation of SWEEP Committee recommendations would be subject to the respective Parties' planning, NEPA, and decision-making requirements.
4. Working with the SWEEP Committee, local governments, and other stakeholders as appropriate to:
    a. pursue potential partnerships and funding mechanisms; and
    b. identify and promote opportunities and resources to improve water quality in Clear Creek along the I-70 Mountain Corridor.
5. Being a signing party to the MOU along with other signing parties.
6. Soliciting volunteer and donated efforts among its members and affiliates for providing data, in-kind labor, or other volunteer or donated efforts.
7. Acting as a conduit for information sharing and communication between CDOT, the I-70 PEIS, and other conservation organizations.

VII. It Is Mutually Understood and Agreed by and among the Parties that:

1. Freedom of Information Act (FOIA). Any information furnished to federal agencies under this instrument is subject to the Freedom of Information Act (5 U.S.C. 552).

2. Open Records Act. Any information furnished to Colorado State agencies under this instrument is subject to the provisions of the Colorado Open Records Act at § 24-72-201, *et seq.*

3. Participation in Similar Activities. This instrument in no way restricts the Parties from participating in similar activities with other public or private agencies, organizations, and individuals.

4. Commencement. This MOU takes effect upon the signature of the Parties.

5. Modification. All Parties will review this MOU every 5 years from original date of execution. This MOU may be amended if/as necessary by written request of any Party and upon written modification by all Parties.

6. Expiration. This MOU shall remain in effect from the date of execution until all I-70 Mountain Corridor projects tiered to that Programmatic Environmental Impact Statement have been constructed and the mitigation/reclamation actions committed to in the PEIS have been completed

7. Termination. Parties may terminate their participation in this MOU with a 30-day notice to the other Parties. The remaining Parties will maintain commitment to the agreement and the MOU will remain in place until all remaining Parties terminate their participation.

8. Dispute Resolution. All Parties agree to work cooperatively to avoid and resolve conflicts. The Parties agree to explore issues thoroughly before escalating disputes. Resolution mechanisms to ensure that adequate communication has occurred, such as mediation and facilitation, may be used at any level to help expedite resolution. All Parties agree to resolve disagreements at the lowest possible level. If disagreements emerge which cannot be resolved at any level, the dispute will be escalated through management as appropriate.

9. Retention of All Authorities. Nothing in this MOU is intended to limit or diminish the legal obligations, responsibilities, and management authority of the Parties.

10. Responsibilities of Parties. The Parties and their respective agencies and office will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each party will carry out its separate activities in a coordinated and mutually beneficial manner.

11. Principal Contacts. The principal contacts for this instrument are:

CDOT Administrative Contact

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Clear Creek County Administrative Contact	Clear Creek Watershed Foundation Administrative Contact
Jo Ann Sorensen Phone: 303-679-2409 E-Mail: jsorensen@co.clear-creek.co.us	Ed Rapp Phone: 303-567-2699 E-Mail: info@clearcreekwater.org
UCCWA Administrative Contact	**Trout Unlimited Administrative Contact**
Fred Lyssy Phone: E-Mail: flyssy@comcast.net	Gary Frey Phone: 303-986-0106 E-Mail: Gbfrey@msn.com

12. Nonbinding Agreement. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity. The parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the parties to obligate or transfer anything of value.

    Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate instruments and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides, nor meets these criteria. If the parties elect to enter into an obligation instrument that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective instrument, each party operates under its own laws, regulations, and/or policies, and any Forest Service obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective instruments must comply with all applicable law.

    Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

13. Non-Liability. Forest Service and BLM do not assume liability for any third party claims for damages arising out of this instrument.

14. Notices. Any communications affecting the operations covered by this agreement given by the Forest Service or the Grantee/Cooperator is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:

    To the Forest Service Program Manager, at the address specified in the grant/agreement.

    To Grantee/Cooperator, at the Grantee's/Cooperator's address shown in the grant/agreement or such other address designated within the grant/agreement.

Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

15. Endorsement. Any Cooperator contributions made under this agreement do not by direct reference or implication convey Forest Service endorsement of the Cooperator's products or activities.

16. Use Of Forest Service/BLM Insignias. In order for the Cooperator to use the Forest Service or BLM insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the BLM or Forest Service's Office of Communications. A written request must be submitted and approval granted in writing by the Office of Communications prior to use of the insignia.

17. Members of U.S. Congress. Pursuant to 41 U.S.C. 22, no U.S. member of, or U.S. delegate to, Congress shall be admitted to any share or part of this instrument, or benefits that may arise therefrom, either directly or indirectly.

18. Forest Service Acknowledged In Publications, Audiovisuals, And Electronic Media. The Cooperator shall acknowledge Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this instrument.

19. Nondiscrimination Statement – Printed, Electronic, Or Audiovisual Material.
The Cooperator shall include the following statement, in full, in any printed, audiovisual material, or electronic media for public distribution developed or printed with any Federal funding.

"In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer."

If the material is too small to permit the full statement to be included, the material must, at minimum, include the following statement, in print size no smaller than the text:

"This institution is an equal opportunity provider."

20. Debarment And Suspension. The Cooperator shall immediately inform the Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the Federal Government according to the terms of 2 CFR Part 180. Additionally, should the Cooperator or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.
21. Establishment of Responsibility. This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.

22. Authorized Representatives. By signature below, the Party certifies that the individuals listed in this document as representatives of the Parties are authorized to act in their respective areas for matters related to this agreement.

The Parties hereto have executed this instrument.

COLORADO DEPARTMENT OF TRANSPORTATION

Russell George 1/4/11 DATE
Russell George
Executive Director

COLORADO DIVISION, FEDERAL HIGHWAY ADMINISTRATION

John M. Cater 1/4/11 DATE
John M. Cater
Division Administrator, Colorado Division
Federal Highway Administration

US FISH AND WILDLIFE SERVICE, ECOLOGICAL SERVICES

Susan C. Linner 1/4/11 DATE
Susan C. Linner,
Colorado Field Supervisor

USDA FOREST SERVICE

FOR Glenn P. Casamassa 1/4/11 DATE
Glenn P. Casamassa,
Forest Supervisor
Arapaho & Roosevelt National Forests
and Pawnee National Grassland

USDA FOREST SERVICE

FOR Scott Fitzwilliams 1/4/11 DATE
Scott Fitzwilliams,
Forest Supervisor
White River National Forest

US BUREAU OF LAND MANAGEMENT

Steven G. Bennett 1/4/2011 DATE
Steven G. Bennett,
Field Manager
Colorado River Valley Field Office

COLORADO DEPARTMENT OF NATURAL RESOURCES, COLORADO DIVISION OF WILDLIFE

Thomas E. Remington 1/12/11 DATE
Tom Remington
Director

CLEAR CREEK COUNTY

Kevin O'Malley DATE
Kevin O'Malley
Chairman
Board of County Commissioners

CLEAR CREEK WATERSHED FOUNDATION

Edward G. Rapp 1/4/2011

Edward G. Rapp DATE
President

UPPER CLEAR CREEK WATERSHED ASSOCIATION

Benjamin Moline 1/4/2011

Ben Moline, DATE
Co-Chair of UCCWA

COLORADO TROUT UNLIMITED

David Nickum 1/4/2011

David Nickum, DATE
CTU Executive Director
Sinjin Eberle,
CTU President

The authority and format of this instrument has been reviewed and approved for signature.

USDA FOREST SERVICE

LuAnn Waida 1/3/11

LuAnn Waida DATE
USFS Grants & Agreements Specialist

FS# 11-MU-11021000-008

Appendix A

SWEEP Implementation Matrix

The following matrix identifies the primary objective for each of the Issues of Concern identified in the SWEEP MOU and supports policy-level mitigation for aquatic resources as it applies to site specific projects. The matrix outlines the inputs, considerations, and outcomes needed for each of the life cycle phases for improvements in the corridor. As activities in the corridor move from corridor planning to project development to project design and so on, the outcomes from the previous phase become inputs for the subsequent phase. This approach is consistent with the Life Cycle Phases and 6-Step Process in the CSS Guidance for the I-70 Mountain Corridor. (For more information on the I-70 Mountain Corridor CSS Life Cycle Phases, see Appendix B)

Water Quality	**Corridor Planning**	**Project Development**	**Project Design**	**Project Construction**	**Operations, Maintenance, Monitoring**
Sediment Management Objective: Reduce sediment loading in waterways from winter maintenance, erosion, and mine waste Applicable Laws: Clean Water Act Section 303(d)	**Inputs:** Total Maximum Daily Loading (TMDLs) or other quantification of loading and characterization Current operations Existing conditions and anticipated broad impacts Inventory of potentially impacted streams	**Inputs:** Existing water quality monitoring programs Sediment Control Action Plans (SCAPs) Site specific assessments	**Inputs:** Anticipated project impacts Best management practices (BMPs) Recommended mitigations Existing water quality monitoring programs data Water Quality Management Plan SCAPs	**Inputs:** Storm Water Management Plan (SWMP) for the project Water quality monitoring during construction	**Inputs:** Water quality monitoring programs SCAPs BMPs

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Sediment Management (continued)	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	What opportunities exist to minimize sediment loading?	Does the existing SCAP provide strategies to avoid, minimize or mitigate impact to meet the objective? What are the costs and benefits of each strategy? What revisions are needed for the SCAP?	What are the appropriate site specific sediment controls? What are the receiving waters in the project area? How might any remaining impacts that exceed standards in the project reach be mitigated?	What practices can be implemented to minimize or avoid construction related impacts?	Are conditions and sediment levels consistent over time? Do the current levels meet TMDLs
	Outcomes:	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Develop SCAPs for the I-70 Mountain Corridor	Revise or endorse SCAP Specific sediment management recommendations to meet the standards Identify site specific mitigation strategies Water Quality Management Plan	Design sediment management strategies and structures Plan for maintaining operations into the future Water Quality Monitoring Plan	Construct sediment management recommendations from the SCAP Implement Best Management Practices (BMPs) Maintenance and removal of temporary BMPs	Maintenance of mitigation measures Remove remaining temporary construction BMPs Sediment basin maintenance Meet the objective

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Clean Water Act, Section 303(d) Listing of Stream Segments Objective: Reduce non-point source loading impacting stream segments and reduce metals and nutrients loading to meet water quality standards Applicable Laws: Clean Water Act CERCLA RCRA	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	303d listings	303d List impairments by segment Gaining/losing segments	Remediation strategies for specific segments Sampling Analysis Protocol (SAP)	Design requirements Agency permit	Listed stream segment inventory and remediation areas
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	What are the requirements for working in and/or near a listed segment?	What are the baseline vs. event driven issues?	What are project design options to lessen impacts to listed segments? What are mitigation design options to remediate impaired segments?	How can construction activities minimize impacts and control specific species of pollutants?	How can maintenance activities avoid impacts?
	Outcomes:	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Recognition of impaired segments, isolated areas with increased concentration of pollutants, and associated requirements	Remediation strategies for specific segments Sampling Analysis Protocol (SAP) Initiate site specific consultation with permitting agencies	Non-point source mitigation design Agency permit	Remediate impaired areas consistent with agency BMPs and stipulations in agency-granted permits	Monitoring and adaptive management to meet objective

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Mine Workings in the I-70 Right-of-Way Objective: Avoid intercepting underground mines and remediate contaminated mine water where possible Applicable Laws: CERCLA RCRA Clean Water Act	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	CERCLA sites information -surface -subsurface -water Mill sites in ROW Previous efforts to remediate mine site Current agreements regarding mitigation and mitigation responsibilities	Subsurface / Geotechnical analysis Site specific avoidance opportunities	Identify specific locations	Follow remediation designs	Known locations of mine workings
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	What are possible impacts? Are there potential effects to the water course?	What design/controls are available?	Identify specific remediation designs if appropriate	Potential design issues or construction challenges	How can activities avoid impacts?

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Mine Workings in the I-70 Right-of-Way (continued)	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Avoidance opportunities Liability relief for general improvements	Water quality design/controls/ baselines Mitigation strategies Liability relief memo for specific project	CERCLA site remediation support Plan for meeting stipulations in site specific liability relief memo	Remediate impacted areas Plan implementation	Monitor plan to determine success

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Highly Mineralized Rock Formations within the I-70 Mountain Corridor Objective: Avoid cuts in rock walls that expose entrained heavy metals Applicable Laws: CERCLA	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	Surface and subsurface geology of ores Existing monitoring results, if any	Site specific assessments	Site specific geology and hydrology considerations	Design specifications	Known locations of mineralized rock formations
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	Plan avoidance of rock cuts through the ore body	What alternatives minimize impacts?	How can these formations be avoided?	If encountered, how can site specific mitigation be utilized?	Can impacts be avoided?
	Outcomes:	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Avoidance opportunities	Avoidance or mitigation strategies	Project mitigation design	Redesign or make adjustments in the field	Hydraulic and chemical management of contaminants Monitoring

Water Quality	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Previous Construction Practices Using Mine Waste as Roadbed Material Objective: Avoid disturbing mine waste in mining areas or mine waste previously used as roadbed material Applicable Laws: CERCLA RCRA	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	Identify existing locations/sites	Verify location inventory Site specific assessments	Verify location inventory Commitments from project development phase	Verify location inventory Design specifications	Location inventory
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	Can remobilization of mine waste be avoided?	What alternatives minimize impacts?	How can this material be avoided?	If encountered, how can site specific mitigation be utilized?	Avoid further impacts
	Outcomes:	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Avoidance opportunities Liability relief for general improvements	Avoidance or mitigation strategies Liability relief memo for specific project	Site specific design that avoids or minimizes impacts Plan for meeting stipulations in site specific liability relief memo	Redesign or field adjustments Plan implementation	Chemical management of contaminants Monitor plan to determine success

Natural Habitat	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Wetlands Protection Objective: No net loss of wetland functions Applicable Laws: Clean Water Act Section 404 Executive Order 11990	**Inputs:** GIS inventory of wetlands (NWI) Existing watershed information Stream morphology Species of special concerns inventory	**Inputs:** Wetland location inventory Site specific assessments Wetland Functional Assessments Current guidance and regulations Coordination with USACE and USEPA	**Inputs:** Wetland location inventory General avoidance and minimization measures Mitigation plan requirements Permit Special Conditions Monitoring Plan	**Inputs:** Wetland location inventory Specific impact minimization measures	**Inputs:** Wetland location inventory Current guidance and regulation
	Considerations: Opportunities for corridor level mitigation strategies What are the policies regarding off-site remediation should remediation of existing wetlands be deemed infeasible?	**Considerations:** Do unique or highly functioning wetlands exist in project areas? Will project be subject to USACE Merger Agreement?	**Considerations:** What design strategies are being used to avoid all wetland areas?	**Considerations:** Can construction practices be improved to further avoid wetland impacts? Are wetlands and drainages adjacent to the project area being protected from direct and indirect impacts?	**Considerations:** Does CDOT Maintenance staff know who to contact in case of an accidental discharge to wetlands or drainages? How long following construction of mitigation sites and/or remediation of temporary impacts should monitoring continue?

Natural Habitat	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Wetlands Protection (continued)	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Corridor-wide mitigation strategies Coordination with USACE and USEPA	Site specific mitigation, preferably within the same watershed ROW acquisition Clean Water Act Permit or continued consultation	Site specific protection measures Mitigation design / monitoring plan Clean Water Act permits, if necessary	BMPs – Installation, maintenance during construction, and removal following construction	Maintenance of permanent BMPs Monitoring reports Adaptive management

Natural Habitat	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Aquatic Species with Special Status Designation Under State and Federal Rule Objective: No further degradation to, and where possible improvement of, stream systems containing species of special designation Applicable Laws: Endangered Species Act CDOW Listing Colorado SB 40	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	Current guidance and regulations	Species habitat inventory Existing recovery efforts Section 7 consultation on special status species Coordination with CDOW and USFWS	Species habitat inventory Species specific needs and compatible project designs	Species habitat inventory Design specifications	Species habitat inventory
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	Are any special status species present? Do species recovery teams have restoration plans within the project area? Are water depletions to the South Platte River or Colorado River basins a potential?	Do opportunities exist for projects to enhance recovery efforts? Do fish barriers exist that should be removed or fish passages that should be designed? Should fish barriers be installed that will protect special status species?	Will project designs minimize impacts to native fish during construction and operations? Are there innovative designs that will further the goals of the recovery efforts in the stream segments affected?	Do storm water management plans show locations of temporary and permanent BMPs?	Are maintenance strategies in place to reduce pollutants that enter streams known to have Special Designation status?

Natural Habitat	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Aquatic Species with Special Designation Under Federal and State Rule (continued)	**Outcomes:** Corridor-wide mitigation strategies Inventory of special status species	**Outcomes:** Identify possible recovery efforts	**Outcomes:** Project design incorporating recovery efforts	**Outcomes:** Avoidance of special designation species impacts	**Outcomes:** Impact minimization

Natural Habitat	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Aquatic Species as a Recreational Resource Objective: Protect and improve aquatic systems as significant recreational resources	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	Current guidance and regulations Current stream designations by segment	Recreational resource inventory within corridor Project area stream designations Adopted local plans	Recreational resource inventory within corridor Site specific mitigation strategies	Recreational resource inventory within corridor Design specifications	Recreational resource inventory within corridor
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	Have corridor creeks, rivers, and lakes been inventoried by segment? What areas of viable habitat can be improved?	Does the CDOW have special designation segments within the project area?	Where can new and improved recreation opportunities be incorporated into project design? Where should recreation in certain stream segments be avoided to protect special status species?	Is it necessary to limit construction during certain times of the year to avoid reproduction periods?	Are maintenance strategies in place to reduce pollutants that enter streams known to have Special Designation status?
	Outcomes:	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Corridor-wide mitigation strategies	Site specific mitigation strategies Partnerships Enhancement opportunities	Design for improved habitat and compatible low-impact recreation	Improved habitat for recreational resources and users	Expanded habitat and Improved habitat value and function

Information	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Information and Research Needs Objective: Identify and acquire information germane to watershed health	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**	**Inputs:**
	Habitat, flow data, water quality data, event data, and site specific data	Project specific data	Project specific data	Project specific data	Data inventory
	Considerations:	**Considerations:**	**Considerations:**	**Considerations:**	**Considerations:**
	Do we know the variety and quantity of aquatic species present in the stream being impacted? What are the historic aquatic values and functions of each stream reach? Is there evidence of stressed riparian vegetation in the project area? Is there a water quality baseline available for the stream likely to be affected?	What are the environmental effects of winter sand/salt procedures on aquatic vegetation? Are there alternative processes that would better minimize sand/salt deposits in the vicinity of rivers and streams?	Are additional data needed for design?	Are additional data needed for construction?	What monitoring protocols are in place?

Information	Corridor Planning	Project Development	Project Design	Project Construction	Operations, Maintenance, Monitoring
Information Needs (continued0	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**	**Outcomes:**
	Data inventory and needs analysis	Data collection and use	Data collection and use	Data collection and use	Monitoring strategies Data collection and use