
Subject: SWEEP Meeting #1

Client: CDOT Region 1

Project: I-70 Peak Period Shoulder Lane

Project No: 215164

Meeting Date: September 20, 2013

Meeting Location: CDOT Golden

Notes by: Lorena Jones/Gina McAfee/Sandy Beazley

ATTENDEES: See attached sign-in sheet.

DISTRIBUTION: Attendees, SWEEP members, Project File

SUMMARY OF DISCUSSION:

(Action items are in **bold**.)

Introductions

Gina McAfee opened the meeting. Self introductions followed.

PPSL Project Overview

1. Gina gave an overview of the PPSL project. The plan is to add some minimal pavement just in the eastbound direction of I-70 between Empire Junction and Idaho Springs. The additional pavement would be used just during peak periods—approximately 3.5 percent of the time, eastbound direction, Sunday afternoons and also holiday afternoons—as a third lane going eastbound, instead of the two lanes we have right now. The third lane would be tolled—open to people willing to pay a toll to use the lane. The rest of the time, that pavement will be used as it is now—a shoulder.
2. For as much as half of the length of the corridor, there would be no need to add any pavement at all (see handouts). In area with additional pavement, there may need to be a retaining wall—to prevent encroachment into Clear Creek, the Clear Creek floodplain, riparian habitat, and private properties. At some interchanges, there will be widening at the acceleration and deceleration lanes. There is little widening on deceleration lanes and more widening on the acceleration lanes—but typically the widening is a sliver.
3. At the SH 103 bridge and interchange area, I-70 is on a sharper curve. Clear Creek and the Greenway are right next to I-70. It is a geographically constrained area and a separate Issues Task Force will examine improvements in this area, which could include a bridge replacement.
4. CDOT has not done a project of this nature before, but this same project (using the shoulder as a travel lane during peak periods) has been implemented in Minnesota, Virginia, and Massachusetts. The idea is to use the existing pavement to handle traffic, essentially maximizing the existing infrastructure to the greatest extent possible.

5. *Sarah Fowler*: Can you explain how CDOT got to the tolling decision versus an HOV operation? *David Singer*: In the metro area, where ridership is higher and it is a traditional Monday-Friday commuter corridor, HOV makes sense. On this stretch, with peak periods occurring on the weekend HOV is not as effective. What we are trying to do is give people options for a reliable trip.
6. *Sarah Fowler*: Can you change the guidelines to make it a 3-plus or a 4-plus HOV lane? What kind of tolling are you looking at? *Gina McAfee*: It will be a dynamic system with variable pricing based on the traffic volume and travel speed. It will also encourage use of transit. Implementing managed lanes is consistent with a recent statewide policy that CDOT has adopted for corridors where congestion is a problem.
7. *Sarah Fowler*: Could you have a combined lane where it is four more passengers and tolling? *David Singer*: I'm not sure how to go about that. Enforcement becomes a challenge. *Gina McAfee*: We looked at that on the Twin Tunnels project and we decided that enforcement would be the biggest constraint.
8. *Sarah Fowler*: How do you deal with not having a shoulder during peak period? *Gina McAfee*: We plan to have pull-out areas. CDOT has talked with emergency responders, and they are excited about the opportunities provided with this project. One emergency responder meeting has occurred to date.
9. *Neil Ogden*: We are developing the concept of operations and looking at signing techniques that would enable us to close the toll lane when needed during an emergency for emergency vehicles to be able to use that lane. The ability actively manage traffic can lead to improved response times.
10. *Gina McAfee*: Safety is of paramount concern to CDOT. When you look at studies of implemented projects, there is actually a reduction in accidents. A reduction in congestion typically leads to a decrease in associated accidents, such as rear end collisions. The current plan right now for the managed lane would be inside left lane, which tends to be safer than a right side shoulder lane
11. *Gina McAfee*: Other aspects of the project include a minimum widening, or possible none, at existing structures, except for SH 103, minimizing visual impacts due to signing, potentially noise walls although this analysis is pending, and the installation of water quality features.
12. *David Holm*: Regarding walls to prevent or minimize encroachment, is the goal to prevent any change in the channel? *Gina McAfee*: Absolutely. The project team is working hard to avoid any impacts to the channel and to the floodplain during the design phase.
13. *Kevin Shanks*: Walls would be 2-foot, 3-foot high walls. They are not like Twin Tunnels. The SH 103 wall is yet to be determined but most walls are pretty low.
14. *Gary Frey*: This sounds like a change from the last discussion at the last Technical Team meeting.
15. *Gina McAfee*: Since the last Technical Team meeting, the project team has been working to minimize the footprint, which is why the infrastructure needs have decreased.

16. *Kevin Shanks*: We'll be talking about some of the retaining walls, like at Lawson, in the next Technical Team meetings, and we will have some drawings/hand sketched simulations to show.
17. *Gina McAfee*: Also, we are going to be talking to the Technical Team to discuss moving toward the median versus moving towards the creek. We are hoping that we will get agreement from the PLT to move toward the median, thereby limiting encroachment towards the creek.
18. *David Singer* described the role of the Technical Team for the SWEEP members' benefit.
19. *David Holm*. For Twin Tunnels there is the intent to revegetate the riprap. Would that be part of PPSL? *Gina McAfee*: We are definitely looking at revegetating but not sure about riprap. We don't know if we are going to be that close to existing riprap. *Kevin Shanks*: For Twin Tunnels, we did have to take all riprap out. There are some slopes that we are actually going to be planting willows in locations where we have soil and water, which is adjacent to the creek. For PPSL we are trying to avoid impacts in areas immediately adjacent to the creek.
20. *Sarah Fowler*: Doesn't look like there is much impact to waters along this corridor. *Gina McAfee*: That is correct. Sirena and Sandy went on a field survey recently and confirmed that wetlands concerns are minimal. *Sandy Beazley*: The wetlands we were able to delineate were generally removed from the project, on the south side of the creek.
21. *Sarah Fowler*: What about riparian? *Gina McAfee*: Riparian impacts will be calculated. With a shift to the median these impacts would be minimized.
22. *Gary Frey*: Are you going to characterize the biomass in the Creek *Gina McAfee*: We can certainly check into it, but we are anticipating minimal impacts. *David Singer*: Paul Winkle did a lot of that bio mass work for Twin Tunnels already. *Gary Frey*: It has points along the stream that is monitored for bio mass, but I don't know if it is within this reach. *David Singer*: We will take a look at what is being conducted for ongoing projects and we can get input from those projects, but at this point we don't know. *David Holm*: There is a presentation that was prepared by Paul Winkle summarizing biomass and creel census data for Clear Creek. *Gina McAfee*: Can we have a copy of that presentation? David will send a copy of the presentation to Gina.
23. *Kevin Shanks*: Though this project does not have much impact, opportunity for BMPs for sediment control exists for this project.
24. *Gina McAfee*: The schedule for this project is very aggressive. We are planning to open this project to traffic in summer of 2015.
25. *David Holm*: With all that's going on in northern Colorado related to flood repair, is the schedule realistic? *David Singer*: The same question has been asked about the RAMP projects, and we've heard from the Commission that RAMP funded projects are going ahead. *Gina McAfee*: The National Guard is doing some repairs on US 36 and SH 7, so that work will not use any resources from CDOT. *Kevin Shanks*: CDOT is mobilizing right now to begin work. Given the lull in construction activity due to a down economy these national firms can move equipment and labor to Colorado as needed, for both flood related work and other projects.

SWEEP MOU Review

Gina introduced the group to the MOU and asked if anyone has any questions.

Current Information and Updates

Clear Creek SCAP

1. *Robert Krehbiel* provided an overview of the Clear Creek SCAP. It is being issued for final approval, which includes a SCAP implementation component. CDOT will implement what they can for this project but the PPSL concept requires people to drive on the black top since there is no shoulder. This project will not allow us to implement 100% of what is in the SCAP—but probably 30%. We will implement sedimentation control, retrofit any inlets, add sediments basis adjacent to walls and pull out areas. There is no inlet on the shoulder in the eastbound section. There is a limited number of BMPs that we can do on this project.
2. *Gary Frey*: Is there anything on this project that precludes implementing the SCAP?
Kevin Shanks: Not long term. Pretty much curb and gutter, if you don't have curb and gutter, when it rains hard, the hazard would be all that water sitting on the road because there is no curb and gutter.
3. *Gina McAfee*: This is an interim project—not a long-term solution. CDOT is still working with FHWA through the CSS process to define exactly what interim means. There would likely be monitoring on how it's used over time. And what other projects are coming along in the corridor and how the PPSL project might fit.
4. *Gary Frey*: Are you developing a decommissioning plan? *Gina McAfee*: We have not gotten into that yet.
5. *David Singer*: We set up a check-in consistent with the ROD—which is 2020. For the five years between opening to traffic in 2015 and 2020, we hope to gather enough data to see if this makes sense. *Gina McAfee*: We are looking at traffic volume triggers, potentially. When traffic reached a certain volume, CDOT would look at more long-term options.
6. *David Holm*: What about westbound? *Gina McAfee*: We are not touching westbound at all—not as a part of this project.
7. *David Holm*: What about maintenance commitment? With the SCAP, is CDOT buying into the additional maintenance needed under the SCAP. *David Singer*: We put together three levels of maintenance involvement: robust, moderate and minimal, with minimal being likely. We are working with CDOT Maintenance to determine what is maintainable.
8. *Robert Krehbiel*: The SCAP did recommend enhanced maintenance because we can't just build all the water quality features unless they will be maintained.

Twin Tunnels

1. *David Singer*: The process that we are doing today is process that we developed in the last couple of years through the I-70 PEIS and Twin Tunnels projects, which is proving effective. We would like to apply some of those successes to this project. For Twin Tunnels, CDOT is opening the tunnel in December and restoring the frontage road to its original condition. There

are a lot of people involved in that partnership. Holly is working with CPW on the ultimate removal and disposal of materials that have been contaminated.

2. *Steve Laudeman*: They did not encounter any of those materials, fortunately. CDPHE has capacity at the Church Placer site (30,000 cubic yards of capacity for historic mine waste). We need to work with our funding partners within EPA.
3. *Neil Ogden*: CDOT is not seeing very much contaminated materials in the SH 103 area. At this point design is not far enough along to estimate any numbers about excavation.
4. *Steve Laudeman*: I know we did the Big 5 mine dump. The tunnels on the north side of I-70, west of Idaho Springs. They have a bridge across and they dump some of their waste on the west side.
5. *David Singer*: For Twin Tunnels, we put in three spill containment areas. We have impacts to riparian vegetation. We are working with CPW under the SB 40 provisions to revegetate the game check area toward the East Portal.

The partnership with the City of Blackhawk has been a nice tool in place for Blackhawk and instills some trust between CDOT and the contractors.

6. *Kevin Shanks*: What happened in Twin Tunnels is actually reconstructing riparian habitat. We opened the floodplain to reconnect the river with those riparian habitats, and that is beyond Senate Bill 40.
7. *David Holm*: When you talk about opening the floodplain and restoring the frontage road, what do you mean? *David Singer*: It means opening the road to its original state, but there will be an improvement over what was precondition—for the bicyclists. This will be open summer/fall 2014.
8. *Sarah Fowler*: What about the opening on Halloween? *David Singer*: That changed. The months of November and December are lower risk.

Terrestrial and Aquatic Wildlife

9. *David Singer*: CDOT has put together an inventory of terrestrial and aquatic wildlife along the I-70 Mountain Corridor. Milepost limits for roadway improvements are MP 233 at Empire Junction and we go to MP 241 at East Idaho Springs. There should be no changes in terms of aquatic mobility, meaning there will be limited impacts to Clear Creek.
10. *Gina McAfee*: At this point, we are not aware of any changes to be made to any of the culverts.
11. *Kelly Larkin*: Did you guys survey them or did you do any models? There is a model you can run to determine lows and highs.
12. *Steve Long*: Can you put that in the context of running that model for the recommendations that have already been made in the 2011 study? Was that model used? *David Singer*: Yes, we can take a look at that and take a look at what the triggers are.

Historic Mine Works

1. *Gina McAfee*: We received two maps from Clear Creek County that show at least what we are aware of right now—mill sites, mine works. These are the maps from the I-70 PEIS and will be used to inform the design team of potential hazards.
2. *David Singer*: It might be of interest to this group to hear about the cadmium runoff project. It doesn't tie into the PPSL project, but it is in the same stretch. It's on the north side of I-70. *David Holm* gave an overview of the project—noting the issue about water run-on (rather than runoff) that runs into the highway as opposed to runoff water. Dealing with mining contaminated runoff from cadmium and an unnamed drainage. The sediment pond is full of sediment right now.

Role of SWEEP on the PPSL Project

1. Gina wanted to confirm the role of the SWEEP, which is to:
 - a. Identify SWEEP-related issues in this project segment.
 - b. Develop recommendations through the SWEEP implementation process.

Implementation Process

1. *David Holm*: This area has cadmium. Having appropriate BMPs and acknowledging the reality that there are contaminated materials. Any sediment removal activities are a 303(d) credit.
2. *Sandy Beazley*: There is standing water, essentially a small pond, in the gore at US 40, and the wetland that extends east from it is very narrow. East of SH 103, at Water Wheel Park, at the base of the fill slope (south side of the highway, north side of the creek), there is a wetland. The other wetland we saw is near the deceleration lane at Lawson and is the size of a bathtub. It is full of trash. It was just a depression of water near a roadway culvert. There are other numerous wetlands that we cannot get to because of high water levels or the danger of working from the interstate side. Even if we make the assumption that everything we see is a wetland, there would still be no impact as these features are at the base of fill slopes that will not be affected.
3. *Gary Frey*: Below Georgetown our concerns are more along the lines of the reproductive ability of the fish in the creek. This area is a tremendous recreation resource because it is so close to Denver. But, what we have in terms of actual creel census data, I do not know.
4. *Kevin Shanks*: I believe one of the County's concerns would be maintaining and enhancing access to the fishing area.
5. *David Holm*: A lot of access to Clear Creek has a lot of that riprap if you want to get down to the water. The purpose of the Fishing is Fun project is to create a stairway but using natural materials, like boulders, so people can get to the high water mark area. Location for the access points are 12 altogether. We coordinated extensively with CDOT. Gina asked David Holm if he could get this information and send it to the PPSL team. It would be helpful information.
6. *David Singer*: On the list was one access on the south side of SH 103. Was that taken out?
David Holm: Yes, because there is a gas line there.

7. *Kelly Larkin*: You only mentioned barrier remediation for special status species—if we are trying to manage the fishery, fixing fish barriers on the streams makes sense. I didn't know if that was something that was decided by the Technical Team. *Gina McAfee*: This matrix came from the MOU, but the purpose of this meeting is to also identify other issues that are not on the matrix. There are some nice sections of spawning habitats within Clear Creek. Just something to consider.
8. *David Singer*: One other thing about recreation—there is rafting along this corridor. We have to work with the rafting community to make sure we are not making impact to their industry.
9. *Kevin Shanks*: And we definitely came up with compromises.
10. *Sarah Fowler*: Bank stabilization or habitat?

Kevin Shanks: Anything, like people falling out of rafts. We know that those willows on the banks of the creek can get really thick, and if you fall out of the raft you could get stuck. Commercial rafting companies on Creak Creek would prefer to minimize the amount of vegetation that is within the creek, or overhangs it at surface level, for safety purposes.

11. *David Holm*: The Clear Creek Watershed Plan is being revised right now. Using a watershed approach, working at the 12-digit level. Looked at what the problems are with each of these watershed projects. By including them in this plan, may be eligible for funding. We are going to have a planning charrette. Sediment control projects also.

Steve Long: How long does that process take?

David Holm: This is a very quick process that will be over by this year. The final plan will be done in March. Look for a meeting in early November, even late October.

Next Steps:

1. *Sirena Brownlee* to contact Paul Winkle (CPW) for any data they have. Things we will be considering to fold into the NEPA process and design process.
2. For additional SWEEP meetings, it might be good to meet again after mid-November or early December after we have some specifics—especially the SCAP specifics, and we have developed the hydraulic plans and specifications. David Singer asked Robert when he thinks he could have the SCAP mitigation ready. Robert replied probably in late November. The plan will be to meet late November or early December.
3. *David Singer*: One other thought on roadway alignment—I think from a project level, we can guess what this group's thoughts are. But when we get the rest of the group that has other interests, like the aesthetic of the roadway, what would be the benefit of going toward the median?

Fewer walls, less impact to riparian vegetation, one less manmade intrusion that you are seeing when you are on the south side of the creek or in the creek.

4. *Sarah Fowler*: The Clean Water Act says that you look at the least damaging practicable alternative. And moving toward the median is probably the least damaging practicable alternative. Not to mention that the median just collects trash, and is unsightly.

5. *Kevin Shanks*: Not impacting the riparian vegetation—riparian provides as a buffer between the creek and the highway.
6. *Steve Laudeman*: State superfund—I think we got GIS files that show outlines some of those. Who can I send the info? Send to David Signer.

Action Items:

Gina summarized some action items from today's meeting:

1. David Holm is going to send us the Power point prepared by Paul Winkle and the maps of the "Fishing is Fun" access improvements.
2. David Singer will check to see if the USFS fish passage model was used for the 2011 study.
3. Kelly Larkin is going to provide a link to the USFS fish passage model.
4. Coordinate with Holly to get information on previous research data.
5. HDR will contact Paul Winkle to get any data CPW already has.
6. Steve Laudeman will send GIS data about the Superfund sites.
7. We will look for any opportunities to enlarge culverts to make them easier for aquatic species to use.
8. We will pass along a recommendation for CDOT to do research on the effects of sanding operations on riparian vegetation and specifically what can be done to alleviate those effects.

SIGN-IN SHEET

SWEEP ISSUES TASK FORCE MEETING

September 20, 2013

9:00 a.m. to 12:00 p.m.

CDOT Homestead Conference Room 425C Corporate Circle, Golden

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AGENDA

SWEEP ISSUES TASK FORCE MEETING

September 20, 2013

9:00 a.m. to 12:00 p.m.

CDOT Homestead Conference Room 425C Corporate Circle, Golden

1. Introductions

2. PPSL Project Overview

- a. Project background/purpose and need
- b. Current design and operating assumptions
- c. Schedule

3. SWEEP MOU Review

- a. MOU development and commitments
- b. Implementation process and matrix

4. Current Information and Updates

- a. Clear Creek SCAP
- b. Twin Tunnels
- c. *A Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor in Colorado*
- d. *Guidelines for Improving Connectivity for Terrestrial and Aquatic Wildlife on the I-70 Mountain Corridor*
- e. Updates on location of historic mine works in this segment

5. Role of SWEEP on the PPSL Project

- a. Identify SWEEP-related issues in this project segment
- b. Develop recommendations through the SWEEP implementation process

6. Implementation Process

- a. Initial list of issues
- b. Identification of information and data needs

7. Next Steps

- a. Follow-up activities
- b. Need for an additional meeting

LIKELY COMPONENTS OF THE PPSL PROJECT (as of 9/11/13)

-  A hybrid cross-section that utilizes the existing pavement width in as many places as possible in the corridor (with an estimate of up to half of the length of the corridor). This may reduce the need for retaining walls, but some retaining walls will still be needed to avoid private property or encroachment into Clear Creek.
-  Minimal widening at either two or three of the eight interchange off-ramp deceleration lanes in the project corridor.
-  Minimal widening at interchange acceleration lanes to include sliver widening at on-ramp tapers.
-  Investigation of modifying the SH 103 bridge rather than replacing it. Also looking to see if we can design something that can be easily expanded in the future for unknown corridor improvements.
-  Trying to minimize the need to widen other bridges.
-  Minimize new signs—maximizing opportunities to use existing bridges for signs.
-  Minimize the inclusion of new emergency refuge areas. The concept is to investigate use of already existing flat areas adjacent to the existing highway and at interchanges.
-  Consider noise walls at locations both north and south of I-70 where residential uses are closest to the travel lanes.
-  Water quality and air quality best management practices where feasible.

Figure 2. Mill Sites, Superfund Operable Units, Remediated Sites, and Highly Mineralized Zones in Central Clear Creek County

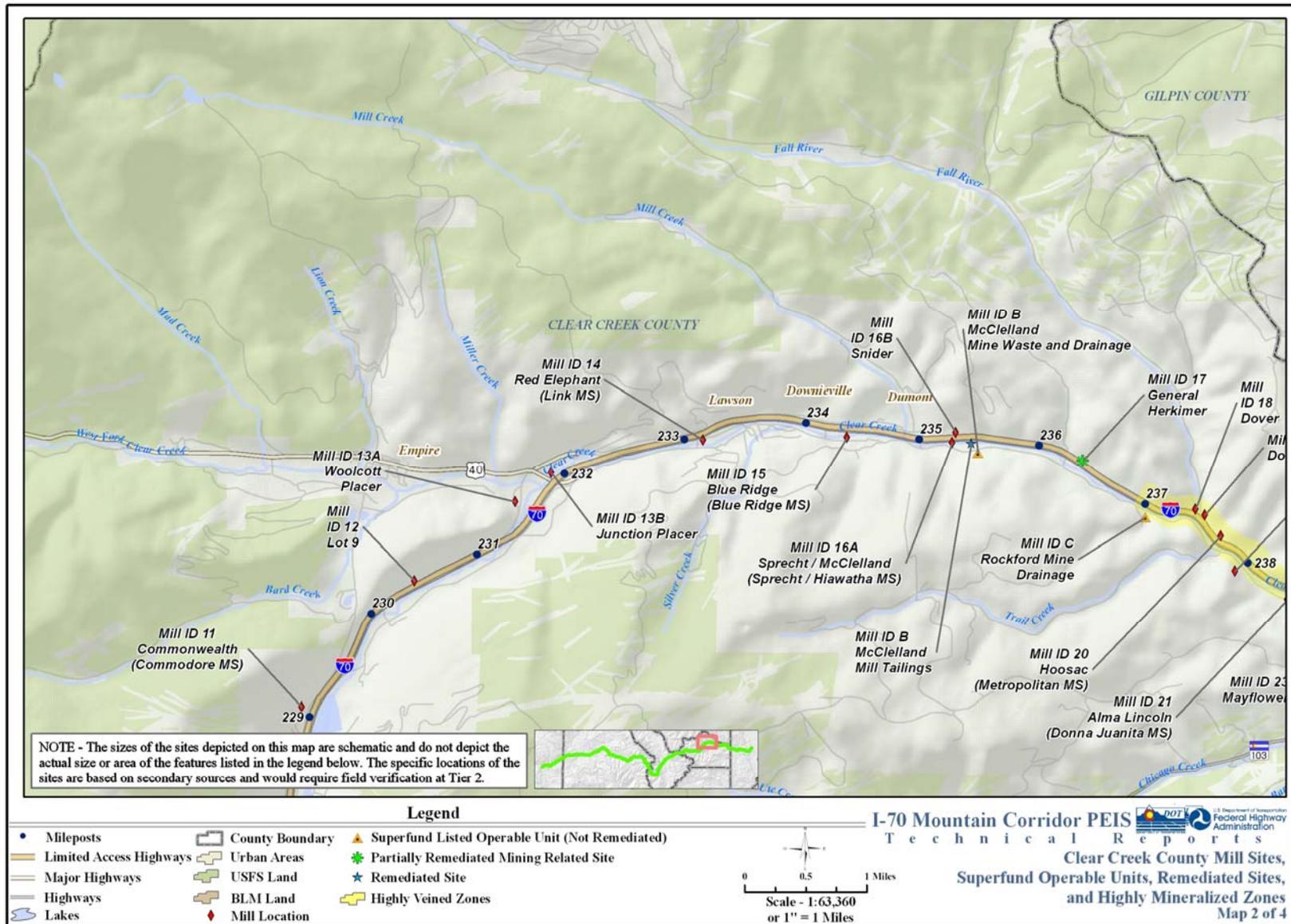


Figure 3. Mill Sites, Superfund Operable Units, Remediated Sites, and Highly Mineralized Zones in Eastern Clear Creek County

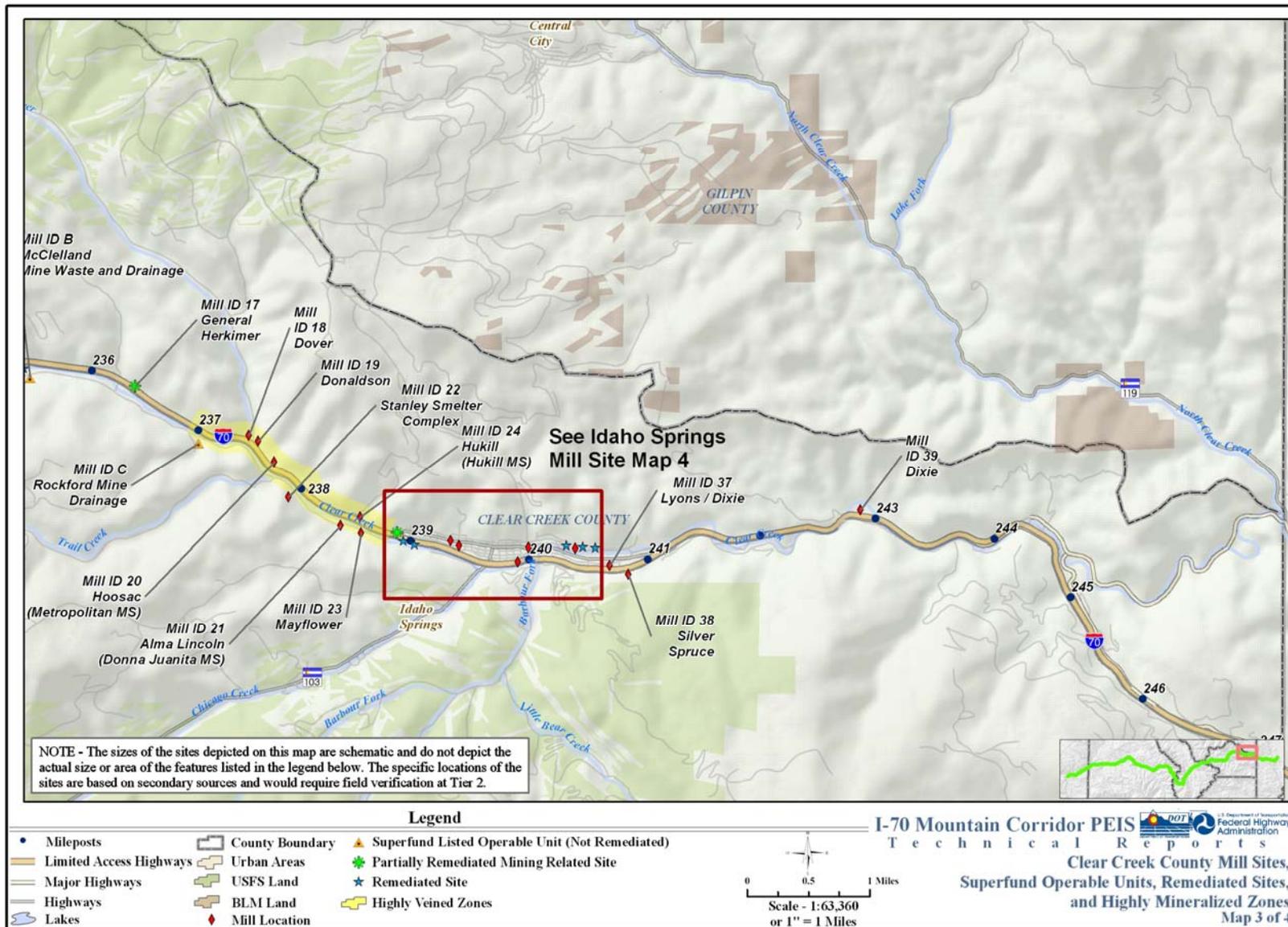
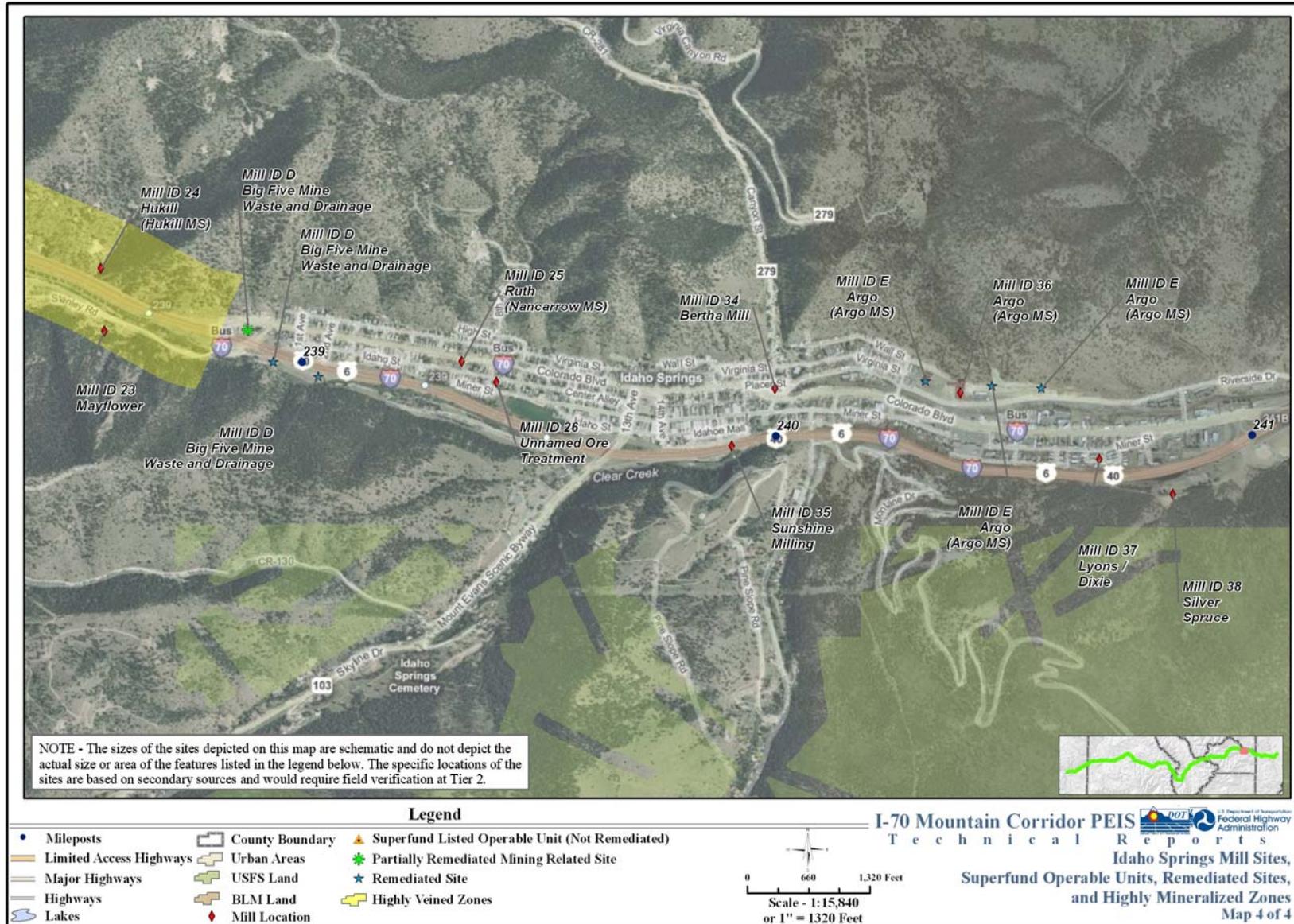


Figure 4. Mill Sites, Superfund Operable Units, Remediated Sites, and Highly Mineralized Zones in Idaho Springs



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 the PPSL Project. The matrix outlines the inputs, considerations, and outcomes needed for project development. This approach is consistent with the Life Cycle Phases and 6-step Process in the CSS Guidance for the I-70 Mountain Corridor.

Water Quality	
<p>SEDIMENT MANAGEMENT</p> <p>Objective Reduce sediment loading in waterways from winter maintenance, erosion, and mine waste.</p> <p>Applicable Laws Clean Water Act Section 303(d)</p>	<p>Inputs</p> <ul style="list-style-type: none"> Existing water quality monitoring programs Sediment Control Action Plans (SCAPs) Site specific assessments <p>Considerations</p> <ul style="list-style-type: none"> 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? <p>Outcomes</p> <ul style="list-style-type: none"> Revise or endorse SCAP Specific sediment management recommendations to meet the standards Identify site specific mitigation strategies Water Quality Management Plan
<p>CLEAN WATER ACT, SECTION 303(D) LISTING OF STREAM SEGMENTS</p> <p>Objective Reduce non-point source loading impacting stream segments and reduce metals and nutrients loading to meet water quality standards.</p> <p>Applicable Laws Clean Water Act CERCLA RCRA</p>	<p>Inputs</p> <ul style="list-style-type: none"> 303d Listing impairments by segment Gaining /losing segments <p>Considerations</p> <ul style="list-style-type: none"> What are the baseline vs. event driven issues? <p>Outcomes:</p> <ul style="list-style-type: none"> Remediation strategies for specific segments Sampling Analysis Protocol (SAP) Initiate site specific consultation with permitting agencies
<p>MINE WORKINGS IN THE I-70 RIGHT-OF-WAY</p> <p>Objective Avoid intercepting underground mines and remediate contaminate mine water where possible.</p> <p>Applicable Laws CERCLA RCRA Clean Water Act</p>	<p>Inputs</p> <ul style="list-style-type: none"> Subsurface/ Geotechnical Analysis Site Specific Avoidance opportunities <p>Considerations</p> <ul style="list-style-type: none"> What design/controls are available? <p>Outcomes</p> <ul style="list-style-type: none"> Water Quality design/controls/baselines Mitigation strategies Liability relief memo for specific project

SWEEP IMPLEMENTATION MATRIX

Water Quality	
<p>HIGHLY MINERALIZED ROCK FORMATIONS WITHIN THE I-70 MOUNTAIN CORRIDOR</p> <p>Objective Avoid cuts in rock walls that expose entrained heavy metals.</p> <p>Applicable Laws CERCLA</p>	<p>Inputs</p> <ul style="list-style-type: none"> • Site specific assessments <p>Considerations</p> <ul style="list-style-type: none"> • What alternatives minimize impacts? <p>Outcomes</p> <ul style="list-style-type: none"> • Avoidance or mitigation strategies
<p>PREVIOUS CONSTRUCTION PRACTICES USING MINE WASTE AS ROADBED MATERIAL</p> <p>Objective Avoid disturbing mine waste in mining areas or mine waste previously used as roadbed material.</p> <p>Applicable Laws CERCLA RCRA</p>	<p>Input</p> <ul style="list-style-type: none"> • Verify location inventory • Site specific assessments <p>Considerations</p> <ul style="list-style-type: none"> • What alternatives minimize impacts? <p>Outcomes</p> <ul style="list-style-type: none"> • Avoidance or mitigation strategies • Liability relief memo for specific project
Natural Habitat	
<p>WETLANDS PROTECTION</p> <p>Objective No net loss of wetland functions.</p> <p>Applicable Laws Clean Water Act Section 404 Executive Order 11990</p>	<p>Inputs</p> <ul style="list-style-type: none"> • Wetland location inventory • Site specific assessments • Wetland Functional Assessments • Current guidance and regulations • Coordination with USACE and USEPA <p>Considerations</p> <ul style="list-style-type: none"> • Do unique or highly functioning wetlands exist in project areas? • Will project be subject to USACE Merger Agreement? <p>Outcomes</p> <ul style="list-style-type: none"> • Site specific mitigation, preferably within the same watershed • Right-of-way acquisition • Clean Water Act Permit or continued consultation

SWEEP IMPLEMENTATION MATRIX

Natural Habitat	
<p>AQUATIC SPECIES WITH SPECIAL STATUS DESIGNATION UNDER STATE AND FEDERAL RULE</p> <p>Objective No further degradation to, and where possible improvement of, stream systems containing species of special designation.</p> <p>Applicable Laws Endangered Species Act CDOW Listing Colorado SB 40</p>	<p>Inputs</p> <ul style="list-style-type: none"> • Species habitat inventory • Existing recovery efforts • Section 7 consultation on special status species • Coordination with CDOW and USFWS <p>Considerations</p> <ul style="list-style-type: none"> • Do opportunities exist for project 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? <p>Outcomes</p> <ul style="list-style-type: none"> • Identify possible recovery efforts
<p>AQUATIC SPECIES AS A RECREATIONAL RESOURCE</p> <p>Objective Protect and improve aquatic systems as significant recreational resources.</p>	<p>Inputs</p> <ul style="list-style-type: none"> • Recreational resource inventory within corridor • Project area stream designations • Adopted local plans <p>Considerations</p> <ul style="list-style-type: none"> • Does the CDOW have special designation segments within the project area? <p>Outcomes</p> <ul style="list-style-type: none"> • Site specific mitigation strategies • Partnerships • Enhancement opportunities
Information	
<p>INFORMATION AND RESEARCH NEEDS</p> <p>Objective Identify and acquire information germane to watershed health.</p>	<p>Inputs</p> <ul style="list-style-type: none"> • Project specific data <p>Considerations</p> <ul style="list-style-type: none"> • 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? <p>Outcomes</p> <ul style="list-style-type: none"> • Data collection and use