MEETING NOTES

PROJECT:	23982-23929 I-70 West Vail Pass Safety and Operations Improvements
PURPOSE:	SWEEP ITF #7 Meeting
DATE HELD:	January 10, 2022
LOCATION:	Online Google Meet Meeting
ATTENDING:	John Kronholm, Project Manager, CDOT Region 3 Karen Berdoulay, Resident Engineer, CDOT Region 3 Rob Beck, Program Engineer, CDOT Region 3 Paula Durkin, CDOT Jen Klaetsch, CDOT Tripp Minges, CDOT Marcus Dreux, US Forest Service Justin Anderson, US Forest Service Liz Roberts, US Forest Service Kristin Salamek, CDOT USFWS Liaison Julie Smith, EPA Region 8 Nolan Hahn, EPA Region 8 Matt Hubner, EPA Region 8 Nolan Hahn, EPA Region 8 Stephanie Gibson, FHWA Jeff Bellen, FHWA Danielle Neumann, DNR Robert Jacobs, Summit County Dick Cleveland, Town of Vail Siri Roman., ERWSD Larissa Read, ERWSD Bill Hoblitsell, ERWSD Megan Wood, Kiewit Holly Huyck, Pinyon Environmental Bridget Mitchell, Pinyon Environmental Randal Lapsley, R S & H Jeb Sloan, R S & H Justin Shintaku, R S & H Mary Jo Vobejda, Jacobs Jim Clarke, Jacobs Pat Hickey, Jacobs Loretta LaRiviere, Jacobs
COPIES:	Attendees

SUMMARY OF DISCUSSION:

1. **Introductions & Meeting Purpose**
   a. Karen introduced the attendees at today's meeting.
   b. Mary Jo briefly reviewed the agenda and said the meeting goal is to review SWEEP ITF progress and gather your input on the SCAP and MAP Book.
2. **Project Progress**
   a. Mary Jo said the truck ramp in Construction Package 1 is completed and the highway closure system is under construction.

b. Construction has ceased for the winter season. Weekly website updates and email blasts will resume when construction restarts in the spring. There could be minor shoulder work being done during the winter, but no lane closures.

c. The TT has met monthly to review the project progress, look at design exceptions and reviewing the work that all the ITF groups have done. We are coming to a completion of many of the ITF groups:

ALIVE ITF has completed their work. The wildlife crossings will be included in CAP #4. It is possible this could change. There are also other discussions taking place around ALIVE and if anything changes, we will give you an update.

106/Aesthetic ITF completed the Aesthetic Guidelines and have been posted on the project website: Planning Documents — Colorado Department of Transportation (codot.gov)

Matt Figgs and the Kiewit team are working closely with Emergency Service Group for each of the construction packages so that everyone is aware as construction goes forward how emergency services and emergency response will be handled.

1. Dick said he has been contacted by east Vail residents regarding sound wall mitigation. He suggested we have a discussion about this so we can have answers for people on what the process is going to be and when it will happen.

   Karen said there is no sound wall in the current funded phase, it is a future funded phase for highway widening closer to their homes and there is no time frame for that work. We know their frustration is wanting more mitigation now. We have also received quite a few letters from people in east Vail and we have provided information to them. Karen said that if Dick gets more calls, he should have people submit their comments to cdot_wvailpassauxlanes.com and if they would like to speak with someone CDOT will respond.

3. Schedule

a. Mary Jo said the addition of a second bridge at MM 185 has extended the project by one year. All the other package schedules remain the same. We will have a separate landscaping package towards the end of the project to finish up the things that are completed in each construction package.

b. Karen said the design will be continuing through August 2023 because there will be a fifth package that will be put out for low bid to spread out the work to our construction community. To pace out the design a little more, we anticipate extending the Technical Team through mid-2023 and then the TT will be combined with the PLT. We are still figuring out that that 5th package will include but it will at least include the eastbound bridge and some demo of the westbound bridge, and it may end up including some other work which we will be determined when we see how the pricing looks.

4. SWEEP Progress Since Last Meeting

a. The field trip was held on September 27, 2021.

b. The SCAP body document, and the Map Book for MM 180-185 are completed and have been distributed for your review.

c. Construction Package 2 sediment control improvements are under design.

d. SWEEP Meeting #8 is currently planned for April. Prior to that meeting you will receive the Map Book for MM 185 – 190. This portion of the map book will be general because design of the eastbound side, which is ongoing through the spring, will impact what happens on the westbound side. The SCAP map book is only for the westbound side of I-70.

e. The maintenance manual will also be distributed for your review before the April SWEEP Meeting #8.

f. Any changes to the SCAP body document and Map Book MM 180 – 185 will be incorporated and highlighted-

5. Field Trip Discussion

a. Holly said during the field trip, there were some questions raised and we can explain how we are addressing some of these issues.

1. Sand volume is calculated for average years, what happens in a year that is not average?

   Sand volume is calculated for average years but there is a safety factor of 1.75 which covers much more than average years and actually provides volume well beyond the largest sand volume used during the years we used for the average. The number of years we used was fairly short but if you look at the SCAP, the use of sand has been decreasing and now it has leveled out. We used the leveled-out portion for figuring out the average and we have assumed that level of sand usage will continue.

2. How have priorities for construction and maintenance been set for sensitive areas?

   Holly said those are areas that will drain to wetlands or are adjacent to streams, particularly the major tributaries and Black Gore Creek, would be inspected and cleaned first. Maintenance does an inspection in the spring and cleans out in late summer to fall, and they will aim for those sensitive areas first.

3. Are maintenance resources adequate for the SCAP measures being implemented?

   There are several maintenance manuals and CDOT has a system now that is fairly new that lists every control measure in the state, including Black Gore Creek. It includes a checklist of every control measure. That way they aren't skipping something because the lists tell them where to go to inspect and clean.

   Karen said we will be putting out the maintenance manual before the next SWEEP meeting and we can spend more time talking about maintenance then.

6. Review of SCAP

a. The goal of this SCAP is to provide guidance for designers how to control sediment in order to improve stream and wetland conditions. This guidance is consistent with the original SWEEP MOU for the I-70 Mountain Corridor and the West Vail Pass EA commitments.

   This SCAP has been updated to reflect the proposed scope from the EA, water quality projects to date, and incorporate lessons learned. The SCAP will serve as a guide to current and future designers.

The first SCAP was created in 2002, but the recommendations for implementation were not fully integrated. The 2022 SCAP focuses on a fully integrated design and having implementation occur during roadway construction.

1. Danielle said she would like to hear how the sanitation district feels about the sediment control explanation because we agreed with all of their comments.

   Siri said the sizing of the basins for 1.75 safety factor made us feel more at ease, so we're good on the sizing of the structures. One of the concerns we are trying to figure out is that you have seen sediment volume go down and level off, but mag chloride is going up. We need to continue to talk about mag chloride use, what is getting in the stream, and how that affects this project. There really is no way to treat for mag chloride other than what we are doing now and want to be mindful of it because its use has gone up and will continue to increase with the additional asphalt.

   Bill said when we look at Black Gore and the greater Gore watershed, we are always looking at all the water quality issues holistically, while the SCAP specifically seeks to address sediment, but we don't want the other things fall to the wayside.

   Bill said that one of the things the Watershed Council was looking at was reporting. We have goals in the SCAP and maintenance manual, SWEEP implementation matrix and the MOU to make sure those goals are being assessed through monitoring, and make sure the information does feed back into the process and gets used over time. In our review, the SCAP was originally created in response to the sediment listing. The SCAP is a way to deal with CDOT's "waste load allocation" in a normal TMDL setting. Monitoring the waste load allocation is really important but so is monitoring the watershed sediment budget and the stream itself and making sure the numbers are going in the right direction and we just aren't picking up sand and assuming that everything else is fine. Those are the big picture items we are trying to keep in the conversation and if they don't live in the SCAP we want to make sure that somewhere else in SWEEP that they are being addressed.

   Siri said it is important to follow up and insure there are possibilities down the road for adjustments to things like the SCAP and Maintenance Manual in light of climate change. State requirements and adaptations, and changing visitor use patterns in the mountains will changes the highway use patterns. Snowfall and variables will change in the next 5-20 years, and there is a need to keep up with climate change in the mountains as part of this project.

2. Danielle said she didn't get a chance to read the SCAP, but she feels adaptive management is really important. Is there somewhere in the document where an adaptive management plan is detailed?

   Siri said she thought adaptive management should be included as part of this project but understands that CDOT has to work within certain boundaries and appreciates this group looking for other ways to do this. I know it's not part of the project, but I appreciate CDOT thinking outside the box to meet our needs.

   Siri said there is an MOU going around [related to CDOT EPB], but unfortunately their attorneys say ERWSD can't sign it because we can't restrict what we do from year to year, only one year at a time. We appreciate CDOT helping with

monitoring. I think if the Black Gore Creek Steering Committee keeps meeting twice a year to share data and if we find issues, we can find another way to fund solutions. We are trying to make sure we don't miss anything and get it documented in the right area.

Danielle thanked the group for the overview and said they also have challenges with the MOU. We are still looking into it internally but since our responsibilities are less, than I think we will be able to get to where we can sign it.

Karen said it is really challenging for CDOT to commit to adaptive management related to a project. Because we go through our project budget, figure out impacts and mitigation and develop the mitigation then we construct the mitigation along with the improvements and when the project closes out. The funding for the project is done. If things change and we need to do more, we look for a different funding source to make that happen.

Karen said she sees two agreements that are happening at the same time. One is the project itself which has its own impacts and mitigation, and the other is CDOT's commitment to SWEEP and Black Gore Creek Steering Committee and other commitments we have made to improve water quality in this corridor. While the projects may be more limited, those other commitments outside of the project are still there.

We're updating the SCAP as part of this project, but we are only constructing the SCAP components that are paid for by the project. In the future we can still look for funding, grants, and partnerships to continue to build things that are in the SCAP to make more improvements to our corridor. I know everyone wants it built right away but obviously it is incredibly expensive. Projects are short-lived, and the other commitments are much longer term and give us a seat at the table.

We understand there is a concern about mag chloride, and we will talk about it in another working group. Jen Klaetsch, Region 3 Environmental, is connecting us with some people at headquarters who are looking into this statewide. And they are looking at how other states address this challenge of trying to keep the road safe while putting down mag chloride and minimizing impacts.

Holly agreed that discussions are ongoing. A different part of CDOT has committed to ongoing sampling for several years that will continue outside of this project.

7. Review of Map Book Sheets

a. Holly reviewed a sample of a Map Book sheet. The wetland mapping is from the EA because the lower half wetlands were not mapped as part of the current project, so the wetland locations may change in the future. The idea is to have integrated sediment control where sediment is conveyed to treatment places. The existing sediment basins that are outside of the construction area are not going to be torn down until something will replace them.

b. The basins are sized on how much roadway is conveyed to them. The volume of sand from MM 180-185 is lower than MM 185-190 which parallels the 2002 SCAP. We have used the same ratios in the current Map Book.

c. Roadway lengths of treatment are noted in the table, so if you are wondering how we calculated a particular sizing, go to the table and you will see for the length of roadway

being treated. The basis of sizing is to try to increase the size along with whatever length of road is being treated. The hydraulic engineers used area for sizing, so three lanes' times the length is the same as was used in the Map Book and the SCAP. The conversions between areas and length are included in Appendix C of the SCAP.

d. I mentioned earlier we have a 1.75 safety coefficient and that addresses some of the questions about average sand use per sizing.

e. Much of the conveyance and treatment includes treating three end points for sand. About 30% of the sand stays up on the road or paved shoulders and gets swept up. The majority of the rest of the sand is conveyed to the sediment basins. A small percentage is side cast and does not reach basins. For those, especially in tight areas, we have stacked par logs and revegetation to keep the side cast sediment out of the streams.

f. A few places noted in the table and the Map Book are so narrow that even side cast cannot be captured. An example is around MM 183.04-183.14, where jersey barrier is just above a wall that extends down to the stream. In that case, the sediment load on the roadway is conveyed past that area and treated further down the road. The goal is to capture, convey as much sediment as possible and treat it.

g. Full implementation is much better integrated in this new system; it is built together as part of the widening and will capture more than is caught now. The focus is keeping the sediment in Zone 1, on or near the roadway, and not letting it get beyond that area Below that zone, both natural erosion and spring runoff carrying sediment will eventually clean out Black Gore Creek. The focus is to cut off traction sand from the watershed below.

h. Holly noted it is very helpful to look at the map sheets and table because it gives you a good sense of how things are pulled together and how we have everything conveyed and treated somewhere along the roadway.

8. SCAP Concepts in Construction Package 2

a. Jeb said we are getting close to completing the final design for this construction package which includes most of the recreation trail realignment and we are designing the SCAP features to treat the ultimate eastbound lanes in this area because that is where the sediment ponds need to be located. Most of these features are placed between recreation trail and I-70 to capture flows prior to crossing the trail and entering the creek.

b. The design team is working to minimize SCAP features to decrease the number of maintenance locations. There are 6 SCAP ponds and 2 special inlets for 1.8 miles of the I-70 eastbound lanes where we are adding a third lane. One of the big items we had to work through was maintenance access from the trail or I-70 with a pad for loading trucks. Most are accessed from the trail, but we also had to provide turnarounds and loading zones so they can clean out the ponds, load the trucks and get back onto I-70. We designed these to capture both the sand on I-70 and sand cast over the barrier during plowing. We designed the storm sewer network, that will be implemented in CAP #4, to get the roadway flows to the ponds and the same ponds will account for what gets cast over the barrier and onto side slope as well. We are trying to make sure these are sized to capture both the sand that stays on the roadway and what gets cast over the barrier.

Adjacent to the realigned rec trail we have a sediment pond with a concrete bottom. To make sure maintenance can get in and out and maintain capacity we put a hard bottom in, so they know when to quit digging. This pond sediment will be loaded onto the truck sitting on the trail, and the truck can turn using the hammerhead turnaround. We also have a weir wall and overflow inlet beyond it. We tried to account for not only capturing the sand but also larger storm events that might overwhelm the basin and overtop it.

1. Dick asked is the current trail and the future reconstructed trail will be designed to carry this type of truck load?

   Jeb said yes, we have worked with specifically the bridge and pavement designs to account for that type of loading.

2. Bill said thanks to Holly and all the team for the work they have put into this, it looks awesome.

3. Mary Jo inquired if you would still be taking comments on the SCAP and the map book and if so, what is the time frame?

   Karen said we would like to receive comments by January 24th

4. John said one comment we heard from stakeholders during the EA process was that the existing SCAP ponds and that SCAP was an afterthought to I-70. Now we are able to integrate the sediment basins and sediment collection with the redesign of I-70 and we are getting a much more effective and continuous system than what we had before.

9. Wetland Delineation Update

a. Pat said preliminary wetland delineation conducted for EA, but it was done primarily by mapping Hydro Fig vegetative communities, so it wasn't a formal wetland delineation process and was considered a conservative approach for locating potential wetlands. AlpineEco did a great job in the initial assessment given how quickly it was completed, they did a thorough job.

b. The EA/FONSI commitment is pr*ior to construction, all wetlands/waters of the US will be formally delineated using the US Army Corps of Engineers standards.*

c. Jacobs' Biology Team completed a more formalized wetland delineation process in late summer 2021. That delineation was done in accordance with US Army Corps of Engineers standards using the Western Mountains supplement. That wetland process confirmed a lot of what was mapped previously but also made some changes to the original mapping where it wasn't quite as extensive as it should have been. We also took the opportunity to look at hydrologic connectivity as it relates to potential jurisdiction of those wetland features.

d. So far it hasn't been necessary to go through a formalized jurisdictional determination from the USACE, but because all of the wetlands that we have been dealing with so far that will be affected by the project are more or less connected to Black Gore Creek so there is no question in their jurisdictional nature. But we may decide to go through that when we get to CP #4 where there are more roadside features that are potentially non-jurisdictional features. And it would be important at that time to distinguish what is jurisdictional and non-jurisdictional wetland separate from the status of federal permitting. Per the agreement with FHWA, CDOT will be mitigating for all wetland

impacts regardless of their status. However, from a 404 permitting perspective we do want to try to identify a protected wetland versus a roadside ditch that actually doesn't have connectivity of significant access to a formal waters.

e. Near the truck ramp there was an area that was mapped as part of a wetland in the original mapping and during our wetland delineation it was determined it was actually not a wetland.

f. The Black Gore Creek alignment was changed as a result of our update. Collecting satellite information is difficult in a heavy wooded deep valley. We spent quite a bit of time trying to make sure we were getting accurate date in that valley to properly map the alignment and in certain areas it varied from what was originally mapped.

10. Wetland Site Visit

a. Pat said once we completed our delineation, we continued to work with the USACE to try to arrange a delineation boundary confirmation meeting to confirm the accuracy of our delineated features. Unfortunately, they were not able to make it, but we did have a site visit with Nolan from the EPA and Paula from CDOT on 10/21/21. We looked at some of the wetland boundaries, discussed jurisdictional questions that we had, and it was helpful to get their perspective. We looked at the areas identified by AlpineEco during the EA process plus some additional areas we came across in our field assessments. We also discussed permitting strategies with the EPA and Paula what would make the most sense for the project to make sure we are covering all our bases.

b. The updated wetland boundaries resulted in the realignment of the southern bridge at Black Gore Creek. The original EA crossing was used for the FIR plan set, and it wasn't until after the FIR that we were able to implement some of these changes. This is a good example of shifting the bridge slightly to the south by about 50 feet we were able to avoid some wetland impacts and forested areas. There were other areas we were able to do the same.

c. Another big thing is fen avoidance. With the shifting of the highway bridges over Polk Creek. For safety, the highway has been shifted slightly to the north and as a result the recreation trail had to be shifted as well. Because it was a fairly steep hillside it is a known geological slide location, we need to design the grading to make sure we are minimizing our cuts into the hillside and not creating more of a slide scenario in this location. We also identified another fen wetland in the same area that we wanted to avoid so we worked with the design team to come up with an alternative that not only worked for the project and the trail but also avoided direct impact to this fen wetland.

d. Avoidance and Minimization measures being used are:

- As we integrated our formal delineation we recognized some areas where we could avoid and minimize impacts to wetlands.
- The SCAP design recommendations were integrated into design. We worked with the designers and the landscape team to come up with some ideas that worked not only for sediment control to minimize wetland impacts but also found some areas where we might be able to improve wetland conditions as a result of the landscape project.
- There were areas with multiple outlets, and we were able to consolidate them into one location and minimize impacts. In some cases, we moved the outlets to a location that was feeding into an area so that it would take advantage of that existing drainage. This

would allow to continue to hydrate that drainage outlet and avoid dehydration which we didn't want that to happen because it would be a dewatering of that wetland and tributary system.

- We also worked with the designers to include low tailwater basin energy dissipators to avoid creating a scour problem. These dissipate the water and disperses it in an appropriate manner that hydrate the lower wetland systems. Typical slope wetland systems have spring runoff, but it is also complemented by underground seepage.
- In some areas we steepened the roadside slopes and used guardrails and barriers to reduce the grading of the toes of the slope to avoid some minor impacts to wetlands. Retaining walls were also looked at to reduce the footprint.
- Bioswales were incorporated along the recreation trail, particularly on the opposite side of Black Gore Creek. Where we weren't worried about the bioswales really getting overrun with gravel we used them as an opportunity to create additional wetland habitat. We are going to try to incorporate the natural drainage that is being captured by the trail into more of a natural feature along the trail to potentially create some willow habitat along the trail.
- We also tried to minimize our impacts by building berms along the trail. Some of the berms will also help to incorporate some bioswales and wetlands features.
- With the updated delineation we found a spot where we could move the trail off the hillside a bit to slightly flatter area which will ultimately reduce the amount of forested vegetation that will be lost.
- Revegetation of construction impacts will be done by incorporating temporary matting in areas where access is needed over wetlands or riparian areas. The vegetation is trimmed, and the matting is put down. They can work over the top of it and when they are done, they can peel all the material back and the integrity of the soil and root masses remain, so you have a quicker natural revegetation process. The full landscape plan and revegetation will be incorporated into Package 4 plan set.
- We identified 20 plus potential wetland mitigation areas. The one that everyone seems to agree that we want to work on is the fen restoration above the maintenance shed near the top of the pass. It has degraded over time and has clearly been ditched in the past and that has resulted in the draining of the fen and key wetland soil. We will try to rehydrate that fen wetland system and that would be at least one mitigation that we could apply to this project. This is on Forest Service property so there is some coordination that need to occur with CDOT and the federal agencies to best make this work.

    1. Bill said thanks for taking the time to explain the rationale for how you are working through this. CDOT's commitment to doing in-basin and off-site mitigation for this rather than banking somewhere else is very important to local partners and this looks great as it progresses.
    2. Justin thanked Pat for this information and added that if you are still looking for additional wetland mitigation opportunities, we may have some ideas. He would

be interested to see the additional wetland opportunities that you have identified.

John said our main contact with the Forest Service is Marcus Dreux, but we are happy to keep you in the loop.

Pat said he would be very interested in speaking with both Justin and Patrick about what we have identified in the project corridor. There may be some places outside of our survey area that could really benefit not only the project area but the forest as a whole. We have started to put together a summary document of the potential wetland mitigation areas that we have identified. When it is complete we can distribute and start to have conversations on what makes the most sense to move forward with.

3. Danielle said CPW would be interested in seeing the mitigation document because we have some aquatic biologists that would like to be involved.

   Pat said they have been working with CPW in the context of SB 40 to minimize our impacts to Black Gore and Polk Creek during construction. We would like to get CPW's input on wetland mitigation as well.

11. Next Steps

Mary Jo reviewed the next steps for SWEEP:

- Continue integrating wetland delineation into the design
- Continue integrating SCAP design recommendations into design
- Submit SCAP Map Book from MM 185 - 190 and the Maintenance Manual to the SWEEP ITF for review prior to the final meeting expected to be in April 2022
- At the April SWEEP meeting we will review any changes to the SCAP and MM 180-185 Map Book from comments received by January 24th.
- Holly said as you are looking at the Map Book, please also look at the table that goes with it because they are strongly integrated and if you see any inconsistencies, we need to make sure those are fixed now.