

Meeting Notes



I-70 Floyd Hill to Veterans Memorial Tunnels

Project: I-70 Floyd Hill to VMT
Meeting: SWEEP Issues Task Force Meeting
Date: April 17, 2018; 1:00 pm to 3:00 pm
Location: CDOT Region 1, 425 Corporate Circle, Golden, CO

Attendees:
See Attached Sign-in Sheet

Summary of Action Items	Responsibility	Status
1. Obtain information/figure on wetland area preserved by development approval near Floyd Hill/CR 65	Fred	Complete
2. Follow up to see if there are site specific locations that may still be using sand for treatment	Neil	In progress

SUMMARY OF DISCUSSION

[Note: Action items are in [blue](#).]

1) Welcome / Introductions

Self-introductions were done by the group

2) Project Overview

Vanessa Henderson (CDOT) gave a project overview as shown in the attached presentation.

Lisa Lloyd (EPA): Is there a summary of the project description? The summary will be included with the notes for this meeting, and will be available on the website (<https://www.codot.gov/projects/i-70-floyd-hill-to-veterans-memorial-tunnels-improvements>).

Chase Taylor (Pinyon) reviewed the Stream and Wetland Ecological Enhancement Program (SWEEP) committee and the SWEEP Memorandum of Understanding (MOU) (January 2011).
https://www.codot.gov/projects/i-70-old-mountaincorridor/final-peis/final-peis-documents/20_App_D_SWEEP_MOU_Signed_01_2011_Rev50.pdf

Clear Creek Sediment Control Action Plan (SCAP) <https://www.codot.gov/projects/i-70-old-mountaincorridor/documents/clear-creek-scap-final-report.pdf>

Other planning documents/elements considered include:

- A Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor (<https://www.codot.gov/projects/i70twintunnels/other-documents/plt-technical-team/issued-task-forces/waterresources/A%20Regional%20Ecosystem%20Framework%20for%20Terrestrial%20and%20Aquatic%20Wildlife%20Along%20the%20I-70%20Mountain%20Corridor.pdf>)
- Guidelines for Improving Connectivity for Terrestrial and Aquatic Wildlife in the I-70 Mountain Corridor (<https://www.codot.gov/projects/contextsensitivesolutions/docs/pdfs/i-70-guidelines-for-enhancing-wildlife.pdf>)

Other relevant projects include:

- Veterans Memorial Tunnels (<https://www.codot.gov/library/studies/i70twintunnels-environmental-assessment>)
- Westbound I-70 Peak Period Shoulder Lane (<https://www.codot.gov/projects/i-70-westbound-peak-period-shoulder-lane>)

3) Fisheries, Wetlands, and Mining Issues and Concerns

Chase Taylor (Pinyon) reviewed fisheries, wetlands and wildlife concerns as shown in the attached presentation.

4) Mitigation Recommendations

Chase Taylor (Pinyon) discussed the mitigations as identified in the SCAP.

5) Map Review

Maps of the corridor were reviewed by the group. An overview of the discussion for each of the four maps is described below.

Neil Ogden (CDOT): Areas treated by traction sand recently changed – now being used from Empire Junction to 241 interchange (east Idaho Springs), magnesium chloride is being used from 241 to Denver. **Neil will follow up to see if there are site specific locations that may still be using sand.**

Holly Huyck (Clear Creek Watershed Foundation): Traction sand still exists in this area, ponds should be able to capture historic sand and erosion.

Lisa: Design of the corridor needs to keep some flexibility for future decisions (sand vs magnesium chloride)

Map 1

Anthony Pisano (Atkins): Options in the west include tunnel or rock cut. Rock cut would involve moving the creek slightly to the south. Does not change the angle of the road going into the tunnels.

Map comment: look at moving the creek north of the highway

Scott Haas (USFS): Need to be careful and consider geology when moving the creek. Issues were not encountered when work was done for Twin Tunnels.

Holly: Would rather have the tunnel option from a water quality perspective.

Map 2

Allison Michael (USFWS): Can the creek be moved north of the highway? Rather than kept between. May end up being a double move of the creek (move south to build the road, then relocate north).

Gary Frey (Trout Unlimited): Concerned about increased use of magnesium chloride going into the stream, and if that's really worse than the sand. Would like to see a study of comparison between the two.

Holly: Magnesium chloride has impacts on vegetation and reduces what will grow, need a buffer between the road and the stream.

Fred Rollenhagen (CCC): Frontage road issues with sanding/traction, this section of the creek may start to see more activity (potential for more sedimentation into the creek).

Map 3

Fred: a lot of erosion in this area, maybe there would be some opportunities for erosion mitigation coming off of I-70 and onto US 40.

Map 4

Holly: Preble's Meadow Jumping Mouse trapped here in 2004 (NE corner of CR 65).

Fred: Wetlands on the south side of I-70, county approved development and attempted to preserve wetlands ([try to get figure](#)) between Floyd Hill and CR 65 (protected in the approval of the subdivision).

Map comment: provide erosion control

6) Next Steps

Next steps for the project include:

- Next SWEEP meeting (late summer/early fall)
- Field Reconnaissance (wetlands)
- Agency Coordination
- Identify Mitigation
- Coordination with Design Team
- Partnership Opportunities

7) Project Schedule

Upcoming dates for future tasks include:

- Existing Conditions/Data Collection
 - Fall 2017 through 2018
- NEPA/30% Design
 - Winter 2017/2018 through Spring 2020
- Final Design followed by Construction (pending funding availability)
 - Spring/Summer 2020
 - Construction 2021-2024

8) Remaining Questions

Neil: Next meeting is after we have design, will there be more SWEEP meetings? Likely will have more meetings and more information from the field surveys.

Gary: Will the group get to see the field study report/methodology document? Will be included in a short presentation at an upcoming tech team meeting.

Gary: Are there any drinking water concerns with the additional chemicals in the creek? Not that we are aware of.

Sign-In Sheet



I-70 Floyd Hill to Veterans Memorial Tunnels

Project: I-70 Floyd Hill to Veterans Memorial Tunnels EA

Meeting: SWEEP Issues Task Force Meeting

Date/Time: April 17, 2018; 1:00 pm to 3:00 pm

Location: CDOT Region 1, 425 Corporate Circle, Golden, CO

Initial	Name	Agency	Address	Phone	E-Mail
CAT	Chase Taylor	Pinyon Env.	3222 S. Vance street 5200 Lakewood, CO 80227	5781 303-980-5200	Taylor@pinyon-env.com
HW	Holly Huyck	Clear Creek watershed Foundation		720-472- 1511	hhuyck@phoenixgeosciencesgroup.com
AM	Alison Michael	USFWS		303 236- 4758	alison-michael@fws.gov
RNP	Becky Pierce	CDOT HQ		303-512-4051	rebecca.pierce@state-co.us
CW	Carrie Wallis	Atkins			Carrie.wallis@atkinsglobal.com
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LH	Lisa Lloyd	EPA RO	1595 Wynkoop Denver, Co	303-232-7604	lloyd.lisa@epa.gov
JW	Joe Walter	CPW	6060 Broadway Denver CO	303-916-1180	joseph.walter@state.co.us
SPG	Scott Garnca 2	CDPHE	4300 Cherry Creek Drive S. Denver, CO 80246	303-692-2374	scott.garnca2@state.co.us

Sign-In Sheet



I-70 Floyd Hill to Veterans Memorial Tunnels

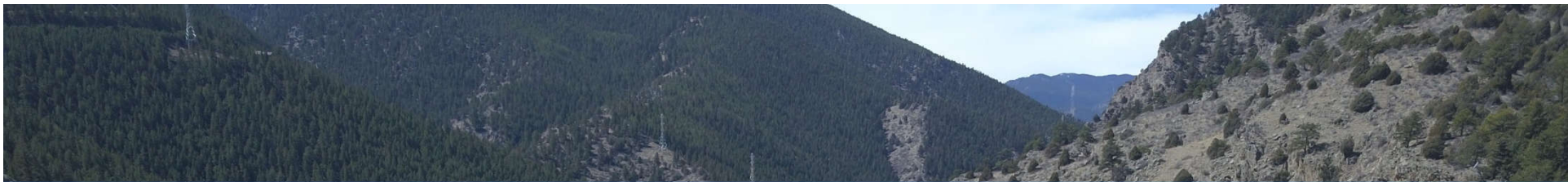
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Initial	Name	Agency	Address	Phone	E-Mail
GF	Gary Fray	CTU		3.986.0104	gfray@msu.com
FJ	Fred Rollenhagen	Clear Creek County	POB 2000 Georgetown, CO 80444	3-679-2360	frollenhagen@co.clear-creek.co.us
VH	Vanessa Henderson	CDOT		7/497-6924	vanessa.henderson@state.co.us



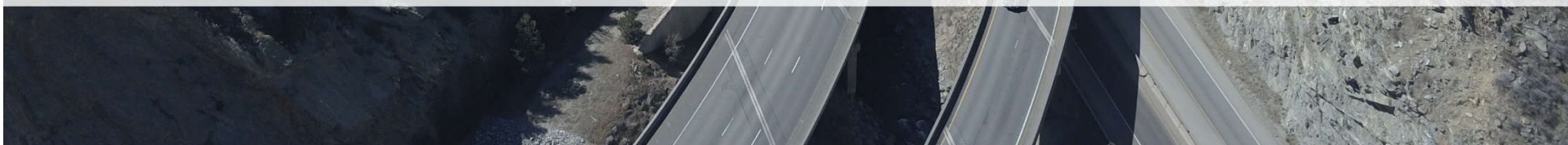
I-70 Floyd Hill to Veterans Memorial Tunnels

ATKINS



SWEEP Meeting

April 17, 2018





I-70 Floyd Hill to Veterans Memorial Tunnels

Agenda

- Welcome/Introductions
- Project Overview
- Fisheries, Wetlands, and Mining Issues and Concerns
- Mitigation Recommendations
- Next Steps
- Project Schedule
- Questions



I-70 Floyd Hill to Veterans Memorial Tunnels

Project Overview and Background



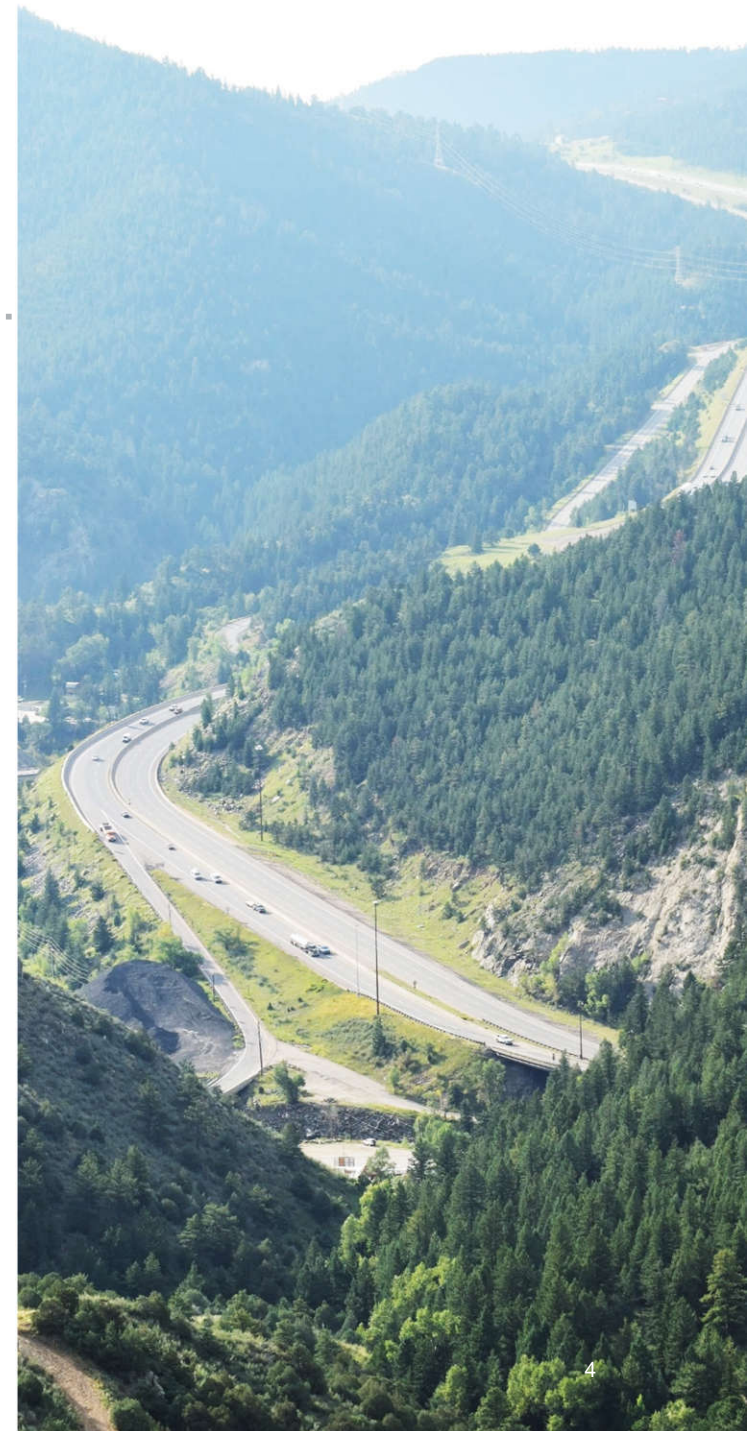


I-70 Floyd Hill to Veterans Memorial Tunnels

Purpose

The purposes of the I-70 Floyd Hill to Veterans Memorial Tunnels project are to:

- Improve travel time reliability, safety, and mobility and address the deficient infrastructure on westbound I-70 through the Floyd Hill area of the I-70 Mountain Corridor.
- Improve multimodal connectivity and provide an alternate route parallel to the interstate mainline in case of emergency or severe weather conditions.





I-70 Floyd Hill to Veterans Memorial Tunnels

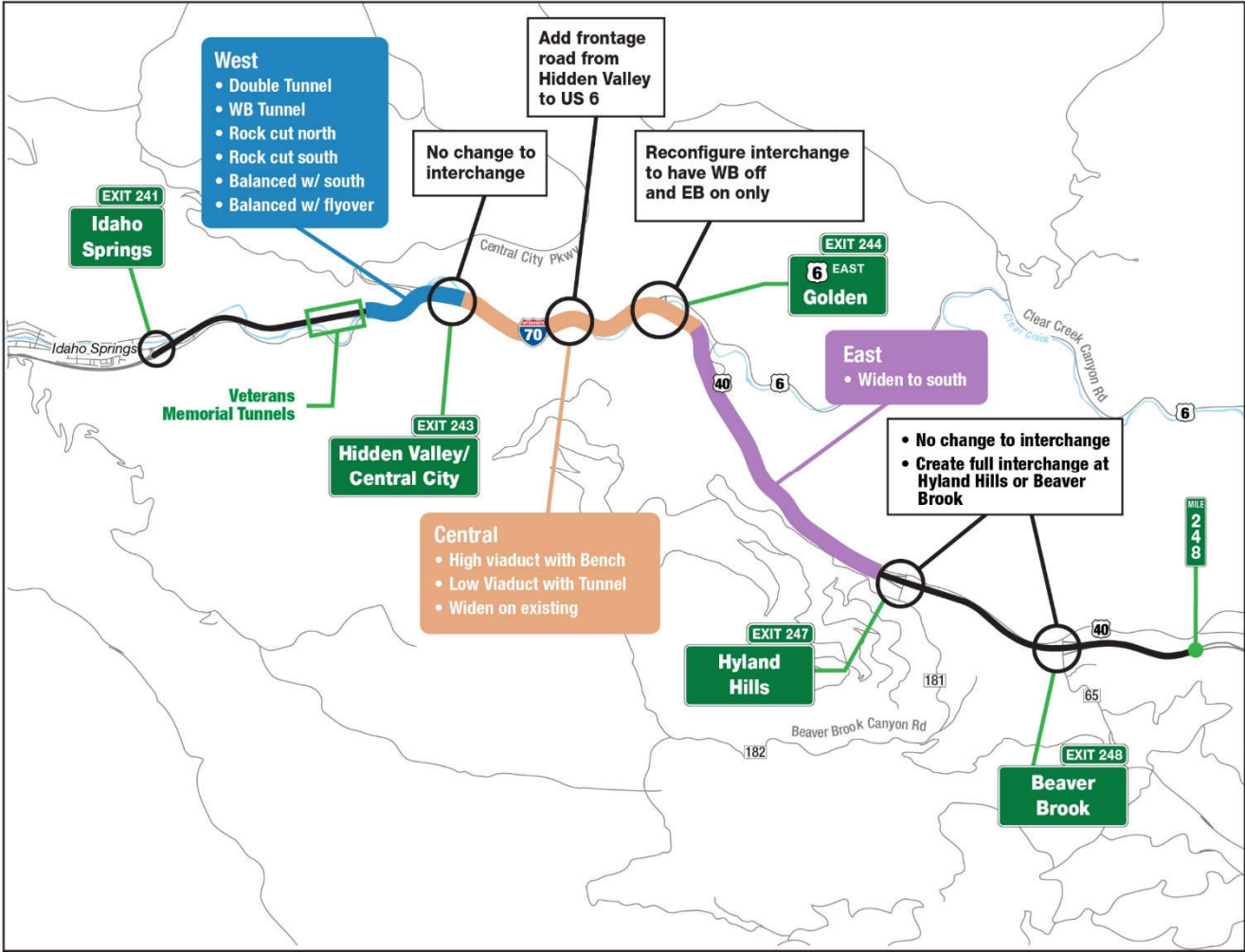
Proposed Action

- Provides a 3rd lane from the top of Floyd Hill through the tunnel (2011 ROD)
 - Evaluating options for tunneling, rock cuts, and benches at two locations (bottom of Floyd Hill and just west of Hidden Valley)
 - Evaluating west terminus (dropping 3rd lane and tie-in with WB PPSL)
 - Evaluating need for truck climbing/acceleration lane with eastbound on-ramp addition at US 6
 - Evaluating additional intersection and interchange improvement needs throughout
- Addition of trail and frontage road between tunnel and US 6 (2011 ROD)
- Evaluating eastbound curve safety improvements



I-70 Floyd Hill to Veterans Memorial Tunnels

Design Options





I-70 Floyd Hill to Veterans Memorial Tunnels

SWEEP Committee

The I-70 Mountain Corridor passes through several watersheds that support numerous aquatic resources.

- I-70 impacts water quality and viability of watershed ecology.
- Lead agencies formed a working group to address these issues through the Stream and Wetland Ecological Enhancement Program (SWEEP) committee.
- The committee works to identify and recommend appropriate mitigation strategies
- The SWEEP Memorandum of Understanding (MOU) (January 2011)
- This allows for holistic consultation and documentation by streamlining this process for all projects along the corridor.



I-70 Floyd Hill to Veterans Memorial Tunnels

Planning Elements

Clear Creek Sediment Control Action Plan (SCAP) finalized in 2013

- SCAP study area covers 33 mile Clear Creek I-70 Corridor from EJMT to Beaver Brook
- Recommends sediment control BMPs for highway-related impacts
- Three areas identified as higher priority for highway sediment and nutrient loading (FH).
- Areas with highly mineralized rock cuts or mine waste residuals were identified
- Other areas in general should use sediment control improvements as detailed in the SCAP



Photos: CDOT



I-70 Floyd Hill to Veterans Memorial Tunnels

Planning Elements

- SWEEP MOU and Implementation Matrix
- A Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor
- Guidelines for Improving Connectivity for Terrestrial and Aquatic Wildlife in the I-70 Mountain Corridor



Photos: CDOT



I-70 Floyd Hill to Veterans Memorial Tunnels

SWEEP Implementation Matrix

Considerations during project development:

- Sediment management
- CWA Section 303 (d) list
- Mine workings in I-70 right-of-way
- Mine waste as road bed
- Wetlands protection
- Special status species
- Aquatic species as a recreation resource
- Information and research needs.



I-70 Floyd Hill to Veterans Memorial Tunnels

Other Relevant Projects

Veterans Memorial Tunnels

- Completion date 2015
- Implemented Clear Creek water quality monitoring program for Hidden Valley segment

Westbound I-70 Peak Period Shoulder Lane

- Environmental Evaluation and Analysis in Progress
- Approximately Fall 2018 for final design followed by construction



I-70 Floyd Hill to Veterans Memorial Tunnels

SWEEP Issues Discussion

Identify:

- Initial list of issues and concerns
- Information and data needs
- Initial mitigation recommendations



Graphic: Google Images



I-70 Floyd Hill to Veterans Memorial Tunnels

Initial Stakeholder Concerns

- Clear Creek is a high value fishery
- Channelization of Clear Creek
- Clear Creek Sediment Control Action Plan
- Minimize wetlands impacts
- Stream Cross Drains should be fish friendly
- Mining waste and mineralization
- Recreational Use and Quality of Experience
- Maintain fishing access

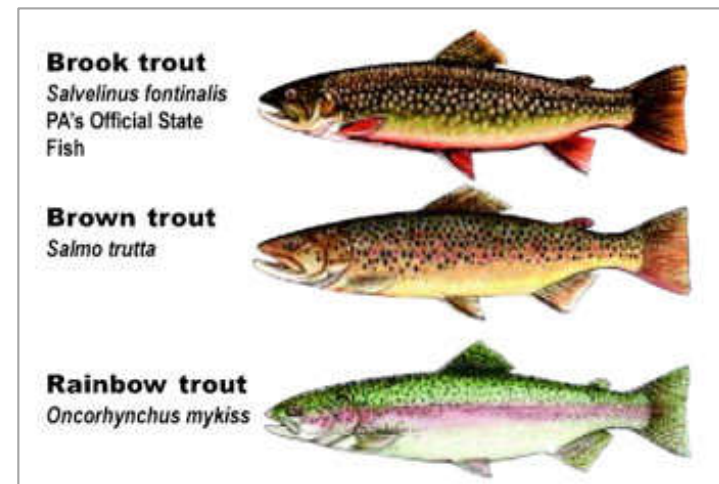


I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Fishery and Aquatic Species

Fish

- Brown trout
- Rainbow trout
- Brooke trout
- Cutthroat trout
- Various Suckers
- Benthic Invertebrates



Graphic: www.fishandtrout.com



I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Fishery and Aquatic Species

Construction and Maintenance Elements

- Increased storm water runoff from impervious surface
- Drainage Pattern Changes
- Petroleum discharge from spills and vehicles
- Maintain fish passage upstream/downstream during construction
- Sedimentation





I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Wetlands

- Multiple potential wetlands identified in the project area
- Primarily associated with Clear Creek and Beaver Brook (eastern end)
- Potential for wetlands along Sawmill Gulch, Johnson Gulch and unnamed tributaries
- Potential for impacts



Photo: Google Images



I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Mine Waste & Mineralization

- Mine Waste Residuals
- Mineralized Rock Cuts
- Historic Mining Claims and Shafts



Photo: www.mindat.org



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Issue: Water Quality

- Floyd Hill identified in SCAP as one of three higher priority areas for erosion and sediment control
- High sedimentation rates resulting from slope erosion and traction sand from Beaver Brook (MP 248) to MP 244 (US 6)





I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Water Quality

- Impacted streams include Beaver Brook, Johnson Gulch, and Clear Creek
- SCAP integrates westbound and eastbound drainage and sediment control BMPs
- SCAP improvements also specified for 2-mile Hidden Valley segment.





I-70 Floyd Hill to Veterans Memorial Tunnels

Issue: Water Quality

- Baseline water quality data available for Clear Creek in Hidden Valley area for highway-related sediment/salt loading.
- Clear Creek is identified as 303(d) listed water body requiring TMDL's (COSPCL11 Mainstem of Clear Creek from a point just above the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado)
 - Cadmium (Dissolved) High Priority (Roadway Pollutant of Concern per CDOT's MS4 Permit)
 - Temperature High Priority



I-70 Floyd Hill to Veterans Memorial Tunnels

Mitigation Recommendations

- Implement improvements identified in the SCAP as appropriate
- SCAP for Floyd Hill area identifies the following:
 - 32 sediment basins
 - Inlet sediment traps
 - Culvert pipe rundowns to prevent slope erosion
 - Implement standard construction BMPs
 - Develop a construction Materials Management Plan
- Aquatic permeability should be improved if culverts are replaced



I-70 Floyd Hill to Veterans Memorial Tunnels

MAP REVIEW

- Considerations for Central Section
- Considerations for West Section



I-70 Floyd Hill to Veterans Memorial Tunnels

Next Steps

- Next SWEEP meeting (late summer/early fall)
- Field Reconnaissance (wetlands)
- Agency Coordination
- Identify Mitigation
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- Partnership Opportunities



I-70 Floyd Hill to Veterans Memorial Tunnels

Schedule

- **Existing Conditions/Data Collection**
 - Fall 2017 through 2018
- **NEPA/30% Design**
 - Winter 2017/2018 through Spring 2020
- **Final Design followed by Construction***
 - Spring/Summer 2020
 - Construction 2021-2024



**Pending funding availability*



I-70 Floyd Hill to Veterans Memorial Tunnels

Questions

