



**APPENDIX A20**  
**CUMULATIVE IMPACTS TECHNICAL MEMORANDUM**



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### INTRODUCTION AND BACKGROUND

The I-70 West Vail Pass Auxiliary Lanes project is located in Eagle and Summit Counties, with the eastern terminus just east of the Vail Pass Rest Area and the western terminus in the Town of Vail. The project study limits include eastbound (EB) and westbound (WB) I-70 from mile post (MP) 179.5 to MP 191.5. The project location and approximate study area are shown in **Figure 1**.

As part of the initial National Environmental Policy Act (NEPA) analysis, a Tier 1 Environmental Impact Statement (EIS) for the I-70 Mountain Corridor (C-470 to Glenwood Springs) was completed in 2011. This EIS, the *I-70 Mountain Corridor Programmatic Final Environmental Impact Statement* (PEIS), recommended the addition of auxiliary lanes EB and WB on the west side of Vail Pass from MP 180 to MP 190 as part of the Preferred Alternative's Minimum Program of Improvements. The PEIS also identified the potential for an elevated Advanced Guideway System (AGS) for transit along the I-70 corridor, including the West Vail Pass project corridor. A follow-up AGS Feasibility Study in 2014 analyzed potential alignments and costs for an AGS system and determined there were three feasible alignments for future AGS. While AGS is not part of the West Vail Pass Auxiliary Lanes project, the AGS Feasibility Study was used to ensure the project did not preclude the favored alignment of the three, which would be partially within CDOT right-of-way (ROW).

A Tier 2 NEPA analysis is the next step required to move highway improvements forward. The project is following the Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) NEPA process to confirm the needs for improvements to West Vail Pass, identify a Proposed Action, investigate the anticipated benefits and impacts of the proposed improvements (through an Environmental Assessment), produce conceptual design plans, and make funding, scheduling, and phasing recommendations.

This memorandum describes the cumulative impacts that would result from implementation of the Proposed Action for improvements associated with the project in comparison to the No Action Alternative when added to other past, present, and reasonably foreseeable future actions.

### I-70 FINAL PEIS AND RECORD OF DECISION (TIER 1 ANALYSIS)

The I-70 Final PEIS (CDOT, 2011b) identified high-level potential cumulative impacts for the following resources:

- Air quality
- Wildlife and Threatened, Endangered, and Special Status species
- Wetlands
- Water resources
- Social and economic values
- Recreation



- Visual
- Historic resources

The I-70 Final PEIS committed to conducting specific additional analysis and coordination regarding cumulative impacts during future Tier 2 processes. The intent of cumulative impacts analyses performed for Tier 2 processes is to focus on those environmental resources studied that are of most concern in the particular study area and watershed. The following commitments from the I-70 Final PEIS are applicable to this Tier 2 process:

- Update impacts information based on greater design detail and more localized resource information
- Revise study area boundaries, as necessary
- Conduct more detailed studies to assess effects to historic properties
- Develop interagency cumulative impact mitigation plans through regional coordination and in conjunction with the implementation plan for the I-70 Final PEIS Preferred Alternative

The cumulative impacts analysis contained in Chapter 4 of the I-70 Final PEIS primarily focused on cumulative impacts related to induced growth from the transportation improvement alternatives evaluated in the document; however, the addition of auxiliary lanes on West Vail Pass was not anticipated to result in induced growth. While growth will continue to occur in the Eagle River Watershed, the growth will not be a result of the addition of auxiliary lanes. The cumulative impacts that were identified for the Eagle River Watershed were associated with additional impact to resources that were impacted previously by construction of the I-70 Mountain Corridor, including wildlife, wetlands, water resources, recreation, and visual.

## LEGISLATION

The Council on Environmental Quality (CEQ) states that cumulative impacts result from the “incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (CEQ, 40 Code of Federal Regulations [CFR] 1508.7). The CEQ recommends that cumulative impact analyses examine resources that could be impacted by the action(s) under investigation or that are known to be vulnerable. This is because an action cannot contribute to cumulative impacts to a resource if it will not have a direct or indirect impact on that resource. Additionally, spatial and geographic parameters must be established in order to evaluate impacts, which may occur in a different area, and to capture impacts from past or future actions. The CEQ has released a document, *Considering Cumulative Effects under National Environmental Policy Act (NEPA)*, to aid in assessment of cumulative impacts in NEPA documents (CEQ, 1997).

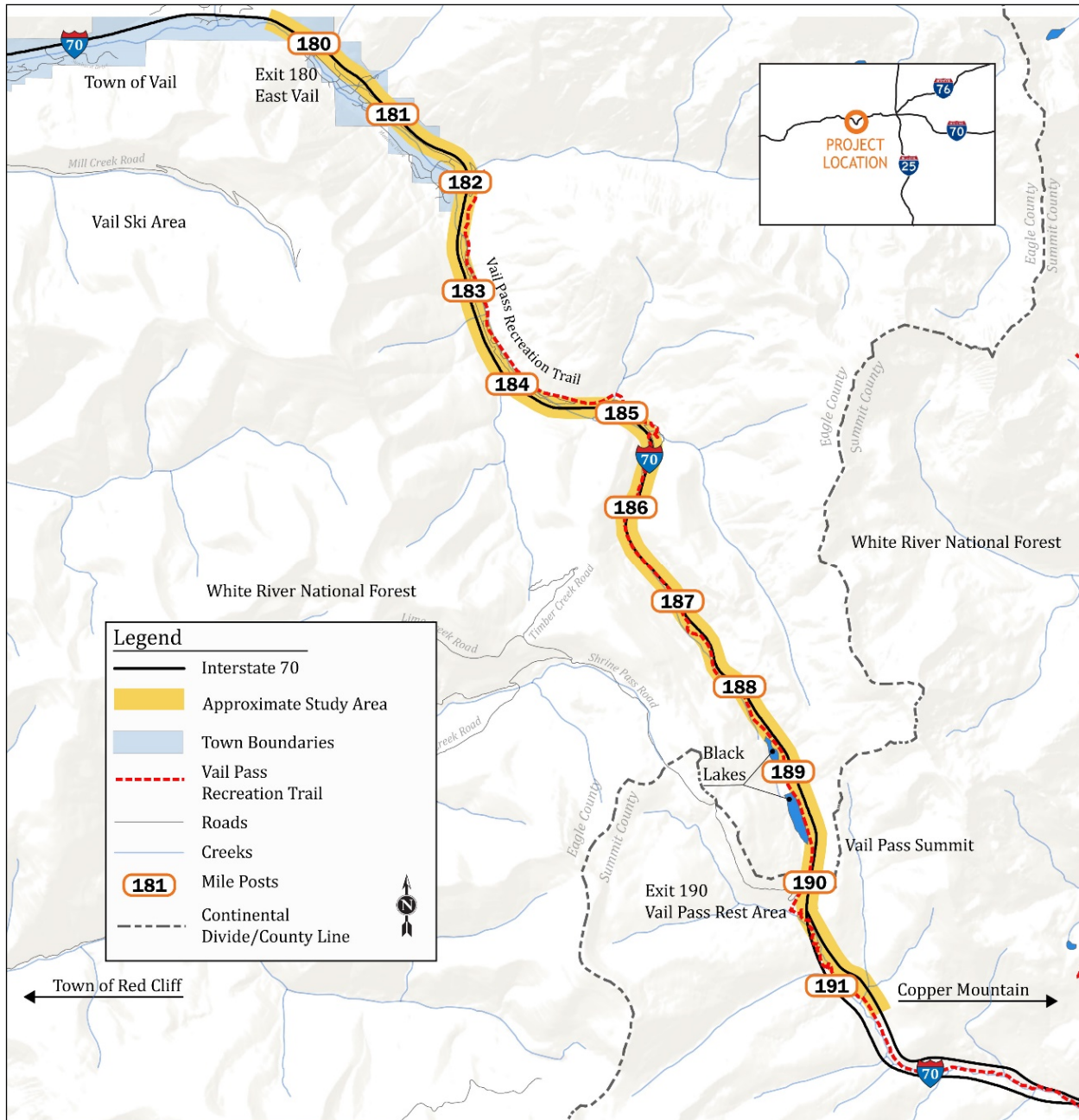
FHWA guidance, *Secondary and Cumulative Impact Assessment in the Highway Project Development Process*, reiterates CEQ’s message of the importance of considering potential cumulative impacts in decision making for transportation projects and provides direction on implementation of CEQ requirements (FHWA, 1992). It emphasizes the importance of considering the functionality of the resources and trends in the condition of the resources that may be impacted. This guidance, along with the U.S. Environmental Protection Agency’s (USEPA’s) document titled *Consideration of Cumulative Impacts in USEPA Review of NEPA Documents* and CDOT’s NEPA Manual, which was

updated in August 2017, provided direction for this cumulative impact assessment (USEPA, 1999; CDOT, 2017a).

**PROJECT LOCATION**

The Project extends from the Town of Vail (MP 179.5) east to the top of Vail Pass (MP 191.5) in Eagle and Summit Counties, Colorado.

**Figure 1. Project Location**



Source: DEA Project Team



## PURPOSE AND NEED

The purpose of the project is to improve safety and operations on EB and WB I-70 on West Vail Pass.

This project is needed to address safety concerns and operational issues due to geometric conditions (steep grades and tight curves) and slow-moving vehicle and passenger vehicle interactions that result in inconsistent and slow travel times along the corridor. The I-70 Mountain Corridor PEIS identified safety and mobility issues on West Vail Pass related to speed differentials due to slow-moving vehicles. (*Mobility is defined as the ability to travel along the I-70 Mountain Corridor safely and efficiently in a reasonable amount of time.*)

- **Safety Concerns:** A high number of crashes occur along the corridor related to speed, tight curves, narrow roadway area, and inclement weather/poor road conditions. Speed differentials between passenger vehicles and slow-moving vehicles cause erratic lane changes and braking maneuvers resulting in crashes and spin outs. Emergency response is hampered by vehicular speeds and lack of roadway width to provide room for emergency vehicles to pass.
- **Operational Issues:** The steep grades and resulting speed differentials causes slow and unreliable travel times through the corridor. Tight curves also cause drivers to slow down. The corridor is frequently closed by vehicle incidents, due to lack of width to maintain a single lane of traffic adjacent to emergency responders, resulting in substantial traffic backups and delays. During winter months, the travel lanes and shoulders are severely impacted by snow accumulation, impacting the overall capacity of the corridor. (*Operations is intended to describe the flow of traffic at desirable speeds given the geometric and prevailing weather conditions.*)

## NO ACTION ALTERNATIVE

The No Action Alternative is included as a baseline for comparison to the action alternative. Under the No Action Alternative, only programmed projects that are planned and funded by CDOT or other entities would be completed. Currently, there are no large-scale transportation projects to add safety improvements, operational improvements, vehicular capacity, and multimodal facilities along I-70 within the project area. The No Action Alternative would leave West Vail Pass as it currently is configured and would not provide substantial improvements beyond typical current maintenance (e.g. resurfacing and plowing) activities. The roadway would remain the same, with 2 EB and 2 WB lanes (each 12 feet in width), an inside shoulder typically 4 feet in width, and an outside shoulder typically 10 feet in width.

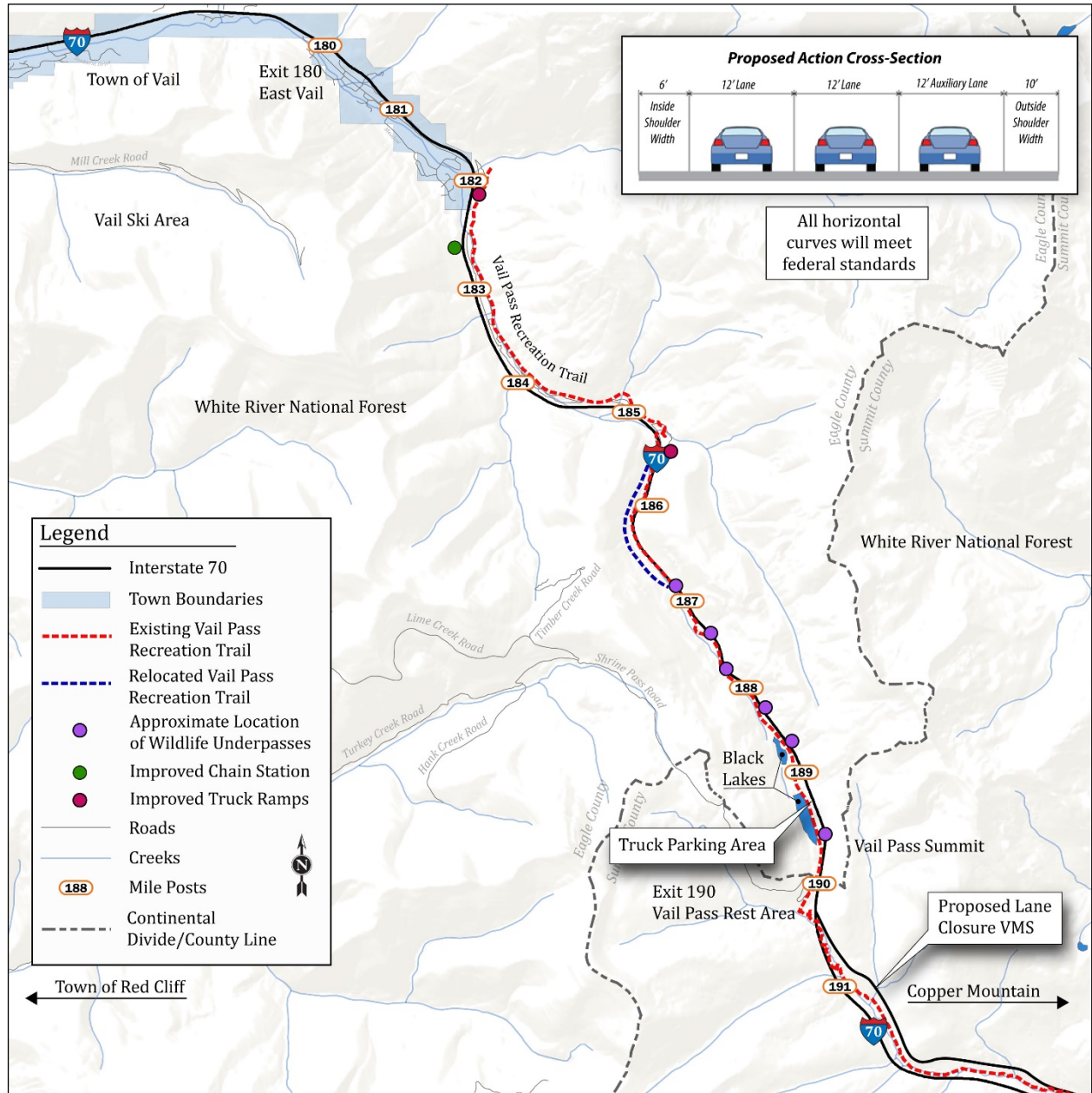
## PROPOSED ACTION ALTERNATIVE

The Proposed Action (**Figure 2**) will add a 12-foot auxiliary lane, both EB and WB, for 10 miles from approximately the East Vail exit (MP 180) to the Vail Pass Rest Area exit (MP 190). Existing lanes will be maintained at 12 feet and the shoulders would be widened to a minimum of 6 feet for inside shoulders and maintained at 10 feet for outside shoulders. All existing curves will be modified as needed to meet current federal design standards.

Intelligent Transportation System (ITS) equipment will also be installed along the I-70 project corridor, consistent with recent study recommendations. Additional variable message signs (VMSs)

will be installed at key locations to warn drivers of upcoming curves, grades, and incidents. Additional variable speed limit signs will be installed to manage driver speeds to conditions. Automated lane closure signage will be installed approaching the East Vail exit on EB I-70 and approaching the WB I-70 Vail Pass Rest Area exit to quickly and efficiently close lanes when needed.

**Figure 2. I-70 West Vail Pass Auxiliary Lanes Proposed Action**



Source: DEA Project Team



Additional elements of the Proposed Action include:

- The Vail Pass Recreation Trail will be directly impacted by the addition of the I-70 auxiliary lane and therefore relocated for approximately two miles from MP 185 to MP 187.
- Existing emergency truck ramps, located at approximately MP 182.2 and 185.5, will be upgraded to current design standards.
- Six wildlife underpasses and wildlife fencing will be constructed throughout the corridor.
- Additional capacity will be added to the existing commercial truck parking area at the top of Vail Pass.
- Widened shoulders (minimum of eight feet of additional width beyond the 10' shoulder) at multiple locations to accommodate emergency pull-offs, emergency truck parking, and staging for tow trucks.
- Improved median emergency turnaround locations to accommodate emergency and maintenance turnaround maneuvers.
- Improved chain station located at approximately MP 182.5 with additional parking, signage, lighting, and separation from the I-70 mainline.
- Avalanche protection located at approximately MP 186.

## **METHODOLOGY**

Individual resources have been analyzed to understand the impacts from the project specific to the resource itself. These impacts have been reviewed in this report to understand how past, present, and reasonably foreseeable future projects will affect these resources in conjunction with this project. Based on the time the impacts would occur and the natural boundaries of resources, a timeframe and study area were created to assess cumulative impacts. A list of past, present, and reasonably foreseeable future projects was generated by reviewing local, regional, and state planning documents, including the I-70 Final PEIS, and through communication with Eagle County, the Eagle River Watershed Council, Town of Vail, U.S. Forest Service (USFS), CDOT staff, and numerous websites of municipalities and organizations across Eagle and Summit Counties and Eagle River watershed.

## **RESOURCES EVALUATED**

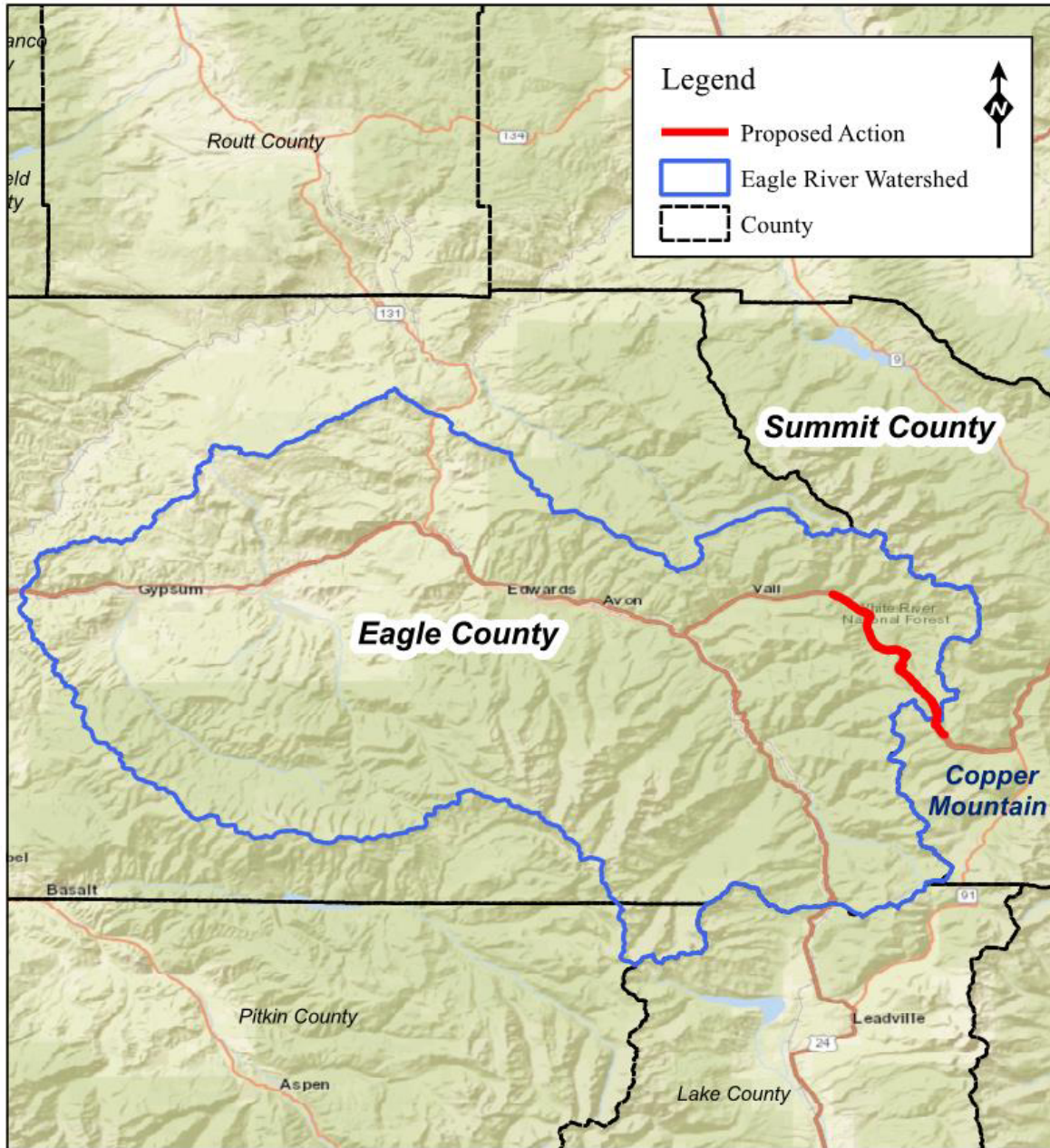
Based on the Project's existing conditions and through coordination with FHWA, the following resources were analyzed for cumulative impacts for the Project: climate change, biological resources, wetlands and other surface waters, water quality, economics, recreation, and historic resources. Resources that were not included in this analysis due to minimal impacts or benefits include hazardous materials, air quality, noise, archaeology, paleontology, land use, environmental justice, and visual resources.

## **RESOURCE STUDY AREAS**

The geographic limits of the study area for cumulative impacts varies by resource. For biological resources, wetlands and other surface waters, and water quality, the cumulative impacts study area comprises the Eagle River watershed. The Eagle River watershed is composed of approximately 970 square miles, including the towns of Vail, Minturn, Avon, Edwards, Eagle, and Gypsum (USGS, 2020). For historic, land use, economics, and recreation, the cumulative impacts study area consists of Eagle

County and a portion of Summit County, extending to Copper Mountain. **Figure 3** shows the county and watershed boundaries in relation to the Project location.

**Figure 3. Cumulative Impacts Study Areas**



**TIMEFRAME FOR THE ANALYSIS**

The timeframe considered for the cumulative impacts assessment begins in the 1870s, when lead carbonate ore was found in Leadville and the first permanent camp was established in Red Cliff, followed by the establishment of Eagle County in 1883. The timeline extends to 2045, which corresponds to the Project’s planning horizon year.





## PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

The cumulative impacts analysis must take into consideration the aspects of the environment affected by the Proposed Action, as well as the impacts of that action in relation to other past, present, and reasonably foreseeable actions in the cumulative impacts study area for each resource. Reasonably foreseeable actions are those future activities that have been committed to or that are known proposals, which could take place within the defined planning horizon.

Past, present, and reasonably foreseeable future actions are considered in the analysis to identify:

- If the environment has been previously degraded and to what extent
- If ongoing activities are causing impacts
- Trends for activities in the area
- If the environment will be degraded in the foreseeable future and to what extent

### PAST AND PRESENT ACTIONS

Beginning in the latter half of the nineteenth century American and European elite began visiting Colorado to experience its natural beauty. In 1870 Colorado was connected to the rest of the country when the Denver Pacific Railroad completed a rail link between Denver and Cheyenne, linking Colorado to the Union Pacific Railroad (transcontinental railroad), and Denver and Kansas City. Travelers began arriving by train, and early resorts and hotels catered to wealthy visitors in Colorado Springs, Boulder, and Denver in the early 1890s. Most early resorts and hotels constructed for tourists were located in cities or in isolated areas of the high country accessed exclusively by rail. Eagle County was established by the Colorado legislature on February 11, 1883 and grew from a population of 3,725 in 1890 to over 55,000 in 2019.

US 6 was one of the earliest highways designated as part of the U.S. Highway System in 1926. Its route across Colorado began taking shape in the early 1930s, and by the latter part of the decade it extended west from Denver through Mt. Vernon Canyon, over Loveland Pass toward Leadville, and on to Grand Junction via US 24 toward the Utah border. However, between 1939 and 1940, US 6 was rerouted using State Highway (SH) 78 over an unnamed pass near Black Lake in Eagle and Summit Counties, instead of along US 24 through Climax, Leadville, and Minturn. US 6 over Vail Pass was part of a coast-to-coast highway that provided an important transportation link between Denver and the previously remote Gore Creek Valley, future site of Vail Village. The Eagle County Regional Airport opened in 1947 and has undergone numerous updates and expansions, providing greater access to the mountain communities.

Charles. D Vail, who served as the state engineer from 1930 to 1945 proposed a direct route from Denver that from Frisco would climb through Uneva peak and Shrine Ridge, then follow Gore Creek into the Eagle River Valley. The route was soon referred to as “Vail Pass” but would the project would remain a dream for over three decades.

In 1942 during World War II, Camp Hale was established in Eagle Park, east of US 24 between Leadville and Red Cliff to provide winter and mountain warfare training. The size of Camp Hale varied between 5,000 and 247,243 acres during the time that it was an active military installation. From 1942 to 1965, multiple teams and groups utilized the camp, including the 10th Mountain Division, the 38th Regimental Combat Team, 99th Infantry Battalion, and soldiers from Fort Carson. From 1959 through 1965, the Central Intelligence Agency secretly trained Tibetan soldiers at Camp Hale.



In July 1965, Camp Hale was deactivated and control of the lands returned to the USFS in 1966 (Camp Hale, 2020).

Ski Cooper, which straddles the Eagle and Lake County line, opened in 1942. The USFS created a master plan for ski resort development in 1959 and Vail opened for business on December 15, 1962, followed by Copper Mountain in 1972, and Beaver Creek in 1980.

In 1963, the Colorado Legislature passed the Condominium Ownership Act, which statutorily recognized condominium ownership and facilitated development of condominium complexes throughout Colorado’s mountain towns and resorts. By the end of 1963, new construction in Vail totaled \$8,480,000 and included restaurants, shops, ski facilities, apartments, and residences, including 50 private new homes, as well as condominiums. The explosive growth in Vail led to the construction of new developments throughout the narrow Gore Creek Valley, many of which were anchored by condominium complexes.

The completion of I-70 through Vail Pass had significant effect on Vail and Eagle County. The rapid growth of the resort community of Vail beginning in the 1960s through the 1980s was closely linked to the completion of I-70 through the area. Opportunities for outdoor recreation—specifically skiing, snowmobiling, hiking, hunting, fishing, and cycling—had been a significant draw for tourists travelling through Eagle County even before I-70 was completed.

Eagle County is composed of seven incorporated towns: Avon, Basalt, Eagle, Gypsum, Minturn, Red Cliff, and Vail. The dates of incorporation and US Decennial Census data for each town is shown in **Table 1**. The County is home to the White River National Forest, Eagles Nest Wilderness, Flat Tops Wilderness, Holy Cross Wilderness, Sylvan Lake State Park, and two National Scenic Byways: Colorado River Headwaters National Scenic Byway and Top of the Rockies National Scenic Byway.

**Table 1. Incorporated Eagle County Town Populations**

TOWN	DATE OF INCORPORATION	FIRST DECENNIAL CENSUS	2010 DECENNIAL CENSUS POPULATION
Avon	1978	1980- 640	6,447
Basalt	1901	1900- 382	3,857
Eagle	1905	1900- 124	6,508
Gypsum	1911	1920- 164	6,477
Minturn	1904	1910- 241	1,129
Red Cliff	1879	1890- 383	267
Vail	1966	1970- 484	5,305

Source: US Decennial Census website



## **FUTURE ACTIONS**

The following sections describe reasonably foreseeable future actions that include water quality management and improvement plans, USFS land management plans and improvements, development projects planned within Eagle County for the near term, master/comprehensive plans, wildlife projects, and transportation projects. Specific projects and associated descriptions can be found in **Appendix A**.

### **WATER QUALITY PLANS**

Future actions affecting water quality in the Eagle River watershed include the following:

- West Vail Pass Sediment Control Action Plan (SCAP)- this will be an update to the existing Black Gore Creek SCAP
- Eagle River Watershed Plan
- Gore Creek Water Quality Improvement Plan
- Gore Creek Strategic Action Plan
- Eagle River Watershed Council Projects (list provided in **Appendix A**)
- Camp Hale - Eagle River Collaborative Restoration

### **USFS PLANS**

The USFS has several projects under development within the White River National Forest in Eagle County, including ski resort improvements, forest restoration and management, and a transmission line project.

### **EAGLE COUNTY DEVELOPMENT AND RECREATION PROJECTS AND PLANS**

A multitude of development and recreation projects and plans were considered in the assessment of cumulative impacts. These projects and plans are in both incorporated and unincorporated areas of Eagle County. In addition to planned residential and commercial development, an update to the Eagle County Comprehensive Plan is currently underway. The community area plans and other special master plans that were considered in the analysis include:

- Dotsero Area Community Plan, 2012
- EagleVail Business Center Master Plan, 2014
- Edwards Area Community Plan, 2017
- Wolcott Area Community Plan, 2009
- Eagle Area Community Plan, 2010
- Mid Valley Area Community Plan, 2018
- Eagle County Regional Airport Master Plan, 2014
- Eagle River Watershed Plan, 2013
- Eagle Valley Regional Trails Plan, 2001
- Mid Valley Trails Plan, 2006 (update is currently underway)
- Eagle County Safe Passages for Wildlife Final Report, 2018



## TRANSPORTATION PROJECTS

A variety of future transportation projects were considered in the cumulative impacts analysis. Only projects from the I-70 Final PEIS that have funding identified were included. Projects included in the analysis are:

- CDOT Asset Management projects, including
  - » Surface treatment (asphalt paving)
  - » Critical culvert repairs
  - » Bridge Preventative Maintenance
  - » Americans with Disability Act Ramps
  - » Traffic ITS, striping, and minor safety improvements
  - » Routine repairs (e.g. guardrail) by CDOT Maintenance
- US 6 Post Boulevard Roundabout
- I-70 Dowd Canyon Improvements
- Vail Pass Rest Area Improvements
- Vail Valley Drive Safety Improvements
- West Edwards Design Improvements
- Edwards Spur Road, Phase II (construction to be completed summer 2020)

## CUMULATIVE IMPACTS

### CLIMATE CHANGE

Climate change is an important national and global concern. While the earth has gone through many natural changes in climate in its history, there is general agreement that the earth's climate is currently changing at an accelerated rate and will continue to do so for the foreseeable future. Anthropogenic (human-caused) greenhouse gas (GHG) emissions contribute to this rapid change. Carbon dioxide (CO<sub>2</sub>) makes up the largest component of these GHG emissions. Other prominent GHGs from transportation sources include methane and nitrous oxide.

Many GHGs occur naturally. Water vapor is the most abundant GHG and makes up approximately two-thirds of the natural greenhouse effect. However, the burning of fossil fuels and other human activities are adding to the concentration of GHGs in the atmosphere. Many GHGs remain in the atmosphere for periods ranging from decades to centuries. GHGs trap heat in the earth's atmosphere. Because atmospheric concentration of GHGs continues to climb, our planet will continue to experience climate-related phenomena. For example, warmer global temperatures can cause changes in precipitation and sea levels.

To date, no national standards have been established regarding GHGs, nor has the U.S. Environmental Protection Agency (EPA) established criteria or thresholds for ambient GHG emissions pursuant to its authority to establish motor vehicle emission standards for CO<sub>2</sub> under the Clean Air Act. However, there is a considerable body of scientific literature addressing the sources of GHG emissions and their adverse effects on climate, including reports from the Intergovernmental Panel on Climate Change, the U.S. National Academy of Sciences, the EPA, and other federal agencies. GHGs are different from other air pollutants evaluated in federal environmental reviews because their impacts are not



localized or regional due to their rapid dispersion into the global atmosphere, which is characteristic of these gases. The affected environment for CO<sub>2</sub> and other GHG emissions is the entire planet. In addition, from a quantitative perspective, global climate change is the cumulative result of numerous and varied emissions sources (in terms of both absolute numbers and types), each of which makes a relatively small addition to global atmospheric GHG concentrations. In contrast to broad-scale actions, such as actions involving an entire industry sector or very large geographic areas, it is difficult to isolate and understand the impacts of GHG emissions from a specific transportation project. Presently there is no scientific methodology for attributing specific climatological changes to a specific transportation project's emissions.

Under NEPA, detailed environmental analysis should be focused on issues that are substantial and meaningful to decision-making.<sup>1</sup> FHWA has concluded, based on the nature of GHG emissions and the exceedingly small potential GHG impacts of the Proposed Action, as discussed below and shown in **Table 2**, that the GHG emissions from the Proposed Action will not result in “reasonably foreseeable significant adverse impacts on the human environment” [40 CFR 1502.22(b)]. The GHG emissions from the Proposed Action will be insignificant, and will not play a meaningful role in a determination of the environmentally preferable alternative or the selection of the preferred alternative. More detailed information on GHG emissions “is not essential to a reasoned choice among reasonable alternatives” [40 CFR 1502.22(a)] or to making a decision in the best overall public interest based on a balanced consideration of transportation, economic, social, and environmental needs and impacts [23 CFR 771.105(b)]. For these reasons, no alternatives-level GHG analysis has been performed for the Project.

The context in which the emissions from the Project will occur, together with the expected GHG emissions contribution from the Project, illustrate why the Project's GHG emissions would not be substantial and would not be a substantial factor in the decision-making. The transportation sector is the second largest source of total GHG emissions in the U.S., behind electricity generation. The transportation sector was responsible for approximately 27 percent of anthropogenic GHG emissions in the U.S. in 2010.<sup>2</sup> The majority of transportation GHG emissions are the result of fossil fuel combustion. CO<sub>2</sub> makes up the largest component of these GHG emissions. U.S. CO<sub>2</sub> emissions from the consumption of energy accounted for about 18 percent of worldwide energy consumption CO<sub>2</sub> emissions in 2010.<sup>3</sup> U.S. transportation CO<sub>2</sub> emissions accounted for about six percent of worldwide CO<sub>2</sub> emissions.<sup>4</sup>

While the contribution of GHGs from transportation in the U.S. as a whole is a large component of the U.S. GHG emissions, as the scale of analysis is reduced, the GHG contributions become quite small. Using CO<sub>2</sub> because of its predominant role in GHG emissions, **Table 2** presents the relationship between current and projected Colorado highway CO<sub>2</sub> emissions and total global CO<sub>2</sub> emissions, as well as information on the scale of the project relative to statewide travel activity.

<sup>1</sup> Refer to 40 CFR 1500.1(b), 1500.2(b), 1500.4(g), and 1501.7.

<sup>2</sup> Calculated from data in U.S. Environmental Protection Agency, Inventory of Greenhouse Gas Emissions and Sinks, 1990-2010.

<sup>3</sup> Calculated from data in U.S. Energy Information Administration (EIA) International Energy Statistics, Total Carbon Dioxide Emissions from the Consumption of Energy, <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=90&pid=44&aid=8>, accessed 2/25/13.

<sup>4</sup> Calculated from data in EIA figure 104: <http://www.eia.gov/forecasts/archive/ieo10/emissions.html> and EPA table ES-3: <http://epa.gov/climatechange/emissions/downloads11/US-GHG-Inventory-2011-Executive-Summary.pdf>



Based on emissions estimates from EPA’s MOVES2014a models<sup>5</sup>, and global CO<sub>2</sub> estimates and projections from the Energy Information Administration, CO<sub>2</sub> emissions from motor vehicles in the entire state of Colorado contributed less than one tenth of one percent of global emissions in 2010 (0.0348 percent). These emissions are projected to contribute an even smaller fraction (0.0261 percent) in 2040 as global emissions increase at a faster rate. VMT in the study area represents 0.28 percent of total Colorado travel activity, and the Project itself would not change VMT. (Note: that the study area, as defined for the Mobile Source Air Toxics analysis, includes travel on many other roadways in addition to the Project.) As a result, based on the Proposed Action, FHWA estimates that the Project would not result in a potential decrease in global CO<sub>2</sub> emissions in 2040 and there would be no corresponding decrease in Colorado’s share of global emissions. The lack of change in global emissions is well within the range of uncertainty associated with future emissions estimates.<sup>6,7</sup>

**Table 2. Statewide and Project Emissions Potential, Relative to Global Totals**

	GLOBAL CO2 EMISSIONS, MMT <sup>8</sup>	COLORADO MOTOR VEHICLE CO2 EMISSIONS, MMT <sup>9</sup> ,	COLORADO MOTOR VEHICLE EMISSIONS, % OF GLOBAL TOTAL	STUDY AREA VMT, % OF STATEWIDE VMT	CHANGE (%) IN STATEWIDE VMT DUE TO PROJECT
Current Conditions (2010)	29,670	10.3	0.0348	0.28	(None)
Future Projection (2040)	45,500	11.9	0.0261	0.28	(None)

MMT: million metric tons

<sup>5</sup> <http://www.epa.gov/otaq/models/moves/index.htm>. EPA’s MOVES2014a model can be used to estimate vehicle exhaust emissions of CO<sub>2</sub> and other GHGs. CO<sub>2</sub> is frequently used as an indicator of overall transportation GHG emissions because the quantity of these emissions is much larger than that of all other transportation GHGs combined, and because CO<sub>2</sub> accounts for 90 to 95 percent of the overall climate impact from transportation sources. MOVES2014a includes estimates of both emissions rates and VMT, and these were used to estimate the Colorado statewide highway emissions in Table 5.

<sup>6</sup> For example, Figure 114 of the EIS’s *International Energy Outlook 2010* shows that future emissions projections can vary by almost 20 percent, depending on which scenario for future economic growth proves to be most accurate.

<sup>7</sup> When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency is required make clear that such information is lacking (40 CFR 1502.22). The methodologies for forecasting GHG emissions from transportation projects continue to evolve and the data provided should be considered within the context of the constraints affecting the currently available methodologies. As previously stated, tools such as EPA’s MOVES model can be used to estimate vehicle exhaust emissions of CO<sub>2</sub> and other GHGs. However, only rudimentary information is available regarding the GHG emissions impacts of highway construction and maintenance. Estimation of GHG emissions from vehicle exhaust is subject to the same types of uncertainty affecting other types of air quality analysis, including imprecise information about current and future estimates of VMTs, vehicle travel speeds, and the effectiveness of vehicle emissions control technology. Finally, there presently is no scientific methodology that can identify causal connections between individual source emissions and specific climate impacts at a specific location.

<sup>8</sup> These estimates are from the EIA’s *International Energy Outlook 2010* and are considered the best available projections of emissions from fossil fuel combustion. These totals do not include other sources of emissions, such as cement production, deforestation, or natural sources; however, reliable future projections for these emissions sources are not available.

<sup>9</sup> MOVES projections suggest that Colorado motor vehicle CO<sub>2</sub> emissions may increase by 14.9 percent between 2010 and 2040; more stringent fuel economy/GHG emissions standards will not be sufficient to offset projected growth in VMT.



## MITIGATION FOR GLOBAL GHG EMISSIONS

To help address the global issue of climate change, U.S. Department of Transportation (USDOT) is committed to reducing GHG emissions from vehicles traveling on our nation's highways. The USDOT and EPA are working together to reduce these emissions by substantially improving vehicle efficiency and shifting toward lower carbon intensive fuels. The agencies have jointly established new, more stringent fuel economy and first-ever GHG emissions standards for model year 2012–2025 cars and light trucks, with an ultimate fuel economy standard of 54.5 miles per gallon for cars and light trucks by model year 2025. Further, on September 15, 2011, the agencies jointly published the first ever fuel economy and GHG emissions standards for heavy-duty trucks and buses (USEPA; NHTSA, 2011)<sup>10</sup>. Increasing the use of technological innovations that can improve fuel economy, such as gasoline- and diesel-electric hybrid vehicles, will improve air quality and reduce CO<sub>2</sub> emissions in future years.

Consistent with its view that broad-scale efforts hold the greatest promise for meaningfully addressing the global climate change problem, FHWA is engaged in developing strategies to reduce transportation's contribution to GHGs—particularly CO<sub>2</sub> emissions—and to assess the risks to transportation systems and services from climate change. In 2013, FHWA developed a procedure to assist states and metropolitan planning organizations in performing GHG analyses (FHWA, 2013). The procedure presents methodologies reflecting good practices for the evaluation of GHG emissions at the transportation program level and will demonstrate how such evaluation may be integrated into the transportation planning process. FHWA has also developed a tool for use at the statewide level to model several GHG reduction scenarios and alternatives for use in transportation planning, climate action plans, scenario-planning exercises, and in meeting state GHG reduction targets and goals. To assist states and metropolitan planning organizations in assessing climate change vulnerabilities to their transportation networks, FHWA has developed a draft vulnerability and risk assessment conceptual model and has piloted it in several locations.

At the state level, there are also several programs underway in Colorado to address transportation GHGs. The Colorado Climate Action Plan, adopted in January 2018, includes measures to adopt vehicle CO<sub>2</sub> emissions standards and to reduce vehicle travel through transit, flex time, telecommuting, ridesharing, and broadband communications (CDNR, 2018). CDOT issued a Policy Directive (PD) on air quality in May 2009 that was updated in 2012 and 2017 (CDOT, 2009). The goal of the PD and its implementation document, the CDOT Air Quality Action Plan, is to reduce air quality impacts from the development and management of the state transportation system (CDOT, 2017b). Some of CDOT's actions and strategies to meet this goal, which includes reducing GHGs, include:

- Researching pavement durability opportunities with the goal of reducing the frequency of resurfacing and/or reconstruction projects.
- Developing air quality educational materials, specific to transportation issues, for citizens, elected officials, and schools, including development of vehicle idling reduction programs for schools and communities.

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<sup>10</sup> For more information on fuel economy proposals and standards, see the National Highway Traffic Safety Administration's Corporate Average Fuel Economy website: <http://www.nhtsa.gov/fuel-economy/>.



- Offering outreach to communities to integrate land use and transportation decisions to reduce growth in VMT, such as smart growth techniques, buffer zones, transit-oriented development, walkable communities, access management plans, etc.
- Committing to research additional concrete additives that would reduce the demand for cement.
- Expanding Transportation Demand Management efforts statewide to better use the existing transportation mobility network.
- Continuing to diversify the CDOT fleet by retrofitting diesel vehicles, specifying the types of vehicles and equipment contractors may use, purchasing low-emission vehicles (such as hybrids) and purchasing cleaner-burning fuels through bidding incentives where feasible.
- Exploring congestion and/or right-lane only restrictions for motor carriers.
- Funding truck parking electrification.
- Researching additional ways to improve freight movement and efficiency statewide.
- Committing to use ultra-low sulfur diesel for non-road equipment statewide.
- Developing a low-VOC emitting tree landscaping specification.

Even though project-level mitigation measures will not have a substantial impact on global GHG emissions because of the exceedingly small amount of GHG emissions involved, the above-identified activities are part of a program-wide effort by FHWA and CDOT to adopt practical means to avoid and minimize environmental impacts in accordance with 40 CFR 1505.2(c).

## **SUMMARY**

This document does not incorporate an analysis of the GHG emissions or climate change effects for either alternative because the potential change in GHG emissions is very small in the context of the affected environment. Because of the insignificance of the GHG impacts, those impacts would not be meaningful to a decision on the environmentally preferable alternative or to a choice among alternatives. As outlined above, FHWA is working to develop strategies to reduce transportation's contribution to GHGs, particularly CO<sub>2</sub> emissions, and to assess the risks to transportation systems and services from climate change. FHWA will continue to pursue these efforts as productive steps to address this important issue. Finally, the construction best practices described above represent practicable project-level measures that, while not substantially reducing global GHG emissions, may help reduce GHG emissions on an incremental basis and could contribute in the long term to meaningful cumulative reduction when considered across the federal-aid highway program.

## **BIOLOGICAL RESOURCES**

### **WILDLIFE**

The residential, commercial, and recreational development combined with associated highway and interstate construction in the Eagle River watershed since the late 1800s has dramatically increased pressure on wildlife species across the watershed. The I-70 Corridor traverses the Colorado Mountains from Golden to Glenwood Springs and crosses numerous land covers and habitat types. The primary impacts to wildlife as a result of the highway include habitat loss and fragmentation, increased barrier effect and animal/vehicle collisions, and effects of winter maintenance. I-70 has facilitated the growth of adjacent communities by allowing local, regional, and interstate commerce, tourism, and recreation. As Colorado's population continues to grow, CDOT must balance the needs of expanding communities who utilize I-70 with wildlife movement and survival.





### **OTHER FUTURE ACTIONS**

Planned residential and commercial development in the Eagle River watershed will increase habitat loss and fragmentation, impede wildlife migration corridors, and increase the barrier effect and linkage area disturbances. Light and noise pollution will also increase as vehicular and human activity increases within wildlife habitats. Because development tends to be concentrated in the valley bottoms, some of the most notable effects are loss of high-quality riparian, wetland, and floodplain habitats and habitat fragmentation. Fortunately, the steeper, more densely vegetated terrain that lynx typically use as habitat would be avoided by planned development.

Continued highway maintenance is not anticipated to directly impact wildlife, but could result in indirect impacts to roadside and aquatic habitats. (CDOT, 2020a)

### **PROPOSED ACTION ALTERNATIVE**

Direct impacts on wildlife as a result of the Proposed Action are loss of habitat due to construction and the increased barrier effect due to new roadway or transit improvements.

Based on the review of habitat present within the Proposed Action study area, Canada lynx is the only federally listed species with potential to occur in the study area. All other federally listed species would have no direct or indirect impacts as a result of the Proposed Action. A primary factor that will impact the Canada lynx is the increased traffic due to expected population growth in Colorado. High traffic volumes can create a barrier to wildlife attempting to cross the roadway, and can result in indirect habitat loss/fragmentation or wildlife injury from vehicular collisions. The barrier effect is further increased from the direct loss of vegetation and cover resulting from additional lanes and an overall wider highway footprint. Indirect effects can result from increased lights, noise, air toxins, deicing chemicals, and increased human presence (CDOT, 2020a).

Thirteen USFS Rocky Mountain Region Sensitive Species occur or have the potential to occur within the Proposed Action study area. For 11 of those species, implementation of the Proposed Action may adversely impact individuals, but is not likely to result in a loss of viability in the study area, nor cause a trend towards federal listing. Two USFS Rocky Mountain Region Sensitive Species would not be impacted. Details regarding each species occurrence within the Proposed Action study area and potential direct and indirect impacts can be found in the *I-70 West Vail Pass Auxiliary Lanes Biological Evaluation*.

The Proposed Action will have no effect on most migratory birds but may adversely impact individuals of some migratory species (see *I-70 West Vail Pass Auxiliary Lanes Biological Evaluation* memo table 12 and 13 for species list). However, it will not likely result in a loss of viability nor cause a trend toward federal listing. These effects are largely due to some direct habitat loss and temporary avoidance of the area during construction.

### **CUMULATIVE IMPACTS**

While the Proposed Action is likely to have only incremental effects on wildlife, the combination with other past, present, and reasonable foreseeable future projects such as forest management activities, increasing traffic volumes, concurrent residential and commercial development, adjacent roads and fencing, recreation trails, and increasing human activity results in a cumulative impact to wildlife movement and mortality.



The Proposed Action will provide some benefits to wildlife through the design of the project. New wildlife fencing and six new proposed wildlife crossings are incorporated into the design to reduce the barrier effect that already exists within the Proposed Action study area and minimize wildlife-vehicle collisions.

A primary factor affecting lynx will be increased traffic growth on I-70 as Colorado's population continues to grow and additional Front Range residents use I-70 to access summer and winter recreational opportunities in the mountains. High traffic volumes can create a barrier to wildlife attempting to cross the roadway, and can result in indirect habitat loss/fragmentation or wildlife injury from vehicular collisions. The barrier effect is further increased from the direct loss of vegetation and cover with additional lanes and an overall wider highway footprint. Indirect effects can result from increased lights, noise, air toxins, deicing chemicals, and increased human presence. As the barrier effect of I-70 continues to increase, wildlife populations north and south of I-70 in the study area and beyond are becoming incrementally isolated from one another, precluding genetic interchange between populations. Increasing recreational use of the Vail Pass area may cause lynx to further avoid the corridor due to human disturbance. (CDOT, 2020a)

Cumulative impacts to USFS Rocky Mountain Region Sensitive Species are similar to those on Canada lynx. Continued development at nearby ski areas and on private property and recreation development Town of Vail and Eagle and Summit County properties will reduce available habitats and add cumulatively to wildlife impacts. Other sources of cumulative impacts include minor impacts from grazing, water management/development, and recreation. (CDOT, 2020b)

As part of CDOT's Context Sensitive Solutions (CSS) process, CDOT will continue to implement the A Landscape Level Inventory of Valued Ecosystem Components (ALIVE) and Memorandum of Understanding (MOU) during final design and construction.

### **FISHERIES AND AQUATIC SPECIES**

The I-70 Final PEIS found that highway construction and previous and ongoing development have resulted in adverse effects to aquatic resources, including macroinvertebrates and fisheries. The Eagle River Watershed Plan notes that, "residential and commercial development has resulted in the loss of significant acreages of prime terrestrial/riparian habitat and ecosystem connectivity, and aquatic habitats have also been compromised in some areas. Water quality stressors of concern include metals (from the Eagle Mine), nutrient and sediment loading, elevated temperatures and pollution from urban runoff."

### **OTHER FUTURE ACTIONS**

Planned residential and commercial development and recreation projects/maintenance in the Eagle River watershed will continue to affect fisheries and aquatic species in the watershed. Increases in both point and non-point source pollution are anticipated due to planned urban and rural development. Ongoing efforts of the Eagle River Watershed Council, Eagle River Water and Sanitation District, Town of Vail, National Forest Foundation, and USFS are actively monitoring, planning, and implementing water quality improvement projects. These projects range from ongoing monitoring of the Eagle River downstream of the Eagle Mine Superfund site to riparian and stream restoration projects and ongoing stormwater treatment projects (**Appendix A**).



### ***PROPOSED ACTION ALTERNATIVE***

The Proposed Action would have the potential to affect approximately 0.2 acre of open water habitat. This habitat loss accounts for approximately 3.2% of the affected landscape and only 0.01% of open water habitat occurring within 2 miles of the Proposed Action study area. The Colorado River Cutthroat Trout (CRCT), a USFS Rocky Mountain Region Sensitive Species, has been recorded in three streams and the Proposed Action would impact a small amount of CRCT habitat. The addition of traffic lanes with the Proposed Action will require additional winter maintenance (such as the use of liquid deicers and traction sand), leading to increased water quality impacts which would degrade suitable spawning habitat. Project construction will remove vegetation and expose soil, and have the potential to alter patterns of surface water drainage, which could increase the possibility for sediment delivery into drainages used by aquatic species. (CDOT, 2020b)

### ***CUMULATIVE IMPACTS***

Continued human population growth and associated developments have the potential to affect aquatic habitats from increased runoff rates and the amount of sedimentation and contamination that would occur in area streams. Rapid runoff rates also cause stream channelization, which, along with decreases in water quality, could reduce fishery habitat values. However, the past, present, and reasonably foreseeable projects, when combined with the Proposed Action, are unlikely to contribute to substantial negative cumulative impacts to these species. Other activities within the area may have similar minimal potential impacts to this species, primarily through direct disturbances (such as earthmoving activities) or herbivory (livestock grazing) near waterbodies, as well as water development and potential water depletions. CDOT will also be updating the SCAP for West Vail Pass, which will include all project-related control measures, additional recommendations for future partnerships and projects, and will prepare maintenance recommendations for CDOT Maintenance to facilitate on-going maintenance of control measures for the Proposed Action. Combined with the ongoing restoration and water quality enhancement efforts of organizations such as the Eagle River Watershed Council and the Town of Vail, the Proposed Action could, over time, show a beneficial result to fisheries and aquatic habitat within the study area.

As part of CDOT's CSS process, CDOT will continue to implement the Stream and Wetland Ecological Enhancement Program (SWEEP) and MOU during final design and construction.

### **WETLANDS AND OTHER SURFACE WATERS**

The I-70 Final PEIS noted that Mountain Corridor wetlands have been affected by population growth, development, and historic mining practices. Wetland impacts from the construction of existing I-70 are not documented because much of I-70 was constructed during a time when these impacts did not require US Army Corps of Engineers permits. Because I-70 was constructed primarily along valley floors adjacent to many of the drainage systems in the corridor, impacts on wetlands were likely extensive. In addition, construction of I-70 contributed to growth of private and public development in the Eagle River watershed and expanded access to, and use of, recreation areas. This induced growth directly impacted wetlands and contributed to increased impervious areas which indirectly effect wetlands by increasing stormwater runoff and deposition.

### **OTHER ACTIONS**

Reasonably foreseeable projects in the Eagle River watershed would result in both adverse and beneficial impacts to wetlands and other surface waters. Planned residential and commercial development could lead to direct wetland impacts as well as accelerated runoff and sediment



transport caused by increased impervious area. Unintended changes to the vegetation and hydrology of wetlands could occur. Development also has the potential to reduce instream flows due to water consumption, alter stream geomorphology, and impact temperature and water quality.

Beneficial effects to wetlands and other surface waters would also occur from reasonably foreseeable actions including riparian area enhancement, invasive species removal, in-stream habitat and water quality improvements, and watershed monitoring and assessment programs. These projects are ongoing or planned throughout the Eagle River watershed by the Town of Vail, Eagle River Watershed Council, the USFS, and the Bureau of Land Management (BLM).

### **PROPOSED ACTION ALTERNATIVE**

The Proposed Action would result in the direct and permanent impact of wetlands and other water features from the placement of earthen fill and other materials associated with roadway improvements. Approximately 9.44 acres of wetlands, including 3.84 acres of slope, 0.03 acre of riverine, and 5.56 acres of stormwater-related wetlands would be lost. No reservoir fringe wetlands would be impacted. It is likely that high-quality wetlands, such as fens, would also be impacted by the Proposed Action. In addition, there is the potential for some indirect permanent impacts as a result of unintended hydrologic modifications or other unexpected causes that are not quantifiable. Temporary impacts for vehicle access and other construction-related activities are also expected to occur but have not been quantified because they depend on construction techniques, specific access routes, control measure installation methods and locations, and other factors.

### **CUMULATIVE IMPACTS**

As required by Section 404 of the Clean Water Act, actions with unavoidable impacts to wetlands are individually permitted and require mitigation. CDOT also mitigates for all non-jurisdictional wetlands impacts. The Proposed Action, in combination with other past, present, and reasonable foreseeable future projects is not anticipated to have a negative impact on wetlands and may result in benefits to water quality and wildlife habitat through wetland mitigation. Wetland mitigation opportunities, such as on-site restoration, in the Proposed Action study area would restore functions that were lost or impaired by the original I-70 construction and surrounding development. Additional benefits to wetlands will be possible by updating the West Vail Pass SCAP as part of the Proposed Action, which includes further identification and refinement of wetland restoration areas.

As part of CDOT's CSS process, CDOT will continue to implement the SWEEP and MOU during final design and construction.

### **WATER QUALITY**

Water quality in the Eagle River Watershed has been dramatically impacted since the late 1800s, beginning with the alteration of natural landscapes when settlers began constructing primitive roads and ranches. With the advent of railroads, mining, agriculture, residential and commercial developments, ski areas, and I-70, water resources across the watershed have been impacted from a variety of pollutants and loss of riparian vegetation (Eagle County, 2013). The Eagle Mine, which was in operation for almost a century until the early 1980s, had a significant impact on the Eagle River from mining operations that left arsenic, cadmium, copper, lead, and zinc in the soil, surface water, and groundwater on the site. (EPA, 2020) The mine was listed as a Superfund site in 1986 and is still undergoing monitoring to assess the effects of the cleanup.



Traction sand and de-icers from I-70 winter maintenance activities are deposited in adjacent wetlands and waterbodies. Additional impervious surface from recreational trails and residential and commercial developments results in more sheet flow runoff and erosion, which often ends up in the creeks and associated tributaries.

### **OTHER FUTURE ACTIONS**

Reasonably foreseeable future projects in the Eagle River watershed are anticipated to both have impacts and provide benefits to water quality in the watershed. Additional impervious surface from ongoing residential and commercial development, combined with winter maintenance activities of roadways, will continue to impact waterways within the watershed. Ongoing efforts of the Eagle River Watershed Council, Eagle River Water and Sanitation District, Town of Vail, National Forest Foundation, USFS, are actively monitoring, planning, and implementing water quality improvement projects. These projects range from ongoing monitoring of the Eagle River downstream of the Eagle Mine Superfund site to riparian and stream restoration projects and ongoing stormwater treatment projects (**Appendix A**).

### **PROPOSED ACTION ALTERNATIVE**

Two forms of sediment originate from the roadway, traction sand and sediment loss due to embankment erosion, especially at the outlets of culverts or other drainage structures. Both forms of sediment have a potential to further impact the receiving streams near the project.

Currently, CDOT Maintenance uses deicing solutions and traction sand on the roadway as part of winter maintenance operations. The volume of deicing solutions and traction sand varies significantly over the years. The Proposed Action will likely increase sediment load due to the increase in pavement, as the application rates will be generally consistent with current rates.

While CDOT will revegetate and stabilize previously eroded areas, embankment erosion could occur again, or new eroded areas could develop during future heavy rain events. Localized locations of erosion may occur on embankments and at the downstream end of new or replaced culverts.

The additional impervious surface, and therefore more storm runoff, will likely result in additional phosphorus loading. As previously mentioned, monitoring indicates that high suspended solids concentrations in I-70 runoff correlate with elevated total phosphorus concentrations. This indicates that sediment loading is a reasonable indicator of phosphorous concentrations.

Areas under bridges have historically been the collection point for traction sand leaving the roadway. Due to the steep slopes and other field conditions, this sand is difficult to remove. Sediment accumulation will continue under the bridges and other inaccessible areas and impact existing vegetation and nearby wetlands. (CDOT, 2020d)

### **CUMULATIVE IMPACTS**

When combined with other past, present, and reasonably foreseeable future projects, the Proposed Action would contribute cumulatively to an increase in impervious surface, which can result in increased stormwater runoff and sedimentation through a larger amount of traction sand used during winter months. The Proposed Action does include permanent control measures, however, for conveyance and treatment of stormwater runoff. Based on previous study results, implementation of the sediment control measures in the mitigation section of the *I-70 West Vail Pass Auxiliary Lanes Water Quality Technical Memorandum* will likely also reduce the amount of phosphorus that is



entering Black Gore Creek as runoff within the study area. CDOT will also be updating the SCAP for West Vail Pass, which will include all project-related control measures, additional recommendations for future partnerships and projects, will prepare maintenance recommendations for CDOT Maintenance to facilitate on-going maintenance of control measures for the Proposed Action, and continue monitoring of Black Gore Creek. As part of CDOT's CSS process, CDOT will continue to implement the SWEEP and MOU during final design and construction.

Combined with the ongoing restoration and water quality enhancement efforts of organizations such as the Eagle River Watershed Council and the Town of Vail, the Proposed Action could, over time, show a beneficial result to water quality within the study area.

## **ECONOMICS**

The first major mining strike in Eagle County was in 1874, when silver ore was found on Battle Mountain. From there, the Gilman mining district, located north of the Town of Red Cliff, was established and included the Belden silver mine and Ground Hog mine. The construction of the Denver & Rio Grande Railroad to Red Cliff in 1881 furthered the economic boom in Eagle County. Ranching and farming in other parts of the County, specifically in Eagle and Gypsum, were also primary economic drivers in the late 1800s.

Mining continued steadily and composed a large part of the Eagle County economy until the early 1980s, when demand for molybdenum and zinc decreased and Eagle Mine environmental concerns caused the mine to close (Colorado Encyclopedia, 2020). The development of ski resorts, recreation trails, camping, and other tourist draws provided a large economic boost to the County, with lodging and food services serving as the largest industries in Eagle County. Recreation destinations serve as a considerable portion of the local economies in Eagle and Summit Counties; composing over 40% of the Counties' economies.

## **OTHER ACTIONS**

Reasonably foreseeable future projects related to water quality, recreational enhancements, and private commercial and residential development are anticipated to positively impact economic resources. Mixed use developments, such as the Basalt River Park and Battle Mountain/Bolts Lake projects, will provide additional commercial economic base combined with residential development. Numerous residential developments across the County will continue to provide construction jobs, which is currently the second largest industry in Eagle County.

Ongoing ski resort enhancements and future recreation projects, such as the completion of the Eagle Valley Trail, will continue to draw tourists to the area.

## **PROPOSED ACTION ALTERNATIVE**

No additional highway traffic capacity will be added and the Proposed Action is not expected to induce population growth within the corridor. Economic benefits would result from the Proposed Action from improved mobility and access to recreational and tourist amenities for both workers and visitors, particularly during periods of snow accumulation in winter months. On a broader scale, the Proposed Action would also have wide-ranging benefits from commerce and industry costs by reducing freight trucking delays on Vail Pass associated with congestion and highway closures.

Detours, lane closures, and an increase in I-70 congestion during construction could affect mobility to local businesses and tourist destinations. Impaired mobility during construction of the Proposed



Action could also result in increased traffic on secondary roads. Business for commercial recreation outfitters/guides that utilize the trail may also be affected indirectly due to possible closures and access issues during construction. Construction activities would also create dust, noise, and vibration, which could negatively affect businesses that rely on outdoor recreation.

### **CUMULATIVE IMPACTS**

When combined with other past, present, and reasonably foreseeable future projects, the Proposed Action is anticipated to contribute to a beneficial cumulative effect on economics. Improved mobility will benefit local businesses as well as larger industries relying on freight in the I-70 corridor. The Vail Pass Rest Area improvement project could also benefit freight industries by providing improved and expanded amenities. Local businesses may also benefit from additional spending in the area from construction workers during construction.

### **RECREATION**

Summer and winter recreation areas are major destinations for travelers on the I-70 Mountain Corridor. Eagle County and far west Summit County are home to hundreds of miles of USFS and local trails, four ski resorts, and numerous campgrounds and backcountry recreation destinations. These recreation destinations serve as a considerable portion of the local economies in Eagle and Summit Counties; composing over 40% of the Counties economies. The I-70 Final PEIS stated that the USFS has indicated that demand for recreation is such that the agency cannot maintain any additional parking or new trailheads and that there is increased use of backcountry trails and roads not originally designed for intensive uses.

### **OTHER FUTURE ACTIONS**

The Town of Vail is planning the following recreation projects (Kronholm, 2020):

- Improvements to Gore Creek and Deluge Lake Trailheads that include parking improvements, drop off areas, separation of the various traffic types (cars, vans, bikes, e-bikes, hikers, etc.) as well as a restroom.
- Improvements to Exit 180 Trailhead parking, with expanded parking and restrooms (within CDOT right-of-way)
- Construction of a bike path/sidewalk connecting Exit 180 parking to bus stops north of I-70, going under Exit 180 underpass.

There are four remaining sections of the Eagle Valley Trail that are still left to construct (Sharkey, 2020):

- Dotsero to Gypsum- 1.7 miles
- Horn Ranch Open Space to Edwards- 7.5 miles
- EagleVail to Down Junction- 1.5 miles
- Down to Minturn- 1.3 miles

Additional recreation projects for other municipalities can be found in **Appendix A**. Ongoing maintenance of USFS recreation trails and campgrounds, along with the Town of Vail and other municipal and Eagle County recreation projects and enhancements, will provide better access to recreation facilities across the County. The Vail Pass Rest Area improvement project will provide additional parking for winter recreation users as well.



### **PROPOSED ACTION ALTERNATIVE**

As part of the Proposed Action, two miles of the Vail Pass Recreation Trail between MP 185 and 187 would be relocated. This section of trail is currently directly adjacent to I-70. The trail would be moved closer to Black Gore Creek, requiring easement from the White River National Forest (WRNF), which will also result in a buffer between the trail and the highway.

The trail will also be widened from existing to provide additional safety for all trail users. Other sections of the recreation trail will remain unchanged.

Under the Proposed Action, temporary impacts to recreation resources are expected. The Bighorn Road access to the Gore Creek Campground, Vail Pass Recreation Trail, Two Elk Trail, Gore Creek Trail, and Deluge Lake Trail and the access to the Vail Pass Recreation Trail at end of Black Lakes Road would need to be closed for several weeks for safety-critical bridge work. Two Elk Trail and the Vail Pass Recreation Trail would both be closed for several weeks where they cross under I-70 (MP 184 and 185.3, respectively) for safety-critical bridge work. The Vail Pass Recreation Trail would also experience periodic intermittent closures between MP 184.7 and 185, but would remain open through the use of flaggers.

### **CUMULATIVE IMPACTS**

When combined with other past, present, and reasonably foreseeable future projects, the Proposed Action is not likely to contribute to substantial negative cumulative impacts to recreation resources. The Vail Pass Recreation Trail will be relocated as part of the Proposed Action away from I-70, improving the user experience.

During construction, cumulative adverse impacts to recreational activities would occur in the study area due to construction activities affecting access to trails and the Gore Creek Campground during safety-critical work. This could result in avoidance of these recreational amenities or diminished recreational experience for an extended duration. During final design, CDOT will work closely with the USFS to further minimize potential closures.

### **HISTORIC RESOURCES**

The I-70 Final PEIS assessed historic resources and determined that “past actions, such as mining, road construction, and other transportation improvements, have affected the historical integrity of communities along the Corridor” but that the “Action Alternatives would have less of an impact in the western counties of Summit, Eagle, and Garfield Counties.” (PEIS, 2011) During the design of Vail Pass, engineers worked with landscape architects early in the design process to integrate aesthetic considerations into various features of the I-70 segment, including sensitive earthwork and slope molding techniques, sculpted rock cuts to match natural outcroppings, revegetation with native flora, and selective placement of “natural” features such as boulders, stumps, and old logs along the highway slopes. In addition, the precast, segmented, concrete, post-tensioned, box girder bridges used on Vail Pass were the first of their kind in Colorado and among the earliest used in the country. The use of bridges instead of the typical treatment involving major fill and culverts for drainage minimized visual effects to the natural landscape and enabled wildlife to cross the highway beneath the structures. The result of these designs is a highway corridor that retains many of the slopes and valleys of the natural landscape and complements its surroundings rather than detracting from them.

The walls along the corridor were designed as a system of pre-cast, curved, concrete wall panels connected with concrete tiebacks. The panels were stacked in a terraced pattern creating steps with





open pockets, which were landscaped with native plants. Other retaining walls included timber cribbing walls; precast, modular, concrete panels; cast-in-place, curved, concrete panels; and several cast-in-place, concrete walls finished with a barnwood texture. All of these features contributed to a determination that the Vail Pass segment of I-70 exhibits “exceptional importance” at the statewide level as a resource with direct and significant associations with important events in the development of Colorado transportation networks and early solutions to the conflict between environmental concerns and highway construction that set standards for later Colorado projects. (CDOT, 202c)

The I-70 Final PEIS also identified the following historic resources, which are listed on the National Register of Historic Places: 5EA.1604 Dotsero Bridge, 5EA.1608 Eagle River Bridge, 5EA.1614 Wolcott Bridge, 5EA.647 First Evangelical Lutheran Church. There was one property listed in the state register, 5EA.2371 Nottingham Power Plant – Avon Water Wheel. The three bridges have all been replaced by CDOT: the Dotsero Bridge was replaced in 2013, the Eagle River Bridge in 2012, and the Wolcott Bridge in 2005. Additional “officially eligible” resources in Eagle County were included as well, including several bridges, segments of the Denver & Rio Grande Railroad, Wolcott Inn, Tigiwon Community House, and Eagle Ranger Station Historic.

### **OTHER FUTURE ACTIONS**

Based on the review of associated projects and plans within Eagle County and the western portion of Summit County, additional adverse effects to historic properties are not anticipated.

### **PROPOSED ACTION ALTERNATIVE**

A total of 25 properties in the area of potential affect (APE) were evaluated as part of the Project historic survey report. Of these, three were determined eligible for the National Register: the Bradley Residence (5EA.3607), Old US 6 (5EA.2587.9), and I-70 at Vail Pass (5EA.1826.4 and 5ST.982.5). The Proposed Action was found to have “no adverse effect” on the Bradley Residence and Old US 6 and an “adverse effect” to I-70 at Vail Pass.

### **CUMULATIVE IMPACTS**

The Proposed Action has an adverse effect to I-70 at Vail Pass, and when combined with past, present, and reasonably foreseeable future projects, the Proposed Action is anticipated to contribute to cumulative impacts on historic resources. As part of the minimization measures for impacts to Vail Pass, CDOT prepared a historic context statement detailing the history and significance of the Vail Pass route of I-70. This report provides detailed documentation on the design and construction of the highway segment and its contributing features. In addition, the CDOT has committed to creating an Aesthetic Issue Task Force (ITF) during final design of the project. This ITF will be responsible for developing project-specific aesthetic guidance that builds on the *Crest of the Rockies Aesthetic Guidance* and incorporates the historic context of West Vail Pass. Project activities, including the implementation of additional minimization of impacts during final design, will focus on maintaining qualities of Vail Pass so it can still convey its significance as historic transportation facility.



## **MITIGATION MEASURES AND BEST MANAGEMENT STRATEGIES**

There are no specific mitigation measures for cumulative impacts beyond those incorporated into the design of the Proposed Action. Mitigation strategies for direct and indirect impacts to the resources studied in this cumulative impacts analysis are addressed in their respective resource technical memo. As discussed in other technical memos, CDOT is committed to following the CSS process and the following during future design and construction phases:

- Follow the processes outlined in the ALIVE MOU to increase the ability of wildlife, particularly protected species, to cross the highway and transit infrastructure throughout the corridor.
- Continue to participate in and promote the SWEEP program. Implement the SWEEP MOU and matrix of mitigation to address stream impairment and benefit aquatic resources.
- Develop project-specific aesthetic guidelines that build on the existing federal lands MOU and *Crest of the Rockies Aesthetic Guidance*.



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## **APPENDIX A**

### **REASONABLY FORESEEABLE FUTURE PROJECT LIST**



The following table lists reasonably foreseeable future actions in Eagle County and Eagle River watershed. The table includes water quality projects, USFS projects, development and recreation projects planned for the near term, master plans for development, wildlife improvements, recreation, and transportation projects.

PROJECT	DESCRIPTION	SOURCE
Water Quality		
West Vail Pass Sediment Control Action Plan	CDOT has committed to updating the SCAP during final design of the Proposed Action. The SCAP will provide new recommendations to improve monitoring processes if opportunities exist.	CDOT
Eagle Mine Superfund Water Quality Monitoring	ERWC monitors the water quality in the Eagle River at three sites below the mine on a monthly basis	Eagle River Watershed Council (ERWC)
Eagle River Riparian Enhancement Project	Focused on improving instream water quality, reducing sediment, and implementing watershed and riparian management actions. Appropriate and effective revegetation of riparian zones that run adjacent to US 6 and I-70 will greatly reduce untreated urban and transportation corridor runoff.	ERWC
Gore Creek Strategic Action Plan	Restore riparian areas in the Town of Vail and address the 303(d) listing for aquatic life.	ERWC, Town of Vail
Lower Eagle River Enhancement Project	Tamarisk removal along the lower Eagle River (Gypsum to Dotsero) in coordination with the BLM	ERWC
Town of Edwards Trail System Improvements	Developing a plan to create a more cohesive trail system (rather than the social trails) to reduce natural resource impacts and address concerns of local residents and the Watershed Council.	ERWC
Wearyman Creek Watershed (Shrine Pass) Improvement Project	Implement a phased project to remove old forest roads and undesignated campgrounds in the vicinity of Wearyman Creek to reduce erosion and improve in-stream habitat.	ERWC, USFS
Black Gore Creek Enhancement Projects	Data collection and plan development for projects on Black Gore Creek to mitigate winter traction sand.	ERWC
Eagle River Community Water Plan	Effort to develop proactive water management recommendations that anticipate changes to population growth and increasing municipal demand for water in Eagle County, climate change, and projects related to the 1998 Eagle River Memorandum of Understanding.	ERWC
Eagle River Restoration at Camp Hale	Efforts include hundreds of acres of wetland restoration, miles of stream channel development, recreation infrastructure enhancements, and construction of interpretive structures and experience zones that tell the story of Camp Hale.	National Forest Foundation





PROJECT	DESCRIPTION	SOURCE
Eagle River Watershed Plan	Provides an update to the 1996 plan and focuses on five main topics: quantity, quality, land use, wildlife and recreation as well as an entire chapter devoted to the Colorado River. Each chapter provides existing conditions and a goal and objectives identified by the community and provides a discussion.	ERWC
Gore Creek Water Quality Improvement Plan	Aims to identify management strategies and corrective actions to protect and improve the biological integrity of Gore Creek. Information from the plan provides direction and focus for implementation of specific corrective actions and management strategies, and it identifies issues and potential water quality improvement measures that require further evaluation and refinement. The plan also provides a framework for sourcing funding for projects as well as the importance of agency coordination/collaboration.	ERWC, Town of Vail
USFS Projects		
McCoy Park	Beaver Creek Resort is proposing to add a ski patrol egress/temporary construction access road, a gray water leach field for the previously approved warming hut, and signage corbels for the McCoy Park terrain development.	USFS Schedule of Proposed Actions Website
Berlaimont Estates Road Improvement Project	Improve existing segments of NFSR 774 and 780 as they lead up to the southeastern corner of the Berlaimont property from local public roads in Edwards.	USFS Schedule of Proposed Actions Website
Derby Mesa Project	Restore ponderosa pine forests to Fire Regime Condition Class I. Improve habitat for species dependent on ponderosa pine forests. Reintroduce surface fire to ponderosa pine ecosystems. Reduce pinon/juniper encroachment from sagebrush communities.	USFS Schedule of Proposed Actions Website
Holy Cross Energy (HCE) Avon-to-Gilman Electric (115-kV) Transmission Line	Construct 8.65 miles of new 115-kV transmission line between the Gilman and Avon substations along the Eagle River valley, crossing 3 miles of the White River National Forest and the Town of Minturn.	USFS Schedule of Proposed Actions Website
White River Forest Health and Fuels Management Project	White River National Forest proposes to perform density reduction treatments in over-crowded regenerating stands of trees. Treatments would reduce the number of trees per acre to improve overall stand health.	USFS Schedule of Proposed Actions Website



PROJECT	DESCRIPTION	SOURCE
CDOT Hwy 24 geo-monitoring instruments	CDOT proposes to install three subsurface inclinometers and monitoring wells all within a 0.75-acre footprint located adjacent to U.S. Highway 24 north of Minturn. Monitoring equipment will be by foot one to two times per month for up to one year.	USFS Schedule of Proposed Actions Website
Golden Peak Improvements	Improving racing/training terrain on Golden Peak at Vail.	USFS Schedule of Proposed Actions Website
Keystone Ski Resort - Peru Lift Upgrade	Proposed replacement of the existing Peru Lift with an upgraded 6 chair lift and the removal of the Argentine Lift.	USFS Schedule of Proposed Actions Website
Muddy Pass/Sheephorn Project	Proposing a variety of management activities designed to benefit multiple resources, including forest vegetation, fisheries, range, transportation, fuels, and wildlife.	USFS Schedule of Proposed Actions Website
Peak 7 Hazardous Fuels Reduction Project	Proposal to remove the current adaptive management threshold of 60% minimum stand mortality to immediately reduce hazardous fuels on 522 acres within the WUI of Breckenridge.	USFS Schedule of Proposed Actions Website
Copper Mountain Snowmaking and Summer Uses	Installation of additional snowmaking, mountain biking and hiking trails, camping activity, and access road extension at Copper Mountain Resort.	USFS Schedule of Proposed Actions Website
Development and Recreation Plans and Projects/Master Plans		
<u>Town of Avon</u>		
Avon Apartments	A new 240-unit apartment complex in Avon.	Town of Avon Planning Website
Basecamp Townhomes	An additional townhome building is proposed for the existing Basecamp development located at the intersection of US-6 and Village Road in Avon.	Town of Avon Planning Website
<u>Town of Basalt</u>		
Basalt Pan and Fork Site	Proposing to use 52,707 square feet (sq-ft) of land for development and nearly 43,000 sq-ft for park. Site located near Midland Ave and Rocky Mountain Institute Innovation Center.	Town of Basalt Website
Basalt River Park	Conceptual plans have been approved for a new mixed use development located near downtown Basalt on the northern bank of the Roaring Fork River. The plan includes 24 residences, restaurant and patio, 12,000 sq-ft of commercial space, a community arts center, and parking.	Town of Basalt Website
<u>Town of Eagle</u>		



PROJECT	DESCRIPTION	SOURCE
Talon Flats	The proposed three story building includes 1200 sq-ft of retail space, 1000 sq-ft of office aps, and 23,000 sq-ft of residential with common areas at 1203 Capitol Street in Eagle.	Eagle County Public Works Website
Red Mountain Ranch	The new subdivision includes 153 dwelling units of various types, limited commercial areas, and open space/park areas on 130 acres along the Eagle River, just east of downtown Eagle.	Eagle County Public Works Website
<u>Eagle-Vail</u>		
Warner Building 2 Conversion	30 single-occupancy rooms and five double-occupancy rooms within the renovated, 42-year-old office building in EagleVail.	Eagle County
<u>Edwards</u>		
Residences at Fox Hollow	This project includes 87 units of for-sale housing just east of the Edwards Interfaith Chapel in Edwards.	Vail Daily Newspaper
Edwards RiverPark	The Edwards RiverPark proposal includes 594 units of various housing types located on a 53-acre parcel at the former B&B gravel pit, in Edwards.	Vail Daily Newspaper
Mtn Hive	The Mtn Hive plan includes 260 to 270 single- and double-occupancy units on a hillside piece of land just south of the Edwards Corner building in Edwards.	Vail Daily Newspaper
Berlaimont	Proposes 19 35-acre parcels on a 680-acre property located north of I- 70 in Edwards.	Vail Daily Newspaper
<u>Town of Gypsum</u>		
Gypsum Broken Bridge	Using the "out of use" bridge east of US 6 over the Eagle River as a new boat launch site. Improving existing parking, adding new parking, improving the bridge, adding picnic tables and portable toilets.	Town of Gypsum Website
Gypsum Campground Improvements	Improvements to campgrounds at both the US BLM property west of town and at LEDE Reservoir.	Town of Gypsum Website
Gypsum IK Bar Bike Park	Bringing water infrastructure to the park, paving a tot track, and irrigating the entire bike park area.	Town of Gypsum Website
Gypsum Recreation Center Expansion	Will feature a two-story bump-out on north side of the gym and gymnastics area. Other improvements include updating facilities within the center.	Town of Gypsum Website
Gypsum BLM Hardscrabble Trails Project	Increase the number and miles of trails south of town between Eagle and Gypsum. Both non-motorized and motorized trails will be pursued.	Town of Gypsum Website



PROJECT	DESCRIPTION	SOURCE
Gypsum Wildlife Park	Located at the formerly proposed Saddle Ridge Golf Course site. Includes the creation of a reservoir and a trail network and opportunities to combine this site with the town's existing 80 acre parcel.	Town of Gypsum Website
Buckhorn Valley Townhomes	The development includes expansion of the exiting Buckhorn Valley Community in the Town of Gypsum by constructing an additional 100 townhomes.	Town of Gypsum Website
<u>Town of Minturn</u>		
Minturn Crossing	The proposed residential development includes single family homes. Multi-family duplexes, and parking on 19 acres between Taylor St. and Minturn Road in North Minturn.	Town of Minturn Planning Website
Battle Mountain/Bolts Lake	130 acres of residential, 55 acres of mixed-use development and 376 acres of open space in Minturn.	Town of Minturn Planning Website
<u>Town of Vail</u>		
534 East Lionshead Circle	Two different projects are approved for the Lionshead parking lot in Vail- a 12-unit project called Elevation and a 23-unit project called Lion's View.	Town of Vail Planning Website
Miradoro	This project is planned for the former Park Meadows Lodge site, in the Matterhorn area of West Vail and would consist of 10 units, plus an employee housing unit.	Town of Vail Planning Website
Marriott Residence Inn	Plans for a Marriott Residence Inn with 170 hotel rooms and 102 apartments, was approved for the old Roost Lodge site in Vail.	Town of Vail Planning Website
Vail Mountain View Residences	Phase 2 of the development includes 15 for-sale dwelling units with 20 attached accommodation units, 15 employee housing units, and parking.	Town of Vail Planning Website
Booth Heights and the East Vail Workforce Housing Subdivision	Plans include developing 49 new Employee Housing Units along with 12 Dwelling Units in the Booth Heights neighborhood in East Vail.	Town of Vail Planning Website
Master/Comprehensive Plans		
Public Works Master Plan	The Town of Vail is developing a Master Plan for the future use and development of the Public Works Department site located at 1309 Elkhorn Dr.	Town of Vail Planning Website
Vail Open Lands Plan Update	An update to previous open land plans, it includes improvement concepts for trails located in town and in USFS land. Most of it seems devoted to trail development.	Town of Vail Planning Website



PROJECT	DESCRIPTION	SOURCE
Town of Vail Civic Area Plan	The Town of Vail is creating a Civic Area Master Plan to guide the future development and use of 10.9 acres in the Lionshead area. The study area includes the Lionshead transportation center, charter bus lot, Dobson arena, Vail library, lot 10 parking area (currently used by Vail Health) and the surrounding rights-of-way.	Town of Vail Planning Website
2020 Eagle County Mid-Valley Trails Plan	The update to the 2006 plan is intended to provide guidance to potential developers, Eagle County staff and officials in the review of land use applications to ensure recreational needs in the Mid-Valley area.	Eagle County
Basalt Area Parks, Open Space, and Trails Master Plan	Adopted in 2013, expresses the desires and goals of the community for their existing parks. Emphasis on improving existing parks and bettering connections within the town.	Town of Basalt Website
Dotsero Area Community Plan	This is a subarea plan of the Eagle County Comprehensive Plan. The subarea plan focuses on development within the town, and ways to boost their economy while preserving the natural environment. This plan is a chapter of the Eagle County Comprehensive Plan.	Eagle County Planning Documents Website
EagleVail Business Center Master Plan	The plan outlines goals, policies and strategies for land use, infrastructure improvements and site designs in this popular commercial destination. A future land use map provides additional guidance regarding the types and patten of land uses that have been determined to be appropriate. Importantly, this plan serves as a contextual platform from which additional, more detailed studies of the area can be initiated.	Eagle County Planning Documents Website
Edwards Area Community Plan	An update to 2013's Area Plan to be consistent with other Area Plans adopted in Eagle County. The number of topics addressed have expanded and new insights to old land use issues are addressed.	Eagle County Planning Documents Website
Wolcott Area Community Plan	The plan is a chapter of the 2005 Eagle County Comprehensive Plan, the Area Plan remains consistent with all goals from the comprehensive plan. The Area Plan provides an extensive review of existing conditions and comparisons to the 1992 Area Plan.	Eagle County Planning Documents Website
Eagle Area Community Plan	Adopted by both the town and county, the plan is intended to work as an extension of the Eagle County Comprehensive Master Plan. The plan focuses mostly on the Town of Eagle and reflects the vision of the town residents (not county residents).	Eagle County Planning Documents Website



PROJECT	DESCRIPTION	SOURCE
Mid Valley Area Community Plan	The plan accompanies the Eagle County Comprehensive Plan as one of the 11 geographic areas identified in the comprehensive plan. The Mid-Valley Area Community Plan uses smart growth strategies to guide their plan so that development and growth do not go unchecked, a major concern in the valley.	Eagle County Planning Documents Website
Eagle County Regional Airport Master Plan	The Plan discusses what type of growth is anticipated in the next twenty years (adopted 2014) and what facilities will be needed to accommodate existing and future demands. In addition to identifying the basic needs of the Airport the Master Plan also evaluates cost implications to complete the recommended improvements.	Eagle County Planning Documents Website
Eagle Valley Regional Trails Plan	This plan was created to specifically describe the vision for an Eagle valley Regional Trails System that will connect the communities of the Eagle River and Gore Creek Valleys. The primary focus of the plan was the creation of a paved arterial “core” trail, the Eagle Valley Trail, that will span the county from Vail Pass at the east end to Glenwood Canyon at the west end.	Eagle County Planning Documents Website
Mid Valley Trails Plan, 2006 (update is currently underway)	The plan contains an inventory of existing trails and trails that were under construction at the time. The plan lists out recommendations for new trails as well as their own design and construction standards.	Eagle County Planning Documents Website
Eagle County Safe Passages for Wildlife Final Report	The goal of this report is to create a common vision that identifies and prioritizes important wildlife movement areas and highway crossing zones and provides guidance for protecting wildlife movement to inform land use and land management in Eagle County. The plan includes priority road segments, mitigation recommendations, capital improvement recommendations (near and long-term), and identifies areas that have low rates of wildlife collisions but could be problem areas in the future.	Eagle County Planning Documents Website
<b>Transportation Projects</b>		
CDOT Asset Management	Projects across the county that include surface treatment (asphalt paving), critical culvert repairs, bridge preventative maintenance, Americans with Disability Act Ramps, traffic ITS, striping, and minor safety improvements, routine repairs (e.g. guardrail) by CDOT Maintenance.	CDOT



PROJECT	DESCRIPTION	SOURCE
US 6 Post Boulevard Roundabout	Safety improvements to existing roundabout at intersection of US 6 and Post Boulevard in the Town of Avon. Construction is planned for 2023.	CDOT
I-70 Dowd Canyon Improvements	PEIS project that includes a feasibility study for I-70 safety and capacity improvements from MP 166-174.	CDOT
Vail Pass Rest Area Improvements	CDOT will be making improvements that include expanding the restrooms, adding 14 more parking spaces for cars and 14 spaces for trucks. CDOT is also planning to replace the wastewater and potable water systems. Construction for this project is planned to begin in 2022.	CDOT
Vail Valley Drive Safety Improvements	The Town of Vail is proposing safety improvements along the portion of Vail Valley Drive from Ford Park to Sunburst Drive to define a clear and aesthetically pleasing separation between motorists and pedestrians/cyclists.	Town of Vail
West Edwards Design Improvements	Project will improve multimodal access and connectivity in West Edwards along about one mile of US 6 between the Eagle River Village and Lake Creek Village Communities and the Vail Christian High School. Design is underway and will conclude in late 2020.	CDOT
I-70 Underpass Pedestrian Improvements	The project would construct a new concrete sidewalk, sheltered bus stops, and landscaping adjacent to Avon Road under the I-70 overpass.	Town of Avon Website
Gypsum Parkway Enhancement	Improving US 6 to provide more pedestrian options and better way finding. Includes a visitor center right near the interchange of US 6 and I-70.	Town of Gypsum Website
Edwards Spur Road	CDOT and Eagle County are making improvements to Edwards Spur Road, an approximate 0.6-mile-long stretch that connects I-70 to US 6 in the unincorporated town of Edwards. Phase 2 of the project will include designing improvements for the southern half of the Edwards Spur Road, starting north of the roadway bridge over the Union Pacific Railroad (where Phase 1 ended) and ending with the connection to US 6 to the south. Construction will be complete in summer 2020.	CDOT