

INTERMOUNTAIN 2040 REGIONAL TRANSPORTATION PLAN

ENVIRONMENTAL OVERVIEW

Environmental factors include not only natural resources such as water quality, air quality, and wildlife, but also wetlands, threatened and endangered species, noise, historic and cultural sites, hazardous materials sites, and recreational areas.

To avoid and minimize environmental impacts from transportation system improvements, CDOT is required to comply with the provisions of the National Environmental Policy Act (NEPA). NEPA is typically introduced at the earliest stage practicable and should identify areas where both natural and human environmental resources might be compromised as a result of a project.

Although the regional planning process for Intermountain TPR does not require a complete or specific inventory of all potential environmental resources within the corridor, identifying general environmental concerns within the region will provide valuable information for project planners and designers. The information contained in this report will serve as the basis for a more in depth analysis as part of the project planning process. This analysis includes identification of three components:

- General resources within the region that have the potential to be impacted by projects, and
- Agencies with responsibilities for resources within the region; examples may include, the US Forest Service (USFS), the US Bureau of Land Management (BLM), Colorado Parks and Wildlife (CPW), the State Historical Preservation Office (SHPO), or the local Parks Department.
- Possible mitigation strategies for potential environmental impacts.

The information that follows identifies general environmental issues within the Intermountain region. No identification of an issue does not mean that the issue is not a concern within the Intermountain region. This section focuses on issues that are easily identifiable and/or which are commonly overlooked. The purpose is to proactively address issues so that the environmental concerns can be mitigated or incorporated into a project in a manner that supports the values of the citizens and communities.

Threatened or Endangered Species

In Colorado, there are 46 species of fish, birds, insects, amphibians, mammals and plants on the federal list of threatened or endangered species. The U.S. Fish and Wildlife Service identified another 8 as candidate species. In addition to the federally listed species, there are 6 additional species listed by the state as threatened or endangered and another 29 listed as State species of concern (Colorado Parks and Wildlife, July, 2014). Impacts can result from destruction of habitat, animal mortality (including from animal-vehicle collisions), habitat fragmentation, water depletions, or changes in species behavior such as altering foraging or denning patterns.

Mitigation:

To comply with the federal Endangered Species Act, CDOT evaluates all possible adverse impacts and takes all necessary measures to avoid harming proposed, candidate and listed species before construction and maintenance activities begin. Impacts that are studied and determined to be unavoidable are minimized through highway design and construction techniques. Appropriate compensation is utilized after all reasonable avoidance and minimization techniques have been exhausted.

Air Quality

Air quality is typically considered one of the most important measures associated with transportation impacts to the environment. With the passage of the Clear Air Act in 1991, areas which violate the National Ambient Air Quality Standards are given non-attainment status. PM 10 refers to particulate matter less than or equal to 10 microns in diameter, and may be composed of a wide range of liquid

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and solid pollutants. In past years, the City of Aspen was identified as a PM10 non-attainment area. In 2003 this designation was removed, due to aggressive and successful measures in reducing air pollution. Aspen now is an attainment/ maintenance area for PM-10.

Other jurisdictions in the Intermountain TPR with air quality mitigation programs include the Town of Vail and Eagle, Pitkin, and Summit Counties. There are currently no non-attainment areas in the Intermountain TPR. The above information is presented on Figure 26.

In order to comply with the Clean Air Act (CAA), the State of Colorado adopted the following standards/regulations that relate to transportation projects, which in turn apply to the Central Front Range:

- Ambient Air Quality Standards Regulation - This regulation established ambient air quality standards for the state and dictates monitoring procedures and data handling protocols. It also identified non-attainment areas in the state, which have historically violated federal and state air quality standards.
- State Implementation Plan Specific Regulations – This regulation defines specific requirements concerning air quality control strategies and contingency measures for non-attainment areas in the state.
- Transportation Conformity, Reg. No. 10 – This regulation defines the criteria the Colorado Air Quality Control Commission uses to evaluate the consistency between state air quality standards/objectives, and transportation planning and major construction activities across the state, as defined in the state implementation plans.
- Street Sanding & Sweeping, Reg. No. 16 – This regulation sets specific standards for street sanding and sweeping practices.

Historical/Archaeological Properties

Section 106 of the National Historic Preservation Act (NHPA) sets forth the process that federal agencies and their designated representatives must follow when planning undertakings that have the potential to affect significant historical and archaeological resources, known collectively as “historic properties.” Typical historic resources include buildings, residential neighborhoods, commercial districts, agricultural complexes, bridges, canals, ditches, reservoirs, railroad lines and landscapes. Archaeological sites include surface scatters of chipped stone, ground stone or ceramic artifacts, architectural and non-architectural features (e.g., pit houses and fire hearth remains, respectively), or any area exhibiting evidence of intact subsurface cultural materials. More information on properties presently on or determined eligible for the National Register of Historic Properties is available on the website of History Colorado (formerly the Colorado Historical Society) at <http://www.historycolorado.org/oahp>.

Mitigation:

The State Historic Preservation Officer (SHPO) must be consulted to determine if sites that have not been entered into the National Register of Historic Places are eligible for inclusion on that list. The SHPO must also be consulted to determine the effects projects may have on historic properties. In addition, over 40 Native American tribes have a historic interest in various parts of Colorado. The NHPA mandates that FHWA and CDOT consult with Native American tribes during the planning of federal-aid transportation projects both on and off Indian Reservations.

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Paleontological Resources

Paleontological resources are non-renewable resources that include fossils (defined as the remains or traces of once-living organisms preserved in the geological record, generally more than 10,000 years old), some sub-fossil remains, and the geological context in which fossil or sub-fossil remains are found. Some fossils found in Colorado include the bones and tracks of vertebrates such as dinosaurs and mammoths, shells of marine invertebrates such as ammonites, and leaf impressions of prehistoric plants. Although paleontological resources specifically exclude any remains which are found in a human-oriented or archaeological context, they are protected under many of the same federal and state regulations as archaeological resources. Regulations specific to paleontological resources include the Paleontological Resources Preservation Act (PRPA) of 2009. Colorado is very rich in paleontological resources, but the density of those resources varies depending on the geology of the specific area being studied. For this reason, the first step in determining the paleontological sensitivity of a project area is to check its geology based on the best available maps.

Mitigation:

If the project will be disturbing sensitive geologic units, a search of museum records and a pedestrian survey of the project area are conducted to determine whether any previously identified or new fossil localities, respectively, will be disturbed. Clearance or mitigation will then be recommended at the discretion of the trained and permitted paleontologist conducting the search and survey.

Water Quality/Wetlands

There are 23 rivers, creeks, and tributaries within the Intermountain region, as well as numerous lakes, floodplains, and wetlands. The existing transportation system has numerous crossings of these riparian zones. A portion of the Colorado River drainage basin lies within the Intermountain TPR. This basin has agreements in place for the protection of endangered fish, and portions of the river are on the state's imperiled list. Protection of these waters must be considered in any transportation improvement project through a number of regulatory reviews and permits. With the passage of the Federal Water Pollution Control Act in 1972, the Environmental Protection Agency (EPA) created the National Pollution Discharge Elimination System (NPDES), later amended to include the Clean Water Act (CWA) and storm water discharge standards. The CWA provides the EPA the authority to restore and maintain the chemical, physical, and biological integrity of the nation's waters, including lakes, wetlands, streams, and other aquatic habitat. Although there are no communities in the Intermountain TPR large enough to fall within the population criteria for the NPDES for storm water discharges, other federal or state permits may apply to transportation projects:

- Any project using a dewatering element during construction, or any project which disturbs five acres or more during construction, will need a 402 permit.
- Projects involving the discharge of dredged or fill materials into waters of the United States, the Army Corps of Engineers will evaluate the proposed activity under Section 404 (b)(1) of the Clean Water Act of 1977.
- The discharge of pollutants into navigable waters requires a Section 401 clearance.

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Mitigation:

Some transportation projects that occur near highly sensitive water bodies, such as drinking water sources or impaired streams, can be required to implement best management practices to ensure that degradation of the water body does not occur.

Impacted wetlands are required to be mitigated on at least a 1:1 basis. For example, if five acres of wetlands are impacted, then five acres of wetlands must be replaced. The replacement wetlands are typically created as close to the impacted wetlands as possible and perform the same ecological and societal functions as the impacted wetlands. Wetland banks are becoming more prevalent and are available to purchase credits to replace impacted wetlands, if they are both in the same watershed.

Noise

The Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) defines noise levels, which, if approached or exceeded, require noise abatement consideration. FHWA requires all states to define at what value a predicted noise level approaches the NAC, thus, resulting in a noise impact. CDOT has defined “approach” as 1dBA less than the FHWA NAC for use in identifying traffic noise impacts in traffic noise analyses.

Noise abatement guidelines also state that noise abatement must be considered when the noise levels “substantially exceed the existing noise levels”. This criterion is defined as increases in the L(eq) of 10.0 dBA or more above existing noise levels.

Noise related to transportation is a major concern in the Intermountain TPR. Communities along the I-70 corridor experience ever-increasing levels of freeway traffic noise, and sound walls have been constructed in problem areas and are being considered at additional locations. As existing higher-speed transportation facilities are widened or new facilities are constructed noise becomes a greater issue. Noise can also be an issue for lower-speed facilities where steep grades or a high percentage of trucks exist.

Federal aid projects meeting criteria that define projects likely to cause noise impacts must conduct an assessment of highway-generated noise in compliance with federally compliant CDOT noise abatement criteria. In general, vehicle noise is not an issue on low-speed facilities unless steep grades or a high percentage of trucks exist.

Aircraft operations at Aspen/Pitkin County and Eagle County Regional Airports contribute to exterior noise levels. Military or joint-use airports are required under military regulations to conduct an Air Installation Compatibility Use Zone Study, which identifies the noise footprint associated with airport operations. Airports with regularly scheduled commercial airline service are required to conduct a similar study under Federal Aviation Administration (FAA) regulations. These studies may be used by planners to assess airport noise impacts on the surrounding communities.

Mitigation:

If noise impacts exceed the FHWA criteria, mitigation is evaluated based on its feasibility and reasonableness. Common noise mitigation techniques along highways include walls and earthen berms separating traffic from other land uses.

For airports, changing take-off and landing patterns to reduce noise impacts on residential communities is a mitigation strategy.

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Hazardous Materials

Within the five-county Intermountain TPR, the potential exists for finding hazardous materials during the construction of transportation improvements. Hazardous materials are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). A number of CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) sites have been previously identified in the Intermountain region.

The region's transportation planners should be aware of the potential for hazardous material sites, and conduct investigations when appropriate. Examples of land uses often associated with such materials include industrial/commercial activities (including mining), active or capped oil/gas drilling operations, railroad facilities, and agricultural areas where large amounts of fertilizer or pesticides have been used. For information on the RCRA, see <http://www.epa.gov/emefdata/em4ef.home>; for information on sites identified as having serious hazardous waste issues, see <http://www.epa.gov/superfund/sites/query/queryhtm/nplmapsg.htm>.

Mitigation:

Typical mitigation/remediation strategies associated with common hazardous materials encountered during construction are to remove the contaminated soil from the site and dispose of the materials appropriately or stabilize contamination on-site where possible. Depending upon the type of contamination, disposal can include solid waste landfills, hazardous waste landfills, or on-site treatment. The mitigation will also include a site-specific health and safety plan for construction workers that specifies how potentially hazardous materials will be handled.

Hazardous Materials Routes

The transport of hazardous and nuclear materials is restricted to a nationwide network of designated routes. Figure 28 illustrates the designated hazardous materials routes within the Intermountain TPR; there are no designated nuclear materials routes within the region.

I-70 is the designated east/west route for hazardous materials, with the exception of the Eisenhower Tunnel. Trucks carrying such materials are required to bypass this section of I-70 via US 6 over Loveland Pass. When Loveland Pass is closed due to weather, convoys of hazardous materials carriers are escorted through the Eisenhower Tunnel, with general traffic being stopped periodically for this purpose. Trucks carrying certain hazardous materials, such as blasting agents and radioactive substances, are prohibited from using Eisenhower Tunnel at all times. During peak periods when Loveland Pass is closed due to weather, trucks carrying hazardous materials are required to wait at designated places away from the entrance until the peak periods have passed. The trucks then are escorted through the tunnel in stages.

Other hazardous materials routes include SH 139, SH 13, SH 9 (I-70 at Silverthorne to the Summit County/Grand County line), SH 91 (I-70 at Copper Mountain to Leadville), and SH 24 (Leadville to Lake County/Chaffee County line).

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Environmental Permits

The following list of permits is meant to provide information needed to comply with basic environmental permitting requirements for construction activities. It is impossible to be all-inclusive and addressing every situation. These are just some of the more common permits associated with construction activities.

- County/State Air Permit (for construction activities, grading, clearing, grubbing)
- County/State Demolition Permit (these permits may also require a utility disconnect permit from your local utility department)
- Source Air Permit (APEN) (concrete batch plant, haul road, fuel storage tank)
- Sandblasting Permit
- Construction Dewatering Permit
- Sand and Gravel Permits (Certificate of Designation)
- Construction Stormwater Permit
- Compliance with a Municipality Separate Storm Sewer System (MS4) Permit
- US Army Corps of Engineers 404 Permit (waters of the U.S., including wetlands)
- Floodplain Permit
- Wildlife Surveys (Greater Sage Grouse Survey, Migratory Bird Survey)
- Incidental Take Statements (USFWS)