

Northwest 2040 Regional Transportation Plan

ENVIRONMENTAL PROFILE

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.

In an effort 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. To further the importance of environmental issues, the Northwest TPR has created specific values towards preserving the quality of the natural environment.

Although the regional planning process does not require a complete specific inventory of all potential environmental resources within the Northwest TPR, establishing 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 involves identification of three components:

- General resources within the region that have the potential to be impacted by projects.
- Agencies with responsibilities for resources within the region, examples may include, the US forest Service, the State Historical Preservation Office, or the local Parks Department.
- Possible mitigation strategies for potential environmental impacts.

The information that follows identifies general environmental issues within the region, both natural and human resources. However, no identification of an issue in this review should not be taken to mean that it is not of concern in the region. This section focuses on issues that are easily identifiable and/or which are commonly overlooked. The purpose is to identify issues that can be acted upon proactively 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 the Northwest TPR serves.

Threatened or Endangered Species

In Colorado, there are 46 species of fish, birds, 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 vehicle-wildlife collisions), fragmentation of habitat, 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.

Senate Bill 40 (SB40) was created primarily for the protection of fishing waters, but it does acknowledge the need to protect and preserve the fish and wildlife resources associated with streams, banks and riparian areas in Colorado. This is accomplished through erosion control, water contaminate control, discharge conditions, construction procedures, vegetation manipulation and noxious weed control. These measures, when properly used, can ensure that Colorado waters remain conducive to healthy and stable fish and wildlife populations which depend on the streams of Colorado.

Northwest 2040 Regional Transportation Plan

The Migratory Bird Treaty Act (MBTA) protects all birds native to North America, with the exception of non-migratory upland game birds (e.g. quail, grouse, pheasant, turkey, etc.) and non-native birds (e.g., House Sparrow, European Starling, Rock Dove (common pigeon), and Eurasian Collared Doves). The MBTA states that it is “unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird.” The MBTA currently protects over 800 species of birds that occur in the U.S. CDOT has developed a set of specifications (Spec. 240) that are designed to protect migratory birds and comply with the act.

Primary mitigation techniques to offset impacts to threatened or endangered species is determined through the Section 7 consultation process with the U.S. Fish and Wildlife Service.

Air Quality

The Colorado Air Quality Control Commission, a division of the Colorado Department of Health and Environment, is responsible for developing and adopting a regulatory program to protect and improve air quality in Colorado. Typically, the commission is involved in the maintenance of the regulations through modification and revision. Much of the air quality management program currently is in place and has been adopted over time. Establishing new programs occasionally is considered by the commission. The commission oversees the implementation of the air quality programs. The commission is responsible for hearing appeals of the Air Pollution Control Division’s implementation of the programs through permit terms and conditions and enforcement actions. Colorado’s air quality management program regulates air pollutant emissions from stationary industrial sources, cars and light duty trucks, burning practices, street sanding and sweeping activities, and the use of prescribed fire. The air quality program also is focused on visibility, odor and transportation planning impacts to future air quality.

The Colorado Air Quality Control Commission distributed a “Report to the Public 2005-2006” addressing air quality issues and attainment designations in the state of Colorado. When discussing air quality in Colorado, the Air Quality Control Commission separates the state into six regions to more clearly address each region’s air quality conditions and activities. The Northwest TPR falls within the Western Slope air quality region.

Air quality concerns in this region primarily are from the impacts of a recent surge in energy development. In the 1990s, air quality concerns primarily were related to woodstoves, unpaved roads and street sanding. These “area” sources were addressed in many Western Slope communities and are no longer as significant as the impacts from energy development, including direct emissions, support service impacts and associated growth. Controlled and uncontrolled burns are a significant source of air pollution in this region.

Many Western Slope communities outside the Northwest TPR have taken aggressive action to control residential burning emissions. The municipalities of Aspen, Crested Butte, Steamboat Springs, Telluride and Vail, and Pitkin, San Miguel, Summit, Mesa and Eagle counties have adopted either mandatory or voluntary control measures to reduce residential burning pollution during winter seasons. Increased awareness of visibility impacts and fine particle levels spurred the installation of new air monitoring equipment to gauge those impacts. The region also has a number of local agencies that conduct air quality control programs.

During the 1970s and 1980s, the U.S. Environmental Protection Agency (EPA) designated many Colorado cities and towns as nonattainment areas because the areas violated nationwide air quality standards. By the mid-1990s, all these areas came into compliance with the various standards. All areas have been re-designated, including Pagosa Springs in 2001.

The re-designations are made possible by cleaner air, and through development and implementation of air quality management plans known as State Implementation Plans or “SIPs.” These plans describe the nature

Northwest 2040 Regional Transportation Plan

of the air quality problems and the probable causes. The plans show projections of future pollutant levels and identify strategies to reduce these pollutants to acceptable levels.

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 Northwest TPR:

- 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 of 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.

In the Northwest TPR, the Routt County Department of Environmental Health maintains and manages five PM₁₀ monitors and one PM_{2.5} monitor. The Steamboat Springs air shed has been in compliance for PM₁₀ levels since 1996 and an air quality attainment plan has been developed, submitted and approved by the Colorado Air Quality Control Commission. Other approvals required from the legislature, the governor's office, and the U.S. EPA were obtained and Steamboat Springs was designated as an attainment area in 2004. For more specific details on Colorado Air Quality Regulations see www.cdphe.state.co.us/regulate.asp.

Water Quality/Wetlands

Colorado has four river basins: Colorado, Missouri, Rio Grande, and the Arkansas. Within these basins are numerous creeks, tributaries, and ditches; as well as lakes, floodplains, and wetlands. The Northwest TPR is part of two of these four river basins. The majority of the Northwest TPR is situated in the Colorado River Basin, and a smaller portion in the South Platte River Basin to the northeast. The major rivers in the Northwest TPR that are part of the Colorado River Basin are the Colorado, White and Yampa. A major water body within the Colorado River Basin is Lake Granby. The Water Pollution Control Act of 1972, later amended to include the Clean Water Act (CWA), protects the waters of the TPR. This Act promulgated the National Pollution Discharge Elimination System (NPDES) and created water discharge standards which includes maintaining the chemical, physical and biological integrity of the nation's waters. Protection of these waters is done through regulatory review and permits. A list of potential environmental permits is listed at the end of this document.

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

Northwest 2040 Regional Transportation Plan

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 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 should 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.

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. As a result of potential impacts, all projects involving federal funding will require completion of a noise analysis.

Mitigation:

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

Historical/Archaeological Sites

Both the Colorado State Register of Historic Places and the National Register of Historic Properties (NRHP) list sites and/or communities of historic/archaeological significance. Any transportation project identified for this region would require field surveys to determine which resources have cultural/archaeological significance and/or potential eligibility for listing on the NRHP. 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>.

Hazardous Materials

The potential to find hazardous materials during the construction of a transportation facility always exists. Hazardous materials are regulated under several programs, including: the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Certain land uses frequently result in a higher potential for location of hazardous waste or materials. Examples of land uses often associated with hazardous materials include industrial and commercial activities such as existing and former mining sites; active and capped oil and gas drilling operations and pipelines; agricultural areas using chemical fertilizers, insecticides, and pesticides; and railroad crossings where there have been accidental cargo spills. Active, closed and abandoned landfill sites are also potential problem areas for transportation facility construction as are gasoline stations that potentially have leaking underground storage tanks. 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/query.htm/nplmapsg.htm>.

Northwest 2040 Regional Transportation Plan

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.

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.

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 & Gravel Permits (Certificate of Designation)
- Construction Storm Water 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 (Migratory Bird Survey)