

COLORADO DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL STEWARDSHIP GUIDE



COLORADO
Department of
Transportation

NOVEMBER 2017



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Department of
Transportation

Environmental Ethics Statement

CDOT will support and enhance efforts to protect the environment and quality of life for all of Colorado's citizens in the pursuit of providing the best transportation systems and services possible

- ∞ CDOT strives to be a good steward of the environment in operating and maintaining the state's transportation system.
- ∞ CDOT goes beyond environmental compliance and strives for environmental excellence.
- ∞ CDOT promotes a sense of environmental responsibility for all employees in the course of all CDOT activities.
- ∞ CDOT ensures that measures are taken to avoid or minimize the environmental impacts of construction and maintenance of the transportation system.
- ∞ CDOT will design, construct, maintain and operate the statewide transportation system in a manner which helps preserve Colorado's historic and scenic heritage and fits harmoniously into communities and the natural environment.

CDOT's environmental ethic establishes a moral foundation of environmental responsibility that guides environmental stewardship, compliance, and sustainability throughout our organization.

CDOT Mission and Vision

Mission:

To provide the best multi-modal transportation system for Colorado that most effectively and safely moves people, goods, and information.

Vision:

To enhance the quality of life and the environment of the citizens of Colorado by creating an integrated transportation system that focuses on safely moving people and goods by offering convenient linkages among modal choices.

Values:

SAFETY – We work and live safely! We protect human life, preserve property, and put employee safety before production!

PEOPLE – We value our employees! We acknowledge and recognize the skills and abilities of our coworkers, place a high priority on employee safety, and draw strength from our diversity and commitment to equal opportunity.

INTEGRITY – We earn Colorado's trust! We are honest and responsible in all that we do and hold ourselves to the highest moral and ethical standards.

CUSTOMER SERVICE – We satisfy our customers! With a can-do attitude we work together and with others to respond effectively to our customer's needs.

EXCELLENCE – We are committed to quality! We are leaders and problem solvers, continuously improving our products and services in support of our commitment to provide the best transportation systems for Colorado.

RESPECT – We respect each other! We are kind and civil with everyone, and we act with courage and humility.



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Purpose of Environmental Stewardship

To be a steward means to take responsibility, to manage, and to protect. The CDOT Environmental Stewardship Guide describes how CDOT carries out its stewardship of the environment. The environment includes not only the natural environment, but also the built environment, the cultural and social fabric of our communities, and the quality of life of the people who live in Colorado. This Environmental Stewardship Guide highlights how CDOT incorporates our environmental ethic into our business practices, thereby creating the moral framework of our decision-making processes.

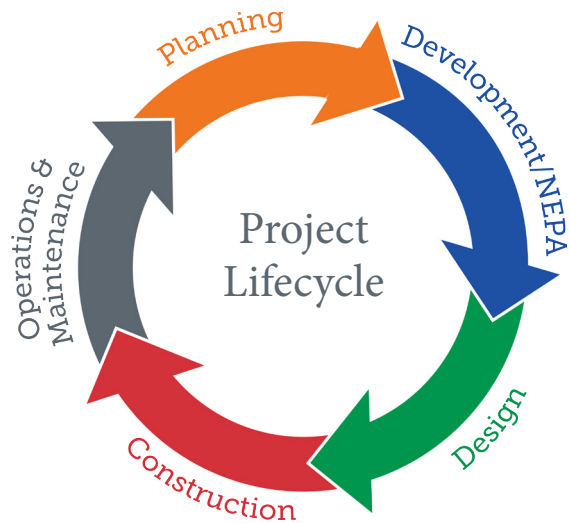
For CDOT, environmental stewardship goes beyond managing environmental clearances and ensuring regulatory compliance for transportation projects. It means CDOT has a responsibility to act in an environmentally conscientious manner and ensure the statewide transportation system is constructed and maintained in a sustainable manner that supports our vision to enhance Colorado's quality of life and environment.

FHWA/CDOT Stewardship and Oversight Agreement

Each April, CDOT and the Federal Highway Administration (FHWA) finalize a new [Stewardship and Oversight Agreement](#) (S&O Agreement). Under the agreement, CDOT and FHWA personnel work together as partners to continually review, evaluate, and improve the environmental program. The agreement emphasizes that:

- ∞ Environmental issues are identified early;
- ∞ Appropriate impact analyses are performed in a timely manner;
- ∞ Adequate documentation is submitted and reviewed as scheduled;
- ∞ Required authorizations are received from the governing entities for all projects and maintenance activities in accordance with the laws, environmental policies, letters of agreement, and rules governing the environment; and
- ∞ Environmental commitments are completed.

The environmental review process may include input from the public, from other agencies, and includes mitigation tracking to ensure environmental protections for each project are carried throughout the full project lifecycle. The S&O Agreement also



includes performance indicators and measures to assess the health of CDOT's Environmental Program.

Performance Indicators

- (1) Completion time for environmental documents
- (2) Active and completed National Environmental Policy Act (NEPA) documents

Performance Measures

- (1) Environmental Protection Agency EIS ratings
- (2) Percent on time for clearance actions
- (3) Wetland impact and replacement ratios
- (4) Water quality measure (resolution of findings)

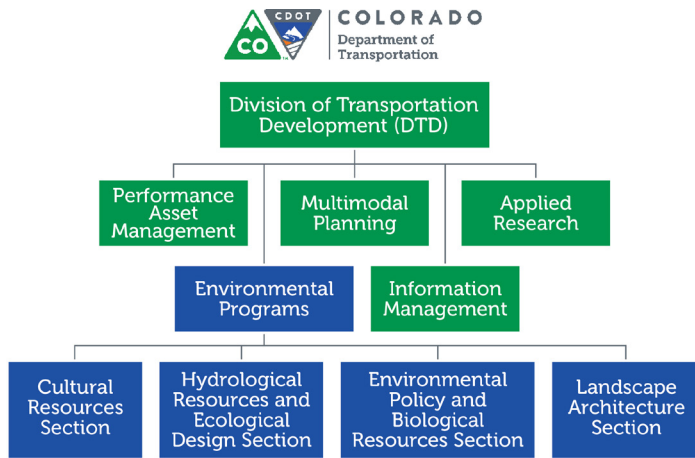


CDOT Environmental Program Responsibilities and Organization

CDOT works cooperatively with FHWA and other federal and state agencies during the environmental review process. While FHWA is ultimately responsible for the environmental approvals of federal actions, the [2017 Programmatic Agreement for the Review and Approval of Certain NEPA Categorically Excluded Transportation Projects](#) (PA) between CDOT and FHWA enables CDOT to approve certain classes of projects which result in no significant environmental impacts, and which meet the other evaluation criteria identified in the PA. The primary purpose of the PA is to increase flexibility, streamline the environmental process, and reduce paperwork. The majority of CDOT projects are processed as Programmatic Categorical Exclusions under the 2017 PA.

CDOT Environmental Program Organization

The CDOT [Environmental Program Branch](#) (EPB)—part of the Division of Transportation Development (DTD)—is comprised of a central office that assists regional staff. [CDOT Regions](#) are the project delivery arm of CDOT. CDOT Regions deliver projects that follow CDOT’s Environmental Ethics and comply



with relevant state and federal laws. The EPB is responsible for assisting the Transportation Commission and CDOT executive management in developing environmental policy, procedures, programmatic agreements, and environmental data for use in the planning and project development process. CDOT Regions also provide support to EPB on the development of policies, procedures, programmatic agreements, and environmental data through project delivery. EPB also assists the CDOT regions with project development, technical support, construction, and maintenance-related environmental activities. EPB consists of four sections:

- ∞ Cultural Resources Section
- ∞ Hydrological Resources and Ecological Design Section
- ∞ Environmental Policy and Biological Resources Section
- ∞ Landscape Architecture Section

State of the Practice

In addition to policy and procedure development, the S&O Agreement identifies that CDOT/FHWA sponsor an annual in-person environmental training workshop for all region and headquarters environmental personnel. The purpose of the workshop is to provide training on new requirements and refine expertise on various resource issues. In addition, CDOT coordinates with FHWA to provide other trainings as new policies and key issues develop.

Other Stakeholders Involved

Transportation Environmental Resource Council

Formed in 2002, FHWA and CDOT co-chair the [Transportation Environmental Resource Council](#) (TERC) which provides a forum for interagency collaboration. The TERC partnership extends beyond CDOT and FHWA to include local, regional, state, and federal agencies from across the state of Colorado.

One of the TERC’s most important functions is to identify and anticipate transportation-related environmental issues. Since its inception, a strong working relationship has blossomed and continues to grow among the TERC members. Meetings of the TERC are held three times a year, usually in spring, summer, and fall.

Transportation Environmental Resource Council



CDOT Participation

- (1) Facilitate interagency collaboration regarding transportation-related environmental policies and issues.
- (2) Disseminate CDOT plans, regulation, and procedures as they are created, modified, and adopted by CDOT.
- (3) Generate discussion of anticipated controversial environmental issues related to existing or planned projects.

Transportation Planning Regions and Metropolitan Planning Organizations (TPRs and MPOs)

CDOT works closely with many planning partners throughout the state, including local officials in the ten rural [Transportation Planning Regions](#) (TPRs) and the five Metropolitan Planning Organizations. The [Metropolitan Planning Organizations](#) (MPOs) and the [Regional Planning Commissions](#) (RPCs) in these fifteen regions meet regularly to plan for their areas and ensure the planning process is being implemented consistently across the state. The [Statewide Transportation Advisory Committee](#) (STAC), comprised of representatives from each of these planning organizations, meets monthly to advise the Department and the Transportation Commission on the multimodal transportation planning needs of the state. Transportation stakeholders are also represented on other statewide planning bodies including the Statewide MPO Committee, Transit and Rail Advisory Committee (TRAC), and the Freight Advisory Council (FAC).

CDOT TPR and MPO Coordination

The [Multimodal Planning Branch](#) (MPB) (also part of DTD) coordinates CDOT's transportation planning process, in conjunction with [CDOT Regions](#). The MPB coordinates planning activities, integrates planning products from different CDOT Engineering Regions and Divisions, incorporates input from the various stakeholders, and provides analysis and policy development support based on a comprehensive, statewide, multimodal perspective.

Internally, coordination includes a number of partners, including DTD's Transportation Performance Branch and Information Management Branch; Division of Accounting and Finance; Division of Transportation System Management & Operations; and the Division of Transit & Rail.

Externally, MPB coordinates with the TPRs and MPOs, along with other key stakeholder groups and the general public. MPO & Regional Planning Section administers several funding programs that enable or support planning processes including the [Consolidated Planning Grant \(CPG\) Program](#), the [Rural Planning Assistance \(RPA\) Work Program](#), and, in conjunction with the [Bicycle and Pedestrian Section](#), the [Congestion Mitigation and Air Quality Program](#) (CMAQ), and [Transportation Alternatives Program](#) (TAP).

Local Agencies – Counties and Municipalities

Many CDOT projects involve either local or state—or a combination of local and state—funding. These projects present opportunities for CDOT to partner with local agencies and promote environmental stewardship for transportation projects at the local level.



CDOT Local Agency Coordination

Although many non-federal projects will not require federal agency (or National Environmental Policy Act [NEPA]) approval, CDOT's involvement with local agency processes is an excellent framework for ensuring CDOT's environmental stewardship principals are followed. The guiding principles of environmental stewardship have been incorporated into the CDOT transportation planning and project development process, as well as maintenance and operations of the state transportation system. It is CDOT's responsibility to recognize and consider the essential principles of environmental stewardship and to appropriately include them in the transportation decision-making process. To meet this responsibility, CDOT coordinates with local agencies to identify environmental requirements for local projects receiving state or federal funding, and ensure that environmental commitments are monitored and completed.

Resource Agencies Roles

Partnering with federal and state resource agencies to protect cultural, historic, biologic, water and other environmental resources according to applicable state or federal statutes is an important part of incorporating CDOT's environmental ethic into every project. CDOT works with resource agencies to identify and mitigate environmental impacts. In instances where impacts are unavoidable, CDOT is responsible for coordinating with resource agencies to obtain required permits or agreements and complete associated regulatory stipulations. CDOT is responsible to oversee the completion of required environmental mitigation and ensuring that mitigation is completed according to applicable regulations or agreements. Resource-specific regulations are taken into consideration early in the project development process and are carried through construction and into the operations and maintenance phase.



Statewide and Regional Long-Range Transportation Planning

23 USC 134-135 and 49 USC 5303-5304

Each state is directed by federal law to conduct a statewide transportation planning process. Among other requirements, the statewide planning process must take into consideration the protection and enhancement of the environment, promotion of energy conservation, and improvement of quality of life [23 USC §135(d)(1)(E)] in all aspects of the transportation planning process; CDOT seeks public and other stakeholder input throughout the process.

The transportation planning process includes the development of required planning products including a Statewide Transportation Plan (SWP), Regional Transportation Plans (RTPs), and Statewide Transportation Improvement Program (STIP). The following graphic identifies key elements of the statewide transportation planning process.

CDOT Policy Directive 14

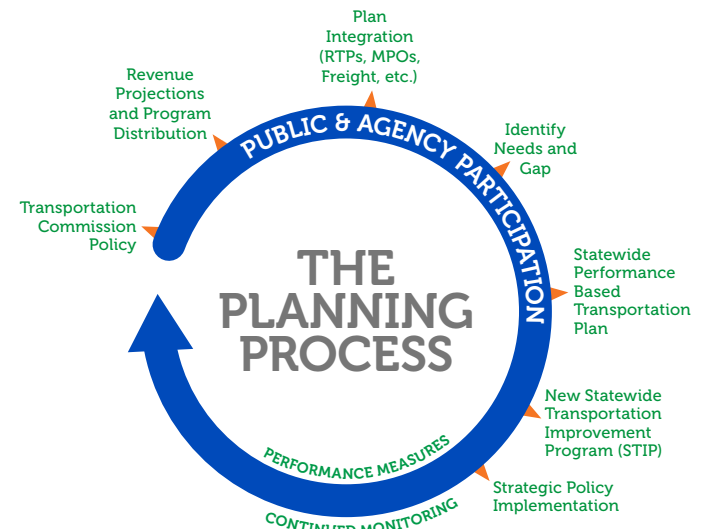
[CDOT Policy Directive \(PD\) 14.0](#) sets goals and performance metrics that are used to guide investment in our transportation system. PD 14.0 incorporates a performance-based approach to planning, articulating how success will be measured, defining terms, incorporating multimodal objectives, and connecting four primary goal areas with appropriate sections of the annual budget. Reference the above link for more specifics on CDOT PD 14.0.

Colorado Climate Plan 2015 Transportation Chapter

The [Colorado Climate Plan 2015](#) was developed to meet the requirements of Colorado House Bill 13-1293, codified as Colorado Revised Statute (C.R.S.) 24 -20-111. That law calls for development of a state climate plan that sets forth a strategy to address climate change and reduce greenhouse gas emissions, while taking into account previous state actions and efforts. To compile the plan, different state agencies were assigned chapters in their area of expertise. CDOT contributed to the transportation chapter in the Colorado Climate Plan 2015. Reference the above link to see more specifics of the Colorado Climate Plan or contact CDOT Environmental Programs Branch.

Air Quality Action Plan

The goal of the [CDOT Air Quality Action Plan](#) is to reduce air



pollution from Colorado’s transportation sector. This Plan will help CDOT document efforts to reduce air quality pollutants from transportation, including greenhouse gases, and to demonstrate environmental stewardship. CDOT’s mission is to deliver transportation projects while protecting our environment, including air quality. For further information on CDOT’s commitment to air quality, which includes a commitment to reducing pollutants that cause climate change, reference the above link for more specifics on CDOT’s Air Quality Action Plan or contact CDOT Environmental Programs Branch.

Statewide Transportation Plan

The Statewide Transportation Plan (SWP) is a 20-year plan identifying future needs for Colorado’s multimodal transportation system. The SWP is a tool for CDOT to implement the transportation vision and goals for the state, including plans for freight, transit, and bike/ped, and it outlines the strategic direction necessary to achieve these goals. CDOT takes a 3C (continuing, comprehensive, cooperative) approach to its SWP planning process. The ten TPRs, the five MPOs, Native American Tribes, environmental resource agencies, and the traveling public are key partners in developing the SWP.

The [Fixing America’s Surface Transportation Act](#) (FAST Act) continues the federal mandate for a performance-based approach to planning. Colorado’s multimodal transportation planning process reflects this approach by incorporating extensive use of data and analysis to inform decision-making, including establishing performance goals and objectives, distributing resources, and selecting projects. The SWP includes CDOT’s commitment to continue or develop six key initiatives directly related to environmental stewardship, including:

- ∞ **Sustainability Program and Plan:** CDOT is committed to developing and supporting a sustainable organization and transportation system. CDOT defines sustainability as



meeting present and future transportation needs while preserving and restoring environmental and ecological systems, fostering community health and vitality, promoting economic development and prosperity, and ensuring equity between and among population groups and over generations.

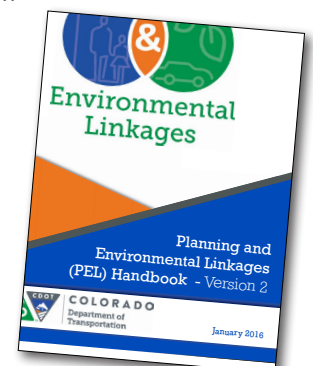
- ∞ **Alternative Fuels Program:** CDOT has partnered with the Colorado Energy Office (CEO), Regional Air Quality Council (RAQC), and Colorado Department of Local Affairs (DOLA) to foster the development of a sustainable, statewide market for compressed natural gas, electric vehicles, and other alternate fuel vehicles.
- ∞ **Environmental Compliance:** CDOT will continue to comply with State and Federal requirements, continue to improve its environmental performance and mitigation measures, and endeavor to be a leader in sustainability efforts.
- ∞ **Innovation:** As new and innovative sustainability tools and environmental mitigation techniques are developed, those techniques will be tested on CDOT projects and, after feedback and recommendations, will become a fixture in CDOT design and construction.
- ∞ **Storm Water Management:** CDOT has developed a strategic initiative to address permanent water quality storm water management, which makes more efficient use of resources. The initiative will achieve a holistic (regional) approach to permanent water quality treatment, rather than storm water management on a project-by-project basis. The initiative includes a local partnership element designed to result in larger mitigation projects with greater water quality improvement and the incentive for local governments to take on the responsibility of on-going maintenance. In support of this effort, CDOT has developed an inventory of storm water management infrastructure statewide to add to a [Statewide Permanent Water Quality Program](#), which will help guide locals in identifying early partnership opportunities for mitigation projects related to planned transportation improvements on the part of CDOT.
- ∞ **C-PLAN:** In conjunction with the recent Statewide Transportation Plan development, CDOT created [C-PLAN](#), an online mapping system that allows for better coordination with resource agencies on environmental data as well as public access to data. CDOT has used the C-PLAN in developing the SWP to conduct multiple webinars in coordination with environmental agencies.

Planning and Environmental Linkages

In 2009, FHWA launched Every Day Counts (EDC) initiative in cooperation with the American Association of State Highway and Transportation Officials (AASHTO) to speed up the delivery of highway projects and address the challenges presented by limited budgets. EDC is a state-based model to identify and rapidly deploy proven but underutilized innovations to shorten the project delivery process, enhance roadway safety, reduce congestion, and improve environmental sustainability. Every two years, the EDC program collaborates with stakeholder to incorporate new innovations, taking into consideration market readiness, impacts, benefits, and ease of adoption of the innovation.

CDOT has embraced the EDC initiative through creation of the [Planning and Environmental Linkages \(PEL\) Handbook](#). The PEL process equips CDOT to be a better environmental steward through:

- (1) Considering qualitative and quantitative environmental impacts early in the transportation planning process to help funded projects proceed more quickly through NEPA during the project development phase
- (2) Identifying environmental resources that may affect future project development time frames, such as those that require avoidance or minimization of impacts during alternatives development, have lengthy environmental clearance processes, or are likely to be controversial or complicated
- (3) Incorporating environmental analysis and mitigation in the planning process and reducing duplication of work in the NEPA phase
- (4) Building partnerships by identifying and engaging affected jurisdictions and transportation agencies at early stages and throughout the planning process
- (5) Initiating early coordination with resource agencies to build partnerships and streamline future consultation and permitting processes
- (6) Conducting ongoing coordinated involvement of FHWA, CDOT, resource agencies, and local agencies
- (7) Improving the quality of information needed to make sound planning decisions and develop the most environmentally responsible and sustainable projects
- (8) Developing Programmatic Agreements with resource agencies, as applicable by early analysis of environmental resources



Project Development and NEPA Compliance

NEPA is a comprehensive environmental law requiring Federal Agencies take into consideration, and weigh equally with other factors, a project's impact to the natural and human environment. The NEPA process extends beyond federally led actions to include state and local level actions that involve federal funding, permit approval, or other federal nexus. Most CDOT projects involve a federal nexus and are processed in accordance with NEPA regulations.

CDOT NEPA Manual

CDOT is committed to following all applicable state and federal environmental regulations. FHWA is the primary lead federal agency for roadway projects in Colorado and works as a partner with CDOT and local agencies to implement NEPA on federally aided or approved projects. Although non-federal projects will not require federal agency approval, the NEPA process is an excellent framework for ensuring environmental factors are considered consistent with CDOT's environmental ethic. Thus, the guiding principles of NEPA have been incorporated into the CDOT transportation planning and project development process, as well as maintenance and operations of the state transportation system. The CDOT [NEPA Manual](#), provides guidance on the language and implementation of NEPA regulations.

The Manual provides guidance on several key areas directly relating to how CDOT deploys its environmental ethic during the NEPA process, including:

(1) NEPA Class of Action

- ∞ Has the type of project been shown to have no individual or cumulative significant environmental effects (i.e., is it categorically excluded from detailed NEPA analyses)? ([Categorical Exclusion, Class II](#))
- ∞ Are the potential environmental effects of the project uncertain? ([Environmental Assessment, Class III](#))
- ∞ Is the project likely to have significant environmental effects that cannot be mitigated? ([Environmental Impact Statement, Class I](#))

CDOT, in collaboration with FHWA, brings a multidisciplinary team together at the beginning of a project to determine the appropriate class of action for a given project. Teams review existing environmental maps and surveys, public and agency input, and environmental and project context.

(2) PEL or Other Studies

(See PEL section)

(3) Context Sensitive Solutions

Context Sensitive Solutions or CSS is a disciplinary approach to transportation development that CDOT has adopted for many of its projects. It recognizes the need to develop transportation solutions that supplement and support the social, economic, and environmental context of the facility. While aesthetic treatments and visual enhancements are often features in designing a facility that is responsive to stakeholder needs, CSS should not be construed as simply a beautification requirement. CSS represents comprehensive solutions to transportation issues in such a way as to minimize negative impacts to community and environmental values and to design projects that best fit the physical setting and work with to enhance the community and environment of which they are a part. Because each project has a unique context, CSS is not a one-size-fits-all process. CSS principles and tools must be developed individually for each project, and include the level of stakeholder involvement appropriate for each project.



(4) CDOT's 1601 Process for Interchange Accesses

CDOT's [1601 process](#) is always required when CDOT, a local agency, or a private developer requests a new interchange or major improvements to an existing interchange. Some interchange requests also require compliance with FHWA's Interchange Approval Request (IAR) process if they affect interstate travel. They are different processes but can be done at the same time. CDOT requires environmental, operational, and other studies performed for the 1601 process be sufficient to meet FHWA IAR and NEPA requirements.

(5) Project Delivery (Construction)

The four project delivery methods currently used by CDOT include Design-Bid-Build, Design-Build, Public-Private Partnership (P3), and Construction Manager/General Contractor (CM/GC). CDOT follows its NEPA process and adheres to environmental commitments regardless of the delivery method. However, the timing of and responsibilities for the NEPA documentation and decision vary so if alternative delivery (design build or CM/GC) is anticipated, the NEPA process should be planned accordingly. Additional delivery methods may emerge as innovations continue. Regardless of the delivery method, all projects are required to track mitigation commitments and comply with all applicable state and federal laws.

Environmental Process for State and Local Projects

CDOT's environmental stewardship extends across all of its transportation projects and programs, regardless of whether they are federally funded. CDOT provides guidance to local agencies in complying with state and federal environmental requirements.

In 2015, CDOT launched its [fund exchange pilot program](#) to (1) examine whether funding certain types of projects with state-only funds (i.e., defederalization) could improve efficiency and cost effectiveness of project delivery, and (2) determine what types of projects may be good candidates for state-only funded projects in the future. The types of projects selected for the pilot program included roadway devolution, a process whereby CDOT abandons part of a state highway to a local municipality or county; permanent water quality (PWQ) facilities; small roadway widening projects; and other small projects.

Removal of federal funding from a project does not necessarily exempt the project from NEPA since a federal nexus may still be present in the form of federal permit approval, federal land involvement, or other federal action. A state-funded project must still comply with the stand-alone environmental laws applicable to all projects regardless of NEPA applicability. Some examples of regulations that still apply, some of which also have a federal nexus, include:

- ∞ Clean Water Act
- ∞ Clean Air Act
- ∞ Endangered Species Act
- ∞ Migratory Bird Treaty Act
- ∞ Section 6(f) of the Land and Water Conservation Act
- ∞ Senate Bill 40 protects fisheries through riparian area avoidance and minimization.
- ∞ Hazardous materials handling and waste management
- ∞ State Register of Historic Properties provides consideration of historic property effects from state agency actions independent of the federal Section 106 process
- ∞ Local ordinances or permitting requirements, such as considerations for noise from nighttime construction, effects to local historic landmarks, or floodplain development

For state-funded projects that do not require federal agency approval, CDOT has committed to generally following the NEPA process because it provides an excellent framework for ensuring required environmental factors are addressed and the intent of its stewardship program. If the projects included in the program are shown to produce efficiency and cost benefits, CDOT may look



to continue or expand the program in the future.

Design, Permitting, and Clearances

Project Design

Preliminary design for CDOT projects occurs in conjunction with the NEPA process and is refined after environmental clearances are completed. The timeframe and process for design depends on the delivery method where final design is completed and the project is then advertised for construction.

The CDOT [Project Development Manual](#), last revised in May of 2016, explains the steps in the project development process, including those specific to the environmental program. The environmental aspect of project development is not a stand-alone process; it occurs in conjunction with preliminary design, and environmental considerations help shape the design from the early stages. Conversely, the preliminary design process defines the project footprint and directs the scope of the environmental resource and alternatives evaluation process. Frequent and effective communication between the design and environmental/planning teams is a critical component to the overall success of any project's design.

Because final design occurs after environmental clearance, there is potential for design changes to occur after an environmental clearance is obtained. Design changes occurring after NEPA is complete must be evaluated for consistency with original NEPA analysis and approval. Minor design changes may be accommodated by the existing environmental clearance if those changes occur within previously surveyed resource areas and do not result in any additional environmental effects. Design changes which result in additional environmental effects not previously evaluated during NEPA require a reevaluation to determine what changes have occurred and whether new documentation or a supplement is necessary.



Permitting

Environmental clearance is required for all CDOT projects before they are advertised for construction bidding. Although NEPA can be and often is completed prior to being fully permitted, project construction cannot begin until required federal, state, and local permits are obtained. The permitting process is often initiated during the NEPA process and final design when design has progressed sufficiently so that environmental impacts can be calculated and included as part of the permit application process. Outside of NEPA and permitting requirements, other environmental laws require CDOT to obtain resource agency concurrence on the level of impact anticipated by a given project and the reasonable mitigation that can be included in the project to reduce adverse impacts to specific resources. In addition, CDOT often must obtain local permits, the number and type of which can vary widely depending on the local agency and type of project being constructed. The most common permits or approvals required for CDOT projects are described below.

Sections 401, 402, and 404 of the Clean Water Act

The Clean Water Act is the primary federal law regulating water pollution and is administered by the US Army Corps of Engineers and Environmental Protection Agency; some aspects of Clean Water Act permitting are delegated to the Colorado Department of Public Health and the Environment. Permitting through the Clean Water Act helps ensure CDOT operates as a responsible steward of Colorado's water resources. The Clean Water Act also provides the federal impetus for CDOT's robust [Water Quality Program](#).

Section 401 of the Clean Water Act requires that an applicant for a federal license or permit provide a certification that any discharges from the facility will comply with the CWA, including state-established water quality standard requirements. Section 401 is administered by States and Tribes.

Section 402 of the Clean Water Act requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source (a pipe, ditch or channel) into a surface water of the United States (a lake, river, and/or ocean) must obtain permission under the National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permitting program is state-administered.

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Section 404 is administered by the U.S. Army Corps of Engineers and the U.S. EPA.

CDOT's Water Quality Program is administered by the Hydrologic Resources Section in the Environmental Programs

Branch, but protecting water quality is a priority for everyone at CDOT, from headquarters to the five regional offices. CDOT's Water Quality Program's mission is to:

- ∞ Ensure the quality of stormwater runoff is protected while Colorado's roadways are constructed, operated, and maintained;
- ∞ Promote innovative control measures (best management practices);
- ∞ Provide effective water quality education to CDOT staff; and
- ∞ Facilitate cooperation among CDOT, watershed groups, other Water Quality Program managers, businesses, contractors, and the public.

Additionally, CDOT maintains and complies with a Municipal Separate Storm Sewer System (MS4) permit. CDOT's MS4 permit authorizes discharges from the municipal storm sewer system within the permit area, which generally includes Colorado's state highway system and associated right-of-ways. The permit requires CDOT to use control measures to prevent or reduce the discharge of pollutants to state waters. The permit does this by requiring CDOT to comply with seven MS4 programs.

Another important permitting requirement of the Clean Water Act relates to Section 404 of the act, which regulates impacts to wetlands and waters of the US. In instances where CDOT projects result in an unavoidable impact to wetlands or waters of the US, CDOT must obtain a Section 404 Permit. The permit describes the impacts, the measures taken to minimize impacts, and a plan for compensatory mitigation.

Clearances

Endangered Species Act

The Endangered Species Act provides protection for threatened and endangered animals and plants. The US Fish and Wildlife Service (USFWS) administers the regulations of the act. CDOT evaluates the potential impacts of its actions on threatened and endangered species and consults with the USFWS to confirm and avoid impacts to the most imperiled plants and animals in the state.



National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966 outlines the process for determining and mitigating effects on historic properties from planned projects or undertakings. The goal of the Section 106 process is to identify historic properties, assess effects to those properties, and minimize or mitigate adverse effects to properties. The Act requires agencies to consult with the State Historic Preservation Officer, tribal representatives, and other interested consulting parties. Section 106 applies to Federal agencies, and CDOT complies with its requirements for most of its projects; for projects that do not have a federal nexus, CDOT follows a similar process to assess and mitigate potential effects to historic properties nominated or listed on the State Register.

Section 4(f) of the Department of Transportation Act

Section 4(f) of the US Department of Transportation Act of 1966 requires FHWA to consider and avoid use of important park and recreational lands, wildlife and waterfowl refuges, and historic sites in developing transportation projects. The law requires FHWA to either (1) determine that the impacts are minor and do not adversely affect the protected properties function (de minimis) or (2) complete a Section 4(f) Evaluation to determine if there is a feasible and prudent alternative that completely avoids Section 4(f) properties. If there is no feasible and prudent alternative that avoids all Section 4(f) properties, FHWA must include “all possible planning to minimize harm” to the Section 4(f) property and select the alternative that results in the least overall harm to Section 4(f) resources.

CDOT uses a [clearance process](#) to assess and document evaluations for all projects involving Section 4(f) resources. FHWA is responsible for all decision-making related to Section 4(f), including all final determinations and approvals. As with NEPA, for projects that do not have FHWA involvement, CDOT follows the tenets of Section 4(f)—always looking to avoid or minimize potential impacts to 4(f) properties—in accordance with its stewardship responsibilities; however, detailed documentation and FHWA approvals are not required.

Other Uses of CDOT Right of Way

Access Permits

Colorado Revised Statutes (CRS) 43-2-147 establishes CDOT’s legal authority to regulate vehicular access to or from any public highway, or property adjoining a public highway, which falls under CDOT jurisdiction. All state highways in Colorado are access-controlled, meaning adjacent tenants or landowners cannot create new accesses without approval from CDOT (CRS 42-1-102 [18]). When there is an anticipated change in use of a property, or need for a new access from CDOT right-of-way, CDOT requires an Access Permit Application to determine

if additional access improvements are necessary. Access improvements might be required based on traffic generation, safety needs, or if an existing access has fallen into disrepair or may not meet current design standards. CDOT works closely with the local jurisdictions regarding proposed land uses to ensure that both access and land use approvals are being administered as required by law. Environmental review for Access Permits is generally limited to the existing CDOT right-of-way; however, applicants are still required to comply with all applicable environmental laws for those portions of the project which may extend outside CDOT right-of-way. CDOT provides guidance to applicants in its [Environmental Clearances Information Summary](#) to ensure that applications are in compliance with CDOT’s environmental requirements and practices.

Utility/Special Use Permits



Utility and Special Use Permits are issued to entities external to CDOT in order to manage the installation of utilities, or the performance of other types of work, within the state highway right-of-way. Utility and Special Use permittees must demonstrate environmental compliance with all required environmental clearances pertaining to their activities. Such clearances may include Clean Water Act Section 404 permit, Colorado Discharge System permit, or ecological, archaeological, historical, or cultural resource clearances, among others.

Local Agency Oversight

CDOT is responsible for maintenance and repair of U.S. Interstates, U.S. Highways, and State Highways within Colorado. However, numerous additional county, city, town, and rural roads are considered Federal Aid Roads and are eligible for FHWA funds. CDOT is the administrator of FHWA funds for Federal Aid Roads and works in partnership with the local counties and municipalities to complete necessary roadway improvements and repairs. These projects, which are referred to as Local Agency Projects, are subject to CDOT (and FHWA) environmental clearance requirements.

CDOT conducts routine, periodic project reviews to ensure Local



Agency projects are being administered in accordance with the terms of the contract and the approved project specific agreement between CDOT and the Local Agency, including environmental commitments. FHWA may participate in these reviews, or conduct their own separate reviews.

Construction, Operations, and Maintenance

Construction

Project construction represents the culmination of planning, design, environmental clearance, and permitting. Construction activities must comply with the commitments set forth in the environmental clearance, environmental commitment tracking form, permitting documents, and any other applicable regulations. The CDOT [Construction Manual](#), defines the criteria and procedures to be used by engineering personnel in the administration of construction contracts and clarifies that the Project Engineer is responsible for complying with



environmental mitigation commitments during construction.

Water quality and stormwater runoff are key considerations when constructing a CDOT project, and failure to comply with water quality requirements can result in civil and even criminal penalties. In addition to the erosion and sediment controls required for active construction sites, all new construction and redevelopment sites in the CDOT MS4 permit area are required to evaluate whether permanent stormwater controls are required to address higher runoff volumes and pollutant loads associated with an increase in impervious surfaces. These controls are here referred to as [Permanent Water Quality Control Measures](#) (aka, permanent best management practices or BMPs). Permanent BMPs can take many forms, such as detention ponds, rip-rap, sediment traps, stormwater vaults, swales, vegetative buffers, among many others. The CDOT [Permanent Water Quality Long Range Master Plan](#) is a road map for CDOT's future water quality, drainage, and flood control watershed actions, and encourages partnerships with municipalities, stormwater/watershed entities, and coalitions.

Another critical element of construction is public information. CDOT keeps the public informed of upcoming and ongoing projects through various mediums including project-dedicated websites, regional level construction reports, public meetings, and targeted use of social media. In partnership with the state, CDOT uses an Intelligent Transportation System (ITS) to inform travelers in real-time of Events and Incident information, weather conditions, road closures, and other pertinent messaging. The ITS system also includes [COTrip.org](#) which provides additional traveler resources, such as live traffic cameras, weather information, travel times and speeds, and road condition information for commercial trucks.

Operations and Maintenance Activities

CDOT's commitment to stewardship does not stop at the end of a construction project. Although major construction of the project may be complete, permits cannot be closed out until the site is fully stabilized and the permit-specific conditions have been addressed. CDOT conducts inspections every 30 days of each inactive construction site until the site is fully stabilized. After stabilization, stewardship continues through ongoing maintenance, a key component to establishing long term sustainability of a project.

Water Quality

Many CDOT projects include permanent BMPs that are either maintained by CDOT maintenance staff or, through statute or agreement, by local municipalities. For example, water quality ponds and storm drain inlets must be cleaned out periodically. CDOT maintenance staff also maintain CDOT's storm drain system to prevent flooding of the roadways and maintain good stormwater quality and they sweep roadways, which captures many pollutants. Any staff applying, pesticides, and herbicides onto CDOT right of ways must be certified by the state of Colorado. They are trained in following manufacturer's specifications and avoiding the over-application of chemicals.

Other Manuals

CDOT maintenance crews are responsible for environmental stewardship through a variety of activities, such as maintaining permanent water quality BMPs; proper use and storage of hazardous materials; innovating and implementing creative practices to reduce environmental impacts from activities, such as roadway deicing; and inspecting and cleaning culverts to maintain drainage.

The CDOT [Library of Manuals and Protocols](#) includes the guiding documents for the numerous responsibilities and procedures carried out by CDOT personnel. Whether it be right-of-way, maintenance, mitigation monitoring, flagging, or a whole host of other expertise areas, CDOT has developed resources to support the facilitation of CDOT policies.



CDOT Sustainability Program

As part of CDOT’s mission to “provide the best multi-modal transportation system for Colorado that most effectively and safely moves people, goods and information,” CDOT’s Sustainability Program is committed to developing and supporting a sustainable organization and transportation system. In 2015, Governor Hickenlooper issued the [Greening of State Government Executive Order](#). The Executive Order establishes a Greening Government Leadership Council with representatives from each state agency and outlines high level directives in each goal area.

In 2015, President Obama signed Public Law 114-94, the [Fixing America’s Surface Transportation Act](#) (FAST Act). The FAST Act builds on the changes made by MAP-21 and sets a national goal for environmental sustainability:

“To enhance the performance of the transportation system while protecting and enhancing the natural environment.”

The objective of the CDOT Sustainability Program is to guide and communicate how CDOT intends to meet the goals outlined in the Colorado Greening of State Government Executive Order.

All CDOT employees and those working with CDOT are encouraged to become acquainted with and implement the strategies outlined in the CDOT Sustainability Program. CDOT will continue to comply with State requirements, continue to improve its environmental performance, and endeavor to be a leader in sustainable efforts.

CDOT Sustainability Strategic Goals

As the concept of sustainability is multi-faceted affecting social, economic, and environmental areas, CDOT’s Sustainability Program is focused on the following internal Strategic Goals:

- ∞ Safety (Social) – Apply CDOT’s Safety Value, “We work and live safely, and we protect human life, preserve property, and put employee safety before production.”
- ∞ Mobility and Accessibility (Social, Economic) – Promote alternate modes of transportation for staff that are affordable and equitable.
- ∞ Economic Viability (Economic) – Promote efficient use of CDOT fiscal resources by adopting sustainable business



practices and ensuring the economic feasibility of transportation investments.

- ∞ Education (Social, Economic, and Environmental) – Support training and development of CDOT staff to promote more efficient work processes.
- ∞ Ecosystems (Environmental) – Protect and enhance the environment at CDOT facilities.
- ∞ Waste Generation (Social, Economic, and Environmental) – Reduce waste generated by CDOT facilities through recycling and landfill diversion programs, where cost effective and feasible.
- ∞ Resource Consumption (Social, Economic, and Environmental) – Reduce the use of nonrenewable resources. Promote the use and reuse of renewable fuels, recycled products, and repurposed items.
- ∞ Emissions and Air Quality (Social, Economic, and Environmental) – Reduce CDOT employee and facility emissions of air pollutants and greenhouse gases.

Sustainability Action Plan

Each fiscal year, CDOT provides a summary of the previous year’s sustainability accomplishments and action items for the coming year. The action plan identifies sustainability goal area(s), and Champion/Contact for each Action Item. Actions are broken down to demonstrate how the accomplishments support the CDOT Strategic Goal areas (Safety, Mobility and Accessibility, Economic Viability, Education, Ecosystems, Waste Generation, Resource Consumption, and Emissions and Air Quality) and the State of Colorado Executive Order Goal areas (Energy, Water, Petroleum, Greenhouse Gas, Environmental Preferable Purchasing, and Waste Generation). These accomplishments and action items are documented in the CDOT [Sustainability Program and Action Plan](#).

Risk and Resiliency

In recent years, CDOT facilities have suffered significant damage from floods, fire, rockfall, and other physical events. In response to these disasters—as well as to comply with federal mandates that transportation agencies apply risk-based asset management processes to preserve and enhance existing roads—CDOT is assessing risk and resiliency of its transportation infrastructure. While not a traditional sustainability initiative, this risk and resiliency review was undertaken to ensure a process by which CDOT and the five MPOs could sustain their infrastructure for the future and continue to provide a safe and functional transportation network. It is expected that this pilot will establish procedures and processes to help CDOT sustain its existing infrastructure and protect facilities—and users—from the effects of natural disasters and improve response techniques and times when natural disasters occur.



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To enhance the quality of life and the environment of the citizens of Colorado by creating an integrated transportation system that focuses on safely moving people and goods by offering convenient linkages among modal choices.

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CDOT Vision Statement



COLORADO
Department of
Transportation