



DEPARTMENT OF
**NATURAL
RESOURCES**

Performance Plan Strategic Component

July 1, 2014

Colorado Department of Natural Resources

Mission and Vision Statement

The Colorado Department of Natural Resources (DNR) is responsible for the management of the water, land, wildlife, minerals/energy, and outdoor recreation resources of the State. Its mission is to develop, preserve and enhance Colorado's natural resources for the benefit and enjoyment of current and future citizens and visitors. The Department of Natural Resources consists of six divisions plus an Executive Director's Office (the Avalanche Information Center is located within the Executive Director's Office but could be argued to be a separate program). Collectively, these divisions carry out the Department's responsibilities for natural resources management, which includes use or access to some resources, promotion of the development of select resources, and the protection or preservation of other resources.

Mission Statement

Colorado is blessed with a wealth of natural resources, including beautiful landscapes, abundant energy and mineral resources, diverse wildlife, and unique geology. The State's high quality natural resources play a significant role in the high standard of living enjoyed by Coloradans. Out-of-state visitors and Coloradans alike enjoy hunting, fishing, outdoor recreation, and visiting Colorado's public lands. Wise use of the state's many high quality natural resource have a variety of positive impacts on Colorado's economy.

With these benefits comes the responsibility of good stewardship. As people move to Colorado to enjoy all that the state has to offer, stresses have been placed on resources such as water supply and wildlife habitat. Mineral and energy development must be undertaken in a responsible manner that protects the quality of Colorado's water and wildlife habitat resources. The Colorado Department of Natural Resources acts as a leader in coordinating the protection of natural resources with the federal government, other state agencies, local governments, businesses, the General Assembly, and private citizens. By soundly managing Colorado's natural resources, future generations of Coloradans will enjoy the same high standard of living enjoyed today. The Department's mission also includes the promotion of outdoor recreation as well as natural resources education.

Vision Statement

Under the leadership of the Department of Natural Resources, Colorado will:

- **Water** - Provide for the long-term municipal, industrial, and agricultural water needs of the State in a way that recognizes and provides for the instream flow needs of fish, wildlife, and recreation. Through the Roundtables and Interbasin Compact Committee processes, Colorado's river basins work towards sharing water in ways that generate win/win results for all parties. Colorado achieves greater efficiencies in water use through conservation, reuse, conjunctive use, and exploration of water projects that benefit all parties. The State finds alternatives to the permanent transfer of water from agricultural use to municipal use, thereby avoiding the permanent loss of irrigated agricultural lands and associated benefits.
- **State Parks** - Maintain a system of parks across the State that offers diverse outdoor recreation opportunities, protects high quality landscapes for current and future generations, and fosters natural resource education. Colorado State Parks remain affordable to all Coloradans, provide excellent customer service to visitors, and maintain safe, high-quality park facilities.
- **Minerals & Energy** - Promote responsible and sustainable development of Colorado's energy and mineral resources in a manner that is consistent with environmental protection, maintenance of Colorado's quality of life, and protection of Colorado's diverse economic base.
- **Wildlife** - Manage and conserve healthy and sustainable wildlife populations for the benefit of current and future Coloradans.
- **State Lands** – Manage state school lands held in a perpetual, inter-generational trust for the benefit and support of public schools. Through prudent and strategic management, the Department will protect the long term value of these trust assets. Recognizing that the long term economic productivity of all lands held in public trust is dependent upon sound stewardship, the Department will protect and enhance the beauty, natural values, open spaces, and wildlife habitat on trust properties.

With a diverse mission, the employees, volunteers, and partners of the Colorado Department of Natural Resources will be highly motivated, knowledgeable, and committed to finding creative, thoughtful, innovative, and cost-effective solutions to Colorado's many natural resource issues. Educating the public and engaging younger generations will be a key part of the long-term effort to protect Colorado's natural resources. The Department is passionate about and committed to its duty to the wise management and conservation of Colorado's incredible natural resource portfolio.

Colorado Department of Natural Resources

Major Program Descriptions

Colorado Avalanche Information Center - The Colorado Avalanche Information Center (CAIC) is a program in the Executive Director's Office of the Department of Natural Resources. This program is funded by the Operational Account of the Severance Tax Trust Fund, fees, donations, funds from the Colorado Department of Transportation, and a small amount of federal funds. This program performs avalanche safety education and training for the public and industry, along with avalanche danger forecasting for the Colorado mountains. Through its education and forecasting efforts the Center attempts to reduce risk to highway travelers, Department of Transportation highway workers, mountain recreationalists, and avalanche professionals.

The CAIC began in 1973 as the Colorado Avalanche Warning Center. It is the oldest public avalanche forecast program in the United States. The Warning Center grew out of the US Forest Service's avalanche research efforts. The US Forest Service dropped the program in 1983 due to budget cuts. That winter the CAIC found a home with the Colorado Department of Natural Resources and, in 1987, the CAIC was placed into the administration of the Colorado Geological Survey. In 1993 the Colorado Department of Transportation contracted with the CAIC to forecast avalanche conditions for many mountain roads. The highway forecasters work closely with the Department of Transportation to keep mountain highways open and travelers safe. In 2013, the Colorado Geological Survey was transferred to the Colorado School of Mines and the CAIC was retained in the Department of Natural Resources as part of the Executive Director's Office.

CDOT and local governments use the Center's avalanche forecasting information to reduce the costs of avalanche mitigation and road closures, thereby reducing maintenance costs and economic losses from transportation delays. The Ski and Recreation Industries, backcountry rescue, guides, and local businesses rely on CAIC forecasting, online tools, and maps to assess and manage their vulnerability and losses to avalanche hazards. Backcountry recreationalists use the Center's educational activities, along with forecasting, online tools and maps to inform their trip planning and avoid or reduce the danger that avalanches pose to their safety.

Providing avalanche information is the major process of this program. This process can be further broken down into two important processes, which are: (1) making observations of snow and weather conditions, along with collecting and analyzing reports from the public and partners, in order to produce daily forecasts of avalanche danger for 10 distinct zones in the Colorado Mountains during the winter snow season, and; (2) Providing free courses to the public on an introduction to avalanche safety.

Mined Land Reclamation - The Office of Mined Land Reclamation is one of two major programs in the Division of Reclamation, Mining, and Safety. The Office of Mined Land Reclamation regulates mining and reclamation activities at coal, metal, and construction materials mines. Primary objectives are to review mining and reclamation permits, to accurately calculate a reclamation financial warranty/bond that is adequate to reclaim the mine site if the operator fails, and to inspect mining operations to make sure that reclamation plans are being followed. Reclamation ensures that land is returned to beneficial use. More generally, the program protects public health, safety, and welfare as well as wildlife, aquatic species, and habitat. The Coal Program is funded with 79 percent federal funds and 21 percent from severance tax revenue. The Minerals Program is funded with 67 percent severance tax revenue and 33 percent cash fees on mining operations.

The mining industry is an important economic base within Colorado. There are 9 coal and 1,505 minerals active mine operations in Colorado. It is estimated that Colorado companies produced \$1.3 billion of coal and \$1.6 billion worth of minerals in 2012. [Source: 2013 Colorado Business Economic Outlook, published by the Leeds School of Business with input from the Colorado Geological Survey, the Division of Reclamation, Mining & Safety, and the Colorado Oil and Gas Conservation Commission]. As of December 2012, there were about 2,091 coal miners employed at Colorado's nine active coal mines [Source: Coal mine status reports submitted to DRMS]. Mineral mines employ thousands of additional employees. For example, the Cresson Mine (a gold mine in the Cripple Creek mining district) employs 497 people along with numerous contract employees. In addition, these operations generate royalty payments, severance tax revenues, and generate General Fund revenue through corporate taxes and the sales and income taxes paid by industry employees.

The construction materials industry in the United States produced 928 million tons of sand and gravel in 2012, which is an increase of 44 million short-tons from 2011. The leading states were California, Texas, Arizona, New York, Utah, Minnesota, Wisconsin, Ohio and **Colorado**. One of the issues with construction aggregates mining is the number of operations near urban areas. The general public is exposed to these operations more than any other mining industry. [Source: Mineral Commodity Summaries – January 2013, U.S. Department of the Interior, U.S. Geological Survey].

The Office of Mined Land Reclamation serves the mining industry, the public, and other government agencies. The office serves the mining industry by promoting responsible development of Colorado's mineral resources. A clear, predictable regulatory environment is essential to the success of the mining industry, along with a timely and efficient permitting process. The office serves the general public through appropriate regulation, bonding, and reclamation requirements. A major goal of the office is to protect the public and the environment from the adverse impacts of coal and mineral mining. Many of the requirements of the Coal Program are directed by federal law, making the federal government an important partner in program oversight and audits for this

program. Coordination with local governments and other state agencies is essential to address jurisdictional issues such as land use, air, and water quality standards.

Major Processes of the program include:

Permitting – Both coal and mineral mines are required to obtain permits prior to mining. Permits are processed within established time frames and specify performance standards for environmental and public protection, including the required financial warranty/bond amount that the operator must submit. More generally, the permitting process is used to balance access to coal and minerals with environmental protections required by the specific acts and regulations. The Coal Program issues one type of permit for coal mining and reclamation regardless of the size of operation or amount of material mined. The Minerals program issues different types of permits based on the size and type of operation, the type of material extracted, and whether or not the mining will disturb materials that are toxic or acid producing or may include toxic chemicals in on-site processing. Mine operators can make revisions and amendments to their approved permits any time through the appropriate revision and amendment processes.

Inspections – Mine site inspections involve ground verification of complex reclamation standards, land/water conditions, and public safety protection measures over sites that can cover thousands of acres. Active coal mines are inspected monthly. Active mineral operations are also regularly inspected, with higher risk “designated mining operations” inspected more frequently than lower risk mining operations, for an overall target frequency of every four years. This risk-based approach to inspections allows for a limited number of field staff to prioritize their time inspecting higher risk sites and sites that have not been inspected in several years. The inspection process also involves responding to citizen complaints and responding to inquiries from the general public, industry, environmental groups, the media, and other governmental agencies. Inspections also occur in response to bond release requests. Inspections are used to ensure permit conditions are being followed, to ensure protection of environmental resources, minimize onsite impacts, and prevent offsite impacts.

Enforcement – When non-compliance is found through regular inspection and complaint response, enforcement may be needed to ensure the public is protected from the adverse impacts of mining. To the extent possible, the Division will work with operators to correct minor problems found either as a result of routine inspections or in response to a citizen complaint. The Mined Land Reclamation Board and the Division share the authority to determine when a permit is in violation of statutes, rules, or regulations.

Enforcement is used for serious violations of the statutes or rules. This process focuses staff time and resources on the most significant and potentially damaging violations. Coal Program staff are authorized to directly issue non-compliance violations to

mine operators (the Mined Land Reclamation Board addresses appeals to those violations), whereas, Minerals Program staff must submit their findings to the Mined Land Reclamation Board which then issues all legal decisions.

Bonding – Financial bonds are required as a guarantee that financial resources are available to properly reclaim a mine site even if the mining company were to become financially insolvent. The amount of the financial bond posted is calculated specific to each mine site and may be adjusted over time to account for changes in a mining operation. Some mine operations take over 20 years to complete, with reclamation being performed in phases. The timeframe for final bond release is mandated by the Coal and Minerals statutes and is dependent upon the sustainability of reclamation conditions, such as soil stability and revegetation success, which can take several years to verify.

Office of Active and Inactive Mines - The Office of Active and Inactive Mines is one of two programs within the Division of Reclamation, Mining and Safety. It consists of two sub programs, the Inactive Mine Reclamation Program and the Mine Safety Training Program.

The Inactive Mine Reclamation Program was established in 1980 to address the hazards and environmental problems arising from abandoned mines in Colorado. It was instituted under the provisions in the Surface Mining Control and Reclamation Act (SMCRA) of 1977, which gives the states that have approved Coal mining regulatory programs under Title V of SMCRA the ability to assume exclusive responsibility and authority to reclaim abandoned mine lands within their borders. Mines abandoned prior to 1977 are eligible for the program. The program was launched with an inventory of hazards and environmental problems associated with past mining activities, which estimated 23,000 abandoned mine sites remained throughout the state. Using this inventory, Colorado prepared a statewide reclamation plan, which was approved by the U.S. Department of the Interior, Office of Surface Mining in June 1982. Approximately 9,075 abandoned mined features have been addressed through this program, and 33 underground coal mine fires have been identified and investigated for safeguarding and control. The primary federal funding for safeguarding activities comes from the Office of Surface Mining. Additional funding for safeguarding activities comes from the U.S. Bureau of Land Management, the U.S. Forest Service as well as state severance tax. Customers include landowners, citizens and visitors who hike, hunt, recreate and visit Colorado's historic mining districts and back-country areas. The program also implements reclamation of permitted mining sites where the operator has forfeited the reclamation bond to the state, wherein the customers are the citizens of Colorado.

The Mine Safety and Training Program is charged with protecting the health and safety of miners, the public and the mining community from mining-related hazards. The program is responsible for administering the coal mine official certification requirements and providing the training and retraining of miners in compliance with federal standards as set forth in Sections 34-21-101, 34-23-101 and 102 C.R.S. [2013], respectively. The MSTP has the authority to inspect tourist mines as promulgated in Section 34-21-110 C.R.S. [2013] and to help train and equip mine rescue teams as set forth in Section 34-23-103 C.R.S. [2013]. The Mine Safety and Training Program, through an agreement with the federal Mine Safety and Health Administration, conducts the testing and certification of over 288 coal mine officials per year, without which coal mines could not operate. The state certification process maintains a high level of competency for coal mine officials by testing them on health and safety duties related to the specific conditions found in Colorado coal mines, which directly aids in reducing injury and fatalities in coal mines in the State. Federal funding for the program is provided by the U.S. Department of Labor/Mine Safety and Health Administration, which is the federal health and safety enforcement agency that ensures that mine operators adequately train employees and comply

with federal mine health and safety regulations. Additional federal funds from the U.S. Department of the Interior/Office of Surface Mining, appropriated through the state's Coal Regulatory Program, support one blasters certification position. The remainder of the program's funding is from the state's severance tax revenue.

Major Processes include:

Inactive Mine Reclamation project management –Inactive Mine Reclamation Program staff develop reclamation projects for funding and construction in future years. Project activities include field investigations, project development, project design, National Environmental Protection Act (NEPA) compliance, realty work, construction contract bidding and management, site construction and reclamation oversight, and site monitoring and maintenance of prior project work.

Certification/Safety Training of Colorado Miners - The Mine Safety and Training Program staff includes four mine safety and health instructors who are Mine Safety and Health Administration certified and each has extensive experience in the mining industry. One FTE provides administrative support and technical expertise to the Coal Mine Board of Examiners which is responsible for maintaining a high level of competency of coal mine officials in Colorado by requiring certification of the official positions of mine foreman, electrician, fireboss, shotfirer, and blaster.

Regulation of Oil and Gas Exploration and Production - The Regulation of Oil and Gas Exploration and Production is the single major program managed by the Oil and Gas Conservation Commission (also referred to as “the OGCC” or “the Commission”). It consists of nine sub-programs: well permitting and location approvals; spill response and waste regulation; inspections; financial assurance; enforcement; well reports; environmental studies; orphaned wells; and public information. The Oil and Gas Conservation Commission is funded by a levy assessed on the value of oil and gas production, by severance taxes, and by a small federal grant that reimburses some of the costs associated with the underground injection program. Fines paid by operators for violations of state rules are used to fund specific program expenses, such as environmental response, remediation projects, and special environmental studies.

Through a largely regulatory role, the OGCC is charged with fostering the responsible, balanced development of our state’s oil and gas resources while protecting the public health, safety and welfare, including the environment and wildlife resources. The oil and gas industry is an important economic base within Colorado. There are about 50,000 active wells in Colorado, which collectively produce over \$10 billion worth of oil and gas. The industry directly employs over 40,000 people and supports about 64,000 additional jobs in the state. In addition, these operations generate royalty payments, severance tax revenues, and generate General Fund revenue through corporate taxes and the sales and income taxes paid by industry employees.

The Regulation of Oil and Gas Exploration and Production Program serves several customers. First, the Program serves the general public through appropriate regulation and reclamation requirements; OGCC also responds to public complaints and concerns regarding industry activity. Second, the Program services the oil and gas industry by fostering the responsible development of Colorado’s oil and gas resources. A clear, predictable regulatory environment is essential to the success of the industry, as is a fast and efficient permitting process. Additionally, county assessors rely on the OGCC’s compilation of oil and gas production and sales information to project tax revenues; local planning officials rely on well location and well data for subdivision planning; and the federal Department of Interior’s Bureau of Land Management relies on the OGCC’s information for tracking oil and gas activities on their lands. Other state agencies, such as the Department of Revenue, Department of Local Affairs, and the State Land Board depend on the wealth of information provided on the OGCC’s website.

Major processes of this program include:

Permitting and Hearings – Oil and gas operators are required to obtain permits prior to drilling a new well, recompleting an existing well, or drilling an underground injection well. Permits are processed within established time frames and lay out minimum performance standards for protection of the public, the environment, and wildlife. More generally, the permitting process is used to balance access to oil and gas resources with reasonable environmental protection, as well as consideration of other public impacts

such as aesthetics, noise, dust, and traffic. This process also includes OGCC hearings, rulemakings, public meetings, training sessions, and other methods of disseminating oil and gas industry information to the public.

Monitoring and Enforcement – OGCC staff review operator-submitted reports and physically inspect oil and gas operations to monitor regulatory and permit compliance. Producing oil and gas wells are currently inspected about once every four years on average; higher risk activities, such as the drilling and completion phases, are inspected more frequently whenever possible. The Field Inspection staff also respond to and gives high priority to citizen complaints. Inspections are used to ensure permit conditions are being followed, to ensure protection of environmental resources, and minimize onsite and offsite impacts. When non-compliance is found through inspection or complaint response, enforcement actions may be taken to ensure the operation returns to compliance, to protect public health, safety and welfare, including the environment, and to deter future non-compliance. Where appropriate, the Division works with operators to correct minor problems in a timely fashion. A formal enforcement action will be initiated for more egregious violations or if corrective actions are not completed in a timely fashion. This process focuses staff time and resources on the most significant and potentially damaging violations.

Restoration – Oil and gas operators are required to provide financial assurance to the OGCC to ensure they are capable of fulfilling statutory and regulatory obligations to reclaim oil and gas locations and properly plug and abandon inactive wells. If an operator fails to meet these obligations, the OGCC claims their financial assurance and uses the money, supplemented by Oil and Gas Conservation and Environmental Response funds as necessary, to plug and abandon the well and/or properly reclaim the land. The OGCC currently has a list of approximately 26 wells that need to be plugged, abandoned, and reclaimed, and approximately 46 facilities that require reclamation only. Most of these wells and facilities are orphaned wells, pre-dating establishment of the OGCC in 1951, for which no responsible party can be located. Orphaned wells are frequently discovered by OGCC field inspectors or landowners. OGCC's engineering staff prioritizes these projects by balancing their risk to the public, environment, and wildlife against the amount of state resources required to properly plug and abandon the well or reclaim the location. This process also includes the investigation of spills and releases of waste resulting from the production process, as well as the review and monitoring of remediation plans to address any resultant environmental issues created by spills and releases.

State Land Board - The State Land Board is a constitutionally created program to which the State of Colorado delegated its fiduciary and management responsibility for the assets, or “trust lands,” of eight public trusts. The trust lands were lands transferred as an endowment to Colorado by the federal government around the time of statehood to be managed for the benefit of public education and public institutions. The State Land Board manages an endowment of assets held in a perpetual intergenerational public trust for the financial support of Colorado’s public schools and other public entities. Included in these assets today are: (1) Approximately three million surface acres of land leased for agricultural, recreational, commercial real estate, rights-of-way, renewable energy and other uses, and; (2) Approximately four million acres of mineral estate, leased for oil, natural gas, coal and other solid mineral extraction uses.

About 95% of the State Land Board assets are part of the School Trust, with the remaining five percent distributed across the other seven trusts: the Public Buildings Trust, the Penitentiary Trust, the University of Colorado Trust, the Colorado State University Trust, the Hesperus Trust (also known as the Fort Lewis Grant), the Internal Improvements Trust, and the Salt Springs (Saline) Trust. Both the Internal Improvements and Salt Springs Trusts are managed for the benefit of the Colorado Division of Parks and Wildlife. While the properties managed by the program are publicly held lands, they are held in the various trusts and thus are not generally open to public access except where recreational leases allow public use. In addition to state trust land leasing activities, the State Land Board also engages in the disposition and acquisition of assets, transactions referred to as non-simultaneous exchanges. Non-simultaneous exchange transactions provide opportunities for the State Land Board to diversify its holdings. The State Land Board is entirely funded by revenues from state trust asset lease revenues. In FY 2012-13 total trust gross revenues were \$125 million and State Land Board’s operating costs were about \$5.0 million.

Revenues generated by the trust lands go to trust beneficiaries, board operations, and state trust land capital investment. School Trust revenues benefit K-12 public schools through the Building Excellent Schools Today or “BEST” Program (which supports capital investment in school facilities), and the Public School Permanent Fund. The Permanent Fund, an inviolate fund managed by the State Treasurer, currently totals \$620 million, with interest on this Fund used to support annual school funding. The Permanent Fund generates about \$24 million per year in interest.

Major processes include:

Management of Mineral Resources - Management of mineral resources includes: developing, evaluating, and auctioning leases for minerals production; collecting royalties, bonuses, rentals, and advance minimum royalties; assigning, tracking, and enforcing lease

stipulations; issuing exploration permits; setting and monitoring reclamation bonds; examining mineral ownership for leasing opportunities; and conducting royalty revenue audits and site inspections.

Management of Agricultural Properties - Management of agricultural properties includes: developing, evaluating, and monitoring grazing and farming leases; billing and collecting rents; inspecting properties; assigning carrying capacity; approving and monitoring state-owned improvements (fencing, buildings, equipment); and overall assuring long-term stewardship of the assets.

Management of Commercial Property and Real Estate - Management for the commercial properties includes: developing, evaluating, and managing commercial and other special use leases; overseeing land disposals and acquisitions; and managing the land development portfolio including development agreements and entitlement projects.

Non-traditional use management - Non-traditional uses of trust land concerns new uses and existing uses that are entirely reactive and/or not broadly implemented. Non-traditional uses often have limited conflicts with existing uses and therefore can be layered on top of current leases. Examples of non-traditional include recreation, ecosystem services, renewable energy, water leases, and rights-of-way. Non-traditional use management involves: indentifying the resource; developing a business plan; marketing and leasing the resource; setting and monitoring reclamation bonds (if applicable); and billing, collecting, and auditing rental payments.

Outdoor Recreation Program - Outdoor Recreation is one of three major programs within Colorado Parks and Wildlife (CPW). Outdoor Recreation is a fundamental part of the DNR mission. To provide the Outdoor Recreation Program to the citizens of Colorado, CPW manages a number of significant and distinct sub-programs and processes, including the State Parks System, Hunting program, Fishing program, Wildlife Viewing program, Boating program, Aquatic Nuisance Species program, as well as Recruitment/Retention. The Outdoor Recreation Program supports CPW’s statutory goals to:

- 1) Protect, preserve, enhance, and manage wildlife and their environment for the use, benefit, and enjoyment of the people of Colorado and its visitors and provide a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunities to the people of Colorado and its visitors, and;
- 2) Protect, preserve, enhance and manage the natural, scenic, scientific and outdoor recreation areas of Colorado for the use, benefit, and enjoyment of the people of Colorado and its visitors and provide a comprehensive program of outdoor recreation in order to offer the greatest possible variety of outdoor recreational opportunities to the people of Colorado and its visitors and to continuously acquire, development, and manage outdoor recreation lands, waters, and facilities.

Outdoor Recreation potentially serves all citizens of the State as well as visitors from other states and countries. Recent research indicated that about 94 percent of Colorado residents participate in the types of recreation provided by CPW. About 46 percent of Coloradans reported that they visited state parks regularly [Source: Corona Research, Inc. 2008. *Colorado State Parks Marketing Assessment: Public Study.*], while over 36 percent of Colorado residents are anglers and about 16 percent are hunters [Source: CPW *Statewide Comprehensive Outdoor Recreation Plan (SCORP)*.] Furthermore, about 97 percent of focus group participants indicated that they viewed state parks as very important to Colorado, even if they did not generally visit state parks [Source: Corona Research, Inc. 2009. *Colorado State Parks Marketing Assessment: 2008/2009 Executive Summary of Findings and Recommendations.*]

Each year thousands of non-resident sportsmen come to Colorado to hunt deer, elk, and other game species. Another 350,000 anglers visit Colorado to fish in the State’s Gold Medal trout streams. Millions more travel to Colorado for wildlife viewing, camping, hiking, biking, and boating. A 2012 study by the Colorado Tourism Office found that outdoor recreation opportunities are the leading reason people visit Colorado, and that outdoor vacations have grown by more than 25 percent over the past ten years. Thousands of businesses, and their employees, benefit from the economic activity generated by outdoor recreation.

CPW’s statutory mission includes the direction to “offer the greatest possible variety of recreation” to Colorado’s citizens and visitors to the state. CPW accomplishes this through statewide plans and assessments, such as the SCORP (the Statewide

Comprehensive Outdoor Recreation Plan), Big Game Season Structure, various grant programs, cooperation with local governments, coordination with federal natural resource agencies, and interaction with a number of recreation stakeholders and groups throughout Colorado. Given the exceptional outdoor recreation participation rates among Colorado residents, this is the program area that engages the greatest proportion of Coloradans. The major processes within the Outdoor Recreation Program are described below and include:

- 1) State Park System
- 2) Hunting
- 3) Fishing
- 4) Wildlife Viewing
- 5) Boating
- 6) Aquatic Nuisance Species
- 7) Recruitment and Retention

The State Park System – Managing the State Park System includes the acquisition, development, improvement and operation of state parks and state recreation areas that are used for outdoor recreational activities including camping, picnicking, hiking, horseback riding, environmental education, sightseeing, hunting, boating, fishing, swimming, as well as other water sports and recreational activities. It also includes educating and advising citizens and visitors of the amenities found on state parks and recreation areas through the distribution of Colorado state park and recreation area guides, through the media including the web, through sponsor partnerships, and through educational and interpretive programs. Another important process is the development and enforcement of regulations aimed at ensuring safe and responsible use of the state parks. Finally, this program includes habitat management (forests, grasslands, water, riparian areas, etc) to ensure the preservation of the state parks’ scenic, natural, and cultural resources for future generations.

The State Park system is authorized to charge a fee for required passes or permits for the use of any state park or state recreation area and to allow sport hunting, trapping, and fishing as forms of outdoor recreation, as wildlife management tools, and as a means of managing wildlife populations on state parks.

The State Parks System is funded by multiple cash and federal funding sources, and receives no state General Fund support. The primary revenue sources include the sale of passes, camping permits and registrations, lottery proceeds, grants from Great Outdoors Colorado Trust Fund (GOCO) and federal funds through a variety of federal programs. Park pass, camping permit and registration

fees are set by the Colorado Parks and Wildlife Commission. Per the Colorado Constitution, the state park system receives, through a direct distribution from the Colorado Lottery Division, 10% of net lottery proceeds annually for the acquisition, development, and improvement of new and existing state parks, recreation areas, and recreational trails. GOCO supports the state park system as one of the four constitutionally authorized purposes for GOCO funds.

Hunting Program – Providing hunting recreation opportunities is one of the major components of the CPW mission. The Hunting Program includes inventorying game populations, developing population models to guide management decisions, research into population health and dynamics, setting and enforcing hunting regulations, operating a limited license draw system, acquiring access for hunters through access leases and easements, cooperative programs with landowners, and in some cases fee title purchases of land (most commonly lands adjacent to or within state wildlife areas). The Hunting Program also includes educating hunters about safety, and informing and advising hunters about hunting opportunities in the state. Education and information is provided through information brochures, representation at state and national hunting trade shows, various information media including the web, and other appropriate information channels.

The Hunting Program is funded through wildlife cash, primarily through the sale of hunting licenses, and federal funding, predominantly through the Pittman-Robertson Act.

Fishing Program – Providing fishing recreation opportunities is another major component of the CPW mission. The Fishing Program includes inventorying fish populations and stream habitat, research into fish health and population dynamics, fish propagation and stocking, fish disease management, setting and enforcing fishing regulations, operating a fishing licensing issuance system, acquiring access for anglers through access leases and easements, as well as improving and operating State Wildlife Areas. It also includes providing angler education and fishing clinics as well as informing and advising anglers about angling opportunities in the state through information brochures, participation in state and national angling trade shows and expos, various information media including the web, and other appropriate information channels.

Recent research by CPW shows that Colorado anglers fish at state parks about 35 percent of the time, further illustrating the level of overlap between state park and wildlife operations in Colorado.

The Fishing Program is funded through the Wildlife Cash Fund and federal funding, primarily through the Sportfish Restoration Program (Dingell-Johnson). The Fishing Program receives no General Fund support.

Wildlife Viewing – CPW’s Wildlife Viewing Program (also referred to as the Watchable Wildlife Program) reaches out to a significant segment of Colorado’s population that does not hunt or fish but who are interested in the state’s wildlife resources. Watchable Wildlife programs also inform millions of citizens and visitors of the many program and project building blocks that support and preserve Colorado’s wildlife viewing opportunities and wildlife resources. Wildlife viewing generates an estimated \$1.2 billion in annual economic activity in Colorado. A 2008 survey showed that two out of every three state visitors cited outdoor activities and nature, including wildlife viewing, as a main activity during their visit. A separate survey found that more than 50% of Colorado citizens made a trip each year primarily to view wildlife.

Watchable Wildlife programs offer a range of activities and events to citizens that might not otherwise have the opportunity to learn about wildlife management and issues in the state. Strategies include: (1) working with many outside organizations to incorporate watchable wildlife viewing and educational information into their projects and initiatives; (2) developing and placing interpretive signs, kiosks and publications, supporting and promoting viewing festivals such as the Sandhill Crane Festival and nearly 30 other events; (3) educating and advising the public about wildlife viewing opportunities in the state through information brochures, various information media including the web, and other appropriate information channels.

Boating – The major components of the boating program are to manage boat registrations, provide boat safety classes, promote and provide boating recreation opportunities, and license river outfitters. The Colorado Boating Safety Program promotes safe vessel operation while enhancing boating experiences. A Boat Safety Review Session is required for people 14 or 15 years old to operate a boat in Colorado, but is valuable information regardless of age or experience. Any boat with a motor or sail operated in Colorado on any public waters must be registered with Colorado State Parks. The annual registration fees are determined by the length of the boat and range from \$ 35.25 to \$75.25. In addition to the Boating Safety Program, the Colorado General Assembly created the River Outfitter Licensing Program in 1984. The program is responsible for enacting rules and regulations necessary to govern the annual licensing of river outfitters, regulate river outfitters, ensure the safety of associated river running activities, and carry out the licensing program. All river outfitters operating in Colorado are required to have a valid river outfitter license from CPW.

Aquatic Nuisance Species – Aquatic nuisance species (ANS) pose a serious threat to the water infrastructure and water recreation in Colorado, with potential serious economic consequences. Zebra and/or Quagga Mussels were identified in eight reservoirs in Colorado in 2008 as a result of a multi-year statewide sampling effort conducted by the former Division of Wildlife (DOW) in partnership with the former State Parks (Parks) division and the U.S. Bureau of Reclamation. As a result, the Colorado General Assembly passed the Aquatic Nuisance Species Act in May 2008, which allocated severance tax funding to ANS programs. CPW has further leveraged the appropriation with external partners to gain over \$1 million in additional funding for ANS programs.

Strategies include conducting boat inspections at targeted locations, including high-risk reservoirs, providing decontamination of boats with detected ANS, as well as public education through signs, brochures, and various other media including the web.

Recruitment and Retention – Recruitment and retention encompasses the full range of outdoor recreation activities, including fishing, camping, hiking, bird watching, hunting, boating, enjoying nature, and all other related activities. Since the merger, CPW has shifted from separate recruitment for wildlife activities and marketing state parks visits to a stronger focus on connecting youth and families to the outdoors. In fact, one of the fundamental reasons for the merger was that parks serve as a “gateway” to other recreation activities, including fishing, camping and hunting. The observation that “you can’t get a kid to hunt if he or she has not slept in a tent” succinctly captures the essence of Colorado Parks and Wildlife.

CPW recently completed an internal strategy document specifically related to this effort, titled “Increasing Hunting, Angling and Park Visitation, Long-Term Strategy”. CPW faces significant challenges as the average age of those who hunt and fish increases and as the rate at which younger generations participate in outdoor activities decreases. Additionally, there has been a nationwide decline in outdoor activities among youth, extending back several decades. Increasingly major health care organizations, such as Kaiser Permanente, recognize the health benefits stemming from regular outdoor activities.¹

CPW has identified the following main objectives: increase awareness of wildlife and parks programs among non-sportsman and non-park users; increase recruitment of youth, adults and families; increase retention rates of current sportsman and parks visitors; increase the number of actively engaged partner organizations and volunteers; and increase coordination and alignment of existing programs. To accomplish these objects CPW plans to focus on marketing and branding, recruitment, public information, experiential education, partnerships and volunteers, and public understanding and support.

¹ DeKoven, M. 2012. Colorado Outdoor Stewardship Coalition Panel (April 19, 2012). “Making the Case for Protecting Colorado’s Outdoors”. Colorado Department of Natural Resources

Wildlife and Habitat Conservation - Wildlife and Habitat Conservation is one of three major programs with Colorado Parks and Wildlife (CPW), and is a fundamental part of the DNR mission. Colorado Revised Statutes (C.R.S) Section 33-1-101(1) stipulates that “wildlife and their environment” are managed “for the use, benefit, and enjoyment of the people of this state and its visitors.” This same statute directs the management of wildlife habitats both comprehensively and continuously, to accomplish those purposes.

CPW’s primary habitat efforts involve Land and Water Management and Species Conservation for game and non-game species. The Wildlife and Habitat Conservation Program consists of many different elements, activities, and processes that support CPW’s statutory goals to:

1. Protect, preserve, enhance, and manage wildlife and their environment for the use, benefit, and enjoyment of the people of Colorado and its visitors and provide a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunities to the people of Colorado and its visitors, and;
2. Protect, preserve, enhance and manage the natural, scenic, scientific and outdoor recreation areas of Colorado for the use, benefit, and enjoyment of the people of the state and its visitors and provide a comprehensive program of outdoor recreation that offers the greatest possible variety of outdoor recreational opportunities to the people of Colorado and its visitors and to continuously acquire, develop and manage outdoor recreation lands, waters and facilities.

In addition to Colorado’s statutory policy for wildlife and habitat, tens of thousands of hunters and anglers come to Colorado to hunt the State’s deer, elk, and other game species and to fish Gold Medal trout streams. Also important are the many more that come to take advantage of and enjoy Colorado’s extensive wildlife viewing opportunities. Wildlife-related recreation is an important part of Colorado’s tourism economy. A study by BBC Research & Consulting assessed the statewide impact of wildlife recreation, finding the following: (1) hunters and anglers spend an estimated \$1.0 billion on trip expenses and equipment (with an estimated economic impact of \$1.8 billion counting secondary impacts); (2) hunting and fishing support an estimated 21,000 full-time jobs in Colorado; (3) non-residents account for roughly 18% or \$186 million of trip and equipment expenditures; (4) wildlife viewing activities contribute roughly \$703 million toward Colorado’s economy (\$1.2 billion counting secondary impacts) and support about 12,800 jobs in Colorado, and; (5) 59 percent of the economic activity associated with watchable wildlife comes from non-Colorado residents. [Source: BBC Research & Consulting, September 26, 2008 “The Economic Impacts of Hunting, Fishing, and Wildlife Watching in Colorado].

Wildlife and Habitat Conservation serves all citizens of the state of Colorado as well as visitors from other states and countries. In particular, the program serves hunters, anglers, outdoor enthusiasts, and the small towns and businesses that directly benefit from hunting, fishing, outdoor recreation, and wildlife viewing activities. The program also serves the fish and wildlife of the State, through conservation of their species and protection of their habitat.

The Major Processes within the Wildlife and Habitat Conservation Program are:

1. Land and Water Management
2. Species Conservation (Game & Non-Game Species)

Land and Water Management

The Land and Water Management Program includes a multitude of activities and processes including: (1) managing CPW-owned property and water rights in support of wildlife populations and wildlife-related recreation statewide; (2) mapping critical wildlife habitats; (3) monitoring the water quality of critical aquatic habitats statewide; (4) supporting wildlife habitat protection and improvement efforts on private lands and waters, and on public lands not owned by CPW, through a variety of cooperative programs; (5) controlling noxious weeds; (6) conducting forest management and fuel mitigation activities; (7) developing stewardship plans for CPW properties, and; (8) providing input on land management decisions to a variety of land management agencies and local and county governments.

One high-profile component of this program is the Colorado Wildlife Habitat Protection Program (CWHPP). The CWHPP was initiated in 2006 with the enactment of legislation to create the Colorado Wildlife Habitat Stamp. A ten-dollar habitat stamp must be purchased prior to the purchase of a hunting or fishing license in Colorado (only one habitat stamp is required per license buyer each year). The habitat stamp generates approximately \$6 million in revenue annually that, by statute, is earmarked for habitat protection and enhancement. The CWHPP program focuses on work with private landowners, local governments, and conservation organizations to protect important fish and wildlife habitat and provide access for the public to enjoy our wildlife heritage. The program has helped permanently protect more than 170,000 acres of wildlife habitat through conservation easements and, to a much lesser extent – approximately 5 percent of the acreage involved -- fee title acquisition.

Wetlands and riparian areas make up less than two percent of Colorado's land but, according to some estimates, provide life cycle or important habitat benefits to approximately 75 percent of species in the state. Colorado Parks and Wildlife's Wetlands Program, first established in 1997 using wildlife purpose GOCO funds, conserves wetland and riparian habitats and their ecological functions by planning and delivering conservation actions on a landscape scale. The program is guided by an updated strategic plan adopted in 2011. Major goals of the program are to improve the status of declining or at-risk species, and to improve the abundance and distribution of ducks and opportunities for waterfowl hunting. The program funds wetland enhancement and restoration projects, conducts strategic planning to prioritize habitat conservation investments, facilitates partnerships, supports local Focus Area Committees, conducts education and outreach on wetlands conservation, and monitors and evaluates wetland projects. In cooperation with partner organizations and landowners, the Wetlands Program has protected, restored or enhanced approximately 280,000 acres of wetlands and adjacent habitats, and more than 275 miles of streams.

In addition, CPW leads or is a partner in more than a dozen other programs focused on voluntary efforts by landowners in support of wildlife habitat or species conservation. The programs range from species-specific recovery efforts to cost-sharing programs for habitat improvements to annual awards to landowners who make significant commitments to improving wildlife habitat on their property. Perhaps the best known of these programs is the Habitat Partnership Program (HPP), which allocates 5% of big game license revenues (about \$2.2 million per year on average) to reduce and mitigate the impact of big game populations on agricultural operations. HPP projects are selected by 19 local committees, covering nearly all of the west slope plus the Republican River basin on the eastern plains. Forage and fencing problems were the initial focus of the HPP program when it was established in 1990. Later statutory changes expanded eligible activities, most notably habitat improvements on public and private lands that can help disperse big game herds. Partner match, including in-kind labor donations, often comes in at more than four times the HPP funding amount, providing strong leverage for hunter dollars invested through the program.

The Natural Areas Program has 116 designated or registered natural areas encompassing 235,000 acres which protect habitats and natural resources of statewide significance and importance. These areas can be owned by federal, state, local or private entities; the program's role is to ensure proper stewardship of these rare and special areas through voluntary cooperative agreements. Areas are eligible for designation based on a variety of factors, but in general the aim is to incorporate the best representative examples of rare plants and animals, native ecosystems, and unique geology and paleontology. Protection of these areas requires ongoing monitoring, including through regular photo monitoring and technical plant counts. CPW collaborates with partners to implement stewardship projects, research studies, and outreach to protect Colorado's most significant natural features.

Species Conservation – Colorado is home to more than 900 wildlife species. Species Conservation Programs provide wildlife and habitat conservation activities for both game and non-game species. General activities under the programs are often similar, but focus on different species. Processes include monitoring wildlife populations in the state, assessing population trends, determining distribution patterns, identifying limiting factors, developing conservation or recovery plans, working with other state, federal and local agencies, and private landowners to implement recovery plans, conducting research on population dynamics including disease, propagation of certain individual species, mapping of the presence and distribution of species, and working with a variety of partners, both public and private, on cooperative strategies for conserving, protection and enhancing populations.

In 2006, CPW adopted the Colorado Wildlife Action Plan, which identified 201 wildlife species “of greatest conservation need” because of declining populations, habitat loss or degradation, adverse impacts from invasive species and other factors that could potentially put the species in peril. The plan links species, habitats, threats, and conservation actions, and sets priorities for conservation efforts. The plan also identifies key wildlife habitats and watersheds, and has been an important guide for conservation easement acquisition priorities for both CPW and private land trusts in the state. The Colorado Wildlife Action Plan is in the early stages of a comprehensive revision, which will be completed in September of 2015. This revision will update and enhance information on the highest priority wildlife species, habitats, threats and conservation actions to provide even greater utility for species conservation efforts; it will also incorporate conservation strategies for Colorado’s rare plant species.

Programs and projects in support of species conservation are vital to Colorado’s efforts to adequately conserve native species and avert threatened or endangered listings under the federal Endangered Species Act. Success in meeting recovery plan goals or in proactive actions on declining species are crucial to retain wildlife management authority at the state level, allowing water projects to move forward and preventing costly and burdensome federal actions. CPW also coordinates with neighboring states on the development of range-wide recovery plans and in meeting recovery plan goals. Recovery plans are a crucial guide in setting priorities and organizing efforts among the many partners that can be involved in species recovery, such as federal land management agencies, local and county governments, landowners, business and industry groups, private conservation organizations, and, in the case of range wide recovery plans, neighboring states.

The Natural Areas Program is the only state program tasked with rare plant species conservation. The rare plant conservation program performs scaled-down conservation activities for the 120 imperiled plant species that occur in Colorado with the parallel goal of conserving rare plant species and habitats and averting federal threatened or endangered listings under the federal Endangered Species Act.

Trails Program - The Trails Program exists to increase accessibility and encourage the use of the out of doors and natural resources, through hiking, bicycling, horse riding and other compatible recreational activities, and to provide for recreational motorized trail uses (C.R.S. §33-11-102 *et seq.*). Furthermore, that statute authorizes Colorado Parks and Wildlife (CPW) to establish and maintain trails that connect the state parks and other outdoor recreation resources, provide access to areas of special or historic interest, and promote a more complete use of public lands for recreation. A key component of the statutory direction is to coordinate, assist and develop such trails with all levels of government.

Colorado Parks and Wildlife (CPW) delivers this program primarily by making grants to governmental agencies, non-governmental organizations, and individuals for the purpose of planning, developing, constructing, improving, operating, and maintaining trails in Colorado. The sources of funds for these grants are Great Outdoors Colorado, federal funds, statutorily dedicated revenue from off-highway vehicles and snowmobile registrations, and to a lesser extent, the Colorado Lottery. CPW also plans, develops, constructs, improves, operates and maintains its own trails in the state park system. Finally, CPW provides technical expertise and assistance to recipients of trails grants and provides support to the Colorado Recreational Trails Committee.

The State Trails Committee is a statutorily created committee (C.R.S. §33 11-105), which works through the approval of the Parks and Wildlife Commission, coordinating trail development with local governments and assisting in the formation of trail plans in Colorado. Work conducted by the Trails Program and the State Trails Committee include planning that considers both the extent and location of trails, as well as coordinating trail development and trail plans with local governments. Additionally, the Trails Committee analyzes methods for funding a trails system through user fees or other financing methods. More specifically, the Trails Committee advises the Commission on matters directly or indirectly pertaining to trails, particularly through the review and recommendation of trail grant proposals.

The Trails Program consists of three sub-programs: the recreational trails program (non-motorized trails), the Off-highway Vehicle (OHV) Program, and the Snowmobile Program. Recreational, non-motorized trail use in Colorado is an extremely popular outdoor activity. Outdoor recreational enthusiasts from throughout the world travel to Colorado for recreation in the Rocky Mountains. Recreation and tourism in Colorado are multi-billion dollar industries each year. Public surveys over the past two decades consistently indicate that trails are a top priority for recreation enjoyment. The more recent of these studies all indicate that between 80 to 90 percent of Colorado residents hike, bike, ride or enjoy other types of trail recreation, making trail recreation the most popular outdoor recreation activity in the state.

Funding for the recreational, non-motorized trails program comes from a mix of state and federal funding sources, including federal Recreation Trails Program (RTP) grants administered by the Federal Highways Administration, and from the federal Land and Colorado Department of Natural Resources

Water Conservation Fund (LWCF) allocations administered by the National Park Service. Significant funding comes from the Colorado Lottery and Great Outdoors Colorado (GOCO). LWCF funds are subject to annual appropriations through the U.S. Congress, and are susceptible to fluctuations or cancellation. Levels of federal RTP funding have diminished over the past decade. The availability of federal funds is increasingly problematic, while the need for greenway and trail funding continues to increase dramatically. Funding for OHV and Snowmobile programs comes from user fees, derived from sales of OHV and snowmobile registrations and permits.

The Trails Program serves those Colorado citizens and visitors to our state who use trails, including walkers, hikers, bikers, snowmobilers, OHV riders, equestrians, and runners. As noted above, recent research indicates that between 80 to 90 percent of Colorado residents regularly participate in trails-related recreation, and thereby either directly or indirectly benefit from the trails program. The program also serves municipalities, local governments, volunteer and trails groups, as a source of funding and coordination. The major processes of this program include:

Registration and Permitting - State law requires that all Off-Highway Vehicles (including motorcycles, motorized dirt bikes, three-wheelers, all-terrain vehicles or “ATVs”, and dune buggies) and snowmobiles be registered with Colorado Parks and Wildlife, before operating on public lands or trails. Dealers and businesses that sell OHVs, snowmobiles, and outdoor goods, offer registrations, as do all CPW offices. Hunting and fishing license agents sell these permits as well.

Grant Program Administration and Management - The grant program encompasses all actions associated with making trail grants and ensuring that the awarded grants are completed successfully. Grant program administration includes supporting the Colorado Recreational Trails Committee, which advises CPW relative to the extent, location, and use of trails. This advice is incorporated in the grant program guidelines and requirements and in outreach to local governments. The grant administration and management process consists of establishing criteria for the grant program, generally based on CPW and stakeholder direction; developing and issuing a request for grant applications, including grant evaluation criteria; receiving, evaluating, and making recommendations for trails grant awards; contracting with grant awardees, and; managing contracted grants through the completion of the project and grant close-out. Grants are accepted and awarded annually through a well advertised process. As grantees complete their projects, program staff review and approve the process to close out those grants.

Trail Management on State Parks - Trail management on State Parks includes the planning, development, operations and maintenance of trails located in Colorado’s state parks. The “Trail Management on State Parks” work arose to provide funding for trail maintenance and construction of trails in state parks, based on the recognition that park visitors see trails in the parks as an important feature of their park visits.

Water Management and Planning - The Colorado Water Conservation Board's (CWCB) strategic mission is *Conserve, Develop, Protect, and Manage Colorado's Water for Present and Future Generations* in accordance with applicable state and federal law and regulations. The Board works to achieve this mission through several sections which are managed as programs. Water Management and Planning is one of two major programs within the CWCB. Water Management and Planning consists of three sub-programs: A) Water Supply, B) Flood Mitigation, and C) Water Efficiency.

A) The Water Supply Program implements the Statewide Water Supply Initiative (SWSI) and supports the ongoing implementation of the Colorado Water for the 21st Century Act. The mission is to plan Colorado's water supply future to help maintain adequate water supplies for Colorado's citizens, agriculture, and the environment. To do this, the Program provides tools, products, and programs that support local basin planning and state water supply planning, as well as implementing projects and methods to help meet the state's consumptive and nonconsumptive water supply needs.

The Water Supply Program provides low-interest loans to agricultural, municipal and commercial borrowers for the design and construction of raw water projects in Colorado. The Program conducts on-going studies (i.e., Statewide Water Supply Initiative) that provide a comprehensive picture of Colorado's water needs, now and in the future. Through the Statewide Water Supply Initiative, the CWCB initially projected water demands to the year 2030 and estimated that Colorado would need an additional 120,000 acre feet (AF) of water for municipal and industrial (M&I) use by 2030. The CWCB updated these projections in 2010 and now estimates that Colorado will need more than between 538,000 and 812,000 AF of additional water by 2050 to meet M&I needs with passive conservation included. Many local water providers have projects or plans in place – known as Identified Projects and Processes– to address these increasing water demands. Thoughtful water supply planning is critical to ensure a secure future for the state. Meeting future water needs must be done in a manner that considers all solutions and addresses the varied water needs of Colorado and its citizens. The CWCB is focused on helping prepare for and meet Colorado's future water supply needs.

The Water Supply Program is funded primarily from the CWCB Water Project Loan Program, which manages the Colorado Water Conservation Board Construction Fund, and the Severance Tax Perpetual Base Account. Additionally, the Water Supply Program also receives funding from the Water Supply Reserve Account and the Interbasin Compact Committee Operating Fund, both of which receive revenues from the Operational Account of the Severance Tax Trust Fund. The principal and interest from CWCB's Water Project Loan Program, combined with annual Mineral Lease and Severance Tax revenues, funds all of CWCB's operating expenses, while also providing loan and grant funds to water entities that are seeking funding assistance to construct various raw water projects that are beneficial to the state.

- B) The Flood Mitigation Program minimizes Colorado’s flood loss vulnerability and related economic impacts. One main goal of this Program is to assist in protecting public health, safety and welfare in addition to identification and protection of billions of dollars worth of flood-prone properties statewide. This Program is responsible for developing, designating and approving regulatory floodplains (including cooperation with Federal Emergency Management Agency (FEMA) to obtain millions of dollars in federal grants for new and revised floodplain mapping); responding to flood disasters for recovery purposes and providing technical assistance or engineering information to support flood recovery efforts; and collaborating with partners regarding flood hazard mitigation and risk reduction measures. This includes the role as the State Coordinating Agency for the National Flood Insurance Program (NFIP) that is aimed at directly helping local communities join and remain in good standing with the NFIP, which allows property owners to obtain federally backed flood insurance. It also encourages community participation in the Community Rating System and involves helping local governments and various districts to develop flood protection plans and projects, often using funding from the CWCB Board’s Construction Loan Program matched with FEMA funding for floodplain mapping and flood mitigation. The Program also participates with local sponsors to help with levee compliance efforts following federal levee inspections. Multi-objective watershed restoration studies and projects are also completed by this program, typically in partnership with local stakeholders, communities, non-profit groups, and other state and federal agencies. This Program administers the Colorado Healthy Rivers Fund (using revenues from a tax check-off), the Colorado Watershed Restoration Program, the Fish and Wildlife Resources Fund, and the Invasive Phreatophyte Control Program. The Program also implements the permitting and grant funding responsibilities for weather modification operations (cloud seeding and hail suppression) and has been involved with key agreements among the Colorado River seven basin states as well as out-of-state funding for cloud seeding operations to augment mountain snowpack. Further, this Program manages the South Platte River flood control project below Chatfield Reservoir and provides state leadership for the Chatfield Reservoir Reallocation Project.

The Flood Mitigation Program is funded from cash fund reserves in the Colorado Water Conservation Board Construction Fund and from federal funds from the Federal Emergency Management Agency’s Map Modernization Program and Community Assistance Program.

- C) The Water Efficiency Program promotes water use efficiency by providing public information as well as technical and financial assistance for water conservation planning. Drought planning is promoted by encouraging and assisting communities to prepare and implement drought mitigation plans and by monitoring drought impacts and informing the public, media, and state officials. The Program provides financial and technical assistance for local drought mitigation planning and coordinates CWCB’s initiatives and programs related to climate change and water adaptation. In addition, the Water Efficiency Program

ensures that all covered entities – retail water providers who sell 2,000 acre feet or more of water annually – are in compliance with Colorado’s Water Conservation Act of 2004 (H.B. 04-1365) by having a water efficiency plan on file with the state that has been approved by the CWCB. The CWCB provides technical assistance and grant money to covered entities seeking to develop or update water conservation plans. In addition, the Act requires that covered entities submit a new or revised plan prior to the CWCB Board’s approval of new loan funds.

The Water Efficiency Program is funded from cash fund reserves in the Colorado Water Conservation Board Construction Fund and the Operational Account of the Severance Tax Trust Fund. A majority of the funds from the Operational Account of the Severance Tax Trust Fund are made available to covered entities via grants. Additional funds are made available to water providers through loans from the CWCB Construction Fund and Severance Tax Perpetual Base Account.

The Water Management and Planning Program and the Water Efficiency Program serve several customers. Governmental organizations receive technical support in developing project plans and qualifying for financial assistance. The Program also provides financial assistance to communities, water providers and eligible agencies for water conservation-related activities and projects. Eligible entities (including state and local governments and agencies) can receive funding to develop water conservation and drought plans, implement water conservation goals outlined in a water conservation plan and educate the public about water conservation. Through the Water Supply Reserve Account grant program, the Program services water conservation districts, irrigation companies, other governmental and non-governmental organizations and municipalities in making funds available for low interest loans that will aid in studies related to consumptive and nonconsumptive water needs, water conservation, storage and improved delivery of water.

The Flood Mitigation Program serves Colorado citizens affected by flood events or who live in flood-prone areas by providing information regarding mitigation assistance, flood insurance, and sources of financial aid as well as information related to flood risks, insurance availability, designation and approval of floodplain areas. Flood-prone areas have been identified in 267 cities and towns and in all of Colorado’s 64 counties. The program also works with various Federal, state and local agencies involved in flood emergencies by providing information documenting scope of damages, mitigation plans, and the effectiveness of mitigation measures.

Environmental Programs - Environmental Programs are one of two major programs within the Colorado Water Conservation Board (CWCB). Environmental Programs provide oversight of and correlate activities for programs that have a positive impact on the environment. The CWCB is responsible for the appropriation, acquisition, protection, and monitoring of instream flow and natural lake level water rights to preserve and improve the natural environment to a reasonable degree. In this regard, CWCB holds water rights on more than 8,500 miles of streams and on 477 natural lakes. The Program supports watershed planning as well as projects designed to restore and protect watersheds to reduce flood hazards, stabilize and restore stream channels, provide habitat, reduce erosion and increase the capacity to utilize water. Additionally, under the Program, the CWCB participates in water-related endangered species initiatives and programs for the benefit and protection of water users in Colorado.

Since recreation and tourism are vital to Colorado and the economy, meeting nonconsumptive needs (environmental and recreational) are an important element of the Program. On behalf of the State of Colorado, the Program's staff reviews all applications for recreational in-channel diversions, which limit water rights to the minimum stream flow necessary for a reasonable recreational experience in and on the water. Environmental Programs are funded from cash fund reserves in the Colorado Water Conservation Board Construction Fund, the Operational Account of the Severance Tax Trust Fund, and the Colorado Healthy Rivers Fund.

Environmental Programs serve several customers. First, the Programs service the citizens and water users in the state by providing reasonable protection of stream flows and preservation of the natural environment. Second, the Programs work with various Federal agencies involved in the protection of streamflows on federal lands in a manner consistent with state law. Finally, the Program benefits native and/or threatened and endangered species by preserving the natural environment to a reasonable degree to maintain and enhance these species' habitats. Current and future water users benefit when their uses of water can be harmonized with protection of threatened and endangered species. In this regard, agriculture, businesses, and municipalities are all customers of the program. The program consists of three major processes.

First, Environmental Programs appropriate, acquire, monitor, and enforce the state's instream flow and natural lake level water rights. Each February, the CWCB holds a workshop to request recommendations for streams and lakes to be protected. All recommendations are processed in accordance with the Instream Flow Program's rules and statutes. In some instances, the CWCB receives offers of water rights for instream flow use via donation, purchase, lease or loan. Water acquisition proposals can be considered at any time during the year. The Program protects the state's instream flow water rights by enforcing terms and conditions contained in water court decrees, stipulations and agreements. The agency also monitors streamflow conditions to ensure that instream flow water rights are being met and administered within the state's prior appropriation system.

Next, on behalf of the State of Colorado, the CWCB reviews all applications for recreational in-channel diversions, which limit water rights to the minimum stream flow necessary for a reasonable recreational experience in and on the water. The recreational in-channel diversions legislation was established in 2001 and amended in 2006 and may be subject to further legislation and court challenges. Upon review, the CWCB Board provides its findings to the water court after deliberation in a public meeting.

Finally, the agency supports watershed protection and restoration as well as participates in initiatives and programs that benefit water-related declining, threatened, and endangered native species. The agency partners with numerous organizations to plan and undertake multi-objective projects designed to reduce flood hazards, stabilize and restore stream channels, provide habitat, reduce erosion and increase the capacity to utilize water. Inter- and intra-agency coordination, communication and prioritization are essential components of the CWCB's efforts.

Water Administration Program - Water Administration is one of three major programs within DWR. It consists of two sub-programs: administration of intrastate water rights and interstate compact enforcement. The process of allocating water to various water users is traditionally referred to as water rights administration. It is the statutory responsibility of DWR to verify: 1) stream diversions are per decree; 2) wells are operated in compliance with their decrees; 3) augmentation plans, or substitute water supply plans are replacing stream depletions; and 4) interstate compact flows are delivered to downstream states. This requires daily oversight of the water allocation system that distributes water to farmers, industries, municipalities, and all other water users. Through the administration of approximately 170,000 water rights through over 45,000 structures, DWR provides supervision and control of surface and ground water resources in Colorado. There are seven division offices located throughout the state, one in each major drainage basin; these division offices employ field staff, including water commissioners, who perform duties that contribute to water administration. Duties of the field staff include turning headgates to control water flow, collecting water use and/or diversion data, and enforcing decrees and water laws. This program is funded with General Fund.

In addition to meeting the needs of Colorado water users, DWR also ensures interstate compact compliance and monitors water supplies through stream flow measurements and ground water regulation. Waters flowing across state boundaries are apportioned through interstate compacts, federal court decrees, and U.S. Supreme Court decisions. The State Engineer/Division Director administers flows along the South Platte, Rio Grande, Republican, Costilla, Arkansas, Colorado, Laramie, North Platte, Animas, and La Plata Rivers and their tributaries on a daily basis to make sure that Colorado is meeting the commitments set forth in compact agreements. The State of Colorado is directly involved in one international treaty, two U.S. Supreme Court decrees, two interstate agreements, and nine interstate compacts.

Colorado is situated such that the streams arising within its borders are vital to the economies of 18 other states and the Republic of Mexico. The consideration of geography alone is enough to make Colorado a prospective defendant in many interstate water cases. Further, water is a vital input to Colorado's economy. One-twentieth of the land in Colorado is under irrigation with 85% of Colorado's water supply going to the economic engine of agriculture (the remaining 15% is divided between municipal/domestic, recreation/fisheries, industrial/commercial, augmentation; and recharge). The ability to protect and defend this essential factor of the state's economy is of major importance to Colorado. The value of water is nearly incalculable since it is essential to 3,000,000 acres of irrigated agriculture, millions of municipal and recreational users, and thousands of businesses. The value of water varies tremendously based on a number of factors, including where it is available, the time of year, the climatic conditions, what the uses are, what the demand is, how long the user will need it, and economic conditions. In areas or times with high demand and scarce supply, the value of water will be high. However, in areas or times with low demand and ample supply the value will be low. The value of

water can be equated to the value of irrigated agriculture in Colorado, thriving municipalities in Colorado, preservation of diverse environments, and robust recreational and business opportunities in Colorado.

The Water Administration Program serves many customers, including farmers, municipalities, recreationalists, anglers, real estate developers, attorneys, other state and federal entities, canal companies, water managers, and downstream states. All these users depend on the accurate and timely distribution of Colorado's water and accurate information on the fluctuating supply and distribution. The program includes several major processes:

Administration of Water Rights (AWR): Water administration by enforcing decrees is a major process of DWR. Decrees are issued by state water courts and are administered by DWR. Approximately 170,000 water rights have been decreed to date and approximately 1,000 new water court cases are filed annually. DWR staff consult with Colorado's seven water courts on every case to assure new decrees are administrable. This important statutory task assures that the court has all the information to decree water rights that work within the priority system and to ensure vested water rights are protected. To physically administer decreed water rights, DWR has field staff in each river basin to assure accurate water operations (water measurement, diversion, replacement, storage, exchange, etc). Since groundwater is interconnected with surface water, administration includes understanding and accounting for groundwater use and its delayed impact on surface water availability. By law, every well in the state that diverts groundwater must have a well permit. Over 250,000 small and large capacity wells exist in Colorado. Small capacity wells generally serve individual households while large capacity wells supply irrigation and municipal needs. Over 4,000 groundwater well permit applications are submitted to DWR annually, and the staff determines the amount of water available and analyzes the potential for injury to other existing water rights under strict statutory guidelines. In addition to well permitting, DWR employs professional engineers and scientists who collect and analyze data on water supply to forecast streamflows, determine diversion requirements, investigate stream transit losses, determine evaporation losses, and calculate historical use and current conditions. A staff of hydrographers maintains the satellite-linked monitoring system. This system gives real-time streamflow information for over 500 stream locations in Colorado for use in daily water administration. This system has also become crucial in Colorado's flood warning and drought monitoring efforts.

Interstate Compact Enforcement (ICE): The State of Colorado is a party to nine interstate compacts; DWR is responsible for assuring the obligations of these compacts are met. Compacts ensure that states who share a river (including Colorado) receive a portion of the available water supply and give the surety of water supply needed for reasonable economic development within the states. As a headwaters state, Colorado's responsibilities to deliver water to these interstate agreements are of utmost importance. Due to growth within Colorado, there is increasing scrutiny of Colorado's administration of water and compact deliveries by other states with an eye toward gaining water for downstream states. An over-delivery of water to downstream states is a missed opportunity for beneficial

use of that water by Colorado citizens. An under-delivery could cause interstate litigation to be initiated by the downstream states. If Colorado fails to meet its intrastate water compact obligations due to the unavailability of accurate and timely streamflow and diversion information, the state may incur significant legal costs and be liable for subsequent repayment of any shortfall in water delivered to the injured state. Ignoring these compact obligations has proven problematic for Colorado in the past, resulting in expensive litigation and repayment requirements. Non-compliance with a decree or permit within Colorado can injure more than just Colorado citizens if that action causes Colorado to fail in meeting its Compact obligations. Thus, enforcement of decrees and permits is needed to ensure Colorado does not fail in meeting its obligations under all of its interstate agreements.

Public Safety Program - Public Safety, which consists of 12.0 Generally Funded FTE and approximately \$180,000 of federal FEMA grant funding, is one of three major programs with the Division of Water Resources (DWR). It consists of one sub-program: the Dam Safety Program. The Public Safety Program is managed by the State Engineer in accordance with Title 37, Article 87 of Colorado Revised Statutes (C.R.S.), which includes Erosion Control Dams, and the Livestock Water Tank Act, Title 35, Article 49 C.R.S. The Public Safety Program protects life and property through the regulation of approximately 2,900 jurisdictional and non-jurisdictional dams within Colorado. Currently in the state there are over 1,900 jurisdictional/non-federal dams, many of them over 100 years old. The Public Safety Program utilizes on-site inspections to assure the structural stability and maintenance of dams, and includes the review and approval of plans for the construction, alteration, modification, repair, enlargement, and removal of any dam. The Public Safety Program also requires the development of Emergency Action Plans for public safety in the event of a dam failure. Of Colorado's non-federal dams, approximately 652 (333 high hazard and 319 significant hazard), or about 34 percent of the total non-federal dams, are classified as dams that, in the event of a failure, would be expected to cause loss of life and/or significant property damage within the flood plain areas below the dams.

Dams and reservoirs store water for use by irrigators, municipalities, and other entities. Dams and reservoirs are an important part of the infrastructure that allows Colorado to optimize the use of water within the state. The Public Safety Program serves many customers, including farmers, municipalities, recreationalists, anglers, other state and federal entities, canal companies, water managers, and downstream states. Citizens and property owners in the flood plain areas below the State's dams are a primary customer of the program as well.

The Public Safety Program has one major process, which is administering the Dam Safety Program. Within that program are several important components.

Classification, Inspection, Restriction: All dams (approximately 2,900) in Colorado are reviewed to determine if they are jurisdictional (over a certain size or volume) per the legislative direction in Section 37-87-101, C.R.S. Those that are jurisdictional (approximately 1,900) are further reviewed to determine if life or property *could* be impacted *in the event* of a failure (hazard classification). That classification determines the regular schedule of safety inspections for each of these dams. Dams that have problems found during inspections are then evaluated through safety evaluations of existing dams to determine the safe storage levels for that structure. An order restricting storage may be placed on a dam to keep storage at that safe level until repairs are made. Minimizing storage until repairs are made also protects life and property.

Plan Review and Construction Inspection: The Dam Safety Program also uses a plan and construction review process to assure competent construction or repairs for any dam. This includes the review and approval of plans for the construction, alteration, Colorado Department of Natural Resources

modification, repair, enlargement, and removal of dams and reservoirs, and field inspections during construction or repairs. These inspections assure that construction proceeds according to the approved plans. Proper design and construction processes are designed to minimize the loss of life and property by avoiding dam failures.

Emergency Action Plans: Emergency Action Plans are required to be developed by the dam owners and filed with the Dam Safety Program and with local emergency responders. These plans rely on hydrographic models to estimate the impacted area from a dam failure. An Emergency Action Plan assures that the local responders know of the dam, whom to contact in an emergency, and the potential affected area in the event of a dam failure. The Emergency Action Plans process is designed to minimize the loss of life and property in the event of a dam failure.

Well Inspection Program - The Well Inspection Program is primarily focused on protecting the quality of groundwater in Colorado by licensing water well construction contractors and by enforcing existing rules and regulations. Groundwater is a drinking water source (potable supplies) for many households and municipalities. It is also extensively used for irrigation of crops for human consumption. Improper construction of wells can lead to aquifer contamination. The Well Inspection Program has two components: a staff of inspectors and a board which sets standards for construction and licensing. Therefore, this program sets and enforces minimum construction standards through approved permits and inspections for the construction, repair, plugging, sealing, and abandonment of all wells, test holes, monitoring and observation holes/wells, and dewatering wells. There are currently over 250,000 water wells in Colorado and over 6,000 oil and gas wells that require a water well permit by the Division of Water Resources (DWR).

The General Assembly created the State Board of Examiners of Water Well Construction and Pump Installation Contractors (Board) under DWR. The five member Board is authorized to develop standards for construction to protect the aquifers and to license contractors for well construction. The Board is also authorized to enforce the rules and standards for well construction and pump installation. The State Engineer provides support staff for the Board and assists in the efficient and effective discharge of its duties and responsibilities. In 2003, the General Assembly passed Senate Bill 03-45 authorizing the creation of a well inspection program that is funded through a well permit application fee (Section 37-91-113, C.R.S.). Without such a program, there is little ability to locate substandard constructions which could allow contamination of the aquifers.

The Well Inspection Program's customers are citizens, municipalities, and irrigators who rely on clean groundwater for drinking and for crops. These same customers also rely on the program to assure proper well construction that meet or exceed minimum construction standards. The Well Inspection Program supports the State Engineer and the Board.

The major processes of the Well Inspection Program are the establishment and enforcement of construction standards (rules) by the Board and the creation of a robust inspection program to assure compliance. The strategy for the establishment and enforcement of construction standards is to use a knowledgeable Board who can set realistic standards. The Board is comprised of appointed experts in well construction and geohydrology. Setting construction standards and licensing requirements gives contractors clear direction for well construction and allows for enforcement against substandard construction that could allow contamination of aquifers.

Well inspector duties in this program include inspecting water well constructions and pump installations, monitoring and observation hole/well constructions, well abandonments, complaints investigations, providing education and public outreach. The strategy for the inspection component of the program is to have field inspections locate and prevent substandard construction of wells and to help identify and initiate action against unlicensed/substandard contractors working illegally. Field inspections are unannounced and conducted during the construction process lending a deterrence strategy to the program.