



**COLORADO**

**Department of Natural Resources**

## **FY 2016-17 Performance Plan**

**December 2016**



**COLORADO DEPARTMENT OF NATURAL RESOURCES**  
**PERFORMANCE PLAN – FISCAL YEAR 2016-17**

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## Section I

Introduction to the Department

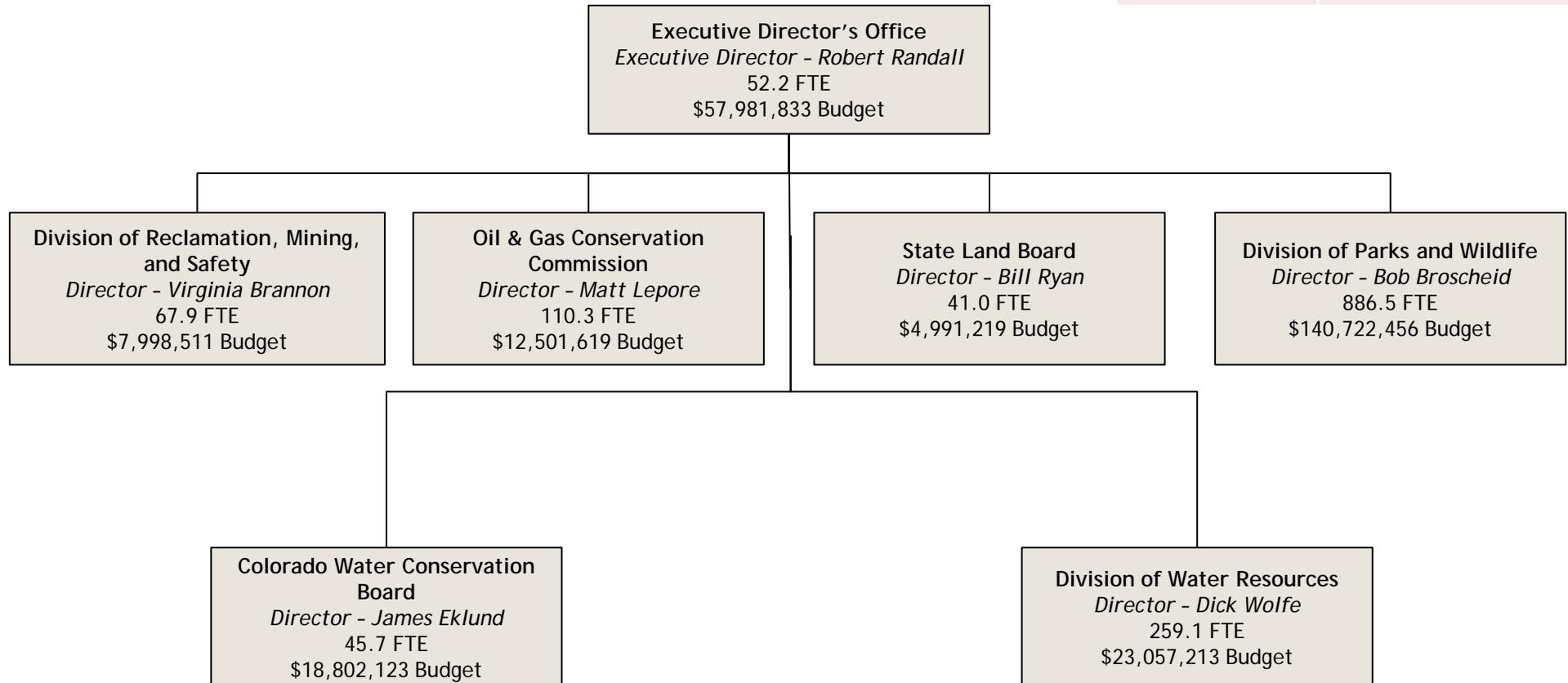
Of Natural Resources

FY 2016-17 Performance Plan



# Colorado Department of Natural Resources

Total Department FTE & budget breakdown (based on FY 2016-17 appropriations)	
1,462.7	Total FTEs
\$266,054,974	Total funds
\$28,742,941	General funds
\$202,967,586	Cash funds
\$7,703,225	Re-appropriated funds
\$26,641,222	Federal funds





**COLORADO**  
Department of Natural Resources

Executive Director's Office  
1313 Sherman Street, Room 718  
Denver, CO 80203

December 28, 2016

To: Governor John Hickenlooper  
Members of the General Assembly  
Interested Members of the Public

Colorado is blessed with abundant natural resources. Our majestic mountains, beautiful landscapes, and diverse wildlife are important parts of our identity as Coloradans. Natural resources also play an integral role in Colorado's economic wellbeing. Water is essential for agriculture, recreation, and other industries. Hunting, fishing, and wildlife viewing bring an estimated economic impact of \$5.0 billion (including secondary impacts) and support about 50,000 jobs in Colorado. Outdoor recreation at state parks brings another \$571 million of economic impact to Colorado's communities. In 2014, the oil and gas industry recorded a production value of \$15.8 billion, while the mining industry added over \$7 billion to Colorado's economy. Similarly, over 56,000 people are directly employed in the mining and oil and gas industries in Colorado.

The Department of Natural Resources (DNR) is committed to responsible stewardship of our natural resources, outstanding customer service, and continuous process improvement. Where possible, we operate within existing legislative appropriations. In limited cases, where more resources would assist the Department in better operating its programs, we submit decision items.

There are several key challenges and opportunities before DNR and the State of Colorado in the coming year, among them:

**1) Declining Mineral Revenues**

Several DNR programs are dependent on severance tax, a highly volatile revenue stream that has seen sharp declines in the last year due to historically low commodity prices for oil and gas and an associated downturn in oil and gas drilling. A Colorado Supreme Court decision in April 2016 allowing additional deductions an oil and gas company can take against its severance tax liability has led to additional declines in revenue. Personnel and operations at four of our divisions receive severance tax appropriations via Tier I of the Severance Tax Operational Fund. Several DNR programs and those of other departments – including the low-income energy assistance programs, species conservation, forest-health grants, and the work of our nine basin roundtables – receive Tier II appropriations from the same fund. In addition, persistently low oil and gas prices have resulted in declining revenue to the Oil and Gas Conservation and Environmental Response Fund, the primary source of funding for operations at the Oil and Gas Conservation Commission (OGCC). This decrease resulted in a \$3 million revenue shortfall in the current fiscal year, which the General Assembly addressed by refinancing the OGCC's budget with approximately \$3 million in one-time funding from Tier I of the Severance Tax



Operational Fund. Resolving this persistent funding gap – as well as providing for a cushion for volatile commodity prices and oil and gas-related emergencies – will be a priority in the coming year.

## **2) Water Plan Implementation**

Colorado is facing unprecedented growth. We are the second-fastest growing state in the nation, adding 110,000 residents in 2014. Colorado's Water Plan, completed in November 2015, was conceived to ensure sufficient water supplies to keep our cities, farms, and environment thriving even as Colorado is expected to continue growing – adding millions of people in coming decades. Since that time, the Department, the Colorado Water Conservation Board (CWCB), and our many partners have started the work of implementing the plan, a process that will unfold over years. The plan will be carried forward by the ranchers, farmers, cities, water utilities, environmentalists, anglers, developers, and many more who care deeply about water's central place in our beautiful state. This year, the CWCB moved forward on implementing the plan by studying storage options and groundwater storage technology, exploring ways to support the temporary transfer of agricultural water, securing funding to develop watershed restoration and stream management plans, and updating the latest Statewide Water Supply Initiative to ensure Colorado's baseline information on water supplies is accurate. The coming year will bring more effort in this regard to ensure that we manage our water supplies to preserve the best of Colorado while allowing cities, farms, and our environment to flourish.

## **3) Outdoor Recreation and Colorado the Beautiful**

In 2015, Governor Hickenlooper announced his Colorado the Beautiful initiative, with the goal that within a generation, every Coloradan lives within 10 minutes of a park, trail, or vibrant open space. At DNR, we are accomplishing this in three ways. First, we've focused on promoting recreational trail opportunities, identifying "16 in 2016" priority trails or missing trail segments by improving coordination among state, federal, and local governments and to advance strategic trail priorities. This year will see over \$23.1 million in state and federal funds committed to advance 10 of these priority projects. Locally, project proponents will match over \$18.4 million to leverage these state and federal dollars even further. Next year, we will make up to \$10 million in public funds available to match an ambitious private fundraising campaign. Second, we are working with the land conservation community to update their statewide conservation priority map, and in 2017 we will identify top priority landscapes for protection. Finally, we are identifying positions within DNR where we can recruit and retain young persons and underrepresented populations in natural resource professions, while creating life-long conservationists. This year, we piloted an effort to increase diversity of seasonal staff at three front-range state parks by 10%, and that pilot will be expanded to increase diversity within all of Colorado Parks and Wildlife by 10% in 5 years. In addition, we continue to have a robust youth engagement program that, over the last two years, included 113 projects and 24 outreach events, 312,340 volunteer hours, and 12,866 youth served. We also conducted 36 stewardship projects with Colorado Youth Corps. Finally, we will continue to hire teams of students from Arrupe Jesuit High School's internship program, which serves economically disadvantaged inner-city youth.

## **4) Process Improvement and Performance Management**

Lean is a process management approach whereby the delivery of products and services are matched to the needs of the customers utilizing a minimum of time and resources. The State of Colorado's statewide Lean program began in 2011. Since then, every division within DNR has conducted at least one Lean evaluation project. The process improvements resulting from DNR's Lean projects have substantially cut processing time, increased quality of services, and allowed staff to focus more time and resources on those natural resource programs which most benefit Colorado's citizens. Past Lean

projects have addressed DNR's employee on-boarding process, the OGCC's field inspection process, CPW's Off-Highway Vehicle program, and permitting and inspections at the Division of Reclamation, Mining, and Safety. In the past year, DNR has conducted Lean projects to address:

- Orphan wells at the Colorado Oil and Gas Conservation Commission;
- Water supply permitting, including Colorado Water Conservation Board, Colorado Parks and Wildlife, and our colleagues at the Colorado Department of Public Health and Environment;
- Real estate transactions with the State Land Board; and
- Processing of lease modifications by the State Land Board.

In addition, DNR has added capacity in the Executive Director's Office using existing FTE to address performance planning, budgeting, and measurement by creating a new Chief Operating and Chief Performance Officer position. This position will be responsible for developing and measuring departmental performance planning and metrics, as well as working directly with DNR's divisions in developing and executing strategic policy initiatives, associated metrics, numerical goals, and business plans. This position will also take on management of DNR's compliance with the State Measurement for Accountable, Responsive, and Transparent Government (SMART) Act.

I hope you find the information in DNR's Performance Plan helpful. It includes background information on each of our divisions and their major programs, as well as our three strategic policy initiatives, our strategies to achieve them, and the metrics to tell us how we're doing. The over-arching initiatives are:

1. Manage, enhance, preserve and protect state lands, wildlife and their environment for the use, benefit and enjoyment of the people of Colorado and its visitors, now and into the future.
2. Conserve, develop, protect, and administer Colorado's water for present and future generations in accordance with state and federal laws.
3. Balance the responsible and efficient development of the State's energy and mineral resources with the protection of public health, safety, welfare and the environment including wildlife.

It is an exciting time at the Department of Natural Resources. If you have any questions, please do not hesitate to contact me at 303-866-3311 or [robert.randall@state.co.us](mailto:robert.randall@state.co.us). Thank you for your continued interest and support!

Sincerely,

A handwritten signature in blue ink that reads "Bob Randall". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Bob Randall  
Executive Director

## **COLORADO DEPARTMENT OF NATURAL RESOURCES INTRODUCTION TO FY 2016-17 DNR Performance Plan**

The Performance Plan for the Department of Natural Resources (DNR) is being submitted in compliance with the State Measurement for Accountable, Responsive, and Transparent Government (SMART) Act, as amended by the General Assembly through H.B. 13-1299. While this plan is developed consistent with Section 2-7-203 (2), C.R.S., this single document is not intended to fully comply with all of the requirements of a SMART Act hearing required by this section of statute. Instead, separate documentation will be provided related to the DNR's regulatory agenda, its budget request, and its legislative agenda. This plan was also developed in accordance with general instructions issued by the Governor's Office of State Planning and Budgeting (OSPB). Based on a number of conversations with OSPB as well as the participants in the Governor's Performance Academy, starting in FY 2015-16 the Department decided to make several significant changes to its annual Performance Plan. These changes included:

- (1) General Layout – In prior years, the DNR performance plan was broken down into discrete programs, almost all of which were contained within a single DNR division. In this regard, the Department's performance plan was really a consolidation of division performance plans. In contrast, the new structure attempted to find large, cross-division goals to which all DNR divisions work. In a nutshell, the Department believes that all DNR divisions should work towards three big picture goals: (1) managing the State's lands and wildlife for the benefit of Colorado citizens; (2) managing water for public benefit, and; (3) managing mineral and energy resources in a balanced manner which allows for both the economic benefits of resources development while, at the same time, protecting the public from the potential negative impacts of resource development. Each of these three goals will be discussed in greater detail on the following pages.
- (2) Streamlining of the DNR Performance Plan – At its 2014 SMART Act Hearing, the Department of Natural Resources presented a 180 page Performance Plan. While very thorough and complete, covering a wide variety of large and small programs, this Plan was simply "too much". The Department believes that the expression "less is more" is often true. In order to focus on the programs with the largest budgets, as well as the programs that generate the most questions and interest from both the general public and the General Assembly, the Department is removing six programs (and the associated metrics) from the Performance Plan. These programs are: (1) The Well Inspection Program in the Division of Water Resources; (2) the Mine Safety Training Program in the Division of Reclamation, Mining, and Safety; (3) The Wildlife Viewing Program in Colorado Parks and Wildlife; (4) the Boating Program in Colorado Parks and Wildlife; (5) the Volunteer Program in Colorado Parks and Wildlife, and; (6) the Avalanche Information Center within the DNR Executive Director's Office. While these programs remain important and will continue to be managed in the same way by the associated divisions, it is also true that these programs are less integral in meeting the three large picture goals discussed in the "General Layout" section above. Most of the associated metrics will continue to be tracked by the programs and will be available upon request. Additionally, to achieve further streamlining, some of the less helpful, lower profile metrics will be removed from the Performance Plan going forward so that the remaining narrative can focus more on the highest priority, most meaningful metrics.

## 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 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 resources 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.



## Section II

Colorado Department of Natural Resources

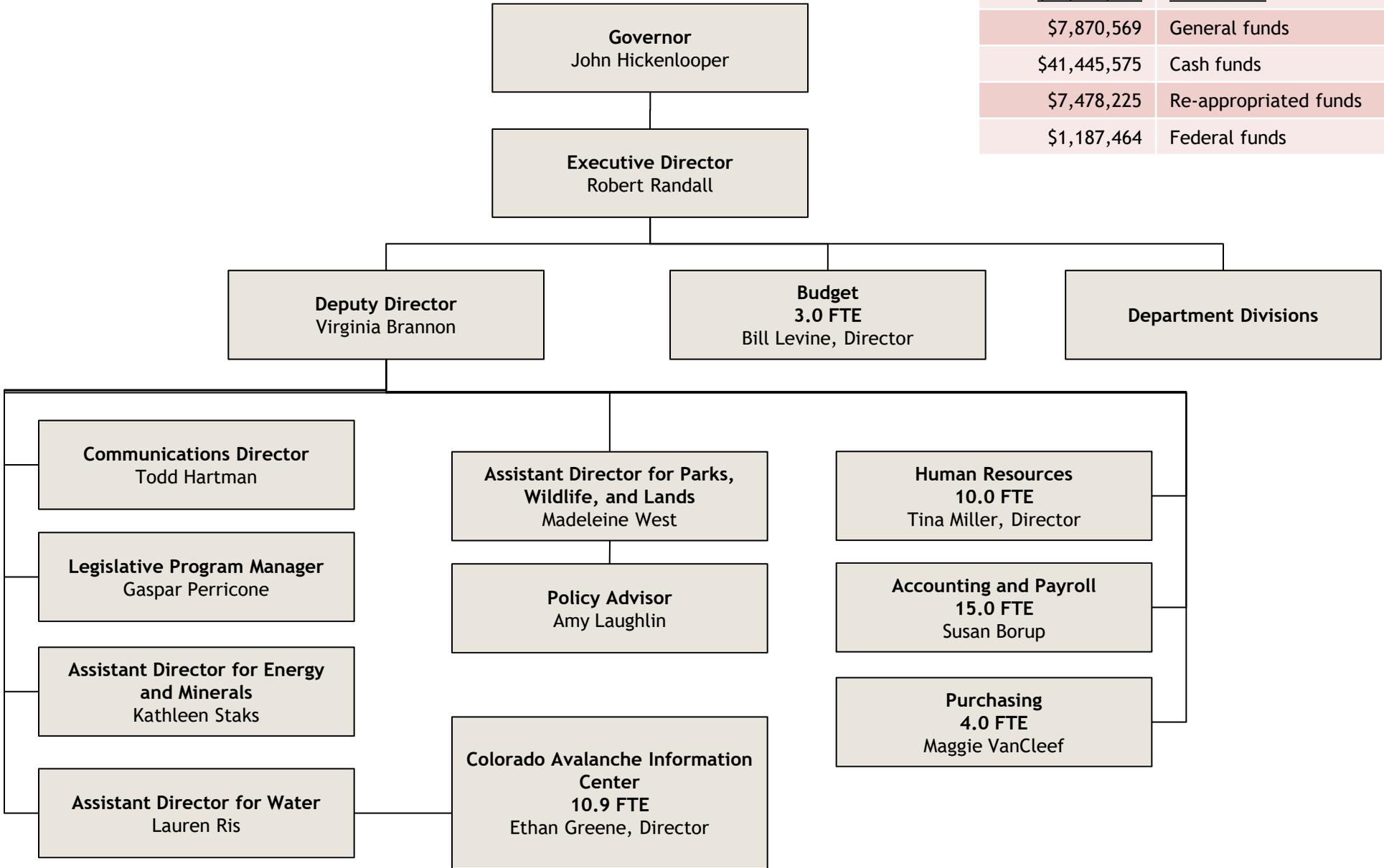
Program Descriptions



# Executive Director's Office

Colorado Department of Natural Resources

EDO FTE & budget breakdown (based on FY 2016-17 appropriations)	
52.2	Total FTEs
\$57,981,833	Total funds
\$7,870,569	General funds
\$41,445,575	Cash funds
\$7,478,225	Re-appropriated funds
\$1,187,464	Federal funds



# Colorado Avalanche Information Center

## What is this Program?

The Colorado Avalanche Information Center (CAIC) is a program in the Executive Director's Office of the Colorado Department of Natural Resources. This program is funded by the Operational Account of the Severance Tax Trust Fund, fees, donations, reappropriated 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, Colorado Department of Transportation highway workers, mountain recreationalists, and avalanche professionals.

The CAIC began in 1973 as the Colorado Avalanche Warning Center in the United States Forest Service. 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 1992 the Colorado Department of Transportation contracted with the CAIC to forecast avalanche conditions for the mountain roads within the State Transportation System. 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.

## Why Is This Program Important?

The Colorado Avalanche Information Center protects people and property by reducing or eliminating short and long-term risks from avalanches. Avalanches not only take lives and destroy property; they damage local and regional economies. Local communities and regional industries all suffer serious economic losses when avalanches close transportation corridors causing lost visitor days and increased transportation costs. The Colorado Department of Transportation, Colorado's Ski Industry, other regional and local businesses, and the general public use CAIC's forecasting, online tools, and maps to avoid or reduce their vulnerability and losses to avalanche hazards. The CAIC also increases public safety through extensive educational programs and educational aids readily available to the public.

- Emergency Managers, Local Governments, and State agencies such as the Colorado Department of Transportation rely on CAIC educational aids, avalanche-safety courses, and expert forecasting to prevent highway closures, avalanche deaths, and disasters.
- Public safety is protected by the quick response of the CAIC to natural hazards and disasters across the state.

- Colorado is the number one ski destination in North America. The Ski and Tourism Industries rely on CAIC weather and avalanche forecasts to reduce lost visitor days and associated economic losses.
- Highways are an essential part of the State's economic infrastructure. In addition to allowing visitors access to ski areas and other tourist destinations, highways allow trucks and other vehicles to deliver a wide variety of consumer items to market places throughout Colorado. Highway closure due to avalanches may result in shipping delays and/or increased cost of shipping, both of which negatively impact Colorado businesses.

### **Key Products and Customers:**

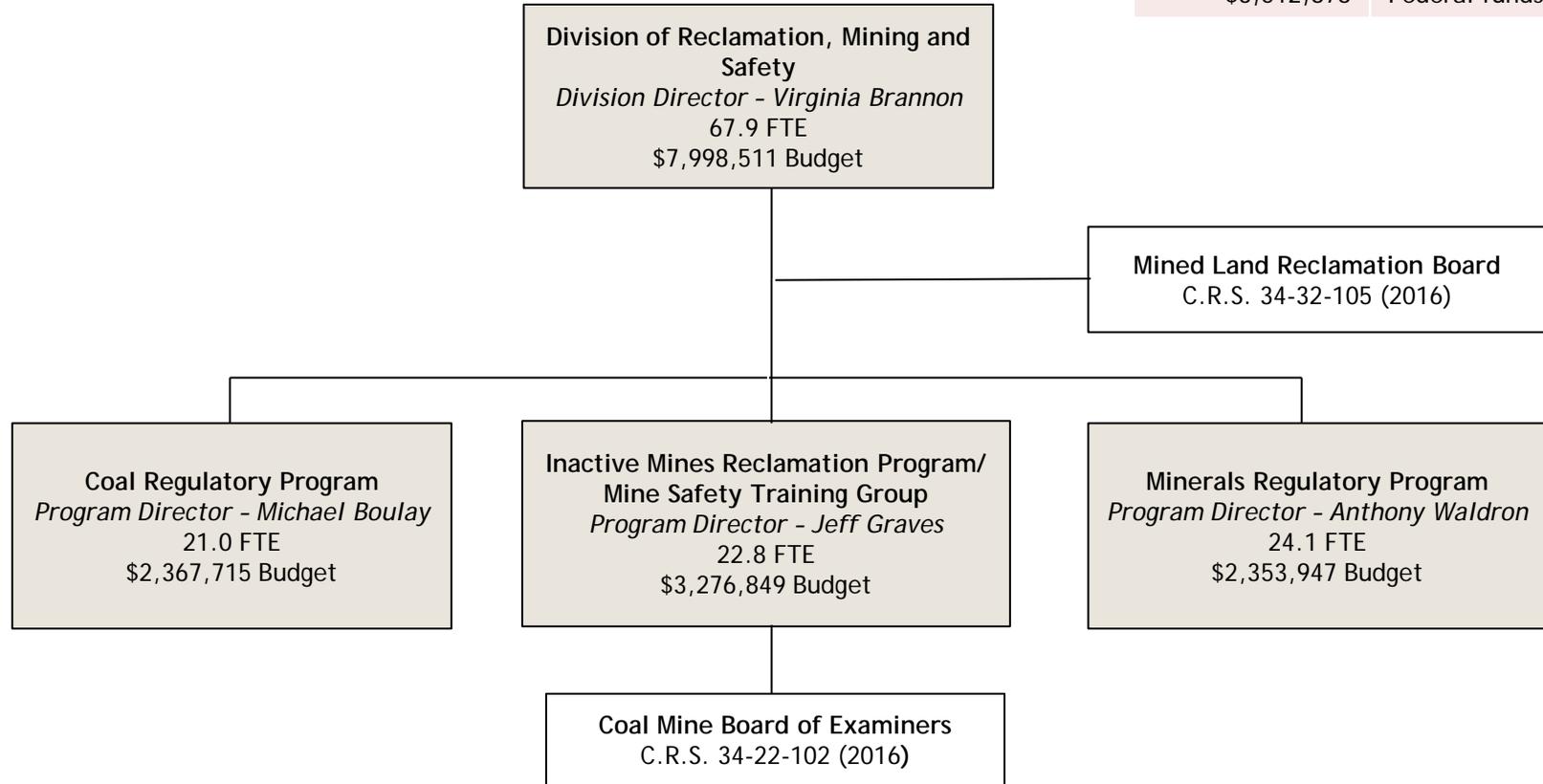
CDOT and local governments use the Center's avalanche forecasting information to reduce the costs of avalanche mitigation and road closures, thereby reducing maintenance costs and economic losses from transportation delays. The Ski and Recreation Industries, backcountry rescue, guides, and local businesses 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.

### **What is this Program Trying to Achieve?**

The objective of the CAIC is to minimize the economic and human impact of snow avalanches on recreation, tourism, commerce, industry and the citizens of Colorado by providing information and education on avalanche danger. Since 1950 more people have died in avalanches in Colorado than in any other state. On average, more people have died in avalanches in Colorado than as a result of any other natural hazard since 1995. With a staff of 19 avalanche professionals, the Center achieves its purpose through a dual mission of forecasting and public education.

# Division of Reclamation, Mining, & Safety

Total Department FTE & budget breakdown (based on FY 2016-17 appropriations)	
67.9	Total FTEs
\$7,998,511	Total funds
\$0	General funds
\$4,485,633	Cash funds
\$0	Re-appropriated funds
\$3,512,878	Federal funds



## Division of Reclamation, Mining, and Safety

### Mined Land Reclamation Programs

#### **What is this program?**

The Office of Mined Land Reclamation is one of two major programs in the Division of Reclamation, Mining, and Safety. It consists of two sub-programs, the Coal Program and the Minerals Program, along with the Mined Land Reclamation Board, which serves as the appellate body for the Coal Program and as an approval/appellate body for the Minerals Program. The Office of Mined Land Reclamation regulates mining and reclamation activities at coal, hardrock, and construction materials mines and is committed to balancing the need for mineral resource production with protection of the public, environment, and natural resources.

The Coal Regulatory Program (Coal Program) regulates active coal mine and exploration operations, as well as reclamation of the land by the mining company after the coal has been extracted. Responsibilities of the program include coal mine permitting, inspection, and enforcement. Program authority is pursuant to the Colorado Surface Coal Mining Reclamation Act (Section 34-33-101, C.R.S.) and through a state primacy cooperative agreement with the federal Department of the Interior/Office of Surface Mining as allowed by the federal Surface Mining Control and Reclamation Act of 1977, PL 95-87. The Coal Program is funded by a federal grant from the Office of Surface Mining and by state matching funds from severance tax revenue. The funding formula is based on the amounts of permitted mine acreage that is located on federal (79%) versus non-federal (21%) lands. Existence of the state Coal Program is also required to allow federal funds to be allocated to the Colorado Inactive Mines Program, which safeguards hazardous mine features that resulted from legacy mine operations.

The Coal Program currently regulates 33 coal mines, including eight actively producing mines, and 47 exploration permits, covering over 170,600 permitted acres (as of June 30, 2016). Financial warranty coverage for these sites exceeds \$200 million. The majority of Colorado's coal production is from underground mines. Colorado coal is of high quality and is used to manage clean air compliance requirements in Colorado and other states. Colorado coal production was 18.5 million tons in calendar year 2015 (per coal production reports submitted to DRMS).

Coal Program staff have direct permit action and enforcement authority, and the Mined Land Reclamation Board serves as an appellate body if staff actions are appealed. Federal oversight activities and policies can also influence state regulatory, permitting, and enforcement activity. Coordination with federal agencies and national organizations on policies, legislation, regulation, and funding is critical to maintaining state primacy. The Division has established working relationships through Memorandums of Understanding (MOUs), and other coordinating documents to engage and cooperate with federal agencies at various levels for emerging projects and issues.

The Minerals Regulatory Program (Minerals Program) and the Mined Land Reclamation Board issue and enforce mining and reclamation permits for all non-coal mines in Colorado on state, federal, and private lands. Program authority is pursuant to the Colorado Mined Land Reclamation Act (Section 34-32-101, C.R.S.) and the Colorado Land Reclamation Act for the Extraction of Construction Materials (Section 34-32.5-101, C.R.S.). Hardrock/metal minerals include uranium, gold, silver, and molybdenum while construction materials include sand, gravel, limestone, marble, clay, and flagstone. The Minerals Program currently regulates 1,440 mines and 145 prospecting operations for a total of 1,585 sites, covering 187,744 acres (as of June 30, 2016). Financial warranty coverage is approximately \$524 million for these sites.

The program is funded from revenue generated from statutory fees on permitted mining and prospecting operations (32 percent) and from severance taxes (68 percent). Fines paid by operators for mining violations accrue to the state's General Fund.

Regulatory staffing for both the Coal and Minerals Programs provides a diverse array of expertise in a team environment. The areas of expertise include geology, engineering, hydrology, range science, soil science, vegetation ecology and other related fields. Teams are structured to allow cross utilization of individual expertise and to maximize geographic coordination of inspection duties, enhanced through a regional office in Grand Junction.

Coordination Across the Regulatory Programs – The Coal and Minerals Programs utilize a single mine permit data tracking system and records imaging system. Starting in FY 2015-16, e-permitting is being used in both the Coal Program and the Minerals Program. Technical and financial warranty trainings have also benefitted staff in both programs.

### **Why Is This Program Important?**

The Office of Mined Land Reclamation regulates mining and reclamation activities at coal, hardrock, and construction materials sites. The program protects public health, safety and welfare, as well as wildlife and aquatic species and their habitat. Primary objectives are to review mining and reclamation permits, accurately calculate a reclamation financial warranty/bond that is adequate to reclaim the mine site if the operator fails, and inspect mining operations to ensure that reclamation plans are being followed. The program ensures that mining and reclamation activities are conducted in compliance with applicable laws and regulations to ensure the environment and our natural resources are adequately protected. Broad regulation of this important industry ensures a level playing field for all involved in extracting these resources and ensures that statewide mined lands are properly reclaimed and returned to a beneficial use.

The mining industry is an important economic base within Colorado. There are eight active coal and 1,440 active minerals mine operations in Colorado. It is estimated that Colorado companies produced \$641 million worth of coal and \$2.3 billion worth of minerals in 2015. [Source: *Colorado Mining Association and Colorado Geological Survey 2016*]. As of December 2015, there were about 1,449 coal miners employed at Colorado's eight active coal mines [Source: *Colorado Mining Association*], and mineral mines employ thousands of additional employees. For example, the Cresson Mine (a gold mine in the Cripple Creek mining district) employs approximately 500 people along with numerous

contract employees. In addition, these operations generate royalty payments, severance tax revenues, and General Fund revenue through corporate taxes and the sales and income taxes paid by industry employees.

Colorado ranks 10<sup>th</sup> in coal production in the United States. Approximately 8.0 million tons mined from Colorado mines stays in-state to support a portion of the state's electricity demand. An additional 7.5 million tons are shipped to other states and 2.6 million tons are shipped outside the U.S. [Source: *Colorado Mining Association*].

The state's consumption of construction materials in 2015 was an estimated 51 million metric tons of sand, gravel and crushed stone for an estimated value of \$425 million. Colorado's aggregate industry employs approximately 5,600 and related cement and concrete jobs total 13,931. [Source: "Construction Materials Industry Overview," *Colorado Stone, Sand and Gravel Association*, August 23, 2016]. Colorado retains its sixth place national ranking of top producing states after Texas, California, Minnesota, Washington, and Michigan. National demand for construction materials has increased 3 percent from 2014, continuing a trend from previous years. This is in line with improving housing and construction demand in the U.S., which is up 4 percent from 2014. [Source: *U.S. Geological Survey Mineral Commodity Summaries-February 2015*].

With respect to the State's Hardrock/Metals industry, Colorado is home to two of the nation's three primary producers of molybdenum, which had a U.S. production value of \$1.8 billion in 2014. Recent production figures are not available, however, the price of molybdenum has retreated significantly over the past year causing Climax Molybdenum to reduce its output and to consider closing its Henderson Mine. This has caused a ripple effect for the two counties where Henderson operates, Clear Creek and Grand, because a significant portion of their county operating budgets are funded from property taxes paid by the Henderson mine. In addition, there is one large gold mine and a number of smaller gold and silver mines across the state. The price of metals has declined over the past year, along with other commodity prices, leading to a general slowdown in production at most of these facilities.

### **Who are the Program's Customers?**

The Office of Mined Land Reclamation serves the mining industry, the public, and other government agencies. The office serves the mining industry by promoting the 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.

### **What is the Objective of this Program?**

- Promote the responsible development of the State’s mineral and energy resources while protecting public health, safety, welfare, and the environment.
- Reclaim coal and mineral mined acres to beneficial post-mining land use.
- Protect the environment by ensuring regulatory compliance at coal and mineral mine sites.
- Coordinate permitting, regulatory and public review processes with federal, state, and local agencies. Implement interagency agreements for groundwater, storm water, point source, and mine waste issues.

## **Inactive Mine Reclamation Program**

### **What is this program?**

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

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 with 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 an estimated 23,000 abandoned mine sites and physical hazards associated with past mining activities (i.e., open adits/tunnels and high walls), 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 of 1982. Approximately 10,058 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 Inactive Mines Reclamation Program also addresses water quality improvement projects from a 2011 inventory of an estimated 320 sites. To date, 25 of those sites have been addressed by the Program.

The primary federal funding for safeguarding activities comes from the Office of Surface Mining. Additional funding for safeguarding and reclamation activities comes from a number of sources, including the U.S. Bureau of Land Management, the U.S. Forest Service, as well as state severance tax.

### **Why Is This Program Important?**

Abandoned mine reclamation includes safeguarding, environmental clean-up, and economic stimulation in rural areas of the state. The safeguarding of dangerous mine openings protects the public health, safety, and general welfare from the hazards associated with an estimated

13,000 remaining abandoned mines. The program characterizes and determines the extent of the environmental problems associated with legacy mine waste, mill tailings, and acid mine drainage. It then develops and executes reclamation projects to address these environmental problems. If water quality issues are not addressed at legacy mining sites, Colorado's streams will continue to be degraded by dissolved metals and acidity associated with historic mining operations.

In FY 2015-16 the Inactive Mine Reclamation Program contributed approximately \$5.5 million into Colorado's construction and engineering services economy, including a significant amount in economically depressed rural areas. These construction activities create jobs, enhance the local economic climate, and result in greater income and sales tax revenues for state and local governments.

### **Who are the Program's Customers?**

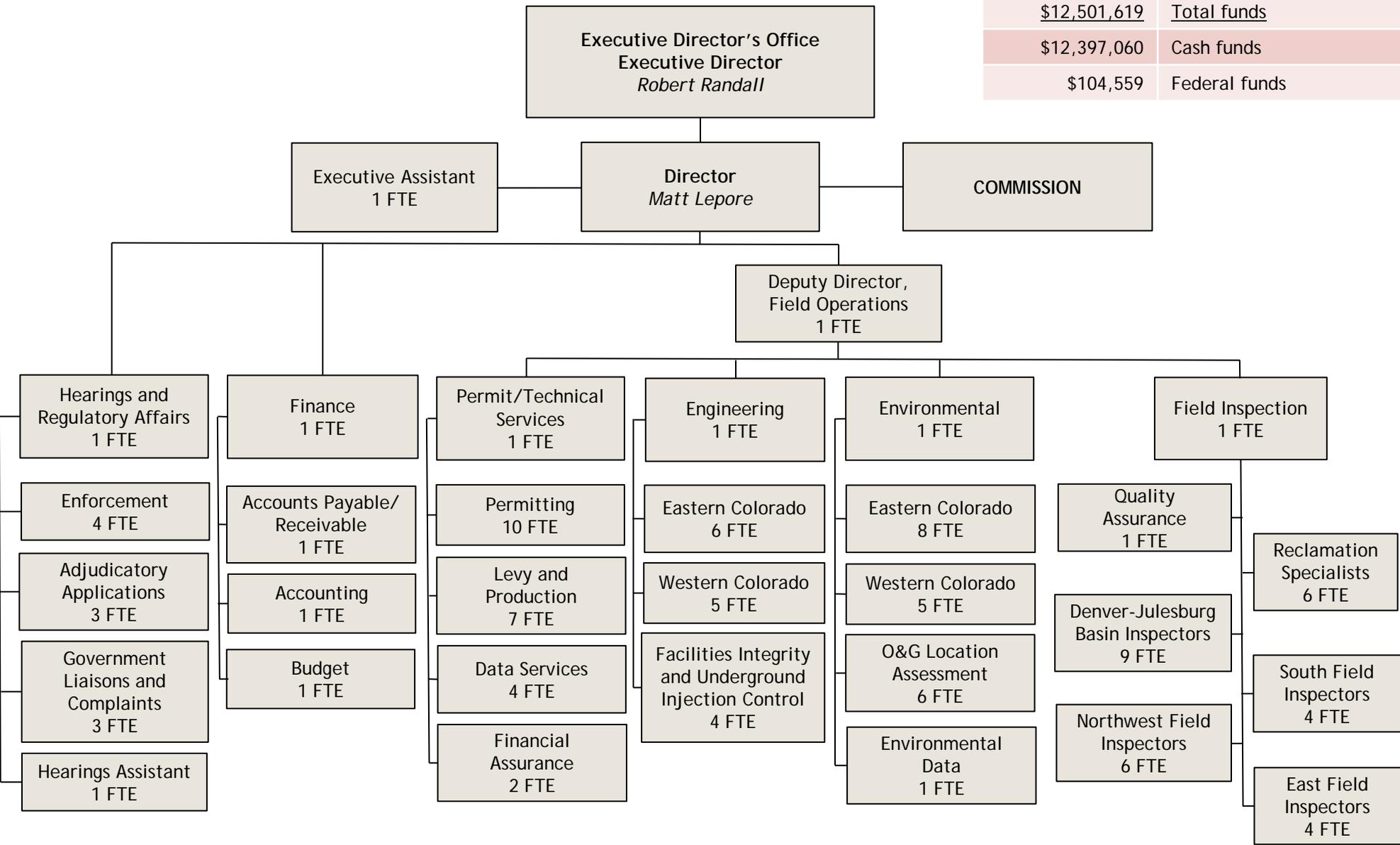
The program protects the public from hazards associated with legacy mining sites statewide and the customers include citizens and visitors who hike, hunt, recreate and visit Colorado's historic mining districts and back-country areas. The direct program customers are entities that own or control lands previously disturbed by historic mining practices. These include private land owners, local towns, city and county governments, and federal land management agencies such as the Bureau of Land Management, the U.S. Forest Service, and the National Park Service. Environmental remediation projects funded from severance tax revenue address mine waste rock and mill tailings that cause pollutants to seep into waterways. The customers who benefit are downstream users of the water resources and partners include watershed groups, as well as the Colorado Department of Public Health and Environment. The program also completes reclamation of permitted mine sites where the operator has forfeited the reclamation bond to the state. All of the aforementioned activities benefit the health and safety of the citizens of Colorado.

### **What is the Objective of this Program?**

- Safeguard hazardous abandoned mine openings in the most cost effective and environmentally sound manner.
- Reclaim and remediate abandoned mine environmental problems that affect air and water quality.

# Oil and Gas Conservation Commission

Total Division FTE & budget breakdown (based on FY 2016-17 appropriations)	
111	Total FTEs
\$12,501,619	Total funds
\$12,397,060	Cash funds
\$104,559	Federal funds



## Regulation of Oil and Gas Exploration and Production

### What is this Program?

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.

**Well Permitting and Location Approval:** This sub-program annually issues about 3,000 to 4,000 permits for the drilling of new oil and gas wells and another 20 to 60 permits for the recompletion of existing wells. In addition, the Commission annually approves about 500 to 1,000 locations for well pads and tank batteries. This permitting and approval program is the cornerstone of the Commission’s efforts to ensure that new and recompleted wells are drilled, completed, and operated, and that locations are constructed, maintained, and reclaimed in a manner that protects public health, safety, and welfare, including the environment and wildlife. The OGCC’s permitting, engineering, and environmental groups all participate in this process, and input is solicited from local governments, the public, and, in certain circumstances, the Department of Public Health and Environment (CDPHE) and the Division of Parks and Wildlife (CPW). The permit review and approval process is the first step in the Commission’s regulatory compliance regime. Where necessary, the OGCC imposes special conditions of approval to ensure efficient resource production and appropriate environmental protection on a site-specific basis.

**Spill Response and Waste Regulation:** The OGCC regulates the generation, storage, treatment, and disposal of exploration and production waste from oil and gas operations, including drilling and completion fluids and produced water. To this end, the OGCC’s engineering group annually issues about 50 permits for the underground injection of such waste into Class II wells pursuant to authority delegated by the Environmental Protection Agency. The OGCC’s environmental group annually issues another 30 to 40 permits for the management of such waste in pits. The agency has noticed a recent decline in the latter due to closed loop drilling, a new technology that does not require pits. Where spills or contamination occurs, the OGCC’s environmental group ensures that appropriate remediation activities are undertaken by the operator. The environmental group had been overseeing the remediation of 300 to 500 new spills and releases annually up until FY 2013-14 when the reporting threshold was lowered by statute, causing the average annual number of spills and releases reported to temporarily exceed 700. Moving forward, the OGCC anticipates responding to somewhere between 500 and 600 spills and releases annually.

**Inspections:** Using a risk-based approach to establish priorities, the OGCC annually conducts about 40,000 inspections on oil and gas facilities, including wells, tank batteries and multi operational locations. These inspections help to ensure that operators are complying with OGCC regulations and permit conditions. The field inspection staff also responds to complaints from surface owners

and other members of the public, and monitors interim and final reclamation of oil and gas locations. Members of the field inspection group are assigned to, and work in, specific geographic areas throughout the state. Field inspectors physically inspect the locations and develop a field inspection report for each visit. The field inspection report is sent to oil and gas operators and may identify corrective actions required to bring a facility into compliance with OGCC rules and permit conditions.

**Financial Assurance:** The OGCC administers about 1,300 surety bonds and other forms of financial assurance in the total amount of approximately \$158 million for oil and gas wells and certain other facilities and operations. These bonds help to ensure that wells are properly plugged and abandoned and that sites are properly reclaimed.

**Enforcement:** The OGCC annually issues over 200 warning letters and notices of alleged violation (NOAVs) to operators who have violated regulatory or permit requirements. Both identify the factual and legal bases underlying an alleged violation and require corrective or remedial action to remedy the alleged violation. The OGCC seeks monetary penalties for NOAVs. When the OGCC seeks a monetary penalty, the NOAV may be resolved through settlement decrees or administrative orders.

**Well Reports:** The OGCC processes monthly production reports from operators covering nearly 54,000 active wells in the state, together with additional reports on well completions, completed intervals, and well abandonments. The resulting information is publicly available and is used by the oil and gas industry to make exploration and acquisition decisions and by local governments, mineral owners, and others to predict and track royalty revenues.

**Environmental Studies:** The OGCC annually spends \$200,000 to \$300,000 conducting regional environmental studies, many of which seek to establish baseline conditions and trends for ground water quality in areas of significant oil and gas development. This information is used to develop appropriate permit conditions and to help monitor the effect of development on ground water.

**Orphaned Wells:** The OGCC annually spends about \$445,000 plugging orphaned wells and reclaiming and re-vegetating orphaned oil and gas sites. This work helps to mitigate the safety and environmental risks associated with orphaned wells and facilities. Identifying the location of orphaned wells is an ongoing process; many additional sites in need of remediation are identified annually.

**Public Information:** The OGCC provides information to the public on oil and gas development in Colorado in several ways. The OGCC's website annually receives over one million visits and provides information on the OGCC's programs, activities, pending permits, approved permits, and all existing wells. It includes an interactive Geographic Information System (GIS) map, which provides about 165 layers of geographic, geologic, hydrologic, environmental, and other information. The OGCC staff regularly participates in quarterly meetings in two areas of the state (northwest and southwest), at which OGCC staff, operators, local governments, and interested citizens discuss oil and gas development, issues of local concern, and regulatory developments. The OGCC staff also participates in scores of speaking engagements and public presentations across the state in response to requests from stakeholders, educators, local and state elected officials, and special interest groups, among others.

### **How are the Program's Operations Funded?**

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. The program does not receive or track royalty payments resulting from oil and gas extraction.

### **Why is this Program Important?**

As a statewide regulator of oil and gas exploration and development, the OGCC is charged with fostering the responsible, balanced development of the 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 occupies an important role in Colorado's growing economy. The nearly 54,000 active wells in Colorado collectively produced about \$10 billion worth of oil and gas in CY 2015. The industry directly employs about 39,000 people and supports about 64,000 additional jobs in the state.<sup>1</sup> In addition, these operations generate royalty payments, severance tax revenues, and General Fund revenue through corporate taxes and the sales and income taxes paid by industry employees.

### **Who are the Program's Customers?**

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 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.

### **What is the Objective of this Program?**

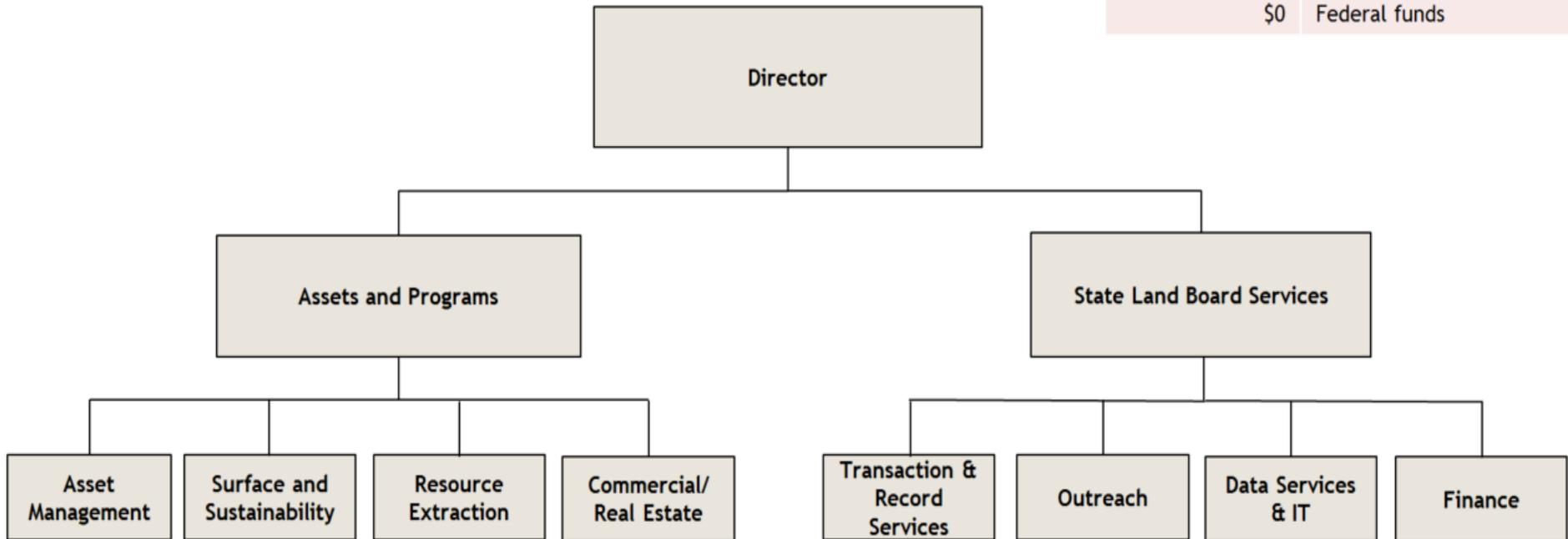
The Program's mission is to ensure the state's oil and gas resources are produced in an economically efficient manner that protects correlative rights and which holds operators to the highest standards in the nation for protecting public health, safety, welfare, the environment, and wildlife. Through its permitting, monitoring, enforcement, and restoration efforts, the Program seeks to encourage innovative technologies and practices that reduce environmental impacts.

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<sup>1</sup> Source: "Oil and Gas Industry Economic and Fiscal Contributions in Colorado by County, 2014" Leeds School of Business, CU Boulder – December 2015.

# Colorado State Board of Land Commissioners

State Land Board Total FTE & budget breakdown <i>(based on FY 2016-17 appropriations)</i>	
41	Total FTEs
\$4,991,219	Total funds
\$0	General funds
\$4,766,219	Cash funds
\$225,000	Re-appropriated funds
\$0	Federal funds



## State Land Board

### **What is this program?**

The Colorado State Board of Land Commissioners (State Land Board) is a constitutionally created state agency to which the State of Colorado delegated its fiduciary and management responsibility for assets in eight public trusts in Colorado. These state trust assets were transferred as an endowment to Colorado by the federal government at statehood to be managed for the benefit of public education and public institutions. Today these assets include approximately three million surface acres of land, leased for agricultural, grazing, recreational, commercial real estate, rights-of-way, renewable energy and other uses, and approximately four million acres of mineral estate, leased for oil, natural gas, coal, and other solid mineral extraction uses.

Approximately 95% of State Land Board assets are part of the School Trust, which benefits K-12 public schools. The remaining five percent are distributed across the other seven trusts. Properties held by the State Land Board are not open to public access except where leases for public use have been developed.

### **Why is This Program Important?**

Revenues generated by state trust lands through surface and subsurface leases are used for State Land Board operations but the majority of the revenues (more than 95%) are distributed to trust beneficiaries through long-term trust funds or capital construction funding. School Trust revenues support the Building Excellent Schools Today (BEST) Program and the Public School (Permanent) Fund. In FY 2015-16, the State Land Board generated \$131 million in revenues for the School Trust and the Permanent Fund generated \$22 million in interest income.

### **Who are the Program's Customers?**

The State Land Board's purpose is to serve trust beneficiaries both now and for future generations to come. In addition to the beneficiaries, our other critical stakeholders and customers are the lessees, the citizens of Colorado, the Governor, and the Legislature.

### **What is the Objective (Goal) of this Program?**

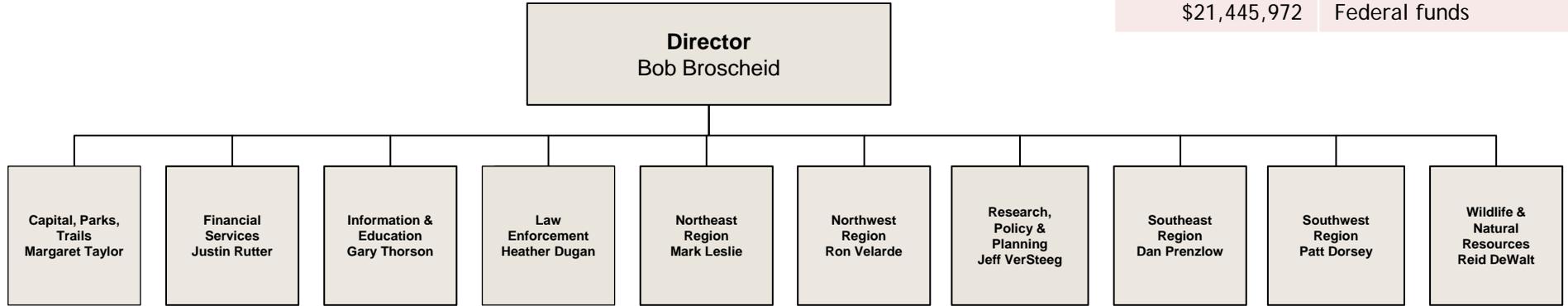
Colorado's trust lands are one of the state's most significant assets in our state, providing value for each generation of beneficiaries. The program's strategic goals as outlined in the State Land Board's formally adopted Strategic Plan are:

- Goal: Deliver enhanced financial outcomes for the eight public trusts.
- Goal: Provide excellent stewardship of lands held in the trusts.
- Goal: Implement best governance and business practices for managing information, knowledge, and human resources.
- Goal: Achieve greater understanding, positive recognition, and support for the agency and its initiatives.

# Colorado Parks & Wildlife

Colorado Department of Natural Resources

CPW FTE & budget breakdown (based on FY 2016-17 appropriations)	
886.5	Total FTEs
\$140,722,456	Total funds
\$150,000	General funds
\$119,126,484	Cash funds
\$0	Re-appropriated funds
\$21,445,972	Federal funds



## Colorado Parks and Wildlife

In 2011, Colorado Parks and Wildlife (CPW) was formed by the merger of the former Division of Parks and Outdoor Recreation and Division of Wildlife. A primary goal of the merger is to create more efficient and effective services through economies of scale and use of shared services, while at the same time maintaining the high-quality programs and recreational opportunities for which the agencies are known. As a merged entity, Colorado Parks and Wildlife is also better positioned to support a comprehensive outdoor recreation mission for the state.

CPW strives to ensure efficient and effective use of financial and human resources. Through planning and by following Colorado's Lean Program, CPW evaluates programs and makes spending adjustments accordingly. In fiscal year 2015-16, CPW completed an agency-wide Strategic Plan as well as a major update of the Colorado Wildlife Action Plan, both involving extensive public review and input. CPW also provided local grants for trails, new shooting ranges, expanded angling opportunities, improved wildlife habitat, and collaborated with partners to provide outdoor experiences for youth and families, to name a small fraction of accomplishments.

Wildlife and outdoor recreation represent an important part of Colorado's economy and quality of life, accounting for an estimated \$34.5 billion in total economic impact. Hunting, angling, wildlife viewing and state park visitation contributes roughly \$6.1 billion in economic effects statewide. Through ongoing partnerships, strategic planning and wise resource investments, CPW is poised to continue providing quality wildlife management and outdoor recreation during the coming years and beyond.

Colorado Parks and Wildlife is the lead DNR division responsible for three major programs: (1) Outdoor Recreation; (2) Trails, and; (3) Wildlife and Habitat Conservation. More extensive discussion of each of the programs follows.

## OUTDOOR RECREATION PROGRAM

### **What Is This Program?**

To provide an 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 the Recruitment/Retention and Volunteer programs. Another aspect of outdoor recreation, the State Trails Program, is treated separately as one of the three major programs of the Division. 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. This goal includes the continuous acquisition, development, and management of outdoor recreation lands, waters, and facilities.

### **Why Is This Program Important?**

Recognized around the country and the world for its beautiful scenery and diverse natural attributes, Colorado offers unique and extensive outdoor recreation opportunities. Outdoor recreation is a cornerstone of the Colorado lifestyle and quality of life, and access to outdoor recreation opportunities has been valued through much of the state's history. Additionally, outdoor recreation is a critical driver for Colorado's economy. The wide variety of outdoor recreation opportunities at state parks generates roughly \$571 million annually in direct spending in local communities and a total of \$1.7 billion annually when secondary expenditures are factored in. Non-local visitors (people who travel 50+ miles to visit a state park) generate about 70% of that economic impact, contributing an estimated \$396 million toward local economies.

A 2014 study for CPW by Southwick Associates on the economic impact of outdoor recreation found that 1) hunting, fishing and wildlife viewing generated more than \$5 billion in economic activity and supported nearly 50,000 jobs; 2) the full range of 38 outdoor recreation activities identified in the report (e.g. skiing, recreational shooting, white water rafting, hiking, fishing, etc.) accounted for \$21 billion in direct expenditures and supported more than 200,000 jobs across the state; 3) taking the multiplier effect into account, outdoor recreation is responsible for \$34.5 billion in economic activity and supports 310,000 jobs; and 4) more than 9 out of every 10 Coloradoans participate in one of the identified outdoor activities every year. The study also documented the major economic role of outdoor recreation in rural areas, noting, for example, that nearly 92,000 jobs in the northwest area of the state are tied to outdoor recreation, representing one-third of the region's adult population.

### **Who are the Program's Customers?**

Outdoor Recreation potentially serves nearly all Colorado citizens as well as visitors from other states and countries. Recent research indicates that nearly 95 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, while more than one out of every three Colorado residents are anglers and about 16 percent are hunters. Furthermore, more than 95 percent of participants in a 2009 focus group indicated that they viewed state parks as very important to Colorado, even if they did not generally visit state parks.

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.

### **What are the Objectives of this Program?**

CPW's 2015 Strategic Plan adopted by the Colorado Parks and Wildlife Commission has identified six goals for the agency:

Goal I: Conserve wildlife and habitat to ensure healthy sustainable populations and ecosystems.

Goal II: Manage state parks for world class outdoor recreation.

Goal III: Achieve and maintain financial sustainability.

Goal IV: Maintain dedicated personnel and volunteers.

Goal V: Increase awareness and trust for CPW.

Goal VI: Connect people to Colorado's outdoors.

### **What are the Major Processes of this program and what strategies are employed in these processes to achieve program objectives?**

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. Major processes within the Outdoor Recreation Program are described below

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 promoting access to and use of the Colorado State Park System through the distribution of 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 Parks System is funded by multiple cash and federal funding sources, most notably parks passes and permits. State Parks receive almost no state General Fund support. 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. Great Outdoors Colorado (GOCO) supports the State Park System as one of the four constitutionally authorized purposes for GOCO funds.

Hunting Program –The Hunting Program includes inventorying game populations, collecting animal harvest data, developing population models to guide license allocations and management decisions, wildlife health research, setting and enforcing hunting regulations, acquiring access for hunters through access leases and easements, cooperative programs with landowners, and habitat protection efforts. The Hunting Program also includes educating hunters about safety, as well as informing and advising hunters about hunting opportunities in the state. Education and information is provided through informational brochures, representation at state and national hunting trade shows, the CPW website, and other appropriate information channels.

The Hunting Program is funded with wildlife cash, primarily through the sale of hunting licenses, and federal funding, predominantly through the Pittman-Robertson Act. The Hunting Program receives no on-going General Fund support.

Fishing Program –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, 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 informational brochures, participation in state and national angling trade shows and expos, the CPW website, e-mail newsletters and other means.

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 with wildlife cash, primarily through the sale of fishing licenses, and federal funding, predominantly through the Sportfish Restoration Program (Dingell-Johnson). The Fishing Program receives no on-going General Fund support.

Aquatic Nuisance Species – Aquatic nuisance species (ANS) pose a serious threat to the water infrastructure, recreation and natural resources in Colorado, with potentially serious economic consequences. Prior to the creation of the ANS program, zebra 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 in partnership with the former State Parks division and the U.S. Bureau of Reclamation. As a result of these discoveries, 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 additional funding for the ANS program.

Due to the threat that invasive mussels and other ANS pose to water infrastructure for municipal, agricultural and industrial supply, many water owners closed key lakes and reservoirs to boating and fishing in 2008. In order to protect Coloradoan's ability to boat and fish, DOW and Parks (now fully merged as CPW) implemented a comprehensive and standardized, mandatory boat inspection and decontamination program in partnership with local and federal governments, as well as with private industry. Not only does the ANS program keep waters open to boating and fishing by reducing the risk of introducing ANS, it also preserves high quality sport fisheries and water based recreational opportunities while protecting water infrastructure for municipal, industrial and agricultural use.

In addition to inspections and decontaminations, the program provides for a large public education and information campaign through the use of signs, brochures, youth education, professional trainings, public expos and events and various other media including the web. The program's successful impact and track record has led several other western and eastern states to adopt Colorado's model. The integrated inspection, decontamination, education and sampling/monitoring programs have proven so effective in stopping the inoculation of Colorado's waters with invasive species that CPW de-listed seven of eight reservoirs in 2014. Since there are no viable control methods for zebra or quagga mussels, or most other ANS, the prevention program is the most effective and efficient method to protect recreational opportunities, natural resources, the economy and the water infrastructure of the state from the irreversible harm of an ANS infestation.

However, the recent Colorado Supreme Court decision related to severance taxes has significantly reduced funding available for the ANS program. Colorado Parks and Wildlife is actively assessing a range of potential long term funding options for the program, including an ANS annual sticker for resident and non-resident powerboats, sailboats and human powered boats; directing a portion of a potential fishing license increase to the ANS program; increased support for the program from other sources; and a reduction in the scope of the program. A decision on how the program will proceed has not yet been determined.

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.

CPW has developed an internal strategy entitled “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.

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 objectives CPW plans to focus on marketing and branding, recruitment, public information, experiential education, and partnerships and volunteers.

Other important programs in support of outdoor recreation include CPW's wildlife viewing program, including assistance with local wildlife festivals across the state and educational brochures; and CPW's boating program, including boating safety and river outfitter licensing.

## TRAILS PROGRAM

### **What Is This Program?**

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. The Trails Program exists to increase accessibility and encourage the use of Colorado's extensive outdoor 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.*). State statutes authorize Colorado Parks and Wildlife 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 delivers the Trails Program primarily by making grants to governmental agencies, non-governmental organizations, and individuals for the purpose of planning, constructing, improving, and maintaining trails in Colorado. The sources of the grant funds are Great Outdoors Colorado, federal funds, statutorily dedicated revenue from off-highway vehicles and snowmobile registrations, and the Colorado Lottery. CPW also develops, improves, and maintains its own trails in the state park system. Trail management on state parks is based on the recognition that park visitors see trails as an important feature of their park visits. CPW has completed a comprehensive mapping database of all state parks trails in Colorado. The database provides miles of trail, terrain conditions, permitted uses and other trail characteristics for every trail in the State Parks System. The result is a package of highly reliable maps of all state parks trails that are downloadable by the public. 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 that consider both the extent and location of trails. The Trails Committee also advises the Commission on matters directly or indirectly pertaining to trails, particularly through the review and recommendation of trail grant proposals.

## **Why Is This Program Important?**

Recreational, non-motorized trail use in Colorado is an extremely popular outdoor activity attracting outdoor recreational enthusiasts from around the world. Public surveys over the past two decades consistently find that trails are a top priority for recreation enjoyment. Recent studies indicate that between 80 to 90 percent of Colorado residents hike, bike, ride or enjoy other types of trail recreation annually, making trail recreation the most popular outdoor recreation activity in the state. The State Comprehensive Outdoor Recreation Plan (SCORP) outlines the top recreational priorities of residents throughout the State. In the most recent SCORP (2014), trails were identified as a top priority.

Colorado's recreational trails program is essential to the effective and extensive development of regional and statewide non-motorized trail systems across Colorado. While municipal, county, and federal government agencies often have established trail programs, the state trails program serves to ensure coordinated and linked trail development that builds toward a unified statewide trail system. The program brings together a variety of trail interest groups who use and frequent Colorado's recreational trails system, including hikers, bikers, equestrians, runners, persons who have a need for access accommodations, and families that seek a variety of healthful, outdoor recreational opportunities.

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 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. Funding available through the RTP program has not been able to keep up with dramatic increases in public demand for greenway and trail resources.

State Demography Office projections show Colorado's population will grow to more than 7.7 million people by 2040, an almost 50 percent increase over Colorado's current population. With an increased public conscientiousness regarding the benefits of active lifestyles, public interest and demand for non-motorized recreational trails is likely to increase substantially in the future. This raises concerns that the non-motorized trail program may not have the financial resources to meet future demands on the program.

Funding for the OHV program comes directly from the OHV user community through the sale of OHV registrations to in-state residents and permits to out-of-state OHV riders visiting Colorado. Registration fees provide financial support for motorized recreation in Colorado and represents the program's principal funding source for OHV recreation. Motorized recreation groups apply for grants for trail maintenance or construction projects. OHV program funds also go to federal agencies as well as several state parks with motorized trails on the parks, to support OHV riding opportunities.

Without good management of motorized trails across Colorado, severe environmental impacts to public lands and waters could occur. In the past several years the OHV program, supported by key OHV user groups, instituted an effort to expand law enforcement and maintenance

activities on public lands. This program included an assessment of environmental impacts from motorized recreation, effectively supplanting largely anecdotal opinions with solid, factual information. The success of this effort, especially in defining the needs for good management practices, encouraged the Parks and Wildlife Commission to continue the effort.

Snowmobiling is an extremely popular winter sport in Colorado, drawing tourists from across the U.S. to experience backcountry, winter trail recreation. Program funding is principally from the sale of snowmobile registrations to in-state and snowmobile permits to non-resident snowmobilers who sled in Colorado. The registration fee provides sound financial support for snowmobile recreation in Colorado and is the primary funding mechanism for snowmobile programs in Colorado. Program funds are available to volunteer groups, clubs and state parks that support snowmobile trails and recreation.

### **Who are the Program's Customers?**

The Trails Program serves millions of Colorado citizens and visitors 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. Indirect, but significant beneficiaries include outdoor equipment manufacturers and vendors, a wide range of tourism-related business, hotels and motels, restaurants, grocery stores and many more.

### **What are the Objectives of this Program?**

In September 2016, the Colorado Parks and Wildlife Commission approved a Statewide Trails Strategic Plan, which lists six major goals and objectives, including:

1. Provide statewide leadership for trail recreation.
2. Facilitate trail development and management across Colorado.
3. Serve as an advocate for trails
4. Emphasize responsible stewardship for trail and among trail recreationists.
5. Advance ethical use and cooperation among trail recreationists.
6. Seek financial sustainability for the Trails Program.

## WILDLIFE AND HABITAT CONSERVATION

### **What Is This Program?**

Wildlife and Habitat Conservation is a fundamental part of the DNR mission. Section 33-1-101(1), C.R.S., 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 Wildlife and Habitat Conservation 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 “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.”

### **Why Is This Program Important?**

Colorado Parks and Wildlife's Species Conservation program is the state's primary effort to protect the full array of wildlife habitats, both terrestrial and aquatic. The Species Conservation program has a central, critical role in addressing species decline, averting both species listings under the federal Endangered Species Act and the associated restrictions on land and water use.

In addition to Colorado’s statutory policy for wildlife and habitat, tens of thousands of hunters and anglers come to Colorado each year to hunt the state’s deer, elk and other game species and to fish Gold Medal trout streams. Also important are the many more visitors who come to enjoy Colorado’s extensive wildlife viewing opportunities. Wildlife-related recreation is an important part of Colorado’s tourism economy. A 2014 study for CPW by Southwick and Associates on the economic impact of outdoor recreation in Colorado found that: 1) fishing recreation generated \$1.9 billion in economic activity and supported 16,400 jobs; 2) hunting generated nearly \$920 million in economic activity and supported just shy of 11,000 jobs; and 3) wildlife viewing recreation was responsible for more than \$2.25 billion in economic activity and supported more than 19,500 jobs. The study also documented the important economic impact of wildlife recreation in Colorado’s small, rural communities. Hunting recreation alone accounted for nearly 250 jobs in Moffat County, 290 in Routt County, 190 in Rio Blanco County and 275 in Gunnison County.

### **Who are the Program’s Customers?**

Customers for the Species Conservation program include water users, farmers and ranchers, mining and forestry industries, construction companies and tradesmen, local businesses and many others throughout the state's economy. The program also serves hunters, anglers, outdoor enthusiasts, and the small towns and businesses that directly benefit from hunting, fishing, outdoor recreation, and wildlife viewing

activities. More than one-third of Coloradoans engage in angling recreation and 16 percent are hunters. A recent U.S. Fish and Wildlife Service survey estimated that more than 1.4 million Colorado residents engage in wildlife viewing activities annually.

### **What are the Objectives of this Program?**

Conserving wildlife and habitat is one of CPW's strategic plan goals. Objectives under that goal include:

- *Manage sustainable populations of game and nongame species to support fishing, hunting, trapping and wildlife viewing opportunities.*
- *Preserve and enhance diverse habitat.*
- *Manage and monitor species of greatest conservation need while working with partners to maintain viable populations.*
- *Protect and enhance water resources for fish and wildlife populations.*
- *Conduct research and monitoring to inform management decisions.*

### **What are the Major Processes of this program and what strategies are employed in these processes to achieve Strategic Policy Initiatives?**

The Major Processes within the Wildlife and Habitat Conservation Program are: (1) Land and Water Management, and; (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 as well as local and county governments.

One high-profile component of this program is the Colorado Wildlife Habitat Protection Program (CWHPP), 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 218,000 acres of wildlife habitat through conservation easements, including ones acquired through third parties (e.g. land trusts) 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 wildlife species in the state. Colorado Parks and Wildlife's Wetlands Program, first established in 1997 through a GOCO Legacy Grant, conserves wetland and riparian habitats and their ecological functions by planning and delivering conservation actions on a landscape scale. The program is guided by a 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 nearly 300,000 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 recognition awards for 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 five percent 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 Western Slope, much of the Front Range, 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, and they remain the primary focus of the program today. Habitat improvements on public and private lands that help distribute big game herds across a larger area, lessening localized conflicts, are a priority for local committees. 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 Colorado Natural Areas Program (CNAP) has 93 designated State Natural Areas encompassing over 182,000 acres which help to protect habitats and natural features 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 qualitative and quantitative monitoring. 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, protecting and enhancing populations.

In 2015 CPW submitted and received U.S, Fish and Wildlife Service approval of a comprehensive revision of the initial 2005 Colorado Wildlife Action Plan. The plan identifies 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 is an important guide for conservation easement acquisition priorities for both CPW and private land trusts in the state. The revision updates and enhances information on the highest priority wildlife species, habitats, threats and conservation actions to provide even greater utility for species conservation efforts; it also incorporates conservation strategies for Colorado’s rare plant species and includes a climate change component.

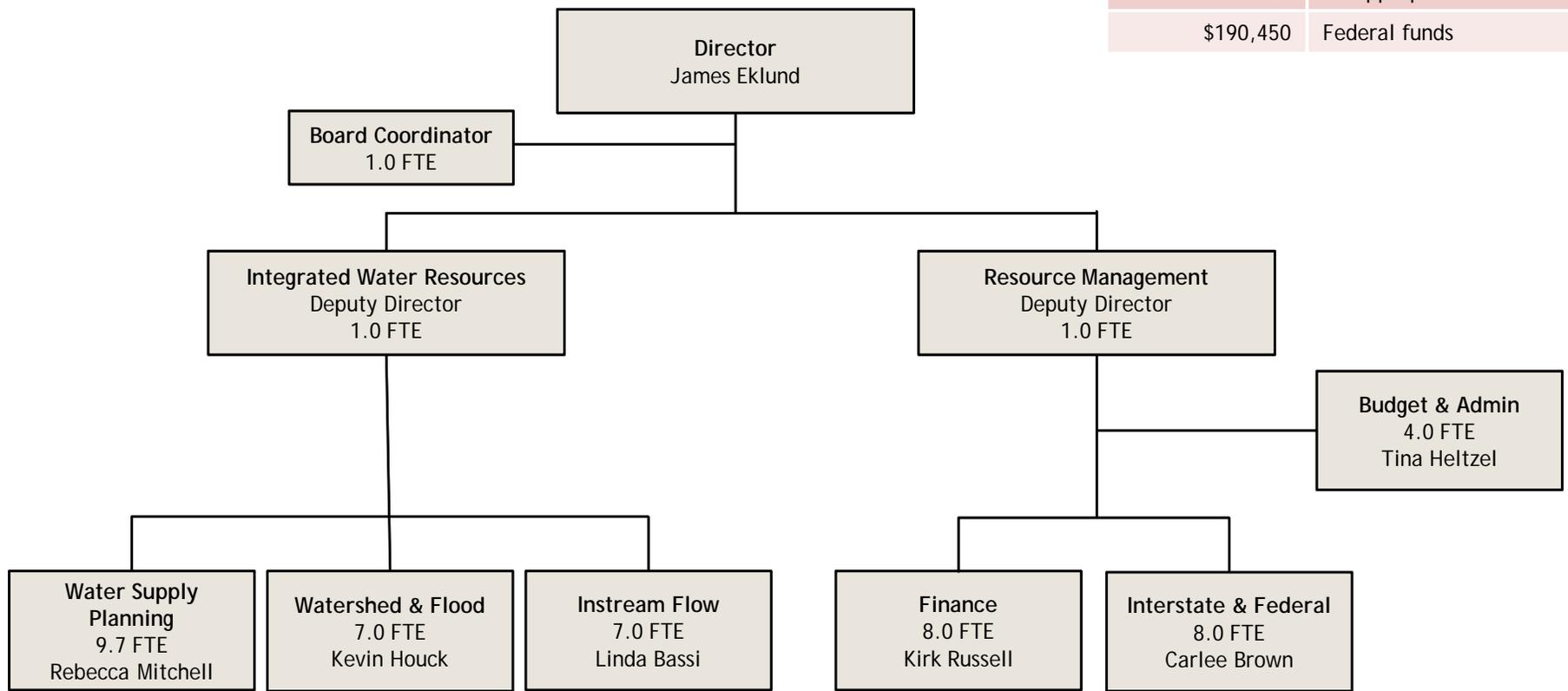
Programs and projects in support of species conservation are vital to Colorado’s efforts to adequately conserve native species and avert threatened or endangered listings under the federal Endangered Species Act. Success in meeting recovery plan goals or in proactive actions on declining species are 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 long-term monitoring and research conservation activities for many of the 117 globally imperiled plant species that occur in Colorado. The program works to conserve rare plant species and habitats with a parallel goal of averting federal threatened or endangered listings under the federal Endangered Species Act.

# Colorado Water Conservation Board

Colorado Department of Natural Resources

CWCB FTE & budget breakdown (based on FY 2016-17 appropriations)	
47.7	Total FTEs
\$11,065,955	Total funds
\$0	General funds
\$10,875,505	Cash funds
\$0	Re-appropriated funds
\$190,450	Federal funds



# Colorado Water Conservation Board

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. For purposes of this Performance Plan, the Colorado Water Conservation Board's program will be broken into two sections: (1) Water Management and Planning, and; (2) Environmental Programs.

## **Water Management and Planning**

### **What is this program?**

Water Management and Planning is one of two major programs within the Colorado Water Conservation Board (CWCB). Water Management and Planning consists of two sub-programs: A) Water Supply and B) Water Efficiency.

A) The Water Supply Program implements the Statewide Water Supply Initiative (SWSI), supports the ongoing implementation of the Colorado Water for the 21<sup>st</sup> Century Act, and recently completed the first version of Colorado's Water Plan through a collaborative effort. The mission is to plan Colorado's water supply future to help maintain adequate water supplies for Colorado's citizens, industry, 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. Current efforts involve updating SWSI and implementing various aspects of Colorado's Water Plan strategically targeted at its measurable objectives, critical goals, and actions.

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 Fund. Additionally, the Water Supply Program also receives funding from the Interbasin Compact Committee Operating Fund and supports the Water Supply Reserve Fund grant process, both of which receive revenue 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, fund 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 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.

**Why Is This Program Important?**

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 between 600,000 and 1,000,000 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 and is involved in creating the Colorado Water Plan.

The Water Efficiency Program provides funding to water entities that develop water efficiency plans, which will extend Colorado’s water supply as demands increase from a growing population. Lowering water demands as a result of water efficiency can assist providers in avoiding, downsizing, or postponing the construction and operation of water supply facilities and wastewater facilities as well as eliminating, reducing, or postponing water purchases. In addition to these water supply benefits, there are other societal, political, and environmental benefits, including:

- Reduction of wastewater discharges through indoor water savings which can improve water quality and aquatic habitat;
- Reduction of outdoor irrigation runoff which can improve water quality;
- Demonstrating commitment to sustainability;
- Meeting political and regulatory requirements necessary to obtain permitting for local and regional water supply projects;
- Demonstrating leadership to the community that being more efficient is the right thing to do in a semi-arid environment;

- Lowering operational costs such as pumping and water treatment; and
- Lowering the amount of chemicals needed to treat water.

In addition, the Program ensures that all covered entities are in compliance with Colorado's Water Conservation Act of 2004 by having a water efficiency plan on file with the state that has been approved by the CWCB. Since July 1, 2006, a covered entity seeking financial assistance from either the CWCB or the Colorado Water Resources and Power Development Authority has been required to submit a new or revised plan that meets the water conservation goals adopted by the covered entity prior to the CWCB Board's approval of the release of new loan funds. The use of CWCB loan or grant funds for water projects provides a benefit to the state by maximizing the efficient use of Colorado's water.

### **Who are the Program's Customers?**

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 and projects related to consumptive and nonconsumptive water needs, water conservation, storage and improved water delivery.

### **What are the Objectives of this Program?**

Objective #1: The objective of the Water Supply Program is to meet the current and future water supply needs of the State.

Objective #2: The objective of the Water Efficiency Program is to reduce the demand for water through increases in water efficiencies.

## **Environmental Programs**

### **What is this program?**

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 9,250 miles of streams and on 480 natural lakes.

The Programs support 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. 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. The Program supports watershed protection and restoration efforts through the administration of:

- The Colorado Watershed Restoration Program, which provides grants for watershed/stream restoration and flood mitigation projects throughout the state;
- The Colorado Healthy Rivers Fund, which helps support local watershed organizations in their efforts to provide clean water, protect habitat and improve recreation and accessibility;
- The Fish and Wildlife Resources Fund, which provides grant money to mitigate the impacts of existing water supply facilities and help preserve a balance between development of the state's resources and the protection of the state's fish and wildlife resources; and

The Invasive Phreatophyte Control Program, which is a grant program that provides cost share assistance to eligible entities to control and/or eradicate Tamarisk (also known as salt cedar), Russian Olive, or other woody riparian invasive phreatophytes that have degraded the state's riparian areas, restricted channel capacity thereby increasing flood risk, and resulted in increased non-beneficial consumptive use of water.

Additionally, under Environmental Programs, the CWCB participates in water-related endangered species initiatives and programs for the benefit and protection of water users in Colorado. These programs include:

- Glen Canyon Adaptive Management Program: Seeks to develop dam operations and other management activities to protect and enhance the natural resources of the Colorado River ecosystem in the Grand Canyon.
- Platte River Recovery Implementation Program: An agreement between the states of Nebraska, Wyoming and Colorado and the U.S. Department of Interior, the Platte River Recovery Implementation Program has two main purposes:
  1. To implement a Platte River Recovery Implementation Program to maintain, improve and conserve habitat for four threatened and endangered species that use the Platte River in Nebraska.

2. To enable existing and new water uses in the Platte River Basin to proceed without additional Endangered Species Act requirements for the four target species.

- San Juan River Recovery Program: Focuses on the San Juan River Basin and two endangered fish.
- Upper Colorado River Recovery Program: Focuses on four endangered fish in the Yampa/White, Colorado and Gunnison River Basins and the recovery strategies include conducting research, improving river habitat, providing adequate stream flows, managing non-native fish and raising endangered fish in hatcheries for stocking.

Finally, 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.

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, the Colorado Healthy Rivers Fund, and in some cases, the Species Conservation Trust Fund.

### **Why Is This Program Important?**

In Colorado's semi-arid environment, water is scarce with many competing demands placed on it by an ever-increasing population. The CWCB recognizes the need to correlate the activities of mankind with the reasonable preservation of the natural environment. The Environmental Programs provide protection of diverse environments in Colorado including: coldwater and warm water fisheries, waterfowl habitat, unique glacial ponds and habitat, riparian vegetation, unique hydrologic and geologic features, and critical habitat for declining, threatened, or endangered native fish and aquatic species.

In addition, because millions of people within the state participate in outdoor recreational activities that are connected to Colorado's water resources, Environmental Programs reviews all applications for recreational in-channel diversions for water-related recreational experiences. Water-related recreational activities bring between \$7 and \$8 billion into the state's economy and employ about 85,000

people across Colorado. The state's recreational opportunities and natural environment continue to draw in businesses and new residents to Colorado, further underscoring their importance to the state's economy.

Finally, in protecting threatened and endangered species, the CWCB is working to minimize the impacts of federal actions on water use and development. Water is a tremendously valuable asset in Colorado, being an essential input for agriculture and many different industries. By protecting instream flows, riparian habitats, and threatened and endangered species, the CWCB is able to support biological diversity in Colorado and allow water to be put to beneficial use by agricultural, municipal, and industrial uses.

### **Who are the Program's Customers?**

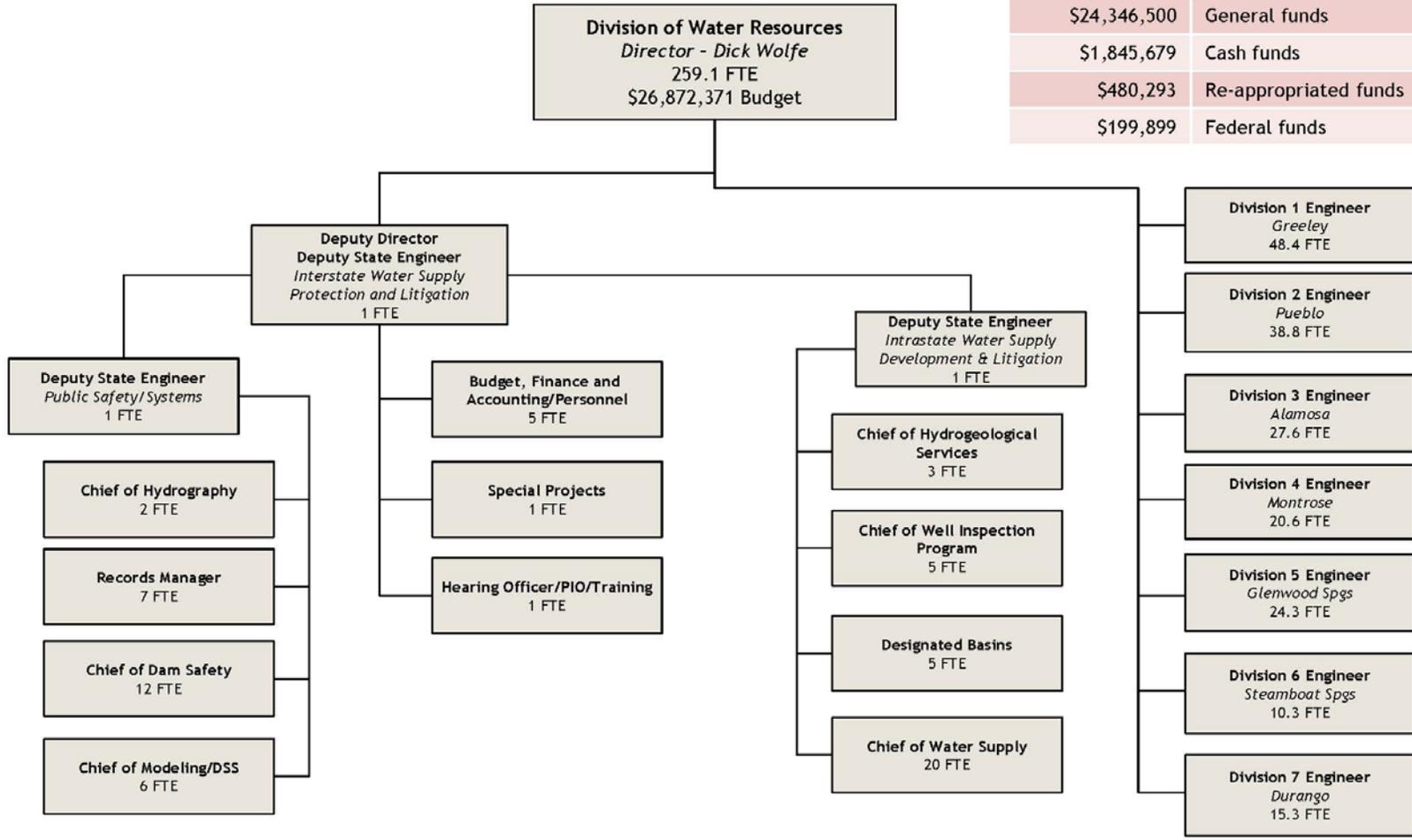
Environmental Programs serve several customers. First, the Programs serve the citizens and water users in the state by providing reasonable protection of stream flows and preservation of the natural environment. Second, the Programs work with various Federal agencies involved in the protection of streamflows on federal lands in a manner consistent with state law. Finally, the Programs benefit native and/or threatened and endangered species by preserving the natural environment to a reasonable degree to maintain and enhance these species' habitats. As mentioned previously, 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, municipalities, and citizens who enjoy the outdoors are all customers of the program.

### **What are the Strategic Policy Initiatives of this Program?**

Strategic Policy Initiative #1: To protect additional miles of decreed instream flow water rights resulting in enhanced preservation of Colorado's environment.

Strategic Policy Initiative #2: To restore and protect the ecological processes that connect stream channels to upland areas through multi-objective projects.

# Colorado Division of Water Resources



Total Division FTE & budget breakdown (based on FY 2016-17 appropriations)	
259.1	Total FTEs
\$26,872,371	Total funds
\$24,346,500	General funds
\$1,845,679	Cash funds
\$480,293	Re-appropriated funds
\$199,899	Federal funds

## Division of Water Resources

The Colorado Division of Water Resources (DWR) is responsible for the supervision and control of water resources in the state and is funded primarily by the General Fund (Sections 37-80-102(h), C.R.S.). It is the mission of the Colorado Division of Water Resources to competently and dependably administer and distribute the waters of Colorado in accordance with the laws of this state, ensure that dams and water wells are properly constructed and maintained to ensure public safety, and to develop, maintain and provide access to accurate and timely information regarding water resources. DWR strives to fulfill its mission by exercising good stewardship of Colorado's human and fiscal resources, by assisting the public in the clarification of complex water issues and the generation of creative solutions to problems, and using technology to its greatest advantage while promoting the sustainability of the state's limited water resources. The agency is committed to meeting the ever increasing challenges of origin issues, reserved rights, wetlands, endangered species recovery, and interstate water issues on an already limited water supply.

Organizationally, DWR consists of two major program areas:

- Water Administration
- Dam Safety

### Water Administration Program

**What is this program?** Water Administration is one of two 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 171,000 water rights through over 57,000 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.

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.

**Why Is This Program Important?** Water is a scarce resource in Colorado and demands for water far exceed the supply. Further, water supplies fluctuate daily. For over 130 years, Colorado has used a system of water distribution known as the doctrine of prior appropriation. Appropriation is the act of diverting and using water. Under this doctrine, the first appropriator of water has a senior right to that water and that right must be satisfied before any rights junior to that right can receive water. DWR is empowered to administer approximately 171,000 surface and ground water rights throughout the state and to ensure that this priority doctrine is enforced. This program is extremely important in that, when taken as a whole and applied consistently statewide, it provides surety to water users/owners through competent and dependable distribution of water in accordance with statutes, decrees and interstate compacts.

Any evaluation of the supply of water available for use by the citizens of Colorado must also consider the ramifications of constitutional law and international law. 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.

**Who are the Program's Customers?** 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 of water in the State.

## **What are the Objectives of this Program?**

Objective #1: Maximize beneficial/optimal use of water: The chief objective of the Water Administration Program is accurate and timely water distribution to maximize beneficial use and provide for optimum utilization of Colorado's limited resource. This objective serves DWR's customers and is met by maintaining and providing accurate and timely information concerning water, its availability, diversion, and use and in assisting the public with water administration questions. As an example, the satellite-linked monitoring system is an important tool for water administration, in that it provides DWR and its customers, such as municipalities, farmers, rafting companies, water managers, and recreationalists with access to real-time and historical stream flow and diversion data from gauging stations across Colorado. These data and software systems provide for more effective water rights administration, water resource management, emergency flood warnings for public safety, and low flow warnings for environmental purposes.

Objective Initiative #2: Water delivered correctly to entitled users: The hydrologic system is dynamic with seasonal and daily fluctuations in water supply. Delivery to users requires daily analysis to assure that a user who is entitled to water on a given day receives the correct amount. It also requires field inspections to assure that the right amount is diverted (or replaced as required) at each diversion location in the state.

Objective Initiative #3: Full compact compliance: As a headwaters state, Colorado has many delivery obligations to downstream states. Compacts are agreements between states that share a river and are ratified by the U. S. Congress. Assuring that the proper amount of water is delivered to each state ensures that Colorado will meet its compact obligations and avoid costly interstate litigation.

## **What are the Major Processes of this program and what strategies are employed in these processes to achieve program strategic policy initiatives?**

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 171,000 water rights have been decreed to date and around 900 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 (including water measurement, diversion, replacement, storage, and exchange.). 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 300,000 small and large capacity wells exist in Colorado. Small capacity wells generally serve individual households while large capacity wells supply irrigation and municipal needs. Approximately 5,000 groundwater well permit applications are submitted to DWR annually. As part of the permitting process, DWR 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 615 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.

## **Dam Safety Program**

Dam Safety, which consists of 12 General Funded FTE and just over \$200,000 of federal FEMA grant funding, is one of the major programs with the Division of Water Resources (DWR). The Dam Safety Program is managed by the State Engineer in accordance with Title 37, Article 87 of the 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 Dam 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 1,967 jurisdictional dams (1,853 of which are non-federal dams), many of them over 100 years old. The Dam 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 Dam 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 668 (352 high hazard and 316 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.

**Why Is This Program Important?** Dams are large complex structures that can cause catastrophic damage and loss of life if they fail. Many of the dams in Colorado are over 100 years old and require regular inspection and maintenance. The Dam Safety Program is important in that it oversees and is responsible for the safety of jurisdictional dams in the State of Colorado. Dam safety engineers regularly inspect jurisdictional dams throughout the state in order to prevent loss of life and property damage and to protect against the loss of water supplies due to a dam failure.

**Who are the Program's Customers?** 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 Dam 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.

### **What are the Objectives of this Program?**

Objective #1: Minimize number of dam failures: Ultimately, the Dam Safety Program is in place to protect the public from the potentially adverse impacts of a dam failure. Dams are complex structures and many in the state are over 100 years old. Unfortunately, there is always a possibility that any given dam might experience partial or total failure and cause extensive damage in the downstream flood plain. Therefore, regular inspection and maintenance are needed to minimize the potential for the failure of a dam. Dam safety engineers conduct physical inspections and issues storage restrictions, if necessary, to help prevent catastrophic failures. Additionally, dam safety engineers review all construction plans to assure the stability of new or repaired dams.

Objective #2: Minimize number of deaths: An objective of the Dam Safety Program is to prevent the loss of life from dam failure. This objective is met by classifying dams by their potential impact, prioritizing the inspecting of dams, restricting storage in defective dams as appropriate, reviewing all plans for construction, and requiring plans for emergency action for each dam in the unlikely event of a failure.

Objective #3: Minimize property value lost: An additional objective of the Dam Safety Program is to prevent property damage incidents from dam failure. This objective is met by classifying dams by their potential impact, prioritizing the inspecting of dams, restricting storage in defective dams as appropriate, reviewing all plans for construction, and requiring plans for emergency action for each dam in the unlikely event of a failure.

**What are the Major Processes of this program and what strategies are employed in these processes to achieve strategic policy initiatives?**

The Dam Safety Program has three processes, identified below.

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 1,853 dams that are jurisdictional and non-federal 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 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, 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.

## **APPENDIX A: RECENT ACCOMPLISHMENTS**

### **Division of Reclamation, Mining, and Safety**

**Office of Active and Inactive Mines:** In FY 2015-16, the Colorado Inactive Mine Reclamation Program completed 90 mine reclamation and water quality improvement projects and distributed an estimated \$5.5 million worth of construction and engineering contracts into Colorado's rural economies. Within those 90 projects, a total of 300 hazardous mine features were safeguarded, five water quality improvement projects were completed, and 112 acres of disturbed lands were reclaimed to beneficial use. This was accomplished using federal grant funds, state severance tax revenue, private donations, and leveraging additional federal funds available to the program for environmental restoration and water quality improvement work. Of the state's original estimate of 23,000 physical mine hazards at abandoned sites, the Division of Reclamation, Mining and Safety has now safeguarded 10,058.

**Coal Regulatory Program:** The Coal Mine Regulatory Program continues to effectively balance coal mine production and environmental compliance. Timely and accurate permitting activity helped ensure the ongoing production of 18.5 million tons of coal at eight operating mines in calendar year 2015. There are currently 33 permits, including eight actively producing operations, one active loadout, and 24 sites that are either idle or in reclamation. The program also manages 47 coal exploration permits. The program staff's diligent efforts, including permitting, ongoing inspections and coordination with mine operators, landowners and government agencies, has resulted in a compliance rate in excess of 99 percent on approximately 171,000 permitted acres. Contemporaneous reclamation continues to occur at active operations along with reclamation and maintenance operations at idled and closed mines. The Coal Program maintains over \$200 million in financial warranties, which are posted to ensure completion of reclamation at all permitted operations if operators fail. The program also completed 173 permitting actions, 344 inspections, issued 1 notice of violation, and released 990 acres of reclaimed land during FY 2015-16. In addition to the staff's permitting, inspecting and enforcement activities, Coal Program specialists provide their expertise as instructors for the Office of Surface Mining, training other federal, state and tribal employees.

**Minerals Regulatory Program:** The Minerals Regulatory Program continues to regulate a variety of mining and exploration sites across the state. There are presently 1,585 permitted sites covering 187,744 permitted acres with a total financial warranty of \$478 million. The Minerals Program has finalized e-permitting capability for operators to submit annual reports and fees electronically. The program also completed a lean process in June of 2014 to develop internal procedures to capture and improve all permitting processes. This standardization of permitting processes across all staff has led to consistency and increased efficiency in responding to and serving our customers. This year, the Minerals Program has embarked on a revised risk based inspection strategy designed to inspect mines based on their potential to cause off-site impacts rather than on a ratio of sites to inspectors. Some of the larger and more complex mine sites are already receiving an increased frequency of inspections. Over the next four years, which is the typical inspection frequency, each site will be evaluated and assigned a unique inspection frequency designation based on its individual characteristics. An updated inspection policy was developed and adopted by the Mined Land Reclamation Board to implement this strategy in the 2016-17 inspection cycle.

## **Colorado Oil & Gas Conservation Commission**

**Field Inspection Lean:** OGCC developed new processes and technologies geared towards improving the documentation, communication, and resolution of issues related to inspections of oil and gas facilities. The more efficient procedures include shortening the length of the inspection report and adding a summary to the front page that clearly states the number of problems that need to be addressed, and will allow issues identified during inspections to be sent to operators quicker, to be understood immediately by operators, and to help ensure compliance is achieved in a timelier manner.

**Small Operator Outreach:** OGCC staff facilitated small operator outreach meetings throughout the state in FY 2015-16 targeting operators with 50 or less wells. Almost 200 people attended these meetings during which OGCC staff reviewed topics ranging from reclamation to enforcement. The highlight of these meetings was small break-out sessions for operators to interact with and ask specific questions of the different OGCC work units.

**eForm Development:** In FY 2015-16, the OGCC performed the necessary work to convert 10 required regulatory forms to an electronic format in its eForm System. The change to an electronic format allows both oil and gas operators and OGCC staff to process these forms faster and more efficiently.

**Bonding for Excess Inactive Wells:** The OGCC's financial assurance (bonding) rules specifically require additional bonding by an operator when the financial liability of its inactive wells exceeds the amount of its blanket bond. An inactive well is defined in the rules as "any shut-in well from which no production has been sold for a period of 12 consecutive months; any well which has been temporarily abandoned for a period of six consecutive months; or any injection well which has not been utilized for a period of 12 consecutive months." Because such a well is not generating income for the operator, it may be ignored or even forgotten by the operator for years, increasing the likelihood that it eventually becomes a liability of the state. Between June 2015 and October 2016, the OGCC's systematic audit of operators secured nearly \$46 million in additional bonds to protect the state from the cost of plugging wells and reclaiming well sites.

**Variance for Cement Bond Log requirements:** OGCC rules require operators to submit a cement bond log along with their Drilling Completion Report within 60 days of releasing the drilling rig. Operators typically run the cement bond log during the well completion phase (*i.e.* hydraulic fracturing), which usually occurs shortly after rig release. However, due to ongoing low oil prices, some operators are delaying well completions until economic conditions improve. Consequently, to remain in compliance with the 60-day cement bond log requirement, these operators would have to run the log many months in advance of completion and incur expensive rental fees on the completion wellhead and a shut-off valve over that time period. In response to a request from Anadarko to delay the timing of the cement bond log, the OGCC acknowledged the unintended financial impact of the rule and worked with the operator to find a solution that protects public health, safety, and welfare and the environment while providing Anadarko with significant cost savings.

**Third Party Use of OGCC Environmental Data:** In July 2016, researchers from the University of Colorado at Boulder and California State Polytechnic University, Pomona published a paper in the Proceedings of the National Academy of Sciences. The paper, titled “*Groundwater methane in relation to oil and gas development and shallow coals seams in the Denver-Julesburg Basin of Colorado,*” relied heavily on OGCC’s water quality database, complaint investigations, and water well investigations data and documentation, which the authors collectively referred to as “one of the most comprehensive groundwater geochemical datasets related to petroleum development anywhere.” The authors also stated: “This study demonstrates the value of a large, continuously updated, and publicly accessible groundwater geochemical database from a petroleum industry regulator.”

Moreover, the report concluded that the pathway for gas migration comes primarily from older vertical wells, which were constructed under earlier regulatory frameworks and may have short surface casing strings or uncemented intervals of production casing, and that “wellbore barrier failure ... is the main thermogenic stray gas migration pathway.” The report goes on to conclude “that horizontal drilling with high-volume hydraulic fracturing has not had a discernible impact on the origin and occurrence of thermogenic stray gas in the DJ Basin.”

**Casing and Cement Standards in the Bradenhead Monitoring Area of the Piceance Basin:** The Bradenhead Monitoring Area (BMA) was established in 2004 following the West Divide Creek gas seep and covers several fields in the southeastern portion of the Piceance Basin. Since then, wells drilled in the BMA have been subject to various field orders applicable to casing, cementing, and bradenhead pressure monitoring. In FY 2015-16, OGCC staff worked to create an improved set of engineering standards for well construction that better addresses the complex geology of the BMA. This included reviewing the geophysical logs and other data on thousands of oil and gas wells, the Colorado Groundwater Atlas, and previous OGCC reports, as well as holding discussions with operators, the EPA, and other state agencies. The results are new field-specific cement and casing standards that increase cement requirements in the BMA and nearby fields to cover the Lower Wasatch and other critical intervals of the Wasatch Formation, as necessary, to achieve geologic isolation. The field-specific standards are displayed in the newly created Field Scout Cards on the OGCC’s website under the Data tab. <http://cogcintranet/data2.html#/fieldscoutcards>

## **State Land Board**

Over the course of the past five years, the State Land Board has produced approximately \$756 million for School Trust beneficiaries. Of this amount, \$378 million went to the BEST program and was leveraged into grants and certificates of participation to construct or renovate schools throughout rural Colorado. The State Land Board contribution to BEST represents 78 percent of the program’s funding and has helped the program to be successful. As of June 30, 2016, the BEST program has funded 285 grant applications in 127 school districts.

## **Division of Parks and Wildlife**

- On September 22, 2015, the US Department of the Interior announced its determination that the greater sage-grouse “does not warrant protection under the Endangered Species Act”. Governor Hickenlooper stated that the decision “recognized the results of significant conservation efforts that have dramatically improved sage grouse habitat in Colorado and across 11 western states. Landowners, regional industries, and local, state and federal government have worked in close collaboration over many years” in support of the species’ recovery.
- The Colorado State Wildlife Action Plan was updated and approved by the U.S. Fish and Wildlife Service. The plan identifies the top priority species and habitats that need conservation efforts in the state, and the potential conservation actions that can address the threats these species and habitats face. CPW received a national award in recognition of the collaborative effort that produced the plan’s analysis of the impact changing climate conditions could have on key habitat types in the state.
- Colorado Parks and Wildlife expanded its Schools and Outdoor Learning Education (SOLE) program from a pilot program of two schools in FY 2013-14, to a total of 24 schools in 19 school districts in FY 2015-16. The program reached 1,700 4<sup>th</sup> grade students in 69 classrooms. SOLE provides each student with: (1) field trips to a state park, the History Colorado Center, and one other site of choice; (2) in-class presentations by SOLE staff and partners, and; (3) a Family Nature Night at each of the schools. The goal of the program is to connect kids and families to the outdoors multiple times throughout the school year.
- CPW awarded \$400,000 to 6 angling improvement projects across the state through the Fishing Is Fun program, and another \$600,000 to 8 large shooting range development or improvement projects. An additional \$27,000 was awarded to 9 shooting ranges for smaller maintenance or improvement projects. All the proposals were led by outside groups such as local or county governments, gun clubs, angling organizations, park and recreation departments, and others.
- Awarded \$1.45 million in Wetland Grants for 23 projects across Colorado. These projects will improve 3,828 acres of wetland and riparian habitat, benefitting waterfowl, waterfowl hunters, and 26 species of at-risk wildlife identified in the Colorado Wildlife Action Plan. Forty-seven governmental and nongovernmental partners will provide an additional \$4.6 million for these projects; \$3.21 for every dollar invested by CPW.
- CPW’s Education Section initiated the “Check Out Colorado” program. The new undertaking allows people to check out a park pass and backpack from Colorado’s public libraries. The program is a partnership between CPW and Colorado Library (a division of CDE) and 298 community libraries around the state.

- Acquired an 88-acre parcel of land near Pagosa Springs that is home to more than one-half of the world’s population of the Pagosa Skyrocket flower, as well as hosting wetlands and other natural resource values. The property will be designated as a state natural area and managed initially by the Colorado Natural Areas Program. Future management and public education programs on the property are expected to involve local non-profit organizations.
- The CPW Trails Program updated the Statewide Trails Strategic Plan, which was adopted by the Parks and Wildlife Commission in September 2016. Development of the new plan was based in part on input from four focus groups convened across the state, a “telephone town hall”, discussions and public input at four State Trails Committee meetings, and from comments received through a page on the CPW website dedicated to the strategic plan.
- The Trails Program also has a leading role on portions of the Colorado the Beautiful Initiative, including the “16 in 2016” priority trails projects announced in January 2016. In addition, CPW’s GIS unit is developing a Colorado Trails System online map, to facilitate outdoor activities by Colorado citizens and visitors.
- Developed a “Wildlife Sporting” license plate pursuant to HB 12-1275. Production of the new license plate, which will benefit shooting range and angling projects, started in January 2016, and by August had passed the order threshold required to make the plate a permanent option for Colorado car owners.
- CPW adopted a new agency-wide 2015 Strategic Plan, which provides high-level vision, goals and strategies to guide CPW priorities for the next 10 – 20 years. Input in the development of the plan included 11 public workshops across the state, 4,700 on-line comments (using forms in both English and Spanish), and a “telephone town hall” with more than 13,500 participants.
- CPW began to include the angling license portion of the non-resident big game hunting licenses in calculations used to determine Colorado’s apportionment of federal sportfish funding. The effect of the new license is expected to increase Colorado’s share of federal sportfish funding by an estimated \$750,000 annually.

## **Colorado Water Conservation Board**

- In response to Governor Hickenlooper's Executive Order from May 2013, the Colorado Water Conservation Board (CWCB) successfully completed Colorado's Water Plan ahead of schedule in November 2015. This plan was the result of an unprecedented grassroots effort, involving over 30,000 public comments. It incorporated and built upon eight years of comprehensive work, dialogue, and consensus that water leaders from across the state produced through the Interbasin Compact Committee and Basin Roundtable process. Colorado's Water Plan is the State's first comprehensive plan for a water future aligned with our values: vibrant and sustainable cities, viable and productive agriculture, a robust skiing, recreation and tourism industry, and a strong environment that includes healthy watersheds, rivers, streams, and wildlife. The CWCB is now hard at work advancing the implementation of various components of the plan, as well as the related Basin Implementation Plans. This involves various funding proposals, programs, policies, and processes aimed at achieving the measurable outcomes, goals and critical actions set forth in the plan. At the same time, the CWCB is updating its tracking and communication methods in an attempt to keep up with many evolving activities.
- Continues to be involved in technical and leadership efforts on stream restoration, emergency stabilization, and master planning activities in the 2013 flood impacted areas. As a result of the extraordinary floods of September 2013, the CWCB has authorized and awarded 20 zero-interest and no-payment, 3-year bridge loans to water suppliers for projects totaling \$22.6 million.
- Worked with other state agencies, watershed coalitions, and local governments to manage the adverse impacts of flooding. Provided technical assistance and funding to communities affected by the floods that occurred in September of 2013. In FY 2013-14, the CWCB provided 10 grants and one technical assistance grant. In FY 2014-15, the capabilities were further enhanced for these ten watershed groups through grants provided by the Department of Local Affairs, to hire staff, which will be used as the points of contact for watershed-related recovery activities moving forward. The program was advanced again in FY 2015-16 with the introduction of Phase II of the USDA Natural Resources Conservation Service Emergency Watershed Protection Program. CWCB is managing the \$63 million grant program for the NRCS. The projects will protect life and property from the impacts of the 2013 floods, while improving watershed health and ecosystem structure and function for flood impacted streams, including the adverse impacts of wildfire to flood-prone areas downstream of burn scars.
- In implementation of SB 14-179, a total of 28 flood recovery projects were funded and managed. Activities through this program include debris removal and stream and watershed restoration in the areas affected by the 2013 flood. Total funding through this program is \$2.5 million.
- Through a partnership with the Colorado Department of Transportation, flood hydrology for all mainstem rivers affected by the 2013 flood was updated using current scientific methods. Data collected from the 2013 flood event was used for calibration purposes. In many cases, this new data replaces previous studies that were over 40 years old. In many reaches, the new flood hydrology is higher than that

previously used, indicating that flood risk is higher than that previously portrayed to the public and local governments. FEMA has issued a Best Available Data memorandum, indicating their concurrence with the new studies and their recommendations for its use.

- Working with the Colorado Recovery Office, the legislature passed SB 15-245, providing funds for hazard mapping in the areas of: (1) floodplain identification in the areas affected by the 2013 flood; (2) erosion zone identification, and; (3) debris flow zone identification. CWCB staff provided data needed for budgeting purposes and is tasked with managing this three-year effort beginning July 1, 2015.
- The CWCB continues to work closely with numerous stakeholders to monitor and enhance drought early warning systems throughout the state. While drought conditions have improved over previous years, we continue to experience record high temperatures that affect our water availability, agriculture and ecosystems. The current Drought Mitigation and Response Plan approved by the CWCB board in September of 2013 and subsequently approved by the Governor and FEMA as part of the state's all hazard mitigation plan, remains the national gold standard for state drought plan and multiple states and countries have sought to use it as a template for their own efforts.
- In September of 2015 The Governor's Office released the Colorado Climate Plan in accordance with HB 13-1293. CWCB coordinated and lead the development of the plan, which represents the first time the state has taken a comprehensive approach to addressing climate change mitigation and adaptation across state agencies. Since its release numerous sectors have also held public engagement sessions to help the state further refine our efforts on climate going forward.
- In FY 2015-16, the CWCB provided funding for 21 new loans for new water projects in the amount of \$21.1 million. This created or preserved over 3,844 acre-feet of water storage.
- Continued support for the "Colorado Water for the 21<sup>st</sup> Century Act" resulting in the successful completion of the Basin Implementation Plans, and Colorado's Water Plan with extensive input from the basin roundtables and the Interbasin Compact Committee, including the assessment of local water projects, various water portfolios (combinations of water conservation, reuse, agricultural transfers, and new supply development) and a related scenario planning process to look at different water "futures" for Colorado.
- Negotiated a draft Memorandum of Agreement with the Upper Colorado states, the Department of Interior, and the Western Area Power Administration for management of Colorado River Storage Project Act (CRSPA) reservoirs in response to drought. If approved, the draft will likely be finalized at the end of 2016.
- Continued working with Denver Water, Grand County and other participants in the Colorado River Cooperative Agreement process to ensure that the CWCB can protect water provided to it and Grand County for instream flow use. On March 1, 2016, Denver Water, Grand County and the CWCB obtained a final decree from the Division 5 water court on the joint water court application filed in 2011 to implement that mechanism and other aspects of the Colorado River Cooperative Agreement.

- Provided over \$1 million in funding for projects to reduce impacts of non-native fish on endangered native fish species. Leased 9,000 AF of water in 2015 and 12,000 AF of water in 2016 from the Ute Water Conservancy District to benefit native fish habitat. This water was released from Ruedi Reservoir to increase streamflows in the 15-Mile Reach of the Colorado River during the summer and fall.

## **Colorado State Forest Service/Division of Forestry**

The Department of Natural Resources worked with the General Assembly, the Governor's Office, and interested citizens and groups to support the creation of the Wildfire Risk Reduction Grant Program (WRRG Program). Created under Senate Bill 13- 269, the WRRG program focuses on projects that reduce wildfire risk to property, infrastructure and water supplies, and projects that limit the likelihood of wildfire spreading into populated areas. Funds are directed to non-federal lands within Colorado. Since 2013, the WRRG Program has awarded nearly \$12 million in grants to 132 projects across 35 counties throughout the state. In addition to awarding grants, DNR is working with the Colorado Forest Restoration Institute to establish data points for monitoring the effectiveness of the program.

Note: The Department of Natural Resources is not appropriated any on-going funding or staff for forestry-related issues. In Colorado, funding for these issues is located in the State Forest Services (for issues related to forestry research and on-the-ground forest work) and within the newly created Division of Fire Prevention and Control (for wildfire-related issues). The Department of Natural Resources works cooperatively with both agencies on forestry issues. The Department of Natural Resources coordinates with the State Forest Service in policy/legislative matters, working closely with State Forester Mike Lester. The successes described above are being included here to document the collaborative effort of the Department of Natural Resources on forestry issues.

## **Division of Water Resources**

- After extensive arbitration in 2013 and 2014, Kansas and Colorado arranged for a one-year temporary approval of the Compact Compliance Pipeline (CCP) operations for 2014. That temporary approval was extended through 2015 and through 2016. Colorado delivered 5,020 acre-feet of water to the Stateline during the spring of 2016 and will deliver additional water during the winter. The CCP and Bonny plans are key to helping Colorado to get into compliance with the Republican River Compact and the three States continued conducting monthly negotiation meetings to settle issues.
- The Division of Water Resources (DWR) continues investigation of high groundwater issues in the South Platte basin (Water Division No. 1) as result of reports of property damage beginning in 2012. DWR initiated ground water level data collection from a network of existing and recently-constructed wells in two targeted areas in the basin. This data was used along with other hydrologic information by

an outside consultant to develop an understanding of the interrelationships between all the natural and man-made hydrologic factors and high ground water levels. The results are in a report delivered in July 2015. In 2016, along with a continued effort to pilot dewatering approaches specifically in the Gilcrest/LaSalle area, DWR staff worked with CWCB staff to conceive and implement a pilot project to evaluate approaches to increasing the use of ground water for irrigation in that area, with the objective of mitigating high ground water levels.

- DWR and CWCB and the State of New Mexico's State Engineer have initiated a comprehensive state of the science review of the use of modern meteorological tools and information to determine dam design parameters, especially at elevations above 7,000 MSL (mean sea level). The CO-NM Regional Extreme Precipitation Study is being guided by a project review board comprised of nationally recognized experts from the U.S. Bureau of Reclamation, Federal Energy Regulatory Commission, U.S. Army Corps of Engineers, three divisions of the National Oceanic and Atmospheric Administration, and the state climatologists from Colorado and New Mexico. The first of eight planned workshops was held in late July and the excitement at the opportunity to significantly update the fifty year old standards currently being used was significant. The project is scheduled to conclude the summer of 2018.
- DWR worked with Tribes, Conservation and Conservancy districts, Associations, and the state of New Mexico to resolve diligence issues on the Animas La Plata project water rights which will help effectuate the Animas La Plata Compact. Those negotiations were successful and a stipulated decree was signed by the water court.
- The State Engineer and Attorney General's office continues to work with water attorneys, the Supreme Court Water Court Committee, the General Assembly and water users to address water right issues including representative period or record, res judicata issues, and historical consumptive use analyses issues that have arisen during change of water right and diligence court cases. Legislation passed during the spring of 2015 should help resolve many of these issues. These discussions have led to a greater understanding of critical issues, which in turn has facilitated quicker settlement on cases that involve these issues. DWR continues to explore ways to be more efficient and effective in its advisory role to the water courts and to minimize the amount of time and cost spent in litigation for everyone involved.
- The U.S. Supreme Court accepted the case of *Texas v. New Mexico and Colorado* Original No. 141, regarding compact operations in the Rio Grande Project and the surface and groundwater rights associated with the project. A Special Master has been appointed to hear the case. Texas, New Mexico, the Bureau of Reclamation and Colorado are all parties to the case. Colorado continued to meet with each party in an attempt to de-escalate and mediate the issues rather than promote litigation.
- DWR completed meetings with the San Luis Valley Special Advisory Committee on Groundwater Rules. Twenty-three meetings were held over several years to gain local input on the groundwater use rules. Those Rules were promulgated and filed with the water court in September 2015. Thirty statements of objection were filed, some in support and some opposed. In 2015 DWR began meeting with objectors to discuss resolution of their issues.



## Section III

Colorado Department of Natural Resources

Strategic Policy Initiatives



***Strategic Policy Initiative #1: Manage, enhance, preserve and protect state lands, wildlife and their environment for the use, benefit, and enjoyment of the people of Colorado and its visitors, now and into the future.***

Discussion of the Strategic Policy Initiative: DNR, through its divisions, is the lead state agency responsible for management of lands and wildlife resources for their natural, scenic, scientific, outdoor recreation and production values now and into the future. The agency must manage these resources and assets for the use, benefit, and enjoyment of the people of Colorado and its visitors. Colorado Parks and Wildlife manages a number of programs, as well as significant land and water assets, for the purpose of providing high quality and varied outdoor recreational opportunities, along with both consumptive and non-consumptive wildlife-related opportunities. CPW strives to continuously acquire, develop and manage outdoor recreation lands, waters, and facilities in support of its mission, including the establishment and maintenance of trails that connect 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.

The State Land Board manages an endowment of assets held in perpetual intergenerational public trust for the financial support of Colorado's public schools and other public entities. The State Land Board strives to ensure Colorado's trust lands are recognized as one of the state's most significant assets, providing value for generations of trust beneficiaries.

How to Measure Success: Success in achieving this initiative will be measured by tracking outcomes measures relating to state park visitation, recreational trail projects supported, the number of licensed hunters, the number of licensed anglers, acres of habitat protected, and the number of federal listings of endangered species averted. For lands managed by the State Land Board, outcomes measures will focus on both revenue earned on trust assets as well as performance related to protecting and enhancing property values.

#### Discussion of Actual Success and Past Performance

The table below provides metrics with which to analyze the Department's performance related to this Strategic Policy Initiative.

<b>State Land Management - Outcomes</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
<b>Manage State Parks, Recreation Areas, and State Wildlife Areas to Promote Outdoor Recreation</b>							
Total New Trail Miles in State Parks	Benchmark: 550	Benchmark: 600	Benchmark: 700	Benchmark: 745	Benchmark: 720	Benchmark : 745	Benchmark: 750
	Actual: 584	Actual: 718	Actual: 710	Actual: 720	Actual: 736	Actual: N/A	Actual: N/A
State Park Visitation	Benchmark: 12,314,745	Benchmark: 12,437,893	Benchmark: 12,687,396	Benchmark: 12,800,000	Benchmark: 12,000,000	Benchmark: 12,700,000	Benchmark: 12,9000,000
	Actual: 12,233,271	Actual: 11,501,520	Actual: 11,948,406	Actual: 12,464,445	Actual: 13,653,112	Actual: N/A	Actual: N/A
<b>Promote the Responsible Development and Use of Recreational Trails</b>							
OHV Trail Grant Awards	Benchmark: 40	Benchmark: 45	Benchmark: 45	Benchmark: 50	Benchmark: 50	Benchmark: 50	Benchmark: 50
	Actual: 50	Actual: 46	Actual: 51	Actual: 50	Actual: 50	Actual: N/A	Actual: N/A
Snowmobile Trail Grant Awards	Benchmark: 5	Benchmark: 5					
	Actual: 5	Actual: 6	Actual: 3	Actual: 6	Actual: 5	Actual: N/A	Actual: N/A
Recreational Trail Grant Awards	Benchmark: 20	Benchmark: 22	Benchmark: 22				
	Actual: 22	Actual: 20	Actual: 22	Actual: 23	Actual: 27	Actual: N/A	Actual: N/A
<b>Promote Hunting, Fishing, and Wildlife Viewing</b>							
Number of Licensed Hunters	Benchmark: 290,000	Benchmark: 290,000					
	Actual: 288,086	Actual: 286,363	Actual: 281,201	Actual: 290,064	Actual: 294,323	Actual: N/A	Actual: N/A

<b>State Land Management - Outcomes</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Number of Licensed Anglers	Benchmark: 660,000	Benchmark: 675,000	Benchmark: 675,000	Benchmark: 675,000	Benchmark: 675,000	Benchmark: 775,000	Benchmark: 775,000
	Actual: 662,617	Actual: 674,775	Actual: 664,051	Actual: 776,042	Actual: 806,298	Actual: N/A	Actual: N/A
Waters Closed Due to ANS	Benchmark: 0	Benchmark: 0					
	Actual: 0	Actual: N/A	Actual: N/A				
Big Game Animals Harvested	Benchmark: 91,346	Benchmark: 91,500	Benchmark: 91,500	Benchmark: 90,000	Benchmark: 91,000	Benchmark: 91,000	Benchmark: 91,000
	Actual: 91,346	Actual: 88,815	Actual: 86,350	Actual: 83,972	Actual: 89,197	Actual: N/A	Actual: N/A
<b>Ensure the Long-Term Viability of Native Fish and Wildlife, Including Habitat Protection</b>							
Habitat Acres Protection Through CWHPP	Benchmark: 25,000	Benchmark: 25,000	Benchmark: 25,000	Benchmark: 25,000	Benchmark: 15,000	Benchmark: 12,000	Benchmark: 10,000
	Actual: 24,012	Actual: 38,784	Actual: 4,634	Actual: 37,534	Actual: 13,217	Actual: N/A	Actual: N/A
Species Listed under the ESA (Cumulative)	Benchmark: 15	Benchmark: 18	Benchmark: 20	Benchmark: 20	Benchmark: 20	Benchmark: 17	Benchmark: 19
	Actual: 15	Actual: 15	Actual: 17	Actual: 18	Actual: 18	Actual: N/A	Actual: N/A
Wetland/Riparian Acres Impacted by Wetlands Program Grants	Benchmark: 1,000	Benchmark: 2,000	Benchmark: 2,000				
	Actual: 0	Actual: 2,870	Actual: 1,225	Actual: 4,729	Actual: 4,089	Actual: N/A	Actual: N/A

<b>State Land Management – Outcomes</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
<b>Reasonable and Consistent Income</b>							
Total Trust Revenue (Non-Recurring and Recurring)	Benchmark: N/A	Benchmark: N/A	Benchmark: \$176,118,433	Benchmark: \$194,368,504	Benchmark: \$136,486,941	Benchmark: \$93,400,436	Benchmark: \$63,975,640
	Actual: \$146,309,540	Actual: \$124,939,401	Actual: \$173,603,504	Actual: <sup>1</sup> \$191,354,826	Actual: <sup>2</sup> \$137,276,402	Actual: N/A	Actual: N/A
<b>Mineral Resources (Non-Recurring)</b>							
	Benchmark: N/A	Benchmark: N/A	Benchmark: \$159,355,680	Benchmark: \$175,279,883	Benchmark: \$114,600,158	Benchmark: \$70,654,069	Benchmark: \$39,784,406
	Actual: \$130,982,147	Actual: \$106,572,213	Actual: \$155,207,099	Actual: \$167,151,516	Actual: \$108,382,341	Actual: N/A	Actual: N/A
<b>Agricultural Resources (Recurring)</b>							
	Benchmark: N/A	Benchmark: N/A	Benchmark: \$9,139,254	Benchmark: \$10,531,709	Benchmark: \$11,280,932	Benchmark: \$11,920,357	Benchmark: \$12,365,477
	Actual: \$8,573,158	Actual: \$9,142,945	Actual: \$8,855,856	Actual: \$10,228,094	Actual: \$11,726,191	Actual: N/A	Actual: N/A
<b>Commercial/Real Estate Resources (Recurring)</b>							
	Benchmark: N/A	Benchmark: N/A	Benchmark: \$3,408,630	Benchmark: \$3,309,821	Benchmark: \$4,015,306	Benchmark: \$3,731,179	Benchmark: \$3,996,365
	Actual: \$2,863,664	Actual: \$3,772,168	Actual: \$4,130,970	Actual: \$3,147,202	Actual: \$3,660,473	Actual: N/A	Actual: N/A
<b>Non-Traditional Surface Uses (Recurring)</b>							
	Benchmark: N/A	Benchmark: N/A	Benchmark: \$4,214,869	Benchmark: \$5,247,091	Benchmark: \$6,590,545	Benchmark: \$7,094,831	Benchmark: \$7,829,392
	Actual: \$3,890,571	Actual: \$5,452,075	Actual: \$5,409,579	Actual: \$7,077,122	Actual: \$8,204,401	Actual: N/A	Actual: N/A

State Land Management – Outcomes	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<b>Permanent Fund Annual Return (Colorado State Treasurer)</b>							
	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: \$24,000,000	Benchmark: \$28,007,536	Benchmark: \$29,093,957
	Actual: \$24,055,589	Actual: \$21,738,351	Actual: \$21,610,649	Actual: \$22,448,806	Actual: \$22,486,730	Actual: N/A	Actual: N/A
<b>Protect and Enhance Value</b>							
O&G Well Inspections – Corrective actions resolved within 1 year	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 80%	Benchmark: 85%	Benchmark: 95%
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: 70%	Actual: 71%	Actual: N/A	Actual: N/A
Agricultural Inspections Rated Poor	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 5%	Benchmark: 5%	Benchmark: 5%
	Actual: 3%	Actual: 2%	Actual: 2%	Actual: 4%	Actual: 2.4%	Actual: N/A	Actual: N/A

<sup>1</sup>FY 2014-15 total revenue includes \$3,750,892 of non-reinvested land sales revenue.

<sup>2</sup>FY 2015-16 total revenue includes \$5,302,996 of non-reinvested land sales revenue.

Total Trail Miles in State Parks – The benchmark measures the availability of one of the most in-demand resources at State Parks, and CPW’s investment in expanding that recreational opportunity. The large jump in actual miles between FY 11-12 and FY 12-13 is the result of a project by CPW’s GIS Unit to accurately map and measure all the trails in the State Parks system. The benchmark was subsequently adjusted to account for the higher baseline.

Parks Visitation – The benchmark assumes annual growth of parks visitation of approximately 2%. However, general weather conditions as well as significant events such as floods or fires can cause visitation to vary dramatically year to year. The benchmark was readjusted downward for FY 15-16 reflecting lower actual visitation in previous years. Although visitation was particularly strong in FY 2015-16, this was attributed to especially favorable weather conditions. Benchmarks for FY 2016-17 and FY 2018-19 reflect longer term expectations based on more average weather conditions.

OHV, Snowmobile and Recreational Trail Grants - Benchmarks are based on historical experience with the three programs and an expectation of no significant change in available funding. Snowmobile applications only refer to capital grant proposals.

Number of Licensed Hunters and Anglers – Both benchmarks are relatively steady, with anglers showing slightly more year to year variation. A goal of CPW is to at least maintain current participation levels, with some growth in future years as recruitment and retention programs draw more participants, particularly youth, into the sports. Angler numbers for 2014 and 2015 showed a significant increase, due in part to two major factors. The first was an expected bump up in response to generally favorable weather conditions. The second was a change in Colorado’s big game licenses starting in 2014, which now include a fishing component. The benchmarks moving forward were adjusted upward to account for those licenses continuing into the future.

Waters Closed to Recreation Due to ANS – The program goal is to prevent any waters from being infected and closed to recreation due to ANS. Boat inspections and current monitoring efforts have proven successful to date. However, the loss of severance tax revenue funding the program will be a major factor on the program’s results moving forward.

Big Game Animals Harvested – Benchmarks reflect a combination of factors such as the biological health of a number of big game species and herds, the number of licenses issued, and historical hunter success rates. General weather conditions during the main hunting seasons can be an important factor in actual results.

Acres protected through CWHPP – Initial benchmarks were based on historical averages. The current year and future year benchmarks account for a tightening of program focus, rising land values and a reduction in total funding for the program.

Species Listed under the ESA – A goal of CPW’s Species Conservation Program is to keep the cumulative number of listings as low as possible, reducing any impact to landowners, water users, businesses and others. The benchmark measures only wildlife species, not plant species. The benchmark for FY 2016-17 is reduced to 17 to reflect a court-ordered delisting of the Lesser Prairie Chicken in July 2016.

Acres Impacted by Wetland Program Grants – The Benchmark is based on historical averages for the program and the funding allocated annually to the program.

Reasonable and Consistent Income - Total trust revenue (non-recurring and recurring).

- The State Land Board’s total trust revenues grew significantly over the past five years. These high revenues were driven by Colorado’s Front Range oil and gas boom.
- The State Land Board anticipates total trust revenues will decline over the next few years, largely due to a decline in revenue from mineral resources (i.e. oil and gas royalties, rentals, and bonus payments), described below.

Mineral Resources - Revenues from mineral, oil, gas, and water leases plus bonus lease revenue from oil and gas lease auctions.

- The State Land Board anticipated a substantial downturn in the oil and gas markets (non-recurring revenue) that started at the end of FY 2014-15 and gained momentum during FY 2015-16. Oil and gas royalty revenues will experience a substantial reduction over the next few years due to low oil and gas prices and decreasing production in Colorado. This is expected to reduce the Board's oil and gas revenue (oil and gas royalties, bonus, and rents) from approximately \$156 million in FY 2014-15 to around \$40 million by FY 2018-19. Bonus revenues will experience a substantial drop-off starting in FY 2016-17. The "bonus cliff" is due to two large multi-year payments that expire in FY 2015-16 and FY 2016-17.

Agricultural Resources - Revenues from dry land crop, irrigated crop, and grazing leases.

- Grazing revenues increased more than 20% between FY 2014-15 and FY 2015-16. This increase was driven by the return of many leases to full carrying capacity following previous reductions due to drought and the implementation of the new grazing rates. The grazing rates are set at 75% to 90% of private rates based on survey. The adjustment from private rates is intended to provide fair credit for lessee improvements and services on trust lands.
- Dry land and irrigated crop rents increased by approximately \$200,000 to a new record of \$3.9 million during Fiscal Year 2015-16. Crop land rental rates on trust lands are calculated using a formula, which considers the yield and the five-year average price of commodities.
- In FY 2016-17, the State Land Board expects dry land and irrigated crop revenues to remain flat, but still at its record revenue level and grazing is anticipated to increase by 4.5% as remaining leases are converted to the new pricing structure.

Commercial/Real Estate Resources - Revenues from vertical assets (buildings), ground lease, and tower sites lease.

- From FY 2011-12 to FY 2013-14, commercial revenues increased primarily due to new vertical assets (buildings) and low office vacancy rates. During FY 2014-15, commercial revenues decreased due to higher office vacancies and higher tenant improvement and building operating costs.
- In FY 2015-16, commercial office revenue income increased by 13% from the prior Fiscal Year. The main driver was the acquisition of a new commercial office building that added nearly \$775,000 in new annual revenue.
- The State Land Board anticipates commercial revenue will increase over the next several years. The increase is attributable to the leasing of vacant properties.

Non-Traditional Surface Uses - Revenues from recreation, right-of-ways, renewable energy, surface use agreements, and ecosystem leases.

- Over the past four years non-traditional surface lease revenue increased steadily, which is a reflection of the State Land Board's strategic initiative to diversify and increase surface leases.
- In FY 2015-16, rights of way revenue grew 24% or \$1.6 million from the prior fiscal year.
- Recreation and renewable energy revenues are expected to increase over the next three years. The State Land Board expects increases in the number of issued leases, including three additional solar garden sites and the conversion of wind planning lease to a production lease. In Fiscal Year 2015-16, rights of way revenues were at a record high of \$2.3 million due largely to pipelines and roads to support oil and gas development. Given that rights of way are onetime payments and are difficult to anticipate from year to year, the State Land Board used a rolling four-year average to project future revenues.

#### Permanent Fund Annual Return

- The Public School Permanent Fund is managed by the State Treasurer's Office and represents the cash part of the School Trust's corpus.
- Over the past four years, the Fund earned a return of approximately 2.7% per year. The Permanent Fund's balance as of June 30, 2016, was \$886 million.
- Based on the investment and governance changes authorized by S.B.16-035, the Fund's return is anticipated to double over the next four years.

#### O&G Well Inspections

- The State Land Board completed inspections on all wells during FY 2013-14 and FY 2014-15, the first two years of the inspection program. As a result of these inspections, the State Land Board noted corrective actions that oil and gas lessees were required to address. Sixty percent of these corrective actions were fixed within the first year after they were identified. The remaining 40 percent will take more than a year to fully address, primarily because these are related to longer-term site reclamation efforts such as reseeding. The State Land Board continues to monitor the implementation of these remaining corrective actions.

#### Agricultural Inspections

- Agricultural leases that are rated poor are usually the result of poor management practices by the lessees. These leases require active management tools such as range monitoring, grazing plans, and frequent follow up inspections by State Land Board field staff.

The vision contained in Strategic Policy Initiative #1 will be achieved using several specific strategies, including:

**Strategy #1: Generate reasonable and consistent income over time for State Land Board Trust beneficiaries.**

Revenues generated by state trust lands through surface and subsurface leases are used for State Land Board operations, but the majority of the revenues (more than 95%) are distributed to beneficiaries through long-term trust funds or capital construction. School Trust revenues benefit K-12 public schools through the Building Excellent Schools Today (BEST) Program and the Public School (Permanent) Fund. In Fiscal Year 2015-16, the State Land Board generated \$131 million in leases revenues for the School Trust and the Permanent Fund generated \$22 million in interest income.

A number of factors drive the workload for the State Land Board and impact the ability of the program to achieve goals and objectives. Workload inputs include the number of state trust acres and buildings square footage. The acreage illustrates the diversity of how the portfolio is managed. For example, a single 640 acre parcel can support various uses from agriculture, recreation, and oil and gas at the same time.

**State Land Board Inputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
<b>Mineral Resources</b>							
Number of Acres of Mineral Rights	3,995,666	3,996,681	4,000,437	4,000,437	3,993,199	3,993,199	3,993,199
Total Mineral Leases	3,505	3,252	3,140	3,241	1,985	1,925	1,812
Producing Oil and Gas Wells	N/A	N/A	2,231	2,243	2,618	2,550	2,800
<b>Agricultural Resources</b>							
Number of Ag Leased Acres	2,708,324	2,757,091	2,671,032	2,654,379	2,590,039	2,590,039	2,590,039
<b>Commercial and Real Estate Resources</b>							
Number of Surface Acres	2,799,538	2,792,312	2,789,870	2,789,870	2,804,636	2,804,636	2,804,636
Square Feet of Commercial Buildings	377,167	461,422	482,308	482,308	584,400	676,245	800,000
<b>Non-Traditional Surface Uses</b>							
Acres of Non-Ag Leases	1,170,927	1,082,687	1,048,520	1,069,321	1,061,645	1,061,645	1,061,645

## Discussion of State Land Board Inputs

Mineral Resources – There are many oil and gas leases that will expire over the next couple of years. While this drives down the number of active oil and gas leases, these leases can be auctioned again.

Commercial and Real Estate Resources – The State Land Board added a commercial building in Fiscal Year 2015-16 and expects to add additional commercial buildings in future years.

### **State Land Board Outputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
<b>Mineral Resources</b>							
Number of corrective actions noted on Well Inspections	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 252	Benchmark: 200	Benchmark: 200
	Actual: N/A	Actual: N/A	Actual: 232	Actual: 199	Actual: 167	Actual: N/A	Actual: N/A
Prior unsatisfactory Well Inspections resolved	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 228	Benchmark: 266	Benchmark: 200
	Actual: N/A	Actual: N/A	Actual: 7	Actual: 182	Actual: 238	Actual: N/A	Actual: N/A
Number of Oil & Gas Nominated Parcels Auctioned	Benchmark: N/A	Benchmark: N/A	Benchmark: 392	Benchmark: 120	Benchmark: 126	Benchmark: 266	Benchmark: 200
	Actual: 681	Actual: 429	Actual: 293	Actual: 129	Actual: 151	Actual: N/A	Actual: N/A
<b>Agricultural Resources</b>							
Number of Ag Leased New/Renewed	Benchmark: N/A	Benchmark: N/A	Benchmark: 167	Benchmark: 281	Benchmark: 229	Benchmark: 214	Benchmark: 214
	Actual: 179	Actual: 207	Actual: 281	Actual: 229	Actual: 214	Actual: N/A	Actual: N/A
<b>Commercial and Real Estate Resources</b>							
Number of Acquisitions	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 5	Benchmark: 1	Benchmark: 2
	Actual: 5	Actual: 4	Actual: 2	Actual: 5	Actual: 5	Actual: N/A	Actual: N/A

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Number of Disposals	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 4	Benchmark: 10	Benchmark: 10
	Actual: 6	Actual: 9	Actual: 5	Actual: 4	Actual: 13	Actual: N/A	Actual: N/A
<b>Non-Traditional Surface Uses</b>							
Number of Recreation Leases New/Renewed	Benchmark: N/A	Benchmark: N/A	Benchmark: 32	Benchmark: 32	Benchmark: 32	Benchmark: 45	Benchmark: 50
	Actual: 30	Actual: 32	Actual: 32	Actual: 32	Actual: 52	Actual: N/A	Actual: N/A
Number of Rights-of-Way New Contracts	Benchmark: N/A	Benchmark: N/A	Benchmark: 20	Benchmark: 43	Benchmark: 26	Benchmark: 29	Benchmark: 31
	Actual: 18	Actual: 30	Actual: 43	Actual: 26	Actual: 42	Actual: N/A	Actual: N/A
Number of Other Non- Traditional Leased New/Renewed	Benchmark: N/A	Benchmark: N/A	Benchmark: 40	Benchmark: 10	Benchmark: 10	Benchmark: 10	Benchmark: 10
	Actual: 36	Actual: 49	Actual: 10	Actual: 10	Actual: 11	Actual: N/A	Actual: N/A
Number of Renewable Energy Leases	Benchmark: N/A	Benchmark: N/A	Benchmark: 13	Benchmark: 31	Benchmark: 48	Benchmark: 52	Benchmark: 60
	Actual: 11	Actual: 12	Actual: 31	Actual: 48	Actual: 40	Actual: N/A	Actual: N/A

### **Discussion of State Land Board Outputs**

Mineral Resources – The State Land Board started a new oil and gas well inspection program during Fiscal Year 2013-14. Through the inspection program, the State Land Board issued corrective actions for weeds, minor leaks, housekeeping, erosion and poor road conditions, or poor reclamation. The regular oil and gas well inspections are conducted on a two-year basis.

Non-Traditional Surface Uses – As part of the State Land Board’s diversification strategy, the number of recreation leases, right-of-way contracts, and renewable energy leases are expected to increase.

**Strategy #2: Manage State Parks, State Recreation Areas, and State Wildlife Areas to promote outdoor recreation, including hunting and fishing. This strategy will recognize the need for some lands to be managed for wildlife and wildlife habitat, which may preclude recreation at some sites.**

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 mission, in part, by managing a 42 state park system that is 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. Management of the state park system includes educational and interpretive programs as well as 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.

State Wildlife Areas also offer wildlife-related recreation to the public. While most activities focus on hunting and fishing, each State Wildlife Area has different allowed activities, based on location and available resources. Colorado Parks and Wildlife manages about 350 State Wildlife Area lands around Colorado.

The following table shows some of the input measures that impact these outdoor recreation programs.

**Outdoor Recreation on CPW Lands - Inputs  
FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Land Acres Managed for State Parks / State Recreation Areas	218,564	218,564	220,365	220,414	220,595	220,650	220,700
Annual Park Passes Sold	63,102	63,110	66,096	66,774	77,265	68,000	69,000
Daily Park Passes Sold	805,661	748,465	770,111	832,799	968,029	810,000	820,000

Land Acres Managed – With the rare exception of the addition of an entirely new park (e.g. Staunton State Park), the total acreage of parks property managed shows only small increases, if any, on an annual basis. Small acquisitions can address in-holdings or provide buffers to existing parks. The benchmark does not project a major new park, only opportunistic in-holding and buffer acquisitions.

Passes Sold - Annual pass sales typically show a more regular increase in comparison to daily pass sales, which are particularly impacted by summer weather conditions and major events such as fires or flooding. While benchmarks for daily passes are included, wide divergence from the benchmark is not unexpected.

**Outdoor Recreation on CPW Lands - Outputs  
FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
State Park Trails Improved (in Miles)	Benchmark: 10	Benchmark: 10	Benchmark: 10	Benchmark: 10	Benchmark: 10	Benchmark: 10	Benchmark: 10
	Actual: 12	Actual: 5	Actual: 37	Actual: 9	Actual: 16	Actual: N/A	Actual: N/A
Revenue from Passes, Permits, Other Fees (\$000's)	Benchmark: 20,000	Benchmark: 21,500	Benchmark: 22,999	Benchmark: 20,700	Benchmark: 21,000	Benchmark: 21,100	Benchmark: 22,000
	Actual: 20,026	Actual: 19,125	Actual: 19,844	Actual: 22,369	Actual: 24,364	Actual: N/A	Actual: N/A

State Parks Trails Improved – The benchmark assumes steady and continued allocation of GOCO funding for the State Parks Trails Program.

Parks Revenue –Revenues generated from Parks passes, permits and other fees can be highly dependent on weather conditions, particularly during the summer. An adjustment downward in the revenue benchmark was made in projections for the FY 14-15 after previous years’ growth projections proved overly optimistic. The result was a growing divergence over time between the benchmark and actual revenues. The benchmark was adjusted to reflect the previous years’ actual results, with a lower, more realistic annual growth projected (1% annually) after that.

**Strategy #3: Promote the responsible development and use of recreational trails, both motorized and non-motorized, on both DNR properties as well as other public and private lands.**

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. The Trails Program exists to increase accessibility and encourage the use of Colorado’s extensive outdoor and natural resources, through hiking, bicycling, horse riding and other compatible recreational activities, and to provide for recreational motorized trail uses. Furthermore, state statutes authorize Colorado Parks and Wildlife 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 delivers the Trails Program primarily by making grants to governmental agencies, non-governmental organizations, and individuals for the purpose of planning, constructing, improving, and maintaining trails in Colorado.

**Trails Program Inputs  
FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Off-Highway Vehicle Registrations and Permits	163,444	163,768	171,073	170,754	192,569	172,000	173,000
Snowmobile Registrations and Permits	31,543	31,406	32,793	32,693	35,637	32,700	32,700
Recreational Trail Grant Funding (\$)	6,336,811	7,123,012	7,003,013	7,710,678	7,980,144	7,400,000	7,300,000

OHV and Snowmobile Registrations – The benchmarks reflect longer-term trends in registrations over recent years, with OHV showing a slight increase and snowmobiles showing a flatter trend line. Snowmobile registrations can be particularly impacted by early snow conditions, with registrations dropping for years in which heavy snow arrives later in the winter.

Recreational Trail Grant Funding – The benchmarks for recreational trail metrics are based on historical experience, with adjustments made based on the outlook for availability of future funding, particularly from federal sources.

**Trails Program Outputs  
FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
OHV Grant Applications	Benchmark: 46	Benchmark: 48	Benchmark: 50	Benchmark: 50	Benchmark: 50	Benchmark: 50	Benchmark: 50
	Actual: 42	Actual: 63	Actual: 57	Actual: 58	Actual: 65	Actual: N/A	Actual: N/A
Recreational Trail Grant Applications	Benchmark: 40	Benchmark: 40	Benchmark: 40	Benchmark: 40	Benchmark: 40	Benchmark: 40	Benchmark: 40
	Actual: 43	Actual: 40	Actual: 27	Actual: 41	Actual: 36	Actual: N/A	Actual: N/A
Snowmobile Grant Applications	Benchmark: 7	Benchmark: 7	Benchmark: 7	Benchmark: 7	Benchmark: 7	Benchmark: 7	Benchmark: 7
	Actual: 7	Actual: 7	Actual: 4	Actual: 8	Actual: 5	Actual: N/A	Actual: N/A

OHV, snowmobile and recreational trail grants - Benchmarks are based on historical experience with the three programs and an expectation of no significant change in available funding. Snowmobile applications only refer to capital grant proposals.

**Strategy #4: Promote hunting and fishing programs statewide.**

CPW’s statutory mission includes the direction to “offer the greatest possible variety of recreation” to Colorado’s citizens and visitors to the state. While part of this mission is met through operation of the state park system (see Strategy #2), another important component of this mission is met by offering hunting and fishing programs. In addition to being important parts of what makes Colorado such a special place to live for many residents, hunting and fishing are an important part of the State’s economy. A 2014 study for CPW by Southwick Associates on the economic impact of outdoor recreation found that hunting, fishing, and wildlife viewing generate more than \$5 billion in economic activity and support nearly 50,000 jobs.

The Hunting Program includes inventorying game populations, collecting animal harvest data, developing population models to guide license allocations and management decisions, wildlife health research, setting and enforcing hunting regulations, acquiring access for hunters through access leases and easements, cooperative programs with landowners, and habitat protection efforts. The Hunting

Program also includes educating hunters about safety, as well as informing and advising hunters about hunting opportunities in the state.

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, 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, the CPW website, e-mail newsletters and other means. 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 following table shows some of the input measures that impact these outdoor recreation programs.

**Hunting and Fishing Inputs  
FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Hunter Education Classes	813	780	802	763	858	790	790
Big Game Applications	473,875	492,532	502,501	510,312	519,784	520,500	525,750
State Land Board Access Funding	\$784,600	\$813,955	\$797,445	\$816,264	\$826,711	\$830,000	\$850,000
Waters Monitored for Aquatic Nuisance Species	260	216	173	173	208	150	150

Hunter Education Classes – The estimates for FY 2016-17 and FY 2018-19 reflects historical experience with the number of classes offered and the availability of hunter education instructors. Future projections are the midpoint of the expected range as the number of classes can vary based on student demand.

Big Game Applications – Big game application totals can vary depending on the biological health of big game herds across the state, state and national economic conditions, and changes in license fees (among other factors). The projection for out years assumes a 1 percent annual increase in applications, reflecting recent history plus changes in application fees.

State Land Board Access Funding – The estimates for FY 2016-17 and FY 2018-19 reflect projections of available funding for the program, including federal Pittman-Robertson funds and wildlife cash funds, which are the major funding sources for the program.

Waters Monitored for ANS – Benchmarks for the current year and for FY 2018-19 have dropped in response to the loss of severance tax funding available to the program. CPW has been working on alternative approaches to the current program, but without a new funding source program reductions are anticipated.

### Hunting and Fishing Outputs FY 2011-12 to FY 2018-19

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Habitat Partnership Program Acres Improved	Benchmark: 30,000	Benchmark: 30,000	Benchmark: 28,000	Benchmark: 25,000	Benchmark: 25,000	Benchmark: 25,000	Benchmark: 25,000
	Actual: 37,172	Actual: 22,174	Actual: 24,943	Actual: 24,295	Actual: 27,319	Actual: N/A	Actual: N/A
Acres of State Land Board Access	Benchmark: 500,000	Benchmark: 510,000	Benchmark: 490,000	Benchmark: 488,000	Benchmark: 480,000	Benchmark: 486,000	Benchmark: 486,000
	Actual: 492,113	Actual: 480,800	Actual: 485,227	Actual: 485,227	Actual: 485,687	Actual: N/A	Actual: N/A
Number of Boat Inspections (for Aquatic Nuisance Species)	Benchmark: 380,000	Benchmark: 412,845	Benchmark: 418,576	Benchmark: 420,000	Benchmark: 420,000	Benchmark: 320,000	Benchmark: 320,000
	Actual: 411,200	Actual: 416,494	Actual: 400,849	Actual: 402,101	Actual: 405,782	Actual: N/A	Actual: N/A
Hunting Licenses Issued	Benchmark: 530,000	Benchmark: 530,000	Benchmark: 520,000	Benchmark: 530,000	Benchmark: 530,000	Benchmark: 530,000	Benchmark: 530,000
	Actual: 529,618	Actual: 537,371	Actual: 553,826	Actual: 556,941	Actual: 556,000	Actual: N/A	Actual: N/A
Fishing Licenses Issued	Benchmark: N/A	Benchmark: 1,000,000	Benchmark: 1,050,000	Benchmark: 1,050,000	Benchmark: 1,050,000	Benchmark: 1,125,000	Benchmark: 1,125,000
	Actual: 1,050,721	Actual: 1,049,557	Actual: 1,085,445	Actual: 1,087,369	Actual: 1,171,424	Actual: N/A	Actual: N/A
Catchable-Sized Trout Stocked	Benchmark: 3,010,000	Benchmark: 3,000,000	Benchmark: 3,000,000	Benchmark: 2,800,000	Benchmark: 3,100,000	Benchmark: 2,800,000	Benchmark: 2,800,000
	Actual: 2,829,000	Actual: 2,906,000	Actual: 2,369,000	Actual: 3,400,000	Actual: 2,890,000	Actual: N/A	Actual: N/A

Habitat Partnership Program Acres Improved – The benchmarks reflect multi-year averages of acres improved and projections of funding available. Year to year actual figures can vary significantly from the benchmark due to overall reactivity of the program, including weather conditions (e.g. drought) and partnership funding declines that can prevent a specific project from being implemented in a particular year, or a large project that could involve multiple years of planning before any acres are actually treated.

Acres of State Land Board Access – Each year adjustments are made to specific acreage covered under the access program. Combined with incremental lease rate increases and funding dedicated to the program, total leased acreage can vary. Benchmarks are based on the outlook for all of those factors.

Number of ANS Boat Inspections – Future benchmarks reflect extensive uncertainty about the structure of and resources directed to the ANS program as a result of a significant reduction in severance tax funding available for the program. CPW is examining a range of options to provide needed personnel and financial support for ANS work.

Hunting Licenses Issued – In contrast to a typical business, which aims to sell as much of its product as possible, the number of hunting licenses made available by Colorado Parks and Wildlife is based strongly on the health of individual herds along with herd survival and recruitment performance. In general, more licenses will be issued when a herd is above its population objective, with fewer licenses issued when it is below objective. In addition to long-term health trends, severe winter weather can cause significant changes in the number of licenses issued on a year to year basis.

Fishing Licenses Issued – Overall fishing license sales stay within a relatively narrow band, with the major variable in actual sales believed to be the presence or absence of drought conditions and the associated low water levels and elevated stream temperatures.

Catchable-sized Trout Stocked – State hatchery production of catchable trout remains fairly constant, with the exception of when a hatchery is taken “off-line” for major repairs or renovations. For FY 16-17 and 18-19, capital maintenance projects are expected to reduce production at individual hatcheries.

**Strategy #5: Ensure the long-term viability of native fish and wildlife. Strive to maintain the broadest representation of the diversity of native wildlife across the state. As part of this strategy, the Department will protect, restore, and enhance habitat for fish and wildlife.**

Efforts related to this strategy generally come under one of two major processes: (1) Land and Water Management; and (2) Species Conservation (Game & Non-Game Species). Each of these two areas will be briefly described below.

#### 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 as well as local and county governments.

One high-profile component of this program is the Colorado Wildlife Habitat Protection Program (CWHPP), 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 program has helped permanently protect more than 220,000 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 conserves wetland and riparian habitats and their ecological functions by planning and delivering conservation actions on a landscape scale. 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 nearly 300,000 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 recognition awards for 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 five percent 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.

The Colorado Natural Areas Program (CNAP) has 93 designated Natural Areas encompassing over 182,000 acres which help to protect habitats and natural features 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 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, 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, protecting and enhancing populations.

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 118 imperiled plant species that occur in Colorado with a parallel goal of conserving rare plant species and habitats and averting federal threatened or endangered listings under the federal Endangered Species Act.

**Species and Habitat Protection Inputs – FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Colorado Wildlife Habitat Protection Program Funding (millions of dollars)	\$12.5	\$11.0	\$9.0	\$9.3	\$9.3	\$9.3	\$9.3
Wetland Program Funding	\$200,000	\$850,000	\$900,000	\$700,000	\$700,000	\$2,800,000	\$700,000
Endangered Species Act Listing Decisions Due	N/A	0	2	5	3	3	2

CWHPP and Wetland Funding – Estimates for FY 2016-17 and FY 2018-19 are based on projections of future funding availability, drawn in part from multi-year financial plans for Great Outdoors Colorado funding.

ESA Listing Decisions Due –The U.S. Fish and Wildlife Service released an updated 7-year National Listing Workplan in September 2016. The workplan identifies discretionary status reviews, proposed listing determinations, and 12-month findings for over 250 species to be completed through federal fiscal year 2023. Five terrestrial and aquatic vertebrate species that occur in Colorado are included in the workplan.

**Species and Habitat Protection Outputs – FY 2010-11 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
Colorado Wildlife Habitat Protection Program Applications	Benchmark: 70	Benchmark: 60	Benchmark: 60	Benchmark: 40	Benchmark: 40	Benchmark: 40	Benchmark: 40
	Actual: 45	Actual: 58	Actual: 45	Actual: 42	Actual: 39	Actual: 34	Actual: N/A
Endangered Species Act Listing Prevented	Benchmark: 20	Benchmark: 20	Benchmark: 20	Benchmark: 24	Benchmark: 27	Benchmark: 28	Benchmark: 29
	Actual: 22	Actual: 22	Actual: 24	Actual: 25	Actual: 28	Actual: N/A	Actual: N/A
Wetlands Grants Awarded	Benchmark: 18	Benchmark: 17	Benchmark: 16	Benchmark: 17	Benchmark: 15	Benchmark: 22	Benchmark: 22
	Actual: 0	Actual: 19	Actual: 18	Actual: 15	Actual: 13	Actual: 23	Actual: N/A

CWHPP and Wetland Grant Applications – Benchmarks are based on projections of future funding availability, drawn in part from multi-year financial plans for Great Outdoors Colorado funding, along with historical experience with landowner interest in the program and the impact on applications from changes in program priorities and focus areas.

ESA Listings Prevented – A goal of CPW’s Species Conservation Program is to prevent any additional listings of wildlife species under the federal Endangered Species Act. While that may not be possible in all cases, state efforts have shown success in averting listings through state-based actions, as well as through species research and monitoring programs.

***Strategic Policy Initiative #2: Conserve, develop, protect, and administer Colorado’s water for present and future generations in accordance with state and federal laws.***

Discussion of the Strategic Policy Initiative: In regards to how the State of Colorado manages its water resources, the vision behind this Strategic Policy Initiative is to achieve the following:

- A productive economy that supports vibrant and sustainable cities, viable and productive agriculture, and a robust skiing, recreation, and tourism industry;
- Efficient and effective water infrastructure; and
- A strong environment that includes healthy watersheds, rivers and streams, and wildlife.

DNR has four strategies to achieve the initiative. These include:

1. Help meet Colorado’s municipal, industrial, environmental, and recreational water supply needs by: (1) helping to develop new sources of water supply; (2) maintaining existing water supply infrastructure; and (3) promoting water conservation to reduce water demand.
2. Manage water to assure that it is put to beneficial use by legally entitled water right holders, including efforts to comply with Interstate Water Compacts.
3. Provide water for Colorado’s environmental and recreational needs.
4. Protect the public health, safety, and welfare from negative outcomes associated with water-based natural disasters. This shall include protecting the public from the impacts of flooding, dam failures, and avalanches.

Success in achieving this initiative will be measured by the following outcomes:

- Outcome Measure #1: Maximize beneficial re-use of water (Water Administration)
- Outcome Measure #2: Regulatory orders or notification (Water Administration)
- Outcome Measure #3: Full compact compliance (Water Administration)
- Outcome Measure #4: # of Dam Failure Incidents (Dam Safety)
- Outcome Measure #5: # of Deaths from Dam Failure Incidents (Dam Safety)
- Outcome Measure #6: # of Property Damage Incidents from Dam Failure (Dam Safety)
- Outcome Measure #7: Acre-feet of Existing Storage Maintained (Water Supply)
- Outcome Measure #8: Acre-feet of New Storage Created (Water Supply)
- Outcome Measure #9: Estimated amount of water saved through a water efficiency plan in acre-feet (Water Efficiency)
- Outcome Measure #10: Additional Miles of stream protected (Environmental Programs)

### Water-related Outcome Measures

	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<b>Administration of Water Rights</b>							
Maximize beneficial/optimal reuse of water	Benchmark: 3.2	Benchmark: 3.2	Benchmark: 3.2	Benchmark: 3.3	Benchmark: 3.5	Benchmark: 3.2	Benchmark: 3.2
	Actual: 2.09	Actual: 4.90	Actual: 3.7	Actual: 2.2	Actual: 2.2	Actual: N/A	Actual: N/A
Regulatory Orders or Notifications	Benchmark: 4.5%	Benchmark: 5.1%	Benchmark: 5.1%	Benchmark: 5.2%	Benchmark: 5.0%	Benchmark: 5.0%	Benchmark: 5.0%
	Actual: 5.45%	Actual: 5.95%	Actual: 12.26%	Actual: 4.3%	Actual: 9.6%	Actual: N/A	Actual: N/A
<b>Interstate Compact Enforcement</b>							
Full Compact Compliance	Benchmark: 100%	Benchmark: 100%					
	Actual: 88%	Actual: N/A	Actual: N/A				
<b>Dam Safety</b>							
Number of Dam Failure Incidents	Benchmark: 0	Benchmark: 0					
	Actual: 0	Actual: 11	Actual: 2	Actual: 0	Actual: 0	Actual: N/A	Actual: N/A
Number of Death Incidents from Dam Failure	Benchmark: 0	Benchmark: 0					
	Actual: 0	Actual: N/A	Actual: N/A				
Number of Property Damage Incidents from Dam Failure	Benchmark: 0	Benchmark: 0					
	Actual: 0	Actual: N/A	Actual: N/A				

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
<b>Water Project Loan Program</b>							
Acre-feet of Existing Storage Maintained	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,000	Benchmark: 1,000	Benchmark: 3,545	Benchmark: 4,415	Benchmark: 4,415
	Actual: 1,050	Actual: 4,120	Actual: 7,500	Actual: 2,672	Actual: 5,381	Actual: N/A	Actual: N/A
Acre-feet of New Storage Created	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,000	Benchmark: 1,000	Benchmark: 2,245	Benchmark: 1,836	Benchmark: 1,836
	Actual: 3,270	Actual: 5,040	Actual: 430	Actual: 240	Actual: 199	Actual: N/A	Actual: N/A
<b>Office of Water Conservation and Drought Planning</b>							
Estimated Amount of Water Saved Through a Water Efficiency Plan in Acre Feet	Benchmark: N/A	Benchmark: N/A	Benchmark: 31,200	Benchmark: 31,200	Benchmark: 44,000	Benchmark: 48,000	Benchmark: 50,000
	Actual: 15,842	Actual: 23,200	Actual: 31,688	Actual: 37,000	Actual: 42,000	Actual: N/A	Actual: N/A
<b>Environmental Programs</b>							
Additional Miles of Stream Protected (Instream Flows)	Benchmark: N/A	Benchmark: N/A	Benchmark: 100	Benchmark: 100	Benchmark: 100	Benchmark: 100	Benchmark: 100
	Actual: 138	Actual: 7	Actual: 86.34	Actual: 40.56	Actual: 111.9	Actual: N/A	Actual: N/A

## **Discussion of Water-Related Outcomes**

Administration of Water Rights – The benchmarks for maximizing the beneficial reuse of water reflect the average re-use of water over the last four years. Actual beneficial/optimal use of water fluctuated between 2.09 and 4.9 in the last five years reflecting the difference between very wet years (more water than we can efficiently use) and very dry years when we have capacity to capture more of the limited supply.

The Regulatory Orders or Notifications metric measures the formal regulatory orders or notifications issued by the Division of Water Resources compared to the total number of surface and ground water structures actively diverting water. The benchmarks for regulatory compliance reflect recent rates of compliance. Spikes in FYs 2013-14 and 2015-16 are related to well head orders in the Arkansas River Basin and new metering rules in the South Platte. To be clear, the goal is to have 100% compliance with all rules. However, the benchmark of 5.0 percent represents a reasonable expectation of non-compliance that will require regulatory enforcement.

Interstate Compact Enforcement - Colorado's compliance with the Republican River Compact over the last several years has not been determined due to complex compact accounting issues. However, the Department is actively working towards resolving those compact issues and expects to resolve compliance questions in the near future. As such, the benchmark moving forward is for 100% compliance.

Dam Safety - There were no dam failures in FY 2015-16, so the Department met all of its benchmarks related to dam safety. The benchmarks all reflect a goal of zero dam failures happening in the future.

Water Project Loan Program - Actual performance in both maintaining water storage and building new water storage is dependent on several factors out of the CWCB's control. The CWCB continues to support and promote water storage projects with low interest loans and grants. And over the longer term, these performance measures will help to gauge how well CWCB is helping to address Colorado's water supply needs as described in the Colorado Water Plan. However, when looking at only a single year, actual performance will reflect the variance based on project completion timelines and there being specific interest by water providers to increase or maintain water storage. Further, cost and permitting can represent major hurdles to completing water storage projects. CWCB has updated the benchmarks to reflect the fact that, over the last few years, the Loan Program has helped to maintain an average of 4,415 acre-feet of existing storage as well as creating an average of 1,836 acre-feet of new storage (excluding the impact of an extraordinarily large one-time project completed in FY 2010-11). CWCB's current portfolio of loans/projects in the permitting, design, and construction phase includes 48 projects that will add an estimated 56,292 acre-feet of storage. This includes the 20,000 acre-feet of storage to be added when the Chatfield Reallocation Project is completed in the future.

Water Efficiency - The benchmark estimates listed in the table above are the year one and year three goals of the CWCB. The benchmarks for the *estimated amount of water saved through a water efficiency plan* and conservation planning efforts are an estimated average of savings outlined in water providers plans. Each water provider plan varies in the amount of annual savings as some programs ramp up over time, while others begin big and taper down. Normally, savings are estimated to accumulate over a planning period such as 5-10 years and then reevaluated at some interval. Conservation planning is one of the fundamental components illustrated in Chapter 10 of the Colorado Water Plan.

Instream Flow – As a result of contested instream flow appropriations that required many hours of staff’s time to prepare for and participate in hearings, the Colorado Water Conservation Board has not always been able to meet its annual benchmark of adding 100 additional miles of a stream protection. This past year, even with five contested appropriations, the CWCB was able to exceed the benchmark of protecting an additional 100 stream miles.

***Strategy #1: Help meet Colorado’s municipal, industrial, environmental, and recreational water supply needs by: 1) helping to develop new sources of water supply; 2) maintaining existing water supply infrastructure, and; 3) promoting water conservation to reduce water demand.***

The Department of Natural Resources, through the Colorado Water Conservation Board, has a number of programs and processes that help to carry out this strategy. Grant and loan programs, funded out of the Construction Fund, Perpetual Base Fund, Water Supply Reserve Fund, and the Water Efficiency Grant Program Cash Fund all assist in implementing this strategy which is an element of the Colorado Water Plan. All of these programs are contained within the CWCB’s Water Management and Planning Program. The inputs and outputs for these programs are discussed in the table below.

**Water Management and Planning Inputs - FY 2011-12 to FY 2018-19**

Input Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<i>Water Supply Reserve Fund</i>							
Total dollar value of funding sought	\$5,051,647	\$7,811,708	\$13,541,818	\$8,618,389	\$10,969,099	\$10,000,000	\$10,000,000
Grant funding available	\$12,562,916	\$8,296,763	\$19,649,223	\$16,107,404	\$13,896,891	\$13,699,330	\$8,018,210
# of grant applications	36	41	80	55	79	64	50
<i>Water Efficiency Grant Fund</i>							
# of water providers seeking grants	9	13	14	14	16	15	15
Total dollar value of funding sought	\$432,919	\$431,311	\$519,482	\$482,374	\$583,249	\$475,000	\$475,000
<i>Water Project Loan Program</i>							
Prospects List: total # of applicants and dollars requested	33 \$124,075,000	16 \$145,550,000	30 \$75,000,000	27 \$75,000,000	24 \$194,200,000	25 \$100,000,000	25 \$100,000,000
Pre-qualified projects list: total number of applicants and dollar requested <sup>1</sup>	15 \$7,030,000	19 \$99,482,000	5 \$50,000,000	8 \$6,800,000	5 \$21,007,500	5 \$50,000,000	5 \$50,000,000

Note: <sup>1</sup>The Pre-qualified Projects list identifies potential borrowers who have submitted an application, but have not completed a loan feasibility study and do not yet have CWCB Board approval to move a project forward. The total dollars requested for the fiscal years 2011-12 through 2018-19 depends on projects moving from the Pre-qualified Projects list to being an approved project as well as the dollar amount that is being requested by a potential borrower for a project.

**Discussion of Water Management & Planning Inputs**

The estimates listed in the table above are the year one and year three projections of the CWCB. The CWCB Water Project Loan Program information is regularly distributed to water providers. The CWCB receives requests for placement on the Prequalification List as the borrower's project develops to a level necessary for consideration for prequalification.

Grant funding available – The reduction in the amount of grant funding available and the number of grant applications anticipated in FY 2016-17 and FY 2018-19 correlate to the reduction in available funds from severance tax. Under the status quo, the sole source of funding for the Water Supply Reserve Fund is an automatic transfer from the Severance Tax Operational Fund Tier 2 of up to \$10 million annually (plus any interest earned on this balance). DNR is now projecting that no Tier 2 transfers will take place in FY 2016-17, and minimal transfers will occur in FY 2017-18. Severance Tax revenue forecasts are largely due to current low energy prices and the cyclical nature of the severance tax revenue stream. Basin accounts have available balances, which vary by basin, and requests for statewide grants were considered in September of 2016 from those available balances.

Reductions in funding will affect basin roundtables adversely as they work to implement projects that will meet goals and objectives identified in Basin Implementation Plans. Current basin balances will help fund projects which have already been approved, but revenue shortfalls will slow the ability to approve new projects. CWCB staff are in the process of evaluating alternative funding sources for CWCB and the basin roundtables.

# of water providers seeking grants - The CWCB saw an increase in water efficiency plan *revisions* in FY 2014-15. The number of water providers seeking grants remained and is estimated to remain steady for FY 2015-16 through FY 2018-19. Revised plans are required within seven years after having submitted the previous plan. It is expected that the number of revised plans as well as applications to develop drought management plans being turned in may increase in the coming years.

**Water Management and Planning Outputs - FY 2011-12 to FY 2018-19**

Output Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<i>Water Supply Reserve Fund</i>							
# of new grants and total dollar value for the Water Supply Reserve Fund	Benchmark: N/A	Benchmark: N/A	Benchmark: 38 \$10,000,000	Benchmark: 38 \$10,000,000	Benchmark: 50 \$10,000,000	Benchmark: 64 \$0	Benchmark: 50 \$0
	Actual: 36 \$5,051,647	Actual: 41 \$7,811,708	Actual: 80 \$13,541,818	Actual: 55 \$8,618,389	Actual: 66 \$10,796,098	Actual: N/A	Actual: N/A
<i>Water Project Loan Program</i>							
# of new loans and total dollar value for new water project loans	Benchmark: N/A	Benchmark: N/A	Benchmark: 15 \$48 M	Benchmark: 15 \$48 M	Benchmark: 20 \$30 M	Benchmark: 20 \$30 M	Benchmark: 20 \$30 M
	Actual: 9 \$17.9 M	Actual: 18 \$37.3 M	Actual: 46 \$69.1 M	Actual: 23 \$142.2 M	Actual: 21 \$41.5 M	Actual: N/A	Actual: N/A

Output Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<i>Decision Support System</i>							
# of Decision Support System models operating	Benchmark: N/A	Benchmark: N/A	Benchmark: 3	Benchmark: 3	Benchmark: 4	Benchmark: 4	Benchmark: 5
	Actual: 3	Actual: 3	Actual: 3	Actual: 3	Actual: 4	Actual: N/A	Actual: N/A
<i>Office of Water Conservation and Drought Planning</i>							
# of water efficiency plans approved	Benchmark: N/A	Benchmark: N/A	Benchmark: 77	Benchmark: 77	Benchmark: 85	Benchmark: 80	Benchmark: 80
	Actual: 57	Actual: 67	Actual: 70	Actual: 78	Actual: 78	Actual: N/A	Actual: N/A

**Discussion of Water Management & Planning Outputs**

The benchmark estimates listed in the table above are the year one and year three goals of the CWCB. The *# of new loans and total dollar value for new water project loans*, the *# of Decision Support System models operating*, and the *# of water efficiency plans approved* were recommended by CWCB staff.

# of new grants and total dollar value for the Water Supply Reserve Fund – This metric is based on the total funding anticipated to be received from the Water Supply Reserve Fund from the Severance Tax Operational Fund. The Water Supply Reserve Fund is a Severance Tax Tier 2 Program. The decrease in the benchmark figures for the number new grants and total dollar value in FY 2016-17 and FY 2018-19 are based on funding reductions to this Program from Severance Tax funds for Tier 2 programs. Severance Tax revenue is being impacted by relatively low current energy prices. (See additional background information above related to the Severance Tax funding reduction under the *Discussion of Water Management & Planning Inputs - Grant funding available* for the Water Supply Reserve Fund.)

# of new loans and total dollar value for new water project loans - CWCB staff work to help local water providers/users meet their demands by managing the Construction Fund and the Severance Tax Perpetual Base Fund to provide low-interest financing for water infrastructure. The types of projects funded by the CWCB include construction, rehabilitation, enlargement, or the improvement of water projects that benefit the state and facilitate the development and management of Colorado’s water supply. The water projects mesh with the Colorado Water Plan. Typically, the CWCB Loan Program approves and completes between 10-15 projects per year, involving a wide range of loan funds. The number of projects and amount of funds disbursed are subject to the borrower’s design and construction schedule and actual loan funds available, and therefore, the performance measure for this item is, at times, difficult to

predict. In general, the CWCB approves about \$20 to \$40 million per year in new loans. The CWCB occasionally receives very large (upwards of \$80 million) loan requests. As shown in the table above, the benchmark for the *number of new loans and total dollar value for new water project loans* is expected to remain steady in FY 2018-19. The large number of actual loans in FY13-14 was due to the September 2013 floods and an upturn in the economy. Staff continues to work to manage available funds as a result of the General Fund transfers and the fluctuating revenues from Severance Tax. Between fiscal year 2008-09 and fiscal year 2011-12, the General Assembly transferred more than \$163,000,000 from the Severance Tax Perpetual Base Fund and \$10,000,000 from the Construction Fund for General Fund balancing purposes. In FY 2014-15, the General Assembly approved the transfer of \$30,000,000 from the General Fund Surplus to the CWCB Construction Fund.

# of Decision Support System models operating - There are currently four Decision Support System models (Rio Grande River DSS, Colorado River DSS, South Platte DSS, and Instream Flow DSS) operating. Further, staff intends to initiate the development of the Arkansas River Decision Support System in FY 2016-17, which will take several years to complete.

# of water efficiency plans approved - In the above table, of the 78 approved water efficiency plans on file in FY 2016-17, 79 covered entities are represented in the plans while 101 non-covered entities are represented within a larger regional planning effort and 30 non-covered entities are represented by their own stand-alone plan. Forecasting out to FY 2018-19, it is anticipated that there will be a nominal increase in Water Efficiency Plans due to new plans being created but more importantly, entities will be renewing and revising existing plans. The old plans will no longer be counted in the totals and thus only new plans will be totaled. This will flatten out the increase in total plans. Water Efficiency plans must be revised within seven years of completion. By the end of FY 2018-19, there will be approximately 60 original water efficiency plans that will have been revised plus any additional plans that do not currently exist. The reason that only 78 water efficiency plans were approved, short of the benchmark figure of 85, is because not all entities were able to complete and submit a plan within the time-frame of the fiscal year, but they are working on them at the present time.

***Strategy #2: Manage water to assure that it is put to beneficial use by legally entitled water right holders, including efforts to comply with Interstate Water Compacts.***

Water Administration is the program by which the Department of Natural Resources allocates water to various water users. This program involves two major sub-programs: administration of interstate water rights (AWR) and interstate water compact enforcement (ICE). The Department administers about 171,000 water rights, as well as 9 interstate compacts, one international treaty with Mexico, two U.S. Supreme Court decrees, and two interstate agreements. The table below provides additional details on the workload and inputs which affect the Water Administration program:

### Water Administration Inputs - FY 2011-12 to FY 2018-19

Input Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<b>Administration of Water Rights</b>							
# of water rights	165,177	164,973	166,901	168,580	170,929	172,000	173,000
# of water court applications	920	1,012	966	894	804	920	920
# of well permit applications	4,372	5,079	5,471	5,329	5,066	5,063	5,063
# of substitute water supply plans received	279	254	310	287	241	241	241
# of stream gages operated/maintained	523	540	560	573	616	620	620
# of structures with diversion records	52,549	54,347	55,052	55,249	57,222	56,250	56,500
# of call changes on water rights	N/A	N/A	2,771	1,968	1,515	2,100	2,100
<b>Interstate Compact Enforcement</b>							
# of interstate compacts	9	9	9	9	9	9	9

## Discussion of Water Administration Inputs

The total workload in the Water Administration continues to increase overtime. FY 2014-15 to FY 2015-16 reflect minor increases for the number of water rights administered, the number of stream gage locations, and the number of structures with diversion records. While FY 2015-16 reflects reductions in water court applications and well permit applications, these applications vary from year-to-year and are expected to follow the previous trends in years prior. Specifically, both water court applications and well permit applications are expected to experience a slow increase moving forward due to the increasing demand for limited water supplies. The State of Colorado continues to enforce nine interstate compacts.

### **Water Administration Outputs - FY 2011-12 to FY 2018-19**

Output Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<b>Administration of Water Rights</b>							
# of permit applications acted upon	Benchmark: N/A	Benchmark: 6,104	Benchmark: 5,700	Benchmark: 5,600	Benchmark: 5,000	Benchmark: 5,000	Benchmark: 5,000
	Actual: 4,480	Actual: 4,882	Actual: 5,003	Actual: 5,172	Actual: 4,739	Actual: N/A	Actual: N/A
# of water court consultations	Benchmark: N/A	Benchmark: 985	Benchmark: 985	Benchmark: 940	Benchmark: 940	Benchmark: 920	Benchmark: 920
	Actual: 880	Actual: 987	Actual: 822	Actual: 940	Actual: 804	Actual: N/A	Actual: N/A
# of statements of opposition	Benchmark: N/A	Benchmark: 54	Benchmark: 50	Benchmark: 40	Benchmark: 40	Benchmark: 20	Benchmark: 20
	Actual: 40	Actual: 25	Actual: 29	Actual: 40	Actual: 20	Actual: N/A	Actual: N/A
# of water right observations and structure observations	Benchmark: N/A	Benchmark: 453,000	Benchmark: 475,000	Benchmark: 480,000	Benchmark: 515,000	Benchmark: 525,000	Benchmark: 530,000
	Actual: 450,879	Actual: 460,646	Actual: 467,002	Actual: 512,574	Actual: 521,061	Actual: N/A	Actual: N/A

<b>Administration of Water Rights (Continued)</b>							
<b>Output Measures</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Estimate</b>	<b>FY 2018-19 Estimate</b>
# of records of actual diversions maintained	Benchmark: N/A	Benchmark: 31,000	Benchmark: 35,000	Benchmark: 37,000	Benchmark: 38,000	Benchmark: 36,500	Benchmark: 36,700
	Actual: 33,495	Actual: 34,907	Actual: 35,939	Actual: 36,187	Actual: 36,305	Actual: N/A	Actual: N/A
# of substitute water supply plans issued	Benchmark: N/A	Benchmark: 291	Benchmark: 291	Benchmark: 275	Benchmark: 280	Benchmark: 241	Benchmark: 241
	Actual: 279	Actual: 254	Actual: 310	Actual: 287	Actual: 241	Actual: N/A	Actual: N/A
# of enforcement orders	Benchmark: N/A	Benchmark: 2,308	Benchmark: 2,308	Benchmark: 2,535	Benchmark: 2,538	Benchmark: 2,540	Benchmark: 2,540
	Actual: 2,570	Actual: 3,218	Actual: 6,752	Actual: 2,425	Actual: 5,362	Actual: N/A	Actual: N/A
Augmentation plan administration and accounting	Benchmark: N/A	Benchmark: 1,504	Benchmark: 1,494	Benchmark: 1,500	Benchmark: 1,500	Benchmark: 1,600	Benchmark: 1,600
	Actual: 1,198	Actual: 1,504	Actual: 1,494	Actual: 1,445	Actual: 1,604	Actual: N/A	Actual: N/A
# of wells completed/administered – cumulative	Benchmark: N/A	Benchmark: N/A	Benchmark: 295,000	Benchmark: 298,000	Benchmark: 300,000	Benchmark: 302,000	Benchmark: 304,000
	Actual: 290,443	Actual: 293,702	Actual: 296,551	Actual: 299,921	Actual: 304,391	Actual: N/A	Actual: N/A
<b>Interstate Compact Enforcement</b>							
# of interstate compact meetings attended	Benchmark: N/A	Benchmark: N/A	Benchmark: 22	Benchmark: 25	Benchmark: 29	Benchmark: 29	Benchmark: 29
	Actual: 21	Actual: 22	Actual: 31	Actual: 47	Actual: 40	Actual: N/A	Actual: N/A

### **Discussion of Water Administration Outputs**

Benchmarks for the above output measures were established based on FY 2015-16 actual outputs, recent trends, and program specific knowledge. The long-term trend for permit applications acted upon and water court consultations indicate slow increases due the increasing demand for limited water supplies. Lower values for Statements of Opposition reflect an attempt by DWR to limit litigation and use the consultation process more effectively. The number of water right observations and structure observations continue to increase due to court and water administration demands. Similarly, as the court and legislation continue to direct DWR to add new and previously un-administered structures, the number of actual diversions records continues to increase. Lower values for Substitute Water Supply Plans (SWSP's) indicate the completion of some court cases where SWSP's had been used in the interim.

The maturing of South Platte well metering program has the number of enforcement orders higher than the previous year. The grace period for compliance ended and some orders were needed to enforce compliance. Additionally, more augmentation plans were adjudicated and came online increasing the number for administration and accounting.

Growth in the number of water wells administered by the Division of Water Resources reflects the fact that the State continues to complete a few thousand new wells each year. The number of interstate compact meetings the Department anticipates attending is 29 per year, down from 40 in FY 2015-16. This benchmark is closer to the three-year average and reflects that FY's 2014-16 were abnormally high due to arbitration and negotiation meetings to resolve Republican River Compact issues and Rio Grande Compact litigation.

### ***Strategy #3: Provide water for Colorado's environmental and recreational needs.***

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 foster a strong environment that includes healthy watersheds, rivers and streams, and wildlife. Environmental Programs help to implement critical actions identified in Colorado's Water Plan related to watershed health, the environment, and recreation. 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 9,267 miles of streams and on 480 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.

### Environmental Programs Inputs - FY 2011-12 to FY 2018-19

Input Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<i>Stream and Lake Protection</i>							
# of Instream Flows requested by stakeholders	28	38	43	47	38	30	30
<i>Watershed Protection and Restoration</i>							
# of Watershed Protection/Restoration project applications	29	32	44	44	36	40	44

#### **Discussion of Environmental Program Inputs**

# of Instream Flows requested by stakeholders - Each year at its annual workshop (held in January), the CWCB staff receives instream flow (ISF) recommendations from various entities, including state and federal agencies, local governmental entities and nonprofit organizations. Staff then prioritizes the recommendations, performs additional field work where necessary, performs a water availability analysis, conducts public outreach to stakeholders on the proposed instream flows, and consults with the Division of Water Resources on each stream, all with the goal of bringing the recommendations to the Board in January of the next year for appropriation. Circumstances that result in staff not bringing a recommendation to the Board in the following January include, but are not limited to: (1) a need for more data collection to support the recommendation; (2) a need for more time to work with stakeholders to discuss and address their concerns; and (3) inability of staff to complete the required steps listed above due to workload and staffing limitations. In the table above, the number of requests for each year includes recommendations from previous years that staff did not bring to the Board in the January following receipt of the recommendation. In addition to receiving recommendation for new instream flow appropriations, CWCB staff also receives offers of water rights to acquire (by donation, purchase, lease, loan or other contractual arrangement) for instream flow use. While acquired water rights typically do not increase the number of stream miles protected by instream flow, such rights bolster existing decreed instream flow water rights and sometimes increase the level of protection of Colorado's streams. The number of offers of water for potential inclusion in the Instream Flow Program is not included in the table above.

The CWCB's estimate for the Instream Flow and Natural Lake Level Program directly depends upon the number of requests received from recommending entities, including Colorado Parks and Wildlife, the U.S. Bureau of Land Management and the U.S. Forest Service. Over the past 10 years, recommending entities have averaged approximately 30 requests per year.

# of Watershed Protection/Restoration project applications – The grant programs, within the Watershed and Flood Protection Section, include the Colorado Watershed Restoration Grant Program, Colorado Healthy Rivers Fund, the Fish and Wildlife Resources Fund, and the Invasive Phreatophyte Control Program. All of these grant programs are informally referred to as the "Watershed Protection Program." In FY 2015-16, a total of 36 grant applications were submitted for all of the grant programs regardless of whether they were funded or not.

The estimate for Watershed Protection and Restoration Project Applications will have an overall increase because of the addition of Stream Management Plans as a grant category in the Colorado Watershed Restoration Program. In Fiscal Years 2013-14 and 2014-15, there was a spike in the amount of applications submitted related to flood recovery projects caused by the 2013 Colorado floods. The estimates for Fiscal Years 2016-17 and the estimates for 2018-19 are building on the trend that had been established in pre-flood conditions. The overall, long-term trend indicates that the number applications are increasing and will continue to do so over the next several fiscal years. An increase in funding for the Colorado Watershed Restoration Program will translate into more applications. This is largely dependent of the local capacity to support collaborative watershed groups and coalitions. The Colorado Healthy Rivers Fund was removed from the tax check-off program and will not return until 2017. There will not be a grant program for this fund until late 2017 or early 2018.

**Environmental Programs Outputs - FY 2011-12 to FY 2018-19**

Output Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
<i>Stream and Lake Protection</i>							
# of instream flow water rights managed by CWCB	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,618	Benchmark: 1,694	Benchmark: 1,705	Benchmark: 1,722	Benchmark: 1,742
	Actual: 1,593	Actual: 1,595	Actual: 1,613	Actual: 1,694 <sup>2</sup>	Actual: 1,712 <sup>2</sup>	Actual: N/A	Actual: N/A
<i>Watershed Protection and Restoration</i>							
# of watershed protection plans	Benchmark: N/A	Benchmark: N/A	Benchmark: 9	Benchmark: 9	Benchmark: 9	Benchmark: 12	Benchmark: 16
	Actual: 3	Actual: 9	Actual: 14	Actual: 14	Actual: 11	Actual: N/A	Actual: N/A
# of watershed protection projects	Benchmark: N/A	Benchmark: N/A	Benchmark: 21	Benchmark: 21	Benchmark: 21	Benchmark: 28	Benchmark: 28
	Actual: 11	Actual: 12	Actual: 15	Actual: 15	Actual: 28	Actual: N/A	Actual: N/A
Leveraging of watershed protection funding <sup>1</sup>	Benchmark: N/A	Benchmark: N/A	Benchmark: 4:1	Benchmark: 4:1	Benchmark: 4:1	Benchmark: 4:1	Benchmark: 3:1
	Actual: 4:1	Actual: 4:1	Actual: 4:1	Actual: 4:1	Actual: 4:1	Actual: N/A	Actual: N/A

\*Notes: <sup>1</sup>Not all projects in FY 2015-16 have been awarded funding; therefore, the leverage ratio is an estimate. <sup>2</sup>Contains both ISF and acquisitions.

**Discussion of Environmental Program Outputs**

The benchmark estimates listed in the table above are the year one and year three goals. The benchmarks are recommendations from CWCB staff. Benchmark goals depend on factors affecting both the CWCB staff and the requesting entities.

# of instream flow water rights managed by CWCB - As mentioned previously, the number of instream flow recommendations staff brings to the CWCB Board for appropriation each year varies as a result of numerous factors. In FY 2014-15, the CWCB was able to appropriate 10 new ISF water rights and 4 natural lake level water rights, achieving the benchmark for the year. While not counted in the instream flow water rights protected, the natural lake level water rights are significant as they are the first natural lake level water right additions to the Programs since 2002 and protect valuable aquatic habitat. In FY 2015-16, the CWCB was able to appropriate 18 new ISF water rights, including a thirty-three mile segment on the mainstem of the Dolores River. Prior to FY 2014-15, acquisitions

were not included, but the Program decided to include them in the totals because it provides a full accounting of the number of water rights managed. In addition, it is important to note that the number of instream flow water rights added by the Program each year does not directly correlate to the number of additional miles protected, since the length of existing decreed instream flow stream reaches ranges from less than one mile to 110 miles.

Staff's one and three year goals are estimates based on the success of instream flow recommendations in previous years. Staff estimates that approximately 10 additional instream flow water rights will be added to CWCB's portfolio each year.

Number of watershed protection plans and projects - In FY 2015-16, the actual number of watershed protection plans and projects exceeded the benchmark. It is anticipated that these efforts will grow in FY 2016-17. Increased funding for the Colorado Watershed Restoration Program will likely translate into more plans and projects. The capacity of local watershed groups will need to increase as well. These groups will need to locate match funding in order to leverage state funds.

Leveraging of watershed protection funding - The Watershed Protection Program is composed of four different grant programs. Most of these require a 1:1 match. All programs are exceeding match requirements by leveraging more money than that contributed by the CWCB. In the future, we can expect the match ratios for the entire Program to decrease to 3:1. This is likely to be caused by increased funding for the Colorado Watershed Restoration Program, which will result in more applicants with smaller quantities of matching funds being selected. Watershed Plans lead to project prioritization and implementation. In addition, it is anticipated that planning cycles followed by project cycles will be seen as applicants seek continued funding after a planning period. Planning efforts yield multiple project needs. It can be expected that project applications will exceed planning applications.

***Strategy #4: Protect the public health, safety, and welfare from negative outcomes associated with water-based natural disasters. This shall include protecting the public from the impacts of flooding, dam failures, and avalanches.***

The Department of Natural Resources has several programs that assist with implementation of this strategy. The Colorado Avalanche Information Center is appropriated 10.9 FTE to protect people, property, and local businesses from the impacts of avalanches by performing avalanche safety education and training, along with avalanche forecasting. The Colorado Water Conservation Board (CWCB) has 2.0 FTE who assist local communities to update floodplain maps as well as to implement flood mitigation projects. Additionally, the CWCB is the coordinating agency for the National Floodplain Insurance Program. The largest program in the Department related to this strategy is the 12.0 FTE Dam Safety Program. Given its relative size, as well as its source of funding (General Fund, along with about \$260,000 in federal FEMA funding), this is the only program which will be analyzed via metrics in this section. The below tables discuss the inputs and outputs for the Dam Safety Program. Please note that these data are tracked on a water year (WY), which runs from November 1 through October 31.

Input measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
# of new dams and modifications to existing dams	52	66	41	49	66	55	55
# of existing jurisdictional dams	1,956	1,960	1,962	1,967	1,993	1,993	1,995
# of observed incidents	14	51	11	14	39	14	14
# dam inspectors appropriated	12.0	12.0	12.0	12.0	12.0	12.0	12.0
# dam inspectors actual	10.61	12.0	12.0	12.0	12.0	12.0	12.0

Output Measures	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Estimate	FY 2018-19 Estimate
Approved plans for new dams or modifications	Benchmark: N/A	Benchmark: 52	Benchmark: 55	Benchmark: 52	Benchmark: 52	Benchmark: 53	Benchmark: 53
	Actual: 52	Actual: 66	Actual: 41	Actual: 48	Actual: 58	Actual: N/A	Actual: N/A
# of restriction orders in place	Benchmark: N/A	Benchmark: 140	Benchmark: 145	Benchmark: 146	Benchmark: 152	Benchmark: 158	Benchmark: 158
	Actual: 146	Actual: 155	Actual: 158	Actual: 162	Actual: 167	Actual: N/A	Actual: N/A
# of inspection reports	Benchmark: N/A	Benchmark: 533	Benchmark: 485	Benchmark: 550	Benchmark: 572	Benchmark: 595	Benchmark: 595
	Actual: 519	Actual: 537	Actual: 757 (169 by Volunteers)	Actual: 681	Actual: 641	Actual: N/A	Actual: N/A
# of updated emergency action plans	Benchmark: N/A	Benchmark: 86	Benchmark: 83	Benchmark: 83	Benchmark: 90	Benchmark: 99	Benchmark: 99
	Actual: 75	Actual: 78	Actual: 81	Actual: 117	Actual: 146	Actual: N/A	Actual: N/A

**Discussion of Public Safety Inputs and Outputs:**

Benchmarks in this section are generally based on the five year rolling average of actual performance.

# of observed incidents – There were 11 incidents in Water Year 2012-13 that occurred between November 1, 2012 and August 27, 2013. Forty additional incidents were recorded in WY 2013-13 during and as a result of the September 11-20, 2013 flooding. The increase in 2014-2015 reflects efforts to increase the frequently inspection for high and significant hazard class dams. Higher numbers in 2015-2016 reflect continued efforts to increase inspection frequency and a result of high moisture levels from the last few years. High moisture levels also revealed some low hazard dams that have now been added to the DWR roster of dams.

# of dam inspectors actual - Fluctuations in this metric are due to retirement/hiring cycles.

# of updated emergency action plans - The increase reflects efforts to emphasize the importance of emergency action plans and require updated information for emergency managers.

***Strategic Policy Initiative #3: Balance the responsible and efficient development of the State's energy and mineral resources with the protection of public health, safety, and welfare, and the environment including wildlife, from possible negative impacts associated with resource development.***

#### Discussion of the Strategic Policy Initiative

The State will achieve this initiative through:

- A robust, evolving regulatory scheme with some of the highest standards in the nation;
- Thorough, strategic inspection programs based on a risk profile of the individual sites; and
- Long-term reclamation requirements that ensure the restoration of land used for energy and mineral development back to beneficial use.

#### How to Measure Success

Success in achieving this initiative will be measured by the following:

- Outcome Measure #1: Percent of New Oil & Gas Locations within 1,000 feet of a Building Unit
- Outcome Measure #2: Percent of Permits Issued in Sensitive Wildlife Habitats included in a Wildlife Management Plan
- Outcome Measure #3: Percent of Wells Drilled Horizontally and/or from Multi-Well Pads
- Outcome Measure #4: Average Number of Calendar Days Between Complaint Receipt and Complaint Resolution
- Outcome Measure #5: Percent of Reclamation Inspections that Comply with OGCC Rules
- Outcome Measure #6: Number of Coal Program Acres Reclaimed
- Outcome Measure #7: Percent of Coal Mine Site Compliance
- Outcome Measure #8: Number of Minerals Program Acres Reclaimed
- Outcome Measure #9: Number of Minerals Mine Sites Reclaimed
- Outcome Measure #10: Percent of Minerals Mine Site Compliance
- Outcome Measure #11: Number of Abandoned Mine Incidents
- Outcome Measure #12: Additional Abandoned Mine Reclamation Funding Leveraged with Severance Tax Appropriations

#### Discussion of Actual Success and Past Performance

The following table provides metrics with which to analyze the Department's performance related to Strategic Policy Initiative #3.

<b>Oil and Gas Outcomes</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Permitting and Hearings</b>							
Percent of New Oil & Gas Locations within 1,000 feet of a Building Unit	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 19%	Benchmark: 19%
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: 21%	Actual: 20%	Actual: N/A	Actual: N/A
Percent of permits issued in Sensitive Wildlife Habitats that are included in a Wildlife Management Plan	Benchmark: N/A	Benchmark: 75%	Benchmark: 75%	Benchmark: 65%	Benchmark: 65%	Benchmark: 65%	Benchmark: 65%
	Actual: 53%	Actual: 53%	Actual: 47%	Actual: 50%	Actual: 55%	Actual: N/A	Actual: N/A
Percent of Wells Drilled Horizontally and/or from Multi-Well Pads	Benchmark: N/A	Benchmark: 85%	Benchmark: 90%	Benchmark: 90%	Benchmark: 90%	Benchmark: 95%	Benchmark: 95%
	Actual: 81%	Actual: 90%	Actual: 88%	Actual: 93%	Actual: 97%	Actual: N/A	Actual: N/A
<b>Monitoring and Enforcement</b>							
Average # of Calendar Days Between Complaint Receipt and Complaint Resolution	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 30	Benchmark: 30	Benchmark: 30
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: 23	Actual: N/A	Actual: N/A
<b>Restoration</b>							
Percent of Reclamation Inspections that Comply with OGCC Rules	Benchmark: N/A	Benchmark: 90%	Benchmark: 80%	Benchmark: 70%	Benchmark: 70%	Benchmark: 70%	Benchmark: 75%
	Actual: 87%	Actual: 91%	Actual: 92%	Actual: 68%	Actual: 75%	Actual: N/A	Actual: N/A

<b>Coal and Mineral Outcomes</b>	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Coal Regulatory Program</b>							
Number of Acres Reclaimed and Released from Financial Warranty	Benchmark: N/A	Benchmark: 500	Benchmark: 15,000	Benchmark: 2,000	Benchmark: 3,700	Benchmark: 2,000	Benchmark: 2,000
	Actual: 366	Actual: 4,994	Actual: 12,708	Actual: 3,490	Actual: 990	Actual: N/A	Actual: N/A
Percent of Mine Site Compliance	Benchmark: N/A	Benchmark: 98%	Benchmark: 98%	Benchmark: 99%	Benchmark: 99%	Benchmark: 99%	Benchmark: 99%
	Actual: 98%	Actual: 98%	Actual: 99%	Actual: 99%	Actual: 99.7%	Actual: N/A	Actual: N/A
<b>Minerals Regulatory Program</b>							
Number of Acres Reclaimed or Released from Financial Warranty	Benchmark: N/A	Benchmark: 1,800	Benchmark: 1,800	Benchmark: 1,800	Benchmark: 4,700	Benchmark: 2,500	Benchmark: 2,500
	Actual: 1,772	Actual: 2,199	Actual: 3,159	Actual: 4,671	Actual: 2,916	Actual: N/A	Actual: N/A
Number of Mine Sites Reclaimed to Beneficial Use	Benchmark: N/A	Benchmark: 110	Benchmark: 95	Benchmark: 95	Benchmark: 90	Benchmark: 85	Benchmark: 85
	Actual: 106	Actual: 43	Actual: 75	Actual: 88	Actual: 70	Actual: N/A	Actual: N/A
Percent of Active Mine Sites in Compliance	Benchmark: N/A	Benchmark: 96%	Benchmark: 96%				
	Actual: 95%	Actual: 95%	Actual: 98%	Actual: 94%	Actual: 96%	Actual: N/A	Actual: N/A

Coal and Mineral Outcomes	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Projected	FY 2018-19 Projected
<b>Inactive Mines Reclamation Program</b>							
Number of Abandoned Mine Incidents	Benchmark: N/A	Benchmark: 0					
	Actual: 2	Actual: 0	Actual: 0	Actual: 0	Actual: 2	Actual: N/A	Actual: N/A
Additional abandoned mine reclamation funding leveraged with severance tax appropriations.	Benchmark: N/A	Benchmark: \$800,000	Benchmark: \$700,000	Benchmark: \$700,000	Benchmark: \$500,000	Benchmark: \$500,000	Benchmark: \$500,000
	Actual: (new in FY13)	Actual: \$884,922	Actual: \$1,832,091	Actual: \$1,302,584	Actual: \$1,056,079	Actual: N/A	Actual: N/A

Percent of New Oil and Gas Locations within 1,000 feet of a Building Unit: This is a new measure starting with the FY 2016-17 performance plan. The OGCC has implemented a variety of setback rules since 2013 that govern oil and gas operations within 1,000 feet of a Building Unit, the definition of which includes residences, every 5,000 square feet of building floor area in commercial facilities, and every 15,000 square feet of building floor area in warehouses that are operating and normally occupied during working hours. The rules are intended to increase communication among oil and gas operators, surface owners, mineral owners, neighbors, and local governments, provide for advanced planning, reduce and mitigate nuisance impacts associated with oil and gas operations, and reduce overall conflict. The percent of Oil and Gas Location Assessment permits processed for locations that still fall within 1,000 feet of a Building Unit are a good measure of how the additional requirements discourage activity in these challenging areas. Approximately 21% and 20% of new locations in fiscal years 2014-15 and 2015-16, respectively, were within 1,000 feet of a Building Unit. The OGCC aims to reduce that percentage further to 19% in FY 2016-17. However, given the vast amount of oil and gas resources underneath urban areas in the northern Front Range, maximizing the distance from homes and managing the inherent conflict between residents and industry activity will be an ongoing challenge.

Percent of permits issued in Sensitive Wildlife Habitats that are included in a Wildlife Management Plan: Statutory changes in 2007 required the OGCC to encourage operators to use landscape level planning tools to provide for the orderly development of oil and gas fields that minimize surface disturbance and fragmentation of important wildlife habitat. The percent of oil and gas wells permitted in Sensitive Wildlife Habitats (SWHs) that are included in Wildlife Management Plans is a good measure of this landscape level planning. The OGCC's goal is 65%. Of the 680 permits issued in SWHs in FY 2015-16, 375 of them, or 55%, were included in existing Wildlife Management Plans. With low natural gas prices suppressing large scale industry development on the West Slope,

operators have not been pursuing any new Wildlife Management Plans, though the OGCC and Colorado Parks and Wildlife personnel continue to encourage such plan development.

Percent of Wells Drilled Horizontally and/or from Multi-Well Pads: The OGCC has met or exceeded its benchmark of 90% over the last few years; therefore, raising its benchmark to 95% for the share of wells that are drilled horizontally and/or from multi-well pads seems appropriate. Both practices minimize oil- and gas-related impacts to water resources, wildlife, and surface owners, by either reducing the number of wells needed to drain the resource or by reducing the number of surface disturbances. Since there will always be an opportunity for conventional development using single wells at lower drilling density, despite these plays or resource extraction opportunities becoming more difficult to find, raising the benchmark all the way to 100% would be inappropriate.

Average # of Calendar Days Between Complaint Receipt and Complaint Resolution: This metric was new to the OGCC's performance plan in FY 2015-16. After a multi-disciplinary team redesigned and strengthened the agency's complaint intake and response process early in 2015, the Division established a goal to resolve all complaints within an average of 30 days. Maintaining the Division's strong performance on this metric will continue to be a high priority, even as the Division reduces staffing to better align itself with lower revenue.

Percent of Reclamation Inspections that Comply with OGCC Rules: Compliance rates initially fell in FY 2014-15 as the OGCC modified its inspection process to include physically measuring the percent of vegetative cover and identifying different plant species. To pass a reclamation inspection, the site must have a uniform vegetative cover that reflects pre-disturbance or reference area forbs (an herbaceous flowering plant other than a grass), shrubs, and grasses with total plant cover of at least 80%, excluding noxious weeds.

In FY 2015-16, OGCC reclamation staff developed guidance documents and conducted numerous compliance outreach events to help operators achieve a higher rate of compliance with the stringent requirements of the reclamation rules. This guidance and outreach improved compliance sooner than expected, given the variable level of operator qualifications and resources. The Division will continue this level of assistance and outreach in FY 2016-17 to maintain or improve upon its FY 2015-16 performance, but will hold its goal steady at 70% for the near term.

Coal Program Acres Reclaimed: The number of reclaimed acres released from financial warranty varies significantly from year to year, largely due to factors outside the control of the Coal Regulatory program. An operator can reclaim mined lands and not request a release from financial warranty for many years; therefore, final acreage released is wholly dependent on operators submitting requests. The average number of acres released over the last seven years, starting with FY 2008-09, was approximately 3,700. While always subject to variability, the number of acres to be released during FY 2016-17 and FY 2018-19 is projected to remain within the historic average. The release of 990 acres in FY 2015-16 is below the seven year average and the benchmark that was estimated at 3,700 acres.

The reason the bond release number was lower than the benchmark is that operators only submitted nine small parcels for release in FY 2015-16. This number included the termination of jurisdiction of one revoked site.

Coal Program Mine Site Compliance: Mine site compliance is measured as the number of notices of violation issued divided by the total number of site inspections. This number has consistently been 98-99 percent due to the Coal Program staff communicating expectations with mine operators, adhering to the law and regulations during permitting actions, and attending to details during on-the-ground inspections. The mine site compliance rate over the next few years is projected to remain within the historic range of 98-99 percent. In FY 2015-16, there was 1 violation issued over 344 inspections, thus 99.7 percent of the inspections complied with the rules and regulations.

Minerals/Acres-Mine Sites Reclaimed: The number of acres/mine sites reclaimed to a beneficial use and released is the desired final outcome of the Minerals Regulatory Program. However, the number of reclaimed and released acres varies from year to year due to a number of factors mostly outside the control of the Division. This makes it very difficult to project how many acres will be reclaimed in a given year. For instance, the Division issues “Life of Mine” permits which allow mining operations to remain active or viable as long as mineral reserves are present. The overall "life of mine" can be different for each site and mining extraction timelines can vary widely within the “life of mine” period based on varying product demand cycles. The price of some volatile commodities, such as gold, silver and uranium can vary significantly from year to year resulting in operations going into temporary cessation (TC) of production. An operator can go into TC for a period of up to five years, not to exceed two successive terms, prior to being required to conduct final reclamation. This action allows operators to suspend production operations throughout periods of low commodity prices and not be forced to commence reclamation and close operations that initially required a significant capital investment to get into production. Once the mining resource is exhausted and mining officially ceases, operators have five years to reclaim the site.

Due to minerals production moderation after the economic recession, some operators focused their efforts on finalizing reclamation on their fully mined sites and requested release of those sites. In addition, an increase in staff reviews of prospecting notices of intent also contributed to the increase in site and acreage releases that occurred over the past five years. Based on the reclamation and release of 4,671 acres in FY 2014-15, the program expected to see a slight increase in both the number of sites released and the number of acres reclaimed to a beneficial use going forward. However, this number decreased by almost in half (2,916) in FY 2015-16, which may be an indication of increased demand for construction materials from mines overseen by the Minerals Regulatory Program due to new housing starts. The program could continue to see more utilization of permitted sites to meet this increased demand, resulting in less reclamation and therefore, less site releases. Based on recent trends, the expectation is that the number of sites reclaimed and acres released will remain steady through FY 2018-19.

Minerals Program Mine Site Compliance: The number of violations increased significantly during FY 2014-15 due to increased diligence by DMRS staff to ensure timely payment of annual fees and report submittals. Since those are technically considered violations, albeit administrative in nature, compliance in FY 2014-15 dropped to 94 percent. The program now acknowledges that inclusion of non-payment of annual fees in the “non-compliance” rate is misleading because the factor is based on violations per number of inspections and annual fees compliance is a separate process from site inspections. Therefore, beginning with FY 2015-16, annual fee violations will be included in “Total Number of Violations” under Enforcement Outputs, but not in this calculation for “% of Mine Site Compliance.” Only the violations resulting from site inspections will be used here to reflect the true intent of this measure. With that change, a compliance rate of 96 percent is projected through FY 2018-19. Data for FY 2015-16 seems to indicate that the number of issued violations is leveling off with 20 violations resulting from non-annual fee related issues. Although this is slightly less than the long term average, it is representative of the overall increase in compliance over the past several years and represents an improvement in the percent of mines in compliance over the previous year.

Inactive Mines/Mine Incidents: This measure reports the number of incidents of human rescue, injury, or death associated with inactive or abandoned mine hazards annually, which are infrequent, rare events. Animal-companion (pet), livestock and wildlife rescues, injuries or deaths are not included. Incidents are usually reported to local sheriff’s departments or in the media and the Inactive Mines Reclamation Program follows up at the site of the incident. Since 1955, there have been 22 deaths, 23 injuries, and 11 human rescues associated with abandoned mine hazards in Colorado. Through safeguarding and public awareness/education efforts, a target benchmark of zero incidents is forecast each year.

In FY 2015-16, the Inactive Mines Reclamation Program (IMRP) was made aware of a multiple fatality incident involving an open mine shaft in Boulder County. The incident is still under investigation, but apparently a vehicle travelling along a Forest Service road at night drove partially into a mine shaft, ejecting two passengers which resulted in fatalities. IMRP works with both private landowners and federal land managers to safeguard dangerous shafts like the one involved in this incident, but due to the volume of remaining hazards and the current funding levels this will take many decades.

Inactive Mines/Leveraged Funding: This measure tracks funding received from federal, private, and state partners that was used in combination with appropriated severance tax funds to successfully complete a number of reclamation projects within a fiscal year. Typical funding partners include the U.S. Forest Service, Bureau of Land Management, Colorado Department of Public Health and Environment, the Environmental Protection Agency, private landowners, and other private entities (in-kind project services provided by local counties, non-governmental organizations, and communities are not included). This measure highlights how relatively small amounts of program funding can support large, meaningful reclamation projects due to the effectiveness of leveraging outside funding.

Partner contributions continued to exceed expectations in FY 2015-16, driven by a continued emphasis on addressing both physical and environmental hazards at legacy sites. Additionally, many high dollar projects were completed in the FY 2015-16 reporting year. The program is continuing to project an overall reduction in partner funds in future years due to anticipated reductions in federal funds available through OSM, BLM and USFS, along with uncertainty related to funding available through CDPHE from EPA.

**DNR has four strategies to achieve Strategic Policy Initiative #3. These include:**

1. Use permitting to ensure mineral and energy development occurs consistent with Colorado's laws and regulations.
2. Use inspections to deter illegal activity and prevent negative impacts associated with resource development.
3. Use enforcement to stop current illegal behaviors and deter future illegal activity.
4. Address activities that occurred before the establishment of the State's regulatory programs, or for which no other responsible party can be found and made to address the issue, and which threaten the public welfare if left unaddressed.

**Strategy #1: Use permitting to ensure mineral and energy development occurs consistent with Colorado's laws and regulations.**

The Department of Natural Resources, through the Oil and Gas Conservation Commission (OGCC) and the Division of Reclamation, Mining, and Safety (DRMS), has a number of permitting programs and processes. Oil, gas, coal, and mineral development must be permitted prior to extraction. Permits specify performance standards and conditions to help protect the public and environment from adverse impacts. The OGCC uses permitting 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. Another important part of the permitting process for both OGCC and DRMS is for the developing party to post financial assurance that could be used to reclaim the development site in cases where an operator is unwilling and/or unable to reclaim the site. As part of the industry's advance planning process for oil and gas development, operators also submit applications for orders related to well spacing, statutory pooling, unitization, cost recovery, and other requests related to how oil and gas is developed. These applications for orders seek regulatory approval for how the resources may be developed.

### Permitting Inputs - FY 2011-12 to FY 2018-19

	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Projected	FY 2018-19 Projected
<b>Coal Regulatory Program</b>							
Number of Permitted Coal Sites Including Exploration	166	122	94	84	80	73	71
<b>Minerals Regulatory Program</b>							
Number of Active Minerals Mines Includes Prospecting	1,768	1,717	1,673	1,607	1,585	1,600	1,600
<b>Regulation of Oil and Gas Exploration and Production</b>							
Number of Drilling Permits Requested	4,541	3,893	4,399	3,880	3,317	3,550	4,000
Number of Applications for Orders	456	525	614	672	680	625	650

#### **Discussion of Permitting Inputs**

Coal Program Inputs – The number of permitted coal mines in Colorado is projected to decrease slightly between FY 2016-17 and FY 2018-19 as coal mines adjust to possible changes in the market and the Coal Program terminates jurisdiction of mine sites that have met all statutorily required reclamation obligations.

Minerals Program Inputs – The number of active minerals mines is anticipated to remain steady or increase slightly as the economy recovers and the demand for construction materials increases. Fallout, in the form of mine closures, from the 2008 economic downturn has likely peaked and a steady level of demand and permitting is expected moving forward as reflected in the numbers for FY 2016-17 and FY 2018-19.

Oil and Gas Inputs: Because oil and gas drilling activity is gradually increasing in response to improving oil prices, the OGCC is currently expecting the number of drilling permits requested in FY 2016-17 to exceed that of FY 2015-16. The number of applications for orders, which reached an all-time high in FY 2015-16, is expected to fall slightly in FY 2016-17 before increasing again in fiscal years 2017-18 and 2018-19.

**Permitting Outputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Coal Program</b>							
Number of Coal Permit Applications and Modifications Approved	Benchmark: N/A	Benchmark: 190	Benchmark: 212	Benchmark: 212	Benchmark: 200	Benchmark: 185	Benchmark: 170
	Actual: 182	Actual: 209	Actual: 209	Actual: 202	Actual: 173	Actual: N/A	Actual: N/A
Number of Acres Permitted by Coal Program	Benchmark: N/A	Benchmark: 172,000	Benchmark: 185,500	Benchmark: 175,000	Benchmark: 168,300	Benchmark: 168,000	Benchmark: 168,000
	Actual: 171,050	Actual: 185,515	Actual: 174,545	Actual: 169,990	Actual: 170,638	Actual: N/A	Actual: N/A
<b>Minerals Program</b>							
Number of Permit Applications and Modifications Approved	Benchmark: N/A	Benchmark: 450	Benchmark: 455	Benchmark: 500	Benchmark: 525	Benchmark: 500	Benchmark: 500
	Actual: 410	Actual: 508	Actual: 501	Actual: 606	Actual: 441	Actual: N/A	Actual: N/A
Number of Acres Permitted	Benchmark: N/A	Benchmark: 185,877	Benchmark: 185,877	Benchmark: 190,000	Benchmark: 190,000	Benchmark: 190,000	Benchmark: 190,000
	Actual: 181,854	Actual: 189,327	Actual: 189,634	Actual: 187,515	Actual: 187,744	Actual: N/A	Actual: N/A
<b>Regulation of Oil and Gas Exploration and Production</b>							
Number of Approved Drilling Permits	Benchmark: N/A	Benchmark: 4,000	Benchmark: 4,000	Benchmark: 4,200	Benchmark: 3,100	Benchmark: 3,000	Benchmark: 3,600
	Actual: 4,549	Actual: 3,643	Actual: 3,988	Actual: 3,662	Actual: 2,876	Actual: N/A	Actual: N/A

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
Ratio of Approved Drilling Permits to New Oil & Gas Locations	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 7:1	Benchmark: 7:1
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: 6:1	Actual: N/A	Actual: N/A
Median # of Days to Process Drilling Permits	Benchmark: N/A	Benchmark: 30	Benchmark: 30	Benchmark: 30	Benchmark: 45	Benchmark: 65	Benchmark: 65
	Actual: 29	Actual: 32	Actual: 53	Actual: 48	Actual: 72	Actual: N/A	Actual: N/A
Number of Orders Issued by the OGCC	Benchmark: N/A	Benchmark: 400	Benchmark: 400	Benchmark: 500	Benchmark: 514	Benchmark: 450	Benchmark: 500
	Actual: 391	Actual: 448	Actual: 526	Actual: 567	Actual: 621	Actual: N/A	Actual: N/A

### **Discussion of Permitting Outputs**

Coal Program Outputs: Permitting activities are projected to decrease slightly over the next three years as operators adjust to changes in the coal market. Additionally, the coal program has and is in the process of terminating jurisdiction on several reclaimed and revoked coal sites. As a result, the program’s permitting output numbers are projected to decrease accordingly. Acreage numbers are also projected to decrease slightly due to the termination of jurisdiction of reclaimed and revoked sites.

Minerals Program Outputs: The increase in permitting actions in FY 2014-15 was primarily driven by revisions to existing permits and numerous permit transfers as companies reorganized and consolidated. As a result of these changes in mine operators on existing sites, the overall permitted acres remained relatively constant. Two things that could have an impact going forward are falling metal commodity prices and continued increases in construction demand.

- Strong base metal prices during FY 2012-13 increased permitting and prospecting associated with smaller metal mines (silver, lead, zinc, and gold) and generated numerous inquiries about milling and mining opportunities in Colorado. However, these smaller operations have had more difficulty as prices decline. The decline in commodity prices may also reduce the number of prospecting submittals related to the base metals.

- On the construction side, if Colorado’s economy continues to stay strong and population growth projections are correct, it’s expected that demand for sand and gravel construction materials will increase as the pace of economic growth picks up. The demand for these materials is very closely related to an increased demand for housing and commercial developments. This projected trend is now occurring with increased housing prices, increasing rental prices, and accompanying shortages of affordable housing. Many projects that were mothballed after the fallout of 2008 are now being resurrected as housing prices and availability are under pressure. As these projects move forward, it is anticipated that increased construction on the housing side will lead to a greater demand for construction materials, thereby leading to an increase in mine permitting. Clearly this increase in housing starts did not generate the anticipated increase in permitting actions during FY 2015-16. It is now anticipated that the program will begin to see this effect starting in FY 2016-17 through FY 2018-19.

Number of Approved Drilling Permits: Due to a decline in oil prices, drilling permit requests, and permit staffing levels, combined with an increase in the complexity of the permits, the OGCC approved about 800 fewer drilling permits in FY 2015-16 than in the prior year. However, given that the number of drilling permit requests increased significantly in the latter part of CY 2016 as a result of improved commodity prices and the general expectation that they will continue to improve, or at least stabilize at higher levels, the OGCC has set its FY 2016-17 and FY 2018-19 benchmarks for approved drilling permits at 3,000 and 3,600, respectively.

Ratio of Approved Drilling Permits to New Oil and Gas Locations: This is a new measure starting with the FY 2016-17 performance plan. The ratio of new well permits to new oil and gas locations is a good indicator of the effectiveness of OGCC rules that are designed to encourage or require, in some instances, the consolidation of wells and facilities on fewer locations, thus minimizing total surface disturbance and improving efficient use of the locations. In FY 2015-16, for every 6 new wells permitted, one new oil and gas location was approved (6:1), on average. The OGCC aims to improve that ratio to seven and one (7:1) in FY 2016-17.

Median Number of Days to Process Drilling Permits: As new oil and gas development increasingly occurs in urbanizing areas, the public comment portion of the permitting process has grown in importance. OGCC staff now work through a greater number of conflicts between different parties and a greater number of requested conditions of approval for the Oil and Gas Location Assessments, which pushed the median processing time for the related permits to over 70 days in FY 2015-16. The Division’s goal for the next few years, however, is to reduce the median processing time to 65 days.

Number of Orders Issued by the OGCC: The number of orders – for matters such as drilling and spacing units and enforcement – that the Commission projects it will issue in FY 2016-17 reflects both a reduced level of staffing and a downturn of drilling activity in much of CY 2016. The Division has increased its benchmark for FY 2018-19, however, to reflect an expected increase in demand for drilling and spacing units and a possible return to normal staffing levels.

**Strategy #2: Use inspections to deter illegal activity and prevent negative impacts associated with resource development**

The Division of Reclamation, Mining, and Safety and the Colorado Oil and Gas Conservation Commission both have active inspection programs. 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. The OGCC annually conducts about 40,000 inspections on oil and gas facilities, including wells, tank batteries and multi operational locations. These inspections help to ensure that operators are complying with OGCC regulations and permit conditions. The OGCC also employs a risk-based approach to its inspection program, prioritizing locations that have a higher risk profile based on environmental and demographic data. Members of the OGCC’s field inspection group are assigned to, and work in, specific geographic areas throughout the state. Field inspectors physically inspect the locations and develop a field inspection report for each visit. The field inspection report is sent to oil and gas operators and may identify corrective actions required to bring a facility into compliance with OGCC rules and permit conditions.

The inspection process in both DRMS and OGCC 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 to ensure reclamation was completed as required. Inspections are used to ensure permit conditions are being followed, environmental resources are protected, onsite impacts are minimized, and offsite impacts are prevented.

**Inspection Inputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Coal Regulatory Program</b>							
Number of Known Required Inspections	374	367	330	328	328	316	300
<b>Minerals Regulatory Program</b>							
Number of Known Required Inspections	442	430	419	440	440	500	500
<b>Regulation of Oil and Gas Exploration and Production</b>							
Total # of Active Wells	47,860	50,909	52,337	53,608	53,651	54,300	56,000

## **Discussion of Inspection Inputs**

**Coal Program Inputs:** Required inspections are projected to decrease slightly in FY 2016-17 to 316. Additionally, the number of required inspections is projected to decrease to 300 by FY 2018-19, due to the termination of jurisdiction of several permitted and revoked mine sites.

**Minerals Program Inputs:** The number of inspections is expected to go up over the next few years as new mines come online triggering more pre-operational inspections. Recently, the Minerals Program has also instituted a team approach to reviewing and inspecting larger more complex designated mining operations. This has led to an increased inspection frequency on those sites. There are approximately six of these operations statewide which will lead to at least 18 additional inspections for these sites from previous years.

Inspections performed by the Minerals Program are expected to change further over the next several years. Currently, every site must be inspected at least once every four years with designated mining operations being inspected every year. Recent review of site inspections suggests that a new procedure for conducting inspections should be implemented to ensure that all sites are being inspected to cover liability commensurate with the size and complexity of the operations. This new inspection procedure will be implemented at a majority of sites by FY 2018-19.

**Oil and Gas Inputs:** Between FY 2013-14 and FY 2014-15, the total number of active oil and gas wells in Colorado grew by nearly 1,300. In FY 2015-16, however, the net rate of growth slowed to 43; although 1,045 new wells were spud during the year, many older vertical wells were plugged due to the OGCC's Horizontal Offset Policy, which requires operators to test and repair or plug, as needed, all wells within 1,500 feet of a proposed horizontal well to prevent communication between wellbores and formations and to protect groundwater resources. In many cases, operators find it more economic to plug an old low- or non-producing well than to repair it. Given the outlook for a modest recovery in oil prices and the fact that many of the older vertical wells proximate to horizontal drilling activity have already been plugged by now, the OGCC anticipates a slightly higher rate of growth through FY 2018-19.

### Inspection Outputs - FY 2011-12 to FY 2018-19

	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Projected	FY 2018-19 Projected
<b>Coal Regulatory Program</b>							
Number of Inspections Completed	Benchmark: N/A	Benchmark: 450	Benchmark: 450	Benchmark: 425	Benchmark: 375	Benchmark: 350	Benchmark: 325
	Actual: 443	Actual: 455	Actual: 382	Actual: 362	Actual: 344	Actual: N/A	Actual: N/A
<b>Minerals Regulatory Program</b>							
Number of Inspections Completed	Benchmark: N/A	Benchmark: 685	Benchmark: 640	Benchmark: 650	Benchmark: 660	Benchmark: 680	Benchmark: 700
	Actual: 683	Actual: 604	Actual: 638	Actual: 616	Actual: 650	Actual: N/A	Actual: N/A
<b>Regulation of Oil and Gas Exploration and Production</b>							
Number of Inspections Completed	Benchmark: N/A	Benchmark: 12,000	Benchmark: 22,000	Benchmark: 30,000	Benchmark: 37,800	Benchmark: 39,900	Benchmark: 39,900
	Actual: 15,126	Actual: 18,725	Actual: 28,439	Actual: 36,421	Actual: 41,285	Actual: N/A	Actual: N/A
Average Inspection Frequency (years between inspections)	Benchmark: N/A	Benchmark: 3.0	Benchmark: 2.5	Benchmark: 1.8	Benchmark: 1.5	Benchmark: 1.4	Benchmark: 1.4
	Actual: 3.2	Actual: 2.7	Actual: 1.8	Actual: 1.5	Actual: 1.3	Actual: N/A	Actual: N/A
Number of High Risk Inspections	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 5,500	Benchmark: 5,500
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: 4,743	Actual: N/A	Actual: N/A
Number of Water Quality Samples on the OGCC Website	Benchmark: N/A	Benchmark: 24,050	Benchmark: 25,500	Benchmark: 29,000	Benchmark: 31,000	Benchmark: 32,400	Benchmark: 36,400
	Actual: 23,532	Actual: 24,518	Actual: 26,300	Actual: 28,053	Actual: 30,393	Actual: N/A	Actual: N/A

## **Discussion of Inspection Outputs**

**Coal Program Benchmarks:** Actual inspection numbers exceed the known required input measure by inclusion of additional inspections also required but not foreseen, for citizen complaints, acreage release assessments, compliance or violation follow-up and inspection of exploration projects. Inspection numbers will also vary as mines temporarily cease or resume production within a fiscal year. In FY 2015-16, the 344 actual inspections completed exceeded the known required inspections (328, as shown in the Inspections Input table) due to these reasons, but the benchmark value predicted was higher than what actually occurred.

The number of total inspections for FY 2016-17 is projected to decline slightly to 350 inspections. As a result of some coal mine sites being reclaimed and jurisdiction over those sites being “terminated” (removed from oversight of the Coal Regulatory Program), the total number of inspections for FY 2018-19 is projected to continue to decline to an estimated 325.

**Minerals Program Benchmarks:** Inspection output numbers, as compared to the known required inspections shown as a Minerals Program input, vary due to inclusion of additional inspections (these are also required but not foreseen) for citizen complaints, permitting pre-operational inspections, and acreage release inspections. Additionally, inspections can decrease due to mines that temporarily cease production within a fiscal year. In FY 2014-15, the 616 completed inspections significantly exceeded the known required inspections of 440. However, the 616 completed inspections fell a bit short of the predicted benchmark of 650 inspections. Factors contributing to the FY 2014-15 number of inspections included the procedural change made in the program to increase inspection frequency on six large, more complex metal mines as well as numerous succession of operator changes, which each require an inspection. During FY 2015-16, inspections did increase to 650 (vs. 616 in FY 2014-15) and almost met the benchmark of 660. The number of completed site inspections at minerals mines is anticipated to increase through FY 2018-19 due to implementation of a new inspection procedure in July of 2016 which will adjust inspection frequency according to size and complexity of certain mines. The FY 2018-19 benchmark for inspections is also based on additional pre-operation inspections for anticipated new permit applications.

**Oil and Gas Benchmarks:** The OGCC’s field inspection unit grew by 3.0 FTE in FY 2015-16, consistent with the recommendations of the 2014-15 Governor’s Task Force on State and Local Regulation of Oil and Gas Operations. As a result of additional staffing, the FY 2015-16 inspection goal was increased to 37,800, and the OGCC exceeded this goal by nearly 10%. It also exceeded its “Average Inspection Frequency” goal by 13%. The inspection goals for fiscal years 2016-17 and 2018-19 reflect slightly reduced inspection staffing, as the agency attempts to better align itself with a reduced revenue stream, as well as its shift in priority towards higher risk locations, which are often more time consuming due to drive time and other factors.

*High risk inspections* are inspections conducted on oil and gas locations that are ranked high by a systematic, automated GIS-based model that relies on statewide environmental, geographic, and demographic data from the Colorado Division of Water Resources, Colorado Parks and Wildlife, Colorado Department of Local Affairs, and U.S. Census Bureau. The model uses the data to calculate a

relative risk level (RRL), between 15 and 75, for each well in the state. Factors used to calculate risk are: population density and urbanization, wildlife and water, time since last inspection, age of facility, reported spills on location, and corrective actions associated with the location. Risk levels are automatically updated as the risk factors change over time. Therefore, OGCC's database provides nearly real-time data for analysis, tracking, spatial display, and workload prioritization on the OGCC's interactive map. Wells with a RRL of 45-75 are considered to be high priority; and the OGCC's goal is to inspect all of them, currently estimated at 5,500, on an annual basis.

As stated in current rules, the OGCC requires water quality testing prior to and after drilling and completion operations. According to expected levels of industry activity in the coming three years, the size of the OGCC's water quality database is projected to grow to over 32,400 water samples in FY 2016-17 and exceed 36,400 samples in FY 2018-19.

### **Strategy #3: Use enforcement to stop current illegal behaviors and deter future illegal activity**

Enforcement is used for violations of the statutes or rules. 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 mineral and energy development. To the extent possible, the Department will work with operators to correct minor problems found either as a result of routine inspections or in response to a citizen complaint.

In the Division of Reclamation, Mining, and Safety, the Mined Land Reclamation Board and the Division share the authority to determine when a permit is in violation of statutes, rules, or regulations. Coal Program staff are authorized to directly issue non-compliance violations to mine operators and the Mined Land Reclamation Board addresses appeals to those violations. The Minerals Program staff must present alleged violations to the Mined Land Reclamation Board which then issues all legal decisions, except in the case of cease and desist orders where there is an emergency.

The OGCC issues warning letters and notices of alleged violation (NOAVs) to operators who have violated regulatory or permit requirements. Both approaches identify the factual and legal bases underlying an alleged violation and require corrective or remedial action to remedy the alleged violation. The OGCC seeks monetary penalties for NOAVs. When the OGCC seeks a monetary penalty, the NOAV may be resolved through settlement decrees or administrative orders.

**Enforcement Inputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Coal Regulatory Program</b>							
Number of Citizens Complaints	4	5	0	0	0	5	5
<b>Minerals Regulatory Program</b>							
Number of Citizens Complaints	28	19	15	23	15	20	20
<b>Regulation of Oil and Gas Exploration and Production</b>							
Number of Citizen Complaints	245	194	197	318	343	350	350
Number of Warning Letters Issued	N/A	N/A	N/A	N/A	N/A	140	140
Number of NOAVs Issued	172	178	259	173	83	80	80

**Discussion of Enforcement Inputs**

Coal Program Inputs – The Coal Program expects the number of citizen complaints to be approximately 5 per year. The three consecutive years of zero complaints likely reflects the Coal Program’s high rate of compliance and a slowdown in new permitting actions. Going forward we expect the number of complaints to be more consistent with historic trends particularly due to the fact that we will see an increase in bond release applications in the next two years. Citizens that own affected lands are given the opportunity to participate in the bond release process and this may result in an increase number of complaints.

Minerals Program Inputs – The Minerals Program is estimating that citizen complaints will continue at recent levels of approximately 20 per year. Common complaints relate to off-site impacts to adjacent landowners (dust, noise), as well as reporting mining activity that does not have signage posted to demonstrate it is a permitted operation.

Oil and Gas Inputs – Based on the 343 actual citizen complaints in FY 2015-16, as well as growth in the total number of active oil and gas wells, the OGCC anticipates receiving about 350 complaints per year in FY 2016-17 and FY 2018-19.

The number of *warning letters issued* and the number of *Notice of Alleged Violations (NOAVs) issued* are new workload measures for the enforcement process. The OGCC typically issues warning letters for Class I and II violations that do not result in actual adverse environmental impacts and are not repeat offenses. NOAVs are generally reserved for Class III violations, for Class I or II violations that result in actual adverse environmental impacts, and for operators who ignore warning letters or engage in a pattern of violations. Successful use of warning letters for less consequential violations results in operators returning to compliance and saves resources for the more time-intensive formal enforcement process that an NOAV initiates.

A reliable tracking system for warning letters did not exist until midway through FY 2015-16, but the division estimates that approximately 140 were issued during the entire fiscal year and is using that as a basis for its FY 2016-17 and 2018-19 projections.

The number of NOAVs issued were lower in FY 2015-16 because for a number of operators who had compliance issues related to regulatory reporting over a period of time, the OGCC was able to secure a global resolution through one NOAV instead of multiple individual NOAVs. The Division is uncertain as to whether this trend will continue over the next few years.

**Enforcement Outputs - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Coal Regulatory Program</b>							
Number of Notices of Violations Issued	Benchmark: N/A	Benchmark: 3	Benchmark: 8	Benchmark: 6	Benchmark: 5	Benchmark: 5	Benchmark: 5
	Actual: 8	Actual: 7	Actual: 5	Actual: 3	Actual: 1	Actual: N/A	Actual: N/A
<b>Minerals Regulatory Program</b>							
Number of Violations Issued	Benchmark: N/A	Benchmark: 26	Benchmark: 26	Benchmark: 30	Benchmark: 30	Benchmark: 30	Benchmark: 30
	Actual: 37	Actual: 37	Actual: 34	Actual: 48	Actual: 52 (32 for annual fees)	Actual: N/A	Actual: N/A
<b>Regulation of Oil and Gas Exploration and Production</b>							
Percent of Warning Letters Resolved without Formal Enforcement	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 75%	Benchmark: 80%
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A
Number of Enforcement Orders Issued	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 69	Benchmark: 60	Benchmark: 60
	Actual: 14	Actual: 25	Actual: 53	Actual: 38	Actual: 75	Actual: N/A	Actual: N/A
Number of NOAVs Resolved	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 152	Benchmark: 80	Benchmark: 80
	Actual: 87	Actual: 39	Actual: 116	Actual: 89	Actual: 100	Actual: N/A	Actual: N/A

## **Discussion of Enforcement Outputs**

Coal Program Outputs: Enforcement activities are entirely dependent on operators' adherence to the law and regulations. The decrease in violations from three in FY 2014-15 to one in FY 2015-16 can be attributed to improved compliance efforts by the mine operators. The Division attempts to reduce notices of violations through adequate enforcement and increased efforts to educate mine operators about program requirements. The Coal Program expects the number of notices of violation to remain similar to the historic trend. The Coal Program projects that it will issue five notices of violation in both FY 2016-17 and FY 2018-19.

Minerals Program Outputs: The Division utilizes a progressive discipline approach when implementing enforcement procedures. For instance, issues that are not obvious illegal mining activities or are not causing off-site environmental impact are treated as problems during initial observance and citation. If these problems go unresolved, they can become violations upon follow-up inspections. The number of violations increased significantly during FY 2014-15 due to increased diligence in collection of past due annual fees. In July 2014, the program instituted a new procedure with respect to annual fee collection. Specifically, the policy of sending multiple notices for past due fees was eliminated and enforcement procedures for past due fees were initiated immediately upon failure to submit dues timely. This led to what the program hoped would be a temporary increase in the number of violations as operators adjusted to the new policy and paid their fees on time. Unfortunately, the program continues to encounter operators who struggle to adhere to this stricter policy.

In another effort to assist operators in timely filing of annual fees, the Minerals Program implemented electronic filing and payment of annual fees in FY 2015-16. The program believes this will assist operators in timelier submittal of annual fees and reports which will reduce the number of violations issued as a result of non-payment or late payment. Finally, the Minerals Program has worked through the majority of stale prospecting sites resulting in the remaining sites being current in their activities and on track to seek release once prospecting activities are completed. As a result of these trends, it is expected that the number of violations will remain constant at around 30 over the next few fiscal years (a slight decrease over recent actual performance).

Oil and Gas Outputs: The percent of warning letters resolved without formal enforcement is a new output measure for FY 2016-17. As mentioned above in the input section, warning letters are used as an attempt to quickly bring operators into compliance for first-time Class I and II violations and avoid the NOAV process, which often results in large fines for the operator and generally consumes significant amounts of staff resources. The Division's initial goal is to achieve compliance through about 75% of the warning letters it issues.

NOAVs are generally resolved through enforcement orders, which assess penalties and require corrective actions. The number of enforcement orders issued and the number of associated Notices of Alleged Violations (NOAVs) that were resolved through those

orders grew to 75 and 100, respectively in FY 2015-16, partly due to gains in enforcement staff over the last few years, and partly due to process improvement.

**Strategy #4: Address activities that occurred before the establishment of the State’s regulatory programs, or for which no other responsible party can be found and made to address the issue, and which threaten the public welfare if left unaddressed.**

The Inactive Mine Reclamation Program in the Division of Reclamation, Mining, and Safety 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 federal 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 physical hazards (i.e., open mine shafts and steep high walls) associated with past mining activities, which estimated that 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 of 1982. Approximately 10,058 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, which is sourced from federal fees collected on Colorado coal production. 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. Between 2006 and July 2014, Colorado received additional grant funds from the federal Office of Surface Mining (OSM) totaling \$52 million, which allowed the program to safeguard and reclaim approximately 300-400 hazardous abandoned mine openings each year over that span of eight years. OSM funding returned to pre-2006 levels starting in FY 2016-17, which allows the program to safeguard its historic level of approximately 200 hazardous openings per year. The Inactive Mine Reclamation Program also conducts water quality improvement projects which were estimated to number 320 in 2011 and 25 of those sites have been addressed through 2016.

The OGCC annually spends about \$445,000 plugging orphaned wells and remediating, reclaiming, and re-vegetating orphaned oil and gas sites. This work helps to mitigate the safety and environmental risks associated with orphaned wells and facilities. The backlog of orphaned sites grows annually, because identifying the location of orphaned wells is an ongoing process and many additional sites in need of remediation are also identified annually.

### Inputs Related to Historic Impacts - FY 2011-12 to FY 2018-19

	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Projected	FY 2018-19 Projected
<b>Division of Reclamation, Mining, and Safety (Inactive Mines Program)</b>							
Estimated inventory of remaining historic mine site hazards	14,539	14,084	13,639	13,242	12,956	12,681	12,206
Number of legacy mining water quality or env. impacts to address	320	313	309	300	295	290	282
<b>Regulation of Oil and Gas Exploration and Production</b>							
Number of Spills & Releases of E&P Waste	485	382	753	719	558	560	560

#### **Discussion of Historic Impact Inputs**

DRMS Inactive Mines Inputs: The estimates shown provide a forecast of the number of historic mine site hazards and water/environmental quality impacts that remain for safeguarding/remediation. It takes into account existing feature inventories, expected funding levels, staff resources, and the timing of grants and projects associated with federal land management agencies and Colorado Department of Public Health and Environment funding and initiatives. Over the next five years, the pace of addressing hazardous-feature reclamation is expected to slow due to planned decreases in federal funding (a pay-back of federal set aside funds that caused a significant increase in grant funding from the Office of Surface Mining has ended). The annual number of environmental restoration projects remaining to address assumes completion of between four and five projects per year through FY 2018-19. These projects may be impacted by federal programmatic and administrative reviews after the Gold King mine incident and their decisions on how best to proceed.

OGCC Inputs: Where spills or contamination occurs, the OGCC's environmental group ensures that appropriate remediation activities are undertaken by the operator. The environmental group had been overseeing the remediation of 300 to 500 new spills and releases annually up until FY 2013-14 when the reporting threshold was lowered by statute, causing the annual number of spills and releases reported to increase to over 700. Moving forward, the OGCC anticipates responding to somewhere between 500 and 600 spills and releases annually.

**Outputs Related to Historic Impacts - FY 2011-12 to FY 2018-19**

	<b>FY 2011-12 Actual</b>	<b>FY 2012-13 Actual</b>	<b>FY 2013-14 Actual</b>	<b>FY 2014-15 Actual</b>	<b>FY 2015-16 Actual</b>	<b>FY 2016-17 Projected</b>	<b>FY 2018-19 Projected</b>
<b>Division of Reclamation, Mining, and Safety (Inactive Mines Program)</b>							
Number of Abandoned Mining Hazards Mitigated	Benchmark: N/A	Benchmark: 345	Benchmark: 374	Benchmark: 400	Benchmark: 275	Benchmark: 250	Benchmark: 225
	Actual: 455	Actual: 445	Actual: 397	Actual: 286	Actual: 300	Actual: N/A	Actual: N/A
Number of Acres Reclaimed	Benchmark: N/A	Benchmark: 205	Benchmark: 200	Benchmark: 150	Benchmark: 100	Benchmark: 90	Benchmark: 90
	Actual: 220	Actual: 169	Actual: 181	Actual: 114	Actual: 112	Actual: N/A	Actual: N/A
Number of Legacy mining water quality/ environmental impacts addressed	Benchmark: N/A	Benchmark: 10	Benchmark: 7	Benchmark: 5	Benchmark: 5	Benchmark: 4	Benchmark: 4
	Actual: 7	Actual: 4	Actual: 9	Actual: 5	Actual: 6	Actual: N/A	Actual: N/A
<b>Regulation of Oil and Gas Exploration and Production</b>							
Wells Plugged and Abandoned and Sites Reclaimed by the OGCC	Benchmark: N/A	Benchmark: 25	Benchmark: 20	Benchmark: 18	Benchmark: 20	Benchmark: 20	Benchmark: 20
	Actual: 25	Actual: 19	Actual: 12	Actual: 29	Actual: 19	Actual: N/A	Actual: N/A
Remediation Plans Completed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 400	Benchmark: 550	Benchmark: 400	Benchmark: 400
	Actual: 733	Actual: 500	Actual: 466	Actual: 638	Actual: 528	Actual: N/A	Actual: N/A

## **Discussion of Historic Impact Outputs**

**DRMS Inactive Mines Benchmarks:** The benchmarks shown provide a forecast of the outputs anticipated in future grant and project construction cycles. It takes into account existing feature inventories, expected funding levels, staff resources, and the timing of grants and projects associated with federal land management agencies and Colorado Department of Public Health and Environment funding and initiatives. Actual hazardous features mitigated were above the benchmark in FY 2015-16 due to a couple of large scale projects that were completed during FY 2015-16, in addition to some projects begun in FY 2014-15, but were completed and counted in FY 2015-16. The majority of large surface acreage hazardous sites have been addressed, so over the past five years the actual acres reclaimed numbers have decreased. The program continues to address the numerous quantities of hazardous openings and other small acreage sites that remain. The six legacy environmental projects completed in FY 2015-16 exceeded the benchmark for that measure due to construction schedules allowing the additional project to be completed.

Over the next five years, hazardous-feature reclamation outputs are expected to decline due to planned decreases in federal funding. The annual number of environmental restoration projects is shown to remain steady at four projects per year through FY 2018-19. These projects may be impacted by federal programmatic and administrative reviews after the Gold King mine incident and their decisions on how best to proceed.

**OGCC Benchmarks:** The OGCC raised its benchmark to 20 plugging and site reclamation projects starting in FY 2015-16, because the recent industry downturn provided the Division with quicker access to service companies and other oil and gas contractors. The number of projects actually completed is heavily dependent upon their respective costs and complexity. The annual appropriation for this work is \$445,000.

For remediation plans completed, the benchmarks set for fiscal years 2016-17 and 2018-19 are lower than the actual number of remediation plans completed in FY 2015-16, because a likely near-term reduction in facility improvements by operators should result in a decrease in the number of remediation plans submitted to the OGCC.