

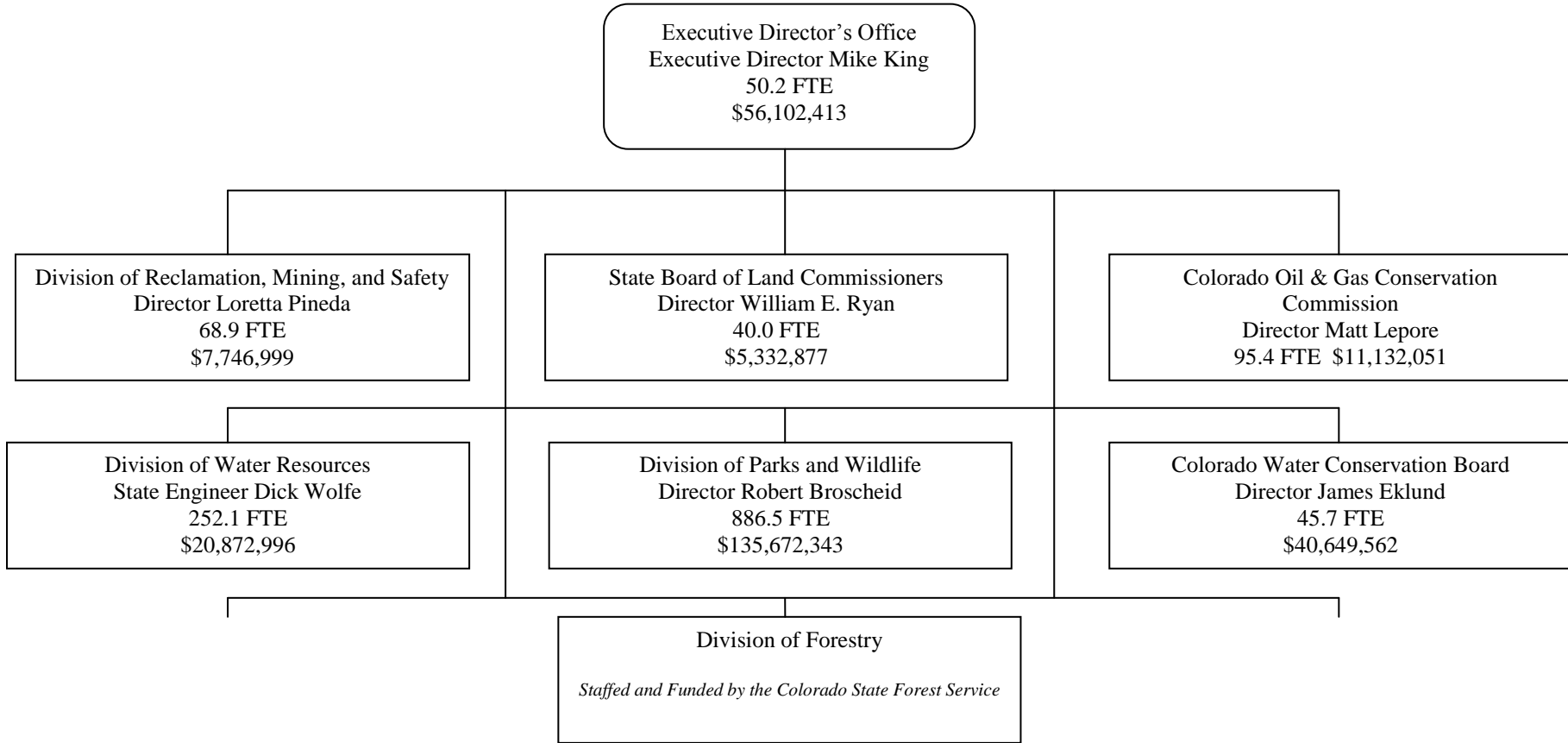


DEPARTMENT OF
**NATURAL
RESOURCES**

Performance Plan for Fiscal Year 2014-15

November 1, 2013

Colorado Department of Natural Resources



1,438.8 FTE

\$277,509,241 Total Funds

\$24,978,508 GF

\$215,177,148 CF

\$8,774,311 RF

\$28,579,274 FF

November 2013. Figures shown are FY 2013-14 Appropriations

Governor
John Hickenlooper

Executive Director
Mike King

Executive Director's Office
50.2 FTE \$51,102,413 Total
\$5,748,808 GF \$38,847,728 CF
\$8,227,724 RF \$3,278,153 FF
(Includes central appropriations and Special Bills) FY2013-14

Deputy Director of Public Policy
Robert Randall

Budget
3.0 FTE
Bill Levine, Director

Chief Operating Officer
Kim Burgess

Colorado Avalanche Information Center
Ethan Greene,
Director
8.4 FTE

DIVISIONS

Assistant Director for Water and Energy Policy
Ginny Brannon

Legislative Affairs
Andy White
Lauren Ris

Coordinator for Water Issues
Madeline West

Assistant Director for Communications
Todd Hartman

Assistant Director for DOW, Parks, SLB, Forestry, and GOCO Affairs
Lisa Dale

Human Resources
10.0 FTE
Tina Miller, Director

Accounting and Purchasing
19.0 FTE
Susan Borup

Administrative Services
3.0 FTE

Governor's Office of Information Technology

Information Technology Services

November, 2013

**COLORADO DEPARTMENT OF NATURAL RESOURCES
STRATEGIC OPERATIONAL PLAN – FISCAL YEAR 2014-15**

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A Letter from Mike King, Executive Director of the Colorado Department of Natural Resources

I. OVERVIEW

Colorado is incredibly blessed with natural resources. An important part of our identity as Colorado citizens is our majestic mountains, our beautiful outdoor landscapes, and our diverse wildlife and terrains. Natural resources also play an integral role in Colorado's economic wellbeing. Water is an essential input for agriculture and many other industries. Hunting, fishing, and wildlife viewing bring an estimate economic impact of \$2.5 billion (including secondary impacts) and support an estimated 33,800 jobs in Colorado. Outdoor recreation at state parks brings another \$571 million of economic impact to Colorado communities. Finally, energy and mineral resources also play an important role in Colorado's economy. In 2011, the mineral and energy industry produced over \$13.0 billion worth of oil and gas, coal, and other minerals. Similarly, in 2011, roughly 27,900 people were employed in the mining and logging industries in Colorado (a 14.3 percent increase over the 24,400 people who were employed in such natural resource fields in 2010). To help sustain and improve upon these benefits, the Department of Natural Resources is becoming more efficient, as outlined later in this section. In limited cases, where more resources would assist the Department in better operating its programs, decision items have been submitted. In particular, more FTE are being requested for the Division of Water Resources to respond to the growing number of water rights holders, assure appropriate delivery of water to senior water rights holders and downstream states per interstate water compacts, and address the growing complexity of water law.

II. PREVIEW AND KEY CHALLENGES

Looking more broadly than FY 2014-15 and our immediate list of decision items requests, I believe there are several key challenges facing the Department of Natural Resources and the State of Colorado:

Challenge #1: Water Supply – The Colorado Water Conservation Board completed a comprehensive update to the Statewide Water Supply Initiative (SWSI 2010), which examined Colorado's projected water supplies and water demands. SWSI 2010 concluded that Colorado faces a shortage of water for meeting the state's consumptive and nonconsumptive water needs. SWSI 2010 also concluded that in order to meet Colorado's water needs, a mix of local water projects, conservation, reuse, agricultural transfers, and the development of new water supplies should be pursued concurrently. SWSI 2010 also found that Colorado's municipal and industrial water supply need continue to grow and that Colorado will need an additional 600,000 to 1 million acre feet of municipal and industrial water by the year 2050. Funding the infrastructure to meet these water needs will cost billions of dollars. Additional moneys will be needed to develop, study, and design projects and solutions to meet these water needs.

The next step in the process is to develop the Colorado Water Plan, which will leverage and integrate nine years of work accomplished by Colorado's basin roundtables, the Interbasin Compact Committee (IBCC), and the Colorado Water Conservation Board. The goal of the Colorado Water Plan is to determine how to implement water supply planning solutions that meet Colorado's future water needs while supporting healthy watersheds, a clean environment, strong recreation and tourism economies, vibrant and sustainable cities, and a viable, productive agriculture industry.

Meeting future water supply needs will be challenging in several aspects, including a financial element. Increasing this challenge is the fact that a total of \$173 million was transferred from CWCB cash funds to the General Fund in FY 2008-09, FY 2009-10, FY 2010-11, and FY 2011-12. One of the reasons that this is problematic is that the CWCB typically has over \$100 million in water projects identified in its loan prospect summary report. These projects are needed in the near future to meet projected water supply needs of municipalities, industry, and agriculture. This is not a future

problem that the State can defer in solving. It can take years to plan, permit, and construct major water projects. As an extreme example, the Animas-La Plata water project was first approved as part of the 1988 Colorado Ute Indian Water Settlement Act. The reservoir was finally filled in July of 2011, over twenty years later, providing a new source of water to Southwest Colorado. Given the required lead time to implement solutions, failure to adequately address water supply issues today will almost assuredly lead to water supply problems in the near future and implementation of more expensive solutions. Water shortages, implementation of more expensive solutions, additional drying up of agricultural lands, potential violations of interstate water compacts, and/or further depletions of groundwater are all possible results of Colorado not proactively planning for and addressing its future water supply needs. If the State is going to continue to be a leader helping to solve these various water supply issues, the CWCB will need the sufficient financial resources to help promote appropriate solutions.

Challenge #2: Responding to Wildfire and Other Natural Disasters –In the last decade, there have been thousands of wildfires that have occurred in Colorado. 2012 was a particularly bad wildfire season that included the High Park wildfire, the Lower North Fork wildfire, and the Waldo Canyon wildfire. On the heels of these fires, the Black Forest wildfire of 2013 was the most destructive in Colorado’s history (passing the Waldo Canyon wildfire from 2012). Apparently Mother Nature was not done, as severe flooding occurred across multiple parts of Colorado’s Front Range in September of 2013. Several critical questions have arisen from these experiences: (1) How do we fund the response to wildfires to stabilize soils and protect watersheds? (2) How do we fund hazardous fuel reduction treatments in high risk forests around drinking water reservoirs and around human development? (3) More broadly, how does the State finance the high cost of natural disaster response without a dedicated source of funding for such activities? The poor health of some Colorado forests due to pine beetles and other pests, combined with the State’s long term drought conditions, certainly indicate the potential for more catastrophic wildfires in the future. At the Department of Natural Resources, we are especially sensitive to the first issue. With an immediate source of funding to re-plant trees and other vegetation in the immediate aftermath of a wildfire, we could reduce the potential for mudslide and massive sedimentation of nearby streams and lakes, preventing millions of dollars in damages to our water supply and water infrastructure. The Department of Natural Resources will be looking at existing funding sources and programs as well as other alternatives to better address various needs related to natural disaster response.

Challenge #3: Financial Sustainability of Parks and Wildlife Programs over the Long Term – The Colorado Parks and Wildlife Commission has identified Financial Sustainability as a strategic priority for the Division. As such, analyses of the Division’s finances have been undertaken and efforts to reduce expenses are being discussed and implemented. Some efforts, such as merging parks and wildlife programs into a single division and reducing the associated overhead of both programs, are well into implementation. Even with this effort, however, actual revenues earned by Wildlife programs continue to be less than expenditures. Further, this trend is projected to continue into the future if actions are not taken. An internal analysis by Colorado Parks and Wildlife staff estimated that the long-term shortfall (difference between revenues and expenditures) was in the neighborhood of \$10 million per year. To address this situation, Colorado Parks and Wildlife staff have created internal working groups to analyze a variety of potential alternatives. While the state parks system is in better shape financially, longer term financial concerns also remain for this program as well.

Challenge #4: Balancing the Development of Natural Resources with Conservation – Natural resource policy should emphasize a thoughtful and appropriate balance between developing and beneficially using natural resources and preserving such resources for current and future generations. Nowhere is achieving the right balance more important than with oil and gas development. On the one hand, it is vital that we protect human health and safety, safeguard wildlife and wildlife habitats, and prevent our State’s precious water supplies from being impacted by oil and gas development. On the other hand, oil and gas are significant contributors to the State economy, providing thousands of jobs to Colorado residents as well as tax revenues to state and local governments. Of particular interest is working constructively with local governments to ensure that local issues are addressed in the State’s regulatory process and procedures. By improving its working relationship with local governments, the Department hopes to

work cooperatively to achieve an appropriate balance that protects the public interest while preserving the immense economic benefits the industry provides. The Department worked with the General Assembly and the Governor's Office on both legislative improvements to maintain the appropriate balance and protect public health, safety, and welfare as well as passing several rules that are among the most progressive in the nation. In particular, the Department assisted in developing new setback rules which will require greater distances between oil and gas wells and buildings, which should provide better protection against human impacts of oil and gas development. Similarly, new groundwater sampling rules should better protect and preserve Colorado's groundwater resources as well as providing data to better understand the long term impacts of development.

None of these are small challenges with easy solutions. However, with dedicated employees and interested citizens who are passionate about these issues, I believe we will make significant progress in overcoming all four challenges. I look forward to working with citizens, interest groups, elected officials, and others to successfully manage Colorado's natural resources for the benefit of current and future generations.

III. BECOMING MORE EFFICIENT

While General Fund revenues for the State continue to improve, the Department of Natural Resources FY 2014-15 budget request represents very modest, targeted requests to increase funding. Significant efforts in the Department will continue to be focused on how to deal with revenue shortfalls in the Wildlife Cash Fund and revenue volatility within the Operational Account of the Severance Tax Trust Fund. Other planning performed by the Department is aimed at assessing and responding to actual and theoretical reductions in federal funding, some of which are related to federal sequestration. All of these pressures have led the Department to reduce spending, look for efficiencies, and focus spending on priority areas. More simply, the Department's goal is to do more with less. The most substantial efforts in this regard have included:

Executive Director's Office – Since taking over as Executive Director of the Department of Natural Resources, I have fully eliminated a net of four positions within the Executive Director's Office. Partially reflecting this, the General Assembly reduced the Office's appropriation by 2.0 FTE in FY 2012-13 as an offset to fund additional staff for the Oil and Gas Conservation Commission which are critically needed to better regulate the growing number of active oil and gas wells in Colorado. In FY 2013-14, the personal services appropriation to the Executive Director's Office was reduced by roughly \$130,000 to reflect the elimination of positions and to reflect the loss of indirect cost recoveries from the Colorado Geological Survey, which was moved to the Colorado School of Mines per H.B. 12-1355.

Colorado Parks and Wildlife - On June 6, 2011, Governor Hickenlooper signed into law Senate Bill 11-208 which merged two DNR divisions, the Division of Parks and Outdoor Recreation and the Division of Wildlife, into the Division of Parks and Wildlife. Since then, a great deal of work has been undertaken to plan and implement the merger. The primary goal of the merger is to create more efficient and effective services through economies of scale and use of shared resources. In this regard, the Department proposed (and the General Assembly approved) reducing the Colorado Parks and Wildlife budget by \$1.6 million and 22.0 FTE. Additional efficiencies from the merger may materialize as the Department continues to implement the merger. Implementing such efficiencies is not only the right thing to do, it is fundamentally necessary given the budget reality of both state parks and wildlife programs. For programs funded from the Wildlife Cash Fund, cash revenues have fallen short of expenditures for a number of years. Based on a recent analysis, the revenue shortfall for wildlife programs is estimated at approximately \$10.0 million per year. Moving forward, additional spending reductions will be needed to close this shortfall. For state park operations, General Fund support of the state park system was eliminated entirely several years ago due to the State's General Fund revenue shortfalls. Looking forward, current revenues for park programs will not be enough to support growing expenses without additional efforts to bolster the financial sustainability of the state park system. As such, Colorado Parks and Wildlife will continue to examine a wide range of efficiencies and alternatives to improve the long term sustainability of the agency.

Operational Account Balancing – In FY 2012-13, Tier 2 programs from the Operational Account had to be reduced by 28.5 percent (a reduction of roughly \$10 million across all Tier 2 programs). Although the Operational Account finished FY 2012-13 with its full Tier 1 and Tier 2 reserves intact, the Department is again projecting that spending in FY 2013-14 will exceed new revenues which flow into the Operational Account. If revenue comes in below the current projection, additional proportional cuts in FY 2013-14 may be needed. The Operational Account is constantly in or near a danger zone whereby full program funding is in question. As such, reduced spending from the Operational Account may make sense to assure the highest priority programs continue to receive full funding. In FY 2012-13, funding for the Species Conservation Trust Fund program was reduced by \$2.6 million in the first effort to reduce the shortfall between authorized expenditures and expected revenues. Similarly, Operational Account support of the Colorado Geological Survey was reduced by about \$840,000 in FY 2013-14. Looking forward, the Department will continue to examine ways to reduce spending from the Operational Account and will continue to analyze how to spend this limited and volatile revenue stream to achieve the highest priorities.

Colorado Geological Survey – In 2011, I approached the Colorado School of Mines to explore the potential interest in merging the Colorado Geological Survey into the School of Mines. This move has now been successfully implemented. I believe there will prove to have been a number of benefits from this merger. Over one-third of all state geological surveys are successfully located within state universities. The Colorado School of Mines’ relationship with industry, the National Science Foundation, and other foundations should broaden the potential funding base for the Survey. Further, the Survey will now be able to leverage the expertise of Mines faculty and students to expand potential grant support and create employment and research opportunities for Mines students.

LEAN Principles – “Lean” is the practice of analyzing all of the steps of a particular process, examining whether each step results in “value”, and targeting for elimination those steps which have little or no value. Reflecting the customer-oriented focus of Lean, “value” is defined as any action or result that a customer would be willing to pay for. With the help of Lean consultants, the Department has undertaken several Lean analyses, including an analysis of the out-of-state travel approval process and an examination of the purchasing process. By making these administrative processes more efficient, the Department hopes to be able to spend more time and resources on those natural resource programs which most benefit Colorado citizens.

Currently, the Oil and Gas Conservation Commission is undergoing a Lean analysis of its enforcement program, looking specifically at the process of issuing notices of alleged violations. In the last year, the State Land Board has started a number of lean analyses, covering many of the agency’s major processes. Oil and gas leasing, as well as agricultural leasing, were both analyzed and the State Land Board is currently in the process of implementing a number of the recommendations which came out of that process. Some of the process improvements will be linked to the new State Asset Management System IT project that the State Land Board is concurrently developing. The State Land Board also looked at revenue processing and was able to successfully reduce the time it takes to process revenue from an average of 4 days to an average of 2 days. A third lean analysis looked at real estate acquisitions and disposals, with some of the suggested process improvements centered around the State Land Board doing a better job specifying up front what they are looking for in new land acquisitions (which should reduce the amount of wasted time on land transactions that ultimately do not happen). A fourth lean process improvement project looked to improve the collection of delinquent revenue while another project looked at the procurement of goods and services by the State Land Board. Moving forward, the performance plans for all DNR division directors now include language directing division directors to evaluate division processes and implement associated improvements.

The Department will continue to examine these and other efficiencies to improve performance, especially as it relates to the most critical functions performed by the Department. Further, working with the Governor's Office, the Department is committed to improving the performance reporting process.

A handwritten signature in black ink, appearing to read "M. King".

Mike King
Executive Director, Colorado Department of Natural Resources

COLORADO DEPARTMENT OF NATURAL RESOURCES INTRODUCTION TO FY 2014-15 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. This plan was also developed in accordance with general instructions issued by the Governor's Office of State Planning and Budgeting (OSPB). The Department of Natural Resources views the strategic planning process as iterative. Each year, the Department builds on the experiences, legislative suggestions, employee and employee organization recommendations, and public input to help guide the strategic planning process going forward.

Building on prior plans, the FY 2014-15 DNR Performance Plan includes several benefits and noteworthy changes:

- (1) General Layout – As was started in FY 2012-3, the Performance Plan will contain significant background on the Department of Natural Resources programs to add context when discussing strategic policy initiatives, inputs, outputs, and outcomes associated with each major program within DNR. Further, the DNR performance plan will continue to provide five years of actual performance data. This data is provided to allow for enhanced performance analysis and to better show longer terms trends.
- (2) SMART Act Audit - In August of 2012, the State Auditor released the Implementation of the SMART Government Act Performance Audit. On Page 12 of the audit, the Department of Natural Resources Strategic Plan was found to have all five of the basic components required under the SMART Government Act, including a five year mission or vision statement, goals which correspond to the Department's mission, performance measures which correspond to the stated goals, an explanation of the strategies used to meet performance goals, and an evaluation of performance. Further, as outlined in a table on Page 18 of the audit, the departments were evaluated on their performance measures. In the performance audit, DNR was found to have measures that were indexed to a baseline, had a specified period of time for measures of successful performance, and were generally reasonably understandable to the public. However, on this same table, DNR was found to have developed performance measures without widespread input from its employees and without the input of certified employee organizations. The FY 2014-15 Department of Natural Resources Performance Plan was developed with input from a wide range of managers and employees, representing the various programs being discussed and evaluated in this performance plan. Further, in October of 2013, a draft of this performance plan was e-mailed to each and every DNR employee with a request for input. Finally, also in October of 2013, the same draft of the performance plan was submitted to Colorado WINS, again with a request for input. Finally, the FY 2014-15 incorporates a number of additional suggested changes that were recommended by the State Auditor's Office staff but not published in the final audit report.
- (3) General Assembly Input: Organization Charts - During last year's SMART Act process, several formal recommendations were made by the General Assembly to the Department of Natural Resources. The Senate Agriculture, Natural Resources, and Energy Committee recommended the inclusion of organization charts for each division, as was done previously by DNR in older versions of its strategic plans. As requested, organization charts are included for all DNR divisions. These may be found before the first major program description for each DNR division.

- (4) General Assembly Input: Average OGCC Inspection Frequency - The Senate Agriculture, Natural Resources, and Energy Committee recommended including the number of well inspections in a fiscal year, divided by the number of active oil and gas wells. This ratio would provide information on the average frequency in which an active oil and gas well in Colorado is inspected. This requested information is provided in the Oil and Gas Conservation Commission (OGCC) section of the FY 2014-15 Performance Plan.
- (5) General Assembly Input: OGCC Use of Risk-Based Inspection Process - Both the House and the Senate Agriculture and Natural Resource Committees recommended that OGCC prioritize its inspections of oil and gas sites. This recommendation was made even more formal by the passage of S.B. 13-202, which requires the Oil and Gas Conservation Commission to “use a risk-based strategy for inspecting oil and gas locations that targets the operational phases that are most likely to experience spills, excess emissions, and other types of violations and that prioritizes more in-depth inspections...” . In this regard, S.B. 13-202 requires the OGCC to report back to the General Assembly by February 1, 2014 regarding findings, recommendations, and a plan for compliance with these requirements, including a plan for implementation that lays out any staffing and equipment needs.

As authorized by SB 13-202, the Oil and Gas Conservation Commission (OGCC) has begun development of a risk model for each operational phase of oil and gas exploration and production in Colorado. The project team, including OGCC staff, a consulting firm, and a temporary environmental specialist, has begun to analyze data on the environmental risks associated with each phase. The OGCC will complete a gap analysis by January 2014 to determine what kinds of regulatory tools, database enhancements, and inspection policies are needed to address the full range of these risks. By February 2014, the OGCC will provide the final report to the Legislature and plans to appear at any committee hearings that are scheduled upon review of the findings and recommendations.

- (6) General Assembly Input: Reclamation of Oil & Gas Sites and Protection of Wildlife Habitat - Following the Department’s 2013 SMART Government Act hearings, the Senate Agriculture, Natural Resources, and Energy Committee recommended that the Colorado Oil and Gas Conservation Commission’s (OGCC) strategic plan include an assessment of industry’s reclamation of wildlife habitat during and following oil and gas operations. A potential standard, or objective benchmark, mentioned in the recommendation is the number of acres restored to 80 percent of native plant species that existed prior to oil and gas development. To best respond to this recommendation, the OGCC reviewed current agency rules and policies governing site reclamation, staffing plans, trends in oil and gas development, surface owner land use, and reclamation practices.

Current metrics. The OGCC currently measures its habitat restoration performance using two strategic plan metrics. First, because interim and final reclamation regulatory requirements address each operator’s need to close pits, remove debris, stabilize soil, perform weed control, replant the site, and complete other tasks, the OGCC’s strategic plan focuses on how many of its reclamation inspections comply with all reclamation regulations combined. Compliance has steadily improved since FY 2009-10, with the current rate of compliance at 91%. The standard of replanting a site to 80 percent of predevelopment vegetation is included in this broader measure.

Second, the OGCC now measures whether newly permitted wells, if located in sensitive wildlife habitat areas, are also part of a Wildlife Management Plan. These plans address site selection, phasing and timing of construction and operations, and mitigation measures to address any wildlife impacts from oil and gas operations. For these wells, the operator consults with the Colorado Parks and Wildlife Division prior to beginning exploratory or production operations. In the most recent fiscal year, more than half (53%) of permits for oil and gas locations in sensitive habitat were also guided by a Wildlife Management Plan.

Frequency of native species replanting. When analyzing the full inventory of oil and gas development sites that are reclaimed each year, a native plant species standard has limited application, particularly given the authority of surface owners to determine the final land use for areas after oil and gas development. To illustrate, in some parts of the state, cash crops like wheat, alfalfa, or sugar beets are the existing land use before construction begins on a new oil and gas drilling pad. Years later, when ground disturbance activity has ended, surface owners with farming operations will often request that operators reclaim the land to agricultural use so it can be tilled for the next season's crop. Also common are places where native vegetation existed before oil and gas development, but the surface owner, interested in expanding the amount of pasture land, asks the operator to replant the site with a distinct seed mix to produce better forage for livestock or wildlife. In both cases, OGCC rules and policies respect the wishes of the surface owner to decide what kind of replanting, if any, takes place on disturbed acreage.

Acreage and site inspections. Two changes in industry practices and OGCC regulation will likely decrease the quantity of disturbed acreage required for future oil and gas development and improve the State's oversight of reclamation of oil and gas sites. First, the share of new wells that are horizontally or directionally drilled is growing rapidly. Horizontal and directional drilling increases the density of wells drilled from a single pad and reduces operator costs by centralizing production operations and reducing road construction. The overall effect will increase the impact on habitat at one site but lower the cumulative impact by reducing the overall acreage that is disturbed by well sites, roads and pipelines. The larger well pads used by some operators reflect an industry trend to improve worker safety by not having so much activity occurring in a smaller, crowded space. Further, some operators are attempting to contain potential spills by placing an impermeable layer under the well pad. Both of these factors can make rapid reclamation of the site more challenging. Finally, the General Assembly authorized additional inspection staff for the OGCC for FY 2013-14. Three of these new staff members will be reclamation specialists, which the OGCC expects will result in a significant increase in the number of inspections focused on reclamation.

Final Thoughts on Oil and Gas Reclamation: Overall, increases in OGCC staffing and changes to the reclamation regulations since 2008 will strengthen the reclamation process and better protect wildlife habitat. Requests to add additional resources to improve OGCC enforcement will further strengthen this program. However, the ultimate decision to protect and restore wildlife habitat belongs to the surface owner and is subject to the operator's completion of ground disturbance activities. The OGCC's current measure of inspections that comply with reclamation regulations is a broad standard that covers potential wildlife impacts as well as groundwater impacts and other threats to public health, safety, and welfare. The Department believes that this measure remains the most appropriate and meaningful measure related to reclamation. Further, the measure on Wildlife Management Plans is specifically designed to examine the proportion of oil and gas development activities in sensitive wildlife areas that are proceeding with special consideration given to minimize impacts to wildlife. In combination, we believe these two measures provide a good gage for evaluating the Colorado Oil and Gas Conservation Commission's performance in minimizing wildlife impacts resulting from oil and gas development.

- (7) General Assembly Input: Hazardous Fuels Reduction Grant Program - The Senate Agriculture, Natural Resources, and Energy Committee also had a number of recommendations related to the Hazardous Fuels Reduction Grant Program that the Department had been proposing during its SMART Act hearing last year. After many discussions with the General Assembly, the Governor's Office, and other interested parties, this proposal ultimately moved forward in the form of S.B. 13-269 (concerning the creation of a grant program to assist with efforts to reduce the risk of catastrophic wildfires to forested lands in Colorado). S.B. 13-269 specifically requires annual reporting to both Agriculture and Natural Resources Committees on the progress and performance of the Hazardous Fuels Reduction grant program, including (1) the number of acres treated; (2) the cost per acre for treatment; (3) tonnage of material generated; (4) the number of jobs created, and; (5) the use

of any forest products generated. Per the legislation, a separate report on the performance of this program will be delivered to the General Assembly before the end of the 2014 Legislative Session. However, a brief update on this program is contained in Appendix A which is the last section of this performance plan (see the Division of Forestry subsection of this appendix).

- (8) General Assembly Input: Implementation of H.B. 12-1355 - The Senate Agriculture, Natural Resources, and Energy Committee recommended that the Department of Natural Resources review the implementation of H.B. 12-1355, which transferred the Colorado Geological Survey to the Colorado School of Mines. The request asked the DNR Executive Director's Office to: (1) identify CGS services that were discontinued; (2) assess whether any of the discontinued services should be extended; (3) identify a possible funding mechanism for such services, and; (4) identify agencies best suited to administer such services. A brief response to this request is contained below.

As this performance plan is being written, the Colorado Geological Survey (CGS) has just moved from the Centennial Building in Denver (where much of DNR is located) to a location near the Colorado School of Mines campus in Golden, Colorado. Further, the Colorado Geological Survey has not yet filled the State Geologist position, since Vince Matthews retired from the position on December 31, 2012. With all of this change, a review of the transfer of the Colorado Geological Survey to the School of Mines is difficult. At the time of the transfer, a number of functions were discontinued in order to reduce severance tax spending to a level more commensurate with average annual revenues. These discontinued functions included the following:

1. **Water Resources** – This function included the preparation and publishing of reports and maps on ground water resources in Colorado. It also included working with state and local government agencies on geologic problems related to ground water supplies.
2. **Mineral and Energy Resources** – This function included development of maps and reports on commercial mineral deposits in Colorado. It also included working with federal, state, and local government agencies on a variety of issues related to the study and development of mineral and energy resources, including providing technical assistance on geothermal energy resources. Finally, this function included providing information, statistics, and reports on actual mineral and energy development in the State.

Today, the Colorado Geological Survey is performing all of the function envisioned when the Survey was transferred to the School of Mines. Further, the General Assembly appropriated \$300,000 General Fund to the Colorado School of Mines in FY 2013-14 in part to fund discontinued services. Since staff with expertise in water resources were transferred to the School of Mines, the water resources function could be easily restored. Further, part of the logic for transferring the Colorado Geologic Survey to the School of Mines was to take advantage of faculty, researchers, and research grants that may become available through the School of Mines. As this transfer is more fully implemented, it is entirely possible that the list of programs which are and are not funded will change considerably. Ultimately the decision on which geologic programs to fund rests with the Colorado Geologic Survey, the Colorado School of Mines, and the General Assembly. The Department of Natural Resources believes it would be inappropriate to comment on which programs a sister state agency should or should not be funding. To the extent the General Assembly believes certain services should be restored, it would seem appropriate to consider either the General Fund or the Operational Account of the Severance Tax Trust Fund as the two most appropriate mechanisms to finance such activities.

Colorado Department of Natural Resources

Mission and Vision Statement

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

Mission Statement

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

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

Vision Statement

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

- **Water** - Provide for the long-term municipal, industrial, and agricultural water needs of the State in a way that recognizes and provides for the instream flow needs of fish, wildlife, and recreation. Through the Roundtables and Interbasin Compact Committee processes, Colorado's river basins work towards sharing water in ways that generate win/win results for all parties. Colorado achieves greater efficiencies in water use through conservation, reuse, conjunctive use, and exploration of water projects that benefit all parties. The State finds alternatives to the permanent transfer of water from agricultural use to municipal use, thereby avoiding the permanent loss of irrigated agricultural lands and associated benefits.
- **State Parks** - Maintain a system of parks across the State that offers diverse outdoor recreation opportunities, protects high quality landscapes for current and future generations, and fosters natural resource education. Colorado State Parks remain affordable to all Coloradans, provide excellent customer service to visitors, and maintain safe, high-quality park facilities.

- **Minerals & Energy** - Promote responsible and sustainable development of Colorado's energy and mineral resources in a manner that is consistent with environmental protection, maintenance of Colorado's quality of life, and protection of Colorado's diverse economic base.
- **Wildlife** - Manage and conserve healthy and sustainable wildlife populations for the benefit of current and future Coloradans.
- **State Lands** – Manage state school lands held in a perpetual, inter-generational trust for the benefit and support of public schools. Through prudent and strategic management, the Department will protect the long term value of these trust assets. Recognizing that the long term economic productivity of all lands held in public trust is dependent upon sound stewardship, the Department will protect and enhance the beauty, natural values, open spaces, and wildlife habitat on trust properties.

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

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

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, and others 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.
- In 2010, Colorado set a new record of 28.9 million overnight visitors who spent \$8.8 billion (up from \$8.6 billion in 2009) on tourism-related expenditures and, with 24 ski areas, 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 the Strategic Policy Initiative associated with this Program?

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 15 avalanche professionals, the Center achieves its purpose through a dual mission of forecasting and public education.

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

Providing avalanche information is the major process of this program. The Colorado Avalanche Information Center employs multiple strategies to further its goal of reducing the economic and human impact of snow avalanches. These strategies include:

- Making observations of snow conditions and weather conditions, along with collecting and analyzing reports from the public and partners in order to produce daily forecasts of avalanche danger for 10 distinct zones in the Colorado Mountains during the winter snow season.
- Disseminating avalanche safety information and forecasts via the Center's website (and other's websites that rebroadcast this information,) email, a telephone hotline, Twitter, and warnings through the National Weather Service's severe weather alert system.
- Providing free courses to the public on an introduction to avalanche safety. These periodic courses provide the public with an introduction to the CAIC's products (and where they are available) along with the rudiments of recognizing and avoiding avalanche danger.
- Participating in more advanced avalanche safety training for recreationalists. CAIC personnel will frequently provide training as part of a larger course on backcountry safety offered by third parties.
- Training and coordinating with other avalanche professionals. The ski industry employs their own avalanche personnel for avalanche forecasting and abatement within their resort boundaries. The CAIC provides training to these workers and cooperates in their efforts to insure the safety of their visitors.

- Coordinating or recommending avalanche hazard reduction operations of the Colorado Department of Transportation for the safety of road workers and the traveling public.

What are the Program’s Inputs?

Several factors drive the workload of the Colorado Avalanche Information Center and impact the ability of the program to achieve programmatic goals and objectives.

	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
FTE	7.7	7.7	7.7	8.4	8.4	8.4	8.4
# of manual observations	N/A	N/A	4,465	4,913	4,932	4,000	4,000

Discussion about Program Inputs –

In recent history 7.7 FTE have been appropriated to, and utilized by, the Colorado Avalanche Information Center. In FY 2011-12 the program was appropriated an additional 0.7 FTE for highway forecasting, bringing the total to 8.4. This appropriation covers twelve part-time permanent staff (due to the seasonal nature of the Center’s work, no staff are full-time) and three to four Temporary Aides. Part-time staff generally work full-time during the busy avalanche season, but work significantly reduced hours during the offseason.

One of the main drivers of the program’s workload is the magnitude and timing of weather events. However, this is difficult to measure and report. When snowpack conditions change frequently it is necessary for the program’s forecasters to make more frequent manual observations. Therefore, the program tracks the number of manual observations as a proxy for the complexity of the avalanche season. Additionally, the CAIC’s participates in avalanche rescues and accident investigations. These events are unpredictable and may require significant time from one or more staff members. This can also be significant driver of workload.

What are the Programs Outputs?

The Colorado Avalanche Information Center has a number of outputs that are designed to achieve programmatic objectives. These are discussed in the table below and the accompanying narrative.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
# of avalanche forecasts	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 3,000	Benchmark: 3,000	Benchmark: 3,000
	Actual: 5,034	Actual: 3,513	Actual: 3,526	Actual: 3,041	Actual: 3,195	Actual: N/A	Actual: N/A
# of student hours taught	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 5,500	Benchmark: 5,500	Benchmark: 5,500
	5,054	6,618	5,690	5,361	6,650	N/A	N/A
Website hits	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,400,000	Benchmark: 1,400,000	Benchmark: 1,500,000
	900,000	1,200,000	1,241,802	1,353,621	1,381,099	N/A	N/A

Discussion about Output-related Performance –

Number of avalanche forecasts - This is the combination of highway and backcountry avalanche products. The number of highway avalanche products will vary with conditions (one forecast may be issued for several days during calm periods.) The number of backcountry avalanche products will also vary from year to year. The Center issues one statewide product in the summer, fall, and spring. During the avalanche season, ten zone forecasts are issued. The date that the Center changes over to, or back from, the zone forecasts changes from year to year. FY 2008-09 represents the last year that the Center issued twice daily backcountry forecasts. There was a tendency for the second forecast of the day to strongly resemble the first and did not appear to be adding much value. Also, the Center received feedback from its customers which suggested it was most common to check the forecast in the morning, prior to heading out for a day of backcountry recreation. Hence, the Center moved to issuing one set of products that was released early each morning.

Number of student hours – This is the number of students in class multiplied by the hours spent in class. So a three day class may only have a few students, but will have a lot of student hours.

Website hits – This is visits and not page views. One visitor may generate a number of different page views. Page views for FY 2012-13 were over 3 million.

Discussion of one and three year projections

The number of forecasts issued varies from year-to-year based on weather events and timing. The Center estimates that 3,000 combined backcountry and highway forecasts represents a “typical” year in as much as such a thing exists. Both the number of student hours and the number of website hits represent the current level of service being provided in those areas. Depending on the demand for classes, and the size and length of classes taught, under current funding the Center estimates it can teach approximately 5,500 student hours annually. As a gross measure of the number of people

being reached by the forecasts, the center wants to keep the number of website visits increasing annually, representing a wider audience being reached.

For FY 2015-16, the CAIC’s three year benchmark output would be to continue issuing about 3,000 avalanche forecasts, to continue providing about 5,500 student hours of avalanche safety training, and to grow the website hits to roughly 1,500,000 hits.

What are the outcomes the Program is trying to achieve?

Objective: Make winter travel and recreation in the Colorado Mountains safer through avalanche safety training and forecasting

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
The number of avalanche deaths per 100,000 population per year	Benchmark: N/A	Benchmark: N/A	Benchmark: < 0.122	Benchmark: < 0.122	Benchmark: < 0.122	Benchmark: < 0.122	Benchmark: < 0.122
	Actual: 0.082	Actual: 0.161	Actual: 0.139	Actual: 0.137	Actual: 0.212	Actual: N/A	Actual: N/A

Discussion about Program Outcomes:

Strategy: Colorado’s population has risen 63% since 1990; however, the number of avalanche deaths per 100,000 population has decreased. Eleven people were killed in avalanches in 2012, which is the most avalanche deaths since 1992. Four other states that have similar topography, Alaska, Utah, Montana, and Wyoming, have all experienced a dramatic increase in avalanche deaths per 100,000. As the population continues to increase each year, the CAIC attempts to keep this measured outcome on a downward trend. By providing training and issuing forecasts, the CAIC attempts to help people avoid dangerous avalanche situations.

Evaluation of Prior Year Performance: The 2012-2013 operating season for the Colorado Avalanche Information Center (CAIC) was marked by a very dry fall that set the stage for very dangerous avalanche conditions during the winter and early spring. By the end of April, the snowpack in Colorado ranged from 45 to 99% of the 30–year average. By the end of May, the snowpack was 56 to 112% of the 30-year average. There were 3.139 avalanches reported to the CAIC between October 2012 and May 2013. In Colorado, there were eleven people killed in seven accidents in 2012-13. The last accident of the season was the most tragic killing 5 people. This was the most deadly avalanche in Colorado since 1962. Eleven deaths is above the 10-year average of 5.4, and most deaths in a single season since 1992-1993 season where twelve people lost their lives in avalanches. During the last 10 years, 59 people have lost their lives in avalanches in Colorado. During the 2012-2013 season the CAIC documented 100 avalanche involvements with 15 complete burials.

Discussion of one and three year projections

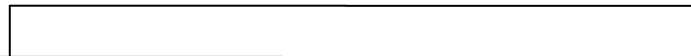
The ultimate goal of the program would be to eliminate deaths by avalanches entirely. However in setting the benchmarks for future year's performance, the program acknowledges that many factors involved in avalanche deaths are outside of the control of the program. Over the last 10 years, 59 people have lost their lives in avalanches. The one and three year projections that the program are trying to achieve are set at approximately this 10 year average. Through public outreach, improved forecasts, and continued education initiatives the program strives to reduce the average number of lives lost annually.

**DIVISION OF RECLAMATION,
MINING AND SAFETY
68.9 FTE
CF \$4,398,942 REAPPR \$30,000
FF \$3,318,057**

DEPT OF NATURAL RESOURCES
Mike King, Executive Director

DIV OF RECLAMATION, MINING
AND SAFETY
Loretta E. Pineda, Division Director

MINED LAND RECLAMATION BOARD
Representatives:
Dept of Natural Resources Soil Conservation Bd
Conservation (2) Agriculture
Mining Industry (2)



OFFICE OF MINED LAND RECLAMATION

OFFICE OF ACTIVE AND INACTIVE MINES

COAL REGULATORY
PROGRAM
22.0 FTE TOTAL

MINERALS
REGULATORY
PROGRAM
24.1 FTE TOTAL

INACTIVE MINES
PROGRAM
17.8 FTE TOTAL

MINE SAFETY &
TRAINING / BLASTERS
CERTIFICATION
5.0 FTE TOTAL

Division of Reclamation, Mining and Safety

Mined Land Reclamation

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 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) oversees active coal mine and exploration operations and 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 (2013)] 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. 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 39 coal mines and 83 exploration permits, covering over 185,515 permitted acres (as of June 30, 2013). Financial warranty coverage for these sites exceeds \$207.9 million. Coal Program staff have direct permit action and enforcement authority, and the Mined Land Reclamation Board serves as an appellate body if the staff actions are appealed.

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.

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. (2013)] and the separate act for Extraction of Construction Materials [Section 34-32.5-101 C.R.S. (2013)]. Hardrock/metal minerals include uranium, gold, silver and molybdenum; construction materials include sand, gravel, marble, clay and flagstone. The Minerals Program currently regulates 1,505 mines and 212 prospecting operations, covering 171,000 acres. Financial warranty coverage is approximately \$457 million for these sites.

The program is funded from revenue generated from statutory fees on permitted mining and prospecting operations (33 percent) and from severance taxes (67 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 regional offices in Durango and Grand Junction.

Coordination Across the Regulatory Programs – The Coal and Minerals Programs utilize a single mine permit data tracking system and records imaging system. E-permitting advancements are currently in production in the Coal Program, of which some components will be applied to a

similar system in the Minerals Program with funds made available through FY 2014-15. 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, metal, and construction materials mines. Primary objectives are to review mining and reclamation permits, to accurately calculate a reclamation financial warranty/bond that is adequate to reclaim the mine site if the operator fails, and to inspect mining operations to make sure that reclamation plans are being followed. Reclamation ensures that land is returned to beneficial use. More generally, the program protects public health, safety, and welfare as well as wildlife, aquatic species, and habitat.

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

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

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 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.

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

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

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

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

Enforcement is used for serious violations of the statutes or rules. This process focuses staff time and resources on the most significant and potentially damaging violations. Coal Program staff are authorized to directly issue non-compliance violations to mine operators (the Mined Land Reclamation Board addresses appeals to those violations), whereas, Minerals Program staff must submit their findings to the Mined Land Reclamation Board which then issues all legal decisions.

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

What are the Program's Inputs?

A number of factors drive the workload of the Office of Mined Land Reclamation and impact the achievement of programmatic goals and objectives. Regulation of mining and reclamation activities provides a framework for sound resource management and the return of land to beneficial uses. Increases in precious metal and uranium values, coal mine expansions and meeting demand for construction materials have resulted in an increased workload related to exploration and permit applications, revisions, and enforcement activities.

COAL INPUT MEASURES

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
REGULATORY FTE	10.8 FTE	11.8 FTE	10.8 FTE	9.5 FTE	11.5 FTE	11.5 FTE	11.5 FTE
PERMITTING INPUTS							
# of sites including exploration	169	156	156	166	122	120	120
# of New Permit Applications/ Modifications	180	168	166	204	198	200	200
# of Permit Actions with Objections	2	1	4	2	5	5	5
INSPECTION/ENFORCEMENT INPUTS							
# of Known Required Inspections	388	376	382	374	367	360	360
# of Citizens Complaints	1	1	6	4	5	4	4

Discussion of Coal Program Inputs - Permitting action review procedures are mandated and prescribed in statute and regulations. Permitting actions include new permits, permit revisions/amendments, exploration permits and modifications, bond adjustments and releases, permit renewals, permit transfers, and midterm reviews. Most actions are implemented within time frames described in statute or rule. However, inter-agency coordination and public involvement, through the program's technical review process and operator response requirements, can increase the time needed to complete the permitting process. Total workload in the Coal program has remained relatively steady over time, covering a total mine acreage between 165,000 acres in 2008 and 185,500 acres in 2013. Mine site numbers, using FY 2012-13 counts as an example, include 9 active coal mines, 1 active loadout, 2 under new construction, 20 operations in temporary cessation or reclamation status, 7 bond forfeiture sites, and 83 exploration sites. The number of mine sites decreased in FY 2012-13 because numerous exploration sites were identified for release and staff worked with operators to validate that final reclamation was complete. Regulatory requirements apply to all of these operations and overall staffing levels have held consistent with this level of workload. The permitting actions are primarily for modifications to existing coal mines, but the industry has also expanded with 2 new mines and 1 new load out over the past 5 years. The *known required* inspections is based on state and federal regulations

requiring that each producing mine, along with most sites in reclamation and active load outs be inspected once a month; sites in temporary cessation and sites that have achieved phase two bond release (topsoil and initial vegetation reestablishment) are inspected once per quarter; and sites where the bond was forfeited are inspected two to four times per year, based upon environmental hazard risk.

Coordination with federal agencies and national organizations on policies, legislation, regulation, and funding is critical to maintaining state primacy. Colorado has established authority to mitigate and regulate the effects of past and present mining. However, new federal regulations and initiatives can impact state statutes, regulations, and policies. Federal oversight activities and policies can influence state regulatory, permitting, and enforcement activity implementation. The Division has established working relationships through Memorandum of Understanding (MOUs), and other coordinating documents to engage and cooperate with federal agencies at various levels, for emerging projects and issues.

The Colorado coal industry implements some of the best reclamation in the nation and maintains an excellent compliance record. 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 28.8 million tons in 2012.

MINERALS INPUT MEASURES

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
Regulatory FTE	13.3 FTE	13.8 FTE	12.8 FTE	12.8 FTE	13.25 FTE	14.25 FTE	14.25 FTE
PERMITTING INPUTS							
# of active mines includes prospecting	1,825	1,821	1,789	1,768	1,717	1,800	1,800
# of New Permit Applications/ Modifications	493	494	490	470	571	500	500
# of Permit Actions with Objections	(new measure in FY 2012-13)	(new measure in FY 2012-13)	(new measure in FY 2012-13)	(new measure in FY 2012-13)	20	28	12
INSPECTION/ENFORCEMENT INPUTS							
# of Known Required Inspections	456	455	447	442	430	451	451
# of Citizens Complaints	27	35	21	28	19	28	28

Discussion of Mineral Program Inputs – The total number of minerals mines and associated workload has remained relatively constant over the last three years – the number shown above includes exploration and prospecting sites. As the national economy improves, it is expected that the number of construction mine operations, which comprise 90 percent of current active mines, are likely to increase. In addition, over the longer term, population growth in the state has resulted in more and more people living in rural areas, creating increased conflicts around mineral development. An initiative to ensure that all uranium operations are in compliance with new rules adopted in 2010 has been implemented. The number of permit revisions and amendments increased in FY 2012-13 based on economic fluctuations which caused mines to either temporarily cease operations or to expand. A major requirement of this rulemaking was that all uranium mines were converted to designated mining operations; thereby requiring them to submit amendments incorporating Environmental Protection Plans into their permit applications. The Minerals Program sent out notices to all uranium mining operations requiring them to submit Environmental Protection Plans for their permits by October 1, 2012. Approximately 90 percent of the permitted uranium mines have submitted an Environmental Protection Plan and over one-third have received approval for their plans as of July 1, 2013. Due to the requirement to publically notice these submittals, which in turn has driven increased citizen objections, the *permit actions with objections* number is elevated in FY 2012-13. Another impact to *permit actions with objections* was due to a rule change in 2010 that required more notification and a comment period for all non-coal prospectors filing Notices of Intent to Conduct Prospecting. There were 24 Notices of Intent to Conduct Prospecting submitted in fiscal year 2011-12; of which 6 received public comments. Objections are expected to decrease in future fiscal years because the uranium Environmental Protection Planning process will be complete.

The Division continues to make adjustments to the regulatory programs to address local governments, environmental groups and industry concerns while continuing to promote a sound and balanced approach to minerals development. Investments to Division business system databases, to electronic permitting capability, and to geographical information systems are required in order to maintain efficient customer services.

The *known required inspections* is based on a program policy of inspecting mines every 4 years as an average (designated mining operations, where chemicals and toxic materials are used in extraction of the minerals, require more frequent inspections with annual inspections at a minimum). Citizen complaints remain consistent, although citizen participation in permitting hearings and public opposition to new mining operations has increased the amount of work required to issue, modify, and renew mining permits.

What are the Program's Outputs?

The Office of Mined Land Reclamation has the following outputs per the tables on the next page that are designed to achieve programmatic objectives.

COAL OUTPUT MEASURES

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2014-16
PERMITTING OUTPUTS							
# of Permit Applications and Modifications Approved	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 190	Benchmark: 212	Benchmark: 212
	Actual: 185	Actual: 177	Actual: 167	Actual: 182	Actual: 209	Actual: N/A	Actual: N/A
# of Acres Permitted	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 172,000	Benchmark: 185,500 acres	Benchmark: 185,500 acres
	Actual: 164,103 acres	Actual: 171,548 acres	Actual: 165,984 acres	Actual: 171,050 acres	Actual: 185,515 acres	Actual: N/A	Actual: N/A
INSPECTION/ENFORCEMENT OUTPUTS							
# of Inspections Completed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 450	Benchmark: 450	Benchmark: 450
	Actual: 410	Actual: 396	Actual: 395	Actual: 443	Actual: 455	Actual: N/A	Actual: N/A
# of Notice of Violations Issued	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 3	Benchmark: 8	Benchmark: 8
	Actual: 6	Actual: 3	Actual: 3	Actual: 8	Actual: 7	Actual: N/A	Actual: N/A

Discussion of Coal Program Output-related Performance – The number of *permit applications and modifications approved* by the Coal Program exceeds the number of incoming requests in certain years due to actions that cross fiscal years and are counted when the final decision is complete. Time involved in reviewing a permitting action can range from a few days to many months depending on the complexity and size of a modification to an existing mine or an application for a new mine. Actual inspection numbers exceed the known required input measure by including additional inspections also required for citizen complaints, acreage release assessments, compliance or violation follow-up and inspection of exploration projects. Inspection numbers will vary as mines temporarily cease or resume production within a fiscal year. The Division initiates enforcement actions whenever significant violations are found. The slight increase in violations from three in FY 2010-11 to seven in FY 2012-13 can be attributed to operations conducting activities not outlined or permitted in their reclamation plan. The Division attempts to reduce notices of violations in the future through the deterrence from adequate enforcement and increased efforts to educate mine operators about program requirements.

Coal Program Benchmarks – Acreage totals are projected to remain steady in FY 2013-14 through FY 2015-16 due to anticipated coal mine expansions. Acres released will be balanced by acres added through forthcoming permit expansion revisions. Permitting actions are also expected to remain steady in FY 2013-14 to accommodate new activities at the active mines.

Coal Program FY 2015-16 Outlook – Permitting actions and regulatory activities will remain steady or slightly increase over the next five years as mine site expansions and new mining lease acquisitions maintain or increase current production levels. Output numbers in FY 2015-16 will be similar to those shown for FY 2013-14.

MINERALS OUTPUT MEASURES

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
PERMITTING OUTPUTS							
# of Permit Applications and Modifications Approved	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 450	Benchmark: 455	Benchmark: 455
	Actual: 477	Actual: 452	Actual: 419	Actual: 410	Actual: 508	Actual: N/A	Actual: N/A
# of Acres Permitted	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 185,877	Benchmark: 185,877 acres	Benchmark: 185,877 acres
	Actual: 179,379 acres	Actual: 182,019 acres	Actual: 182,204 acres	Actual: 181,854 acres	Actual: 189,327 acres	Actual: N/A	Actual: N/A
INSPECTION/ENFORCEMENT OUTPUTS							
# of Inspections Completed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 685	Benchmark: 640	Benchmark: 640
	Actual: 699	Actual: 629	Actual: 593	Actual: 683	Actual: 604	Actual: N/A	Actual: N/A
# of Notices Violations Issued	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 26	Benchmark: 26	Benchmark: 26
	Actual: 17	Actual: 30	Actual: 30	Actual: 37	Actual: 37	Actual: N/A	Actual: N/A

Discussion of Minerals Program Output-related Performance - Minerals Program permitting activities exceed the incoming requests each year due to actions that cross fiscal years and are counted when the final decision is complete. Time involved in reviewing a permitting action can average 30-180 days depending on the complexity and size of a modification to an existing mine or an application for a new mine. Inspection output numbers as compared to the *known required* input measure vary due to inclusion of additional inspections (which are also required but unknown in advance) for citizen complaints, permitting pre-operational inspections, and acreage release inspections or due to a decrease in required inspections due to mines that temporarily cease production within a fiscal year.

The number of violations increased beginning in 2009, due in part to the Mined Land Reclamation Board's elimination of a policy regarding certain activities that exempted some construction material operations from the need to obtain a reclamation permit. The new determination relies strongly on the statutory definition of mining. A second issue that increased the number of violations was the impact of the downturn in the economy. Many operators became financially stressed, leading to problems with maintaining their financial warranties, problems with maintaining their sites and in some instances, bankruptcies leading to loss of their permits through non-compliance with their permitting requirements and performance standards. It is expected that the number of violations will remain relatively constant over the next few years as the economy stabilizes.

Minerals Program Benchmarks – Both permitting actions and acreage are projected to increase as the economy recovers and the need for construction materials increases, as reflected in the numbers shown for FY 2013-14 and FY 2015-16.

Minerals Program FY 2015-16 Outlook - Recent levels of minerals mine permitting and reclamation have remained relatively constant. Two things that could have an impact going forward are continued increases in construction demand and falling metal commodity prices. Last year's strong base metal prices 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 may have 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, the 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.

What are the Outcomes the Program is trying to achieve?

Ultimately, the Office of Mined Land Reclamation operates to protect the public health, safety, and welfare from potentially adverse impacts of mining activities. Included in this objective is protecting the natural environment. While it is difficult to measure the exact impacts of mining statewide, several strategic policy initiatives capture the impacts. First, by measuring the # of acres reclaimed, the office measures land area that is successfully reclaimed from the physical impacts of mining. To qualify for inclusion under this measure, the acres must be physically inspected by Division staff, vegetation must be successfully and permanently restored to beneficial use, and any and all other permit conditions for reclamation must be fully met. After meeting these conditions, that portion of the financial warranty held for the mining activity is returned to the operator and the acres will be counted as reclaimed. It is common for mine sites to be reclaimed in stages over time as portions of mining activity are completed and development is moved to a different part of the mine site.

COAL OUTCOME MEASURES

Strategic Policy Initiatives	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
PERMITTING OUTCOME MEASURES							
# of Acres Reclaimed / Released from Financial Warranty	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 500 acres	Benchmark: 15,000 acres	Benchmark: 5,000 acres
	Actual: 735 acres	Actual: 819 acres	Actual: 97 acres	Actual: 366 acres	Actual: 4,994 acres	Actual: N/A	Actual: N/A
INSPECTION/ENFORCEMENT OUTCOME MEASURES							
% of Mine Site Compliance	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 98%	Benchmark: 98%	Benchmark: 98%
	Actual: 99%	Actual: 99%	Actual: 99%	Actual: 98%	Actual: 98%	Actual: N/A	Actual: N/A

Discussion of Coal Program Outcomes:

The number of acres reclaimed varies significantly from year-to-year and is largely dependent upon mine operators applying for final bond release. On average, 477 acres were reclaimed over each of the last five years from FY 2007-08 to FY 2011-12. During FY 2012-13, nearly 5,000 acres were released, which included the release of two full mine sites. The program also anticipates a significant increase in released acres in FY 2013-14 based on large-acreage sites that are projected to complete final reclamation this year. Upon completion of the reclamation, some or all of the financial warranty that is held by the Division is released back to the operator. The percent of mine site compliance with regulatory and statutory requirements has consistently been in the 98 to 99 percent range. However, the Coal Program revoked one permit and forfeited the bond in FY 2012-13. The strong compliance record may be attributed to the industry's commitment to compliance with the regulations, and the ongoing coordination and regulatory oversight that occurs between the Coal Program and the mine operators.

Coal Program Benchmarks – Acres released are anticipated to increase for FY 2013-14 due to the possible release of 4 mines. The compliance percentage for FY 2013-14 is expected to remain within historic values. Although production may increase, bond release and compliance patterns tend to remain stable.

Coal Program FY 2015-16 Outlook – Strategic policy initiative numbers for FY 2015-16 will likely remain within historic values, however, it is possible that as reclaimed mines complete the required ten year reclamation liability period, released acres may increase. Colorado is a national leader in the final release of coal reclamation sites. Compliance numbers are expected to remain constant due to the ongoing compliance commitment observed at Colorado coal mines.

MINERALS OUTCOME MESURES

Strategic Policy Initiatives	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
PERMITTING OUTCOME MEASURES							
# of Acres Reclaimed / Released from Financial Warranty	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,800	Benchmark: 1,800 acres	Benchmark: 1,800 acres
	Actual: 2,026 acres	Actual: 2,027 acres	Actual: 1,083 acres	Actual: 1,772 acres	Actual: 2,199 acres	Actual: N/A	Actual: N/A
# of Mine Sites Reclaimed to Beneficial Use	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 110	Benchmark: 95	Benchmark: 95
	Actual: 107	Actual: 116	Actual: 110	Actual: 106	Actual: 43	Actual: N/A	Actual: N/A
INSPECTION/ENFORCEMENT OUTCOME MEASURES							
% of Active Mine Sites in Compliance	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 96%	Benchmark: 96%	Benchmark: 96%
	Actual: 98%	Actual: 95%	Actual: 95%	Actual: 95%	Actual: 95%	Actual: N/A	Actual: N/A

Discussion of Minerals Program Outcomes - Minerals mine sites must be reclaimed to beneficial use as required in the site reclamation plan. By measuring the number of acres that are reclaimed to beneficial use after mining operations have concluded, the division can measure the land surface area where reclamation was deemed successful. The number of acres reclaimed is dependent on industry business decisions and is largely out of control of the Division. An average of 1,800 acres and 22 mine sites have been reclaimed over the last five actual years.

Compliance with state statutes as well as Division rules and regulations is essential to protecting the public health, safety, and welfare. Through a combination of public education and outreach, as well as deterrence through enforcement, the division hopes to achieve compliance with statutes, rules, regulations, and permit conditions, all of which are designed to protect the public from adverse impacts. The final strategic policy initiatives measure compliance at Colorado’s mine sites, by comparing the number of inspections that result in enforcement actions relative to the total number of inspections conducted. The number of mine sites in compliance with regulatory and statutory requirements has consistently been in the 95 percent range.

Minerals Program Benchmarks – The number of acres reclaimed to a beneficial use and ultimately released is the desired final outcome. This number varies from year to year due to a number of factors mostly out of control of the Division. For instance, the Division issues “Life of Mine” permits, meaning operations can remain active or viable as long as mineral reserves are present. However, once the mining resource is exhausted and mining ceases, operators have five years to reclaim the site. Given the varying product demand cycles, mining extraction timelines can vary widely over the “life of mine”. As a result, it is very difficult to project how many acres will be reclaimed in a given year.

The inspection/enforcement strategic policy initiative is expected to remain relatively constant over the next year. Once the number of distressed operators decreases, the program expects to see a parallel decrease in enforcement actions. Economic conditions are slowly improving.

Minerals Program FY 2015-16 Outlook – As mentioned in the benchmarks discussion, it is difficult to predict the number of sites and acres that will be reclaimed to a beneficial use from year to year. However, the Mineral Program does expect a slight increase in both the number of sites released and the number of acres reclaimed to a beneficial use in the upcoming year and through FY 2016-17.

With respect to *Percent of Active Mine Sites in Compliance*, it is expected to remain relatively constant at approximately 95 percent through FY 2016-17. This is due to the factors mentioned above; specifically, a number of distressed operators will continue to struggle with financial issues which in turn will impact maintenance of their sites and their ability to obtain financial warranties.

Office of Active and Inactive Mines

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 two sub programs, the Inactive Mine Reclamation Program and the Mine Safety Training Program.

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

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

Why Is This Program Important?

Abandoned mine reclamation includes several different aspects including 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 13,925 remaining abandoned mine openings. 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 2011-12 the Inactive Mine Reclamation Program (IMRP) contributed \$7.2 million [*Source: based on rounded RIMS II multipliers for industries in Colorado*] into Colorado's construction economy, including a significant amount in economically depressed rural areas. These

construction activities create jobs and enhance the local economic climate, but they also result in greater tax revenues for state and local governments by increasing the revenues collected from income and sales taxes. The program overall has created approximately 300 new permanent private-sector construction jobs, putting \$30.7 million into local economies, and generating \$1.9 million in Colorado sales and income tax revenues.

The mine safety training and certification programs protect miners and the public from hazards at active mining operations by ensuring that mine foremen and supervisors meet minimum qualifications of experience and training. Further, the programs ensure that all employees work in compliance with federal health and safety standards. A measurable benefit of the program is that Mine Safety and Training Program services have had a significant positive effect on the safety performance of mining operations receiving services from the program. Through cooperative and coordinated efforts between the federal government, the mining industry and safety professionals, the program ensures that effective and high-quality safety training materials are developed and that training stays current with mining practices and federal Mine Safety and Health regulations.

Who are the Program's Customers?

Inactive Mine Reclamation Program – The program protects the public from hazards associated with legacy mining sites statewide; therefore, 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 town, 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. The program also implements reclamation of permitted mining sites where the operator has forfeited the reclamation bond to the state, wherein the customers are the citizens of Colorado.

Mine Safety and Training – The program provides mine safety training to mine employees and independent contractors for all types of mines across the state (active and inactive) to fulfill training requirements established by the federal Mine Safety and Health Administration. The program also creates and distributes innovative, up-to-date mine safety training DVD's that are used both nationally and internationally. The general public, other government agencies, colleges, and trade associations benefit from the safety audits the program conducts, including at tourist mines, and the information distributed by the program on mine safety requirements, regulatory updates, and training materials.

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
- Conduct training programs for the mining industry and the public to ensure the safety of miners and visitors to active mines

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

Inactive Mine Reclamation project management – A staff of 19.4 permanent FTE and 1.5 seasonal FTE in the Inactive Mine Reclamation Program develop reclamation projects for funding and construction in future years. Project activities include field investigations, project development, project design, National Environmental Protection Act (NEPA) compliance, realty work, construction contract bidding and management, site construction and reclamation oversight, and site monitoring and maintenance of prior project work. Given the short construction season in Colorado's high country, projects often take more than one year to complete. Between 2006-2014 Colorado will receive \$30 million to safeguard and reclaim approximately 250-400 sites per year of the estimated 13,925 remaining abandoned mine openings, control or extinguish 33 coal mine fires, and perform mine subsidence stabilization work in high-risk subsidence areas in Colorado Springs and other areas along the Front Range urban

corridor where homes are built over abandoned underground coal mines. Over 70 percent of the available funding is disbursed directly to private-sector contractors and engineering firms in Colorado’s historic mining areas.

Certification/Safety Training of Colorado Miners - The Mine Safety and Training Program has a staff of 5.0 FTE. The program’s four mine safety and health instructors are Mine Safety and Health Administration certified and each has extensive experience in the mining industry. One FTE provides administrative support and technical expertise to the Coal Mine Board of Examiners which is responsible for maintaining a high level of competency of coal mine officials in Colorado by requiring certification of the official positions of mine foreman, electrician, fireboss, shotfirer, and blaster. Candidates must possess the appropriate experience and pass an exam in accordance with national testing standards. The staff provides federally-required health and safety training for new miners, an annual refresher, and mine rescue training courses. Additionally, education assistance is provided to mine operators and mining contractors to help protect miners, contractors, and the public at over 1,800 Colorado mining operations. The staff also provides safety and mine emergency rescue training to Colorado miners and contractors each year, targeting the most common causes of fatal accidents and injuries in Colorado and the nation.

What are the Program’s Inputs?

The table below shows the factors that drive the workload of the Inactive Mine Reclamation and Mine Safety training and impact the ability of the program to achieve programmatic goals and objectives.

INACTIVE MINE RECLAMATION INPUT MEASURES

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
# of FTE- Project Management	16.3	15.6	17.8	17.8	19.4	19.4	19.4
# of Mine Hazards projected for safeguarding on annual prioritization list	275	609	360	448	398	374	350
# of Legacy mining water quality/environ. impacts projected for mitigation on annual prioritization list	5	6	5	6	7	7	6

Discussion of Inactive Mine Inputs

Annual Hazardous Features Prioritization List – This is the number of hazardous features designated for closure each year. The Inactive Mines Reclamation Program develops a schedule of projects for reclamation/construction that includes the number of hazardous features in each project. Projects ready for construction contracting have received landowner consent, all clearances under the National Environmental Protection Act (NEPA process), and the final closure designs and specifications have been selected.

Annual Environmental Impacts Inventory (Prioritization List) – The Inactive Mines Reclamation Program staff develop a prioritization list of environmental mine reclamation projects each December for the SB-181 mandated report to the Water Quality Control Commission, as well as to inform the program’s citizen advisory council. Projects on the list include historic mining-related environmental impacts affecting water quality that have been proposed or received funding from Colorado Department of Public Health and Environment under the Non Point Source grants program, as well as mining water-quality improvement projects proposed by federal land management agencies (the U.S. Forest Service and Bureau of Land Management), the Environmental Protection Agency, private landowners, counties, and local governments. Many of the environmental projects remain on the list for 3 to 4 years during the characterization, analysis, and design phases, and are only removed from the list once reclamation of the mining features is completed. Funding levels and staff resources allow the program to plan and execute final reclamation on 5-7 water quality impairment projects each year.

MINE SAFETY INPUT MEASURES

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
# of Training/Certification FTE	5/1	5/1	4/1	4/1	4/1	4/1	4/1
# of Training Requests ¹	7,200 estim	7,500 estim	6,900 estim	5,600 estim	4,786	4,900	5,100
# of Certification exam requests ²	318	346	256	327	335	295	305

¹ Number of training requests includes those for new miner, mine refresher, mine emergency and mine rescue training. *FY 2011-12 and future projections decreased due to staff reduction by 1 FTE in FY 2012-13.*

² Number of individuals who were tested with a certification exam for coal mine officials. *MSTP, with industry cooperation, is addressing the pass rate by providing study materials and training assistance upon request.*

Discussion of Mine Safety Inputs - The Mine Safety and Training Program conducts effective, up-to-date mine health and safety training on-site whenever possible. Training is scheduled to maximize instructor time by grouping miners together as appropriate and to minimize instructor travel time. The Board and the MSTP conduct quarterly Board meetings followed two weeks later by a certification exam in Grand Junction, administered in compliance with national testing standards. Mine emergency and mine rescue training is scheduled either at the Edgar underground mine facility near Idaho Springs or at a particular mine site to build critical mine emergency skills and decision-making in compliance with federal requirements. On average, the program is unable to fulfill 500-1,000 requests for training and assistance per year per the current staffing level.

What are the Programs Outputs?

The Office of Active and Inactive Mines has a number of outputs that are designed to achieve programmatic objectives. These are shown separately for the Inactive Mine Reclamation Program and the Mine Safety Training Program in the table below and in the accompanying narratives.

INACTIVE MINE RECLAMATION OUTPUT MEASURES

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
# of Abandoned Mining Hazards mitigated	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 345	Benchmark: 374	Benchmark: 350
	Actual: 162	Actual: 339	Actual: 337	Actual: 455	Actual: 445	Actual: N/A	Actual: N/A
# of Acres Reclaimed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 205	Benchmark: 200 acres	Benchmark: 170 acres
	Actual: 175 estimated acres	Actual: 321 acres	Actual: 239 acres	Actual: 220 acres	Actual: 169 acres	Actual: N/A	Actual: N/A
# of Legacy mining water quality/ environmental impacts addressed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 10	Benchmark: 7	Benchmark: 6
	Actual: 2	Actual: 7	Actual: 5	Actual: 7	Actual: 4	Actual: N/A	Actual: N/A

Discussion about **Inactive Mines** Output Related Performance

Hazards: This is the actual number of hazardous mining features the program safeguards each fiscal year, as reported in the program’s annual evaluation, and to the federal Office of Surface Mining in their program database.

Acres: This is the number of acres of pre-1977 historic mining-affected land the program addresses and reclaims each fiscal year, as reported in the program’s annual evaluation, and to the federal Office of Surface Mining’s program database.

Legacy Water Quality Improvements: This is the actual number of pre-1977 historic mining environmental impacts (features) addressed or reclaimed, as reported in the program’s annual evaluation, and in the division’s annual report to the Water Quality Control Commission. Many of the environmental projects are technically challenging and remain on the priority list for 3 to 4 years during the characterization, analysis, and design phases. Features are only counted after they are reclaimed during project construction.

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.

Inactive Mines FY 2015-16 Outlook - Over the next five years, hazardous-feature reclamation outputs are expected to decline slightly due to decreases in federal funding, while environmental restoration outputs are expected to increase. There are several larger environmental restoration projects in process of investigation and design that are slated for construction in the next several years. These shifts cause an overall stable workload for the program and similar output levels to the benchmarks shown.

MINE SAFETY OUTPUT MEASURES

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
Miners trained	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 4,300	Benchmark: 4,300	Benchmark: 4,400
	Actual: 6,261	Actual: 6,047	Actual: 5,742	Actual: 4,316	Actual: 4,044	Actual: N/A	Actual: N/A
Certification exams completed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 250	Benchmark: 250	Benchmark: 270
	Actual: 245	Actual: 305	Actual: 226	Actual: 271	Actual: 289	Actual: N/A	Actual: N/A
Training materials distributed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 700	Benchmark: 700	Benchmark: 730
	Actual: 1,179	Actual: 711	Actual: 443	Actual: 716	Actual: 594	Actual: N/A	Actual: N/A

Discussion about Mine Safety Output Related Performance - The Mine Safety and Training Program attempts to fulfill as many requests for training and assistance as possible with current resource levels and staff. The program prioritizes assistance by requiring a minimum of 10 persons per class and assists mine operators and contractors that lack the resources to conduct their own training, that have experienced significant safety problems or challenges, or those that require assistance in complying with ever changing federal safety and health regulations. The program reaches many more miners and contractors through the creation and distribution of digital (DVD) interactive training materials versus those that can be reached through

in-person training classes. The reduction in staff trainers and a slowdown in construction materials mining accounted for a reduction in both the number of miners/contractors trained and the number of training materials distributed. However, these numbers have begun to increase as construction materials mining recovers and a new trainer gains expertise. Requests for coal mine official certification do not fluctuate significantly. When the economy is slow, many miners decide to become certified as they have time to prepare for the examination.

Mine Safety Benchmarks - With the continued recovery of the construction materials mining industry, the Mine Safety and Training Program anticipates a modest increase in the number of training requests, certification exam requests, and number of training materials distributed. It is anticipated that current staffing levels will remain constant. However, federal funding levels have been reduced and could be reduced further. If program funding decreases, the MSTP will need to continue to carefully prioritize the delivery of its services to ensure the maximum protection to the public and mine employees. The MSTP is exploring other funding options to sustain program functions.

Mine Safety FY 2015-16 Outlook - Over the next five years, the Mine Safety and Training Program anticipates both continued challenges with federal funding, as well as an increase in demand for its services as veteran miners retire and less experienced employees join the mining workforce. However, the numbers of miners/contractors trained and training materials developed will remain similar to current benchmark levels if staffing levels remain unchanged.

What are the Outcomes the Program is trying to achieve?

Protecting the public health, safety, and general welfare from the hazards associated with abandoned mines is the highest priority of the Inactive Mine Reclamation Program. This includes safeguarding hazardous openings and remediating environmental problems such as controlling coal mine fires, mitigating coal mine subsidence, and improving water quality affected by past mining. Due to the magnitude and scope of the problem it has been important for the program to partner with other state and federal agencies to acquire funding. In addition, the program has been able to provide technical expertise and leverage funding to watershed groups and local governments to ensure abandoned mine project successes and cost efficiencies.

The major objective of the Mine Safety and Training Program is to ensure the safety of miners and visitors to active mines. Mine operators and mine contractors continue to request program services as more experienced miners retire and new, inexperienced miners take their places. New federal mine health and safety requirements are complex and often difficult to understand, which increases the use of program services dramatically.

INACTIVE MINE RECLAMATION OUTCOME MEASURES

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14	FY 2015-16
Improved public safety: # of abandoned mine incidents	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 0	Benchmark: 0	Benchmark: 0
	Actual: 0	Actual: 0	Actual: 0	Actual: 2	Actual: 0	Actual: N/A	Actual: N/A
Additional abandoned mine reclamation funding leveraged from project partners with inactive mine reclamation severance tax appropriations.	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: \$800,000	Benchmark: \$700,000	Benchmark: \$700,000
	Actual: (new measure in FY 2012-13)	Actual: (new measure in FY 2012-13)	Actual: (new measure in FY 2012-13)	Actual: (new measure in FY 2012-13)	Actual: \$884,922	Actual: N/A	Actual: N/A

Discussion of Inactive Mine Outcome Measures

Narrative for Number of abandoned mine incidents - This strategic policy initiative reports the number of incidents of human rescue, injury, or death associated with inactive or abandoned mine hazards each year. Animal-companion (pet) rescues, injuries, or deaths are not included. Incidents are usually reported in the media and are followed up in detail by the Inactive Mine Reclamation Program staff. Since 1955, there have been 20 deaths, 23 injuries, and 11 human rescues associated with abandoned mine hazards in Colorado. In 2011-12 there were two abandoned mine related rescues in Jefferson County. The rescues were conducted by Jefferson County Sheriff's office and local rescue crews. The first was at an abandoned clay pit located on Jefferson County open space. Three high school students were rescued. They had become trapped when the trail in the clay mine collapsed. The second incident occurred on private property near Evergreen at an abandoned prospect pit. Sheriff's officers rescued a young child from the pit.

In FY 2012-13 there were no reported incidents of human rescue or injuries associated with abandoned mines.

Narrative for severance tax leveraged funding – This strategic policy initiative reports the amount of additional funding received from federal, private and state partners that was actually expended on legacy mining reclamation projects in each fiscal year. The policy initiative tracks all completed mining reclamation projects where appropriated severance tax funds were combined with funding from project partners to complete the reclamation goals. In FY 2012-13, \$512,173 of severance tax funding leveraged \$703,322 of other cost share funds; which is a 137% return on investment. The benchmark value for FY 2012-13 was adjusted to include a single year of funding only - previous number of \$2,400,000 reflected 3

years of funding, which is the typical duration of project funds. Typical project 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 is intended to measure both the efficiency and effectiveness of program funding, because leveraging allows relatively small amounts of division funding to support completion of large, meaningful reclamation projects.

Inactive Mine Benchmarks

Number of abandoned mine incidents - Abandoned mine incidents as defined are infrequent, rare events. A target benchmark of zero incidents is forecast each year. At present there is no statistically based method to predict how many abandoned mine incidents will occur in a particular year.

Leveraged environmental project funding – The benchmark amounts are estimated based on leveraged funding received to date in the current fiscal year from July 1 – November 30, 2013, and extrapolated over a full fiscal year period. The benchmarks also take into account expected future levels of federal and private funding.

Inactive Mine FY 2015-16 Outlook

Number of abandoned mine incidents – Although Colorado is seeing continual increases in tourism visits and recreational use in areas affected by past mining activity, educational outreach and continued safeguarding of hazardous mine openings is expected to keep abandoned mine incidents at a near zero level through 2016.

Leveraged environmental project funding – Based on trends established over the past 5 years and projected budget levels for federal land management agencies, the amount of funding leveraged by the Inactive Mine Reclamation Program is expected to remain at similar or slightly decreased levels over the next five years.

MINE SAFETY OUTCOME MESAURES

Outcome Measure	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Actual	FY 2015-16 Actual
Accident rate below national rate for miners trained by Mines Safety and Training staff	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: MSTP trained coal: 2.0 MSTP trained non-coal: 2.1	Benchmark: MSTP trained coal: 1.5 MSTP trained non-coal: 1.9	Benchmark: MSTP trained coal: 1.5 MSTP trained non-coal: 1.9
	Actual: Natl <u>coal</u> rate: 3.00 MSTP <u>coal</u> rate : 3.88 Natl <u>non-coal</u> rate: 2.24 MSTP <u>non-coal</u> rate: 2.48	Actual: Natl <u>coal</u> rate: 2.72 MSTP <u>coal</u> rate: 2.86 Natl <u>non-coal</u> rate: 2.058 MSTP <u>non-coal</u> rate: 2.095	Actual: Natl <u>coal</u> rate: 2.50 MSTP <u>coal</u> rate: 2.31 Natl <u>non-coal</u> rate: 1.96 MSTP <u>non-coal</u> rate: 1.84	Actual: Natl <u>coal</u> rate: 2.452 MSTP <u>coal</u> rate: 1.979 Natl <u>non-coal</u> rate: 1.793 MSTP <u>non-coal</u> rate: 2.237	Actual: <u>Coal miners:</u> MSTP trained NFDL rate: 1.006 Not trained by MSTP: 2.228 <u>Metal/Non-metal miners:</u> MSTP trained NFDL rate: 1.986 Not trained by MSPT: 2.594	Actual: N/A	Actual: N/A

Discussion of Mine Safety and Training Outcome Measure - The *non-fatal days lost* or NFDL rate is a calculation based on specific types of injuries that occur per 200,000 miner worker hours. In FY 2008-09 through FY 2011-12, the measure compared NFDL injury rates for coal and non-coal mines to the National NFDL injury rates. Beginning in FY 2012-13, the measure will compare injury rates for miners trained specifically by the Mine Safety and Training Program to rates for miners trained by other entities who provide similar training in the state. The benchmarks reflect the goal of fewer injuries; thus, a lower NFDL rate per year.

Evaluation of Prior Year Performance:

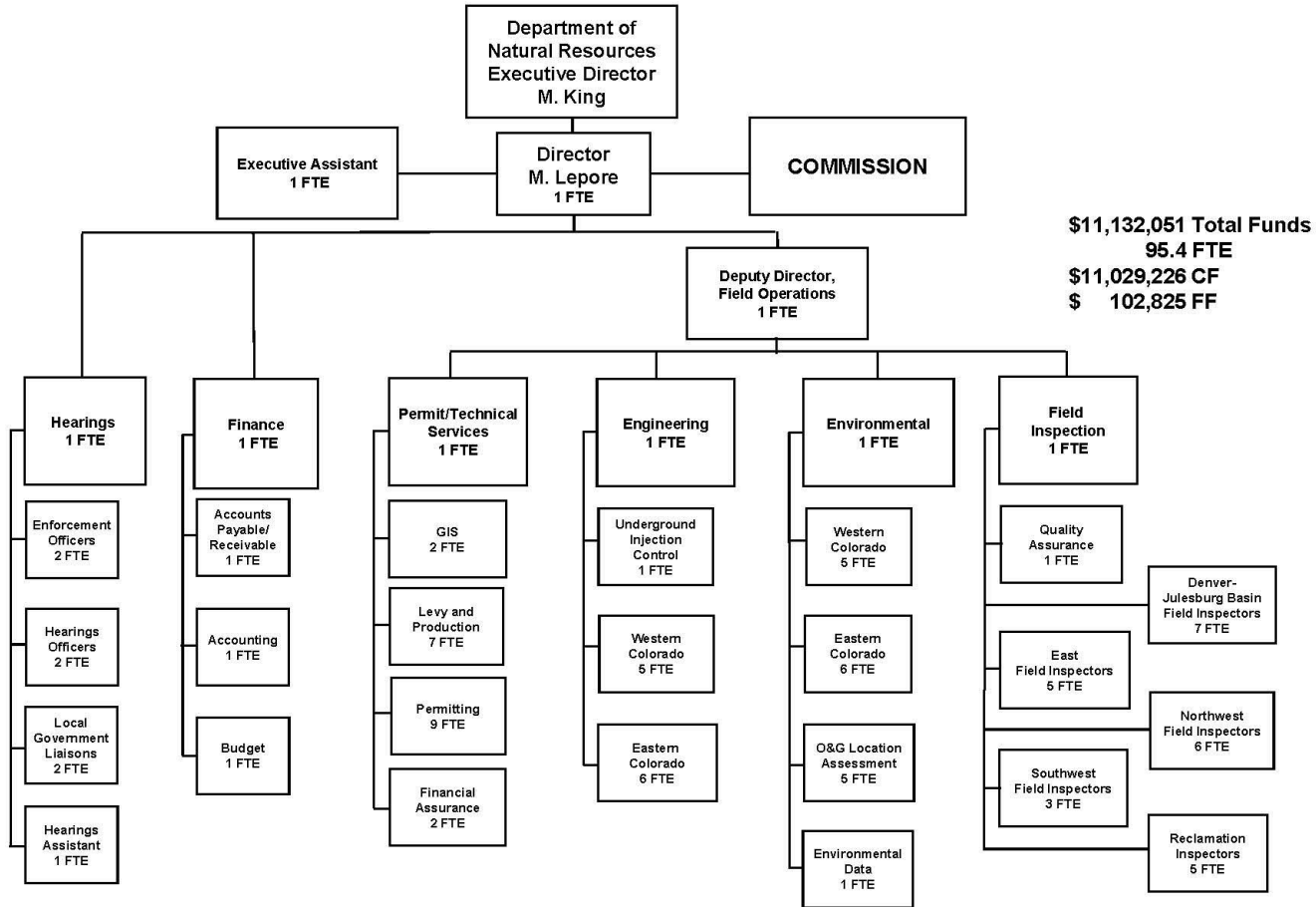
- **Coal Mines** - Last year, the NFDL rate for Colorado coal mines receiving Mine Safety and Training Program services was 1.006 as compared to a national rate of 1.334.
- **Non-Coal Mines** - Last year, the NFDL rate for non-coal mines receiving Mine Safety and Training Program services was 1.986 as compared to a national rate of 2.410. The program is providing targeted training to non-coal mines that have had safety problems and significant numbers of injuries in the past.

Mine Safety and Training Program's assistance to mines for the goal of reducing their lost-time injury rates and protecting the safety of their mine workers is achieved by providing effective, consistent, and current mine safety and health training; auditing mine safety practices and developing; and distributing new, innovative training tools to mine safety personnel and mine employees. As Colorado's mining industry recovers, larger numbers of experienced mine employees are retiring and mine operators are hiring large numbers of inexperienced mine employees and mining related contractors. These employees must learn to operate larger, technologically advanced equipment in challenging geologic environments in a safe and healthful manner. Adequate training and certification of coal mine officials and miners is critical to a safe coal mining industry in Colorado.

Mine Safety Benchmarks – The Mine Safety and Training Program's goal is to continue a six-year trend of incremental decreases in the *lost time injury rate* (or NFDL rate) for Colorado mines that receive the program's safety compliance services, as reflected in the benchmark numbers shown for FY 2013-14 and FY 2015-16. For comparison, the National NFDL benchmarks for FY 2013-14 are 2.35 for coal mines and 2.00 for non-coal mines. Program resources are targeted to Colorado mines with unique geologic and safety challenges, those with a large number of past injuries or mines with new, inexperienced employees and a lack of resources/expertise to comply with the federal and state safety regulations.

Mine Safety FY 2015-16 Outlook – In FY 2016-17, the Mine Safety and Training Program hopes to reduce the NFDL rate at mines receiving the program's services to approximately 1.5 for Colorado coal mines and 1.9 for non-coal mines. However, the numbers of miners trained, mines assisted (safety audits, etc) and training materials developed will remain similar to current benchmark levels if staffing and federal funding levels remain the same.

COLORADO OIL & GAS CONSERVATION COMMISSION



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 approximately 4,000 permits for the drilling of new oil and gas wells and another 250 to 500 permits for the recompletion of existing wells. In addition, the Commission annually approves approximately 2,500 to 3,000 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, special conditions of approval are imposed 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 40 permits for the underground injection of such waste into Class II wells pursuant to authority delegated by the Environmental Protection Agency, and the OGCC’s environmental group annually issues another 65 to 200 permits for the management of such waste in pits. The agency has noticed a recent decline in these figures 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 oversees the remediation of about 300 to 500 spills and releases annually and the ongoing remediation of continuing impacts at approximately 200 to 300 other sites.

Inspections: The OGCC annually inspects between 16,000 to 19,000 oil and gas facilities, including wells, tank batteries and multi operational locations. These inspections help to ensure that well 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 operations. 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 1,200 surety bonds and other forms of financial assurance in the total amount of approximately \$75 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 approximately 250 to 500 notices of alleged violation (NOAVs) to operators who have violated regulatory or permit requirements. These notices identify the factual and legal bases underlying an alleged violation and require corrective or remedial action to remedy the alleged violation. The OGCC’s Hearings Unit may also seek monetary penalties for violations. 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 about 50,000 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 \$100,000 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 \$300,000 to \$400,000 plugging orphaned wells and reclaiming and re-vegetating orphaned well sites. This work helps to mitigate the safety and environmental risks associated with orphaned wells and sites. 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 more than 150 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? Through a largely regulatory role, the OGCC is charged with fostering the responsible, balanced development of our state’s oil and gas resources while protecting the public health, safety and welfare, including the environment and wildlife resources.

The oil and gas industry is an important economic base within Colorado. There are about 50,000 active wells in Colorado, which collectively produce over \$10 billion worth of oil and gas. The industry directly employs over 40,000 people and supports about 64,000 additional jobs in the state.¹ In addition, these operations generate royalty payments, severance tax revenues, and generate General Fund revenue through corporate taxes and the sales and income taxes paid by industry employees.

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 clear, predictable regulatory environment is essential to the success of the industry, as is a fast and efficient permitting process. Additionally, county assessors rely on the OGCC’s compilation of oil and gas production and sales information to project tax revenues;

¹ Source: “Assessment Of Oil And Gas Industry Economic And Fiscal Impacts In Colorado In 2010,” Business Research Division, CU Boulder – November 2011.

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 are the Strategic Policy Initiatives of this Program? The Program's mission is to foster the responsible development of Colorado's oil and natural gas resources. Objectives include:

- Prevent and mitigate adverse impacts to public health, safety, and welfare, in addition to the environment and wildlife
- Ensure compliance through an effective enforcement program
- Expedite the processing of oil and gas well drilling, recompletion, and underground injection well permit application
- Serve as the primary government resource to the public regarding oil and gas development in Colorado.

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

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

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

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

Public Relations – The Public Relations process includes OGCC hearings, rulemakings, public meetings, training sessions, and other methods of disseminating oil and gas industry information to the public. All hearings are open to the public, and a portion of each regular hearing is reserved for public testimony and for updates on staff projects, such as environmental investigations and remediations. OGCC staff members frequently speak at

public meetings and provide technical training, on a variety of topics, for the regulated community, Local Government Designees, and other stakeholders. Furthermore, the OGCC’s website provides a vast amount of information about wells, permits, violations, production, environmental studies, and industry practices, all of which are available to the public.

What are the Program’s Inputs?

A number of factors drive the workload of the Regulation of Oil and Gas Exploration and Production Program and impact the ability of the Program to achieve programmatic goals and objectives.

Inputs	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
Total # of Active Wells	39,944	42,324	45,401	47,860	50,909	53,400	58,400
# of OGCC FTE	52.6	61.8	65.2	65.4	72.2	95.4	95.4
# of Citizen Complaints	220	157	296	245	234	250	250
# of Spills & Releases of E&P Waste	377	427	519	485	377	500	500
# of Site Investigation and Remediation Workplans Submitted	236	301	588	763	631	700	750
# of Drilling Permits Requested	6,923	5,278	4,883	4,541	3,867	4,000	4,000
# of Applications for Orders	103	125	255	456	525	500	500

Discussion – While the Program’s workload is affected by a number of metrics, some of which are included in the table above, the continuous increase in the number of active wells has been the principal driver of the Program’s work and its ability to generate positive outcomes. The number of active wells increased by an average of about 1,000 wells per year between 1991 and 2005 and by an average of about 3,150 wells per year during the last seven years, from mid-2006 through mid-2013. This net growth, meaning that every year significantly more wells are drilled than are plugged, has impacted all Program processes, from the major processes discussed above to the support roles such as information technology, budgeting, procurement, and records administration. Moreover, after it is drilled, cased, cemented, stimulated, and connected to a sales line, each well will produce oil and/or natural gas for decades. Therefore, even when drilling temporarily slows due to a poor economy or low product prices, the active well count continues to grow, albeit at a slower pace. If drilling suddenly came to an unprecedented “complete halt” at the end of Fiscal Year (FY) 2013-14, for example, the active well count would likely exceed 53,000. Most of these wells will produce and require monitoring by

operators and the OGCC for a minimum of 20 to 30 years. Hundreds of currently active wells were drilled in the 1940s and 1950s; some were drilled as long ago as the early 1900s.

In addition, population growth in Colorado, coupled with the discovery of new reservoirs and technologies, has resulted in more people living near drilling activities, creating increased conflicts with oil and gas development. Although reflected to some extent in statistics such as the number of citizen complaints, the proximity of wells to homes, schools, and other structures has substantially increased the Division’s workload in ways that are difficult to measure. Because OGCC staff members do not track their work hours by complaint, violation, or inspection number, the Division cannot accurately calculate the additional time spent responding to phone calls and e-mails from landowners, local government representatives, and the media; prosecuting major rule violations; developing new rules to address the conflicts; conducting extra hearings; and responding to requests for public documents under the Colorado Open Records Act.

What are the Program’s Outputs?

The Regulation of Oil and Gas Exploration and Production Program has a number of outputs that are designed to achieve programmatic objectives. These are discussed in the table below and the accompanying narrative.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
# of Approved Drilling Permits	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 4,000	Benchmark: 4,000	Benchmark: 4,000
	Actual: 7,158	Actual: 5,623	Actual: 4,898	Actual: 4,549	Actual: 3,643	Actual: N/A	Actual: N/A
Median # of days to process permits	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 30	Benchmark: 30	Benchmark: 30
	Actual: 62	Actual: 54	Actual: 30	Actual: 28	Actual: 32	Actual: N/A	Actual: N/A
# of Notices of Alleged Violations (NOAVs)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 180	Benchmark: 180	Benchmark: 180
	Actual: 258	Actual: 237	Actual: 337	Actual: 172	Actual: 180	Actual: N/A	Actual: N/A

Average # of days to resolve NOAVs or moved to next level of enforcement	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 90	Benchmark: 90
	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A	Actual: N/A
# of Inspections Completed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 12,000	Benchmark: 22,000	Benchmark: 28,500
	Actual: 10,562	Actual: 12,470	Actual: 17,088	Actual: 15,130	Actual: 18,809	Actual: N/A	Actual: N/A
Average Inspection Frequency (years between)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 3.00	Benchmark: 2.50	Benchmark: 2.00
	Actual: 3.78	Actual: 3.39	Actual: 2.66	Actual: 3.16	Actual: 2.71	Actual: N/A	Actual: N/A
# of Water Quality Samples on the OGCC Website	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 24,050	Benchmark: 25,500	Benchmark: 27,000
	Actual: 21,798	Actual: 22,652	Actual: 23,222	Actual: 23,532	Actual: 24,518	Actual: N/A	Actual: N/A
Wells Plugged and Abandoned by the OGCC	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 25	Benchmark: 20	Benchmark: 20
	Actual: 8	Actual: 9	Actual: 2	Actual: 20	Actual: 20	Actual: N/A	Actual: N/A
# of Orders Issued by the OGCC	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 400	Benchmark: 400	Benchmark: 400
	Actual: 94	Actual: 106	Actual: 239	Actual: 391	Actual: 448	Actual: N/A	Actual: N/A
# of Public Meetings in which OGCC Staff Participated	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 120	Benchmark: 120	Benchmark: 120
	Actual: 43	Actual: 51	Actual: 63	Actual: 117	Actual: 180	Actual: N/A	Actual: N/A

Discussion about Output-Related Performance –

Drilling permits: OGCC is required by statute to review drilling permit applications in a timely and efficient manner. Under the OGCC's rules, if staff has not approved a drilling permit within 75 days, the operator may request approval through an expedited hearing before the Commission. Within an approved Comprehensive Drill Plan, drilling permits must be approved within 30 days of the application being deemed complete. When backlogs develop, as they did in FY 2005-06 through 2007-08, the agency hires contract staff to lower the median approval time. Starting in January 2013, for the first time in seven years, the OGCC processed permits in a timely and efficient manner with its *full-time permit staff only*, without the assistance of contract permit technicians. This is a major accomplishment, notwithstanding the decline in the number of applications received, because increased well density, proximity to urban areas, and the proliferation of horizontal drilling has significantly increased the complexity of permit review for all staff members involved: permit technicians, engineers, and environmental staff. The development by the OGCC of the nation's first electronic permit application and approval process in 2009 improved efficiency and helped make the reduction in contractors possible. The agency's continued focus on the development of electronic regulatory forms has improved other processes as well. Much more work in this area is needed before staff resources can be fully optimized.

Notices of Alleged Violations: Violations of OGCC rules or permit conditions can result in formal enforcement action against the offending operator. OGCC initiates formal enforcement actions by issuing an NOAV to the operator, which identifies the factual and legal bases for the alleged violations. An NOAV also sets forth corrective actions that must be taken to bring the operator back into compliance. Violators are also subject to monetary penalties; the maximum penalty per violation is set by statute. Historically, NOAVs often were issued as 'warnings,' and were resolved informally. Recently, the OGCC has implemented additional tools to address less serious violations that can be remedied quickly and easily, including issuing an Unsatisfactory Inspection Report or a Warning Letter. In these cases, the operator is given a short time to remedy the alleged violations, and may be give specific corrective actions to perform. An NOAV is issued when more serious violations are identified, or when an operator has a poor compliance history. The expectation is that an NOAV will include corrective actions as well as a monetary penalty. NOAVs may be resolved through a negotiated settlement agreement or an adjudicatory hearing before the Commission.

The change in approach to enforcement procedures has resulted in fewer NOAVs being issued, but more formal enforcement matters before the Commission (which is expected to continue in future years). In November 2011, the OGCCC introduced an electronic inspection form that automatically generates and sends an e-mail copy of the inspection report to the operator. Operators have generally responded by quickly correcting deficiencies identified in the inspection report, which has reduced the number of NOAVs issued. In FY 2007-08, 590 NOAVs were issued. In FY 2012-13, 180 were issued.

Inspections and inspection frequency: Inspection goals and objectives are developed for each member of the field inspection group. The actual goal for each inspector varies according to well density and geographic features of the region to which they are assigned. In areas in the Denver-Julesburg Basin with a high well density and well-developed system of highways and county roads, an inspector is required to complete a larger number of inspections. In comparison, in northwestern Colorado, where well densities are lower and the topography and geography are more challenging, an inspector's goal is a lower number. On average, the number of inspections is approximately 1,000 wells or facilities per inspector annually. The inspection rate or average is sensitive to staff turnover; the hiring process can be lengthy, and new inspectors need extensive training to successfully conduct detailed site inspections and work with the OGCC database and permit system.

Another issue that affects the inspection rate is the amount of time inspectors allocate to respond to a complaint, which is a more time consuming process than a routine inspection. As drilling moves into the urban interface zone along the Front Range, OGCC inspection staff spend more time investigating and resolving complaints. Responding to citizen complaints is a high priority, and the Division's policy is to respond within 48 hours;

however, inspectors frequently respond within 24 hours. The complaint scenarios include such issues as noise and odors, and field inspectors must frequently make three or more site visits in order to observe the conditions giving rise to the complaints. Dust and traffic complaints are increasing, and these issues may involve multiple state and local governmental agencies, adding to the complexity of a complaint and the amount of time required to ensure that the chief complaint subjects are addressed. With eleven additional inspectors that were authorized for FY 2013-14, the total inspection count will increase, allowing each well to be inspected on average once every two to three years.

The frequency of OGCC inspections of active wells has increased by 28 percent since FY 2008-09, from an average of once per 3.78 years to once per 2.71 years in FY 2012-13. These frequencies take into account the need to inspect those wells with the most reported problems multiple times within a short period of time until the complaints can be resolved. That is, an average frequency of one inspection every three years does not guarantee that every well in the state is inspected during a three year timeframe.

Additions to the inspection staff and increases in efficiency over the last several years have been offset by the continued growth in the active well count. Inspection frequency benchmarks set for FY 2013-14 (once per 2.50 years) and FY 2015-16 (once per 2.00 years) assume growth in the number of OGCC inspectors at a greater rate than the growth in the active well count.

Baseline water quality samples: Colorado was the first state to require operators to conduct baseline water quality sampling in areas with significant oil and gas development activity. Since 1999, the OGCC has been assembling a water quality database, now publicly available, that contains about 25,000 analytical samples. In 2009, the OGCC passed a rule requiring sampling before and after the drilling of any coalbed methane well. The most recent statewide water sampling rule, which took effect May 1, 2013, requires operators to sample groundwater before and after drilling any new well. Accordingly, the groundwater database is expected to grow rapidly over the next few years. The data will be useful in determining where, if any, impacts to ground water are occurring as a result of industry activities.

Plugging and Abandonment: Since the early 1990's, the OGCC has had an active orphaned and abandoned oil and gas well plugging and site reclamation program. Occasionally, orphaned and abandoned wells and oil and gas operations sites in need of reclamation are identified by OGCC inspectors or are reported to the OGCC by the public. Typically, these wells and sites pre-date modern oil and gas regulation in Colorado. The orphaned and abandoned well plugging and site reclamation program was established to use funds provided by the regulated industry to prevent impacts to the environment and public health, safety, and welfare that could be posed by these old wells and sites. In FY 2012-13, the OGCC completed 20 well plugging, abandonment and reclamation projects, which is greater than the 6 year average of 17 completed projects per year. With more funding and management effort on both small and large size projects, OGCC has set a goal of completing 20 projects in both FY 2013-14 and 2015-16. Much depends on the complexity of projects chosen and the speed at which contracts can work their way through the state process.

What are the Outcomes the Program is trying to achieve?

Ultimately, the Regulation of Oil and Gas Exploration and Production Program is working to protect public health, safety and welfare, including the environment and wildlife resources, while at the same time ensuring the efficient and economic development of the state's oil and gas resources and protecting the correlative rights of mineral owners. The Program works with federal land agencies and the federal government, as well as local governments, to encourage sound management practices that minimize cumulative impacts on wildlife, the environment, and local communities. In addition, the OGCC is an "Implementing Agency" for the state's Water Quality Control Commission (WQCC), and is responsible for upholding the water quality standards and classifications that are established by the WQCC with respect to oil and gas operations. The OGCC is responsible for regulating oil and gas development in a manner that prevents and mitigates impacts to the environment, including contamination of water. The number of adverse impacts to water resources that occur from oil and gas development is an important measure of how well the OGCC is

implementing these responsibilities. Reducing or controlling such impacts during current unprecedented levels of oil and gas activity in Colorado will continue to be challenging.

Outcomes	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
Percent of Oil & Gas Wells Permitted Using a Closed Loop System	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 75%	Benchmark: 90%	Benchmark: 90%
	Actual: N/A	Actual: 37%	Actual: 67%	Actual: 74%	Actual: 86%	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: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 75%	Benchmark: 75%	Benchmark: 75%
	Actual: N/A	Actual: 15%	Actual: 45%	Actual: 53%	Actual: 53%	Actual: N/A	Actual: N/A
Percent of Wells Drilled Horizontally and/or from Multi-Well Pads	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 85%	Benchmark: 90%	Benchmark: 90%
	Actual: N/A	Actual: 36%	Actual: 58%	Actual: 81%	Actual: 90%	Actual: N/A	Actual: N/A
Percent of Reclamation Inspections that Comply with OGCC Rules	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 90%	Benchmark: 80%	Benchmark: 70%
	Actual: 54%	Actual: 72%	Actual: 82%	Actual: 87%	Actual: 91%	Actual: N/A	Actual: N/A
Total # of Citizen Complaints that Result in NOAVs per thousand Active Oil and Gas Wells	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: .30	Benchmark: .25	Benchmark: .25
	Actual: .45	Actual: .66	Actual: .45	Actual: .33	Actual: .28	Actual: N/A	Actual: N/A

Discussion of Outcome Measures and Benchmarks -

Closed loop drilling: Increasing use of closed loop drilling systems is related to the Strategic Policy Initiative of preventing and mitigating adverse impacts of oil and gas activity on public health, safety, and welfare. Closed loop drilling systems significantly reduce impacts to the environment by eliminating the use of drilling pits. The number of closed loop systems in use, as a percentage of all new wells, is one way to measure progress in reducing impacts to water resources. Closed loop systems also allow more timely detection of drilling fluid releases, and easier well site reclamation. The OGCC requires the use of closed loop drilling in certain situations, such as proximity to surface and/or ground water and at all new oil and gas locations within 1,000 feet of residences or other occupied buildings. More frequently now, as reflected in the increasing rate of closed loop drilling, operators choose to use this more environmentally friendly drilling method on their own or at the request of farmers who do not want pit installation disturbing the soils in their fields. As more and more rigs are built and equipped with the closed loop systems, the benchmark for FY 2015-16 of 90 percent should be achievable.

Wildlife management plans: Increasing use of wildlife management plans is also related to the Strategic Policy Initiative of preventing and mitigating adverse impacts of oil and gas activity on public health, safety, and welfare. Adverse impacts, in this case, are those associated with wildlife and wildlife habitat. Statutory changes in 2007 required the OGCC to encourage operators to use landscape level planning tools to provide for orderly development of oil and gas fields that minimize surface disturbance and fragmentation of important wildlife habitat. The percentage of oil and gas wells permitted in Sensitive Wildlife Habitat that are included in Wildlife Management Plans is a good measure of this landscape level planning. More operators are satisfying their Division of Parks and Wildlife consultation requirement before they start drilling in Sensitive Wildlife Habitat. By developing wildlife management plans, operators have a better understanding of their environmental protection obligations and associated costs earlier in the process. Going forward, the OGCC hopes to have 75 percent of oil and gas wells permitted in Sensitive Wildlife Habitats included under wildlife management plans. Wildlife management plans are not appropriate for all wells, though, particularly wildcat (i.e. exploratory) wells, because follow-up drilling is uncertain. With gas prices projected to be low for the immediate future, operators have not been pursuing new wildlife mitigation plans, though the Division and Colorado Parks and Wildlife personnel continue to encourage plan development.

Use of multi-well pads: The OGCC strives to reduce impacts to the surface by requiring the use of multi-well pads, when practical, and conducting reclamation inspections subsequent to drilling operations. In this regard, this outcome measure also relates to the Strategic Policy Initiative to prevent and mitigate the adverse impacts of oil and gas activity. The use of horizontal and directional drilling technologies reduces surface disturbance because multiple wells can be drilled from a common well pad, which is located to minimize impacts to water resources, wildlife, and surface owners. Furthermore, horizontal wells provide the additional benefit of reducing the total number of wells that need to be drilled, thereby reducing surface disturbance and impacts to public health, the environment, and wildlife.

The percentage of wells that were drilled horizontally and/or directionally from a common well pad increased from 36 percent in FY 2009-10 to 90 percent in FY 2012-13, as a result of the OGCC's and industry's efforts to minimize surface impacts. In future years, the OGCC believes that 90 percent of new wells will be drilled either horizontally or from multi-well pads. There will always be an opportunity for conventional development using single wells at lower drilling density, but these plays or resource extraction opportunities are becoming more difficult to find. Therefore, it seems appropriate to the OGCC to not elevate the benchmark to 100 percent.

Reclamation inspections: The Commission issued revised reclamation rules, effective in the latter half of FY 2008-09, that put additional focus on conducting inspections and reporting the reclamation status of oil and gas facilities to the OGCC. Starting in that year, the share of reclamation inspections in compliance with OGCC rules decreased. The percentage gradually improved as oil and gas operators corrected the mistakes that led

to failed inspections. The significant improvement from 54 percent to 91 percent between fiscal years 2008-09 and 2012-13 surpassed expectations but is attributed to a larger, re-organized field inspection staff and increased attention to reclamation by both the OGCC and industry.

Future compliance rates will drop as OGCC shifts its focus to interim reclamation requirements that have become more important as higher density and larger oil and gas facilities are constructed around the state. To be in compliance at a location, interim reclamation should be in progress and waiting on revegetation within 12 months of well completion. Inspectors aim to evaluate progress twice during the 18 month period following well completion. Final reclamation inspections are conducted when the operator requests the release of its financial assurance. By FY 2015-16, the OGCC expects to find 70 percent of reclamation inspections meeting the OGCC's current standards. This outcome measure relates to both the Strategic Policy Initiative of ensuring compliance through an effective enforcement program as well as to preventing and mitigating adverse impacts from oil and gas activity (OGCC requires reclamation to protect groundwater resources, prevent excessive dust, and allow properties where oil and gas activities occurred to be restored to other beneficial uses).

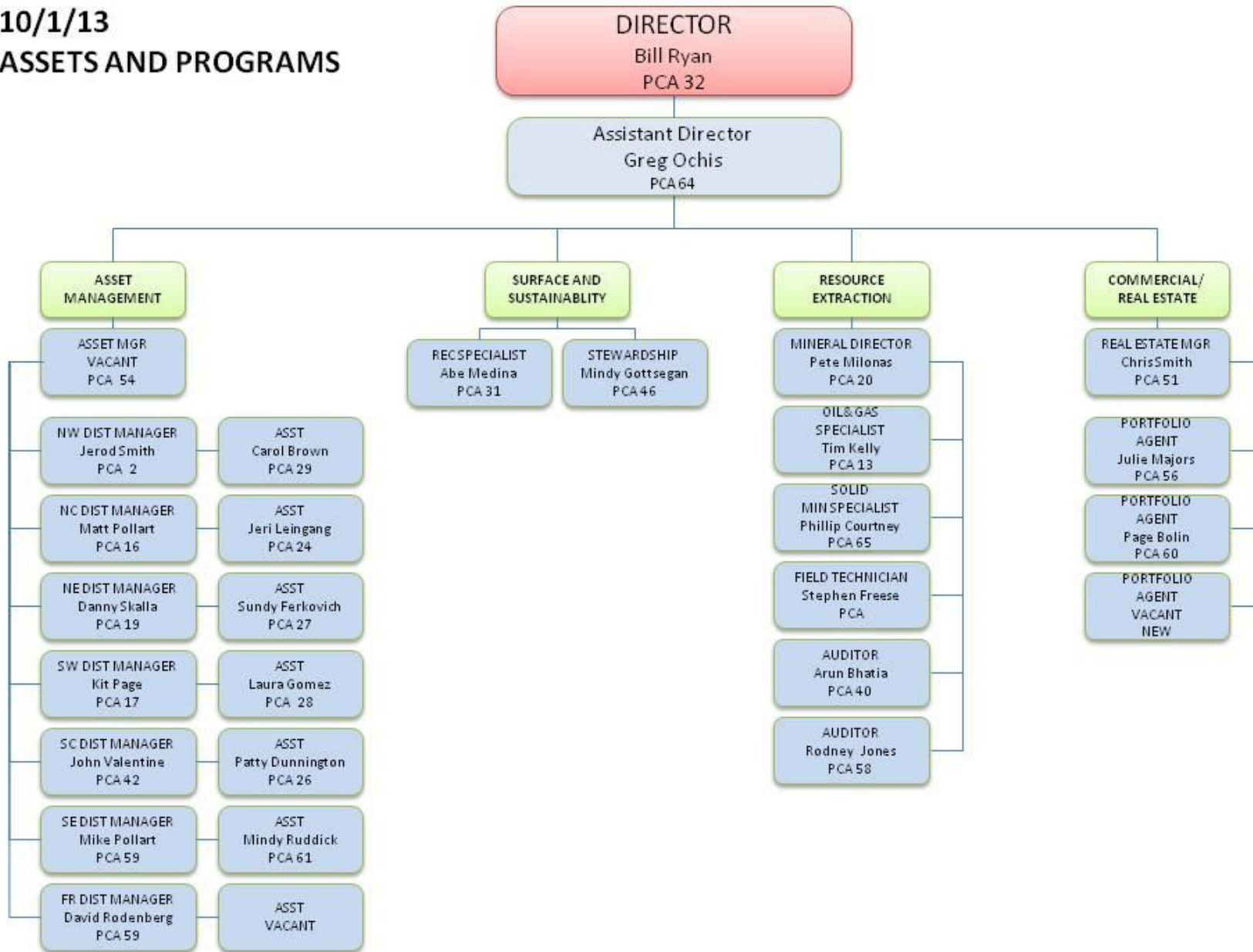
Citizen Complaints: The OGCC diligently and promptly responds to all citizen complaints. Complaint investigation is a transparent process for the public, as each complaint is tracked on the OGCC web site until the issue is resolved. When a complaint describes one or more issues that the OGCC has the authority to address, the citizen complaint outcome measure relates to the strategic initiative of ensuring compliance through an effective enforcement program.

The number of citizen complaints that result in an NOAV being issued is one metric for measuring the impacts of oil and gas activities on the public (per the OGCC's first strategic initiative), and of how well regulation by the OGCC reduces those impacts. Of the 234 complaints received by the OGCC in FY 2012-13, 14 led to NOAVs for violations of OGCC rules. To standardize this number against the growing number of active wells, the 14 complaints are reported in the table above as the number of complaints resulting in NOAVs per thousand active wells (i.e. 14 divided by 50.909 thousand active wells = 0.28). The total number of complaints and the ratio of complaints resulting in an NOAV have been in decline over the past two years.

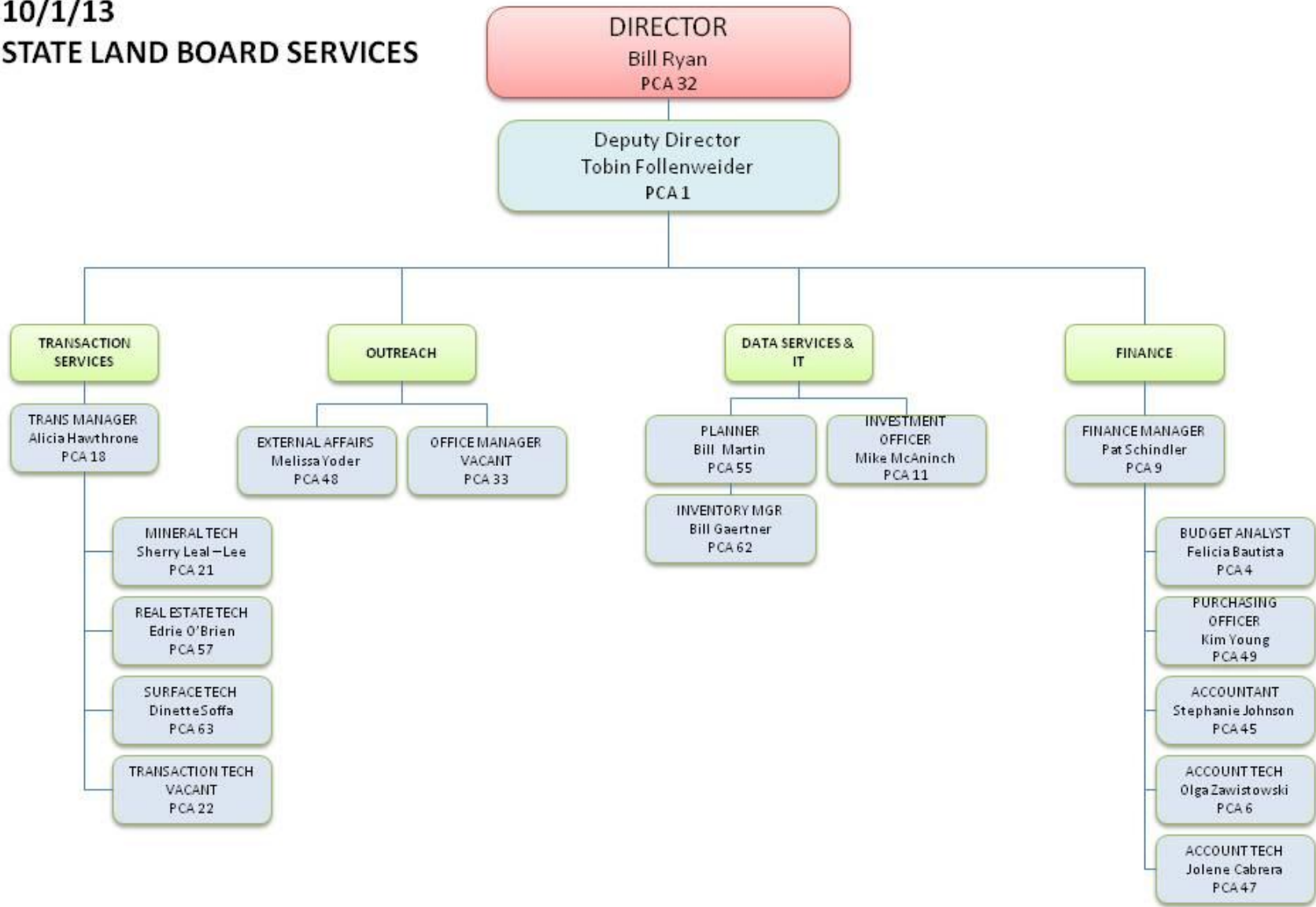
The OGCC anticipates both total complaint volume and the rate at which complaints result in an NOAV may drop in the near term for several reasons. First, the Commission adopted an enhanced location assessment program in FY 2008-09, and followed up with action to amend setback rules that were widely publicized midway through the FY 2012-13 fiscal year. The OGCC's location assessment program and revised setback rules are capable of mitigating some of the key nuisance issues cited in citizen complaints, including noise, odors, and traffic impacts. Second, the Division is on track to double the number of staff inspectors between 2007 and 2014, increasing the likelihood that many potential adverse impacts of oil and gas activity will be identified and corrected before complaints are submitted. A greater presence of inspectors in the field effectively raises expectations for operators, and the industry responds by improving both its operations and its stakeholder outreach.

Overall, the OGCC believes that a good target for the ratio of citizen complaints that become an NOAV per 1,000 wells is a number between 0.25 and 0.30. This range reflects the preventative role of the OGCC inspector who can secure immediate corrective actions before public complaints are submitted, but also reflects the changing use of the NOAV as the first step in enforcement rather than being a minor advisory notice to the operator only.

10/1/13
ASSETS AND PROGRAMS



10/1/13
STATE LAND BOARD SERVICES



State Land Board

What is this program?

The Colorado State Board of Land Commissioners (State Land Board) is a constitutionally created state program to which the State of Colorado delegated its fiduciary and management responsibility for the assets, or “trust lands,” of eight public trusts. The trust lands were lands transferred as an endowment to Colorado by the federal government around the time of statehood to be managed for the benefit of public education and public institutions. The State Land Board manages an endowment of assets held in a perpetual intergenerational public trust for the financial support of Colorado’s public schools and other public entities. Included in these assets today are:

- Approximately three million surface acres of land leased for agricultural, 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.

About 95% of the State Land Board assets are part of the School Trust, with the remaining five percent distributed across the other seven trusts: the Public Buildings Trust, the Penitentiary Trust, the University of Colorado Trust, the Colorado State University Trust, the Hesperus Trust (also known as the Fort Lewis Grant), the Internal Improvements Trust, and the Salt Springs (Saline) Trust. Both the Internal Improvements and Salt Springs Trusts are managed for the benefit of the Colorado Division of Parks and Wildlife. While the properties managed by the program are publicly held lands, they are held in the various trusts and thus are not generally open to public access except where recreational leases allow public use. In addition to state trust land leasing activities, the State Land Board also engages in the disposition and acquisition of assets, transactions referred to as non-simultaneous exchanges. Proceeds generated from these exchanges must be reinvested within two years. Non-simultaneous exchange transactions provide opportunities for the State Land Board to diversify its holdings.

The State Land Board is entirely funded by revenues from state trust asset lease revenues. In FY 2012-13 total trust gross revenues were \$125 million and State Land Board’s operating costs were about \$5.0 million.

Why is This Program Important?

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

Who are the Program’s Customers?

The State Land Board’s purpose is to serve the trust beneficiaries both now and for future generations to come. In addition to the beneficiaries, our other critical 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 will be recognized as one of the state's most significant assets, providing value for each generation of beneficiaries. The program's strategic policy initiatives as outlined in the State Land Board's formally adopted Strategic Plan are:

- Initiative: Develop creative and responsible ways to deliver enhanced financial outcomes for its eight public trusts, with special emphasis on its largest trust, the School Trust.
- Initiative: Fully realize the vision of Colorado's citizens, as expressed in Amendment 16, for stewardship of the lands the Board holds in perpetual trusts, especially those held in the Stewardship Trust.
- Initiative: Improve the State Land Board's decision-making processes.
- Initiative: Achieve greater positive recognition and support for the State Land Board.
- Initiative: Enhance internal skills and organizational capacities.
- Initiative: Model excellence in governance.

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

Management of Mineral Resources

Management of mineral resources includes: developing, evaluating, and auctioning leases for minerals production; collecting royalties, bonuses, rentals, and advance minimum royalties; assigning, tracking, and enforcing lease stipulations; issuing exploration permits; setting and monitoring reclamation bonds; examining mineral ownership for leasing opportunities; and conducting royalty revenue audits and site inspections.

Management of Agricultural Properties

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

Management of Commercial Property and Real Estate

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

Non-traditional use management

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

What are the Program's Inputs?

A number of factors drive the workload for State Land Board and impact the ability of the program to achieve programmatic goals and objectives. Workload inputs include the number of state trust acres and building square footage both owned and leased, the number lease applications, and the program's operating budget.

Exhibit 1: State Land Board Inputs FY 2008-09 to FY 2015-16

Measure	Type	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
<i>Trust Land Administration</i>								
Annual Operating Budget	Benchmark	N/A	N/A	N/A	N/A	N/A	\$5,332,877	\$5,332,877
	Actual							
		\$4,995,546	\$4,834,240	\$5,103,019	\$5,123,091	5,106,935	N/A	N/A
# FTE	Benchmark	N/A	N/A	N/A	N/A	N/A	40.0	40.0
	Actual	35.1	35.1	35.6	36.8	37.0	N/A	N/A
<i>Mineral Resources</i>								
Number of acres of mineral rights	Benchmark	N/A	N/A	N/A	N/A	N/A	3,996,381	3,996,381
	Actual	4,029,364	3,992,248	3,995,825	3,995,666	3,996,681	N/A	N/A
Number of Oil and Gas Nominations received	Benchmark	N/A	N/A	N/A	N/A	N/A	417	443
	Actual	351	254	311	685	486	N/A	N/A
Total Mineral Leases	Benchmark	N/A	N/A	N/A	N/A	N/A	3,229	3,427
	Actual	3,102	3,072	3,212	3,505	3,252	N/A	N/A
<i>Agricultural Resources</i>								
Number of Ag Applications	Benchmark	N/A	N/A	N/A	N/A	N/A	200	231
	Actual	155	127	256	254	207	N/A	N/A
Number of Ag Leased Acres	Benchmark	N/A	N/A	N/A	N/A	N/A	2,757,091	2,757,091
	Actual	2,722,377	2,655,099	2,769,019	2,708,324	2,757,091	N/A	N/A
<i>Commercial/Real Estate Resources</i>								
Number Surface Acres	Benchmark	N/A	N/A	N/A	N/A	N/A	2,792,312	2,862,312
	Actual	2,847,753	2,814,732	2,811,702	2,799,538	2,792,312	N/A	N/A
Number of Commercial Buildings	Benchmark	N/A	N/A	N/A	N/A	N/A	19	19
	Actual	9	13	14	14	18	N/A	N/A
Sq Ft of Commercial Buildings	Benchmark	N/A	N/A	N/A	N/A	N/A	607,415	607,415
	Actual	271,178	351,106	377,167	377,167	537,415	N/A	N/A
<i>Non-Traditional Surface Uses</i>								
Number of Non-Ag, Non-right-of-ways leases	Benchmark	N/A	N/A	N/A	N/A	N/A	563	572
	Actual	530	569	596	585	537	N/A	N/A
Acres of Non-Ag leases	Benchmark	N/A	N/A	N/A	N/A	N/A	1,454,328	1,454,328
	Actual	1,420,189	1,486,142	1,519,717	1,466,916	1,378,676	N/A	N/A
Applications for Non-Ag leases	Benchmark	N/A	N/A	N/A	N/A	N/A	100	97
	Actual	111	83	118	91	99	N/A	N/A

Discussion

There are several important trends illustrated by the inputs listed in Exhibit 1. The most significant trend is the number of mineral leases and oil and gas nominations, which have been driven by the Niobrara and Mississippian oil and gas plays. These oil and gas plays have increased the number of oil and gas parcels nominated and auctioned as well as the number of wells permitted and drilled on state trust land.

The second major trend identified in Exhibit 1, is the increase in commercial building and square footage. Over the past five years, the Board acquired five small office and flex-space buildings as well as the airplane hangar at Centennial where the state plane is housed. In FY 2012-13 the Board acquired a large office building in the Denver Tech Center which added over 100,000 square feet to the Board's commercial portfolio².

The third major trend was in non-agricultural leases, specifically right-of-ways. Over the past five years, the program issued nearly 100 new rights-of-way contracts. This increased the number of non agricultural leases by nearly 20% but had little impact on total non-agricultural lease acreage due to the fact that right-of-way contracts are generally less than 20 acres each and many are no more than 5 acres.

Total state trust acreage, the number of agricultural leases, and the State Land Board's operating budget were essentially unchanged over the last five years.

For FY 2012-13 and FY 2013-14, the State Land Board expects limited change in agricultural leasing and overall surface ownership³. It is difficult to project future oil and gas lease nominations. Nonetheless, the State Land Board expects a significant decline in oil and gas lease nominations due to the fact that many of the properties that are economically viable have already been leased. While leasing is anticipated to decline, state trust land has and will continue to experience major increases in oil and gas drilling activity which is expected to increase oil and gas royalty revenue. The State Land Board also anticipates non-agricultural leasing, particularly real estate, and certain types of solid mineral leases to increase as a result of the program's recent focus on creating and enhancing new lines of business. This focus is represented in the State Land Board's FY 2013-14 operating budget requests.

² In FY 2012-13, the State Land Board demolished a building (18,450 sq ft) at 6th and Kipling and acquired a building (102,795 sq ft) in the Denver Tech Center. The number of buildings remained the same but the square footage increased.

³ The State cannot dispose of its trust mineral ownership except to the federal government.

What are the Programs Outputs?

The State Land Board generates outputs that are designed to achieve programmatic objectives and outcomes. Outputs concern the program's annual workflow and are focused on the lease and real estate contracts process.

Exhibit 2: State Land Board Outputs FY 2008-09 to FY 2015-16

Measure	Type	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
<i>Mineral Resources</i>								
Percent of mineral lease revenue audited within the statute of limitations (5 years)	Benchmark	N/A	N/A	N/A	N/A	N/A	95%	95%
	Actual	97%	92%	93%	89%	93%	N/A	N/A
Number of Audits Conducted	Benchmark	N/A	N/A	N/A	N/A	N/A	45	45
	Actual	23	33	28	23	45	N/A	N/A
Amount of Audit Recoveries	Benchmark	\$400,000	\$400,000	\$400,000	\$400,000	\$650,000	\$400,000	\$400,000
	Actual	\$980,884	\$1,040,897	\$1,076,547	\$590,502	282,597	N/A	N/A
Number of O&G Nominations Auctioned	Benchmark	N/A	N/A	N/A	N/A	N/A	392	402
	Actual	342	243	263	681	429	N/A	N/A
<i>Agricultural Resources</i>								
Number of AG Lease - New/Renewed	Benchmark	N/A	N/A	N/A	N/A	N/A	167	171
	Actual	145	124	179	179	207	N/A	N/A
<i>Commercial/Real Estate Resources</i>								
Gross Number of properties acquired/disposed	Benchmark	N/A	N/A	N/A	N/A	N/A	16	16
	Actual	22	19	12	13	13	N/A	N/A
Gross number of acres acquired/disposed	Benchmark	N/A	N/A	N/A	N/A	N/A	25,406	28,493
	Actual	9,972	88,725	1,974	21,367	4,993	N/A	N/A
Gross value of properties acquired/disposed	Benchmark	N/A	N/A	N/A	N/A	N/A	\$17,396,275	17,396,275
	Actual	\$17,100,303	\$23,381,005	\$6,537,740	\$7,853,048	32,109,280	N/A	N/A
<i>Non-Traditional Surface Uses</i>								
Number of recreation leases new/renewed	Benchmark	N/A	N/A	N/A	N/A	N/A	34	35
	Actual	37	23	47	30	32	N/A	N/A
Number of ecosystem service projects - active	Benchmark	N/A	N/A	N/A	N/A	N/A	3	3
	Actual	0	0	0	0	0	N/A	N/A
Number of right-of-ways new contracts	Benchmark	N/A	N/A	N/A	N/A	N/A	20	19
	Actual	23	21	9	18	30	N/A	N/A
Number other non-traditional leases new/renewed	Benchmark	N/A	N/A	N/A	N/A	N/A	40	42
	Actual	36	33	46	36	49	N/A	N/A
Number of Renewable energy leases	Benchmark	N/A	N/A	N/A	N/A	N/A	13	14
	Actual	5	8	8	11	12	N/A	N/A
Number of Renewable energy leased acres	Benchmark	N/A	N/A	N/A	N/A	N/A	20,933	20,933
	Actual	8,318	13,986	13,122	15,835	14,871	N/A	N/A

Discussion

There are several important performance trends illustrated by the outputs listed in Exhibit 2. Generally, the trends show a high rate for converting nominations and applications into leases as well as a focus on investing in higher revenue commercial assets. These outputs lead to higher revenue and asset value for the trust.

Over the past five years, the State Land Board successfully auctioned over 90% of nominated parcels. The program also converted 78% of agricultural applications to leases and 90% of non-agricultural applications to leases. This leasing conversion led to an overall growth in mineral and non agricultural leases. Despite the number of agricultural leases processed over the past five years, the total number of agricultural leases did not increase primarily because most agricultural leases are renewals rather than new leases.

Other output performance measures identified in Exhibit 2 include audits and real estate transactions. The State Land Board audits over 90% of its mineral revenues (mineral revenues account for 87% of total trust revenue). The program covers its annual cost of minerals auditing which is about \$175,000 and consistently outperforms its audit recovery benchmark.

The State Land Board's Real Estate transactions output spiked in FY 2009-10 primarily due to the completion of a large federal land exchange concerning the formation of the Great Sand Dunes National Park and Refuge in southern Colorado. The Sand Dunes transaction covered 78,000 acres of land and mineral rights worth \$15.6 million.

Over the next five years, the State Land Board expects a decline in new oil and gas leasing as well as limited growth in overall agricultural leasing. On the other hand, the program is focused on growing non-traditional surface uses and therefore expects increases in the number of new leases and contracts. This may lead to a decrease in the conversion of applications to leases given the expectation of increased competition for leases. However, overall revenues from non-traditional sources should increase as a result.

What are the outcomes the Program is trying to achieve?

The State Land Board's goal is produce reasonable and consistent income over time for trust beneficiaries, which is predicated on protecting and enhancing the value of property and having a diverse income stream.

**Exhibit 3: State Land Board Outcomes
FY 2008-09 to FY 2015-16**

Measure	Type	FY 2008-09 Act	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Projected	FY 2015-16 Projected
<i>Reasonable and Consistent Income</i>								
Total Trust Revenue	Benchmark	N/A	N/A	N/A	N/A	\$120,853,570	\$124,681,913	\$132,275,042
	Actual	\$75,483,193	\$67,803,039	\$122,777,917	\$146,309,540	\$124,939,389	N/A	N/A
Coal Revenue	Benchmark	N/A	N/A	N/A	N/A	\$1,008,921	\$525,000	\$556,973
	Actual	\$22,967,504	\$6,967,519	\$7,787,310	\$3,363,070	\$946,854	N/A	N/A
Oil & Gas Revenue	Benchmark	N/A	N/A	N/A	N/A	\$45,260,095	\$51,014,661	\$54,121,454
	Actual	\$31,565,060	\$25,936,069	\$27,364,379	\$28,669,503	\$47,845,024	N/A	N/A
Other Mineral Revenue	Benchmark	N/A	N/A	N/A	N/A	\$58,413,717	\$56,406,499	\$59,841,655
	Actual	\$6,738,390	\$19,211,674	\$73,547,393	\$98,949,574	\$58,451,830	N/A	N/A
Agricultural Revenue	Benchmark	N/A	N/A	N/A	N/A	\$8,912,720	\$9,139,254	\$9,695,835
	Actual	\$7,922,083	\$8,184,783	\$7,887,797	\$8,573,158	\$9,142,944	N/A	N/A
Commercial Lease Revenue (net)	Benchmark	N/A	N/A	N/A	N/A	\$3,264,954	\$3,408,630	\$3,616,216
	Actual	\$2,769,676	\$3,532,836	\$2,772,299	\$2,863,664	\$3,772,167	N/A	N/A
Recreation Revenue	Benchmark	N/A	N/A	N/A	N/A	\$899,386	\$1,004,364	\$1,065,530
	Actual	\$937,870	\$983,682	\$915,295	\$919,718	\$986,761	N/A	N/A
Water Related Revenue	Benchmark	N/A	N/A	N/A	N/A	\$73,501	\$85,129	\$90,313
	Actual	\$0	\$0	\$0	\$50,953	\$83,460	N/A	N/A
Renewable Energy Revenue	Benchmark	N/A	N/A	N/A	N/A	\$593,232	\$636,000	\$674,732
	Actual	\$364,393	\$486,814	\$417,506	\$564,983	\$601,382	N/A	N/A
Ecosystem Services Revenue	Benchmark	N/A	N/A	N/A	N/A	\$13,000	\$5,000	\$5,305
	Actual	\$0	\$0	\$0	\$0	\$0	N/A	N/A
Right-Of-Way Revenues	Benchmark	N/A	N/A	N/A	N/A	\$750,263	\$700,000	\$742,630
	Actual	\$424,805	\$794,212	\$283,515	\$782,435	\$1,614,638	N/A	N/A
Other Revenue	Benchmark	N/A	N/A	N/A	N/A	\$1,663,781	\$1,757,376	\$1,864,400
	Actual	\$1,793,412	\$1,705,450	\$1,802,423	\$1,572,482	\$1,530,329	N/A	N/A
<i>Protect and Enhance Value</i>								
Number of Oil and Gas Lease Stipulations	Benchmark	N/A	N/A	N/A	N/A	181	177	212
	Actual	132	55	260	285	151	N/A	N/A
Agricultural Inspections Rated Good or Above for Range Conditions	Benchmark	55%	60%	65%	60%	65%	65%	70%
	Actual	53%	51%	53%	50%	60%	N/A	N/A

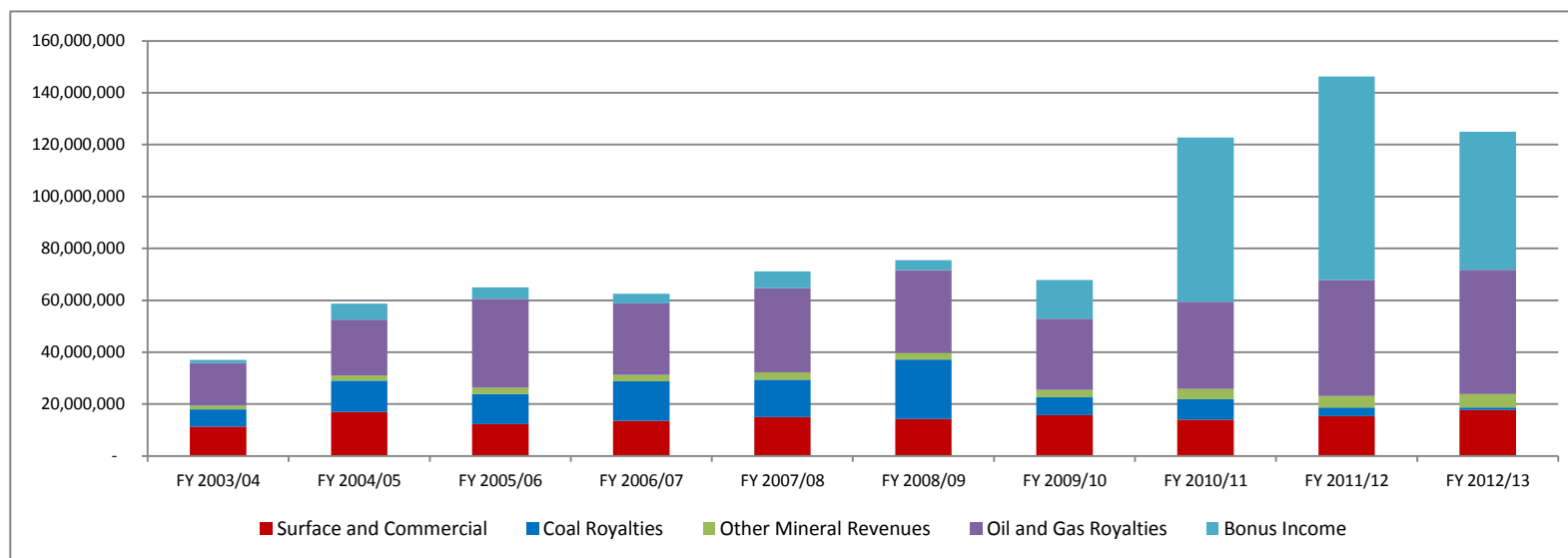
Discussion

The State Land Board's outcome measures listed in Exhibit 3 fall into two categories: (1) reasonable and consistent revenues, and; (2) protect and enhance value.

Reasonable and Consistent Revenue

The State Land Board's total trust revenues grew dramatically over the past decade. In FY 2003-04, total trust revenues were \$37 million. Ten years later, total trust revenues were \$125 million in FY 2012-13. As shown in the bar chart below, most of this growth occurred over the last three years.

**Exhibit 4: Ten Year Trust Revenues
FY 2003-04 to FY 2012-13**



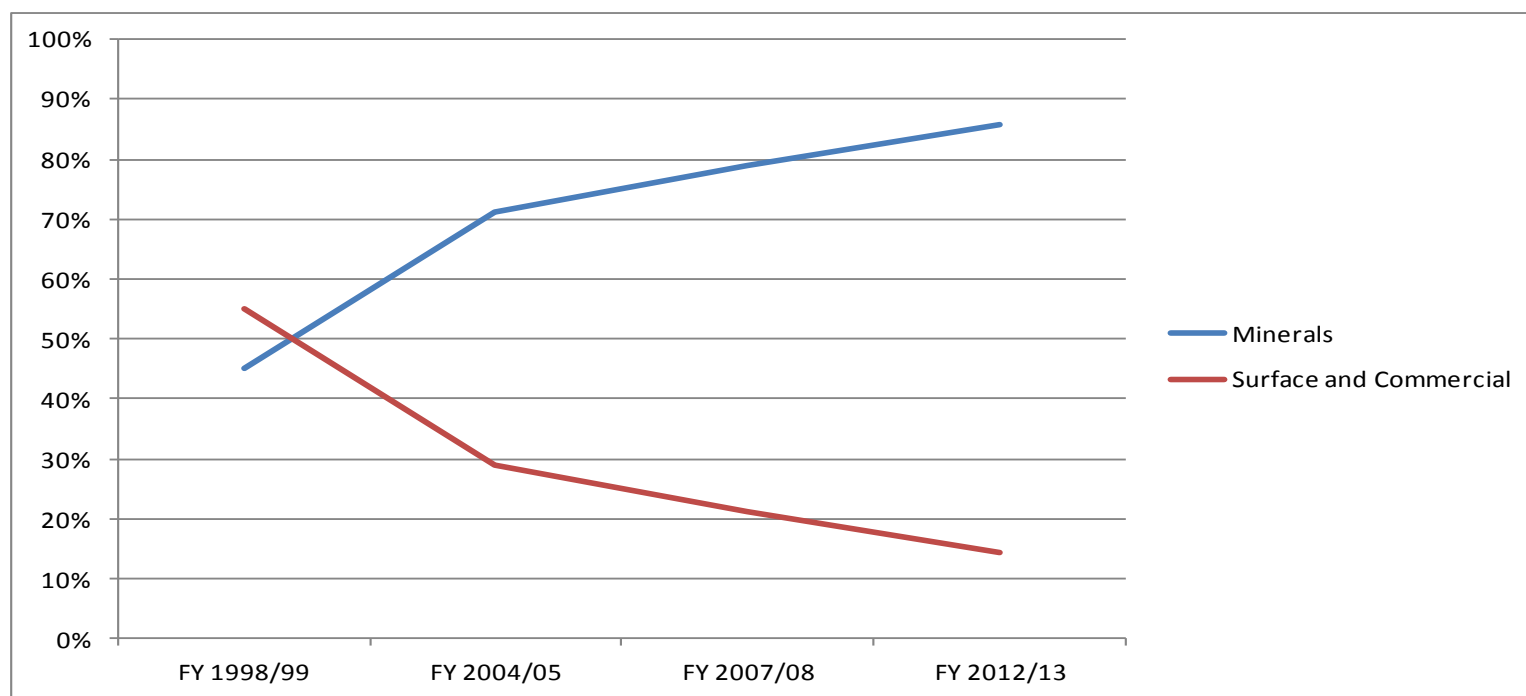
The increase in total trust revenue over the past ten years has been dominated by mineral revenues which are highly volatile and subject to commodity pricing, technology advances and the regulatory environment, among other factors outside of the agency's control. Future bonus revenue is expected to taper off as the parcels in the Niobrara are leased and less valuable parcels remain. The Lowry Bonus (\$27.5 m/yr.) has three more years of payment and National Hog Farms (\$12 m/yr.) has four. In total, these two bonus streams account for approximately \$40 million or close to 75% of total bonus revenue in FY 2012-13.

Capitalizing on the horizontal drilling technology, primarily in the Niobrara formation, oil royalties were the highest on record for FY 2012-13. The State Land Board is currently monitoring well production and depletion numbers to see if and how this translates into increased royalties through long-term oil and gas production. Wells are experiencing an 80% decline curve in the first year and currently there are not enough new wells being drilled to compensate for this decline, creating uncertainty on future levels of production.

Gas royalty revenue spiked in FY 2005-06 after Hurricanes Rita and Katrina drove prices in spot markets as high as \$16.00/mcf. Gas prices stayed high through FY 2008-09 and then followed the economy downward in the ensuing recession. Gas royalty revenue still has not begun any meaningful recovery (as July of 2013, the prices were \$3.50/mcf) and we do not anticipate growth in gas royalties above FY 12 levels.

The mineral revenue performance from the past ten years increased the disparity between highly variable revenues (oil, gas, and coal royalties) and more recurring revenues (agricultural and commercial rents). Exhibit 4 shows the growth of mineral revenues as a percent of total revenues. In FY 1998/99, mineral revenues were less than half of total revenues. Today, minerals are eighty-six percent of total revenues.

Exhibit 5: Percent of Total Trust Revenues

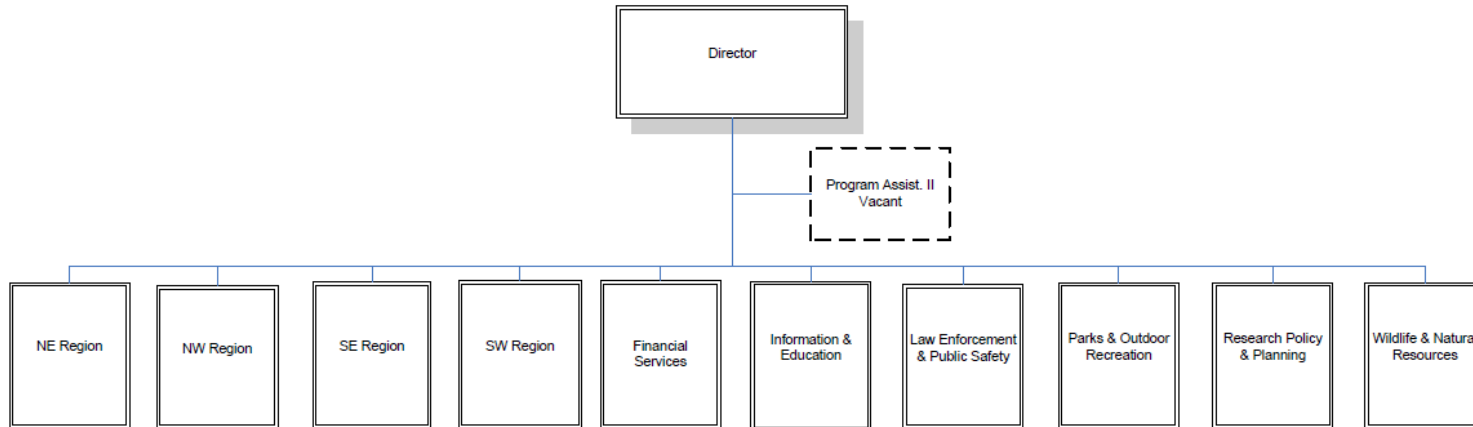


Each of the State Land Board's revenue streams is affected by different trends and market pressures. A brief discussion of these is presented below.

- The mineral performance over the past ten years overshadowed modest revenue gains in surface and commercial revenues. These revenues have increased over the past decade at an annual growth rate of 4.6%, growing from \$11.2 million in FY 2003-04 to \$17.7 million in FY 2012-13.
- In FY 2012-13, mineral revenues were \$107 million which is a decrease of eighteen (18) percent over the previous fiscal year. This decrease was primarily from the reduction in bonus revenues, from \$78.4 million to \$53.1 million. FY 2012-13 bonus revenues is composed of three revenue streams: quarterly lease auctions at \$13.7 million, Lowry Range bonus at \$27.4 million, and National Hog Farms bonus at \$12 million.

- The record high oil royalty revenue in FY 2012-13 was the result of horizontal drilling in the Niobrara formation. Oil production from the Niobrara increased by approximately 109,000 barrels, while conventional oil production decreased by 9,000 barrels. Total oil production was 408,000 barrels in FY 2012-13 compared to 308,000 in the prior fiscal year.
- Gas royalty revenues decreased in FY 2012-13 by 20.8% due to both the low prices of gas and a production decline. The State Land Board has experienced limited gas royalty production associated with the Niobrara oil development.
- As the economy improved over the past two years, so too has the production of construction-related materials on state trust land. Increases and/or high royalty revenues in limestone, other minerals (mostly quarry leases), sand and gravel reflect this trend.
- The significant decrease in coal royalty revenues stem from the 20 Mile coal mine operations in Routt County moving off State Land. The State Land Board expects new production on state trust coal to occur on the nearby Sage Creek mine which is permitted to begin development over the next several years. However, the earliest production will occur in 2015 and the present economics of coal mining are such that future revenues from the mine are highly uncertain.
- Surface revenues increased by nearly 13% to \$13 million in FY 2012-13. This performance was the result of increases in agriculture rents (irrigated and dry land crop) as well as a large, one time increase in right-of-way revenues associated with new oil and gas pipelines.
- Agricultural revenues grew by nearly 24% percent in FY 2012-13 as a result of changes in dry land and irrigated lease rates to better reflect current market rates for farmland leases.
- Right of way contracts are generally one time payments for a 30-year easement for power lines, pipelines, and roads. The large increase in FY 2012-13 is due to the recently completed Front Range Pipeline agreement.
- Grazing rental was flat and is expected to decrease in FY 2013-14 due to drought and the drought credits offered by the SLB to its grazing partners in order to better assure the long-term stewardship of the land.
- Commercial revenues are generated by commercial ground leases, commercial building rents (vertical assets), and communication towers placed on state trust land. Overall commercial revenues were up significantly in FY 2012-13. Most notable was a 56% increase in revenues from vertical assets, mostly due to the acquisition of a new commercial property in the Tech Center.
- Renewable energy grew 6.44% for FY 2012-13. The SLB added approximately \$86,000 in annual revenue with the addition of the Limon Wind LLC lease and now has 14,692 acres of SLB land under wind lease production. The SLB is also actively pursuing opportunities in solar and geo-thermal markets.
- Other and interest revenues produced approximately \$330,000 for FY 2012-13

Colorado Parks & Wildlife



SB 13-230 Total Funds	\$135,672,343
General Fund	\$ 500,000
Cash Funds	\$113,629,217
Federal Funds	\$ 21,543,126
FTE	886.5

Outdoor Recreation Program:

What is this program?

Outdoor Recreation is one of three major programs within Colorado Parks and Wildlife (CPW). Outdoor Recreation is a fundamental part of the DNR mission. To provide the Outdoor Recreation Program to the citizens of Colorado, CPW manages a number of significant and distinct sub-programs and processes, including the State Parks System, Hunting program, Fishing program, Wildlife Viewing program, Boating program, Aquatic Nuisance Species program, as well as 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 and to continuously acquire, development, and manage 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 opportunities for outdoor recreation. Outdoor recreation is a cornerstone of the Colorado lifestyle and quality of life, and access to outdoor recreation opportunities has been valued throughout the state's history. Additionally, outdoor recreation is a critical driver for Colorado's economy. Outdoor recreation at state parks (including the wide variety of recreational activities such as boating, hiking, camping, bike riding, rock climbing, wildlife watching, and photography) generates roughly \$571 million of direct spending in local communities annually 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). [Source: Corona Research, Inc.'s 2009 report titled "Colorado State Parks Marketing Assessment: Visitor Spending Analysis, 2008-2009"]. Similarly, a recent study on the impact of hunting and fishing in Colorado found the following: (1) hunters and anglers in Colorado spend an estimated \$1.0 billion on trip expenses and sport equipment (with an estimated economic impact of \$1.8 billion counting secondary impacts); (2) hunting and fishing support an estimated 21,000 full-time jobs in Colorado; (3) non-residents contribute about 18% or \$186 million of trip and equipment expenditures; (4) wildlife watching activities contribute roughly \$703 million toward Colorado's economy (\$1.2 billion counting secondary impacts) and support about 12,800 jobs in Colorado, and; (5) an estimated 59 percent of the economic activity associated with watchable wildlife comes from non-Colorado residents. [Source: BBC Research & Consulting, September 26, 2008 "The Economic Impacts of Hunting, Fishing, and Wildlife Watching in Colorado].

Who are the Program's Customers?

Outdoor Recreation potentially serves all citizens of the State as well as visitors from other states and countries. Recent research indicated that about 94 percent of Colorado residents participate in the types of recreation provided by CPW. About 46 percent of Coloradans reported that they visited

state parks regularly [Source: Corona Research, Inc. 2008. *Colorado State Parks Marketing Assessment: Public Study.*], while over 36 percent of Colorado residents are anglers and about 16 percent are hunters [Source: CPW *Statewide Comprehensive Outdoor Recreation Plan (SCORP)*.] Furthermore, about 97 percent of focus group participants indicated that they viewed state parks as very important to Colorado, even if they did not generally visit state parks [Source: Corona Research, Inc. 2009. *Colorado State Parks Marketing Assessment: 2008/2009 Executive Summary of Findings and Recommendations.*]

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

What are the Strategic Policy Initiatives of this Program?

The Parks and Wildlife Commission has identified three overarching strategic policy initiatives for the agency – Recruitment and Retention, Habitat Preservation and Financial Sustainability. For the Outdoor Recreation Program, the Recruitment and Retention strategic priority provides important guidance, as follows:

Strategic Priority #1 - Recruitment and Retention: Connect People to the Outdoors by Providing Quality Outdoor Opportunities and Settings.

- *Objective 1: Promote public awareness of and participation in Colorado's outdoor and wildlife recreation opportunities.*
- *Objective 2: Provide a variety of hunting, fishing, and trapping opportunities on public and private lands.*
- *Objective 3: Maintain or increase current levels of hunter and angler satisfaction and participation.*
- *Objective 4: Operate, maintain and enhance park resources and services to meet visitor needs and enrich the Colorado State Parks experience.*
- *Objective 5: Promote participation by youth and families in hunting, fishing, parks visitation and other outdoor recreation activities by providing accessible and meaningful recreational and educational opportunities.*
- *Objective 6: Continue to direct leadership, support, and resources to promote and establish a statewide-interconnected trails network.*
- *Objective 7: Seek adequate resources to meet current and future demand for outdoor recreational opportunities.*

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. The major processes within the Outdoor Recreation Program are described below and include:

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

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

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

The State Parks System is funded by multiple cash and federal funding sources, and receives no state General Fund support. The primary revenue sources include the sale of passes, camping permits and registrations, lottery proceeds, grants from Great Outdoors Colorado Trust Fund (GOCO) and federal funds through a variety of federal programs. Park pass, camping permit and registration fees are set by the Colorado Parks and Wildlife Commission. Per the Colorado Constitution, the state park system receives, through a direct distribution from the Colorado Lottery Division, 10% of net lottery proceeds annually for the acquisition, development, and improvement of new and existing state parks, recreation areas, and recreational trails. GOCO supports the state park system as one of the four constitutionally authorized purposes for GOCO funds.

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

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

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

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

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

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

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

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

Aquatic Nuisance Species – Aquatic nuisance species (ANS) pose a serious threat to the water infrastructure and water recreation in Colorado, with potential serious economic consequences. Zebra and/or Quagga Mussels were identified in eight reservoirs in Colorado in 2008 as a result of a multi-year statewide sampling effort conducted by the former Division of Wildlife (DOW) in partnership with the former State Parks (Parks) division and the U.S. Bureau of Reclamation. As a result, the Colorado General Assembly passed the Aquatic Nuisance Species Act in May 2008,

which allocated severance tax funding to ANS programs. CPW has further leveraged the appropriation with external partners to gain over \$1 million in additional funding for ANS programs. Strategies include conducting boat inspections at targeted locations, including high-risk reservoirs, providing decontamination of boats with detected ANS, as well as public education through signs, brochures, and various other media including the web.

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

CPW recently completed an internal strategy document specifically related to this effort, titled “Increasing Hunting, Angling and Park Visitation, Long-Term Strategy”. CPW faces significant challenges as the average age of those who hunt and fish increases and as the rate at which younger generations participate in outdoor activities decreases. Additionally, there has been a nationwide decline in outdoor activities among youth, extending back several decades. Increasingly major health care organizations, such as Kaiser Permanente, recognize the health benefits stemming from regular outdoor activities.⁴

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

Volunteers -- CPW’s Volunteer Program helps provide a skilled and knowledgeable workforce to augment CPW programs and initiatives. Volunteers assist the CPW in a full range of activities, from helping maintain state parks, customer service in offices and on State Wildlife Areas, to field work helping with species surveys. These same volunteers assist with outreach efforts, by sharing their positive experiences with others.

What are the Program’s Inputs?

Program inputs are factors that are necessary to achieve the desired statutory and programmatic outputs and strategic policy initiatives. For outdoor recreation, these input factors include accessible lands (measured in acres), number of available recreation areas (e.g., the number of State Parks), and the interest or willingness people have to pay for those recreation activities (e.g., the number of license applications or entrance passes actually purchased). Additionally, inputs for a successful Aquatic Nuisance Species program includes the number of waters monitored by the program and the number of inspection sites operated during the boating season.⁵

A number of trends affect the workload of the Outdoor Recreation Program and impact the ability of the program to achieve programmatic goals and objectives. Overall population growth and societal changes influence how CPW provides services, as well as revenues needed to pay for delivery of those services. Some notable trends include a decline in the number of people that hunt, both in Colorado and nationally; fluctuations in fishing

⁴ DeKoven, M. 2012. Colorado Outdoor Stewardship Coalition Panel (April 19, 2012). “Making the Case for Protecting Colorado’s Outdoors”.

⁵ The purpose of the ANS program is to prevent the spread of invasive aquatic nuisance species. Input measures such as the number of waters monitored, directly defines the program’s capacity to prevent the spread of aquatic nuisance species.

participation; generally increasing park visitation; and an increasingly urbanized population that has led to a rising percentage of residents who are less familiar with being outside and enjoying outdoor activities. Other key trends include an increasing market for seniors, an increasing proportion of the population with a Hispanic background, and the continued need to connect effectively with families and young adults.

**OUTDOOR RECREATION PROGRAM
INPUT MEASURES, FY 08-09 THROUGH FY 15-16**

Input Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Operation of State Parks								
# of Land Acres of State Parks to Manage	Benchmark	225,099	225,119	225,318	218,564	218,564	218,564	218,564
	Actual	225,009	225,119	225,318	218,564	218,564	N/A	N/A
Number of State Parks and State Recreation Areas	Benchmark	42	42	42	41	42	42	42
	Actual	42	42	42	41	42	N/A	N/A
# of Annual Park Passes Sold	Benchmark	63,677	63,885	61,001	62,265	63,529	63,993	64,921
	Actual	63,973	63,456	60,582	63,102	63,110	N/A	N/A
# of Daily Park Passes Sold	Benchmark	697,867	728,497	759,127	789,757	746,552	765,915	784,558
	Actual	712,149	715,836	741,597	805,661	748,465	N/A	N/A
Hunting Program								
# of big game license applications	Benchmark	N/A	N/A	N/A	460,000	470,000	474,700	479,447
	Actual	463,075	463,187	470,576	473,875	472,226	N/A	N/A
# of hunting limited license sales	Benchmark	N/A	N/A	N/A	335,000	335,000	340,000	340,000
	Actual	348,269	343,327	338,851	330,230	333,000	N/A	N/A
# of Acres managed (State Wildlife and Habitat Areas)	Benchmark	N/A	N/A	800,000	825,000	830,000	925,000	960,000
	Actual	N/A	N/A	801,837	826,959	917,714	N/A	N/A
Fishing Program								
# of anglers (per Federal Aid rules)	Benchmark	N/A	N/A	680,000	670,000	670,000	670,000	680,000
	Actual	654,721	687,584	674,755	662,617	674,775	N/A	N/A
Wildlife Viewing								
Visitation to CPW Wildlife Viewing website page	Benchmark	N/A	N/A	N/A	55,000	55,000	40,000	50,000
	Actual	57,627	54,757	N/A	43,814	35,086	N/A	N/A
Boating								
# of boat registrations	Benchmark	95,306	92,959	91,000	91,000	91,455	91,912	92,142
	Actual	97,966	95,922	90,841	91,835	84,985	N/A	N/A
Aquatic Nuisance Species								
# of Inspection Sites Operated	Benchmark	N/A	N/A	78	78	78	76	75
	Actual	N/A	N/A	78	78	76	N/A	N/A
# of Waters Monitored	Benchmark	N/A	N/A	260	260	260	170	170
	Actual	N/A	N/A	260	260	170	N/A	N/A

Discussion of Program Inputs

Public access to lands and waters is the keystone of quality outdoor recreation opportunities. CPW continues to rely on a combination of management agreements, easements, access programs and purchase of properties to facilitate outdoor recreation, for parks, wildlife areas, fishing and hunting access. Similarly, access, location, the types and quality of recreation offered, and other factors affects how many people visit state parks each year. The amount of visitation to the state parks then determines the sale of entrance passes, which in turn provide the funding to operate those same parks. The number of state parks, the quality of the resources in the parks, the acreage available for trails, boating, camping, etc., all function as direct inputs into how CPW operates and accomplishes the agency's mission. Additionally, the sale of park entrance passes indicates the amount of use (i.e., visitation) the parks receive. Funding to operate the parks is legislatively directed (C.R.S §33-12-100.2) to come from user fees, making the sale of park passes a key measure.

Wildlife in Colorado belongs to the people of the state and as such, CPW must balance the needs of outdoor recreationalists with the well-being of the wildlife species. This can involve protection of important habitat through seasonal closures, identification of particularly vulnerable resources and associated use restrictions, or controlled public access to specific habitat. In addition, CPW wildlife biologists often limit the number of licenses made available for hunting (quotas) based on the biological status of the wildlife species being hunted. In recent years, CPW has come much closer to reaching herd management objectives, which has decreased the number of licenses available.

CPW also seeks to open up lands to suitable recreational opportunities. In addition to state parks, CPW manages more than 300 State Wildlife Areas (SWAs) as well as cooperating with the Colorado State Land Board on the management of State Land Board properties specifically identified for wildlife habitat, hunting, fishing and wildlife viewing values.

Boat registrations provide the financial support for the state's Boat Safety Program. The program includes boating safety classes for youth, safety operations on CPW managed reservoirs and other program functions. The number of annual boat registrations defines the size and scope of this program. The Boat Safety Program also receives matching grants from the U.S. Coast Guard.

Since the discovery of aquatic nuisance species (ANS) in Colorado, CPW, working with partner agencies, has successfully prevented the spread of ANS in Colorado. However, the threat to both recreational and commercial water sources from aquatic nuisance species remains high. Water is a crucial component of a number of outdoor recreational activities, including fishing and boating, and continued diligence and partnering with other states to prevent the spread of ANS and other invasive species remains critical. The number of inspection sites and the number water bodies monitored function as input measures showing the scope of this program.

What are the Programs Outputs?

The Outdoor Recreation Program has a number of outputs that measure programmatic objectives. These are discussed in the table below and the accompanying narrative.

OUTDOOR RECREATION PROGRAM
OUTPUT MEASURES, FY 08-09 THROUGH FY 15-16

Output Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Operation of State Parks								
Number of Camping Reservations	Benchmark	80,000	81,569	83,139	84,708	86,278	87,847	92,555
	Actual	80,905	85,008	86,321	88,778	86,867	N/A	N/A
Number of Camping Nights (permits) Sold	Benchmark	282,800	282,800	282,800	282,800	282,800	282,800	282,800
	Actual	293,291	300,206	312,152	319,145	304,509	N/A	N/A
Revenue from passes, permits and other fees	Benchmark	\$16,150,000	\$16,625,000	\$18,900,000	\$20,000,000	\$21,500,000	\$22,200,000	\$22,644,000
	Actual	\$16,175,066	\$16,668,954	\$19,752,403	\$20,026,117	\$19,125,550	N/A	N/A
New Park Management Plans Completed	Benchmark	N/A	N/A	N/A	1	1	2	2
	Actual	N/A	N/A	N/A	1	1	N/A	N/A
New Stewardship and Resource Management	Benchmark	N/A	N/A	N/A	1	1	1	1
	Actual	N/A	N/A	N/A	1	1	N/A	N/A
Asset Management Tools - Percent Coverage	Benchmark	N/A	N/A	N/A	100%	100%	100%	100%
	Actual	N/A	N/A	N/A	100%	100%	N/A	N/A
Hunting Program								
# of Hunting Licenses Issued	Benchmark	N/A	N/A	540,000	530,000	530,000	520,000	525,000
	Actual	569,635	538,734	535,893	535,893	537,371	N/A	N/A
# of Game Animals Harvested	Benchmark	N/A	N/A	93,945	91,346	91,500	91,500	90,000
	Actual	103,892	92,050	93,945	91,346	88,515	N/A	N/A
# of hunters (per Federal Aid rules)	Benchmark	N/A	N/A	290,000	290,000	290,000	290,000	290,000
	Actual	304,432	294,186	288,098	288,086	286,363	N/A	N/A
Fishing Program								
# of Fishing Licenses Issued	Benchmark	N/A	N/A	988,291	1,050,721	1,000,000	1,050,000	1,100,000
	Actual	1,007,249	994,263	988,291	1,050,721	1,049,557	N/A	N/A
# of warm water fish stocked annually (millions per Calendar Year)	Benchmark	N/A	N/A	57.2	63.24	60	60	70
	Actual	N/A	N/A	57.2	63.24	63	N/A	N/A
Number of catchable-size trout stocked annually (millions per Calendar Year)	Benchmark	N/A	N/A	3.10	3.01	3.00	3.00	3.00
	Actual	N/A	N/A	3.10	3.01	3	N/A	N/A

OUTDOOR RECREATION PROGRAM
OUTPUT MEASURES, FY 08-09 THROUGH FY 15-16 (Continued)

Output Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Wildlife Viewing Program								
Wildlife Festivals with CPW involvement	Benchmark	N/A	N/A	N/A	N/A	27	28	30
	Actual	N/A	N/A	N/A	25	27	N/A	N/A
Aquatic Nuisance Species								
# of Infected Boats Caught/Decontaminations	Benchmark	N/A	N/A	N/A	2,861	3,333	5,025	5,075
	Actual	N/A	N/A	2,833	3,300	5,000	N/A	N/A
# of Boat Inspections	Benchmark	N/A	N/A	N/A	380,000	412,845	420,294	424,507
	Actual	N/A	N/A	N/A	411,200	418,203	N/A	N/A
Recruitment and Retention								
# of returning hunters	Benchmark	N/A	N/A	195,857	174,335	170,000	170,000	170,000
	Actual	207,000	203,152	195,857	174,335	152,036	N/A	N/A
# of Hunter Education Classes Conducted	Benchmark	N/A	N/A	810	813	815	815	800
	Actual	720	750	810	813	783	N/A	N/A
# of Students Reached/Receiving Hunter Education Cards	Benchmark	N/A	N/A	18,850	19,750	19,800	19,800	19,500
	Actual	17,454	17,353	18,850	19,750	22,323	N/A	N/A
# of students reached - angler education	Benchmark	N/A	N/A	21,892	24,445	25,000	25,000	22,000
	Actual	20,396	34,175	21,892	24,445	24,600	N/A	N/A
# of students reached - hunter mentoring	Benchmark	N/A	N/A	12,748	15,650	16,000	16,000	15,000
	Actual	5,399	8,535	12,748	15,650	13,425	N/A	N/A

Discussion of Program Outputs

For many of the outputs, CPW can influence, but cannot completely control, results. With respect to participation in outdoor recreation in general, the weather, the state of the economy, environmental factors such as fire and floods, fluctuations in wildlife populations or reservoir levels and many other factors all affect the outputs in both the short and long term. Societal trends (demographics, values, etc.) affect the outputs on a long term basis. Similarly, societal and biological factors are significant variables outside the control of CPW that can and do have a deciding influence on program results.

Benchmarks generally reflect the goal of either maintaining or increasing the results for the program or types of recreation. For example, statute directs CPW to provide camping opportunities to the public. Two outputs shown in the table are “Number of Camping Reservations” and “Number of Camping Nights (permits) Sold”. The number of camping reservations increases about 1.7 percent per year, while camping nights increase about

2.5 to 2.9 percent per year⁶. That rate of increase is the result of several factors, including effective marketing and the number or availability of campsites, in addition to conditions at specific parks. Reservations revenues and camping permit revenues constitute about 12 percent of the overall operating revenues for state parks. Additionally, these along with entrance pass revenues comprise the bulk of “Revenues from Passes, Permits and Other Fees”. External factors, beyond CPW’s influence, such as weather or the cost of gasoline, also affect these outcomes.

In FY 12-13, the “Number of Camping Reservations” and the “Number of Camping Nights (permits) Sold” declined from the previous year. Low water levels at many CPW reservoirs are at least partially the cause for this decline. These in turn affected the “Revenues from Passes, Permits and Other Fees”.

Two other measures, “Complete Park Management Plans” and “Stewardship and Natural Resource Management Plans” were included in past years or in previous strategic plans. These planning efforts provide important tools for the effective management of the parks or the resources in the parks. These also reflect a need to complete sound inventories of natural resources and facilities at the parks, which in turn require periodic monitoring to determine the condition of resources or facilities. The measures shown are what CPW reasonably expects to complete every year, building on the plans already completed. For example, most state parks already have “Resource Stewardship Plans” so the projected numbers include the periodic updates to existing plans. As with any such effort, the availability of staff and resources constrains the projected output.

Boating registrations declined to about 85,000 registrations in FY 12-13, falling slightly below the target of 91,000 registrations. Drought conditions across much of Colorado in 2012 and 2013 contributed to the decline. Many boat owners delay renewing their registration if they expect drought conditions at their favorite reservoirs or lakes.

As noted above, Aquatic Nuisance Species (ANS) program operated fewer inspection sites and monitored fewer waters in FY 12-13 due to program budget cuts. However, the ANS program completed more boat inspections, likely due to improved inspection procedures. The ANS program continued the expansive boat inspection and decontamination station and certification training program with over 70 trainings in 2012. Furthermore, the ANS inspectors expanded the number of decontaminations in FY 12-13, again, largely due to improved procedures. As a result, this program accomplished approximately 400,000 inspections and 5,000 decontaminations during the year, has intercepted a total of 48 contaminated boats, has prevented introductions of invasive mussels which are nearly impossible to eradicate and extremely expensive to manage, and created about 675 new seasonal jobs as certified inspector/decontamination technicians statewide. Since the inception of this program, there have been no new detections for mussels anywhere else in the state; however, numerous other aquatic nuisance species such as the New Zealand mud snail, rusty crayfish, and Eurasian water milfoil sites have been identified. CPW continues its efforts to control mussels, and has developed and implemented Statewide Management Plans with its partners to target other aquatic nuisance species in Colorado. Inspections did decrease some from past years due to program budget constraints, yet still actively monitored 170 water bodies in Colorado during FY 2012-13. CPW will provide final figures in the ANS Annual Legislative Report in January 2014. This is an example of improved efficiencies in program operations.

CPW reported that 6,511 individuals volunteered to work on projects in state parks, trails or recreation and wildlife related projects, contributing over 337,000 total hours to the agency. These volunteers provide the ability to accomplish extra results. They do not represent replacement of regular staff. Instead, volunteers can provide services in addition to regular staff, such as campground hosting, special interpretative tours and additional support during peak periods. Volunteer projections are not shown as a measurement in the Outputs table above. The volunteer program

⁶ People typically campers stay for more than one night at a time, so the number of nights is different from the number of reservations (one reservation may represent several nights). Additionally, about 35 percent of the camping is “walk-in” customers who do not make a reservation, so the growth rate of the two measures are different.

is very important to CPW operations. However, the program augments operations, thereby complimenting outputs. The volunteers are not a specific output.

What are the Outcomes the Program is trying to achieve?

Ultimately, a major component of the strategic policy initiative related to recruitment and retention is providing high quality and varied outdoor recreational opportunities to residents and visitors to the state of Colorado, while preserving the natural resources of the state, including its wildlife. Achieving the goals of this strategic initiative will involve a number of strategies, principles, and outcomes, including:

- Providing quality outdoor recreation, based on an inclusive and comprehensive perspective, to citizens and visitors of Colorado, now and in the future, is the primary strategic consideration for CPW.
- Service is the hallmark of Colorado Parks and Wildlife; service to the public, to our visitors and to our license holders. In all interactions we will provide excellent service.
- Hunters, anglers, trappers and other wildlife enthusiasts are highly satisfied with fish and wildlife recreation opportunities.
- Park visitors remain highly satisfied with their experiences at the parks, and continue to return to the parks, generating the funds needed to operate the parks.
- Colorado's state parks and recreation areas should provide a wide range of outdoor activities, consistent with changing demographics and customer expectations. CPW recognizes that this requires sensitivity to new interests, opportunities and technologies.
- Management decisions rely on informed decisions, with sound regard for local, regional and statewide implications of those decisions.
- Landowners allow access for fish and wildlife recreation wherever these activities can be responsibly conducted.
- Provide a comprehensive range of quality outdoor recreation that is widely available and well distributed around the state.
- Work cooperatively with local, state and federal agencies that provide outdoor recreation.
- Through sound management and quality educational efforts, seek to minimize conflicts among different recreational users, aiming to recognize that ultimately all Coloradans want and need quality, sustainable resources for their enjoyment.
- Colorado citizens are well-informed and knowledgeable about outdoor recreation resources.
- Colorado citizens and visitors are actively engaged in outdoor activities.
- Operations of CPW undertaken in a sustainable manner. Sustainable includes, among other things, the conservation and stewardship of natural resources, effective service life of facilities and the stability of CPW's financial condition.

OUTDOOR RECREATION PROGRAM
OUTCOMES, FY 08-09 THROUGH FY 15-16

Outcome Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Parks								
# of State Park Visitors	Benchmark	11,952,570	12,072,096	12,192,817	12,314,745	12,437,893	12,687,396	12,891,206
	Actual	11,955,691	12,295,354	12,338,520	12,233,271	11,501,520	N/A	N/A
Pass, Permit and Fee Revenue per State Park Visitor	Benchmark	\$1.35	\$1.33	\$1.59	\$1.62	\$1.66	\$1.67	\$1.69
	Actual	\$1.35	\$1.36	\$1.60	\$1.64	\$1.66	N/A	N/A
Hunting Program								
# of Hunting Licenses Issued	Benchmark	N/A	N/A	N/A	N/A	535,000	530,000	535,000
	Actual	569,635	538,734	535,893	535,893	537,371	N/A	N/A
# of licensed hunters (per Federal Aid rules)	Benchmark	N/A	N/A	N/A	N/A	287,000	287,000	290,000
	Actual	304,432	294,186	288,098	288,086	286,363	N/A	N/A
Fishing Program								
# of Fishing Licenses Issued	Benchmark	N/A	N/A	N/A	N/A	1,000,000	1,050,000	1,090,000
	Actual	1,007,249	994,263	988,291	1,050,721	1,049,557	N/A	N/A
# of licensed anglers (per Federal Aid rules)	Benchmark	N/A	N/A	670,000	660,000	675,000	675,000	680,000
	Actual	654,721	687,584	674,755	662,617	674,775	N/A	N/A
Wildlife Viewing								
# of Birding Trails Completed	Benchmark	N/A	N/A	2	2	3	3	4
	Actual	1	1	2	2	3	N/A	N/A
Aquatic Nuisance Species								
# of infected waters (Zero - 0 - infected waters is the target)	Benchmark	N/A	N/A	0	0	0	0	0
	Actual			0	0	0	0	0
# of waters closed to recreation due to ANS	Benchmark	N/A	N/A	0	0	0	0	0
	Actual			0	0	0	N/A	N/A
Recruitment and Retention								
Percentage of the State's public who are aware that license sales help manage all	Benchmark	N/A	N/A	80	80	85	85	87
	Actual	N/A	N/A	88	83	83	N/A	N/A

Discussion of Outcomes

Financial sustainability of the agency continues to be an important focus of CPW leadership and the Parks and Wildlife Commission given the current economic environment, revenue constraints, and trends in the number of citizens who purchase hunting and fishing licenses and who visit the state parks. A strategic policy initiative of CPW is to “stabilize and strengthen” CPW’s financial condition. The long-term financial stability and sustainability of CPW is a major challenge for the agency and Colorado’s outdoor recreation, wildlife and state parks. Without greater financial stability, the implications for statewide wildlife management and many types of outdoor recreation are daunting.

As an initial step toward this goal, CPW staff, in conjunction with the CPW Commission, developed a five-year strategic plan. The “*CPW Path Forward*” discusses the Financial Sustainability priority “Stabilize and Strengthen Colorado Parks and Wildlife Financial Condition.” The “*Path Forward*” lists five objectives:

Objective 1: Increase funding as needed to meet legal mandates and public expectations.

Objective 2: Identify efficiencies and eliminate unnecessary costs.

Objective 3: Develop strategies to enhance existing and secure new and more sustainable funding sources.

Objective 4: Effectively market and expand awareness of and support for Colorado Parks and Wildlife.

Objective 5: Maintain accountability and transparency in all financial decisions.

CPW is already working to strengthen the agency’s financial condition. This involves a series of significant budget changes including cutting 20 FTE positions in FY 12-13, additional cuts to operating budgets in FY 13-14 totaling close to \$4.5 million, and further cuts potentially totaling several million dollars, under discussion for FY 14-15 and beyond. The strategic intent is for CPW to achieve a stable and sustainable financial situation.

CPW recognizes that the agency’s financial stability must also rely on sound, thoughtful pricing for hunting and fishing licenses, park passes, camping permits and other charges. CPW’s statutory direction is to rely on the “users pay philosophy”. CPW does not receive any General Fund support,⁷ making the “users pay” approach vitally critical. Over the next several years, CPW will thoroughly review the complete package of expenditures and revenues to build the foundation for long term financial stability and sustainability.

In general, the total number of visitors to Colorado’s 42 state parks has grown over the past five years, due to the quality of park natural resources as well as the caliber of facilities and recreational opportunities offered within the parks. Another factor contributing to the increase in park visitation is the growth of Colorado’s population over the past five years. The desired outcome for this performance measure is an annual increase in total visitation to state parks, and is consistent with the CPW-wide marketing goal, which states that CPW will “retain current and acquire new customers through exceptional service and by improving State Park’ visibility with innovative marketing.” The strategy to meet this objective will be carried out by broadening CPW’s visibility, maintaining high-quality recreation opportunities for existing visitors, and expanding in state and regional marketing efforts to attract additional visitors.

Visitation to state parks declined about 6 percent in FY 2012-13, likely related to drought and weather conditions during the summer of 2012 and again during the spring and early summer of 2013. Although weather-related impacts are largely unavoidable, CPW continues to explore ways to prepare contingencies when weather impacts revenues, such as strengthening marketing efforts. The opening in the spring of 2013 of the state’s 43rd state park, Staunton State Park, should also increase overall visitation in the future.

CPW also tracks the “Pass, Permit and Fee Revenue per Visitor” as that demonstrates how effectively CPW is generating the revenue needed to operate the state parks. Revenue per visitor is a key to continuing to provide quality services at the state parks, and is also integral to attaining the

⁷ CPW does receive Severance Tax designated to operate specific programs.

financial sustainability strategic initiative for CPW. The efficacy of this measure is that it effectively demonstrates a quantifiable measure of revenues per visitor. Since CPW's state parks operations must be financially sustainable, and cannot use wildlife license revenues to underwrite state parks operations, it is critical that the state parks operate to generate the revenues needed for their operations. By tracking the "Revenue per Visitor" generated specifically through entrance passes, camping and similar fees, CPW can understand and adjust to fluctuations more effectively.

Hunting recreation produces substantial economic benefits for Coloradans, particularly those in small rural communities. The number of people who hunt in Colorado is the outcome of many factors and reflects the success of CPW's attempts to manage big-game populations, to provide public access, to recruit new hunters to the sport, to provide a quality experience that causes hunters to return year after year to hunt in Colorado, to strengthen applied research on factors such as wildlife population dynamics and wildlife habitats, as well as to inform and educate the public about hunting opportunities. Nationally, demographic trends suggest that the number of hunters in the United States will decline in the coming years. In Colorado, continued pressure on wildlife habitat may reduce big game populations. Maintaining the current number of hunters in the face of these trends will be a challenge. CPW has marketed hunting in Colorado through various methods, including use of a predictive modeling system to identify potential customers, expanded information and offerings on the CPW website, magazine and television advertising, and other steps designed to increase the number of hunting license applicants. CPW continues to analyze the impact of current efforts and explore a variety of programs and initiatives, including communicating with other state fish & wildlife agencies, to develop strategies that increase hunter participation.

The number of people who fish in Colorado is the outcome of many factors and reflects the success of CPW's attempts to manage sportfish populations, including maintaining stream and lake water quality and quantity, augmenting sportfish populations through fish production at hatcheries, providing public access to fishing waters, building applied research on fish population management and threats, and managing the detrimental impacts of diseases and invasive species, recruiting new anglers to the sport, providing a quality experience that causes anglers to return year after year to fish in Colorado, and informing and educating the public about angling opportunities. In recent years, the number of anglers has not grown as rapidly as the growth of Colorado's population. This situation is related to many biological, social, and economic variables such as general economic conditions and trends, an aging population, a diversifying society, tightening public access to fishable waters and limits on available leisure time. CPW is aware of these issues and the corresponding implications on CPW revenue, budget prioritization, and planning for future years. CPW will continue to monitor and take steps to provide fishing recreation opportunities for citizens and visitors to Colorado through the strategies outlined above.

Major outcome measures include several related to hunting and fishing. Factors such as "hunting licenses available" depend on biological conditions that CPW seeks to manage to population objectives over a long period of time. Similarly, a factor such as "hunting licenses sold" or "fishing licenses sold" can be affected by general economic conditions, gas prices, the extent of wildfires in the state, drought, and other issues. While many of those are not unexpected year to year, predicting when they will come to bear on license sales is impossible two or three years in advance. The measures in this plan can capture the impact of longer-term variables such as progress toward population objectives, but a natural and short-term variance from projections is expected based on year-to-year influences.

Among big game species, measures of post-hunt populations can represent significantly different factors affecting individual big game species, and even varying conditions affecting the same species in different parts of the state.

Deer present an example of divergent trends in different parts of the state. Mule deer herds in western Colorado have witnessed significant declines, and are being addressed on a number of fronts. Although there is no scientific consensus on the cause or causes of the decline, CPW has a range of research projects underway to help determine contributing factors and to identify management strategies to address them. CPW is also undertaking public outreach and actively implementing management strategies it believes are warranted based on current understanding or assessment of deer

biological needs. These include acquiring and protecting critical habitat through the Colorado Wildlife Habitat Protection Program and setting harvest objectives and deer license numbers at levels conducive to population increases.

At the same time, deer herds in the central and northern mountain are performing well and populations are increasing. Most plains deer populations in the northeast and southeast remain relatively stable.

Viewed in total, the 2012 statewide deer population estimate of 408,000 animals is well below the current statewide objective of between 525,000 and 575,000 animals. However, the statewide objective is based on the compilation of 55 herd management plans, many of which are recognized as being out of date. CPW biologists systematically prioritize and revise herd management plans, and as individual plans are updated to reflect more current and accurate population models and habitat changes the statewide objective is certain to change.

In contrast to deer, 40% of Colorado's elk herd populations are above objective. Colorado Parks and Wildlife biologists have intentionally worked to reduce over-objective populations in recent years. Statewide, the post-hunt 2012 elk population is estimated to be 266,000, above the 220,000 – 260,000 target range. But similar to the situation with deer, CPW biologists recognize that many of the elk herd management plans rely heavily on outdated population models. Those herd management plans are in the process of being updated and are expected to result in revised population estimates and herd size objectives. Other factors that impact population objectives include landowner concerns about game damage, public land managers' information on habitat carrying capacity, and sportsmen's preferences for elk hunting opportunities.

In 2010, pronghorn populations hit a peak of 79,000, well above the statewide objective of 66,000 – 74,000. Colorado Parks and Wildlife biologists have deployed a number of tools to reduce herd size, including discounted licenses, late seasons and an emphasis on doe licenses. The efforts – against a backdrop of drought conditions that lowered fawn production and recruitment -- have succeeded in rapidly reducing the 2012 post-hunt pronghorn population estimate to 67,000. As pronghorn herds approach objective, the number of limited licenses is cut. The 2013 quota of limited licenses is 19,000, a 21% reduction from just 2012 and a much larger cut than would have been predicted two years ago.

In Colorado, more than 1.2 million individuals, residents and nonresidents alike, take more than 4 million trips to view wildlife annually. The significant state and local economic impact of wildlife watching activities – generating an estimated \$1.2 billion in annual economic activity and supporting nearly 13,000 jobs in Colorado – has laid the groundwork for a new and expanded set of partners for CPW wildlife programs. An estimated 170,000 people took part in more than 25 wildlife viewing events or festivals across Colorado in FY 2011-12.

The strategic objective of the ANS program is to prevent the spread of aquatic nuisance species into Colorado waters. The targeted measures relate to the number of infected waters and the number of waters closed due to ANS problems in Colorado. This will be a challenging target to maintain. Currently no adult Zebra Mussels have been found in Colorado waters.

The Wildlife Management Public Education Advisory Council (PEAC) represents a coalition of hunters, anglers, conservationists, livestock, agricultural and local interests working to educate the public about the benefits wildlife recreation and management brings to Colorado. PEAC is funded with a \$.75 surcharge on hunting and fishing licenses. PEAC sponsors advertising campaigns through with these funds.

Trails Program

What is this program?

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

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

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

The Trails Program consists of three sub-programs: the recreational trails program (non-motorized trails), the Off-highway Vehicle (OHV) Program, and the Snowmobile Program.

The recreational trails program exists to foster the planning, development and maintenance of a variety of non-motorized trails throughout Colorado. This includes:

- 1) Coordinating diverse state and federal funding streams allocated to the recreational trails program;
- 2) Administering the non-motorized, recreational trails grant application review and project prioritization process and coordinating with sub-committees of the State Trails Committee;
- 3) Reviewing and approving non-motorized trail projects;
- 4) Coordinating the development and maintenance of recreational trail and signing standards for Colorado, including coordinating the development of these standards with local, state and federal land managers;
- 5) Promoting and supporting volunteer trail organizations throughout Colorado, and;
- 6) Providing funding for recreational trail capacity building and crew leader training.

Responsibilities of the Off-Highway Vehicle (OHV) program include:

- 1) Processing resident OHV registrations and out-of-state OHV permitting for all types of motorized trail recreational vehicles in Colorado;
- 2) Administering the motorized (OHV) trails grant application review and project prioritization process and coordinating with the grant review subcommittee of the State Trails Committee;
- 3) Developing OHV trail standards for Colorado in coordination with other land and trail management agencies;
- 4) Providing law enforcement and public safety programs in OHV riding areas;
- 5) Promoting programs that educate the OHV riding public about responsible riding practices;
- 6) Promoting volunteer organizations that enhance OHV recreation;
- 7) Maintaining motorized trails and facilities on public lands;
- 8) Assisting in the development and implementation of federal Travel Management Plans as those apply to motorized trail riding and multiple trail use;
- 9) Educating recreationists about riding safety and sound management programs.

The Snowmobile Program exists to:

- 1) Provide in-state registration and out-of-state permitting for snowmobiles used on trails designated for snowmobile travel on Colorado's public lands;
- 2) Make grants for trail grooming;
- 3) Develop and maintain snowmobile trail and signing standards for Colorado, including coordinating the development of these standards with federal land managers;
- 4) Provide snowmobile training and snow safety programs;
- 5) Promote and supporting volunteer organizations and snowmobile clubs throughout Colorado, and;
- 6) Support federal Travel Management planning and related law enforcement on state and federal lands.

Why Is This Program Important?

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

Colorado's recreational trails program is essential to the continued 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 trail system around the state. 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. This program ensures that residents and visitors continue to safely enjoy the outdoors and a quality of life that makes Colorado special.

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. Levels of federal RTP funding have diminished over the past decade. The availability of federal funds is increasingly problematic, while the need for greenway and trail funding continues to increase dramatically.

The State Comprehensive Outdoor Recreation Plan (SCORP) outlines what the top recreational priorities are for residents throughout the State. In the last SCORP (2008), trails were a top priority. Federal Land and Water Conservation Fund (LWCF) appropriations are directed to SCORP identified priorities.

CPW faces increasing challenges to fund non-motorized, recreation trails in Colorado. Concerns over the potential decrease in federal RTP and LWCF funding for trails, coupled with the issues related to federal sequestration and consequent diminished management presence by federal partner agencies such as the U.S. Forest Service (USFS) and Bureau of Land Management (BLM), serve to make the stakes significantly greater.

Colorado does not have a user-fee funding source to support non-motorized trail projects comparable to the OHV and Snowmobile programs. Funding for those two programs come from user fees, derived from sales of OHV and snowmobile registrations and permits. There is no comparable user-fee funding from non-motorized trail users. However, the Colorado Constitution provides for a direct funding source for the non-motorized trail program through the Colorado Lottery and Great Outdoors Colorado.

State Demography Office projections show Colorado's population increasing to over 7.7 million by 2040, almost a 50 percent increase over the 2012 Colorado population. With an increased public conscientiousness regarding the benefits of active lifestyles, the public interest and demand for non-motorized recreational trails may increase substantially in the future. This raises concerns that this vital program may not have the financial support necessary to address the demands on the program in the future.

Recognizing the strong public interest and demand for trails in Colorado, CPW continues to work closely with Great Outdoors Colorado (GOCO) on trails funding priorities, especially for local communities that lack an alternative funding base. CPW and GOCO recently toured the state together to receive input from communities on their trails needs and priorities. CPW will be working with GOCO to implement their \$10 million local community opportunity grants for trails initiatives. The focus of that grant opportunity will be large-scale trails projects sponsored by local communities specifically to increase trail access for youth and families to existing parks, open spaces, natural areas and environmental education opportunities. This ongoing coordination with GOCO will serve to optimize Colorado's limited funding for non-motorized trail maintenance and construction to provide the greatest potential benefit to Coloradans.

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 represent the principal funding source⁸, as well as the largest funding source, for OHV recreation. Motorized recreation groups apply for grants that are used for

⁸ Both the OHV and Snowmobile programs do receive some federal RTP funds specifically allocated for motorized recreation in Colorado.

trail maintenance or construction. 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 the motorized trails across Colorado, severe environmental impacts to public lands and waters could occur. In the past two 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 unfounded 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. This will continue the strategic focus on more effective trails management on public lands, as well as building those strategies based on sound, reliable information about motorized recreation use.

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 funding¹ mechanism for snowmobile programs in Colorado. Moneys from the program flow to volunteer groups, clubs and state parks that support snowmobile trails and recreation.

Groomed snowmobile trails also provide winter access for non-motorized recreationists as well as backcountry access for public safety personnel in the event of a backcountry avalanche or other problem. Without this program, unregulated and unmanaged snowmobile riding could become commonplace on public lands in Colorado. This is a valuable part of Colorado's trail recreation efforts each year.

Who are the Program's Customers?

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

What are the Strategic Policy Initiatives of this Program?

Initiative #1: To promote the responsible development of recreational trails in Colorado, both motorized and non-motorized.

Initiative #2: Increase public access to trail-related outdoor recreation.

Initiative #3: Coordinate, assist and develop such trails with all levels of government, interested organizations and the public.

Initiative #4: Work to emphasize public safety on trails throughout Colorado.

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

Registration and Permitting

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

OHV registrations and permits are valid from April 1 through March 31 of the following year and are renewable each year. Registration renewal cards are mailed to current registered OHV owners each March. These registrations may also be renewed online. OHV dealers are required by law to complete the registration application and collect the registration fee before the vehicle leaves their premises. Out-of-state visitors who bring OHVs into Colorado and OHVs registered for street use must purchase a Colorado OHV permit which is valid from the date of purchase through the following March 31. Hunting and fishing license agents sell these permits as well.

Snowmobile registrations are valid from October 1 through September 30 of the following year. Registration renewal cards are mailed to current registered snowmobile owners each August. Snowmobile registrations are available on-line, at CPW offices or through agents across Colorado, including agents who sell hunting and fishing licenses. Out-of-state visitors who bring snowmobiles into Colorado must purchase a Colorado Non-Resident Snowmobile permit which is valid from the date of purchase through the following September 30. Permits can be purchased via mail or online.

Grant Program Administration and Management

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

Trail Management on State Parks

Trail management on State Parks includes the planning, development, operations and maintenance of trails located in Colorado’s state parks. The “Trail Management on State Parks” work arose to provide funding for trail maintenance and construction of trails in state parks, based on the recognition that park visitors see trails in the parks as an important feature of their park visits. In 2010 and again in 2011, the former State Parks division allocated \$600,000 in GOCO funding (Parks Quadrant funds) to state park trails.

Twenty-four state parks trail projects were funded during the first two years; fourteen of these projects are completed (FY 12-13), and the remaining projects are close to completion. In 2013, CPW allocated another \$600,000 of GOCO funds. Thirteen additional state parks trails projects received funding in FY 12-13, from fifteen state park trail applications. Additionally parks also handle many trail maintenance projects using park operating and capital funds. This approach helps state parks improve and expand trail opportunities in the state parks, thereby directly benefiting park visitors.

CPW recently completed an important effort to map all state parks trails in Colorado, comprehensively and consistently. The project provides miles of trail, terrain conditions, allowed uses and other trail characteristics for every trail in the state parks. CPW generated GPS tracking for all

trails in the state parks, which were then reviewed to ensure the accuracy in the information. This result is a package of highly reliable maps of all state parks trails, including key trail characteristics, which in turn are now available and downloadable to the public.

What are the Program’s Inputs?

The Trail Program accomplishes its objectives by awarding grants to local governments, constituent non-governmental organizations representing trail recreation enthusiasts, and partnerships with those entities and the federal land management agencies, principally the U.S. Forest Service and Bureau of Land Management. This achieves the programmatic mission by leveraging a small staff from CPW in a cooperative way to complete a large number of trail projects each year. Oftentimes, the same people who use and enjoy trails for recreation volunteer to complete the trail construction and maintenance funded through the trail grants. At other times, trail user groups contract the trail work to firms or individuals who specialize in trail construction and maintenance. The program functions effectively by coordinating the efforts of interested and committed people to achieve goals that serve the interests of many people in Colorado. The program efficiently transforms the available funding into hundreds of miles of trail improvements each year, which in turn provides millions of recreational days each year to Coloradans and visitors to the state.

Program inputs include the number of registrations and permits and the resulting revenues. These provide the grant funding for the OHV and Snowmobile programs. That determines the number and kinds of trail projects undertaken, which then decides what trails are maintained, improved or constructed. Finally, those results affect what trail opportunities are available for the public.

CPW does not have influence on the amounts for a sizeable portion of non-motorized trail funding. Although both GOCO and Colorado Lottery provide funds used for non-motorized trail projects, federal funds comprise a significant portion of non-motorized trail funding, typically one-third to one-half of the total. As those federal funds fluctuate, the amount of funding available for non-motorized trail efforts fluctuates. Those federal funds are increasingly tenuous.

TRAILS PROGRAM

INPUT MEASURES, FY 08-09 THROUGH FY 15-16

Input Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Number of OHV Registrations/Permits	Benchmark	160,260	161,018	161,777	162,535	163,294	164,052	165,569
	Actual	160,823	161,749	159,099	163,444	163,768	N/A	N/A
Number of Snowmobile Registrations/Permits	Benchmark	35,786	34,596	33,405	32,215	31,025	32,502	32,776
	Actual	35,855	34,547	33,675	31,543	31,406	N/A	N/A
OHV Registration/Permit Revenue	Benchmark	\$4,019,085	\$4,038,170	\$4,057,255	\$4,076,340	\$4,095,425	\$4,114,510	\$4,152,680
	Actual	\$4,016,430	\$4,041,011	\$3,975,111	\$4,082,968	\$4,090,875	N/A	N/A
Snowmobile Registration/Permit Revenue	Benchmark	\$1,014,711	\$1,036,000	\$1,006,000	\$942,800	\$938,400	\$975,060	\$983,280
	Actual	\$1,074,853	\$1,035,687	\$1,009,940	\$946,215	\$941,033	N/A	N/A
Funding for State Park Trail development	Benchmark	N/A	\$600,000	\$600,000	\$0	\$600,000	\$250,000	\$250,000
	Actual	N/A	\$600,000	\$600,000	\$0	\$600,000	N/A	N/A

Discussion of Program Inputs

The trails program depends on funding to develop and maintain trails across Colorado. Funding is the most vital input, and in fact directly determines staffing, the number and amount of grants and other aspects, as funding for program operations comes from registration revenues and other sources. This is a self-supporting program for Colorado. With adequate and stable funding, the trails program is able to provide constituents and government cooperators the needed funding for trail projects through a long-standing and successful grants program. In turn, the grants program serves to achieve programmatic goals and objectives as grant criteria and rankings directly relate to those programmatic goals and objectives.

The funding for two Trails sub-programs, OHVs and snowmobiles, primarily comes from registration and permit fees, paid directly by those recreationists who recreate with OHVs and snowmobiles. Registrations and permits, for both OHVs and snowmobiles, generate the financial resources to support and operate their respective programs. Additionally, the level of registration and permit revenue determines the program grants awarded each year. The grant awards in turn result in improved and new trail opportunities for Colorado residents and visitors to the state.

There has been a steady rise in the total amount of OHV grant funding in recent years due to the increased numbers of ATVs and other trail vehicles, coupled with increased interest for motorized recreation. Expectations are that this trend will continue. Despite this increased demand for motorized access, federally managed lands and trails face possible closures due to declining federal budgets, environmental concerns and other factors. Colorado faces an unavoidable combination of increased demand for motorized recreation and a potential for diminished availability of motorized trails. This makes effective management and successful partnerships increasingly important.

Snowmobile funding is highly dependent on snow conditions, especially early in the winter. As the registration year starts in October, snowmobile owners often do not renew or purchase registrations until the snow conditions support quality sledding opportunities. Snowmobile owners realize that if good snow conditions are not available, the snowmobile may sit unused during the winter. In 2012-2013, poor snow conditions at the onset of the season contributed to the lower registration totals.

The third sub-program, non-motorized recreation, does not receive user-derived revenues, subjecting the efforts to provide quality non-motorized trails to funding fluctuations. Funding for non-motorized trail grants is highly volatile, mainly due to the variability in federal funding through the Recreation Trails Program (RTP) and Land and Water Conservation Fund (LWCF) funding. The non-motorized, recreation trail program is the most widely used category of trails in Colorado.

Funding for trails in the state parks comes directly from Great Outdoors Colorado (GOCO) monies allocated to CPW for projects in the state parks. Directing those GOCO funds for state park trails is a relatively recent (FY 2009-10) effort to expand and improve non-motorized trail recreation in the state parks. This decision occurred due to the recommendation by park staff that the parks needed more and better-maintained trails in the parks. Additionally research indicated that trail related recreation was one of the top recreation activities among park visitors when at the parks, and could encourage increased visitation at many parks.

What are the Program Outputs?

The Trails Program outputs indicate the achievement of programmatic objectives. These are discussed in the table below and the accompanying narrative.

TRAILS PROGRAM
OUTPUT MEASURES, FY 08-09 THROUGH FY 15-16

Output Measure	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Number of OHV Grant Applications	Benchmark	N/A	N/A	60	60	61	61	61
	Actual	N/A	N/A	63	57	57	N/A	N/A
Number of Recreation Trail Applications	Benchmark	N/A	N/A	40	40	40	40	40
	Actual	N/A	N/A	43	40	27	N/A	N/A
Number of OHV Grant Awards	Benchmark	N/A	N/A	46	46	48	50	50
	Actual	N/A	N/A	46	46	51	N/A	N/A
Number of Rec Trails Grant Awards	Benchmark	N/A	N/A	19	20	20	18	18
	Actual	N/A	N/A	19	18	22	N/A	N/A

Discussion of Program Outputs

The number of trail grant applications and awards directly affects the quantity and quality of the trail systems in Colorado. The number of trail grants awarded along with the annual dollars awarded, provides measurements of CPW’s progress toward fulfillment of the program’s mission, goals and objectives.

Snowmobile awards are a combination of capital projects, such as staging areas or grooming equipment, and snow trail grooming, which improves trail traction and accessibility. The amount and costs of grooming contracts vary directly based on the actual snow pack in different parts of the state. In a low snow year, grooming may be minimal, in a heavy snow year, grooming happens more frequently.

Using the number or amount of snowmobile grants as an output may be somewhat misleading, due to the variability resulting from year to year fluctuations of snow conditions. The snowmobile program will continue to award both capital and grooming contracts consistent with the availability of snowmobile funding, while recognizing that the awards depend entirely on weather conditions. Hence, snowmobile awards are included as an outcome since a sound snowmobile program is the objective. However, the actual number of grants awarded in any year is not a truly meaningful output measure, and hence is not shown in the table above.

What are the outcomes that the Program is trying to achieve?

“*On Nature’s Trail*”, the continuing strategic vision for the Colorado Trail Program, discusses the Program’s strategic policies [Source: Colorado State Trails Program. 2000]. Every trail grant application (non-motorized, OHV and snowmobile) has to demonstrate how the proposed project relates to the strategies, goals and objectives designated in the “*On Nature’s Trail*” plan. This plan discusses strategies that include the three sub-programs: recreational, OHV and snowmobile trail efforts.

Ultimately, the Trails Program aims to increase the quality, access to, and interconnectedness of motorized and non-motorized recreational trails in Colorado, while protecting the natural environment, and ensuring public safety. Additionally, trails boost Colorado’s economy by providing recreational and tourism opportunities, including access to backcountry opportunities in areas with otherwise limited accessibility.

The intent of the OHV program is to continue the practice of devoting most of the revenues collected from OHV registration and permits back into motorized trail improvements through the grants program. The same is true for snowmobile revenues from registrations and permits; the objective of the program is to return as much of those revenues as possible back to the recreationists who pay the registration and permit fees by means of grants that benefit those recreationists.

The recreation, non-motorized trail efforts have the same intention of returning available revenues so that those benefit the recreational users, and by expanding recreation trail use, generate opportunities for recreation and tourism throughout Colorado. Similar to snowmobile, there are significant external influences that affect the amount of funding for these efforts.

CPW is committed to returning most of the available funds where those will most benefit recreational interests. Increasingly trail applications, perhaps especially those from local governments, involve synergistic efforts to leverage trail grants with other types of grants to maximize the overall recreation benefits for projects. This may involve linking projects with special purpose funds, such as “Fishing if Fun” grants, for trail projects that include fishing access, or projects that use GOCO local government, National Forest Foundation or private sources such as Carter Family Foundation grants. Increasingly the result is development of multi-purpose projects that serve the interests of a wide spectrum of citizens.

TRAILS PROGRAM
OUTCOMES, FY 08-09 THROUGH FY 15-16

Outcome Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Amount (dollars) of OHV Trail Grants Awarded	Benchmark	\$1,600,000	\$3,000,000	\$3,200,000	\$3,200,000	\$4,300,000	\$4,220,000	\$4,262,200
	Actual	\$1,633,242	\$3,191,173	\$3,230,490	\$4,305,062	\$4,220,653	N/A	N/A
Amount (dollars) of Rec Trail Grants Awarded	Benchmark	\$3,000,000	\$1,500,000	\$1,400,000	\$1,900,000	\$1,600,000	\$1,700,000	\$1,725,000
	Actual	\$1,578,852	\$1,416,136	\$1,963,524	\$1,621,708	\$2,329,455	N/A	N/A
Amount (dollars) of Snowmobile Capital Grants	Benchmark	N/A	N/A	N/A	N/A	\$289,000	\$280,000	\$280,000
	Actual	N/A	N/A	N/A	N/A	\$289,500	N/A	N/A
Amount (dollars) of Snowmobile Grooming	Benchmark	N/A	N/A	N/A	N/A	\$660,000	\$650,000	\$650,000
	Actual	N/A	N/A	N/A	N/A	\$660,000	N/A	N/A
Miles of Trails in State Parks	Benchmark	N/A	N/A	530	550	600	730	750
	Actual	N/A	N/A	534	584	718	N/A	N/A

The change in “Miles of Trails in State Parks” from FY 11-12 to FY 12-13 is due to the improved accuracy in measuring actual trail miles in each park. In FY 11-12 and earlier, all reports of trail miles in the parks were based on a compilation of estimated miles in each park. With the use of accurate GIS mapping, the FY 12-13 reported mileage comes from accurate measurements of trail miles.

Discussion of Trails Program Outcomes

As with any strategic plan, “*On Nature’s Trail*”, describes what the program intends to accomplish in terms that the program’s customers and the public can readily understand. As with many strategic plans, the crux of whether a strategic plan helps a program successfully accomplish the described mission, goals and objectives rests on how effectively that program delivers on those intentions. Funding, staffing, clear priorities and other factors all contribute to that level of success.

The structure of the Trails Program helps target program efforts on the stated goals and objectives. Using competitive grant awards, which are tied to the program’s goals, and working cooperatively with stakeholders to accomplish high priority projects keeps administrative costs relatively low. This delivers the greatest direct return to the trail users, by increasing the quantity and quality of trail recreational opportunities. The grant ranking process involves direct evaluation of the applications by interested and knowledgeable Trail Committee members. This is combined with periodic reviews of trail projects by trained professionals, to ensure that grants are completed according to approved standards and in a timely and cost-effective manner. The result is a nationally recognized program for development of trail opportunities at the local, regional and statewide levels, largely funded through user-generated revenues leveraged with funds from the Colorado Lottery and Great Outdoors Colorado.

Due to the structure of the program, specifically the reliance on grants to accomplish the desired enhancements in the quality and amount of trail recreation across Colorado, the amount of funding directed to grants each year reflects progress toward achieving the program’s desired outcomes. Spending is seldom a desired measure for a government agency. In this case, the unique structure of the program works so that the dollars allocated to grants does indeed provide a desired measure for programmatic success.

The number of trail projects completed may vary from year to year due to several factors, especially due to the size and scope of high priority projects, funding availability and other factors. For those reasons, reporting the number of grants awarded or completed would not adequately demonstrate how successfully the program is moving toward accomplishing the programmatic goals and desired outcomes.

Adjustments and improvements to the grant criteria and evaluation process occurs periodically as the Trails Committee, CPW Commission, stakeholders and other partners dialog throughout the year. These periodic adjustments help to ensure that the dollars awarded in each of the major program categories are consistent with and serve the interests of the end users, specifically the citizens and visitors to Colorado participating in trail related recreation. While it is difficult to measure the comprehensive impacts of the program statewide, such as the qualitative benefits to people achieved through exercise and outdoor recreation, the intent is that direct, on-going and transparent reviews of the program’s activities ensure that staff and stakeholders work cooperatively to deliver comprehensive trail opportunities.

Directly related to CPW’s statutory mission, the quality and quantity of trail opportunities in the state parks system is an important desired outcome. The desired outcome is to increase the number of miles of designated trails within the state parks, reflecting the input from park visitors mentioned previously. Therefore, an outcome measure is the number of miles in state parks.

Colorado’s Trails Program continues to serve as a model for efficiency and for coordination with stakeholders and the public. The most important desired outcome is to continue that successful approach.

Wildlife and Habitat Conservation

What is this program?

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

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

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

Why Is This Program Important?

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

Who are the Program’s Customers?

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

What are the Strategic Policy Initiatives of this Program?

The Parks and Wildlife Commission has identified three strategic policy initiatives for the agency – Recruitment and Retention, Habitat Preservation and Financial Sustainability. For the Wildlife and Habitat Conservation Program, the Habitat Preservation strategic policy initiative provides importance guidance, as follows:

Strategic Priority #2 - Habitat Preservation and Enhancement: *Support and Facilitate Habitat Protection and Natural Resource Stewardship*

- *Objective 1: Protect, restore, and enhance habitat for fish and wildlife.*
- *Objective 2: Cooperate with other agencies and conservation organizations to collect, share, and disseminate natural resource information and to coordinate resource management.*
- *Objective 3: Promote the stewardship of properties managed by CPW through proactive management and sound planning to minimize impacts and keep resources intact for future generations.*
- *Objective 4: Ensure the long-term viability of native fish and wildlife and strive to maintain the broadest representation of the diversity of native wildlife in suitable habitats across the state. Proactively prevent and control non-native species and fish and wildlife diseases.*
- *Objective 5: Maintain healthy and viable game and sport fish populations sufficient to meet the demand for hunting, fishing and trapping, while minimizing landowner conflicts.*
- *Objective 6: Provide meaningful interpretive and environmental education opportunities that expand public awareness, appreciation and stewardship of Colorado's natural values.*

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
2. Species Conservation (Game & Non-Game Species)

Land and Water Management

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

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

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

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

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

Species Conservation – Colorado is home to more than 900 wildlife species. Species Conservation Programs provide wildlife and habitat conservation activities for both game and non-game species. General activities under the programs are often similar, but focus on different species. Processes include monitoring wildlife populations in the state, assessing population trends, determining distribution patterns, identifying limiting factors, developing conservation or recovery plans, working with other state, federal and local agencies, and private landowners to implement

recovery plans, conducting research on population dynamics including disease, propagation of certain individual species, mapping of the presence and distribution of species, and working with a variety of partners, both public and private, on cooperative strategies for conserving, protection and enhancing populations.

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

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

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

Previous actual performance combined with expert opinion regarding current and future trends shape predictions. Often unforeseen external factors significantly influence actual results. The measures included in this plan provide examples of how multiple factors impact actual versus projected input, output and outcome variables. For wildlife programs, the following sections include discussions of recent and current variables that have impacted the actual results of programs.

What are the Program’s Inputs?

A number of factors drive the workload of the Wildlife and Habitat Conservation Program and impact its ability to achieve programmatic goals and objectives.

WILDLIFE AND HABITAT CONSERVATION

INPUT MEASURES, FY 08-09 THROUGH FY 15-16

Input Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Number of Proposals Received, CWHPP	Benchmark	N/A	N/A	80	70	60	60	60
	Actual	81	102	69	45	58	N/A	N/A
Funds Allocated to CWHPP (millions of dollars)	Benchmark	N/A	N/A	15.0	12.5	11.0	11.9	11.0
	Actual	15.0	15.0	15.0	12.5	11	N/A	N/A
Number of Wetlands Grant Proposals	Benchmark	N/A	N/A	50	25	25	20	20
	Actual	55	45	47	0	21	N/A	N/A
Habitat Stamp Funds (total)	Benchmark	N/A	N/A	N/A	\$6,043,000	\$6,091,344	\$6,140,075	\$6,189,195
	Actual	N/A	N/A	\$5,470,554	\$6,615,795	\$6,200,960	N/A	N/A
Number of listing decisions due by USFWS (annual)	Benchmark	N/A	N/A	N/A	N/A	0	5	3
	Actual	N/A	N/A	N/A	N/A	0	N/A	N/A

Discussion of Inputs

In managing this program, CPW responds to inputs that come from a vast array of sources. These include public testimony at monthly Parks and Wildlife Commission meetings; special studies and surveys; comments from customers and constituents gleaned from field contacts, at administrative facilities, and through the agency website; personal observations by field and administrative staff, public and user surveys, material appearing in various media including print and internet; scientific research, including historical trends and published peer-reviewed studies; and many other sources of information that can help guide successful implementation of the program.

While CPW strives to be proactive in its management of wildlife species, priorities and activities can be influenced or driven by actions of external actors. It is not uncommon for the state and CPW to have to respond to timelines established by others operating through their own processes, to court-ordered mandates, to information voids, to negotiated deadlines and other schedules impossible to predict years in advance. Similarly, technological advances can dictate a change in priorities or strategies. For example, recent advances in genetic analysis suggest that some populations of greenback cutthroat trout thought to be native species may not be genetically pure. This could have a major impact on the relative priority of habitat protection in specific locations where confirmed genetically-pure populations are found, as well as on other important conservation efforts.

Environmental changes or discovery of environmental conditions can drive sudden changes in priorities and strategies. Since the discovery of aquatic nuisance species (ANS) in Colorado, such as the quagga mussel for example, CPW has successfully prevented the spread of many of these species within the state's borders. This has required substantial investment of human and financial resources. The threat to both recreational and commercial water sources from aquatic nuisance species remains high. Water is a crucial component of a number of outdoor recreational activities, including fishing and boating, and continued diligence and partnering with other states to prevent the spread of ANS and other invasive species remains critical.

The Wetlands Program had a relatively predictable amount of funding and project applications since its establishment in 1996. However, in FY 2011-12 the actual input measure for applications dropped to zero. The program continues, but during FY 2011-12 financial concerns led agency leadership to make significant cuts in several capital programs to help close a financial gap. The Wetlands Program was one of the programs affected and grants were suspended for one year. In contrast to the projected 25 grants anticipated in FY 2011-12, zero grant applications were actually received when the program was temporarily suspended. The program returned closer to normal operating levels the following year and the number of wetland grant proposals was much closer to its benchmark.

The CWHPP program represents a different experience. Program funding has remained relatively consistent, but priorities within the program have changed and become more targeted. One result has been a reduction in the raw number of funding applications, but an increase in the number of applications that are focused on CPW habitat priorities.

Measurements related to endangered species listings are projected to change in the next 3-4 years despite CPW efforts. While CPW has been successful in averting threatened or endangered listings under the federal Endangered Species Act, a federal court decision (the *Multi District litigation*) mandated more than 750 listing decisions by the US Fish and Wildlife Service over the next five years. Nine of the species are present in Colorado, increasing the risk of a federal listing, which is reflected in the change of outcome measures.

What are the Programs Outputs?

The Wildlife and Habitat Conservation has a number of outputs that help reach programmatic objectives. These are discussed in the table below and the accompanying narrative.

WILDLIFE AND HABITAT CONSERVATION

OUTPUT MEASURES, FY 08-09 THROUGH FY 15-16

Output Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
State Wildlife and Habitat Area Acres Protected (Total)	Benchmark	N/A	N/A	800,000	825,000	830,000	925,000 ²	960,000
	Actual	N/A	N/A	801,837	826,959	917,714 ¹	N/A	N/A
# of State Land Board Acres managed	Benchmark	N/A	N/A	525,000	500,000	510,000	490,000	485,000
	Actual	N/A	N/A	525,427	493,113	480,800	N/A	N/A
Number of Acres Improved through HPP	Benchmark	N/A	N/A	N/A	30,000	30,000	28,000	25,000
	Actual	22,422	33,106	25,654	37,172	33,000 ³	N/A	N/A
Number of CWHPP Acquisitions Closed	Benchmark	N/A	N/A	12	12	10	10	9
	Actual	14	9	14	9	11	N/A	N/A
Number of CWHPP Projects Funded (Tier 1)	Benchmark	N/A	N/A	12	10	10	10	10
	Actual	10	11	12	9	10	N/A	N/A
Number of Wetlands Grants	Benchmark	N/A	N/A	18	18	17	16	15
	Actual	N/A	19	0	19	18	N/A	N/A
Number of candidate species listed under the federal Endangered Species Act	Benchmark	N/A	N/A	15	15	18	20	20
	Actual	N/A	N/A	15	15	15	N/A	N/A
Number of Designated and Registered Natural Areas	Benchmark	N/A	N/A	114	116	116	118	120
	Actual	N/A	114	114	116	117	N/A	N/A
¹ Change in actual reflects improvements to real estate database. ² Reflects change in actual information from previous year. ³ Estimated total at writing.								

Discussion of Outputs

Habitat conservation is important for all wildlife species. In the most acute situations, habitat conservation efforts play a critical role in the prevention of the listing of species under the federal Endangered Species Act. Protection of migration corridors and winter range are crucial for the health of Colorado's big game populations. Migratory birds and waterfowl benefit from protection and enhancement of wetland areas. Native aquatic species – the greenback cutthroat trout for example – depend on watershed and stream water quality protection efforts. Anglers for game fish species benefit from aquatic habitat protection and improvement programs. Wildlife viewers are drawn to expanded opportunities to enjoy Colorado's abundant wildlife resources. Additionally, more accurate and detailed habitat and land mapping leads to better informed land use decisions, more effective species recovery plans and easier public access to public lands.

Hunting and fishing have central roles in wildlife management, serving as a primary mechanism for managing sportfish and game animal populations. Concurrent with influencing the number and location of wildlife, habitat management and protection is also a key component in the

management and preservation of Colorado’s wildlife populations. Habitat management activities include identifying and mapping important wildlife habitat areas across the state; delineating priority habitat protection areas; implementing habitat protection and enhancement efforts built on partnerships with landowners, land trusts and conservation organizations; supporting monitoring and management of new and existing properties and easements; and protecting wetland resources across the state.

The measure of acres improved under the Habitat Partnership Program exhibits a wide range of actual results. The variability is based in large part on the interplay of several factors that appear, either jointly or in combination, during a particular year. A leading variable having an impact on annual actual results is, not surprisingly, the weather. Dry conditions can prevent planned prescribed burns or fertilization efforts from being undertaken for example. In recent years, cuts in the number of big game licenses issued on the west slope has also led to a reduction in the amount of the funding from license revenue directed to the program. At that same time, matching funds from partners dropped off, either as a result of federal funding cuts or general economic conditions. A final factor is a new HPP initiative to support large-scale projects that the State Council believes will be more effective in distributing big game and livestock. However, the larger projects also require more planning, which can reduce overall project acreage in one year, but lead to a jump in the following year.

Habitat protection is a crucial component in maintaining Colorado’s wildlife for current and future generations and is not surprisingly a top priority for the CPW. Property rights or easements under CPW ownership assure the public of long term, perpetual management for wildlife recreation, as well as public access and maintenance of viable wildlife habitat. For this performance measure, the term “protected” means to preserve and enhance wildlife habitat or to provide public recreation access, or both. The performance measure calculations exclude lands owned by the State Land Board and leased by CPW for hunting and fishing recreation purposes.

What are the outcomes the Program is trying to achieve?

The Wildlife and Habitat Conservation Program strives to provide high quality habitat – on public and private lands -- to sustain and support Colorado’s game and non-game wildlife species. In turn, this program supports the hunting, fishing, wildlife viewing, and other outdoor recreational opportunities in Colorado for residents and visitors while preserving the natural resources of the state, including its wildlife and natural habitats. Desired outcomes include:

- Quality fish and wildlife habitat is conserved, maintained, and restored.
- Colorado citizens are satisfied with the diversity and health of the state’s native fish and wildlife, and with the number and variety of fish and game available for harvest.
- CPW is regarded as a leader in natural resource stewardship and a comprehensive source for fish and wildlife information.
- State parks and other CPW properties are managed sustainably for the long-term benefit of Colorado citizens and visitors.
- Colorado’s fish and wildlife is conserved adequately to minimize the need for federal listings under the Endangered Species Act.

WILDLIFE AND HABITAT CONSERVATION

OUTCOMES, FY 08-09 THROUGH FY 15-16

Outcome Measures	Type	FY 08-09 Actual	FY 09-10 Actual	FY 10-11 Actual	FY 11-12 Actual	FY 12-13 Actual	FY 13-14 Estimate	FY 15-16 Request
Number of candidate species listings prevented (total)	Benchmark	N/A	N/A	20	20	20	20	27
	Actual	N/A	N/A	20	20	20	N/A	N/A
Wetlands Program								
Wetlands/Riparian Acres Impacted by Projects	Benchmark	N/A	N/A	3,000	3,000	2,000	2,000	2,000
	Actual	N/A	7,647	0	2,870	1,225	N/A	N/A
CWHPP								
Wildlife Habitat protected (acres annually)	Benchmark	N/A	N/A	N/A	25,000	25,000	25,000	25,000
	Actual	33,245	18,069	24,371	24,012	38,784	N/A	N/A
Post-Hunt Population Size								
Deer	Benchmark	N/A	465,000	441,000	431,000	425,500	414,000	430,000
	Actual	466,670	460,650	430,390	417,950	408,010	N/A	N/A
Elk	Benchmark	N/A	N/A	280,000	280,000	280,000	270,000	240,000
	Actual	283,210	287,270	283,430	264,170	266,300	N/A	N/A
Pronghorn	Benchmark	N/A	N/A	74,000	74,000	68,000	66,000	69,000
	Actual	74,640	76,710	78,600	71,100	66,480	N/A	N/A
Moose	Benchmark	N/A	1,560	1,610	1,830	2,000	2,270	1,800
	Actual	1,365	1,580	1,690	1,830	2,110	N/A	N/A

Discussion of Outcomes:

Maintaining healthy wildlife populations and ecosystems is one of the major strategic policy initiatives of Colorado Parks and Wildlife. Succeeding in this strategic policy initiative means, among other things, preventing the population decline of specific wildlife populations to the point where listing under the federal Endangered Species Act results. The listing of a species – or more important, the avoidance of a listing -- is the end result of many factors and reflects the success of CPW’s efforts to protect and maintain wildlife habitat, to manage wildlife populations, to discover, generate, and provide scientific information about the status of species, and to expand scientific understanding of the factors influencing wildlife populations, among other activities. The measure of candidate species listed under the federal Endangered Species Act and the number of candidate species prevented from federal listing focus on a relatively small number of species, most of which are thought to be in peril, and are therefore receive considerable management attention.

Fifteen Colorado wildlife species are currently listed under the federal Endangered Species Act: whooping crane, least tern, southwest willow flycatcher, piping plover, Mexican spotted owl, bonytail chub, razorback sucker, humpback chub, pikeminnow, greenback cutthroat trout, gray wolf, black-footed ferret, grizzly bear, Preble’s meadow jumping mouse, and Canada lynx.

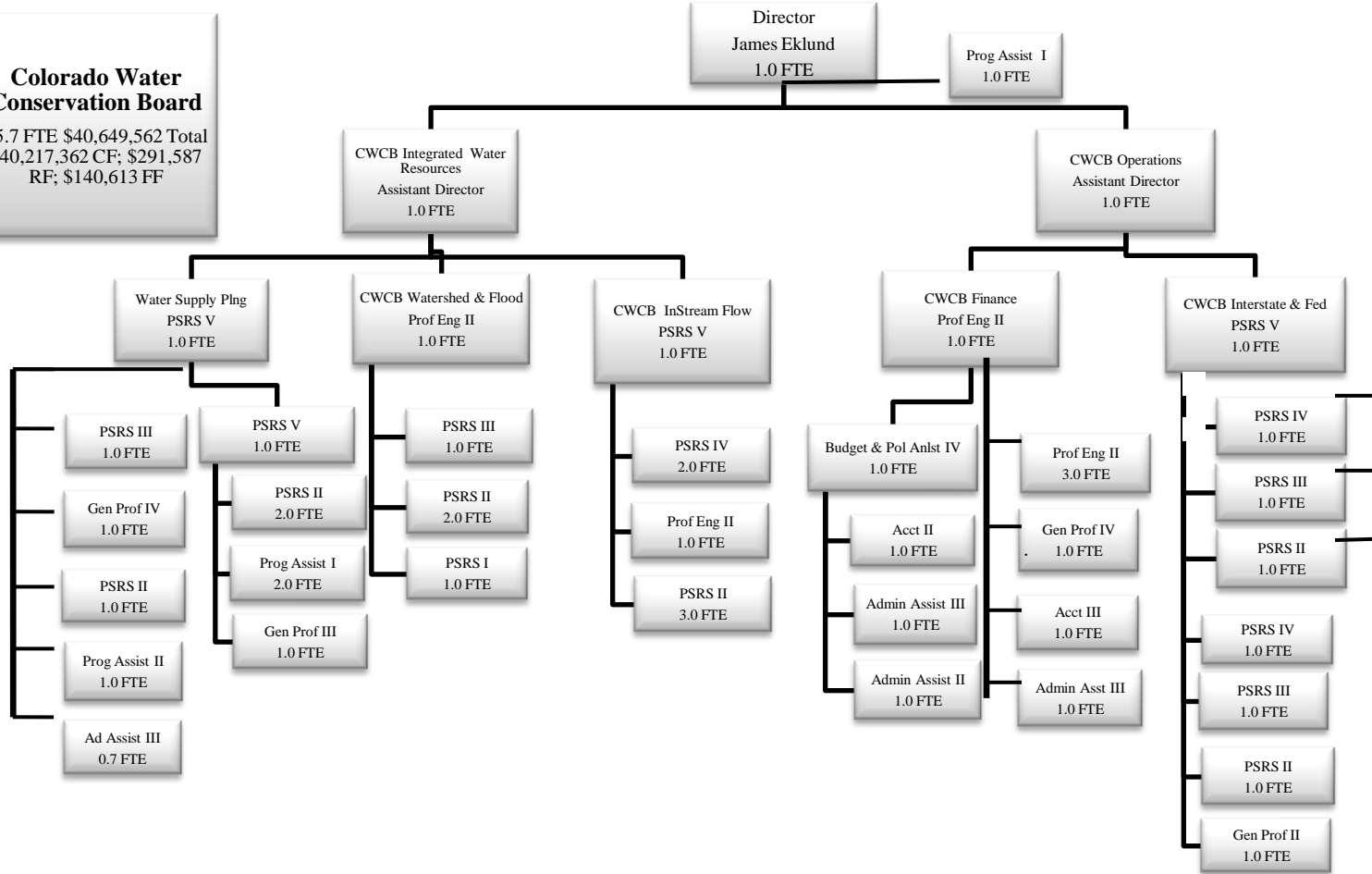
No new species were listed either federally or through the state Parks and Wildlife Commission process during FY 2012-13. The US Fish and Wildlife Service made a positive 90 day finding on two Colorado species -- the white-tailed ptarmigan and desert massasauga -- during FY 2012–13. These two species will be added to the federal candidate list, but no additional work toward listing will occur until after September 30, 2015.

More directly related to the outcome measures above, in September 2011, the US Fish and Wildlife Service, through a court mandated work plan (*Multi District Litigation*), was directed to make listing decisions on 750 species nationwide, including nine federal candidate species occurring in Colorado. The species affected in Colorado include lesser prairie chicken, Gunnison sage-grouse, greater sage-grouse, western yellow-billed cuckoo, Rio Grande cutthroat trout, Arkansas darter, New Mexico jumping mouse, wolverine, and Gunnison's prairie dog. Listing decisions for many of the wildlife species are scheduled to be made during either the 2013 or 2014 federal fiscal year. Preliminary listing decisions for Gunnison's prairie dog and greater sage-grouse are scheduled for 2015. A listing decision for the Arkansas darter is slated for 2016.

The measures for Endangered Species listings above represent the changed environment for listings over the next 5 years, largely influenced by the court decision that mandates USFWS listing decisions. While Colorado Parks and Wildlife and many partners around the state have acted aggressively to develop and implement recovery plans, and protect important wildlife habitat, the risk of additional listings of species found in Colorado increases under the *Multi District Litigation* decision and resulting process. However, the measures also anticipate that Colorado's efforts will help avert several of the proposed listings.

Colorado Water Conservation Board

45.7 FTE \$40,649,562 Total
 \$40,217,362 CF; \$291,587
 RF; \$140,613 FF



August 2013

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.

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 three sub-programs: A) Water Supply, B) Flood Mitigation, and C) Water Efficiency.

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

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

- B) The Flood Mitigation Program minimizes Colorado's flood loss vulnerability and related economic impacts. One main goal of this Program is to assist in protecting public health, safety and welfare in addition to identification and protection of billions of dollars worth of flood-prone properties statewide. This Program is responsible for developing, designating and approving regulatory floodplains (including cooperation with Federal Emergency Management Agency (FEMA) to obtain millions of dollars in federal grants for new and revised floodplain mapping); responding to flood disasters for recovery purposes and providing technical assistance or engineering information to support flood recovery efforts; and collaborating with partners regarding flood hazard mitigation and risk reduction measures. This includes the role as the State Coordinating Agency for the National Flood Insurance Program (NFIP) that is aimed at directly helping local communities join and remain in good standing with the NFIP, which allows property owners to obtain federally backed flood insurance. It also encourages community participation in the Community Rating System and involves helping local governments and various districts to develop flood protection plans and projects, often using funding from the CWCB Board's Construction Loan Program matched with FEMA funding for floodplain mapping and flood mitigation. The Program also participates with local sponsors to help with levee compliance efforts following federal levee inspections. Multi-objective watershed restoration studies and projects are also completed by this program, typically in partnership with local

stakeholders, communities, non-profit groups, and other state and federal agencies. This Program administers the Colorado Healthy Rivers Fund (using revenues from a tax check-off), the Colorado Watershed Restoration Program, the Fish and Wildlife Resources Fund, and the Invasive Phreatophyte Control Program. The Program also implements the permitting and grant funding responsibilities for weather modification operations (cloud seeding and hail suppression) and has been involved with key agreements among the Colorado River seven basin states as well as out-of-state funding for cloud seeding operations to augment mountain snowpack. Further, this Program manages the South Platte River flood control project below Chatfield Reservoir and provides state leadership for the Chatfield Reservoir Reallocation Project.

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

- C) The Water Efficiency Program promotes water use efficiency by providing public information as well as technical and financial assistance for water conservation planning. Drought planning is promoted by encouraging and assisting communities to prepare and implement drought mitigation plans and by monitoring drought impacts and informing the public, media, and state officials. The Program provides financial and technical assistance for local drought mitigation planning and coordinates CWCB's initiatives and programs related to climate change and water adaptation. In addition, the Water Efficiency Program ensures that all covered entities – retail water providers who sell 2,000 acre feet or more of water annually – are in compliance with Colorado's Water Conservation Act of 2004 (H.B. 04-1365) by having a water efficiency plan on file with the state that has been approved by the CWCB. The CWCB provides technical assistance and grant money to covered entities seeking to develop or update water conservation plans. In addition, the Act requires that covered entities submit a new or revised plan prior to the CWCB Board's approval of new loan funds.

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

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 more than between 538,000 and 812,000 AF of additional water by 2050 to meet M&I needs with passive conservation included. Many local water providers have projects or plans in place – known as Identified Projects and Processes– to address these increasing water demands. Thoughtful water supply planning is critical to ensure a secure future for the state. Meeting future water needs must be done in a manner that considers all solutions and addresses the varied water needs of Colorado and its citizens. The CWCB is focused on helping prepare for and meet Colorado's future water supply needs.

The Flood Mitigation Program serves as the State Coordinating Agency for the National Flood Insurance Program (NFIP), provides leadership to assist in the preparation for and recovery from actual major flood events in Colorado, offers a daily assessment of flood potential around the state via

a Flood Threat Bulletin, provides Technical Assistance Grants for Flood Response as well as Flood Hazard Mitigation Grants, and supports watershed planning as well as projects designed to restore and protect watersheds. The Program protects public health, safety, and welfare as well as wildlife and aquatic species and habitat.

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

The Flood Mitigation Program serves Colorado citizens affected by flood events or who live in flood-prone areas by providing information regarding mitigation assistance, flood insurance, and sources of financial aid as well as information related to flood risks, insurance availability, designation and approval of floodplain areas. Flood-prone areas have been identified in 267 cities and towns and in all of Colorado's 64 counties.

The program also works with various Federal, state and local agencies involved in flood emergencies by providing information documenting scope of damages, mitigation plans, and the effectiveness of mitigation measures.

What are the Strategic Policy Initiatives of this Program?

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

Strategic Policy Initiative #2: The objective of the Flood Mitigation Program is to provide public health, safety, and welfare for Colorado's citizens by protecting them and their property from flood related events and from the financial hardship associated with natural hazards.

Strategic Policy Initiative #3: The objective of the Water Efficiency Program is to reduce the demand for water through increases in water efficiencies.

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

Water Supply – Wise and 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. This is accomplished by facilitating planning and dialogue at the basin and statewide levels, undertaking studies and analyses related to Colorado's water supplies and demands, publishing reports and reporting this information to a wide variety of interests and stakeholders. Also, the Water Supply Reserve Account grant program provides grant funds to facilitate the implementation of consumptive and nonconsumptive projects identified by the basins.

Flood Mitigation – Floods are the most common and widespread of all natural hazards. One of the major processes of this program is to provide information about programs and activities that the CWCB conducts to address long-term flood protection for the state.

Water Efficiency – Water efficiency efforts include the practices, techniques and technologies that extend water supplies and other resources (e.g. energy) by either saving water or through substituting with alternative supplies such as reuse. This, in turn, frees up water supplies for other uses, such as new development, stored drought reserves, agricultural leases, and environmental uses (e.g. instream flows). Water efficiency is inclusive of water conservation and includes both system demands and customer water demands.

What are the Program's Inputs?

A number of factors drive the workload of the Water Management and Planning Program and impact the ability of the program to achieve programmatic goals and objectives.

Colorado Water Conservation Board Inputs
FY 2008-09 to FY 2015-16

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Water Supply Reserve Account</i>							
Total dollar value of funding sought	\$7,379,310	\$4,768,428	\$4,749,789	\$5,051,647	\$7,811,708	\$10,000,000	\$10,000,000
Grant funding available	\$10,685,444	\$9,081,133	\$10,312,705	\$12,562,916	\$8,296,763	\$10,000,000	\$10,000,000
# of grant applications	46	31	46	36	41	38	38
New funding	\$7,000,000	\$5,775,000	\$6,000,000	\$7,000,000	\$7,157,724	\$10,000,000	\$10,000,000

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Flood Mitigation Program</i>							
# of counties (out of 64) with no maps or paper maps	45	40	37	33	34	30	28
<i>Water Efficiency Grant Fund</i>							
# of water providers seeking grants	N/A	13	12	9	13	13	13
Total dollar value of funding sought	N/A	\$481,516	\$527,672	\$432,919	\$431,311	\$450,000	\$450,000
<i>Water Project Loan Program</i>							
Prospects List: total # of applicants and dollars requested	20 \$136,190,000	28 \$113,840,000	33 \$125,125,000	33 \$124,075,000	16 \$145,550,000	30 \$150,000,000	30 \$150,000,000

Pre-qualified projects list: total number of applicants and dollar requested ¹	N/A (tracking of this info began July 1, 2010)	N/A (tracking of this info began July 1, 2010)	9 \$21,627,525	15 \$7,030,000	19 \$99,482,000	25 \$135,000,000	30 \$150,000,000
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Note: ¹The 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 change total dollars requested for the fiscal years 2010-11 through 2015-16 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

Highlighted above are two input measures and their trend information.

New WSRA funding - The Water Supply Reserve Account (Account) was created in 2006 by S.B. 06-179. The legislature created the Account to help citizens identify and meet their critical water supply and management needs in conjunction with the Basin Roundtable process established by H.B. 05-1177 (Colorado Water for the 21st Century Act). The Account is funded by the Severance Tax Trust Fund Operational Account and is a Tier II program. Over the years, the legislative appropriation has fluctuated in relation to revenues received. In FY 2006-07, the full legislative appropriation of \$10,000,000 was received. In FY 2007-08, the legislative appropriation was reduced to \$6,000,000. In FY 2008-09, the program received \$7,000,000, less than the originally intended \$10,000,000 per year due to shortfalls in the Operational Account of the Severance Tax Trust Fund. Due to ongoing budgetary shortfalls, the legislative appropriation was reduced to \$5,775,000 in FY 2009-10, \$6,000,000 in FY 2010-11, \$7,000,000 in FY 2011-12, and \$7,157,724 in FY 2012-13. In 2009, the Water Supply Reserve Account Program was reauthorized in perpetuity by S.B. 09-106, which allows remaining funds in the account to be carried over and used in the following fiscal year. S.B. 09-106 appropriates \$10,000,000 per year from the Severance Tax Trust Fund, subject to available funding. The program is authorized to receive \$10,000,000 in FY 2013-14 and beyond, but the amount to be received will depend on the health of the Severance Tax Trust Fund’s Operational Account.

of water providers seeking grants - In FY 2012-13, grants for three drought plans were approved with more expected in the future. In the next few years, CWCB anticipates an increase in water efficiency plan *revisions*. The revised plans are required within seven years after having submitted the previous plan. It is expected that the number of revised plans being turned in will only increase as time goes by. These two factors will increase the number of water providers accessing Water Efficient Grant funds in coming years.

What are the Program’s Outputs?

The Water Management and Planning Program has a number of outputs that are designed to achieve programmatic objectives. These are discussed in the table below and the accompanying narrative.

Colorado Water Conservation Board Outputs

FY 2008-09 to FY 2015-16

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Water Supply Reserve Account</i>							
# of new grants and total dollar value for the Water Supply Reserve Fund	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 35 \$6,000,000	Benchmark: 38 \$10,000,000	Benchmark: 38 \$10,000,000
	Actual: 46 \$7,379,310	Actual: 31 \$4,768,428	Actual: 46 \$4,749,789	Actual: 36 \$5,051,647	Actual: 41 \$7,811,708	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: N/A	Benchmark: N/A	Benchmark: 15 \$48 M	Benchmark: 15 \$30 M	Benchmark: 30 \$150 M
	Actual: 15 \$28.3 M	Actual: 12 \$15.3 M	Actual: 9 \$17.9 M	Actual: 18 \$37.3 M	Actual: 20 \$70 M	Actual: N/A	Actual: N/A

Discussion of One and Three Year Goals

The benchmarks listed in the table above are the year one and year three goals of the CWCB. The benchmarks for the *# of new grants and total dollar value for the Water Supply Reserve Account* are based on the total funding anticipated for the Water Supply Reserve Fund from the Severance Tax Trust Fund Operational Account. The benchmarks for the *# of new loans and total dollar value for new water project loans* was recommended by CWCB staff.

Discussion about Output-related Performance

Output Measure: *# 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 Trust Fund Perpetual Base Account 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. 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, CWCB approves about \$20 to \$40 million per year in new loans. CWCB occasionally receives very large (upwards of \$60 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 increase in FY 2015-16. The estimated increase is related to projects that either have been approved by the CWCB Board or are

listed on the CWCB Pre-qualified Projects list, which identifies potential borrowers who have submitted an application, but do not yet have CWCB Board approval to move forward on the project. Staff has been working to manage available funds based on the recent 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 Account and \$10,000,000 from the Construction Fund for General Fund balancing purposes.

Additional output measures for the Water Management and Planning Program include measures for the Flood Mitigation Program's Federal Emergency Management Agency (Risk Map Program). The chart below shows measurement data for the fiscal years 2008-09 to FY 2015-16.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Flood Mitigation Program – Federal Emergency Management Agency (Risk Map Program)</i>							
# of new digital maps	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 2	Benchmark: 2	Benchmark: 2
	Actual: 5	Actual: 2	Actual: 3	Actual: 2	Actual: 2	Actual: N/A	Actual: N/A
# of total floodplain designations	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 644	Benchmark: 647	Benchmark: 647
	Actual: 612	Actual: 615	Actual: 635	Actual: 641	Actual: 641	Actual: N/A	Actual: N/A
Total value of premium reductions to communities	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: \$1.5 M	Benchmark: \$1.5 M	Benchmark: \$1.7 M
	Actual: \$1.0 M	Actual: \$1.1 M	Actual: \$1.3 M	Actual: \$1.4 M	Actual: \$1.7 M	Actual: N/A	Actual: N/A
# of communities enrolled in federal flood insurance programs	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 245	Benchmark: 245	Benchmark: 245
	Actual: 240	Actual: 240	Actual: 240	Actual: 242	Actual: 245	Actual: N/A	Actual: N/A

Discussion of One and Three Year Goals

The benchmarks listed in the table above are the year one and year three goals of the CWCB. The benchmarks are recommendations from CWCB staff.

Discussion about Output-related Performance

The FEMA Map Modernization program has transitioned into the Risk Map program. The Risk Map program, FEMA's initiative to update floodplain maps in partnership with states, is ongoing throughout Colorado. In addition to updating the technical adequacy and making the maps

more current, this program also addresses mitigation activities to help local governments reduce flood hazards. In order to meet federally stated objectives, the goal of the program by FY 2016-17 is to achieve 80% verified stream miles through detailed methodologies and analyses (i.e. 80% of miles portrayed on floodplain maps are to be analyzed and updated) and to have current maps deployed to at least 70% of the population. This will provide improved data to local governments so that better land use decisions in light of flooding hazards can be achieved.

Also, the Program measures data for the Decision Support System and Weather Modification Program. The chart below provides measurement data for the fiscal years 2008-09 to FY 2015-16.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Decision Support System</i>							
# of Decision Support System models operating	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 3	Benchmark: 3	Benchmark: 4
	Actual: 3	Actual: 3	Actual: 3	Actual: 3	Actual: 3	Actual: N/A	Actual: N/A
# of Decision Support System website hits (per year)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 91,250	Benchmark: 109,500	Benchmark: 109,500
	Actual: (Not recorded)	Actual: (Not recorded)	Actual: (Not recorded)	Actual: 91,250	Actual: not recorded	Actual: N/A	Actual: N/A
<i>Weather Modification Program</i>							
# of weather modification sites operating	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 7	Benchmark: 7	Benchmark: 7
	Actual: 8	Actual: 8	Actual: 8	Actual: 7	Actual: 7	Actual: N/A	Actual: N/A
Value of weather modification grants disbursed	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: \$340,000	Benchmark: \$350,000	Benchmark: \$350,000
	Actual: \$343,000	Actual: \$352,000	Actual: \$350,000	Actual: \$315,651	Actual: \$322,130	Actual: N/A	Actual: N/A

Discussion of One and Three Year Goals

The benchmarks listed in the table above are the year one and year three goals of the CWCB. The benchmarks are recommendations from CWCB staff.

Discussion about Output-related Performance

Output Measure:

of Decision Supported website hits – The Decision Support Systems (CDSS) contain gage and diversion records, reservoir storage content records, water right listings, climatic data and maps, river basin models, consumptive use models and water right administration tools. The approach and software used to track the number of website hits was changed by the Office of Information Technology (OIT) and the CWCB is in the process of getting OIT support to make the necessary changes to track website hits again.

of weather modification sites operating and value of weather modification grants disbursed - One of the many responsibilities of the CWCB is weather modification permitting and monitoring the environment as described by statute and the Colorado Weather Modification Rules and Regulations. The 1972 Weather Modification Act is a permitting program that has been delegated from the Department of Natural Resources Executive Director's Office to the CWCB Director since 1987. Each year liability insurance, annual reporting, operational plans, and then temporary suspensions for high snowpack and avalanche hazards are the primary activities to address public safety and make accurate information available on operations. There is also a provision that the statutes sunset every seven years, and program operations are audited by the Department of Regulatory Agencies with a report submitted to the legislature. Based on the results of that report, a legislative bill may be introduced by a member of the legislature to reenact the program authorities. Senate Bill 11-090 did reenact the Weather Modification Permitting Program for seven years through 2020.

In 2004, the CWCB established a grant program for wintertime cloud seeding at the request of water users. In 2007, formal agreements were signed to disburse grants to local programs and report back to downstream (out-of-state) water users. An agreement between the CWCB and three downstream water users known as the Lower Basin and another agreement between the CWCB and State of New Mexico are the vehicles to disburse those funds. Each year funding is made available from downstream states, and the amounts and activities are signed into action by the CWCB Director. The CWCB is required to collect all reports from contractors and report back on activities and expenditures to the downstream states. At the end of each winter, the CWCB will report on the expenditure activities to the out of state entities.

The potential benchmark for the CWCB depends on whether or not out-of-state entities continue to match the CWCB to fund cloud seeding in Colorado. For example, in 2012, a five year agreement expired and was renewed for five years with the New Mexico Interstate Stream Commission, and \$25,000 was provided to fund cloud seeding in the San Juan Mountains to benefit Colorado and New Mexico. In addition, the agreement between the CWCB and the Southern Nevada Water Authority, Central Arizona Water Conservancy District, and California Six Agency Committee has no expiration date, but they have provided continuous funding since 2007. Approximately \$1.3M has been donated to Colorado since these agreements were signed in 2007.

The 1986 Weather Modification Rules and Regulations were updated as required by SB 11-090 and were adopted at the July 2012 CWCB Board Meeting in conjunction with the Executive Director's Office of DNR. The program authority resides in the EDO-DNR office. Of importance in the new rules are stricter requirements on contractors for better analysis of the efficacy of programs. Target control analyses are now required in every contractor's annual report. As a result, all permitted programs developed target control reporting equations, and the first reported results were published within each contractor's winter 2012-13 annual reports. The results ranged from 1% to 7% in estimated increases to snow water equivalent due to cloud seeding. A separate but similar rule suggested other evaluation methods taken from the American Society of Civil Engineers (ASCE) Standards and Practices Manual. The rule did not require them because of high costs, but it was meant to give local project sponsors an idea of how to evaluate their programs. The CWCB will continue to foster the development of meaningful evaluation proposals for consideration by permit holders and local project sponsors.

Furthermore, the Program measures data for the Office of Water Conservation and Drought Planning that is designed to achieve programmatic objectives. The chart below shows measurement data for the fiscal years 2008-09 to FY 2015-16.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Office of Water Conservation and Drought Planning</i>							
# of approved drought plans	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 2	Benchmark: 3	Benchmark: 5
	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: 1	Actual: N/A	Actual: N/A
# of water efficiency plans approved	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 67	Benchmark: 77	Benchmark: 87
	Actual: 30	Actual: 40	Actual: 45	Actual: 57	Actual: 67	Actual: N/A	Actual: N/A

Discussion of One and Three Year Goals

The benchmarks listed in the table above are the year one and year three goals of the CWCB. The benchmarks are recommendations from CWCB staff.

Discussion about Output-related Performance

With the importance of drought planning becoming more recognized and with the ongoing drought occurring in Colorado, an increase in drought mitigation plans is forecasted. In the above table, of the 67 approved water efficiency plans on file in FY 2012-13, 56 are plans for covered entities and the remaining eleven plans include non-covered entities. The entities that completed plans were fairly small, but larger than FY 2011-12, in terms of water demand, averaging approximately 7,600 acre feet per year. The lower demands characterizing these entities will result in a smaller water efficiency savings. Forecasting out to FY 2016-17, it is anticipated that there will be a significant increase in Water Efficiency Plans due to new plans being created and because many existing plans must be revised by that time. Water Efficiency plans must be revised within seven years of completion. By the end of FY 2016-17, there will be approximately 40 original water efficiency plans that will have been revised plus any additional plans that do not currently exist.

Which Outcomes is the Program working to achieve?

The CWCB is also working to maintain and create new water storage facilities for the state so that adequate supplies are available for uses such as municipal, industrial, agriculture, environmental, and recreational needs now and in the future. Storage is very useful for reducing drought impacts and capturing high runoff to mitigate flood impacts. Through efforts to enroll communities in a federal flood insurance program, the CWCB helps to identify hazard areas, ensure appropriate local floodplain ordinance adoption, and mitigate flood issues before disaster strikes or respond following actual disasters. Through these actions, CWCB protects public health, safety, and welfare for Colorado citizens and protects property

from loss and financial hardships due to floods and natural hazards. The Water Efficiency Program works to demonstrate that the implementation of water efficiency plans and the efficient use of water will help produce water savings through a reduction in the demand for water.

The Community Assistance Program (CAP) is currently managed by the CWCB Watershed Protection and Flood Mitigation section and is intended to work closely as a liaison between local communities and the Federal Emergency Management Agency (FEMA). The CAP program is mostly federally funded and is required in every state. It helps to identify, prevent, and resolve floodplain management needs in cooperation with participating communities (communities enrolled in the National Flood Insurance Program or “NFIP”) before any problems result in enforcement action. CWCB staff provides technical assistance and support to communities and evaluates community performance in implementing NFIP floodplain management activities with the additional goal of building floodplain management expertise and capabilities. The CAP program aims to work directly with every participating community in the state within a 5-year rolling time period through phone calls and meetings. An additional goal of the program is to increase enrollment in the NFIP and encourage voluntary enrollment in the Community Rating System (CRS), which can significantly reduce flood insurance premiums for policy holders in CRS communities.

The floodplain designation program exists to ensure compliance with important statutory requirements regarding flood hazard identification studies and maps. Rules and criteria have been set forth by federal and state government. The program involves a technical review of the study, coordination with the study contractor, and cooperation with affected local governments. Board action is required to designate and approve each study or map. The program brings a sense of continuity and consistency to flood hazard mapping on a statewide basis, with the overall goal of helping to protect lives and property.

Colorado Water Conservation Board Outcomes

FY 2008-09 to FY 2015-16

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Water Project Loan Program</i>							
Acre-feet of existing storage maintained	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,000	Benchmark: 1,000	Benchmark: 1,000
	Actual: 245	Actual: 350	Actual: 3,800	Actual: 1,050	Actual: 4,120	Actual: N/A	Actual: N/A
Acre-feet of new storage created	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,000	Benchmark: 1,000	Benchmark: 1,000
	Actual: 280	Actual: 400	Actual: 72,000	Actual: 3,270	Actual: 5,040	Actual: N/A	Actual: N/A
<i>Flood Mitigation Program – Federal Emergency Management Agency (Risk Map Program)</i>							
Total number of communities (out of 324) enrolled in a federal flood insurance program	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 245	Benchmark: 245	Benchmark: 245
	Actual: 240	Actual: 240	Actual: 240	Actual: 242	Actual: 242	Actual: N/A	Actual: N/A
<i>Office of Water Conservation and Drought Planning</i>							
Estimated amount of water saved through a water efficiency plan in acre feet	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 23,750	Benchmark: 31,200	Benchmark: 47,400
	Actual: 5,961	Actual: 6,610	Actual: 7,921	Actual: 15,842	Actual: 23,200	Actual: N/A	Actual: N/A

Discussion

Program Outcomes: *Estimated amount of water saved through a water efficiency plan in acre feet* - On average, entities have set goals to reduce demand from water conservation plan implementation by approximately 1% to 2% annually. Looking at projected savings out to 2020 from the existing plans and future plan trends, we were able to estimate the amount that could be saved in each fiscal year. As more plans come online, the savings are added to the existing ongoing savings. Hence, the increase in water savings stems from the additive effect of more plans coming online. The estimated amount of water savings should increase because of the additional new plans, the continuation of existing plans, and the submission of revised plans. The calculations for saved water have changed slightly and are more indicative of the cumulative nature of water savings over time. A fair estimation that may be achieved by FY 2015-16 is around a benchmark of 47,400 acre feet saved.

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 8,500 miles of streams and on 477 natural lakes. The Program supports watershed planning as well as projects designed to restore and protect watersheds to reduce flood hazards, stabilize and restore stream channels, provide habitat, reduce erosion and increase the capacity to utilize water. Additionally, under the Program, the CWCB participates in water-related endangered species initiatives and programs for the benefit and protection of water users in Colorado.

Since recreation and tourism are vital to Colorado and the economy, meeting nonconsumptive needs (environmental and recreational) are an important element of the Program. On behalf of the State of Colorado, the Program's staff reviews all applications for recreational in-channel diversions, which limit water rights to the minimum stream flow necessary for a reasonable recreational experience in and on the water.

Environmental Programs are funded from cash fund reserves in the Colorado Water Conservation Board Construction Fund, the Operational Account of the Severance Tax Trust Fund, and the Colorado Healthy Rivers Fund.

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.

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 endangered species, the CWCB is able 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 service the citizens and water users in the state by providing reasonable protection of stream flows and preservation of the natural environment. Second, the Programs work with various Federal agencies involved in the

protection of streamflows on federal lands in a manner consistent with state law. Finally, the Program benefits native and/or threatened and endangered species by preserving the natural environment to a reasonable degree to maintain and enhance these species' habitats. 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, and municipalities 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 which connect stream channels to upland areas through multi-objective projects.

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

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

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

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

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.

The agency 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.

What are the Program’s Inputs?

A number of factors drive the workload of Environmental Programs and impact the ability of the program to achieve programmatic goals and objectives.

Colorado Water Conservation Board Inputs

FY 2008-09 to FY 2015-16

Input Measures	FY 2008-09 Actual	FY 2009- 10 Actual	FY 2010- 11 Actual	FY 2011- 12 Actual	FY 2012- 13 Actual	FY 2013- 14 Estimate	FY 2015-16 Estimate
<i>Stream and Lake Protection</i>							
# of Instream Flows requested by stakeholders	54	26	29	28	38	30	30
<i>Watershed Protection and Restoration</i>							
# of Watershed Protection/Restoration project applications	29	23	36	29	32	36	42
<i>Recreational In-channel Diversion</i>							
# of RICD applications	0	0	0	2	2	0 ¹	0 ¹

Note: ¹The CWCB is required by law to provide recommendations regarding applications for RICDs that are filed in water court. At this time, the CWCB staff is not aware of any RICD applications that may be filed in FY 2013-14. However, if applications are filed, the CWCB will satisfy its statutory obligations.

Discussion

Highlighted from the above tables, listed as the *CWCB Environmental Programs' Inputs*, are two input measures and their trend information.

Program Input: *# of Instream Flows requested by stakeholders* - Each year at its annual workshop (held in January or February), 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 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.

Program Input: # 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 2012-13, a total of 32 grant applications were submitted for all of the grant programs regardless of whether they were funded or not. Of the 32 grant applications, there were no applications submitted for the Colorado Watershed Restoration Program since the application submittal deadline was changed from January 31, 2013 to September 30, 2013.

What are the Program's Outputs?

Colorado Water Conservation Board Outputs

FY 2008-09 to FY 2015-16

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
<i>Stream and Lake Protection</i>							
# of instream flow water rights managed by CWCB	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,603	Benchmark: 1,618	Benchmark: 1,648
	Actual: 1,540	Actual: 1,570	Actual: 1,581	Actual: 1,593	Actual: 1,595	Actual: N/A	Actual: N/A
<i>Watershed Protection and Restoration</i>							
# of watershed protection plans	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 2	Benchmark: 9	Benchmark: 12
	Actual: 8	Actual: 8	Actual: 3	Actual: 3	Actual: 9	Actual: N/A	Actual: N/A
# of watershed protection projects	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 21	Benchmark: 21	Benchmark: 21
	Actual: 15	Actual: 16	Actual: 20	Actual: 11	Actual: 12	Actual: N/A	Actual: N/A
Leveraging of watershed protection funding ¹	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 4:1	Benchmark: 4:1	Benchmark: 4:1
	Actual: 3.1:1	Actual: 4.7:1	Actual: 7.2:1	Actual: 4:1	Actual: 4:1	Actual: N/A	Actual: N/A
<i>Recreational In-channel Diversion</i>							
# of RICD recommendations by Board	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1	Benchmark: 0 ²	Benchmark: 0 ²
	Actual: 0	Actual: 0	Actual: 0	Actual: 2	Actual: 2	Actual: N/A	Actual: N/A

*Notes: ¹Not all projects in FY 2013-14 have been awarded funding; therefore, the leverage ratio is an estimate.

²The CWCB is required by law to provide recommendations regarding applications for RICDs that are filed in water court. At this time, the CWCB staff is not aware of any RICD applications that may be filed in FY 2014-15 or FY 2015-16. However, if applications are filed, the CWCB will satisfy its statutory obligations.

Discussion of One and Three Year Goals

The benchmarks listed in the table above are the year one and year three goals of the CWCB. The benchmarks are recommendations from CWCB staff.

Discussion about Output-related Performance

Program Output Measure: *# of instream flow water rights managed by CWCB* - As mentioned above, the number of instream flow recommendations staff brings to the CWCB Board for appropriation each year varies as a result of numerous factors. For example, in FY 2010-11 and FY 2011-12, CWCB staff, Colorado Parks and Wildlife (CPW), and the U.S. Bureau of Land Management (BLM) spent a significant amount of time on additional data collection and technical analyses, as well as outreach to numerous stakeholders on the controversial San Miguel River instream flow appropriation that was a joint recommendation of CPW and BLM. As a result, CPW and BLM had less time to do the required field work to generate new instream flow recommendations and CWCB staff had less time to work on the recommendations it had received. Consequently, staff brought a smaller number of instream flows to the CWCB Board for appropriation, resulting in fewer instream flow water rights being added to the CWCB's portfolio. Likewise, due to the large amount of time spent on the San Miguel River instream flow hearing in 2012, coupled with the retirement of CPW's Instream Flow Coordinator and an additional CWCB staff member, who performed instream flow water availability analyses, staff only brought two recommendations to the Board for appropriation in 2013. Staff anticipates that the number of instream flow recommendations brought to the Board in future years will increase since both the CWCB and CPW have recently filled vacant positions that support the ISF program. However, 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.

Program Output Measure: *number of watershed protection plans* - In FY 2012-13, the actual number of watershed protection plans exceeded the benchmark since various entities are making and implementing prevention plans for their areas based on experience from the devastating fires throughout the state. It is anticipated that these planning efforts will grow in FY 2015-16.

Program Output Measure: *Leveraging of watershed protection funding* - The Watershed Protection Program is composed of five different grant programs. Most of these require a 1:1 match, except for the Colorado Healthy Rivers Fund which requires fewer matches. 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 exceed 3:1. 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.

Which Outcomes is the Program trying to achieve?

The Instream Flow Program portion of Environmental Programs is working to increase the number of protected stream miles by at least 100 miles each year to ensure protection of Colorado's stream-related natural environment. CWCB staff's top priorities in achieving this outcome are to: (1) protect habitat on streams that support native fish species; and (2) assist the state in meeting identified nonconsumptive needs by protecting stream reaches that support environmental attributes identified by Basin Roundtables. Staff's ability to work on instream flows in these priority areas depends in large part on the instream flow recommendations it receives each year. In an effort to increase the number of instream flow

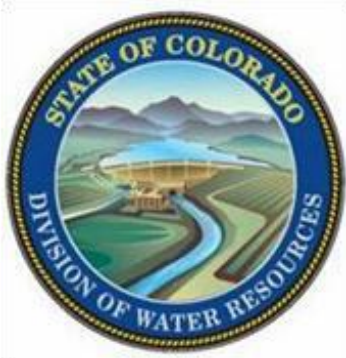
recommendations on these priority streams, staff has asked the standard recommending entities (Colorado Parks and Wildlife and the U.S. Bureau of Land Management) to try to focus their efforts in these areas when possible. Additionally, staff will conduct education and outreach with the Basin Roundtables to deliver the message that the Instream Flow Program can be a valuable tool in meeting nonconsumptive needs. Another desired result of the Instream Flow Program is to acquire water rights using the Species Conservation Trust Fund for instream flows that will preserve or improve the natural environment of species that have been listed as threatened or endangered under state or federal law, are candidate species, or are likely to become candidate species.

**Colorado Water Conservation Board Environmental Program Outcome
FY 2008-09 to FY 2015-16**

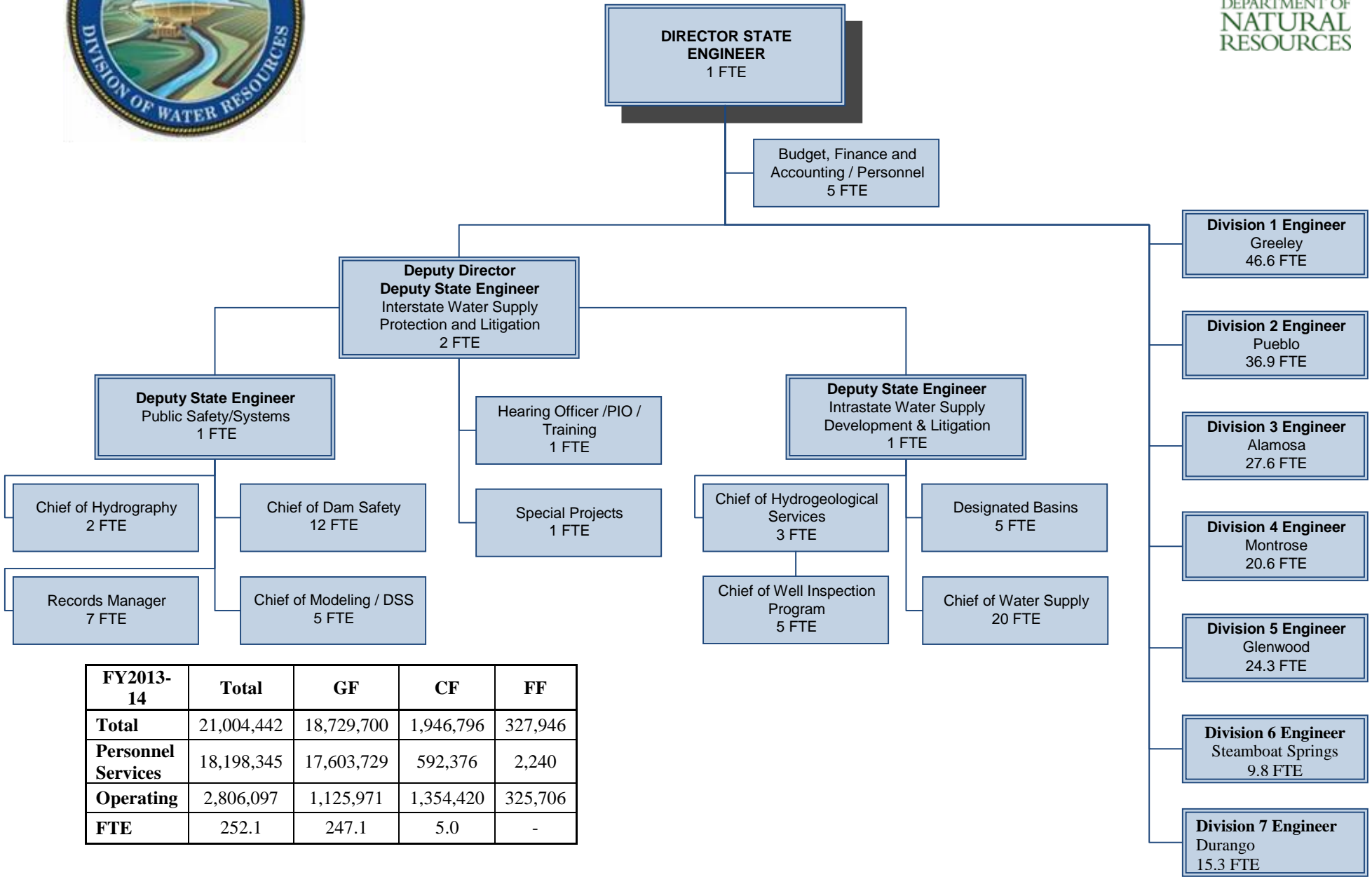
Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Estimate	FY 2015-16 Estimate
Additional miles of stream protected (instream flows)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 100	Benchmark: 100	Benchmark: 100
	Actual: 74.5	Actual: 116	Actual: 75.86	Actual: 138	Actual: 7	Actual: N/A	Actual: N/A

Discussion

As noted above, the number of Instream Flow water rights added to the Instream Flow 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. For example, as shown in the table above, in FY 2009-10, the CWCB Board appropriated 21 Instream Flow water rights that resulted in 116 additional miles of protected streams. In FY 2011-12, the CWCB Board only appropriated 12 water rights, but due to the length of the reaches of stream, that resulted in 138 additional miles of protected streams. In FY 2012-13, the Board only appropriated 2 additional water rights resulting in 7 additional miles of protected streams. With the departure of a key CWCB staff member and CPW staff member, who both worked on new appropriations, staff was unable to meet the estimated benchmark in FY 2012-13. Protecting additional miles of instream flows enhances and preserves Colorado’s environment, while protecting ecological processes which connect stream channels to upland areas.



COLORADO DIVISION OF WATER RESOURCES ORGANIZATIONAL CHART



FY2013-14	Total	GF	CF	FF
Total	21,004,442	18,729,700	1,946,796	327,946
Personnel Services	18,198,345	17,603,729	592,376	2,240
Operating	2,806,097	1,125,971	1,354,420	325,706
FTE	252.1	247.1	5.0	-

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 accord 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 three major program areas:

- Water Administration
- Dam Safety
- Well Inspection

Water Administration Program

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

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 170,000 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.

What are the Strategic Policy Initiatives of this Program?

Strategic Policy Initiative #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 our 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.

Strategic Policy 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.

Strategic Policy 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 170,000 water rights have been decreed to date and approximately 1,000 new water court cases are filed annually. DWR staff consult with Colorado's seven water courts on every case to assure new decrees are administrable. This important statutory task assures that the court has all the information to decree water rights that work within the priority system and to ensure vested water rights are protected. To physically administer decreed water rights, DWR has field staff in each river basin to assure accurate water operations (water measurement, diversion, replacement, storage, exchange, etc). Since groundwater is interconnected with surface water, administration includes understanding and accounting for groundwater use and its delayed impact on surface water availability. By law, every well in the state that diverts groundwater must have a well permit. Over 250,000 small and large capacity wells exist in Colorado. Small capacity wells generally serve individual households while large capacity wells supply irrigation and municipal needs. Over 4,000 groundwater well permit applications are submitted to DWR annually, and the staff determines the amount of water available and analyzes the potential for injury to other existing water rights under strict statutory guidelines. In addition to well permitting, DWR employs professional engineers and

scientists who collect and analyze data on water supply to forecast streamflows, determine diversion requirements, investigate stream transit losses, determine evaporation losses, and calculate historical use and current conditions. A staff of hydrographers maintains the satellite-linked monitoring system. This system gives real-time streamflow information for over 500 stream locations in Colorado for use in daily water administration. This system has also become crucial in Colorado's flood warning and drought monitoring efforts.

Interstate Compact Enforcement (ICE): The State of Colorado is a party to nine interstate compacts; DWR is responsible for assuring the obligations of these compacts are met. Compacts ensure that states who share a river (including Colorado) receive a portion of the available water supply and give the surety of water supply needed for reasonable economic development within the states. As a headwaters state, Colorado's responsibilities to deliver water to these interstate agreements are of utmost importance. Due to growth within Colorado, there is increasing scrutiny of Colorado's administration of water and compact deliveries by other states with an eye toward gaining water for downstream states. An over-delivery of water to downstream states is a missed opportunity for beneficial use of that water by Colorado citizens. An under-delivery could cause interstate litigation to be initiated by the downstream states. If Colorado fails to meet its intrastate water compact obligations due to the unavailability of accurate and timely streamflow and diversion information, the state may incur significant legal costs and be liable for subsequent repayment of any shortfall in water delivered to the injured state. Ignoring these compact obligations has proven problematic for Colorado in the past, resulting in expensive litigation and repayment requirements. Non-compliance with a decree or permit within Colorado can injure more than just Colorado citizens if that action causes Colorado to fail in meeting its Compact obligations. Thus, enforcement of decrees and permits is needed to ensure Colorado does not fail in meeting its obligations under all of its interstate agreements.

What are the Program's Inputs?

A number of factors drive the workload of the Water Administration Program and impact the ability to achieve programmatic goals and objectives:

Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of water rights (AWR)	N/A ⁹	N/A	N/A	165,177	164,973	164,000	166,000
# of water court applications (AWR)	805	967	1,127	920	1,012	966	980
# of well permit applications (AWR)	5,582	4,923	9,400	4,445	5,102	5,891	5,000
# of substitute water supply plans received (AWR)	318	295	243	279	254	278	280
# of stream gages operated/maintained (AWR)	506	518	525	530	552	560	570
Input Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of structures with diversion records (AWR)	37,305	44,580	48,841	49,310	54,100	55,000	56,000
# of call changes on water rights (AWR)	N/A ¹⁰	N/A	N/A	N/A	N/A	3,777	3,777
# of interstate compacts (ICE)	9	9	9	9	9	9	9

⁹ Not tracked annually; new indicators will be tracked going forward.

¹⁰ Not tracked annually; new indicators will be tracked going forward.

Discussion – Total workload in the Water Administration Program has steadily increased overtime.

Water rights: All water in Colorado is a public resource and is distributed to citizens who own water rights. A water right is a property right and entitles a water user, such as a city, farmer, or business to take water from natural streams and put it to a specific, beneficial use. Water rights are established on a first-come, first-served basis as directed by the Colorado Constitution. The water court determines the priority of each water right. DWR then tabulates all water rights and uses the information for water administration. Further, DWR reviews all new water rights applications filed with the water courts in all seven water divisions.

(Designated Basins are areas where groundwater extraction occurs with a presumption that no streams will be impacted. The Designated Basins are located on the eastern portion of the state. Within the Designated Basins the legislature determined that groundwater use should be administered under a different system. This system is a permit system under the authority of the Colorado Ground Water Commission. DWR acts as the staff for the Colorado Ground Water Commission and processes and administers the permits within these Designated Basins. For purposes of this document, the processing and administration of these permits is similar and is considered within the metrics for water rights and permits.)

The long-term trend for water court applications and permits is slowly increasing due to increasing demand for limited water supplies. The number of water rights applications varies from year-to-year and is out of the control of DWR; staff works on these applications as they are presented to the seven water courts. Water rights are tracked in a dynamic database maintained by DWR, meaning that there is no way to go back into the database and capture the number of water rights for previous years; the only way to account for this is to query the database on the date the number is needed. These numbers were not previously captured but will be measured as a Water Administration Program input going forward. For FY 2012-13, the number of water rights was 164,973. This number is slightly lower than previous years, as the Water Division No. 1 2010 Abandonment List was decreed by the court. This slight downward trend will continue into next fiscal year, as the remaining 2010 Abandonment Lists for Water Divisions 2 – 7 will be decreed by the courts. By FY 2015-16, DWR projects the number of water rights to increase again as demand continues to increase and supplies continue to decrease.

Water court applications: In order to perform its statutory responsibilities, DWR is required to take an active role in water court applications, which consumes a significant amount of time and effort. The Division Engineers are required to draft a summary of consultation to the water court on each application. The number of water court applications in a given year is dependent on many factors that are outside of the control of DWR, including drought, population growth, or changes to water law. When compared to previous years, the number of water court applications and amendments has declined and leveled out from its historical peak in 2002. The efforts required by the staff of the Denver offices and divisions offices remain high as a result of the lag effect of the large number of cases a few years ago, as those cases continue to work their way toward trial. Workload is expected to remain high due to the increasing complexity of water court applications.

Well permit applications: According to the 1965 Ground Water Management Act, every well in Colorado that diverts tributary, nontributary, produced water from coalbed methane wells, Designated Basin groundwater, or geothermal resources must have a permit. There are two different classes of wells: those that are exempt from water rights administration (not administered under the priority system), and those that are non-exempt (governed by the priority system). In order to obtain a permit to drill a well, a water user must file an application with DWR. Well permit applications are required when a homeowner needs to construct a household well or a farmer or municipality needs to construct a large capacity well. When an application is submitted, DWR staff determines the amount of groundwater available and the potential for groundwater use to injure other existing water rights. The number of well permit applications varies from year-to-year and is entirely out of control of DWR. There has been a steady decline in well permit applications over the last decade, which generally corresponds to the decrease in the housing market (11,399 permit applications in 2003, as compared to 5,102 permit applications in 2012, a 55 percent decrease). As the national and local economies improve and the focus on natural gas development increases, it is expected that the number of well permits will increase.

Substitute water supply plan applications: The majority of the rivers in Colorado are over-appropriated, with more water rights appropriations than are physically available. This means that prospective water users may be unable to divert surface water or get a well permit without a plan for augmentation to replace stream depletions. An augmentation plan is a court-approved plan, which is designed to protect existing water rights by replacing water depleted by a new project. To provide sufficient time to fully integrate new projects into the water court adjudication process, a substitute water supply plan may provide for withdrawals for a limited period of time. The authority to evaluate and issue substitute water supply plans is vested exclusively to DWR. DWR reviews general substitute water supply plans (including emergencies), substitute water supply plans related to gravel pits, and replacement plans approved pursuant to rules. Generally, substitute water supply plans are valid for one year and are reviewed and acted upon by DWR within 30 to 60 days. Typically, a substitute water supply plan can be renewed yearly for up to five years, until the water court adjudication process for the augmentation plan is completed. The number of substitute water supply plans filed with the State Engineer varies and is dependent on outside factors, population growth, drought, timing of year, and the over-appropriated nature of basin. The number of substitute water supply plans has grown due to changes in legislative direction and as a method to initiate water projects in a timely manner.

Gages: Gages are installed on streams, ditches, and reservoirs. The satellite-linked monitoring system (telemetered gages) has expanded over the past five years, with DWR adding gages to the network to meet expressed needs of water users and the division's own internal need to provide streamflow and diversion data for critical water administration functions. This system has become vital for water administration and compact compliance and is an efficient method to leverage limited staff. In 2008, there were 506 gages in the satellite-linked monitoring system network; in 2012, there were 552 gages, a 9 percent increase. Fueled by increasing competition for water, the steady increase in gages occurs across all divisions and is anticipated to continue to trend upwards.

Structures with Diversion Records: The number of structures with diversion records has increased over the past five years (37,305 in 2008 compared to 54,100 in 2012, a 45 percent increase). Structures with diversion records include headgates, pipes, or wells used to divert water for beneficial use. Not all structures require active administration (field staff time). For example, a spring in the national forest, decreed for wildlife watering, may not require active administration every year. For efficiency, DWR develops records for structures that require active administration, measuring that number of structures as an indicator of workload. The number of structures with diversion records may include structures temporarily fallowed or idled, as well as actively diverting structures. There is a steady increase the number of in structures requiring administration each year due to new appropriations, new decrees, and existing structures coming under active administration. The spikes in structures with diversion records relates to incorporating Republican River and Rio Grande groundwater pumping and coalbed methane wells into the diversion database. The steady increase in structures with diversion records is expected to continue.

Call changes on water rights: Water rights which were appropriated first (senior) have the right to divert water before those who appropriated water later (junior). This priority system protects the economic value of senior water rights and ensures they get water in drier times. When a water shortage occurs, senior water rights may place a “call” for water, which may result in junior water rights being ordered to stop some or all diversion so the senior rights can receive their water. Many factors influence a senior call on the river, including interstate compact obligations, streamflows, snowpack, drought, groundwater depletions and accretions, weather conditions and other factors outside of the control of DWR. These factors can change the amount of water available and thus the “call” to other water rights. A “call change” is a reflection of active water administration. While “call changes” are administered each day, tracking within a database is not currently standardized across every water division. In FY 2012 – 13, there were an estimated 3,777 call changes across the seven divisions.

Interstate water compacts: Each interstate water compact, agreement, and decree has different compliance components that must be met. The total number of interstate water compacts for Colorado (nine) has remained constant for decades, while the activities needed to remain in compliance have changed throughout time due to interstate litigation. Interstate litigation altered the accounting of the Republican River Compact, for example and caused Colorado to fall out of compliance. Efforts to bring Colorado into compliance continue via an augmentation plan that needs the approval of the other compact states.

What are the Program's Outputs?

The Water Administration Program has a number of outputs that are designed to achieve programmatic objectives.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of permit applications acted upon (AWR)	Benchmark: N/A ¹¹	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 6,104	Benchmark: 5,793	Benchmark: 5,793
	Actual: 5,582	Actual: 4,440	Actual: 9,438	Actual: 4,403	Actual: 5,102	Actual: N/A	Actual: N/A
# of water court consultations (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 985	Benchmark: 920	Benchmark: 920
	Actual: 741	Actual: 935	Actual: 1057	Actual: 880	Actual: 987	Actual: N/A	Actual: N/A
# of statements of opposition (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 54	Benchmark: 46	Benchmark: 46
	Actual: 64	Actual: 32	Actual: 70	Actual: 40	Actual: 25	Actual: N/A	Actual: N/A
# of water right observations and structure observations (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 453,000	Benchmark: 470,000	Benchmark: 480,000
	Actual: 384,866	Actual: 429,042	Actual: 420,355	Actual: 446,868	Actual: 461,197	Actual: N/A	Actual: N/A
Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of records of actual diversions maintained (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 29,000	Benchmark: 29,000	Benchmark: 29,000
	Actual: 22,683	Actual: 27,519	Actual: 32,006	Actual: 30,288	Actual: 34,904	Actual: N/A	Actual: N/A

¹¹ Benchmarks will be set going forward based on previous performance over a period of five years.

# of substitute water supply plans issued (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 291	Benchmark: 278	Benchmark: 278
	Actual: 318	Actual: 295	Actual: 243	Actual: 279	Actual: 254	Actual: N/A	Actual: N/A
# of enforcement orders (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 2,308	Benchmark: 2,535	Benchmark: 2,538
	Actual: N/A	Actual: 2,942	Actual: 1,411	Actual: 2,570	Actual: 3,218	Actual: N/A	Actual: N/A
Augmentation plan administration and accounting (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 360	Benchmark: 334	Benchmark: 334
	Actual: N/A	Actual: 306	Actual: N/A	Actual: 354	Actual: 342	Actual: N/A	Actual: N/A
Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of wells completed/administered – cumulative (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 270,000	Benchmark: 274,000	Benchmark: 274,000
	Actual: 257,908	Actual: 260,464	Actual: 268,812	Actual: 269,223	Actual: 272,324	Actual: N/A	Actual: N/A
# of interstate compact meetings attended (ICE)	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 22	Benchmark: 23	Benchmark: 23
	Actual: 21	Actual: 23	Actual: 21	Actual: 22	Actual: 28	Actual: N/A	Actual: N/A

Discussion about Output-related Performance:

Well permit applications acted on: Well permit applications are typically acted upon (approval or denial) within the same year they are submitted. The trend in applications over the past five years has varied based on several factors outside of the control of DWR, including late season submittals. This performance reflects a decrease in applications due to the economic downturn. The value for Colorado Department of Natural Resources

2010 reflects the one-time incorporation of produced water wells pursuant to court and legislative direction. The average number of applications acted on over a five year period (FY 2008-2013) has been 5,793.

Summary of consultations issued: Division Engineers are required by statute to consult on all water court applications (the exception to this is if DWR decides to enter the case as a party opposing the application). The trend is for a steady long term increase in consultations due to the increasing demand for water causing an increase in court applications. Spikes in work reflect increases due to court or legislative direction.

Statements of opposition: DWR may enter a statement of opposition to any water rights application for many reasons including probable injury to other water rights, interstate compact implications, or insufficient engineering by the applicant. This number also includes abandonment cases where DWR is an integral party. The number of statements of opposition is a measure of the number of cases DWR is actively involved in. The spike in 2011 is due to the filing of the decennial abandonment list (statute requires that a list of water rights presumed to be abandoned be developed every 10 years and filed with the court). Generally, the trend is that statements of opposition will be a relatively consistent percentage of the overall court applications that are filed.

Water right observations and structure observations: Water right observations and structure observations are a measure of active water administration and reflect the actual observations by the staff. These include physical inspections in the field and the review of recorded data. To certify a diversion record, staff has to make enough observations that they are comfortable representing the accuracy of the record. Some structures have reliable data and only need to be visited when turned on or off. Some structures are highly variable and have to be visited multiple times per week. Some structures are on for short periods of time while others may run most of the year. The demand for observations continues to increase due to court and water administration demands. DWR is leveraging automated data collection and satellite-linked monitoring system to meet these demands. The upward trend of the number of observations reflects these demands and leveraging efforts. In FY 2008-09, observations were 384,866; by 2012-13, there were 461,197 observations, a 20 percent increase. The five year (FY 2008-2013) average of observations is 428,466 observations.

Records of actual diversions records maintained: This is a measure of structures each year which did divert water. Final diversion records are produced for every structure that is actively administrated; this subset of records reflects where water was actually diverted. This number continues to increase as court and legislation direct DWR to add new and previously un-administered structures. An example of previously un-administered structures that are now actively administrated, and have records of actual diversions, is groundwater wells. Prior to 1996, few groundwater wells were metered or administered. Since that time, most wells have acquired meters and are reporting usage and as a result, have come under active administration. The addition of new court decrees assures that additional diversion information will be needed for administration. Therefore, DWR anticipates continued growth in this metric.

Substitute water supply plans issued: The water court process can take a lot time and may not be appropriate for temporary uses of water. Substitute water supply plans are a way to quickly start a water project or to effectuate temporary water projects; substitute

water supply plans are submitted to, reviewed, and acted upon by DWR. All substitute water supply plans are acted on within 30 to 60 days of submission unless they have outstanding issues. Some substitute water supply plans requests submitted to the office cannot be reviewed and approved without some level of clarification or modification. The resulting need to correspond with the parties submitting the applications and the time required to resolve issues can cause a significant delay in approving requested substitute water supply plans. The trend in substitute water supply plans issued is flat to declining. Many substitute water supply plans were filed subsequent to changes in case law and legislation that impacted the South Platte Basin in 2003. These substitute water supply plans allowed water projects to proceed while court applications were being processed by the water courts. Those court applications are finally being completed so the associated substitute water supply plans are not being renewed.

Enforcement orders: While DWR attempts to work cooperatively with all water users, some level of enforcement is required to administer the approximately 170,000 water rights in Colorado. Formal regulatory orders such as wellhead and surface headgate orders, as well as letters ordering required meters and reports and corresponding data, are necessary to enforce the regulations and protect water users' water entitlements. The number of regulatory orders issued by DWR will change annually and can be influenced by the promulgation of new rules and regulations within a basin. In response to court decisions, compact litigation, and user requests over the past few years, DWR has needed to increase groundwater enforcement efforts. This includes promulgation of measurement and well use rules in several water divisions. A learning curve exists while water users attempt to come into compliance with these new regulatory requirements, and thus the number of enforcement orders will temporarily increase with the new rules. In FY 2012-13, there was a spike in enforcement orders in the Republican River Basin (Water Division No. 1). Recently promulgated measurement rules revealed some pumping in excess of permit limits, due mostly to extraordinarily dry conditions in the basin. Thus, DWR issued orders regarding the excess pumping and permit violations.

Administering and accounting of augmentation plans: With the over-appropriated nature of most rivers, augmentation plans are a valuable method to allow water projects to operate. These complex plans outline how a water user will replace depletions in such a way as to prevent injury to other water users. Augmentation plans are authorized by statute and approved by a water court. Due to their complexity, augmentation plans require a higher level of administration and water accounting and represent a significant workload for DWR. The number of augmentation plans is a reflection of that administrative and accounting workload. The number of augmentation plans annually is expected to increase as one of the few methods to ensure the optimal use of water in Colorado. This performance currently is not expressly captured in the databases of DWR; going forward, the agency will report the number of augmentation plans and their accounting plans.

Wells administered: This performance measure represents the total amount of completed, permitted wells. All wells are administered either through permitting or by active administration. The continued growth in this metric is reflective of general state population increase and the resulting demand for water supplies. There has been a steady increase in administered wells over the past five years (FY 2008-2013); in FY 2008-09, there were 257,908 wells administered by DWR; by 2012-13, there were 272,324 wells administered, a six percent increase.

Compact meetings attended: The number of compact meetings attended is a reflection of base requirements for the administration of compacts, as well as occasional efforts to eliminate interstate strife (in the form of special meetings). DWR holds one compact meeting every year for the Republican, Arkansas, Costilla, and the Rio Grande Compacts; special meetings are called as needed. In 2009 for the Republican River Compact, two special meetings were called; in 2012, one was called; and in 2013, six were called. There are also annual meetings which DWR is required to participate in, to discuss and resolve legal and engineering issues; this includes the South Platte River, Animas La Plata, La Plata River, and the Upper Colorado River Compacts. DWR participates in an average of 21 meetings per year. In 2012-13, there were three formal special meetings and three informal work sessions of the Republican River Compact Association to discuss Nebraska's efforts at compliance as well as Colorado's Resolution with regard to the Compact Compliance Pipeline (proposed to assure the proper delivery of water).

Benchmarks: Water Administration is an essential, statutorily driven program. Many benchmarks established for the division's outputs are dependent on outside factors, such as weather or changes in water law. Therefore, DWR averages annual data on observations for some benchmarks. For example, DWR strives to act upon well permit applications, water court consultations, statements of oppositions, substitute water supply plans, and enforcement orders as they are received and to perform all required observations or inspections; the benchmark of these performances will be altered annually to reflect the averages over the past fiscal years. The benchmark for enforcement orders will likely increase with anticipated water use rules or compact rules promulgated in different water basins and subsequent enforcement. Interstate compact meetings are set by law; the need for special meetings is sometimes outside of the control of DWR. The benchmarks for compact meetings will also be based on the average of the past five years.

The benchmark for water rights observation is based on the continuing growth of structures over the last five years. Looking forward, DWR anticipates a steady increase in the amount of diversion records maintained, amount of augmentation plans, and wells administered, based on cumulative averages and the growth of water administration in the state.

Through the methodologies outlined above, DWR uses its benchmarks for FY 2013-14 and FY 2015-16 as year one and year three goals.

What Outcomes is the Program trying to achieve?

Maximize beneficial/optimal use of water: The Water Administration Program attempts to distribute water to farmers, industries, municipalities, and all other water users, as defined by statute. An important part of this is to maximize the beneficial/optimal use of water in time, place, and amount and by successive reuse of water. Water, in various forms of precipitation, falls from the sky and eventually results in streamflow and groundwater flow. Users can then divert and use the water. Not all the water diverted is consumed; some returns (return flows) to the stream for others to use. As a semi-arid state with limited water supplies that vary seasonally, Colorado attempts to optimize the benefits of the limited water supplies by successive reuse of water. The goal is to

maximize the benefit for Colorado by using it multiple times before it exits Colorado. The measurement of this outcome compares the water diverted, stored and used in Colorado to the water exiting the state; this is expressed as a ratio.

Regulatory orders or notifications: Water administration is conducted within a regulatory environment in which limited water supplies are distributed in time, amount, and location to adjudicated water rights based upon their respective water right priorities and available water supplies. The vast majority of citizens and water users in Colorado have come to rely upon DWR to assure the limited water supplies are being distributed effectively and in compliance with all applicable laws. While most changes in curtailment are accomplished with cooperation of users, sometimes formal regulatory orders are issued to compel diversion adjustments when compliance is not voluntary. The measurement of this outcome is the percentage of formal regulatory orders issued by DWR per year compared to the total number of surface and groundwater structures actively diverting water. An associated workload measure is the number of observations, inspections, or visits conducted by DWR staff in a year. These observations can lead to formal orders being issued. Daily oversight of water administration and subsequent enforcement ensures maximum delivery to water users. Additionally, it prevents illegal diversions by junior appropriators and injury to senior water right holders. This decreases the likelihood of inter and intrastate lawsuits, including claims from the U.S. Supreme Court, Colorado water courts, senior water users, and the public. Savings to the State of Colorado are seen in the avoidance of potentially costly litigation claims and economic damages that could be borne by senior water rights holders, who will not receive all of the water to which they are entitled.

Full compact compliance: It is critical that Colorado meet its contractual water delivery obligations for each of its nine compacts, two United States Supreme Court decrees, a U.S. Treaty, and two interstate water allocation agreements, while simultaneously protecting the right of Colorado to develop its full interstate compact apportionment. Each compact, agreement, and decree has different compliance components that must be met. This outcome demonstrates whether Colorado is in compliance overall with respect to each of these. Compliance is measured by water accounting for each compact, agreement, and decree. The outcome will assess the overall compliance based on each respective accounting method.

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
Maximize beneficial/optimal use of water (AWR)	Benchmark: >3.0	Benchmark: >3.0	Benchmark: 3.2	Benchmark: 3.2	Benchmark: 3.2	Benchmark: 3.3	Benchmark: 3.5
	Actual: 2.70	Actual: 3.2	Actual: 3.59	Actual: 2.09	Actual: 4.90	Actual: N/A	Actual: N/A
Regulatory Orders or Notifications ⁵ (AWR)	Benchmark: N/A	Benchmark: N/A	Benchmark: 4.2%	Benchmark: 4.5%	Benchmark: 5.1%	Benchmark: 5.0%	Benchmark: 5.0%
	Actual: 3.46%	Actual: 6.92%	Actual: 3.02%	Actual: 5.45%	Actual: 5.95%	Actual: N/A	Actual: N/A
Full compact compliance (ICE)	Benchmark: 100%	Benchmark: 100%	Benchmark: 100%	Benchmark: 100%	Benchmark: 100%	Benchmark: 100%	Benchmark: 100%
	Actual: 88%	Actual: 88%	Actual: 88%	Actual: 88%	Actual: 88%	Actual: N/A	Actual: N/A

⁵ Formal regulatory orders or notifications issued by DWR per year compared to the total number of surface and ground water structures actively diverting water.

Discussion:

Maximize Beneficial/Optimal Use of Water: An outcome of the overall effectiveness of water management is the use and re-use of water from streams and reservoirs and resulting return flows as they successively cascade from the mountains to the prairies before eventually leaving the state. The goal is to maximize the benefit for Colorado by using it multiple times before it exits Colorado. In FY 2012-13, approximately 20 million acre-feet of water was diverted to irrigation or municipal use or stored in reservoirs and approximately 4 million acre-feet of water exited the state, indicating that water was used 4.9 times in Colorado before exiting the state. There was a significant decrease in available water based on extreme drought events. The below-average snowpack in all water basins corresponds with below-average runoff conditions. This equates to less water available for use in Colorado and less water available (and required for delivery) to downstream states.

Regulatory Orders or Notifications: An outcome of water administration enforcement is the percentage of formal regulatory orders or notifications filed by DWR per year compared to the total number of surface and groundwater structures actively diverting water. The goal is to appropriately monitor and observe water administration, as well as to properly distribute water in accordance with water court decrees and interstate compact entitlements. These measures of enforcement are done by water commissioners, well inspectors, and dam inspectors who conduct field inspections and ensure proper diversions or storage of water; daily records are available in most

districts to review response rates and increase efficiency of water administration. These observations can lead to formal orders being issued. The number of regulatory orders or notifications issued by DWR in FY 2012-13 increased from the previous fiscal years. This is due to the continued work on the enforcement of the well measurement rules in several divisions, including Division 1 (South Platte and Republican River Basin).

Full Compact Compliance: An outcome of enforcement is full compact compliance. For FY 2012-13, the State of Colorado was in compliance with U.S. Supreme Court Decrees, all agreements, and eight of its nine compacts (Colorado was not in compliance with the Republican River Compact). Numerous actions have been taken by the Colorado State Engineer in the Republican River Basin over the past several years to assist Colorado to achieve compliance with obligations in relation to the Republican River Compact, including construction of a Compact Compliance Pipeline, participation in federal conservation plans (water and land retirement), local conservation efforts (removal of end guns on irrigation sprinklers), surface water buyouts, and a continuation of strict well measurement rules. As of FY 2012-13, the cumulative annual total number of acres participating in land conservation programs (temporary and permanent), to which DWR is a technical or regulatory participant, was approximately 33,000 acres.

Benchmarks:

Maximize Beneficial/Optimal Use of Water: With the implementation of remote sensing and transmission of streamflow and diversion information, DWR has been able to increase optimization of water use within the state, while meeting Colorado's compact obligations. Due to record high snowpack conditions in FY 2011-12, reservoirs across Colorado filled and interstate compact obligations were satisfied (except the Republican River Compact); however, Colorado had limited ability to capture all excess water that was available for successive use because of the quick rate at which the water flowed and limited storage capacity. The severe drought in 2012-13 decreased the available surface water state-wide significantly. The benchmark for maximization of the beneficial use of water will be increased over the next five years by successive reuse and storage of water, with the goal of achieving 3.5 times reuse of water by FY 2015-16.

Regulatory Orders or Notifications: In response to court decisions, compact litigation, and user requests over the past few years, DWR has increased groundwater enforcement. This includes promulgation of measurement and well use rules in several water divisions. However, a learning curve exists while water users attempt to get in compliance with these new regulatory requirements. The trends for this performance will change annually, based on whether or not rules are anticipated in each water division. The benchmark has been increased in FY 2013-14, with anticipated water use rules in the Rio Grande Basin. The benchmark for FY 2015-16 is based on previous years actual; however, the goal is to have 100% compliance for all rules.

Full Compact Compliance: The benchmark for compliance for all compacts is 100%. With the steps outlined above, DWR anticipates to be in full compliance with the Republican River Compact within five years.

Through the methodologies outlined above, DWR uses FY 2013-14 and FY 2015-16 benchmarks as year one and year three goals.

Public Safety Program

What is this program? Public Safety, which consists of 12 Generally Funded FTE and approximately \$180,000 of federal FEMA grant funding, is one of three major programs with the Division of Water Resources (DWR). It consists of one sub-program: the Dam Safety Program. The Public Safety Program is managed by the State Engineer in accordance with Title 37, Article 87 of Colorado Revised Statutes (C.R.S.), which includes Erosion Control Dams, and the Livestock Water Tank Act, Title 35, Article 49 C.R.S. The Public Safety Program protects life and property through the regulation of approximately 2,900 jurisdictional and non-jurisdictional dams within Colorado. Currently in the state there are over 1,900 jurisdictional/non-federal dams, many of them over 100 years old. The Public Safety Program utilizes on-site inspections to assure the structural stability and maintenance of dams, and includes the review and approval of plans for the construction, alteration, modification, repair, enlargement, and removal of any dam. The Public Safety Program also requires the development of Emergency Action Plans for public safety in the event of a dam failure. Of Colorado's non-federal dams, approximately 652 (333 high hazard and 319 significant hazard), or about 34 percent of the total non-federal dams, are classified as dams that, in the event of a failure, would be expected to cause loss of life and/or significant property damage within the flood plain areas below the dams.

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 Public 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 Public Safety Program serves many customers, including farmers, municipalities, recreationalists, anglers, other state and federal entities, canal companies, water managers, and downstream states. Citizens and property owners in the flood plain areas below the State's dams are a primary customer of the program as well.

What are the Strategic Policy Initiatives of this Program?

Strategic Policy Initiative #1: Minimize number of dam failures: Ultimately, the Public 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.

Strategic Policy Initiative #2: Minimize number of deaths: An objective of the Public 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.

Strategic Policy Initiative #3: Minimize property value lost: An additional objective of the Public 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 Public Safety Program has one major process, which is administering the Dam Safety Program. Within that program are several important components.

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

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

What are the Program’s Inputs?

	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual ¹²	FY 2013-14 Est.	FY 2015-16 Projected
# of new dams and modifications to existing dams	32	34	62	50	34 [As of August 19, 2013]	42	42
# of existing jurisdictional dams	1,930	1,937	1,945	1,952	1,941 [As of August 19, 2013]	1,941	1,941
# of observed incidents	13	11	N/A ¹³	14	8 [As of August 19, 2013]	12	12
# dam inspectors appropriated	12	12	12	12	12	12	12
# dam inspectors actual ³	11.42	11.67	10.48	10.61	10.25	12	12

¹² Objectives are tracked on a water year (WY) which runs from November 1 (each year) through October 31 (each year). This data is as of August 19, 2013.

¹³ Not Complete. Full listing of incidents not available for WY 2010-11.

³ Fluctuations due to retirement/hiring cycles

Discussion – Total workload in the Dam Safety Program has remained relatively steady over time.

Number of new dams and modifications to existing dams: This performance measure includes reviewing plans and specifications for the construction of new dams and major repairs, alterations, and enlargements to existing dams. These plans are thoroughly evaluated for compliance with current dam safety standards, design criteria, and state requirements. Periodic on-site inspection of construction procedures are used to verify conformance with approved plans and specifications. This performance measure is dependent on many factors that are outside of the control of DWR, including the state of the national economy and the magnitude of the required repairs. When compared to previous years, the number of new dams and modifications to existing dams continues to remain steady.

Number of existing jurisdictional dams: This performance measure includes all regulated (jurisdictional) dams, including non-federal dams that the Dam Safety Program inspects. This number remains relatively steady but can change if a dam is removed, if a new dam is constructed, or if a dam is enlarged to bring it into the statutory requirements for jurisdictional dams. This number shows a slow upward growth in the number of jurisdictional dams. The number of jurisdictional dams and their potential to cause loss of life or property damage drive the inspection workload.

Number of observed incidents: This performance measure tracks dam incidents requiring emergency responses and investigations by the Dam Safety Program. Beyond regular inspections, the dam safety engineers will respond to emergency requests. These can include inspections needed due to a local earthquake, fire, citizen observations at a dam, a dam owner request, a local emergency official request, direction of the Division Engineer or State Engineer. Responses to these incidents are to assure safe dams and minimize the loss of life and property. Due to the retirement of the Chief of Dam Safety during Water Year 2010-11, a full listing of incidents for that period was not available. However, one significant incident was a swarm of magnitude 3.0 to 5.3 earthquakes that occurred near Trinidad, Colorado August 22 – 24, 2011. Multiple high hazard dams are located near the earthquake site and significant efforts were made by the area dam safety engineer to ensure no damage had occurred as a result of these natural disasters. Immediate field inspections were performed at five dams in the vicinity. In the month following the events, additional inspections of the outlet works conduits were conducted. The US Army Corps of Engineers also conducted an inspection at Trinidad Lake Dam, located within a short distance to the earthquake epicenter. The local dam safety engineer assisted in that inspection due to the urgent nature of earthquake triggered inspection needs.

In Water Year 2011-12, 14 dam safety incidents were logged. Dam safety incidents are defined as situations at dams that require an immediate response by dam safety engineers. The response is typically a site visit and actions based on the situation, up to and including the activation of a dam's Emergency Action Plan (EAP). In Water Year 2011-12, incidents occurred at seven high hazard dams. Incidents reported and acted upon included unusual seepage, embankment settlement and excessive upstream slope damage from wave action. Incidents also included on the Water Year 2011-12 list were associated with the large and damaging wildfires that occurred, particularly the High Park fire and the Waldo Canyon fire. These fires were tracked to ensure no damage would occur on dams within or near the fire areas. No EAP's were activated for any of the Water Year 2011-12 incidents.

Number of dam inspectors appropriated and actual: The Public Safety Program consists of 12 FTE. DWR has maintained the same number of dam inspectors since the late 1980's. In years in which FTE retire/resign, the Public Safety Program has vacancies. DWR acts vigilantly to replace vacated positions and tries to minimize the amount of time in which positions are vacated.

What are the Program's Outputs?

The Dam Safety Program has a number of outputs that are designed to achieve programmatic objectives:

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual ¹⁴	FY 2013-14 Est.	FY 2015-16 Projected
Approved plans for new dams or modifications	Benchmark: N/A ¹⁵	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 43	Benchmark: 40	Benchmark: 40
	Actual: 32	Actual: 34	Actual: 58	Actual: 49	Actual: 25 [As of August 19, 2013]	Actual: N/A	Actual: N/A
# of restriction orders in place	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 167	Benchmark: 164	Benchmark: 164
	Actual: 168	Actual: 176	Actual: 166	Actual: 157	Actual: 155 [As of August 19, 2013]	Actual: N/A	Actual: N/A
# of inspection reports	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 533	Benchmark: 485	Benchmark: 485
	Actual: 533	Actual: 513	Actual: 520	Actual: 524	Actual: 335 [As of August 19, 2013]	Actual: N/A	Actual: N/A

¹⁴ These objectives are tracked on a "water year-WY" which runs from November 1 (each year) through October 31 (each year). This data is as of August 19, 2013.

¹⁵ Benchmarks will be set going forward based on previous performance over a period of five years.

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual ¹⁶	FY 2013-14 Est.	FY 2015-16 Projected
# of updated emergency action plans	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 91	Benchmark: 79	Benchmark: 79
	Actual: N/A	Actual: N/A	Actual: 97	Actual: 86	Actual: 55 [As of August 19, 2013]	Actual: N/A	Actual: N/A

Discussion about Output-related Performance:

Approved plans for new dams or modifications: Applications for approval of plans for new dams or modifications of existing dams are typically acted upon within the same year. Design plans are reviewed by professional engineers in the Dam Safety Program and approved by the State Engineer. Dam constructions and modifications are high cost operations. The trend over the past five years has varied based on several factors outside of the control of DWR including the economy and the needs of dam owners. The decrease in new dam construction is attributed to the current economy of the nation and Colorado. The owner of a restricted dam may elect to hold off repairs and live with the restriction or may immediately make repairs to remove the restriction. The average number of plans approved over the five year reporting period (FY 2008-2013) has been 40.

Number of restriction orders in place: The Dam Safety Program performs diligent field observations on dams to identify potentially dangerous situations and minimize the possible loss of life and property damage. Dams can be restricted from full storage due to inadequate spillways and various structural deficiencies such as significant leakage, cracking and sliding of embankments. The restrictions provide risk reduction for the public until any deficiencies identified are corrected. Since repairs can be complex and expensive, it may take several years to design and implement the repairs. The trend over the past five years has varied based on several factors outside of the control of DWR. In Water Year 2011-12, the largest historic storage restriction in the state at Cucharas #5 Dam was removed when the dam owner excavated the spillway down to the restricted level. This action removed 33,000 acre-feet of storage from the restricted storage quantity, but it did not result in returning any storage to use since the reservoir now has that much less storage due to spillway excavation. The owner greatly reduced the risk exposure to himself and to the downstream public through this action. The average number of restrictions in place over the five year reporting period (FY 2008-2013) was 164.

¹⁶ These objectives are tracked on a water year (WY) which runs from November 1 (each year) through October 31 (each year). This data is as of August 19, 2013.

Number of inspection reports: This performance measure includes inspections for all dam classifications; this does not include inspections conducted during construction. The Dam Safety Program conducts inspections as required per dam hazard-class risk-based classifications. Hazard classification of a dam is the placement of a dam into one of four categories based on the hazard *potential* evaluation of the probable incremental adverse consequences due to failure or improper operation of the dam.

The number of inspections is variable because not all dams are required to be inspected every year. Each dam safety engineer's highest priority is to perform periodic field evaluations of the dams in their territory of responsibility. Dams rarely fail without first showing visible signs of distress, which, when detected by a highly educated and trained individual, can be the difference between a catastrophic failure and prompt corrective action. Regular visual observation is, therefore, the most important tool available to each dam safety engineer. The trend over the past five years has varied based on several factors such as number of dams, hazard classification, inspection periodicity, etc. The average number of inspections over the five year reporting period (FY 2008-2013) was 485 per year for the 10 safety inspectors.

Number of emergency action plans updated: An Emergency Action Plan is a written document prepared by the dam owner, describing a detailed plan of actions for response to emergency or unusual events, including alerting and warning emergency officials in the event of a potential or imminent dam failure or other emergency related to the safety of the dam and public. Colorado has been actively involved in this planning since 1981, ultimately requiring that Emergency Action Plans be prepared for high hazard and significant hazard classified dams as part of the regulations for dam safety. The owners of significant hazard dams that do not have a plan have been notified of the requirement to prepare them. The dam safety engineers continue to assist dam owners in the preparation of their Emergency Action Plans. In FY 2012-13, 98% of high and significant hazard dams had Emergency Action Plans in place. This performance measure tracks updates to the Emergency Action Plans currently in place; this will remain steady and will vary only slightly based on whether or not a dam changes classification over the year (decreases or increases in hazard based on needed repairs, population influx below the dam, etc). Although all high hazard dams have an Emergency Action Plan, work is still needed to update, maintain, and exercise the plans annually. Emergency Action Plans that are older than three years are reviewed and updated pursuant to federal Emergency Action Plans guidelines. If an Emergency Action Plan was not updated in a year, it remained as status quo. Efforts were made in Water Year 2011-12 to update EAP's identified as being outdated and to scan (digitize) the portfolio of EAP's into DWR's digital information environment. The effort is intended to allow ease of access to information contained in EAP's to both DWR and members of the public at large. By the end of Water Year 2011-12, approximately 170 of the 705 EAP's for high and significant hazard dams had been scanned, organized for electronic access, and were available.

Benchmarks: Public safety through regular dam safety inspections minimizes the potential for loss of life and property damage. Many benchmarks set for outputs are dependent on outside factors, such as potential for dam deficiencies (leakage, cracking, sliding of embankments), large-scale weather events, and spillway concerns. Therefore, DWR averages annual data for some benchmarks. For example, the benchmarks for the plans for new dams/modifications, number of restriction orders, and inspections will be altered annually to reflect the averages over the past five fiscal years. Emergency Action Plans are required for all high hazard and significant

hazard dams as part of the regulations for dam safety. Therefore, the benchmark for this performance measure will be contingent upon the classification of dams on an annual basis. Thus, benchmarks are the Public Safety Program’s year one and year three goals and are developed using the described methodologies.

What Outcomes is the Program is trying to achieve?

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual ¹⁷	FY 2013-14 Est.	FY 2015-16 Projected
# of dam failure incidents	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0
	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: N/A	Actual: N/A
# of death incidents from dam failure	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0
	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: N/A	Actual: N/A
# property damage incidents from dam failure	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0	Benchmark: 0
	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: 0	Actual: N/A	Actual: N/A

Discussion: Through diligent field observations of dam safety engineers statewide, several near-failure incidents were acted upon in time to diffuse potentially dangerous situations and possible loss of life. As a direct result of these actions, no loss of life or

¹⁷ These objectives are tracked on a water year(WY) which runs from November 1 (each year) through October 31 (each year). This data is as of August 19, 2013.

significant property damage occurred in Colorado in FY 2012-13. This is attributed to the increased awareness and responsibility of the dam owners for their dams, including emergency action planning, and to the enforcement of the regulations, policies, and procedures by DWR.

Benchmarks:

Minimize number of dam failures: The benchmark is set at 0 incidents. While not all conditions are in the control of DWR's Public Safety Program, the regular inspections, design reviews, planning, and restriction tools make this a more achievable goal. No jurisdictional dam failures occurred in Colorado in Water Year 2011-12.

Minimize number of deaths and property value lost: The benchmark is set at 0 incidents. Dam inspections are conducted based on hazard class and are successful in detecting problems before they get to a dangerous tipping point. Regular dam inspections, followed by storage restrictions when necessary, continue to be one of the best tools to maintain safe dams and reduce the risk of dam failure for the people of Colorado. The last major dam failure event occurred on July 15, 1982 (Lawn Lake Dam in Rocky Mountain National Park). The resulting flood wiped out campsites, tragically killing 3 people and causing \$31 million in damages. DWR's Dam Safety program made changes to its program in response to that tragedy, including increasing inspections and focusing on dams with the greatest risk and consequences.

By striving to keep the above outcomes at zero, the Program seeks to achieve its strategic policy initiatives of minimizing dam failures, loss of life, and loss of property.

Well Inspection Program

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

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

Why Is This Program Important? The Well Inspection Program was instituted for the protection of public health and of groundwater resources through enforcement of existing statutes and the Water Well Construction Rules (2 C.C.R. 402-2). Improperly constructed wells can allow pollutants to infiltrate into aquifers and ultimately into potable supplies. Incidentally, this program also can allow for well owner redress in cases of substandard construction.

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

What are the Strategic Policy Initiatives of this Program?

Strategic Policy Initiative #1: Protection of Groundwater: The chief objective of the Well Inspection Program is to ensure the protection of the groundwater resources and public health through enforcement of well construction and pump installation requirements.

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

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

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

An internal strategy is to utilize DWR expert staff to assist the Board with compliance and enforcement actions, variances from the requirements of the Water Well Construction Rules, and licensing and license renewal of well construction and pump installation contractors. In addition to these functions, the staff provides technical and professional assistance to the Board in the development of its administration rules, construction rules and associated policies. The staff also reviews and presents to the Board new technology developed in the well construction industry, coordinates the activities of the Board with the objectives and requirements of DWR and other agencies, disseminates information to contractors and license applicants, and provides education and general information concerning the Board's activities in a variety of public forums.

What are the Program's Inputs?

A number of factors drive the workload of the Well Inspection Program and impact the ability to achieve programmatic goals and objectives.

	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
# of new wells	4,083	3,147	2,929	2,735	3,101	3,199	3,199
# of water well contractors and pump installers	252	254	225	237	231	240	240
# well inspectors appropriated	5.0	5.0	5.0	5.0	5.0	5.0	5.0
# well inspectors actual	4.0	3.7	3.0	3.0	3.0	3.0	3.0

Discussion

New Well Construction: New well construction, which had steadily declined from 4,083 in FY 2008-09, to 2,735 in FY 2011-12, made a slight rebound in 2012-2103 to 3,101 new wells. This reflects a slight improvement in the economy and construction sector. However, the overall decline is directly correlated to Colorado's slowing economy from 2008-2012 and the consequent decrease in the total number of well permit applications received and the total number of well permits issued by DWR. This has led to an overall decrease in the number of wells constructed. The total number of permit applications received in 2004, when the inspection program was instituted, was 10,043. In 2012, the number of permits applications received was 4,445, a 56 percent decrease from 2004. Since this is a cash funded program, the number of filled inspector positions has kept track with this decline. As of today's date, there are two positions out of five (40% decrease in FTE) being held vacant due the reduced workload and associated revenue shortfall.

Water Well Contractors and Pump Installers: The number of licensed contractors has also declined similar to the number of permit applications and actual well constructions. Again, this is directly correlated with the slow economy.

Number of Well Inspectors appropriated and actual: The Public Safety Program consists of five appropriated FTE. DWR has been unable to fill all five positions, leaving two positions vacant, due to budgetary restraints. A reduction in the number of permits issued has created a budget shortfall in the cash funds that pay for this program, and as a result, two positions are being held vacant.

What are the Program’s Outputs?

Output Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015 – 16 Projected
# of inspections	Benchmark: N/A ¹⁸	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 1,376	Benchmark: 1,376
	Actual: 1,750	Actual: 1,488	Actual: 1,237	Actual: 1,128	Actual: 1,276	Actual: N/A	Actual: N/A
# total of licenses issued	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 240	Benchmark: 240
	Actual: 252	Actual: 254	Actual: 225	Actual: 237	Actual: 231	Actual: N/A	Actual: N/A
# of injunctions and compliance orders issued	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: N/A	Benchmark: 29	Benchmark: 29
	Actual: 38	Actual: 22	Actual: 52	Actual: 17	Actual: 16	Actual: N/A	Actual: N/A

¹⁸ Benchmarks will be set going forward based on previous performance over a period of five years.

Discussion about Output-related Performance

Inspections: Well inspections include those on water wells and pump installations, as well as monitoring or observation of well constructions, well pluggings and abandonments. Not all wells can or will be inspected under this program. Rather, the program relies on unannounced inspections during construction to promote compliance and to identify non-compliance. The trend over the past five years has been based on several factors out of the control of DWR, including the economic downturn and loss of inspectors due to reduced workload and insufficient fee revenue. The number of well inspections declined from a high of 2,872 in 2006 to 1,276 in 2012, a 56 percent decrease. DWR has been unable to fill vacant positions due to budgetary restraints resulting from a reduction in the number of licenses issued. The average number of inspections conducted over a five-year period (FY 2008-2013) has been 1,376.

Licenses Issued: As required by rules and regulations, the Board issues new or renewal licenses for contractors and pump installers annually. New contractors must demonstrate minimum construction experience and familiarity with construction standards and rules. License renewals include requirements for accredited continuing education courses to ensure all contractors are kept up-to-date on technology and safety standards. DWR coordinates the licensing activity of the Board by scheduling and administering written examinations, assembling test scores, and scheduling oral examinations before the Board. The average trend for this performance is 240 licensed contractors and pump installers over a five-year period (FY 2008-2013). This trend should remain steady, unless there is a major change in new well constructions (i.e. correlated with increase in new home building).

Injunctions and compliance orders issued: The State Engineer's well inspectors and staff supporting the Board are responsible for investigating complaints that allege well constructions or pump installations have violated statutes and/or existing rules and regulations. A key focus of the well inspectors and the inspection program is to locate and initiate action against unlicensed contractors working illegally in the state. With regard to licensed contractors, the most frequent violations continue to be contractors drilling outside the distance limits allowed by the permit (usually 200 feet). The investigations often result in bringing these issues before the Board for resolution, while other issues are resolved through actions authorized to the staff by the Board. The well inspectors and staff also conduct "follow-up" actions to ensure that contractors, pump installers and well owners are complying with Orders of the Board, including pursuing judicial enforcement when necessary. This performance measure tracks new complaints investigated. Complaints include construction violations, permit violations, unlicensed contractors, failure to submit construction and pump installation reports, and orders to fix or plug wells. The trend over the past five years has been based on several factors outside the control of DWR, including the number of construction violations. The average number of new complaints investigated over the past five years (FY 2008-13) is 29.

Benchmarks: The benchmarks set for outputs are dependent on outside factors, chiefly the state of the economy. Therefore, DWR averages annual data for the number of well inspections, licenses issued, and number of complaints investigated to get applicable benchmarks. Going forward the benchmark of these performances will be altered annually to reflect the averages over the past five fiscal years. Since the inception of the Well Inspection Program, it is evident that many licensed contractors are refining their construction practices to ensure full compliance with the Board's Rules. Going forward, the five year benchmark for the Well

Inspection Program will be contingent on the number of well inspections, licensing assistance, and investigations and resolution into complaints on an annual basis; this will be modified based on previous year’s performance. Through the methodologies outlined above, DWR uses its benchmarks for FY 2013-14 and FY 2015-16 as its year one and year three goals.

What Outcomes is the Program is trying to achieve?

Protection of Groundwater: Aligning with the program’s strategic policy initiative, the outcome of this program is to protect Colorado’s groundwater resources and preserve public health. To achieve this outcome, the Well Inspection Program operates through enforcement of statutes and the Water Well Construction Rules (2 C.C.R. 402-2). Improperly constructed wells can allow pollutants to infiltrate into aquifers and ultimately into potable supplies. DWR measures this outcome by comparing inspections and reported well completions. Reported completions are all reported through DWR’s Well Construction and Test Report forms. This number varies with time, due to late reports submitted. Inspections are defined as only inspections directly corresponding to permit numbers reported on the Well Construction and Test Reports and are only counted as performed or not performed (inspections are not necessarily performed during the month the well was completed). The benchmark of this performance measure reflects staffing and funding levels for a deterrence type program and acts as year one and year three goals for FY 2013-14 and FY 2015-16, respectively.

Outcome Measures	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Actual	FY 2012-13 Actual	FY 2013-14 Est.	FY 2015-16 Projected
Well Inspections vs. Well Completions	Benchmark: N/A	Benchmark: N/A	Benchmark: 30%	Benchmark: 22.9%	Benchmark: 24%	Benchmark: 21%	Benchmark: 21%
	Actual: N/A	Actual: 25.2%	Actual: 23.2%	Actual: 20.3%	Actual: 16.04%	Actual: N/A	Actual: N/A

Discussion:

Protection of Groundwater: The Well Inspection Program protects groundwater by setting and enforcing well construction standards. The number of inspections varies and depends upon the number of wells being constructed and the number of available staff for inspections. The Well Inspection Program is cash funded via a well inspection fee and, due to the economy, currently is not staffed at the fully appropriated level. With a reduced number of staff (2 FTE being held vacant due to the decline in permits issued) in FY

2012-13, the well inspectors inspected 16.04% of the wells completed. This decline in inspection rate is reflective of a slight increase in number of wells completed in 2012-2013, a static number of program staff, and the large geographic area covered by remaining staff. Since this is a cash funded program, DWR must staff the program at conservative levels considering the variability in the number of wells (and consequent funding) constructed each year. Colorado's economy during the last few years has resulted in a decrease in the total number of well permit applications received, ultimately creating a subsequent decrease in the total number of well permits issued by DWR and in the number of wells completed.

Benchmarks:

Protection of Groundwater: The benchmark for groundwater protection from enforcement of well construction standards will be modified annually based on average outcome from five previous fiscal years. Additionally, this benchmark will be altered based on increases in new home/well construction and a correlated increase in well construction enforcement.

APPENDIX A: RECENT ACCOMPLISHMENTS

Colorado Oil & Gas Conservation Commission

- **Setback Rules:** The COGCC adopted new setback rules that increase the minimum distance between wells and buildings to 500 feet statewide and impose stringent best management practices (BMPs) such as green completions and pit-less drilling on all wells and production facilities within 1,000 feet of occupied buildings. The new setback rules prohibit wells within 1,000 feet of specified High Occupancy Buildings such as schools, day care centers, and hospitals, without Commission approval following a public hearing. The increased setbacks and required BMPs will eliminate or greatly reduce potential adverse impacts associated with drilling operations. The new rules also require operators to provide advance notice to all homes within 1,000 feet of a proposed new well before drilling operations begin, and to meet with community members when requested to do so. The combination of setback distances, required best management practices, and early engagement with neighbors make Colorado's new setback rules among the most progressive and protective in the nation. The new setback rules took effect August 1, 2013.
- **Groundwater Sampling Rules:** In 2013, Colorado became the first state in the nation to require operators to sample groundwater near new drilling sites both before and after drilling the well. Operators must sample domestic wells and springs within a half-mile of a new drilling site once before and twice after drilling at a new location. A maximum of four sampling locations is required. Within the Greater Wattenberg Area, one location per quarter section must be sampled, and one post-drilling sample is required. Additional sampling may be required any time potential oil and gas impacts to groundwater are observed. All water quality data generated under the rule will be publicly available and can be provided to local governments upon request. The new sampling rules will protect and preserve Colorado's groundwater resources, document baseline groundwater quality before oil and gas development, and improve detection of any adverse impacts. The new groundwater sampling rules took effect May 1, 2013.
- **Local Government Liaison Program:** A new position, with a working title of Local Government Liaison ("LGL"), was created within COGCC to spearhead communication and collaboration with local governments concerning oil and gas development. Two LGLs were hired in July 2012 and they have since developed a statewide outreach and training program. The LGLs have conducted training for local governments in Limon, Grand Junction, Broomfield, Durango, and Sterling, and three additional programs are planned in Denver, Glenwood Springs, and Lamar during 2013. The LGLs have also worked closely with local government staff and elected officials to craft local oil and gas regulations that complement, rather than conflict with, COGCC rules, and have helped the local governments draft MOUs with operators. A quarterly newsletter has also been launched to keep local government partners informed about rule and policy developments, training opportunities, and other new developments.

- **Denver Julesburg (DJ) Basin Horizontal Offset Policy:** During the latter half of 2012, the COGCC convened a group of industry representatives to establish a common review practice for hydraulic fracturing operations in the state’s most densely developed basin. The group determined that oil and gas wells within 1,500 feet of a proposed well must meet current standards prior to the start of the new well’s hydraulic fracturing phase. The policy supports the COGCC’s statutory mandate to require safeguards that minimize the risk of any oil and gas impact on groundwater quality, human health and the environment.

Division of Parks and Wildlife

- Completed system analysis and conversion planning to combine CPW’s financial, budgeting, and personnel systems under a single agency for FY 2013-14, setting the stage for a major milestone in the merger of the former Parks and Wildlife agencies. Completed organizational restructuring and established a combined regulatory process.
- Completed two planning documents related to one of three strategic priorities identified by the Parks and Wildlife Commission : “Recruitment and Retention: Connect People to the Outdoors by Providing Quality Outdoor Opportunities and Settings.” The report are:
 - “CPW Partnership Themes Report”
 - “Increasing Angling, Hunting and Park Visitation – Long Term Strategy”
- In June 2012, the High Park fire started west of Fort Collins and entered Lory State Park. Largely due to previous CPW wildfire mitigation projects, the High Park fire quickly lost intensity in the park, allowing suppression efforts to halt the fire’s spread and preventing the wildfire from spreading to the Horsetooth Reservoir watershed.
- Received 58 applications and awarded funding to 12 projects through the Colorado Wildlife Habitat Protection Program (CWHPP). Land trusts are partners in 7 of the approved projects. Since 2007, CWHPP acquisitions have protected 176,816 acres of wildlife habitat. Public access is allowed on 79,256 acres of CWHPP easements and properties, including more than 28 miles of river access.
- Provided extensive comments in opposition to a U.S. Fish and Wildlife proposal to list the Gunnison sage-grouse under the federal Endangered Species Act, based in part on extensive and long-term work with landowners, county governments and others on habitat protection, translocations, monitoring and surveys. CPW also opposed a proposal to list the lesser prairie chicken and is working with 4 other states on a range-wide conservation and mitigation plan to preclude the listing.

- Approved \$500,000 in funding to develop or improve 13 shooting ranges across the state, including support for the new Cheyenne Mountain Shooting Complex, at Ft. Carson, the largest public shooting range in the state.
- Awarded \$900,000 for 11 angling projects, including 12 miles of aquatic habitat improvements and expanded angler access to more than 20 miles of stream.
- Opened Staunton State Park, the newest and 42nd State Park, in May 2013, representing the culmination of years of cooperative efforts involving DNR, GOCO, the Colorado Lottery, CDOT, local governments and many stakeholders and citizens. Over 70,000 people visited Staunton in the first month the park was open.
- 6,511 volunteers contributed more than 337,000 hours to Colorado Parks and Wildlife programs, representing 162 full time employees (FTE) equivalent. Compared to the previous year, volunteers increased hours donated to CPW projects by 13.8%, an increase of 40,991 hours.
- Organized and hosted 176 hunter outreach programs, including skills instruction seminars, drawing more than 13,000 participants. Mentored 108 hunting events, focusing on introducing hunting to first-time youth and women participants.
- Continued the close cooperative partnership with GOCO and implementation of GOCO's \$10 million local community opportunity grants initiatives, emphasizing outdoor recreation opportunities for youth and families. Completed the third of four regional Colorado Birding Trails. The new Northwest Region Birding Trail consists of 13 driving loops with 155 sites for wildlife viewing, including every one of the 12 state park in the region, 15 state wildlife areas and 10 sites on private land.
- Completed a three-year effort to map and document allowed trail uses for all of Colorado State Parks trails (over 700 miles). These are downloadable and interactive maps, so trail users can plan their trail activities and know where they are on a trail at any given time.
- CPW continued the on-going effort to document and monitor natural and cultural resources in the state parks. This is a multi-year undertaking that includes periodic updates to resource stewardship plans for the parks. These assist park managers to help ensure that park visitors continue to experience high quality, enjoyable opportunities when visiting a park.
- Completed the Cheyenne Mountain State Park Management Plan. Development of park management plans allows public input for park operations as well as providing a tool for effective park management.

- Added two new registered Natural Areas to the Colorado Natural Areas Program in FY 12-13. These areas represent some of Colorado's best and most special places.
- Continued to expand and improve the "Facilities Inventory" tracking software application, originally developed by Colorado State Parks and increasingly expanded to include former Division of Wildlife facilities. This is a valuable assessment and evaluation tool to assist managers with developing effective budgeting for CPW facilities.
- In late FY 2012-13, CPW analyzed revenues and expenditures to better understand the long term sustainability of both State Park and Wildlife Programs. In early FY 2013-14, groups of employees started developing ideas to reduce expenditures, increase revenues, and address current and looming financial issues facing CPW. Most pressing is the need to reduce expenditures and otherwise address an estimated \$10.0 million gap between current revenues and current expenditures for Wildlife Programs. At its November 2013 meeting, the Parks and Wildlife Commission is scheduled to approve a list of specific expenditure reductions that will save the Wildlife Cash Fund millions of dollars per year.

Colorado Water Conservation Board

- Governor Hickenlooper issued an Executive Order in May 2013 directing the Colorado Water Conservation Board (CWCB) to develop the Colorado Water Plan. This plan will be a grassroots effort, incorporating and building upon eight years of comprehensive work, unprecedented dialogue, and consensus that water leaders from across the state have produced through the Interbasin Compact Committee and Basin Roundtable process. The Colorado Water Plan will be Coloradans' 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 continues to work closely with numerous stakeholders to monitor and respond to ongoing drought conditions across Colorado. A Drought Impact Tour was hosted by the CWCB on August 12, 2013 to bring decision and policy makers out to drought affected areas, some of which have been suffering from 3 years of sustained below average precipitation. While the existing Drought Mitigation and Response Plan has proven to be a critical tool for drought response and improved preparedness, CWCB is also in the process of updating this plan with lessons learned and new science. The revised plan will go before the CWCB board for approval in September 2013 before being integrated into the state's overall natural hazard mitigation plan. It will then move to the Governor and onto the Federal Emergency Management Agency for approval.

- In FY 2013, the CWCB provided funding for 20 new loans for new water projects in the amount of \$70 million. This alone created or preserved over 9,000 acre-feet of water storage.
- Developed a work plan to begin implementing 16 key recommendations endorsed by the IBCC and CWCB that resulted from the 2010 Statewide Water Supply Initiative (SWSI).
- Continued support for the “Colorado Water for the 21st Century Act” by assessing various water portfolios (combinations of water conservation, reuse, agricultural transfers, and new supply development) developed by the Basin Roundtables, and began a scenario planning process to look at different water “futures” for Colorado.
- Also, in 2012-13, CWCB filed water court applications for new instream flow water rights, including instream flow water rights on the Colorado River between Kremmling and Dotsero as a key element of the Upper Colorado Stakeholder Group Wild and Scenic Management Plan Alternative.
- Accepted and implemented three temporary leases of water for instream flow use on the Yampa River, Deep Creek and the Colorado River that were offered under the Colorado Water Trust’s Request for Water 2012 program, and one interagency agreement with Colorado Parks and Wildlife to loan water for instream use on Big Beaver Creek and the White River.
- Successfully negotiated Minute 319 to the 1944 Water Treaty between the U.S. and Mexico, and the implementation agreements necessary for the execution of Minute 319. Minute 319 has been described as a model for international collaboration on water resources issues, and it paves the way for future opportunities to better meet water needs of both countries in the future.
- 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. Denver Water, Grand County and the CWCB have been negotiating with objectors to the joint water court application filed in 2011 to implement that mechanism and other aspects of the Colorado River Cooperative Agreement.
- Worked with the United States Bureau of Reclamation and the basin states to complete and publish the Colorado River Basin Study, which documents the future water supplies and water demands within the entire Colorado River basin. This study provides tools, and documents options for meeting the projected possible future water supply/demand imbalances. This work will serve as a basis for additional and future work among the basin states, the federal government, and other interested stakeholders to implement real solutions to meet the growing challenges associated with water supply/demand imbalances.

- Completed the alluvial groundwater model for the South Platte river basin, with the modeling report available for download at the CWCB website.
- Led the region in meeting and/or exceeding FEMA's goals and metrics for the Risk Map program. FEMA is the primary funding source for these activities and successful metrics insure ongoing funding.
- Worked closely with numerous stakeholders to successfully obtain funding for future topographic basemapping projects and minimize costs through data exchange
- Worked with local governments to assist in adopting community floodplain regulations that are consistent with the Rules and Regulations for Floodplains in Colorado, effective January 2011.
- Worked with other state agencies and local governments to manage the adverse impacts of wildfire to floodprone areas downstream of burn scars. Provided technical assistance and funding to all wildfire-affected communities.

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 a Wildfire Risk Reduction Grant Program. With the passage of S.B. 13-269, \$9.8 million was allocated to this program in FY 2013-14 to reduce the risk of wildfire in areas where human development and forest lands overlap. The program hopes to reduce the risk for damage to property, infrastructure, and water supplies as well as minimize the likelihood of wildfires spreading into populated areas.
- Following the passage of the new grant program, DNR convened the Advisory Committee pursuant to the provisions of the statute. The Committee released application information in June, accepted applications in July, and made awards in August 2013. A total of 64 applications were received. Just over \$4 million was awarded to 25 projects in 16 counties. Those applicants are now working with the Colorado Forest Restoration Institute to establish baseline data that will feed into the monitoring and effectiveness research component of the program.
- The Department of Natural Resources is again the lead state agency to support the Forest Summit, an annual meeting that brings together members of statewide collaborative groups, the forestry industry, legislators, and scientists. This year's event is planned Oct 28-29 in Delta. Unlike previous years' events, which have been held in Denver in an effort to attract political leadership, the 2013 Summit will feature field tours on the west slope.

Note: The Department of Natural Resources is not appropriated any 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 assists 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.

State Land Board

- Over the past two fiscal years, the State Land Board has generated nearly \$260 million for the school trust. Of this amount, \$130 million went to the BEST program and was leveraged into more than \$400 million of grants to construct or renovate 90 schools throughout rural Colorado. While the State Land Board does not direct the operations of BEST, the agency's record-breaking revenues have made the program successful and given BEST tremendous resources to fund school facility improvements throughout Colorado.
- The State Land Board acquired 5975 South Quebec, a multi-tenant 102,795 square foot Class A office building located in south metro Denver. The Quebec building is 89% leased at acquisition to eight tenants and is anticipated to produce an annual net operating income of \$1.3 million and an unleveraged internal rate of return of 9.6% over the next 12 years.
- Recognizing the severe drought impacting Colorado's ranching and agricultural families, the State Land Board worked cooperatively with regional partners to provide financial relief through appropriate rent credits and management plans to reduce livestock on state trust lands. This action achieves a dual outcome of providing sound stewardship of the school trust assets, while being a good business partner with the State Land Board's many agricultural lessees who have had their operations and livelihoods affected by drought.

Division of Water Resources

- In the Republican River basin (Water Division No. 1), a trial was held in *Kansas v. Nebraska and Colorado* (Supreme Court Original, No. 126) in August of 2012 (focusing on Kansas' damage claims and Nebraska modeling issues). Colorado's State Engineer testified as did Colorado's modeling expert. In January 2013, the Supreme Court Special Master had a one day hearing in Portland, Maine to review his ruling. He scheduled limited expert reports and a further hearing in August 2013; a ruling on these specific issues is anticipated by the end of 2013.

Colorado submitted its Compliance Pipeline Augmentation Plan and Bonny Reservoir Accounting Plan for approval by the Republican River Compact Association. A meeting was held in May 2013 to vote on Colorado's proposal. Nebraska voted yes while Kansas voted no. Colorado immediately initiated fast-track arbitration and an arbitrator has been selected; the

hearing is set for October 2013. These plans are key to helping Colorado to get into compliance with the Republican River Compact.

- The Division of Water Resources (DWR) continues investigation of high groundwater issues in the South Platte basin (Water Division No. 1) in concert with H.B. 12-1278. The DWR initiated ground water level data collection from a network of existing and recently-constructed wells in two targeted areas in Sterling in 2012. This data will be used along with other hydrologic information to develop an understanding of the effect precipitation and other water use has on high ground water levels. The DWR has undertaken a similar effort in the Gilcrest/LaSalle area.
- In the Rio Grande Basin (Water Division No. 3), the Subdistrict No.1 of the Rio Grande Water Conservation District filed an Annual Replacement Plan (ARP) with the State Engineer on April 13, 2012. The State Engineer held a public hearing to hear comments and approved the ARP on May 1, 2012. On May 14, 2012 opponents filed an appeal in court and as a result a trial was held in late October 2012. The court ruling was received in April 2013, upholding the actions taken by the State Engineer. The 2013-2014 ARP application was submitted April 13, 2013 for the State Engineer's consideration. The State Engineer approved the ARP on April 30, 2013. This ARP provides one umbrella plan to provide 'augmentation' for over 3,000 wells saving significant costs compared to individual plans.
- New Mexico has sued the United States Bureau of Reclamation for improper operation of Elephant Butte Reservoir. Texas has filed for cert with the U.S. Supreme Court (*Texas v. New Mexico and Colorado*) to settle issues regarding compact operations in the Rio Grande Project and the surface and groundwater rights associated with the project. Colorado met with each party in an attempt to de-escalate and mediate the issues rather than promote litigation however that effort was not successful. All three states have briefed the issues to the U.S. Supreme Court. The court has solicited input from the U.S. Solicitor General. The court is considering the briefs.
- The Rio Grande Conservation Reserve Enhancement Program (RG -CREP) was approved by the United States Department of Agriculture (USDA) and signed by the Governor in December 2012. The agreement between USDA, Colorado, and the Rio Grande Water Conservation District will allow the use of over \$125M to fallow lands in the Rio Grande Subdistrict. This fallowing will reduce the draft on aquifers, enhance the environment, and provide economic incentives to reduce water usage. Producer sign-ups on the RG – CREP began in June 2013.
- In the Colorado River Basin the Division of Water Resources has participated in negotiations over the past few years with the many parties to the Colorado River Cooperative Agreement (CRCA) to reach a consensus on administrative protocols for the effective implementation of the Agreement. The CRCA resolves many issues of water administration and settles many debated issues between East slope and West slope interests regarding transmountain water diversions. Implementation of the CRCA:

- Allows parties to avoid the debate as to whether it is necessary to file an application to change Moffat Tunnel rights to include storage in an enlarged Gross Reservoir;
 - Settles Denver's upcoming diligence filings on its Blue River water rights;
 - Resolves disputes regarding the interpretation of the Blue River Decree ending 13 years of administrative strife and expensive future litigation between the parties;
 - Eliminates the need for an annual interim operating policy by the State Engineer through the creation of a new Green Mountain Reservoir Operating Protocol;
 - Provides for protection of future water supplies for West Slope communities and their vital recreation and tourism industries;
 - Provides water for protection of the environmental flows in several critically stressed streams on the West Slope; and,
 - Demonstrates how consensus building and cooperation among many diverse stakeholders can successfully resolve long-standing historic issues and promote greater trust between the parties involved in opposition to traditional methods of competition and litigation between Front Range and Western Slope interests that often result in suspicion and misgivings between the parties.
- In the San Juan/Dolores Basin (Water Division 7), negotiations are almost complete with the Animas-La Plata (A-LP) parties on the implementation of an operating protocol for the A-LP Project. The DWR has received comments from the Association, the United States Bureau of Reclamation, and the Southern Ute and Ute Mountain Ute tribes on the proposed ALP protocol and has met with the ALP parties several times this year. The DWR has also received comments from New Mexico in regards to the project under the A-LP project compact. The DWR is also working with the parties to resolve retained jurisdiction needs for several cases. Completion of the protocol and resolving the retained jurisdiction issue will eliminate the need for costly litigation over the retained jurisdiction issues.
 - Construction continues on the Long Hollow Reservoir. This reservoir will assist in the delivery of water to New Mexico under the La Plata Compact (avoiding possible costly litigation) and will generate several thousand acre-feet of additional water for Colorado users.

Division of Reclamation, Mining and Safety

- **Office of Active and Inactive Mines:** In FY 2012-13, the Colorado Inactive Mine Reclamation Program completed over 134 mine reclamation and water quality improvement projects and distributed an estimated \$7.1 million worth of construction and engineering contracts into Colorado's rural economies [*Source: based on RIMS II economic multipliers for industries in Colorado*]. A total of 445 hazardous mine features were safeguarded last fiscal year and 169 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 estimated 23,000 abandoned mine features, the Division of Reclamation Mining and Safety has safeguarded 9,075.
- **Coal Regulatory Program:** The Coal Mine Regulatory Program continues to effectively facilitate a balance between coal mine production and environmental compliance. Timely permitting activity was managed to ensure ongoing production of 28.6 million tons of coal at 11 operating mines during 2012 (9 active sites as of June 2013). There are currently 39 permits, including 9 actively producing operations, one active loadout, and 29 sites that are idle or in reclamation. Proactive compliance work, including ongoing inspections, and coordination with mine operators, landowners, and government agencies, resulted in a compliance rate of 98 percent over approximately 185,000 permitted acres. Concurrent reclamation proceeds at the active operations, along with extensive reclamation and environmental maintenance at idle and closed mines. Two sites were permanently reclaimed and released from regulatory liability during FY 2012-13. The program holds \$208 million in financial warranty and manages about 260 permitting actions, 450 inspections, and 8 enforcement actions per year.
- **Minerals Regulatory Program:** The Minerals Regulatory Program addresses a variety of active mining and exploration challenges in historic mining districts where legacy problems mark the landscape. There are currently 1,700 mines permitted on 181,000 acres, and the program holds \$416 million in financial warranty. Recent efforts by the program achieved significant success at the Ute-Ulay Mill, a historic mill that was erected in 1882. The site was permitted in 1978 and the most recent owner was never able to bring the mill into compliance with modern permitting standards. The operator recently worked with Hinsdale County to transfer ownership of the adjacent "old town site" to Hinsdale County. The operator also wanted to convey ownership of the mine/mill to the county, but because it was an active permitted site, regulatory standards and rules needed to be followed. In order to comply with the permitting and reclamation requirements, facilitate clean-up, and provide a path to final release of the site, the Minerals Program worked closely with the Colorado Department of Public Health and Environment, the mine operator, Hinsdale County and the U.S. Environmental Protection Agency to achieve those goals. The Minerals Program and these partners worked to ensure that the majority of the site would be properly reclaimed and that the mill and mine entrance could be cleaned up, safeguarded and prepared for future use as a heritage tourism site. It is an excellent example of cooperation to improve the environment and create a heritage tourism opportunity for Colorado's high country.