

# **Strategic Plan Fiscal Year 2012-13**

November 2011

# COLORADO DEPARTMENT OF NATURAL RESOURCES

# STRATEGIC PLAN – FISCAL YEAR 2010-11

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

Natural resources play an integral role in Colorado's economic wellbeing. In this regard, the Department of Natural Resources plays an important role in managing the land, mineral, water, and wildlife resources in the State of Colorado. Through strategic management of these resources, the Department attempts to maximize the long-term, net economic benefits associated with Colorado's natural resources. Some of the important economic benefits associated with Department programs include:

- Water is an essential input for agriculture and many other industries. The Colorado Water Conservation Board is actively working to assure that current and future water supply needs are met. Without these efforts, an increasing amount of residential, industrial, environmental, and agricultural water needs will go unmet. Further, the Division of Water Resources assures that the senior water rights holders who rely on water for their livelihood are protected from out-of-priority water diversion and that Colorado takes advantage of all of its allocated water without violating interstate water compacts.
- Colorado has some of the best hunting and fishing opportunities in the United States. A significant number of sportsmen come to Colorado to hunt the State's deer, elk, and other game species. Others come to Colorado to fish in our Gold Medal trout streams. Also important are the many people who come to Colorado for wildlife viewing opportunities in this beautiful state. These three activities are an important part of Colorado's tourism economy. BBC Research & Consulting studied the impact of these activities and found the following: (1) hunters and anglers spend an estimated \$1.0 billion on trip expenses and sport equipment (with an estimated economic impact of \$1.8 billion if you count 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 the trip and equipment expenditures; (4) wildlife watching activities contribute roughly \$703 million toward Colorado's economy (\$1.2 billion if you count 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].
- Outdoor recreation at state parks (including a wide variety of activities such as boating, hiking, camping, bike riding, rock climbing, wildlife watching, and photography) is also an important of Colorado's tourism economy. Visitors to Colorado State Parks spend roughly \$571 million in local communities as part of their park visit. If you just focus on non-local visitors (people who travel 50+ miles to visit a state park), these visits generate about 70% of the 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"].
- Energy and mineral resources also play an important role in Colorado's economy, with almost \$12 billion in production value occurring in Colorado in 2009. This includes \$9.2 billion in oil and gas related production, \$1.1 billion in coal related production, and \$1.0 in the production of metals, uranium, and other minerals. According to the Colorado Department of Labor and Employment and the Colorado Business Economic Outlook Committee, there were over 25,000 jobs in the mineral and energy industry in 2009 [Mineral production value from the Colorado Geological Survey. Jobs information from the University of Colorado, Leeds School of Business, "2010 Colorado Business Economic Outlook"]

Looking ahead, balancing the State's budget remains the most important and challenging issue facing the State of Colorado. The Department of Natural Resources remains committed to helping the Governor's Office and General Assembly in crafting and

implementing innovative solutions to today's economic challenges. In this regard, the Department is prioritizing its limited funding for the most important programs. Traditional ways of doing business are being re-examined in an effort to find efficiencies and explore ways to improve the services provided to the public. As an example, the Department has been actively working to merge two of its largest divisions – the Division of Parks and Outdoor Recreation and the Division of Wildlife – to create a single Division of Parks and Wildlife. The Department proposed this idea last legislative session and the General Assembly approved the concept by passing S.B. 11-208. To assist with implementation, an employee Transition Team was convened to create a comprehensive plan for merging the two agencies. The plan will identify ways to achieve three primary objectives. The first objective is to eliminate unnecessary duplication. The second objective is to identify the means to achieve the greatest possible efficiencies in the delivery of products and services. The third objective is to identify strategies to enhance the effectiveness of park and wildlife programs. The Transition Team is also responsible for soliciting review and feedback from employees, senior managers, stakeholders, and the public. To help meet these objectives and complete the required work, the Transition Teams is being assisted by ten distinct Working Groups that were created to explore specific areas and create the foundation for the broader discussion of the plan to merge the two agencies. The Working Groups explored the following functions within the new division: (1) field operations; (2) capital development; (3) water and real estate; (4) financial services; (5) volunteers, interpretation, and environmental education; (6) property evaluation; (7) marketing, branding, and public information; (8) customer service; (9) invasive species, and; (10) biologists and scientists.

Innovative efforts do not stop there. Through the Integrated Natural Resources FY 2012-13 decision item, the Department hopes to foster collaborative efforts by the DNR divisions to work together to solve natural resource issues. This decision item will allow divisions seeking expertise and assistance for sister DNR agencies to be able to pay for such assistance. It is my hope that this effort increases cooperation between divisions and helps to bring down some of the walls which cause agencies to focus solely on their own goals and objectives. In this time of dwindling government resources, we need the flexibility for our divisions to focus on the most important natural resource priorities regardless of organizational barriers. The FY 2012-13 DNR Budget Request also contains several change requests to consolidate Long Bill line items. These requests would provide additional flexibility to DNR, as well as reducing the amount of budgeting and accounting work that inevitably comes with more line items. The Department's ultimate goal through all of these efforts is to reduce cost and increase performance in meeting the Department's highest priority objectives.

The bulk of the Department of Natural Resources' Strategic Plan is focused the highest priority objectives of the Department of Natural Resources. Consistent with the SMART Government Act (see H.B. 10-1119 or Section 2-7-201, C.R.S. for more details), this Strategic Plan was developed to respond to the requirement that state departments implement a performance-based budgeting program. As such, for each of the high priority objectives detailed in this strategic plan, there will be an associated performance measure and associated discussion of the Department's performance against that objective.

This Introduction to the Strategic Plan includes two more sections: (1) a recap of recent accomplishments of the Department, and; (2) a preview of the challenges the Department faces in the current fiscal year and future fiscal years.

#### **SECTION 1: RECENT ACCOMPLISHMENTS**

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

- In 2008, implemented the first comprehensive regulatory update in more than a decade to support the continued development of the state's oil and gas resources, encourage the use of up-to-date planning and technology, and provide additional protections for public health and the environment.
- Issued more than 25,500 drilling permits in 2007 through 2010, more than the number of permits issued in any previous 4-year period in state history, despite an unprecedented collapse of natural gas prices and a new rule, effective in 2009, that extends from one year to two years the amount of time drilling permits are valid, which reduces the number of reissued permits. It is expected that 4,800 permits will be issued in 2011. Colorado has more than 45,000 active oil and gas wells that are helping to meet the nation's energy needs, and it is currently the regional leader in new well starts.
- Significantly reduced average permitting times despite a high number of permit applications. During the first quarter of FY 2011-12 the median permitting time, statewide, was 28 days.
- Amended rules have increased protection for ground and surface water, required additional testing of oil and gas wells to identify problems, placed restrictions on operations near drinking water, provided disclosure of chemicals used downhole, and resulted in landscape level plans (covering about 480,000 acres or 750 square miles) that provide for oil and gas development and wildlife protection. Reorganized, the well inspection program has been able to increase the number of annual inspections from about 10,000 per year in 2009 to an estimated 14,000 in 2011.
- The COGCC recently won a 2011 Council of State Government Innovation Award for the "eForm" system which streamlines permitting of oil and gas operations and allows for online completion of regulatory forms. Within six months of introduction, more than 80 percent of forms submitted were being done using the new eForms online system. The new system has been a double-win: it is more convenient for industry to submit e-forms and COGCC benefits from enhanced data management and analysis. Because regulatory data can be viewed by COGCC, the Division of Parks and Wildlife, and the Department of Public Health and Environment all at the same time, permit processing times have been reduced. Public transparency has also been enhanced, as the public can query, view, and comment on oil and gas applications that are under review.

# **Division of Parks and Wildlife (Wildlife Programs)**

• The Division has negotiated with 13 oil and gas operators to create Wildlife Mitigation Agreements that will protect 519,494 acres of key wildlife habitat on Colorado's Western Slope.

- Reauthorized the Habitat Stamp in 2009 to increase its buying power from \$3.5 million to \$6 million annually in 2011. Almost 120,000 acres have been protected under the Habitat Stamp & Colorado Wildlife Habitat Partnership Program since 2007 including 51,000 acres of public access for hunting and fishing.
- Between 2007 and 2011, the Habitat Partnership Program has awarded more than \$10.6 million in grants and leveraged an additional \$58 million in matching funds and in-kind contributions for public and private land habitat improvement projects, fencing repairs and improvements, and other projects related to reducing big game/private landowner conflicts.
- The Division continued its aggressive Aquatic Nuisance Species program which has performed more than 1,400,000 watercraft inspections and decontaminated more than 10,000 watercraft.
- Since 2007, awarded more than \$4.7 million in grants to 65 angling improvement projects across the state through the Fishing is Fun program while leveraging an additional \$3.9 million to improve habitat and access on more than 30 miles of river and stream, open or improve fishing at 44 ponds, and install more than 25 handicapped accessible fishing piers.
- With assistance from local landowners the Division successfully transplanted Moose to the Grand Mesa which was supported
  and encouraged by the citizens of the Grand Valley and the White River.

### Division of Parks and Wildlife (State Park and Outdoor Recreation Programs)

- Provided recreational opportunities for more than 12.3 million visitors, generating an estimated \$396 million for local businesses located within 50 miles of a park.
- Continued to control the spread of zebra mussels and other aquatic invasive species in the state's waterways, inspecting more than 200,000 boats in the past year.
- Have, for all practical purposes, repurposed Bonny Lake State Park into a State Wildlife Area.
- In FY 2011-12, the Division will be doing road work and trail construction at Staunton State Park. This state park has not yet been opened to the public, but would make available nearly 3,700 acres of public land for outdoor recreation. The park is approximately 45 miles southwest of downtown Denver or about 6 miles west of the town of Conifer. Currently, the Division is projecting that the park will be open for public use in the fall of 2012 or in the spring of 2013.

#### **Colorado Water Conservation Board**

- The CWCB adopted a comprehensive revision of Colorado's State Drought Mitigation and Response Plan. The 2010 FEMA-required revision process resulted in a Plan that uses state-of-the-art planning techniques to prepare Colorado for drought. The Plan incorporates improvements in drought monitoring since 2001; modernizes drought monitoring indices; includes a vulnerability assessment of natural resource and economic sectors; and provides a robust drought planning toolbox for local entities, including a drought planning guidance document and additional web based resources and materials.
- Since January 1, 2007, has loaned \$196 million to borrowers for 90 water projects, including \$60 million to the Republican River Water Conservancy District to help bring Colorado into Compact Compliance.
- Completed a comprehensive update to the Statewide Water Supply Initiative (SWSI) with the Board's adoption of SWSI 2010.
- Supported the "Colorado Water for the 21<sup>st</sup> Century Act" by assessing combinations of water conservation, reuse, agricultural transfers, and new supply development for Colorado's needs and supporting the IBCC's development of a report to outgoing Governor Ritter and incoming Governor Hickenlooper.
- A preliminary analysis ("Phase 1" of the Colorado Water Availability Study) by the CWCB suggested that Colorado still has water available to develop on the Colorado River, although additional research is needed to better quantify how much water is still available. The study looked at hydrology, water rights, and current uses in all four West Slope Colorado River Basins, then used five separate climate change models to predict probable physical water supply in the streams in the year 2040. Phase 2 of this study will also look at water availability, but under future water demands.
- Also, in 2010-11, CWCB filed water court applications for 30 new instream flow water rights, including instream flow water rights on Big Dominguez Creek and Little Dominguez Creek in the Dominguez Canyons Wilderness Area.
- Facilitated and supported the execution of three Minutes to the 1944 Water Treaty between the U.S. and Mexico, which has provided a foundation for bi-national discussions between the United States, Mexico, and the basin states to explore water management opportunities to better meet water needs in the future for both countries.
- Developed and endorsed the Upper Colorado Stakeholder Group Wild and Scenic Management Plan Alternative and developed an instream flow recommendation that has been acted upon by the Board in order to appropriate an instream flow water right for the Colorado River between Kremmling and Dotsero.
- Worked with the Bureau of Reclamation and the basin states to issue Interim Report No. 1 of the Colorado River Basin Study, which explores the water supplies and the water demands within the entire Colorado River basin, for the first time.

- Promulgated revised floodplain rules and regulations in order to increase public safety and to reduce future flood damages along with their negative economic impacts.
- Leveraged State funds with millions of dollars of non-State funds and partnered with stakeholders to complete hazard mapping, watershed restoration, and Decision Support Systems.

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

- Continued the successful implementation of the Healthy Forests and Vibrant Communities Act of 2009. In this regard, the Colorado State Forest Service issued its second "One Year Report" on the Healthy Forests and Vibrant Communities Act in January of 2011. The report addresses accomplishments to date that correspond with each section of the original legislation, including community and firefighter planning and preparedness; community wildfire risk mitigation; community watershed restoration; wildfire risk mitigation loan program; wildfire risk mitigation revolving fund; and improved outreach and technical assistance.
- Supported the extension of funding for wildfire preparedness and prevention. The measure (S.B. 11-238) extended an annual \$3.25 million transfer of funds used by the Colorado State Forest Service for various purposes, including funding for firefighting resources and equipment, as well as development of plans to address wildfires.

Note: The above funding and staff are contained in the Colorado State Forest Services, which is located in the Department of Higher Education. The State Forest Service works closely with the Department of Natural Resources and its agencies. Although the successes documented here were achieved predominantly with staff and funding outside of DNR, some of the accomplishments were aided by cooperation and coordination with the Department of Natural Resources. These successes are being included here to document the collaborative effort of the Department of Natural Resources and State Forest Service on forestry issues.

# **State Land Board**

- Revenues in the period from 2007 through fiscal year end in 2011 represent the highest revenue years on record, with total annual revenues exceeding \$122 million in FY 2010-11. This performance is due to strong demand for oil and gas leases that has resulted in record per acre "bonus" amounts paid at lease auctions.
- Completed a \$4.1 million property disposal to the City of Colorado Springs that establishes a long-term non-development agreement for a 640 acre parcel known as Manitou Section 16. The agreement allows the City to add this property to their open space portfolio.
- As of July 2011, the State Land Board projects increased revenues of \$2.2 million and increased land value totaling \$83.1 million as a result of projects funded by \$13.2 million from the Investment and Development Fund.

#### **Division of Water Resources**

- The DWR is moving forward with draft well measurement rules for tributary water in the South Platte Basin (Water Division No. 1). Additionally, the Division continued to work on approval for the Colorado Compact Compliance Pipeline (CCP) in the Republican River Basin. The Republican River Water Conservation District has accepted a bid for construction of the CCP, with an anticipated start date of September 2011.
- The Irrigation Improvement Rules were promulgated and delivered to the Water Court for Water Division No. 2 for approval in September 2009. Over 20 objections to the rules were filed; however DWR was able to settle with all the objectors and the Water Court issued a decree approving the rules in November 2010. The Irrigation Improvement Rules became effective in 2011; as of July 1, 2011 the State Engineer approved the first Compact Compliance Plan under the Rules.
- The State Engineer formed a Special Advisory Committee to assist in the development of overall Rules and Regulations regarding the use of groundwater in the Rio Grande Basin. The Rules Governing the Withdrawal of Ground Water in Water Division No. 3 are anticipated to be completed and submitted to the Water Court in late 2011. Work continues on updates and refinements to the RGDSS Model.
- In the Colorado River Basin (Water Division No. 5), negotiations between Denver Water and several west slope water interests ("the Colorado River Cooperative Agreement"), has made significant progress. The DWR will continue to support negotiations and the administrative/accounting needs of all parties involved. The settlement will resolve long standing issues between east slope and west slope water use demands and reduce overall litigation between numerous parties and the State of Colorado. DWR is working with the CWCB to collect baseline data on prior and perfected water rights in the Colorado River system and to develop strategies to avoid initiation of a "compact call" on the Colorado River in the event long term flows on the Colorado require the upper basin States to limit water use.
- Under the Animas-La Plata Compact and federal authorization, the Ridges Basin Dam, pumping plant and pipeline were constructed (Water Division No. 7). The Animas-La Plata Project came on-line in FY 2010-11 with the filing of Lake Nighthorse. Compact deliveries may begin in FY 2011-12. Colorado continues to work with New Mexico and the other project water users in developing an administrative protocol for project water delivery to the users in both states.

#### **Colorado Geological Survey**

• The Colorado Geological Survey released three significant new reports on ground water in the Denver Basin. The reports, representing more than a decade of investigation, provide the most detailed information yet on the varied distribution of groundwater in the Denver Basin and show the most productive aquifers are concentrated near the mountain front and diminish

to the east. The reports will help regulators, local officials, developers and planners better understand the variability of water productivity in the Denver Basin, a major source of water supply for populous regions south of Denver.

- CGS is investigating the subsidence potential in areas that have been undermined by historic coal mines in the Tri-Towns area (Firestone, Frederick, and Dacono) of southern Weld County. The Tri-Towns area was actively mined for coal during the late 1800s to mid 1900s. Roughly 35 known coal mines are located in the project study area. Old underground mine workings can collapse and create deformation at the ground surface.
- A newly-released study by the Colorado Geological Survey examined areas in Colorado that have naturally poor, surface-water quality due to the area's geology. The report, titled "Natural Acid Rock Drainage Associated with Hydrothermally Altered Terrain in Colorado," identifies a number of streams in eleven different headwater areas of Colorado where surface water is acidic and has high concentrations of metals upstream of any significant human impacts. The report can be used to distinguish the natural, or background, water quality so that realistic clean- up goals for water quality can be set.
- CGS mapped and identified geologic hazards on over 258,000 acres of land in areas with high growth rates. Local, state and federal governments used this information to protect public safety and reduce economic losses.
- The Colorado Geological Survey completed investigation of potential water bearing strata on over 4,700,000 acres of land. CGS identified potential aquifer recharge and storage volumes of up to 7,000,000 acre-feet. These studies provide essential information to water districts, local governments, State agencies and the public about potential water availability and the ability to recharge and store water in aquifers.
- CGS evaluated over 500,000 acres of land for potential water quality and quantity problems. This included looking at potential contamination to 4,900 individual wells and several municipal water supply wells. To help protect pubic safety, CGS often provides such assistance to small communities with limited resources.
- The Colorado Geological Survey published two maps of Colorado's geothermal resources. One map shows the state's geothermal gradient, or the rate at which temperature increases underground. The second plots the location of inactive or abandoned oil and gas wells near geothermal resources. While Colorado does not yet have any geothermal power plants, the U.S. Bureau of Land Management has begun the process of leasing federal lands for geothermal development. Continued CGS research will help further promote geothermal energy development in Colorado.
- CGS identified and evaluated key mineral and energy resources on over 1,000,000 acres of land. This included evaluation of coal, construction materials, metallic minerals, coal bed methane, carbon sequestration potential, and oil and gas resources. This information was used by local governments for land use planning and by the industry for resource development.
- Working closely with local governments, CGS reviewed over 16,100 acres of proposed land developments for geological hazards.

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

- In September of 2010, the Mined Land Reclamation Board (MLRB) approved changes to the Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal and Designated Mining Operations. Rule changes resulted from rulemaking conducted to implement changes to the Colorado Mined Land Reclamation Act, which was amended by the passage of three bills in 2008: SB 08-228, SB 08-169 and HB 08-1161. The trio of laws established new rules to protect Colorado's groundwater during in-situ uranium mining, revised existing rules regarding the disclosure of additional information during prospecting activities and updated hard rock mining fees. Among the key provisions of the new rules: All uranium mines are now Designated Mining Operations, requiring detailed environmental protection plans. In-situ leach uranium mine applications must protect groundwater to existing conditions or to state ground water standards. In-situ leach uranium mine applications must demonstrate that the proposed mining technology has been used at five other locations without harming groundwater quality. In-situ leach uranium mine applications must include detailed baseline hydrology information. In-situ leach uranium mine applicants cannot receive a permit if the applicant is in violation at another operation. Prospecting notices are now largely public information. Public comment is now allowed on prospecting notices. DRMS may now assess insitu leach uranium mine applicants for extraordinary costs associated with permit reviews.
- Maintained oversight on 1,431 construction material mines, 116 hard rock/metal mines and 242 prospecting sites, including approximately 182,000 acres under permit. Conducted 593 inspections and managed 625 permitting actions.
- Conducted ongoing regulation of 41 coal mine permits (including 10 actively producing operations) and 116 exploration sites, covering 166,000 acres. Conducted 395 inspections and 200 permitting actions.
- Last year the Inactive Mines Program infused \$7.5 million into the state's heavy civil construction and technical consulting business economy through a distribution of approximately 121 federally funded abandoned mine safeguarding/reclamation contracts per year. These funds included \$399,458 of American Recovery and Reinvestment Act (ARRA) funding.
- During the past five years 16,382 acres have been released from Phase I of the Coal Program's bonding process and 13,954 acres have been released from Phase II, and 13,235 acres from Phase III (completion of all phases can take up to 10 years to conclude). These releases make Colorado the leader among western states in achieving successful bond releases.

#### SECTION 2: FY 2012-13 AND BEYOND - PREVIEW AND KEY BUDGET CHALLENGES

As we look to the future, I believe there are 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 additional 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.

Unfortunately, a total of \$173 million will have been transferred from CWCB cash funds to the General Fund in FY 2008-09, FY 2009-10, FY 2010-11, and FY 2011-12. On top of that, this budget request will include a proposal to transfer additional moneys (\$33.85 million) from the CWCB Perpetual Base Account to the General Fund in FY 2012-13. The State of Colorado and the Department of Natural Resources face a major challenge in meeting future water supply demands in light of dwindling funding for water programs. The General Fund transfers have greatly diminished the ability of the CWCB to issue loans and non-reimbursable grants for water projects and programs. The CWCB 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 until after the budget problems are solved. 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. On the positive side, it is estimated that \$20.0 million would be available under the Governor's budget request for water project loans from the Perpetual Base Account in FY 2012-13.

Challenge #2: Efficiently Operating Parks and Wildlife Programs – As mentioned previously, S.B. 11-208 set in motion the merging of the Division of Wildlife and the Division of Parks and Outdoor Recreation. Due to the significant overlap in core elements of these two former agencies, the merger provides a unique opportunity to operate more efficiently. While we are currently in the process of reviewing hundreds of pages of recommendations from the Working Groups, the reality remains that there is much work ahead to fully and successfully implement a merger of these two large divisions. The recommendations of the Working Groups, Division managers, and out stakeholders will provide an important opportunity to explore and implement a wide variety of ideas to help improve the financial standing and operation of both parks and wildlife programs. Looking forward, population growth, forest health issues, and numerous other social, economic, and natural factors are constantly presenting new challenges to the successful

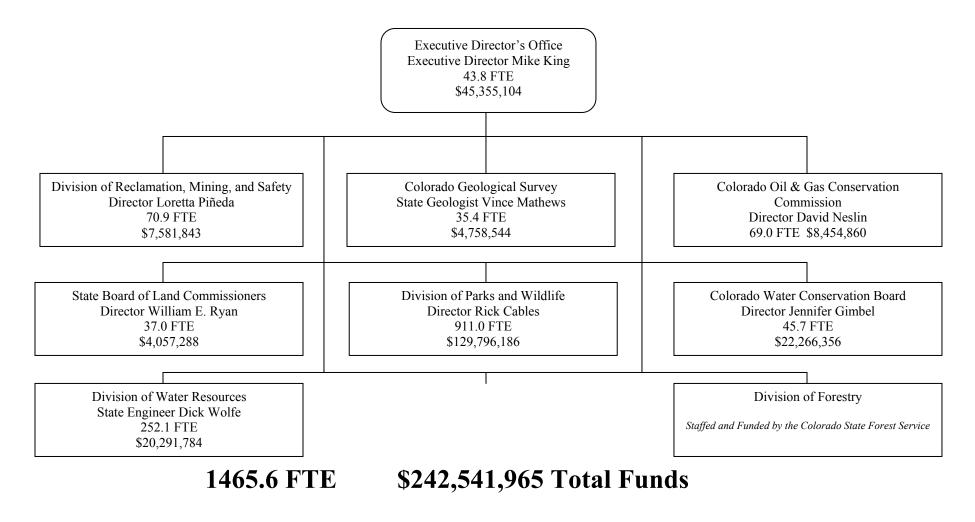
operation of park and wildlife programs. To successfully address these challenges, park and wildlife programs must operate more efficiently. As we change the way we operate, we must be mindful of: (1) the 12 million people each year that visit state parks; (2) the 300,000 licensed hunters each year that hunt in Colorado; (3) the roughly 685,000 licensed anglers each year that fish in Colorado; (4) the numerous citizens and visitors alike who enjoy viewing Colorado's wildlife, and; (5) the significant impact that park and wildlife programs have on local economies. By improving the way we operate, Colorado's state park and wildlife programs can better address current challenges, continue to be an important part of Colorado's tourism economy, and remain a treasured asset that helps to make Colorado such a special place for residents and visitors alike.

Challenge #3: Finding Alternative Revenue Sources for Parks and Wildlife Programs – Both prior to and separate from During FY 2011-12, General Fund support of State Parks was completely eliminated; in the early 1990's General Fund support of State Parks exceeded 30 percent. While severance tax support has backfilled some of this loss, severance tax support of State Parks is also declining and over-reliance on this volatile revenue stream is not prudent. Similarly, Wildlife programs face two significant financial challenges. First, it was recently discovered that the Wildlife Cash Fund reserve had been overstated in certain budgetary documents. The correction of the errors resulted in an unobligated cash reserve of \$16.2 million in the Wildlife Cash Fund at the end of FY 2010-11. A long standing requirement exists that unobligated cash reserves be maintained at ten percent or more of annual revenues. The cash reserve was met at the end of FY 2010-11, albeit barely. Additional strategies may be needed to maintain the required reserve in FY 2011-12 and beyond. Further, there is a national trend whereby the total number of people hunting across the United States is declining. Hunting revenues comprise a majority of the agency's revenues and subsidize fishing and non-game species protection programs. As such, potential reductions in hunting license sales have the potential to significantly affect all of the Division's wildlife programs. Given all of these challenges, the successful and sustainable operation of park and wildlife programs over the long-term will likely require Colorado Parks and Wildlife to seek alternative sources of revenue.

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 that 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.

Mike King Executive Director, Colorado Department of Natural Resources

# Colorado Department of Natural Resources



\$23,422,123 GF \$191,031,122 CF \$8,480,565 RF \$19,608,155 FF

November 2011. Figures shown are FY 2011-12 Appropriations

# Colorado Department of Natural Resources Strategic Plan

The Colorado Department of Natural Resources (DNR) is responsible for the management of the water, land, wildlife, minerals/energy/geology 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 eight divisions plus an Executive Director's Office. 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 State Parks. In this regard, natural resources are an important part of Colorado's tourism industry and play an important role in 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, 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 to find ways to share 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.
- **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. Promote renewable energy, innovative technology, and energy efficiency as part of sustaining Colorado's long term energy supply.
- 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' 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.

# **DEPARTMENT OF NATURAL RESOURCES PERFORMANCE MEASURES**

Each division in the Department of Natural Resource has contributed to the Department's Strategic Plan. It should be noted that many of the Department's divisions have their own strategic plans, which will provide more detailed information than is contained in this Strategic Plan. This document intends only to summarize performance related to a select few of the Department's highest priority objectives.

Given the diverse statutory missions and programs of the Department's eight divisions, the Department's 1,500+ FTE, seasonal employees, temporaries, and volunteers work every day on a wide variety of Department objectives. Below, the Department has chosen seven key performance measures to be used in measuring the Department's success in meeting high priority objectives. While accepting these measures as the highest profile measurement of the Department's performance, the Department cautions readers that performance evaluation should start, but not finish with, an evaluation of the performance measures. Measuring performance for natural resource programs is complex and often multi-dimensional. For example, good management of the State's water resources might involve: (1) protecting water quality; (2) enhancing municipal, industrial, and agricultural water supply; (3) ensuring water is put to beneficial use; (4) ensuring the delivery of water to other states and countries in accordance with interstate water compacts; (5) regulating water use to be sure water is consumed only by legally entitled users; (6) ensuring water is flowing through rivers and streams at the appropriate amounts and proper times to enhance wildlife and wildlife habitats; and (7) analyzing groundwater resources to be sure that such use is sustainable. In this regard, the Department's management of water resources is not easily measured by a single metric. Further, it is important to recognize that "Mother Nature" has a significant impact on the Department's ability to achieve desired outcomes. External factors which can affect natural resource related outcomes include drought, forest fires, heavy snowfall / inclement weather, social and economic trends, and outbreaks of wildlife disease. With these difficulties in mind, the Department will attempt to provide narrative clarification and background to help analyze performance.

# **DNR-1. Species Conservation**

Objective: Protect the diversity of Colorado's wildlife resources

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of species on the "Species of Greatest	Benchmark	210	210	210	210
Conservation Need" list	Actual	210	210	Unknown	Unknown

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of species listed under the Federal Endangered	Benchmark	13/17	15/20	17 <sup>1</sup> /22	$20^2/24^3$
Species Act / Prevented-State- Federal Listing (Cumulative)	Actual	15/20	15/20	Unknown	Unknown

# Strategy:

Maintaining healthy wildlife populations and ecosystems is one of the major components of DPW's mission. Succeeding in this mission means, among other things, preventing the decline of populations to the point where listing under the federal Endangered Species Act is warranted. The listing of a species (or avoidance of listing) is the end result of many factors and reflects the success of DPW'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. This measure focuses on a relatively small number of species, most of which are in peril, and are therefore of extreme importance to DPW and receive considerable management attention.

In order to prepare the federally-required "Colorado Wildlife Action Plan", CPW developed a set of criteria for identifying the "Species of Greatest Conservation Need." Maintaining healthy wildlife populations and ecosystems is one of the major components of the DPW's mission. This measure focuses more broadly on overall ecosystem health and can be viewed as a barometer of the

health of wildlife in Colorado. Species on this list are targeted by conservation programs so as to secure wildlife populations such that they do not require protection via federal or state listing regulations.

### Evaluation of Prior Year Performance:

No new species were listed either federally or through the State of Colorado during FY 2010-11. Three species that had either been petitioned for listing or proposed for listing under the Federal Endangered Species Act (White-tailed Ptarmigan, Mountain Plover, and Northern Leopard Frog) were determined not warranted for listing and removed from the Federal Candidate Species List during FY 2010-11.

In September 2011, the US Fish and Wildlife Service, through a court mandated work plan, has been directed to make listing decisions on 9 Federal Candidate Species occurring in Colorado. These species 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 all species except Greater Sage Grouse and Rio Grande Cutthroat will be made during either the Federal Fiscal Year 2013. The decision for Rio Grande Cutthroat will be made in the Federal Fiscal Year 2014 and for Greater Sage Grouse in Federal Fiscal Year 2015.

The fifteen wildlife species are currently listed under the federal Endangered Species Act: Whooping Crane, Least Tern, SW Willow Flycatcher, Piping Plover, Mexican Spotted Owl, Bonytail chub, Razorback Sucker, Humpback Chub, Pikeminnow, GC Trout, Gray Wolf, Black-footed Ferret, Grizzly Bear, Preble's Meadow Jumping Mouse, and Lynx.

<sup>1</sup>Multi District Litigation (MDL) Candidate species expected to be federally listed in FY 11-12: Gunnison Sage Grouse (2-3-12), Lesser Prairie Chicken (June 2012)

<sup>2</sup>MDL Candidate species with potential to be federally listed in FY 12-13: Western Yellow-billed Cuckoo, Wolverine, New Mexico Jumping Mouse

3MDL Candidate species with potential to be found not warranted for listing in FY 12-13: White-tailed Ptarmigan, Gunnison Prairie Dog

Listing decisions for Greater Sage Grouse and Rio Grande Cutthroats are expected in FY15 and FY14 respectively

The Comprehensive Wildlife Conservation Strategy was finalized in FY 2006-07. This plan is a ten-year plan and as required by the Fish and Wildlife Service, prior to 2015 when the plan must be revised, an assessment will be made as to the status of the species listed and what accomplishments have been made. The Division currently has over 70 recovery and conservation plans targeted to either individual species or ecosystems and these plans are being implemented over this ten year period. The first time that the actual outcome will deviate from the benchmark outcomes will be evident in the FY 2015-16 actual data once the results of the ten year plan have been analyzed. Because this measure is updated about once every ten year, the additional performance measures associated with endangered species listing and preventing listings was added to this objective to better track performance from year to year.

## **DNR-2. Outdoor Recreation**

Objective: Provide and promote a variety of outdoor recreational opportunities for citizens and visitors.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Annual Visitation to State Parks *	Benchmark	12,360,000	12,480,000	12,387,874	12,600,000
	Actual	12,295,354	12,338,520	Unknown	Unknown

<sup>\*</sup> Note: The Division is in the process of installing Entrance Automation stations at pilot parks throughout the Parks system. This number may be adjusted depending on the outcome of this project.

#### Strategy:

The total number of visitors to Colorado's 42 state parks has grown over the past five years, due in part to expanding the number of state parks and the recreational opportunities within the parks. Another factor contributing to this increase in visitation is the growth in 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 Division-wide Marketing Goal which states that State Parks will: "Retain current and acquire new customers through exceptional service and by improving State Parks' visibility with innovative marketing." This will be carried out by broadening the Agency's visibility, maintaining high-quality recreation opportunities for existing visitors, and expanding in-state and regional marketing efforts to attract additional visitors. As we move forward, the Department's performance in this area will have to be considered in light of the overall budget provided to State Parks and actions taken to address the loss of General Fund support. Operations at Bonny Lake State Park have already been reduced and additional proposals to reduce operations at other state parks may be considered in order to improve the long term financial sustainability of the state park system. Because the Parks and Wildlife Commission has not approved any such actions as of the writing of this budget request, the benchmark visitation for FY 2012-13 shown above is based on current operations. However, if additional reductions in operating budget for state parks were implemented, this visitation estimate may not longer be realistic.

### Evaluation of Prior Year Performance:

Visitation increased 0.4% in FY 2010-11 over FY 2009-10. This was probably due to a number of factors, including overall population growth of the state, and development of new parks facilities. The summer months are by far the busiest of the year.

# **DNR-3.** Compact Compliance

Objective: Maximize efficient use of Colorado's water resources in compliance with interstate compacts

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Overall compliance with interstate water compacts (expressed as a percentage)	Benchmark	100%	100%	100%	100%
	Actual	88%	88%	Unknown	Unknown

### Strategy:

It is critical that the State of Colorado meet its contractual water delivery obligations for each of its nine compacts, two United States Supreme Court decrees, a U.S. Treaty, and 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 performance measure 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 performance measure will assess the overall compliance based on each respective accounting method.

#### Evaluation of Prior Year Performance:

For FY 2010-11, the State of Colorado was in compliance with both U.S. Supreme Court Decrees, all agreements, and eight (with exception noted below) of its nine compacts (not in compliance with the Republican River Compact). The Animas-La Plata Project (component of the Animas-La Plata Compact) came on-line in FY 2010-11; with the filing of Lake Nighthorse, compact deliveries may begin in FY 2011-12. The La Plata River Compact is not considered in this analysis due to unresolved accounting issues. Operational issues for the compacts and percentage of compliance follow:

1969 Animas-La Plata Project Compact	100%
1949 Arkansas River Compact	100%
1922 Colorado River Compact	100%
1963 Amended Costilla Creek Compact	100%

1922 La Plata River Compact	N/A
1942 Republican River Compact 2002 Final Settlement Stipulation	0%
1938 Rio Grande River Compact	100%
1923 South Platte River Compact	100%
1948 Upper Colorado River Compact	100%

# **Republican River (Republican River Compact)**

Numerous actions have been taken by the Colorado State Engineer in the Republican River Basin over the past fiscal year to assist Colorado to achieve compliance with her obligations in relation to the Republican River Compact. Principally, Colorado formally proposed the idea of a Compact Compliance Pipeline (CCP) to the State of Kansas and Nebraska for compliance with the Republican River Compact; Nebraska supports approval of the CCP, while Kansas does not. Colorado continues to work with Kansas and Nebraska to develop an amicable resolution for approval of the proposed CCP. The Colorado State Engineer participated in an arbitration hearing on the CCP in July 2010. In October of 2010, an Arbitrator found that Kansas was not un-reasonable in its denial of the resolution; however, she noted that the states needed to work toward a settlement. Colorado and Kansas continue negotiations through 2011. The Republican River Water Conservation District has accepted a bid for construction of the CCP, with an anticipated start date of September 2011. Major federal conservation programs such as the Conservation Reserve Enhancement Program (CREP), Environmental Quality Incentives Program (EQIP), and the Agricultural Water Enhancement Program (AWEP) have been extremely successful in retiring irrigated acreage in the Republican River Basin in Colorado. As of FY 2010-11, the cumulative annual total number of acres participating in land conservation programs (temporary and permanent), to which the DWR is a technical or regulatory participant, was 32,662 acres.

Measurement rules were promulgated in July 2008, requiring metering of all wells within the Republican River Basin effective March 2009. With the help of additional enforcement staff, measurement devices are in place on almost all the approximately 4,000 high capacity wells in the Republican River Basin. Data have been collected and are currently being evaluated. In FY 2010-11, the Colorado State Engineer also ordered release of approximately 5,007 acre-feet of water stored in Bonny Reservoir to reduce Colorado's water consumption now and in the future.

### **Arkansas River (Arkansas River Compact)**

In an effort to avoid potential future violations of the Arkansas River Compact, the Colorado State Engineer formed a special advisory committee to assist in developing rules that dealt with irrigation improvements made in the Arkansas River Basin to surface water irrigation systems. These improvements are subject to the Arkansas River Compact under certain circumstances. After over two years of work by the committee, the Irrigation Improvement Rules were promulgated and delivered to the Water Court for Water Division No. 2 for approval in September 2009. Over 20 objections to the rules were filed; however DWR was able to settle with all

the objectors and the Water Court issued a decree approving the rules in November 2010. The Irrigation Improvement Rules became effective in 2011; as of July 1, 2011 the State Engineer approved the first Compact Compliance Plan under the Rules.

## **Rio Grande (Rio Grande Compact)**

In the Rio Grande Basin, an advisory committee was formed in 2009 to assist the State Engineer in drafting rules to address injurious depletions caused by ground water use, sustainability of aquifers, setting an irrigation season, developing ground water subdistricts and ground water management plans to prevent injury to senior water rights, and avoiding interference with the Rio Grande Compact. The Rules Governing the Withdrawal of Ground Water in Water Division No. 3 are anticipated to be completed and submitted to the Water Court in late 2011. Work continues on a CREP application for the Rio Grande Basin for retirement of approximately 40,000 acres in the Rio Grande Water Conservation District's Subdistrict No.1.

#### Colorado River (Colorado River Compact and Upper Colorado River Compact)

Colorado is subject to the Colorado River Compact and the Upper Colorado River Compact. These compacts allocate a portion of the flows in the Colorado River Basin to Colorado's use. With uncertain future climatic conditions and growing demand for water from this system, Colorado is considering how compact obligations can be met in the event insufficient water is available to meet our obligations. The DWR is working with the Colorado Water Conservation Board (CWCB) to complete studies to determine current needs and depletions in the Colorado River Basin and to assist in developing strategies as to how water rights would be administered on the Colorado River and its tributaries in the event Colorado could not meet its obligations under the compacts.

# La Plata River (Animas-La Plata Compact and La Plata River Compact)

To assure compliance with the La Plata River Compact, DWR supported the La Plata Water Conservancy District, the Southwestern Water Conservancy District, and the Colorado Water Resources and Power Development Authority's construction of the Long Hollow Reservoir, which will include a pool of water to assist Colorado in meeting our obligations under the La Plata River Compact. The Colorado Water Resources and Power Development Authority funded the dam design from set-aside Animas-La Plata settlement funds with the Indian tribes in the area.

Under the Animas-La Plata Compact and federal authorization the Ridges Basin Dam, pumping plant and pipeline were constructed. The Animas-La Plata Project came on-line in FY 2010-11 with the filing of Lake Nighthorse. Compact deliveries may begin in FY 2011-12. Colorado continues to work with New Mexico and the other project water users in developing an administrative protocol for project water delivery to the users in both states.

# **Costilla Creek (Costilla Creek Compact)**

Colorado is in full compliance with this compact.

#### **South Platte River (South Platte River Compact)**

Colorado is in full compliance with this compact.

# **DNR-4.** Wildlife Recreation

Objective: Provide hunting and fishing recreation opportunities for citizens and visitors to Colorado

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of Licensed Hunters in Colorado	Benchmark	305,000	305,000	305,000	305,000
(Based on Calendar Year)	Actual	288,098	286,363	Unknown	Unknown

### Strategy:

Providing hunting recreation opportunities is one of the major components of the DPW mission. Hunting recreation produces substantial economic benefits for Coloradans, particularly those in small rural communities. The number of people who actually hunt in Colorado is the outcome of many factors and reflects the success of the DPW'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, and 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 spite of these trends will be a challenge.

# Evaluation of Prior Year Performance:

In FY 2009-10, the actual number of hunters was 94.5% of the benchmark target. In FY2010-11, the actual number of hunters was 93.9% of the benchmark target. The Division continues to see a decrease in number of licensed hunters in Colorado. This decrease is related to many biological, social, and economic variables such as the economy, hunter satisfaction, game management objectives, demographics, etc., The DPW is aware of these issues and the corresponding negative impact on Division revenue, budget prioritization, and planning for future years. The DPW will continue to monitor and take steps to provide hunting recreation opportunities for citizens and visitors to Colorado.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of Licensed Anglers in Colorado	Benchmark	685,000	690,000	685,000	685,000
(Based on Calendar Year)	Actual	687,584	674,775	Unknown	Unknown

#### Strategy:

Providing fishing recreation opportunities is another major component of the DPW mission. The number of people who actually fish in Colorado is the outcome of many factors and reflects the success of DPW'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, 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.

### Evaluation of Prior Year Performance:

In FY 2009-10, the Division exceeded the established benchmark as the actual number of licensed anglers was 103.8% of the measure. In FY2010-11, the actual number of anglers was 97.8% of the benchmark target. While the Division increased its benchmark for FY2010-11, it believes that this target was overly optimistic given the social and economic variables prevalent in the past two years. The DPW will continue to monitor and take steps to provide fishing recreation opportunities for citizens and visitors to Colorado through the strategies outlined above.

# **DNR-5.** Water Supply

Objective: Meet the current and future water supply needs of the State.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Increase water storage to meet	Benchmark	10,000 ac ft	122,265 ac ft.	36,455 ac ft.	5,740 ac ft
long term water supply needs.	Actual	750 ac ft	75,802 ac ft	Unknown	Unknown

### Strategy:

In 2003, the General Assembly approved funding to complete the Statewide Water Supply Initiative (SWSI) to examine, on a basin by basin basis, Colorado's projected water supplies and water demands. One of SWSI's major findings was that projects and water planning by local water providers have the ability to meet about 80 percent of Colorado's municipal and industrial water needs through 2030. CWCB will work to help local entities meet their demands by managing the Construction Fund and the Severance Tax Trust Fund Perpetual Base Account and other grants funds to provide low-interest financing for water infrastructure and grants for water related planning, programs and project implementation. The CWCB has estimated that by the year 2050, Colorado will need an additional 750,000 to 1,100,000 ac ft of water supply.

# Evaluation of Prior Year Performance:

The CWCB financed and completed one new storage project and three dam rehabilitation projects in FY 2010-11, resulting in approximately 75,802 ac. ft. of additional water storage. The one new storage project was Rueter-Hess Reservoir, located near Parker, Colorado, which involved over 72,000 ac. ft. in new storage. Eight other new storage or rehabilitation projects, financed by the CWCB, are currently either in the design or construction phase and are expected to be completed within the next two to four years. The resulting total increase in water storage for these projects is in excess of 42,195 ac. ft. In FY 2010-11 CWCB completed 12 projects, involving over \$22 million in loan funds. Typically, the CWCB Loan Program 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 measures for this item is at times hard to predict. Staff is projecting a significant reduction in money available for new loans in FY 2011-12 and FY 2012-13 from the Severance Tax Perpetual Base Account, which will effect water supply projects in FY 2012-13 and FY 2013-14 due to the cash transfer of CWCB funds to the State's General Fund. To-date the General Assembly has transferred over \$163,000,000 from the Severance Tax Perpetual Base Account and \$10,000,000 from the Construction Fund. The CWCB has identified over \$110,000,000 in water project needs over the next 10 years.

# **DNR-6.** Energy Development

Objective: Ensure that energy development is undertaken in a responsible manner that encourages protection of environmental resources such as water and wildlife habitat

Performance Measure Percent of oil and gas wells permitted	Outcome Benchmark	FY 2008-09 Actual	FY 2009-10 Actual 37%	FY 2010-11 Actual 37%	FY 11-12 Estimate 37%	FY 12-13 Request 37%
using a closed loop drilling system	Actual	incomplete data	37%	67%	unknown	unknown

Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Percent of oil and gas wells permitted in Sensitive	Benchmark	N/A	0%	0%	0%	0%
Wildlife Habitats that are included in Wildlife Management Plans	Actual	0%	15%	45%	unknown	unknown

# Strategy:

The Department will work 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. The primary mission of the OGCC is to "foster the responsible, balanced development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare, including protection of the environment and wildlife resources". 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. An important measure of how well the OGCC is implementing these responsibilities is the number of adverse impacts to water resources that occur from oil and

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

A way to measure progress, in terms of reducing impacts to water resources, is to look at closed loop drilling systems, which significantly reduce impacts to the environment by eliminating the use of drilling pits. Benefits also include: better protection of groundwater, more timely detection of drilling fluid releases, and easier and timelier reclamation. Furthermore, statutory changes in 2007 require the OGCC to encourage operators to use landscape level planning tools to provide for orderly development of oil and gas fields minimizing surface disturbance and fragmentation in 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.

Evaluation of Prior Year Performance:

### Closed Loop Drilling:

The OGCC requires the use of closed loop drilling in certain situations, such as proximity to surface and/or ground water. In many situations, when operators are given a choice between using a closed loop drilling system or lined pits, the closed loop system is preferred. 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 pits on their property.

### Wildlife Management Plans:

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.

# **DNR-7. State Land Board Lands**

Objective: Earn reasonable and consistent revenue on State Land Board properties for the benefit of all trusts

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Increase revenues to the school trust by 5 percent annually	Benchmark	\$47,697,543	\$ 68,142,859	\$ 71,550,002	\$ 75,127,502
	Actual	\$66,361,924	\$120,557,842	Unknown	Unknown

The table below provides a more comprehensive and detailed look at all State Land Board revenues (not just the School Trust revenue shown above).

Income Source	FY 2006-07 Actual	FY 2007-08 Actual	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual
Agricultural Rentals	\$10.2 million	\$11.8 million	\$10.7 million	\$11.8 million	\$10.8 million
Mineral Royalties	\$43.7 million	\$47.7 million	\$55.4 million	\$34.9 million	\$43.0 million
Bonus Payments	\$3.6 million	\$6.4 million	\$3.9 million	\$14.9 million	\$63.3 million
Other	\$5.0 million	\$5.4 million	\$5.6 million	\$6.3 million	\$5.8 million
TOTAL	\$62.5 million	\$71.3 million	\$75.6 million	\$67.9 million	\$122.9 million

Notes: The "Other" category includes mineral rental income, commercial revenue, renewable energy income, timber sales, land sales, interest income, and fee revenue.

# Strategy:

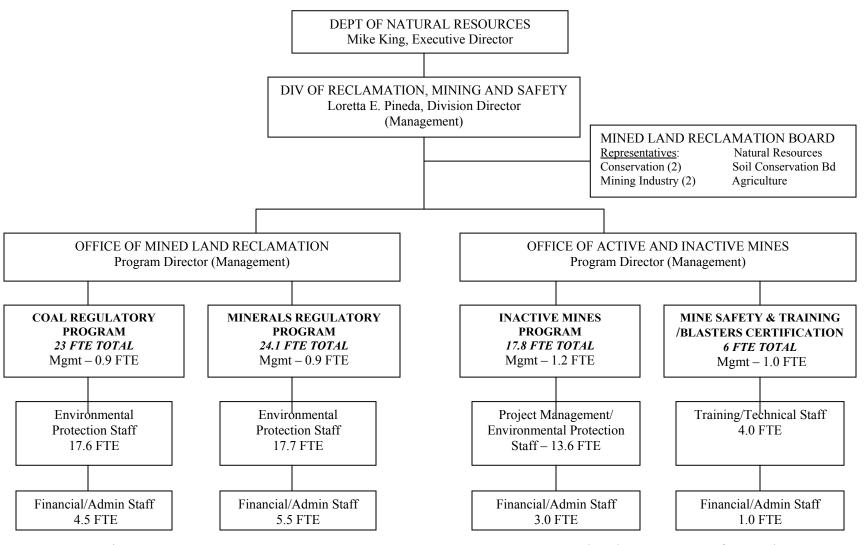
The School Trust is the largest trust accounting for 98.0 percent of the total State Land Board revenue. The main revenue components are: mineral (e.g., royalty, bonus, and lease), surface (e.g. agricultural and recreation leases), and commercial (e.g. office and ground leases). The goal is to diversify the trust land portfolio ownership and leasing in order to reduce revenue instability cause by such things as drought, commercial market, and minerals pricing. The School Trust saw a significant decline in revenue in FY 2009-10 due to coal royalties. Offsetting such a decline of forty percent will take years of positive growth from commercial and surface revenues.

#### Evaluation of Prior Year Performance:

Revenue to the school trust reached a new record in FY 2010-11 driven by a recent dramatic surge in the per acre "bonus" amounts paid at auction to lease land for oil and gas development on State Trust lands. As the available supply of desirable sites recedes, maintaining this level of revenue to the trusts represents a challenge in coming years. The Board's goal is to expand its portfolio with a specific emphasis on long-term asset acquisition and stewardship initiatives that will help offset declines in revenue from non-renewable sources.

# DIVISION OF RECLAMATION, MINING AND SAFETY

70.9 FTE CF \$4,560,658 REAPPR \$30,000 FF \$2,991,185



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# **Division of Reclamation Mining and Safety**

# DRMS -- Description

The Division of Reclamation Mining and Safety consists of four programs: Coal Regulatory program, Minerals Regulatory program, Inactive Mine Reclamation program, and Mine Safety and Training program. The Coal Regulatory program oversees active coal mining operations and the reclamation of the land by the mining company after the coal has been extracted. Responsibilities of the program include reviewing permit applications, amendments, revisions, and requests for bond release. The Mined Land Reclamation Board and the Minerals program issue and enforce exploration, mining and reclamation permits for all non-coal mines in Colorado on state, federal and private lands. The types of minerals regulated are metals (such as uranium, gold, silver and molybdenum) and construction materials (such as sand, gravel, marble and flagstone). The Inactive Mine Reclamation program addresses the hazards and environmental problems that exist from abandoned mines in Colorado. A comprehensive inventory of hazards and environmental problems associated with past mining activities estimated that there were 23,000 abandoned mined sites throughout the state. The Mine Safety and Training program is charged with protecting the health and safety of miners. Program activities include performing site-specific mine health and safety training and education in all aspects of mine operations, certification of coal mine officials, and inspection of tourist mines.

# *DRMS – Statutory Authority:*

Coal Regulatory Program: State: Section 34-33-101, C.R.S. Federal: (SMCRA) 1977 - PL 95-87

Inactive Mine Reclamation Program State: Section 34-33-133, C.R.S. Federal: (SMCRA) of 1977, Title IV, PL 95-87

Minerals Regulatory Program State: Sections 34-32.5-101 et seq.; 34-32-101 et seq; and 25-8-104, C.R.S.

Mine Safety and Training Program: Federal: Title 34, Articles 20-25, Title 30, Parts 1-199 (SMCRA) 1977 – PL 95-87. State: Section 34-33-101, C.R.S.

#### DRMS -- Mission:

To protect the public, miners and the environment during current mining operations; to restore abandoned mines; and to ensure that all mined land is restored to beneficial use.

## DRMS -- Vision:

The division is committed to balance the need for mineral resource production with protection of the public, environment and Colorado's natural resources.

Over the next five years, the biggest challenge will continue to be balancing mineral resource development and environmental protection. Increases in precious metal values, renewed interest in strategic minerals and rare-earth-elements, coal mine expansions and demand for construction materials have resulted in an increased workload related to exploration and permit applications, revisions and enforcement activities. In addition, the DRMS staff is confronted with technical and cyclical trends related to uranium mine development and reclamation, and closeout plans for exploration and mining. DRMS 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. DRMS must make investments to its business system databases and develop electronic permitting and geographical information systems (GIS) in order to maintain efficient customer services.

Federal budgets will continue to get tighter and more restrictive and will continue to have implications for two critical areas that support state government programs for the regulation of active coal mining operations and the reclamation of abandoned mine lands (AML). Any federal grant reductions to the Coal Regulatory Program would make it difficult to maintain staffing levels and cover inflationary costs for the regulation of coal mining in Colorado. In addition, federally proposed changes to the grant application process for AML reclamation work would inhibit the AML program's safeguarding efforts of over 350 hazardous mine openings per year and work to reclaim problems at more than 15,000 abandoned coal and hardrock mines in Colorado. Stagnant federal funding for the mine safety training program makes it difficult to keep up with the demand for training and training materials.

New rulemaking initiatives by Office of Surface Mining (OSM), Environmental Protection Agency (EPA), Mine Safety and Health Administration (MSHA) and other federal agencies could have impacts on the division's regulatory programs, abandoned mine program, and mine safety training program. New federal regulations threaten state primacy, and may require review of state statutes, regulations and policies. This is especially true where the regulation of mining operations is concerned. DRMS' goal is to coordinate with federal agencies on proposed policies, legislation and regulation, and to maintain state primacy for regulatory programs.

Employee retention, recruitment and funding challenges will also continue over the next five years as the division workforce ages and more retirements occur. DRMS will strive to provide training and maintain adequate staffing as this transition occurs.

Tackling the most difficult abandoned mined land issues, including water quality issues, also involves dealing with long-term liability responsibilities which need to be worked out between landowners and state and federal government agencies. Without federal "Good Samaritan" legislation (provides liability waivers for organizations and groups who want to do water quality improvement projects in areas impacted by prior mining activity) many projects will continue to go unfunded and long-term objectives for environmental clean-up and reduction of mining-impacted stream water metals loading will not be realized.

# **DRMS - PERFORMANCE MEASURES**

# DRMS-1. Mined Land Reclamation

Objective: Reclaim coal and minerals mined acres to a beneficial post mining land use

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Final bond release – expressed as a percentage of the total number of	Benchmark	3.0%	5.0%	5.0%	4.0%
mined acres recorded per fiscal year.	Actual	5.3%	1.0%	Unknown	Unknown

#### Strategy:

This is a measure of the establishment of post-mining beneficial land use as expressed in a ratio of final reclaimed acres over the total number of mined acres recorded per a single fiscal year. "Mined acres" are defined where ground excavation has occurred. The number of released acres is a function of mine operator's submitting applications for release of acres that are typically out of a larger mined area under continued excavation. The number of acres released is also dependent on operator factors such as financial status and insurance considerations for that mine. Due to total mined acres fluctuating annually with new acres added (new permits) and reclaimed acres removed, the measure provides a general indicator of industry trends toward continued or expanded mining versus reclamation/closing operations across the state. Mine operations can operate for over 20 years with reclamation being performed in phases over the acres where the minerals have been removed. 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. Colorado is a national leader in the final release of coal reclamation sites.

Evaluation of Prior Year Performance: This measure is contingent on mine operators submitting applications for release of acreage. The benchmark percentages are historic estimates and actual results will vary.

# **DRMS-2.** Regulate Mining

Objective: Protect the environment by ensuring regulatory compliance at coal and mineral mine sites.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
The percent of inspected coal and mineral mine	Benchmark	100%	100%	100%	100%
sites that are in regulatory compliance annually.	Actual	97%	97%	Unknown	Unknown

# Strategy:

This is a measure of overall regulatory compliance for the mine sites that were inspected in a single fiscal year as compared to the ideal of 100% compliance at inspected sites. Mine operators manage the sites to ensure protection of environmental resources, minimize onsite impacts, and prevent offsite impacts. Inspections that result in no violations being cited offer a measure of this goal (percent of inspected sites in compliance). The Mined Land Reclamation Board and the Division determine when a permit is in violation of statutes, rules or regulations.

Evaluation of Prior Year Performance: The percentage of mine sites exhibiting compliance remained relatively constant at 97% as compared to previous years. This is a 3% increase in compliant sites from FY2006-07. The percent of mine sites inspected and in compliance will be a function of various factors. Frequency of inspections and regulatory presence in the field may influence this percentage. As the DRMS increases inspection frequency, the mine operators may be more proactive in maintaining mine site compliance. An increased inspector presence also improves the probability that regulatory outreach and education will further facilitate operator initiatives to maintain compliance.

# DRMS-3. Safeguarding/Reclamation of Abandoned and Inactive Mines

Objective: Reclaim or safeguard abandoned mine sites from the effects of past or inactive mining

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percentage of abandoned or forfeited mine sites	Benchmark	36.0%	36.0%	40.5%	40.5%
reclaimed/safeguarded out of a baseline	Actual	37.0%	38.6 %	Unknown	Unknown
inventory of 23,000 total project units <sup>1</sup> .					

#### Strategy:

This is a measure of the cumulative percentage of safeguarding/reclamation projects that have resolved problems at abandoned mine sites relative to the number of sites per statewide inventories conducted between 1980 and 2005. This inventory is updated as additional problems are encountered in the field and addressed as part of on-going projects. The baseline is 23,000 sites.

Evaluation of Prior Year Performance: The benchmark was exceeded in FY2010-11. In addition to safeguarding 377 hazardous mine openings, the program reclaimed 239 acres of abandoned or inactive mined land, and conducted water quality improvement projects at 19 legacy mining sites, putting \$7.5 million in reclamation expenditures directly into Colorado's construction and engineering-consulting sectors. Abandoned mine reclamation includes several different aspects including safeguarding, historic preservation, economic stimulation, and environmental clean-up. Project activities include field investigations, project development, project design, NEPA (National Environmental Protection Act) compliance, realty work, construction contract bidding and management, site construction and reclamation, construction inspection, 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.

<sup>&</sup>lt;sup>1</sup>Source for abandoned mine openings baseline inventory: Colorado's Inactive Mine Reclamation Plan/Inventory, Colorado Division of Mined Land Reclamation, 1980.

All these activities require staff time and coordination and in many cases projects need a three year time period in order to accomplish the administrative requirements. The program also performs reclamation at coal mine fires. Coal mine subsidence areas are not reflected in this measure, but are included in the 239 acres of land reclaimed.

Objective: Reclaim or safeguard forfeited mine sites from the effects of mining

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percentage of forfeited mine sites reclaimed/ safeguarded out of a	Benchmark	65%	74%	82%	82%
baseline inventory of 252 total project units.	Actual	68.1%	76%	Unknown	Unknown

#### Strategy:

This is a cumulative measure of projects that have resolved problems at forfeited mine sites relative to the number of sites per statewide inventories prepared between 1983 and 2008. The baseline is 252 sites as of July 8, 2009. This inventory is updated as additional permits are revoked (approximately 2-3 per year) and their corresponding bonds forfeited.

Evaluation of Prior Year Performance: The benchmark was exceeded in FY2010-11. In many cases the forfeited mine sites have not been maintained and require safeguarding and environmental protection. Numerous sites have hazardous materials issues that were not originally foreseen during bonding and permitting, including asbestos testing and disposal, and other toxic chemicals and substances such as cyanide and metallurgical processing reagents. Hazardous materials testing and disposal requirements have increased the costs of reclamation. All these projects must be bid out according to state fiscal and purchasing rules. The program has developed a systematic geographic approach to deal with multiple smaller or low-bonded forfeited mine sites in the same area, improving efficiency and cost effectiveness. Severance tax funding, which supplements reclamation work at sites where bonds are insufficient, was reduced by 50 percent in FY10. This has limited funding for reclamation at some sites to the actual bond amounts that were historically capped at inadequate levels, resulting in an inability to fully complete reclamation plans.

## DRMS-4. Environmental Restoration at Inactive Mines

Objective: Reduce stream degradation caused by past mining

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of water quality improvement	Benchmark	-	12.5%	17%	19%
projects completed on streams impacted by legacy mining, expressed as a percentage of a baseline of 133 approved legacy mining- related TMDLs.	Actual	10% (Actual data for new measure)	15 % (Actual data for new measure)	Unknown	Unknown

#### Strategy: (New Measure as of FY2012-13 Budget Request)

Data for this new measure was first collected beginning in FY09-10, but not included in the DNR Strategic Plan until the FY2012-13 submittal. This measure compares the number of mining-related water quality improvement projects performed by DRMS each year to a baseline of 133 currently documented pollution impairments related to legacy mining and natural background metals loading in Colorado's streams and rivers. The Inactive Mine Reclamation Program reclaims hardrock mine waste and performs source controls work to incrementally address this baseline of 133 separate TMDL's<sup>2</sup> (Total Maximum Daily Loads) that have exceeded allowable standards. Each of these 133 cases indicate impacts due to legacy mining and background loading sources in numerous streams and rivers. Mining related nonpoint source pollution in Colorado is widespread and diverse. Stream acidity and dissolved metals resulting from past mining and milling activities combines with some areas of natural background loading to

<sup>&</sup>lt;sup>2</sup>Source- EPA- Approved TMDL List as of 30-SEP-09: Colorado Water Quality Control Division, 2010.

contribute to the contamination of the state's water resources. The elimination of metals and acidity pollution from mining sources on each impacted stream segment extends over a long period of time and can involve multiple reclamation projects at individual sites on the same stream segment as well as multiple projects on the same mine site where there are complex site characteristics.

Evaluation of Prior Year Performance: The previous measurement standard of not counting duplicate stream miles caused the program to show negligible progress against the stream-mile baseline because numerous water quality improvement projects are occurring on the same stream miles and those "miles" were already counted as an accomplishment in a prior year. The stream-mile measure was adopted 15 years ago because there were no quantified, measurable water quality impairments for individual streams completed at that time. That measure has been discontinued, because detailed assessments are now available using the TMDL approach.

Each water quality improvement project that occurs on the same stream reach or same mine complex contributes some level of water quality improvement -- that was not clearly enumerated in the old stream-mile measure. Another factor causing minor progress against the old stream-mile baseline to show in a certain fiscal year is when investigative and design work are performed during one fiscal year (high altitude conditions restrict project conditions to a few summer months per year), but such efforts cannot be counted as resolving the baseline until the actual on-the-ground work is completed in a later fiscal year. Out of the 20 sites addressed in FY2010-11, only 4 miles of new stream length could be counted under the old measure. The 18 other projects were preliminary investigations/design work or vegetation maintenance at other legacy mine sites located on stream miles previously counted in prior fiscal years. The program also worked cooperatively with watershed stakeholder groups to accomplish long-term water quality improvement objectives, including the investigation or design of 11 new projects that will move to construction in the next few seasons.

Water quality improvement projects that iteratively address sites on the same stream segments counted in the past fiscal years under the old measure need to be accounted for; therefore this performance measure was reassessed and revised in FY2010-11 to reflect a working baseline of 133 documented mining-related water quality impairments in Colorado. Because data was collected toward this new measure in FY2009-10, all fiscal years show data for this new performance measure.

In future years the baseline number of impairments will change due to elimination of impairments through ongoing reclamation work, and inclusion of new impairments as the remaining streams in Colorado are assessed and TMDL's adopted. The baseline number of impairments should be adjusted every 5 years.

## DRMS-5. Mine Safety

Objective: Protect the safety of Colorado's miners

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Average injury rate	Benchmark	National NFDL	National NFDL	National NFDL	National NFDL
at mines that		Coal/Non-coal	Coal/Non-coal	Coal/Non-coal	Coal/Non-coal
received training		2.72/2.06	2.50 / 1.96	2.45 / 1.93	2.45 / 1.93
from the Mine	Actual	Colorado NFDL	Colorado NFDL	Unknown	Unknown
Safety and Training		for MSTP	for MSTP		
Program as		Trained Miners-	Trained Miners-		
compared to the		Coal/Non-coal	Coal/Non-coal		
national average of		2.86 / 2.09	2.31/1.84		
"non-fatal days					
lost" or NFDL					
injury rates.					

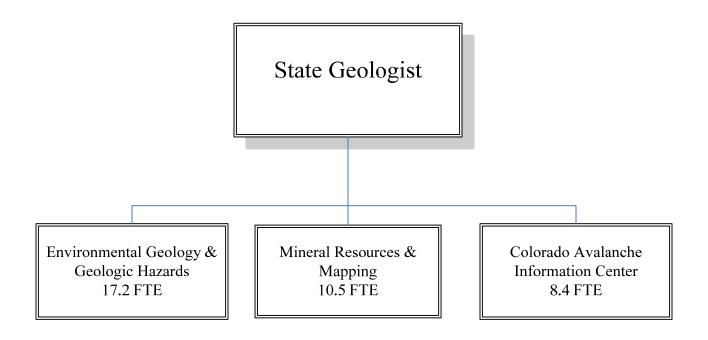
#### Strategy:

This measure compares the "non-fatal days lost" (NFDL) injury rates for the nation's coal and non-coal mines to the NFDL injury rates of Colorado mines that received training from the MSTP. The benchmark values in the appropriation and request years are estimated from national trends.

Evaluation of Prior Year Performance: The Mine Safety and Training Program's (MSTP) goal is to assist Colorado mine operators in reducing their 'non-fatal days lost' (NFDL) injury rates below the national average or below the NFDL rate for Colorado mines for which the program did not provide assistance and to continue that rate to zero. The MSTP does this by providing effective mine safety and health education, auditing mine safety practices, and developing and distributing new, innovative training tools to various mining employees. Last year, the MSTP provided mine safety assistance to all Colorado coal mines. The FY 2010-11 NFDL rate for coal mines receiving MSTP assistance was 2.308 as compared to the national NFDL rate for coal mines of 2.500. The NFDL rate for Colorado coal mines has been reduced from 3.88 in 2009 to 2.308 in 2011. This is a significant improvement. This is coupled with a number of challenges faced by Colorado coal mines including: limited qualified

staff at mines, newer inexperienced miners, slow economic times and difficult mining conditions (i.e. faulting, unstable ground, water inundations, etc.). The NFDL rate for non-coal mines in Colorado mines receiving MSTP services was 1.840 as compared to the national NFDL rate for non-coal mines of 1.957. The NFDL rate for non-coal mines in Colorado receiving MSTP services has dropped from 2.48 in 2009 to 1.840 in 2011, a significant improvement. Over 90 % of non-coal mines in Colorado that received MSTP services had no lost-time injuries. The MSTP is attempting to meet the dramatically increasing demand for mine safety education, auditing and assistance across the state with flat federal funding levels. The MSTP continues to evaluate and test coal mine officials for certification and maintain a high level of competence for supervisory workers at coal mines. The program assists mine operators in complying with the extensive new requirements of the MINER Act of 2006 as well as newly promulgated and proposed federal health and safety requirements. Some of the new requirement include respirable coal mine dust, coal mine official certification standards, additional mine emergency and mine safety training requirements, miner's rights, new ventilation rules, and roof control planning. Over the last several years, the Mine Safety Training Program has been training roughly 4,500 miners each year but must still turn away hundreds of additional training requests due to funding limitations.

# Colorado Geological Survey (CGS)



\$4,758,544 Total Funds 36.1 FTE \$2,931,137 CF \$850,402 RF \$977,005 FF

### Colorado Geological Survey

Mission of the Colorado Geological Survey:

Building vibrant economies and sustainable communities free from geologic hazards, through good science, collaboration, and sound management of mineral, energy and water resources.

Vision of the Colorado Geological Survey:

Protect public safety and enhance the economy of Colorado.

CGS Delivers Its Services Through Three Main Programs:

- The CGS Environmental Geology and Geologic Hazards Program protects people and property by reducing or eliminating risks from geologic hazards and lack of safe, adequate water. Across the state, businesses, citizens, state agencies, and local governments make informed and smart land use and business decisions because of our work. Average citizens and large companies alike, use our geologic hazard, water quality data, and groundwater-supply maps, online tools and on-the ground assistance to avoid or reduce vulnerability and losses to geologic hazards and lack of safe water. Through educational programs, CGS increases the awareness and understanding of these issues throughout Colorado.
- The CGS Mineral Resources and Mapping Program improves the sustainability and economy of Colorado. State agencies, private industry, local governments and others utilize our studies, maps, statistical data to responsibly explore and develop critical mineral and energy resources. The state's economy and environment will benefit from CGS's leadership in the studies of CO<sub>2</sub> sequestration and geothermal power generation (a clean, renewable energy source). Colorado's green industry, which is expected to generate \$61 billion in revenue and provide over 600,000 jobs by 2030, utilize our maps and studies of rare earth metals needed for wind and solar production.

• The CGS 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 as well. Local communities and regional industries all suffer serious economic losses when avalanches close transportation corridors causing lost visitor days and increased transportation costs. CDOT, Colorado's Ski Industry and others use CGS forecasting, online tools, and maps to avoid or reduce their vulnerability and losses to avalanche hazards. CGS also increases public safety through extensive educational programs and educational aids readily available to the public.

#### Other Ways CGS Benefits the Citizens and Economy of Colorado

- Public safety is protected by CGS's quick response to geologic hazard and avalanche disasters across the state.
- CGS prevents large economic losses by working with local governments to place new developments in hazard free areas or to successfully mitigate risks.
- Local, regional, and state agencies make use of CGS groundwater studies and maps to ensure that municipalities, agriculture, and private industry have safe and adequate water supplies.
- Colorado Parks and Wildlife as well as the tourism industry use CGS popular geology guides to promote state parks and geologic wonders throughout Colorado.

## CGS -- Statutory Authority:

The statutory authority for the Colorado Geological Survey is found at Title 34, Article 1, Part 1, Colorado Revised Statutes (2011).

## **CGS PERFORMANCE MEASURES**

## CGS-1. Avalanche Safety

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

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
The number of avalanche deaths	Benchmark	0.122	0.122	0.122	0.122
per 100,000 population per year	Actual	0.159	0.139		

#### Strategy:

Colorado's population has risen 38% since 1990; however, the number of avalanche deaths per 100,000 population has decreased. 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.

#### *Key Products and Customers*:

CDOT and local governments use our 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 CGS forecasting, online tools, and maps to access and manage their vulnerability and losses to avalanche hazards.

Evaluation of Prior Year Performance:

The 2010-2011 operating season for the Colorado Avalanche Information Center (CAIC) was marked by unprecedented snowfall in parts of the Northern and Central Mountains and above average snowfall is all but one of the 10 backcountry zones. By the end of April, snowfall in the river basins of Colorado ranged from 92-134% of average. There were 2,143 avalanches reported to the CAIC between October 2010 and May 2011. In Colorado there were seven people killed in seven accidents in 2010-11. This is above the 10-year average of 5.2, but less than the 2009-2010 season where eight people lost their lives in avalanches. There were 43 people caught and 10 people buried in avalanches during the same time period. In 2010-11, the CAIC staff taught 105 avalanche classes to 5,690 students.

#### CGS-2. Land Use Review

Objective: Protect people and property by reducing or eliminating short and long-term risks from geologic hazards sound landuse planning and timely Land Use Reviews

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percentage of Land Use Reviews	Benchmark	97%	97%	97%	97%
completed within the statutory deadline	Actual	97%	97%		

#### Strategy:

Development in hazard-prone locations continues to increase. Local elected officials and the private sector utilize CGS land-use reviews to reduce or eliminate vulnerability to geologic hazards. CGS communicates hazard risks and integrates mitigation strategies into functional recommendations that are used by local planners and elected officials. State statutes require that CGS complete some types of land-use reviews (subdivisions) within 21 days.

#### *Key Products and Customers*:

Government agencies at local, regional and state levels integrate CGS land-use reviews into land-use planning and sustainable development policies. Landowners and private industry also use CGS land-use recommendations to reduce potential future liabilities in areas of known natural or human-induced hazards.

#### Evaluation of Prior Year Performance:

During FY 2010-11, CGS met its benchmark performance measure of completing 97% of the Land Use Reviews within the statutory deadline of 21 days. This performance measure is an Individual Performance Objective (IPO) metric for all of the Land Use Review (LUR) staff. Below is a summary of reviews by key hazards.

FY 2010-11 Land-Use Review Summary By Hazard Identified									
	Totals By Hazard Identified								
Total Reviewed	Landslides, and Rockfall		Unstable Soil						
Schools (number)	0	4	1	7					
Acreage <sup>1</sup>	4,100	6,000	2,774	3,773					
<b>Building Sites (number)</b>	2,328	3,400	3,347	2,047					

<sup>&</sup>lt;sup>1</sup> Total acres evaluated by the Colorado Geological Survey's Land Use Review program.

## CGS-3. Geologic Mapping

Objective: Reduce the impact of geologic hazards on the citizens of Colorado through geologic mapping

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
The cumulative percent of the total state's	Benchmark	22.7%	22.9%	23.2%	23.3%
quadrangles mapped at the 1 to 24,000 scale	Actual	22.7%	22.9%		

#### Strategy:

Each year, CGS maps geologic hazards, mineral and energy resources, groundwater aquifers, and basic geology in areas of the state where such information is limited or does not exist. State agencies, land managers, local governments and the public use CGS maps to identify and manage natural resources and reduce injuries and economic losses from geologic hazards. The CGS mapping program is overseen by a diverse group of stakeholders that prioritize the areas mapped; highest priority is to complete mapping in areas with high growth rates. The CGS mapping program (STATEMAP) is part of the National Cooperative Geologic Mapping Program. Forty-seven states participate in this program.

#### Evaluation of Prior Year Performance:

The STATEMAP program has met its performance measure benchmark for FY 2010-11. Below is a summary of the geologic hazards mapped by CGS.

FY 2010-11 Summary of Geologic Hazards Mapped									
Total Acres Mapped or Investigated	Hazards Mapped								
	Landslides & Rockfall	Flooding	Subsidence	Coal Bed Methane Seeps	Post-Fire Hazards	Unstable Soil			
258,000	X	X	X	X	X	X			

# **CGS-4.** Advise Policy Makers

Objective: Provide sound geologic advice and information to a variety of constituencies on the impact of geologic hazards or the geology of ground water

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
The percent of counties in the	Benchmark	30%	30%	30%	30%
state and state departments receiving assistance in	Actual	31%	34%		
geologic hazards or ground water issues from CGS.					

#### Strategy:

Our assistance work makes communities more resilient and resistant in the face of natural hazards by integrating sound science and hazard mitigation into day-to-day land use decisions. Colorado is subject to severe hazards and weather. At the same time,

the state is growing fast, with many people moving to hazard or drought prone areas. Growth in these areas also exposes billions of dollars of private property, public facilities, and infrastructure to damages from geologic hazards and drought. Colorado communities need maps, plans, and strategies for reducing their vulnerable to natural hazards.

The cheapest and easiest approach to geologic hazard problems is to understand, anticipate, and mitigate the problems before they occur. For example, a landslide investigation and mitigation program may cost a few thousand to tens of thousands of dollars, whereas an active landslide, in a key transportation corridor, will cost several millions of dollars to remediate.

The need for studies of ground water in its geological framework grows with each new Coloradan and every drought period. In order for the counties and state departments to fully understand the impact of the current draw on the State's aquifers and ground water, more geologic information is needed. CGS provides that independent information in the form of studies that it completes and publishes, along with acting as technical advisors to the Interbasin Compact Commission Roundtables.

#### Evaluation of Prior Year Performance:

CGS met this performance measure goal in FY 2010-11. CGS helped protect public safety by providing fifteen counties, and numerous city councils and boards with geologic hazard and water supply technical support. CGS also assisted the Division of Reclamation, Mining and Safety, and the Division of Parks and Outdoor Recreation. Through technical advice to the Water Round Tables, CGS reaches every county in the State. Below is a summary of the water supply resources provided by CGS.

FY 2010-11 Groundwater Program Summary									
	ea and Volume								
CGS Completed Water Supply Studies For:	er Supply Total Area		Evaluated for Water Quality Problems Evaluated for Public Water Supply						
Dept. of Natural Resources	4,790,000 acres	27,000 acres	4,775,000 acres	7,000,000 acre-ft.					
<b>Local Governments</b>	4,955 parcels	4,955 wells	6 municipal supply wells	NA					
Other Agencies	495,000 acres	495,000 acres	185,000 acres	NA					

## **CGS-5.** Promote Responsible Development

Objective: Promote the responsible economic development of mineral and energy resources

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
The percent of counties in the state and state	Benchmark	10%	10%	10%	10%
departments receiving assistance in	Actual	17%	11%		
mineral and energy resources from CGS					

#### Strategy:

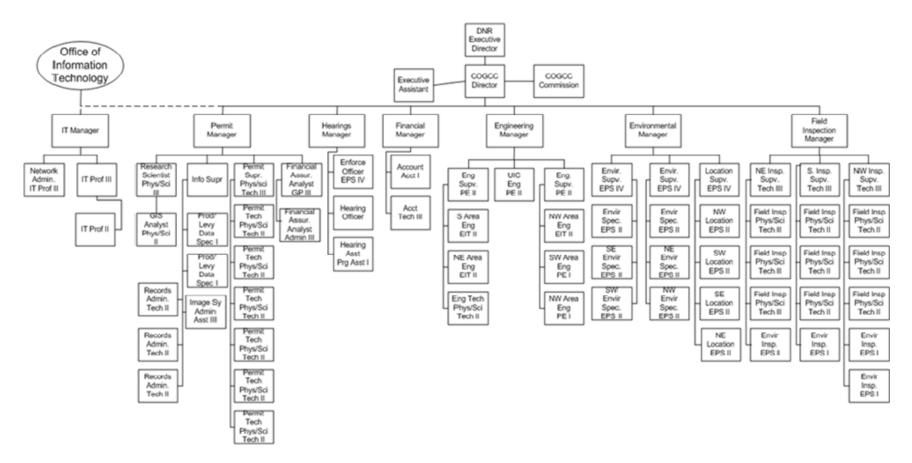
Information about the location and character of mineral and energy deposits and the locations of active mines and quarries are vital to entities that may be planning urban or commercial development. These data may be used to make informed land use decisions. If citizens and local government officials are aware of new exploration trends in their area, plans to accommodate exploration and development of mineral and energy resources can be made, thereby avoiding or mitigating land use conflicts.

#### Evaluation of Prior Year Performance:

The Mineral and Energy Resources Program assisted several counties in FY2010-11. Studies included areas in Moffat and Montezuma counties. CGS also provided technical support the Governor's Energy Office, the Oil and Gas Conservation Commission, the Division of Reclamation, Mining and Safety, and the Division of Parks and Outdoor Recreation. A brief summary of the total area evaluated for key mineral and energy resources is listed below.

1	FY 2010-11 Mineral Resource & Energy Program Summary										
Total Acres	Resource Evaluated										
Mapped or Investigated	Coal	Metallic Minerals	Construction Materials	Coal Bed Methane	CO2 Sequestratio n Potential	Oil & Gas					
1,070,000	X	X	X	X	X	X					

# Colorado Oil & Gas Conservation Commission



\$8,454,860 Total Funds 69.0 FTE \$8,350,624 CF \$104,236 FF

## Colorado Oil and Gas Conservation Commission (OGCC)

#### OGCC -- Description:

Through a largely regulatory role, the Oil & Gas Conservation Commission (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 OGCC accomplishes this important role through three workgroups:

- Operations -- Environmental protection specialists, engineers and field inspectors in this section ensure technical compliance with the OGCC rules and regulations. Staff reviews information and applications for approval, including production and injection well applications, technical well information, pit applications, land farms, remediation work plans for exploration and production waste cleanup operations and requests to plug and abandon wells. Field inspections are performed to ensure compliance for: drilling, production, and injection wells; well abandonment; pit and landfarm operations; and exploration and production waste cleanup operations. The Operations staff is also responsible for responding to inquiries and investigating complaints. As part of their duty to provide technical expertise, staff recommends enforcement actions and supports enforcement actions before the Commission at hearings for violations of OGCC rules. This section is responsible for identifying, recommending, and managing projects using the Oil and Gas Conservation and Environmental Response Fund (Fund 170).
- Administration and Hearings -- This section assists the Commission<sup>1</sup> in conducting hearings, holding local public forums, developing policies, and implementing rules, regulations, and orders to maximize oil and gas production and revenues for the state, to prevent waste, to protect correlative rights, and to protect public health, safety, welfare and the environment. It acts as a liaison to the Department, the public, and industry regarding OGCC activities. This includes responding to inquiries, investigating complaints, and performing outreach to parties such as the oil and gas industry, local governments and other interested groups to share information about issues of concern, to form committees, and to work on rulemaking. This section also manages the division's financial resources by preparing the annual budget request, and administering appropriations for their effective and efficient use.

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<sup>&</sup>lt;sup>1</sup> The Colorado Oil and Gas Conservation Commission is a nine-member public board charged with implementing and enforcing the Colorado Oil and Gas Conservation Act, Title 34 Section 60. Seven members are appointed by the Governor; the other two members include the Executive Director of the state's Department of Natural Resources and the Executive Director of the Department of Public Health, Safety and the Environment or their designees.

• Information -- This section processes, reviews and publishes oil and gas operator-submitted reports and applications and responds to customer inquiries. The information section is responsible for collecting, reviewing for compliance, processing, storing and tracking oil and gas well information, production volumes and conservation levy volumes and production values in the State of Colorado in order to supply information on the complete life cycle of the oil and gas wells. This section ensures that oil and gas operations and regulatory reporting are in compliance with the rules, regulations and orders of the Commission, including reviewing all drilling permit applications for regulatory compliance, and verifying that oil and gas operators are properly registered and meet the OGCC financial surety requirements. This section is responsible for managing the Local Area Network and the OGCC Internet Website to disseminate OGCC information to the public, government agencies, and other customers.

OGCC -- Statutory Authority:

Oil and Gas Conservation Act – Title 34, Section 60, Colorado Revised Statutes

OGCC -- Mission:

The mission of the Colorado Oil and Gas Conservation Commission (OGCC) is to foster the responsible, balanced development of Colorado's oil and gas natural resources. Responsible development results in:

- The efficient exploration and production of oil and gas resources in a manner consistent with the protection of public health, safety and welfare, including protection of the environment and wildlife resources;
- The prevention of waste in the production and utilization of oil and gas;
- The protection of mineral owners' correlative rights, and;
- The prevention and mitigation of adverse impacts to the environment and to wildlife resources.

The OGCC seeks to serve, solicit participation from, and maintain working relationships with all those having an interest in Colorado's oil and gas natural resources.

# OGCC PERFORMANCE MEASURES

Given the importance of Oil & Gas impacts on water supplies to both the Oil and Gas Conservation Commission and to the Department of Natural Resources, a performance measure related to these issues can be found in the Section titled "DNR-Wide Performance Measures", at the beginning of this document.

## **OGCC-1. Surface Disturbances**

Objective: Decrease surface disturbance caused by oil and gas activity

Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Percent of	Benchmark	86%	86%	86%	86%	86%
reclamation						
inspections that comply with	Actual	54%	72%	82%	Unknown	Unknown
OGCC rules.						

Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Percent of oil &	Benchmark	36%	36%	36%	36%	36%
gas wells that are						
drilled, pursuant	Actual	unavailable	36%	58%	65%	Unknown
the new rules,	1100001		3070	3070	0370	O I II I I I I I I I I I I I I I I I I
horizontally						
and/or from multi-well pads						

#### Strategy:

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. 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, thus further reducing impacts to public health, the environment, and wildlife.

Evaluation of Prior Year Performance:

<u>Reclamation Inspections</u>: As field inspectors began in FY 2008-09 to devote more time enforcing interim reclamation rules on a regular and timely basis, the percent of reclamation inspections that complied with OGCC rules was expected to fall in the near term, as it did in FY 2008-09, and gradually improve as oil and gas operators corrected the mistakes that led to failed inspections. The significant improvement from 54% to 82% between fiscal years 2008-09 and 2010-11, was greater than expected but can be attributed to the OGCC's larger, re-organized field inspection staff and increased attention to reclamation by both the OGCC and industry.

Note: To be in compliance, oil and gas sites must be making, at a minimum, adequate progress towards complete re-vegetation.

<u>Directional Drilling</u>: Based on data through October 11, 2011, the percentage of wells that were drilled horizontally and/or from a common well pad increased from 36% in FY 2009-10 to 65% in the first few months of FY 2001-12.

#### OGCC-2. Public Health

Objective: Decrease health, safety, and environmental (other than water) incidences caused by oil & gas operations.

Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Total number of	Benchmark	.16	.16	.16	.16	.16
citizen complaints that resulted in a						
Notice of Alleged	Actual	.45	.66	.45	Unknown	Unknown
Violation - per						
thousand active						
oil & gas wells						

#### Strategy:

The OGCC diligently and promptly responds to all complaints that are received by the agency. Each complaint is publicly tracked on the OGCC web site until the issue is resolved. Although not all complaints are related to issues that the OGCC has the regulatory authority to resolve, the number of complaints that are received by the agency, and result in a Notice of Alleged Violation, is considered to be one important indicator of the impact that the oil and gas industry is having on the public and how well OGCC regulation is reducing the impact. Note that this measure changed from the FY 2008-09 budget request to track actual violations rather than complaints.

Evaluation of Prior Year Performance: Of the 295 complaints received by the OGCC in FY 2010-11, 20 were found to be in violation of OGCC rules. Notices of Alleged Violations (NOAV's) were issued for those 20 incidents. Although the percentage of valid complaints decreased slightly over the last year, the total number of complaints increased from the 157 reported in FY 2009-10. Not included in the performance measure are the 313 NOAV's issued in FY 2010-11, as a result of routine inspections rather than complaints.

## **OGCC-3.** Historic Impacts

Objective: Decrease environmental impacts from historic oil and gas activity.

Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Number of orphaned oil &	Benchmark	27	27	27	27	27
gas wells plugged and abandoned and sites reclaimed by the OGCC.	Actual	8	9	2	unknown	unknown

#### Strategy:

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.

*Evaluation of Prior Year Performance:* As in fiscal years 2008-09 through 2010-11, the OGCC completed a smaller than usual number of projects because projects selected were more time-consuming and costly than more typical projects.

#### **OGCC-4.** Public Information

Objective: Increase opportunities for disseminating information to the public

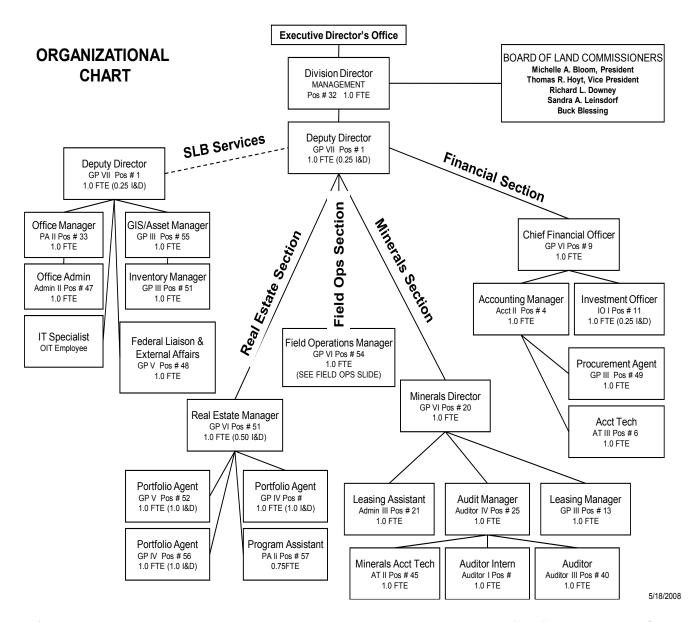
Performance Measure	Outcome	FY 2008-09 Actual	FY 2009-10 Actual	FY 2010-11 Actual	FY 11-12 Estimate	FY 12-13 Request
Number of visits to the Oil and	Benchmark	931,422	931,422	931,422	931,422	931,422
Gas Conservation Commission's website.	Actual	808,487	1,186,414	1,119,147	Unknown	Unknown

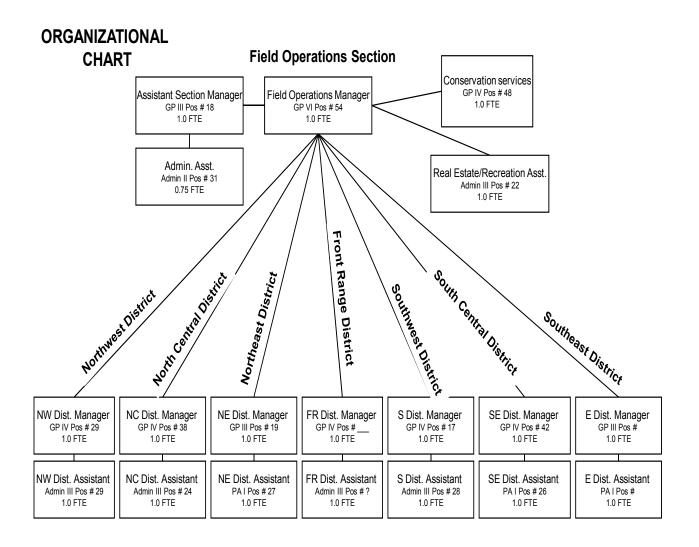
#### *Strategy:*

The OGCC's website provides electronic access to valuable information about oil and gas development in Colorado. The website contains all regulatory information that has been submitted for oil and gas wells, which includes, but is not limited to, information regarding permits, well construction, production, complaints, and inspections. Also available are digital well logs and extensive Geographic Information System (GIS) maps that contain over 100 layers, such as wells sites, well spacing orders, oil and gas fields, wildlife information, Bureau of Land Management stipulations, color aerial photography, topography, and water resource information. The OGCC works to continuously improve the volume and quality of data provided to the regulated community, federal, state and local governments, the media, and the general public.

#### Evaluation of Prior Year Performance:

The continued high volume of activity on the agency's website is a reflection of its value to the industry, the general public, and government agencies.





## **Colorado State Board of Land Commissioners**

State Land Board – Description:

The State Land Board operates as a fiduciary for eight trusts. The trusts are: School Trust (accounting for over 98% of total revenues), Public Building Trust, Penitentiary Trust, University of Colorado Trust, Saline Trust, Internal Improvements Trust, Colorado State University Trust, and Hesperus Trust.

In the case of the School Trust, the State Land Board has been mandated by law to:

- Manage an intergenerational trust for the support of public schools;
- Earn reasonable and consistent income over time;
- Establish and maintain a long term Stewardship Trust (300,000 acres) that will be managed to protect and enhance the beauty, natural values, open space, and wildlife habitat of those lands; and
- Not significantly diminish the Trust.

The State Land Board's operations are organized around a director, deputy director, and four sections. These are the Field Operations, Minerals, Real Estate, and Financial Sections.

The Field Operations Section employees work with state trust land lessees on day-to-day land management issues and challenges, as well as on longer-term initiatives to ensure that natural resources on trust lands are conserved and that the long-term value of the trust asset is maintained or improved. This section also performs property inspections and recommends appropriate land disposals and acquisitions.

The Minerals Section issues leases for production, issues exploration permits, collects royalties, conducts royalty revenue audits, conducts public lease auctions, collects auction bonuses, rentals and advance minimum royalties, sets reclamation bond amounts, approves reclamation for bond release, examines mineral lease tracts for production evaluation, and audits for environmental protection. This section is also responsible for energy leases.

The Real Estate Section provides the asset management for the commercial and other special uses of state trust land, coordinates and provides the technical services needed and strategic investment options for land disposals and acquisitions. This section is responsible for oversight of the development portfolio of state trust land including development agreements and entitlement projects.

The Financial Section administers the State Land Board's 19 trust fund accounts (two per trust) and processes 25,000 accounting transactions including allocation of the \$122.8 million in annual revenue. The section directs the \$5.0 million expense budget which includes managing the procurement process and all related construction contracts. Additionally, the section oversees the formulation of the annual budget request and analyzes land transactions and investments considered by the Board. The Financial Section is responsible for oversight and reporting of the Investment and Development Fund.

State Land Board – Statutory Authority:

Federal: Federal Statehood Enabling Act of 1875 (Para. 7-12 and 14 and 15).

State: Colorado Constitution, Article IX, Section 9-10.

Colorado Revised Statutes Title 36, Article 1 through 7.

#### State Land Board – Mission:

As its constitutional and statutory mission, the Colorado State Land Board protects, enhances, and manages Colorado's permanent endowments of land assets for the reasonable, consistent and ongoing benefit of Colorado's public schools and public facilities, while recognizing that economic productivity is dependent on sound natural resource stewardship, including the protection and enhancement of the beauty, natural values, open space and wildlife habitat of those lands.

#### State Land Board – Vision:

In the 21st century, Colorado's trust lands will become one of the state's most treasured assets, producing valuable results for each generation of beneficiaries while sustaining enduring value of the trust lands for future generations.

## **SLB PERFORMANCE MEASURES**

Given the importance of school trust revenue to both the State Land Board and to the Department of Natural Resources, a performance measure related to this issue can be found as one of 7 major Department performance measures ("DNR-7 State Land Board Lands"). These performance measures are contained just before the divisional sections of the Strategic Plan.

## **SLB-1. Property Inspection**

Objective: Protect trust assets

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percent of Agricultural Property	Benchmark	60.0 percent	65.5 percent	60.0 percent	65.0 percent
Inspections Rated Good or Above for Range Conditions	Actual	51.0 percent	53.0 percent	<u>In progress</u>	In progress

#### Strategy:

This performance measure incorporates the stewardship duties of the State Land Board. Beyond monetary value identified in other performance measures, the State Land Board is mandated to protect trust assets and make decisions that promote long term goals of the various trusts. There are five categories of range conditions: Excellent, Good, Fair, Poor, and Unknown (not included).

#### Evaluation of Prior Year Performance:

This performance measure reflects the quality of agricultural land leased by the State Land Board. The primary determinant of quality is the utilization of the land by the Board's lessees. The Field Operations Section and the district offices are responsible for monitoring conditions and evaluating the quality of the land. Drought conditions in several parts of the State have had a noticeable impact on the quality of agricultural lands. In addition, the State Land Board monitors lands closely to identify potential overgrazing. In its recently-adopted strategic operating plan, the Board identified a series of steps to enhance the stewardship of all State Land Board properties. These steps include consistent application of best management practices, establishment of formal stewardship plans on numerous critical properties, and regular inspections of properties in each district. The State Land Board believes the improvement in land conditions noted between FY 2009-10 and FY 2010-11 demonstrates that this plan is moving stewardship outcomes in the right direction. Nonetheless, our goals remain aggressive and land conditions improve slowly with time, so a few additional years of data are necessary for a comprehensive evaluation of the success of these stewardship objectives.

## SLB-2. Investment and Development Fund

Objective: Pursue Investment opportunities

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2010-11 Approp.	FY 2011-12 Request
Investment and Development Fund Net Present Value	Benchmark	\$20 million	\$20 million	\$20 million	\$20 million
estimate	Actual	\$17 million	\$34.8 million	TBD	TBD

#### Strategy:

The Investment and Development Fund (36-1-153 C.R.S.) was created to allow the State Land Board to make value added investments in School Trust properties for revenue or land value enhancement. The net present value estimate is a risk-adjusted return. The performance measure is a sum of all the projects funded by the Fund and includes completed, ongoing, and inactive projects. A positive net present value indicates the amount the State Land Board anticipates the Fund will earn above the School Permanent Fund which is considered a "risk free" investment.

#### Evaluation of Prior Year Performance:

Presented in the Annual Report on the Investment and Development Fund, delivered to the JBC on November 1, 2011. The I&D fund continues to serve as a valuable tool for enhancing the value of State Land Board properties. The funds have supported activities that range from fencing and stock-well installation to land entitlement for urban development to staff and consultant resources for developing and executing large projects. Due to these activities, the State Land Board expects to realize a \$2.2 million increase in annual revenue over the next 10 to 20 years and an \$83.1 million increase in property value over the next 5 to 20 years.

## **SLB-3.** Revenue Recovery

Objective: Ensure that revenues owed to the State Land Board are recovered

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2011-12 Request
Annual Audit Revenue	Benchmark	\$400,000	\$400,000	\$400,000	\$400,000
Kevenue	Actual	\$1,040,897	\$1,076,547	TBD	TBD

#### Strategy:

This performance measure shows the effectiveness of the State Land Board's mineral audit program. The program has 3.0 FTE auditors, contract dollars, and uses the Department of Revenue for specific audits.

#### Evaluation of Prior Year Performance:

Audit revenues are inherently variable over time. After the launch of an audit program, revenues can be substantial for a number of years and the State Land Board audit program has, in fact, averaged roughly \$1.0 million in audit revenue each year for the past decade. In time however, many factors that drive audit recoveries are addressed by the lease-holders and, with improved compliance, revenues begin to decline. Since the program has been in place for over a decade, our expectation is that audit recoveries will not remain at current levels in perpetuity. Current indications suggest that improved compliance, especially with large payers, will begin to reduce audit revenues in the coming years.

#### Colorado Division of Parks and Wildlife

Division of Parks and Wildlife -- Description:

A major part of the mission of the Colorado Division of Parks and Wildlife is to perpetuate the wildlife resources of the state and to provide people with the opportunity to enjoy them. Per Colorado Revised Statutes (C.R.S) 33-1-101(1); "It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced and managed for the use, benefit, and enjoyment of the people of this state and its visitors. It is further declared to be the policy of this state that there shall be provided a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that to carry out such program and policy, there shall be a continuous operation of planning, acquisition and development of wildlife habitats and facilities for wildlife-related opportunities."

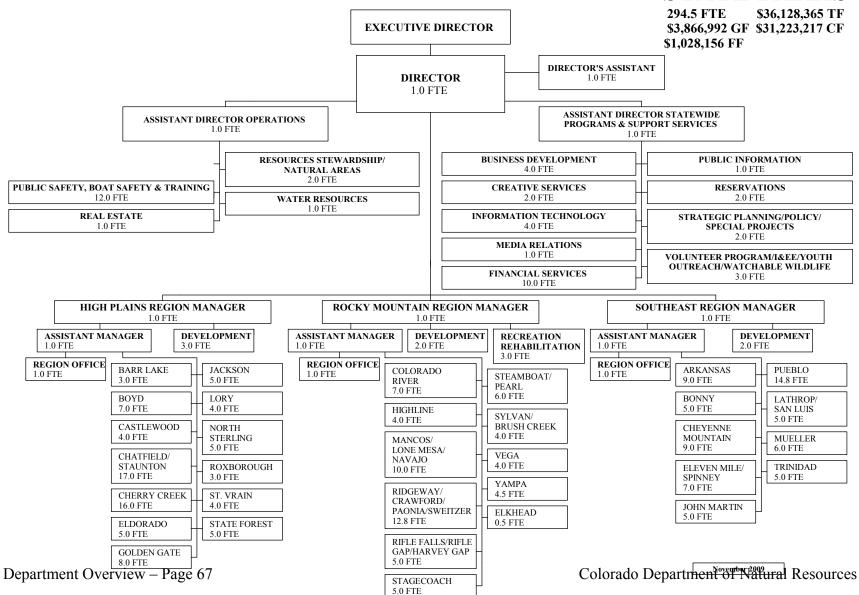
Under S.B. 11-208, the former Division of Wildlife was merged with the former Division of Parks and Outdoor Recreation, effective July 1, 2011. As a result, another major mission of the Division of Parks and Wildlife is to manage Colorado's state park system and outdoor recreation programs. Attracting over 12 million visitors per year, Colorado's 43 state parks and statewide recreation programs are a vital cornerstone of Colorado's quality of life, offering some of the highest value outdoor recreation destinations in the state. These state parks include a variety of landscapes to match the state's geography, from urban playgrounds to back-country retreats, from mountain lakes to whitewater adventure. Colorado State Parks enable everyone, regardless of age, background, economic or social circumstance, to enjoy the state's internationally famous natural beauty and experience a wide range of activities. Park visitors and beneficiaries of State Parks' many statewide outdoor recreation programs can literally "re-create" themselves both physically and spiritually. The parks are a priceless, irreplaceable legacy for future generations. Providing that enjoyment and protecting the legacy is a key part of this mission. Colorado's state park system includes more than 4,200 campsites, 42 cabins and yurts, and encompasses 225,260 land and water acres. Several statewide programs including Trails, Boat Safety, Commercial River Outfitter Licensing, and Registrations for vessels, snowmobiles, and off-highway vehicles are also administered through the Division of Parks and Wildlife. Through hunting, fishing, wildlife viewing, state park visitation, and outdoor recreation, the Division is an integral revenue source to Colorado's growing economy.

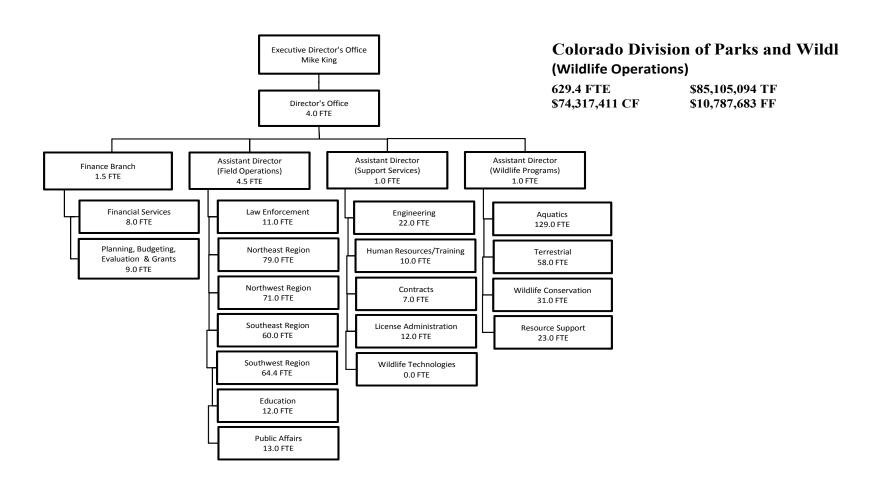
DPW -- Statutory Authority:

Title 33, Articles 1 through 9, Colorado Revised Statutes, relate to operation of wildlife programs

Title 33, Articles 10 through 15, Colorado Revised Statutes, relate to the operation of state parks and outdoor recreation programs.

# COLORADO STATE PARKS





Note: Under S.B. 11-208, the Division of Parks and Outdoor Recreation was merged with the Division of Wildlife. While implementation of this merger is well underway, the new combined Division of Parks and Wildlife is still analyzing various issues which will impact the organization of the new merged agency. The Director position shown in both of these older (pre-merger) organizational charts are now one and the same person. The Department will insert a newer organization chart into the DNR Strategic Plan when the new organization structure of the merged agency is finalized.

## **DPW PERFORMANCE MEASURES**

Given the importance of species conservation, hunting, fishing, and outdoor recreation to both the Division of Parks and Wildlife and to the Department of Natural Resources, objectives related to these programs are listed as three of seven major Department performance measures (see performance measures "DNR-1 Species Conservation", DNR-2 "Outdoor Recreation", and DNR-4 "Wildlife Recreation" at the beginning of the Strategic Plan).

#### DPW-1. Habitat

Objective: Protect wildlife habitat

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Number of habitat	Benchmark	785,000 820,000		840,000	900,000
acres protected (Cumulative)	Actual	802,183	889,011	Unknown	Unknown

#### Strategy:

Habitat protection is a crucial component in the preservation of Colorado's wildlife and as such is a high priority for the DPW. Property rights placed under DPW ownership or easement assures the public of long term, perpetual management to provide for recreation access and to maintain viable wildlife habitat. For this performance measure, the term "protected" means "controlled by DPW and managed 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 DPW for hunting and fishing recreation purposes,

lands owned and managed by the federal government (United States Forest Service or Bureau of Land Management), by other state agencies, by other governments, by private landowners, or by private land trusts or other conservation organizations.

#### Evaluation of Prior Year Performance:

As of FY 2009-10, the DPW has exceeded its benchmark by 17,183 acres, which is approximately 2% over the target 785,000 cumulative acres. This was due to the closing of a few projects which had been in the project pipeline for several years. Of this total acreage, 377,944 acres have been acquired through fee title, 154,138 acres have been acquired through perpetual conservation easements, 34,511 acres have been acquired as perpetual public access easements, 96,844 acres through third-party perpetual conservation easements, and 138,746 acres have been acquired as leasehold interests (excluding SLB Statewide lease agreement).

As of FY 2010-11, the DPW has exceeded its benchmark by 69,011 acres, which is approximately 8% over the target. Of this total acreage, 405,518 acres have been acquired through fee title, 168,911 acres have been acquired through perpetual conservation easements, 54,005 acres have been acquired as perpetual public access easements, 114,842 acres through third-party perpetual conservation easements, and 145,735 acres have been acquired as leasehold interests (excluding SLB Statewide lease agreement).

#### **DPW-2. Public Awareness**

Objective: Raise public awareness of the nature and purpose of wildlife management

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percentage of the public that is	Benchmark	82	N/A(Old)	N/A(Old)	N/A(Old)
aware of wildlife management	Actual	79	N/A(Old)	N/A(Old)	N/A(Old)
Percentage of the State's public who are aware that license sales help manage all wildlife in Colorado.	Benchmark	New	80	80	80
	Actual	New	88	Unknown	Unknown

Educating the public (including school children and adults) about wildlife and wildlife management is a key component of the DPW's mission. The DPW utilizes numerous programs to reach a variety of audiences including Project WILD, Angler Education, wildlife festivals, the Wildlife Management Public Education Council (Wildlife Council), Colorado Outdoors magazine, as well as diverse and varied stakeholder meetings. Public involvement is measured primarily through annual surveys of the public.

# Evaluation of Prior Year Performance:

The DPW education programs are all designed to promote the benefits of wildlife management. The Wildlife Council has just completed its fifth year of aggressively promoting the benefits of wildlife management. Survey results indicate that over 88 percent of those surveyed said that "fees from hunting" and 86% said "fees from fishing" are major sources of funding wildlife management. The Division will continue to work with the Wildlife Council to promote the value of wildlife management and encourage people to hunt, fish, and get outdoors through media campaigns in TV, radio, and other markets.

### DPW-3. Park Acres

Objective: Provide sustainable outdoor recreation settings, statewide programs and education opportunities to keep pace with the rising demands, needs, and diversity of Colorado citizens and visitors.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Acres of State Parks land managed per	Benchmark	.08	.08	.08	.08
capita	Actual	.07	.07	Unknown	Unknown

#### Strategy:

The Division operates 43 State Parks that provide outdoor recreation opportunities for citizens throughout the state. The state parks and statewide recreation programs are a vital cornerstone of Colorado's economy and quality of life. The Division actively

manages a total of 218,635 land acres among all parks and 140,090 acres in 78 Designated Natural Areas. (Please note that this figure does not include the parks that are not yet open to the public.) The 2010 Colorado population from the 2010 U.S. Census is 5,024,748. Based on these figures, the Division manages .07 acres of land per capita. The desired outcome for this performance measure is an increase in the number of land acres managed by the Division to keep pace with the increase in number of residents of Colorado. This is consistent with the Division-wide Strategic Plan Recreation Goal which states that State Parks will: "Provide sustainable outdoor recreation settings, statewide programs and education opportunities to keep pace with the rising demands, needs, and diversity of Colorado citizens and visitors." The Division has several options for increasing the amount of acreage it actively manages, including acquiring buffer parcels adjacent to existing parks; acquiring in holdings within existing parks; and increasing the level of management on properties that the agency currently owns but are not yet open to the public (Staunton and Lone Mesa State Parks, for example).

#### Evaluation of Prior Year Performance:

During FY 2009-10, the Division only added very minor inholding property acquisitions, totaling roughly 100 acres. The most recent data available shows population has been growing at about 1.6 percent per year. Due to this population growth, and the very small growth in State Parks managed lands, this performance has remained below the benchmark for each of the last two actual years.

# DPW-4. Campsite Usage

Objective: Retain current and acquire new customers through exceptional service and by improving State Parks' visibility with innovative marketing.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Percentage of occupancy at campsites	Benchmark	18%	18%	18%	18%
Campsites	Actual	19%	19%	Unknown	Unknown

## Strategy:

There are more than 4,200 campsites in the Colorado State Parks system. The percentage of these campsites that are occupied during prime camping season (roughly April through October) is a key indicator of the overall popularity of the system. This

percentage can also be used to extrapolate other important information, including revenue stream trends and the degree to which the Division is meeting visitor expectations. The desired outcome for this performance measure is an increase in the percentage of occupancy per total rental nights available at campgrounds each year and is consistent with the Division-wide Strategic Plan Marketing Goal which states that State Parks will: "Retain current and acquire new customers through exceptional service and by improving State Parks' visibility with innovative marketing." The agency has a number of strategies to achieve this outcome, including increasing marketing efforts that would improve the mid-week reservations (when occupancy is at the lowest level). Because this performance measure has never been calculated in Colorado, the Division is using the actual occupancy percentage from 2005 for Montana as a benchmark.

Evaluation of Prior Year Performance:

Occupancy was in line with agency projections.

# DPW-5. Park Stewardship

Objective: Improve and sustain the ecological, scenic and scientific assets in and around state parklands through proactive stewardship.

Performance Measure Establish resource	<b>Outcome</b> Benchmark	FY 2009-10 Actual 70%	FY 2010-11 Actual 70%	FY 2011-12 Approp. 70%	FY 2012-13 Request 70%
management practices and maintain the resources in good condition for all state parks	Actual	69%	69%	Unknown	Unknown

#### Strategy:

The Division needs to provide and promote a systematic framework for addressing the changing values and opportunities on state lands which recognizes and utilizes the current potential for these properties while preserving and enhancing the quality of the parks for current and future generations. Every park has a resource stewardship plan with individual goals to protect key

resources, but the condition of the vegetation is one overall measure that can be informative about resource quality over time and can be measured with GIS. This measure does not directly take wildlife or water quality measures into account which is important at many parks. This measure is affected by how much integrated weed management, fire mitigation work and native re-vegetation is completed by the parks, as well as by how much visitors and uses are managed. This performance measure would be based on the percentage of acreage within Colorado State Parks that is rated at the Good or Excellent level in relation to total park acreage. Monitoring will be implemented as part of the Stewardship program. Another measure is the condition of the 78 designated Colorado Natural Areas. This is reported by 3 sources annually: volunteers, park staff visits, and Colorado Natural Areas Program (CNAP) staff visits. The report includes an overall condition rating of excellent, good, fair or poor. The rating would be the percentage of Natural Areas in good to excellent condition. These measures are consistent with the Division-wide Strategic Plan's Natural Resource Goal which states that State Parks will: "Improve and sustain the ecological, scenic and scientific assets in and around state parklands through proactive stewardship."

Evaluation of Prior Year Performance:

For FY 2009-2010, the proportion of total acreage in Colorado State Parks that is rated at the good or excellent level was 69% an increase from 64% in FY 2008-2009. In FY 2009-2010, the Stewardship Program has focused on identification of non-native plant areas through mapping and field inventory; development of integrated weed management plans at several parks; selective application of herbicides at most of the parks, and; restoration with native grasses, shrubs and trees best suited for habitat improvements. Hazardous tree removal has played an important role in these efforts as well, especially in parks faced with significant forest pest invasions (e.g., Steamboat Lake, Pearl Lake, Golden Gate Canyon, and State Forest State Parks). A large portion of the Division's efforts are cooperative, with local county weed control coordinators, county land use officials, the Colorado State Forest Service, and adjoining landowners playing an important role.

# **DPW-6.** Customer Satisfaction

Objective: Apply effective, accurate and reliable information for the analysis, planning, and implementation of all decisions.

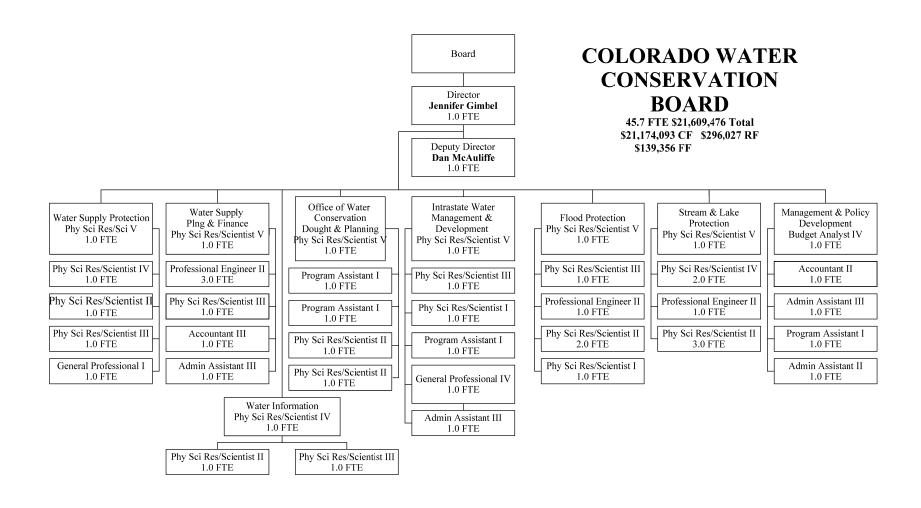
Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Annual customer satisfaction	Benchmark	77%	77%	77%	77%
survey	Actual	91%	91%	Unknown	Unknown

The Division would email on an annual basis a customer satisfaction survey to customers of state parks. This survey would consist of a set of questions that would remain the same each year and would be returned via email. The survey would help measure overall visitor satisfaction with respect to a number of natural resource, recreation, safety, education, and park planning criteria. The performance measure would be comprised of a percentage of customers that rate their experience with State Parks at the Good or Excellent level with respect to the criteria outlined in the survey. Over time, the Division's desired outcome would be to maintain the level of satisfied customers and increase that level by one or more percentage points each year. Questions on the survey would break down aspects of the visitor experience, such as law enforcement, customer service, resource quality, recreation opportunities, and level of park development. This performance measure is consistent with the Division-wide Planning Goal which states that State Parks will: "Apply effective, accurate and reliable information for the analysis, planning, and implementation of all decisions." The above measurement is the percentage of customers that rate their experience at state parks as good or excellent.

The recent Corona Research Market Assessment Study indicates that 91% of all visitors ranking the quality of their experience as good or excellent.

Currently, Colorado State Parks does not have a systematic way of calculating this performance measure on an annual basis. During the next fiscal year, Colorado State Parks staff will attempt to establish a way of capturing this performance measure for future annual reporting purposes.

*Evaluation of Prior Year Performance:* Customer satisfaction surveys are only undertaken once every two to three years. Performance shown above reflects the most recent survey of state park users undertaken during the summer of 2010.



August 2010

# Colorado Water Conservation Board (CWCB)

*CWCB* -- *Description*:

The CWCB was created in 1937. It is responsible for water supply protection, flood protection, water supply planning and finance, stream and lake protection, water conservation and drought planning, intrastate water development and management, as well as the management of related water information and educational materials. The CWCB functions under the following seven programs:

The **Interstate and Federal** Section protects the State's ability to utilize its compact allocations both interstate and intrastate, ensures effective support for the administration of international treaties, interstate compacts, and U.S. Supreme Court decisions impacting Colorado's water resources, and participates in the Endangered Species Recovery Programs and similar efforts that maintain Colorado's ability to develop its compact apportioned waters.

The **Watershed and Flood Protection** Section works to prevent flood damage, support stream restoration efforts, and provide local jurisdictions with technical assistance as well as new and revised floodplain information. The Section administers the Weather Modification Program, manages the Flood Response Fund, Healthy Rivers Fund, and Watershed Protection Fund, and implements Executive Orders related to Flood Protection.

The **Finance** Section oversees the Construction Fund and the Severance Tax Trust Fund Perpetual Base Account. The Section also provides funds to agricultural organizations for emergency drought-related water augmentation purposes. In addition, the Section requests Severance Tax Trust Fund Operational Account funds for projects and programs, manages the CWCB Construction Fund Non-Reimbursable Program and develops CWCB's annual Projects Bill.

The **Stream and Lake Protection** Section appropriates, acquires, and protects instream flow and natural lake level water rights to preserve and improve the natural environment to a reasonable degree.

The **Office of Conservation and Drought Planning** promotes water use efficiency while providing public information and technical and financial assistance for water conservation planning. Efforts and successes in reducing water demand through water efficiency and conservation will play a critical role in meeting Colorado's future water supply needs and mitigating the water supply shortages forecasted for the future. The Office of Water Conservation and Drought Planning also promotes drought planning by encouraging

and assisting communities to prepare and implement drought mitigation plans, by monitoring drought impacts, and by informing the public, media, and state officials about drought conditions and issues. The Office provides financial and technical assistance, in the form of tools, products, and programs, for local drought mitigation planning. The Office coordinates CWCB's initiatives and programs related to climate change and water adaptation.

The **Water Information** Section promotes the development, implementation, and maintenance of statewide water information management systems. The Section develops, operates, and maintains the Decision Support System (CDSS), as well as maintains the state's Water Resource Information Center (WRIC).

The **Water Supply Planning Section** implements the Statewide Water Supply Initiative (SWSI) and supports the ongoing implementation of the Colorado Water for the 21<sup>st</sup> Century Act. The section's mission is to plan Colorado's water supply future to help provide an adequate water supply for Colorado's citizens, agriculture, and the environment. To do this, the section provides tools, products, and programs that support local basin planning and state water supply planning and grants to help implement solutions to Colorado's water supply needs.

CWCB -- Statutory Authority: Title 36, Articles 20 and 75 Title 37, Articles 60-69, 83, 92, and 96 Title 39, Article 29

CWCB -- Mission:

CWCB must develop and implement programs to:

- Conserve the waters of the State for wise and efficient beneficial uses
- Develop waters of the State to: Preserve the natural environment to a reasonable degree; Fully utilize State compact entitlements; Help ensure that Colorado has an adequate water supply for our citizens and the environment by implementation of CWCB adopted mission statements and the findings and recommendations identified in the 2010 Statewide Water Supply Initiative; Protect the waters of the State for maximum beneficial use without waste; and Manage the waters of the State in situations of extreme weather conditions both for floods and droughts.

#### CWCB - Vision:

Conserve, develop, protect, and manage Colorado's water for present and future generations in accordance with applicable state and federal law and regulations.

# **CWCB – PERFORMANCE MEASURES**

Given the importance of water supply initiatives to both the Colorado Water Conservation Board and to the Department of Natural Resources, this issue was listed as a major Department performance measure (see performance measure "DNR-5 Water Supply" at the beginning of the Strategic Plan).

#### **CWCB-1. Instream Flows**

Objective: Protect additional miles of decreed instream flow water rights resulting in enhanced protection of Colorado's environment.

Performance Measure Miles of stream where CWCB actively manages	Outcome Benchmark	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp. 100 miles	FY 2012-13 Request 100 miles
water rights to leave water in streams for purposes of improving wildlife habitat.	Actual	116 miles (8,929.31 miles)	75.86 miles (9,005.17 miles)	Unknown	Unknown

Incremental miles added / (Total miles Protected)

#### Strategy:

Instream flow refers to the practice of establishing water rights in a river or stream for the purpose of preserving Colorado's environment, including protection of wildlife and wildlife habitat that rely on rivers and streams for their survival. The objective

of this program is to increase the number of streams and natural lakes protected by a state-held water right in order to: (1) meet non-consumptive water needs to preserve and improve the natural environment to a reasonable degree, and; (2) for watershed and river restoration protection projects. A critical component of this program is installing, operating, and maintaining stream gages to monitor stream flow and assure compliance with instream flow water rights. The CWCB currently holds, monitors, and protects instream flow water rights on approximately 9,005 miles of Colorado's streams. The amount of additional miles that will need to be protected is unknown due to diversion and complexities of other water issues.

Evaluation of Prior Year Performance:

In May of 2011, the Colorado Water Conservation Board took final action and appropriated an additional 7 stream segments totaling 75.86 miles of stream, which was slightly below the projected 100 miles.

Although there was a reduction in overall miles of stream, CWCB staff spent a significant amount of time processing an instream flow recommendation on the main stem of the Colorado River from the confluence of the Blue River to the confluence with the Eagle River. This recommendation is a key component of the Management Plan Alternative negotiated by the Upper Colorado River Wild and Scenic Stakeholder Group for submittal to the BLM and USFS as an alternative to Wild and Scenic designation for this reach of the Colorado River. Staff also spent a significant amount of time on public outreach and addressing objections to the San Miguel River instream flow recommendation, which has drawn attention from multiple stakeholders. Further, budgetary constraints and staff furlough days during FY2009-2010 reduced the amount of time that staff could spend on processing instream flow recommendations, resulting in a reduction in the number of stream miles added to the Instream Flow Program for preservation of the natural environment.

# **CWCB-2.** Online Documents

Objective: Disseminate technical information.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Increase technical documents on-line	Benchmark	5,000	5,000	5,000	5,000
	Actual	4,753	6,246	Unknown	Unknown

The Division is committed to providing historic and current water resource information to the water community and the public through various mediums, including the Decision Support System (DSS) and the Division's imaging system. The CWCB is the lead agency responsible for the implementation of the DSS, which provides water resource data, planning tools, modeling datasets and documentation on-line, for use by the Division and the public to help make better informed water resource decisions. Another tool used to disseminate water resource information is Laserfiche, the agency's imaging system. The system provides an accessible, user-friendly web portal for accessing CWCB's library of documents, including (but not limited to) maps, reports, studies, data and documentation.

### Evaluation of Prior Year Performance:

The accomplishments of the CWCB Imaging System Project during Fiscal Year 2010 concentrated on the following two areas: (1) scanned and uploaded 900 large format loan project and historical water supply maps to Laserfiche, and (2) completed a feasibility study on a data harvesting/integration project with Colorado State University, which investigated the searching of both document management systems at one time. The conclusions reached by this study indicate that harvesting water data and sharing it across systems is possible, and recommends adopting a proven data-sharing protocol.

# **CWCB-3. Flood Protection**

Objective: Protect Colorado's citizens from financial hardship associated with natural hazards

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Increase insured value of flood	Benchmark	\$4.2 billion	\$4.3 billion	\$4.45 billion	\$4.5 billion
prone properties	Actual	\$4.2 billion	\$4.4 billion	Unknown	Unknown

#### Strategy:

The Division helps protect Colorado's citizens from flooding and related natural hazards. The Division works to prevent flood damages, supports local stream restoration efforts, reviews and approves floodplain designations, and provides local jurisdictions

and citizens with technical assistance as well as new and revised floodplain information. It will increase the number of stream miles designated by the Board and will increase the number of homeowners eligible for federally backed flood insurance to help prevent uninsured losses. It will increase the number of people receiving flood forecasts and updates during the flood season. The Division will also increase the number of updated floodplain maps statewide that can be used to assess flood threats and post-flood damages.

The CWCB will provide for reduced economic loss to homeowners due to flooding in the State of Colorado by increasing the total insured value of properties that are covered by federally backed flood insurance.

## Evaluation of Prior Year Performance:

The Division was successful in helping the following communities enroll in the National Flood Insurance Program since early 2008: Aguilar, Cedaredge, Fraser, Granby, Leadville, Mt. Crested Butte, Ovid, Rye, Saguache, and Simla. In addition, the City of Centennial and City of Loveland received help to become enrolled in the Community Rating System Program, reducing flood insurance costs to homeowners. Also, the Division leveraged a moderate amount of State funds to obtain around \$1 million dollars in grant funds from FEMA to produce new and revised digital floodplain information. Several new countywide studies were initiated, progressed, or completed during the prior fiscal year. The total value of insured flood-prone structures statewide was increased and multiple stream restoration efforts were supported utilizing the Colorado Watershed Protection Fund, other funding sources, and in-house expertise.

# **CWCB-4.** Water Efficiency

Objective: Reduce the demand for water

Performance Measure Create reductions in M & I water supply demand through water conservation	Outcome Benchmark	FY 2009-10 Actual Approx 1.5% annual demand reduction or approx 11,440 ac ft	FY 2010-11 Actual Approx 1.5% annual demand reduction or approx 10,153 <sup>1</sup> ac ft	FY 2011-12 Approp.  Approx 1.5% annual demand reduction or approx 11,350 <sup>1</sup> ac ft	FY 2012-13 Request Approx 1.5% annual demand reduction or approx 13,755 <sup>1</sup> ac ft
planning and implementation of water efficiency measures.	Actual <sup>1</sup>	Approx. 8,738 <sup>2</sup> ac ft or approx 1.5% annual demand reduction	10,153 ac ft or approx 1.5% annual demand reduction	Unknown	Unknown

Note: <sup>1</sup> An annual demand reduction, which includes the estimated demand reduction from the water conservation plans received within the referenced fiscal year AND the ongoing demand reductions occurring annually from water conservation plans submitted in the previous years. These plans were estimated to reduce demand by 1.5% annually.

#### Strategy:

The CWCB will provide data regarding water conservation through the Division's conservation planning efforts, specifically from the administration of the Water Efficiency Grant Program and role in providing technical assistance for water conservation planning. The state will see reductions in Municipal and Industrial (M & I) water supply demand as a result of water conservation plan implementation occurring through the use of the Water Efficiency Grant Program. The Division assists in the development and implementation of water conservation plans, as well as reviewing and approving water conservation plans. It provides water conservation and drought planning, implementation grants through its Water Efficiency Grant Program, and helps water providers integrate climate change into their water resource planning efforts. It provides technical assistance and public education and outreach programs, such as workshops, conferences, and meetings, to promote the Water Efficiency Grant Program and other

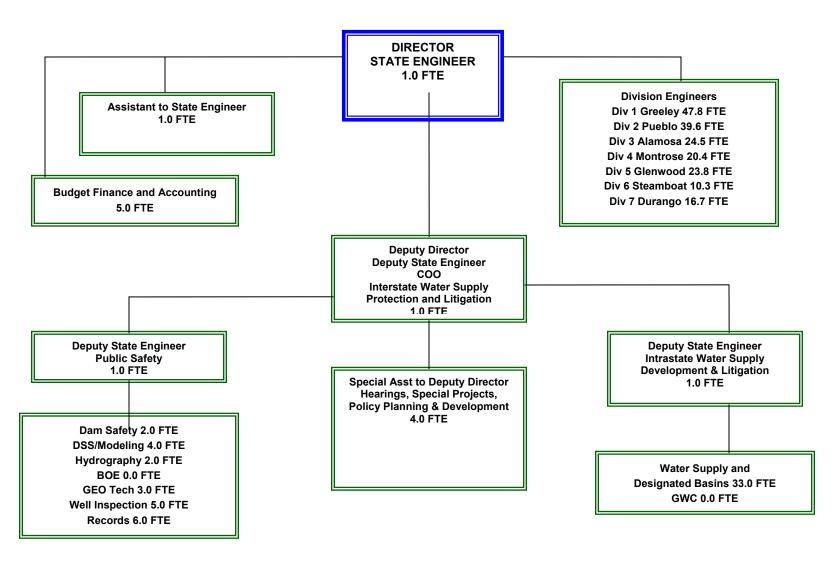
<sup>&</sup>lt;sup>2</sup> Estimated calculation based on the note following the Strategy for this Objective.

water conservation planning resources. Through these efforts, the CWCB will increase the number of covered entities with current and approved water conservation plans. It will increase the number of communities that have drought mitigation plans. It will coordinate and provide climate change data that will be used by water providers in their planning. Maximum utilization of current Division staff will enable the Division to carry out its mandate as defined in Sections 37-60-124, 126, & 126.5 C.R.S. Further, effective program management will ultimately result in valuable water resource supply savings due to water conservation driven demand reductions at the M & I water provider level.

Note: The FY07/08 benchmark was based on an anticipated 25 approved water conservation plans on file with the State, with each plan representing a covered entity that on a retail basis (and on average) provides 10,000 ac. ft. annually. For 2 of the 25 plans –Denver Water and Aurora Water – we used more specific goals contained in the water conservation plans, which would have the two utilities achieving a total of 3,420 acre feet of water savings each year. On average, entities have set goals to reduce demand from water conservation plan implementation by approximately 1% to 2% annually (1.5% average) and ramping up incrementally as conservation measure programs come online. Figures presented are cumulative, such that water demand by these communities will be reduced by a total of 10 percent to 20 percent over the next ten years.

### Evaluation of Prior Year Performance:

The total number of water conservation plans on file with the CWCB as of the end of FY 2010-2011 was 45 – an increase of 5 over the previous fiscal year. Of this total amount of 45, 40 are covered entities and the remaining 5 are non-covered entities. The average annual retail delivery for the additional five covered entity water conservation plans is 3,000 acre-feet, which is significantly smaller than those utilities that have provided water conservation plans in the past. The number of water conservations plans approved for FY2010-2011 was fewer than the CWCB had anticipated, thereby reducing the benchmarks for FY 2011-2012 and FY 2012-2013. The FY 2009-2010 benchmark was calculated as a cumulative amount both in its estimated % demand reduction and in acre-feet. The benchmark for FY 2009-10 and FY 2010-11 were summations of the previous fiscal year reductions and the year of reference. For this revision of the Strategic Plan, staff reevaluated its methodology and calculations, and determined that an annual demand reduction benchmark was more appropriate and easier to track. Therefore, the benchmarks have been adjusted. This readjustment explains in part the discrepancy between the benchmark established for FY 2009-2010 and the estimated actual annual demand reduction. The estimated actual reduction also reflects a number of water conservation plans that was slightly less than anticipated for this fiscal year.



\$20,291,784 Total Funds 252.1 FTE GF \$18,299,926 CF \$1,862,735 FF \$129,123

## **Division of Water Resources**

Division of Water Resources-- Description:

The Colorado Division of Water Resources (DWR) is responsible for the supervision and control of water resources in this state per Section 37-80-102(h), C.R.S. Water administration is DWR's principal duty, requiring daily oversight of the allocation system that distributes water to farmers, industries, municipalities, and all other water users (Section 37-92-301, C.R.S.). This allocation system is performed in accordance with the Doctrine of Prior Appropriation (the first entity to historically use water in a stream retains the first priority to continue diverting water for the same use), Colorado Supreme Court decisions, Interstate Compacts, water court decrees, and rules and regulations issued by the State Engineer.

The DWR is also 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.

Major DWR programs include:

#### **Water Administration**

This program provides supervision and control of surface and ground water resources in Colorado, which includes administration of over 100,000 decreed water rights. This includes daily oversight of water allocation to all water right owners in the state including farmers, industries, and municipalities. 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.

## **Dam Safety**

This program provides public safety of life and property through the regulation of approximately 2,900 jurisdictional and non jurisdictional dams within the state; currently there are 1,819 jurisdictional/non-federal dams. This includes the review and approval of plans for the construction, alteration, modification, repair, enlargement, and removal of dams and reservoirs, safety inspections and emergency action plans.

## **Well Inspection**

This program is primarily focused on protecting the ground water in Colorado by way of licensing water well contractors and enforcement of the Water Well Rules. This includes setting and enforcing 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 40,000 oil and gas wells that require a water well permit by the DWR.

Division of Water Resources -- Statutory Authority:

Federal/State Statutory and Other Authority:

Colorado Revised Statutes: Sections 37-80 through 37-92, et seq.; 37-61 through 37-69, et seq.

## Division of Water Resources -- Mission:

It is the mission of the Colorado Division of Water Resources to competently and dependably administer and distribute the waters of the Colorado in accordance with the laws of this state, ensure that dams and water wells are properly constructed and maintained to ensure public safety and to develop, maintain and provide access to accurate and timely information regarding water resources. The Division will strive to fulfill its mission by exercising good stewardship of 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.

### Division of Water Resources – Vision:

The Colorado Division of Water Resources is a leader in the water community of Colorado and the western United States. This is accomplished by focusing on the following areas: people, water, and stewardship. People, because we recognize that the business of water involves our employees and the public. Water, because the administration, safety, and use of the State of Colorado's water resources is something we are committed to and care deeply about. Stewardship, because we understand and accept our obligation to the taxpayers and ourselves, in using and protecting the resources in the most effective manner possible.

# **DWR PERFORMANCE MEASURES**

Given the importance of Interstate Compacts to both the Division of Water Resources and to the Department of Natural Resources, this issue was listed as one of seven major Department performance measures (see performance measure "DNR-3 Compact Compliance" at the beginning of the Strategic Plan).

## **DWR-1. Water Administration Effectiveness**

Objective: Optimize the availability of water supplies in time, place and amount by successive reuse of water.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Water in Colorado diverted and stored compared to water	Benchmark	>3.0	>3.0	>3.0	>3.0
exiting the state expressed as a ratio.	Actual	2.81	3.59	Unknown	Unknown

Due to its natural topography and hydrology, the State of Colorado attempts to optimize the availability of water supplies by successive reuse of water. The majority of the total amount of water diverted from a stream is applied to its decreed beneficial use or consumed through natural evaporation. However, a portion of the water also returns to the stream system for subsequent diversion and use by downstream appropriators. One performance measure of overall effectiveness of water management is the capture and use of these return flows as they successively cascade from the mountains to the prairies before eventually leaving the state. The goal is to maximize the use of water and to use water more than three times before it exits Colorado state-lines. The performance measure compares the water diverted and stored in Colorado to the water exiting the state; this is expressed as a ratio. For example, in FY 2010-11, approximately 25 million acre-feet of water was diverted/stored and seven million acre-feet of water exited the state, indicating that water was used 3.59 times in Colorado before exiting the state. The DWR operates an extensive network of stream gages in order to measure these flows. In FY 2010-11, DWR added more gages to the Satellite Monitoring System network, increasing that number to 525.

## Evaluation of Prior Year Performance:

With the implementation of remote sensing and transmission of streamflow and diversion information used in conjunction with the Decision Support Systems, the Division was able to optimize the use of water within the state while meeting Colorado's compact obligations. In FY 2010-11, robust snowpack numbers and wetter conditions in portions of the State lead to an overall increase in available water for diversions and storage. Colorado maximized in-state use effectively while still meeting interstate compact obligations.

# DWR-2. Water Administration and Enforcement

Objective: Assure the effective distribution and compliance with applicable water laws.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Formal regulatory orders issued by DWR per year compared to the total number of surface and ground water structures actively diverting water expressed as a percentage	Benchmark	<5.0%	<5.0%	<5.0%	<5.0%
	Actual	6.92%	3.02%	Unknown	Unknown
Initiate the change in amount for headgate	Benchmark	98%	98%	98%	98%
diversions and/or reservoir releases within 24 hours of a change in the calling water right priority on a river or creek system (% Compliance)	Actual	95%	95%	Unknown	Unknown

For this performance measure, two trends are tracked: the time in which diversion adjustments are initiated by the DWR and a measure of the number of formal regulatory orders DWR must issue to achieve diversion adjustments. 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 priority and available water supplies. Typical of most regulatory environments, the vast majority of citizens or water users comply with applicable laws. They do so, in part, because of their reliance 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.

As part of their daily administration, division engineers and water commissioners must initiate the change in amount for headgate diversions and/or reservoir releases within 24 hours (or even sooner in intensively managed areas) of a change in the calling water right priority on a river or creek system; a 95% percent response rate is maintained throughout the DWR. Increased performance, closer to the higher benchmark, is anticipated through the addition of more real-time monitoring stations, however maximum system

response is limited due to the constraints of working with natural river systems. Daily records are available in most districts to review response rates.

As noted above, in some cases DWR must issue formal regulatory orders to force compliance with required diversion adjustments. The trend for the regulatory order portion of this performance measure should decrease over time, showing the effective enforcement of the terms and conditions in water court decrees and well permits. This performance measure is the percentage of formal regulatory orders filed by DWR per year compared to the total number of surface and ground water structures actively diverting water. The performance measure is expressed as a percentage.

## Evaluation of Prior Year Performance

In response to court decisions, compact litigation, and user requests over the past few years, the DWR has increased ground water 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. Formal regulatory orders such as well head and surface head gate orders, and letters ordering required meter reports and corresponding data are necessary to enforce the regulations and protect water users' water entitlements. FY 2010-11 showed a decrease in the number for formal regulatory orders issued by the DWR from the previous fiscal year. This is due to ground water administration becoming more mature and water users becoming more familiar with the provisions of implemented rules.

# DWR-3. Dam Safety

Objective: Inspect dams using the risk-based profiling system. Maintain emergency action plans for all high and significant hazard dams.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
% of Inspections Completed	Benchmark	100%	100%	100%	100%
	Actual	100%	100%	Unknown	Unknown
Emergency Action Plans	Benchmark	100%	100%	100%	100%
	Actual	99.3%	98.6%	Unknown	Unknown

The dam safety branch performs risk based dam inspections, dam design review, construction and repair inspections, and maintains emergency action plans (EAP) for dams. Of these tasks, the inspection program and maintenance of current EAPs are critical elements. The dam safety branch is responsible for approximately 2,900 jurisdictional and non jurisdictional dams within Colorado. Currently there are 1,819 jurisdictional/non-federal dams; approximately 621 (318 high hazard, 303 significant hazard) dams classified as such, 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.

Regular visual observation through inspection is the most important tool available to each dam safety engineer. The frequency of field inspection for a particular dam is determined by the risk-based profiling system. The risk-based profiling system is a software tool that ranks the relative physical conditions of high and significant hazard dams in Colorado. The rankings are used to more effectively allocate resources to dams determined to present the greatest risk to public safety and property.

Emergency preparedness for incidents at dams that jeopardize public safety has become an integral part of dam safety program; EAPs are required in order to detect incidents at dams, give adequate warning, and maintain preparedness in the event of a dam failure. The Colorado Rules and Regulations for Dam Safety and Dam Construction (2-CCR-402-1: January 1, 2007) requires that EAPs be updated and maintained for all high hazard and significant hazard dams. Dam safety engineers must perform periodic field safety evaluations of existing dams.

This performance measure tracks the total number of dam inspections and compares the number to the expected annual inspections for dams, based on the risk-based profiling score. Construction inspections do occur, but are not included in this analysis. This performance measure also compares the number of high and significant hazard dams to the EAPs (expressed as a percentage).

### Evaluation of Prior Year Performance:

The dam safety branch conducted inspections as required per dam hazard class risk base scores. In FY 2010-11 the dam safety branch inspected all dams the risk based system determined needed inspection. The number of inspections is a variable target because not all dams are required to be inspected every year.

Additionally, the dam safety branch continued to educate dam owners on safety and the importance of EAPs. The dam safety engineers continue to assist dam owners in the preparation of their EAPs. In FY 2010-11, 98.6% of high and significant hazard dams had EAPs in place.

# **DWR-4.** Well Inspection

Objective: Assure proper well construction via a robust inspection program.

Performance Measure	Outcome	FY 2009-10 Actual	FY 2010-11 Actual	FY 2011-12 Approp.	FY 2012-13 Request
Well Inspections vs. Well Completions	Benchmark	30%	30%	30%	30%
Completions	Actual	25.2%	23.5%	Unknown	Unknown

The well inspection program was instituted for the protection of ground water resources through enforcement of the Water Well Rules (2 C.C.R. 402-2). The program operates by assuring compliance with construction standards through inspections. 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 outreach, and generally supporting the State Engineer and Board of Examiners for Water Well Construction.

A key focus of the well inspectors and the well inspection program is to prevent substandard construction of wells and to locate and initiate action against unlicensed contractors working illegally in the state. This performance measure compares inspections and reported well completions. The benchmark of this performance measure reflects staffing and funding levels for a deterrence type program.

## Evaluation of Prior Year Performance:

The number of inspections will vary and are dependent upon the number of wells being constructed. The well inspection program is cash funded and, due to the economy, is not staffed at the full level. With this reduced staff in FY 2010-11, the well inspector inspected 23.5% of the wells constructed. 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.