Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Natural Resources

PB Request Numbe NPR-01

Request Titles

NPR-01 Annual Fleet Vehicle Request

Dept. Approval By: Will H. Lewis 10/29/2014 — X — **Change Request FY 2015-16**

OSPB Approval By: _____ — ___ — **Supplemental FY 2014-15**

___ — **Base Reduction FY 2015-16**

___ — **Budget Amendment FY 2015-16**

Line Item Information	Fund	FY 2014-15 Appropriation	FY 2014-15 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$3,902,389**	**$0**	**$3,902,389**	**($29,212)**	**($29,212)**
	FTE	-	-	-	-	-
Total of All Line Items	GF	$252,298	$0	$252,298	($4,783)	($4,783)
	CF	$3,576,478	$0	$3,576,478	($20,184)	($20,184)
	RF	$8,091	$0	$8,091	$3,319	$3,319
	FF	$65,522	$0	$65,522	($7,564)	($7,564)

Line Item Information	Fund	FY 2014-15 Appropriation	FY 2014-15 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$3,902,389**	**$0**	**$3,902,389**	**($29,212)**	**($29,212)**
	CF	$3,576,478	$0	$3,576,478	($20,184)	($20,184)
01. Executive Director's Office - Vehicle Lease Payments	FF	$65,522	$0	$65,522	($7,564)	($7,564)
	GF	$252,298	$0	$252,298	($4,783)	($4,783)
	RF	$8,091	$0	$8,091	$3,319	$3,319

Letternote Text Revision Required? Yes ___ No X **If Yes, describe the Letternote Text Revision:**

Cash or Federal Fund Name and CORE Fund Number: Various Sources of Cash Funds

Reappropriated Funds Source, by Department and Line Item Name: Department Indirect Cost Recoveries (for EDO costs)

Approval by OIT? Yes ___ No ___ **Not Required:** X

Schedule 13s from Affected Departments:

Other Information:

Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Natural Resources

PB Request Numbe R-01

Request Titles

R-01 Additional Staffing for Field Operations and Hearings

Dept. Approval By: Will H. Levine 10/28/2014 — X — **Supplemental Change Request FY 2015-16**

OSPB Approval By: _____ — **Base Reduction FY 2015-16** — **Budget Amendment FY 2015-16**

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$29,576,854**	**$0**	**$30,835,493**	**$403,450**	**$404,440**
	FTE	94.3	-	94.3	2.0	2.0
Total of All Line Items	GF	$3,122,112	$0	$3,084,609	$0	$0
	CF	$22,621,817	$0	$23,412,937	$403,450	$404,440
	RF	$1,419,730	$0	$1,771,836	$0	$0
	FF	$2,413,195	$0	$2,566,111	$0	$0

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$11,372,174**	**$0**	**$11,631,863**	**$15,854**	**$15,854**
	CF	$7,652,556	$0	$7,730,869	$15,854	$15,854
01. Executive Director's Office - Health, Life, And Dental	FF	$1,328,321	$0	$1,394,372	$0	$0
	GF	$1,213,503	$0	$1,018,485	$0	$0
	RF	$1,177,794	$0	$1,488,137	$0	$0
	Total	**$205,663**	**$0**	**$206,538**	**$295**	**$295**
	CF	$141,925	$0	$141,631	$295	$295
01. Executive Director's Office - Short-Term Disability	FF	$25,433	$0	$25,547	$0	$0
	GF	$32,444	$0	$33,069	$0	$0
	RF	$5,861	$0	$6,291	$0	$0

	Total	**$4,274,935**	**$0**	**$4,629,634**	**$5,888**	**$6,422**
	CF	$2,949,931	$0	$3,182,017	$5,888	$6,422
01. Executive Director's Office - Amortization Equalization Disbursement	FF	$528,457	$0	$564,370	$0	$0
	GF	$674,702	$0	$742,138	$0	$0
	RF	$121,845	$0	$141,109	$0	$0
	Total	**$4,007,752**	**$0**	**$4,471,806**	**$5,687**	**$6,356**
	CF	$2,765,561	$0	$3,073,539	$5,687	$6,356
01. Executive Director's Office - Supplemental Amortization Equalization Disbursement	FF	$495,428	$0	$545,130	$0	$0
	GF	$632,533	$0	$716,838	$0	$0
	RF	$114,230	$0	$136,299	$0	$0
	Total	**$1,302,222**	**$0**	**$1,285,663**	**$43,233**	**$53,086**
	CF	$697,736	$0	$674,892	$43,233	$53,086
01. Executive Director's Office - Leased Space	FF	$35,556	$0	$36,692	$0	$0
	GF	$568,930	$0	$574,079	$0	$0
	Total	**$8,414,108**	**$0**	**$8,609,989**	**$332,493**	**$322,427**
03. Oil and Gas Conservation Commission - Program Costs	CF	$8,414,108	$0	$8,609,989	$332,493	$322,427
	FTE	94.3	-	94.3	2.0	2.0

Letternote Text Revision Required? Yes ____ No **X** **If Yes, describe the Letternote Text Revision:**

Letternotes for the Oil and Gas Conservation Commission should be changed to reflect an increase of $332,493 from the Oil and Gas Conservation and Environmental Response fund.

Cash or Federal Fund Name and CORE Fund Number: Oil and Gas Conservation and Environmental Response Fund (Fund #1700)

Reappropriated Funds Source, by Department and Line Item Name

Approval by OIT? Yes ____ No ____ **Not Required X**

Schedule 13s from Affected Departments:

Other Information:

Cost and FTE

- The Oil and Gas Conservation Commission (OGCC) requests an increase of $403,450 Cash Funds from the Oil and Gas Conservation and Environmental Response Fund in FY 2015-16, and $404,440 in FY 2016-17 for 2.0 FTE in its permitting and hearings units, contract services, and additional leased space. The ongoing funding will help the OGCC keep pace with the increasing complexity and volume of oil and gas operations.

Current Program

- The OGCC ensures that the state's oil and gas resources are produced in an economically efficient manner that protects correlative rights, and which holds operators to the highest standards in the nation for protecting public health, safety, welfare, the environment, and wildlife.
- The agency's permitting unit reviews applications for permits to drill, well completion reports, and various other industry-submitted reports to monitor regulatory compliance. The hearings unit supports Commission actions on hearing applications and enforcement matters.

Problem or Opportunity

- Oil and gas operations continue to grow in both number and complexity. In FY 2013-14, Colorado's active well count grew to more than 52,000 wells. Further, due to horizontal drilling and other technologies designed to capture more of the resource and minimize waste products, today's drilling plans and proposals to construct new oil and gas facilities are far more complex than industry activity just five years ago. An estimated 94 percent of wells drilled in the Denver Julesburg Basin in FY 2014-15 will be horizontal; five years ago, this number was about 2 percent.
- The OGCC in the coming years will be evaluating applications to drill wells that, on average, pose for staff the most complex challenges related to the integrity of adjacent wellbores, tradeoffs in potential impacts to a surface owner, and conflicts between mineral interests.
- The OGCC's ability to absorb much of this workload increase is limited. No additions to the permitting staff have been made since FY 2010-11. The hearings unit received only 0.9 additional FTE for FY 2014-15. However, the growth in active wells alone has generated and will continue generating the need for additional resources.

Consequences of Problem

- Without sufficient resources, the OGCC will experience challenges in reviewing drilling applications and requests for well spacing and pooling orders within reasonable timeframes, causing unnecessary delays for mineral owners, oil and gas operators, and other stakeholders.

Proposed Solution

- In the permitting unit, add 1.0 FTE and $170,456 in contract services to shorten median permit processing times from the current 56 days to the agency goal of 30 days. In the hearings unit, add 1.0 FTE to keep pace with a growing volume of hearing applications requesting Commission pooling and spacing orders. In total, the OGCC requests 2.0 FTE and associated costs, additional contract services, and leased space.

Department Priority: R-01
Request Detail: Oil and Gas Conservation Commission – Additional Staffing for Field Operations and Hearings

Summary of Incremental Funding Change for FY 2015-16	**Total Funds**	**Cash Funds**
Additional Staffing for Field Operations and Hearings	$403,450	$403,450

Problem or Opportunity:

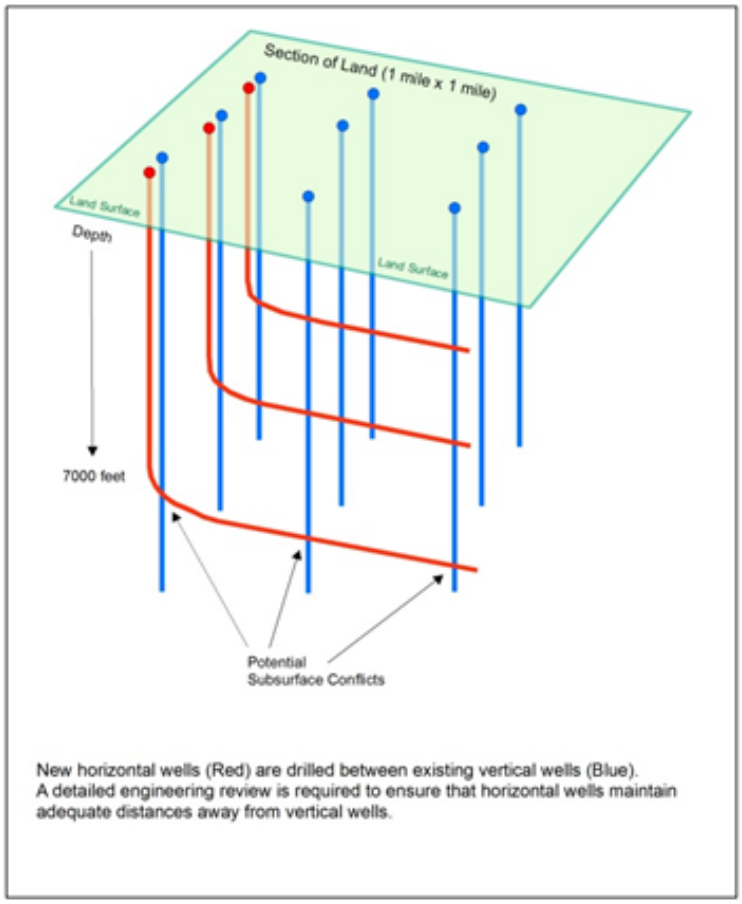
The strategic policy initiative of the Oil and Gas Conservation Commission (OGCC) is to ensure the state's oil and gas resources are produced in an economically efficient manner that protects correlative rights, and which holds operators to the highest standards in the nation for protecting public health, safety, welfare, the environment, and wildlife. To achieve this, the OGCC must constantly keep pace with and address risks associated with the growing volume and complexity of oil and gas operations. Current and projected trends in several of the OGCC's workload and performance metrics, such as permitting timeframes and hearing applications, indicate that additional resources will be required in FY 2015-16 for the agency to continue providing efficient and effective customer service to all stakeholders.

Oil and gas resource development has accelerated to record levels in the Denver Julesburg (DJ) Basin along the Front Range. Compared to just five years ago, the industry's drilling, completion, and construction programs for new oil and gas facilities are far more complex. To meet these challenges the OGCC must continue to evolve, in terms of its technical skills, IT capabilities, and staff size, or it will quickly fall behind in nearly every category of customer service.

Much of the impact on OGCC's regulatory programs is related to the increased use of horizontal drilling. Applications to drill horizontal wells have largely replaced applications to drill vertical or directional wells in the DJ Basin, with the horizontal share growing from about 2 percent in 2009 to an estimated 94 percent in 2014. This trend is not expected to change in the foreseeable future, given the superior economics this technology provides operators targeting the oil rich Niobrara Formation.

Figures 1 and 2 demonstrate some of the challenges associated with horizontal wells, which are being drilled through multiple horizons through fields of existing vertical wells, often within several hundred feet of each other. Figure 1 is a simplified schematic showing three new horizontal wells (red) being drilled between nine existing vertical wells (blue).

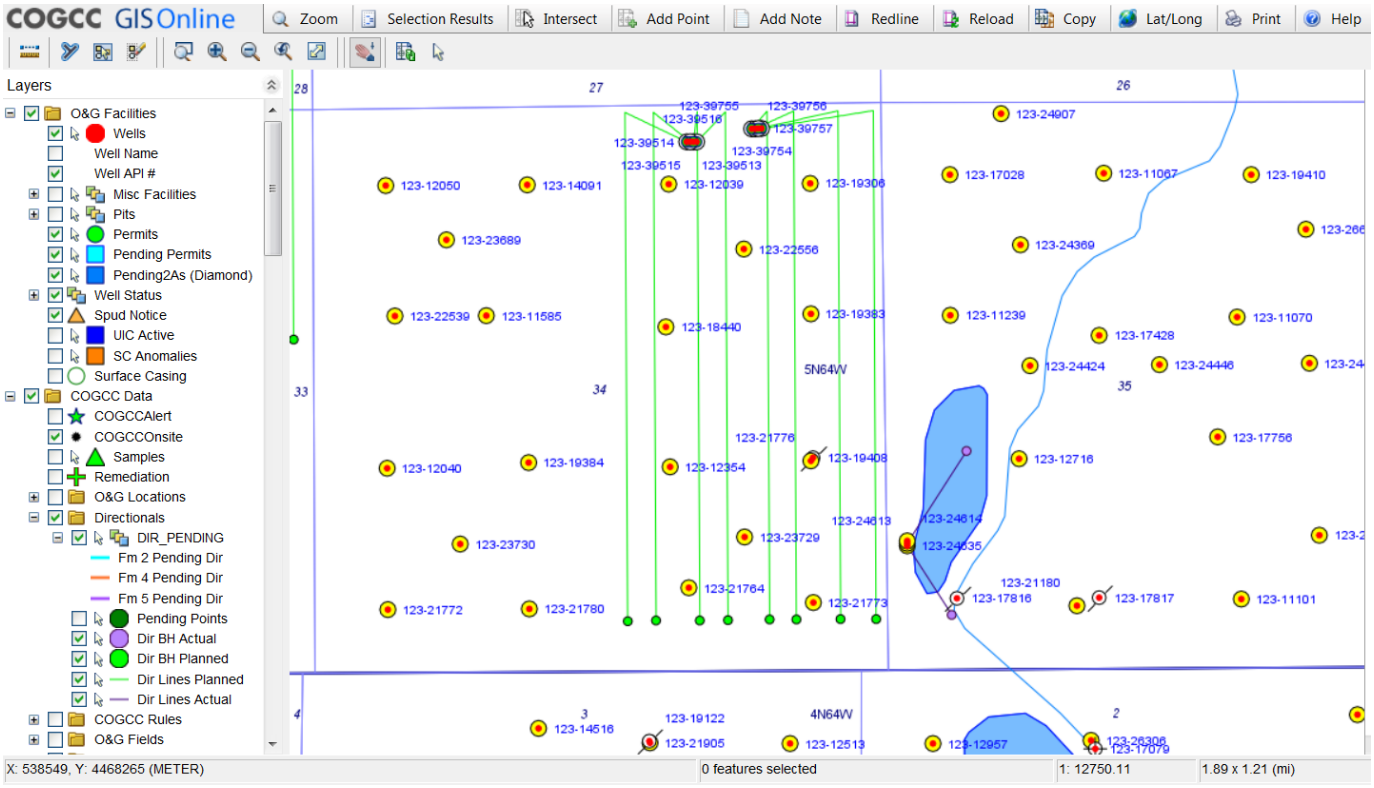
Figure 1
Horizontal Well Technology Requiring OGCC Review



Cross Section View
Three Horizontal Wells Drilled Between Nine Vertical Wells in a Section

A surface view of these conditions is shown in Figure 2, which is a map image taken directly from the OGCC's online GIS service. The image shows data from two one-square mile DJ Basin sections that contain 46 vertical wells and 8 new and proposed horizontal wells. Yellow circles around the red dots indicate a producing well. The red dots by themselves represent the surface locations of existing vertical wells, while the red dots with green lines emanating from them represent the surface locations and wellbore paths of horizontal wells that have been permitted but not yet drilled. The red dots connected to purple lines show the actual wellbore paths of existing directional wells.

Figure 2
Oil and Gas Development Pattern in Northeast Colorado



This pattern of development requires a review by OGCC staff of the lateral portions of the horizontal wells in order to check their design for safe and appropriate offset distances from adjacent wells and ensure compliance with anti-collision practices, which include surveys in nearby wells to confirm their exact locations. The existing vertical wells are also evaluated to ensure producing formations and groundwater are properly isolated. This complex evaluation process adds significant review time to a horizontal well's permit approval process — potentially hours to days more than a typical vertical well.

Oil and gas development patterns of today also impact hearing applications for drilling units. For a more traditional, vertically drilled well, the typical hearing application would contain one well per 40 acre drilling unit. For horizontal wells, however, applications include 8 to 128 wells per drilling unit, with sizes ranging from 640 to over 2,560 acres. In addition to reviewing more wells per hearing application, the hearings unit conducts comprehensive reviews of sworn testimony, the complexity of which roughly corresponds to the size of the unit. Information such as land, geology, surface facilities, and fluids management are included in the testimonies. Hearing officers review the information and coordinate the reviews by other appropriate OGCC staff. They also receive and consider input from agencies such as Colorado Parks and Wildlife and the Bureau of Land Management.

The sheer volume of active wells also contributes to the OGCC's workload. During Fiscal Year 2013-14, Colorado's active well count grew to more than 52,000 wells, and the agency forecasts a 2,000 net increase in this number each year for the foreseeable future. Most of the increase will consist of horizontal wells similar to those shown in Figures 1 and 2, and more than 70 percent of those wells will be located north and east of Denver in the DJ Basin, where the Niobrara Shale play has attracted billions of dollars in private investment.

Proposed Solution:

The OGCC requests an increase of $403,450 Cash Funds from the Oil and Gas Conservation and Environmental Response Fund for the following 2.0 FTE, contract services, and leased space to improve the OGCC's ability to address the growing volume and increasing complexity of oil and gas operations.

- 1.0 Permit-Compliance Technician,
- 1.0 Hearing Officer,
- Contract Permit-Compliance Staff (4,160 hours ongoing), and
- Additional leased space (2,413 square feet ongoing)

Permitting

Add a permit-compliance technician (1.0 FTE, Engineering/Physical Science Tech II) and $170,456 in contract services to decrease the permit processing time from its FY 2013-14 median of 56 days to the agency goal of 30 days.

To maximize existing permit staff resources, the OGCC has developed nearly 20 guidance documents over the last two years. They have helped both staff and industry reduce errors and improve consistency on APDs and other regulatory forms. Some were specifically designed to remove all redundancies from internal processing procedures. Nevertheless, the OGCC's median timeframes for evaluating applications for a permit to drill (APDs) have increased and surpassed the agency's stated performance goal of 30 days. Without the requested staff adjustments, the delay in OGCC's review is expected to worsen over the next few years as work inputs exceed the capacity for on-time output in this area. Operators depend on a predictable permitting process to efficiently plan and manage their exploration and production assets in a competitive, multi-state market.

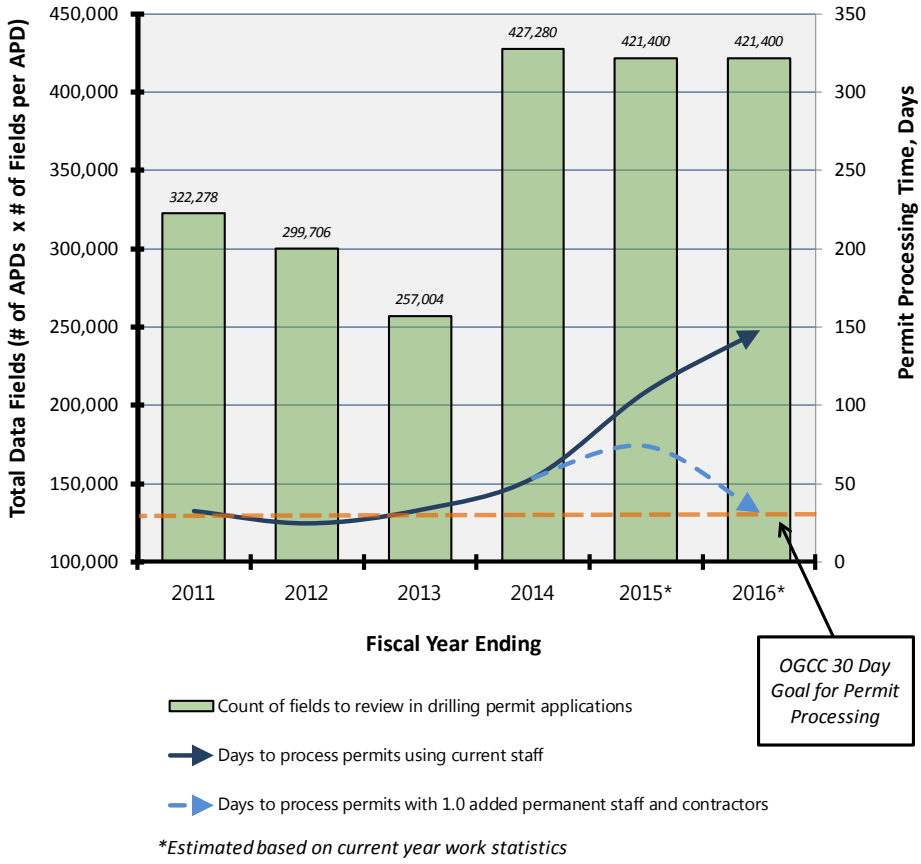
There are two primary reasons for the increase in permit review and approval times:

- **Reduction in Contract Staff.** Because Colorado Revised Statutes (Section 24-50-504, C.R.S. 2014) prohibit the continuous use of contractors for work that can be conducted by state employees, the permit unit attempted in FY 2013-14, for the first time in four years, to process permits relying entirely on its staff of 9.0 FTE, without contract assistance. While work process efficiencies had been realized in this unit, the level of complexity in horizontal well permit applications had superseded the gains from more efficient APD processing. Therefore, permit timeframes increased. The OGCC has very limited funding available for contractors in FY 2014-15. The agency has generally used vacancy savings in previous years, when available, to hire contract support for the permitting program. Without the requested funding for contractors, the OGCC anticipates permit approval times will continue to increase.

- **More Complex Applications.** The State's new setback rules for oil and gas facilities, effective August 1, 2013, increased the amount of information the OGCC requires on each Application for Permit to Drill (APD). As shown in Figure 3, permit staff now handle more than 420,000 pieces of information annually, a 62 percent increase from the 260,000 pieces of information provided to the OGCC in FY 2012-13. The added safeguards in the rules, combined with

inadequate staffing, and a high volume of APDs, have delayed the issuance of drilling permits by up to several weeks.

Figure 3
APD Data Fields vs Median Days to Process Drilling Permits



With the additional data fields, the average capacity of a permit-compliance technician is currently about 370 permits per year; therefore the annual output of the entire staff of 9.0 FTE is about 3,330 permits. An additional permit-compliance technician position, along with two contractors (4,160 hours for $170,456), would boost the annual output by about 1,110 permits to a total of 4,440, which slightly exceeds the anticipated 4,300 annual permit applications. However, the extra capacity is needed to address the current backlog of approximately 800 APDs.

The OGCC can generally meet its 30 day target median processing time when the number of APDs received in a given year closely matches the staff's capacity. But, as Figure 3 demonstrates, when backlogs start to develop, permit processing times increase at an exponential rate unless the staffing shortfall is addressed. Therefore, to prevent a backlog from developing, it is important that the permit unit always has enough staff to process the anticipated APDs.

An alternative solution, that foregoes the addition of new FTE, is to add enough contract resources to address the drilling permit workload. However, this solution would conflict with state personnel directives, given the duration and number of contract staff the agency has required in recent years. While it is not necessary that the OGCC always be staffed to meet peak demand, it is appropriate to hire

FTE when the long term need has been demonstrated over a three to five year period as is the current case. The recommended solution, hiring 1.0 additional permitting FTE plus funding two contractors, strikes a balance that recognizes the permitting workload has reached a long-term, higher threshold that requires additional full-time staff, but refrains from using only permanent FTE to meet this new level of demand. The use of some contractors will allow the OGCC to easily respond to the smaller, unpredictable fluctuations in workload associated with temporary changes in industry activity.

Hearings

Add a hearing officer (1.0 FTE, Hearing Officer II) and associated costs to keep pace with the growing volume of pooling and spacing applications.

Hearing applications, submitted by operators to space wells and pool mineral interests within drilling units, have doubled in volume in less than three years and quadrupled over the last four years as part of a wave of new industry investment in the DJ Basin and throughout Colorado. Spacing is a process administered by the Commission to establish the appropriate number of acres drained by one well or the appropriate number of wells necessary to efficiently drain a drilling unit of a given size. In certain instances, the Commission will also pool mineral interests within a drilling unit (i.e., combine all oil and gas interests for joint development) in order to ensure that a drilling unit is efficiently and economically developed while protecting correlative rights.

OGCC hearings and permit staff conduct initial reviews of these applications. This step alone can consume several hours or more. When an application is deemed sufficient, the hearing officer prepares a notice of hearing. If someone protests the application, the hearing officer schedules and conducts an administrative hearing prior to the Commission hearing. For uncontested matters, the hearing officer proceeds with a thorough review of the sworn testimony included in the application and presents the application to the Commission. In either case, when hearings staff is recommending approval by the Commission, the hearing officer prepares a draft order in advance of the next regularly scheduled Commission hearing, of which eight to nine are held each year. In addition, hearing officers must be prepared to publicly defend the agency's position on all matters, including those placed on the consent agenda, during the Commission hearing. This labor and time-intensive process required for each application has become more complex in recent years due to the predominance of horizontal drilling, which, as discussed earlier, has resulted in a significant increase in the number of wells and acres per drilling unit.

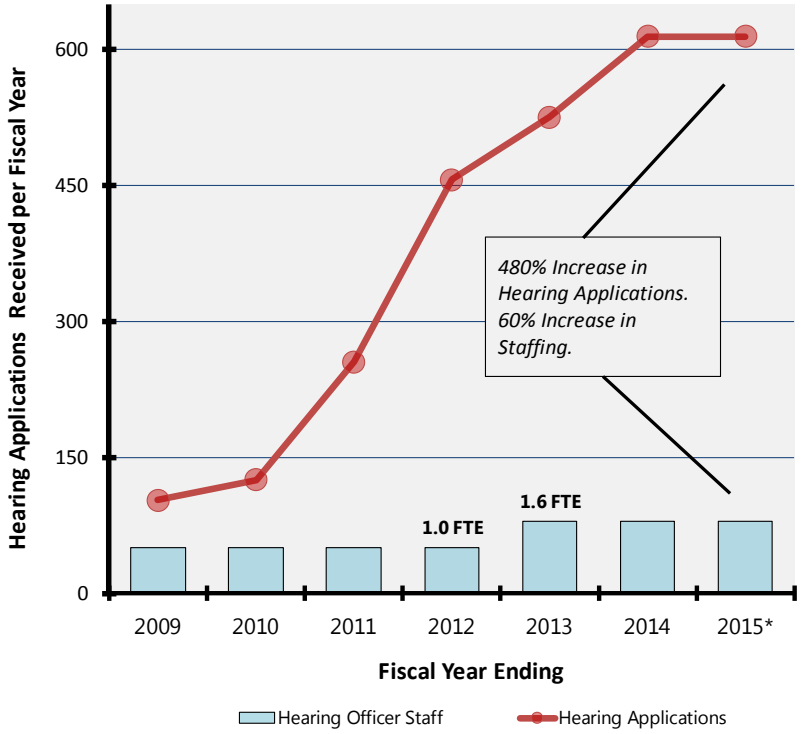
As Figure 4 demonstrates, the number of hearing applications, which has grown from 103 to 614 between fiscal years 2008-09 and 2013-14, has far surpassed the growth in staff resources. For the July 2014 hearing, the OGCC received 96 new applications, putting it on track to match or exceed FY 2013-14's all-time high figure. Currently, two hearing officers are able to dedicate about 80 percent of their time, combined for a total of 1.6 FTE, to these applications. The remaining 20 percent of their time (0.4 FTE) is spent on enforcement-related duties. Additional resources are needed to prevent multi-month delays in approving spacing and pooling requests by operators. The issuance of APDs also depends on the timely approval of hearing applications.

From a budget and personnel perspective, an ongoing source of confusion is the sharing of a state job classification by two different types of employees, *hearing* officers and *enforcement* officers. With the exception of one of these staff members, all hearing and enforcement officers are classified as Hearing Officer IIs, because the State's personnel system does not offer a separate classification for enforcement

officers. Both types of employees have legal backgrounds and, therefore, can step in for one another when required. Generally speaking, however, they have separate and distinct roles. The OGCC's newest hearing unit position, appropriated by House Bill 14-1356, which increased the OGCC's maximum daily penalty, was filled with an enforcement officer. To summarize, it is important to note that the OGCC has only 1.6 FTE available for addressing hearing applications, even though additional Hearings Officer II positions are on staff.

Furthermore, a substantial portion of the additional 2,180 hours in legal services, appropriated for FY 2014-15, will be spent prosecuting enforcement cases, responding to Colorado Open Records Requests, and working on rulemaking issues. Few of these hours, if any, will be available for assistance with hearing applications.

Figure 4
Hearing Officer Workload



**Estimated based on hearing applications received through August 2014.*

An alternative solution would bypass the hiring of any new permanent staff and would instead add enough contract attorney resources to supplement permanent staff. Past experience with this approach has shown that contract staff fulfilling these specialized legal functions requires a lengthy period of training, up to six months at significant hourly rates, before the contractor becomes effective and more independent, making a contractor-only solution a very expensive, short term fix to staffing shortfalls in this work unit. Furthermore, if hearing application workload is elevated for many years to come, as anticipated, permanent staffing would be significantly less expensive and would avoid the questionable legality of using contractors for this on-going workload that is largely addressed by permanent state employees.

Additional Leased Space
Add 2,413 square feet of leased space at a cost of $43,233

The OGCC's current space at The Chancery building, in downtown Denver, is fully utilized by permanent Denver-based staff, contractors, temporary employees, visiting field staff, and OGCC-assigned Office of Information Technology (OIT) staff. Several cubicles, containing two workstations each, are already carefully scheduled to maximize office space, especially during the summer months when the agency hosts about a half dozen college interns.

To provide office space for the two requested FTE, as well as additional staff that will likely be needed in the near future as the industry continues to expand, the agency recommends leasing the remaining 2,413 square feet of vacant space on the eighth floor of The Chancery building. Although building management is actively trying to lease the vacant suite and, therefore, cannot guarantee its availability in FY 2015-16, the space is ideal, because it is contiguous to the agency's existing space.

Full Decision Item - Summary
In total, the OGCC requests cash fund appropriations for 2.0 FTE, contract services, and additional leased space.

If the OGCC's permitting and hearing programs do not receive sufficient resources in the coming fiscal year, the agency will experience challenges with reviewing drilling applications and requests for other planning services, such as well spacing and pooling orders. Timeframes to process these requests will continue to increase, causing unnecessary delays for mineral owners, oil and gas operators, and other stakeholders.

Anticipated Outcomes:

The OGCC proposes to measure the benefits of the decision item using the following performance metrics:

- Median time required to process drilling permits
- The number of Commission orders issued each year

These measures are already in place in the OGCC Performance Plan document.

Key markers of success in OGCC programs, if this decision item is authorized, would include:

1. **Permit Efficiency.** The addition of a Permit-Compliance Technician and contractors to adequately address the demand for processing as many as 4,300 applications for permits each year, all within a 30 day target median processing time by the end of FY 2016-17.

2. **Correlative Rights.** The addition of a Hearing Officer to adequately address the demand for processing as many as 600 applications for spacing and pooling orders.

Assumptions and Calculations:

Due to competition with the oil and gas industry for skilled employees, the OGCC has been unable to attract qualified staff at range minimum salaries. The scarcity of applicants has forced the OGCC to conduct multiple searches and ultimately pay salaries up to 35 percent above range minimum. To successfully compete for qualified candidates, the OGCC is requesting that funding be appropriated at the following levels:

- 28 percent above range minimum for the permit technician
- 31 percent above for the hearing officer

These figures represent the salaries required of the most recent hires in these job classes.
For the hearing officer, an ongoing appropriation of $750 is required for Continuing Legal Education (CLE) courses and oil and gas-related technical training.

Leased space calculations are based on 2,413 square feet at an estimated annual rental rate of $21.00 /square foot, plus $100.54/month in operating costs. Due to the time required to amend the existing contract and expand into the requested space, only 10 months of funding are requested for the first year.

(((2,413 x $21.00)/12 months) + $100.54) x 10 months = $43,233

Twelve months of funding, at an escalated annual rate of $21.50/square foot, are requested for FY 2016-17.

Table 1 – Fund Balance, FY 2013-14 through FY 2016-17. (This request is not included in the projections for fiscal years 2015-16 and 2016-17.)

Cash Fund Name	Cash Fund Number	FY 2013-14 Expenditures	FY 2013-14 End of Year Cash Balance Actual	FY 2014-15 End of Year Cash Balance Estimate*	FY 2015-16 End of Year Cash Balance Estimate*	FY 2016-17 End of Year Cash Balance Estimate*
Oil and Gas Conservation and Environmental Response Fund	1700	$9,980,201	$10,674,407	$9,906,982	$9,161,126	$8,343,311

*Estimated based on current levy rate, production projections, and product price estimates.

Calculation Assumptions:

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($1,200), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2015-16 as 0.9166 FTE to account for the pay-date shift.

Expenditure Detail		FY 2015-16		FY 2016-17	
Personal Services:		FTE		FTE	
	Monthly Salary				
Prmt Tch - Eng/PhysSciTech II	$ 4,950	1.0	59,400	1.0	59,400
PERA			6,029		6,029
AED			2,614		2,851
SAED			2,525		2,822
Medicare			861		861
STD			131		131
Health-Life-Dental			7,927		7,927
Subtotal Position 1, 1.0 FTE		1.0	**$ 79,487**	1.0	**$ 80,021**
	Monthly Salary				
Hearing Officer II	$ 6,200	1.0	74,400	1.0	74,400
PERA			7,552		7,552
AED			3,274		3,571
SAED			3,162		3,534
Medicare			1,079		1,079
STD			164		164
Health-Life-Dental			7,927		7,927
Subtotal Position 2, 1.0 FTE		1.0	**$ 97,558**	1.0	**$ 98,227**
Purchased Personal Services			**$ 170,456**		**$ 170,456**
Subtotal Personal Services		2.0	**$ 347,501**	2.0	**$ 348,704**
Operating Expenses					
Prmt Tch - Eng/PhysSciTech II					
Regular FTE Operating	500	1.0	500	1.0	500
Telephone Expenses	450	1.0	450	1.0	450
PC, One-Time	1,230	1.0	1,230		-
Office Furniture, One-Time	3,473	1.0	3,473		-
Office Suite Software	330	1.0	330	-	-
Subtotal Position 1, 1.0 FTE			**$ 5,983**		**$ 950**

Hearing Officer II						
Regular FTE Operating	500	1.0	500	1.0		500
Telephone Expenses	450	1.0	450	1.0		450
PC, One-Time	1,230	1.0	1,230			-
Office Furniture, One-Time	3,473	1.0	3,473			-
Office Suite Software	330	1.0	330	-		-
Annual CLE and Tech	750	1.0	750	1.0		750
Subtotal Position 2, 1.0 FTE			**$ 6,733**		**$**	**1,700**
Leased Space Expenses			**$ 43,233**		**$**	**53,086**
Subtotal Operating Expenses			**$ 55,949**		**$**	**55,736**
TOTAL REQUEST		2.0	**$ 403,450**	2.0	**$**	**404,440**
General Fund:						
Cash funds:		*2.0*	*$ 403,450*	*2.0*		*404,440*
Reappropriated Funds:						
Federal Funds:						

Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Natural Resources

PB Request Number: R-02

Request Titles

R-02 Enhanced Water Administration

Dept. Approval By: William H. Levine 10/28/2014

OSPB Approval By:

Supplemental

Change Request FY 2015-16 ___

Base Reduction FY 2015-16 ___

Budget Amendment FY 2015-16 ___

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
Total of All Line Items	Total	$39,901,597	$0	$41,562,842	$213,140	$202,072
	FTE	248.8	-	249.1	2.4	2.5
	GF	$21,953,059	$0	$22,492,335	$213,140	$202,072
	CF	$14,151,169	$0	$14,769,252	$0	$0
	RF	$1,419,730	$0	$1,771,836	$0	$0
	FF	$2,377,639	$0	$2,529,419	$0	$0

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
01. Executive Director's Office - Health, Life, And Dental	Total	$11,372,174	$0	$11,631,863	$31,708	$31,708
	CF	$7,652,556	$0	$7,730,869	$0	$0
	FF	$1,328,321	$0	$1,394,372	$0	$0
	GF	$1,213,503	$0	$1,018,485	$31,708	$31,708
	RF	$1,177,794	$0	$1,488,137	$0	$0
01. Executive Director's Office - Short-Term Disability	Total	$205,663	$0	$206,538	$262	$274
	CF	$141,925	$0	$141,631	$0	$0
	FF	$25,433	$0	$25,547	$0	$0
	GF	$32,444	$0	$33,069	$262	$274
	RF	$5,861	$0	$6,291	$0	$0

	Total	**$4,274,935**	**$0**	**$4,629,634**	**$5,240**	**$5,980**
	CF	$2,949,931	$0	$3,182,017	$0	$0
01. Executive Director's Office - Amortization Equalization Disbursement	FF	$528,457	$0	$564,370	$0	$0
	GF	$674,702	$0	$742,138	$5,240	$5,980
	RF	$121,845	$0	$141,109	$0	$0
	Total	**$4,007,752**	**$0**	**$4,471,806**	**$5,061**	**$5,918**
	CF	$2,765,561	$0	$3,073,539	$0	$0
01. Executive Director's Office - Supplemental Amortization Equalization Disbursement	FF	$495,428	$0	$545,130	$0	$0
	GF	$632,533	$0	$716,838	$5,061	$5,918
	RF	$114,230	$0	$136,299	$0	$0
	Total	**$20,041,073**	**$0**	**$20,623,001**	**$170,869**	**$158,192**
	CF	$641,196	$0	$641,196	$0	$0
07. Water Resources Division - Water Administration	FTE	248.8	-	249.1	2.4	2.5
	GF	$19,399,877	$0	$19,981,805	$170,869	$158,192

Letternote Text Revision Required? Yes ____ No **X** **If Yes, describe the Letternote Text Revision:**

Cash or Federal Fund Name and CORE Fund Number:

Reappropriated Funds Source, by Department and Line Item Name

Approval by OIT? Yes ____ No ____ **Not Required** **X**

Schedule 13s from Affected Departments:

Other Information:

Cost and FTE

- The Department requests $213,140 General Fund to fund 2.4 FTE in FY 2015-16 and $202,073 and 2.5 FTE ongoing for the Division of Water Resources (DWR) to: (1) accommodate increased groundwater administration in the Arkansas River basin; (2) address new demands for water administration in the Yampa River basin; and (3) tabulate, track and report on increasingly complex water rights consistent with recommendations in the H.B. 12-1278 study. This request represents a 1% increase in DWR's FTE.

Current Program

- DWR administers nine interstate compacts and over 170,000 water rights through 45,000 surface water structures and 270,000 groundwater wells in the water administration program. This program serves all water users in the state and ensures interstate compact compliance.
- Water administration determines when users can legally divert and use water, records water use, and maximizes use of water in Colorado without impairing compacts.

Problem or Opportunity

- Due to the growth and demands for more municipal, recreational and environmental uses, water users spend enormous time and funds assuring that water court decrees do not injure their water rights, resulting in very complex decrees. The increase in the number and complexity of water rights decrees requires more complex records and more careful and strict water administration by DWR.
- Adding these additional complex operations into already full daily workloads without assistance means it is likely that senior water rights will get shorted or suffer delays in getting their water, which can lead to a significant economic impact and potential litigation. Water users are the most directly impacted when DWR is unable to assure rights are administered pursuant to decrees, rules, and compacts.

Consequences of Problem

- DWR cannot administer water rights pursuant to the decrees, collect and provide the information water users rely on to maintain the use and value of their water rights, and document the State's compliance with interstate compacts with existing resources. This situation could lead to an increase in litigation over administration, changing water rights, and availability of water for growth.
- DWR anticipates the number and complexity of decrees will continue to increase. Without this request, DWR's ability to provide efficient and effective administration will diminish.

Proposed Solution

- DWR requests funding and approval for FY 2015-16 of 2.4 new FTE: Two 0.5 FTE deputy well commissioners in the Arkansas River basin to assist with groundwater administration (1.0 FTE total), 0.5 FTE deputy water commissioner in the Yampa River basin to assist with increased water administration, and 0.9 FTE water rights and diversion records specialist to direct staff in seven water divisions across the state in order to provide consistent data to water users. In FY 2016-17 the request is annualized to 2.5 FTE due to the pay-date shift.

Department Priority: R-02
Request Detail: Division of Water Resources – Enhanced Water Administration

Summary of Incremental Funding Change for FY 2015-16	Total Funds	General Fund
Enhanced Water Administration	$213,140	$213,140

Problem or Opportunity:

The Division of Water Resources ("DWR") is requesting 2.4 new FTE for FY 2015-16 and 2.5 FTE for FY 2016-17 and beyond to: (1) accommodate increased groundwater administration in the Arkansas River basin; (2) address new demands caused by strict water administration in the Yampa River basin; and (3) tabulate, track and report on increasingly complex water rights per recommendations in the HB 12-1278 study.

Water administration is vital to Colorado citizens in that it provides for dependable distribution of water and surety to water users/owners for a commodity valued in the billions of dollars annually. The Colorado General Assembly has tasked DWR with the administration of nine interstate compacts and over 170,000 water rights through 45,000 surface water structures and 270,000 wells. Many of these are high capacity wells that impact surface water users and require remedy of those impacts.

New water rights appropriations and operations must be added into daily administration by field staff to assure maximum utilization of water in Colorado. New uses and issues complicate administration and result in over-appropriated basins. An over-appropriated basin is a condition in which there is insufficient water to satisfy all water rights in a basin or area. In these cases DWR must strictly administer water to assure water rights are satisfied in priority. DWR administers water court decrees, including recreational and environmental uses, such as recreational in-channel diversions ("RICD") and instream flows, and works with entities to administer water in ways that avoid impact to endangered species.

Factors complicating water administration include: the number of, and statewide distribution of, water rights; management of Colorado's seven major drainages (including 78 sub-basins); the ability for citizens to appropriate new water rights and change senior water rights; the need to incorporate the delayed impacts of groundwater use on stream systems and water rights; the increasing complexity of court decrees (many new cases require surface and groundwater modeling and complex accounting to determine water availability); and interstate compacts. Colorado must also ensure that some water is delivered to adjoining states through interstate compacts, which are legally binding and enforceable contracts that are ratified by the legislative authority in each of the signatory states and by the U.S. Congress. Previous interstate compact violations have cost Colorado millions of dollars. In the Arkansas River basin, for example, well pumping reduced compact deliveries to Kansas and resulted in an interstate lawsuit. Resolution of that lawsuit not only held Colorado liable for $34.7 million, but also resulted in strict well administration with a well measurement and groundwater administration program.

DWR is dedicated to maximizing the beneficial use of water in Colorado through administration and to achieving 100-percent compliance with interstate compacts, as outlined in the Department of Natural Resources' Performance Plan. To accomplish these goals, DWR maintains data on water rights and water diversions, monitors water supplies through stream flow measurements and groundwater regulations, and administers diversions across the State. Increased demand for water leads to an increase in structures and operations that are captured by high level data systems to verify operations, evaluate future changes, and provide a solid foundation of data for policy/planning purposes. In addition to being used to administer the state's water supply, these data are also relied upon by water users, policy analysts, and numerous state and federal agencies as inputs to models to maximize Colorado water use and to develop water plans and policies, including the Colorado Water Plan. These data are only available from DWR.

Arkansas River Basin – Deputy Well Commissioners

Staff must enforce groundwater administration and assist with Arkansas River Compact requirements such as field verification of actual irrigated acreage and dry-up verification efforts. Since 2010, DWR has needed to administer 3,700 Coal Bed Methane ("CBM") wells in the Arkansas Basin in addition to the 10,000 high capacity wells that are currently under administration. With the addition of approximately 3,700 CBM wells, the number of wells under administration in the Arkansas River Basin has increased approximately 37 percent since 1999. However, the current staffing level of 6.0 FTE for groundwater field personnel has not changed from the pre-CBM level of 10,000 wells. In addition to permitting the additional wells, there are on-going verifications and enforcement actions that need to occur. The 2009 settlement of the *Kansas v Colorado* case requires regular verification of irrigated acreage, dry-up acreage, and return flow maintenance. Finally, variable replacement supplies require field staff to respond quickly to allow or discontinue groundwater use during the irrigation season. The additional workloads cannot be met by existing staff. To meet these additional workloads, the Division requests two additional permanent part-time Deputy Well Commissioners (1.0 FTE increase total), who will be employed during the irrigation season, when administration needs are most pressing.

Water administration was once less complex in the Arkansas River basin. A water commissioner in charge of the water in the river ensured it went into various headgates or to the Kansas stateline through basic priority administration, which includes turning headgates to assure water is diverted in-priority or turned off when out-of-priority (or not legally allowed to divert). Following the *Kansas v Colorado* lawsuit in 1985 that settled in 2009, water administration became much more complicated when Colorado began requiring groundwater (well) users to replace depletions to streams. Groundwater use impacts to a river occur over long periods of time. As a result, it is not possible to simply turn off a well when it is 'out-of-priority' in order to restore the amount of surface water required to be in the river. Another source of water is needed (referred to as augmentation or replacement) to add to the river to keep the river rights whole when well impacts are 'out-of-priority.'

Under the Well Use Rules, wells may only pump if they have replacement water to cover stream depletions; the chief supply of replacement water is trans-mountain water and certain reusable supplies. Replacement allocations may fluctuate throughout the year due to a variable climate, meaning a well commissioner must quickly respond to this change so that water users can maximize the available water opportunities while not injuring other water rights or the Arkansas River Compact. Given the complicated nature of the Arkansas River Compact and the high value of water in the Arkansas River basin, DWR 'tags' wells when they are 'out-of-priority' so that verification by all is transparent. If a well 'tagged out' is approved to pump additional water for a short time, then DWR must quickly 'un-tag' the well to allow the

Colorado user to maximize their water use opportunity. The requested additional two Deputy Well Commissioners would assist in this quick response to changing water availability.

Additional CBM Well Administration: The *Vance v. Wolfe* decision brought oil and gas wells in the State under DWR's administrative purview, resulting in the issuance of water well permits for over 6,000 oil and gas wells. Those wells both cause depletions and place water in the rivers for diversion. Legislation, initiated in 2009 and amended in 2010, directed rulemaking by the State Engineer in 2010 and allowed for reliance on Substitute Water Supply Plans through 2012. Of those wells subject to DWR oversight resulting from the *Vance v. Wolfe ruling* and subsequent legislation, Division No. 2, the Arkansas River Basin, is responsible for the administration of nearly 3,700 CBM wells and over 9,000 acre-feet of water produced by these wells, some of which is used to replace depletions from groundwater use and some of which is administered in priority in the rivers. The addition of these permitted wells has created an increase in workload on DWR, with ongoing administrative obligation for each well, as well as purview over new oil and gas wells. The right side of Figure 1 illustrates the increase in the number of wells administered in the Arkansas River Basin.

Compact Compliance Related to Acreage: In the *Kansas v Colorado* case, the U.S. Supreme Court Special Master said that the key to compliance with the Arkansas River Compact rests not so much with Colorado's Rules themselves as with the Replacement Plans and their implementation. The workload associated with this grows as replacement supplies dwindle, irrigation systems change, and land is dried up for augmentation or compliance purposes. Figures 1 and 2 illustrate the workload increases related to the inspections required and the acreage inspected for the items below.

Irrigated Acreage Updates with Satellite Imagery

Appendix B.4 of the U.S Supreme Court decree in *Kansas v. Colorado* requires DWR to update irrigated acreage using satellite imagery on a five-year basis. Under the current cycle, this update was last performed in 2013. To complete the update, commissioners must verify a random selection of fields (20 percent of those in the mainstem ditch area) by field visits twice during the year. This field verification task took approximately 400 hours of additional time for the existing 6 FTE in 2013. The data collected by DWR's commissioners is then used with remote sensing via satellite imagery to classify all parcels within the target area as irrigated or non-irrigated and also to classify the crops grown on those parcels. This process will be repeated every five years thereafter. In 2003 the number of parcel inspections conducted was 3,832 involving 43,730 acres. In 2013 DWR commissioners performed 6,206 parcel inspections involving 64,521 acres. DWR will have a greater burden to provide site inspection verifications in upcoming years due to the fact that the Arkansas River Decision Support System will include irrigated acreage data outside the mainstem ditch area and field verification will occur across the basin.

Farm Unit Verification

Appendix B.3 of the decree in *Kansas v. Colorado* requires DWR to verify how water is used on farms that have wells by doing farm verification inspections on approximately 20 percent of these farms in the main ditch system areas each year. In 2003 DWR commissioners completed 1,340 farm verification inspections on farm parcels that included 30,882 acres. In 2013, DWR completed 1,474 farm verification inspections encompassing 38,919 acres. This task consumed approximately 1000 hours of the 6.0 FTE field staff time in 2013. The number of active farms with wells varies with hydrologic circumstances that impact the amount of replacement water available to support augmented well pumping; therefore, the number of farms with active wells can vary with time. As noted, Colorado must stay in compliance with the Compact. Without these verification inspections Colorado users will not be able to take advantage of increased water supplies.

Irrigation Improvement Rules

These rules were promulgated in January 2011 and require administration of farm fields converted from traditional flood and furrow irrigation to drip/sprinkler irrigation in order to maintain historical return flows in compliance with the Arkansas River Compact. During the spring each year, DWR commissioners must conduct windshield surveys (quick visual inspections) to identify new irrigation improvements, track down the owner/user of the improvement, and inspect existing improvements. Existing systems must be monitored to ensure compliance with terms and conditions of return flow maintenance plans. With only about 12 percent of this mainstem area converted from traditional flood/furrow irrigation, DWR anticipates this workload will continue to grow. Total irrigated acreage needing inspection in 2013 was 39,842 acres which involved 692 inspections by commissioners.

Dry-up Verification and Monitoring

Appendix B.4 of the U.S Supreme Court decree in *Kansas v. Colorado* requires DWR to field inspect parcels that have had surface water removed to provide augmentation supplies for ongoing post-Compact well depletions. This typically requires DWR commissioners to visit the dry-up fields twice during the irrigation season and sometimes three times. Pursuant to the final settlement with Kansas, at least one of the dry-up inspections is performed with staff from the Kansas Division of Water Resources. In 2003 commissioners performed 690 parcel inspections comprising 10,693 acres. In 2013, the number of parcel inspections needed rose to 1,314 involving 19,694 acres. The rising number of acres and inspections is driven by the diminishing supply of augmentation water leased from municipalities that drives greater dry-up of lands to maintain well augmentation supplies.

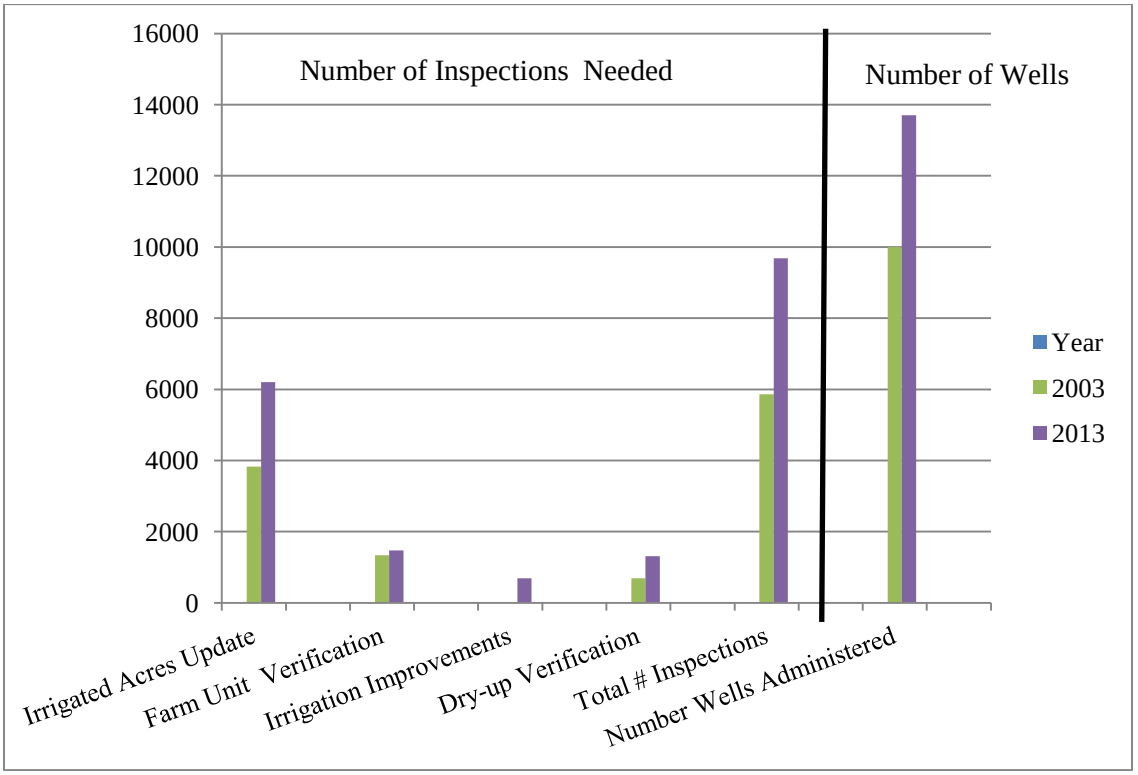


Figure 1

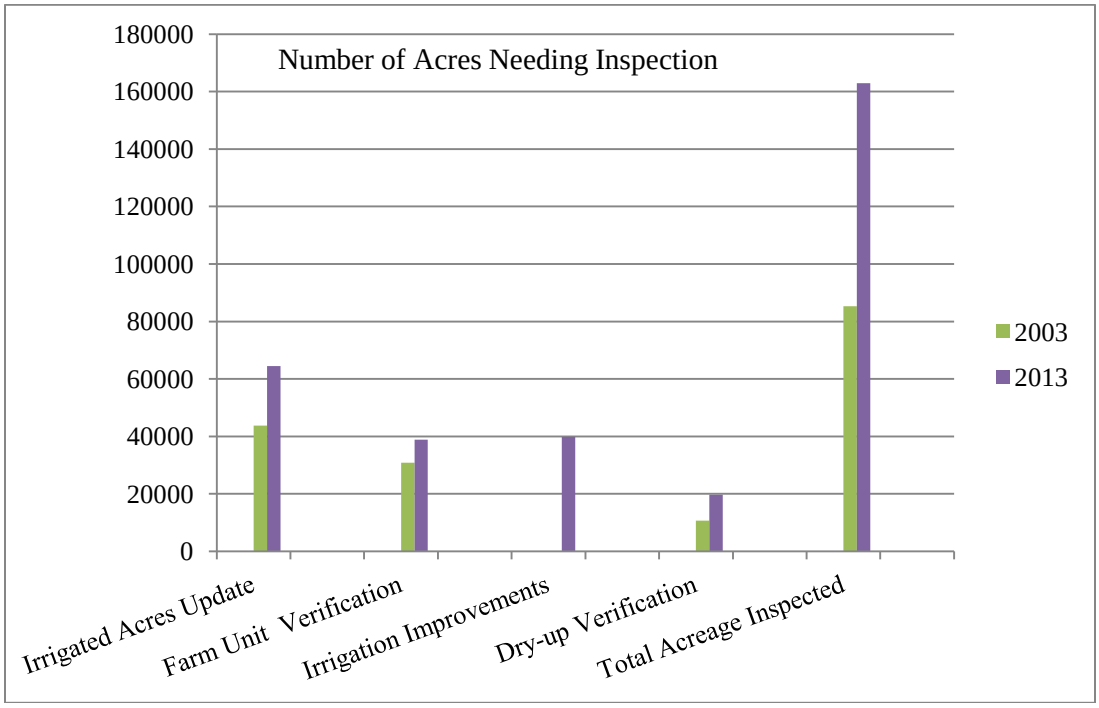


Figure 2

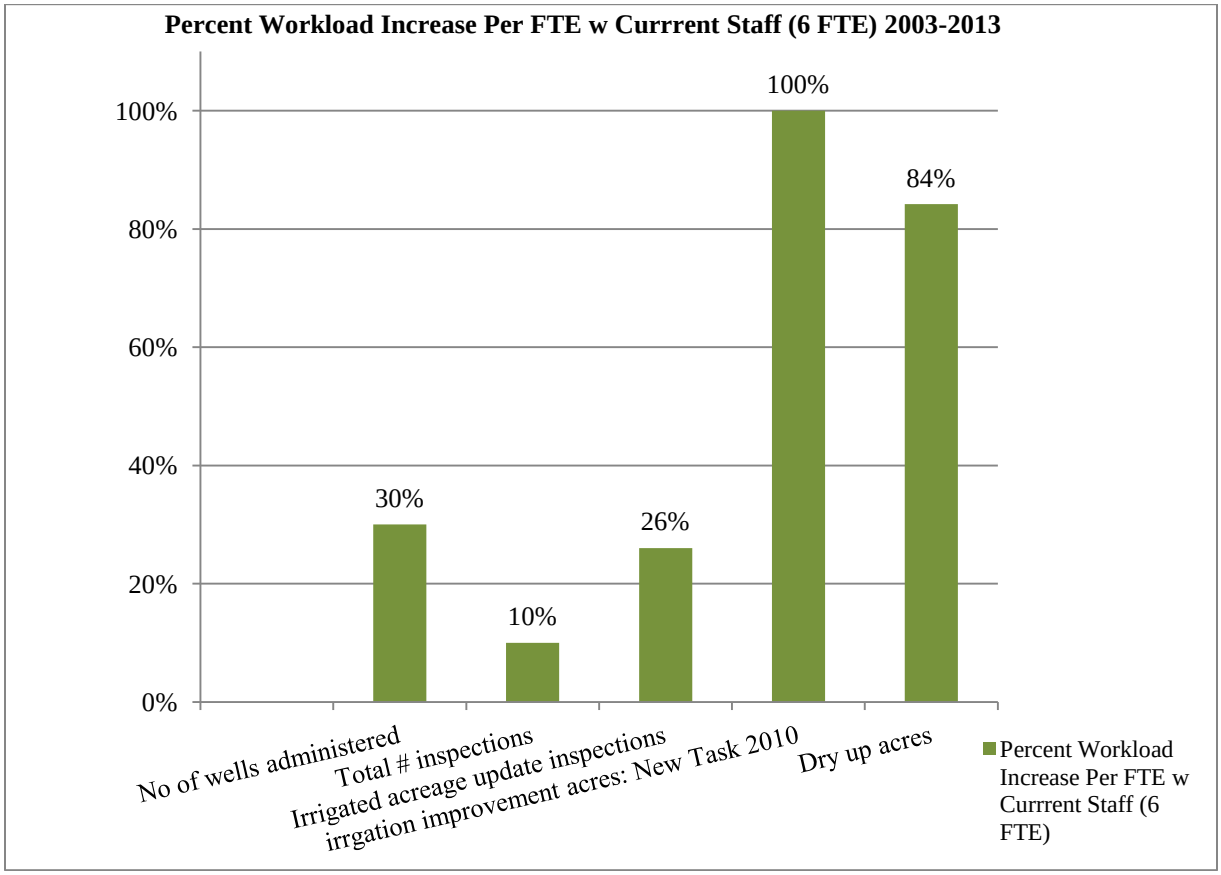


Figure 3

Figure 3 illustrates the increase in workload per FTE. Presently there are 6.0 FTE doing field duties related to groundwater use and verifications related to groundwater and Compact requirements in the Arkansas River Basin. The graph shows the percent increase of additional workload (2003-2013) per FTE.

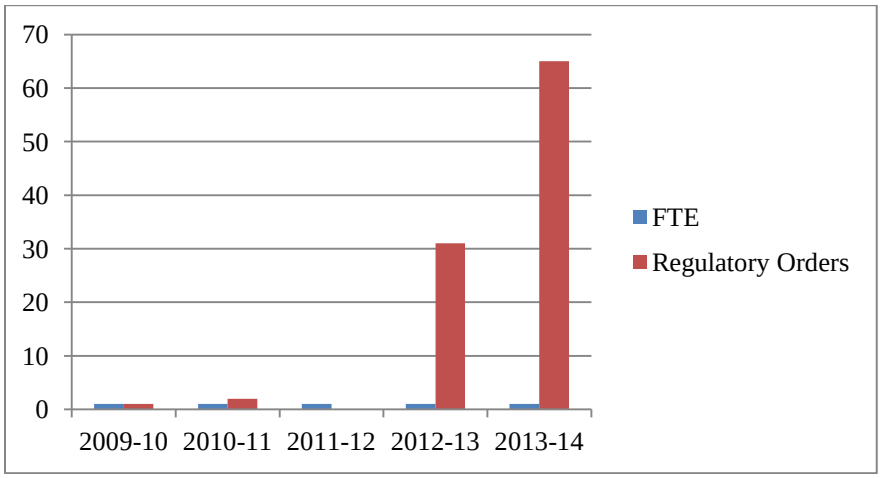
Water administration occurs every day in the Arkansas River basin, due to Arkansas River Compact requirements and the over-appropriated nature of the basin. Adding these additional complex operations into already full daily administration workload without assistance means it is likely that senior water rights holders will get shorted or suffer delays in getting their water, which can lead to a significant economic impact and potential litigation. This increased workload is impacting DWR's ability to administer the river properly. Under-delivery on the Compact can lead to interstate litigation and potential further curtailment of Colorado users' water rights. Over-delivery means water that could have been used in Colorado is going to Kansas. Under-delivery to a Colorado user can cause economic loss and litigation. Without these positions, the existing commissioners will be unable to cover this additional workload and respond to changing water availability quickly. The requested FTE, as detailed in the Solutions section, will assist in alleviating these problems by adding staff during the critical irrigation season.

Yampa River Basin – Deputy Water Commissioner

In the Yampa River basin, there is an increasing demand for water caused by an increasing number of water court decrees, environmental issues, and endangered species concerns. Historically, the Yampa River basin was irrigation-centric and had sufficient water so that it did not require the 'strict administration' practices seen in the South Platte, Arkansas, or Rio Grande basins. Water supply in the Yampa basin generally exceeded demand. The eight water districts in the basin are administered by 10.3 FTE, which includes the Division Engineer and administrative staff. Water commissioners accounted for water use and administered water rights occasionally in dry periods. However, the changing needs of Colorado's citizens and the environment have led to the acquisition of water rights for a recreational in-channel diversion ("RICD"), instream flows, and endangered species protection agreements and operations in the Yampa River basin. Some of these water right decrees have very large diversion rates and have caused parts of the basin to become over-appropriated and subject to 'strict administration'. Over-appropriation (or strict administration) means there is insufficient water available to meet all of the decreed water rights, and water commissioners must curtail junior diversions to assure that senior water rights are able to divert their decreed amounts. Over-appropriation also leads to the adjudication of augmentation plans that allow for additional development/use of water without injury to senior water rights. The operation of these augmentation plans carries a significant administrative obligation. The basins represented by Water Districts 57 and 58 have become over-appropriated and now require strict administration. Current staffing in those Districts cannot meet the increase in workload.

To illustrate the increase in strict administration, consider the number of regulatory orders initiated to ensure diversion structures are in a condition that allows for proper administration. To be able to turn on/off/adjust the water flowing through a ditch, an operational headgate is needed as well as a measuring device to ensure the amount of water being diverted through a ditch can be measured accurately. The headgate is used in conjunction with the measuring device to adjust flows to the appropriate amount, and collectively, headgates are used to ensure that the most water rights are served by the water available. Historically, with extra water available in the Yampa River basin, only some rights needed such structures. Now with over-appropriation and consequent strict administration, all structures need operational headgates and accurate measuring devices. To curtail a diversion, DWR has to be sure that no other user is diverting more than their decreed water right allows. With the switch to strict administration, DWR inspected all diversion points and has issued orders to install headgates and/or measuring devices. From FY 2009-10

through FY 2012-13, regulatory orders increased from one to 34. By the end of FY 2013-14, an additional 65 regulatory orders were issued.



Regulatory Orders

Municipalities, industries, agriculture, water conservation districts, water conservancy districts, environmental needs, and interstate compact obligations all compete for the same limited resource. Parts of the basin are now over-appropriated and thus additional water administration is needed. One FTE currently covers all of Water District 57 and a portion of Water District 58. Combined, these two districts cover 1,080 square miles and include the mainstem of the Yampa River and the major drainages of Trout Creek, Elk River, and Oak Creek, all areas subject to strict water administration. These districts have over 850 active surface water diversions. Seventy-five percent of the water court applications in Division No. 6 occur in or affect Water Districts 57 and 58. This additional workload cannot be absorbed by existing personnel. The 0.5 FTE Deputy Water Commissioner requested is a part-time employee for the irrigation field work season.

If the requested part time Deputy Water Commissioner is funded, it will help ensure that Colorado users receive the amount of water to which they are entitled. This will preserve the economic value of the water rights and ensure that Colorado maximizes the amount of water available to Colorado citizens under the Colorado River compacts. Misadministration can lead to costly litigation and lost opportunity for Colorado to fully utilize the water supply before it leaves the State. The requested FTE as detailed in the Solutions section below will allow water users to get their allotted use of water in a timely and accurate fashion.

Statewide – HydroBase Water Rights Tabulation & Diversion Records Coordinator

DWR administers water rights by means of seven division offices collocated with the seven water courts, assigned to oversee the water rights of the seven major tributary drainages in the state. The division offices are organized administratively via seven division engineers, who report directly to the State Engineer. Each of the division offices uses the exact same technology in the performance of their duties, which provides DWR with the opportunity to streamline the use of those technologies by providing a central, coordinating team or specialist. The central coordinating team is responsible for developing consistent business processes that can then be used by each of the seven division teams. This is a much more effective and efficient solution than requiring each of the seven teams to develop their own independent solutions to the exact same problems or processes. The centralized resource enables collaboration and integration of singular solutions, shared databases, and technical support for training and employee/application development.

The technology used by DWR includes the following subject matter expert teams:

- Dam Safety
- Hydrography
- Well Metering
- Water Supply
- DSS/Modeling
- GIS
- Electronic Documents
- Water Rights Tabulation
- Diversion Records

Because of the technical nature, critical contact with external entities, and decision making authority, the teams are all supervised by a senior authority position, which DWR calls a "chief". Chief positions are filled at the PE-III or PSRS-V classification, depending on whether the technology is engineering or a science. Five of the nine teams, Dam Safety, Hydrography, Well Metering, Water Supply and DSS/Modeling, have been organized for more than twenty years, are well established and are managed by four Chiefs. The remaining four teams, Electronic Documents, GIS, Water Rights Tabulation, and Diversion Records, have all been organized within the past ten years and are supervised by the Chief of Water Information, a new position established in FY 2014-15. Electronic Documents is supported by a statewide coordinator, filled at the GP-IV classification, as the day to day coordination requires constant focus and attention beyond what the supervising Chief can provide. Similarly, GIS is supported by a statewide coordinator at the PSRS-III classification. As with Electronic Documents and GIS, the day to day demands for support of the remaining two teams, Water Rights Tabulation and Diversion Records, also warrants a statewide coordinator, which is the FTE requested in this decision item.

DWR confirmed the need for a permanent, full time coordinator for the Water Rights Tabulation and Diversion Records teams in the spring of 2013. This need was independently corroborated in December 2013 by a study commissioned by the Colorado Legislature in H.B. 12-1278 (Section 37-60-115(7), C.R.S.) to, in part, evaluate the effectiveness of water rights administration in the South Platte River basin. As it relates to this decision item, the study was directed to[1]:

1. "Evaluate whether current laws and rules that guide water administration…achieve the dual goals of protecting senior water rights and maximizing the beneficial use of both surface and groundwater"; and,
2. "Provide information … to facilitate the long-term sustainable use of South Platte water supplies."

The Colorado Water Institute at Colorado State University was directed to conduct the study and presented a final report to the General Assembly on December 31, 2013 ("Report"). In addition to other needs, the Report states, "There is a demonstrated need for two additional full time FTEs in Division 1 to focus on the technical aspects of surface and groundwater tabulation and administration… and one new senior staff position in DWR to provide leadership for services."[2] Two of the three positions, a hydrographer and the senior staff position, were added to DWR by the Colorado Legislature during the 2014 legislative session. The third position was a water rights tabulation and diversion records specialist just for the South Platte

[1] Report to the Colorado Legislature- HB12-1278 Study of the South Platte River Alluvial Aquifer; pg. 24
[2] ibid; pg. 11-12

division office. However, DWR recommends the position as a statewide position, instead of a position for just the South Platte.

The Report focused only on the South Platte, but the same need is occurring statewide. The recommended position could efficiently meet the South Platte needs at the same time as the other statewide needs. The Report recognized the importance of comprehensive data gathering networks and decision support tools needed to complete day-to-day operations and to serve the needs of the people of the State of Colorado. The Report identified the need for a new capacity within DWR to respond to the increasing need for the integration of DWR data processes, both internally and externally. Specifically, the needs identified in the Report that will be met by this request are:

- Update information access and software for new diversion record coding;
- Improve access to augmentation plan information to facilitate review and analysis;
- Improve database design to help understand the history of augmentation;
- Add metered well pumping to HydroBase;
- Improve access to documents in Laserfiche;
- Address technical issues related to distributing and accessing HydroBase; and
- Continue and improve integration of third-party data, in particular for data that currently have limited availability.

The H.B. 12-1278 Study determined this position was needed because the public needs access not just to more complex data that has historically been tabulated and recorded, but to improved data management processes used to collect, store, transmit and use the data. This FTE will enable DWR to manage the increasingly complex business processes required to coordinate the tabulation of water rights and diversion records done by seven different division teams in accordance with the statutory directive to tabulate water rights and annually report the use of the State's water. In addition, as determined by the Report, incorporating the more complex information into the tabulation and diversion record will enable the public to perform comparative analyses that cannot be done without the information. It will also provide the public with a liaison through which to submit suggested improvements to the data process and from which to gain assistance to do complex analyses, a constant and growing need for which DWR is not currently staffed.

DWR tabulates all court decrees and records all diversions and water use within its Hydrobase program. That information is used across the State to administer the diversion of water rights, determine the value of water rights and to plan for growth. Historically, water rights and diversion records were easier to tabulate and record. Growth in Colorado, demand for scarce water supplies, compact obligations, groundwater use, and the need to maximize the beneficial use in Colorado has led to a multiplicity of recognized beneficial uses and of administrative schemes to allow diversions. Water rights continue to increase in administrative complexity, which increases the complexity of the diversion records associated with the water right. The current organization whereby tabulating water rights and recording diversions is done through disconnected processes in each of the seven division offices has been overwhelmed by the increased complexity. Central coordination is needed to streamline the processes and assure consistent treatment of the increasingly complex decrees, administration, and records, across the seven divisions.

As an example, several years ago DWR reviewed its database for diversion records and found that the system was insufficient to accurately capture the complex operations that were occurring. The same kind of diversion was recorded differently in each of the seven division offices. An error such as this leads to confusion for water users, in the courts, and in the use of that information in modeling for policy decisions.

An ad hoc committee of DWR staff identified the present and coming information needs and the changes needed in the structure of the diversion records data system. Using OIT resources, the database has been redesigned and is now capable of accurately capturing the evolving diversion records.

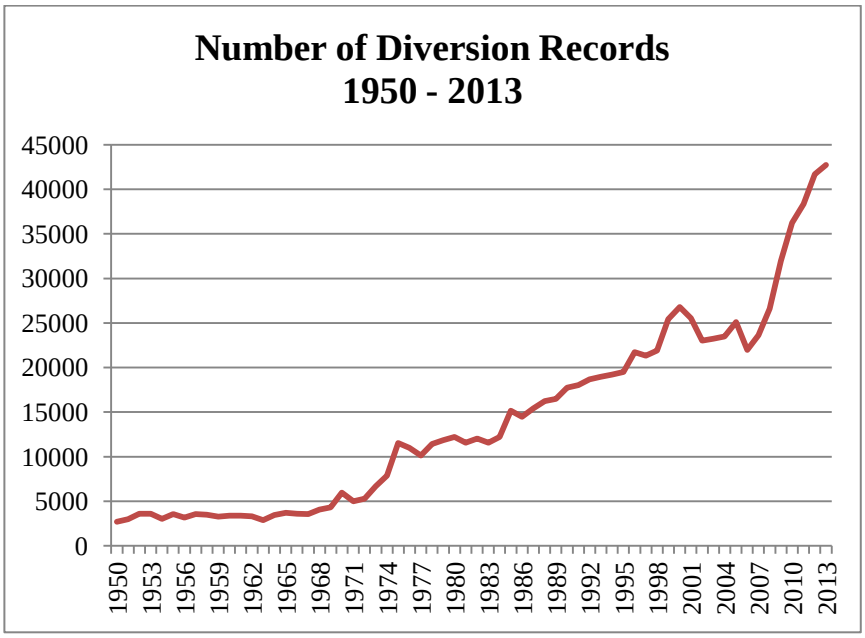
Because there was no central FTE to coordinate and facilitate that process, the change took six years to accomplish and only addressed the simpler half of the equation, diversion records. A much more complicated consolidation of processes must also occur with the tabulation of water rights. In addition, while the improved systems will capture and report the more complex operations, the system needs a central coordinator to ensure consistent water rights tabulation and diversion records occur statewide and that new uses and schemes are incorporated and implemented consistently into the system. While field entry of diversion records and tabulation will continue to be performed by commissioners and division office staff, this coordinator position would assure that records are consistent across the State. Specific tasks would include:

1. Routinely manage/perform data correction projects;
2. Support/oversee the water court resume tabulation;
3. Consult internally on diversion record & tabulation QA/QC protocols and problems;
4. Consult with the public on diversion record & tabulation QA/QC protocols;
5. Approve new diversion record water class formulations;
6. QA/QC annual diversion record compilation;
7. QA/QC ongoing water rights tabulation, and;
8. Train new employees/commissioners in the diversion records and tabulation system.

The two primary business processes addressed by this request – as identified in the Report - are water rights tabulation and diversion records, both of which are duties mandated by the legislature to the State Engineer. Both of these business processes have increased in complexity. For example, a decree formulating a plan for augmentation was less than 10 pages in length in the 1980s, many times three pages or less. The same magnitude of operation of obtaining a decree in the current decade has evolved to more than 150 pages and required DWR to perform complex administration and accounting review – all of which has to be tabulated, tracked and provided for review and analysis to our staff and to the public.

Similarly, the number of diversion records published is a direct measure of the complexity of water rights administration, as shown in the following graph. In the agrarian based administration of the 1950s and 1960s, administration was almost exclusively direct diversion of stream flow to irrigation or storage. Partly in response to the 1969 Water Rights Administration Act and partly due to urban development, diversion records steadily increased through the 1970s to 1990s due to changes in water rights for municipal uses, integration of groundwater pumping into the prior appropriation system and the collection and reuse of trans-basin and other sources of fully consumable water.

The river systems generally have more demand for water than supply. In order to meet the growing demand for new uses, such as municipal, existing rights must be changed from their historical decreed uses like irrigation. Those changes are decreed by the court, which requires the change be accomplished without impacting existing water rights. As a result, water rights complexity and administration increase. The spike in the number of diversion records since 2007 is due almost exclusively to the significant increase in the complexity of water rights administration, which is the result of growing demand, temporal drought and changing public perceptions regarding the best use of water. The need to respond to that increased complexity and public demand not just for information, but access to the data management process is the driving force behind this request.



This position will ensure that the 50,000+ diversion records compiled by DWR each year, and the thousands of water right tabulations done each year, will be consistent by being dedicated to controlling the quality of the data and tabulations. Water users rely upon DWR information to assess the value and availability of their water right. Policy analysts and state/federal agencies use this information as the input to regional models evaluating everything from population migration to climate change to developing water plans and policies. The State of Colorado has invested tens of millions of dollars in planning and administration models that rely primarily on the water rights tabulation and diversion record data. Insufficient or inaccurate information will result in millions of dollars worth of negative impacts to both private water right owners and the state as a whole as it regards compliance with interstate compacts and the development of the Colorado Water Plan.

Proposed Solutions:

In order to meet our statutory obligations and administer waters of the State, DWR is requesting **$213,140 General Fund and 2.4 FTE.** This request would be an increase of approximately 1.0 percent in DWR's FTE. DWR is requesting 2.4 permanent FTE to: (1) assist in increased groundwater administration and Compact compliance in the Arkansas River basin (2) assist in water administration in the Yampa River basin; and (3) and tabulate, track and report on increasingly complex water rights and diversion records per recommendations in the HB 12-1278 study. Below are the proposed solutions by geographic area.

Arkansas River Basin – Deputy Well Commissioners

DWR requests $60,570 in Personal Service dollars and two 0.5 FTE and $9,406 in one-time operating dollars, along with $14,620 in ongoing expenses for mileage and for regular operating and telephones. The total request is **$84,596** for deputy well commissioners in the Arkansas River basin. These positions are for Engineer/Physical Scientist Assistant (EPSA) III to administer groundwater, help bring nearly 3,700 CBM wells into the administrative process, and ensure Compact compliance with acreage verifications.

The requested FTE will "tag" or "un-tag" wells as water supply allows, will ensure that wells are not operated in violation of the Measurement Rules and Produced Nontributary Groundwater Rules, will assist

with compliance of the Irrigation Improvement Rules, and will provide field verification of compliance efforts with the Arkansas River Compact.

Yampa River Basin – Deputy Water Commissioner
DWR requests $33,875 in Personal Service dollars for 0.5 FTE and $4,703 in one-time operating costs, in addition to $3,600 in on-going regular operating, telephone and mileage expenses. The total request is **$42,178** for a deputy water commissioner in the Yampa River basin. This request is for an Engineer/Physical Scientist Technician I (EPST I) and would assist in the administration of critical administration areas in Districts 57/58 in the Yampa River basin.

The requested FTE will assist in the administration of water rights in Water Districts 57/58 which have become critical administration areas and will oversee water diversions, operations of plans for augmentation, changes of water rights, instream flows, and exchanges affecting water administration in this area of the Yampa River basin. The requested FTE will work under the lead water commissioner and will be responsible for observing/adjusting headgate diversions; developing diversion records for active structures within the assigned area; administering assigned streams as priority dictates; ensuring that diversion structures, headgates and measuring devices are reasonable, operational and adequate, and providing inspections for water court applications.

Statewide – HydroBase Water Rights Tabulation & Diversion Records Coordinator
DWR is requesting $80,713 in Personal Service dollars and 0.9 FTE, along with $4,703 in one-time operating dollars and $950 in on-going regular operating and telephone costs. The total request is **$86,366** for FY 2015-16. This position annualizes to 1.0 FTE in FY 2016-17 and beyond due to the pay-date shift. This position would be a Physical Science Researcher/Scientist III (PSRS III) and will develop, implement and maintain water rights tabulation and diversion record protocols, will facilitate a statewide response to public needs and will coordinate the necessary quality assurance program needed to provide accurate, complete water rights tabulations and diversion records.

Anticipated Outcomes:

Arkansas River Basin – Deputy Well Commissioners
The requested FTE would allow groundwater administrators to ensure Colorado users maximize their ability to use water, to conduct field verification of irrigated acreage and irrigation methods and to conduct groundwater well monitoring and administration, all important requirements to comply with the Arkansas River Compact.

Yampa River Basin –Deputy Water Commissioner
Anticipated outcomes of this FTE include the ability for all water users to optimize and timely use water without interfering with senior water rights holders.

Statewide – HydroBase Water Rights Tabulation & Diversion Records Coordinator
This position will enable DWR to properly steward water rights tabulation and diversion record data, which is critical information for the administration of all water rights. It will also enable DWR to more effectively interface with the ever growing number of external parties who need access to this information and the associated data collection processes.

Assumptions and Calculations:

The Personal Services estimates are based on the minimum salary for each requested position. PERA and Medicare estimates were calculated as 10.15 percent and 1.45 percent of base salaries, respectively. Operating dollars are estimated based on OSPB's Common Policies, equating to $5,653 per new FTE. Mileage was estimated at a cost of $0.53/mile. The deputy well commissioners located in the Arkansas River basin were projected to drive 2,000 miles each per month for six months, during the irrigation season. The deputy water commissioner located in the Yampa River basin was projected to drive 5,000 miles per irrigation season. Below is a breakdown by each requested position.

Arkansas River Basin – Deputy Well Commissioners

DWR requests $60,570 in Personal Service dollars and $9,406 in one-time operating dollars and $14,620 in ongoing mileage, regular operating and telephone expense, for a total of $**84,596**.

Yampa River Basin – Deputy Water Commissioner

DWR requests $33,875 in Personal Service dollars and $4,703 in one-time operating dollars and $3,600 in ongoing mileage, regular operating and telephone expense for a total of $**42,178**.

Statewide – HydroBase Water Rights Tabulation & Diversion Records Coordinator

DWR requests $80,713 in Personal Service dollars and $4,703 in one-time operating dollars and $950 in on-going regular and telephone expense for a total of $**86,366.**

Supplemental, 1331 Supplemental or Budget Amendment Criteria:

N/A

Calculation Assumptions:

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($900), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2015-16 as 0.9166 FTE to account for the pay-date shift.

Expenditure Detail		FY 2015-16		FY 2016-17	
Personal Services:	Monthly Salary	FTE		FTE	
Engineer/ Physical Scientist Assistant III (Deputy Well Commissioners- Arkansas River Basin)	$ 3,093	0.5	18,558	0.5	18,558
PERA			1,884		1,884
AED			817		891
SAED			789		882
Medicare			269		269
STD			41		41
Health-Life-Dental			7,927		7,927
Subtotal EPSA III, 0.5 FTE		0.5	**$ 30,285**	0.5	**$ 30,452**
Engineer/ Physical Scientist Assistant III (Deputy Well Commissioners- Arkansas River Basin)	$ 3,093	0.5	18,558	0.5	18,558
PERA			1,884		1,884
AED			817		891
SAED			789		882
Medicare			269		269
STD			41		41
Health-Life-Dental			7,927		7,927
Subtotal EPSA III, 0.5 FTE		0.5	**$ 30,285**	0.5	**$ 30,452**
Engineer/ Pysical Scientist Technician I (Deputy Water Commissioner- Yampa River Basin)	Monthly Salary $ 3,590	0.5	21,540	0.5	21,540
PERA			2,186		2,186
AED			948		1,034
SAED			915		1,023
Medicare			312		312
STD			47		47
Health-Life-Dental			7,927		7,927
Subtotal EPST I, 0.5 FTE		0.5	**$ 33,875**	0.5	**$ 34,069**

Physical Science Researcher/Scientist III (Water Rights Tabulation and Diversion Records	Monthly Salary $ 5,493	0.9		60,419	1.0	65,916
PERA				6,132		6,690
AED				2,658		3,164
SAED				2,568		3,131
Medicare				876		956
STD				133		145
Health-Life-Dental				7,927		7,927
Subtotal PSRS III, 0.9 FTE		0.9	**$**	**80,713**	1.0	**$ 87,929**
Subtotal Personal Services		2.4	**$**	**175,158**	2.5	**$ 182,903**
Operating Expenses						
Regular FTE Operating	500	4.0		2,000	4.0	2,000
Telephone Expenses	450	4.0		1,800	4.0	1,800
PC, One-Time	1,230	4.0		4,920		
Office Furniture, One-Time	3,473	4.0		13,892		
Vehicle Mileage (Arkansas)	12,720	1.0		12,720		12,720
Vehicle Mileage (Yampa)	2,650	0.5		2,650		2,650
[Note: Personal vehicle mileage rate is $0.53/mile]				-		
Subtotal Operating Expenses			**$**	**37,982**		**$ 19,170**
TOTAL REQUEST		2.4	**$**	**213,140**	2.5	**$ 202,073**
General Fund:		*2.4*	*$*	*213,140*	*2.5*	*202,073*
Cash funds:						
Reappropriated Funds:						
Federal Funds:						

Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Natural Resources

PB Request Numbe R-03

Request Titles

R-03 CAIC Administrative Changes

Dept. Approval By: Will H. Leerine 10/28/2014

OSPB Approval By:

	Supplemental
X	Change Request FY 2015-16
	Base Reduction FY 2015-16
	Budget Amendment FY 2015-16

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$30,844,356**	**$0**	**$32,034,711**	**$189,926**	**$238,343**
	FTE	50.8	-	50.8	1.4	1.4
Total of All Line Items	GF	$3,374,410	$0	$3,336,907	($28,210)	($28,403)
	CF	$19,239,709	$0	$19,859,415	$28,210	$28,403
	RF	$5,727,212	$0	$6,182,448	$189,926	$238,343
	FF	$2,503,025	$0	$2,655,941	$0	$0

Line Item Information	Fund	FY 2014-15	FY 2015-16 Request	FY 2015-16 Base Request	FY 2015-16	FY 2016-17 Continuation
	Total	**$3,693,831**	**$0**	**$3,796,961**	**($24,038)**	**($24,038)**
01. Executive Director's Office - Personal Services	FTE	41.8	-	41.8	(0.5)	(0.5)
	RF	$3,693,831	$0	$3,796,961	($24,038)	($24,038)
	Total	**$11,372,174**	**$0**	**$11,631,863**	**$8,842**	**$8,842**
	CF	$7,652,556	$0	$7,730,869	$2,211	$2,211
01. Executive Director's Office - Health, Life, And Dental	FF	$1,328,321	$0	$1,394,372	$0	$0
	GF	$1,213,503	$0	$1,018,485	($28,210)	($28,403)
	RF	$1,177,794	$0	$1,488,137	$34,841	$35,034

	Total	**$205,663**	**$0**	**$206,538**	**$152**	**$152**
	CF	$141,925	$0	$141,631	$41	$41
01. Executive Director's Office - Short-Term Disability	FF	$25,433	$0	$25,547	$0	$0
	GF	$32,444	$0	$33,069	$0	$0
	RF	$5,861	$0	$6,291	$111	$111
	Total	**$4,274,935**	**$0**	**$4,629,634**	**$3,202**	**$3,522**
	CF	$2,949,931	$0	$3,182,017	$862	$948
01. Executive Director's Office - Amortization Equalization Disbursement	FF	$528,457	$0	$564,370	$0	$0
	GF	$674,702	$0	$742,138	$0	$0
	RF	$121,845	$0	$141,109	$2,340	$2,574
	Total	**$4,007,752**	**$0**	**$4,471,806**	**$3,002**	**$3,402**
	CF	$2,765,561	$0	$3,073,539	$808	$915
01. Executive Director's Office - Supplemental Amortization Equalization Disbursement	FF	$495,428	$0	$545,130	$0	$0
	GF	$632,533	$0	$716,838	$0	$0
	RF	$114,230	$0	$136,299	$2,194	$2,487
	Total	**$1,246,924**	**$0**	**$1,246,924**	**($250)**	**($250)**
	CF	$1,057,006	$0	$1,057,006	$0	$0
01. Executive Director's Office - Operating Expenses	FF	$5,337	$0	$5,337	$0	$0
	RF	$184,581	$0	$184,581	($250)	($250)
	Total	**$3,902,389**	**$0**	**$3,902,389**	**$14,400**	**$43,200**
	CF	$3,576,478	$0	$3,576,478	$0	$0
01. Executive Director's Office - Vehicle Lease Payments	FF	$65,522	$0	$65,522	$0	$0
	GF	$252,298	$0	$252,298	$0	$0
	RF	$8,091	$0	$8,091	$14,400	$43,200

	Total	**$1,302,222**	**$0**	**$1,285,663**	**$18,000**	**$18,000**
	CF	$697,736	$0	$674,892	$0	$0
01. Executive Director's Office - Leased Space	FF	$35,556	$0	$36,692	$0	$0
	GF	$568,930	$0	$574,079	$0	$0
	RF	$0	$0	$0	$18,000	$18,000
	Total	**$838,466**	**$0**	**$862,933**	**$166,616**	**$185,513**
	CF	$398,516	$0	$422,983	$24,288	$24,288
01. Executive Director's Office - Colorado Avalanche Information Center Program Costs	FF	$18,971	$0	$18,971	$0	$0
	FTE	9.0	-	9.0	1.9	1.9
	RF	$420,979	$0	$420,979	$142,328	$161,225

Letternote Text Revision Required? Yes ____ No **X** **If Yes, describe the Letternote Text Revision:**

Letternotes for the Executive Director's Office, Administrative section should be changed to show an increase of $3,922 from Severance Tax and an increase of indirect cost recoveries from the Department of Transportation of $124,385.

The Colorado Avalanche Information Center's letternotes should be changed to reflect an increase of $28,210 from Severance Tax and an increase of $189,926 from the Department of Transportation.

Cash or Federal Fund Name and CORE Fund Number: 7040 Severance Tax Operational Account

Reappropriated Funds Source, by Department and Line Item Name:

Reappropriated Funds from the Colorado Department of Transportino

Approval by OIT? Yes ____ No ____ **Not Required X**

Schedule 13s from Affected Departments: Department of Personnel & Administration

Other Information:

Cost and FTE

- The Colorado Avalanche Information Center (CAIC) is requesting $189,926 in FY 2015-16 and $238,343 in FY 2016-17 to support two forecasters, administrative assistance, and equipment in order to maintain and improve avalanche forecasting and hazard mitigation.
- This request includes $128,325 for personal services and operating funding, $61,600 of funding for equipment, and 1.4 FTE primarily funded by the Colorado Department of Transportation (CDOT).

Current Program

- This program provides public safety information on avalanche conditions in the Colorado mountains and education to the public, the Colorado Department of Transportation and industry groups.
- Through its education and forecasting efforts the Center reduces risk to highway travelers, CDOT highway workers, mountain recreationalists, and avalanche professionals.

Problem or Opportunity

- Management continues to face two critical challenges: 1) the CAIC has seen increased turnover in recent years as experienced staff retire. Though the managers communicate remotely with all forecasters, they are unable to train, supervise, and support new and developing forecasters in the field, and 2) administrative tasks have become a substantial part of the managers' workload, reducing their ability to focus on operational needs.
- A forecaster with 20 years experience is retiring. This forecaster's area of responsibility has expanded from three to eight highways during their tenure, and to effectively replace this forecaster and the workload, the CAIC must divide the territory among two forecasters. The Colorado Department of Transportation and CAIC are reevaluating the management of assets (trucks, radios, and office space) that CDOT has loaned to the CAIC to ensure effective usage.

Consequences of Problem

- Forecasters are required to issue advice about hazard mitigation and general safety advisories. Without proper training and support this advice could be less informed, thereby decreasing programmatic benefits.
- Loaned assets create unclear and confusing asset management issues. Further, CDOT assets need to be used for highway avalanche forecasting purposes, creating inefficiencies when CAIC would otherwise want to redirect staff to address emerging backcountry forecasting issues.

Proposed Solution

- The CAIC proposes adding one full time forecaster to the Boulder office to reduce the forecast workload on the program's managers. The CAIC proposes splitting the area of responsibility of the retiring forecaster along geographic lines. An additional forecaster will be hired to be responsible for approximately half of this area (four highways). This more manageable workload will improve forecasts and mitigation advice, thereby improving safety. By managing its own equipment, CAIC will experience increased flexibility. Equipment and staff will be able to move between backcountry and highway forecasting as conditions warrant.

Department Priority: R-03
Request Detail: Colorado Avalanche Information Center – Administrative Changes

Summary of Incremental Funding Change for FY 2015-16	Total Funds	General Fund
Management and Administration changes	$69,679	($28,210)
Sawatch Range Highway Forecasting	$58,647	$0
CDOT Equipment	$61,600	$0

Problem or Opportunity:

The Colorado Avalanche Information Center (CAIC) is a program in the Executive Director's Office of the Colorado Department of Natural Resources. This program is funded by the Operational Account of the Severance Tax Trust Fund, fees, donations, reappropriated funds from the Colorado Department of Transportation, and a small amount of federal funds. This program provides public safety information on avalanche conditions in the Colorado mountains and education to the public and industry groups. Through its education and forecasting efforts the Center reduces the risk to highway travelers, Colorado Department of Transportation (CDOT) highway workers, mountain recreationalists, and avalanche professionals.

During the 2012 legislative session, H.B. 12-1355 established a process for transferring the Colorado Geologic Survey (of which the CAIC was a part) to the Colorado School of Mines. During the transfer process, it was determined that the Colorado Avalanche Information Center would be better housed in the Department of Natural Resources. As a result, the General Assembly passed H.B. 13-1057 to retain the program in the Executive Director's Office of the Department. Since this transfer occurred, the Executive Director's Office and the Colorado Avalanche Information Center have undertaken both internal and external reviews of the Avalanche Information Center's operations. In 2013 the CAIC began a three-year review of their forecasting operations. The purpose was to examine field safety and forecasting procedures, compare them to industry standards and ensure that they meet or exceed best practices for avalanche operations in North America. The first year focused offices in the northern mountains, year two on the central mountains, and year three will focus on the southern mountains. Additionally, the Colorado Department of Transportation commissioned an external review of the program after the Avalauncher accident on March 31, 2014, where an explosive delivery system exploded injuring one CDOT employee and one CAIC employee, These reviews showed that the program met or exceed industry standards but have identified opportunities to improve program administration, forecasting coverage, and service delivery to both the Colorado Department of Transportation and the citizens of Colorado.

Program Administration
The CAIC has a flat organizational structure with one program director and one de facto deputy director that together manage 14 forecasters spread across the state in 10 posting locations. The directors of the Colorado Avalanche Information Center spend the majority of their time on day-to-day operations and administrative tasks leaving little time for employee management and program administration. Both the director and deputy director are essential to the day-to-day operations of the Center. The program director works half time as a forecaster and the deputy director works full time as a forecaster during the avalanche season. The forecasting portion of their jobs occurs in Boulder. The directors must return to Boulder for each forecast shift, limiting their ability to travel to the various offices around the state to support and supervise the forecasting staff.

The ability to effectively manage the employees and other program operations is further reduced by the administrative tasks that the managers are performing. Though the Executive Director's Office assists the program with purchasing, human resources, and accounting, the appropriate role of EDO staff is approval and control (to provide for checks and balances on these types of transactions). Therefore, the program must initiate, monitor, and justify each of these transactions. Since the transfer of the CAIC to the Executive Director's Office, the amount of administrative tasks required to keep the Center functioning properly has created a significant increase in workload for the CAIC management staff. This workload is heaviest in the fall and spring and lightest in the summer. Though staff have not tracked the time spent on these tasks precisely, they estimate that both the Director and the Deputy Director spend four days a month each (eight days a month total) on administrative tasks. This estimate does not take into account administrative tasks that are not completed when staff have to move on to operational tasks.

Forecasting Coverage
Both internal and external reviews have flagged the workload of one of the current highway forecasters as an area of concern. An existing west slope forecaster is soon to retire after working the same forecast area for the last 20 years. When this forecaster first began, the area of responsibility included forecasting avalanche conditions and advising on mitigation strategies for three highways. Over the last 20 years, as avalanche events occurred in a larger area, an additional five highways were added to the responsibilities of this single position. This addition of new segments over time allowed the forecaster to observe and model the conditions that were especially dangerous for each highway. This long-term experience has allowed the current forecaster to appropriately prioritize their activities to the highways that are at greatest risk. However, even with extensive experience, snow conditions can warrant personal observations and potential mitigation at more than one highway. In order to deal with these situations, the current forecaster was required to work long hours with extensive driving between locations. These activities necessitated a reduced schedule of gathering field data and increased the forecaster's dependency on second hand observations. Site visits allow the forecaster to reduce the uncertainty in their hazard assessment and produce more accurate forecasts of avalanche risk to the transportation corridor.

Equipment Management
Staff from both the Colorado Department of Transportation (CDOT) and the Colorado Avalanche Information Center (CAIC) have been analyzing the efficiency and effectiveness of the working relationship. Over previous years, CDOT has been supporting the operation of the Avalanche Information Center by providing CAIC staff with vehicles, radios, and leased space at no cost to CAIC. This is problematic to CDOT for several reasons. First, this arrangement has CDOT managing assets for which it does not have complete control, so that questions such as whether the radios and vehicles it provides the CAIC should be counted on an inventory of CDOT assets if they are held in possession by non-CDOT

employees are difficult to answer. Other questions such as which department is responsible for paying a risk management claim if the vehicle is involved in an accident create grey areas and therefore inhibit the effective management of resources. For both CDOT and CAIC, the management of these assets will be cleaner if it is made more clear who owns the items in question. Also, CDOT management is undertaking an effort to reduce the size of its total fleet of vehicles. Since CDOT doesn't directly manage the avalanche forecasters who drive the vehicles, it is more difficult for CDOT to analyze and prioritize the vehicles loaned to CAIC.

Conversely, the loaning of equipment creates several problems for the CAIC. Foremost among the problems is that CDOT vehicles and equipment should only be used for highway avalanche forecasting purposes (limiting the CAIC's ability to assign its forecasters to the highest priority avalanche forecasting issues at any given point in time, regardless of whether the issue is related to highways or back country recreation). Second, the current process does not assure that CAIC will be loaned the optimal vehicles and equipment for its needs. While the CAIC has generally received good equipment and the proper vehicles, having acquisition of these items managed by another entity (CDOT) is not the optimal process for getting the tools that best meet CAIC's needs. Third, CDOT only provides leased space to CAIC's avalanche forecasters (not to the back country recreation forecasters). This means that staff responsible for highway forecasting and back country forecasting in the same region of the state are not co-located and share information only remotely through e-mails and phone calls.

Proposed Solution:

The Department of Natural Resources requests the addition of $189,926 total funds and 1.4 FTE to the Colorado Avalanche Information Center. This funding will come primarily from the Colorado Department of Transportation as part of a contract to provide avalanche forecasting in support of their mountain highway maintenance activities. The other funding comes from the Severance Tax Operational Account.

In order to increase the effectiveness of program management, the Colorado Avalanche Information Center has identified two necessary changes. The first change is to hire an additional forecaster to work full-time (0.7 FTE) at the Boulder office. This position would take over the forecasting workload from the program Director (currently half of their time is spent forecasting in the winter) and half of the forecasting duties of the Deputy Director (currently all of their time is spent forecasting in the winter). In recent contract discussions, the Colorado Avalanche Information Center negotiated an agreement with CDOT to compensate the program for half of the Director's time. Adding $69,679 of reappropriated funds from the Colorado Department of Transportation to account for half of the director's compensation will free up enough funding to hire a 0.7 FTE forecaster at an estimated cost of $53,944. The remaining $15,735 will be used to create a training and equipment budget. CAIC employees are required to maintain Wilderness First-Aid credentials and Type I explosives permits from the Colorado Department of Labor and Employment. Both require continuing education and recertification every two to three years. The Center also has an aging fleet of snowmobiles that it uses to collect information on avalanche conditions and for rescues and accident investigations. These were purchased by the Colorado Geological Survey, but the Center does not have a funding source to expand, maintain, or replace this important equipment. In the FY 2014-15 budget cycle, the General Assembly allocated additional Severance Tax to the program in part to free up donations for operational expenses. These funds have been allocated to the maintenance and installation of weather stations in order to ensure that the forecasting models have high quality observations and to fill holes in the dataset.

The second necessary change in the program administration is the addition of administrative help. The Executive Director's Office has identified an administrative position that can assist the CAIC. The position

description has been rewritten to include administrative support of the Colorado Avalanche Information Center as half of their job duties. In order for the budget to reflect this change the Department requests the addition of $28,210 Cash Funds from the Operational Account of the Severance Tax Trust Fund be added to the Colorado Avalanche Information Center Program Costs line item. The Executive Director's Office, Personal Services line item should be reduced by an equal amount of Reappropriated Funds from departmental indirect cost recoveries. Reducing the amount of reappropriated funds appropriated to personal services in the Executive Director's Office will free up indirect cost recovery revenue and allow the Department to offset an additional $28,210 of General Fund via its indirect cost plan. Lastly, there should also be a net-zero transfer of 0.5 FTE from the Executive Director's Office to the Colorado Avalanche Information Center.

In order to address the upcoming retirement of the west slope forecaster, the CAIC's internal review, the third party contractors completing reviews of the program, and CDOT agree that the area of responsibility should be split along geographic lines. The Department requests the addition of $58,647 of Reappropriated Funds from the Colorado Department of Transportation and 0.7 FTE to add a second seasonal forecaster to this area. The two positions would split the geographic area divided by the Sawatch Mountain Range.

Lastly, there are a number of benefits associated with the CAIC managing its own vehicles, equipment, and offices leases. At present, CDOT annually provides the CAIC with office space for 8 employees and 8 vehicles equipped with radios. The Department recommends providing CAIC with $61,600 of reappropriated funds spending authority so that the CAIC can buy these assets for itself using moneys provided by the Colorado Department of Transportation. The CAIC would gain several benefits from leasing and acquiring its own assets. Foremost among the benefits is that it would gain programmatic efficiencies for how these assets are used. Under the current arrangement, for example, CDOT vehicles are only used for CAIC's highway forecasting functions. However, if CAIC owned its own vehicles, its forecasters would have more flexibility to spending their time on either highway forecasting or back country recreational avalanche forecasting, whichever was more important at a given time and location. CAIC would still be responsible for delivering highway avalanche forecasting services, but would gain important flexibility to meet all avalanche forecasting needs statewide. Further, CAIC will have more direct control over the offices, vehicles, and equipment that it leases, increasing the likely effectiveness of such assets because they can be purchased with CAIC needs foremost in mind. The proposed solution will also allow CAIC to potentially co-locate highway forecasters with back country forecasters, allowing for more efficient sharing of information and experience. The recommended solution will also have the CAIC budget better reflect the full cost of providing avalanche information services to the State. On the CDOT side of the equation, the proposed solution will solve problems and confusion associated with shared ownership of the assets. Asset inventories and fleet management will be made easier because CDOT will not be attempting to purchase, justify, and manage vehicles and equipment on behalf of CAIC employees.

Anticipated Outcomes:

Providing an additional forecaster to take over the forecasting responsibilities of the two CAIC program managers will be highly beneficial to the program and its customers. The Colorado Avalanche Information Center has historically seen little turnover in its forecasters. However, in recent years the Center has experienced more turnover and staff expect that trend to continue (three forecasters will likely retire in the next 5 years). By reducing the forecasting workload on the program managers, the managers will be able to travel to different work locations to support and supervise the forecasting staff. Input and advice from the

program directors is essential for junior forecasters who are tasked with complicated operational duties and often work alone or in small groups. Allowing program managers to occasionally work with new and existing employees increases consistency in operational methods, creating a safer working environment and higher quality products for highway operations and backcountry recreation. Additionally, not being tied to the forecast schedule will allow the program director to increase outreach activities educating the public on avalanche safety, provide support for businesses involved in winter recreation, increase advisory activities to local governments, and be available to the highway program in order to consult on avalanche problems that are not part of day-to-day operations. The addition of administrative support will also benefit the program in similar ways by moving the routine administrative tasks to an administrative position which has experience in state purchasing, accounting, and human resources. The Executive Director's Office will benefit by reducing expenditures to only support half of a position. For the first two years, this reduction in indirect cost recoveries will then be available to offset General Fund via the indirect cost plan (after this point in time, indirect cost recoveries will "true up" and be reduced to reflect the lower amount of DNR overhead supporting DNR divisions).

In addition to the increased mentoring, managing, and outreach activities discussed above, there will be two other major benefits to reducing program management's forecasting and administration workload. The Colorado Avalanche Information Center is staffed to cover the forecast areas. This is appropriate when all positions are filled and fit for work. However, if there are any forecasters out, there is no "backup" to take over the absent forecaster's workload. In the middle of the just-completed avalanche season, the Colorado Avalanche Information Center had one employee out due to a major medical issue and another that was out due to injury when an avalanche mitigation device malfunctioned (exploded). This nearly 15% reduction in available forecasters caused a significant burden on program management and the remaining forecasters. If management was already freed from having to work forecast shifts, they would have been available to fill in. As it was, it was necessary for a number of employees to relocate in order to fill the gap. This resulted in less thorough coverage and longer shifts per employee.

Another major benefit of having program management not assigned forecast shifts is in the area of emergency response. When there is an avalanche emergency, especially when there is an ongoing rescue effort, program management responds to the scene. Due to their extensive expertise in the potential dangers of working in avalanche prone areas they make themselves available to other emergency responders to advise on keeping the search and rescue efforts safe. Additionally, all CAIC staff carry specialized search equipment and are trained in search and rescue procedures. This time consuming, but important, activity is currently in addition to their existing full-time workload and requires other forecasters to cover their workload while the emergency is active. Reducing the forecasting responsibilities of CAIC managers would make it easier for CAIC staff to respond to emergencies.

Adding an additional forecaster in the Sawatch region will increase safety for transportation workers, the driving public, and the forecasters themselves. By splitting the existing area of responsibility, each forecaster will be able to take first hand observations within their highway corridor and will be better equipped to monitor and advise on hazard mitigation activities. Though the incumbent forecaster has done an admiral job under difficult circumstances, requiring the same level of performance out of a new employee that doesn't have the same history and experiences would be unrealistic.

Replacing CDOT equipment with resources managed within the program will more clearly delineate the relationship between the two programs. This delineation will allow the CAIC to manage their resources as conditions warrant. Currently, resources provided by CDOT are only available to the highway forecasting program. If there is a greater need for resources in the backcountry program, CDOT resources cannot be

shifted to that area (and vice versa). Having CAIC maintain its own resources will allow the program to be more flexible in staff assignments and will allow quicker service delivery to the area and application that has the greatest need.

During the FY 2014-15 budget cycle, four vehicles were added to the program and assigned to backcountry operations. With the addition of these eight vehicles, there will be 12 vehicles available to 17 staff. Due to posting locations, not all of the staff will have easy access to the vehicles. As all 17 staff members are essentially on call, personal vehicles may still be used for travel. Also during the FY 2014-15 budget cycle, the General Assembly approved additional funds to purchase satellite radios. These satellite radios are assigned to every staff member and are used primarily for field safety. The radios have limited communication, but are good for emergencies. The radios in this request are for operational communication. They could be used to coordinate an emergency response, but are primarily used to communicate with CDOT staff about road conditions and road closing procedures. They will also be essential for hazard mitigation missions as staff may have to stand far away from explosive delivery systems due to the accident last year and new regulations.

The Colorado Avalanche Information Center is charged with reducing the risk to highway travelers, Colorado Department of Transportation highway workers, mountain recreationalists, and avalanche professionals. The Department's strategic plan measures the outcome of this program through the number of deaths per year per 100,000 of population. By making these changes the program anticipates that it will be able to make approximately 45 more field observations, issue better forecasts, teach 10 additional avalanche safety classes (approximately 300 to 500 additional student hours), and reach more people with avalanche safety information. This increase in activity will lead to more accurate forecasts, more timely delivery of information, and ultimately a safer traveling and recreating experience in the Colorado high-country.

Assumptions and Calculations:

The requests for both the Boulder forecaster and the additional west slope forecaster assume that the positions will be hired as Professional Scientists \ Research Scientist II's at range minimum salaries. The administrative help is based on the current salary of the existing position that is being split between the Executive Director's Office and the Colorado Avalanche Information Center. Detailed calculations are attached to this document.

Vehicles
The request for additional equipment includes trucks, funding for mileage, radios, and funding for office space. The requested trucks are bi-fuel F150 4x4 trucks.
New vehicle cost per month: $450
Mileage per year: $0.43 per mile; mileage is assumed to be 15,000 miles per year per vehicle
Number of vehicles requested: 8
Total funding needed for FY 2015-16:

Cost	FY 2015-16	FY 2016-17
Cost per month	(450 x 8 x 4 months) = $14,400	(450 x 8 x 12 months) = $43,200
Mileage cost	($0.43/mile x 8 x 5,000 miles (4 months)) = $17,200	($0.43/mile x 8 x 15,000) = $51,600
Total	**$31,600**	**$94,800**

Radios
The request also includes 8 truck mounted radios and two handheld at $1,200 per radio. The total cost for FY 2015-16 is $12,000 ($1,200 x 10 radios). For FY 2016-17 and beyond, the CAIC requests $1,200 for repair and replacement. This assumes that 10% of the equipment (one radio) will need replaced annually and is based on past experience with the SPOT devices forecasters used to carry.

Office space
The office space has not yet been located but the program has estimated that it will need to add five offices at an approximate rate of $300 per month (5 offices x $300 per month x 12 months = $18,000).

Calculation Assumptions:

Personal Services -- Based on the Department of Personnel and Administration's August 2011 Annual Compensation Survey Report, a [POSITION] at the [BOTTOM, MIDDLE, OR TOP] of the pay range will require a monthly salary of $#,###.

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($900), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2012-13 as 0.9166 FTE to account for the pay-date shift.

Expenditure Detail		FY 2015-16		FY 2016-17	
Personal Services:		FTE	$	FTE	
Boulder Forecaster	Monthly Salary				
PS\RS II	$ 4,764	0.7	40,018	0.7	40,018
PERA			4,062		4,062
AED			1,601		1,761
SAED			1,501		1,701
Medicare			580		580
STD			76		76
Health-Life-Dental			4,421		4,421
Subtotal Position 1, #.# FTE		0.7	**$ 52,259**	0.7	**$ 52,619**
Operating Expenses					
Regular FTE Operating	500	1.0	500	1.0	500
Telephone Expenses	450	1.0	450	1.0	450
PC, One-Time	1,230	-	-	-	-
Office Furniture, One-Time	3,473	-	-	-	-
Mileage	735	1.0	735	1.0	735
Other			-		
Other			-		
Other			-		
Subtotal Operating Expenses			**$ 1,685**		**$ 1,685**
TOTAL REQUEST		0.7	**$ 53,944**	0.7	**$ 54,304**
General Fund:					
Cash funds:					
Reappropriated Funds:					
Federal Funds:					

Calculation Assumptions:

Personal Services -- Based on the Department of Personnel and Administration's August 2011 Annual Compensation Survey Report, a [POSITION] at the [BOTTOM, MIDDLE, OR TOP] of the pay range will require a monthly salary of $#,###.

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($900), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2012-13 as 0.9166 FTE to account for the pay-date shift.

Expenditure Detail		FY 2015-16		FY 2016-17	
Personal Services:		FTE	$	FTE	
Shared Admin	Monthly Salary				
Program Assist II	$ 3,590	0.5	21,540	0.5	21,540
PERA			2,186		2,186
AED			862		948
SAED			808		915
Medicare			312		312
STD			41		41
Health-Life-Dental			2,211		2,211
Subtotal Position 1, #.# FTE		0.5	**$ 27,960**	0.5	**$ 28,153**
Operating Expenses					
Regular FTE Operating	500	0.5	250	0.5	250
Telephone Expenses	450	-	-	-	-
PC, One-Time	1,230	-	-	-	-
Office Furniture, One-Time	3,473	-	-	-	-
Mileage	735	-	-	-	-
Other			-		
Other			-		
Other			-		
Subtotal Operating Expenses			**$ 250**		**$ 250**
TOTAL REQUEST		0.5	**$ 28,210**	0.5	**$ 28,403**
General Fund:					
Cash funds:					
Reappropriated Funds:					
Federal Funds:					

Calculation Assumptions:

Personal Services -- Based on the Department of Personnel and Administration's August 2011 Annual Compensation Survey Report, a [POSITION] at the [BOTTOM, MIDDLE, OR TOP] of the pay range will require a monthly salary of $#,###.

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($900), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2012-13 as 0.9166 FTE to account for the pay-date shift.

Expenditure Detail		FY 2015-16		FY 2016-17	
Personal Services:		FTE	$	FTE	
Sawatch Range Forecaster	Monthly Salary				
PS\RS II	$ 4,764	0.7	40,018	0.7	40,018
PERA			4,062		4,062
AED			1,601		1,761
SAED			1,501		1,701
Medicare			580		580
STD			76		76
Health-Life-Dental			4,421		4,421
Subtotal Position 1, #.# FTE		0.7	**$ 52,259**	0.7	**$ 52,619**
Operating Expenses					
Regular FTE Operating	500	1.0	500	1.0	500
Telephone Expenses	450	1.0	450	1.0	450
PC, One-Time	1,230	1.0	1,230	-	-
Office Furniture, One-Time	3,473	1.0	3,473	-	-
Mileage	735	1.0	735	1.0	735
Other			-		
Other			-		
Other			-		
Subtotal Operating Expenses			**$ 6,388**		**$ 1,685**
TOTAL REQUEST		0.7	**$ 58,647**	0.7	**$ 54,304**
General Fund:					
Cash funds:					
Reappropriated Funds:					
Federal Funds:					

Calculation Assumptions:

Personal Services -- Based on the Department of Personnel and Administration's August 2011 Annual Compensation Survey Report, a [POSITION] at the [BOTTOM, MIDDLE, OR TOP] of the pay range will require a monthly salary of $#,###.

Operating Expenses -- Base operating expenses are included per FTE for $500 per year. In addition, for regular FTE, annual telephone costs assume base charges of $450 per year.

Standard Capital Purchases -- Each additional employee necessitates the purchase of a Personal Computer ($900), Office Suite Software ($330), and office furniture ($3,473).

General Fund FTE -- New full-time General Fund positions are reflected in FY 2012-13 as 0.9166 FTE to account for the pay-date shift.

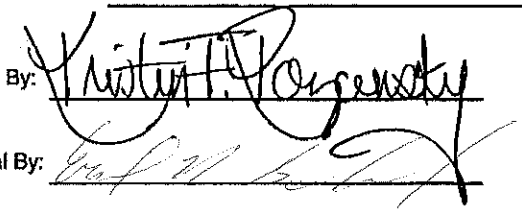
Expenditure Detail		FY 2015-16		FY 2016-17	
Operating Expenses					
8 Bifuel 4x4 trucks (per month)	3,600	4.0	14,400	12.0	43,200
15,000 miles per vehicle	51,600	0.3	17,200	1.0	51,600
DTR radios (each)	1,200	10.0	12,000	1.0	1,200
Offices (annualy)	3,600	5.0	18,000	5.0	18,000
Other	735	-	-	-	-
Other			-		
Other			-		
Other			-		
Subtotal Operating Expenses			**$ 61,600**		**$ 114,000**
TOTAL REQUEST		-	**$ 61,600**	-	**$ 114,000**
General Fund:					
Cash funds:					
Reappropriated Funds:					
Federal Funds:					

Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Personnel & Administration

Request Title NPR-04 CAIC Administrative Changes

Dept. Approval By: 

OSPB Approval By:

____ **Supplemental**

__X__ **Change Request FY 2015-16**

____ **Base Reduction FY 2015-16**

____ **Budget Amendment FY 2015-16**

Line Item Information		FY 2014-15		FY 2015-16		FY 2016-17
		FY 2014-15 Appropriation	Supplemental Request	Base Request	FY 2015-16 Funding Request	Continuation Amount
Total of All Line Items	Total	$19,031,173	$0	$19,149,719	$14,400	$43,300
	FTE	-	-	-	-	-
	GF	$0	$0	$0	$0	$0
	CF	$0	$0	$0	$0	$0
	RF	$19,031,173	$0	$19,149,719	$14,400	$43,300
	FF	$0	$0	$0	$0	$0
04. Central Services - Vehicle Replacement Lease/Purchase	Total	$19,031,173	$0	$19,149,719	$14,400	$43,300
	RF	$19,031,173	$0	$19,149,719	$14,400	$43,300

Letternote Text Revision Required? Yes _____ No __X__ **If Yes, describe the Letternote Text Revision:**

Cash or Federal Fund Name and CORE Fund Number:

Reappropriated Funds Source, by Department and Line Item Name:

Approval by OIT? Yes _____ No _____ **Not Required:** __X__

Schedule 13s from Affected Departments:

Other Information:

Schedule 13

Funding Request for the FY 2015-16 Budget Cycle

Department of Natural Resources

PB Request Numbe R-04

Request Titles

R-04 Reauthorize Funding to Reclaim Forfeited Mine Sites

Dept. Approval By: Will H. Lewis 10/28/2014

OSPB Approval By:

	Supplemental FY 2014-15
X	**Change Request FY 2015-16**
	Base Reduction FY 2015-16
	Budget Amendment FY 2015-16

Line Item Information	Fund	**FY 2014-15** Appropriation	Request	**FY 2015-16** Base Request	FY 2015-16	**FY 2016-17** Continuation
	Total	**$21,718,219**	**$0**	**$22,679,465**	**$127,000**	**$127,000**
	FTE	16.4	-	16.4	0.0	0.0
Total of All Line Items	GF	$2,553,182	$0	$2,510,530	$0	$0
	CF	$14,200,220	$0	$14,651,813	$127,000	$127,000
	RF	$1,419,730	$0	$1,771,836	$0	$0
	FF	$3,545,087	$0	$3,745,286	$0	$0

Line Item Information	Fund	**FY 2014-15** Appropriation	Request	**FY 2015-16** Base Request	FY 2015-16	**FY 2016-17** Continuation
	Total	**$11,372,174**	**$0**	**$11,631,863**	**$3,742**	**$3,742**
	CF	$7,652,556	$0	$7,730,869	$3,742	$3,742
01. Executive Director's Office - Health, Life, And Dental	FF	$1,328,321	$0	$1,394,372	$0	$0
	GF	$1,213,503	$0	$1,018,485	$0	$0
	RF	$1,177,794	$0	$1,488,137	$0	$0
	Total	**$205,663**	**$0**	**$206,538**	**$58**	**$58**
	CF	$141,925	$0	$141,631	$58	$58
01. Executive Director's Office - Short-Term Disability	FF	$25,433	$0	$25,547	$0	$0
	GF	$32,444	$0	$33,069	$0	$0
	RF	$5,861	$0	$6,291	$0	$0

	Total	**$4,274,935**	**$0**	**$4,629,634**	**$1,052**	**$1,052**
	CF	$2,949,931	$0	$3,182,017	$1,052	$1,052
01. Executive Director's Office - Amortization Equalization Disbursement	FF	$528,457	$0	$564,370	$0	$0
	GF	$674,702	$0	$742,138	$0	$0
	RF	$121,845	$0	$141,109	$0	$0
	Total	**$4,007,752**	**$0**	**$4,471,806**	**$986**	**$986**
	CF	$2,765,561	$0	$3,073,539	$986	$986
01. Executive Director's Office - Supplemental Amortization Equalization Disbursement	FF	$495,428	$0	$545,130	$0	$0
	GF	$632,533	$0	$716,838	$0	$0
	RF	$114,230	$0	$136,299	$0	$0
	Total	**$1,686,695**	**$0**	**$1,739,624**	**$0**	**$0**
	CF	$519,247	$0	$523,757	$0	$0
02. Division of Reclamation, Mining, and Safety - Program Costs	FF	$1,167,448	$0	$1,215,867	$0	$0
	FTE	16.4	-	16.4	(0.3)	(0.3)
	Total	**$171,000**	**$0**	**$0**	**$121,162**	**$121,162**
02. Division of Reclamation, Mining, and Safety - Reclamation Of Forfeited Mine Sites	CF	$171,000	$0	$0	$121,162	$121,162
	FTE	-	-	-	0.3	0.3

Letternote Text Revision Required? Yes ____ No **X** **If Yes, describe the Letternote Text Revision:**

Letternotes for the Executive Director's Office, Adminstrative section should be changed to show an increase of $5,838 from the Operational Account of the Severance Tax Trust Fund.

Letternotes for the Division of Reclamation, Mining, and Safety, (B) Inactive Mines section should be changed to show an increase of $121,162 from the Operational Account of the Severance Tax Trust Fund.

Cash or Federal Fund Name and CORE Fund Number: Operational Account of the Severance Tax Trust Fund (Fund 7040)

Reappropriated Funds Source, by Department and Line Item Name

Approval by OIT? Yes ____ No ____ **Not Required X**

Schedule 13s from Affected Departments:

Other Information:

Cost and FTE

- The Division of Reclamation, Mining and Safety (DRMS) - Inactive Mine Reclamation Program (IMRP) requests reauthorization of funding to reclaim forfeited mine sites at a reduced level of $127,000 Cash Funds from the current $171,000 funding level that ends in FY 2014-15. The cash funding is from the Severance Tax Operational Account.

Current Program

- The original spending authority for the Reclamation of Forfeited Mine Sites line totaled $1.7 million appropriated over eight fiscal years from FY 2007-08 to FY 2014-15 to address a preliminary list of 32 sites.
- This funding enabled full reclamation of 53 forfeited sites by covering bonding shortfalls that ranged from $600 to $295,000.

Problem or Opportunity

- Due to economic stress on vulnerable mine operators and financial institutions, DRMS continues to face up to five under-bonded mine sites annually at an average shortfall of $12,600 each. Similar to the bankruptcy/foreclosure patterns across the nation, some mine operators are forced to abandon their mine sites when DRMS requires them to increase bond coverage to address inflationary costs or on-site activities that exceed the approved permit parameters.
- Other bond amounts have not been released by banks or insurance companies due to misplaced bonds during mergers, bonds released to operators without DRMS being notified, or cancellations due to operator collateral deficiencies. There are eight sites that fall under these circumstances for a total of $86,456 in lost bond funds.

Consequences of Problem

- Unreclaimed mine sites may pose public health and safety hazards and environmental degradation.
- Delays in addressing forfeited sites can result in worsening site conditions from soil erosion, distribution of polluted mine tailings or dangers from steep high walls or chemicals left on-site.
- As population centers expand into traditionally remote mining areas, adjacent landowners or visitors are more directly exposed to these hazards.
- Reclamation costs for earth moving equipment, soil erosion controls, concrete/metal gate closures, and other resources continue to escalate as reclamation is delayed.

Proposed Solution

- Reauthorization of $127,000 annual severance tax funding for the Reclamation of Forfeited Mine Sites enables IMRP to address the eight sites void of bond funding over three years ($28,819/year) and up to five under-bonded sites at an estimated $63,000 per year. Any requested funds not needed to supplement the forfeited bond funds will remain in the Severance Tax Operational Account.
- IMRP staff costs to manage the reclamation projects are estimated at $35,200 per year. This request includes a net zero transfer of 0.3 FTE from the Inactive Mines Program Costs line item to the Forfeited Mine Site line item.

Department Priority: R-04
Request Detail: Division of Reclamation, Mining and Safety - Reauthorize Funding to Reclaim Forfeited Mine Sites

Summary of Incremental Funding Change for FY 2015-16	Total Funds	Cash Funds	FTE
(B) Inactive Mines – Reclamation of Forfeited Mine Sites – **Reauthorization of cash funds/severance tax to supplement forfeited bond funds to reclaim under-bonded mine sites.**	$127,000 ($44,000 reduction from FY 2014-15)	$127,000	0.0 (net-zero transfer 0.3 FTE from Program Costs line)

Problem or Opportunity:

Since 1977, when the General Assembly created the first mine regulatory programs through the Colorado Mined Land Reclamation Act (Act), , the permit review and approval process undertaken by the Division of Reclamation, Mining and Safety (DRMS) has included a detailed estimate of the cost of conducting reclamation of the site. This estimate is used as the basis for the amount of the reclamation bond required to be posted by an operator upon issuance of a permit. In the early years of the program (through the early 1980s), these reclamation bond estimates were statutorily set and did not allow for increases based on inflation or other site changes. In 1993, the entire Act under Title 34, Article 32 C.R.S. was revised to include tougher environmental laws and stricter bonding requirements; however, when bonds were recalculated for projected reclamation costs of mine sites, some operators were not able to post the increased financial warranty.

The historical factors outlined above, compounded by the economic instability in recent years, continues to impact a number of mine operators and financial institutions. Economic pressure to maintain a financial warranty that keeps pace with the true cost of reclaiming the surface disturbancecan lead to mine operators relinquishing their operations, revocation of their permits, and the state being left with an inadequate bond amount to fully reclaim the site if that bond was inadequate. If mine sites are left un-reclaimed and dangerous conditions exist, they pose public health and safety issues to adjacent landowners, visitors to the area, and possible environmental degradation of soils, water, fisheries and wildlife resources. The use of severance tax revenue, which is assessed on the coal and metal mining sectors of the industry, has been considered the appropriate source of state funds to supplement under-bonded reclamation in lieu of revenue from general income/sales taxes. Federal funds granted for abandoned mine reclamation are restricted for use on sites that predate the enactment of mining laws and bond requirements. DRMS does not have other funding sources to address these sites.

These under-bonded situations occur primarily with metal and construction materials mines (non-coal). Approximately 260 mining permits have been revoked since 1977, out of 8,500 permits issued; 53 of the revoked sites were under-bonded, which equates to 0.6 percent of the total number of permits over 37 years of mining regulation in the state. By 2008, 32 of those 53 forfeited sites had not been reclaimed and the bonding shortfall was estimated to be $1.7 million. The Mined Land Reclamation Board designated the Inactive Mine Reclamation Program (IMRP) to handle the contracting and project management for forfeited sites, but the program was unable to implement reclamation on the sites without additional funding.

Severance tax funding was approved to address the backlog in FY 2007-08 for a total of $1.7 million that was appropriated over eight fiscal years through FY 2014-15. These funds successfully covered bonding shortfalls that ranged from $600 to $295,000, with the majority ranging from $1,000 - $25,000. The funding enabled full reclamation at 53 sites to date, 18 of which were on the original list and an additional 35 sites where the permits were revoked since 2008, which avoided another backlog to accumulate. Once formal site assessments were performed, 14 sites on the original 2008 list did not require additional funding to complete the reclamation. Attachment A provides details on the severance tax spending per project and by fiscal year.

In recent years, economic conditions continue to cause up to five bonds per year to be released to the division that are inadequate to cover the reclamation costs. The main causes for bond failures are described below:

- Regulations in the Minerals Regulatory Program within DRMS state that all financial warranties shall be set and maintained at a level which reflects the actual current cost of fulfilling the requirements of the Reclamation Plan. During inspection cycles of three to four years per site, bond requirements are reviewed and may be increased to keep pace with inflation or to cover any new site impacts that were not approved during the original bond calculation. Financially distressed mine operators are often unable to obtain the increased bond amount (financial/surety institutions have tightened qualifications), causing them to abandon the operation before the site is reclaimed. This leaves the state with a bond amount that is inadequate to completely reclaim the site. This is similar to the trend in increased bankruptcies and mortgage foreclosures since the 1980's. In more recent years, approximately five mining permits have been revoked per year, with under-bonding amounts ranging from $1,000 to $25,000 per site. The bond deficiencies are not as severe as the original list funded in 2008 due to the Minerals Program's ability to phase in increased bond amounts from operators since the 1980s.

- Economic stress on financial institutions has also left DRMS with unsecured bond amounts on revoked mine sites. This is aggravated by changes in the financial warranty industry, company mergers and displaced bond records that occur over the 30 year life cycle of many mine operations. DRMS is stated as an assignor on every bond, but situations have occurred where the Division was not informed when the bond was released to an operator or if collateral on sureties is deemed unsuitable and the bond is not honored. DRMS has significantly improved annual audits with financial institutions to confirm that bonds are still in place, but bond failures continue to occur. DRMS has a current list of eight sites with bond losses totaling $86,456 due to bank and insurance company failures. The Division is left with no funds for reclamation costs at these sites. The individual bond amounts range from $500 to $39,000.

Reclamation at forfeited mine sites can include the following activities, depending on the type of surface disturbance that was required for the commodity being mined:

- Obtaining landowner approval for the IMRP to conduct activities to completely reclaim the mine site;
- Designing the site plan and conducting contractual purchasing steps;
- Grading of the surface area and slope stabilization (distributing or reducing steep piles of excavated materials);
- Backfilling groundwater pits exposed at construction materials mines (some exposed water pits are extensive in size and very expensive to backfill);
- Installing grates over openings to adits/shafts;
- Noxious weeds control; and
- Re-seeding to control soil erosion.

Accurate estimates of reclamation costs are difficult to ascertain at forfeited sites until actual site conditions are assessed and the bid solicitations are conducted, which fluctuate with economic conditions. Subsequent cost adjustments are required for unforeseen site conditions, such as hazardous materials or explosives unearthed during reclamation work. This request provides the "best estimate" of funding to keep pace with any future under-bonded sites based on amounts spent on the 53 previous sites.

The original appropriation for this purpose did not specify a portion of the funding for state employees to provide the project management required to design and monitor the contractor's reclamation work. Federal funding sources in IMRP are specified to address impacts of mining that occurred before mining regulation laws were passed in 1977 (referred to as "pre-law" sites); therefore, it is not appropriate to use these federal funds to pay for project managements costs on forfeited "post-law" sites. The program allowed employees to monitor forfeited bond sites that were close in proximity to other abandoned mine reclamation work in order to justify use of other funds to cover the project management hours. This arrangement was not ideal for providing adequate time for monitoring the forfeited mine sites. Table 3 on page 7 shows the documented hours spent on managing reclamation projects at forfeited sites, but does not fully capture all hours spent during co-location routes. An estimated need of 0.3 FTE for future forfeiture projects is derived by averaging the hours over the past seven years. Typical staffing includes Environmental Protection Specialist (EPS) III level expertise for initial site assessment and project design and EPS II level for on-site project management.

Proposed Solution:

The Division of Reclamation, Mining and Safety requests reauthorization of cash funds from severance tax revenue for the Reclamation of Forfeited Mine Sites line at a reduced level of $127,000 annually (currently $171,000). These funds cover a funding shortfall when financial warranty (bond) funds are insufficient to cover the full cost of reclaiming the site. A three-year spending cycle is requested on each appropriation to accommodate preliminary project work and seasonal construction periods. To ensure project management FTE are accurately reflected with this funding, 0.3 existing FTE are requested to be transferred from the Inactive Mines Program Costs line, for a net-zero FTE adjustment. The funding level will be reviewed after three years (in FY 2018-19) to re-assess the appropriate funding level for under-bonded sites.

The source of cash funds requested is from the Operational Account of the Severance Tax Trust Fund (Section 39-29-109, C.R.S.). The increase will not exceed the Division's statutory severance tax allowance of 25 percent in Tier 1. The reduction of $44,000 from the current appropriation level of $171,000 is matched by an equal savings in the Tier 1 reserve amount for a total savings of $88,000 per year. Also, any annual unspent portion of the $127,000 will remain in the Operational Account (revenue is drawn only after actual expenditures occur). Priorities for severance tax funding for Tier 1 and Tier 2 programs are determined annually based on the most recent economic forecast.

Continuation of funding for under-bonded forfeited sites ensures reclamation is performed in a timely manner. This prevents site conditions from worsening over time, avoids increased construction costs from delays, and avoids another accumulation of back-logged sites. Table 1 below shows examples of inflationary increases for project items since 2008. As the state's population centers continue to expand into rural areas formerly used for mining, risks to citizens residing in the area include exposure to unstable or polluted mine waste piles, soil erosion, water quality deterioration, and hazardous mine openings. Weather and forces of nature can exacerbate sites left un-reclaimed over many years, causing new erosion and landslides that threaten homes, highways and waterways. Aquatic/terrestrial wildlife may be at risk if water quality and habitat are not restored.

Table 1 – Cost Estimate Comparisons between 2008 and 2014 IMRP Bid Specifications

IMRP PROJECT ITEMS	2008 average	2014 average	% Change	%/year
Adit Backfill	$ 2,300.00	$ 1,224.00	-47%	-8%
Adit Bulkhead	$ 2,500.00	$ 3,525.00	41%	7%
Adit Culvert w/ Grate	$ 3,000.00	$ 3,565.00	19%	3%
Grated Adit Door	$ 1,800.00	$ 3,750.00	108%	18%
Grated Adit Closure	$ 2,800.00	$ 6,079.00	117%	20%
Shaft Backfill	$ 1,200.00	$ 1,714.00	43%	7%
Hollow Core Plug w/ Structure	$ 7,800.00	$ 9,796.00	26%	4%
Backhoe w/Operator per hour	$ 70.00	$ 95.00	36%	6%

The Reed Construction Data website also shows pricing increases in the following areas since 2010: (http://www.reedconstructiondata.com/market-intelligence/articles/nonresidential-construction-materials-projects-price-inflation-accelerates)

- Steel products pricing up 8% to 16%;
- Construction equipment rental up 6%;
- Diesel fuel up 65%; and

- Plastic pipe products up 26%

Anticipated Outcomes:

Maintaining funding to address under-bonded mine sites will ensure the division avoids accumulation of another back-log of sites as had occurred in 2008. Conducting reclamation in a timely manner avoids costly inflationary increases in construction materials, equipment rental and fuel costs. Transfer of 0.3 FTE from the Program Costs line for project management, funded from 28 percent of the reauthorized funding, will ensure staff time to manage the projects is not subsidized from other IMRP funds that are not approved for "post-law" mine sites. If less need arises per year than the requested amount, those severance tax funds will remain in the Operational Account. The requested funding level will be reviewed in three years to determine if the pace of under-bonded forfeited sites still warrants that level of funding.

Assumptions and Calculations:

The request of $127,000 is based on the following cost assumptions:

- Five future under-bonded forfeited sites per year is based on the additional 35 forfeited bond sites that were addressed with the original severance tax appropriation over seven years, for a pace of 5 under-bonded sites per year.
- The estimated $12,600 additional funding need per site is based on an average of the additional funding that was required on the 53 reclaimed sites shown on Attachment A, after removing the atypical, high cost sites over $70,000 from the calculation.
- The additional list of eight revoked permit sites exists where the bank or surety companies have failed to pay the posted bond amount totals $86,456. The reclamation work on these sites would be spread over three years; therefore, one-third of the total amount of failed bonds is requested per year.
- The total cost of 0.3 IMRP FTE to manage the reclamation on ongoing forfeited sites is based on actual partial costs of current FTE (see Table 4).

Table 2 – Cost Estimates to Address Ongoing Under-Bonded Forfeiture Sites

Cost Category	Cost Estimate	Calculation	Total Cost/FY
Reclamation Costs Under-bonded Sites Up to 5 permit revocations per year with inadequate bond amounts	Additional funding needed per site = average of $12,600/site	5 x $12,600 = $63,000/year	$63,000
Absence of bond funds due to bank/ surety failure 8 sites with $86,356 in bond losses	Address 8 sites over 3 fiscal years	$86,456 / 3 = $28,819	$28,819
Project Management Costs 0.3 Existing FTE in the IMRP Program Costs line: 0.2 EPS II FTE + 0.1 EPS III FTE	0.2 EPS II cost = $22,674 0.1 EPS III cost =$12,526	0.3 FTE = $35,200	$35,200
		TOTAL	$127,019 *Rounded:* **$127,000**

Actual Cost of Existing 0.3 FTE Requested for Transfer

The request is for 0.3 FTE to be transferred to the Reclamation of Forfeited Mine Sites line from the Inactive Mines Program Costs line to differentiate the FTE used on post-law projects. The IMRP FTE used for project management on forfeited bond sites since FY 2007-08 has averaged 0.3 FTE per the hours/FTE shown in Table 3.

Table 3 – IMRP FTE Documented Hours Spent on Project Management to Reclaim Forfeited Sites								
	FY07-08	FY08-09	FY09-10	FY10-11	FY11-12	FY12-13	FY13-14	**Average**
Hours	383	311	427	1,275	812	1,222	646	**725**
FTE @ 2080 hours/year	0.18	0.15	0.21	0.61	0.39	0.59	0.31	**0.35**

The 0.3 FTE would be comprised of 0.1 FTE at the Environmental Protection Specialist (EPS) III level to provide required expertise for initial site assessment and project design and 0.2 FTE at the be EPS II level to provide the bulk of the on-site management duties. Table 4 below shows FY 2014-15 actual costs for existing IMRP employees who work on forfeited bond sites.

Table 4 – IMRP 0.3 FTE Costs	*Based on Actual Costs of Existing FTE in FY 2014-15*		
Costs of Partial FTE	EPS II – 0.2 FTE Salary $6,938/month $83,256/year **$16,651 per 0.2 FTE**	EPS III – 0.1 FTE Salary $8,050month $96,600/year **$9,660 per 0.1 FTE**	TOTAL Cost 0.3 FTE
Salary	16,651	9,660	26,311
PERA @ 10.15%	1,690	980	2,670
AED @ 4.0%	666	386	1,052
SAED @ 3.75%	624	362	986
Medicare @ 1.45%	241	140	381
Short Term Disability @ 0.22%	37	21	58
Health/Life/Dental EPS II = Empl + Family rate=$1,151.88/mo EPS III = Empl + Spouse = $813.98/mo	2,765	977	3,742
TOTAL	$22,674	$12,526	**$35,200**
Percent of $127,000		*0*	*27.7%*

ATTACHMENT A -- FORFEITURE SEV TAX EXPENDITURE HISTORY

								$ 1,710,000	
FORFEITURE FUNDING SPENT PER 3-YR SPENDING CYCLES	**FY2007-08**	**FY2008-09**	**FY2009-10**	**FY2010-11**	**FY2011-12**	**FY2012-13**	**FY2013-14**	**FY2014-15**	
FUNDING									
Fiscal Year Appropriation	342,000	342,000	171,000	171,000	171,000	171,000	171,000	171,000	=will be spent through FY2016-17
Rollforwards		342,000	548,774	288,894	223,323	315,666	219,612	143,113	
TOTAL FUNDING	342,000	684,000	719,774	459,894	394,323	486,666	390,612	314,113	
EXPENDITURES									Total Spent by Appr
FY08 Appr/FMS8		135,226	206,774						342,000
FY09 Appr/FMS9			224,106	117,894					342,000
FY10 Appr/FMSX				102,777	68,223				171,000
FY11 Appr/FMS1				15,900	9,179	145,921			171,000
FY12 Appr/FMS2					1,255	121,134	48,612		171,000
FY13 Appr/FMS3							166,277		166,277
FY14 Appr/FMS4							32,610		32,610
FY15 Appr PCAADFM50									
TOTAL EXPENDED	0	135,226	430,880	236,571	78,657	267,055	247,499	0	1,395,887
FTE (per documented hrs)	**0.18**	**0.15**	**0.21**	**0.20**	**0.39**	**0.59**	**0.31**	**AVERAGE FTE/YEAR>>>**	**0.29**

	EXPENDITURES ON FOREITURE SITES	On Orig List	FMS8	FMS9	FMSX	FMS1	FMS2	FMS3	FMS4		ORIGINAL BOND AMT
1	ALASKA/BROOKLYN	N	4,500.00					0.19		4,500.19	$4,660.00
2	AMIGO / TIMBERLAKE	N				3,937.88				3,937.88	$950.00
3	BAR NOTHING	N			39,735.78	5,436.19				45,171.97	$13,000.00
4	BEAL PLACER	N		2,446.00						2,446.00	$12,135.60
5	BESSIE G	Y					8,689.29	16,169.71		24,859.00	$17,450.00
6	BISQUIT ROCK	N					10,250.00			10,250.00	$886.50
7	BUENO MINE	Y			14,953.40					14,953.40	$15,673.00
8	CHAIN O MINES	Y				14,962.38	59,233.61			74,195.99	$500.00
9	DAWSON RIDGE	N		2,499.70	1,334.36					3,834.06	$400.00
10	DIAMOND MINE	N			14,532.20		1,254.80			15,787.00	
11	DONNA JULIE	N				3,921.00				3,921.00	$1,000.00
12	DRUID - 2 PHASES	Y	30,262.83	5,818.88						36,081.71	
13	ENTERPRISE PROJECT	Y	19,487.00	3,063.25						22,550.25	$3,800.00
14	FARMER GIRL (BENNETT MINING)	Y					3,790.00			3,790.00	
15	FLEECE/GLADIATOR/ LIMA MAINT	N	22,329.91	10,928.90						33,258.81	
16	FOOLS LUCK	Y		533.00						533.00	$2,800.00
17	FRANKLIN MINE	N	118,365.08	182,953.75						301,318.83	$252,070.00
18	GLORY HOLE	N				80,368.00				80,368.00	$5,000.00
19	GOLD BOND STATEWIDE	N	11,600.00							11,600.00	$1,500.00
20	GOLD KING	N		2,082.74						2,082.74	$40,156.00
21	GRAND UNION	N				7,158.00				7,158.00	$9,576.39
22	GRIFFITH MT	N						2,361.00		2,361.00	$1,500.00

	EXPENDITURES ON FOREITURE SITES	On Orig List	FMS8	FMS9	FMSX	FMS1	FMS2	FMS3	FMS4		BOND AMT
23	HESS MINE REVIEW	N				725.00	286.12	422.63		1,433.75	$1,900.00
24	JARED'S PIT	N			41.55					41.55	
25	JOHN JAY	N		4,604.78	33,796.01					38,400.79	$4,000.00
26	LAST CALL	N		2,851.00						2,851.00	
27	LELAND	N		179.00						179.00	$2,000.00
28	LEVICY	Y		599.38						599.38	$4,750.00
29	LITTLE SILVER	Y		2,340.00						2,340.00	$10,302.00
30	LONDON	Y				3,778.94	2,637.84	2,196.56	10,378.44	18,991.78	$12,000.00
31	LORD BYRON	N		10,391.05						10,391.05	$475.00
32	MASCOT MINE	N	10,634.09							10,634.09	$475.00
33	MOOSE MINE	N		9,408.20						9,408.20	$475.00
34	MOUNTAIN TOP	N	9,713.09	1,092.91						10,806.00	$2,500.00
35	NATIONAL/CENTRAL GOLD	Y	8,515.00							8,515.00	$475.00
37	NEW EUROPE / CLEAR CREEK	Y		37,047.40	379.00					37,426.40	$1,828.95
38	PINYON SAND & GRAVEL	Y		5,240.10	15,959.90					21,200.00	$22,250.00
39	PRINTER BOY	N		27,704.00	342.20					28,046.20	$10,391.00
40	ROCKET / BLUE FROG	N	11,355.00							11,355.00	$3,395.00
41	SHERMAN MINE - 2 PHASES	Y	85,405.00	150.00		15,900.00				101,455.00	$87,020.00
42	SILVER CREEK	N				2,601.00				2,601.00	
43	SLOAN RANCH	N			8,692.70					8,692.70	$3,500.00
44	STATE CLAY MINE	N		2,974.00	10,848.90					13,822.90	$4,531.25
36	SUNLIGHT COAL	N						4,700.00		4,700.00	$11,800.00
45	TIPPECANO/PEACOCK	Y									$12,401.00

					4,639.00					4,639.00	
	EXPENDITURES ON FOREITURE SITES	**On Orig List**	**FMS8**	**FMS9**	**FMSX**	**FMS1**	**FMS2**	**FMS3**	**FMS4**		**BOND AMT**
46	TOMICHI PIT	**Y**		308.13	25,045.00					25,353.13	$5,000.00
47	TRUCK STOP PLACER	**Y**					2,000.00			2,000.00	
48	TWO BROTHERS	N					14,839.00			14,839.00	
49	VICTOR MAINT	N					4,520.00	191.63	1,250.37	5,962.00	
50	WEDDING BELL	N			700.00					700.00	
51	YUKON TUNNELL / ARRIGO MINING	**Y**					1,057.18	115,710.74	838.60	117,606.52	$5,000.00
52	YULE QUARRY	N				1,696.52				1,696.52	$9,500.00
53	RED ARROW	N					17,373.51	27,343.89	13,693.38	58,410.78	
	COSTS THAT CAN'T BE ID'ed BY SITE		*9,833.00*	*26,783.83*		*30,515.09*	*45,068.65*	*(2,819.35)*	*6,449.12*	*115,830.34*	*NON-ID'd COSTS*
		TOTAL	342,000.00	342,000.00	171,000.00	171,000.00	171,000.00	166,277.00	32,609.91	1,395,886.91	**$24,152.01 =average shortfall**
		Y = 18	**FMS8**	**FMS9**	**FMSX**	**FMS1**	**FMS2**	**FMS3**	**FMS4**	1,395,886.91	

# OF SITES RECLAIMED OFF THE ORIGINAL LIST:	**18**

remove >$70,000 sites

$12,606.50 =revised average shortfall

	SITES ON ORIGINAL FY2008-09 LIST THAT DID NOT REQUIRE SEVERANCE TAX FUNDS	
	***The original list included some sites that had not been researched thoroughly due to lack of available staff at the time - that was the best list we had available when the decision item was submitted.*	
	SITE NAME	**REASON SEV TAX NOT NEEDED**
1	AMERICAN ENERGY	Bond amount was adequate to complete reclamation.
2	CAPROCK CORP	Reclamation was complete once site was visited; bond amount was returned to operator
3	COLINA ORO MOLINO	Bond amount was adequate to complete reclamation.
4	FAIR CHANCE	Bond amount was adequate to complete reclamation.
5	FORTUNE	Bond amount was adequate to complete reclamation.
6	H&M VENTURE - 2 PHASES	Was not a true forfeited site - other funds were used to resolve.
7	HUERFANO PEAK	Bond amount was adequate to complete reclamation.
8	INTERNATIONAL MINING	Bond amount was adequate to complete reclamation.
9	JACK KNIFE	Bond amount was adequate to complete reclamation.
10	SAN MIGUEL GOLD	Bond amount was adequate to complete reclamation.
11	SARATOGA MINES	Landowner would not authorize the reclamation work.
12	SLEEPY JIM	Completed with bond amount and $3,189.09 from Emergency Response Fund
13	SUMMITVILLE	Became a superfund site - CDPHE and U.S. EPA handled
14	VIRGINIA CANYON	Bond amount was adequate to complete reclamation.

	FINANCIAL INSTITUTION BOND FAILURES		
	Mine Name	**County**	**Unpaid Bond Amount**
1	Grizzly Bear Mine	Ouray	10,000.00
2	Weitzel Pit	Larimer	39,281.00
3	West Fork Pit	Mineral	5,000.00
4	Armstead Pit	Weld	23,575.00
5	Black Rose Mine	Boulder	2,500.00
6	Paradoz View No. 4	Montrose	600.00
7	Bonanza	Saguache	500.00
8	Katinka-Chicken	Teller	5,000.00
			$ 86,456.00
		Divide by 3 years:	**28,818.67**