COLORADO DEPARTMENT OF NATURAL RESOURCES
BUDGET REQUEST - FY 2006 - 2007
TABLE OF CONTENTS

CHANGE REQUEST

Schedule 7
Summary of Change Requests

Department Name: Natural Resources
Submission Date: November 15, 2005
Total Number of Decision Items: 21
Total Number of Base Reduction Items: 0

Priority Number	IT Request	Title	Total	FTE	GF	CF	CFE	FF
1	o **Yes** **X No**	DWR - Refinance Ground Water Management Program	0	0.0	3,186,051	(3,186,051)		
2	**X Yes** o **No**	OGCC - Adjusting to a Changing Colorado	848,689	9.0		848,689		
3	o **Yes** **X No**	DWR - Ground Water Administration Service Personnel	639,184	11.5	639,184			
4	o **Yes** **X No**	CWCB - Water Supply Management, Development, and Implementation Assistance Section	470,980	0.0			470,980	
5	o **Yes** **X No**	DOW - Line Item Consolidation	0	0.0				
6	o **Yes** **X No**	DWR - Vehicle Mileage	50,386	0.0	50,386			
7	o **Yes** **X No**	CGS - Coalbed Methane Stream Depletion Assessment Study, Raton and Piceance Basins	186,000	0.0		186,000		
8	o **Yes** **X No**	Parks - New Facilities	552,524	4.0		552,524		
9	o **Yes** **X No**	CWCB - Severance Tax	255,000	0.0		255,000		
10	o **Yes** **X No**	OGCC - Phase II Raton Basin Gas Seep Investigation, Las Animas and Huerfano Counties	188,625	0.0		188,625		
11	o **Yes** **X No**	DWR - Legal Services	57,938	0.0	57,938			
12	o **Yes** **X No**	DMG - Abandoned Mine Non-Point Source Projects	280,000	0.0		250,000	30,000	
13	**X Yes** o **No**	EDO - Information Technology Support	52,212	1.0		29,239	22,973	
14	o **Yes** **X No**	EDO - Training/Benefits Coordinator	49,667	1.0		27,814	21,853	
15	o **Yes** **X No**	DOW - Public Education Advisory Council Spending Authority	900,000	0.0			900,000	
16	o **Yes** **X No**	DOW - Property Operating & Maintenance	230,000	0.0			230,000	
17	o **Yes** **X No**	SLB - New State Vehicle for Northeast District Manager	1,360	0.0			1,360	
18	o **Yes** **X No**	Parks - New Leased Vehicles	9,546	0.0		5,208	4,338	
19	o **Yes** **X No**	CWCB - Vehicle	1,998	0.0			1,998	
20	o **Yes** **X No**	DWR - Leased Space	40,778	0.0	40,778			
21	o **Yes** **X No**	OGCC - Increase Appropriation for the Environmental Assistance Projects Line	202,000	0.0		202,000		
Non-prioritized	**X Yes** o **No**	Parks - Voice Over Internet Protocol	128,902	0.0			128,902	
Statewide	o **Yes** **X No**	Multi-Use Network	85,137	0.0	5,568	76,380	633	2,556
Statewide	o **Yes** **X No**	Vehicle Replacements	126,721	0.0	48,115	1,560	76,028	1,018
Statewide	o **Yes** **X No**	Vehicle Lease Line Reconciliation	(42,313)	0.0	(14,781)	(855)	(26,677)	
Decision Item Subtotal			5,315,334	26.5	4,013,239	(563,867)	1,862,388	3,574
	o **Yes** o **No**							
	o **Yes** o **No**							
Base Reduction Item Subtotal			0	0.0	0	0	0	0
TOTAL			5,315,334	26.5	4,013,239	(563,867)	1,862,388	3,574

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 1 of 21
Division: Water Resources
Program: Water Administration
Request Title: Refinance Ground Water Management Program

Dept. Approval: William H. Levine **Date:** Nov. 10, 2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: 37-80;37-82;37-84;37-90;37-92

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 15 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	16,455,334	18,115,563			14,027,866	0	14,027,866			0
	FTE	227.9	249.6			249.6	0.0	249.6			0.0
	GF	13,562,564	14,428,465			13,533,385	3,186,051	16,719,436			3,186,051
	CF	2,891,866	3,671,206			478,621	(3,186,051)	(2,707,430)			(3,186,051)
	CFE	0	15,892			15,860	0	15,860			0
	FF	904	0			0	0	0			0
Line Item Name Personal Services	Total	16,455,334	18,115,563			14,027,866	0	14,027,866			0
	FTE	227.9	249.6			249.6	0.0	249.6			0.0
	GF	13,562,564	14,428,465			13,533,385	3,186,051	16,719,436			3,186,051
	CF	2,891,866	3,671,206			478,621	(3,186,051)	(2,707,430)			(3,186,051)
	CFE	0	15,892			15,860	0	15,860			0
	FF	904	0			0	0	0			0

Letter Notation:
Cash Fund name/Number, Federal Fund Name:
IT Request ☐ Yes X No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes X No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ Yes x No **(If yes, Name of other Department(s)_____)**

Efficiency and Effective Analysis

Identifying Information

Department:	**Natural Resources**
Request Title:	**Refinance Ground Water Management Program**
Priority number:	**1 of 21**
Division:	**Water Resources**

Summary of Request

This request is for $3,186,051 in General Funds for FY 2006-07 and subsequent years so that most personal services expenses incurred for ground water management are refinanced with general funds. This expense is currently financed by Ground Water Management Cash Fund revenue, derived from well permit fees that were increased with the passage of SB 03-181.

Element No. 2 – Problem or Opportunity Definition.

The State Engineer's Office is responsible for all well permitting and enforcement actions in Colorado related to ground water. Since 1957, the General Assembly has legislated this authority with the State Engineer through statutes such as the Water Right Determination and Administration Act of 1969. Well permitting, regulation, and enforcement all help ensure public health and safety through proper containment and clean maintenance of Colorado's aquifers. Eliminating funding for the ground water management program would essentially counter nearly five decades of ground water legislation.

Ground water development is an increasing source of domestic water supply to both individual residences in rural communities and municipalities that use large capacity wells. Ground water wells also provide irrigation water to over two million acres of cultivated farmland, livestock watering, and a variety of commercial and industrial operations throughout the state.

In March 2003 the legislature enacted SB 03-181 to allow DWR to fully cash fund all personal services expenses required to support the Division's ground water management program. This legislation allowed the Division to sustain essential ground water administration, while reducing the need for general fund support during the economic recession. An increased cash fund appropriation of $3,186,051 was secured by raising most well permit fees from $60 to $440. This legislation contains a sunset clause, such that well permit fees will revert to the original level of $60 after June 30, 2006. (The $40 well inspection fee, legislated with SB 03-045 to fund the well inspection program, has no sunset and will therefore require well applicants to pay a total of $100 at the time of application after June 30, 2006. This $40 fee, however, is legislated to maintain the well inspection program and cannot be depleted for well permitting or general purposes.)

If General Fund for this program is not restored, the Division of Water Resources would lose nearly all funding for personnel assigned to administer the ground water management program. The Division of Water Resources would be unable to satisfy its statutory responsibilities for ground water administration. Failure to administer the 2.3 million acre-feet of ground water in Colorado is projected to result in the

misuse of 20% of ground water supplies. Misuse may include over irrigation of lawns and crops, non-augmentation of residential wells that injure existing wells or senior surface water users, illegally expanded crop areas, and over drilling of large capacity or irrigation wells. The value of water misused is estimated at $26.5 million. Lack of administration also exposes the state to potential interstate compact litigation costs for inability to appropriately administer interstate compact agreements, as well as potential intrastate litigation from Colorado senior water users who would also be injured. The estimated annual litigation liability from these two sources is $33.8 million.

Legislative Charge

Title 37, Articles 90 and 92 vest with the State Engineer the authorities to regulate ground water and to administer and distribute water in accordance with adjudicated water rights and the doctrine of prior appropriation.

Element No. 3 – Available Alternatives.

Alternative No. 1 (Recommended):

- Allow SB 03-181 to sunset and replace lost revenue with General Funds in the amount of $3,186,051 annually. Well permitting application fees would return to $60 from $440. Other associated application and processing fees (e.g. extension fees) would return to their prior levels, which were all lower than their SB 03-181 levels.

Alternative No. 2 (Not Recommended):

- Enact legislation to extend SB 03-181 and continue to cash fund the ground water management program. Maintain well permitting application fees at their current $440 level. Maintain all associated application and processing fees at their current SB 03-181 levels.

Alternative No. 3 (Not Recommended):

- Allow SB 03-181 to sunset and do not replace lost revenue with General Funds.
- Abandon statutory requirement of the State Engineer to administer ground water within Colorado. Risk injury to other ground and surface water users. Risk violation of multiple interstate compacts.

Element No. 4 – Selected Analytical Technique.

A benefit-cost analysis has been performed for this request. The benefit to the state is quantified in terms of (1) the estimated value of entitled water delivered to senior water rights holders and (2) the expense of potential litigation avoided.

Element No. 5 – Assessment of Alternatives.

Alternative No. 1 generates a benefit to the state of $60.3 million (See benefit calculations below), yielding a cost/benefit ratio of 18:1.

Alternative No. 2 extends the status quo for an unspecified time period. The benefits derived from this alternative are the same as Alternative No. 1. Considering that Referendum C has passed, it is now appropriate to provide relief to the users who have financed the cost of this program since March 2003. The State no longer requires that this program be cash funded. Consequently, this alternative is not recommended.

Alternative No. 3 involves no direct cost to the state. It also involves no benefit to the state's ground water users, as the Division would no longer administer their water. Indirect costs to the state include the expenses of potential intrastate and interstate litigation and the potential loss of public health and safety.

Benefits Calculations

Approximately 250,000 producing wells in Colorado annually pump 2.3M acre-feet from the ground. Historical averages demonstrate that Colorado annually produces about 17M acre-feet of water, 10.2M of which must by compact be delivered to downstream states. The ground water management program is therefore tasked with administering 13.5% (2.3M / 17M) of Colorado's total water supply.

Approximately 86% of Colorado's water is used for agricultural purposes (irrigating crops, watering livestock, etc.). The value of this water varies from region to region and generally ranges from $20 to $50 per acre-foot when annually leased (or significantly higher for augmentation water). This analysis conservatively estimates that all agriculture water can be valued at $35 per acre-foot.

Municipal, residential, industrial, and commercial uses account for 9% of Colorado's water use. Values vary by region and use, ranging from $200 per acre-foot leased (excluding costs of storage, transport, and treatment), to $15,000 per acre-foot purchased (including all infrastructure costs). This analysis estimates that water for these uses can be conservatively valued statewide at $250 per acre-foot.

All other uses (recreation, recharge, fish ponds, augmentation, etc.) account for the remaining 5%. While augmentation water may be valued as highly as $15,000 per acre-foot, this analysis estimates that water for all other uses can be valued statewide at $100 per acre-foot. It is estimated that failure to administer the ground water within Colorado would result in the misuse (over irrigation of lawns and crops, non-augmentation of residential wells that injure existing wells or senior surface water users, illegally expanded crop acres, over drilling of large capacity municipal or irrigation wells, etc.) of 20% of the ground water annually consumed. The total value of ground water administered by the ground water management program is estimated at $132.5M, with $26.5M misused if the Division fails to administer.

Use	Percent of CO Water Used	A-F used (of 2.3M)	Annual Value per A-F	Total Annual Value	Misuse at 20%
Agriculture	86%	1,978,000	$ 35	$ 69,230,000	$ 13,846,000
Muni., res., ind., com.	9%	207,000	$ 250	$ 51,750,000	$ 10,350,000
Other	5%	115,000	$ 100	$ 11,500,000	$ 2,300,000
Total	**100%**	**2,300,000**		**$ 132,480,000**	**$ 26,496,000**

The second benefit component – potential litigation avoided – may be considered based on twenty years of litigation on the Arkansas River. On April 29, 2005, Colorado paid $34.7M to Kansas in payment of the damages and prejudgment interest owed to Kansas for depletions to usable Stateline Arkansas River flow from 1950 through 1996. Kansas additionally seeks $4.0M in recovery of court costs. When added to Colorado's own total legal expenditures (court costs, attorney fees, engineering fees, etc.) of approximately $12M, the State's total litigation expense for the 20-year trial approaches $50M. This approximate $2.5M annualized amount could likely be expected to continue without subsequent ground water enforcement that has transpired in the Arkansas River Basin.

$34.7M award to Kansas + $4.0M potential court costs to Kansas + $12.0M approximate legal cost incurred by Colorado = ~$50M

$50M Arkansas River Compact litigation expenses / 20 years of litigation = $2.5M per year

Historically, The Arkansas River Basin pumps approximately 142,000 acre-feet of ground water per year, representing 6% of the 2.3M acre-feet pumped statewide. To arbitrarily pro-rate an annual litigation expense of 2.5M for 142,000 acre-feet of ground water across the entire 2.3 M acre-feet of ground water statewide seems excessive. More appropriately, we are estimating potential litigation costs of 10 times the Arkansas River Compact litigation expenses, if no groundwater administration were available, statewide.

$25M estimated potential annual *interstate* compact litigation costs incurred by Colorado

Intrastate water users would also likely bring litigation against the State for breaching its legislative duty to administer their water. Recognizing that Colorado expended $12M defending claims of water damages to Kansas, finally valued at $37.4M, this analysis reasons that legal costs approach 1/3 of damages. As yearly damages to Colorado water users are herein calculated at $26.5M annually,

potential annual intrastate litigation costs exceed $8.8M.

Total estimated potential annual litigation avoided = $25M interstate + 8.8M intrastate = $33.8M

Total annual benefit: $60.3 M = $26.5M value of water to senior water users + $33.8M litigation avoided

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 2 of 21
Division: Colorado Oil & Gas Conservation Commission
Program: Operations, Information, Administration & Hearings
Request Title: Adjusting to a Changing Colorado

Dept. Approval: William H. Lee **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	**Total**	2,929,950	3,044,942			3,044,942	848,689	3,893,631			727,105
	FTE	33.3	36.0			36.0	9.0	45.0			9.0
	GF										
	CF	2,429,950	3,044,942			3,044,942	848,689	3,893,631			727,105
	CFE	500,000									
	FF										
Line Item Name Program Costs	**Total**	2,892,216	2,993,699			2,993,699	842,753	3,836,452			709,297
	FTE	33.3	36.0			36.0	9.0	45.0			9.0
	GF										
	CF	2,392,216	2,993,699			2,993,699	842,753	3,836,452			709,297
	CFE	500,000									
	FF										
Line Item Name EDO Vehicle Lease Payments*	**Total**	37,734	51,243			51,243	5,936	57,179			17,808
	FTE										
	GF										
	CF	37,734	51,243			51,243	5,936	57,179			17,808
	CFE										
	FF										

Letter Notation:
Cash Fund name/Number, Federal Fund Name: $498,678 from the Operational Account of the Severance Tax Trust Fund and $344,075 + $5,936* from the Oil and Gas Conservation and Environmental Response Fund (Fund #170). *Vehicle lease payments are COGCC's allocation from the total Vehicle Lease Payments line item in EDO.
IT Request ☒ **Yes** **No (If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ **Emergency** ☐ **Technical Error** ☒ **New Data** ☐ **Unforeseen Contingency**
Request for New or Replacement Vehicles: ☒ **Yes** ☐ **No** **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ **Yes** ☒ **No** **(If yes, Name of other Department(s)_____)**

COMMON IDENTIFICATION INFORMATION

Department:	Natural Resources
Priority Number:	2 of 21
Long Bill Group/Division:	Colorado Oil and Gas Conservation Commission
Program Title/Work Package Title:	Operations, Information and Administration
Change Request Title:	Adjusting to a Changing Colorado
Statutory Cite:	CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

This document is an expression of a comprehensive long term vision to bring the Colorado Oil and Gas Conservation Commission (COGCC) staff resources to a level that can adequately meet the challenges of regulating an oil and natural gas industry that has vigorously grown over the last several years and is expected to continue strong growth into the foreseeable future. For over ten years the agency has been reluctant to grow staffing levels, focusing instead on improving efficiency. The COGCC has managed an increasing workload by streamlining business processes, revising reporting requirements, conducting document imaging and indexing projects, and making other information system advancements. These efficiency gains have kept staff growth at bay even as the workload continued to grow at a rapid pace. The agency has reached the point, however, that these incremental improvements are not enough to meet the growing needs of the public and industry, without a significant infusion of staff.

SUMMARY OF REQUESTED ALTERNATIVE

This change request is for $848,689 to fund nine additional full time employees and one contractor to address the continued high levels of oil and gas development activity in the State. In order to meet this increased demand on the COGCC, funding is requested for the following positions, listed in priority order (see Exhibit A for a summary of costs and expected benefits):

- 1.0 FTE Legal Assistant I – Hearings Assistant
- 1.0 FTE Engineering/Physical Science Technician II – Engineering/Environmental Technician
- 1.0 FTE Engineering/Physical Science Technician II – Well Permit Technician
- 1.0 FTE Environmental Protection Specialist II – Northwest Area EPS
- 1.0 FTE Engineer-in-Training II – Northwest Area Field Inspector
- 1.0 FTE Engineer-in-Training II – Central Area Field Inspector
- 1.0 FTE Environmental Protection Specialist II – Southwest Area EPS
- 1.0 FTE General Professional VI – Enforcement Officer
- 1.0 FTE Professional Engineer II – Supervising Engineer
- 1.0 Application Programmer – Contract Position (2000 hours)

Funding for this change request is as follows: $498,678 is requested from the Operational Account of the Severance Tax Trust Fund and $350,011 is from the Oil and Gas Conservation and Environmental Response Fund (Fund 170), of which $5,936 would be appropriated to the Executive Director's Office for four vehicle leases. Funding for all COGCC's potted items comes from Fund 170.

PROBLEM OR OPPORTUNITY DEFINITION

High natural gas and oil prices are fueling unprecedented oil and gas development activity in Colorado. Prices for both commodities (see Figures 1 & 2) have nearly tripled during the past few years and supply and demand dynamics exist to keep natural gas and oil prices at these higher levels.

Natural gas demand is rapidly increasing for both electrical power generation and traditional residential and commercial purposes, yet natural gas production in older producing areas, such as the mid-continent and the gulf coast, is rapidly declining. The Rocky Mountains, particularly in Colorado, have vast natural gas resources that have been targeted by oil and gas operators to keep pace with increased national demand. Rapidly increasing global oil demand, particularly in countries with emerging economies like China and India, combined with political unrest in many oil producing regions, has caused oil prices to rise dramatically to sustained high levels.

Figure 1

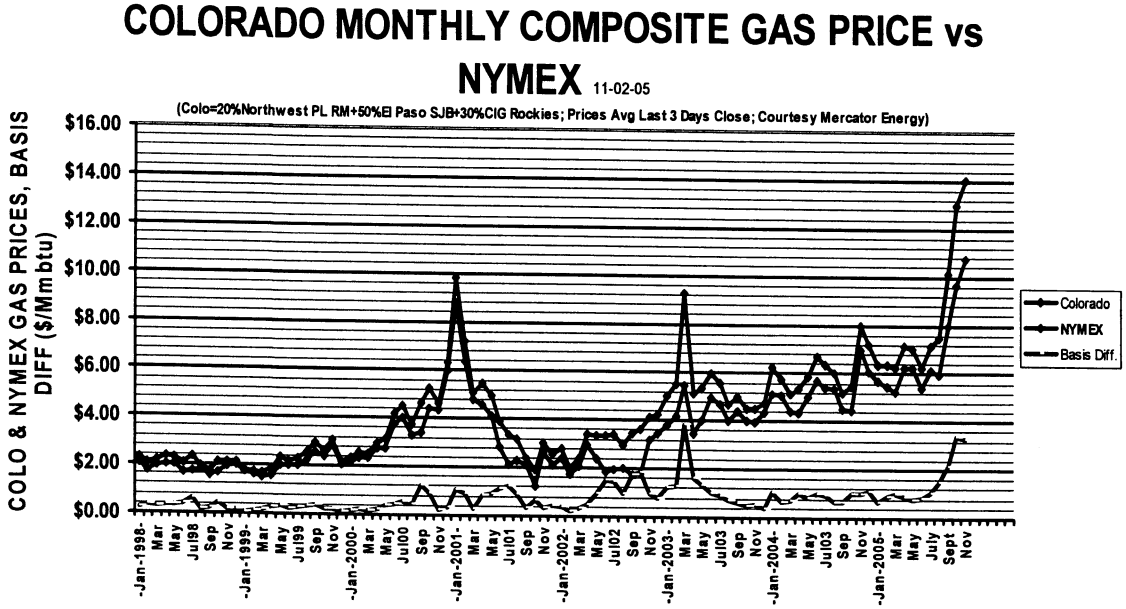
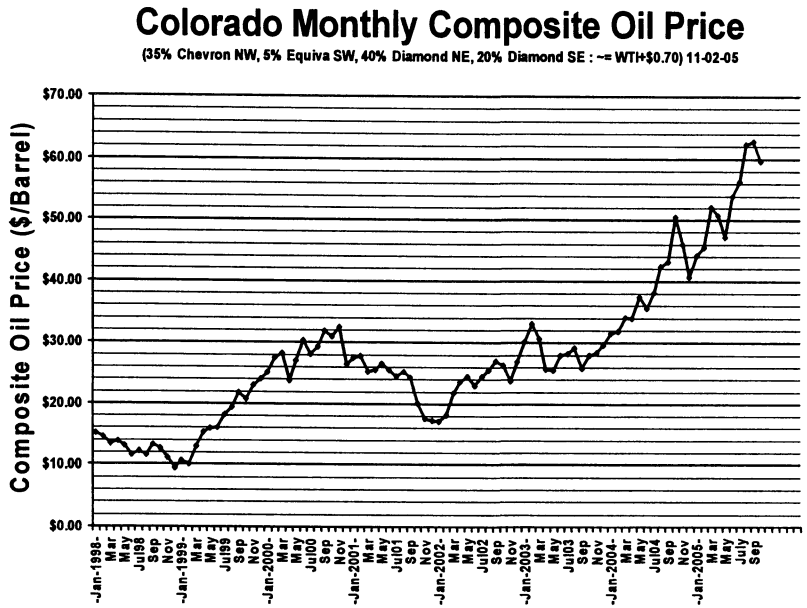


Figure 2



Other factors encouraging development activity in Colorado are natural gas pipeline projects that will add significant pipeline capacity. For example, two major pipelines, the Entrega Pipeline and the Wyoming Interstate Company Piceance Basin Expansion, are scheduled for completion in January 2006. These two pipelines alone will deliver an additional 1.6 Billion Cubic Feet Per Day (BCFD) of Colorado natural gas to national markets during the first year. This represents an increase in pipeline capacity equivalent to approximately 52% of Colorado's current production of 3.1 BCFD. Construction of new pipelines is an important development, because when pipeline capacity is limited, like it has been in the Rockies, local natural gas prices remain below the national average. The price differential in FY 2004-05 averaged about 87 cents per MMBTU. As pipeline limitations are removed and the price differential declines, industry will devote even more resources to the Rocky Mountain region.

The local, national, and global scene that drive the COGCC's workload, as briefly described above, impact specific metrics, such as the number of new well permits, drilling rigs, and active wells. These metrics are described below.

Permitting Activity

As shown in the graph below (Figure 3) record high oil and gas well permitting levels are expected to continue into the foreseeable future:

- FY 2004 total: 2,650 permit applications received (all time record - increase of 27% from FY 2003)
- FY 2005 total: 3,845 permit applications received (increase of 45% from 2004)
- FY 2006 estimated: 5,500 permit applications received (increase of 43% from 2005)

Approximately one third of new permits are in Garfield County and one third are in Weld County (Figures 4 and 5).

Figure 3

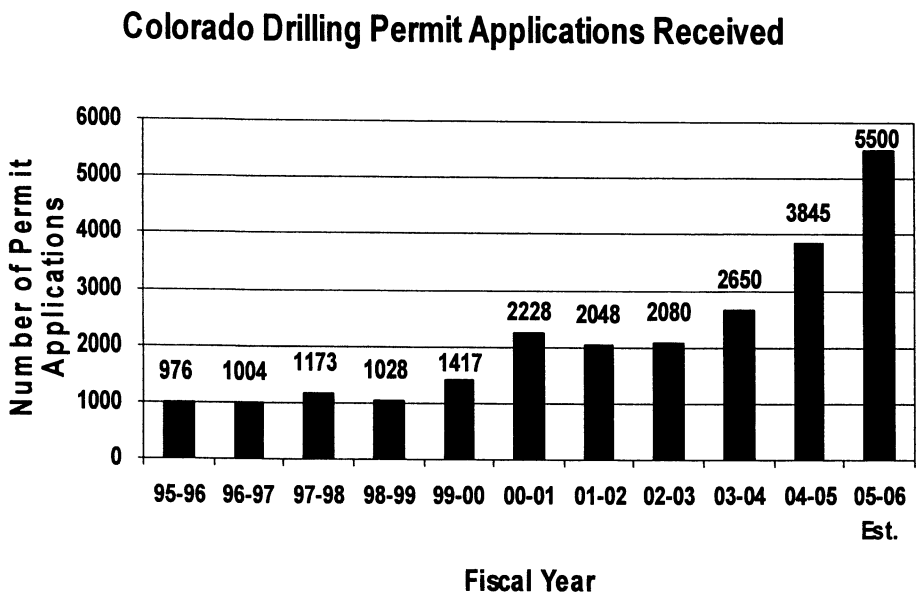


Figure 4
As of May 31, 2005

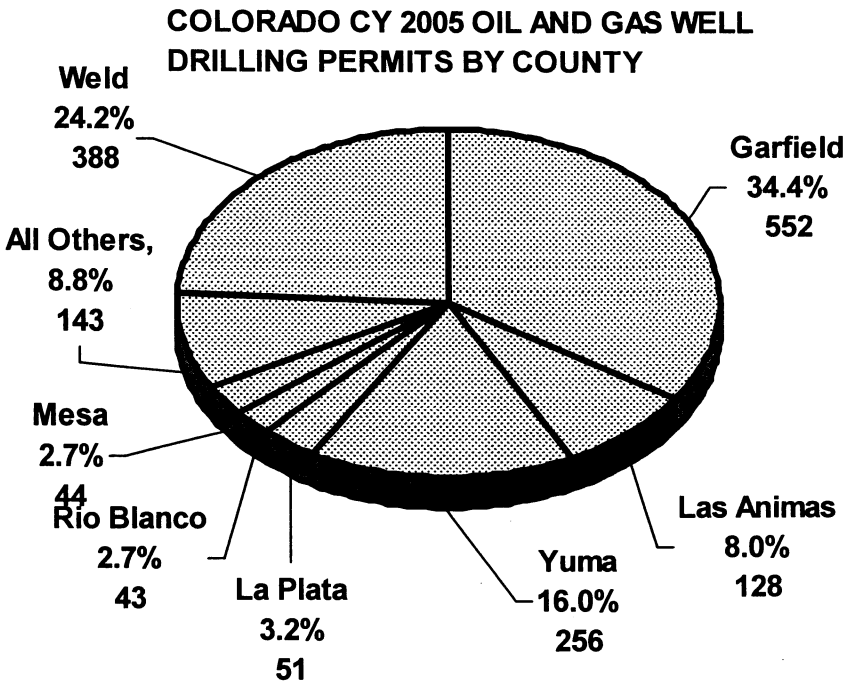
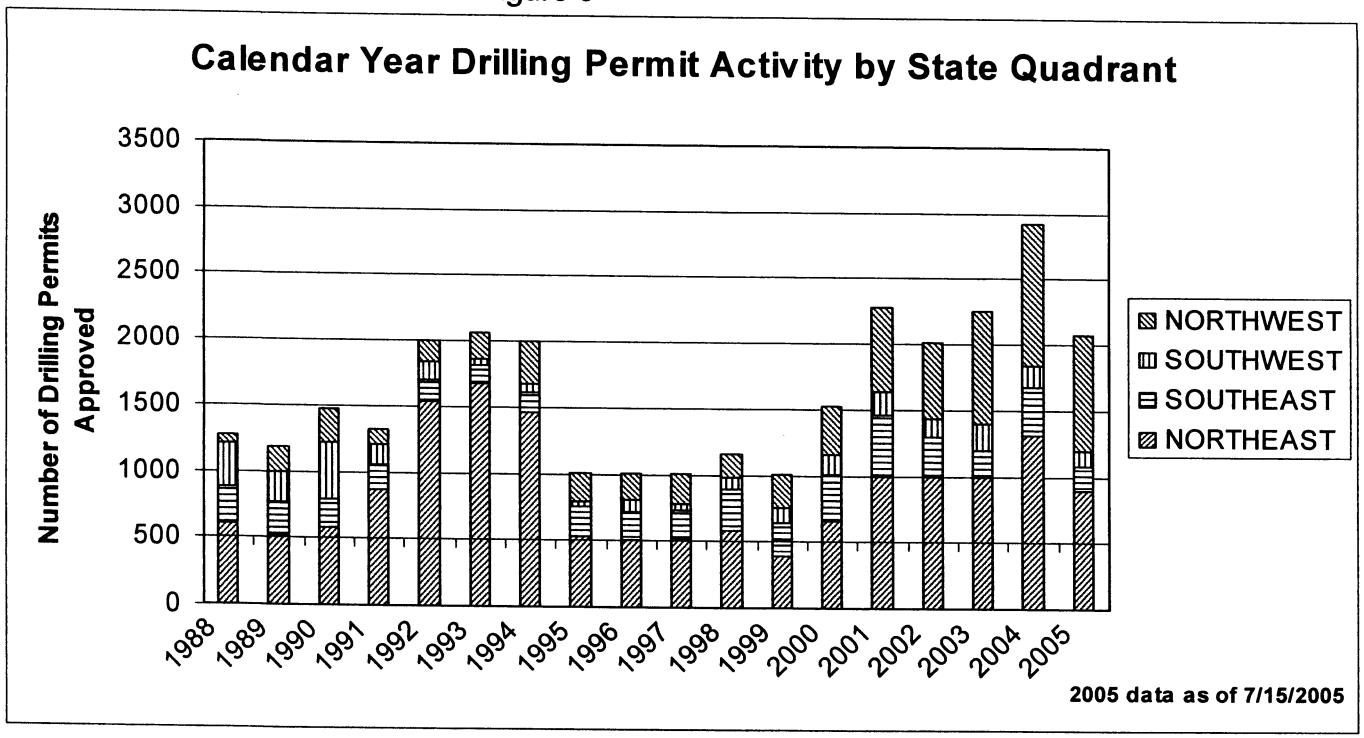


Figure 5



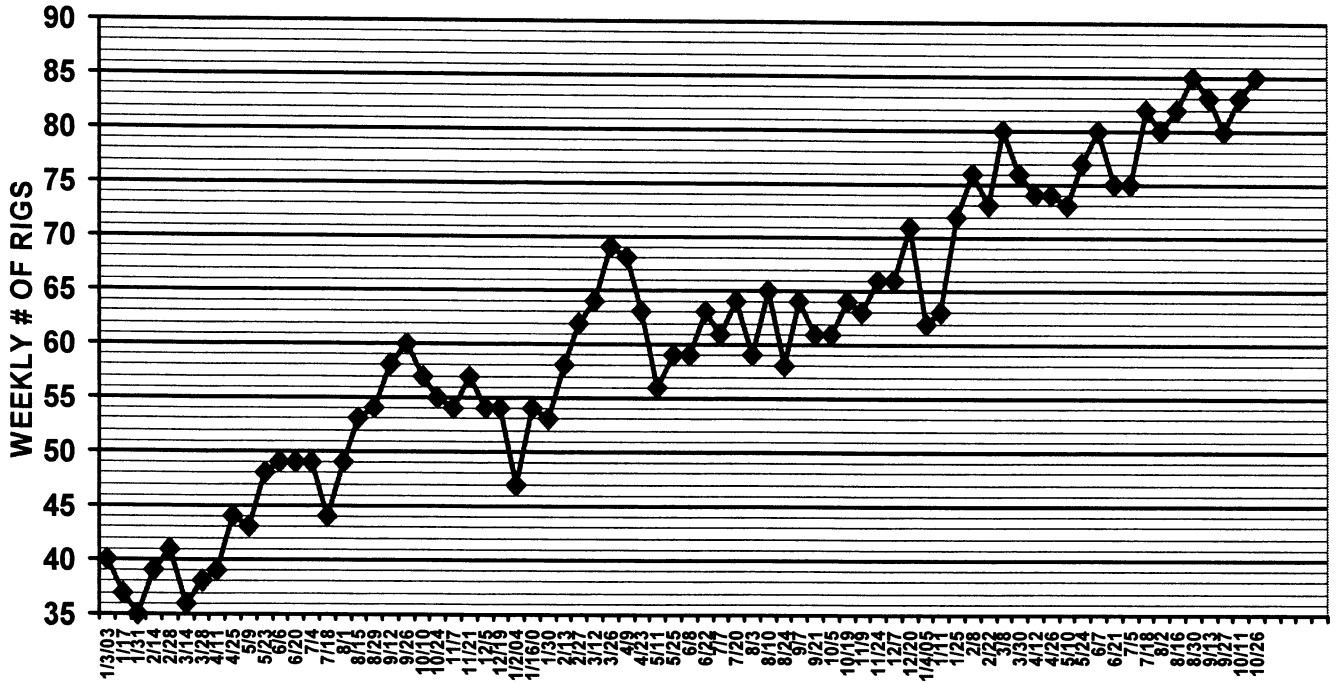
Drilling Activity

In October 2005, there were over 80 active drilling rigs in the State, double the rig count a few years ago. The rig count is expected to steadily increase for the next few years. Nearly three quarters of the drilling rigs are located in the Piceance Basin of Northwest Colorado and nearly one quarter are in the Denver-Julesburg Basin of Northeast Colorado. (See Figure 6)

Figure 6

TOTAL DRILLING RIGS RUNNING IN COLORADO EVERY OTHER WEEK IN 2003-2005

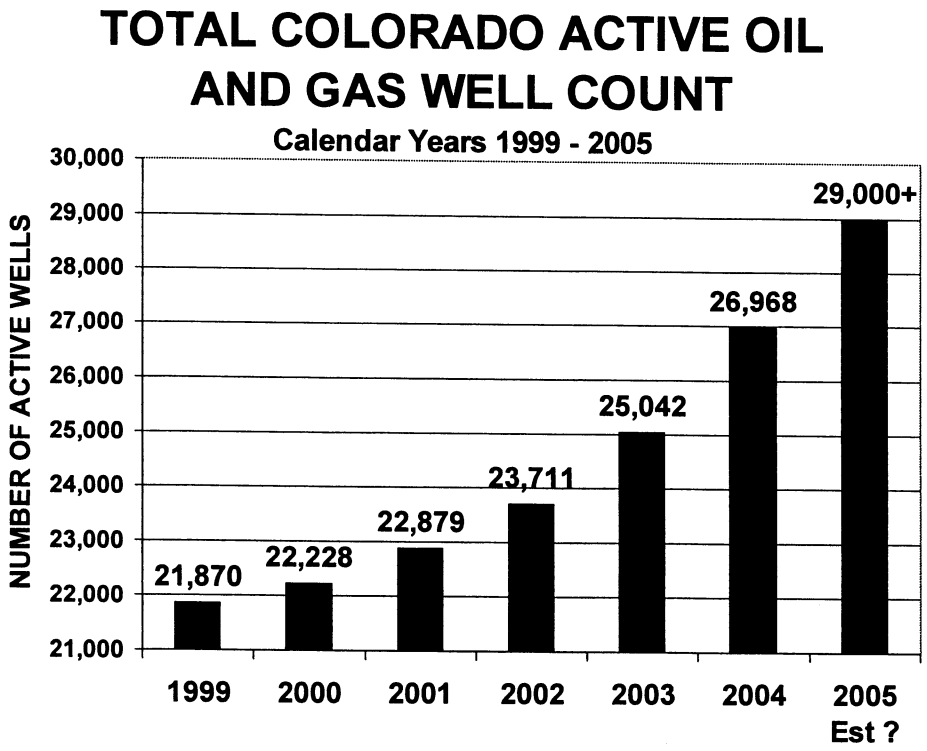
(Based on data from PI/Dwights Drilling Wire through 4/30/03 and Anderson Reports Weekly Rig Status Report 5/1/03 to present)



Active Well Count

The current active oil and gas well count is approximately 28,700, about 5,000 more than three years ago. The agency is expecting this figure to exceed 29,000 by the end of Calendar Year 2005. (See Figure 7)

Figure 7



Other Major Issues:

- Much of the new oil and gas drilling and production activity is occurring near residential development or is being encroached on by residential development in Garfield, Weld, Las Animas and La Plata Counties, creating the potential for conflicts between oil and gas development and other land uses.

- The sheer number of wells being drilled increases the number of complaints and the probability of undesirable events or high profile issues. The West Divide Creek gas seep in Garfield County, the Bondad trailer explosion in La Plata County, increased drilling and production from coalbed methane (CBM) wells and associated questions about potential impacts to senior water rights, and drilling near the Project Rulison Nuclear Experiment are recent examples.

- There is the potential for decline in attention to detail by operators with field operations and local interests as new and merged operators focus on demands to deliver financial performance.

- Every segment of the agency has been significantly impacted by the unrelenting growth in activity. In particular, increased permitting, field inspection, environmental projects and administrative workload for COGCC will further strain the agency's ability to deliver quality service to its customers.

- Until the Legislature approved one new environmental protection specialist for FY 2005 and two new field inspectors for FY 2006, the COGCC has operated with the same number of FTE (35.0) since 1994 when there were 55% of the number of active wells that exist today. The figures below (Figures 8 & 9) show comparisons between an increasing active well count, FTE levels, and number of inspections.

Figure 8

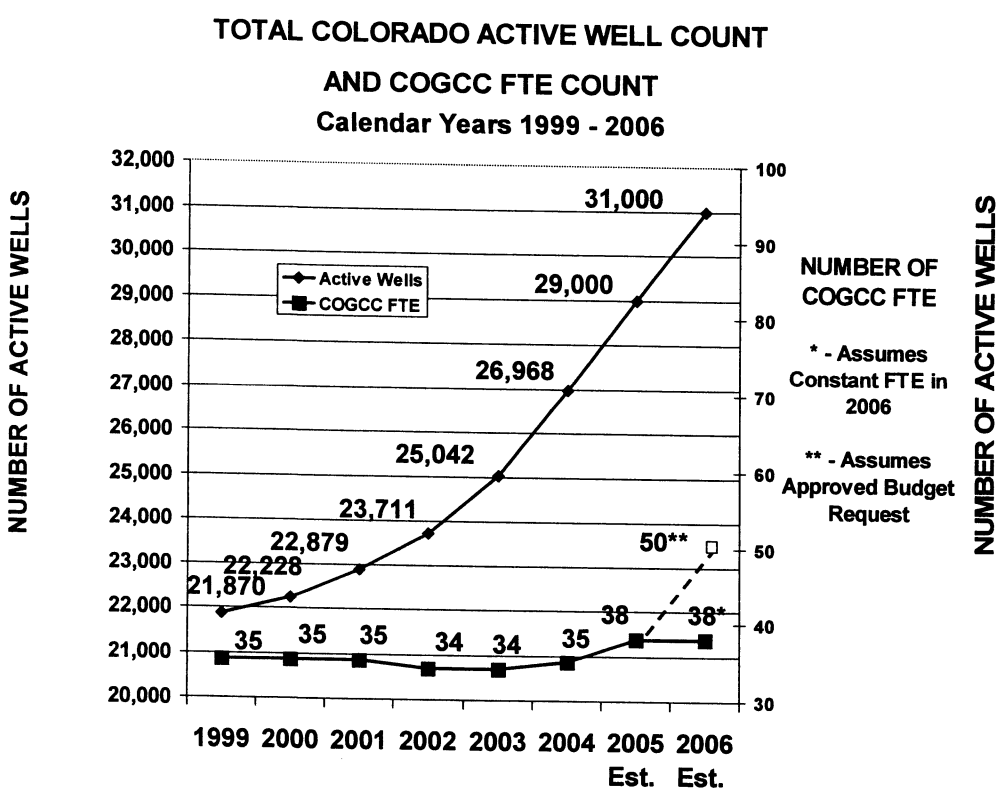
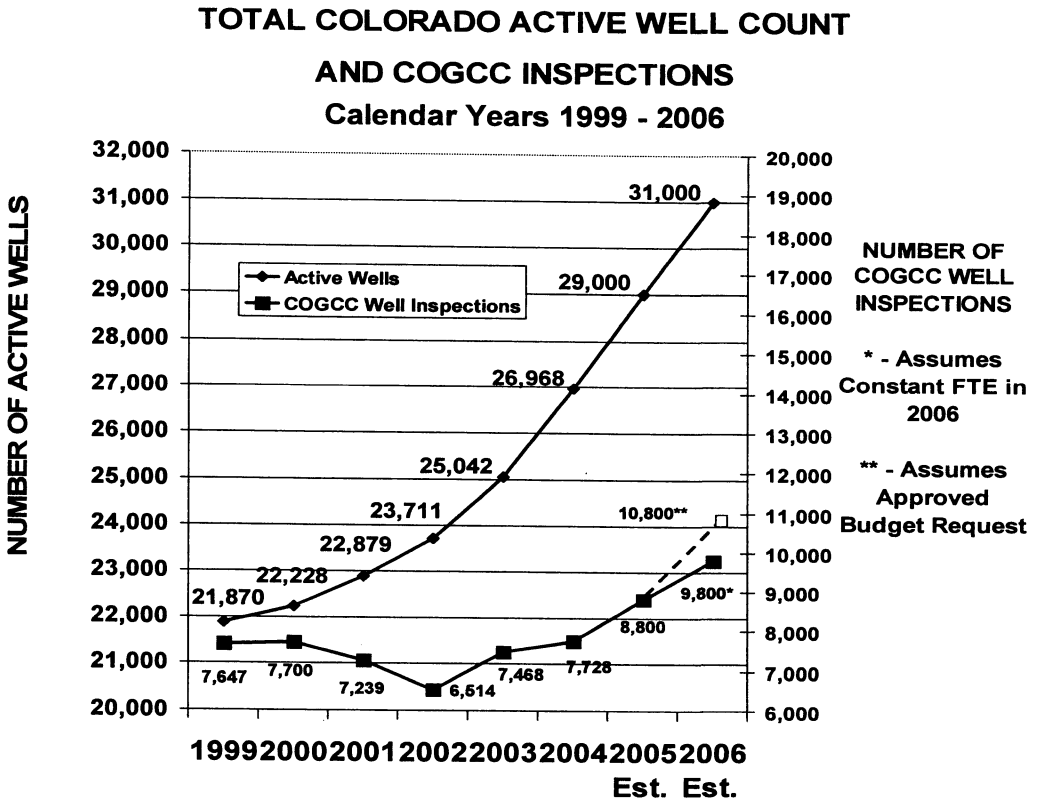


Figure 9



AVAILABLE ATERNATIVES

Description of Alternatives

Alternative 1: Add 9.0 FTE and 1.0 contractor in the Operations, Administration, and Information Sections, operating expenses for Denver-based and in-home offices, and 4 additional leased vehicles from Fleet Management.

See proposed new positions in shaded boxes on organization chart below.

Cost Estimate: $848,689

Assumptions:

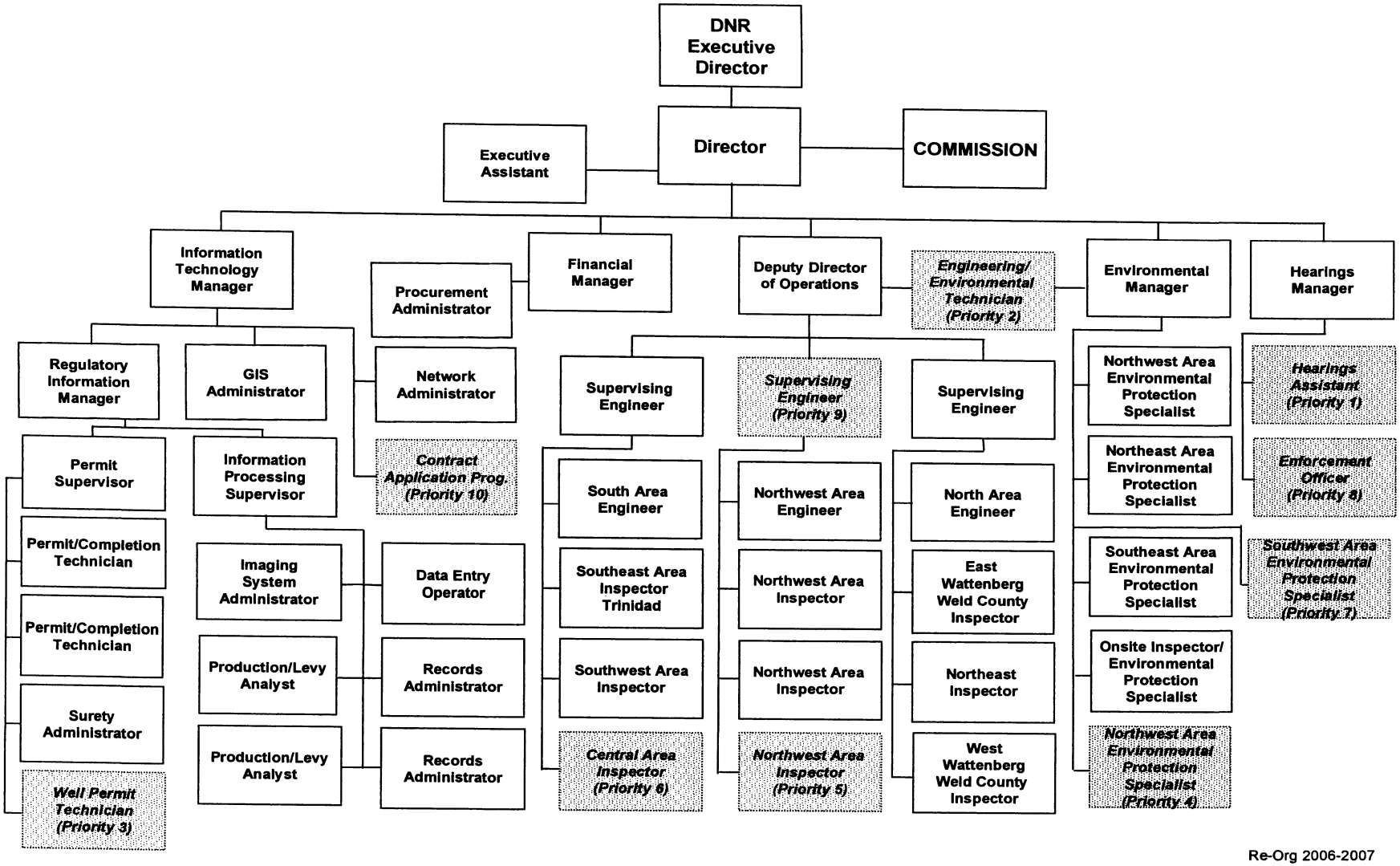
1. 9.0 FTE position's would be filled for 12 months in FY 2007 and thereafter.
2. New positions would need desktop computer and software, office furniture, and on-going operating.
3. 4 additional leased vehicles for 3 months in FY 2007 and 12 months thereafter.
4. Contract Application Programmer would work 2,000 hours at $46/hour.
5. New positions would increase IT maintenance cost according to the type and location of FTE, as shown on the following table.

Type of FTE	Computer	Desktop Application Suite	Camera	Printer/ Fax	GPS	Total	Lifecycle	Annual Life Cycle Cost
FTE located in Denver office w/no field presence	$1,025	$300				$1,325	4	$331
FTE (in Denver & Home office) with field presence	$1,700	$300	$250	$350		$2,600	3	$867
Extra for FTE with Vehicle					$1,883	$1,883	5	$377

Calculations:

See Exhibit B

Adjusting to a Changing Colorado
Reorganization of the
COLORADO OIL & GAS CONSERVATION COMMISSION ORGANIZATION



Re-Org 2006-2007

COGCC's Statutory Authority to Implement Alternative 1

CRS 39-29-109(1)(a)(II) (Senate Bill 96-170) One-half of the severance tax receipts credited to the Severance Tax Trust Fund ..."shall be credited to the Operational Account of the Severance Tax Trust Fund and used to fund programs established within the Colorado Oil and Gas Conservation Commission, the Colorado Geological Survey, the Division of Minerals and Geology, and the Colorado Water Conservation Board that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water...".

CRS 39-29-109(1)(c)(I) "...The General Assembly may appropriate moneys from the total moneys available in the Operational Account of the Severance Tax Trust Find to fund recommended programs as follows:
(A) For programs or projects within the Colorado Oil and Gas Conservation Commission, up to forty-five percent of the moneys in the operational account...".

(It is important to note that the sum of all COGCC FY 06-07 funding requests from the Severance Tax operational account, including this request, is approximately 4.65 percent (4.65%) of the moneys forecast to be available in the operational account.)

CRS 34-60-102(1): Oil and Gas Conservation Act – "declares it is to be in the public interest to foster, encourage, and promote the development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare."

CRS 34-60-106(2)(d): The Commission has the authority to regulate..."Oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, taking into consideration cost-effectiveness and technical feasibility."

Alternative 1 – Linkage to Specific Department Objectives:

Department of Natural Resources Strategic Objectives include:

1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.

Alternative 2: No Action.

ANALYTICAL TECHNIQUE – BENEFIT-COST ANALYSIS

ASSESSMENT OF ALTERNATIVES

Alternative 1

Priority #1: Legal Assistant I (Hearings Assistant) $48,347 – This position would assist the Hearings Manager to compose, issue and publish Notices of Hearing, prepare and distribute informational packets for Commissioners in preparation for hearings, and prepare and distribute Commission Orders and Hearing Officer Reports. The position would also coordinate the compiling, printing, and distribution of the Monthly Staff Report, Rulemaking Drafts, and Rule Books, in addition to posting and maintaining all hearing related information on the agency's website. This position was previously filled by a full time employee, but a recent reallocation of duties, necessitated by the high activity level of the oil and gas industry, resulted in this work being performed by a contractor during the latter part of FY 2004-05 and all of FY 2005-06. The COGCC considers this a short term, but unavoidable, solution to address the substantial workload it experienced in FY 2004-05 and is expecting to face in FY 2005-06.

An alternative to funding a new FTE would be to continue outsourcing the hearings assistance work. If a consistent source of funding were available, along with a contractor willing to work long term in such a capacity, this alternative would work. Neither appears to be available, however. The agency funded the FY 2004-05 contractor services through temporary vacancy savings and anticipates funding the FY 2005-06 services by setting aside personal services and operating funds as available throughout the year. The agency does not anticipate locating enough funds to employ a contractor full time at the market rate of over $30 per hour. Long term contractors are also difficult to find, and it takes approximately two months for a new contractor to work independently and proficiently. Each time this position is turned over, about 25% of the Hearings Manager's time is spent training the new contractor during the first month and about 10% the second month. At a monthly salary of about $8,000, the cost of this training is $2,000 the first month and $800 the second month for a total of $2,800 each time the contract position turns over. Based on recent experience, the agency expects the position to turn over four times per year, for a total annual cost of $11,200.

When the availability of the Hearings Manager is reduced, other positions at the COGCC, including the volunteer commissioners, are significantly impacted. The Hearings Manager cannot risk missing statutory deadlines that would compromise the ability of the Commission to hold hearings. Numerous public inquiries that are typically handled by the Hearings Manager would have to go directly to the engineers and permitting staff, preventing those employees from performing their job duties. At an average monthly salary for engineers and permitting staff at $6,541, the lost time spent on the Hearing Manager's duties is valued at $2,289 ($1,635 for first month + $654 for second month of training). $2,289 multiplied times 4 turnovers/year = $9,156.

The Hearings Manager regularly conducts pre-hearing conferences and administrative hearings. If the Hearings Manager is training a new employee, some of these conferences and hearings would not be held, which would result in longer Commission hearings (10 days

verses 20 days per year), because many conflicts that would have been resolved prior to the hearing would have to go before the full Commission for resolution. This is an additional delay to industry and all involved parties, in addition to an increase in volunteer Commissioner time. Seven Commissioners are compensated $50 per day, for a total of $350 for each hearing day. Additional lodging and meals would also be incurred at a rate of approximately $650 per two day hearing. The total annual cost of reduced pre-hearing conferences and administrative hearings resulting in 10 additional Commission hearing days is approximately $10,000 (10 days x $1,000 per diem and travel expenses).

Alternative	Annual Compensation (incl. Pera & Med. and Operating Cost For Alternative #1) [A]	Hearings Manager's Time Devoted to Training	Expenses for 10 Additional Commission Hearing Days per Year	Value of Engineers & Permit Staff's Time Devoted to Responding to Public Inquiries [B]	Total Cost
Alternative #1	$44,693				$44,693
Alternative #2	$60,000	$11,200	$10,000	$9,156	$90,356

Footnote:

A. First year cost of FTE does not include one-time cost of PC, software, furniture, and IT maintenance cost in this analysis, because these expenditures are also needed for long term contractors. The annual cost of a contractor is estimated at $30/hour for 2,000 hours per year.

B. The incremental environmental risk associated with engineers and permit technicians spending time away from their primary tasks is not included in this analysis, but could be significant.

The COGCC recommends Alternative 1, because of lower costs ($44,693 verses $90,356), for a net benefit of $45,663

Priority #2: Engineering/Physical Science Technician II ($61,739) - An Engineering/ Environmental Technician is needed to gather and organize data for the engineering and environmental staff. This position would specifically collect data on wells that are shut-in or temporarily abandoned and on locations that have been permanently abandoned. The position would also track compliance with COGCC regulations regarding mechanical integrity testing (MIT) of shut-in and temporarily abandoned wells to ensure that groundwater resources are being protected. This compliance tracking, while very important, has not been performed on a regular basis due to other increasing high priority workload requirements. This position would also help manage and maintain information on water wells, formation pressure tests, and gas seeps around the state and prepare maps and reports of these data. The organized data would be submitted to members of the environmental staff for analysis. This work would allow the COGCC to take a proactive role in anticipating and responding to environmental impacts related to oil and gas operations.

The primary beneficial outcomes of this requested position are:

Customer	Beneficial Outcome to Customer
Oil and Gas Industry, Local Governments, and The Public	• Increases COGCC staff assistance to operators to identify potential problems which could cause environmental impacts. • Reduces potential risk of impacts to public health, safety, welfare and the environment.
OGCC Staff	• Allows staff to find well problems earlier while the problems are easier to correct and before they become a state liability.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, welfare and the environment created by oil and gas activity that the COGCC will not be able to adequately address without the approval of this request. There is an incremental risk associated with the diminished ability of the COGCC to focus on the identification of shut in and orphan wells and the management of water well, formation pressure test, and gas seep data. This chart assigns a potential cost of each risk item to effected entities and calculates total potential annual cost avoidance.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding an Engineering/Environmental Technician)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Delay in identification of shut-in wells [A]	Fund 170	$250	300	$75,000	Low	100%	$75,000	COGCC
Delay in identifying excess inactive and orphan wells [B]	Fund 170	$25,000	10	$250,000	Medium	50%	$125,000	COGCC
Impacts to water wells [C]	Surface owners, surface waters, soils, ground water	$60,000	2	$120,000	High	100%	$120,000	COGCC & Industry
Public Health, Safety, and Environmental impacts due to gas seeps [D]	Surface owners, surface waters, soils, ground water	$250,000	1	$250,000	High	10%	$25,000	COGCC & Industry
Total Cost				**$695,000**			**$345,000**	

Footnotes:

A. Operators of shut-in and temporarily abandoned wells that are not in compliance with MIT requirements will be identified. Staff will then require the operator to conduct the necessary test, thereby determining whether the well casing is leaking and whether there is a potential for ground water and/or soils to be impacted. If a well fails the MIT, then the operator will be required to fix the problem or plug the well and remediate impacts to ground water and soil. Identifying wells with leaking casing as early as possible will help limit the spread of contamination and the aerial extent of the impacts, which in turn will reduce the costs for remediation.

B. Delay in identifying excess inactive and orphaned wells. The operations/environmental technician will manage data and generate computer reports. These reports can help the agency identify and track wells that have either been abandoned by the well operator or are at high risk of being abandoned by the well operator. By tracking these wells we can ask for an increased

plugging bond from at-risk operators. Cost per occurrence figures were generated assuming $25,000 to plug and abandon one well. The COGCC estimates that approximately 10 wells are orphaned each year that could be found using computer reports. The engineering/environmental technician would eliminate about 50% of these occurrences.

C. The Colorado Oil and Gas Conservation Commission maintains an extensive data base of water well test results. Analysis of this data can provide early indications of water well contamination. Cost per occurrence for this issue is based on the cost of plugging a contaminated water well and drilling a new water well.

D. This position will systematically manage data that will be used to track areas of gas seepage. Local governments use this data to delineate areas of geologic hazard and areas of limited development. Cost estimates for areas of gas seepage can be high and $250,000 assumes an entire gas seep area. The agency assumes that the data provided to local governments will alleviate or help mitigate 10% of these seeps.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences in Colorado.
Incremental Risk Factor - Percentage of impact not currently being addressed (multiplier to calculate cost of incremental risk).
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Engineering/Environmental Technician position in this request has a first year cost of $61,739, which is substantially less than the $345,000 of incremental risk that is avoided.

Priority #3: Engineering/Physical Science Technician II ($68,435) - A Permit Technician is needed to provide additional support for the Permitting Section. This position would be responsible for reviewing the increasing paperwork submitted subsequent to the drilling of new wells and the recompletion of existing wells. In addition, the Permit Technician would submit requests for delinquent paperwork to oil and gas operators, and track operator responses. Timely paperwork review is necessary to ensure compliance with permit conditions, rules and Commission orders by oil and gas operators so that new permits can be properly processed and non-compliance issues can be quickly addressed. Current and anticipated activity levels require an additional position devoted to these tasks.

Assessment of Annual Incremental Risk Attributed to Alternative 2 - "No Action" (not funding an additional Permit Technician)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Contamination from improperly constructed wells, due to delay in review of well construction paperwork [A]	Surface owners, surface waters, soils, ground water	$60,000	10	$600,000	High	25%	$150,000	Industry and COGCC
Contamination from improperly plugged and abandoned wells, due to delay in review of well plugging paperwork [B]	Surface owners, surface waters, soils, ground water	$60,000	10	$600,000	High	25%	$150,000	Industry and COGCC
Additional Issues due to current workload management								
Delay in delivery of information to stakeholder community [C]	Govt., Industry, Resellers, Public	$25	4,000	$100,000	Low	100%	$100,000	Various
Total Cost				**$1,300,000**			**$400,000**	

Footnotes:

A. A completion report must be submitted by the oil and gas operator within 30 days of drilling a well. Due to heavy workload, COGCC staff cannot track wells that have been drilled but not reported. Completion reports that are submitted must be reviewed for completeness and correctness. This includes confirming that the report is for the well the operator claims it is, in addition to checking for compliance with permit conditions. If the associated data, such as well logs and directional surveys, are not included or are incorrect then the correct information must be sought. The failure to review a completion report in a timely manner will allow approximately ten wells per year to escape detection of cementing deficiencies for a period long enough to create an adverse impact to groundwater. The delay could easily be one year or greater at current permit levels. Treatment systems can be installed to mitigate impacts from hydrocarbon contamination. For domestic water wells these systems cost approximately $60,000.

B. Prior to plugging and abandoning any oil and gas well in Colorado, the well operator must submit a report proposing the methodology to be used in plugging the well. This report is approved (sometimes with corrections) and returned to the operator. After the well is plugged and abandoned the operator must submit a subsequent report showing how the well was actually plugged. These reports are used to discover improperly plugged wells. Due to the high activity level, the COGCC has difficulty tracking wells that have been plugged and abandoned, but have not been properly reported as plugged. The additional permitting person would allow us to find wells which have been plugged but not reported. The failure to review a plugging report in a timely manner will allow approximately ten wells per year to escape detection of cementing deficiencies for a period long enough to create an adverse impact to groundwater. The delay could easily be one year or greater at current permit levels. Treatment systems can be installed to mitigate impacts from hydrocarbon contamination. For domestic water wells these systems cost approximately $60,000.

C. Well information is vital to many users, including the oil and gas industry, government agencies, environmental community, and property owners (both surface and mineral). This information is vital to additional drilling and exploration in the state. At current permit levels the permit technicians must prioritize workload, this results in a delay of processing reports, such as completion, plugging and miscellaneous information. The delay can easily be a year or more depending on permitting activity and employee resources. The approximate hourly rate for a contractor to research files in the COGCC public room is $25, which would be required if reports have not been processed and are unavailable on the Internet.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences handled by COGCC staff.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 4 = 25%)
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Permit Technician in this request has a first year cost of $68,435, which is substantially less than the $400,000 of incremental risk that is avoided.

Priority #4: Environmental Protection Specialist II ($94,763) - A Northwest Area EPS would be stationed in the Grand Junction/Rifle area to investigate environmental complaints, oil and water spills, and to provide environmental expertise to the area field inspectors. Due to the high level of oil and gas activity in northwest Colorado, in addition to current and anticipated hearing applications for increased well density, an EPS is needed to reside in the area of activity to provide quick response to the increased environmental workload, including the investigation of complaints alleging impacts from oil and gas activities and environmental emergency response,

to ensure public health, safety, welfare and the environment are protected through compliance with COGCC rules and orders, and to monitor new and ongoing environmental projects.

The primary beneficial outcomes of this requested position are:

Customer	Beneficial Outcome to Customer
Oil and Gas Industry, Local Governments, and The Public	• Increases COGCC staff assistance to operators to identify potential problems which could cause environmental impacts. • Reduces potential risk of impacts to public health, safety, welfare and the environment.
OGCC Staff	• Allows staff to find well problems earlier while the problems are easier to correct and before they become a state liability.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, welfare and the environment created by oil and gas activity which the COGCC will not be able to adequately address without the approval of this request. There is an incremental risk associated with diminished ability of the COGCC to focus on leaking production pits, spills and releases, impacts to wildlife and livestock and complaint response. There is an incremental cost associated with delay in delivering environmental information to stakeholders and in approving exploration and production waste disposal facilities. This chart assigns a potential cost of each risk item to effected entities and calculates total potential annual cost avoidance.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding a NW Environmental Protection Specialist)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Delay in remediation and reclamation of orphaned sites. [A]	Surface owners, surface waters, soils, ground water	$15,000	10	$150,000	High	50%	$75,000	COGCC
Environmental and land owner impacts by less timely spill reclamation [B]	Surface owners, surface waters, soils, ground water	$10,000	4	$40,000	Medium	50%	$20,000	Industry
Environmental and landowner impacts by less timely follow up on failed MIT and bradenhead tests [C]	Surface owners, surface waters, ground water, soils	$150,000	2	$300,000	Medium	50%	$150,000	Industry and COGCC
Additional Issues due to current workload management								
Delay in delivery of information to environmental stakeholder community [D]	Govt., Industry, Resellers, Public	$50	20	$1,000	Low	100%	$1,000	Various
Delay in issuing E&P waste management permits [E]	Industry	$1,000	10	$10,000	Low	100%	$10,000	COGCC
Total Cost				**$501,000**			**$256,000**	

Footnotes:

A. Reclamation costs for orphaned sites in northwestern Colorado have ranged from $5,000 for routine plugging and abandoning of one well to $300,000 for more complex sites with oily pits, asbestos covered pipelines, oil soils, junked equipment, liquids stored

in tanks, and wells. Delays in remediation and reclamation of these sites due to workload and insufficient staff allow impacts to worsen, reclamation costs to increase due to inflation, and potential liability of the State to increase.

B. Impacts to ground water from spills are quite common, but typically the impacted area is relatively small, often less than an acre. Remediation costs for impacted ground water can range from $10,000 to $50,000. Remediation costs from soil impacts can range from $1,000 to $50,000.

C. In 2004 there were three separate instances of ground water and surface water impacts from gas wells in Northwest Colorado that experienced abnormally high bradenhead pressures. The costs for remediation of these impacts have ranged from $100,000 to $5,000,000. Overpressured tight sandstone reservoirs and fractured shallow rock contributed to problems with cementing these gas wells. Inadequate cement allowed production gas to migrate into the annular space, creating high bradenhead pressures and allowing gas to communicate with shallow water resources. Although detection and early enforcement response to these situations would not have eliminated all impacts, it would have kept the impacted areas and volumes of gas lost to the environment smaller. This would have greatly reduced the amount of time and money spent on remediation.

D. Well information is vital to many users, including the oil and gas industry, government agencies, environmental community, and property owners (both surface and mineral). This information is vital to additional drilling and exploration in the state. At current permit levels the permit technicians must prioritize workload, this results in a delay of processing reports, such as completion, plugging and miscellaneous information. The delay can easily be a year or more depending on permitting activity and employee resources. The approximate hourly rate for a contractor to research files in the COGCC public room is $50, which would be required if reports have not been processed and are unavailable on the Internet.

E. Permits are issued for produced water disposal pits, centralized waste management facilities, and remediation of exploration and production wastes. Produced water includes formation water, injection water, and any chemicals added downhole or during the oil/water separation process. Delays in issuing permits could result in operators having to pay for waste transportation and disposal at commercial facilities. These costs could range from $1,000 up to in excess of $100,000, depending upon the volume and type of waste disposed.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences handled by Environmental Staff in Northwest Colorado.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 2 = 50%)

Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Northwest Environmental Protection Specialist in this request has a first year cost of $94,763, which is substantially less than the $256,000 of incremental risk that is avoided.

Priority #5: Engineer-In-Training II ($81,392) - A Northwest Area Field Inspector would be stationed in the Rifle area to investigate complaints, perform additional well site inspections, witness cementing and plugging operations, and provide engineering expertise to the EPS in the area. An additional inspector for this area has been approved for FY 2005-06, but the forecasted activity level over the next few years justifies the need for a fourth inspector in this region. As the number of new wells increases through current and anticipated hearing applications for increased well density in the area, additional permit conditions are expected to be imposed, requiring increased field monitoring to ensure compliance.

The primary beneficial outcomes of this requested position are:

Customer	Beneficial Outcome to Customer
Oil and Gas Industry, Local Governments, and The Public	• Increases COGCC staff assistance to operators to identify potential problems which could cause environmental impacts. • Reduces potential risk of impacts to public health, safety, welfare and the environment.
OGCC Staff	• Allows staff to find well problems earlier while the problems are easier to correct and before they become a state liability.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, welfare and the environment created by oil and gas activity that the COGCC will not be able to adequately address without the approval of this request. There is an incremental risk associated with the diminished ability of the COGCC to focus on contamination from improperly constructed wells, impacts related to reclamation and production operations, and complaint response. This chart assigns a potential cost of each risk item to effected entities and calculates total potential annual cost avoidance.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding a NW Field Inspector)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Contamination from improperly constructed wells [A]	Surface owners, surface waters, soils, ground water	$100,000	2	$200,000	High	25%	$50,000	Industry and COGCC
Environmental and land owner impacts by untimely well site inspections [B]	Surface owners, surface waters, soils, ground water	$3,000	20	$60,000	Medium	25%	$15,000	Industry
Environmental and land owner impacts by untimely Mechanical Integrity Tests and Bradenhead tests [C]	Surface owners, surface waters, soils, ground water	$50,000	4	$200,000	High	25%	$50,000	Industry and COGCC
Additional Issues due to current workload management								
Delay in delivery of information to stakeholder community [D]	Govt., Industry, Resellers, Public	$25	1,000	$25,000	Low	100%	$25,000	Various
Delay in Identifying orphan wells [E]	Environmental response fund	$25,000	2	$50,000	Medium	100%	$50,000	COGCC
Total Cost				**$535,000**			**$190,000**	

Footnotes:

A. Contamination from improperly constructed wells. The COGCC wants to witness operations where casing is cemented in the well. Witnessing these operations allows the COGCC to insure that aquifers are protected and that oil and gas producing zones are properly isolated. Witnessing more cementing operations would help eliminate the problems with contaminated water wells

and gas seeps seen on the western slope. Remediation costs for impacted ground water can range from $50,000 up to several million dollars.

B. Environmental and land owner impacts by untimely well site inspections. Colorado currently has over 28,000 active oil and gas wells and this number is increasing by about 3000 wells per year. We currently perform 7,000 to 8,000 inspections per year. This means that on the average we inspect each well site every four years. By increasing our inspection schedule we could help eliminate problems caused by weeds, spills, trash on location, and abandoned well sites or non-producing wells.

C. Environmental and landowner impacts by untimely Mechanical Integrity Tests and Bradenhead Tests. The COGCC requires all wells that are in a non-producing status for over two years to be tested for Mechanical Integrity. This test insures no gas or oil is leaking into other formations. Bradenhead tests insure gas and oil are properly sealed in their original formations. Both of these tests are done to minimize contamination of aquifers.

D. Well information is vital to many users, including the oil and gas industry, government agencies, environmental community, and property owners (both surface and mineral). This information is vital to additional drilling and exploration in the state. At current permit levels the permit technicians must prioritize workload, this results in a delay of processing reports, such as completion, plugging and miscellaneous information. The delay can easily be a year or more depending on permitting activity and employee resources. The approximate hourly rate for a contractor to research files in the COGCC public room is $25, which would be required if reports have not been processed and are unavailable on the Internet.

E. Wells which have ceased to be economic are a liability to the oil and gas producer. We can identify these wells by careful screening of production reports and by field inspections. If the COGCC can identify these wells early, we can require additional bonding from operators to cover any plugging costs. Currently to COGCC often finds these wells after the oil and gas operator has ceased to maintain the operations and the COGCC pays for the plugging and abandonment of these well using bond and ERF money.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences handled by field inspection staff in Northwest Colorado.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 4 = 25%)
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Northwest Colorado Field Inspector in this request has a first year cost of $81,392, which is substantially less than the $190,000 of incremental risk that is avoided.

Priority #6: Engineer-In-Training II ($80,372) - A Central Area Field Inspector would be stationed in the Bennett/Byers area to investigate complaints, perform additional well site inspections, and witness cementing and plugging operations in the central eastern part of the state. This area contains the largest number of active wells in the state and they are not being routinely inspected due to the increase in oil and gas activity and complaints in other parts of the state.

The primary beneficial outcomes of this requested position are:

Customer	Beneficial Outcome to Customer
Oil and Gas Industry, Local Governments, and The Public	• Increases COGCC staff assistance to operators to identify potential problems which could cause environmental impacts. • Reduces potential risk of impacts to public health, safety, welfare and the environment.
OGCC Staff	• Allows staff to find well problems earlier while the problems are easier to correct and before they become a state liability.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, welfare and the environment created by oil and gas activity which the COGCC will not be able to adequately address without the approval of this request. There is an incremental risk associated with the diminished ability of the COGCC to focus on risk mitigation because of increased drilling permitting and regulatory reporting workload and decreased vehicle availability. This chart assigns a potential cost of each risk item to effected entities and calculates total potential annual cost avoidance.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding a Central Colorado Field Inspector)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Contamination from leaking production equipment and pits [A]	Surface owners, surface waters, soils, ground water	$25,000	5	$125,000	High	25%	$31,250	Industry and COGCC
Wildlife and livestock impact from oil in pit [B]	Surface owners, and wildlife	$10,000	10	$100,000	High	25%	$25,000	Industry and COGCC
Unauthorized discharge of produced water [C]	Surface owners, surface waters, soils, ground water	$75,000	3	$225,000	High	25%	$56,250	Industry and COGCC
Additional Issues due to current workload management								
Delay in processing bond releases	Industry	$200	100	$20,000	Low	100%	$20,000	Various
Delay in Identifying orphan wells [D]	Environmental response fund	$20,000	1	$20,000	Medium	100%	$20,000	COGCC
Total Cost				**$490,000**			**$152,500**	

Footnotes:

A. Contamination from leaking production equipment and pits. Wells in Northeast and Central Eastern Colorado often have pits on the wells site to dispose of produced water. These pits need to be inspected regularly to insure they do not leak this brine water to adjacent land. Saltwater spills cost approximately $25,000 to remediate. This cost must be borne by operators or the COGCC.

B. Wildlife and livestock impact form oil in pit. Production pits in Northeast and Central Colorado are subject to oil overflow which carries crude oil from production equipment to the water pit. These pits must be inspected regularly to insure the pits are clean to

protect wildlife and livestock from this oily water. Estimated cost per occurrence is based on fines levied by the US Fish and Wildlife Service.

C. Unauthorized discharge of produced water. Oil and gas operators have purposely released produced water to the environment in order to reduce costs. Additional inspections will allow us to catch operators and avoid further environmental damage. Costs for remediation of unauthorized discharge can range from $25,000 to $200,000. This cost must be borne by operators or the COGCC.

D. Delay identifying orphaned wells. Wells that have ceased to be economic are a liability to the oil and gas producer. We can identify these wells by careful screening of production reports and by field inspections. If the COGCC can identify these wells early, we can require additional bonding from operators to cover any plugging costs. Currently the COGCC often finds these wells after the oil and gas operator has ceased to maintain the operations; the COGCC must then pay for the plugging and abandonment of these wells using bond and Fund 170 money.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences handled by the field inspection staff in Central Colorado.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 4 = 25%)
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Central Colorado Field Inspector in this request has a first year cost of $80,372, which is substantially less than the $152,500 of incremental risk that is avoided.

Priority #7: Environmental Protection Specialist II ($94,763) - A Southwest Area EPS would be stationed in the Durango area to investigate environmental complaints, oil and water spills, and provide environmental expertise to the area field inspector. This area is currently handled by the Environmental Supervisor, who needs more time to handle supervisor duties and statewide environmental issues. A steady level of oil and gas activity continues in this area of the state, and locating an EPS here would provide more immediate response to various environmental issues, including the investigation of complaints alleging impacts from oil and gas activities and environmental emergency response, that continue to be raised, along with monitoring ongoing environmental projects. In addition, it is anticipated that various hearing applications, requesting the ability to drill more wells in the area, will result in an increase in activity over the next several years.

The primary beneficial outcomes of this requested position are:

Customer	Beneficial Outcome to Customer
Oil and Gas Industry, Local Governments, and The Public	• Increases COGCC staff assistance to operators to identify potential problems which could cause environmental impacts. • Reduces potential risk of impacts to public health, safety, welfare and the environment.
OGCC Staff	• Allows staff to find well problems earlier while the problems are easier to correct and before they become a state liability.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, welfare and the environment created by oil and gas activity which the COGCC will not be able to adequately address without the approval of this request. There is an incremental risk associated with diminished ability of the COGCC to focus on leaking production pits, spills and releases, impacts to wildlife and livestock, supervision of COGCC monitoring programs, and complaint response. There is an incremental cost associated with delay in delivering environmental information to stakeholders and in approving exploration and production waste disposal facilities. This chart assigns a potential cost of each risk item to effected entities and calculates total potential annual cost avoidance.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding a SW Environmental Protection Specialist)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Delay in remediation and reclamation of orphaned sites and inability to implement long term monitoring of orphaned wells previously plugged and abandoned by COGCC to ensure success [A]	Surface owners, surface waters, soils, ground water	$100,000	1	$100,000	High	50%	$50,000	COGCC
Environmental and land owner impacts by untimely spill reclamation [B]	Surface owners, surface waters, soils, ground water	$10,000	4	$40,000	Medium	50%	$20,000	Industry
Inability to conduct long term & follow up monitoring of sites plugged and abandoned by industry to ensure success. [C]	Surface owners, ground water	$20,000	1	$20,000	Medium	50%	$10,000	Industry and COGCC
Delayed supervision of and analysis of data collected for COGCC monitoring programs, including gas seepage, ground water wells, pressure monitoring detection of impacts to surface water rights. [D]	Surface owners, surface waters, soils, ground water	$60,000	2	$120,000	Medium	50%	$60,000	COGCC
Additional Issues due to current workload management								
Delay in delivery of information to	Govt., Industry,	$50	20	$1,000	Low	100%	$1,000	Various

environmental stakeholder community	Resellers, Public							
Delay in issuing E&P waste management permits	Industry	$1,000	25	$25,000	Low	100%	$25,000	Industry
Total Cost				**$306,000**			**$166,000**	

Footnotes:

A. Reclamation costs for orphaned sites in southwestern Colorado have averaged about $5,000 for routine plugging and abandoning of one well. However, in 2005 an explosion in Bondad, which seriously injured one person, occurred at the site of an orphaned gas well that had been plugged and abandoned (P&A) by the COGCC early in 1996. Initial P&A cost approximately $200,000 and our emergency response to the explosion and ongoing mitigation will exceed $200,000. Due to workload and insufficient staff, orphaned sites P&A and reclaimed by the State cannot be inspected on a long term basis to ensure success, thus the potential liability of the State is increased.

B. Impacts to groundwater from spills are quite common, but typically the impacted area is relatively small, often less than an acre. Remediation costs for impacted ground water can range from $10,000 to $50,000. Remediation costs for soil impacts can range from $1,000 to $50,000.

C. Old conventional gas wells are known to have acted as conduits for gas migration from the Fruitland Formation to the ground surface and into shallow ground water. Over the past 10 to 15 years operators have remediated or plugged these wells, as required by the COGCC and the US BLM. Due to workload and insufficient staff these wells cannot be inspected on a long term basis to ensure success. In 2005 one such well was brought to our attention by a complaint. Fortunately the operator is still a viable entity and is being required to remediate the situation; however, if the operator were no longer working in Colorado, the remediation would have to be conducted by the COGCC and the potential liability of the State is increased. Costs for reentering, properly plugging, and reclamation of orphan sites have ranged from $10,000 to $200,000.

D. The San Juan Basin is located in the southwestern portion of Colorado. It is one of the largest gas fields in the United States. Most of the gas is produced from coal seams and is referred to as "coalbed methane" (CBM). Many people are concerned about impacts to public health safety and welfare from CBM development, in particular the apparent increase in gas seepage from the outcrops of certain coal seams, gas seepage into ground water aquifers along manmade (deeper conventional gas wells and/or improperly completed or plugged and abandoned oil and gas wells) or natural (fractures, faults, igneous intrusions) conduits, and depletion of surface water. A tremendous volume of data is collected annually in La Plata and Archuleta Counties by the COGCC, industry, the US BLM, and the Southern Ute Indian Tribe (SUIT). Hundreds of water wells are sampled by industry,

COGCC, and the US BLM to monitor changes in methane concentrations, COGCC has installed 7 monitoring wells that collect pressure data on a daily basis and industry maintains approximately 25 monitoring wells. Approximately 50 miles of the outcrop of the Fruitland Formation is closely monitored and mapped in La Plata and Archuleta Counties. Operators collect pressure data from all new gas wells, but it is not possible for all of these data to be managed and closely evaluated in a timely manner, in addition to responding to complaints and handling the routine workload with the current staffing level. Cost to mitigate impacts from gas seepage can range from purchasing a few acres of property at approximately $10,000 per acre plus costs for structures on the property and other improvements.

E. Well information is vital to many users, including the oil and gas industry, government agencies, environmental community, and property owners (both surface and mineral). This information is vital to additional drilling and exploration in the state. At current permit levels the permit technicians must prioritize workload, this results in a delay of processing reports, such as completion, plugging and miscellaneous information. The delay can easily be a year or more depending on permitting activity and employee resources. The approximate hourly rate for a contractor to research files in the COGCC public room is $50, which would be required if reports have not been processed and are unavailable on the Internet.

F. Permits are issued for produced water disposal pits, centralized waste management facilities, and remediation of exploration and production wastes. Delays in issuing permits could result in operators having to pay for waste transportation and disposal at commercial facilities. These costs could range from $1,000 up to in excess of $100,000, depending upon the volume and type of waste disposed.

Annual Frequency – Annual average number of total occurrences handled by environmental staff in Southwest Colorado.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 2 = 50%)
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Southwest Colorado Environmental Protection Specialist in this request has a first year cost of $94,763, which is substantially less than the $166,000 of incremental risk that is avoided.

Priority #8: General Professional VI ($109,422) - An Enforcement Officer position is needed to coordinate and prepare enforcement matters to ensure operator compliance with the Commission's rules, regulations, orders and the Oil and Gas Conservation Act. This position would review all Notices of Alleged Violation prepared by the engineering and environmental sections of the COGCC prior to issuance, and prepare and issue all other Notices of Alleged Violation for non-compliance issues not related to field matters. In addition, the Enforcement Officer would track the Notices of Alleged Violation to ensure compliance is achieved by the corrective action deadline.

This position would be responsible for drafting Administrative Orders By Consent and negotiating with operators to reach a final order. The Enforcement Officer would be responsible for drafting and negotiating Orders Finding Violation, in addition to prosecuting these matters at hearing before the Commission and preparing the final written order as entered by the Commission. The prosecution of Orders Finding Violation before the Commission involves identification of witnesses and exhibits, preparation of the witnesses and oversight of the exhibits. This position would prepare all Notices of Hearing for Administrative Orders By Consent and Orders Finding Violation. The Enforcement Officer would track collection of penalties assessed by the Commission in conjunction with Administrative Orders By Consent and Orders Finding Violation, and refer any unpaid penalties to State Collections to attempt collection or to authorize initiation of a lawsuit for collection purposes. In addition this position would seek determination of responsible parties and pursue reimbursement of funds spent from the Fund 170 as appropriate.

The tasks proposed for the Enforcement Officer position are currently being performed by the engineering and environmental section staff, who have coordinated all of the aspects of enforcement throughout the Division in addition to performing numerous other functions. It is estimated that current staff (at least three positions per enforcement matter) spend approximately 15% of their time on enforcement matters that if handled by another position would allow those staff to concentrate on the tasks for which their education and experience is most appropriate. The COGCC needs one position devoted to enforcement matters to ensure consistency and timeliness with all compliance issues and to ensure that the engineering and environmental sections are used in the most efficient manner. The Enforcement Officer should have a legal background, with experience in presenting witnesses and testimony at hearing proceedings, along with negotiation skills to ensure more consistent settlements.

The addition of an Enforcement Officer position would improve the COGCC's ability to enforce its rules, regulations, orders, and the Oil and Gas Conservation Act in an efficient, consistent and timely manner.

Assessment of Annual Incremental Risk Attributed to No Action Alternative (not funding an Enforcement Officer Position)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Less timely follow-up on enforcement [A]	Surface owners, surface waters, soils, ground water	$60	235	$14,100	Low	100%	$14,100	COGCC
Reduced level of compliance with bonding requirements [B]	Fund 170	$25,000	10	$250,000	Medium	50%	$125,000	COGCC
Reduced engineer availability [C]	Surface owners, surface waters, soils, ground water	$600	32	$19,200	High	100%	$19,200	COGCC
Reduced compliance with reporting requirements [D]	COGCC, Industry, Resellers, & Public	$15	1200	$18,000	Low	100%	$18,000	COGCC
Total Cost				**$301,300**			**$176,300**	

Footnotes:

A. Once a Notice of Alleged Violation ("NOAV") has been issued, it is imperative that any additional enforcement needed occur within a short timeframe from the initial NOAV issuance so that compliance can be more closely monitored and where appropriate, fines can be levied.

B. Once an NOAV has been issued to an operator who has excess inactive wells without the required financial assurance, it is necessary to be able to closely monitor an operator's response to comply with posting adequate financial assurance to meet its financial obligation.

C. Absent having an Enforcement Officer to handle all matters related to coordinating, monitoring and preparing enforcement matters, engineering staff would be responsible for conducting these matters. The engineering staff has numerous other functions requiring specific engineering expertise that may not be addressed if it is the only staff that can to respond to enforcement matters.

D. Currently there is insufficient staff to properly monitor and enforce paperwork violations by operators. It is extremely important for a priority to be placed on paperwork submittal, as this is the first step to ensure compliance by operators with COGCC rules.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences handled by environmental and engineering staff.
Incremental Risk Factor - Reduced availability of staff to be able to deal with issues due to current workload management (equivalent to 1 FTE out of 2 = 50%).
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The COGCC recommends funding an Enforcement Officer, because the costs outweigh the risk, first year cost of $109,422 verses annual risk of $176,300.

Priority #9: Professional Engineer II ($117,457) - Additional staff levels will require an additional Supervising Engineer. Northwest Colorado currently has three field inspectors with one more field inspector requested. This group will need a supervisor to provide expertise and coordination for this specific area. A professional engineer with extensive petroleum experience will be needed for this position, which will be stationed in Denver and provide supervision, support, and technical expertise for the Northwestern field inspectors. If this supervisor increased each field inspector's efficiency by 15%, the benefit would be 15% x $190,000 x 4 field inspectors, or $114,000. This supervisor would also review drilling reports, completion reports, and plugging reports presently reviewed by one of the current three field inspectors. This reduction in paperwork approval would translate to additional time the current field inspectors spend in the field. Cost savings would be equal to one half of the salary for a field inspector or $30,000. Total benefit of this position would be $114,000 + $30,000, or $144,000, which is greater than the first year cost of $117,457.

Priority #10: Application Programmer Contract Position ($92,000) – This contractor would be dedicated to the following application development projects, all of which would significantly increase the overall efficiency of the staff:

Project Title	Description	Estimated Hours to Complete Project	Estimated One-Time Cost @ $46/hour	Estimated Annual Savings in Time and Value
Underground Injection Control (UIC) annual report to the Department of Energy	The project would automate the UIC well reporting process. Current manual process is very complex and annually consumes nearly 150 hours of senior engineer and IT staff time. Transitioning this job function to junior staff, due to retirement or other reason, would be extremely time consuming and unnecessarily disruptive.	850	$39,100	150 hrs @ average total compensation of $51/hr = $7,650
Conversion of external databases to COGIS	The environmental staff currently maintains four Microsoft Access databases outside of the Colorado Oil and Gas Information System (COGIS). This data needs to be converted to the master file format and moved into COGIS, so that it can be easily and efficiently correlated with other agency data. Applications for entry, lookup, and maintenance of the data will also be developed to improve accessibility, integrity, and security of important environmental information. The completed project is projected to save 5 members of the environmental staff approximately 2 hours per month (120 hours annually) and the 8 field inspectors 1 hour per month (96 hours annually) for a total of 216 hours that could be used more efficiently. The data would also be available, through the COGCC website, to the industry and other stakeholders.	750	$34,500	216 hrs @ average total compensation of $34/hr = $7,344
Integration of Notice of Alleged Violations (NOAV's) and Complaints	COGIS contains two separate text based functions (one for NOAV's and one for complaints) that cannot be queried against each other. To determine if an NOAV should be issued, the staff needs to review past complaints and NOAV's against the operator. The current process is time consuming and requires a manual search of records and multiple queries to the database. Integration of the NOAV and complaint functions would also provide a centralized mechanism for tracking the progress of a complaint or NOAV to its resolution. The completed project is expected to improve the efficiency of 22 staff members by approximately 1%, or 21 hrs/year/staff member, for a total of 458 staff hours annually. The data would also be available, through the COGCC website, to the industry and other stakeholders.	400*	$18,400	458 hrs @ average total compensation of $37/hr = $16,946
Totals		2,000	$92,000	$31,940

* The number of hours to complete this project is estimated at 1,200. The remaining 800 hours would be absorbed by the COGCC.

The application development projects described above would allow the COGCC to continue streamlining its business processes to better manage a workload that has more than doubled over the last couple of years. The one-time cost of $92,000, plus the additional $36,800 that would be absorbed by the agency to complete the final project, would save about 824 staff hours valued at $31,940 per year. The time savings would be spent on higher value activities. More difficult to quantify, however, are the significant benefits these projects provide the industry and other stakeholders by making more COGCC data accessible over the Internet. As a result of the improved efficiency of its customers, the agency would experience fewer telephone requests for data and fewer of the more disruptive Freedom of Information Act requests.

Conclusion: Alternative 1, which is providing funding for nine additional FTE and one contractor, provides an adequate, and substantially higher, level of customer service and a lower risk of impacts to public health, safety and welfare and the environment. Alternative 2 "no action" subjects the State to an increasing level of risk.

Description of Key Issues for Decision Making

Colorado is experiencing all time historic levels of oil and gas drilling activity, which is being driven by sustained high oil and natural gas commodity prices. The Colorado Oil and Gas Conservation Commission received a record 2,650 applications for permits to drill (APD's) during FY 2004, 3845 applications during FY 2005, and is on track to receive an estimated 5,500 applications during FY 2006. The number of active wells has increased from less than 22,000 in 1999 to an estimated 33,000 by the end of calendar year 2006. The unprecedented growth in industry activity during the last few years has resulted in a workload that is no longer manageable at the current staffing level. Nearly every segment of the agency has been significantly impacted by the unrelenting growth in activity. Colorado is experiencing an elevated level of risk of impacts to public health, safety and welfare from the oil and gas activity that must be addressed. It is critical that the Division have a staffing level that allows it to meet its statutory and regulatory requirements.

Exhibit A

Adjusting to a Changing Colorado
Summary of Cost / Benefits of Requested Positions

Agency's Priority	State Classification/ Working Title	1st Year Cost of Position, incl. one-time costs	Estimated Annual Benefit	Footnotes
1	Legal Assistant I Hearings Assistant	$48,347	$90,356	A
2	Engineering/Physical Science Tech II Engineering/Environmental Technician	$61,739	$345,000	
3	Engineering/Physical Science Tech II Well Permit Technician	$68,435	$400,000	
4	Environ Protection Specialist II NW Area EPS (home office)	$94,763	$256,000	
5	Engineer-in-Training II NW Field Inspector (home office)	$81,392	$190,000	
6	Engineer-in-Training II Central Field Inspector (home office)	$80,372	$152,500	
7	Environ Protection Specialist II SW Area EPS (home office)	$94,763	$166,000	
8	General Professional VI Enforcement Officer	$109,422	$176,000	
9	Professional Engineer II Supervising Engineer	$117,457	$144,000	
10	Application Programmer Contract Position	$92,000	$319,400	B
	Total Costs/Benefits	**$848,689**	**$2,239,256**	

Footnotes

A The indirect enivironmental impact of engineers and permit technicians being redirected to cover Hearings Manager duties is not included in this figure, but could be significant. Examples of such impacts include contamination of the environment from improperly constructed wells and improperly plugged and abandoned wells, due to a delay in review of paperwork. These impacts can cost the COGCC and Industry hundreds of thousands of dollars to remediate.

B The contract position is a one-time cost, while the benefit is over a 10 year period (10 x $31,940), as it would not be appropriate to compare a one-time contracting expense to just one year of benefits.

Exhibit B

Adjusting to a Changing Colorado - Cost Estimates

Priority	Position (and Fund Source)	# of FTE	(a) Monthly Salary	Annual Salary	PERA 10.15%	Medicaid 1.45%	Vehicle Lease @ $371/mo for 4 months FY 06-07	(b) Annual Vehicle Lease @ $371/mo	(c) Annual Mileage Costs	Annual Operating Costs	Cell Phone @ $50/mo	Home Office Phone/Fax/ Internet Service $180/mo	*One-time* Build out of Lease Space	(d) *One-time* PC: $690 Laptops: $1500/$1700	(e) *One-time* Monitors for Desk-top PCs	*One-time* Software Package	*One-time* Furniture	*One-time* Fax/Copier/ Scanner for home office	(f) IT Main-tenance Annual Cost	Total Cost FY 06/07	Total Cost FY 07/08	(g) *Increase to Environ. Assistance Line D.I. #29*
1	Legal Assistant I Hearings Assistant (Severance Tax)	1.0	3,300	39,600	4,019	574				500				690	317	294	2,021		331	48,347	45,025	
2	Engineering/Physical Science Tech II Engineering/Environmental Tech. (Severance Tax)	1.0	4,300	51,600	5,237	748				500				690	317	294	2,021		331	61,739	58,417	
3	Engineering/Physical Science Tech II Well Permit Technician (Severance Tax)	1.0	4,800	57,600	5,846	835				500				690	317	294	2,021		331	68,435	65,113	
4	Environ Protection Specialist II NW Area EPS (home office) (Fund 170)	1.0	6,100	73,200	7,430	1,061	1,484	4,452	2,720	500	600	2,160		1,700		294	2,021	350	1,243	94,763	93,366	*20,850*
5	Engineer-in-Training II NW Field Inspector (home office) (Fund 170)	1.0	5,000	60,000	6,090	870	1,484	4,452	4,080	500	600	2,160		1,700		294	2,021	350	1,243	81,392	79,995	
6	Engineer-in-Training II Central Field Inspector (home office) (Fund 170)	1.0	5,000	60,000	6,090	870	1,484	4,452	3,060	500	600	2,160		1,700		294	2,021	350	1,243	80,372	78,975	
7	Environ Protection Specialist II SW Area EPS (home office) (Severance Tax)	1.0	6,100	73,200	7,430	1,061	1,484	4,452	2,720	500	600	2,160		1,700		294	2,021	350	1,243	94,763	93,366	*20,850*
8	General Professional VI Enforcement Officer (Severance Tax)	1.0	7,500	90,000	9,135	1,305				500	600		3,000	1,700		294	2,021		867	109,422	102,407	
9	Professional Engineer II Supervising Engineer (Severance Tax)	1.0	8,100	97,200	9,866	1,409				500	600		3,000	1,700		294	2,021		867	117,457	110,442	
10	Application Programmer Contract Position (Fund 170)	0.0		92,000																92,000		
	Grand Totals	**9.0**	**50,200**	**694,400**	**61,144**	**8,735**	**5,936**	**17,808**	**12,580**	**4,500**	**3,600**	**8,640**	**6,000**	**12,270**	**951**	**2,646**	**18,189**	**1,400**	**7,699**	**$848,689**	**$727,105**	***$41,700***

Funding Source		
Severance Tax	498,678	470,317
Fund 170	344,075	238,980
Fund 170 - potted item (vehicle lease)	5,936	17,808
	$848,689	$727,105

Assumptions

(a) The COGCC cannot employ at range minimum due to strong demand in the oil and gas industry.

(b) 4-wheel drive vehicles (Jeep Liberties) are needed to access well locations

(c) Employee will be driving for a full year, even though the agency is renting a used vehicle from State Fleet for the first 8 months.

(d) Desktop PC and Laptop prices of $690 and $1500, respectively, are in accordance with OSPB common policy. Higher end laptops (quoted in June 2005 @ $1700) are required for employees who are frequently in the field. These "field" laptops must be able to hold all data in the COGIS database and run the programs that access the data.

(e) Prices based on May 2005 quotes

(f) The asset maintenance Decision Item is based on current staffing level of 38 FTE. The following are the Annual Life Cycle Costs of each type of new FTE

	Annual Life Cycle Cost
FTE located in Denver office w/no field presence (just needs PC & software)	$331
FTE in Denver or home office with field presence (laptop, digital camera, & printer/fax required)	$867
Extra for FTE with vehicle (GPS units are needed for each vehicle)	$377

(g) This is the incremental amount (from Fund 170) that needs to be added to the "Increase Appropriation for the Environmental Assistance Projects Line" decision item for each new Environmental Protection Specialist. It was calculated as follows:

Each new EPS would generate:	20 water samples @ $450/sample	9,000
	10 soil samples @ $150/sample	1,500
	20 gas samples @ $475/sample	9,500
	5 nights lodging @ $100/night	500
	10 days of meals @ $35/day	350
	Total	$20,850

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 3 of 21
Division: Water Resources
Program: Water Administration
Request Title: Ground Water Administration Service Personnel

Dept. Approval: William H. Lavine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: 37-80;37-82;37-83;37-84;37-90;37-92

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 15 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base In Out Year FY 2007-08
Total of All Line Items	Total	18,138,727	19,822,629			15,746,103	639,184	16,385,287			577,269
	FTE	227.9	249.6			249.6	11.5	261.1			11.5
	GF	14,649,584	15,620,776			14,737,002	639,184	15,376,186			577,269
	CF	3,291,810	4,095,432			902,712	0.0	902,712			0
	CFE	196,429	106,421			106,389	0.0	106,389			0
	FF	904	0			0	0	0			0
Line Item Name Personal Services	Total	16,455,334	18,115,563			14,027,866	482,809	14,510,675			482,809
	FTE	227.9	249.6			249.6	11.5	261.1			11.5
	GF	13,562,564	14,428,465			13,533,385	482,809	14,016,194			482,809
	CF	2,891,866	3,671,206			478,621	0	478,621			0
	CFE	0	15,892			15,860	0	15,860			0
	FF	904	0			0	0	0			0
Line Item Name Operating Expense	Total	1,299,211	1,311,469			1,302,518	126,450	1,428,968			63,710
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	721,169	816,961			808,010	126,450	934,460			63,710
	CF	399,944	403,979			403,979	0	403,979			0
	CFE	178,098	90,529			90,529	0	90,529			0
	FF	0	0			0	0	0			0
Line Item Name Leased Space	Total	384,182	395,597			415,719	29,925	445,644			30,750
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	365,851	375,350			395,607	29,925	425,532			30,750
	CF	0	20,247			20,112	0	20,112			0
	CFE	18,331	0			0	0	0			0
	FF	0	0			0	0	0			0

Letter Notation:
Cash Fund name/Number, Federal Fund Name:
IT Request X Yes No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☒ Yes ☐ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes x No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Identifying Information

Department: Natural Resources
Request Title: Ground Water Administration Service Personnel
Priority number: 3 of 21
Division: Water Resources

Summary of Request

This request is for $639,184 in General Funds and 11.5 FTE in FY 2006-07 and $577,269 in General Funds and 11.5 FTE in FY 2007-08 to provide additional ground water administration in Water Divisions 1 (South Platte River Basin) and 3 (Rio Grande Basin) in response to changing administrative practices and subsequent substantial growth in workload.

The collective personnel request for each Water Division is described and justified separately as an individual efficiency & effectiveness analysis.

Problem or Opportunity Definition

Increased ground water administration workload has been identified in two specific areas of the state. This workload has developed as a result of tightening water supplies, increasing populations, recent Colorado Supreme Court rulings, heightened compact compliance difficulties, and newly promulgated or proposed rules and regulations.

Available Alternatives

1. **Recommended:** Add staff to meet the increased demands for ground water administration. Many water administration services have been or will soon have to be reduced to sub-standard levels in order to meet the most critical demands. This will adversely impact service to the public by increasing response times and lowering the quality of service provided in other areas.
2. **Status Quo:** Continue current service level with existing staff. Reallocate staff to meet the most critical demands, cutting less-critical – yet still statutorily required – public services.

Department Objectives

1.1, 1.2, 1.7, 2.1, 2.3, 2.6, 2.7

Analytical Technique Used

An individual benefit-cost analysis has been performed for each Water Division's request. The benefits are most easily quantified in either added value of entitled water delivered to senior water rights holders or in expense of potential litigation avoided.

Assessment of Alternatives
An individual assessment has been provided for each Water Division request.

Cost Calculations and Assumptions
Detailed cost components have been provided for each Water Division request, including personnel services costs and FTE, operating, mileage expectations of the specific position, first-year capital costs, and in two cases, a state leased vehicle. (See Cost and Benefit tables within.)

Glossary of Terms:

Acre-Foot:

A unit of measurement for water. The amount of water needed to cover one acre one foot deep.

Alluvial Well:

Those wells located near a stream, consisting of alluvium (clay, silt, or gravel carried by rushing streams and deposited where the stream slows down), whose depletion has a direct impact on streamflow.

Augmentation:

A plan for augmentation allows an out-of-priority water right to continue to divert by providing replacement water to senior water rights affected by the junior diversion. Pooling of water resources, exchanges of water, substitute supplies of water, and/or development of new supplies of water may be means of augmentation. The plan is confirmed in a Water Court case, which may result in changes to established water rights, and/or adjudication of new water rights. In many cases, an accounting method is decreed which is then used to compute and record the proper application of the decreed plan.

Conjunctive:

In terms of administration or water use, this involves ground and surface water and often requires regulation with the recognition that ground water and surface water are hydrologically connected.

Diversion:

The physical redirection of water flowing in a natural stream, into a ditch, canal, pipeline, or other conveyance structure. A diversion is the typical exercise of a water right by a water right owner.

Interstate Compact:

Colorado's unused water ultimately ends up in a downstream state. In all the river basins of our State, water flows downstream to a series of other states and is subject to one or more interstate compacts. An interstate compact specifies how much water Colorado may consume before delivering the water at the stateline for downstream use by one or more states. The specification describing this apportionment varies from compact to compact. The result is that every interstate compact is in effect a downstream water right that must be satisfied, just as downstream water rights must be satisfied in Colorado, provided that the right is currently "in priority".

Large Capacity Well:

A well that produces at least 50 gallons per minute and is subject to administration by the State Engineer.

On call:

This term describes a stream that cannot supply sufficient water to satisfy all water rights demanding water. A "call" consists of a call date – the priority date of a water right which is not fully satisfied, and a location on the stream. Any stream system, from the uppermost tributary to the stateline downstream, may have multiple calls in place simultaneously.

Recharge Project:

The process of restoring ground water during the non-irrigation season. Often water may be available to junior water rights holders during the non-irrigation season when senior water rights are not diverting. This "excess" water can be diverted from the stream to a small pond that will allow the water to deeply percolate back to the aquifer.

Streamflow:

The amount of water flowing in a stream at any given time. The amount is difficult to judge without a measuring device, normally a calibrated gage placed at a stream location from which readings may be taken and flow computed. Currently, many streamflow data readings are transmitted via satellite to a central site in Denver, flows computed, and streamflow amounts are subsequently made available via a variety of media within minutes or hours to water users and water administrators.

Water Administration:

This activity is performed primarily by field personnel called "water commissioners" (classified as engineering technicians and engineering assistants). These personnel access real-time streamflow data for their hydrologic area and determine which water rights are in priority and which are out of priority, based upon a list of quantified water rights ordered by seniority. This ensures that the proper senior water rights who are in priority and wanting water receive their water, and those who are out of priority do not. The process is performed by water commissioners by visiting headgates, water users, and/or by telephone. It may be either passive – the water user is informed of their proper headgate change and expected to make the change him/herself, or active - by actual physical adjustment of the headgate, sometimes including the application of a chain and lock, and a headgate "order", directing that no change is to be made by others. Records of diversions and changes are kept, and settings may be adjusted more than once daily. The variation of stream conditions from upstream to downstream, and the dispersion of water rights over the hydrologic area – upstream and downstream, on the main stream and tributaries – plus the varying nature of hydrologic conditions within the area, such as the amount, timing, and location of irrigation return flows, for example, make this process complicated. A good water commissioner requires a high degree of knowledge, computational ability and judgment, and benefits greatly from local experience and good interpersonal skills.

Water right:

In Colorado, a water right is a property right, established by physically applying water to beneficial use. A water right is specified by a location, an amount, a priority date (normally the date of first use of the water), and the types of use allowed for that water right. A water right is perfected by having it adjudicated in a court process (now performed by district courts designated as Water Courts). A water right may be changed in use and location, while maintaining its priority date. It may also be transferred from one owner to another, separately from the water right change process.

Department: **Natural Resources**
Request Title: **Division 1 Personnel**
Division: **Water Resources**

Summary of Requested Alternative: The Division seeks $244,462 and 4.5 FTE in FY 2006-07 and $222,757 and 4.5 FTE in FY 2007-08 to adequately and equitably administer large capacity wells within the South Platte River Basin (Water Division 1).

The recent multi-year drought resulted in intense scrutiny of both water decrees and all aspects of the Division's water administration by private water interests. Most, if not all, of the senior water rights community in Division 1 have voiced concern over the Division's inability to equitably administer the operation of large capacity wells. Many large capacity wells operate with relatively recent water right decrees and thus are junior to the senior water rights in the basin. To operate effectively, well owners have had to find replacement water through augmentation plans that enable the senior water right holders to continue receiving their water in priority. Population growth and tightening water supplies, combined with Colorado Supreme Court rulings (discussed later) in Empire Lodge v. Moyer and Simpson v. Bijou, have radically affected the 30-year administrative practices of the State Engineer regarding large capacity wells in the South Platte River Basin. In recent years, administration of nearly 9,000 permitted large capacity wells in the basin has become exponentially more critical, more complex, and more demanding of existing resources.

In the 30-year period prior to Simpson v. Bijou in 2003, most of these wells operated within one of six large augmentation plans. The Division therefore administered six plans, and operators of those plans (such as GASP – the Groundwater Appropriators of the South Platte River Basin, Inc.) handled individual well administration within the plan. Since Simpson v. Bijou, these six large plans have either dissolved or restructured and over 40 new, more complex irrigation well augmentation plans (such as the Lower Logan Water Users Association) have been organized to include about 7,000 of the nearly 9,000 large capacity irrigation wells. The remaining wells have mostly been unable to demonstrate the ability to provide replacement water and thus can no longer operate. The Division therefore must now review and administer these 40 new augmentation plans while ensuring that 1,500 to 2,000 unaugmented wells do not operate and thereby divert water that is legally entitled to holders of other water rights. Additionally, most, if not all, of the 40 plans rely heavily on recharge operations and wintertime diversions and now require additional field resources to audit compliance during the non-irrigation season.

The Division's efforts to administer large capacity wells since 2002 have been inadequate. In an average year, the 7,000 legally-operating wells impact streamflow to the South Platte River by approximately 280,000 acre-feet.[1] As detailed in Element #4, the complexity of augmentation plans in Division 1 combined with a lack of personnel could likely result in a 30% loss of water by senior water rights holders through improper administration, misuse, and failed augmentation. Element #4 will calculate this water value at $9,576,000 annually. The Division can ill afford inadequate administration of such a valuable asset; such a failure of statutory duty would almost certainly result in costly litigation.

The Division of Water Resources is therefore requesting an additional 4.5 FTE and supporting resources and office space for Water Division 1.

[1] This estimate of 40 acre-feet per well is derived from Central Colorado Water Conservancy District's augmentation plan, Case No. 2002-CW335.

Element #2 – Problem or Opportunity Definition:

Background

With the Supreme Court ruling in Simpson v. Bijou Irrigation Co., et al, and legislative changes enacted in 2002 and 2003, the administration of large capacity wells in the South Platte River Basin has become significantly more complex and more critical.

Simpson v. Bijou represented an attempt to amend the South Platte Ground Water rules after 2002 legislative changes. The Division intended to keep most of the work related to well augmentation within the plan organizations. The decision against the State Engineer in this case effectively shifted this workload back to the Division and increased the number of plans administered by Division 1 from six to approximately 40. In so doing, the Division lost much of its flexibility in administering these plans. Tightening water supplies due to competition for water stimulated by population growth in recent years has helped trigger litigation such as Simpson v. Bijou and has increased the amount of required administration several fold.

By way of example, during the 30-year period prior to Simpson v. Bijou, the irrigation wells operating at that time did so under the oversight of six main plans of augmentation: the decreed Bijou Canal, Fort Morgan Canal, the Poudre Plan and three annually-renewed substitute supply plans operated by Central Colorado Water Conservancy District, the Groundwater Appropriators of the South Platte River Basin, Inc. (GASP), and the Lower South Platte Water Conservancy District. In contrast, since the Supreme Court ruling in 2003, approximately 40 new crop irrigation plans have been organized.

Not only did Simpson v. Bijou increase the number of plans requiring administration, but Section 37-92-308, C.R.S. (2004) heightened the operating requirements of the plans and mandated operations verification by state personnel (where previously plan operator verification sufficed). Further, the public notification process on non-compliant wells, paired with the increased public scrutiny and inquiries resulting from all of these changes, has greatly escalated the hours dedicated to public interaction.

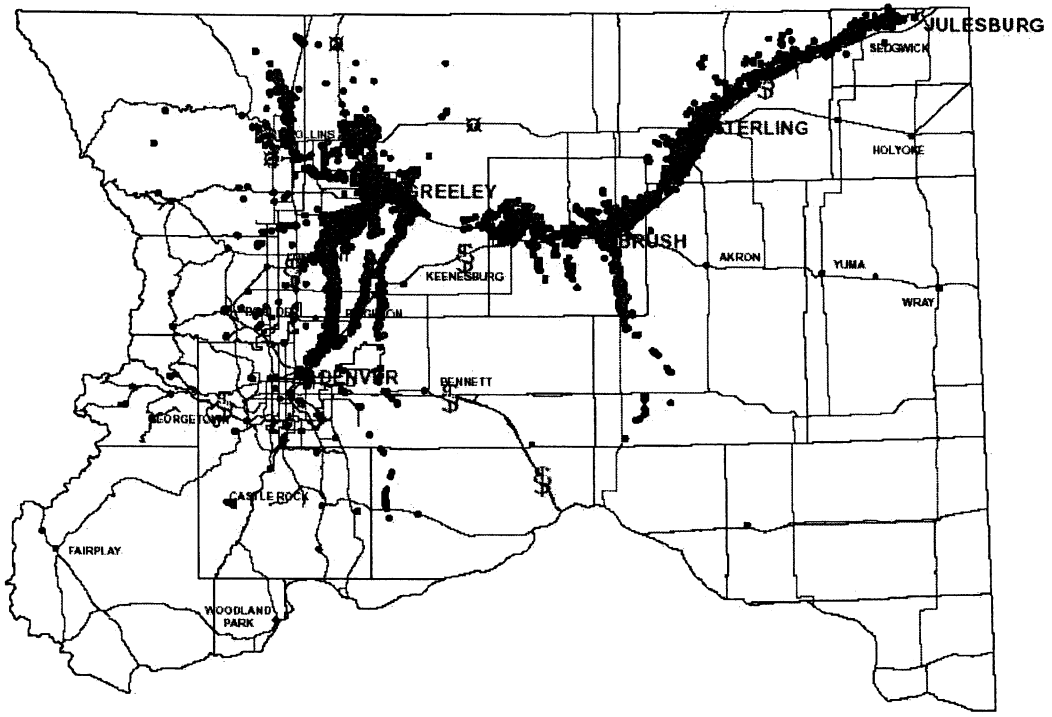
In addition to the order of magnitude increase in the number of plans that require coordination and the new demands on state personnel, most, if not all, of the plans now rely heavily on recharge operations and thus require year-long administration. About 200 new recharge sites have been installed in just the last three years along the main stem of the river with that number expected to double over the next ten years. Recharge projects (1) demand much more field intensive administration to monitor and confirm operations, (2) require ditches to run during the non-irrigation season when field personnel have historically been able to catch up on the non-field-oriented aspects of their responsibilities (e.g. diversion record quality assurance, new water court decree input and review, ditch company and agricultural producer meeting attendance, etc.), and (3) increase the time and attention required to monitor and maintain field instrumentation.

For reference, approximately two thirds of the wells covered by augmentation plans are submitted by groups of well owners, with about one third of the wells covered by plans submitted by water conservancy districts. The history of substitute water supply plans is included at the end of this analysis.

Efforts to Date

There have been significant increases in the time and attention required to comply with the new legislation. While some of the nearly 9,000 wells (plotted in Figure 1) will simply not be able to find economical means to comply, it is anticipated that approximately 7,000 wells will continue to operate. Over the last two years, through some simple determination, a modicum of innovation and some modest realignments in personnel, two existing positions have been redefined to try to accommodate the substantial new work load associated with the administration and coordination of 40 new field-intensive plans.

Figure 1 – Large Capacity Well Distribution



In spite of the effort to date, the result has inequitably focused on wells nearer the river and has remained the subject of public disapproval. Of the approximate 2,000 Water Court decreed wells that have no associated plan for augmentation, less than 20% have been field-inspected to make certain they have ceased operation.

Personnel
The efforts of the past two years have helped develop an understanding of workload and resources required. In all, 4.5 new FTE are required to administer large capacity wells and the associated plans for augmentation: a water commissioner level enforcement coordinator, two-and-a-half deputy well commissioners, a half-time hydrographer, and a half-time administrative assistant.

While it is expected that ultimately about 7,000 will be able to legally operate, another approximately 2,000 wells currently have decreed water rights, but no current ability to legally operate. Because the statutory abandonment of water rights requires at least 10 consecutive years of non-use, the division anticipates checking approximately 9,000 wells for at least the next 10 years. For the Deputy Well Commissioner positions, allotting one hour per well per year for travel, data gathering, data entry, data documentation for court work, and public contact would require 9,000 hours per year. But annually checking each of the 2,000 wells legally inoperable and only 75% of the 7,000 legally operable wells would reduce the time requirement to 7,250 hours or 3.38 FTE (allowing 2,080 regular-time hours and 60 overtime hours per year). The Division has re-assigned one EPSA III to well work, so adding 2.5 FTE will provide 3.5 FTE for well-oriented field work. The extra 0.12 FTE will assist the 0.5 hydrographer position.

For the 0.5 hydrographer, the Division allocates 1,100 hours per year (1,040 regular time and 60 overtime), as it already has a 0.5 hydrographer position allocated from streamflow measurement in the lower river. The time spent by this half FTE will include travel, recharge site inspection, documenting necessary measurement device maintenance and repairs, recharge site flow measurement, recharge site flow data entry, and public contact. Initial recharge site visits for new sites or previously uninspected existing sites are expected to take four hours and site re-visits two hours. There are approximately 200 existing recharge sites, many of which have not been inspected. Assuming that 25 new sites will be added in the next year, inspecting 225 sites at four hours each will require a total of 900 hours. Re-visits on half raises the total by 200 to 1,100 hours.

Added IT time requirements, including database development and maintenance, training, and desktop support will be handled by existing and new staff.

These positions are listed in priority order:

Engineering Physical Scientist Technician II (EPST II, 1.0 FTE): The Well Enforcement Coordinator will oversee the field compliance efforts working along side and in support of the two main stem water commissioners involved in field-oriented compliance activities. This will be a completely new position and will be stationed in Greeley. This position will be responsible for coordinating field-oriented tasks such as (1) on-site well inspections, (2) remote data gathering (e.g. power usage records from electric utilities), (3) first level water use/replacement water accounting review, (4) peak-season task-assistance on duties listed below for the new EPSA III positions as necessary to meet court-imposed deadlines, and (5) coordinate regional public interaction. This position will also directly supervise an existing Greeley office EPSA III position recently re-assigned to exclusively regulate wells.

If this position is not filled, well enforcement efforts will continue to be organized on an ad hoc, semi-organized basis rather than in a coordinated, organized and efficient manner. In addition to neglecting the field personnel obligations discussed on the previous page, this would further worsen inequitable and inadequate enforcement by the Division.

Engineering Physical Scientist Assistant III (EPSA III, 1.0 FTE): Both requested new Deputy Well Commissioners are needed to address the substantial increase in field related activities. Both will report to the Well Enforcement Coordinator but will also receive day-to-day guidance from the main stem commissioners as needed. This first position will be located in the proposed Sterling office (the other Deputy Well Commissioner would be located in Greeley) and will be primarily responsible for field-oriented tasks including (1) on-site well compliance/data gathering inspections, (2) posting orders prohibiting pumping on non-compliant wells, (3) water user complaint investigations, (4) water recharge site compliance/data gathering inspections and (5) preparation of all necessary reports documenting compliance/non-compliance with Water Court-issued decrees or State Engineer-issued substitute water supply plans. This position will also be responsible for answering questions from the general public and individual water users related to water wells, water use, augmentation and substitute water supply plans, and other water related questions. This position is expected to generally cover the downstream area along the main stem of the South Platte River from about Brush, Colorado to the Colorado–Nebraska state line.

If this position is not filled, only very limited well enforcement field work will be performed in this lower end of the river on a specific complaint basis by existing personnel as time permits. This will result in delayed response times, neglect of the aforementioned field obligations, and inequitable and inadequate enforcement by the Division.

Engineering Physical Scientist III (EPSA III, .5 FTE) and **Engineering Physical Scientist Technician II (EPST II, .5 FTE):** An existing Hydrographer/Deputy Water Commissioner (EPST I) position will be split and combined with the new half-time Deputy Well Commissioner and half-time Hydrographer to make a full-time combination Deputy Well Commissioner/Deputy Water Commissioner (EPSA III) and a full-time Hydrographer (EPST II). Both positions will be assigned to the proposed Sterling office. The Deputy Well Commissioner/Deputy Water Commissioner will perform the tasks listed for the new EPSA III positions (see above) as well as similar tasks related to surface water diversion and use in the same geographic area as the new EPSA III Sterling office position. If the EPSA III position is not filled, only very limited well enforcement field work will be performed in this lower end of the river on a specific complaint basis by existing personnel as time permits. This will result in delayed response times, neglect of the aforementioned field obligations, and inequitable and inadequate enforcement by the Division.

The additional half-time Hydrographer is required to support the significant increase in recharge operations resulting from the newly created augmentation plans. Additionally, locating this position in Sterling will reduce the operating costs associated with attempting to maintain the critical lower end river gauges from Greeley. The Julesburg South Platte River flow measurement station is the key structure used to determine compliance with the South Platte River Compact between Colorado and Nebraska. Virtually all of the new augmentation plans in the lower end of the river rely on recharge sites as their primary source of augmentation water. (A recharge site is a shallow area excavated in an area of porous soil, such as sand, that is used to artificially place surface water in the alluvial aquifer). Recharge sites use a combination of water available in this area (generally during the non-irrigation season and high river flow events after large storms during the irrigation season) and the slow movement of water underground as a means to mitigate the impacts of pumping their wells on senior surface rights in subsequent irrigation seasons. The key to recharge site operation is accurate measurement of the water placed into the site. It is critical that these devices be installed and maintained properly (kept level, kept unrestricted at water entrance and exit, etc.). Hydrographers are specifically trained to accurately measure surface water flow in streams and into recharge sites. With the large increase in recharge sites previously discussed, it will be necessary to have a full time hydrographer assigned and based in the lower river to effectively and economically monitor both the recharge sites and the Julesburg South Platte

River flow measurement station. If this position is not filled, excess water may be placed into recharge sites, resulting in injury to senior water right holders and in inefficient maintenance of the Julesburg South Platte River flow measurement station.

Engineering Physical Scientist Assistant III (EPSA III, 1.0 FTE): The second of two requested new Deputy Well Commissioners will be assigned to the Greeley office. This position will perform the same tasks as the new Sterling office Deputy Well Commissioner (see above EPSA III), but this position will generally cover the area near the mainstem of the South Platte River from the north side of the Denver metro area to about Brush.

If this position is not filled, limited well enforcement field work will be performed in the Denver to Brush area by the requested EPST II and existing staff on a time available basis with priority given to specific complaints. This will result delayed response times, neglect of the aforementioned field obligations, and inequitable and inadequate enforcement by the Division.

Administrative Assistant II (ADMIN ASST II, .5 FTE): There will be a significant compliance document workload associated with the administration efforts discussed above. A half-time administrative assistant will be required to manage the anticipated work. This position will (1) catalog, distribute and file documents received related to well compliance/enforcement, (2) catalog and mail correspondence, including certified letters containing orders from the Division prohibiting pumping by well owners and augmentation plan operators, (3) maintain the files associated with all well related compliance inspections and order enforcement actions, and (4) field initial incoming public inquiries via mail, email, telephone, and in person. This position will be located in the Greeley Office.

Enforcement efforts over the last two years have resulted in approximately 430 wells being tagged with orders prohibiting pumping because these wells are not currently covered by an augmentation plan. Current estimates suggest that there are approximately 1,300 additional wells that require tags. The owner of each tagged well receives a certified letter informing him or her that an order has been placed on the well. A file containing all enforcement-related information is created for each well that is tagged because that information will be necessary if the order is violated and the Division must seek an injunction and fines in water court. Files for wells that do not violate the tag contain about six different information forms. Files for wells that do violate the tag (about 10% of wells thus far inspected) create several times the document load as non-violators. If this position is not filled, positions at the EPSA III or EPST II level will be required to perform this work, resulting in lower levels of field inspection and enforcement.

New Resources Required

The priority need for additional staff is field-oriented. The following discussion of additional personnel-related resources is based on the bare minimum required to equitably administer the large capacity wells in Division 1. In addition to new staff and an increased physical presence in the lower river (South Platte River from Brush to the state line), there will be the need to develop new tools, such as Measurement Rules and databases, that can relate to and build upon existing Division computer applications.

Facilities

With the reorganization of Districts 1 and 64 into a combined district with one lead water commissioner, the home office presence of the District 64 (downstream of Brush) water commissioner has been compromised. To compensate, the Division has been renting a meeting room in the Lower South Platte Water Conservancy District's offices in Sterling. This meeting room has proven an invaluable host location for DWR staff to coordinate field activities and to interface with a public that has demonstrated a significant desire to interact with the Division staff. The agricultural water users in this area prefer to do business locally and "face to face," as they have demonstrated with almost daily use of the current meeting room for water-related discussions with staff. While the Lower South Platte Water Conservancy District has graciously allowed the Division to rent their office space, no one anticipated this level of use. Ongoing or heightened use will likely require the Division to make alternate arrangements.

With the substantial increase in field-oriented activity, the Division needs more than just a meeting room. A satellite office is required. The cost of a new Sterling office will be partially offset by the current $100 paid monthly to rent conservancy district space. The benefit of the staff presence has already provided significant value to the citizens who rely on water from the lower end of the river.

As mentioned, the Julesburg South Platte River flow measurement station is the key structure used to determine compliance with the South Platte River Compact between Colorado and Nebraska. Currently this station is being monitored and maintained by full-time hydrographers based in the Greeley office. A round trip from Greeley to Julesburg requires approximately 310 miles and five hours. A round trip from Sterling to Julesburg requires approximately 120 miles and two hours. The Balzac South Platte River flow measurement station is a key structure used to regulate in-state water usage. This station is also currently being monitored and maintained by hydrographers based in the Greeley office. A round trip from Greeley to Balzac requires approximately 140 miles and 2.5 hours. A round trip from Sterling to Balzac requires approximately 50 miles and one hour. Even at a bare minimum of two trips per month to both of these gages, a hydrographer based in Sterling would save 560 miles and nine hours per month. Given the large increases in recharge sites discussed previously, many of which will be located from Brush to the state line, the savings may reach two or three times the amount calculated.

Support Equipment

There will also be some additional equipment and overhead expenses, such as mileage, associated with the new positions. In addition to office fixtures, five new computers and a printer for the proposed Sterling office will be required. Each of the four new field-oriented positions will be required to utilize their own four-wheel drive vehicles.

These functions of the Division are authorized in the following statutes:

Title 37	Article 80	Water Rights and Irrigation
Title 37	Article 82	Appropriation and Use of Water (Administration of Water in Natural Surface Streams),
Title 37	Article 83	Exchange of Water and Transfer From One Stream To Another
Title 37	Article 84	Responsibility of User and Owner (Administration of the Diversion and Measurement of Water)
Title 37	Article 90	Underground Water
Title 37	Article 92	Water Right Administration and Distribution

Element #3 – Available Alternatives:

Alternative No. 1 (Recommended):

- Add the requested 4.5 FTE for additional field staff and physical presence in the lower end of the South Platte River (downstream of Brush). Add Sterling office space, computers, office furniture, field equipment, telecommunications support, and operating allowances for the positions requested.
- Allows the Division/State to regulate operation of all large capacity wells in a fair and equitable manner in accordance with statute.
- Allows the Division/State to perform all the duties required by statute because of adequate resources.
- Allows the Division/State to ensure that wells operate in compliance with the South Platte River Compact.
- Maintains or restores the credibility of the Division/State as an impartial and unbiased regulatory entity among the water users in northeast Colorado.
- Allows the Division/State to ensure that senior, in-state water users receive all of the available water to which they are entitled and that no surplus water is delivered across the state line. This will result in a positive impact on the agricultural-based economy of northeastern Colorado. It will also ensure that municipal suppliers are not burdened with curtailment of their rights because of inadequate regulation of wells.

Alternative No. 2 (Not Recommended):

- Continue to provide the currently inadequate level of ground water regulation with existing resources.
- Maintains the current inequity in compliance enforcement where wells closest to the river receive the most scrutiny and wells in more remote areas receive little or no scrutiny because of severely limited resources.
- Exposes the Division/State to justifiable claims from senior water users, public, and media of not performing duties required by statute.
- Exposes the Division/State to possible legal action by either in-state senior water users who did not receive the full amount of water to which they were entitled because of out-of-compliance well operation or the State of Nebraska because of violations of the terms of the South Platte River Compact.
- Damages the credibility of the Division/State with water users and the general public in at least northeastern Colorado as an impartial and unbiased regulatory entity.
- There is no direct cost to the state for this alternative.

Element #4 – Selected Analytical Technique

The selected technique is to compare the cost of the request to the benefit of appropriately administering ground water with additional staff and resources. The benefits are measured through (1) the value of water (water that would otherwise be illegally diverted or misused) lawfully delivered to senior water rights holders; and (2) the avoided expense of litigation without lawful administration.

Water Value

Water is a critical component in nearly all sectors of Colorado's economy. Agricultural, industrial, commercial, and municipal users rely on the State Engineer to administer their water at the time and in the amount adjudicated by court decree. Failure of the State Engineer to do so may result in disruption of their operations and subsequent economic injury. But rather than quantify all of the economic damages resulting from loss of water, this analysis calculates water value assuming that the senior water right holder may always pay for replacement water. And while it is difficult to estimate the portion of water that, without administration, will not be lawfully delivered to the entitled user, this analysis estimates that 30% of Division's ground water will be illegally diverted.

Seven thousand legally operating large capacity wells can impact the South Platte River by an annual average of 280,000 acre-feet. The impact of any incorrect administration or illegal operation of these wells is borne by the senior water users who would not receive the water supply to which they are entitled. The South Platte River is under a call by senior surface water rights for either the direct application of water to irrigation or non-agriculture uses during the irrigation season or for storage of water in reservoirs for later use in the non-irrigation season in all but the wettest periods. The surface water rights that are typically calling for water are almost always senior in priority to the large capacity wells. If 30% (20% through over-pumping, misuse, or illegally expanded acres and 10% through failed augmentation) of the 7,000 wells were not correctly administered due to a lack of personnel, senior water rights would potentially be impacted by 84,000 acre-feet of water per year. Division 1 water diversion records for 2004 indicate that 68% of the water is diverted to irrigation and 32% to municipal, commercial, and industrial uses. Current agricultural lease rates approximate $50 per acre-foot (per Alan Berryman, Engineering Director for Northern Colorado Water Conservancy District). Municipal, commercial, and industrial leases range near $250 per acre-foot (per Brad Dallam, City of Lafayette Water Resources Director). Assuming that the senior surface rights are impacted in proportions similar to 2004 diversions and that they are then forced to lease additional supplies of water at these rates, their direct cost would total $9,576,000 ($2,856,000 for irrigation and $6,720,000 for non-irrigation).

84,000 acre-feet * 68% irrigation * $50 / acre-foot = $2,856,000 total cost to irrigators
84,000 acre-feet * 32% other uses * $250 / acre-foot = $6,720,000 total cost to municipal, commercial, industrial

If the agriculture users do not lease replacement water, the reduced water supply either results in reduced crop yields or a reduced number of acres irrigated by these rights. While putting a precise value on these losses is difficult, it is at least equal to (and probably exceeds) the current general agricultural water lease rate. (The market would not long support a production cost that exceeded the return.) If the non-agriculture users do not lease replacement water, they must impose watering restrictions, raise rates, or reduce demand in some fashion.

Potential Litigation Avoided

Additional costs would be incurred by the state. These in-state water users could potentially show that the State failed to uphold its statutory duty and that they were financially injured by the Division's failure to properly administer their water rights. Potentially more damaging would be injury suffered by Nebraska for Colorado's failure to comply with the South Platte River Compact through inadequate well regulation. Either such claim could result in severe litigation expenses.

Litigation related to non-compliance with the Arkansas River Compact is finally drawing to a close two decades after the State of Kansas brought suit against the State of Colorado in the U.S. Supreme Court seeking nearly $320M in damages. While the award of damages totaled $34.7M (excluding the potential settlement of an additional $4M in court costs), Colorado also bore significant cost in terms of direct expenditures for defense of the lawsuit (approximately $12M over 20 years). In total, the State expended approximately $50M for 20 years of litigation ($2.5M per year) and could reasonably anticipate continued expense without the curtailment and enforcement that has subsequently transpired.

Varying compact requirements, hydrology, and rules and regulations may dictate changes in administrative practices from basin to basin. But recognizing that one well permit legally represents one property right that seeks protection within the prior appropriation system, this analysis compares the South Platte Basin to the Arkansas Basin in terms of the number of wells. With 3.5 times the number of large capacity wells in the South Platte Basin (~7,000 versus ~2,000), Colorado could potentially incur annual litigation expense of $8.75M. Because unadministered ground water in the South Platte would very likely result in compact violations, an increased probability of 50% is applied to this annual figure.

$50M / 20 years = $2.5M annual litigation expense attributed to violations of the Arkansas River Compact

7,000 South Platte wells / 2,000 Arkansas wells = 3.5 South Platte:Arkansas ratio

3.5 * $2.5M annual litigation expense = $8.75M potential litigation expense attributed to violations of the South Platte River Compact

$8.75M potential annual litigation expenses * 50% increased probability of litigation = $4,375,000 anticipated annual *interstate* litigation

Expenses of litigation brought by users within the state are estimated by incorporating the water value analysis with the Arkansas litigation analysis. Recognizing that Colorado incurred $12M in legal expenses to defend damages valued at $37.6M, this analysis estimates that Colorado would realize intrastate litigation costs equal to one third the value of the water litigated. The above analysis of water value indicates an annual loss of $9,576,000 by Colorado water users. Associated legal costs, therefore, can be estimated at $3,160,000. No probability factor is applied as 30% unlawful diversion has already been estimated. Because the damages to Colorado water users have been accounted for in the water value analysis above, the intrastate litigation component consists only of direct legal expenditures.

$9.756M damages to senior water rights holders * 1/3 cost of litigation = $3,160,000 anticipated annual *intrastate* litigation

Element #5 – Assessment of Alternatives

There are two alternatives: 1) Add staff and resources sufficient to resolve the problem; 2) do not increase staff and resources and subject Colorado's water rights system to increasing abuse.

Alternative No. 1 shows the expenditure of adding the requested FTE and supporting resources. The benefit represents the sum of the value of water properly delivered to senior water rights holders ($9,756,000) and the potential litigation expenses avoided ($7,535,000).

Benefits of adding a Sterling office are not quantified, but would increase Division presence in northeast Colorado and substantially reduce driving time of new personnel (refer to Figure 1 for geographic workload). In addition, some existing Division 1 staff could potentially relocate to Sterling for added drive-time savings.

Alternative No. 2 is the status quo and has no direct cost or benefit to the state.

Alternative	Year	Cost	FTE	Benefit	Ratio of benefit/cost
# 1	1	$244,462	4.5	$17,291,000	70.7
	2	$222,757	4.5	$17,291,000	77.6
# 2	1	0	0	0	0
	2	0	0	0	0

Recommendation:
Increase appropriation to the Division of Water Resources by $244,462 and 4.5 FTE to provide the necessary large capacity well regulation (ground water administration) in the South Platte River Basin (Water Division 1) to adequately respond to the increased work load required by changes in water rights administration brought on by recent Colorado Supreme Court decisions and the resulting changes to statute.

Element #6 - Division 1 Ground Water Enforcement Decision Item Costs and Benefits - FY 2006-07

Job Title	EPST II	EPSA III	EPSA III	EPST II	EPSA III	ADM AST II	GRAND TOT
FTE	**1.0**	**1.0**	**0.5**	**0.5**	**1.0**	**0.5**	**4.5**
Monthly Salary	$ 3,598	$ 2,768	$ 2,768	$ 3,598	$ 2,768	$ 2,256	$ 17,756
Projected Overtime	$ 156	$ 120	$ 156	$ 120	$ 120	$ -	$ 672
Months	12	12	6	6	12	6	54
Salary	45,048	34,656	17,544	22,308	34,656	13,536	167,748
PERA (10.15%)	4,572	3,518	1,781	2,264	3,518	1,374	17,026
Medicare (1.45%)	653	503	254	323	503	196	2,432
Total PS	**$ 50,274**	**$ 38,676**	**$ 19,579**	**$ 24,896**	**$ 38,676**	**$ 15,106**	**$ 187,207**
FY 2006-07							
Total miles	*12,000*	*16,000*	*0*	*16,000*	*16,000*	*0*	*60,000*
per mile cost	*0.320*	*0.320*		*0.320*	*0.320*		
Cost to reimburse	3,840	5,120		5,120	5,120		19,200
Total Mileage Expense	$ 3,840	$ 5,120	$ -	$ 5,120	$ 5,120	$ -	$ 19,200
Sterling office lease	*(estimated $800 monthly less $100 monthly currently paid for a meeting room)*						8,400
Sterling office utilities							3,000
Cell Phones	*(five new FTEs require field communication for ground water enforcement)*						2,700
Operating cost	500	500	250	250	500	250	2,250
Office/Personnel Op.	$ 500	$ 500	$ 250	$ 250	$ 500	$ 250	$ 16,350
Total Operating	**$ 4,340**	**$ 5,620**	**$ 250**	**$ 5,370**	**$ 5,620**	**$ 250**	**$ 35,550**
Capital							
Office furniture	2,021	2,021		2,021	2,021	2,021	10,105
Desk/Laptop & Software	1,794	1,794		1,794	1,794	984	8,160
Ipac, GPS, Dig Cam	860	860		860	860		3,440
Other	-	-	-	-	-	-	-
Total Capital	**$ 4,675**	**$ 4,675**	**$ -**	**$ 4,675**	**$ 4,675**	**$ 3,005**	**$ 21,705**
							-
FY 2006-07 Cost	**$ 59,289**	**$ 48,971**	**$ 19,829**	**$ 34,941**	**$ 48,971**	**$ 18,361**	**$ 244,462**
FY 2006-07 Benefit							**$ 17,291,000**
FY 2006-07 B/C Ratio							**70.7**

Note: 16,000-mile vehicle for 6 month EPST II and 0 miles for EPSA II Iresult from combining these positions with existing half-time positions.

Division 1 Ground Water Enforcement Decision Item Costs and Benefits - FY 2007-08

Job Title	EPST II	EPSA III	EPSA III	EPST II	EPSA III	ADM AST II	GRAND TOT
FTE	**1.0**	**1.0**	**0.5**	**0.5**	**1.0**	**0.5**	**4.5**
Monthly Salary	$ 3,598	$ 2,768	$ 2,768	$ 3,598	$ 2,768	$ 2,256	$ 17,756
Projected Overtime/mo.	$ 156	$ 120	$ 156	$ 120	$ 120	$ -	$ 672
Months	12	12	6	6	12	6	54
Salary	45,048	34,656	17,544	22,308	34,656	13,536	167,748
PERA (10.15%)	4,572	3,518	1,781	2,264	3,518	1,374	17,026
Medicare (1.45%)	653	503	254	323	503	196	2,432
Total PS	**$ 50,274**	**$ 38,676**	**$ 19,579**	**$ 24,896**	**$ 38,676**	**$ 15,106**	**$ 187,207**
FY 2006-07							
Total miles	*12,000*	*16,000*	*0*	*16,000*	*16,000*	*0*	*60,000*
per mile cost	*0.320*	*0.320*		*0.320*	*0.320*		
Cost of fleet miles	3,840	5,120	-	5,120	5,120	-	19,200
Total Mileage Expense	$ 3,840	$ 5,120	$ -	$ 5,120	$ 5,120	$ -	$ 19,200
Sterling office lease	*(estimated $800 monthly less $100 monthly currently paid for a meeting room)*						8,400
Sterling office utilities							3,000
Cell Phones	*(five new FTEs require field communication for ground water enforcement)*						2,700
Operating cost	500	500	250	250	500	250	2,250
Office/Personnel Op.	$ 500	$ 500	$ 250	$ 250	$ 500	$ 250	$ 16,350
Total Operating	**$ 4,340**	**$ 5,620**	**$ 250**	**$ 5,370**	**$ 5,620**	**$ 250**	**$ 35,550**
FY 2007-08 Cost	**$ 54,614**	**$ 44,296**	**$ 19,829**	**$ 30,266**	**$ 44,296**	**$ 15,356**	**$ 222,757**
FY 2007-08 Benefit							**$ 17,291,000**
FY 2007-08 B/C Ratio							**77.6**

History of the Substitute Water Supply Plan Process

1965 Act

· In 1965, the Colorado General Assembly passed House Bill 65-1066 and created the Colorado Ground Water Management Act ("1965 Act"). This gave the State Engineer the authority to evaluate the use of ground water and deny a well permit if there was no unappropriated water available or if the well would cause material injury. This was the first time that groundwater was incorporated into the priority system.

1969 Act

· In 1969, the Colorado General Assembly enacted the Water Rights Determination and Administration Act ("1969 Act"). The 1969 Act put tributary ground water (that is outside designated ground water basins) clearly within the judicial jurisdiction of the water judges and the administrative jurisdiction of the State Engineer.

· The 1969 Act further recognized the connection between ground water and surface water.

· The 1969 Act also introduced the concept of Plans for Augmentation. This was the primary means provided by the Act for integrating ground water into the priority system.

1974, 1977

· In 1974, the General Assembly adopted Senate Bill 7, which authorized the State Engineer to approve temporary plans for augmentation, until the applicants could get court approval.

· Those provisions of Senate Bill 7 were repealed in 1977.

2001 to present

· In late 2001, the Colorado Supreme Court issued its decision in Empire Lodge Homeowners' Ass'n v. Moyer, 39 P.3d 1139 (Colo. 2001). The Court determined that the State Engineer did not have authority to approve temporary substitute water supply plans ("SWSP") to replace depletions caused by out-of-priority diversions.

· On May 31, 2002, the State Engineer filed proposed Amended Rules of the South Platte River in the Division 1 Water Court. These rules laid out the process by which the State Engineer could approve temporary replacement plans. Numerous parties challenged the State Engineer's claim to this authority. The water court ruled against the State Engineer on December 30, 2002, stating he could not promulgate the rules since he

did not have the authority to approve the plans, no matter the process. On April 30, 2003, the Supreme Court upheld that decision. See Simpson v. Bijou, 69 P.3d 50 (Colo. 2003).

- Also on May 23, 2002, the Governor signed House Bill 02-1414, which gave the State Engineer the authority (and the process) to approve substitute water supply plans. Legislation in 2003 has fine-tuned this section. See section 37-92-308, C.R.S.

Changes

- With the new legislation, the largest plans (including GASP) dissolved or reorganized as wells broke off to form smaller, localized groups. In 2001, the DWR reviewed about 20 replacement plans. In 2005, that number has grown to more than 160.

- New SWSP legislation requires applicants for SWSPs to seek approval of a corresponding Plan for Augmentation in Water Court. These complicated cases continue to work their way through water court. While many of the issues are resolved outside the courtroom, some of the larger plans have up to fifty objectors and hundreds of water rights to augment. Consensus on these novel legal and engineering theories is thoughtful, deliberate and slow.

Department: **Natural Resources**
Request Title: **Division 3 Personnel**
Division: **Water Resources**

Summary of Requested Alternative: The Division seeks $394,722 and 7.0 FTE in FY 2006-07 and $354,512 and 7.0 FTE in FY 2007-08 to implement well measurement rules and regulations in the Rio Grande Basin.

This request secures the funding necessary to address the additional workload demand on the Division of Water Resources in achieving compliance under well measurement rules and to address the impact of pumping on the aquifers, on senior water rights, and on Colorado's ability to comply with the Rio Grande Compact. Approximately 600,000 acres are irrigated in the Rio Grande Basin, with much of that land served by more than 5,000 wells. This area had a gross farm income of $255,000,000 in 2003,[2] with associated ground water valued at $22,000,000 (discussed below). The abrupt implementation of well administration (via court-ordered cessation of out-of-priority well use) in the Arkansas and South Platte River Basins has negatively impacted the economy and agricultural production in those areas. A similar negative impact may be avoided in the Rio Grande Basin through the measurement of ground water pumping in concert with use of the Rio Grande Decision Support System (RGDSS, House Bill 98-1011). The RGDSS determines overall impact of ground water pumping and helps provide information that could support the formation of ground water management districts to control and replace injurious depletions. Staffing and costs in this analysis are in part based on the existing Arkansas River program. Water Division 2 (Arkansas River Basin) has added 14 FTE as a result of Kansas-Colorado compact litigation and due to its added burden of administering augmentation water for any wells that purchase water for the upcoming year. Though Division 2 must administer fewer wells, the additional complexity of daily water management in a basin under intense litigation scrutiny (Kansas v. Colorado, No. 105 Original) required a larger number of field staff. Division 3 anticipates that it can accomplish necessary administration with half the number of FTEs because Division 3 would not have augmentation administration, and the proposed monitoring would occur less frequently than in Division 2 (often bi-annually versus monthly).

Rules and Regulations for Well Measurement in the Rio Grande Basin will be promulgated in the summer of 2005 and will generate the demand for well administration for the first time in Division 3. Installation of metering systems should begin after the rules are promulgated. Certification of meters/metering systems will begin as soon as meters/systems are installed. Though the rules should become effective and implemented beginning November 1, 2006, the process of inventorying current wells should begin now and involves (1) identification and location of current systems, (2) determination that current systems meet their decree stipulations, (3) construction of compliance databases, and (4) review of petitions for variances prior to rules implementation. Many producers have, in fact, already begun the process of meter installation and variance petitioning in anticipation of rules promulgation. Existing staff in Division 3 has begun preliminary IT work and data gathering. The new personnel therefore would have full workloads leading up to rules implementation even if their positions commenced today.

[2] 2003 Colorado Ag Stats.

Many producers in the basin depend on ground water pumping to irrigate their acres or to supplement irrigation from surface water diversions. The dry climate and sandy soils in the San Luis Valley cannot provide economic crop yields without adequate water supplies (i.e. dryland farming is not practical). Producers therefore rely heavily on equitable and accurate water administration by Division staff in determining their available water supply from year to year. About 550,000 acre-feet of ground water are pumped and another 1,000,000 acre-feet of surface water diverted in a typical year in the basin.

Because the water is used almost exclusively for agriculture and because water leases in Division 3 are not common, as they are in Divisions 1 and 2, the water may be valued at approximately $40 per acre-foot (the price paid by the Bureau of Reclamation for Rio Grande irrigation water needed to protect the silvery minnow in New Mexico). The 550,000 acre-feet of ground water in Division 3, which previously had not been administered, could then be valued at $22M. Without proper administration, approximately 20% of this amount could be lost through over-pumping, misuse, or illegally expanded acres. The $4.4M cost of this loss would be borne by senior water rights holders who would have to lease water to replace the water to which they were entitled (further detailed in Element #4).

The Division of Water Resources therefore requests an additional 7.0 FTE and supporting resources to accomplish the well measurement program, under the well measurement rules, and to bring ground water appropriations in the Rio Grande Basin into compliance with the compact, the appropriation system, decree, and permit limitations.

Element #2 – Problem or Opportunity Definition:

Background

Ground water administration in the Rio Grande Basin is rapidly emerging in response to recent court actions within the State of Colorado. Historically, the Supreme Court has determined that the ground water appropriators in the Rio Grande Basin were impacting surface water rights. However, determination of individual well impacts was not possible without additional study, resources, and legislation. With both the final development of the Rio Grande Decision Support system (HB 98-1011), and the provision of State Engineer ground water rule making authority (SB 04-222), the State Engineer now has the technical ability and the authority to determine injury. Meanwhile, absent the determination of specific points of injury, the ground water appropriations have continued to operate. However, Simpson v. Bijou ordered all injurious ground water appropriations to cease operation pending the approval of augmentation plans. This has resulted in a tremendous financial impact to the agricultural and rural communities in the South Platte Basin. In the South Platte, many wells are still unable to pump, lands are fallow, and millions of dollars are being spent on engineering and legal fees pursuing augmentation plans. In the Arkansas Basin, well pumping reduced compact deliveries to Kansas, resulting in an interstate lawsuit. Resolution of that lawsuit not only held Colorado liable for $34.7M (excluding the potential settlement of an additional $4M in court costs), but also resulted in strict well administration with a well measurement program requiring 14 new FTEs.

Currently, the Rio Grande Basin (San Luis Valley) has 600,000 acres of irrigated land and approximately 5,000 large capacity wells. Many of these irrigation systems are conjunctive-use systems using both surface and ground water supplies. In view of the Simpson v. Bijou decision, the General Assembly passed SB 04-222, which was designed to avoid the abrupt cessation of ground water use in the Rio Grande Basin. In addition to rulemaking authority, SB 04-222 authorized the development of Subdistricts of existing or newly created parent districts (e.g. the existing Rio Grande Water Conservation District) within the Rio Grande Basin as an alternative to individual augmentation plans. Ground water appropriators within Subdistricts could continue ground water pumping as long as the operation under the Subdistricts plan would (1) prevent injury to senior surface water appropriations, (2) protect the Rio Grande Compact, **and** (3) restore and maintain ground water levels and artesian pressures experienced in the 1978 to 2000 time period.

Whether Subdistricts are formed or the State Engineer promulgates rules requiring strict augmentation of depletions, well measurement is required to determine the impact of the ground water diversions on surface water rights, the aquifers, and the Rio Grande Compact. The State Engineer is currently promulgating rules and regulations regarding the measurement of ground water diversions within the Rio Grande Basin. The proposed rules require measurement of all large capacity wells of 50 gallons per minute and larger. The rules allow for various types of measurement systems (e.g. power conversion coefficient utilizing utility measurements, flow meters, sonic metering, etc.). The rules are patterned after the Arkansas Basin measurement rules promulgated in 1994 and 1996.

Without measurement rules, the State Engineer will be unable to evaluate the effectiveness of Subdistrict plans and the impact of wells upon the surface water rights, the aquifers, and the Rio Grande Compact. Without Subdistricts, the likelihood of court-ordered cessation of ground water use becomes greater. Again, such a cessation would significantly and abruptly injure the crop value and long-term value of over 600,000 acres of irrigated land within the Rio Grande Basin.

The measurement rules are designed to give the widest latitude to the owners/operators of ground water rights in selecting measurement types/techniques including variances for alternative techniques. The rules require annual reporting of usage, and the certification of the metering method. To accurately and fairly implement the rules, each meter/system will require database tracking. The measurement rules will require additional staffing to (1) ensure accurate measurement devices are installed and maintained, (2) collect, evaluate and process the data, (3) ensure compliance with the rules and with decrees of the court, and (4) evaluate the effectiveness of proposed Subdistricts or augmentation plans. This staff and operating support required for either Subdistrict or augmentation plan administration would be the same.

Additional Workload Required

Currently, ***Division 3 has no staff for ground water measurement or administration.*** Though ground water development began in the basin during the 1950s, SB 04-222 was needed to clarify the State Engineer's authority to promulgate rules governing administration. That legislation, combined with dwindling aquifer conditions, growing stream depletions, improved science and technology, and recent court decisions, has necessitated a sudden and urgent need to perform new duties. The proposed additional duties include:

1. Develop a complete inventory of large capacity wells and well owners in the Rio Grande Basin. A correct inventory is critical as realized through actual example in Water Divisions 1 and 2. An adequate inventory would minimally include all decreed or permitted wells as well as non-registered, non-decreed wells, their correct location (GPS), the type of system in which they operate, type of measuring system planned or in place, type of power supply, and the correlation of the permit and decreed identities of each well. It is anticipated that the field staff requested below would initially perform the well inventory and would then move into the measurement, certification, verification, and enforcement roles.

2. Modify and maintain new databases utilizing a structure similar to that undertaken in Water Division 2 for the Arkansas Basin well measurement program, including: (1) a structure database including information about each well. Existing databases will be modified to fit the requirements in the Rio Grande Basin; (2) a measurement database to track type of measurement selected by the owner and ensure proper calculation of usage based on the selected technique. This will include meter verification and certification data and reported usage data; (3) product databases and reports on well usage and stream impact and replacement adequacy as Subdistricts are proposed and implemented. These databases will also be used to track the replacement and adequacy of court-approved augmentation plans; and (4) a certification database for tracking certification status of testers. The need for additional staff is both immediate and ongoing because the Division does not anticipate full compliance for two to three years. As inspections are completed, this up-front work will shift to regular testing, measuring, and calibrating, with daily enforcement activity similar to that currently needed in Water Division 2.

3. Oversee the timely collection and processing of ground water use data to satisfy the model input requirements and ensure accuracy that the amount pumped is within limits set by rules, augmentation plans and Subdistrict plans. Data collection and database development is only useful if monitoring and regulation are upheld.

4. Supervise and operate processes to ensure accurate operating measurement systems including: review of installations, variances, certification of private testers, data review to detect rule violations, and preparation of orders.

5. Enforcement actions to compel well owners to comply with provisions of the rules. This would include field verification and follow-up and enforcement of actions necessary to get owners to comply with the rules. Vehicles and the mileage associated with these activities are critical for success of this objective.

6. Administrative assistant for clerical, administrative, and enforcement actions.

Personnel

In all, 7.0 new FTE are required to implement and enforce the ground water measurement rules. Division 2 required the hiring of 14 FTE as a result of needed ground water enforcement. Though Division 3 has a comparable number of wells, the geographic area is smaller and Division 2 must administer augmentation plans resulting from the settlement in Kansas v. Colorado. The Measurement and Field Enforcement group will consist of one lead engineer, four field staff, one database administrator and one administrative assistant. The group will be based out of the central Division 3 office in Alamosa. Even with the formation of Subdistricts, verification of measurement will be required to properly assess the impacts and operation of a Subdistrict plan and to assure that wells are operating within their decreed limitations.

The group will be tasked with:

- Developing an inventory of non-exempt wells within Division 3;
- Conducting verification tests to promote compliance with the measurement rules and the integrity of the resultant data;
- Training well test contractors for approval;
- Reviewing and approving or denying variance requests;
- Monitoring the usage of "inactive" wells or independent power-supply wells (those not subject to power conversion coefficients);
- Monitoring for re-certification needs;
- Modifying and maintaining the measurement databases.
    - DWR has several existing database systems that will be the initial structure for metering requirements.
    - Databases will include: metering system, calibration schedules, contact information, power conversion coefficients, complexity of the operating system, power company downloads, web-centered owner input.

These tasks are quantified in the following staffing analysis.

Rio Grande Groundwater Measurement Staffing Analysis

				DWR Total hours	DWR FTE
Totalizing Flow Meters			Performed by		
Number of meters (TFM)	3000				
% repair-change/yr	5%		150 certified tester		
% annual test	25%		900 certified tester		
%of annual test/change test confirmed	10%		105 DWR		
% failure/retest	5%		45 DWR		
hours/test DWR	2	hr	300 DWR hours		
travel/test	1	hr	150 DWR hours		
review cert test report DWR	1	hr	1050 DWR hours	1500	0.75
PCC (Power Conversion Coefficient)					
Number systems	2000				
% repair-change/yr	10%		200 certified tester		
# annual test	2	/system	4200 certified tester		
%of annual test/change test confirmed	10%		440 DWR		
% failure/retest	5%		210 DWR		
hours/test DWR	3	hr	1950 DWR hours		
travel/test	1	hr	650 DWR hours		
review cert test report DWR	1	hr	4400 DWR hours	7000	3.5
inactive wells (no metering system)					
Number of wells	250				
# annual inspections	1	/well	250 done by DWR		
hours/inspection DWR	1		250 DWR hours	250	0.125
Variance Reviews					
# reqests annually	50				
hours/review DWR	4		200 DWR hours	200	0.1
Enforcement actions					
noncompliance rate	1%		50 # actions/yr		
# hours/DWR	16		800 DWR hours	800	0.4
Supervision					0.25

Division 3 requests four field staff (2 EPST and 2 EPSA) and one supervising Engineer. The supervisor is expected to perform field work and handle enforcement, variance review, reporting, certification training, and supervision of the group. This staffing analysis addresses only field staff.

Total FTE **5.0**

In order of priority:

Professional Engineer (PE II, 1.0 FTE), Ground water measurement leader: As an expert on the determination of adequate measurement technique for wells, this position will approve variances to the measurement rules, determine compliance with the rules, analyze data comparing indicated to observed measurements, and review the operation of and recommend amendments to the rules. Public input on the rules indicates that variances on measurement technique may be requested for half of the wells (2,500). As measuring techniques are tested and new devices are developed, the Division expects a substantial number of changes in measuring techniques to be implemented. All require review, inspection and certification. Additionally, this position will be responsible for recommending and coordinating enforcement actions for non-compliance. For enforcement actions, this position will be the expert for well measuring techniques and systems. With more than 5,000 wells, a 5% non-compliance rate will generate 250 actions per year. This position will also be responsible for analysis of the pumping impacts and the review of proposed Subdistrict plans and/or augmentation plans and will testify as an expert in court on such matters. This position will supervise the following staff of the well measurement group:

Information Technology II (IT II, 1.0 FTE), Database administrator: This position will be required to modify existing and develop new database systems to effectively and efficiently integrate the existing DWR information databases with new databases needed to capture the data being supplied by the landowners, power companies, Subdistricts, etc. In addition to the existing decree and permit databases, the database will include: ownership, type of irrigation system, conjunctive use with surface water, metering system, variance system approval, history of system, annual measurements, power measurements, certification, certification status, ownership changes, and enforcement actions. This IT workload would be detailed to this position allowing the Assistant Division Engineer who currently handles well-related IT duties to focus on the primary duties of the position. Additionally, this position will utilize the database and the RGDSS to assist in day-to-day Division 3 ground water operations: determine the adequacy of proposed augmentation plans, replacement plans, and Subdistrict plans; monitor compliance; and determine the replacement needs to the river in view of the compact, priority administration, and the existing river conditions that change each year.

Engineering and Physical Scientist Technician I (EPST I, 2.0 FTE), Ground water enforcement technician: These positions are responsible for the enforcement of the measurement rules. These positions will also handle incoming questions as the rules are initiated, help process variance requests, Power Conversion Coefficient (PCC) reviews, system complexity reviews, and ensure that enforcement actions are verified and properly filed. Under the proposed rules, with over 5,000 wells on a four-year test schedule, there are at least 1,250 wells to re-certify annually. Additional bi-annual tests may be required to accurately report well pumping of those wells that rely on PCCs (as power requirements vary with well water levels throughout the year). All recertification tests must be reviewed and 10-15% subject to field measurement to ensure that the testers are correctly performing the certifications. For test failures, these positions will work with the owners to ensure proper measurement technique and equipment. These positions will train and certify independent testers.

Engineering and Physical Scientist Assistant (EPSA II, 2.0 FTE): Ground water enforcement assistant: These positions will conduct tests on wells to verify the accuracy of measurement technique, compile data from well tests, conduct field enforcement, review inactive wells, observe well tests, advise owners on available measurement techniques, and work generally for the Technicians. With more than 5,000 wells, these positions are required to meet the workload of review, inspection, certification, testing, retesting, data collection, and enforcement action.

Administrative Assistant II (ADMIN ASST II, 1.0 FTE): Data Quality/Administrative Assistant: With over 5,000 wells reporting, this position will be needed to process data mailed, phoned, e-mailed, field collected or otherwise submitted to DWR. This data entry includes: annual meter readings, changes in meter type, replacements, certification test information, inactive well data, changes in contacts (ownership), changes in system design, and status of enforcement actions. Initial calls to verify information or to error-check with the owner or contact will be made at this level. This position will also answer incoming calls, handle correspondence between parties, construct and maintain files for enforcement actions, assist in development of case files, as well as support the general administrative needs of the additional staff being requested.

New Resources Required

Resources required for the 7.0 FTE include mileage funding, office and field equipment, and office space. Five of the positions (the engineer, technicians, and assistants) entail extensive field time in investigating, measuring, ensuring compliance and calibrating the metering methods selected. These positions will be required to use their own four-wheel drive vehicles to travel to and carry equipment for the field sites. These positions will require measuring equipment suitable to the various types of metering systems installed. Two of the positions (IT2 and AA2) have little travel need. All will require office space, furniture, file cabinets, a telephone, a computer, etc.

Facilities

An additional 1,100 square feet of ancillary office space is required to host these 7.0 FTEs.

Support Equipment

Operating and capital equipment shall include office furniture and desk phones for all seven personnel, two desktop computers for IT personnel, and for five field personnel: laptop computers, mobile phones, vehicles, GPS units, Collins meters, sonic meters, magnetic meters, and small tools.

These functions of the Division are authorized in the following statutes:

Title 37	Article 80	Water Rights and Irrigation
Title 37	Article 82	Appropriation and Use of Water (Administration of Water in Natural Surface Streams),
Title 37	Article 83	Exchange of Water and Transfer From One Stream To Another
Title 37	Article 84	Responsibility of User and Owner (Administration of the Diversion and Measurement of Water)
Title 37	Article 90	Underground Water
Title 37	Article 92	Water Right Administration and Distribution

Element #3 – Available Alternatives:

Alternative No. 1 (Recommended):

- Add the requested 7.0 FTE for additional field staff and physical presence in the Rio Grande Basin. Add office space, computers, office furniture, field equipment, telecommunications support, and operating allowance for the positions requested.
- This action is in concert with current trends in water administration in Colorado (e.g. the Kansas v. Colorado settlement) and the current South Platte well administration conundrum.
- This action will support the implementation of Subdistricts, as they are enacted.
- This action will support the administration of augmentation plans.
- This action will support compact administration.
- This action will be needed to enforce court-ordered well administration.

Alternative No. 2 (Not Recommended):

- Continue to allow unregulated and unmeasured pumping of ground water
- The possibility of court-ordered cessation of all well pumping increases with time:
    - A sudden court decision in the South Platte has idled over 100,000 acres of irrigated farm ground.
    - Higher engineering and legal expenses would be incurred by those developing augmentation plans while farm land sits fallow.
- Stream depletions to the river system due to well pumping would require higher curtailment of senior surface water rights to assure compact deliveries or shorting the compact to ensure senior water rights are satisfied:
    - If the depletions to the river system result in failed compact compliance, then interstate litigation could ensue.
    - Conversely, if the losses are charged to senior water rights, instate litigation could occur.
- There is no direct cost to the state for this alternative.

Element #4 – Selected Analytical Technique

The selected technique is to compare the cost of the request to the benefit of appropriately administering ground water with additional staff and resources. The benefits are measured through (1) the value of water (water that would otherwise be illegally diverted or misused) lawfully delivered to senior water rights holders; and (2) the avoided expense of litigation without lawful administration.

Water Value

San Luis Valley irrigated agriculture generated a gross farm income of $255,000,000 in 2003, of which approximately 70% is directly linked to ground water production. Abrupt administration in the Arkansas Basin has severely injured the agricultural economy there, and similar results could be expected in the San Luis Valley without appropriate enforcement.

About 550,000 acre-feet of ground water are pumped and another 1,000,000 acre-feet of surface water diverted in a typical year in the basin. Nearly all of this water is used by the agricultural sector. Water leases in Division 3 are not common as they are in Divisions 1 or 2. The water may be valued at approximately $40 per acre-foot (the price paid by the Bureau of Reclamation for Rio Grande irrigation water needed to protect the silvery minnow in New Mexico). Without proper administration, approximately 20% of this amount could be lost through over-pumping, misuse, or illegally expanded acres. The $4.4M resulting cost to replace this loss would be borne by senior water rights holders who would have to lease water to replace the water to which they were entitled.

550,000 acre-feet * 20% loss rate * $40 / acre-foot = $4,400,000 total cost to water users

If the agriculture users do not lease replacement water, the reduced water supply either results in reduced crop yields or a reduced number of acres irrigated by these rights. While putting a precise value on these losses is difficult, it is at least equal to (and probably exceeds) the current general agricultural water lease rate. (The market would not long support a production cost that exceeded the return.)

Potential Litigation Avoided

Additional costs could be incurred by the state. These in-state water users could potentially show that the state failed to uphold its legislative duty and they were financially injured by the Division's failure to properly administer their water rights. Potentially more damaging would be injury suffered by New Mexico and Texas for Colorado's failure to comply with the Rio Grande Compact through inadequate well regulation. Any such defensible arguments could result in severe litigation expenses.

Litigation related to non-compliance with the Arkansas River Compact is finally drawing to a close two decades after the State of Kansas brought suit against the State of Colorado in the U.S. Supreme Court seeking nearly $320M in damages. While the award of damages totaled $34.7M (excluding the potential settlement of an additional $4M in court costs), Colorado also bore significant cost in terms of direct expenditures for defense of the lawsuit (approximately $12M over 20 years). In total, the State expended approximately $50M for 20 years of litigation ($2.5M per year) and could reasonably anticipate continued expense without the curtailment and enforcement that has subsequently transpired.

Varying compact requirements, hydrology, and rules and regulations may dictate changes in administrative practices from basin to basin. But recognizing that one well permit legally represents one property right that seeks protection within the prior appropriation system, this analysis compares the Rio Grande Basin to the Arkansas Basin in terms of the number of wells. With 2.5 times the number of large capacity wells in the Rio Grande Basin (~5,000 versus ~2,000), Colorado could potentially incur annual litigation expense of $6.25M. Because unadministered ground water in the Rio Grande would very likely result in compact violations, an increased probability of 50% is applied to this annual figure.

$50M / 20 years = $2.5M annual litigation expense attributed to violations of the Arkansas River Compact

5,000 Rio Grande wells / 2,000 Arkansas wells = 2.5 Rio Grande:Arkansas ratio

2.5 * $2.5M annual litigation expense = $6.25M potential litigation expense attributed to violations of the Rio Grande Compact

$6.25M potential annual litigation expenses * 50% increased probability of litigation = $3,125,000 anticipated annual *interstate* litigation

Expenses of litigation brought by users within the state are estimated by incorporating the water value analysis with the Arkansas litigation analysis. Recognizing that Colorado incurred $12M in legal expenses to defend damages valued at $37.6M, this analysis estimates that Colorado would realize intrastate litigation costs equal to one third the value of the water litigated. The above analysis of water value indicates an annual loss of $4,400,000 by Colorado water users. Associated legal costs, therefore, can be estimated at $1,467,000. No probability factor is applied as 20% unlawful diversion has already been estimated. Because the damages to Colorado water users have been accounted for in the water value analysis above, the intrastate litigation component consists only of direct legal expenditures.

$4.4M damages to senior water rights holders * 1/3 cost of litigation = $1,467,000 anticipated annual *intrastate* litigation

Element #5 – Assessment of Alternatives

There are two alternatives: 1) Add staff and resources sufficient to resolve the problem; 2) do not increase staff and resources and subject Colorado's water rights system to increasing abuse.

Alternative No. 1 shows the expenditure of funding the 7.0 FTE and supporting resources. The benefit represents the sum of the value of water properly delivered to senior water rights holders ($4,400,000) and the potential litigation expenses avoided ($4,592,000).

Alternative No. 2 involves no direct cost to the state.

Alternative	Year	Cost	FTE	Benefit to owners	Ratio of benefit/cost
# 1	1	$394,722	7.0	$8,992,000	22.8
	2	$354,512	7.0	$8,992,000	25.4
# 2	1	0		0	0
	2	0		0	0

Recommendation:
Increase appropriation to the Division of Water Resources by $394,722 and 7.0 FTE to provide the necessary large capacity well regulation (ground water administration) in the Rio Grande Basin (Water Division 3) to adequately support the pending rules and regulations.

Element #6 - Division 3 Ground Water Enforcement Decision Item Costs and Benefits - FY 2006-07

Job Title	PE II	IT II	EPST II	EPSA II	ADM AST II	GRAND TOT
FTE	1.0	1.0	2.0	2.0	1.0	7.0
Monthly Salary	$ 5,639	$ 3,883	$ 3,072	$ 2,181	$ 2,045	$ 16,820
Projected Overtime	-	-	-	-	-	-
Months	12	12	24	24	12	84
Salary	67,668	46,596	73,728	52,344	24,540	264,876
PERA (10.15%)	6,868	4,729	7,483	5,313	2,491	26,885
Medicare (1.45%)	981	676	1,069	759	356	3,841
Total PS	**$ 75,517**	**$ 52,001**	**$ 82,280**	**$ 58,416**	**$ 27,387**	**$ 295,602**
FY 2006-07						
Total miles	*12,000*	*0*	*48,000*	*48,000*	*0*	*108,000*
per mile cost	*0.320*		*0.320*	*0.320*		
Cost to reimburse	3,840	-	15,360	15,360	-	34,560
Total Mileage Expense	$ 3,840	$ -	$ 15,360	$ 15,360	$ -	$ 34,560
Additional leased space	*(1,100 square feet at $15.75 per sq-ft per year)*					17,325
Cell Phones (5 total)	*(five new for field personnel @ $45/mo.)*					2,700
Operating cost	500	500	1,000	1,000	500	3,500
Office/Personnel Op.	$ 500	$ 500	$ 1,000	$ 1,000	$ 500	$ 23,525
Total Operating	**$ 4,340**	**$ 500**	**$ 16,360**	**$ 16,360**	**$ 500**	**$ 58,085**
Capital						
Office furniture	2,021	2,021	4,042	4,042	2,021	14,147
Computer & Software	984	984	1,968	1,968	984	6,888
Field equipment			10,000	10,000		20,000
Other	-	-	-	-	-	-
Total Capital	**$ 3,005**	**$ 3,005**	**$ 16,010**	**$ 16,010**	**$ 3,005**	**$ 41,035**
						-
FY 2006-07 Cost	**$ 82,862**	**$ 55,506**	**$ 114,650**	**$ 90,786**	**$ 30,892**	**$ 394,722**
FY 2006-07 Benefit						**$ 8,992,000**
FY 2006-07 B/C Ratio						**22.8**

Division 3 Ground Water Enforcement Decision Item Costs and Benefits - FY 2007-08

Job Title	PE II	IT II	EPST II	EPSA II	ADM AST II	GRAND TOT
FTE	**1.0**	**1.0**	**2.0**	**2.0**	**1.0**	**7.0**
Monthly Salary	$ 5,639	$ 3,883	$ 3,072	$ 2,181	$ 2,045	$ 16,820
Projected Overtime	-	-	-	-	-	-
Months	12	12	24	24	12	84
Salary	67,668	46,596	73,728	52,344	24,540	264,876
PERA (10.15%)	6,868	4,729	7,483	5,313	2,491	26,885
Medicare (1.45%)	981	676	1,069	759	356	3,841
Total PS	**$ 75,517**	**$ 52,001**	**$ 82,280**	**$ 58,416**	**$ 27,387**	**$ 295,602**
FY 2006-07						
Total miles	*12,000*	*0*	*48,000*	*48,000*	*0*	*108,000*
per mile cost	*0.320*		*0.320*	*0.320*		
Cost of fleet miles	3,840	-	15,360	15,360	-	34,560
Total Mileage Expense	$ 3,840	$ -	$ 15,360	$ 15,360	$ -	$ 34,560
Additional leased space	*(1,100 square feet at $16.50 per sq-ft per year)*					18,150
Cell Phones (5 total)	*(five new for field personnel @ $45/mo.)*					2,700
Operating cost	500	500	1,000	1,000	500	3,500
Office/Personnel Op.	$ 500	$ 500	$ 1,000	$ 1,000	$ 500	$ 24,350
Total Operating	**$ 4,340**	**$ 500**	**$ 16,360**	**$ 16,360**	**$ 500**	**$ 58,910**
FY 2007-08 Cost	**$ 79,857**	**$ 52,501**	**$ 98,640**	**$ 74,776**	**$ 27,887**	**$ 354,512**
FY 2007-08 Benefit						**$ 8,992,000**
FY 2007-08 B/C Ratio						**25.4**

History of the Rio Grande Aquifers

In 1938 the Rio Grande Compact was enacted. The compact requires a percentage of the flows in the Rio Grande and Conejos rivers be delivered to the Colorado/New Mexico state line for the use of New Mexico, Texas and Mexico.

During the 1950s through 70s, ground water well development begins in the Rio Grande Basin.

In 1965, the Colorado General Assembly passed House Bill 65-1066 and created the Colorado Ground Water Management Act ("1965 Act"). This gave the State Engineer the authority to evaluate the use of ground water and deny a well permit if there was no unappropriated water available or if the well would cause material injury. This was the first time that ground water was incorporated into the priority system.

In 1966, Texas and New Mexico sued Colorado over the administration of the Rio Grande Compact. Colorado owed in excess of 900,000 acre-feet to the downstream states. To halt the lawsuit Colorado stipulated to make deliveries to the downstream states as required by the compact and to eradicate the debt.

In 1969, the Colorado General Assembly enacted the Water Rights Determination and Administration Act ("1969 Act"). The 1969 Act put tributary ground water clearly within the judicial jurisdiction of the water judges and the administrative jurisdiction of the State Engineer.

- The 1969 Act further recognized of the connection between ground water and surface water.
- The 1969 Act also introduced the concept of Plans for Augmentation. This was the primary means provided by the Act for integrating ground water into the priority system.

In 1972, the DWR issued a moratorium on the drilling of new non-exempt Confined aquifer wells and alluvial wells in the Rio Grande Basin.

In 1979, the DWR attempted to promulgate well administration rules in the Rio Grande Basin. Following months of trial and millions of dollars in expense incurred by the State, the surface water users, and the well users the Supreme Court found that wells were injuring senior water rights, but found that the DWR was unable to determine the individual impact from each well.

In 1981, the DWR issued a moratorium on the drilling of new non-exempt unconfined aquifer wells in the Closed Basin in the San Luis Valley.

In 1985, Colorado came into compliance with the terms of the Rio Grande Compact when Elephant Butte Reservoir spilled.

In 1998, the Colorado General Assembly passed HB98-1011 that mandated the development of the Rio Grande Decision Support System (RGDSS) to model the water supply, use, and operations in the Rio Grande Basin. The General Assembly also directed the DWR to promulgate rules and regulations regarding new appropriations from the confined aquifer.

In 2003, the State Engineer issued a moratorium on the issuance of Alternate Point of Diversion and Supplemental well permits to existing decreed well water rights. The State Engineer also issued a moratorium on deepening of existing or replacement wells. This was because the Division was unable to determine that the issuance of such permits would not cause injury to senior vested water rights, per section 37-92-137 C.R.S.

In June 2004, the DWR promulgated Rules and Regulations regarding new appropriations from the confined aquifer in accordance with HB98-1011. Those rules are set for judicial review in early 2006 as a result of challenges by a small group wanting to export water from the San Luis Valley.

In 2004, the Colorado General Assembly enacted SB 04-222 regarding the development of Subdistricts and clarifying the State Engineer's authority to promulgate rules and regulations regarding well administration.

In 2005, the State Engineer began the process to promulgate Rules and Regulations regarding Well Measurement in the Rio Grande Basin. These rules will be filed with the Water Court in June 2005.

Schedule 6
CHANGE REQUEST for FY 06-07

Department: Natural Resources
Priority Number: 4 of 21
Division: CWCB
Program: (new section)
Request Title: Water Supply Management, Development, and Implementation Assistance Section

Dept. Approval: William H. Lacivita **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Section 37-60-106 (1), C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	2,633,232	2,743,165		2,743,165	2,739,877	470,980	470,980		3,210,857	470,980
	FTE	29.0	30.0		30.0						
	GF										
	CF										
	CFE	2,633,232	2,743,165		2,743,165	2,739,877	470,980	470,980		3,210,857	470,980
	FF										
Personal Services	Total	2,544,577	2,650,722		2,650,722	2,650,722	458,500	458,500		3,109,222	458,500
	FTE	29.0	30.0		30.0						
	GF										
	CF										
	CFE	2,544,577	2,650,722		2,650,722	2,650,722	458,500	458,500		3,109,222	458,500
	FF										
Operating	Total	88,655	92,443		92,443	89,155	12,480	12,480		101,635	12,480
	FTE										
	GF										
	CF										
	CFE	88,655	92,443		92,443	89,155	12,480	12,480		101,635	12,480
	FF										

Letter Notation:
Cash Fund name/Number, Federal Fund Name: Construction Fund (CFE) - Fund # 424
IT Request ☐ Yes ☒ No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ☒ No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ Yes ☒ No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: Water Supply Management, Development, and Implementation Assistance Section
Priority #: 4 of 21
Division: Colorado Water Conservation Board (CWCB)

Summary of Requested Alternative
To receive $470,980 in operational funding from the CWCB Construction Fund (CFE), for technical contractual support, for a new section within the CWCB to ensure that an adequate water supply is available for the citizens of Colorado and the environment.

Problem or Opportunity Definition
In May 2003, the CWCB implemented the Statewide Water Supply Initiative (SWSI). SWSI was a basin-by-basin analysis of Colorado's current and future (through 2030) water uses and needs. The final report was delivered to the legislature on December 1, 2005. The report had a number of significant findings and recommendations, and has received accolades from: water users, local governments, professional organizations, the state legislature, agricultural and ranching interests, and environmental and recreational interests.

The study was a non-partisan look at the challenges and issues facing Colorado as our population is expected to grow from 4.3 million to 7.1 million people by the year 2030. The largest increase in population is expected to occur on the Front Range between Pueblo and Fort Collins. By 2030, it is expected that over 80 percent of the states population will reside in eleven Front Range counties. While the greatest number of people will live on the Front Range, Colorado's West Slope basins will grow the fastest based on a percentage increase. To serve this growth, Colorado will need an additional 630,000 acre-feet of municipal and industrial water. Water providers and planners under the *most optimistic scenario* have identified projects and processes to address about 80 percent (512,000 acre-feet) of the additional water need. This leaves a municipal and industrial gap of 20 percent (118,000 acre-feet) between supply and need.

Given this outlook, we know that competition for water and competing uses for water between "sectors" (municipal, industrial, agricultural, environmental and recreational) will intensify. Local communities will likely seek and compete for growth and economic development, and will not always look for opportunities to coordinate activities and cooperate with each other. Without a coordinated effort, opportunities to look at regional issues, impacts, and solutions will occur on an ad hoc basis, if at all. In addition, the 80 percent portion of identified projects and processes is an optimistic scenario, state

support is needed to help address financial, technical, political/institutional, and legal/water rights uncertainties. Through this decision item request, the CWCB will help to track and support identified projects and processes, and promote coordination and communication to maximize the beneficial use of Colorado's water supplies. In addition, CWCB will focus on developing and promoting opportunities to address the 20 percent municipal and industrial gap, agricultural shortages, and environmental and recreational enhancements.

From the SWSI study, we learned that addressing Colorado's water future is complex and will require a systematic effort to resolve the social, cultural, economic, political, and institutional issues which are imbedded in water resource management and development. Because of SWSI we know more today than ever about how Colorado will meet future water needs, but all of the questions are not answered. For example:

- We know that, if successful, water providers can meet 80 percent of our future needs but significant uncertainty exists, such as
  - How will we know if their plans are on track;
  - What will or can be done if their projects are unsuccessful;
  - Is adequate and affordable financing available;
  - How much competition is there for the same water supplies; and
  - Who will win and who will lose?
- We know that there is a 20 percent shortfall in meeting Colorado's 2030 municipal and industrial needs.
  - But how will this shortfall be met;
  - What might the impacts be to rural communities, agricultural users or Colorado's environment; and
  - Are there different options and what are the strengths and weaknesses of these options?
- Meeting recreational and environmental needs is vital to our quality of life and are major economic drivers for many of our communities.
  - How will our human uses and needs for water affect these important needs;
  - Can projects be developed that meet multiple purposes; and
  - Are there areas of the state were we need to address environmental and recreation needs now?

These are examples of the many complex questions and issues that need to be addressed to help ensure that Colorado can provide an adequate water supply for our citizens and the environment. The creation of a "water infrastructure and financial assistance" section would allow CWCB to focus on the necessary resources to help ensure that Colorado's water needs are met in a deliberate, orderly, and well-reasoned manner.

To continue the implementation of SWSI and to follow up with the findings and recommendations, as well as coordinating the implementation of House Bill 05-1177, the CWCB is proposing a new section using existing FTEs. Given the complexity of the issues, the geographic scope of the issues, and the need for technical support it is essential that adequate operational funding be provided.

Available Alternatives:
1. No action (Status Quo): Do not fund this decision item as requested
2. Provide support via new FTE's with partial contractor support
3. Fund the requested operational costs in the amount of $470,980, while utilizing existing FTE

Analytical Technique:
A qualitative benefit-cost analysis will be used to evaluate this change request.

Assessment of Alternatives:

1. **Alternative Number One:** Status Quo **(Not Recommended)**
   a. **Description:**
      Do not fund this decision item as requested.

   b. **Department's authority to implement the alternative:**
      Section 37-60-106 (1), C.R.S. Duties of the board – Summarizes the duties of the board, including but not limited to: promoting utilization of the waters of the state; formulating methods, means and plans to bring about the greater utilization of the waters of the state; gathering data and information looking toward the greater utilization of the waters of the state; to foster the conservation of the waters of the state; to recommend water infrastructure projects; and making mitigation recommendations to balance between the development of the state's water resources and the protection of the state's fish and wildlife resources.

   c. **Anticipated Outcome:**
      The CWCB's mission is to develop, conserve, protect and manage the state's water. If the decision item is not funded, water providers will continue to pursue their individual projects in a less coordinated fashion. The questions outlined above will, for the most part, go unanswered. This will result in inefficiencies and a cumulative impact, which are hard to foresee or predict. Our initial sense is that there will be a greater impact to agriculture and rural communities as water is acquired for senior agricultural uses and transferred to municipal and industrial use.

Without coordinated state support some of the projects that providers are pursuing may be less successful, take longer to implement or cost more. It is unclear how the 20 percent municipal and industrial water need gap will be filled. Currently, there are no identified solutions that are being pursued by local providers or interests. Environmental and recreation needs will continue to be addressed by the CWCB's instream flow program but alternate flow methods, habitat issues, and priority species needs will not be fully addressed. Agricultural users will continue to struggle to remain economically viable and will have little opportunity to develop additional water supply to meet their needs.

2. **Alternative Number Two:** Provide technical information, analysis, and stakeholder coordination via 3.0 new FTE with necessary operating costs, and partial contractor support. **(Not Recommended)**

   a. **Description:**

   Under this scenario, the technical support provided to the new section would come primarily from 3.0 new FTE. The 3.0 new FTE would be required to be at a high level of technical competence and have broad expertise. The new FTE would provide the labor to produce the necessary deliverables outlining study findings and recommendations, and infrastructure costing, design, and monitoring. In addition, the new FTE would track and support the projects and processes that are being pursued by water providers that are intended to address 80 percent of Colorado's future water needs. Producing reports and designs could result in a higher level of operating costs, but those costs are difficult to accurately estimate and are therefore not included at this time. Partial contractor support is included to ensure that diverse skill sets are provided and to have the flexibility to address sudden increases in workload.

   b. **Department's authority to implement the alternative:**

   Section 37-60-106 (1), C.R.S. Duties of the board – Summarizes the duties of the board, including but not limited to: promoting utilization of the waters of the state; formulating methods, means and plans to bring about the greater utilization of the waters of the state; gathering data and information looking toward the greater utilization of the waters of the state; to foster the conservation of the waters of the state; to recommend water infrastructure projects; and making mitigation recommendations to balance between the development of the state's water resources and the protection of the state's fish and wildlife resources.

   c. **Anticipated Outcome:**

   The CWCB's mission is to develop, conserve, protect and manage the state's water. Under Alternative 2, the new section would be comprised of existing FTE plus 3.0 new FTE. Tracking and supporting projects and processes that will address 80 percent of Colorado's future water needs is expected to be an ongoing effort over the foreseeable future. Developing, analyzing, and designing alternatives to address the remaining 20 percent has greater

uncertainty. Further, it is anticipated that a greater level of effort may be needed during the first 1-3 years. This could create a problem for hiring a long-term FTE. The breadth and complexity of expertise needed will be difficult to obtain without contractor support. In addition, if alternatives do proceed to design phase, long-term liability issues may arise if design and costing is not completed by a third party with appropriate error and omissions liability coverage.

3. **Alternative Number Three:** Provide $470,980 in operational funding for technical contractual support and use existing FTE for a new section within the CWCB to help ensure that an adequate water supply is available for the citizens of Colorado and the environment. **(Recommended)**

a. Description:

Under this recommended Alternative 3, existing FTE would be used to manage technical support contractor(s) and to coordinate with all CWCB sections. Funding for the technical support contractors would come from the requested operating funds.

b. Department's authority to implement the alternative:

Section 37-60-106 (1), C.R.S. Duties of the board – Summarizes the duties of the board, including but not limited to: promoting utilization of the waters of the state; formulating methods, means and plans to bring about the greater utilization of the waters of the state; gathering data and information looking toward the greater utilization of the waters of the state; to foster the conservation of the waters of the state; to recommend water infrastructure projects; and making mitigation recommendations to balance between the development of the state's water resources and the protection of the state's fish and wildlife resources.

c. Anticipated Outcome:

The CWCB's mission is to develop, conserve, protect and manage the state's water. Under this recommended Alternative 3, operational funds would be used to acquire broad technical expertise in water use, water availability, water rights, water supply infrastructure design and costing, as well as for facilitation and meeting coordination. Work will be completed to address both tracking and supporting projects and processes slated to meet 80 percent of Colorado's 2030 water needs, and to develop alternatives to meet the unmet 20 percent gap between supply and water need. The workload for this effort is expected to be higher in the first 1-3 years and is therefore conducive to contractor support rather than hire permanent state employees. Over the longer-term, depending on the outcome of the first few years of work, the need for contractor support should decrease and/or the need for full-time FTE could increase and the longer-term costs may be more similar to Alternative 2.

Background Information

Over the past two decades, the CWCB has identified several important trends. In the late 1980's, Colorado's economic conditions began to improve. In the 1990's, Colorado was the third fastest (30%) growing state in the nation. With this population growth, significant new demands were placed on our water supplies. These demands included both traditional uses of water (municipal, domestic, industrial, and agricultural) and greater emphasis on providing and protecting water for environmental and recreational uses. It is also important to note that the 1990's were among the wettest decade of the last century and that very few water development projects had been developed during this period of change. Safe and reliable water supplies have largely come from projects that were developed decades ago by far-sighted planners.

Many of our perceptions regarding water supply changed dramatically between 2000 and 2002 when Colorado experienced a severe and sustained drought. The convergence of growth, drought, and increased demands on our water supplies led the CWCB to launch the comprehensive evaluation of Colorado's current and future water needs, and an examination of how the State might address future needs and water management issues. This effort was formally authorized by the 2003 General Assembly and became known as the Statewide Water Supply Initiative (SWSI).

SWSI was an 18-month basin-by-basin analysis of the water management issues, challenges, and opportunities facing Colorado over the next thirty years. The project was completed with extensive local input via basin technical roundtables comprised of diverse water user/provider interests. SWSI is the most comprehensive investigation of Colorado's water needs and issues completed to date. We have learned a great deal about how Colorado intends to meet water needs, where we are short of supply, and what might be done to address that shortfall. But SWSI did not answer every question and issue; no single study could. SWSI provides a "snapshot" of where Colorado is today and what we may need in the future. This decision item request will allow the CWCB to build on the important work that began during the SWSI process. It will allow the CWCB to know more definitively if the projects and processes, that are intended to meet 80 percent of our future needs, will be successful or if they are facing significant implementation issues. If implementation issues arise, information will be obtained to either resolve the issues or seek alternative water development solutions. In addition, this decision item request will allow the CWCB to develop future water management alternatives and solutions to address Colorado's unmet water needs.

Linking Budgetary Expenditures to the Full Range of Outcomes:

1. **Alternative Number One: Do not fund this decision item (status quo).**
   By not funding this decision item and remaining status quo, the following items would occur:

1. Colorado would face a more uncertain water future.
2. A very small amount of information will be developed to specifically address Colorado's unmet water need.
3. Without greater coordination among water supplies and the state, Colorado would expect to see an increased impact on irrigated land. Municipal and Industrial providers will likely pursue the acquisition of senior agricultural water rights and transfer the water to these new uses. Rural economies and communities could be adversely impacted and the open space and wildlife benefits provided by irrigated agriculture would be lost.
4. Competition among water users for the same sources of water is not well understood. Some providers will win, while others will lose, whereas a more coordinated effort would minimize negative impacts.
5. Currently, there are no readily available mechanisms to address environmental and recreational enhancements. Conflicts between water providers and environmental/recreation interest will likely intensify as projects and processes move forward and water is developed for human uses. This likely will increase project costs and delay in project implementation.

2. **Alternative Number Two: Provide technical information, analysis, and stakeholder coordination via 3.0 new FTE with necessary operating costs and partial contractor support.**
Providing technical support for the new section via 3.0 new FTE will allow CWCB to assist water providers in successful implementation of their identified projects and processes to address 80 percent of Colorado's future demand. CWCB will better understand and help educate local governments, water providers and other stakeholders about how the 80 percent solution might affect local and regional areas. As previously mentioned the 80 percent "solution" is the most optimist scenario, by tracking and supporting projects and processes, the CWCB will identify implementation issues, will assist water providers in addressing these issues, and will better understand issues related to competition for the same sources of water. The CWCB will also be able to address the 20 percent gap as previously described. Using state FTEs to accomplish this effort could result in issues related to long-term workload. It is likely that the needs and expertise for future work will shift. This could result in reduced workload for the permanently added FTE and/or the wrong set of skills of the newly hired FTEs. The limited operating money is likely an issue as the development of technical products and facilitation/mediation of disputes would require some operating dollars. To help offset some of these issues partial contractor support is included.

3. **Alternative Number Three: Provide $470,980 in operational funding for technical contractual support and use existing FTE for a new section within the CWCB to help ensure that an adequate water supply is available for Colorado's citizens and the environment.**
This alternative allows the CWCB to address the issues described under Alternatives 1 and 2 and as outlined in this analysis. Accomplishing the work via the additional operational dollars allows the agency to remain flexible in obtaining

the proper level of effort and expertise. Work-load issues would be more easily addressed and there would not be the long-term commitment of FTE. Contractor support is highly desirable to address fluctuating workloads where you can focus higher levels of effort for discrete periods of time. In addition, broader expertise can be used for finite times. Work products and findings developed by the new section, with technical contractor support, can be used to conduct work load analysis to determine if a shift to permanent state FTE would be more cost effective/efficient. Therefore, this alternative allows the CWCB to acquire the proper expertise to perform the necessary work with the greatest flexibility without prematurely committing to hiring permanent new state FTE.

Budgetary Cost Assumptions and Calculations:

1. **Funding Alternative Number One: Do not fund this decision item (status quo)**
   This alternative has no budgetary costs associated with it.

2. **Funding Alternative Number Two: Provide technical information, analysis, and stakeholder coordination via 3 new FTE with necessary operating costs, and partial contractor support.**
   This alternative would increase personnel services by $409,319 and operating costs would increase by $37,716.

3. **Funding Alternative Number Three: Provide $470,980 in operational funding fortechnical contractual support and use existing FTE for a new section within the CWCB to help ensure that an adequate water supply is available for Colorado's citizens and the environment.**
   The operating budget line would be increased by $470,980. Existing FTE would be utilized without impacting other programs. The highest initial costs relate to the funding of Alternative 3, but this Alternative would provide the greatest benefits for the State of Colorado as outlined under the ***Linking Budgetary Expenditures to the Full Range of Outcomes*** section of this decision item request. Alternative 3 allows the CWCB to assist water providers in successful implementation of their identified projects and processes to address 80 percent of Colorado's future demand and addresses the 20% gap.

Application of the Analytical Technique/Assumptions and Calculations:

The chart below identifies the costs for a qualitative benefit-cost analysis for the three alternatives in this decision item request. As outlined in the document, as well as in the table below the *Costs for Qualitative Cost-Benefit Analysis*, the benefits for the CWCB, State of Colorado, and Colorado citizens outweigh the initial investment to fund this new section, in the amount of $470,980, within the CWCB.

Costs for Qualitative Benefit-Cost Analysis

	Alternative #1: no action	Alternative #2: new FTE[4]	Alternative #3: add'l operational funding
meeting costs	N/A	$ 3,200	$ 3,200
travel for current state employee	N/A	$ 9,280	$ 9,280
[1] Annual salary for PSRS IV	N/A	$ 78,852	N/A
[1]Annual Salary for Prof Engineer II	N/A	$ 78,852	N/A
[1]Annual Salary for PSRS III	N/A	$ 70,365	N/A
[2]Operating expenses	N/A	$ 10,515	$ -
[3]Travel for new 3.0 FTE	N/A	$ 13,872	$ -
[5]Consultant: Proj Mgr (600 hrs x $160/hr)	N/A	N/A	$ 96,000
[5]Consultant: Engineer (1250 hrs x $150/hr)	N/A	$ 93,750	$ 187,500
[5]Consultant: Hydrologist (1250 hrs x $140/hr)	N/A	$ 87,500	$ 175,000
TOTAL	$ -	$ 446,186	$ 470,980

Notes:

[1] Salary includes salary + state benefits of PERA (10.65%), Medicare (.0145), HLD ($303.50), STD (.0016)

[2] Operating expenses include: $500, $984 (PC - one-time), $2,021 (furniture - one-time) x 3.0 FTE

[3] Travel for new 3.0 FTE includes mileage (16 mtgs @ average 200 miles R.T. x .32/mile = $1024/FTE); Lodging (16 mtgs x ave. 2 nts x $75/nt = $2400/FTE); Meals (16 mtgs x 3 days x $25/day = $1200/FTE)

[4] Referenced consultant costs for Alternative 2, if applicable, are assumed to be one half of Alternative3

[5] Consulting costs for Alternatives 2 and 3 are based on "fair and reasonable" standard and market based experience with engineering and scientific consulting. For costing purposes it appears that three individual consultants are used when in reality these are level of efforts and often times you may have access to multiple experts and higher levels of effort for a defined periods of time to address fluctuating workload.

Benefits for Qualitative Benefit-Cost Analysis

The principal goals of the new CWCB section would be to help ensure the success of the 80 percent identified projects and processes and to help address the 20 percent municipal and industrial gap, agricultural shortages and environmental and recreation enhancements. Full quantification of these benefits is not possible at this time because specific alternatives have not been developed. However, to illustrate potential benefits, it is possible to make base assumptions.

For this analysis, the following assumptions are made:

1) The greatest economic benefits will be from municipal and industrial water development and are therefore the focus of the analysis.
2) The new section will help identify and address legal, institutional, political and technical issues that could otherwise prevent the successful implementation of the 80 percent identified projects and processes. It is assumed that the section would help 10 percent of the projects (i.e., 80 percent of Colorado's future water need is 512,000 acre-feet x 10 percent = 51,200 acre-feet).
3) The new section will be successful in addressing half of the 20 percent municipal and industrial gap (20 percent gap is 118,000 acre-feet x 50 percent = 59,000 acre-feet).
4) Environmental and Recreational benefits will occur, but are not quantified here.
5) Agricultural shortages are prevalent throughout the state, but no specific alternatives have been identified at this time so benefits are not quantified here.
6) The cost of water varies throughout the state. However, the greatest need and shortfall are located in the Arkansas and South Platte basins. Therefore, the analysis focuses on information for these basins and includes ranges of values.
7) The costs to build infrastructure are dependant on many factors including location, water availability, and the design for the specific project. These factors will greatly influence cost and there is not a strong basis to make assumptions at this time. In addition, no available studies were identified that accurately describe the "'multiplier effect" that water development provides (i.e., one acre foot of municipal or industrial water provides jobs and commerce in several economic sectors). To help address these uncertainties the analysis focuses on the market value of water that has been or is being sold on the Front Range.

Finally, it is noted that if water providers are unsuccessful in implementing the new water supply development projects lists, they will need to increase the acquisition of senior agricultural water supplies. The costs for acquiring existing senior water rights along the Front Range are increasing significantly as competition for the limited amount of water intensifies. The

failure to identify projects and processes will place increased pressure on this limited resource and further increase water acquisition costs. For this reason the cost summary is realistic and, if anything, would undervalue water for the Front Range. In areas of greater water availability, costs would be significantly less.

Examples of existing acquisition costs include Colorado-Big Thompson units, South Adams-Farmers Reservoir and Irrigation Company (FRICO), East Cherry Creek-United-FRICO and offers to the South Metro water providers by High Plains A&M and Resource Colorado Water and Sanitation Metropolitan District and are shown in the table below.

Description	Cost per Acre-Foot	Notes
Colorado – Big Thompson Units	$17,000	Based on $12,000 per unit and 0.7 AF per unit. CBT has sold for over $17,000/unit in recent years.
South Adams - FRICO	$12,000	FRICO acquired 5,000 AF of consumable effluent from Denver Water in a water court settlement. The effluent was sold to South Adams County Water and Sanitation District under a series of options.
East Cherry Creek – United - FRICO	$15,000	Agricultural water will be converted to firm yield and withdrawn from Beebe Draw aquifer. Costs do not include pipelines, pump stations, and water treatment facilities.
High Plains A&M	$28,000[1]	Water transferred from the Ft. Lyons Canal in the Arkansas basin would be treated to an acceptable quality and delivered to the headwaters of Cherry Creek for distribution to South Metro Providers. Cost does not include additional pipelines and treatment facilities to deliver the water to individual providers.
Resource Colorado Water and Sanitation Metropolitan District	$27,000[1]	Lost Creek designated groundwater basin water. Costs do not include pipelines, pump stations, and water treatment facilities.

[1]These costs include some infrastructure so they are not included in the range, but were included as additional points of reference.

Estimated Benefit to Colorado Based on the Market Value of Recent Water Purchases

	Alternative #1: no change	Alternative #2: new FTE	Alternative #3: add'l operational funding
Value of water is estimated based on the range of : $12,000-$17,000 per acre foot x 110,200 acre-feet of need met based on the above assumptions	$0.00	$1,322,400,000-$1,873,400,000	$1,322,400,000-$1,873,400,000

Assumptions and Calculations

The costs and calculations illustrated on the following chart represent the costs related to Alternative #3, to provide $470,980 in operational funding for technical contractual support and use existing FTE for a new section within the CWCB to help ensure that an adequate water supply is available for the citizens of Colorado and the environment. It is assumed that this alternative would best serve the needs of the State by hiring contractors for this new Section to be used to acquire broad technical expertise in water use, water availability, water rights, water supply infrastructure design and costing, as well as for facilitation and meeting coordination.

Costs

Water Supply Management, Development, and Implementation Assistance Section

Assumptions:
Quarterly meetings in each of the eight water basins (total of 32 meetings)
Rental Space (assumed for 50% of the meetings)
Rental Space at $100 per day x 2 days per meeting
Vehicle Rental for an average of 2 days per meeting
Vehicle Rental at $45 per day
Meal reimbursement at $25 per day
Lodging at average of 2 nights per trip at $75 per night
Consultants

32 Meetings:		
Rental Space	$	3,200
Video/Tele-Conferencing		
Travel (for current state employee):		
Vehicle Rental	$	2,880
Meals 1.0 FTE	$	1,600
Lodging 1.0 FTE	$	4,800
Personnel:		
Consultants to conduct hydrologic and technical analysis support on water-use, water availability, water rights, water supply infrastructure, facilitation, costing and feasibility study level design.		
Project Manager at $160/hr x 600 hours	$	96,000
Engineer at $150/hr x 1250 hours	$	187,500
Hydrologist at $140/hr x 1250 hours	$	175,000
TOTAL	$	470,980

Consulting support will help address the questions outlined on page 2 of this document. Efforts will focus on: addressing water project uncertainty, including alternatives development; alternatives development; identification and development of supply options to meet the water supply gap; fostering cooperation among water providers to avoid unnecessary competition and conflict over water supply and to maximize existing resources; identification of potential impacts of water transfers from agriculture on rural communities and development of possible alternatives to minimize these impacts; identification of methods for prioritizing and addressing environmental and recreation resource needs and options to achieve these needs; and describing and outlining the "proper balance" between human and environmental uses of water.

Key Issues For Decision Making

Funding for the new section would be from the CWCB Construction Fund, which is a cash funds exempt source. Currently, this fund provides dollars for CWCB operations, grants, and loans for water projects. Maintaining the financial health of the fund is essential to the CWCB to accomplish its mission and statutory duties. Careful management of non-revenue generating expenditures (CWCB operations and grants) is a top priority for the CWCB. To ensure the health of the fund, the increase in operating dollars for the CWCB may require a reduction in money available for other grants. In addition, CWCB is considering other budgetary and/or legislative action to address long-term agency funding.

Descriptions of any omissions, biases, or uncertainties

See the previously discussed items under the *Linking Budgetary Expenditures to the Full Range of Outcomes* section regarding long-term uncertainties for hiring new permanent FTE under Alternative 2.

Recommendation

The Colorado Water Conservation Board recommends Alternative 3, which involves establishing a new section with existing FTE and $470,980 operating budget.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Dept. Approval: William H. Lewis **Date:** 11/10/2005
Priority Number: 5 of 21
OSPB Approval: [signature] **Date:** 11-11-05
Division: Wildlife
Statutory Citation: 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

		1	2	3	4	5	6	7	8	9	10
	Fund	Prior-Year Actual FY 2004-05	Appropriation FY 2005-06	Supplemental Request FY 2005-06	Total Revised Request FY 2005-06	Base Request FY 2006-07	Decision/Base Reduction FY 2006-07	November 1 Request FY 2006-07	Budget Amendment FY 2006-07	Total Revised Request FY 2006-07	Change from Base in Out Year FY 2007-08
Total of All Line Items	**Total**	77,308,787	78,921,402	0	78,921,402	78,921,402	0	78,921,402	0	78,921,402	0
	FTE	754.3	762.4	0.0	762.4	762.4	0.0	762.4	0.0	762.4	0.0
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	68,096,905	69,653,095	0	69,653,095	69,653,095	0	69,653,095	0	69,653,095	0
	FF	9,211,882	9,268,307	0	9,268,307	9,268,307	0	9,268,307	0	9,268,307	0
Director's Office Personal Services	**Total**	1,360,135	1,548,716	0	1,548,716	1,548,716	-1,548,716	0	0	0	-1,548,716
	FTE	14.70	18.00	0.00	18.00	18.00	-18.00	0.00	0.00	0.00	-18.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,243,723	1,438,025	0	1,438,025	1,438,025	-1,438,025	0	0	0	-1,438,025
	FF	116,412	110,691	0	110,691	110,691	-110,691	0	0	0	-110,691
Director's Office Operating Expenses	**Total**	272,344	401,521	0	401,521	401,521	-401,521	0	0	0	-401,521
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	267,571	397,317	0	397,317	397,317	-397,317	0	0	0	-397,317
	FF	4,773	4,204	0	4,204	4,204	-4,204	0	0	0	-4,204
Director's Office	**Total**	0	0	0	0	0	1,950,237	1,950,237	0	1,950,237	1,950,237
	FTE	0.00	0.00	0.00	0.00	0.00	18.0	18.00	0.00	18.00	18.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	0	0	0	0	0	1,835,342	1,835,342	0	1,835,342	1,835,342
	FF	0	0	0	0	0	114,895	114,895	0	114,895	114,895

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 5 of 21
Division: Wildlife
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

Dept. Approval:
OSPB Approval:
Statutory Citation: 33-1-101

Date: 11/10/2005
Date:

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Biological Programs Personal Services	Total	15,459,843	16,037,890	0	16,037,890	16,037,890	-16,037,890	0	0	0	-16,037,890
	FTE	227.80	232.30	0.00	232.30	232.30	-232.30	0.00	0.00	0.00	-232.30
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	12,955,530	13,040,338	0	13,040,338	13,040,338	-13,040,338	0	0	0	-13,040,338
	FF	2,504,313	2,997,552	0	2,997,552	2,997,552	-2,997,552	0	0	0	-2,997,552
Biological Programs Operating Expenses	Total	8,041,166	9,149,084	0	9,149,084	9,149,084	-9,149,084	0	0	0	-9,149,084
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	5,614,523	6,722,277	0	6,722,277	6,722,277	-6,722,277	0	0	0	-6,722,277
	FF	2,426,643	2,426,807	0	2,426,807	2,426,807	-2,426,807	0	0	0	-2,426,807
State Fish Hatcheries Personal Services	Total	4,770,877	4,543,934	0	4,543,934	4,543,934	-4,543,934	0	0	0	-4,543,934
	FTE	94.00	93.60	0.00	93.60	93.60	-93.60	0.00	0.00	0.00	-93.60
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	4,463,838	4,162,351	0	4,162,351	4,162,351	-4,162,351	0	0	0	-4,162,351
	FF	307,039	381,583	0	381,583	381,583	-381,583	0	0	0	-381,583
State Fish Hatcheries Operating Expenses	Total	3,526,959	3,519,619	0	3,519,619	3,519,619	-3,519,619	0	0	0	-3,519,619
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	3,188,594	3,141,896	0	3,141,896	3,141,896	-3,141,896	0	0	0	-3,141,896
	FF	338,365	377,723	0	377,723	377,723	-377,723	0	0	0	-377,723

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources **Dept. Approval:** **Date:** 11/10/2005
Priority Number: 5 of 21 **OSPB Approval:** **Date:**
Division: Wildlife **Statutory Citation:** 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

		1	2	3	4	5	6	7	8	9	10
	Fund	Prior-Year Actual FY 2004-05	Appropriation FY 2005-06	Supplemental Request FY 2005-06	Total Revised Request FY 2005-06	Base Request FY 2006-07	Decision/Base Reduction FY 2006-07	November 1 Request FY 2006-07	Budget Amendment FY 2006-07	Total Revised Request FY 2006-07	Change from Base in Out Year FY 2007-08
Regional Operations Personal Services	Total	17,198,035	16,577,572	0	16,577,572	16,577,572	-16,577,572	0	0	0	-16,577,572
	FTE	299.80	294.70	0.00	294.70	294.70	-294.70	0.00	0.00	0.00	-294.70
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	15,617,865	15,048,731	0	15,048,731	15,048,731	-15,048,731	0	0	0	-15,048,731
	FF	1,580,170	1,528,841	0	1,528,841	1,528,841	-1,528,841	0	0	0	-1,528,841
Regional Operations Operating Expenses	Total	5,347,070	4,732,738	0	4,732,738	4,732,738	-4,732,738	0	0	0	-4,732,738
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	4,901,342	4,320,866	0	4,320,866	4,320,866	-4,320,866	0	0	0	-4,320,866
	FF	445,728	411,872	0	411,872	411,872	-411,872	0	0	0	-411,872
Information and Education Personal Services	Total	1,935,894	2,227,549	0	2,227,549	2,227,549	-2,227,549	0	0	0	-2,227,549
	FTE	29.80	34.50	0.00	34.50	34.50	-34.50	0.00	0.00	0.00	-34.50
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,717,046	1,965,185	0	1,965,185	1,965,185	-1,965,185	0	0	0	-1,965,185
	FF	218,848	262,364	0	262,364	262,364	-262,364	0	0	0	-262,364
Information and Education Operating Expenses	Total	2,143,897	2,110,375	0	2,110,375	2,110,375	-2,110,375	0	0	0	-2,110,375
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,934,275	1,884,882	0	1,884,882	1,884,882	-1,884,882	0	0	0	-1,884,882
	FF	209,622	225,493	0	225,493	225,493	-225,493	0	0	0	-225,493

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources **Dept. Approval:** **Date:** 11/10/2005
Priority Number: 5 of 21 **OSPB Approval:** **Date:**
Division: Wildlife **Statutory Citation:** 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Law Enforcement Administration Personal Services	Total	797,792	812,212	0	812,212	812,212	-812,212	0	0	0	-812,212
	FTE	9.50	10.30	0.00	10.30	10.30	-10.30	0.00	0.00	0.00	-10.30
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	797,792	812,212	0	812,212	812,212	-812,212	0	0	0	-812,212
	FF	0	0	0	0	0	0	0	0	0	0
Law Enforcment Administration Operating Expenses	Total	195,497	185,635	0	185,635	185,635	-185,635	0	0	0	-185,635
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	195,497	185,635	0	185,635	185,635	-185,635	0	0	0	-185,635
	FF	0	0	0	0	0	0	0	0	0	0
Special License Fund	Total	96,929	20,430	0	20,430	20,430	-20,430	0	0	0	-20,430
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	96,929	20,430	0	20,430	20,430	-20,430	0	0	0	-20,430
	FF	0	0	0	0	0	0	0	0	0	0
State Trust Land & Property Leases	Total	913,937	889,964	0	889,964	889,964	-889,964	0	0	0	-889,964
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	527,488	589,964	0	589,964	589,964	-589,964	0	0	0	-589,964
	FF	386,449	300,000	0	300,000	300,000	-300,000	0	0	0	-300,000

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources **Dept. Approval:** **Date:** 11/10/2005
Priority Number: 5 of 21 **OSPB Approval:** **Date:**
Division: Wildlife **Statutory Citation:** 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Wildlife Management	**Total**	0	0	0	0	0	60,807,002	60,807,002	0	60,807,002	60,807,002
	FTE	0.00	0.00	0.00	0.00	0.00	665.4	665.40	0.00	665.40	665.40
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	0	0	0	0	0	51,894,767	51,894,767	0	51,894,767	51,894,767
	FF	0	0	0	0	0	8,912,235	8,912,235	0	8,912,235	8,912,235
Support Services Personal Services	**Total**	2,819,310	2,931,976	0	2,931,976	2,931,976	-2,931,976	0	0	0	-2,931,976
	FTE	40.60	39.70	0.00	39.70	39.70	-39.70	0.00	0.00	0.00	-39.70
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	2,804,610	2,912,819	0	2,912,819	2,912,819	-2,912,819	0	0	0	-2,912,819
	FF	14,700	19,157	0	19,157	19,157	-19,157	0	0	0	-19,157
Support Services Operating Expenses	**Total**	1,336,112	1,619,174	0	1,619,174	1,619,174	-1,619,174	0	0	0	-1,619,174
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,336,112	1,619,174	0	1,619,174	1,619,174	-1,619,174	0	0	0	-1,619,174
	FF	0	0	0	0	0	0	0	0	0	0
Information Technology Personal Services	**Total**	1,449,626	1,478,949	0	1,478,949	1,478,949	-1,478,949	0	0	0	-1,478,949
	FTE	16.60	18.00	0.00	18.00	18.00	-18.00	0.00	0.00	0.00	-18.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,449,626	1,478,949	0	1,478,949	1,478,949	-1,478,949	0	0	0	-1,478,949
	FF	0	0	0	0	0	0	0	0	0	0

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources **Dept. Approval:** **Date:** 11/10/2005
Priority Number: 5 of 21 **OSPB Approval:** **Date:**
Division: Wildlife **Statutory Citation:** 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

		1	2	3	4	5	6	7	8	9	10
	Fund	Prior-Year Actual FY 2004-05	Appropriation FY 2005-06	Supplemental Request FY 2005-06	Total Revised Request FY 2005-06	Base Request FY 2006-07	Decision/Base Reduction FY 2006-07	November 1 Request FY 2006-07	Budget Amendment FY 2006-07	Total Revised Request FY 2006-07	Change from Base in Out Year FY 2007-08
Information Technology Operating Expenses	Total	1,662,210	1,235,174	0	1,235,174	1,235,174	-1,235,174	0	0	0	-1,235,174
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,225,410	1,235,174	0	1,235,174	1,235,174	-1,235,174	0	0	0	-1,235,174
	FF	436,800	0	0	0	0	0	0	0	0	0
Engineering Personal Services	Total	1,822,212	1,690,406	0	1,690,406	1,690,406	-1,690,406	0	0	0	-1,690,406
	FTE	21.50	21.30	0.00	21.30	21.30	-21.30	0.00	0.00	0.00	-21.30
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,822,212	1,690,406	0	1,690,406	1,690,406	-1,690,406	0	0	0	-1,690,406
	FF	0	0	0	0	0	0	0	0	0	0
Engineering Operating Expenses	Total	156,040	157,754	0	157,754	157,754	-157,754	0	0	0	-157,754
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	156,040	157,754	0	157,754	157,754	-157,754	0	0	0	-157,754
	FF	0	0	0	0	0	0	0	0	0	0
Technical Services	Total	0	0	0	0	0	9,113,433	9,113,433	0	9,113,433	9,113,433
	FTE	0.00	0.00	0.00	0.00	0.00	79.0	79.00	0.00	79.00	79.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	0	0	0	0	0	9,094,276	9,094,276	0	9,094,276	9,094,276
	FF	0	0	0	0	0	19,157	19,157	0	19,157	19,157

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources **Dept. Approval:** **Date:** 11/10/2005
Priority Number: 5 of 21 **OSPB Approval:** **Date:**
Division: Wildlife **Statutory Citation:** 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Wildlife Commission	**Total**	139,017	160,000	0	160,000	160,000	0	160,000	0	160,000	0
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	139,017	160,000	0	160,000	160,000	0	160,000	0	160,000	0
	FF	0	0	0	0	0	0	0	0	0	0
Game Damage Claims & Prevention	**Total**	890,526	1,050,000	0	1,050,000	1,050,000	0	1,050,000	0	1,050,000	0
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	890,526	1,050,000	0	1,050,000	1,050,000	0	1,050,000	0	1,050,000	0
	FF	0	0	0	0	0	0	0	0	0	0
Instream Flow Program	**Total**	296,027	296,027	0	296,027	296,027	0	296,027	0	296,027	0
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	74,007	74,007	0	74,007	74,007	0	74,007	0	74,007	0
	FF	222,020	222,020	0	222,020	222,020	0	222,020	0	222,020	0
Habitat Partnership Program	**Total**	1,825,861	2,500,000	0	2,500,000	2,500,000	0	2,500,000	0	2,500,000	0
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,825,861	2,500,000	0	2,500,000	2,500,000	0	2,500,000	0	2,500,000	0
	FF	0	0	0	0	0	0	0	0	0	0

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Dept. Approval:
Date: 11/10/2005
Priority Number: 5 of 21
OSPB Approval:
Date:
Division: Wildlife
Statutory Citation: 33-1-101
Program: Wildlife Habitat and Species Management; Wildlife Recreation; Wildlife Information and Education, Responsive Management
Request Title: Line Item Consolidation

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Indirect Cost Assessment	Total	2,851,471	3,044,703	0	3,044,703	3,044,703	0	3,044,703	0	3,044,703	0
	FTE										
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	2,851,471	3,044,703	0	3,044,703	3,044,703	0	3,044,703	0	3,044,703	0
	FF	0	0	0	0	0	0	0	0	0	0

* Actual expenditures will be added to the schedule after period 12 close. Final expenditures won't be available until after July 30, 2005. FTE and expenditures by fund source will not be available until mid-September.
** The appropriation for personal services line items includes salary survey and AED. Federal funds by line item are estimates only and may change depending on grant awards the Division receives.

Letter Notation: No Change

Cash Fund name/Number, Federal Fund Name: Wildlife Cash Fund, Fund 410; Colorado Outdoors Revolving Fund, Fund 418; PEAC Fund 426, Habitat Partnership Fund, Fund 423

IT Request ☐ Yes ■ No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**

Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency

Request for New or Replacement Vehicles: ☐ Yes ■ No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/GSS)**

Request Affects Another Department(s): ☐ Yes ■ No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: Long Bill Line Item Consolidation
Priority number: 5 of 21
Division: Division of Wildlife
Program Title:
Tracking Number: DNR

Summary of Requested Alternative: Consolidate the Long Bill appropriations for the Division of Wildlife's (CDOW) operating funds with a net zero change in total spending authority. CDOW's operating budget is currently appropriated in 25 separate line items (See Budgetary Cost Calculations and Assumptions section), which are grouped into two major sections – "Division Operations" and "Special Purpose." There are 18 line items within under the "Division Operations" section, which are grouped based on the Division's organizational structure. Within this section there are two separate line items – one for personal services and one for operating – for each of nine groups.

The request combines all personal services and operating lines items into a single line item within each organizational group, and then merges several of these groups together. This would reduce the number of line items under the "Division Operations" section from 18 to 3. The request also incorporates several of the special purpose lines into the proposed line items under Division Operations, but retains separate line item appropriations for Commission Discretionary, Game Damage Prevention, Instream Flow Program, Indirect Cost and Habitat Partnership under the "Special Purpose" section. This results in a reduction in the total number of line items from 25 to 8. The proposed format is show in a table under the budget assumption and cost section.

Problem or Opportunity Definition

Appropriating the operating budget in 25 separate line items impedes the Division's ability to efficiently and effectively set priorities and manage its resources. As a self-funded agency the Division needs the ability to operate in a manner that ensures that income generated from the sale of hunting and fishing license is used to fund top priorities. The Division's work load is often driven by rapidly changing environmental/biological needs and new and competing demands from hunters and anglers, environmentalists and other constituents. The CDOW is continually faced with major programmatic,

policy and political challenges beyond the control of the agency that place considerable pressure on its limited resources. Having the ability to set priorities, to effectively manage the organization and to direct financial resources accordingly is the only way the Division can respond quickly and effectively. Under the current long bill format, the Division is hamstrung because it doesn't have the flexibility to shift resources to its highest priorities in a timely manner. The CDOW can reallocate funds among the 25 line items only through a supplemental request or through a change request – both of which can have very long lead times (a year or longer). Greater flexibility in managing the budget will allow the Division to address changing priorities and manage costs.

Available Alternatives

1. No budgetary changes.
   a. Description: Manage resources within the current Long Bill format and refrain from redirecting resources during the fiscal year to address changing conditions and priorities; redirect resources annually through the supplemental and change request process.
   b. Department's authority to implement the alternative: 33-1-101, 110 C.R.S.
   c. How this alternative promotes specific department objectives:

      1.1 Respond to demands by constituents by providing services, information, and assistance

      1.5 Protect the diversity of Colorado's wildlife resources by continuing to identify and implement creative strategies to stabilize and enhance native species populations and to recover threatened and endangered species in ways that minimize adverse impacts on local governments, private landowners, and other citizens.

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

      1.7 Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs.

      2.5 Improve customer service to the citizens of Colorado and visitors by demonstrating a 10 percent increase in customer satisfaction and implementing initiative to improve access to department services to under-served populations.

2.
   a. Description: Change the Long Bill to the more traditional format of Personal Services, Operating and Special Purpose line items, for a total of four line items.
   b. Department's authority to implement the alternative: 33-1-101, 110 C.R.S.
   c. How this alternative promotes specific department objectives: Same as Alternative 1.

3. Recommended Alternative
   a. Description: Provide the Division with greater management flexibility by consolidating personal services, operating expenses and several special purpose lines into three line items under Division Operations, and retaining separate line item appropriations for Commission Discretionary, Game Damage Prevention, Instream Flow Program, Indirect Cost and Habitat Partnership under the "Special Purpose" section.
   b. Department's authority to implement the alternative: 33-1-101, 110 C.R.S.
   c. How this alternative promotes specific department objectives: Same as Alternative 1 and 2.

Analytical Technique Used

Qualitative Benefit-Cost Analysis

Assessment of Alternatives:

- Background information

During the course of any given fiscal year the Division finds it necessary to alter priorities, modify work plans or make organizational changes to effectively manage the agency. With a relatively small number of line items many of these adjustments can be implemented within the same line item, with little impact on spending authority. With a larger number of line items, making the necessary adjustments becomes more problematic. Other high priority efforts funded in the line item must be scaled back to avoid the risk of being overspent, even though ample spending authority exists in other lines. This leads to a divergence from agency top priorities and toward lower priority work that can actually be funded and accomplished. Alternately, the agency can forego making the desired changes in its work plans in order to stay within existing line item authority resulting in missed opportunities to redirect resources to higher valued work.

For example, an opportunity has recently emerged to enter into agreements with private landowners for the purpose of protecting the Gunnison Sage Grouse and to avoid federal listing. The opportunity arose suddenly, and has a very limited window of opportunity (due to US Fish and Wildlife Service actions beyond the CDOW's control). Executing the large number of agreements will require considerable time and effort on the part of CDOW personnel in the Field Operations branch, funded out of the "Regional Operations – Personal Services" line item. The time and effort required cannot be spared within the Field Operations branch due to other high priority demands in that branch. Resources (time and effort) can be spared in the Wildlife Programs branch, by delaying certain projects that are not as time-critical. However, the CDOW is prohibited from reassigning priorities in this manner because two separate line items are involved. By the time a supplemental request or a change request could be approved, the opportunity will have passed. Similarly, once the landowner sign-up is complete, priorities will return to their former state and the resources will be needed once again in the Wildlife Programs line item. Trying to respond to these types of situations through numerous, ongoing annual supplemental or change requests are impractical, particularly in the context of operating as an effective enterprise.

Line item constraints also impact the Division's ability to make minor organizational changes that improve the operation of the agency and the delivery of programs. For example, after conducting an analysis of the game damage prevention program, the Division determined that transferring supervision of the program to the Field Operations branch (funded out of the Regional Operations – Personal Services line item) from the Wildlife Programs branch (funded out of the Wildlife Programs – Personal Services line item) was a more efficient and effective approach to managing the program because of the local contact with landowners. There were no other changes in the program - no change in priorities, workload, or program costs. To simply change the supervisor for the 2 FTE in the program (out of 750 total agency FTE) required a decision item to transfer spending authority between the two different line items involved.

Appropriating personal services and operating expenditures in separate lines also limits the Division's ability to implement management decisions that benefit the agency. If the Division decided that it was more cost effective to scale back or idle production at one of its hatcheries and instead purchase fish from private growers, that decision couldn't be readily implemented because of the personal services and operating distinction. FTE costs are a major cost of hatchery operations, which are funded within the Personal Services appropriation. Personnel savings realized from scaling back or halting production at a facility cannot be used to purchase fish from a private grower because those costs are considered an operating expense and are funded within the operating expense line. Conversely, the operating dollars to purchase fish from private growers couldn't be redirected to hire additional staff if an analysis disclosed that overall costs could be reduced by using the hatchery system to produce fish. Again, a supplemental request or change request would need to be approved simply to change the source of the fish used for stocking.

Finally, the large number of line items requires the CDOW to be very conservative in its spending plans each year, with the likely result that spending authority will revert in numerous line items. As noted above, challenges, opportunities, and

needs arise frequently during the year, and the CDOW must respond. Under the current line item structure, a new need in the Field Operations branch must be accommodated within the Regional Operations line item. A new need in the hatchery system must be accommodated in the Hatchery Operations line item, and so on, for each of the 25 operational line items. The CDOW cannot meet a new need in the hatcheries by delaying work or shifting resources out of the Wildlife Programs line item.

In 1997-98, CDOW developed a "modified zero-base" budget process for developing annual operating budgets at a very detailed programmatic level. Budgets are developed within the Division for each of 125+ "work packages" defined as a discreet collection of work that's required to accomplish specific objectives. Division managers develop budgets annually for each work package based on priorities within their unit with no assumed level of "base" funding. Those priorities and budgets are reviewed and approved up the management chain with final approval given by the Director. The purpose in changing the internal budget process was to develop a much better understanding of program costs, how existing resources were being allocated and to continually assess priorities and redirect resources to the highest priority work. Each year the Division prepares a "Zero-based" budget document that describes the activities for each of the 125+ work packages, reports actual and expected performance, and provides two years of actual expenditures, estimated expenditures for the current year, and projected expenditures in the request year. For a number of years, the Division has provided considerably more detailed budget information through this ZBB document to the General Assembly than is typically required. That detailed budget information at the work package level will continue to be reported in the annual operating budget request and will be available to the General Assembly should questions or concerns be raised on the level of funding for a particular program funded within one of the line items.

- Link expenditures to the full range of outcomes

- The budget expenditures – The request consolidates the existing Long Bill line items and reallocates spending authority in those new lines. This change will not lead to any additional costs to the Division.
- There are no external costs to other government entities, private industry, or citizens.
- The main internal benefit is that the Division will be able to more quickly act on opportunities to redirect existing resources to perform higher priority work, and implement organization changes the agency deems necessary to effectively and efficient manage the agency. It allows the agency to respond to changes in wildlife management policy and political and environmental demands outside the control of the agency.
- The main external benefit is that Division can more quickly respond to customer and constituent needs without having to wait for additional spending authority in the budget.

- Application of the Analytical Technique/Assumptions and Calculations

Benefit-Cost Analysis

There are no additional costs to the Division associated with the implementation of either alternative. Increased flexibility realized from the consolidation of the line items will allow the Division of Wildlife to more effectively and efficiently manage the agency, provide better customer service to the public by being able to more quickly respond to their demands, and reduce under most circumstances the need to request additional funding to address changing priorities.

Budgetary Cost Calculations and Assumptions

Crosswalk between current and proposed line item format - Proposed Alternative

FY05-06 LONG BILL FORMAT		FY 06-07 PROPOSED LONG BILL FORMAT							
		Division Operations			Special Purpose				
Line Item Appropriation	Approp	Directors Office	Wildlife Management	Technical Services	Commission Discretionary	Game Damage	Instream Flow	HPP	Indirect Cost
Division Operations									
Director's Office									
Personal Services	1,591,284	1,591,284							
Operating	401,521	401,521							
FTE	18.0	18.0							
Biological Programs									
Personal Services	16,069,546		16,069,546						
Operating	9,149,084		9,149,084						
FTE	232.3		232.3						
State Fish Hatcheries									
Personal Services	4,687,811		4,687,811						
Operating	3,519,619		3,519,619						
FTE	93.6		93.6						
Regional Operations									
Personal Services	17,479,895		17,479,895						
Operating	4,732,738		4,732,738						
FTE	289.7		289.7						
Information & Education									
Personal Services	2,282,082		2,282,082						
Operating	2,110,375		2,110,375						
FTE	36.5		36.5						

Crosswalk between current and proposed line item format - Proposed Alternative

FY05-06 LONG BILL FORMAT		FY 06-07 PROPOSED LONG BILL FORMAT							
		Division Operations			Special Purpose				
Line Item Appropriation	Approp	Directors Office	Wildlife Management	Technical Services	Commission Discretionary	Game Damage	Instream Flow	HPP	Indirect Cost
Law Enforcement Admin									
Personal Services	837,894		837,894						
Operating	185,635		185,635						
FTE	10.3		10.3						
Information Technology									
Personal Services	1,521,904			1,521,904					
Operating	1,235,174			1,235,174					
FTE	18.0			18.0					
Engineering									
Personal Services	1,746,999			1,746,999					
Operating	157,754			157,754					
FTE	21.3			21.3					
Support Services									
Personal Services	3,003,115			3,003,115					
Operating	1,619,174			1,619,174					
FTE	41.5			41.5					
TOTAL - DIVISION OPERATIONS	**72,331,604**	**1,992,805**	**61,054,679**	**9,284,120**	**0**	**0**	**0**	**0**	**0**
TOTAL - FTE	**761.2**	**18.0**	**662.4**	**80.8**					
Special Purpose									
Wildlife Commission	160,000				160,000				
Game Damage Claims & Prevention	1,050,000					1,050,000			
Special License Fund	20,430		20,430						
State Trust Land & Property Leases	889,964		889,964						
Instream Flow Program	296,027						296,027		
Habitat Partnership Program	2,500,000							2,500,000	
Indirect Cost Assessment	3,044,703								3,044,703
TOTAL - SPECIAL PURPOSE	**7,961,124**	**0**	**910,394**		**160,000**	**1,050,000**	**296,027**	**2,500,000**	**3,044,703**
TOTAL - DIVISION BUDGET	**80,292,728**	**1,992,805**	**61,965,073**	**9,284,120**	**160,000**	**1,050,000**	**296,027**	**2,500,000**	**3,044,703**
TOTAL - FTE	**761.2**	**18.0**	**662.4**	**80.8**					

Benefit Cost Calculations and Assumptions

There are no monetary costs directly associated with the alternatives described in this decision item. The change is not requiring an increase in the existing operating budget. Benefits, while difficult to quantify, could include:

1) **Reduction in the number of forgone opportunities for redirection of resources to higher priorities.** For example, if the Division had a one-time opportunity to purchase additional fish from a private grower at a reduced rate because supply was greater than demand, the Division, under the current long bill format, couldn't take advantage of this opportunity without scaling back on funds used to operate the hatchery units, which impacts fish production. With the consolidation, the Division could reprioritize work or take advantage of vacancy savings in the Wildlife Management line to redirect resources for this one-time fish purchase.

2) **Potential future cost savings realized from increased flexibility to quickly implement organizational changes that can be redirected to other priorities.** For example, the Division is currently assessing whether the Habitat Partnership Program should be managed by the Biological Programs section, or could be more efficiently and effectively managed by field staff because of their local presence. The Habitat Partnership program was created statutorily to address livestock/big game conflicts which have been an issue for many years in Colorado. Considerable efforts have been made to provide relief and/or compensation for these conflicts but for a variety of reasons the Division's efforts weren't addressing landowner concerns. An increased level of concern and frustration by the landowners resulted in the Division committing to resolving the issue through a partnership program with private landowners. Through the Habitat Partnership Program, local Committees were created to ensure appropriate public involvement, on a local basis, in identifying range management problems and recommending solutions to these problems. Those committees are located throughout the state and work very closely with wildlife managers in those locations to address these issues. Program management was initially assigned to the Terrestrial section because of their big game management responsibilities, but because of the local involvement field staff have with the local Committees and the types of issues being addressed assigning management responsibility to field staff may make more sense.

   If after this evaluation the Division concludes that the program can be more efficiently and effectively managed in the field, implementing the recommendation in a timely manager becomes problematic because of the line item constraints. The personal services and operating costs to manage the program are budgeted within the Biological Programs with the responsibilities transferred to Regional Operations. In order to implement the change under the current format, the Division has two options 1) wait to implement the recommendation until a change request to transfer the spending authority from Biological Programs to Regional Operations is approved by the General

Assembly, or 2) redirect resources from other high priority work funded in Regional Operations to accommodate the transfer. With line item consolidation, the Division could reassign management of the program with no budgetary implications.

3) **Increased income on the sale of hunting and fishing licenses**. The Law Enforcement administration unit has been working on a rigorous license fraud (false statement in the purchase of a license) project using their existing investigators to test the violation rates associated with license purchases. Phase I of the project was recently completed, and depending on how the data was sorted, violation rates of 0.56% to 11.8% were detected. On average between 1 and 2% of all big game licenses is being fraudulently purchased. Based on 1% of resident licenses in 2003 that impact would have been $191,160 in lost revenue for deer licenses and $736,200 in lost revenue for elk licenses. With other species factored in the loss could be well over $1 million each year. If violation rates were reduced by just 25%, $250,000 in lost revenue could be recovered. In addition to recovering the lost income, additional revenue will also be generated from fines for license violations and potential unlawful possession charges. Initial estimates are in the range of $480k to $640k for license violations alone. Other types of fraud such as license agent fraud, landowner preference fraud, and special licensing fraud could also have a major impact on Division finances. The ability to investigate these cases will have a significant deterrent effect as it becomes evident to violators that the Division was pursuing and prosecuting these types of cases.

Currently the Division does not have a FTE dedicated to investigate and prosecute these crimes, but the initial results from the phase of this study have concluded that redirecting resources to investigate these fraud cases is a top priority. However, resources can't be quickly and readily redirected to fund the position without eliminating other high priority investigative work because of the line item and FTE constraints in the Law Enforcement Administration line. The only other option is to wait twelve months or longer to begin the work after a change request to transfer the spending authority and FTE is approved. With line item consolidation, the Division would be able to redirect an FTE from other lower priority work to fraud investigations without impacting the other critical work the law enforcement investigation unit is conducting. And, resources could easily be redirected to other priority work once the workload for these investigations and prosecution of these cases begins to diminish because of deterrent factor.

- Key Issues for Decision Making

The Division goes to great lengths to prioritize its budgets to meet changing demands and ensure resources are allocated to the highest priority work. That information is provided to the legislature to OSPB and JBC annually in

great detail. At anytime, the General Assembly can access the information to determine where funds are being allocated and spent.

Because of the current financial condition of the State and TABOR issues, the General Assembly seems more willing to consider measures that provide agencies with some relief to manage limited resources.

- Omissions, biases, or Uncertainties

One perceived cost of line item consolidations may be the reduced ability of the General Assembly to exercise oversight over the Division's budget. The Division does not believe this would be the case, since detailed ZBB budget documents (in considerably more detail than that provided in the annual operating request by the current 25 line items) would continue to be provided to the General Assembly and public each year.

Recommendation:

Approve the Division of Wildlife's request to consolidate the Long Bill line items reducing the number in Division Operations from 18 to 3, and retaining five of the seven line items in the Special Purpose section.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 6 of 21
Division: Water Resources
Program: Water Administration, Public Safety
Request Title: Vehicle Mileage

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: 37-80-102; 37-92-501; 37-92-502; 37-87-105; 37-87-107; 37-91-104

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 15 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	1,299,211	1,311,469			1,302,518	50,386	1,352,904			50,386
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	721,169	816,961			808,010	50,386	858,396			50,386
	CF	399,944	403,979			403,979	0	403,979			0
	CFE	178,098	90,529			90,529	0	90,529			0
	FF	0	0			0	0	0			0
Line Item Name Operating Expense	Total	1,299,211	1,311,469			1,302,518	50,386	1,352,904			50,386
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	721,169	816,961			808,010	50,386	858,396			50,386
	CF	399,944	403,979			403,979	0	403,979			0
	CFE	178,098	90,529			90,529	0	90,529			0
	FF	0	0			0	0	0			0

Letter Notation:
Cash Fund name/Number, Federal Fund Name:
IT Request ☐ Yes X No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes x No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ Yes x No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: Vehicle Mileage
Priority Number: 6 of 21
Division: Water Resources
Summary of Requested Alternative:

The Colorado Division of Water Resources requests $50,386 in General Funds for vehicle mileage expenses to allow the agency to provide critical water administration and public safety work at the same level of service provided during FY 2004-05. As a result of increases in mileage rates assessed by Fleet Management, mileage expenses for state vehicles driven by Water Resources have increased 16% since FY 2004-05. Without addition funding, the agency would be compelled to reduce miles driven by 204,327 miles to remain within budget. This action would result in canceling all fieldwork that requires state vehicles for 0.7 days out of every five.

Element No. 2 – Problem or Opportunity Definition.

At the beginning of FY 2005-06, State Fleet Management increased variable mileage rates to compensate for substantial increases in costs incurred for maintenance and fuel for state-owned vehicles. Maintenance costs were driven higher for an ageing fleet partially because budget constraints allowed for no vehicle replacements for 3 fiscal years. Although the Division of Water Resources secured additional funding of $87,569 during the last legislative session to compensate for a 38% increase in mileage costs over the last two years, the agency is now facing an additional 16% increase, beginning July 1, 2005. The agency is requesting a permanent increase in operating appropriation, beginning in FY 2006-07, and intends to submit a supplemental request for comparable funding for FY 2005-06.

The effects of the mileage increase vary across major areas of the agency, since Water Resources uses a different mix of vehicle classes in each area. Variable mileage percentage increases across vehicle classes are not the same. Following is a table that demonstrates this impact by major area of the agency. In addition, two new vehicles were approved for new water administration personnel to be hired in FY 2005-06. The budget request approved for these vehicles assumed variable mileage rates at FY 2004-05 levels. Consequently, an individual line item appears below to account for increased mileage rates. The impact analysis captures actual miles driven from June 1, 2004 through May 31, 2005.

VEHICLE COST SUMMARY

LOCATION	Actual Miles 6/1/04 - 5/31/05	$/Mile (new)	$/Mile (old)	% Increase	Cost (new)	Cost (old)	$ Increase
Division 1	345,265	$0.255	$0.217	17.5	$88,043	$74,923	$13,120
Division 2	356,461	$0.249	$0.213	16.9	$88,759	$75,926	$12,833
Division 3	178,865	$0.255	$0.217	17.5	$45,611	$38,814	$6,797
Division 4	138,603	$0.232	$0.202	14.9	$32,156	$27,998	$4,158
Division 5	120,204	$0.239	$0.213	12.2	$28,729	$25,603	$3,125
Division 6	71,610	$0.252	$0.215	17.2	$18,046	$15,396	$2,650
Division 7	106,885	$0.253	$0.216	17.1	$27,042	$23,087	$3,955
Denver	133,432	$0.218	$0.198	10.1	$29,088	$26,420	$2,669
New vehicles approved for Spring, 2006	27,000	$0.262	$0.222	18.0	$7,074	$5,994	$1,080
TOTALS	**1,478,325**	**$0.247**	**$0.213**	**16.0**	**$364,546**	**$314,161**	**$50,386**

COST REDUCTION NECESSARY TO MAINTAIN FY 2004-05 COST	**$50,386**

MILEAGE REDUCTION NECESSARY TO MAINTAIN FY 2004-05 COST	**204,327**

Water Administration

If the Division of Water Resources is required to reduce mileage by 204,327 miles, this equates to requiring our field personnel to park their vehicles for 0.7 days during every 5 working days, thus suspending 14% of field enforcement activities for the entire water season. Should this occur, the reduction in water diversion observations will precipitate illegal diversions (theft) of water by junior water rights owners. All water divisions were asked to project the quantity of water theft likely, under this scenario. Their research projects a potential theft of 121,000 acre-feet of

water for this fiscal year. This water is valued at $66.67 per acre-foot. The estimate of value is based upon the assumption that one acre of irrigated land will generate $200 in income from crop production; one acre of irrigated land typically uses 3 acre-feet of water. At $66.67 per acre-foot, the estimated value of total crop production lost equals the value of the water, $8,067,070 per year. In addition, lack of adequate field enforcement activities threatens the ability of this agency to assure compliance with interstate compact requirements; this environment could expose the State to future litigation activities.

Other mission critical functions of the agency will be impacted, as well. The reduction in mileage will impact the effectiveness of the hydrographic program streamflow measurement and water year streamflow and water diversion records, real-time satellite transmission of stream flow data, dam safety program, safe storage level determination and new project approval, and field inspections required under the well inspection program.

Hydrographic Measurements

The hydrographic program is a comprehensive hydrographic system that conducts streamflow measurements at various sites along the State's natural rivers and creeks to determine the amount of water available at that location for distribution to water users. These flow measurements are determined with equipment in river gauging stations that measure the depth and flow of a river/stream on a continual basis. This information is useful to produce/publish annual streamflow records that describe the mean daily streamflow, the instantaneous maximum, lowest mean streamflow, and monthly/ annual volumetric totals for a specific river location. The information and records are used to improve administration of water rights, monitor plans of augmentation to prevent injury to senior water rights, monitor and account for water delivery of reservoir storage, and collection, breakdown and analysis of complex data from municipalities and other water users for short and long-term planning.

The reduction in available mileage results in reduced measurement and streamflow data collection in every river basin throughout Colorado. The streamflow measurements provide a time-specific quantification of water available at a particular point and are used to effectively administer water. There is increasing scrutiny of Colorado's administration of water and compact deliveries with an eye toward gaining water for downstream states. An over-delivery of water to downstream states injures Colorado citizens through missed opportunity for beneficial use of that water. An under-delivery could cause interstate litigation to be initiated by the downstream States or the Federal Agencies. Streamflow measurements are also used as a calibration tool to adjust for changing streambed conditions that naturally occur due to seasonal flow fluctuations. The ability to maintain stream gaging stations, which are located at important hydrologic locations throughout the state would be reduced. These gaging stations contain data recorders that continuously monitor the change in river depth that is used to calculate the mean daily streamflow. This data is extremely valuable to support water management decisions and to provide current conditions and comparison with long-term data.

Satellite Monitoring System

The satellite-linked monitoring system (SMS) provides the Division of Water Resources, other state and federal entities, and the water user community with access to real-time and historic streamflow data from gaging stations across the State of Colorado. These data and software systems provide for more effective water rights administration, water resource management, computerized hydrologic record development, and flood warning. The SMS allow the Division of Water Resources to collect, process, store, and distribute any kind of environmental data transmitted

from remote locations. The data set of interest to the Division is the water level at rivers, streams, diversion structures, and reservoirs. The SMS converts these raw water level values into several "products" of use to various "clients". The "products" range from raw data passed on to other computer systems to the official Hydrographic Records of mean daily stream flows. Our "clients" include Division of Water Resources personnel and other water users wanting real-time administrative data, computer systems performing other analyses, and the varied user community of state and federal agencies, municipalities, canal companies, attorneys, and consulting engineers needing access to real-time and historic stream flow data.

This reduction in travel due to the increased mileage rate, if it continues indefinitely, creates hardship in maintaining the satellite monitoring system. This is a comprehensive system of remote-sensing equipment that is housed in river gaging stations that provide near-instantaneous streamflow information via satellite relay. The purpose of this satellite monitoring system is twofold: This system is used to provide real-time streamflow data to water users and water commissioners via electronic access to current streamflow information; this allows our water commissioners to monitor fluctuating water supply conditions, thus promoting efficiency in water administration and distribution. The remote monitoring system also serves as an advance warning system to alert officials of imminent flooding conditions. It has become a valuable tool in making real-time adjustments based on ever-changing streamflow conditions, especially in times of scarce water supply.

Intangible benefits are centered on the reliance that water users have upon an unbiased state authority to regulate water supplies in strict accordance with water right decrees and Interstate Compacts. This reliance has a proven record of lessening dissension among competitive water users and the potential for contentious/unnecessary litigation between water users or downstream states.

Dam Safety

The mission of the Dam Safety program is to prevent loss of life, prevent and/or reduce property damage, and to protect the State's water supplies from the failure of dams. The Dam Safety program assures a safe environment related to the design, construction, and operation of dams and reservoirs in accordance with Section 37-87-101 through 125, C.R.S. and Rules and Regulations for Dam Safety and Construction. The program includes the enforcement of a comprehensive set of regulations, policies, and procedures for the construction and maintenance of dams, the safe operation of reservoirs, and emergency preparedness. The safe storage level is determined by the review and approval of engineered plans for the construction and repair of dams, and regular safety evaluations of existing dams and reservoirs by professional engineers.

Reduction in the ability to perform the necessary duties of the Dam Safety program increases the risk of dam failure resulting in potential loss of life and property damage. In addition, program reduction is likely to result in the construction of dams and reservoirs by unlicensed engineers, non-engineers and engineers without the necessary knowledge, experience and skill to design and construct these high-risk structures. A portion of the existing dams will not be maintained or will be maintained at a significantly lower level resulting in increased failure incidents threatening life, property and water storage.

Well Construction

The mission of the Division of Water Resources and The Board of Examiners for Water Well Construction and Pump Installation Contractors is the protection of the groundwater resources and public safety. This is accomplished through the proper licensing of contractors and the development and enforcement of rules and regulations for the proper construction of water wells, monitoring and observation wells, and pump installation. The Division of Water Resources and The Board of Examiners for Water Well Construction and Pump Installation Contractors, in accordance with Section 37-91-101 through 112, C.R.S. are responsible to safeguard the public health and to protect and preserve the groundwater resources of the State of Colorado. The Board promulgates and enforces Water Well Construction Rules related to the minimum construction standards for water wells, monitoring wells and pump installation and administrative rules regarding licensure, disciplinary action and correction of improperly constructed wells.

During FY 2006-07 the agency plans to complete 3,500 construction inspections and observations. A significant curtailment of mileage to perform these inspections could result in improperly constructed wells, improperly abandoned wells, and improperly installed pumps resulting in greater risk of groundwater contamination, water contamination, disease, well contamination, and increased number of open and illegal wells. All of these factors increase risk and reduce protection of the public's safety.

The Department's prioritized objectives relevant to this request include:

1.2 Maximize efficient use of Colorado's water resources and comply with and enforce other states' compliance with interstate compacts.

1.7 Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs.

2.3 Promote conservation and stewardship of the state's natural resources among private and public landowners by providing technical assistance and incentives.

Element No. 3 – Available Alternatives:

Alternative # 1 (Recommended):
Provide $50,386 in funding to allow the Division of Water Resources to provide an adequate level of water administration and public safety services commensurate with the level of service provided during FY 2004-05.

Alternative #2 (Not Recommended):
Provide no additional funding to the agency. Curtail field observations of water diversions by 14%, and reduce the effectiveness of the hydrographic program streamflow measurement and water year streamflow and water diversion records, real-time satellite transmission of stream flow data, dam safety program safe storage level determination and new project approval, and the well inspection program.

Alternative #3 (Not Recommended):
Divert appropriated operating funds from other activities to provide necessary supplemental funding for increased vehicle mileage expenses.

Element No. 4 – Selected Analytical Technique

The Alternative Benefit/Cost Technique is applied to this request.

Element No. 5 –Assessment of Alternatives

Alternative #1

Benefits

Benefits are based upon the economic value of crop production that can be realized with adoption of this alternative.

Total benefits: $66.67/acre-foot x 121,000 acre-feet of water diverted to appropriate senior water rights holders = $8,067,070

Costs
The total amount that is requested is $50,386.

Benefit/Cost Ratio: $8,067,070/$50,386 = 160

Calculations and Assumptions

Described above for individual work components. The qualitative benefits associated with the impact of increased effectiveness on other programs affected by this proposal are significant, but could not be quantified.

Alternative #2 – will severely jeopardize the most critical core missions of this agency, including water allocation, interstate compact compliance, and effective hydrographic, dam safety and well inspection programs.

Alternative #3 – The agency evaluated the feasibility of reducing operating expenses in other areas of the agency to generate the necessary $50,386 for incremental mileage expenses. Operating funds to support the core mission of the agency were reduced through mandatory general fund cuts by nearly 4% in FY 2002-03 and nearly 3% in FY 2001-02. During this period, the agency also absorbed all inflationary cost increases. The agency concluded that any shifting of expenditures would simply endanger the same functions impacted by alternative #2; this alternative, consequently, does not provide any quantifiable benefit.

We recommend adoption of alternative #1.

Schedule 6
DECISION ITEM REQUEST for FY 2006-2007

Department: NATURAL RESOURCES
Priority Number: 7 of 21
Division: COLORADO GEOLOGICAL SURVEY
Program:
Request Title: Coalbed Methane Stream Depletion Assessment Study, Raton and Piceance Basins

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: C.R.S. 34-1-103 (1); 39-29-109 (1) a; 34-60-105; COGCC Rule 907
C.R.S. 37-80, -82, -84, -90, -92

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	2,082,096	2,562,906		2,562,906	2,599,257	186,000	2,785,257		2,785,257	0
	FTE	15.7	18.2		18.2	18.2		18.2		18.2	0.0
	GF	0	0		0	0		0		0	0
	CF	1,399,140	1,202,120		1,202,120	1,229,509	186,000	1,415,509		1,415,509	0
	CFE	443,954	764,610		764,610	770,793		770,793		770,793	0
	FF	239,002	596,176		596,176	598,955		598,955		598,955	0
Environmental Geology & Geologic Hazards	Total	2,082,096	2,562,906		2,562,906	2,599,257	186,000	2,785,257		2,785,257	0
	FTE	15.7	18.2		18.2	18.2		18.2		18.2	0.0
	GF	0	0		0	0		0		0	0
	CF	1,399,140	1,202,120		1,202,120	1,229,509	186,000	1,415,509		1,415,509	0
	CFE	443,954	764,610		764,610	770,793		770,793		770,793	0
	FF	239,002	596,176		596,176	598,955		598,955		598,955	0

Letter Notation: (a) Of this amount, $1,048,353 shall be from the Operational Account of the Severance Tax Trust Fund established pursuant to Section 39-29-109(1)(a)(II), C.R.S., and $367,156 shall be from fees for geological services.

Cash Fund name/Number, Federal Fund Name: Operational Account of the Severance Tax Trust Fund, Fund 171

IT Request ☐ Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)

Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency

Request for New or Replacement Vehicles: ☐ Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)

Request Affects Another Department(s): ☐ Yes X No (If yes, Name of other Department(s)_____)

REQUEST TO CHANGE THE BASE OPERATING BUDGET

PART B – EFFICIENCY AND EFFECTIVENESS ANALYSIS

COMMON IDENTIFICATION INFORMATION

Department:	Natural Resources
Priority Number:	7 of 21
Long Bill Group/Division	Colorado Geological Survey (CGS) Division of Water Resources (DWR) Oil and Gas Conservation Commission (OGCC)
Program Title/Work Package Title:	Engineering and Environmental Geology / Data Acquisition and Technical Assistance
Change Request Title:	Coalbed Methane Stream Depletion Assessment Study - for the Raton Basin and Piceance Basins in Colorado
Tracking Number:	
Statutory Citation:	Sections 34-1-103 (1); 39-29-109 (1) a; 34-60-105; and 37-80, -82, -84, -90, -92, C.R.S.; COGCC Rule 907

SUMMARY OF REQUEST

This decision item is to fund a study to assess whether stream depletion is occurring or could occur in the future as a result of water removal by coalbed methane (CBM) wells, and if so, quantitatively determine the levels of stream depletion. The request is for a one time increase in the Colorado Geological Survey (CGS) budget for fiscal year FY 2006-07 to assess potential depletions in the Raton Basin of south-central Colorado, and the Piceance Basin of northwest Colorado. The information gained will be used to evaluate whether statutes or rules need to be promulgated to address the issue of depletions to stream/tributary waters by CBM production. The study will be conducted jointly by CGS, the Division of Water Resources (DWR), and the Oil and Gas Conservation Commission (OGCC).

This request is for $186,000 cash funds from the Department of Natural Resources (DNR) Operational Account of the Severance Tax Trust Fund.

Description of How Performance Will Be Evaluated

At the end of FY06-07, the DWR/OGCC/CGS will deliver a full draft report to the DNR Executive Director summarizing the estimated present and potential future impacts to surface water and tributary ground water by CBM production. The final product will include recommendations for further study, additional data gathering needs, and/or proposed changes to applicable rules and regulations. The report will be published by the CGS as *Coalbed Methane Stream Depletion Assessment Study for the Raton Basin and Piceance Basins in Colorado* and will be made available to decision makers, stakeholders, and the general public.

PROBLEM AND OPPORTUNITY DEFINITION

Coalbed methane development has accelerated in Colorado in recent years and is expected to continue at a fast pace. Initially, large amounts of water must be removed from the producing coal or sandstone horizon to liberate the CBM gas and allow it to migrate to the production well. Water production will generally decrease over the life of the CBM well, but as a CBM field is developed over several years, significant water quantities will be pumped from the basin.

Concern has been raised that the removal of water from coalbeds and adjacent aquifers, which are potentially tributary to surface water, could be resulting in stream depletions or a reduction in spring flows and/or formation outflows (accretions). Also, there is a need to determine whether these potential depletions cause injury to senior water rights holders on over-appropriated stream systems throughout Colorado. In most cases, the water has not been considered as having been put to beneficial use; and therefore, the handling of the water with respect to potential impacts to existing water rights has not been subject to administration under the body of Colorado water law and is under the jurisdiction of Rule 907 of the COGCC.

The study will address two CBM producing basins, specifically the Raton and Piceance basins. Using geologic data, CBM production data, and standard analytical hydrogeologic modeling, this study seeks to:

1) develop a reliable assessment of whether depletions to "tributary" groundwater systems are occurring, and if so, the amount of depletion that may be occurring;
2) define the areas where CBM production is ongoing that might be classified as "nontributary";
3) examine and define any possible correlations of water quality, geology, aquifer geometry, or formation/well depth that could lead to general guidelines about the potential for stream depletion; and
4) based on the items above, determine whether more detailed studies are necessary and, if so, develop recommendations for further investigations and data collection.

Depending on the results of the study, DNR will be able to determine whether applicable statutes or rules need to be promulgated or statutory changes need to be made to address the issue of depletions to stream/tributary waters by CBM production. Without approval of this decision item, the question of depletions by CBM production will likely be marked by copious, long-term litigation.

AVAILABLE ALTERNATIVES

Three alternatives are presented for this decision item to fund a Coalbed Methane Stream Depletion Assessment Study.

Alternative 1: Full funding is approved to produce the report *Coalbed Methane Stream Depletion Assessment Study for the Raton Basin and Piceance Basins in Colorado* within one year in FY06-07. Allocation from the DNR Severance Tax Fund will be $186,000 in FY06-07.

Alternative 2: Full funding is approved to produce the report for both Raton and Piceance basins, but the project will take place over a two-year period, FY06-07, and FY07-08. Allocation from the DNR Severance Tax Fund will be $93,000 for FY06-07 and $95,790 for FY07-08.

Alternative 3: No action; the study is not funded

Description - Alternative 1: Full Funding of Coalbed Methane Stream Depletion Assessment Study in FY06-07

Estimated Budget Requirements	FY06-07
• CGS scientific staff and administration	$ 33,000
• Hydrogeologic consultant services	$ 153,000
Total Request	**$ 186,000.**

Funding by fiscal year: $186,000 for FY06-07

Alternative 1-Statutory Authority to Implement Coalbed Methane Stream Depletion Assessment Study

Colorado Geological Survey:
Section 34-1-103, C.R.S.
1) The Colorado geological survey shall function to provide assistance to and cooperate with the general public, industries, and agencies of state government, including institutions of higher education, in pursuit of the following objectives, the priorities of which shall be determined by mutual consent of the state geologist and the executive director of the department of natural resources:

(a) To assist, consult with, and advise existing state and local governmental agencies on geologic problems;
(b) To promote economic development of mineral resources;
(c) To conduct studies to develop geological information;
(e) To collect and preserve geologic information;
(f) To advise the state and act as liaison agency on transactions dealing with natural resources between state agencies and with other states and the federal government on common problems and studies;
(g) To evaluate the physical features of Colorado with reference to present and potential human and animal use;
(h) To prepare, publish, and distribute reports, maps, and bulletins when necessary to achieve the purposes of this part 1, but in accordance with section 24-1-136, C.R.S.;

(2) The duties of the state geologist shall be to fulfill the objectives of this part 1 and, together with the employees of the survey, work for the maximum beneficial and most efficient use of the geologic processes for the protection of and economic benefit to the citizens of Colorado.

Section 39-29-109, C.R.S.
(1) (a) There is hereby created in the office of the state treasurer the severance tax trust fund. The fund is to be perpetual and held in trust as a replacement for depleted natural resources and for the development and conservation of the state's water resources pursuant to sections 37-60-106 (1) (j) and (1) (l), 37-60-119, and 37-60-122, C.R.S., and for the use in funding programs that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water. State severance tax receipts shall be credited to the severance tax trust fund as provided in section 39-29-108. All income derived from the deposit and investment of the moneys in the severance tax trust fund shall be credited to the severance tax trust fund. At the end of any fiscal year, all unexpended and unencumbered moneys in the fund shall remain therein and shall not be credited or transferred to the general fund or any other fund. All moneys in the fund shall be subject to appropriation by the general assembly for the following purposes:

(II) The operational account. One-half of the severance tax receipts credited to the severance tax trust fund for tax years commencing on and after July 1, 1995, shall be credited to the operational account of the severance tax trust fund and used to fund programs established within the Colorado oil and gas conservation commission, the Colorado geological survey, the division of minerals and

geology, and the Colorado water conservation board that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water, as set forth in paragraph (C) of this subsection (1).
(B) For programs within the Colorado geological survey, up to twenty percent of the moneys in the operational account;

Division of Water Resources:
Title 37, Articles 90 and 92 vest with the State Engineer the authorities to regulate ground water and to administer and distribute water in accordance with adjudicated water rights and the doctrine of prior appropriation.

Title 37, Article 90 states that in the administration and enforcement of this article and in the effectuation of the policy of this state to conserve its ground water resources and for the protection of vested rights, the State Engineer, either in the State Engineer's own capacity or as the executive director of the [ground water] commission, is empowered:

1. To require both flowing and nonflowing wells to be so constructed and maintained as to prevent the waste of ground waters through leaky wells, casings, pipes, fittings, valves, or pumps, either above or below the land surface;
2. To go upon all lands, both public and private, for the purpose of inspecting wells, pumps, casings, pipes, fittings, and measuring devices, including wells used or claimed to be used for domestic or stock purposes;
3. To order the cessation of the use of a well pending the correction of any defect that the state engineer has ordered corrected;
4. To commence actions to enjoin the illegal opening or excavation of wells or withdrawal or use of water therefrom and to appear and become a party to any action or proceeding pending in any court or administrative agency when it appears that the determination of such action or proceeding might result in depletion of the ground water resources of the state contrary to the public policy expressed in this article or might injure vested rights of other appropriators.

Title 37, Article 92 provides for the determination and administration of water rights by the State Engineer, as cited:

1. **Section 102**: *... it is the policy of this state to integrate the appropriation, use, and administration of underground water tributary to a stream with the use of surface water in such a way as to maximize the beneficial use of all of the waters of this state... the use of underground waters as an independent source or in conjunction with surface waters is necessary to the present and future welfare of the people of this state...Water rights and uses vested prior to June 7, 1969, in any person by virtue of previous or existing laws, including an appropriation from a well, shall be protected subject to the provisions of this article...The existing use of ground water, either independently or in conjunction with surface rights, shall be recognized to the fullest extent possible, subject to the preservation of other existing vested rights, but, at his own point of diversion on a natural watercourse, each diverter must establish some reasonable means of effectuating his diversion. ...The use of ground water may be considered as an alternate or supplemental source of supply for surface decrees entered prior to June 7, 1969, taking into consideration both previous usage and the necessity to protect the vested rights of others...No reduction of any lawful diversion because of the operation of the priority system shall be*

permitted unless such reduction would increase the amount of water available to and required by water rights having senior priorities...

2. **Section 301**: *The state engineer shall be responsible for the administration and distribution of the waters of the state...*
3. **Section 501**: *The state engineer and the division engineers shall administer, distribute, and regulate the waters of the state in accordance with the constitution of the state of Colorado... It is the legislative intent that the operation of this section shall not be used to allow ground water withdrawal which would deprive senior surface rights... the state engineer shall have wide discretion to permit the continued use of underground water consistent with preventing material injury to senior surface water rights...*

In summary, the Division's statutory obligations are set forth in the following statutes:

Title 37	Article 80	State Engineer
Title 37	Article 82	Appropriation and Use of Water (Administration of Water in Natural Surface Stream)
Title 37	Article 84	Responsibility of User and Owner (Administration of the Diversion and Measurement of Water)
Title 37	Article 90	Underground Water
Title 37	Article 92	Water Right Determination and Administration Act of 1969

Oil and Gas Conservation Commission:
Section 34-60-105, C.R.S., Powers of commission
(1) The commission has jurisdiction over all persons and property, public and private, necessary to enforce the provisions of this article, and has the power to make and enforce rules, regulations, and orders pursuant to this article, and to do whatever may reasonably be necessary to carry out the provisions of this article. Any delegation of authority to any other state officer, board, or commission to administer any other laws of this state relating to the conservation of oil or gas, or either of them, is hereby rescinded and withdrawn and such authority is unqualifiedly conferred upon the commission, as provided in this section. Any person, or the attorney general on behalf of the state, may apply for any hearing before the commission, or the commission may initiate proceedings upon any question relating to the administration of this article, and jurisdiction is conferred upon the commission to hear and determine the same and enter its rule, regulation, or order with respect thereto.

COGCC Rule 907
The COGCC statute (COGCC Act; 34-60-105 C.R.S.) grants certain authority to COGCC to promote oil and gas conservation, and rescinds any authority of any other agency as it relates to the conservation of oil and gas (above). CBM produced water is considered a waste product by operators and must be properly disposed of to prevent adverse environmental impacts. Pursuant to COGCC rules, an operator may dispose of water from a CBM well in any of the following ways: 1) inject into a disposal well; 2) place it in a properly permitted lined or unlined pit for evaporation and or percolation; 3) dispose the water at a permitted commercial facility; 4) dispose of the water by road spreading on lease roads outside sensitive areas for produced waters; 5) discharge the water into waters of the state

in accordance with the Water Quality Control Act and the rules and regulations promulgated thereunder; 6) reuse the water for enhanced recovery, recycling, and drilling; or 7) mitigation to provide an alternate domestic water supply to surface owners within the oil and gas field.

Alternative 1- Linkage to Specific State of Colorado Department of Natural Resources (DNR) Objectives

1) Funding this request furthers the following DNR Strategic Planning Principles and Strategic Objectives (as listed in the 2006-2007 Budget Plan- DNR Strategic Plan and Schedule 1 Prioritized Objectives).

Strategic Planning Principles

#3. Stewardship. DNR is committed to stewardship practices that recognize that natural resources must be properly managed to sustain our quality of life. DNR will solicit views and utilize the expertise of other federal, state and local agencies, as well as landowners, water users and community leaders. The Department recognizes that economic development must be sustainable and must respect complex ecological functions that transcend jurisdictional boundaries. Resources management decisions will:

- integrate all information from relevant disciplines;
- sustain the health and viability of both the natural environment and the economy; and
- acknowledge the values of protection and responsible use of Colorado's natural resources.

#4. Science and Information. DNR will strive to obtain and use complete and credible information to guide policy development and decision-making.

- Policies and decisions will be supported by the best available scientific data and will take into account local values, traditions and cultures; and
- DNR will develop state-of-the-art technical capabilities and will make effective use of this expertise throughout the Department.

Prioritized Strategic Objectives

Essential Objectives:

1.1— Respond to demands by constituents by providing services, information, and assistance.

1.2— Maximize efficient use of Colorado's water resources and comply with and enforce other states' compliance with interstate compacts; distribute available water supplies in time and amount necessary to meet water right demands in priority on a daily basis.

1.4— Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.

High Priority Objectives:
2.3— Promote conservation and stewardship of the state's natural resources among private and public landowners by providing technical assistance and incentives.
2.4— Increase citizen knowledge and understanding of natural resource issues by expanding and enhancing public information and outreach efforts.
2.7— Assist local governments in land-use planning and natural resource management by increasing the availability of relevant information and data and providing technical assistance.

Description - Alternative 2: Funding of Coalbed Methane Stream Depletion Assessment Study over 2 years

The cost for the second year of the study increases by an estimated 3% due to "cost of living" increases in salaries and consulting services.

Budget Requirements	FY06-07	FY07-08
• CGS scientific staff and administration	$ 16,500	16,995
• Hydrogeologic consultant services	$ 76,500	78,795
Total Request by fiscal year	**$ 93,000**	**$95,790**

Total Request = $188,790

Alternative 2-Statutory Authority to Implement Coalbed Methane Stream Depletion Assessment Study
--as above for Alternative 1--

Alternative 2- Linkage to Specific State of Colorado Department of Natural Resources (DNR) Objectives
--as above for Alternative 1--

Description - Alternative 3: No Action

Alternative 3 has no direct cost to the state nor does it give any benefit to the state. It has no link to the DNR Strategic Objectives. It would not maximize efficient use of Colorado's water resources (1.2) nor would it promote development of energy resources consistent with environmental preservation. This alternative does not promote conservation and stewardship of the state's natural resources (2.3) in the form of ground water. Without performing this study citizen and industry knowledge and understanding of natural resources is not enhanced (2.4) and local governments will lack assistance on this natural resource management issue (2.7), the potential depletion of tributary water by CBM development.

ANALYTICAL TECHNIQUE

The BENEFIT–COST ANALYSIS analytical technique is used. This analysis focuses on the benefit to the residents of Colorado via knowledge gained from the final results of the Coalbed Methane Stream Depletion Assessment Study. Findings on the potential depletion impacts of CBM production on tributary water have identifiable benefits that can be weighed against the cost of the study.

ASSESSMENT OF ALTERNATIVES

Necessary Background Information

The benefit-cost analysis of this request has two components: 1) Potential stream depletion savings, and 2) Potential litigation avoided.

Potential stream depletion savings refers to water that, by virtue of this CBM Stream Depletion Assessment Study, may be identified as being depleted from surface water or tributary groundwater. If augmentation of this water is subsequently required by DWR, that water has an economic value. For purposes of this benefit-cost analysis, the value is estimated as 2% of 12,000 acre-ft (yearly total CBM water production in the Raton and Piceance basins, based on year 2004), *-multiplied by-* 30 years (lifetime of CBM field production), *-multiplied by-* $57/acre-ft of water (use-averaged value of water for agricultural/municipal/other [by volume]). The $57/acre-ft value of the water is an annualized value because of the anticipated finite life of the CBM production. This gives an economic savings of $410,400 for the value of water potentially augmented. This figure only accounts for the property rights value of the water recovered from depletion, not any value derived from agriculture or other use of the recovered water, which may be significant.

Potential litigation avoided is difficult to quantify, but one could use the cost of litigation in relation to the Arkansas River Compact litigation with Kansas as an example. In this case Kansas sued Colorado over the pumping of groundwater that was tributary to the Arkansas River and reducing compact flows into Kansas. This is analogous to the pumping of potentially tributary water by CBM wells and subsequent depletion of flows normally available to senior water rights holders. The cost of litigation in this case is estimated at $50 million dollars ($34.7M award to Kansas + $4.0M potential court costs to Kansas + $12.0M approximate legal cost incurred by Colorado = ~$50M). The volume of water alleged to be depleted was 400,000 acre-feet between 1950 and 1994. This amounts to a litigation cost of $125/acre-foot. The potential cost of litigation in the Raton and Piceance basin equals $125/acre-foot - *multiplied by-* the potential stream depletion estimated above as 2% of 12,000 acre-feet, or 240 acre-feet *-multiplied by-* 30 years (lifetime of CBM field production). Therefore, the potential estimated cost of litigation for CBM-produced tributary water is $900,000.

The 2% depletion estimate is supported by data presented in a report on the San Juan Basin by Questa Engineering and others titled, "*San Juan Basin Ground Water Modeling Study: Ground Water-Surface Water Interactions Between Fruitland Coalbed Methane Development and Rivers*." Depletion percentages in specific areas of the San Juan Basin are estimated to be 8% in the Pine River area, 6% in the Florida River area, and 0.5% in the Animas River area, based on modeled and graphical data in the report. From this data a conservative estimate of 2% was chosen for the Benefit-Cost comparison.

Linked Budgetary Expenditures to Beneficial Outcomes

Alternative 1- Full Implementation of "Coalbed Methane Stream Depletion Assessment Study" during FY06-07

Funding this request will

1) determine whether CBM development is or will have a significant depletion affect on the tributary stream system including groundwater in the Raton and Piceance basins of Colorado;
2) identify the quantity (in acre-ft) of potential depletions to the tributary stream system including groundwater;
3) identify parts of CBM production zones and adjacent aquifers that are tributary and/or non-tributary to surface water, identifying areas where augmentation to surface water is appropriate or not appropriate;
4) reduce litigation surrounding the questions of tributary water depletion and the necessity to augment surface water supplies or not;
5) maximize the beneficial use of water resources in Colorado;
6) determine whether adequate data are available to arrive at reasonable estimates of depletions to tributary water;
7) determine whether there is a need to write new regulations or statutes to account for any potential depletions.

Beneficiary	**Outcome to beneficiary**
• Holders of tributary water rights • CBM development and production companies	• Quantify depletions and effects on vested water rights; augment where appropriate. • Identify non-tributary portions of CBM horizons and associated aquifers where augmentation is not necessary
• Holders of tributary water rights • CBM development and production companies	• Reduced litigation related to controversies over potential stream depletion and impact to groundwater wells
• Colorado citizens	• Better management of the groundwater and surface water resources; • Maximizes the amount of useable water in the Raton and Piceance basins now and in the future.

Alternative 2- Implementation of "Coalbed Methane Stream Depletion Assessment Study over two-years, FY06-07 and FY07-08. This alternative accomplishes the same benefits and outcomes as Alternative 1 (above), but the benefits are delayed by one year and costs to complete the project are slightly increased.

Alternative 3- No Action

Benefit-Cost Comparisons – Coalbed Methane Stream Depletion Assessment Study

Alternative	Estimated Costs		Total Cost	Estimated Benefits		Total Benefit	Benefit-Cost Ratio
	Internal Cost (cost of study)	External Cost		Potential Tributary Stream Depletion Savings	Potential Litigation Avoided		
Alternative 1 - Full funding in FY06-07	$186,000 [1]	$4,000 [3]	$190,000	~$410,400 [4]	$900,000 [5]	$1,310,000	7 to 1
Alternative 2 - Funding over 2 years FY06-07 and FY07-08	188,790 [2]	$4,000 [3]	$192,790	~$410,400 [4]	Less than $900,000 [5]	Less than $1,310,000	Less than 7 to 1
Alternative 3 - No Action	0	0		0	0	0	none

The benefit-cost comparison involves the following:

Costs –

[1] Cost to complete "*Coalbed Methane Stream Depletion Assessment Study*" for both Raton and Piceance basins during one year, FY06-07

[2] Increased cost is due to "inflation" increases for salaries and consulting services during the second year of the project.

[3] External cost to citizens and businesses of publications purchased after CGS publication of the study report; estimated sales of 200 publications at $20 per unit = $4,000.

Benefits –

[4] Potential stream depletion savings estimated as: 2% of 12,000 acre-ft (annual total CBM water production in the Raton and Piceance basins based on year 2004) x 30 years (avg. CBM field lifetime) x $57/acre-ft of water (annualized, use-averaged value of water, by volume, for agricultural/municipal/other) = $410,400

[5] Potential litigation avoided is estimated as $125/acre-ft (cost of Kansas v. Colorado litigation) x 2% depletion of 12,000 acre-ft/year (annual total water production in the Raton and Piceance basins based on year 2004) x 30 years (avg. CBM field lifetime) = $900,000. The 2% depletion estimate is supported by data presented in a report on the San Juan Basin by Questa Engineering and others (see section "Necessary Background Information" above).

Recommendation:

Alternative 1 is recommended because it exhibits the best benefit-cost ratio of the three alternatives. It has lower cost and earlier litigation avoidance time period than Alternative 2. Alternatives 1 and 2 both provide information that can resolve potential conflict between water rights holders and CBM well producers. Without being adequately addressed with the best possible data, these conflicts have to potential to carry on for many years. Alternative 1 provides the quickest means to address this CBM production issue in both the Raton and Piceance basins.

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 8 of 21
Division: Parks and Outdoor Recreation
Program: State Park Operations
Request Title: New Facilities

Dept. Approval: Will H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: Section 33-10-101 to 33-15-112, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total		21,870,847		21,870,847	21,870,847	552,524	22,423,371		22,423,371	552,524
State	FTE		238.6		238.6	238.6	4.0	242.6		242.6	4.0
Park	GF		2,321,255		2,321,255	2,321,255		2,321,255		2,321,255	0
Operations	CF		16,938,638		16,938,638	16,938,638	552,524	17,491,162		17,491,162	552,524
	CFE		2,191,060		2,191,060	2,191,060		2,191,060		2,191,060	0
	FF		419,900		419,900	419,900		419,900		419,900	0

Letter Notation:
Cash Fund name/Number, Federal Fund Name: Parks Cash Fund (Fund # 172)
IT Request ☐ Yes ✠ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ✠ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ✠ No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Identifying Information

Department: Natural Resources – Division of Parks and Outdoor Recreation
Request Title: New Facilities
Priority number: 8 of 21
Performance Measures: Expanded recreational opportunities for park visitors through improved amenities.

Summary of Request

This request is for $552,524 and 4.0 FTE for FY2006-07 in Cash Funds to expand facilities at various State Parks throughout the state. This request addresses improvements that are being made which will have a significant impact on park visitors' experiences at Colorado State Parks. A few of the changes are expanded camping services, including new cabins and camper services buildings. These improvements will allow parks to reach a larger portion of the public that may not otherwise visit the parks.

Problem or Opportunity Definition

Colorado State Parks has continued to see increased growth within our visitor base. As the demand for natural areas continues to grow, the demand for improved and enhanced services increases as well. To respond to this demand, Colorado State Parks is investing in facility enhancement projects that are currently underway at several parks, which includes adding new campsites, adding electric hook-ups to existing campsites, and expanding existing facilities. Surveys and polls indicate a strong public preference to preserve open space and to invest in expanded recreational and park facilities. In this regard, Colorado State Parks providing of outdoor recreation with amenities is consistent with public expectations. In particular, seniors and young families, the fastest growing segments of the population, expect that State Parks will provide updated amenities such as showers, modern campgrounds, well designed trail systems, frequent safety patrols, and environmental education. It is our responsibility to ensure facilities are adequately maintained, supported, and accessible to the public.

The public pays for the use of the parks through various means, such as annual passes, daily passes and fees to access the parks and the amenities provided within the parks. The revenue generated by the various projects is a measure of the benefit of these projects to the citizens visiting the parks. Since none of the state park fees are required to be paid by any citizen, the revenue generated is a measure of Colorado citizen's willingness to pay for new park amenities. Economic theory would indicate that if citizens are willing to pay for new park amenities and the related services, they are receiving at least this amount in actual benefit. In fact, to the extent some citizens would be willing to pay more than the current fees, the actual benefit of these new amenities would be higher than the estimated annual revenue from these new projects.

Available Alternatives

Alternative #1- Recommended

Increase Operating and Utility Appropriation for expanded State Park services.

- Statutory authority for this alternative: Section 33-10-101 to 33-15-112, C.R.S.
- Specific Department objectives promoted by this alternative:

  1.1 Respond to demands by constituents by providing services, information, and assistance.
  1.6 Provide and promote a variety of outdoor recreational opportunities for citizens and visitors.
  2.2 Provide continuing oversight and stewardship of State land assets by developing and implementing appropriate management plans or leases for all parcels.
  2.4 Increase citizen knowledge and understanding of natural resource issues by expanding and enhancing public information and outreach efforts.

- Create a positive revenue stream that fully supports the operation and staffing costs of this initiative, while helping State Parks achieve its goal to become more self-sufficient.

Alternative # 2 – Not Recommended

Not approve the requested Operating and Utility Appropriation for expanded State Park services.

Selected Analytical Technique

Benefit-Cost Analysis will be used to demonstrate the increased value to citizens utilizing park facilities.

Alternative 1: Benefits received from this alternative directly impact the citizens that visit the State Parks and are able to use the upgraded amenities that will be offered.

Alternative 2: Since this is the status quo alternative, there is no benefit received by the citizens that visit State Parks.

ITEM	FTE	Total	Pers Svcs	Operating	Utilities	SWP	Capital	Fleet/ Fixed	Fleet/ Variable	FY06-07 Estimated Revenue
Operating Requests										
Navajo Marina	1.0	$ 95,412	43,179	9,730	5,000	33,355		1,700	2,448	$ 227,000
Chatfield		$ 59,133		6,280	39,069	13,784				$ 258,459
Cherry Creek		$ 53,644		19,000	15,270	19,374				$ 170,994
Mueller Cabins		$ 35,228		8,572	6,356	20,300				$ 72,800
Cheyenne Mountain	3.0	$ 309,107	122,505	94,897	21,797	52,367		5,100	12,441	$ 461,197
Total	**4.0**	**$ 552,524**	**$ 165,684**	**$ 138,479**	**$ 87,492**	**$ 139,180**	**$ -**	**$ 6,800**	**$ 14,889**	**$ 1,190,450**

Assessment of Alternatives

Alternatives	**Benefits and Objectives**		
	Protect our natural resources and maintain our investment in facilities	Provide citizens with services and promote recreation opportunities	Develop positive revenue stream to improve State Parks' vision of self-reliance
Alternative #1 – Fund request	Yes	Yes	Yes
Alternative #2 – Do not fund request.	No	No	No

Key Issues for Decision Making:

Colorado State Parks has continued to see increased growth within our visitor base. As the demand for natural areas continues to grow, the demand for improved and enhanced services increases as well. The Division has invested in new facility enhancement projects, such as the addition of new campsites, addition of electric hook-ups to existing campsites, and expanding existing facilities at several parks, which will add to the overall experience for citizens visiting the parks.

The public that visits our state parks pays a fee to enjoy our parks and the amenities that we have to offer. This is accomplished through the purchase of an annual pass, a daily pass and camping and usage fees. With the payment of this entrance fee, visitors anticipate an adequately maintained facility with modern amenities and various activities. The Division has been working on expanding and modernizing many parks and adding more recreational activities such as marinas, more modern cabins and more service centers within the campsites. This has allowed the parks to expand to a new customer base that may not otherwise visit the parks. In order to continue attracting new visitors and to further expand the visitor base, it is vital that we maintain our current facilities and continue to expand at additional parks.

Assumptions and Calculations

Estimated Annual Revenue Summary

Camping (includes increases from new electric camp sites, upgraded camp sites)	$1,190,450
Total Estimated Revenue	$1,190,450

Estimated Costs Summary

Personal Services, Operating, Utilities, Seasonal Staff, Capital, Fleet	$552,524
Total Estimated Costs	$552,524

Assumptions:

Navajo State Park Marina – Phase II

This is Phase II of a planned three phase development of the state owned and operated Navajo Marina. One FTE was hired in the Phase I allocation to run the new marina. The existing FTE is needed to manage the commercial, business and marketing aspects of the new marina. The requested FTE is required to perform daily operations and maintenance of the new facilities recently constructed; three full service rental cabins, an additional 64 campsites, a new visitor center, parking lots, group picnic facility, new restrooms and an upgrade to the park's sewage system. The vehicle will be utilized by the new FTE while performing daily operations and maintenance. An operating budget is required for purchase of supplies and maintenance items. SWP is required to provide service to the public for launch and retrieval of boats, pumping gas, dock service, and staffing the store operations. Utility funds are required for the electrical service to run the gasoline, sewer pump-out, heating and cooling for the stores and electrical hookups for the boat slips.

This project has been received well by park visitors due to the quality of the facilities and services that are being provided. Based upon the response that has been received, the marina could have further potential for growth beyond this phase. The potential expansion for phase III includes the construction of enclosed or covered dry storage facilities, boat slips in the mooring cove, addition of boat slips to the main marina, adding houseboat rentals, and construction of a full service boat shop. These facilities would be constructed as capital funding becomes available. If the expansion were made possible, there would be additional seasonal staff and FTE that may be required due to the added workload.

Navajo State Park Marina – Phase II

Phase Two Cost Projections:	Projections	Phase Two Revenue Projections:	Projections
Personal Services – Total	**$43,179**	Expanded Dry Storage	$4,000
1.0 FTE Resource Tech IV-Salary	$36,348	Mooring Cove Buoy Rental	$21,000
PERA	$3,871	Slip Rentals	$75,000
Medicare	$527	Boat Rentals	$76,000
Short-term Disability	$58	Marina Stores	$50,000
Health/Life/Dental	$2,375	Launch & Retrieve	$1,000
Operating – Total	**$18,878**		
Uniform/Operating for FTE	$1,730		
Expanded Dry Storage	$500		
Mooring Cove buoy maintenance (20 buoys)	$1,000		
Variable Fleet Costs	$2,448		
Fleet – 1 lease truck * $1,700/yr	$1,700		
Slip maintenance (26 slips)	$1,000		
Rental boat maintenance (6 boats)	$3,000		
Store building maintenance (2 stores)	$2,000		
Launch & retrieve supplies	$500		
Utilities - electricity	$5,000		
Seasonal Work Program – Total	**$33,355**		
Boat Rentals/Launch & Retrieve			
4 mos x $8.60/hr x 173 hrs/mo. incl. PERA & Medicare	$6,671		
Slips/Buoys/Expanded Dry Storage			
4 mos x $8.60/hr x 173 hrs/mo. incl. PERA & Medicare	$6,671		
Marina Stores			
12 mos x $8.60/hr x 173 hrs/mo. incl. PERA & Medicare	$20,013	TOTAL REVENUE	$227,000
TOTAL ESTIMATED BUDGET – Cash Funds	**$95,412**	MINUS OPERATING COSTS	$95,412
		NET REVENUE	**$131,588**

Chatfield State Park:

This is for the operation and maintenance of 44 new campsites, a new camper services building and the upgrade of the existing 153 single campsites and 10 group campsites. The additional utilities are necessary to support the added electrical, water and sewer hook-ups in both the existing campsites and the new campsites. Utility costs will increase due to the addition of 146 electrical pedestals in the individual sites and 40 electrical pedestals in the group site. Additionally full water and sewer hookups are available at 120 sites, resulting in increased water and sewer costs. The additional camper services building will require propane for heating and hot water. Additional SWP will be required to maintain the additional campsites and camper services building, as well as increase staffing hours in the campground registration building.

Expenses	Cost Projected	Revenue Projections	Revenue Projection
SWP Total	**$13,784**	**Campsites/Upgraded Facilities Total**	**$258,460**
2.4 mos.-Campground Attendant 403 hrs * 8.20/hr	3,705	Increased Pass Sales	44,223
6 mos.-Maint Tech 1008 hrs * 8.92/hr	10,079	Increased Camping Sales	209,737
Operating Total	**$6,280**	New shower facilities	4,500
2-6 yd dumpster for 7 mos. (summer)	1,100		
2-6 yd dumpster for 5 mos. (winter)	180		
Janitorial supplies for new camper Svcs bldg.	1,000		
Gasoline fleet cost increase	4,000		
Utilities (New Loop D) Total	**$18,356**	TOTAL REVENUE	$258,460
Campground improvements consumption **	13,356		
New D Loop camper services bldg.	5,000		
Utilities (Upgraded A,B,C & Group)	**$20,713**	LESS OPERATING COSTS	$59,133
Total	**$59,133**	**NET REVENUE**	**$199,327**

Increased Utilities Cost **

Expenses

New Electric Camp Sites - Camp Loop D							
May to September - Camping							
full hook-up	# days	# sites	Occ. rate	# nights	Utility Cost per site		
weekend	36	44	94.0%	1,489	2.00	2,978	No Aspen discounts
weekday	90	44	87.0%	3,101	2.00	6,201	Assume 10% Aspen discount
Aspen weekday	90	44	10.0%	396	2.00	792	
September through April - Camping							
full hook-up	# days	# sites	Occ. rate	# nights	Utility Cost per site		
weekend	19	44	76.0%	635	2.00	1,271	No Aspen discounts
weekday	42	44	58.0%	965	2.00	1,929	Assume 10% Aspen discount
Aspen weekday	42	44	5.0%	92	2.00	185	
					Total Utilities Expense	**$13,356**	

Chatfield State Park

ANTICIPATED INCREASE IN PASS SALES FROM NEW CAMPSITES

					Revenue					
Camp Loop D	# days	# sites	Capacity	Vehicles	Daily	$6 daily	Annual	$55 annual	Aspen	$27 Aspen
44 full hook up sites					63%	fee	5%	fee	1%	fee
May- September Peak weekend	36	44	94.0%	1,489	938	5,628	74	4,095	15	402
May - September Peak weekday	90	44	87.0%	3,445	2,170	13,023	172	9,474	34	930
September - April Weekend	19	44	76.0%	635	400	2,001	32	1,747	6	222
September - April Weekday	42	44	58.0%	1,072	675	3,376	54	2,948	11	375
assume loop closed 11/1 - 3/31					**Totals**	24,029		18,264		1,930
									Grand Total	**$44,223**

New Full Hook-Up Camp Sites: Camp Loop D

May to September - Camping

full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
weekend	36	44	94.0%	1,489	22.00	32,757	No Aspen discounts
weekday	90	44	87.0%	3,445	22.00	68,215	Assume 10% Aspen discount
Aspen weekday	90	44	10.0%	396	11.00	4,356	
Reservation fees							
week end	36	44	94%	744	8.00	5,956	50% of sites reserved for average of three nights
weekday	90	44	87%	1,723	8.00	13,781	50% of sites reserved for average of three nights

September through April - Camping

full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
weekend	19	44	76.0%	635	20.00	12,707	No Aspen discounts
weekday	42	44	58.0%	965	20.00	19,293	Assume 10% Aspen discount
Aspen weekday	42	44	5.0%	92	10.00	924	
Reservation fees							
weekend	19	44	76%	318	8.00	2,541	50% of sites reserved for average of three nights
weekday	42	44	58%	536	8.00	4,287	50% of sites reserved for average of three nights

Upgraded Camping - Add Water & Sewer: Camp Loop A

May to September - Camping

full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
weekend	36	50	94.0%	1,692	2.00	3,384	No Aspen discounts
weekday	90	50	87.0%	3,524	2.00	7,047	Assume 10% Aspen discount
Aspen weekday	90	50	10.0%	450	2.00	900	
Reservation fees							
week end	36	50	94%	846	8.00	6,768	50% of sites reserved for average of three nights
weekday	90	50	87%	1,958	8.00	15,660	50% of sites reserved for average of three nights.

Chatfield State Park

Upgraded Camping - Add Electric, Water & Sewer: Camp Loop B						
May to September - Camping						
full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Increase**	**Total**
weekend	36	25	92.0%	828	2.00	1,656 No Aspen discounts
weekday	90	25	44.0%	891	2.00	1,782 Assume 10% Aspen discount
Aspen weekday	90	25	10.0%	225	2.00	450
Reservation fees						
weekend	36	25	92%	414	8.00	3,312 50% of sites reserved for average of three nights
weekday	90	25	44%	495	8.00	3,960 50% of sites reserved for average of three nights
					Upgraded Camping Total	**$209,737**

Cherry Creek State Park:

This request is essential for the operation and maintenance of 31 new campsites, 3 new group loops, a new camper services building, as well as additional comfort station facilities throughout the group loops and campground. The additional utilities are necessary to support the added electrical, water and sewer hookups for the new campsites and buildings. Utility costs will increase due to the addition of 109 electrical pedestals in the individual sites and 3 electrical pedestals in the group site. Additionally full water and sewer hookups are available at 113 sites, resulting in increased water costs. The additional camper services building will require propane for heating and hot water. Additional SWP will be necessary to operate the entrance station and campground year round for revenue collection.

Expenses	Cost Projected	Revenue Projections	Revenue Projection
SWP (including PERA & FICA) Total	**$19,374**	**Campsite Total**	**$116,980**
6 mos.-Campground Attendant 1038 hrs * 8.00/hr	9,309	A Loop	29,725
6 mos.-Maint Tech 1038 hrs * 8.65/hr	10,065	B Loop	24,055
		C Loop	10,286
Operating Total	**$19,000**	D Loop	12,864
Trash	4,000	F Loop	20,025
General	5,000	G Loop	20,025
Uniforms, radio, vehicle lease	10,000		
		Entrance Fees Total	**$54,014**
Utilities Total	**$15,270**		
Water/sewer	3,520		
Electricity	10,750	TOTAL REVENUE	$170,994
Gas	1,000	LESS OPERATING COSTS	$53,644
Total	**$53,644**	**NET REVENUE**	**$117,350**

Mueller State Park:

This request is for additional SWP, operating and utility funds to cover the cost associated with operating the 3 newly constructed deluxe cabins at Mueller State Park. These cabins are open throughout the year for rental by park visitors. The cabins have been very popular since they became available to the public. The amenities within the cabins include flush restrooms, showers, kitchen facilities and sleeping and living quarters. The upgraded cabins require more maintenance than traditional cabins in order to ensure they are adequately maintained and accessible to all that visit the park.

Expenses		**Cost Projected**		
Septic Pumping	**Gallons**	**Per Gallon**		**Total**
4 bedroom cabin	1500	0.16		240
3 bedroom cabin	1250	0.16		200
2 bedroom cabin	1000	0.16		160
			Total	**600**
Electricity*		**Per Month**	**Months**	**Total**
4 bedroom cabin		$97	12	1,164
3 bedroom cabin		$70	12	840
2 bedroom cabin		$50	12	600
*Lights, stove, well, hot water heater			**Total**	**2,604**
Propane*	**Gallons**	**Per Gallon**	**Months**	**Total**
4 bedroom cabin	100	1.194	12	1,433
3 bedroom cabin	70	1.194	12	1,003
2 bedroom cabin	50	1.194	12	716
*Gas fireplaces and gas forced air furnace			**Total**	**3,152**
			Utility Cost Total	**6,356**
Operating				
See below			**Operating Cost Total**	**8,572**
Seasonal Work Program	**Hours/ week**	**Wage**	**Months**	**Total**
1-Summer cabin cleaner	24	7.25	6	4,656
1-Summer cabin cleaner	24	7.00	6	4,495
1-Winter cabin cleaner	16	7.25	5	2,599
1-Maintenance Tech I*	24	7.25	5.5	4,200
*snow removal, painting, grounds and building maintenance				
1-Admin Tech*	30	7.25	4.5	4,350
* Cabin check in/out, inventories, correspondence and guest relations				
SWP Total (including Pera and FICA)				**20,300**
			Grand Total	**$35,228**

Revenue Projections	
Cabin Rental Fees	
Ponderosa 182 * $160/nt	$29,120
Spruce 182 * $160/nt	$29,120
Pine 182 * $80/nt	$14,560
TOTAL REVENUE	$72,800
LESS OPERATING COSTS	$35,228
NET REVENUE	**$37,572**

*These costs are derived on an estimated occupancy rate of 50%, or 182 nights per cabin.

Mueller State Park Operational Expenses:

Linen service picks up dirty sheets and towels and delivers clean sheets and towels. This service is two times per week May through August and once per week September through April. The dollar amount varies depending on the amount of clean linens delivered. The budgeted high price was $250 per week and the budgeted low price was $25 per week. An average price was determined and used to calculate estimated cost of linen service.

2 deliveries per week @ $ 150 per week X 16 weeks = $2,400
1 delivery per week @ $ 52 per week X 36 weeks = $1872
Estimated total for linen service = $4272

Trash Removal service was based on an estimated 2 yards of trash generated by 3 cabins. The summer season of 6 months would require an additional dumpster added to the existing contract for waste removal. The winter season trash generated would be placed in existing dumpsters.

2 yard dumpster emptied 1 time per month @ $75 per month X 6 summer months = $450
Total for trash removal = $450

Maintenance supplies are estimated for all 3 cabins based on cabins in other parks and other facilities at Mueller. These items include toilet paper, paper towels, coffee filters, interior and exterior stains and paint, wood floor polish, automatic dish washer detergent, light bulbs, dish sink detergent, brooms, dust mops, toilet brushes, weekly wood floor refurbish, monthly wood floor revitalize, annual floor stripper and refinisher, insect spray, etc.

Total for maintenance supplies $2,450

Custodial supplies includes daily cleaning supplies including wood floor cleaner, glass cleaner, furniture polish, bathroom tile cleaner, toilet bowl cleaner, Lysol disinfectant, air freshener, 409 kitchen counter cleaner, Jet Dry automatic dish washer additive, sponges, pine sol, dry cleaning of bedspreads, carpet cleaning rental and detergent, etc.

Total for custodial supplies $1,400

Cheyenne Mountain State Park:

This project continues a joint investment by GOCO, Colorado State Parks and the City of Colorado Springs at Cheyenne Mountain, El Paso County's first State Park. The estimated project cost will total over $22,000,000 when completed. Projects that will be funded with this year's capital construction request and the prior two years of funding include the following:

Roads - $3.8 million
Trailheads and trailhead parking - $500,000
Visitor Center site work - $200,000
Campgrounds and cabins - $4 million
Camper services buildings and flush toilets - $1 million
Picnic facilities - $500,000
Amphitheater and site work - $300,000

This request is for additional funding to accommodate full operation and maintenance of a visitor center, a 62-site campground, a maintenance shop, six comfort stations, 40 picnic sites, a group picnic area, 1.5 miles of ADA accessible trails and 18.5 miles of natural surface trail. The costs associated with the above have increased due to the park being open for the entirety of FY 06-07. There will be increased costs associated with the completion of the visitor center, 6 comfort stations, a camper services building, 62-site campground, maintenance shop, and site maintenance for these facilities. There will be an increase in fuel, water and sewer expenses, increased fleet management costs due to the addition of a PM III, as well as additional expenses for a larger SWP workforce. Additionally, three vehicles are needed to enable the new FTE and SWP to effectively patrol and maintain the new facilities at Cheyenne Mountain. The timetable for completion of milestones is shown below:

Timetable	
Phase	**Est. Completion Date**
Trail construction completed	Summer 2006
Road & Utilities	Summer 2005
Electricity	January 2006
Water, Sewer and Gas	April 2006
Visitor Center Completed	Spring 2006
Campground open to visitors	Summer 2006
Cabins open to visitors	Summer 2007
Project Completion	Winter 2008

Trails: The trail system is largely complete with roughly 17.5 miles of natural surface trail having been constructed to date. By Summer 2006 all planned trails should be complete. However, we expect limited trail use will be open to the public as early as the Fall of 2005.

Road and Utilities: The first phase of the project involved construction of roads and utilities. Water and sewer are almost in place, however work must be completed to allow connections to City utilities. The anticipated completion for electricity is January 2006 for and April 2006 for water, sewer and gas.

Buildings: The completion date for the visitor center is anticipated in Spring 2006, followed by the campground opening Summer 2006. The cabins will be phased in beginning fall 2006 and being available for use during the Summer 2007.

Expenses	Cost Projected			Revenue Projections	
Personal Services			**Annualized**		
0.5 Park Manager II:	Payroll	2,815	16,890	Camping Fees	184,309
	PERA	10.65%	1,799	Parking/Trail Use	276,888
	FICA	1.45%	245		
	STD	0.16%	27		
	Health/Life/Dental	$199	1,194		
		Total	**$20,155**		
0.5 Technician IV:	Payroll	2,955	17,730		
	PERA	10.65%	1,888		
	FICA	1.45%	257		
	STD	0.16%	28		
	Health/Life/Dental	$199	1,194		
		Total	**$21,098**		
1.0 Park Manager III	Payroll	3,257	39,084		
	PERA	10.65%	4,162		
	FICA	1.45%	567		
	STD	0.16%	63		
	Health/Life/Dental	$199	2,388		
		Total	**$46,264**		
1.0 Administrative Assistant III	Payroll	2,420	29,040		
	PERA	10.65%	3,093		
	FICA	1.45%	421		
	STD	0.16%	46		
	Health/Life/Dental	$199	2,388		
		Total	**$34,988**		
	Total Personal Services		**$122,505**		

Cheyenne Mountain State Park -Continued

Seasonal Work Program	Hours	Wage	Months	Total
1 - Park Ranger III	173	10.00	6	11,636
1 - Park Ranger II	173	9.00	6	10,473
1 - Program Tech	173	9.00	3	5,237
1 - Visitor Services Tech III	173	8.00	6	9,311
2 - Maintenance Tech III	346	9.00	4.5	15,710
Total SWP (including PERA & FICA)				**$52,367**
Operating				
Consumables				38,985
custodial supplies, paper products, herbicide, trash bags, office supplies				
Training/ammunition				2,500
Variable Fleet Costs				12,441
3 full-time lease 4x4 truck 7,000 miles/yr. * $.222 var. rate				
Fixed Fleet Costs				5,100
3 full-time lease trucks @ $1,700/yr				
Marketing				1,000
print media, direct mail, advertising brochures				
Other				52,412
Trash collection, telephone, fuel, equipment, SWP uniforms and equipment, cell phones, postage, copier lease, and equipment repair and maintenance.				
Operating Total				**$112,438**
Utilities Total				**$21,797**
			Total	**$309,107**

TOTAL REVENUE	**461,197**
LESS OPERATING COSTS	**309,107**
NET REVENUE	**$152,090**

Parking/trail use	# days	# sites	load	Vehicles	63% daily	$6 daily fee	5% Annual	$55 annual fee	1% Aspen	$27 Aspen fee
May- September Peak weekend	44	291	75.0%	9,603	6,050	$ 36,299	480	$ 26,408	96	$ 2,593
May - September Peak weekday	109	291	40.0%	12,688	7,993	$ 47,959	634	$ 34,891	127	$ 3,426
October - April Weekend	61	291	40.0%	7,100	4,473	$ 22,366	355	$ 19,526	71	$ 2,485
October - April Weekday	178	291	25.0%	12,950	8,158	$ 40,791	647	$ 35,611	129	$ 4,532
Totals						$ 147,416		$116,436		$13,036
									Grand Total	**$276,888**

Cheyenne Mountain State Park -Continued

May through September - Camping							
full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
Weekend	34	52	70.0%	1,238	$20.00	4,752	No Aspen discounts
Weekday	88	52	50.0%	2,059	$20.00	41,184	Assume 10% Aspen discount
Aspen weekday	88	52	50.0%	229	$10.00	2,059	
Basic							
Weekend	34	10	70%	238	$12.00	2,856	No Aspen discounts
Weekday	88	10	50%	396	$12.00	4,752	Assumes 10% Aspen Discount
Aspen Weekday	88	10	50%	44	$ 6.00	264	
Reservation fees							
Weekend	34	62	70%	738	$ 8.00	5,902	50% of sites reserved for average of three nights
Weekday	88	62	50%	1,364	$ 8.00	10,912	
					Total	**$ 92,682**	
October through April- Camping							
full hook-up	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
Weekend	61	52	30.0%	952	$20.00	19,032	No Aspen discounts
Weekday	178	52	25.0%	2,083	$20.00	41,652	Assume 10% Aspen discount
Aspen weekday	178	52	25.0%	231	$10.00	2,083	
Basic							
Weekend	61	10	30%	183	$12.00	2,196	No Aspen discounts
Weekday	178	10	25%	401	$12.00	4,806	Assumes 10% Aspen Discount
Aspen Weekday	178	10	25%	45	$ 6.00	267	
Reservation fees							
Weekend	61	62	30%	567	$ 8.00	4,538	50% of sites reserved for average of three nights
Weekday	178	62	25%	1,380	$ 8.00	11,036	
					Total	**$ 85,610**	
July - Sept & April - June							
Group Picnic	**# days**	**# sites**	**Occ rate**	**# nights**	**Fee**	**Total**	
Weekend	44	1	80%		$ 90	3,168	
Weekday	109	1	20%		$ 90	1,962	
October through March - Group Picnic							
Weekend	44	1	10%		$ 90	396	
Weekday	109	1	5%		$ 90	491	
					Total	**$ 6,017**	**Grand Total Revenue** **$461,197**

Schedule 6
CHANGE REQUEST for FY 06-07

Department: Natural Resources
Priority Number: 9 of 21
Division: CWCB
Program: Severance Tax
Request Title: Severance Tax

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Sections 39-29-109, 37-60-102 and 106, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Severance Tax	Total	585,000	840,000		840,000	585,000	255,000	840,000		840,000	255,000
	FTE										
	GF										
	CF	585,000	840,000		840,000	585,000	255,000	840,000		840,000	255,000
	CFE										
	FF										

Note: Figures in column 10 may change depending on revenues received from the Operational Account of the Severance Tax Trust Fund

Letter Notation:
Cash Fund name/Number, Federal Fund Name: Operational Account of the Severance Tax Trust Fund (CF)
IT Request ☐ Yes ☒ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ☒ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ☒ No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request: Severance Tax
Priority Number: 9 of 21
Division: Colorado Water Conservation Board (CWCB)

Summary of Requested Alternative:
To request a permanent increase of $255,000 in funds available to the CWCB, its water supplier partners and local communities from the Severance Tax Trust Fund Operational Account to:

- Conduct water studies and prepare water resource plans;
- Produce maps;
- Facilitate water conservation;
- Provide educational information;
- Rehabilitate water infrastructure;
- Protect the environment;
- Reduce flood-related hazards; and,
- Restore streams.

Problem or Opportunity Definition:
The CWCB annually solicits applications for projects to be funded from the Severance Tax Trust Fund Operational Account. This process begins each January when grant applications are due, continues through March when each application for funds is reviewed, approved or modified, and ranked by the members of the CWCB. The state Minerals Energy and Geology Policy Advisory (MEGA) Board then reviews the projects and the rankings and forwards its recommendation to the DNR Executive Director.

Each fiscal year, the CWCB receives more Severance Tax Trust Fund Operational Account grant applications than it is able to fund under its currently authorized appropriation. The State, acting through the CWCB, has also been involved in several long-range planning processes – the Statewide Drought Assessment, the Covered Entities Technical Assistance Project, and the Statewide Water Supply Initiative (SWSI).

Each of these processes has identified that Colorado water suppliers, and citizens in general, want the CWCB to:

- Provide support for water resource planning and development;
- Educate citizens about water use, development and conservation;
- Provide more technical assistance to deal with drought and water supply related problems;
- Mitigate the impacts of development by reducing flood-related hazards and mitigating the use and development of water through state-held instream flows;
- Generally encourage cooperation and planning among entities with water rights; and,
- Encourage the use of science and technology to solve complex problems.

The Operational Account monies that the CWCB receives assists in meeting the above demands by funding projects that sponsors, often acting through the CWCB and its staff, have applied for or been encouraged to pursue.

The CWCB has received Severance Tax Trust Fund Operational Account grant requests totaling significantly more than the base appropriation of $585,000. The following information summarizes the amount requested by grant applicants for the past two, current, and request year fiscal years:

- FY03-04 = $2.15 million
- FY04-05 = $1.56 million
- FY05-06 = $1.78 million
- FY06-07 = $2.19 million

Prior to FY05-06, the CWCB had not been granted a Severance Tax increase for several years and historically has not received its full 5% allocation. Because of that, projects were ranked in terms of importance to stay within the constant funding stream of the $585,000 line item appropriation. During the FY05-06 request, the CWCB received a one-time funding increase of $255,000 to be added to the $585,000 which is normally received. The increase allowed the CWCB to fund additional project requests, which were ranked as "High" and "Medium" priorities during that fiscal year. The on-going appropriation of the funding will allow the CWCB to work on and/or complete water projects that are beneficial to the State of Colorado.

Currently, the CWCB continues to use the same ranking process as mentioned above. During the project ranking process, projects that would receive some funding, even if it were less than the full amount of the request, are ranked

high. The CWCB Board recommends consistently that all high and medium projects should be pursued – if not in the Fiscal Year of the request, than in a future Fiscal Year.

Available Alternatives:

1. No budgetary Change (Status Quo)
2. Retain the one-time increase of $255,000 Severance Tax Trust Fund Operational Account appropriation on a permanent basis to benefit local and state water activities
3. Receive the full five-percent portion of $1,891,201 in funds available to the CWCB from the Severance Tax Trust Fund Operational Account

Assessment of Alternatives:

1. **No budgetary change (Status Quo – Fund a Portion of the High Priorities) – (Not recommended)**
   a. **Description:**
   Maintain the CWCB's current appropriation of $585,000.

   b. **Department's authority to implement the alternative:**
   Sections 39-29-109, 37-60-102 and 106, C.R.S.

   c. **Link to objectives:**
   This option allows the CWCB to continue to study water availability, perform water planning and development, plan for droughts, promote the efficient use of water, identify and reduce flood risks, and plan and manage instream flows, but would not allow the CWCB to complete many of the projects that are approved each year by the CWCB Board and the MEGA Board. The list of projects for FY06-07 is listed on the back pages of this decision item request document as *Attachment A*. These objectives correspond with objectives 1.1, 1.2, 1.5 and 1.7 of the DNR Strategic Plan.

2. **Retain the One-Time Increase of $255,000 in Severance Tax Appropriation (which is an amount that is less than the CWCB's allocated five percent share of Operational Account monies to help in funding projects) – (Not recommended)**
   a. **Description:**
   Permanently retain the one-time increased amount of $255,000 in severance tax, which is less than the five percent share allowed by statute.

b. Department's authority to implement the alternative:
Sections 39-29-109, 37-60-102 and 106, C.R.S.

c. Link to objectives:
This option allows the CWCB to better study water availability, peform water planning and development, plan for droughts, promote the efficient use of water, identify and reduce flood risks, plan and manage instream flows, and fund local water study and demonstration projects. It helps the CWCB to meet a majority of the demands for funds for the above purposes. The CWCB would be able to fund a larger portion of those projects ranked as having a "High" priority. These objectives correspond with objectives 1.1, 1.2, 1.5 and 1.7 of the DNR Strategic Plan.

3. Receive the full five-percent portion of $1,891,201 in funds available to the CWCB from the Severance Tax Trust Fund Operational Account – (Recommended)

a. Description:
Receive the full five-percent portion in funds available to the CWCB from the Severance Tax Trust Fund Operational Account to help in funding projects.

b. Department's authority to implement the alternative:
Sections 39-29-109, 37-60-102 and 106, C.R.S.

c. Link to objectives:
This option allows the CWCB to fund more fully severance tax related projects and to continue to study water availability, plan for droughts, promote the efficient use of water, identify and reduce flood risks, and plan and manage instream flows. All projects ranked as a high priority for FY06-07 and several of the medium priority projects would have the required funding for completion and future demands would be met. These objectives correspond with objectives 1.1, 1.2, 1.5 and 1.7 of the DNR Strategic Plan.

Analytical Technique:
The analytical technique used for this decision item is the multi-criteria method. This will allow the evaluation of performance against multiple objectives or criteria.

Assessment of Alternatives:
Background Information

Since July 1995, one-half of the severance tax receipts credited to the Severance Tax Trust Fund are placed in the Operational Account. The Operational Account supports programs that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water. The CWCB is allowed to request up to five percent (5%) of the funds in the Account.

The severance tax revenue that the CWCB has received has been a valuable addition to the funding provided from the Construction Fund for local water planning activities and water project loans appropriated through the annual Water Projects Bill.

The projects (see *Attachment A*) recommended by the CWCB for funding are a mix of projects developed within the CWCB and projects proposed by outside interests or water user partners.

Link Budget Expenditures to the Full Range of Outcomes:

- The budget expenditures will benefit the state and help local water suppliers.
- There are no external costs to other government entities, private industry, or citizens.
- The main internal benefit is that the CWCB will be able to fund severance tax related projects and to continue to effectively meet its goal of developing, conserving, protecting and managing water. The CWCB utilizes funds from the Severance Tax Operational Account and the CWCB Construction Fund to provide money for water projects. Allowing the CWCB to utilize more of its portion of the Severance Tax Operational Account would reduce the number of grant requests for Construction Fund monies, thereby leaving more of those funds available for loans.
- The external benefit is that the local water entities will receive funding, technical assistance, and materials to be able to meet their own water resource goals. In addition, more money would be available in the Construction Fund for project loans.

Application of the Analytical Technique/Assumptions and Calculations:

Multi-Criteria Analysis

Option	Upgrade water protection data	Promote & Plan water projects	Flood Mitigation	Instream Flow Planning	Provide additional local water planning benefit	Develop more water (in acre-feet)
Alt #1 (No change): Continued Funding of $585,000	X	X	X	X	X	X
Alt #2: Retain one-time increase of $255,000 permanently	XX	XX	XX	XX	XX	XX
Alt #3: Receive 5% appropriation	XX	XX	XX	XX	XX	XX

- • = does not achieve program objective
- X = may achieve program objective
- XX = will achieve or exceed program objective

As shown in the table above, the option of receiving the additional appropriation of $255,000 of the severance tax operational account helps the CWCB to meet the criteria and demonstrates a beneficial use of the funds. The alternative of receiving the $255,000 permanently, for water projects, greatly benefits the state by allowing the CWCB to upgrade water protection data, water planning projects and instream flows, mitigating floods, and developing acre feet of water.

Budgetary Cost Assumptions and Calculations:
It is assumed that the severance tax revenue will produce adequate funds for the CWCB's use per S.B. 96-170.

Benefits, Assumptions and Calculations:
It is assumed that the majority of the expenditures and contracts for studies and projects will benefit local communities.

Key Issues for Decision Making:
Historical revenue collections have shown that Severance Tax revenues can fluctuate greatly. Therefore, studies, planning, grants, and coordinating efforts that can be completed within one year are very appropriate for this fund source. The key motivation behind creating this fund source was the need to mitigate the loss of valuable non-renewable energy resources as they are removed from the land. It was desired that a portion of the value of these resources should return to local communities and the state to be used to help mitigate the loss of these non-renewable resources.

Water may be Colorado's most valuable commodity and making more water available for growth, recreation and other purposes has been a key component in community planning. In fact, when the Severance Tax statutes were enacted, special consideration was given to using the revenues for water-related activities.

Omission, Biases, or Uncertainties:
The main uncertainty is that if energy prices collapse, the revenue would decrease, but there is a statutory Severance Tax Trust Fund Operational Account reserve that will mitigate risks. Further, the amount of funding provided to the CWCB can be adjusted from year to year to adjust for available funds in the Operational Account.

Recommendation:
To receive, on a permanent basis, the increase of $255,000 in funds available to the CWCB from the Severance Tax Trust Fund Operational Account to conduct and fund water studies, produce mapping projects, generate water plans, and facilitate water planning between multiple water organizations.

Attachment A
CWCB Program FY 06-07 Severance Tax Projects List

Project Name	Type of Project	Location and Beneficiary	[1]Cost of Project (Estimated)	[2]Funding Request	Brief Description of Project	Priority Ranking
Statewide Water Planning and Local Planning Grants	Study	Statewide - Local Water Planners	$ 250,000	$ 250,000	Cost sharing grants that result in water planning products within one year.	H
Colorado River Compliance	Study	Statewide - CWCB/DWR/ Local Water Planners	$ 250,000	$ 100,000	Develop scenarios upon which future plans will be based in accordance with the Colorado River Compact.	M
Geochemical Characterization & Age Dating of Groundwater	Study	Statewide Water Users - Denver Basin	$ 26,000	$ 22,000	To provide groundwater geochemical information to assist local entities in water supply planning.	M
Ground Water Resource Mapping Program	Study	Statewide - Water Users	$ 160,000	$ 80,000	Interactive internet based groundwater resource maps for use by local water planners.	H
Hydrogeology of the Dakota-Cheyenne Aquifer	Study	Arkansas River Basin - Regional Water Planners	$ 65,000	$ 28,500	To map the groundwater resources of this aquifer to assist in water supply planning efforts.	M
Gunnison River Transit Loss Study	Study	Gunnison River Basin - Gunnison River Basin Water Users	$ 83,300	$ 50,000	To estimate streamflow transit losses along the Gunnison River to manage water releases downstream.	H
Fountain/Monument Creeks Transit Loss Study, Phase 2, Update	Study	El Paso and Pueblo Counties - El Paso County, Arkansas River and Colorado River Compacts Water Users	$ 300,000	$ 50,000	To update an existing transit loss model for flexibility and enabling real time data incorporation.	H

Bent Tamarisk Removal Project	Demonstration	Bent County - Bent County Water Users	$	70,940	$	49,000	To remove Tamarisk in the Arkansas and Purgatorie watersheds and to educate the public relative to the dangers and control of Tamarisk.	L
Dolores Tamarisk Control Project	Demonstration	Dolores and Montezuma Counties - Dolores and Montezuma Counties Water Users	$	60,000	$	20,000	To continue efforts to eradicate Tamarisk around McPhee Reservoir and its tributaries.	L
Upper Rio Grande Basin Geophysical Study	Study	Upper Rio Grande River Basin - Rio Grande Basin Water Users	$	769,900	$	171,000	To supplement DSS groundwater flow models with Aeromagnetic and Electromagnetic data to enhance the planning of compact obligations with New Mexico and Texas.	M
SPDSS Groundwater Modeling Coordination	Study	South Platte River Basin - S. Platte River Basin Water Users	$	90,900	$	50,000	To continue the coordinated efforts with CWCB and SPDSS to provide quality assured databases, MODFLOW files and GIS data sets.	H
Diversion Structure Inventory	Study	Rio Grande River (Div 3) - Rio Grande River Water Providers'	$	85,000	$	85,000	Inventory of diversion structures encompassed by the Rio Grande River for evaluation and potential rehabilitation.	H
De Beque Water Intake and Water Supply Study	Study	Colorado River near Town of De Beque - Town of DeBeque	$	720,000	$	120,000	To study water intake protection as it relates to the effects of pollution and to repair the delivery system for adequate supplies of water.	L
SWSI IPP Cost Evaluation	Study	Statewide - Local Water Planners	$	50,000	$	50,000	Study to determine costs of implementing and whether adequate financing exists to complete identified projects and processes (IPP) of SWSI.	M

Rural Water Supply Planning	Study	Statewide - Local Water Planners	$	50,000	$	50,000	Evaluate need for assistance and develop criteria and policies for rural areas such as homeowners associations relying on groundwater wells.	H
Water Supply Assessment Follow-Up	Study	Statewide - Statewide Water Users	$	105,000	$	105,000	To perform a follow-up survey to previous Drought and Water Supply Assessment	H
Water Education	Product Implementation	Statewide - Statewide Water Users	$	50,000	$	50,000	To continue efforts to educate the public through such means as conferences, brochures, displays, and the State Fair.	H
Irrigation Water Management	Demonstration	Yuma, Washington, Phillips and Kit Carson - Local Water Users	$	175,000	$	35,000	To provide education and testing services to demonstrate and promote water quality protection and water quantitiy conservation.	M
HB 04-1365 Grants	Grants	Statewide - Local Water Planners	$	75,000	$	75,000	Grants to implement HB 04-1365 and provide technical assistance to covered entities to develop drought mitigation.	H
Federal Funding Strategies and Grant Applications Program	Product Implementation	Statewide Water Users	$	50,000	$	50,000	To identify federal grant programs and seek applicable federal monies to help achieve Instream Flow goals and support implementation of identified projects and processes.	H
Instream Flow Program Outreach and Education	Demonstration	Statewide Water Users	$	25,000	$	25,000	To develop information to educate water interests regarding ISF and Natural Lake Level Program	H
RICD Support	Technical Assistance	Statewide - Local Water Planners	$	50,000	$	50,000	Provide technical assistance to local communities to assure compliance with CWCB policies regarding recreational in-channel diversion water rights' applications.	H

Development of Infiltration and Unit Hydrograph Parameters for Inflow Design Flood Studies	Study	Statewide - Local Water Planners	$	50,000	$	30,000	To continue the evaluation of extreme precipitation and inflow design flood parameters related to dam safety, water storage and conservation.	H
Multi-Objective Watershed Restoration Projects	Study	Statewide - Local Water Planners	$	250,000	$	125,000	To provide funding for watershed restoration projects to selected candidates to address watershed planning.	H
Detailed Flood Hydrology Assessments	Study	Statewide - Local Water Planners	$	100,000	$	50,000	To provide cost sharing funding to address local floodplain planning needs in conjunction with FEMA.	H
Enhanced Snowpack Assessment - Phase III	Study	Statewide - Local Water Planners	$	100,000	$	70,000	To develop the Snow Data Assimilation System, which will provide a model for analysis of snowpack for water planning and flooding impact.	H
Community Collaborative Rain, Hail and Snow Network	Study	Statewide - Colorado Climate Center & Statewide Water Users	$	20,000	$	10,000	To improve the website and to develop interactive training for data input for volunteers to enhance drought monitoring, water supply assessments and evaluating flood potential.	M
NRCS SNOTEL Site Installations	Product Implementation	Salida and Loveland - Statewide & Local Water Planners	$	48,000	$	15,000	To install new SNOTEL sites to increase the coverage of data for water supply forecasting during runoff.	H
Hydro-Climate Indicators on Colorado River Basin Precipitation	Study	Statewide - Local Water Planners	$	99,000	$	99,000	To prepare a hydro-climate based trend predictions / outlooks of basin specific water year precipitation and other data for forecasting trends.	H
SWSI IPP Database	Database	Statewide - Local Water Planners	$	100,000	$	100,000	Prepare a database to monitor implementation of IPPs.	M
Water User Data	Database	Statewide - CWCB/DWR/ Local Water Planners	$	50,000	$	50,000	Develop proposal to collect municipal water use data.	H

FEMA Coordinator Program	Product Implementation	Statewide - Local Water Planners	$ 30,000	$ 30,000		H
Tamarisk Matching Funds Project		Statewide - Local Water Planners	$ 50,000	$ 50,000		H
			$ 4,458,040	**$ 2,194,500**		

Notes for *Attachment A*:

[1]The column entitled *Cost of Project (Estimated)* is the amount that the sponsor (i.e., requestor for the grant) needs to complete a project in part or in whole for the fiscal year.

[2]The *Funding Request* column describes the total or partial amount that the sponsor would like to receive from the CWCB to complete the project listed. It may cover all expenses for a project or may require a partner match to equal the overall total cost of the project. In the event that the sponsor is not able to receive the full amount of funds requested or if full funding is not available for a project, the project may be performed in phases over multiple years. As noted earlier, the CWCB typically receives requests for funding that exceed available funding. The CWCB's prioritization process is discussed in the *Problem or Opportunity Definition* section of this document. The CWCB would follow the same prioritization process to conform the project request amounts to funds available from the CWCB's portion of the Severance Tax Operational Trust Fund.

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 10 of 21

Dept. Approval: Will H. Lewis **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05

Division: Colorado Oil & Gas Conservation Commission
Program: Operations
Request Title: Phase II Raton Basin Gas Seep Investigation, Las Animas and Huerfano Counties

Statutory Citation: CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	**Total**						188,625	188,625		188,625	
	FTE										
	GF										
	CF						188,625	188,625		188,625	
	CFE										
	FF										
Line Item Name Phase II Raton Basin Gas Seep Project	**Total**						188,625	188,625		188,625	
	FTE										
	GF										
	CF						188,625	188,625		188,625	
	CFE										
	FF										

Letter Notation: A - These funds are requested over a two year period, FY 2006-07 through FY 2007-08
Cash Fund name/Number, Federal Fund Name: Oil and Gas Conservation and Environmental Response Fund (Fund #170)
IT Request Yes x No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ **Emergency** ☐ **Technical Error** ☐ **New Data** ☐ **Unforeseen Contingency**
Request for New or Replacement Vehicles: ☐ **Yes** ☒ **No** **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ **Yes** ☒ **No** **(If yes, Name of other Department(s)_____)**

REQUEST TO CHANGE THE BASE OPERATING BUDGET

PART B - EFFICIENCY AND EFFECTIVENESS ANALYSIS

COMMON IDENTIFICATION INFORMATION

Department:

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Priority Number:	10 of 21
Long Bill Group/Division:	Colorado Oil and Gas Conservation Commission
Program Title/Work Package Title:	Operations
Change Request Title:	Phase II Raton Basin Gas Seep Investigation, Las Animas and Huerfano Counties
Statutory Cite:	CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

SUMMARY OF REQUESTED ALTERNATIVE

This change request is for $188,625 to fund a second phase of gas seep mapping in the Raton Basin over the two year period FY 2006-07 through FY 2007-08. The results of the proposed study will be compared to the results from the FY 2000-01 and FY 2001-02 baseline seep mapping to determine whether changes in location, aerial extent, and/or volume of gas seepage are occurring.

Funding for this change request is from the Oil and Gas Conservation and Environmental Response Fund (Fund 170).

PROBLEM OR OPPORTUNITY DEFINITION

The number of coalbed methane (CBM) wells in the Raton Basin has increased from about 90 wells in 1993, to 350 wells in 2001, to approximately 1,550 wells in 2005. This trend of increasing gas production is likely to continue into the future. To produce CBM, the water that occurs in the coal seams must also be removed. This dewatering decreases the pressure in the formation and allows the gas to desorb from the surface of the coal. As more CBM gas wells are drilled and more water is removed, the formation pressure continues to decrease, allowing more gas to desorb from the coal seams. As this process continues there is an increase in the potential for gas to seep from the outcrop of the coal seams. Gas may also move from the coal seams through or along conduits, such as improperly plugged coal mine exploration core holes, old oil and gas wells, deep water wells, faults, fractures, or igneous intrusions into ground water aquifers and to the ground surface.

In FY 2000-01and FY 2001-02, the COGCC conducted an extensive study (Phase I) to document the existing conditions throughout the Raton Basin. One of the key components of the study was the identification and accurate documentation of the existing gas seeps. Since that time more than 1,000 additional CBM wells have been drilled. It is critical that another phase of gas seep mapping is conducted throughout the Raton Basin for comparison to the results of the Phase I mapping. This will enable the COGCC to track changes, if any, in the location and extent of gas seepage, to identify areas where seepage has the potential to impact public health, safety, and welfare, the environment, and ground water resources, and to determine mitigation strategies.

AVAILABLE ATERNATIVES

Description of Alternatives

Alternative 1: Complete Phase II Raton Basin Gas Seep Investigation, Las Animas and Huerfano Counties as proposed.

Cost Estimate: **$188,625**

Assumptions & Calculations:

1. Ground survey to locate methane seeps using an infrared spectrometer (IRS) instrument

a. Driving IRS survey:	25 days @ $3,080/day	$77,000
b. Transfer all data to ARC View files:		$ 8,250
c. Written report:		$ 8,800
		$94,050

2. Detailed mapping of identified seep areas with potential to impact public health safety and welfare

a. Field mapping:	10 square miles (sq mi) @ $3,300/sq mi	$33,000
b. Transfer all data to ARC View files:		$11,250
c. Written Report:		$12,000
		$56,250

3. Gas seep		
a. Analytical costs (gas composition & isotope):	25 samples @ $475/sample	$11,875
b. Consultant to collect samples:	6 days @ $700/day	$ 4,200
c. Written Report:		$ 1,000
		$17,075
4. Water well sampling		
a. Analytical costs:	25 samples @ $450/sample	$11,250
b. Consultant to collect samples:	10 days @ $700/day	$ 7,000
c. Written Report:		$ 3,000
		$21,250
Grand Total		**$188,625**

COGCC's Statutory Authority to Implement Alternative 1

CRS 39-29-109(1)(a)(II) (Senate Bill 96-170) One-half of the severance tax receipts credited to the Severance Tax Trust Fund ...shall be credited to the Operational Account of the Severance Tax Trust Fund and used to fund programs established within the Colorado Oil and Gas Conservation Commission, the Colorado Geological Survey, the Division of Minerals and Geology, and the Colorado Water Conservation Board that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water...

CRS 39-29-109(1)(c)(I) ...The General Assembly may appropriate moneys from the total moneys available in the Operational Account of the Severance Tax Trust Find to fund recommended programs as follows:
(A) For programs or projects within the Colorado Oil and Gas Conservation Commission, up to forty-five percent of the moneys in the Operational Account...

CRS 34-60-102(1): Oil and Gas Conservation Act – declares it is to be in the public interest to foster, encourage, and promote the development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare...

CRS 34-60-106(2)(d): The commission has the authority to regulate...oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, taking into consideration cost-effectiveness and technical feasibility.

Linkage to Specific Department Objectives:

Department of Natural Resources Strategic Objectives include:

1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.

Alternative 2: No Action.

ANALYTICAL TECHNIQUE – BENEFIT-COST ANALYSIS

ASSESSMENT OF ALTERNATIVES

Alternative 1 - <u>Phase II Raton Basin Gas Seep Investigation, Las Animas and Huerfano Counties</u>

Experience gained by the COGCC shows the need to establish baseline conditions related to natural gas seepage and water quality and quantity. If data are not collected using sound scientific practices and properly documented as early as possible during the development of an oil and gas field, then the only yardstick for identifying whether changes are occurring is anecdotal information. Because personal motivations of oil and gas operators or other individuals can impact the validity of or COGCC's awareness of such changes, reliance on anecdotal information is clearly not adequate to protect public health, safety and welfare, and the environment. In FY 2000-01 and FY 2001-02 the COGCC expended approximately $235,000 conducting the Raton Basin - Phase I project that documented conditions existing at that time, including the existence of natural gas seepage from the outcrops of numerous coal seams and natural gas seepage to the ground surface via various manmade and natural conduits. This was the first step in documenting and monitoring changes, if any, in gas seepage. The data collected during the investigation proposed in Alternative 1 – Phase II Raton Basin Gas Seep Investigation would be compared to the data collected in Phase I. This comparison would give us an objective indication of whether gas seepage has changed or is occurring in previously unidentified areas. This information would be for the immediate use and benefit of all stakeholders including operators, local government, landowners, environmental groups, and the COGCC.

Alternative 1 contains four components designed to enable the COGCC to be proactive in identifying whether significant adverse impacts to public health, safety and welfare, or to the environment have occurred or have the potential to occur in the Raton Basin as a result of CBM gas development. Funding for Alternative 1 is proposed to come from Fund 170.

Alternative 2 – No Action would result in no proactive activities being conducted; and any resampling and/or resurveying would be conducted in response to complaints from potentially impacted landowners or concerned members of a local government.

The primary beneficial outcomes of Alternative 1 are:

Customer	Beneficial Outcome to Customer
The Public and Local Governments	• Long term commitment by COGCC to monitor environmental conditions to identify changes that may be occurring as a result of oil and gas development. • Readily available environmental data for the entire Raton Basin. • Readily available environmental data managed in a centralized location by COGCC. • Improved COGCC response time to environmental complaints.
COGCC Staff	• Improved understanding of the potential and actual impacts of gas development on methane seepage. • Facilitate evaluation of whether impacts from CBM development occur. • Readily available tools for developing and evaluating strategies to minimize and mitigate impacts from CBM development.
Oil and Gas Industry	• Data collected by 3rd party resulting in improved credibility. • Long term commitment by COGCC to monitor environmental conditions.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, and welfare and the environment created by oil and gas activity that the COGCC will not be able to identify and quickly address without the approval of this request. Based on current CBM impacts in the Raton Basin, as well as La Plata County and statewide, the COGCC believes the monetized values and assumptions on the chart are reasonable.

Assessment of Annual Incremental Risk Attributed to Alternative 2 - "No Action" (not funding the Phase II Raton Basin Gas Seep Investigation)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Explosion or fire resulting from gas seepage [A]	Surface owners	$1,500,000	2	$3,000,000	High	10%	$300,000	Industry and COGCC
Residential methane detection and monitoring [B]	Surface owner	$10,000	10	$100,000	High	10%	$10,000	Industry and COGCC
Water well treatment to remove methane [C]	Surface owner	$25,000	5	$125,000	High	10%	$12,500	Industry and COGCC
Loss of crop production or timber due to methane seepage [D]	Surface owner	$5,000	10	$50,000	High	100%	$50,000	Industry and COGCC
Total Annual Cost of Alternative 2 - "No Action"				**$3,275,500**			**$372,500**	

Footnotes:

A. The Raton Basin is located in the southeastern portion of Colorado. Most of the gas is produced from coal seams and is referred to as "coalbed methane" (CBM). Many people are concerned about impacts to public health safety and welfare from CBM development. In particular the apparent increase in gas seepage from the outcrops of certain coal seams, gas seepage into ground water aquifers along manmade (deeper conventional gas wells and/or improperly completed or plugged and abandoned oil and gas wells) or natural conduits (fractures, faults, igneous intrusions). In FY 2004-05 complaints from landowners brought to the COGCC's attention the fact that gas was seeping from the outcrop of the Raton Formation in close proximity to two homes at potentially explosive concentrations. High concentrations of gas were also detected in the basement of one of the houses and in the water wells associated with both. High gas concentrations in the soil resulted in approximately three acres of stressed or dead vegetation.

This was an area in which high methane concentrations had been detected during the gas survey conducted in FY 2000-01, but the results of the localized gas survey conducted in response to this complaint suggests that the impacted area has increased since then. In response to other complaints gas surveys were also conducted on two other parcels of land. Methane was not detected in these areas. The Phase II Raton Basin Gas Seep Investigation will proactively and systematically identify and map other areas, if any, where gas seepage has increased, as well as areas where gas seepage is not occurring. The results of this survey can be used as a tool to evaluate the placement and construction of structures and water wells in areas of gas seepage.

B. In FY 2004-05, in response to a complaint, the COGCC installed 3 methane monitoring and detection systems. These cost approximately $10,000 each.

C. Treatment systems can be installed on water wells to remove methane from ground water. These systems cost approximately $25,000 and included buried cisterns, aeration and disinfection devices, and reverse osmosis or other types of filters.

D. The costs for this were estimates based on production from one acre of irrigated land and the value of the land, which as long as there was gas seepage would not produce crops. The actual costs would be dependant on the type of impacted vegetation.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences in Colorado.
Incremental Risk Factor - Percentage of impact not currently being addressed (multiplier to calculate cost of incremental risk). It has been assumed that approximately 10% of the outcrop area contains houses, occupied structures, and water wells. It is assumed that 100% of the outcrop has vegetation with the potential to be impacted.

Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

The Phase II Raton Basin Gas Seep Investigation in this request has a first year cost of $188,625, which is substantially less than the $327,500 of incremental risk that is avoided.

Conclusion:

Alternative 1 provides a satisfactory level of customer service and a lower risk of impacts to public health, safety and welfare and the environment.

Alternative 2 "no action" subjects the State to an increasing level of risk.

Description of Key Issues for Decision Making

The key issues for decision making are as follows:

- More than 1,000 new CBM wells have been drilled since the Phase I Raton Basin Project was conducted. It is necessary and appropriate to conduct Phase II, so that current data can be compared to the Phase I data to help determine whether CBM development in the Raton Basin is impacting or has the potential to impact gas seepage at the outcrop and from manmade and natural conduits.
- Determine whether CBM production is causing or has the potential to cause significant adverse environmental impacts, or significant adverse impacts to human health, safety, and welfare.
- Use money from Fund 170 for its intended purpose of promoting and encouraging sound natural resource planning, management, and development.
- Develop strategies to prevent impacts and to mitigate existing impacts, should they be identified.

Recommendation

The COGCC and the Department of Natural Resources recommend that funding for Alternative 1 be approved.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 11 of 21
Division: Water Resources
Program: Water Administration, Public Safety
Request Title: Legal Services

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: 37-61,62,63,64,65,66,67,68,69,80,80.5,81,82,83,84,86,87,89,90,90.5,91,92

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 15 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	657,661	670,603			670,602	57,938	728,540			59,912
	FTE	0.0	0.0			0.0	0.0	0.0			0
	GF	647,636	651,580			651,579	57,938	709,517			59,912
	CF	10,000	19,023			19,023	0	19,023			0
	CFE	25	0			0	0	0			0
	FF	0	0			0	0	0			0
Line Item Name Legal Services	Total	657,661	670,603			670,602	57,938	728,540			59,912
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	647,636	651,580			651,579	57,938	709,517			59,912
	CF	10,000	19,023			19,023	0	19,023			0
	CFE	25	0			0	0	0			0
	FF	0	0			0	0	0			0

Letter Notation:
Cash Fund name/Number, Federal Fund Name:
IT Request ☐ Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes x No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Identifying Information

Department:	**Natural Resources**
Request Title:	**Legal Services**
Priority number:	**11 of 21**
Division:	**Water Resources**

Summary of Request

The Division of Water Resources ("DWR" or "Division") seeks to restore its average legal services appropriation of 10,979 hours per year by increasing the FY 06-07 and FY 07-08 appropriations by 869 hours per year. The Division, therefore, requests $57,938 of General Funds in FY 06-07 and $59,912 of General Funds in FY 07-08. The DWR will also submit a Supplemental Budget Request for FY 05-06 for the same 869 additional hours ($56,034). This request does *not* assume any new major litigation; if such a need arises, the DWR will seek additional funding.

Element No. 2 – Problem or Opportunity Definition.

Section 37-92-203, C.R.S. established a water court in each of the State's seven water divisions. This district court judge has "exclusive jurisdiction of water matters within the division." According to section 37-92-302(4), C.R.S., the division or state engineer must consult on each case filed in water court. Each year, users file more and more cases. According to the Judicial Branch, the number of new cases filed in water court tripled in the ten years ending FY 02-03, an average increase of 11.6% per year (see Table 33 from the Colorado State Judicial Branch 2003 Annual Report, available at http://www.courts.state.co.us/panda/statrep/ar2003/table_33.pdf).

Fortunately, the DWR has not had to seek legal counsel for each of these cases. The division engineers have defended the State's interests in the more routine cases. Our water systems are over-appropriated in most areas; that is, there are more water rights decreed than available water in some (if not most) years. Therefore, water users are using more innovative legal and technical solutions to maximize utilization of this limited resource. These conundrums are more complicated and require the DWR to seek legal advice more often.

The cases have become increasingly complex in several ways. Water court applications address more structures as users seek to augment, change, and/or exchange their existing rights. An increasing number of the cases involve changes from agricultural irrigation to municipal, recreational, and a host of beneficial uses that were not contemplated until recently. Not only are these cases legally and technically challenging, they are politically charged as cities and other interests advocate their claims.

As supplies of water become more limited, replacement water becomes proportionally more valuable and more expensive. For instance, one share of transbasin water from the Colorado-Big Thompson Project (approximately one acre-foot) originally sold for $1.50 in 1957. In 2003, one share sold for $17,000. As it becomes more valuable, prolonged litigation does not dissuade applicants and other opposers from protecting their interests.

Corresponding with the propensity for litigation, DWR enforcement efforts have been increasing statewide, prompting additional litigation. The increased demand prompts some individuals to illegally divert water, thereby depriving others of their entitlement in tributary stream systems. The DWR is vested with exclusive, statutory authority to administer water rights in accordance with lawful standards, including enforcement actions when necessary. Furthermore, the Division expects to see a specific and dramatic increase in enforcement actions following the implementation of the Confined Aquifer Rules and the Measurement Rules in the Rio Grande Basin in FY 06-07. To prosecute these actions, only the Department of Law can file a Complaint on behalf of the DWR (*see* section 24-31-101, C.R.S., Powers and Duties of Attorney General).

The Division's statutory obligations are set forth in the following statutes:

Title 37	Article 61	Colorado River Compact
Title 37	Article 62	Upper Colorado River Compact
Title 37	Article 63	La Plata River Compact
Title 37	Article 64	Animas-La Plata Project Compact
Title 37	Article 65	South Platte River Compact
Title 37	Article 66	Rio Grande River Compact
Title 37	Article 67	Republican River Compact
Title 37	Article 68	Amended Costilla Creek Compact
Title 37	Article 69	Arkansas River Compact
Title 37	Article 80	State Engineer
Title 37	Article 80.5	Arkansas River Water Bank Pilot Program
Title 37	Article 81	Diversions of Waters from State
Title 37	Article 82	Appropriation and Use of Water
Title 37	Article 83	Exchange of Water
Title 37	Article 84	Responsibility of User and Owner
Title 37	Article 86	Rights-of-way and Ditches
Title 37	Article 87	Reservoirs
Title 37	Article 89	Offenses
Title 37	Article 90	Underground Water
Title 37	Article 90.5	Geothermal Resources
Title 37	Article 91	Water Well Construction and Pump Installation Contractors
Title 37	Article 92	Water Right Determination and Administration

The Department's relevant objectives include:

1.1 Respond to demands by constituents by providing services, information, and assistance. Number of substitute water supply plans and subdivision analyses that provide adequate water supplies for housing subdivisions, municipalities, irrigators, etc. and simultaneously protect existing water rights. Number of well permits issued within statutory time limits.

1.2 Maximize efficient use of Colorado's water resources and comply with and enforce other states' compliance with interstate compacts. Distribute available water supplies in time and amount necessary to meet water right demands in priority on a daily basis.

1.7 Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs. Continue to improve the dam safety program through the implementation of risk-based decision making, effective allocation of available staff and perform field inspections to reduce the potential of dam failure, loss of life and water supplies. Implement the provisions of SB03-045, well inspection program and related well construction and administration rules, to reduce the potential for contamination of ground water supplies and to protect the public health.

2.1 Assure that the Department's regulatory and enforcement responsibilities are carried out in a professional manner with minimal intrusive impacts on citizens and visitors by conducting at least one review of a regulatory process each year. Revise Dam Safety regulations.

Element No. 3 – Available Alternatives.

Alternative No. 1 (Recommended):
Increase the Division's Legal Services allocation to meet the average of the last three years (FY 02-03 to FY 04-05).

Alternative No. 2 (Status Quo, Not Recommended):
Do not increase the Division's Legal Services allocation from the FY 05-06 amount. This alternative will result in a deficit in sufficient funding that is necessary for adequate legal protection of vested water rights within Colorado from material injury.

Element No. 4 – Selected Analytical Technique.
The selected technique is a comparison of the cost of the request to the benefit of adequate legal representation.

Water Value
Water is a critical component in nearly all sectors of Colorado's economy. Agricultural, industrial, commercial, and municipal users rely on the State Engineer to administer their water as adjudicated and the State Engineer relies on court decrees to define that administration. Failure of the State Engineer to secure adequate legal counsel may result in decrees that are irreparable; a decree with legal inaccuracies can affect water law and administration throughout the State. Senior water rights would be injured if a decree erroneously granted senior status to a junior right or failed to require a junior appropriator to replace its out-of-priority diversions. Furthermore, that faulty decree would be a precedent to be used in other cases. Some of the errors might be remedied on appeal however, a Supreme Court case is often more costly than legal representation at the onset. The Division expects that parties to a case would stipulate to language that is amenable to those parties, however water users who are not involved in the case might be harmed by such a stipulation. The DWR has a duty to protect the waters of the State for all its citizens. While the DWR assumes that the division engineers will continue to remedy engineering and technical errors, they are not trained to find legal flaws. Moreover, they cannot distinguish the impact of a decree's phrasing on another part of the State.

The Division is unable to estimate a monetary value of an improper decree, due to the innumerable variables, such as:

- the amount of water erroneously decreed;
- the location of the water erroneously decreed;
- the amount and location of water in subsequent decrees that will rely on the erroneous decree;
- the size, complexity, interpretation, and applicability of the error.

Division of Water Resources Absorbs the Legal Workload
If 869 legal hours are not restored, the division engineers will take on the caseload that the DWR cannot afford to refer to the Department of Law. Because the engineers are not trained in legal matters, the DWR estimates it will take an engineer at least twice as long to resolve legal questions that would otherwise be referred to the Attorney General's Office ("AGO"). The DWR assumes it would continue to request legal assistance on the most challenging cases and not refer the less complicated ones.[1] The 1738 hours (869 legal hours x 2) that the division engineers would have to devote to legal issues means that they could not focus on water administration. Even if a division engineer could only affect 1% of the water in his basin, the loss to the State would be dramatic.

[1] The AGO would be negatively impacted when it could not train new staff using the less complicated cases and the cases that were referred to the AGO would be the most difficult and time-consuming. The DWR will not estimate these reduced efficiencies, as they will be borne by the Department of Law.

In the most recent year on record (Water Year 2004: October 1, 2003 to September 30, 2004), the Division of Water Resources delivered 14,209,095 acre-feet of water to Colorado water users.[2] If the seven division engineers affected only 1% of that amount, they could affect 142,091 acre-feet. Without 1738 hours to devote administration, that number is reduced by 12% [1738 ÷ (7 division engineers x 40 hours per week x 52 weeks per year)]. This means that 16,961 acre-feet (12% of 142,091) will not be delivered to Colorado water users.

Rather than quantify all of the economic damages resulting from loss of water, this analysis calculates water value assuming that the senior water right holder may always buy replacement water.

According to the 2004 Cumulative Yearly Statistics, approximately 86% of Colorado's water is diverted for agricultural purposes (irrigating crops, watering livestock, etc.). The value of this water varies from region to region and generally ranges from $20 to $50 per acre-foot when annually leased (or significantly higher for augmentation water). This analysis conservatively estimates that all agriculture water can be valued at $35 per acre-foot. If the agriculture users do not lease replacement water, the reduced water supply results in either reduced crop yields or a reduced number of acres irrigated by these rights. While putting a precise value on these losses is difficult, it is at least equal to (and probably exceeds) the current general agricultural water lease rate. (The market would not long support a production cost that exceeded the return.) If the non-agriculture users do not lease replacement water, they must impose watering restrictions, raise rates, or otherwise reduce demand.

Municipal, residential, industrial, and commercial uses account for 9% of Colorado's water use. Values vary by region and use, ranging from $200 per acre-foot leased (excluding costs of storage, transport, and treatment), to $15,000 per acre-foot purchased (including all infrastructure costs). This analysis estimates that water for these uses can be conservatively valued statewide at $250 per acre-foot.

All other uses (recreation, recharge, fish ponds, augmentation, etc.) account for the remaining 5%. While augmentation water may be valued as highly as $15,000 per acre-foot, this analysis estimates that water for all other uses can be valued statewide at $100 per acre-foot.

Assuming that the senior surface rights are affected in proportions similar to 2004 diversions and that they lease or purchase additional supplies of water at these rates, their direct cost would total nearly $977,000.

Use	Percent of Colo Water Used	A-F used (of 16,961)	Annual Value per A-F	Total Annual Value
Agriculture	86%	14,586	$ 35	$ 510,526
Muni, res, ind, comm	9%	1,526	$ 250	$ 381,623
Other	5%	848	$ 100	$ 84,805
Total	**100%**	**16,961**		**$976,954**

[2] Cumulative Yearly Statistics of the Colorado Division of Water Resources, 2004. Available at: http://water.state.co.us/pubs/cumulative/CYS_rpt_2004.pdf

Furthermore, rapid population growth statewide requires municipalities and other water suppliers to increasingly rely on changed senior agricultural water rights. Cities are now acquiring the water rights and preparing to file these change cases. As seen over the last years, these cases will continue to grow progressively more complex.

This request does not seek funding for specific cases or a short-term spike in the DWR Legal Services need. It seeks merely to cover the day-to-day applications and enforcement actions that the Engineers face.

Increased Workload Projections

Billing for the DWR is divided into five groups:

- NR AE for enforcement and compact compliance in the Arkansas River Basin, resulting from the Kansas v. Colorado litigation.
- NR WD for issues before the Board of Examiners of Water Well and Pump Installation Contractors ("BOE" or "Board").
- NR GW for issues before the Ground Water Commission
- NR GN is a newly created group to track enforcement cases in the Designated Basins only.
- NR WE for all other issues throughout the State (administration, enforcement, legal opinions and research, etc.).

This table describes the workload trends in the last three years, as General Fund hours billed, the average hours and the projected hours:

	FY03 Actual	**FY04** Actual	**FY05** Actual	**AVERAGE**	**FY07** Projected	**FY08** Projected
NR AE	313	249	373	**311**	300	300
NR GW	1,440	1,444	721	**1,202**	850	850
NR WD	621	755	869	**748**	2,350	2,355
NR GN			123	**123**	122	126
NR WE	8,715	8,528	8,789	**8,677**	7,677	7,677
Total	11,088	10,975	10,875	**10,979**	11,300	11,309

The Division foresees the following changes in its caseloads.

NR AE This group was established in 1985 following Kansas's complaint of compliance violation. After twenty years, the workload has leveled at an average of 309 hours per year. While the DWR does not believe the work will completely disappear, the Division does not anticipate much fluctuation beyond an annual average of 300 hours.

NR GW Most of the legal work for the staff of the Ground Water Commission takes place before the Commission itself. As seen in the trend above, the Commission has had several appeals to the Supreme Court in recent years. In FY05, the DWR instituted several internal efficiencies, including fewer hearings before the hearing officer. Therefore, the DWR estimates an average of 850 hours.

NR WD The BOE saw a 165% increase in new Board complaints, from 26 in Calendar Year 2003 to 69 in Calendar Year 2004, and anticipates approximately 100 complaints by the close of 2005. Approximately 80 of those cases will require legal assistance. Because the Board does not have jurisdiction over unlicensed contractors, those complaints are heard in district court. The Division has seen those court actions double since the enactment of SB 03-045 (from 11 to 21) and expects an increase to 25 unlicensed complaints per year.

Prior to SB 03-045, an average of 675 hours were billed to the NR WD line. That amount was, and continues to be, funded from the DWR Legal Services line. To offset the increase in cases, SB 03-045 provided $10,000 for litigation (from the Well Inspection Cash Fund). That $10,000 bought 165 hours in FY04, 162 in FY05, and will buy 155 hours in FY06. Assuming the same trend in billing rates, the $10,000 will buy 150 hours in FY07 and 145 in FY08.[3]

The average BOE case takes 20 hours to resolve; therefore, the DWR projects it will need 2500 hours (20 x (100 + 25)). Thus, the BOE will need 2350 hours (2500 – 150) in FY07 and 2355 hours (2500 – 145) in FY08.

NG GN The special group for well enforcement in the Designated Basins began with SB 04-225. Because the violation had to occur after May 2004, the DWR has only incurred 123 hours for 6 cases. None of these cases has been resolved. The DWR expects to utilize at least twice that much (250 hours) in FY07 and FY08.

Furthermore, SB 04-225 provided for $8511 of litigation expenses to be paid from the Well Enforcement Cash Fund. However, that fund was not financed in FY05 since the funding comes from penalties and attorneys' fees collected in these cases. Nonetheless, the DWR anticipates penalties and attorneys' fees will be collected and can be used to offset 128 hours in FY07 (8511 ÷ 66.64) and 124 hours in FY08 (8511 ÷ 68.91)[3].

NR WE The DWR foresees an increase in enforcement actions, particularly in the South Platte, Republican, and Rio Grande River Basins. However, the amount of the enforcement actions directly correlates to the number of personnel the DWR has working to discover the offenses. An increase in FTE is addressed in a separate Decision Item. Furthermore, additional staff would have to be hired and trained before they could find the violations. Due to notice and informal appeals procedures, the DWR does not feel it would incur any significant legal costs within the scope of this Decision Item (that is, prior to June 2008). Therefore, this increased workload is not addressed here.

AGO Staffing In the last few years, the Water Unit at the AGO has had significant staff turnover. When a new attorney was hired, it was an attorney with no experience in water law and little experience in litigation. Therefore, the Water Unit saw a protracted training period. In most cases, especially those that went to trial, at least one senior attorney paralleled the billing of these new-hires. As they have become more proficient, they are becoming more self-sufficient. While staffing turnovers are always inevitable, the Division (and the AGO) feels that the Water Unit will not have the remarkable turnover that it had in FY04 and FY05, when eight attorneys were replaced. The DWR estimates an efficiency of 1000 hours in the NR WE line for FY07 and FY08.

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[3] *See* Element 6 – Cost Calculations and Assumptions

Element No. 5 – Assessment of Alternatives.

Alternative 1. Benefits from this alternative accrue directly to the public in the form of stricter administration and enforcement of the State's water laws. Full and adequate funding for legal services is paramount to protect the interests of vested water rights owners, including the substantial economic impacts that directly corresponds to the use of water in irrigated crops, industry, drinking water supplies, etc. It is critical to retain legal counsel in water court proceedings because the decrees issued by the court are perpetual and any legal or technical deficiencies may not be remedied. Furthermore, adequate funding is necessary to protect existing water rights (including those owned by the State) from illegal surface and groundwater diversions and to ensure compliance with compact delivery obligations to the nine interstate river compacts. In 1985, Kansas sued Colorado because Colorado's groundwater wells reduced compact deliveries to Kansas. Twenty years later, resolution of that lawsuit held Colorado liable for $34.7 million (plus an additional $4 million in court costs).

Alternative 2. Since this is the status quo alternative, it is considered the "baseline" and no additional benefits accrue. As described above, this result would have a negative impact to the State and the Division.

Element No. 6 – Cost Calculations and Assumptions:

According to the Colorado State Judicial Branch 2003 Annual Report, the total caseload in Water Court has tripled the ten years from FY 93-94 to FY 02-03.[4] In addition to the sheer volume of water court cases, the complexity of the cases has increased and the DWR has required assistance from the Attorney General's Office on as increasing number of cases, an average of 16% more per year since FY02-03 (as seen below). Meanwhile, the hours funded for Legal Services has steadily decreased in the last three years, an average of 3% per year. By decreasing the hours, the Attorney General's Office has not been able to appropriately focus its attention while struggling to meet the mandatory deadlines.

The DWR requests the three-year average for FY07 and FY08, i.e. 10,979 hours. The FY05-06 appropriation of 10,110 hours should, therefore, be increased by 869 hours for FY07 and FY08, to the annual total of 10,979 hours.

As set in the Long Bill, the blended billing rate for FY06 is $64.45 per hour. For the period from FY01 to FY06, there was an average increase in blended rate of 3.4% each year. The DWR assumes this trend will continue and estimates a blended rate of $66.64 in FY07 and $68.91 in FY08 (64.45 x 1.034 = $66.64 for FY07 and 66.64 x 1.034 = $68.91 for FY08). The requested amounts are 869 hours at $66.64 and $68.91, respectively.

[4] Information is not available subsequent to FY03. Table 33 from the Judicial Branch Annual Report is available at http://www.courts.state.co.us/panda/statrep/ar2003/table_33.pdf.

	FY03 Actual	FY04 Actual	FY05 Actual	FY06 Appropriated	FY07 Assumed	FY07 Requested	FY08 Assumed	FY08 Requested
Cases w/ AG Asst	329	407	443					
Total Hours	11,088	10,975	10,875	10,110	10,110	10,979	10,110	10,979
Blended Rate	$ 59.80	$ 60.79	$ 61.57	$ 64.45	$ 66.64	$ 66.64	$ 68.91	$ 68.91
	$ 663,077	$ 667,182	$ 669,561	$ 651,590	$ 673,730	$ 731,668	$ 696,680	$ 756,592
					difference	$ 57,938		$ 59,912

Schedule 6
CHANGE REQUEST for FY 06-07

Department: Department of Natural Resources
Priority Number: 12 of 21
Division: Minerals and Geology
Program: Inactive Mines Program
Request Title: **Abandoned Mine Non-Point Source Projects**

Dept. Approval: Willi H. Levine Date: 11-10-2005
OSPB Approval: Date: 11-11-05
Statutory Citation: C.R.S. 39-29-109

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
TOTAL	Total	902,332	931,461	0	931,461	931,461	280,000	1,211,461	0	1,211,461	1,211,461
	FTE	13.6	13.6	0.0	13.6	13.6	0.0	13.6	0.0	13.6	13.6
	GF	0	0	0	0	0	0	0	0	0	0
	CF	125,000	125,000	0	125,000	125,000	250,000	375,000	0	375,000	375,000
	CFE	0	0	0	0	0	30,000	30,000	0	30,000	30,000
	FF	777,332	806,461	0	806,461	806,461	0	806,461	0	806,461	806,461
(2) Minerals and Geology (B) Inactive Mines -- Program Costs	Total	777,332	806,461	0	806,461	806,461	0	806,461	0	806,461	806,461
	FTE	13.6	13.6	0.0	13.6	13.6	(1.2)	12.4	0.0	12.4	12.4
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	0	0	0	0	0	0	0	0	0	0
	FF	777,332	806,461	0	806,461	806,461	0	806,461	0	806,461	806,461
(2) Minerals and Geology (B) Inactive Mines -- Mine Site Reclamation	Total	125,000	125,000	0	125,000	125,000	280,000	405,000	0	405,000	405,000
	FTE	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	1.2	1.2
	GF	0	0	0	0	0	0	0	0	0	0
	CF	125,000	125,000	0	125,000	125,000	250,000	375,000	0	375,000	375,000
	CFE	0	0	0	0	0	30,000	30,000	0	30,000	30,000
	FF	0	0	0	0	0	0	0	0	0	0

Letter Notation: "This amount shall be from the Operational Account of the Severance Tax Trust Fund established pursuant to Section 39-29-109(1)(a)(II), C.R.S."
Cash Fund name/Number: Operational Account of the Severance Tax Fund
IT Request Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)

Request for New or Replacement Vehicles: Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): X Yes No (If yes, Name of other Department(s)__Dept. of Public Health and Environment__)

Change Request – FY06-07
Efficiency and Effectiveness Analysis

Identifying Information

Department: Natural Resources
Priority Number: 12 of 21
Long Bill Group/Division: Inactive Mines Program/Division of Minerals and Geology
Change Request: **Abandoned Mine Non-Point Source Projects**

Summary of Request

The Inactive Mines Reclamation Program (IMP) is requesting an increase of $250,000 Cash funds from the Severance Tax Trust Fund Operational Account to expand matching funds for water quality improvement projects at abandoned mines and to cover the partial cost of existing 1.2 FTE to coordinate and provide expertise for the projects. The request also provides for $30,000 of Cash Funds Exempt spending authority to accept transfer funds from the Colorado Dept. of Public Health and Environment (CDPHE) to cover the remainder of the project coordinator position. The request is summarized below by the impacted Long Bill lines:

Long Bill Line	Total Request	1.2 FTE Funding	Additional Nonpoint Source Project Funding
(B) Inactive Mines			
Program Costs			
FTE	(1.2)		
Mine Site Reclamation			
Total Funds	280,000		
FTE	1.2		
Cash Funds	250,000	61,207	188,793
Cash Funds Exempt	30,000	30,000	

Due to approximately 150 such projects remaining from an original inventory of 182 across the state, an increase in funding will allow the IMP to expand local partnerships, with entities such as Soil Conservation Districts and local watershed groups, and significantly decrease the time required to address the remaining sites.

Benefits derived from addressing nonpoint source water pollution through these projects include reducing costs at water treatment plants, improving water conditions for agricultural uses downstream and providing higher quality waterways which benefit fisheries, riparian conditions and wildlife habitat.

If the request is not approved, the State's ability to remediate water quality problems at abandoned mines will continue at the pace of 1-4 per year and with limited partnerships at the local level. Such delays can exacerbate the severity of the water quality problems and increase public and environmental health concerns. These sites threaten aquatic species and habitat, public water storage and treatment systems, and overall viability of the watershed, impairing and reducing water quality standards.

Performance Evaluation Measures

1. Number of grants issued to local entities for non-point source projects from the Mine Land Reclamation funds.
2. Amount of federal funds acquired by local entities by using grants from the Mine Land Reclamation funds as matching dollars.

Problem or Opportunity Definition

Acid mine drainage occurs when sulfide minerals in mining waste or exposed rock reacts with air and water to form sulfuric acid. The acid leaches metals out of the rock, which can enter water flowing through historic mine tunnels, into nearby streams, rivers and seep into groundwater. Acid mine drainage (AMD) and metal leaching continue long after a mine operation has ended, with severe cases requiring water treatment in perpetuity. Examples of negative effects of AMD/metal leaching to waterways include:

- Biological dead-zones causing fish/aquatic life kills and similar impacts to fish hatchery operations;
- Death of migratory birds at tailings ponds or water filled abandoned pits; and
- Low level metal contamination in the food chain - from plants to agricultural livestock to humans.[1]

Seasonal snowmelt and the corresponding run-off significantly increase the AMD/metals load in Colorado streams. These fluctuations increase the unpredictability of impacts on aquatic and migratory wildlife and agricultural operations.

Modern mining operations are required to include the cost of water treatment to achieve acceptable water quality standards as a requirement of obtaining the original mining permit and as a factor in calculating the financial warranty/bond posted on the operation. Water treatment operations can continue decades after the mining operation has ceased. If the mine operator is unable to fulfill the permit requirements to treat the water due to bankruptcy or by abandoning the mine, and bonding funds are tied up in bankruptcy court proceedings, and the water treatment costs may become the responsibility of the State or the U.S. Environmental Protection Agency.

[1] U.S. Forest Service Acid Mine Drainage Fact Sheet – sources: USDA Forest Service 1993, Acid Mine Drainage from Impact of Hardrock Mining on the National Forests: A Management Challenge. Program Aid 1505. p. 12.

Historic mining that occurred prior to the federal Clean Water Act in 1972 are addressed through Colorado's mining non-point source program. The program uses established best management water control technologies to address water quality problems and uses an integrated approach to the control of these sources. The process uses a watershed approach to remediation based upon creating a plan that targets all sources of pollution in a watershed through the non-regulatory mechanisms to implement those strategies, and providing follow-up monitoring to determine if the efforts are successful.

An assessment in 1984 found that almost 1,300 miles of streams were adversely impacted by heavy metals and acidic drainage from inactive and abandoned mines in the state. Thirty-two (32) sites have been addressed by IMP, and according to the current inventory, approximately 150 sites remain to be addressed. The IMP and local partners have applied for and received limited funding under the Federal Clean Water Act's Nonpoint Source (NPS) Program to address mining water quality issues. That funding requires that 40 percent of the cost of the project come from non-federal sources. Since FY98-99, the IMP has provided $80,000-$125,000 annually in severance tax funds to local partners, who in turn used the funds to provide match on federal NPS funds. These funds have been applied to nine different nonpoint source areas. The demand for these cost share funds is high and the current $125,000 only funds one large scale project or up to four smaller projects.

Problems associated with the current funding and coordination of NPS projects are:

- Current funding at the $125,000 level is only able to provide matching funds for 1-4 projects per year. Addressing the remaining 150 sites will require up to 75 years and lead to further exacerbation of poor environmental and public health conditions at some of the sites.
- All but 0.2 FTE in the IMP staff are currently funded by federal Office of Surface Mining (OSM) grants, which has also covered the staff's work on water quality projects. The OSM funds are primarily for safeguarding and reclaiming former coal related sites because the funding is derived from a fee on coal mines. Therefore, alternative funds to cover the nonpoint source project coordination duties at non-coal sites are recommended as the pending reauthorization of the Abandoned Mine Land legislation may bring increased scrutiny on non-traditional uses of the funds.

Opportunities for ensuring the continuance of IMP staff on water quality projects are:

- IMP staff possess a unique expertise on mining related water quality issues, that differs from agricultural and urban drainage problems and on the safety problems for working around abandoned mine sites. The continued involvement of IMP staff in these projects ensures effective resolution of water quality issues.
- Thirty percent of the fund balance in the Severance Tax Operational Account is statutorily available to DMG to resolve issues related to the industries that are assessed the tax.

Available Alternatives

Alternative 1 – Requested Alternative – Increase Severance Tax funding to support abandoned mine water quality projects by an additional $250,000, for a total of $375,000, to serve as matching funds for federal Clean Water Act/EPA grants and to support 1.2 FTE in IMP, including $30,000 CFE from CDPHE, to coordinate and provide expertise on the projects.

Authority:
C.R.S. 39-29-109 Severance Tax Statutes – Statutory authority for divisions within the Department of Natural Resources to request Severance Tax funding to support programs related to the industries which pay the tax (i.e., coal and metal mines). The Division of Minerals and Geology is authorized to request up to 30 percent of the Severance Tax Operational Account. The existing base severance tax amount, including Change Requests, will not exceed the allowable 30 percent. [See Departmental Narrative, Severance Tax Table.]

Department of Natural Resources Objectives:
DEPT 1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety by increasing the availability of relevant information and data and maintaining a balanced regulatory environment.

DEPT 2.7 Assist landowners, water users and local governments in land-use planning and natural resource management by increasing the availability of relevant information and data and providing technical assistance.

Alternative 2 – Status Quo – Continue funding abandoned mine non-point source projects at the current level of $125,000 per year.

Authority and Objectives:
(Same as Alternative 1)

Background Information

Examples of Hydrologic Projects and Costs
Animas River Infiltration Controls – San Juan County
This is a cooperative project with the San Juan Resource and Conservation District (RCD) and the Animas River Stakeholders Group. One element of the project work is to intercept or prevent clean water from contacting sulfides in mine workings. Mines investigated

for source controls (methods of controlling water quality and flow capacities close to the actual source of the water that is presenting a problem) included the Sound Democrat, Columbus, Mountain Queen, Queen Anne and Pride of the West. The #6 and #1 mine depth levels of the Pride of the West were investigated. In the #1 level (deepest), a large portion of the inflows were found to come from core holes. These holes are to be plugged during Summer 2005 to prevent the inflow. In addition, there are two intermittent streams that flow into stopes (vertical tunnels) on the #6 and #7 (highest) levels of the mine. These stopes are to be capped in 2005 with funding from the cooperative partners on the project, Severance Tax and IMP funding.

Cost estimate - $300,000, including $100,000 of federal 319 funds and $210,000 of Severance Tax Funds.

Commodore Mine/Nelson Tunnel – Mineral County
This is a cooperative project with the Willow Creek Reclamation Committee (WCRC) near Creede. Nine open connections between the Commodore Mine and the Nelson Tunnel have been identified and rehabilitated. Approximately three miles of mine workings have been rehabilitated. Current work is to install the infrastructure to pump the flooded portion of the Nelson Tunnel to access the sections near the Amethyst Shaft. This is the area where historic documents have indicated that the majority of the flow enters the Nelson Tunnel workings. Currently, these workings are completely flooded and are inaccessible. The Nelson Tunnel drainage is the principle source of metals to Willow Creek. The feasibility of constructing hydrologic controls will be investigated. Region 8 of the Environmental Protection Agency funded the rehabilitation project.

Cost Estimate - $85,000.

The WCRC recently received approval on a federal 319 Grant to test dewatering of the Nelson Tunnel. The test is between the Nelson Tunnel and the Commodore 5 levels within the flooded section of the tunnel, and to test an underground treatment system that will be required to discharge pumped water from the Commodore 5. The test pumping is planned to be done in Fall 2005.

Cost Estimate - $95,000 of federal 319 funds and Severance Tax funds.

Dinero Tunnel – Lake County
The Dinero Tunnel is located in Sugarloaf Gulch approximately ¼ mile southwest of the Turquoise Lake Dam. This is a cooperative project with the Lake Fork Watershed Group and the Bureau of Land Management (BLM). Funding for the project comes from a Task Order with the BLM, DMG's Severance Tax funds, and a federal 319 Grant obtained by the Lake Fork Watershed Group.

Initial work at the Dinero Tunnel was completed during Summer 2003 to facilitate future underground investigations. The Dinero Tunnel is a draining mine. Previous investigations had shown that there was a collapse damming the water approximately 400 feet

from the entrance. The collapse has formed a chimney that extends to the surface, approximately 90-100 feet above. The DMG, in cooperation with Denver Grouting, drilled the chimney collapse and pressure grouted the collapse material above the tunnel.

Cost: $25,000 BLM funding

Additional project work in 2003 included removing the waste rock piles from both sides of Sugarloaf Gulch, constructing a disposal area for each pile, and reclamation of the disposal and removal areas. Because they were placed in a wetland area, these waste rock piles were continually leaching metals into the Lake Fork of the Arkansas River. Approximately 65,000 cubic yards of waste rock were removed from the saturated wetland zone and consolidated in a nearby repository. The waste rock was capped with inert material and covered with growth medium. Personnel from Colorado Mountain College completed revegetation in Spring 2004.

Cost: $38,000 IMP Severance Tax funding
$242,000 BLM funding

Work to remove the blockage in the adit to facilitate underground investigation of inflows was completed in Fall 2004. Water behind the collapse was drained slowly and treated, then the tunnel was rehabilitated. The work was funded by BLM.

Cost: $10,000 IMP Severance Tax funding
$140,000 BLM funding

Investigations in the Dinero Tunnel continued in January 2005. The workings were accessible beyond 2000 feet, but the atmosphere in the tunnel was oxygen deficient. Work was complete during Summer 2005 to ventilate the mine workings to allow for future investigations of the tunnel.

Cost: $69,000 BLM funding

Projects Funded from IMP "Mined Land Reclamation" Water Quality Funding since FY99

TOTAL EXPENDITURES by FISCAL YEAR	Grant(s) Issued by Sponsor/ Name of Abandoned Mine Site	Severance Tax Funds [2]	Federal 319 Funds	Other Funds
FY00 = $80,000	Silver Wing Mining / Silver Wing Mine	73,300	216,000	68,000
	Salem Minerals / Mammoth Mine	6,700	10,050	

FY01 = $80,000	Silver Wing Mining / Silver Wing Mine	2,700	(included under Silver Wing above)	
	San Juan RC&D / Hercules Mine	77,300	86,500	
Mine Land Reclamation Funding Expenditures continued	**Grant(s) Issued by Sponsor/ Name of Abandoned Mine Site**	**Severance Tax Funds [2]**	**Federal 319 Funds**	**Other Funds**
FY02 = $125,000 (1)	San Juan RC&D / Hercules Mine	12,700	(included under San Juan RC&D above)	
	San Juan RC&D / Carbon Lakes	74,000	76,010	
	Colorado Mountain College / Dinero Tunnel	35,000	76,000	211,000
	San Luis RC&D / Willow Creek	3,300	79,000	50,000
FY03 = $124,700	San Luis RC&D / Willow Creek	28,700	(included under San Luis RC&D above)	
	San Juan RC&D/Red Mountain	96,000	200,000	
FY04	Lake Fork Stakeholders / Dinero Tunnel	(amt not final)		
	Willow Creek Stakeholders / Commodore	(amt not final)		
FY05	Upper Animas River Stakeholders / Silver Lake	(amt not final)		

[2] Total appropriation amounts were increased in FY02 from $80,000 to $125,000.

Current funding sources and associated FTE for IMP are shown below. The funding sources impacted by this request are highlighted.

FUNDING SOURCE	CURRENT IMP FTE	REQUEST - Alternative 1	PURPOSE OF FUNDS
Federal Funds – Office of Surface Mining (OSM)	**13.6**	**12.4**	**Safeguarding abandoned mine sites – primarily coal sites.**
Federal Funds – Bureau of Land Management	0.0* *Less than 0.1 FTE funded from BLM grants	0.0	Safeguarding abandoned mine sites located on BLM lands – usually paired with OSM funds.
Federal Funds – U.S. Forest Service	0.0	0.0	Safeguarding abandoned mine sites located on Forest Service lands – usually paired with OSM funds.
Severance Tax for Abandoned Mine Safety	**0.2**	**0.2**	Safeguarding primarily non-coal abandoned mine sites and supplementing funding to address emergency issues.
Cash Funds / Severance Tax for Mine Site Reclamation + Cash Funds Exempt from CDPHE	**0.0**	**1.2**	**Addressing water quality issues at abandoned mine sites by providing cost share funds to special districts for use in applying for federal NPS funds.**
CDPHE Non-point Source Project Funds	0.0	0.0	Addressing non-point source water quality issues at abandoned mine sites.
TOTAL FTE	**13.8**	**13.8**	

Analytical Technique
Switch Point Analysis – Compares monetized costs to monetized benefits, and discusses implied values of non-monetized benefits that provide additional justification of the cost, but have a degree of uncertainty.

Assessment of Alternatives

ASSUMPTIONS AND CALCULATIONS

COSTS

1. **Annual Cost of existing IMP 1.2 FTE** to coordinate/provide expertise on inactive mines water quality projects:
**Amounts below reflect the actual cost of current Environmental Protection Specialist II and Program Assistant I staff. These are not new FTE, therefore actual costs of the positions are used instead of entry level costs.*

COST OF 1.2 FTE OF EXISTING STAFF	TOTAL	Salary	PERA x 0.1015	AED x 0.005	Medicare x 0.0145	Short Term Disability x 0.0005	Health/ Life/ Dental $199/mo
1.0 Environmental Protection Specialist II	**$80,444**	69,600	7,064	348	1,009	35	2,388
0.2 Program Assistant I	**$10,763**	9,170	931	46	133	5	478
TOTAL COST OF 1.2 FTE	**$91,207**	78,770	7,995	394	1,142	40	2,866

2. **Additional matching funds for projects:** Deduct cost of 1.2 FTE ($91,207) from total requested amount of $280,000 = **$188,793 additional funding to apply as matching funds for water quality projects.**

3. **Unavailability of Local Funds:** Assume local districts do not have sufficient funds to address nonpoint source problems without state support to help provide the matching funds. Historically, local entities have not addressed water quality issues at inactive mines because local funding sources are not readily available and most of the problem areas are located in counties with the lowest tax base in the state.

BENEFITS

1. **Increased Number of Nonpoint Source Projects Addressed**: Assume the IMP water quality matching funds from severance tax can be matched with NPS federal funds to equal the following average total project costs:

	Matching	Federal NPS Funds	Examples of Number of Projects Funding can Support
Current Funding	$125,000	$187,500	1-4 PROJECTS: One medium scale project = $312,500 Two small scale projects = $150,000 each
Current + Requested Funding	$313,793	$470,690	4-10 PROJECTS: One large scale project = $750,000 Three medium scale projects = $250,000 each Ten small scale projects = $75,000 each

2. **Value of Fishing to State Economy**: Assume potential "lost value" of recreational fishing on Colorado streams that are impacted by AMD/metal leaching issues is estimated at the minimum to be 5 percent of the overall economic impacts of fishing in the State per Colorado Division of Wildlife assessments[1] as follows:

Economic Impacts of Fishing in Colorado in 2002	
Direct expenditures (fishing license, angling supplies, etc)	$457,700,000/year
Indirect expenditures (secondary costs – transportation, lodging, food, etc.)	$361,300,000/year
Total jobs related to fisheries	10,950

- 1,300 miles of streams in the state are impacted by mine drainage out of 9,000 miles of trout streams (www.bigtrout.com/goldmedal.html) which is 14 percent.
- Assume approximately half of the 1,300 impacted miles are considered viable trout fishing streams (based on IMP staff knowledge of the impacted areas) = seven percent of 9,000 trout streams.
- In order to apply a percentage of AMD/metal impacted streams to the economic expenditure figures above, a further reduction in the comparative percentage is required to compensate for fishing revenues derived from lakes/reservoirs, rather than streams. Assume seven percent is reduced to two percent to make this adjustment = two percent of fishery economic impacts.

[3] Model developed by BBC Research and Consulting as commissioned by the Colorado Division of Wildlife in 1998. Values are based on 2004 dollars.

Two percent of combined direct and indirect costs = the potential lost value if fisheries health declines on that quantity of streams in the state:

$9,154,000 direct expenditures +
$7,226,000 indirect expenditures
$16,380,000 Total Economic Impact

Per the BBC study, fishing activity days are nearly eight times greater than hunting activity days in Colorado, demonstrating the significance of fishing to the state's economy.

3. **Value of Fish Rearing Units:** Assume the following costs if a fish kill occurs at a state fishery rearing unit due to AMD/metal overloading:

(A) Loss of 800,000 fingerlings (Quantity of lost fish is based on actual fish kill at Chalk Creek hatchery [3].)

Colorado Division of Wildlife value of one 3" fingerling = 15-32 cents [4]
800,000 lost fingerlings x $0.15 = **$120,000 lost fish value**

(B) Cost to replace lost fish through purchase from non-state sources = $1.26 [4] per 10" fish x 50% of 800,000 lost fingerlings (halved due to normal hatchery fingerling loss) = $1.26 x 400,000 replacement fish = **$504,000 replacement costs**

4. Implied Benefits of State Assuming Costs of Water Treatment: The costs avoided if the state does not assume legal liability of running a water treatment operation due to mine operator bankruptcy or other failure are exemplified as follows:

	Mid-Scale Treatment Plant	Large Scale Water Treatment Plant
Construction Costs (one-time)	$1,000,000	$6 million
Operation and Maintenance Costs	$250,000/year (based on London Extension project)	$1 million/year (based on Argo water treatment facility)

[4] Chalk Creek Nonpoint Source Project Case History – Final Draft, September 1993, by Science Applications International Corporation

[5] Investigation and Monetary Values of Fish and Fresh Water Mussel Kills, Southwick and Loftus. American Fisheries Society, Special Pub 30.

Comparison of Costs to Monetized and Non-Monetized Benefits

	ALTERNATIVE 1 – Increase IMP Matching Funds to Address 4-8 Water Quality Projects + Cost of Project Coordination	**ALTERNATIVE 2 – Status Quo**
COSTS	**$280,000**	**$0**
BENEFITS/COSTS AVOIDED – MONETIZABLE = COSTS AVOIDED BY NONPOINT SOURCE PROJECTS REMEDIATING AMD/METAL LEACHING PROBLEMS		
		STATUS QUO ASSUMES HALF THE LEVEL OF COMPARING "BENEFITS/COSTS AVOIDED" DUE TO FUNDING LEVEL BEING HALF THAT OF REQUESTED AMOUNT
Fisheries Economic Impacts – avoid loss of 5 percent of total economic value of fishing to the state by maintaining clean fish/aquatic habitat	$16,380,000	$8,190,000
Fish Rearing Unit Costs: Avoid "lost value" of losing 800,000 fingerlings during a fish kill. Corresponding fish replacement costs.	$120,000 $504,000	$60,000 $252,000
Total Monetized BENEFITS/COSTS AVOIDED	**$17,004,000**	**$8,502,000**
BENEFITS MINUS COSTS = NET BENEFIT	**$16,724,000**	**$8,502,000**

VALUE OF IMPLIED BENEFITS/COSTS AVOIDED – indicates possible additional costs avoided that have less certainty of resulting in State expenditures or cannot be monetized (value applied equally to both alternatives).		
Cost for the state to construct and operate a mid-scale water treatment plant	$1,000,000 (construction) $250,000 (annual operating)	$1,000,000 $250,000
Agricultural problems—crops and livestock intake of AMD/metals	Non-monetized	Non-monetized
Human ingestion of polluted well water or of crops/livestock	Non-monetized	Non-monetized

Analysis Conclusion:
The estimated benefits shown as costs avoided exceed the total cost of the requested Alternative 1 by $16,724,000, which is double the benefits level realized by the Status Quo alternative, which addresses the problems at a slower pace. This combined with the "implied benefits" shown, which are non-quantifiable "costs avoided", supports accelerating the pace to which IMP and local partners can address the issues. Relative to the implied costs, the reasonableness of assuming the state may need to assume the cost of a water treatment plant is contingent on: 1) the probability of a mine operator abandoning a permitted mine and the bond not being sufficient to operate the treatment facility; and 2) the role of the U.S. Environmental Protection Agency in such cases. Although, the specific impacts of AMD/metals on plant, livestock and human health are not statistically documented in Colorado, these impacts have been included as reasonable public health concerns. Given the chemistry of sulfuric acid and metals, it is reasonable to assume that even low-level exposure to these over a period of time would be very harmful.

Key Issues for Decision Making:

1. Threat posed by mine water drainage, if left uncontrolled, could be a significant cost to the fisheries economy in the state and possibly to state revenues to assume water treatment costs and to the quality of public health and the environment.
2. The use of severance tax revenue to address problems at abandoned mine sites as a "local impact" was one of the original purposes for approval of the tax.
3. To secure funding for the IMP staff who work on water quality projects is vital for continued high quality and effectiveness of the actual work at the sites.
4. The trend in water quality management is toward watershed-based approach, which is reflected in the mining nonpoint source program. The watershed-based approach has led to a number of local and regional initiatives with diverse organizational models and functional roles. Initiatives have focused on site-specific restoration projects for targeted sources of pollution, information sharing and consolidation of water quality monitoring efforts. The priorities of individual

stakeholder groups and government agencies must continually be modified to reflect new data derived from sampling and monitoring activities.

5. The Nonpoint Source Program brings together regulatory, non-regulatory, voluntary, and incentive efforts to improve water quality. The overriding goal of the current management plan is to create a framework for helping project sponsors develop and implement restoration projects, so that impaired streams can meet water quality standards.
6. Build long-term partnerships to enhance cooperation between industry, environmental groups, and government in restoration of inactive mined lands and to provide a sustainable funding source for water quality restoration projects.

Recommendation

The request to increase the funding for IMP water quality control projects and coordination by $280,000 is recommended due to the demonstrated benefits of costs avoided that exceed the annual cost of the request and for the opportunity to address remaining sites in a more timely manner to avoid further exacerbation of problems at the sites.

Schedule 6
DECISION ITEM REQUEST for FY 2006-2007

Department: NATURAL RESOURCES
Priority Number: 13 of 22
Division: EXECUTIVE DIRECTOR'S OFFICE
Program: INFORMATION TECHNOLOGY SERVICES
Request Title: Information Technology Support

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Sections 24-1-105, 24-1-124, and 24-33-101 through 24-33-111, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
TOTAL - EDO											
Administration	Total	1,360,908	4,537,710		4,537,710	4,537,710	52,212	4,589,922		4,589,922	52,212
and Information	FTE	14.0	56.6		56.6	56.6	1.0	57.6		57.6	1.0
Technology -	GF										
Personal	CF	1,360,908	2,140,239		2,140,239	2,140,239	29,239	2,169,478		2,169,478	29,239
Services	CFE		2,397,471		2,397,471	2,397,471	22,973	2,420,444		2,420,444	22,973
	FF										

Letter Notation: This amount shall be from statewide and departmental indirect cost recoveries.
Cash Fund name/Number, Federal Fund Name: Indirect Cost Recoveries
IT Request ⊛ Yes ☐ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ⊛ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ⊛ No (If yes, Name of other Department(s)_____)

Efficiency / Effectiveness Analysis

Department of Natural Resources

Request Title:	Executive Directors Office (EDO) Information Technology Support Request
Program Title:	All Programs
Work Package:	All Programs
Priority #:	**13 of 22**
Tracking #:	
Evaluation:	Benefit/Cost Analysis

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1. Summary of Request

This request is to provide information technology support for the Department of Natural Resources (DNR), Information Technology Section (ITS). This request is for $135,485 to support critical imaging information technology (IT) infrastructure and to provide helpdesk support for the Department of Natural Resources (DNR). The request is comprised of two distinct parts: 1.0 FTE for helpdesk support and 1.0 FTE for technical imaging support.

DNR Strategic Plan Objectives:

This request meets the following objectives:

Essential Objectives:

1.1 Respond to demands by constituents by providing services, information, and assistance.

1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.

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

1.7 Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs.

1.8 Provide an effective, integrated information technology infrastructure capable of supporting the department's service delivery, regulatory, and information interchange responsibilities.

High Objectives:
2.4 Increase citizen knowledge and understanding of natural resource issues by expanding and enhancing public information and outreach efforts.

2.5 Improve customer service to the citizens of Colorado and visitors by demonstrating a 10 percent increase in customer satisfaction and implementing initiatives to improve access to department services to under-served populations.

2.6 Respond to a changing business environment and improve organizational efficiency, decision-making and data availability by modifying a current system or introducing at least one major technology initiative each year that meets business objectives and is consistent with industry standards.

2.9 To the maximum extent possible, utilize the states acquired Internet and e-Government capabilities to deploy customer service applications along with efficient means of delivering information to citizens and constituent groups.

Low Objectives:
4.2 Ensure that the Department's administrative functions are run efficiently, consistent with statewide efforts to review and improve administrative activities and procedures, by conducting a review of each administrative area by 2007.

Performance Evaluation Measure(s) for the Request:
1) Continued support of current levels of customer service delivery through public services such as access to DNR information and processing.
2) Maintenance of current departmental imaging infrastructure to support internal and external customers.
3) Cost avoidance associated with continual turnover of helpdesk staff.
4) Avoiding loss of data, documents, and increased staff down time of departmental imaging infrastructure.
5) Increased level of standard agency performance of employee support and constituent services.

- 2. Problem or Opportunity Definition.

The problem definition is characterized into two disparate parts. Each of these parts is an integral requirement to support IT service and functionality within the department.

Problem 1:

The Information Technology Section (ITS) within EDO provides IT help desk support for 230 employees located at 1313 Sherman Street, at the Parks Division Littleton Operations Center, and five State Land Board (SLB) remote sites outside the Denver

Metropolitan Area. This help desk support includes responding to employee needs to restore service in the office at the desktop, services to supported employees working at home or on travel, providing solutions to local area network (LAN) communication outages impacting these employees, restoration of communications services beyond DNR facilities, dealing with virus protection and security needs of employees, installation of new hardware and software, disposal of old equipment, and securing services from IT vendors supporting DNR.

In January 2004, ITS recognized that the current staffing of helpdesk IT Professionals (1.0 FTE) was insufficient to meet the needs of these 230 employees. Service requests were found to be queued for extended lengths of time, user satisfaction was at a low ebb, critical IT projects were being delayed as available IT FTE resources were being reallocated to provide help desk support for customers (2.0 FTE), and new initiatives were stalled and remained on hold because resources were just not available. To rectify this problem and restore an adequate level of service, ITS hired two state temporary IT technical people to deal with the back log of requests and sustain an improved level of service desired by the users. Other initiatives were brought into play to help deal with the help desk service needs of users while the temporary IT help desk people were available. A policy spotlight was put on the Acceptable Use Policy to communicate to employees what violation of the policy means to the safety and security of the IT systems as well as the burden it places on the helpdesk staff to remedy the results of unacceptable use. Finally, the two state temporary employees were instructed to spend a little more time with users to provide training on an individual basis. This approach worked but it was temporary as the state temporary staff were only available for 6 months due to state personnel rules. Because the demand for services still existed, ITS hired contract staff to meet the existing helpdesk support needs. The contract helpdesk support model is also temporary, as a personal services waiver must be approved. Relying on this exception approval process to fill a core business function is a risk to the department.

Information technology is a means to end. The goal of successful information technology is to serve and support the business requirements of an organization. The Mid-Floor Local Area Network segment provides service to EDO, State Parks (locally), State Land Board, and the Colorado Geological Survey. One additional (1.0) FTE to support the increasing requirements of these divisions is needed to ensure adequate support of their business requirements. ITS has a history of supporting these divisions without any additional FTE. In fact, ITS has only added one FTE in the last twenty-two years. Information technology has moved from the "computer room" to the desktop and the support of these desktops users on the Mid-Floor LAN segment is critical to meeting their business requirements. The benefits are clear. Prior to January 2004, ITS struggled to meet its commitment to provide help desk support to the users defined above. After the increase of two state temporary employees in January 2004, the workload was accomplished on time, user satisfaction was increased, and other critical support projects, heretofore waiting for resources to get started, were kicked off and completed to the benefit of Mid-Floor LAN users and enterprise customers throughout DNR.

As stated above, the current model within ITS to provide the required help desk support is to use six month state temporary positions or contractor support from the state overflow award. This approach is problematic due to the continual turnover associated with this staffing strategy. The table below illustrates the relative pros and cons of this staffing strategy:

Method	Pros	Cons
Permanent State FTE	Continuity, Lower Cost	
Six Month Temporary State FTE	Lower Salary Cost	Continual turnover, Productivity Loss
Contractor Support	Flexibility	Higher cost, Continual Turnover, Productivity Loss, Approval Waiver

The cost of turnover is well documented. According to Forrester Research, the cost of turnover has two elements: hiring costs and vacancy costs. Hiring costs are the hard costs associated with recruiting a new employee (advertising, screening, interviewing, and processing candidates). Vacancy costs are less obvious but include extra work assumed by existing staff, productivity losses, and loss of knowledge on unfinished projects. Forrester Research states that the average cost to hire ranges from 25 percent to 100 percent of a worker's annual salary (CIO Magazine: June 15, 2004, By the Numbers, Jon Surmacz).

Help Desk Online, Investing in the Help Desk, (Karen Schoemehl) states the cost of turnover is seen to equal between 75 percent and 150 percent of a help desk workers' salary. The key to minimize support costs is the retain staff and prevent turnover (http://www.helpdesk-online.com/oldsite/dec21/article2.asp).

An additional factor that elevates the cost of helpdesk support is the cost differential associated with the use of contract staff. Although the use of contract staff provides great flexibility, that flexibility is paid for at a higher cost. The cost of contract staff can range to be 30 percent to 70 percent higher than state FTE cost on an annual basis.

Problem 2:

Four divisions in DNR currently utilize the departmental imaging system that was initially installed in 1999. These divisions, State Land Board (SLB), Division of Minerals and Geology (DMG), Oil and Gas Conservation Commission (OGCC) and the Division of Water Resources (DWR) require long-term support for imaging operations that are integrated into their business processes. ITS performs the support contract management for the imaging infrastructure. However, ITS currently lacks the expertise to provide the divisions with not only day-to-day support of all imaging related systems, but also consultation for changes and future enhancements.

The request is for one (1.0) FTE to be added to the ITS staff who would be responsible for the operation and maintenance of the department's imaging infrastructure. This position would be responsible for ensuring that Imaging related software systems are properly installed, functioning, and maintained and that appropriate databases are available to users. Additionally, this person would review, analyze, and make recommendations for future imaging and related technologies in the department.

The department has no specified FTE with the required technical expertise to support the burgeoning imaging requirement. The divisions have implemented imaging processes and technology to a varied degree of integration into their business workflow. A contractor must make even minor changes to the imaging system. Over $50,000 has been spent with contractors over the last two years to provide technical support to the departmental imaging system. Additionally, the department has not been able to leverage the existing capabilities of the imaging system. For example, the departmental Imaging system provides workflow processes that only one division has utilized.

3. Available Alternatives

Problem 1: Helpdesk Support

Alternative A:

Description: Provide helpdesk support with contractors. This will have a higher cost of $113,244 due to greater labor cost, potential annual contractor turnover and employee productivity loss.

Does not meet Departmental Objectives. May result in loss of critical systems, both employee and public data, and interruption or loss of public and internal services.

Alternative B:

Description: Provide helpdesk support by staffing with state temporary employees. This will have a higher cost of $89,941 due to staff turnover every six months and employee productivity loss.

Meets Departmental Objectives. May prevent loss of majority of critical systems, both employee and public data, and interruption or loss of public and internal services.

Alternative C:

Description: Staff ITS (Requested Alternative) – Provide and fund 1.0 FTE for helpdesk support. The cost for this alternative is $61,164.

Meets Departmental Objectives. Will prevent loss of majority of critical systems, both employee and public data, and interruption or loss of public and internal services.

Link to Departmental Objective(s) met by funding requested alternative.

This request will allow the Department of Natural Resources (DNR) Executive Director's Office (EDO) to meet key department and state IT goals and objectives as well as accomplish the DNR IT Mission, support the DNR Strategic Plan and the Department IT Plan. It will enable the DNR to continue to provide the current level of service and support to the public and our employees. This alternative supports all the strategic objectives listed on pages two and three of this request.

DNR IT Goals and Objectives Met

- **Infrastructure**. DNR believes that it is essential to have a modern and robust network infrastructure in order to implement digital government and has a goal of establishing such an infrastructure. To that end, DNR will establish appropriate objectives such as implementing, over time, a modern service-oriented, multi-tiered (N-tier) architecture.
- **IT Management.** DNR has a goal of improving and strengthening its management of technology by following best practices for such vital areas as lifecycle management and project management. DNR will maintain appropriate objectives such as establishing a sound asset lifecycle management program and a project management office.
- **Communication.** DNR has a strong need for communication and has a goal of improving it on several fronts. Technically, the department needs to be able to communicate quickly and reliably with all its offices, employees and resources. In order to deliver services to its constituents in a wide range of methods, DNR also needs to be able to communicate with those constituents via a variety of methods, including over the Internet. DNR has a specific goal of improving education in the domain of natural resources. Appropriate objectives will be established in this area. DNR also seeks to improve the use of technology in the field through the use of such technologies as remote computing—and wireless communications.

4. Analytical Technique

Based on the type of request, DNR has completed a benefit-cost analysis to quantify the costs and benefits of each alternative. These benefits and costs reflect the ability to:

- Demonstrate reduced future expenditures by avoiding higher contractor costs.
- Demonstrate reduced future expenditures by avoiding staff turnover costs.
- Demonstrate increased staff productivity results by minimizing employee productivity loss.

5. Assessment/Analysis of Alternatives

Helpdesk support alternatives entail the providing contractors, state temporary employees or one (1.0) state FTE. The business requirement met by all of these alternatives is the continuous need for desktop support of the department's business.

Problem 1: Helpdesk Support

Alternative A: Provide helpdesk support with contractors.

Assessment: **High Risk, High Cost**

Alternative A has two primary impacts that affect the support of the departmental helpdesk and the ability to provide desktop support. This alternative prohibits any ability to improve either of these functions. The risks associated with this alternative are:

Continual Staff Turnover

- Productivity loss in IT operations staff due to instability in staffing caused by continual staff turnover. Continually replacing contract staff has several costs. These are:
    1) Training time and training cost of contract staff. Contract staff are assumed to turnover on an annual basis.
    2) Partial productivity (50 percent) of contract staff while in training process.
    3) Partial productivity (50 percent) of permanent state IT FTE while providing training.
    4) Contract staff training time is approximately one month or 8 percent of their total availability.
    5) Additional workload for the Human Resources personnel and IT management to manage the almost continual recruitment and staffing tasks associated with continual staff turnover.
    6) The average monthly cost of a contract help desk staff is $6,160.
    7) The average IT management salary cost is $7,192.

Annual Contract Staff Turnover Costs

Contractor Hiring Tasks	Task Duration	Productivity Loss During Task	Monthly Salary Costs	Annual Turnover Cost per Contract Staff
Training - Contract Employee	1 month	50%	$6,160	$3,080
Trainer - IT Staff FTE	1 month	50%	$4,279	$2,140
Recruitment/Hiring – IT Management Time	0.5 month	30%	$7,192	$2,157
Total				**$7,377**

Employee Productivity Loss

- Productivity loss of employees due to greater down time after incurring a computer problem. Greater down time can be associated with the one month transition time frame of new contract workers. Since contract workers tenures are temporary, the transition time frame can occur every year. The total transition time frame is then calculated to be a two-month period.
- Productivity loss can also be calculated during a transition time when there is no contract helpdesk support available. There is a historical perspective showing helpdesk support lag due to hiring and availability schedules. The estimate of this support gap is one month per year.
- The total transition time frame associated with training and availability for contract helpdesk support is calculated to be three months.
- As stated above, the IT help desk provides support to 230 DNR employees. The cost of down time can be calculated as:

  Average DNR employee salary: $4,630 per month
  Down Time: 1 percent of month (1.76 hours per month)
  Service Provision Impact: 3 months out of 12
  230 employees x ($4,630 salary x 3 month impact) x 0.01down time = $31,947 annual down-time cost for 230 DNR employees

Other Risks

Alternative A provides the opportunity to provide helpdesk and desktop support at a higher cost and with a stated legal risk. These risks and costs are:

Higher Contactor Cost

Salary Costs	Six Month Costs per Position	Annual Costs per Position
Contractor	($35 per hour x 176 per month x 6 months) = $36,960	$73,920
State Temp	$3800 monthly salary X 6 months = $22,800	$45,600
	Total Differential	**$28,320**

- The cost to hire contractors is a 62 percent cost increase above the cost of state temporary staff ($73,920/$45,600 = 62 percent).
- The contract cost of $35 per hour is an actual cost of for contract helpdesk support currently.
- Greater risk to IT infrastructure operations environment due to continual staff turnover.
- Risk of finding experienced staff to accept a temporary contract position. This risk is market-driven and can be quite difficult to mitigate.
- Approval of personal services waiver for contract desktop support. Hiring contractors to provide help desk and desktop support has inherent legal risks. The state contracting rules have a personal services certification form that requires approval of the departmental Human Resources Office. This certification states that any service that can be provided by a state FTE should be and cannot be contracted. DNR has hired contractors to perform the help desk support role in the past. The Department of Personnel and Administration (DPA) contract administrator has advised DNR that DPA will not continue to approve a waiver for desktop support contract services.

Alternative B: Provide helpdesk support by staffing with state temporary employees.

Assessment: **High Risk, High Cost**

Alternative B has two primary impacts that affect the support of the departmental help desk and the ability to provide desktop support. This alternative prohibits any ability to improve either of these functions. The risks associated with this alternative are:

Continual Staff Turnover

- Productivity loss in IT operations staff due to instability in staffing caused by staff turnover of state temporary employees every six months. Continually replacing contract staff has several costs. These are:
  1) Training time and training cost of state temporary employees. Temporary state employees are assumed to turnover every six months due to state personnel rules.
  2) Partial productivity (50 percent) of contract staff while in training process.
  3) Partial productivity (50 percent) of permanent state IT FTE while providing training.
  4) State temporary employee training time is approximately one month or 17 percent of their total availability.
  5) Additional workload for the Human Resources personnel and IT management to manage the almost continual recruitment and staffing tasks associated with continual staff turnover.
  6) The average monthly cost of a state temporary employee is $3,800.
  7) The average IT management salary cost is $7,192.

State Temporary Employee Turnover Costs

State Temporary Employee Hiring Tasks	**Task Duration**	**Productivity Loss During Task**	**Monthly Salary Costs**	**Turnover Cost per State Temporary Employee**
Training - State Temporary Employee	1 month	50%	$3,800	$1,900
Trainer - IT Staff FTE	1 month	50%	$4,279	$2,140
Recruitment/Hiring – IT Management Time	0.5 month	30%	$7,192	$2,157
Total				**$6,197**

Annual turnover cost for state temporary employee is calculated as:

Turnover cost per state temporary employee ($6,197) X 2 turnovers per year = $12,394

Employee Productivity Loss

- Productivity loss of employees due to greater down time after incurring a computer problem. Greater down time can be associated with the one month transition time frame of new contract workers. Since contract workers tenures are temporary, the transition time frame can occur twice a year. The total transition time frame is then calculated to be a two-month period.
- Productivity loss can also be calculated during a transition time when there is no contract help desk support available. There is a historical perspective showing help desk support lag due to hiring and availability schedules. The estimate of this support gap is one month per year.
- The total transition time frame associated with training and availability for contract help desk support is calculated to be three months.
- As stated above, the IT help desk provides support to 230 DNR employees. The cost of down time can be calculated as:

  Average DNR employee salary: $4,630 per month
  Down Time: 1 percent of month (1.76 hours per month)
  Service Provision Impact: 3 months out of 12
  230 employees x ($4,630 salary x 3 month impact) x 0.01down time = $31,947 annual down-time cost for 230 DNR employees

Alternative C: Staff ITS (Requested Alternative) - Provide 1.0 FTE for helpdesk and desktop support.

Assessment: **Low Risk, Low Cost**

Alternative C asks for 1.0 FTE to provide helpdesk and desktop support. The permanent staffing of these positions will mitigate the existing staff turnover and employee productivity loss.

Summary Benefit/Cost Table for Problem 1 Alternatives

Alternative	Cost – Annual Cost 1.0 FTE	Benefit
A - Provide help desk support with contractors.	Productivity Loss - $31,947 Turnover Cost - $7,377 Contractor Cost - $73,920 **Total Cost - $113,244**	No staff costs for STD, Health, Life or Dental
B - Provide helpdesk support by staffing with state temporary employees.	Productivity Loss - $31,947 Turnover Cost - $12,394 State Temporary Employee Cost - $45,600 **Total Cost - $89,941**	No staff costs for STD, Health, Life or Dental
C - Staff ITS (Requested Alternative) - Provide 1.0 IT Professional I FTE for help desk support.	Loaded Salary Cost - $61,164 **Total Cost - $61,164**	No Productivity Loss - $31,947 No Turnover Cost - $18,632 **Total Benefit - $50,579**

Note: All alternatives for the helpdesk support problem have a cost. The cost of doing nothing or the status quo can be calculated using the same methodology as the previous alternatives. This status quo cost is:

Average DNR employee salary: $4,630 per month
Down Time: 1 percent of month (1.76 hours per month)
Service Provision Impact: 12 months out of 12
230 employees x ($4,630 salary x 12 month impact) x 0.01down time = $127,788 annual down-time cost for 230 DNR employees

Alternative C provides the least cost and a benefit, while the status quo and alternatives A and B have greater costs.

Problem 2: Technical Imaging Support

Document imaging has been an integral part of the department's business since 1999. Currently, the State Land Board (SLB), Division of Minerals and Geology (DMG), Oil and Gas Conservation Commission (OGCC) and the Division of Water Resources (DWR) require long-term support for imaging operations that are integrated into their business processes. Each of these divisions has implemented document imaging processes, which support constituents' business needs on a daily basis. For example, the

OGCC provides all well log images over the Internet to the oil and gas industry. Several oil and gas companies and operators use these well logs all day, every day to assist in their decision-making processes. The growth of industry constituents using this capability is shown by the increase of Internet users to the OGCC website, http://oil-gas.state.co.us over the last five years.

Year	Permits Issued	Active Wells	Internet Users	Percentage Increase
1999	1010	24035	15,239	
2000	1529	22228	46,136	302.7%
2001	2271	22879	104,824	227.2%
2002	2008	23711	175,690	167.6%
2003	2249	25042	261,956	149.1%
2004	2917	26968	423,127	161.5%
		Five Year Average Increase		**201.6%**

Alternative A:

Description: Status Quo – Continue apportioned FTE to provide technical support.

Does not meet Departmental Objectives. May result in loss of critical systems, both employee and public data, and interruption or loss of public and internal services.

Alternative B:

Description: Provide Contractor Support – Fund contractor cost differential.

Meets Departmental Objectives. Will prevent loss of majority of critical systems, both employee and public data, and interruption or loss of public and internal services.

Alternative C:

Description: Staff ITS (Requested Alternative) – Provide 1.0 FTE for technical imaging support.

Meets Departmental Objectives. Will prevent loss of majority of critical systems, both employee and public data, and interruption or loss of public and internal services.

Link to Departmental Objective(s) met by funding requested alternative.

This request will allow the Department of Natural Resources (DNR) Executive Director's Office (EDO) to meet key department and state IT goals and objectives as well as accomplish the DNR IT Mission, support the DNR Strategic Plan and the Department IT Plan. It will enable the DNR to continue to provide the current level of service and support to the public and our employees. This alternative supports all the strategic objectives listed on pages two and three of this request.

DNR IT Goals and Objectives Met

- **Infrastructure**. DNR believes that it is essential to have a modern and robust network infrastructure in order to implement digital government and has a goal of establishing such an infrastructure. To that end, DNR will establish appropriate objectives such as implementing, over time, a modern service-oriented, multi-tiered (N-tier) architecture.
- **IT Management.** DNR has a goal of improving and strengthening its management of technology by following best practices for such vital areas as lifecycle management and project management. DNR will maintain appropriate objectives such as establishing a sound asset lifecycle management program and a project management office.
- **Communication.** DNR has a strong need for communication and has a goal of improving it on several fronts. Technically, the department needs to be able to communicate quickly and reliably with all its offices, employees and resources. In order to deliver services to its constituents in a wide range of methods, DNR also needs to be able to communicate with those constituents via a variety of methods, including over the Internet. DNR has a specific goal of improving education in the domain of natural resources. Appropriate objectives will be established in this area. DNR also seeks to improve the use of technology in the field through the use of such technologies as remote computing—and wireless communications.

4. Analytical Technique

Based on the type of request, DNR has completed a benefit-cost analysis to quantify the costs and benefits of each alternative. These benefits and costs reflect the ability to:

- Demonstrate reduced future expenditures by providing permanent technical staff support.

Problem 2: Imaging Technical Support

Alternative A:

Description: Status Quo – Continue apportioned FTE to provide technical support.

Currently, DNR uses a contract for technical system and application support. Additionally, support of the imaging effort is apportioned to several FTE as they function within their perspective divisions. The following table shows the current cost of supporting the imaging environment:

Apportioned FTE to Provide Technical Support

Division	FTE Class	Current Annual FTE Cost *	Contract Cost **	Total Cost
EDO	IT Pro IV	$14,144		$14,144
OGCC	IT Pro V	$15,790	$10,400	$26,190
DMG	IT Pro III	$12,473	$10,400	$22,873
DWR	GP III	$10,087	$10,400	$20,487
CWCB	IT Pro II	$13,785	$10,400	$24,185
SLB	IT Pro IV	$10,294	$10,400	$20,694
		$76,571	$52,000	**$128,571**

*Current Annual FTE cost is calculated as a loaded annual salary cost.
** Current contract cost with Integro, Inc.

- As the departmental imaging system grows the apportioned management of this system causes greater risk by not having a centralized technical support focus. Continuing without a specified technical support FTE will promulgate this risky situation.
- Lack of in-house technical resource leads to greater instability of the imaging infrastructure, which causes system down-time and employee productivity loss.
- Continued risk of external constituent complaints due to document system unavailability through the Internet. This risk is driven by system down-time.

Alternative B:

Description: Provide Contractor Funding – Fund contractor cost differential.

Alternative B provides the opportunity to provide technical imaging support at a higher cost with contractors. These costs are:

Higher Contactor Cost

Contract cost: $138 per hour
Contract term: 2080 hours per year

Total cost: $287,040

Alternative C:

Description: Staff ITS (Requested Alternative) – Provide 1.0 FTE for technical imaging support.

Staff ITS (Requested Alternative)

The addition of an FTE to provide technical support for the DNR Imaging Initiative will have the following impacts:

- Existing contract costs will be reduced approximately forty percent, from $52, 000 to $20,000.
- Impact to Divisional FTE will be reduced by 10 percent as the new FTE provides technical system and implementation support.

Costs of New FTE for Imaging Technical Support

Division	FTE Class	Current Annual FTE Cost	Contract Cost	Total Cost
EDO	IT Pro III New FTE	$74,321		$74,321
EDO	IT Pro IV	$4,715		$4,715
OGCC	IT Pro V	$5,263	$4,000	$9,263
DMG	IT Pro III	$4,158	$4,000	$8,158
DWR	GP III	$3,362	$4,000	$7,362
CWCB	IT Pro II	$4,595	$4,000	$8,595
SLB	IT Pro IV	$3,431	$4,000	$7,431
		$99,845	$20,000	**$119,845**

* Current Annual FTE cost is calculated as five percent of actual annual loaded salary cost.
** Projected contract cost with Integro, Inc.

Four-Year Cost of Alternative C

Alternative	Year 1	Year 2	Year 3	Year 4	Total
Status Quo					
FTE Costs	$76,571	$77,720	$78,885	$80,069	$313,245
Contract Costs	$52,000	$53,560	$55,167	$56,822	$217,549
Total	$128,571	$131,280	$134,052	$136,890	**$530,793**
Add FTE					
FTE Costs	$99,845	$101,343	$102,863	$104,406	$408,456
Contract Costs	$20,000	$20,600	$21,218	$21,855	$83,673
Total	$119,845	$121,943	$124,081	$126,260	**$492,129**

The projected annual savings in the first year are $8,726 or 6.7 percent of the current estimated support costs.

Summary Benefit/Cost Table for Problem 2 Alternatives

Alternative	Cost – Annual Cost	Benefit
A - Status Quo – Continue with current apportioned staffing strategy.	Apportioned FTE Cost: $76,571 Contract Cost - $52,000 **Total Cost - $128,571**	None
B - Provide Contractor Funding – Fund cost of contractor staff.	Contractor Cost - $287,040 **Total Cost - $287,040**	None
C - Staff ITS (Requested Alternative) - Provide 1.0 FTE for imaging technical support.	New FTE Cost - $74,321 Apportioned FTE Cost: $25,254 Contract Cost: $20,000 **Total Cost: $119,845**	Apportioned FTE Cost Reduction - $51,317 Contract Cost Reduction - $32,000 **Total Benefit - $83,317**

Conclusion:

Problem 1: Help Desk Support
The recommended alternative for this problem is Alternative C. The cost of Alternative C is the loaded salary costs for 1.0 FTE in an IT Professional I classification. The actual costs and requested dollars are stated below in the *Summary Costs and Requested Dollars* table.

Problem 2: Imaging Technical Support
The recommended alternative for this problem is Alternative C. The cost is the loaded salary for 1.0 FTE in an IT Professional III classification. The actual costs and requested dollars are stated below in the *Summary Costs and Requested Dollars* table.

Other Key issues for decision Makers:

Summary Costs and Requested Dollars

Request	Help Desk Support	Imaging Support
Position	IT Professional I	IT Professional III
Annual Salary	$61,164	$74,321
Total		
Grand Total for Problems 1 and 2		$135,485
Amount Requested for Decision Item		**$135,485**

Omissions, Biases, or Uncertainties
None.

Schedule 6
DECISION ITEM REQUEST for FY 2006-2007

Department: NATURAL RESOURCES
Priority Number: 14 of 22
Division: EXECUTIVE DIRECTOR'S OFFICE
Program: HUMAN RESOURCES
Request Title: Training / Benefits Coordinator

Dept. Approval: Will H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: Sections 24-1-105, 24-1-124, and 24-33-101 through 24-33-111, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	3,269,792	5,796,773		5,796,773	5,796,773	49,667	5,846,440		5,846,440	46,662
	FTE	0.0	56.6		56.6	56.6	1.0	57.6		57.6	1.0
	GF	0	0		0					0	0
	CF	1,176,182	2,452,846		2,452,846	2,452,846	27,814	2,480,660		2,480,660	24,809
	CFE	2,093,076	3,338,590		3,338,590	3,338,590	21,853	3,360,443		3,360,443	21,853
	FF	534	5,337		5,337	5,337	0	5,337		5,337	0
EDO Administration and Information Technology - Personal Services	Total	2,975,548	4,537,710		4,537,710	4,537,710	46,162	4,583,872		4,583,872	46,162
	FTE	37.8	56.6		56.6	56.6	1.0	57.6		57.6	1.0
	GF										
	CF	886,280	2,140,239		2,140,239	2,140,239	24,309	2,164,548		2,164,548	24,309
	CFE	2,089,268	2,397,471		2,397,471	2,397,471	21,853	2,419,324		2,419,324	21,853
	FF										
EDO Administration and Information Technology - Operating Expenses	Total	294,244	1,259,063		1,259,063	1,259,063	3,505	1,262,568		1,262,568	500
	FTE	0.0	0.0		0.0	0.0				0.0	0.0
	GF		0		0	0				0	
	CF	289,902	312,607		312,607	312,607	3,505	316,112		316,112	500
	CFE	3,808	941,119		941,119	941,119		941,119		941,119	0
	FF	534	5,337		5,337	5,337		5,337		5,337	0

Letter Notation: These amounts shall be from statewide and departmental indirect cost recoveries.
Cash Fund name/Number, Federal Fund Name: Indirect Cost Recoveries
IT Request ☐ Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes X No (If yes, Name of other Department(s)_____)

Efficiency / Effectiveness Analysis

Department of Natural Resources

Request Title: Training/Benefits Coordinator
Program Title: Department Administration
Work Package: Human Resources
Priority #: 14 of 22
Evaluation: Benefit/Cost Analysis

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1. Summary of Request

This request is for one permanent FTE, classified as a General Professional III to develop and/or administer departmental training and benefits programs.

- 2. Problem or Opportunity Definition.

Training
The Department of Natural Resources is, not unlike other state agencies, experiencing an unprecedented rate of attrition. Since 2001, an average of 70 retirements per year have occurred and an average of 86 vacancies have been filled. The Department is not equipped to address the training needs of increased numbers of new employees, supervisors and managers. Specifically, the department lacks adequate means to provide new employee orientation, lacks a comprehensive new supervisor training program, and lacks the professional staff resources in the Human Resources Office to provide adequate annual training related to substance abuse, workplace violence and performance management. As a result, new employees struggle unnecessarily to acclimate to the state personnel system and are generally uninformed. Many supervisors are unprepared to assume a portion of their legal responsibilities.

Without the resources to provide training, the department fails to comply with federal law, State Personnel Rules, Executive Orders, and our departmental policies. Specific requirements for training include the following:

a) Performance Management - Personnel Rule 6-4 mandates a detailed training plan and mandatory training for all raters

b) Substance abuse prevention/detection – State Risk Management policy stipulates, "It is the state's intent to comply with each of the provisions of the Drug-Free Workplace Act of 1988 (P.O. 100-690, Title V, Sub-Title D), the Omnibus Transportation Employee Testing Act of 1991 and the Final Rules (49CFR, Part 40). " Department of Natural Resources policy requires, "A supervisor . . . must be able to show that he/she has received the required two hours of training on drug and alcohol abuse. . . ."

) Workplace Violence – Executive Order D 0010 96:, "Workplace Violence" requires, "Agency managers are directed to evaluate their organizations and take appropriate steps to address potential workplace violence situations."

) Risk Management – Department of Personnel and Administration Rules for Risk Management (1 CCR 105-1), 6-1 (b) requires, "a program to reduce property and liability losses incurred by each state agency."

) Sexual Harassment Prevention – DNR Policy, "The Department is committed to providing training for its employees. . . policy against sexual harassment will be covered in at least one formal training session per year.

Beyond mandated training, the Department lacks resources to implement other training initiatives relative to loss prevention. For example, training relative to injury prevention and worker's compensation could reasonably prevent or reduce the extent of injury and subsequent costs in lost time and worker's compensation.

Benefits

A reduction in benefits program support from the Department of Personnel and Administration coupled with the increased complexity and variability of benefits offered by the State, results in a substantial information gap in an area of vital importance for employees. On-line enrollment has been implemented in an attempt to streamline the enrollment process. Even so, the benefits program includes a myriad of options, procedures and requirements that change from year to year. Employees have ongoing needs for assistance related to choosing from among options, completing enrollment and utilizing benefits. Benefits extend beyond insurance to employee assistance programs and leave management. For example, employees have ongoing needs for information and technical assistance related to crisis prevention and management, counseling and family medical leave benefits.

Staffing levels within the Human Resources Office have not increased in over a decade. Diverting existing Human Resource Specialist positions to address training and benefits administration would have a substantial negative impact our ability to attend to the increasing volume in the areas of selection, job evaluation and consultation.

3. Link to Departmental Objective(s) met by funding requested alternative

This request will allow the Department of Natural Resources (DNR) to comply with requirements of existing law and policy. The request will also ensure we are able to meet key department and State goals and objectives by preparing supervisors to perform their assigned duties, minimizing risk resulting from a lack of training, and contributing positively to the morale and well-being of our employees.

4. Analytical Technique

Based on the type of request, DNR has completed a benefit-cost analysis to quantify the costs and benefits of each alternative. These benefits and costs reflect the ability to:

- Demonstrate reduced future expenditures by avoiding legal challenges/liability.
- Demonstrate increased staff productivity results by minimizing employee productivity loss.
- Demonstrate increased employee morale by providing assistance with regard to performance management, workplace violence/substance abuse assessments, and benefits administration.

5. Assessment/Analysis of Alternatives

Alternative A: Status Quo – Continue with current staffing level (no FTE dedicated to departmental training/benefits)

Assessment: **High Risk, Increased Potential for Cost**

Training

The Department will continue to be out of compliance with federal and state mandates for training and will be unable to implement associated departmental policies. In this case, the Department creates high risk of legal liability and resulting costs. In addition, there is high risk of sustaining ongoing costs resulting from reduced employee productivity. Beyond the absence of mandated training, lack of training in other areas leaves supervisors unable to perform many supervisory duties successfully (e.g. progressive discipline, employee mentoring and assistance, identify and addressing potential workplace violence, injury prevention and worker's compensation, etc.) For example, during the period FY 2000 to 2004, the Department has expended on average $9,977 per workers compensation claim. The number of claims has escalated from approximately 175 claims to over 200 per year in that time period. Without training, the department fails to utilize one very effective tool to potentially reduce or eliminate costs (costs both in terms of time and payouts to injured employees).

Benefits

The Department will continue to be unable to implement benefits administration activities delegated by the Department of Personnel and Administration. For example, the Department of Personnel and Administration no longer provides informational meetings for employees at the outset of the open enrollment process. The responsibility for communication that is designed to provide information and answers questions has been delegated to departments. This annual exchange is critical for employees who must make decisions that will affect them and their families. With current staffing, the Human Resources Office has been unable to

effectively obtain, monitor and relay information about benefits to our employees. Employees have no single point of contact in the Department that is responsible for possessing the depth and breadth of information necessary to effective serve our employees.

Alternative B: Acquire one FTE dedicated to the coordination of departmental training and benefits initiatives.

Utilizing one FTE to coordinate and administer training and benefits for the Department will allow the following to occur:

0) The Department will come into compliance with federal and state mandates and will be able to implement existing internal policies.
0) The Department will begin to utilize one very effective, inexpensive tool to minimize legal, administrative and productivity costs associated with, among other things, ineffective performance management, workplace violence, injury and worker's compensation.
0) Provide significantly improved service to our employees by establishing a central contact for benefits administration, enhance communication concerning benefits changes and information to our employees, and provide support and advocacy if necessary for employees who encounter problems.

Cost/Benefit Analysis:

Issue	Impact(s)	Cost Per Occurrence	Annual Frequency	Annual Cost of Impacts
Performance management cases	• **Losses in productivity** • **Cost of informal legal assistance/ review** • **Cost of litigation** • **Non-compliance with Personnel Rule**	**$964/informal[1]** **$7728/formal[2]**	**36** **7**	**$34,704** **$54,096**
Substance abuse	• **Losses in productivity** • **Increased risk to employee/ public safety**	**$964/informal**	**1**	**$964**

[1] Informal Review Costs = (Attorney time = 1 hr x $64/hr) + (HR Administrator time =3 hr x $40/hr.) + (Supervisor/Manager time = 12 hrs x $43/hr) + (Employee time = 12 hrs x $22/hr) = $964. Number of hours per participant, per occurrence are based on estimated average of hours of involvement in 36 cases handled in the past 18 months. Cost per hour for each participant based on the average hourly rate for participants in 36 cases handled in the past 18 months.

[2] Formal Review/Litigation Costs = (Attorney time = 80 hr x $64/hr) + (HR Administrator time =9 hr x $40/hr.) + (Supervisor/Manager time = 40 hrs x $43/hr) + (Employee time = 24 hrs x $22/hr) = $7728. Number of hours per participant, per occurrence are based on estimated average of hours of involvement in 7 cases handled in the past 18 months. Cost per hour for each participant based on the average hourly rate for participants in 7 cases handled in the past 18 months.

	• Cost of informal legal assistance/review • Cost of litigation • Non-compliance with federal law			
Workplace violence	• Losses in productivity • Cost of informal legal assistance/ review • Increased risk to employee/ public safety • Cost of litigation • Non-compliance with Executive Order	**$964/informal**	**3**	**$2,892**
Sexual harassment	• Losses in productivity • Cost of informal legal assistance/ review • Increased risk to employee/ public safety • Cost of litigation • Non-compliance with DNR Policy	**$964**	**1**	**$964**
Injury/loss, worker's compensation claims, American's with Disabilities Act compliance	• Losses in productivity • Cost of informal legal assistance/ review • Increased risk to employee/ public safety • Cost of litigation • Non-compliance with DPA Risk Management Rules	**$9977[3]**	**157**	**$1,572,375**
Inadequate support for benefits administration	• Losses in employee productivity. • Errors in enrollment	**See footnote[4]**	**	**

[3] Based on information provided in the Annual Risk Management Report (June 3, 2005) developed by the Department of Personnel and Administration. For the fiscal years FY 00/01- FY 03/04, the Department of Natural Resources had 788 worker's compensation claims totaling $7,862,579.89. Average claim = $9977, Average number of claims per year = 157.

Net Benefit: Departmental coordination and delivery of training in the areas highlighted in the table above coupled with increased support for benefits administration could decrease annual costs by 10-15% or $166,599 – $249,899. General Professional III, minimum range salary =$41,364 x 1.34 (cost of benefits) = $55,428. Conservative net benefit = $166,599 - $55,428 = $111,171.

Assumptions & Calculations:

General Professional III	- $41,364
PERA @ 10.15%	- $4,198
Medicare @1.45%	- $600
Total Personal Services	- $46,162
One-Time Operating	
Office Furniture	- $2,021
Desktop Computer	- $690
Office Software	- $294
Total One-Time	- $3,505
GRAND TOTAL	**- $49,667**

This decision item will be funded entirely from indirect cost recoveries. Based on the final FY 2005-06 indirect cost recovery plan, it is estimated that the Division of Wildlife will pay for 55.95% of the cost of this decision. This portion of the costs are reflected as CF. The remaining portion of the costs, or 44.05% of the total, will be from various other divisions and will be reflected as CFE.

Conclusion:

The Department of Natural Resources must come into compliance with mandates regarding training. In addition, new supervisors and employees must be better prepared to perform their assigned duties. It is incumbent on the Department to ensure this preparation takes place. The Department must also attend to the responsibilities that have been delegated by the Department of Personnel and Administration and better serve our employees by providing enhanced benefits administration. The objectives established by the Human Resources Office for training and benefits cannot be categorized as "nice to do", but are essential to the

[4] Data unavailable. While qualitative information is available, meaningful quantified measures of losses resulting from damaged morale and increased stress for employees who are afforded little assistance with matters critical to their well-being and the well-being of family members have not been identified. Exit questionnaires from DNR employees, do however provide general indications that quality and associated cost of benefits often contribute to employee attrition.

prevention or reduction of costs associated with legal liability and loss of productivity. These costs directly impact the Department's ongoing ability to fulfill its mission.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 15 of 21
Division: Wildlife
Program: Wildlife Education
Request Title: Public Education Advisory Council Spending Authority

Dept. Approval: Will H. Levine **Date:** 11/10/2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: 33-1-112 (3.5)(a)(b)

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items *	Total	4,079,791	4,337,924	0	4,337,924	4,337,924	900,000	5,237,924	0	5,237,924	0
	FTE	29.80	34.50	0.00	34.50	34.50	0.00	34.50	0.00	34.50	0.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	3,651,321	3,850,067	0	3,850,067	3,850,067	900,000	4,750,067	0	4,750,067	0
	FF	428,470	487,857	0	487,857	487,857	0	487,857	0	487,857	0
Information and Education - Personal Services	Total	1,935,894	2,227,549	0	2,227,549	2,227,549	95,087	2,322,636	0	2,322,636	0
	FTE	29.80	34.50	0.00	34.50	34.50	0.00	34.50	0.00	34.50	0.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,717,046	1,965,185	0	1,965,185	1,965,185	95,087	2,060,272	0	2,060,272	0
	FF	218,848	262,364	0	262,364	262,364	0	262,364	0	262,364	0
Information and Education - Operating Expenses	Total	2,143,897	2,110,375	0	2,110,375	2,110,375	804,913	2,915,288	0	2,915,288	0
	FTE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	1,934,275	1,884,882	0	1,884,882	1,884,882	804,913	2,689,795	0	2,689,795	0
	FF	209,622	225,493	0	225,493	225,493	0	225,493	0	225,493	0

Letter Notation: Change the letter notation for Division Operations from $5,000 shall be from the public education donation revenues to $905,000.
Cash Fund name/Number, Federal Fund Name: Wildlife Management Public Education Fund (Fund 428)
IT Request ☐ Yes ■ No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ■ No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/GSS)**
Request Affects Another Department(s): ☐ Yes ■ No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: Wildlife Public Education Advisory Council Education Program
Priority number: 15 of 21
Division: Division of Wildlife
Program Title: Education and Information Personal Services & Operating
Tracking Number: DNR

Summary of Requested Alternative: Inform and educate the public about the values of wildlife, wildlife management, hunting and fishing.

Problem or Opportunity Definition

Many people in Colorado don't understand the role that hunting and fishing play in managing healthy wildlife populations. The average age of people who hunt and fish is rising and fewer young people are learning to hunt and fish. Urban residents dominate the voting numbers in Colorado, but many urban citizens have never participated in hunting or fishing. The Wildlife Management Public Education Advisory Council (PEAC) created through C.R.S. 33-4-120 has developed a program that will professionally inform and educate the public about the values of wildlife, wildlife management, hunting and fishing, and present facts in an entertaining, stimulating and effective method.

This decision item requests $900,000 of spending authority for revenue generated from the 75 cent (PEAC) license surcharge approved in HB 05-1266 for this educational use.

Available Alternatives

1. No budgetary changes.
   a. Description: Maintain existing level of work load and to try and implement some general populace educational events while delaying the implementation of a statewide public education media campaign authorized under C.R.S. 33-4-120 (1) (e)(I-III).
   b. Department's authority to implement the alternative: 33-4-102 (8.5) (a), 33-1-101, 110 C.R.S.

c. How this alternative promotes specific department objectives: The Division's strategic plan number W-5 states: "Public demand for information about hunting, fishing, viewing, human-wildlife conflicts and species conservation is high and continues to increase. The Division depends on an informed constituency to fulfill its mission. The growth of human impacts is causing a significant decline in wildlife habitat for wildlife and to provide opportunities for the public to enjoy." This alternative will result in a decrease in communication with the Division's traditional consumers by redirecting limited resources to educate the general public about critical wildlife issues. The Departmental objective is 2.4 and states "Increase citizen knowledge and understanding of natural resource issues by expanding and enhancing public information and outreach efforts."

2. Partially fund the request.
   a. Description: Partially fund the request for now and base future full funding on the educational effectiveness of the program.
   b. Department's authority to implement the alternative: 33-4-102 (8.5) (a), 33-1-101, 110 C.R.S.
   c. How this alternative promotes specific department objectives: Same as Alternative #1

3. Fully fund the request. (Recommended)
   a. Description: Fully fund the request to reach more of the public with educational information.
   b. Department's authority to implement the alternative: 33-4-102 (8.5) (a), 33-1-101, 110 C.R.S.
   c. How this alternative promotes specific department objectives: Same as Alternative #1. Approval of spending authority for the income generated from the surcharge will give the Division an opportunity to test the media market and assess whether investing in an on-going media campaign will benefit the agency in the long term.

Analytical Technique Used

Benefit-Cost Analysis

Assessment of Alternatives:

- Background information

In 1998, the Colorado General Assembly passed H.B. 98-1409 that created an advisory council and charged it with designing a media-based program to educate Colorado residents about the positive benefits that hunting and fishing play in wildlife management. This advisory council, composed of 9 members, developed a formal action plan in 1998. The initial funding mechanism to implement the action plan was a statutorily-authorized voluntary check-off contribution on the CDOW limited license application. For 2000 and 2001, this check-off generated $135,000 in contributions from over

20,000 hunters and anglers. A pilot media-based public education campaign was conducted to determine whether or not a media-based public education campaign would be effective. The results of the pilot study were positive. In the public meetings held throughout the development of the legislation (H.B. 05-1266) to raise resident hunting and fishing fees, constituents expressed strong support for implementing a fee-based funding mechanism to allow the Council to implement the media campaign on a statewide basis. As a result, a 75 cent license surcharge, with the revenues going to the Wildlife Management Public Education Fund (WMPEF), was included in the legislation. With passage of H.B. 05-1266, a permanent funding source for these education activities was created. Income generated from the surcharge will be used to fund the request.

During the first year, the two educational themes to be developed and presented are: 1) wildlife management has provided for the re-establishment of Colorado's native species including desert bighorn sheep, shiras moose, mountain goats, peregrine falcons, and cutthroat trout, and 2) hunting and fishing license system is the primary method of financing wildlife management and protecting the habitat and open space in which wildlife lives. The desired effect of these two programs is to increase the awareness of specific educational topics in the three markets (Denver/Northern front range, Colorado Springs/Pueblo, and Western Slope) by 5 – 10% in the first year. Ongoing monitoring will be conducted to track results of each media strategy. To measure and assess the effectiveness of the campaign after the first year, quantitative research through surveys will be conducted. Future budget requests for PEAC will be based on the results of this analysis.

- ♦ Link expenditures to the full range of outcomes

- The budget expenditures will allow the Division to implement a public education program to inform the public of wildlife and wildlife management in Colorado.
- There are no external costs to other government entities, private industry, or citizens.
- The main internal benefit is that the Division will be able to continue to serve our existing constituents while educating the public about wildlife so that they can make informed decisions.
- The main external benefit is that a better informed public will make wiser decisions about wildlife and wildlife management.

- ♦ Application of the Analytical Technique/Assumptions and Calculations

Budgetary Cost Calculations and Assumptions

Although PEAC has not finalized plans for the FY 06-07 campaign, the following are estimated costs of television and newspaper advertising and project monitoring and coordination. Cost estimates were provided to PEAC by a marketing firm (Blakely & Company) and are representative of costs for these types of activities. While these costs could change somewhat once the PEAC marketing plan has been completed in detail, the final budget should be very close to the figures below. The final PEAC marketing plan will be based on the results of a market study expected to be completed in FY 05-06.

Media Budget		
Denver/Northern Front Range	Television	$422,579
Denver/Northern Front Range	Newspaper	$181,106
Colorado Springs/Pueblo	Television	$112,687
Colorado Springs/Pueblo	Newspaper	$ 48,295
Western Slope	Television	$ 28,172
Western Slope	Newspaper	$ 12,074
Administration		
Benchmark Research	(Contract)	$ 34,087
Public Relations	(Contract)	$ 18,000
TV Production – Editing Existing Spots		$ 7,000
Newspaper Production		$ 6,000
Project Coordination	(Contract)	$ 30,000
Total		$900,000

The key assumption is that the 75 cent surcharge on licenses will produce $900,000 per year in revenue.

Benefit Cost Calculations and Assumptions

The main benefits from investing the $900,000 generated from the surcharge are: 1) Coloradans will be better informed about wildlife management and the benefits of hunting and fishing, and 2) better informed citizens will make better decisions concerning wildlife.

Hunting and fishing are not only necessary tools in wildlife management for maintaining healthy and diverse populations of wildlife in Colorado; they also support a sizable portion of Colorado's tourism economy. According to "The Economic Impacts of Hunting, Fishing, and Wildlife Watching in Colorado" prepared by BBC Research & Consulting for the Division

of Wildlife in October 2004, hunters and anglers spend an estimated $797 million on trip expenses and sporting equipment in Colorado during 2002, and the Division of Wildlife spent an additional $49 million on operations that support hunting an fishing. This study also estimated that the secondary economic impact of hunting and fishing dollars re-circulating in the local economy during that same period totaled roughly $660 million, yielding a total estimated impact of just over $1.5 billion. An estimated 20,000 jobs located across Colorado were supported from the hunting and fishing industry. These jobs are an important component of the economy, particularly in the rural areas of the state.

The risk of losing all or a portion of hunting or fishing in Colorado in the future because of declining interest in participating in the sport, changing public values, statutory or constitutional restrictions, or other adverse circumstances, is of real concern to many Colorado citizens. If there is even a remote chance that hunting or fishing opportunities or both were in jeopardy in the future, the Colorado economy would be impacted, Colorado Citizens would lose the opportunity to enjoy these sports, and the Colorado Division's of Wildlife's revenue base for wildlife management would be depleted, which could result in the need for a general fund subsidy for wildlife management.

The probability of losing even a portion of these programs in the future is impossible to predict. But if hunting in Colorado was restricted in the future because of changing public values, Colorado's economy would be negatively impacted primarily from the loss of non-resident hunter spending. Using the 2002 economic impact data, resident hunters' direct and secondary expenditures were estimated at $286 million and non-residents hunters' at $317 million. Assuming that resident hunters will continue spending in Colorado on other commodities, and non-resident spending in the state would cease if hunters will no longer come to Colorado to hunt, the economic impact to Colorado would be roughly $317 million in 2002 dollars. Many rural communities who primarily rely on hunting to boost their economies would severely be impacted.

The loss of hunting opportunities in Colorado will also dramatically impact wildlife management in Colorado. In FY 2003-04, income from the sale of hunting licenses, federal revenues from excise tax on hunting equipment, interest and other sources totaled 63.4 million. Revenue the Division generates from hunting not only pays to manage hunting programs in Colorado but also is used to subsidize other wildlife management programs as well. Roughly 38.7 million was used to pay for hunting related expenses and another 13.9 million on other programs. Elimination of hunting in Colorado will severely impact the Division's ability to effectively manage Colorado's wildlife and could result in the need for general fund dollars.

Colorado cannot afford to lose hunting opportunities due to poor information and misunderstandings about the benefits hunting provide the State of Colorado. Investing in a media campaign in FY 06-07 and analyzing the effectiveness of educating the public about wildlife management and the importance of hunting and fishing in Colorado will provide the Division with valuable information to assess what marketing strategies work best for the agency.

- Key Issues for Decision Making

Increasingly the public is being asked to make policy-type decision concerning the use and management of Colorado wildlife. In order to help the public make informed decisions, the Division needs to provide complete factual information concerning wildlife, wildlife management, hunting, fishing, watchable wildlife and habitat management. The most effective way to inform and educate a large population is through the use of mass media, but unfortunately this venue is costly. The Division does not have the funds to address this need without dramatically impacting current information and educational programs.

Constituents and the General Assembly recognized the importance of hunting and fishing to Colorado and Colorado's economy. In fact, the risk of losing these activities in Colorado was sufficient enough to pass HB 05-1266 - legislation authorizing the surcharge to insure there is a well-informed and educated public.

Support for public educational and informational programs is also seen in the Division's strategic plan W-5. This plan states: "Public demand for information about hunting, fishing, viewing, human-wildlife conflicts and species conservation is high and continues to increase. The Division depends on an informed constituency to fulfill its mission. The growth of human impacts is causing a significant decline in wildlife habitat for wildlife and to provide opportunities for the public to enjoy." Therefore, there has been a long standing strategy and support for these educational and informational activities at the Division.

- Omissions, biases, or Uncertainties

As in the establishment of any new program, there is a certain amount of uncertainty about the magnitude of the eventual affect of these information and educational investments. Pre-testing of the public's wildlife knowledge and several years of post-testing will be needed to accurately quantify the impact. It is assumed that there will be programmatic adjustments to align the correct mix of media to optimize the message.

Recommendation:

Increase spending authority to the Division by $900,000 to fully implement the PEAC information/education program.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 16 of 21
Division: Wildlife
Program: Wildlife Habitat and Species Management
Request Title: State Wildlife Areas Operating & Maintenance

Dept. Approval: Will H. Levine **Date:** 11/10/2005
OSPB Approval: **Date:**
Statutory Citation: 33-1-105 (1)(c); 33-4-102.7

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	5,347,070	4,732,738	0	4,732,738	4,732,738	230,000	4,962,738	0	4,962,738	230,000
	FTE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	4,899,342	4,320,866	0	4,320,866	4,320,866	230,000	4,550,866	0	4,550,866	230,000
	FF	447,728	411,872	0	411,872	411,872	0	411,872	0	411,872	0
Regional Operations - Operating Expenses	Total	5,347,070	4,732,738	0	4,732,738	4,732,738	230,000	4,962,738	0	4,962,738	230,000
	FTE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GF	0	0	0	0	0	0	0	0	0	0
	CF	0	0	0	0	0	0	0	0	0	0
	CFE	4,899,342	4,320,866	0	4,320,866	4,320,866	230,000	4,550,866	0	4,550,866	230,000
	FF	447,728	411,872	0	411,872	411,872	0	411,872	0	411,872	0

Letter Notation: Add $230,000 to the Wildlife Cash Fund letter notation for Division Operations
Cash Fund name/Number, Federal Fund Name: Wildlife Cash Fund (410)
IT Request ☐ Yes ■ No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ■ No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/GSS)**
Request Affects Another Department(s): ☐ Yes ■ No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: State Wildlife Areas Operation and Maintenance
Priority number: 16 of 21
Division: Division of Wildlife
Program Title: Wildlife Recreation
Tracking Number: DNR

Summary of Requested Alternative: Fund the O&M costs on the existing properties and new properties purchased with revenue generated from a Habitat Stamp approved with the passage of HB05-1266.

Problem or Opportunity Definition

House Bill 05-1266, which passed in 2005, created a habitat stamp, to provide a revenue source for protecting and managing wildlife habitat and for improving public access to wildlife recreation opportunities.

The sale of habitat stamps, which becomes effective January 1, 2006, is expected to generate approximately $2.3 million per year. Ninety percent of the revenue generated from the stamp will be used for acquisition of wildlife habitat, recreation, and public access. The remaining 10% will be used to maintain and operate new State Wildlife Areas (SWAs) and to expand and enhance O & M on existing SWAs. Currently, many of the existing SWAs are not managed at level an acceptable to the public or the Division. Many properties lack funding for fence and signs to limit trespassing and secure habitat. Existing signs need to be replaced, fences repaired or replaced, noxious weeds controlled, public access (roads and parking lots) repaired and public facilities improved. Additionally funding is needed: for roads, structures, wells and other improvements; to operate public facilities; improve and manipulate habitat; control noxious weeds; and generally maintain new properties acquired to support wildlife populations and provide for public wildlife related recreation. The $230,000 will provide funds for these purposes.

Available Alternatives

1. No budgetary changes.
   a. Description: No additional spending authority for increased property O&M. Existing properties would continue to be operated and maintained at current levels. Opening newly acquired properties may be delayed.
   b. Department's authority to implement the alternative: 33-1-105(1)(II)(c)
   c. How this alternative promotes specific department objectives: This option allows the Division to operate and maintain existing facilities at the current level.
      1.1 – Respond to demands by constituents by providing services, information and assistance.
      1.3– Promote the State's interest in federal natural resources-related policy by proactively identifying activities that may impact Colorado and developing and advancing a State position on those issues.
      1.5 – Protect the diversity of Colorado's wildlife resources by continuing to identify and implement creative strategies to stabilize and enhance native species populations and to recover threatened and endangered species in ways that minimize adverse impacts on local government, private landowners and other citizens.
      1.6 – Provide and promote a variety of outdoor recreational opportunities for citizens and visitors.

2. Fund the Request (Recommended)
   a. Description: Approve additional spending authority based on 10% of Habitat Stamp revenue collected, to pay for the increase in O&M costs on existing and newly acquired properties. This will allow the DOW to ensure that the properties are operated and maintained to the level outdoor enthusiasts are requesting.
   b. Department's authority to implement the alternative: 33-1-105(1)(II)(c)
   c. How this alternative promotes specific department objectives: 1.1, 1.3, 1.5 and 1.6

3. Shift resources from other priority work to operate and maintain new acquisitions.
   a. Description: DOW would scale back on activities such as law enforcement, customer service both in the field and at DOW offices, hunter mentoring and education, big and small game management and research or a variety of other activities funded by the Regional Operations line item.
   b. Department's authority to implement the alternative: 33-1-105(1)(II)(c). In addition the Division of Wildlife has authority to shift resources between programs as long as it is within the same line item.
   c. How this alternative promotes specific department objectives: 1.1, 1.3, 1.5 and 1.6

Analytical Technique Used

Qualitative Cost benefit

Assessment of Alternatives:

- Background information

The Division of Wildlife manages over 576,199 (fee title, leased and easements) acres in approximately 260 State Wildlife Areas (SWA) located statewide. DOW spends roughly 4.3 million annually ($8.6/acre) to operate and maintain these properties. Funding is appropriated within Regional Operations personal services and operating line items.

In FY 05-06, the Division was unable to fund $234,425 in property O & M requests from Area Wildlife Managers responsible for managing properties across the state because of resource limitations. Funds were either directed to other priority work such as customer service or law enforcement activities or used to absorb cost increases in office leases, vehicles, utilities, etc. The $234,425 request included funding for fencing, signage, parking lots and surveying on newly acquired properties (2,360 acres) on properties in their respective areas.

Minimum standards for SWAs are surveying, fencing and signage, when appropriate. If the new properties are not surveyed, signed and fenced the potential for illegal use of the land increases. While none of the illegal uses are life–threatening DOW needs to limit the ease at which potential illegal activity can happen on state wildlife areas. Off-road-vehicles (OHV) use could increase, potentially damaging fragile habitat. By not having signs identifying the regulations for that property, the potential for illegally fishing and hunting become an ongoing issue. If the SWA is not fenced along adjacent properties that allow grazing, the potential for the animals to wander into the SWA and graze is a high probability and the impact on habitat and wildlife could be great. In addition the DOW has a statutory requirement, C.R.S. 35-5.5-110(1), to control the weeds on state lands.

With the passage of HB05-1266, the Division plans to begin acquiring some additional property in FY 2006-07 with the Habitat Stamp proceeds, which will require funding to get the properties open to the public and for ongoing operation. The current budget allocated to property O&M is not sufficient to cover existing costs to manage or any added costs on new properties. Resources from other programs such as law enforcement, customer service, public information and education would need to be redirected to cover the costs or properties would remain closed.

As with any other government agency, the Division of Wildlife must weigh the cost of maintaining a property against other high priority work, such as threatened and endangered species, researching diseases and deer and elk management. With more and more people moving into the state for the high quality of outdoor life, the Division is being pressed daily to respond to numerous calls from citizens relating to wildlife. These types of impact on Division resources prevent the availability of needed resources to enhance property management.

Growth in the state is having a major impact on Colorado's wildlife. Fortunately, many of these impacts can be lessened through the protection of valuable habitat. Concern from Colorado sportsmen and sportswomen, conservation groups, and concerned citizens over the impact growth had on wildlife resulted in overwhelming support for a Habitat Stamp to acquire wildlife habitat and improve public access to wildlife recreation. During development of the habitat stamp proposal proponents agreed that in addition to providing funding for acquisitions, for operating and maintaining existing and newly acquired properties was also an important priority for habitat stamp revenues.

Link expenditures to the full range of outcomes

- The budget expenditures will allow the Division to maintain signs, fences, roads, structures, wells and other improvements as well as develop public facilities; improve and manipulate habitat; control noxious weeds; and generally maintain properties to support wildlife populations and provide for public wildlife related recreation.
- There are no external costs to other government entities, private industry, or citizens.
- The main internal benefit is that the Division will be able to maintain the new properties acquired to the division's minimum standards as well as maintaining the existing properties to that same level.
- The main external benefit is that the properties will be maintained to a level where the public will want to spend time enjoying the outdoors and the wildlife.

♦ Application of the Analytical Technique/Assumptions and Calculations

Qualitative Benefit-Cost Analysis

With the purchase of newly acquired land the DOW would like to entice users to visit not only the newly acquire properties but keep visiting the previously acquired properties. The better the property is maintained and appears the more likely people will keep visiting and using the property. Through habitat manipulation, which consists of seeding, prescribed burns and weed control among other activities, the CDOW would hope to improve the habitat enough so the SWA would

be sustainable for big game. As an example, a benefit-cost analysis using controlled burning on winter range habitat for elk west of I-25 (where the impact would be greatest) is shown below. While the estimated projected revenue per acre would not cover the entire cost per acre to improve an acre of elk habitat, there are other qualitative benefits that arise out of the habitat manipulation. These include:

- Moving elk from private property to state owned land, thereby reducing conflicts and game damage costs;
- Increasing deer carrying capacity, thereby increasing revenue from deer license sales;
- Improving habitat for species such as sage grouse, thereby preserving sustainable populations, reducing the risk of federal listing, reducing danger from fire, and reducing O&M costs.

Revenue	**CY 2004**
Estimated Elk Hunters	250,907
Estimated Pre-Hunt Elk	324,332
Ratio of Hunters to Elk-Pre-Hunt	0.77
Increased Elk per Improved Acre (5 elk per 640 acres)	0.008
Revenue Collected for Resident Hunters	$ 4,537,883
Revenue Collected for Non-Resident Hunters	$37,246,500
Total Revenue Collected	$41,784,383
Number of Hunters	252,817
Average License Fee per Hunter (Resident and Non-Resident)	$ 170.00
*Revenue per Improved Habitat Acre (ratio*inc elk*avg lic fee)*	*$ 1.03*
Average Cost for Habitat Manipulation	
Prescribed Burns Per Acre ($50/acre - 15 year cycle)	*$ 3.33*

Cost Calculations and Assumptions

Estimated Habitat Stamp Revenue	
	FY06-07
Stamp Cost	$ 5.00
Estimated Stamps Sold	760,000
License Sales Adjustment (TLS fee)	60%
Estimated Revenue (1)	$2,300,000
Property O&M-10%	$ 230,000
Land Acquisition-90%	$2,070,000
(1) Rounded to the nearest one hundred thousand	

The spending authority requested will be cash exempt in the Regional Operations operating line item.

Benefits Assumptions and Calculations

- Key Issues for Decision Making

DOW is anticipating an increase in the number of acres identified as State Wildlife Areas, due to the passage of HB05-1266. In order to operate and maintain these areas and enhance O & M on properties currently managed by the Division, additional funding is required. Revenue will be generated through the sale of the Habitat Stamp to offset an increase in costs.

Recommendation:

The Division of Wildlife recommends that the requested $230,000 for additional spending authority to pay for operations and maintenance on existing and new State Wildlife Areas be approved. The request would increase the operating line within the Regional Operations.

Schedule 6
CHANGE REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 17 of 21
Division: State Land Board/Executive Director's Office
Program: Field Operations/State Fleet Management
Request Title: New State Vehicle for Northeast District Manager

Dept. Approval: Willi H. Levi **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Colorado Revised Statutes Title 36, Article 1

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total		4,266,905		4,266,905	4,266,905	1,360	4,268,265		4,268,265	4,081
	FTE		34.0	0.0	34.0	34.0	0.0	0.0	0.0	34.0	0.0
	GF										
	CF										
	CFE		4,266,905		4,266,905	4,266,905	1,360	4,268,265	0	4,268,265	4,081
	FF										
Vehicle Lease Payments/ Executive Director's Office	Total		1,644,633		1,644,633	1,644,633	1,420	1,646,053		1,646,053	4,260
	FTE										
	GF										
	CF										
	CFE		1,644,633		1,644,633	1,644,633	1,420	1,646,053	0	1,646,053	4,260
	FF										
Program Costs/ State Board of Land Commissioners	Total		2,622,272		2,622,272	2,622,272	(60)	2,622,212		2,622,212	(179)
	FTE										
	GF										
	CF										
	CFE		2,622,272		2,622,272	2,622,272	(60)	2,622,212	0	2,622,212	(179)
	FF										

Letter Notation:
Land Board Trust Adminstration Fund (Fund # 162)
IT Request ☐ Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: X Yes ☐ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes X No (If yes, Name of other Department(s)_____)

Efficiency and Effective Analysis

Identifying Information

Department: Natural Resources
Request Title: New State Vehicle for Northeast District Manager
Priority number: 17 of 21
Division: State Land Board

Summary of Request

This request is for $1,340 for FY 2006-07 and $4,081 for FY 2007-08 in cash fund exempt spending authority to provide a state vehicle for the State Land Board's Northeast District Manager.

Problem or Opportunity Definition

The State Land Board has six district managers, each of which is responsible for several hundred leases covering hundreds of disparate parcels. The average surface acreage per district is about 475,000 (The northeast district is responsible for 376,205 surface acres). District managers are required to perform inspections of all land in their districts at least twice during the applicable lease term as well as make interim inspections if issues arise. Many of the State Land Board parcels do not have road access and/or property access is poor. Therefore district managers have been provided 4X4 state vehicles in order to carry out their job responsibilities.

The northeast district manager does not have a state vehicle. Consequently, he must utilize his own 4X4 vehicle and is reimbursed for private mileage at the rate of $0.28/mile.[1] However, the state-legislated reimbursement rate of $0.28/mile does not cover the actual vehicle expenses. Actual cost of operating a similar four-wheel drive vehicle is estimated at $0.56/mile (see exhibit 3). Both the Internal Revenue Service allowable deduction rate and the federal employee reimbursement rate (when no government vehicle is available) are $.405/mile. But because neither rate makes a distinction between rates for two-wheel drive and more costly job-mandated four-wheel drive, this analysis utilizes the *actual* $0.56/mile cost comparison.

This analysis demonstrates that the northeast district manager is subsidizing the state's vehicle expense by not being compensated for the actual operating costs of the private vehicle. Without provision of a state vehicle, the employee essentially suffers a reduced "take home pay" of $2,777 ($5,181 including taxes and applicable benefits) – see exhibit 2. The district manager effectively performs the same duties as the other district managers, but for less compensation.

[1] Even though the Northeast District Manager's private vehicle is a 4X4 Dodge Durango, the State Land Board has been unsuccessful in securing the $0.32 per mile 4X4 reimbursement as allowed by statute. According to fiscal rules, in order to qualify for the 4X4 reimbursement, the employee must in four-wheel drive mode. This is very difficult to prove so the reimbursement has defaulted to the non-4X4 $0.28 per mile level. Based on conversations with other DNR agencies, SLB will be pursuing the higher reimbursement using the argument that having a 4X4 is a "term of employment" and therefore the district manager qualifies for 4X4 reimbursement of $0.32/mile.

This subsidy creates two problems: 1) concern the employee may choose to defer administration of specific, non-vital tasks due to personal costs incurred of such administration; 2) morale injury that over time could decrease the effectiveness of the employee, and may in turn diminish the ability of the State Land Board to hire the most qualified personnel. In general, recruitment and retention of top quality individuals in these positions is not a significant problem, but the Division must continue to ensure that employee concerns are addressed, lest retention and recruitment of these types of positions become a problem in the future. In sum, the State Land Board seeks avoid the additional costs created by these potential problems, to maintain essential inspections completed by the district manager, and main equity among the six district managers.

The Division's statutory obligations are set forth in the following statutes:

Federal:	Federal Statehood Enabling Act of 1875 (Para. 7-12 and 14 and 15).
State:	Colorado Constitution, Article IX, Section 9-10.
	Colorado Revised Statutes Title 36, Article 1.

The Department's relevant objectives include:

Prioritized Objectives and Performance Measures

1.1 Respond to the increased demands related to population growth by providing services, information, and assistance.
1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.
1.6 Provide and promote a variety of outdoor recreational opportunities for citizens and visitors.
2.2 Provide continuing oversight and stewardship of state land assets by developing and implementing appropriate management plans or leases for all parcels.
2.4 Increase citizen knowledge and understanding of natural resource issues by expanding and enhancing public information and outreach efforts.
2.5 Improve customer service to the citizens of Colorado and visitors by demonstrating a 10 percent increase in customer satisfaction and implementing initiatives to improve access to Department services to under-served populations.
2.8 Promote a systematic framework for addressing the changing values and opportunities on state lands which recognizes and utilizes the current potential of these properties while preserving and enhancing the qualities that will attract higher and better uses.

Available Alternatives

Alternative No. 1 (Recommended):

Acquire a state vehicle for northeast district manager.

Alternative No. 2 (Status Quo, Not Recommended):

Continue to require district manager to drive his own vehicle.

Selected Analytical Technique

Net benefit-cost analysis will be used (see exhibit 1).

Assessment of Alternatives

Exhibit 1 compares alternatives 1 and 2. Alternative 1 shows a full annual net benefit of $1,100 for providing the district manager a state vehicle. This net benefit is the difference between the amount of subsidy born by the district manager ($0.28 vs. $0.56) and the cost for the state to provide the district manager an appropriate state vehicle.

Exhibit 1: Summary of Alternative Analysis

Alternative	Cost to State	Year	Benefit to Employee	Net Benefit-(Cost)	Comments
1	$1,360	1	$1,727	$367	Four months – Positive net benefit.
	$4,081	2	$5,181	$1,100	Twelve months – Positive net benefit
2	$0	1	$0	$0	Status quo, lost benefit burdened by employee
	$0	2	$0	$0	Status quo, lost benefit burdened by employee

Leased vehicles are not received until March 1, 2007. Year 1 (FY 2006-07) is based on the final four months of the year. Year 2 (FY 2007-08) is based on the entire twelve months.

Benefits Calculations

Alternative 1 – Benefits from this alternative occur in two ways: 1) Maintain or improve employee performance and morale by either equitably compensating the district manager or allowing him to drive a state vehicle as do the other district managers; 2) Prevent employee from subsidizing the state for operation of his own vehicles.

Alternative 2 – Since this is the no-change alternative, it is considered the "baseline" and no additional benefits are accrued.

The benefits to the state of having this employee conduct his responsibilities are difficult to quantify but this employy assits in the earning of revenue for K-12 education. This analysis assumes that this employee continues to conduct his regular duties in all alternatives, but that eliminating his subsidy to the state and maintaining his appropriate levels of performance and morale would require adequate compensation (after tax deductions) to cover the current out-of-pocket cost burdens. Estimated annual financial, morale, and performance benefits are therefore calculated in terms of what additional compensation would have to be paid to this individual to coverage of the cost burden. The state must therefore "gross up" the wage to cover the employee's tax deductions. The state would also incur benefits and payroll tax expenses on that grossed up wage.

Exhibit 2: Annual Employee Benefit Calculation

Annual Employee Benefit: $2,777 (Out-of Pocket cost burden to employee – see exhibit 4) / .67 (1 – marginal federal/state/PERA tax rates) * 1.25 (25% benefits and payroll tax) = $5,181.

Based on the above calculation, in order to offset the costs (subsidy) born by the district manager, the state would need to increase the personal services appropriation and consequently the district manager's compensation by a total of $5,181 in order to cover salary and benefits.

Cost Calculations and Assumptions:

Costs to the state in Alternative 1 are calculated using estimated lease payments [2] and fleet mileage rates.

Costs to the state in Alternative 2 are calculated in the same manner as benefits.

Costs to the employee for continued use of his private vehicle is estimated at $0.56 per mile, using the calendar year 2004 average of 15,000 annual miles per vehicle as shown in exhibit 3.

Exhibit 3: Actual Cost to Operate Private 4X4

Item	Annual Cost	Description
Lease[2]	$4,080	Assumes employee obtains lease comparable to fleet lease
Insurance	1,600	Business-use coverage
Registration fees	150	
Fuel	2,100	$2.10 / gallon * 1 gallon / 15 miles * 15,000 miles
Maintenance/Repairs	482	Preventative and repair estimates
Total Annual Costs	$8,412	
Per mile	**$0.56**	Based on 15,000 miles annually

Both the 2005 Internal Revenue Service allowable deduction rate and the 2005 federal employee reimbursement rate (when no government vehicle is available) are $.405. Neither rate distinguishes between two-wheel and four-wheel drive vehicles while the district manager requires more a costly four-wheel drive vehicle. This analysis therefore utilizes the actual cost of $0.56 rate.

[2] Lease estimate of $340.12 per month is based on information provided by Larry Wegrzyn, Operations Manager, State Fleet Management, for a Chevy Trailblazer, which is driven by the other district managers. This is a smaller vehicle than what the northeast district manager currently own, however, the comparison is made in order to maintain consistency among the assumptions.

Exhibit 4 compares the costs (including state lease payments) for Alternative No. 1. The final column represents the requested additional funds (costs using state leased vehicle less anticipated personal mileage payments).

Exhibit 3: Private Vs. State Vehicle Costs

Name	SLB District	Calendar Year 2005 Mileage	Private Mileage Reimbursed at $0.28/mile	Out-of-pocket Cost Burden to Employee ($0.56-$0.28)	Pre-tax + Benefit Cost Burden to Employee (/0.67 * 1.25)	Lease Payment ($340,12 monthly lease plus 12.50 management fee)	Estimated Operating Costs $0.262/mile	Total Costs Using State Vehicle	Decision Item Cost to State (Total Costs - Current Reimbursement)
Danny Skalla	3	9,918	2,777	2,777	5,181	4,260	2,599	6,859	4,081

Recommendation

This analysis recommends the appropriation of a state vehicle for the State Land Board's Northeast District Manager. This request increases the Vehicle Lease Payments line item in the DNR Executive Director's Officer by $1,429 for FY 2006-07 and $4,260 for FY 2007-08 and decreases the State Land Board's Programs Costs line item by $80 for FY 2006-07 and $179 for FY 2006-07 due to the slightly higher reimbursement rate per mile than the estimated operating costs (maintenance and fuel) of the state vehicle.

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 18 of 21
Division: Parks and Outdoor Recreation
Program: State Park Operations
Request Title: New Leased Vehicles

Dept. Approval: Will H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: Section 33-10-101 to 33-12-101, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total		21,870,847		21,870,847	21,870,847	9,546	21,880,393		21,880,393	28,638
State	FTE		238.6		238.6	238.6		238.6		238.6	
Park	GF		2,321,255		2,321,255	2,321,255		2,321,255		2,321,255	
Operations	CF		16,938,638		16,938,638	16,938,638	5,208	16,943,846		16,943,846	15,624
	CFE		2,191,060		2,191,060	2,191,060	4,338	2,195,398		2,195,398	13,014
	FF		419,900		419,900	419,900		419,900		419,900	

Letter Notation:
Cash Fund name/Number, Federal Fund Name: Parks Cash Fund (Fund # 172), Parks Cash Fund Exempt (Fund # 426)
IT Request ☐ Yes ☒ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: X Yes ☐ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ☒ No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Identifying Information

Department:	Natural Resources – Division of Parks and Outdoor Recreation
Request Title:	New Leased Vehicles
Priority number:	18 of 21
Performance Measures:	To reduce the cost of staff utilizing personal vehicles.

Summary of Request

This request is for $9,546 for FY2006-07 and $28,638 for FY2007-08 in Cash Funds and Cash Funds Exempt to provide eight new vehicles for the Division of Parks and Outdoor Recreation. The purpose of this request is to provide leased vehicles for four employees who are each driving in excess of 15,000 miles during the fiscal year and currently utilize their own vehicles to conduct their responsibilities. The employees are reimbursed for their mileage at the rate of $0.28/mile.

Problem or Opportunity Definition

Colorado State Parks is in need of four vehicles for use by staff at various locations within the state. Two of these vehicles will be used to replace temporarily assigned vehicles by State Fleet Management that are being utilized at John Martin State Park. The remaining vehicles will be for staff that are currently using their personal vehicles or that will be required to use their personal vehicles for new programs that are beginning on July 1, 2005. Although fleet services mandates a minimum of only 6,000 miles for regionally based employees, these employees are each currently driving between 17,600 and 20,000 miles annually. Although these employees receive reimbursement for driving their private vehicles, the current reimbursement rate for the state is $0.28, while the federal reimbursement rate is $0.405. Based upon the actual cost of operating a four-wheel drive vehicle, which is approximately $0.52 per mile, the reimbursement rate does not cover the actual vehicle expense. The included calculations show that employees are in effect subsidizing the state's vehicle expenses by $18,654 each year.

The use of temporarily assigned vehicles by State Fleet Management is not a feasible alternative. Currently, the temporary vehicles are available for assignment only for a six-month period and it is not guaranteed that a vehicle will be available. In addition, the vehicles that are provided for temporary assignments are often older, high-mileage vehicles that are unreliable for employees that must travel into remote locations, on short notice and, at times, during inclement weather.

The purchase of these vehicles would ensure employees would be able to carry out their duties to enhance the State Parks for the visitors that are paying for their use. The use of the State motor pool or renting vehicles is not sensible for many of the programs, as often times the vehicle is needed due to an emergency or on short notice. Using motor pool for these situations may not guarantee a four-wheel drive vehicle would be available when needed. The requested vehicles would be used for the following duties:

- Two vehicles are needed for our Statewide Volunteer Program that was established in 2003. This program requires on-going regional and statewide travel in order to complete parks needs assessments, provide training, assist parks with volunteer recruitment and advise on specific volunteer management issues. This program will begin in July 2005 and staff will be required to utilize personal vehicles for travel for the program. The purchase of vehicles for this program has been authorized through GOCO funding. The employees are currently using personal vehicles for travel related to this program.

- Two vehicles are needed at John Martin Reservoir. This park was created in FY2004-05 and a decision item was submitted in FY2002-03 requesting 2.0 FTE and vehicles for the staff. This request for the FTE and the vehicles was initially approved, but the vehicles were never purchased due to General Fund budget reductions. John Martin Reservoir is currently fully staffed and fully operational. Without the purchase and use of these vehicles, the operation of this facility is hindered. The park is currently forced to utilize temporarily assigned Fleet Management vehicles to perform routine patrols and to operate the park.

Many programs within Parks and Outdoor Recreation are statutorily mandated and must be completed. Without a sufficient number of four-wheel drive vehicles for patrolling the park, statutes could be violated, communities would be negatively impacted and employees would be at risk while driving in adverse weather conditions and to remote areas.

Available Alternatives

Alternative #1- Acquire eight new leased vehicles to provide to these employees – Recommended

- Statutory authority for this alternative: Section 33-10-101 to 33-12-101, *C.R.S*
- Specific Department objectives promoted by this alternative:
  - 1.1 Respond to demands by constituents by providing services, information, and assistance.
  - 1.3 Promote the State's interests in federal natural resource-related policy by proactively identifying activities that may impact Colorado and developing and advancing a State position on those issues.
  - 1.6 Provide and promote a variety of outdoor recreational opportunities for citizens and visitors.

Alternative # 2 – Status Quo – Not Recommended

Continue to require these employees to drive their own vehicles. Employees would then incur a cost of $.52/mile and be reimbursed at $.28/mile.

Alternative # 3 – Not Recommended

Increase employees' pre-tax compensation to sufficiently cover their cost burden.

Selected Analytical Technique

Benefit-Cost Analysis will be used. This request addresses an inequity issue among employee compensation and will be measured in terms of benefits to state employees rather than in terms of direct benefit to the state.

Alternatives 1 and 3: Benefits from these alternatives impact employees directly who are inequitably subsidizing the state for operation of their own vehicles. As this request attempts to address an inequity issue among state employees, this analysis does not include indirect benefits to the state of maintaining employee performance and morale through provision of state vehicles or equitable compensation.

Alternative 2: Since this is the status quo alternative, no additional benefits are accrued.

Assessment of Alternatives

Alternative	Cost to State	Year	Benefit to Employee	Net Benefit - (Cost)	Comments
1	9,546	1	6,736	(2,810)	Four Months
	28,638	2	20,209	(8,429)	Twelve Months
Total	**38,184**		**26,945**	**(11,239)**	
2	0	1	0	0	
	0	2	0	0	
Total	**0**		**0**	**0**	Status Quo - Lost benefit burdened by employees
3	11,601	1	11,601	0	
	34,803	2	34,803	0	
Total	**46,404**		**46,404**	**0**	Added compensation = added employee benefits

*Because funds are appropriated for the full fiscal year, but leased vehicles are not received until late in the fiscal year (approximately March 1), Year 1 (FY2006-07) is based on the final four months of the year. The first eight months of Year 1 are equal under each alternative and excluded. Year 2 (FY2007-08) is based on the entire twelve months.

Key Issues for Decision Making:

The Division of Parks and Outdoor Recreation is requesting four vehicles. The staff at John Martin State Park, as well as the Volunteer Program staff, have been using personal vehicles and temporarily assigned vehicles from State Fleet Management. The temporary vehicles are assigned only for a six-month period and are not guaranteed to be available when needed. In addition, the vehicles that State Fleet Management provides for temporary assignments are older, high-mileage vehicles that are unreliable for staff that must access remote locations or travel during inclement weather. The use of State motor pool or renting vehicles is not feasible for employees, as the use of these vehicles, at times, is needed on short notice or during hours when the State motor pool is not accessible.

Assumptions and Calculations

This analysis assumes these employees will continue to conduct their regular duties in each alternative, but by eliminating their subsidy to the state and maintaining their appropriate levels of performance would require adequate compensation to cover their current out of pocket cost burdens. Estimated benefits to these employees are therefore calculated in terms of what additional compensation would have to be paid to these individuals to cover their current cost burden.

Costs to the state in Alternative 1 are calculated using estimated lease payments and fleet mileage rates.

Total compensations costs to the state in Alternative 3 are calculated in the same manner as benefits for Alternatives 1 and 3.

The 2005 Internal Revenue Service allowable deduction rate is $.405. This rate, however, does not distinguish between two-wheel and four-wheel drive vehicles, while the employees who are performing these duties will need four-wheel drive vehicles. Therefore, this analysis will utilize the actual incurred cost of $.52/mile.

Costs to the employees for continued use of personal vehicles are estimated at $.52/mile, using the FY2004-05 average of 15,000 annual miles per vehicle and the figures below.

Item	Annual Cost	Description
Lease *	3,468	Assumes employee obtains vehicle and terms comparable to fleet lease
Insurance	1,600	Business use coverage per Progressive Insurance Co.
Registration fees	150	
Fuel	2,100	$2.10/gal x 1 gallon/15 miles x 15,000 miles
Maintenance/Repairs	482	Preventive maintenance and repair estimates
Total	**$7,800**	**$.52/miles on 15,000 miles**

* Lease estimate of $289 based on purchase price of $22,500 ($2,000 salvage value) amortized over eight years at 6% plus a fleet management fee of $20. The lease estimate provided by State Fleet Management of $24,500 purchase price, no salvage value, 4 years, 6% plus $20 management fee.

The following table describes the costs (including state lease payments) under Alternative Number 1.

The final column represents the requested additional funds (costs using state-leased vehicle less anticipated personal mileage payments).

There are no additional direct costs to the state under Alternative Number 2.

Name	Annual Mileage FY04-05	Private Mileage Reimbursed at $0.28/mile	Cost to Employee ($0.52/mile)	Out of Pocket Cost Burden to Employee ($0.52-$0.28)	Pre-tax + Benefit Cost Burden to employee (/.67*1.25)	Lease Payment (Annual)	Mileage Payments at $.262/mile	Total Costs Using State Vehicle	Decision Item Cost to State (Total Costs-Current Reimbursement)
Volunteer Coord	19,978	5,594	10,389	4,795	8,945	6,870	5,234	12,104	6,510
Volunteer Coord	20,296	5,683	10,554	4,871	9,088	6,870	5,318	12,188	6,505
John Martin Park	17,625	4,935	9,165	4,230	7,892	6,870	4,618	11,488	6,553
John Martin Park	19,827	5,552	10,310	4,758	8,878	6,870	5,195	12,065	6,513
Totals	**77,726**	**21,763**	**40,418**	**18,654**	**34,803**	**27,480**	**20,364**	**47,844**	**26,081**

Item	Annual Cost	Description
Lease	3,468	Assumes employee obtains vehicle and terms comparable to fleet lease
Insurance	1600	Business use coverage per Progressive Insurance
Registration fees	150	
Fuel	2100	$2.10/gal x 1 gallon/15 miles x 15,000 miles
Maintenance/Repa	482	Preventative and repair estimates
Total	**7,800**	**$.52/miles on 15,000 miles**

Schedule 6
CHANGE REQUEST for FY 06-07

Department: Natural Resources
Priority Number: 19 of 21
Division: CWCB
Program: Water Supply Planning and Finance Section
Request Title: Vehicle

Dept. Approval: Will D. Levine Date: 11-10-2005
OSPB Approval: Date: 11-11-05
Statutory Citation: Sections 37-60-102, 106, and 121 (2) C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
EDO Vehicle Lease Payments	Total	7,926	4,433		4,433	4,433	1,998	1,998		6,431	5,994
	FTE										
	GF										
	CF										
	CFE	7,926	4,433		4,433	4,433	1,998	1,998		6,431	5,994
	FF										

Letter Notation:
Cash Fund name/Number, Federal Fund Name: Construction Fund (CFE)
IT Request ☐ Yes ☒ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☒ Yes o No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ☒ No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Department: Natural Resources
Request Title: Vehicle
Priority #: 19 of 21
Division: Colorado Water Conservation Board (CWCB)

Summary of Requested Alternative:
The CWCB is requesting on-going Cash Funds Exempt (CFE) funding in the amount of $5,994 per year from the CWCB Construction Fund for a six-year lease for a state leased four-wheel drive (4WD) vehicle for the Water Supply Planning and Finance Section.

Problem or Opportunity Definition:

The Colorado Water Conservation Board (CWCB) Construction Fund, managed by the Water Supply Planning and Finance Section, was created by the Colorado General Assembly in 1971 to provide low interest loans to water users for the development of water resource projects. Since inception, the program has completed 235 loans, involving over $220,000,000 in loan funds. Currently, there are 54 new, active projects (28 projects under construction and 26 projects under design), accounting for over $100,000,000 in additional loan funds.

This program requires that a designated field person from the Water Supply Planning and Finance Section inspect projects to ensure that construction is proceeding in accordance with the design plans and specifications, and to approve the disbursement of the CWCB approved loan funds. Extensive travel, for one staff member, of approximately 2,100 miles per month is required to ensure proper inspection coverage of these projects. This amount of travel results in the full-time use of a state vehicle.

Currently, the CWCB has only two assigned state vehicles to use as transportation to accomplish all of its responsibilities, which have steadily grown over the years given the water needs of the State. Allocating one of these vehicles solely to the Water Supply Planning and Finance Section is not possible. Over the past few years the Water Supply Planning and Finance Section has relied on State Fleet Management for surplus vehicles on a 6-month lease basis. These vehicles have proven to be unreliable, have high mileage, are in poor condition, and generally are unsafe for travel to remote areas or for any continued long distance travel schedule.

The Water Supply Planning and Finance Section needs a safe, reliable 4WD vehicle to effectively run its program.

Available Alternatives:

1. **No action (Status Quo) – (Not Recommended)**
   a. **Description:**
   The Water Supply Planning and Finance Section would continue to utilize the State Fleet Management surplus vehicle pool to obtain vehicles on a 6-month lease.

   b. **Department's authority to implement the alternative:**
   Sections 37-60-102, 106, and 121 (2) C.R.S.

   c. **Link to Objectives/Anticipated Outcome:**
   This alternative allows for only a basic level of transportation for field staff to perform his or her duties, **if** State Fleet Management is able to provide the CWCB with a temporarily loaned vehicle. There is no guarantee that a vehicle will be available from State Fleet Management at the end of a 6-month temporary assignment when the CWCB returns an existing temporarily leased vehicle. In addition, vehicles that are available are typically in poor condition, have high mileage, and are only 2WD. As such, these vehicles are unreliable and unsafe for someone whose job requires state-wide travel to construction sites and remote locations. The Construction Fund Program relies on construction projects being inspected on a timely basis.

2. **Utilize the CWCB 1% loan origination fee account to pay for motor pool and rental vehicles from state vendors – (Not Recommended)**
   a. **Description:**
   Under this Alternative the Water Supply Planning and Finance Section would utilize the existing 1% loan origination fee account to fund motor pool and rental vehicles. (Calculations appear under the Application of the Analytical Technique/Assumptions and Calculations section in the Benefit-Cost table.)

   b. **Department's authority to implement the alternative:**
   Sections 37-60-102, 106, 119 (2), and 121 (2) C.R.S.

   c. **Link to Objectives/Anticipated Outcome:**
   This alternative addresses the needs of the Water Supply Planning and Finance Section and achieves the goal of the Construction Fund Program, but at a very high cost. The average rental price for a 4WD vehicle per month is

$1,000, which would be $12,000 per year. Currently, the State Motor Pool charges $56 per day for a 4WD vehicle, which would be approximately $1,215 per month or $14,580 per year. Additionally, it can be difficult to obtain motor pool vehicles during spring and summer, and private rental agencies cannot guarantee availability.

3. **Fund the fixed and variable vehicle line items for the CWCB to obtain an additional 4WD state leased vehicle. (Recommended)**
   a. **Description:**
   The CWCB will request adequate, long-term funding to the fixed and variable vehicle rate line items for the CWCB for an additional state leased vehicle to be used by staff members. (Calculations appear under the Application of the Analytical Technique/Assumptions and Calculations section in the Benefit-Cost table.)

   b. **Department's authority to implement the alternative:**
   Sections 37-60-102, 106, and 121 (2) C.R.S.

   c. **Link to Objectives/Anticipated Outcome:**
   Alternative #3 resolves all shortcomings identified under alternatives 1 and 2. It is the most cost-effective use of state funds, allowing the Water Supply Planning and Finance Section to effectively meet its workload, while eliminating the uncertainty of State Fleet vehicles. This alternative ensures a new, safer vehicle for the state employee to provide travel to to project sites to perform project inspections.

Analytical Technique:
The analytical techniques used for this decision item are the cost-effectiveness and multi-criteria analyses.

Assessment of Alternatives

Background Information:

The Colorado Water Conservation Board is requesting a 4WD vehicle for the Water Supply Planning and Finance Section to be used by a designated field staff member. The field staff member will utilize this vehicle to perform various site inspections on projects throughout the state that are associated with the Water Supply Planning and Finance Section Construction Loan Program.

Currently, the CWCB Construction Loan Program has 28 projects under construction and 26 projects under design, involving over $100,000,000 in loan funds. These projects range from $100,000 ditch rehabilitation efforts to $15,000,000 reservoir rehabilitations. Interest payments on these loans go toward funding new projects, CWCB employee salaries, non-reimbursable grant projects, and other miscellaneous items. Given that the success of the Construction Loan Program is based on a "customer first" attitude, it is imperative that design plans are reviewed and projects be inspected on a timely basis, such that loan funds can be disbursed so loan customers can, in turn, pay their vendors for work completed on the projects.

The Water Supply Planning and Finance Section is currently utilizing temporarily-assigned vehicles from State Fleet Management to complete the work mentioned above. These temporary vehicles are assigned only for a 6-month period, with no guarantee that a vehicle will be available. Vehicles that are available are typically in poor condition, have high mileage, and are not 4WD. These older, unreliable vehicles are also a safety concern for the field person that has to travel throughout the state, to remote areas, in the mountains, under all types of weather conditions. It is important that this employee have access on a full time basis to a reliable vehicle while traveling long distance alone to perform the required functions. Based on the current work schedule, the field staff member is required to travel more than 2,100 miles per month. Depending on new projects, the amount of miles will increase.

Currently, the Colorado Water Conservation Board has 2 assigned vehicles to cover all the sections responsibilities. It is not feasible to permanently assign one of these vehicles to the Water Supply Planning and Finance Section. It is for this reason that the Water Supply Planning and Finance Section has been utilizing the surplus vehicles at State Fleet Management for the past few years.

To demonstrate the need for a third vehicle, which will be assigned to the Water Supply Planning and Finance Section, the following bullet points provide a brief description of the CWCB Flood Protection, Compact, and Stream and Lake Sections vehicles needs:

- The Flood Protection Section requires vehicles for transportation to locations around the state for various meetings, to examine problems in communities, to collect data, learn what has caused a flood, and to fund, plan, and implement future prevention methods. Four of the eight Flood Protection objectives that would be highly affected by a vehicle shortage are: hazard identification, community planning, project implementation, and federal/state/local coordination. The FEMA coordinator is required to visit 45 communities per year in the state. This requirement is federally mandated and is necessary for federal and state coordination. If the visits were not performed, communities would be in jeopardy of losing their eligibility for and status with the federal government to participate in the National Flood Insurance program. This would lead to safety issues for Colorado citizens, flooding problems

would not be addressed, and the division would lose federal funding because community project audits would not be performed.

The idea of using State motor pool or renting vehicles is not sensible for the Flood Protection section. Floods do not come on a schedule and using a motor pool may not guarantee a 4-wheel drive vehicle is available when needed. In addition, motor pool daily hours would not allow the section to have access to a vehicle during emergency situations.

- The Compact Section requires vehicles for attendance at Cooperative Agreement meetings, which is vital to the state of Colorado. The outcome could affect current and future use of the compact entitlement and water use within the states, which could have a negative economic impact to Colorado, northern Front Range water users, and the agricultural community. In addition, the cost of implementing the Cooperative Agreement will be in the range of $15-30 million, and it is essential that Colorado's interests be represented to ensure that our dollars are invested wisely. Therefore, attendance at and transportation to meetings is necessary. Meetings are held year-round in various locations, which require a 4-wheel drive vehicle for safety while driving on roads in winter conditions.

- The Stream and Lake Section requires vehicles to perform biologic and hydrologic analyses of proposed instream flow segments and to physically monitor existing instream flow water rights within each of the state's seven water divisions. The CWCB currently holds, monitors, and protects instream flow water rights on approximately 8100 miles of Colorado streams and natural lake level water rights on 475 Colorado lakes.

- A large amount of equipment is required at the CWCB board meetings. The Board Coordinator needs the use of a vehicle, which is large enough to carry all the equipment. In addition, the board meetings are held in different locations around the state throughout the year.

Many programs in CWCB require travel throughout the state. Without a sufficient number of 4-wheel drive vehicles, these programs and communities would be negatively affected. Therefore, it is not feasible for the Water Supply and Finance Section field staff member to use one of the existing two vehicles currently available to the Colorado Water Conservation Board.

Link Budget Expenditures to the Full Range of Outcomes:

The proposed budget expenditure for Alternative #1 is at minimal cost, but at significant shortcomings. The 6-month temporary lease vehicles from State Fleet are not guaranteed to be available, which can leave the Water Supply Planning and Finance Section without a vehicle, creating an inability for projects to be inspected and loan proceeds to be disbursed. Given the overall demand on the two designated vehicles within the Colorado Water Conservation Board it is not possible for the Water Supply Planning and Finance Section to utilize one of these vehicles when State Fleet vehicles are not available. In addition, when vehicles are available from State Fleet, they are generally in poor condition, high mileage, unreliable, and unsafe for someone driving long distances for state business.

The proposed budget expenditures for Alternative #2 allows the Water Supply Planning and Finance to meet its project workload, but at a much higher cost and in a less efficient manner. Additionally, motor pool and rental vehicles are not always available when needed. Alternative #2 is not the most fiscally responsible choice since on-going costs to continually rent vehicles and not having an opportunity to pay off the vehicle loan creates a perpetual expense. In addition, staff time is wasted locating a vehicle from the motor pool and/or a private vendor when it could be used to focus on main duties and statutory responsibilities.

On the other hand, alternative #3 (providing additional funding to the CWCB for the fixed vehicle rate for a 4WD state leased vehicle) provides benefits internally and externally. The proposed alternative:

- Allows the CWCB Water Supply Planning and Finance Section to spend its budget allocation in a fiscally responsible and efficient way;
- Supplies the Water Supply Planning and Finance Section with a vehicle to adequately manage its project workload in a safe, effective manner; and
- Provides a means to meet the Department's and division's missions and goals.

None of the proposed alternatives will increase costs to other state agencies, nor to federal, local, or private entities.

Application of the Analytical Technique/Assumptions and Calculations:
The table below identifies costs associated with each of the three alternatives. The funding source for the on-going fees and costs associated with the vehicle lease would come from the CWCB Construction Fund, which are cash funds exempt (CFE). The table includes annualized costs for the vehicle lease rate under alternative #3, which would require a 6-year lease that begins in March, 2007 and ends in February, 2012.

Cost Description Table (Cost-Effectiveness Analysis)

Item	Alternative No. 1 Costs: No change; fund out of 1% loan orig. fee	Alternative No. 2 Costs: use 1% loan orig. fee funds for rentals; no temp vehicle available	Alternative No. 3 Costs: fund a state vehicle
6-month State Fleet Lease Vehicle	$0	N/A	N/A
Motor Pool Vehicles – 20-day rental/month (4WD)	$56/day x 40 days = $2,240	$56 per day x average 20 days/mo. x 6 months = $6,720	FY07 only: $56/day x 27 days = $1,512
Private Rental Vehicles (4WD)	$1,000/month x 3 months = $3,000	$1,000 per month x 6 months = $6,000	FY07 only: $1,000/month x 2 months = $2,000
State Vehicle Lease (6-year lease) for 4WD; includes lease + $14.50 State Fleet Mgmt Fee	N/A	N/A	FY07: $499.50 x 4 months = $1,998; FY08-11: $499.50 x 12 = $5994/yr; FY12: $499.50 x 8 mo's = $3,996
State Fleet Lease Management Fee (2WD)	$14.50/month x 12 months = $174	N/A	FY07 only: $14.50/month x 8 months = $116
Variable mileage rate ($0.185/mile)	$0.185 x 2,100 miles per month x 12 months = $4,662/yr	N/A	All FYs: $0.185 x 2,100 miles/month x 12 months = $4,662
Annual Totals:	**$10,076**	**$12,720**	**FY07: $10,288; FY08-11: $10,656/yr (12 mo's); FY12: $8,658 (8 mo's)**

Note: This table describes the total costs associated with the three alternatives, not the cost of the decision item. The amount requested for the decision item appears under alternative #3 for the line entitled "State Vehicle Lease (6-year lease) for 4WD: includes lease + $14.50 State Fleet Management Fee." Other expenses shown are currently budgeted to be paid out of CWCB's one-percent loan origination fee and hence are not included in the decision item request.

The costs associated with Alternative #1 (no change) are based on the current fiscal year's (FY06) assumptions. The Section has been provided with a 2WD 6-month temporary loan vehicle from State Fleet Management. It is assumed that the staff member will require a 4WD vehicle for forty days from the State Motor Pool and three months of rental from a private rental agency to inspect projects in mountainous and remote locations, as well as during the winter season, or when the reliability of the State Fleet Lease vehicle cannot be trusted on long trips. During periods when the 4WD vehicles are rented, the 2WD vehicle would still be in the Section's possession, but not in use since it cannot be used in 4WD territory. It is not advantageous to return the temporary vehicle while a 4WD rental is being utilized as State Fleet Management may loan the temporary vehicle to another agency and therefore, the Section would be without a vehicle entirely. This alternative includes costs for the State Fleet Management leasing fee of $14.50 per month and a variable mileage rate of $0.185 per mile. The costs would be paid from funds collected for the 1% loan origination fee.

Alternative #2 (using the 1% loan origination fee to fund rental vehicles for the entire year), includes costs to rent vehicles from the State Motor Pool and private rental agencies for six months each to total a one year period. The costs for private rental agency 4WD vehicles can fluctuate drastically from month to month, so an average price of $1,000 per month is being used for this purpose. (A quick internet website search indicated that the lowest cost for available rentals from a private auto rental agency for a 4WD Sport Utility Vehicle during the month of July 2005 is $800 per month and the cost for the month of August 2005 is $1,259.) Based on availability during the different seasons of the year, the assumption of renting vehicles for six months each (on a rotating basis throughout the fiscal year), from State Motor Pool and a private rental agency, is being used for this alternative.

The figures listed in the column for alternative #3 (funding a state leased vehicle) include costs for purchasing a state leased vehicle for a 6-year lease period, which includes the State Fleet Management leasing fee of $14.50 per month and a variable mileage rate of $0.185 per mile. The costs for the lease and the management fee represent the total amount requested for this decision item. All costs have been broken down by fiscal year to identify expenses associated with the request fiscal year and beyond. State Fleet Management normally orders and then delivers the new leased vehicles in the month of March therefore, the number of months for the first year of the new lease would begin in March and total four months of data for the first year. The information provided for subsequent years is based on a full twelve month fiscal year, and then the sixth year of data includes costs for the final eight months of the lease purchase. Also included are expenses to lease a temporary vehicle from State Fleet Management during the first eight months of the lease period prior to the arrival of the permanent vehicle, twenty-seven days of costs for a Motor Pool vehicle, and two months of costs for private agency rentals. These figures have been prorated so that they are comparable to costs in Alternative #1. In addition, it is assumed that a temporary vehicle would be available from State Fleet Management, that a Motor Pool

vehicle would be required for approximately twenty-seven days of the eight month period, and that a vehicle would be rented from a private rental agency for two months while waiting for the arrival of the permanent state vehicle.

Although the overall costs for Alternative #1 are less than Alternative #3 in the amount of $580 for a 12-month period, Alternative #1 has many negative issues associated with it. As mentioned, these vehicles are typically in poor condition, have high mileage, are 2WD, and are not guaranteed to be available. The vehicles are not only a safety concern for someone driving long distances, but their unreliability creates logistic and scheduling problems. Alternative #3 provides the Water Supply Planning and Finance Section with a safe, full-time, reliable vehicle, in a very cost-effective manner. Once the importance of a dependable and suitable vehicle is factored into the cost, the benefit far exceeds the additional amount of $580 per year (i.e., the difference between the full-year costs for Alternatives #1 and #3). Above all, the safety of the state employee should surpass all concerns regarding the additional minimal cost.

The following multi-criteria analytical technique will allow the evaluation of performance against multiple objectives or criteria.

Multi-Criteria Analysis

Alternatives	allows the CWCB to spend its budget allocation in a fiscally responsible and efficient way	supplies the CWCB with a vehicle to carry out agency statutes and responsibilities	Provides a means to meet the department's and division's missions and goals	Provides external benefits to other agencies and the public from data collected and shared, meetings attended, and protection of the state's interests
Alt. 1: State Fleet temp vehicle	X	•	•	X
Alt. 2: use 1% loan Origination Fee funds for State Motor Pool and rental vehicles	•	X	X	X
Alt. 3: Fund fixed and variable line items for a permanent 4WD vehicle	XX	XX	XX	XX

CHART KEY: • = Does not achieve program objective; X = May achieve program objective; XX = Achieves or exceeds program objective

As shown in the table above, alternative #3 (funding the fixed and variable line items), allows the CWCB to better achieve or exceed the goals and objectives of the agency.

Key Issues for Decision Making:
1) The CWCB is a cash funds exempt agency and this request would be fully funded from its construction fund (a cash funds exempt source).

2) Colorado is not set up for a mass-transit system for state employees to properly perform duties and, employees may not have personal transportation or should not be required to use their personal vehicle for work-related issues. The employees in the CWCB are time-conscious, fiscally responsible, and will therefore, combine as many projects as possible into one trip.

Omission, Biases, or Uncertainties:
There is uncertainty regarding future increases in fees charged by State Fleet Management to the Division. The Division does not have any control over such matters.

Recommendation: Fund the fixed and variable vehicle line items for the CWCB to obtain an additional 4WD state leased vehicle, as proposed in alternative 3.

Schedule 6
Decision Item Request for FY 2006-07

Department: Natural Resources
Priority Number: 20 of 21
Division: Water Resources
Program: Water Administration, Public Safety
Request Title: Leased Space

Dept. Approval: Will A. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: 37-80,82,83,84,87,92

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 15 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total	1,683,393	1,707,066			1,718,237	40,778	1,759,015			70,336
	FTE	0.0	0.0			0.0	0.0	0.0			0
	GF	1,087,020	1,192,311			1,203,617	40,778	1,244,395			70,336
	CF	399,944	424,226			424,091	0	424,091			0
	CFE	196,429	90,529			90,529	0	90,529			0
	FF	0	0			0	0	0			0
Line Item Name Leased Space	Total	384,182	395,597			415,719	30,778	446,497			70,336
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	365,851	375,350			395,607	30,778	426,385			70,336
	CF	0	20,247			20,112	0	20,112			0
	CFE	18,331	0			0	0	0			0
	FF	0	0			0	0	0			0
Line Item Name Operating Expense	Total	1,299,211	1,311,469			1,302,518	10,000	1,312,518			0
	FTE	0.0	0.0			0.0	0.0	0.0			0.0
	GF	721,169	816,961			808,010	10,000	818,010			0
	CF	399,944	403,979			403,979	0	403,979			0
	CFE	178,098	90,529			90,529	0	90,529			0
	FF	0	0			0	0	0			0

Letter Notation:
Cash Fund name/Number, Federal Fund Name:
IT Request ☐ Yes X No **(If yes and request includes more than 500 programing hours, attach IT Project Plan)**
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes x No **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ Yes x No **(If yes, Name of other Department(s)_____)**

Efficiency and Effectiveness Analysis

Identifying Information

Department:	**Natural Resources**
Request Title:	**Leased space**
Priority number:	**20 of 21**
Division:	**Water Resources**

Summary of Request

This request is for $40,778 in General Funds in FY 2006-07 and $70,336 in FY 2007-08 to finance lease costs for office space in Glenwood Springs and Colorado Springs.
The request for each Water Division is described and justified separately as an individual efficiency & effectiveness analysis.

Problem or Opportunity Definition

The purpose of this request is to secure a long-term solution for space needs for the Division 5 office in Glenwood Springs through participation in a new co-location project to occupy a building to be constructed and owned by the Colorado Department of Transportation (CDOT); this request also provides additional funding for office space in Colorado Springs.

Department Objectives

1.1, 1.2, 1.7, 2.3, 2.7, 3.2

Analytical Technique Used

An individual benefit-cost analysis has been performed for each Water Division's request.

Assessment of Alternatives

An individual assessment has been provided for each Water Division request.

Cost Calculations and Assumptions

Detailed cost components have been provided for each Water Division request, including lease costs and one-time moving costs to relocate the Glenwood Springs office.

Efficiency and Effectiveness Analysis

Identifying Information

Department: Natural Resources
Request Title: Glenwood Springs Office Building Co-location Project
Priority number: 20 of 21
Division: Water Resources

Summary of Request

The Glenwood Springs Co-location Project is the construction of an office building and garage built and owned by CDOT on the Glenwood Springs CDOT property for lease to the Division of Water Resources, the Division of Wildlife, the Department of Public Safety, the Division of Motor Vehicles, the Colorado Department of Labor and Employment, and the Department of Information Technology. The building will also be occupied by the owner, CDOT. This request is for $38,483 for FY 2006-07 in General Funds to provide for additional lease costs of $28,483, and one time moving expenses of $10,000 to transport the Division's property to the new location. The request is also for $67,972 of General Funds to provide for additional lease costs for the Division of Water Resources in FY 2007-08, and subsequent years.

The Division also evaluated the alternative of securing a long-term lease in Glenwood Springs at current market rates to accommodate DWR, exclusively. The co-location project is a superior option, generating an estimated $1.2 million net present value over the expected 50-year life of the project.

Element No. 2 – Problem or Opportunity Definition.

Background

The Division of Water Resources currently leases 3,418 square feet of office space in Glenwood Springs for $14.66/sq ft with a year-to-year agreement, projected to escalate at 2.8%[1] per year, every November 1st. The Division of Water Resources and the Division of Wildlife currently reside in the same building in Glenwood Springs, with one-year leases that have been synchronized to expire every July 1st. Previously, Wildlife and Water Resources each had 10-year leases that expired in different years, and both agencies have since opted to keep rent from escalating beyond a nominal amount by allowing the building owner to defer controlled maintenance and major capital expenses; we have been signing short-term leases, while investigating other options. To sign a long-term lease for the current space, these major expenses must be incurred, and the owner will want to recover these costs within the life of a 10-year lease agreement, dramatically increasing our costs.

[1] The inflation rate of 2.8% is based upon the annualized growth rate in the Denver-Boulder-Greeley CPI over 10 years (1994-2004)

CRS 37-92-202 requires the office of the Division Engineer for Water Division 5 to reside in Glenwood Springs. To find more suitable space for the Division of Wildlife and to protect the Department of Natural Resources from unstable and escalating costs for office space, the Glenwood Springs offices of Water Resources and Wildlife began jointly looking for a long term solution through the purchase of an office building or purchase of land and construction. Wildlife's 10-year lease expired prior to Water Resources' lease; Wildlife began this search before Water Resources became involved. This search found we might already be priced out of today's market, and that there are very few suitable options. Lease costs for existing suitable space in Glenwood Springs ranges from $20 to $30/sq ft; this rate is all-inclusive, assuming provision for utilities, janitorial services, and miscellaneous operating costs. An existing raw parcel sized and located to meet the needs of Wildlife and Water Resources in Glenwood Springs was $1.9M. After adding development and construction costs to the financing, a project on this property would place costs of a state owned building on purchased land in the high end of the Glenwood Springs commercial property market.

The Department of Public Safety (State Patrol) was also attempting to solve their space problems. Eventually Water Resources, Wildlife, and State Patrol approached CDOT, and CDOT determined there might be some space on its property to consider. Later, the Department of Motor Vehicles and Department of Labor and Employment, who both currently lease expensive space in the Glenwood Springs Mall, and the Department of Information Technology, were all brought into the project.

Current Status

An Interagency Governmental Agreement (IGA) has been prepared to allow the Department of Transportation to build, own, and manage the building on their property. The tenant agencies will each enter into a 30-year lease, which will repay development, and construction costs. The office lease costs will be $14 - $18/sqft for office space and are intended to include the actual costs of repayment for the building, fund a controlled maintenance line item (carpet, paint, etc) and fund a capital maintenance replacement pool for potential issues with HVAC, roof, etc. that are long term items. Once the 30-year lease expires, the tenant costs will be reduced to O&M including controlled maintenance and capital maintenance replacement. To date, the lease cost remains an estimated range in the IGA. The IGA is based on individual space needs estimated by each agency and the common space that will improve efficiency and customer service.

The Division's current lease space is 3418sqft with 240sqft of outside storage. This space is not ADA compliant, and does not meet Fire Code. Our current office does not provide secure space for our dam safety files that are inaccessible to the public. The proposed new space will be 5551 sq ft, excluding common and garage space. This increase allows for growth of office staff from 10 to 14 people, provides office space for field staff that currently fills our small conference room, and increases permanent workstations from 1 to 2 for field staff. The estimated increase in new office staff of 4.0FTE's over the next 30 years will be necessary to administer ever-increasing competition for Colorado River water and to address added complexity in water rights due to increased demand for export of water, changing in-basin uses, and future interstate compact regulation. This is at a slower pace than increases in office

staff, when 6.6 FTE's were added to the Glenwood Springs office between 1980 and 2005. Other enhancements include: copy room to reduce noise, dedicated space for the public to do research, a records area that currently fills our conference room, and space for files that currently line our hallway. Water Resource's share of the common space is 885 sq ft, which includes reception, restrooms, lunchroom, a medium conference room, and a large conference room. Water Resources will also have one bay in the garage totaling 600 sq ft to store hydrographic and satellite monitoring equipment, provide heated space for a work bench to repair equipment, and store an ATV and two Snowmobiles. These machines and some of the equipment are currently stored off site at private homes. The estimated lease cost of garage space is $6.60/ sq. ft. If all of the above needs were accommodated by our current landlord, the expansion requirements would require significant capital improvements and removal of one tenant from the building; the current lease cost would rise to $20/ sq. ft. to cover both the additional space and allow recovery of capital improvements.

Exhibit 1 provides a detailed breakdown of the new office space for the tenant agencies.

The co-location project will have a number of benefits in addition to the financial benefits, outlined later. Having most state agencies in one location in the Glenwood Springs area is a convenience to the public. The shared facilities such as reception, restrooms, an IT closet, and a lunchroom makes efficient use of space through reduced duplication. The sharing of a large conference room allows the agencies to eliminate renting as needed, and provides the public with a consistent familiar location for public meetings hosted by the tenant agencies. Many meetings hosted by the Division of Water Resources are located based on availability of hotel conference facilities. A state owned conference room would allow Water Resources to host many meetings in Glenwood Springs, where we currently must travel out-of-town, reducing time demands and travel costs for Division 5 staff. The sharing of a medium conference room makes greater use of space that if owned individually by each agency would be used a fraction of the time.

The next step will be preparation of architectural plans, where the lease costs will be refined to a smaller range. The plans will then be put out to bid. Once a bid is accepted and financing is locked in, the initial lease cost should become final. It is estimated that from acceptance of the IGA (July 22, 2005) through construction completion it will take 18 months (January 22, 2007), and the first lease payment will be in February 2007.

The Division's statutory obligations are set forth in the following statutes:

Title 37	Article 80	State Engineer
Title 37	Article 82	Appropriation and Use of Water (Administration of Water in Natural Surface Stream)
Title 37	Article 83	Exchange of Water and Transfer From One Stream To Another
Title 37	Article 84	Responsibility of User and Owner (Administration of the Diversion and Measurement of Water)
Title 37	Article 87	Reservoirs (Administration of Water Storage and Release from Reservoirs)

Title 37 Article 92 Water Right Administration and Distribution, including CRS 37-92-202 requiring the Division Engineers Office to be located in Glenwood Springs.

The Department's relevant objectives include:

1.1: Respond to demands by constituents by providing services, information, and assistance.
1.2: Maximize the efficient use of Colorado's water resources and comply with and enforce other states' compliance with interstate compacts. Distribute available water supplies in time and amount necessary to meet water right demands in priority on a daily basis.
1.7: Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs.
2.3: Promote conservation and stewardship of the state's natural resources among private and public landowners by providing technical assistance and incentives.
2.7: Assist landowners, water users and local governments in land-use planning and natural resource management by increasing the availability of relevant information and data and providing technical assistance.
3.2: Ensure that the Department has a highly qualified and motivated workforce that reflects the diversity of the State's population and is prepared to meet the challenges associated with the large number of retirements projected in the next 10 years.

Element No. 3 – Available Alternatives.

Alternative No. 1 (Recommended):

- Provide additional funding to allow co-location of the Division with other state agencies in Glenwood Springs in a building owned by the CDOT.
- Allows a permanent, long- term solution for office space while avoiding continually escalating lease expenses in a geographic area that has minimal land remaining for commercial space.
- Allows improved customer service to the public, with state services in Glenwood Springs consolidated in one location.

Alternative No. 2 (Not Recommended):

- Provide additional funding to allow the Division to secure a stand-alone location, at current market rates, without co-location of other state agencies.
- Allows a permanent, long-term solution for office space. Lease expenses will escalate over time.
- Service to the public will be comparable to current levels.

Alternative No. 3 (Not Recommended-Status Quo):

- Continue to lease existing space with annual renewal of the lease agreement. This requires necessary capital replacement and controlled maintenance for the building to remain undone.
- This option does not provide a long-term solution for office space.
- Service to the public will be comparable to current levels.
- There is no immediate direct cost to the state for this alternative.

Element No. 4 – Selected Analytical Technique.

The selected technique is to compare the cost of the request (Alternative 1) to the cost of obtaining alternative space for Water Resources (Alternative 2), exclusively, at current market rates. A discounted cash flow analysis was used to calculate the net present value of Alternative 1. Since the lease cost for office space is currently estimated in the range of $14-$18/sq. ft., we assumed a worse case scenario of $18/sq. ft. ($14.50/sq. ft for fixed costs to be repaid over 30 years, and $3.50/sq. ft. for operating costs that escalate with inflation). All of the assumptions and calculations for the analysis are contained in Exhibit II (attached).

Element No. 5 – Assessment of Alternatives.

There are three alternatives: 1) Provide funding to allow Water Resources to participate in a co-location project with other state agencies in a building constructed and owned by the CDOT; 2) Provide funding for Water Resources to obtain exclusive space in Glenwood Springs at market rates; 3) Do not commit to a long-term solution to obtain lease space for the Division.

Exhibit II demonstrates that Alternative 1 is financially superior to Alternative 2. The recommended alternative provides a net present value of $1.2 million over the expected 50-year life of the project. The benefits of this alternative accrue primarily because the primary lease costs, required to re-pay construction and development costs, remain constant over the 30-year period. After the end of 30 years, the Division's costs are limited to operating costs which escalate with inflation. The discounted cash flow analysis assumes a discount rate of 2.8% (based upon the annualized growth rate in the Denver-Boulder-Greeley CPI from 1994-2004). Sensitivity analysis indicates that if the discount rate were increased to 6%, the net present value is still positive ($234,918).

Alternative 3 (status quo) provides no long-term solution to meet the Division's space needs. Under that alternative, the current landlord would have to defer necessary capital replacement and controlled maintenance costs, forever. This is clearly not possible. It is important to also understand that if the current landlord addressed the existing issues and entered into a long-term lease, the projected lease cost, after renovation, is equal to the costs under alternative 2. In addition, if we delay securing a long-term solution, it may be

extremely difficult to secure adequate space in Glenwood Springs, regardless of cost. There is very little land remaining in the area for commercial development.

Recommendation: Adopt Alternative 1 to allow the Division to participate in the co-location project.

Element No. 6 – Cost Calculations and Assumptions.

Costs to the state in Alternative 1 are calculated below:

Assumptions

Move in to new office on Feb. 1, 2007

Cost of existing office

Current office lease is $14.66/sf, as of Nov. 1, 2005

Inflate existing lease by 2.8%/yr.

Current office lease will be $15.07 as of Nov 1, 2006

Current office lease will be $15.49 as of Nov 1, 2007

Cost of co-location

Assume $14.50/sf for office and common area

Assume $3.50/sf operating cost for 1st yr, escalating by 2.8% per yr.,thereafter

Assume $6.60/sf for garage space

Calculations

Co-location facility	FY 2006-07	FY 2007-08
Moving costs		
7 month cost to remain in old building	10,000	
3418 sf x $14.66/sf x 4 months/12	16,703	
3418 sf x $15.10/sf x 3 months/12	12,903	
5 month cost to reside in new building		
Fixed costs: (6436 sf office space x $14.50/sf x 5 months/12	38,884	
Operating costs (6436 sf x $3.50/sf x 5 months/12	9,386	
Fixed costs:(600 sf garage spacex $6.60/sf x 5 months/12	1,650	
12 month cost to reside in new building		
Fixed costs: (6436 sf office space x $14.50/sf)		93,322
Operating costs (6436 sf x $3.598/sf)		23,157
Fixed costs:(600 sf garage space x $6.60/sf		3,960
Total new costs	**89,526**	**120,439**
Current costs		
3418 sf x $14.66/sf x 4 months/12	16,703	
3418 sf x $15.07/sf x 8 months/12	34,340	
3418 sf x $15.07/sf x 4 months/12		17,170
3418 sf x $15.49/sf x 8 months/12		35,297
Total current costs	**51,042**	**52,466**
Amount of decision item request	**38,483**	**67,972**

Efficiency and Effectiveness Analysis

Identifying Information

Department: Natural Resources
Request Title: Colorado Springs Lease Space
Priority number: 20 of 21
Division: Water Resources

Summary of Request

The Division of Water Resources requests $2,295 in General Funds for FY 2006-07 and $2,364 for FY 2007-08 and subsequent years, to reimburse the Colorado Division Of Wildlife for 300 sq. ft. of office space sublet to provide office space for three Division of Water Resources personnel in Wildlife's Regional Service Center located at 4225 Sinton Road in Colorado Springs. Later this year, a supplemental budget request will be presented to finance lease costs for FY 2005-06.

Element No. 2 – Problem or Opportunity Definition.

For at least ten years prior to relocation to the above address (summer, 2003), the Division of Wildlife (DOW) allowed Division of Water Resources (DWR) personnel to occupy office space they owned, without charge. However, now that Wildlife is leasing office space using both Game Cash and Federal Aid funds, it is important to establish a clear accounting record of reimbursement to avoid a Federal Aid diversion issue. Consequently, DOW will require DWR to reimburse them for sublet of 300 sq. ft. of office space.

DOW and DWR both believe that the public is better served through a service center concept. Previously DWR staff members maintained home offices. Presently DOW, DWR, and the Division of Parks and Outdoor Recreation (DPOR) are all visible and easily accessible from Interstate 25 at one common location. DWR personnel report fishermen and boaters often take the opportunity to ask water resource related questions while conducting other business at this facility. Additionally, certain efficiencies and interagency cooperation is promoted through co-location and the associations made possible as a result. Among these is the ability to utilize some of the same office equipment, and to take advantage of voice over Internet protocols which provide lower cost telephone service. Also, the interagency relationships developed through working in close physical proximity enhance coordination and cooperation in achieving objectives of each of the agencies; for example DPOR personnel know who to contact regarding structural problems with dams associated with water based recreation facilities, and the DOW can conveniently be apprised of extraordinary water regulation activities that may threaten wildlife habitat.

The Division's statutory obligations are set forth in the following statutes:

Title 37	Article 80	State Engineer
Title 37	Article 82	Appropriation and Use of Water (Administration of Water in Natural Surface Stream)
Title 37	Article 83	Exchange of Water and Transfer From One Stream To Another
Title 37	Article 84	Responsibility of User and Owner (Administration of the Diversion and Measurement of Water)
Title 37	Article 87	Reservoirs (Administration of Water Storage and Release from Reservoirs)
Title 37	Article 92	Water Right Administration and Distribution

The Department's relevant objectives include:

1.1: Respond to demands by constituents by providing services, information, and assistance.
1.2: Maximize the efficient use of Colorado's water resources and comply with and enforce other states' compliance with interstate compacts. Distribute available water supplies in time and amount necessary to meet water right demands in priority on a daily basis.
1.7: Assist citizens in avoiding or mitigating risks to life and property by providing training, information, technical assistance and regulatory enforcement related to statutorily authorized programs.
2.3: Promote conservation and stewardship of the state's natural resources among private and public landowners by providing technical assistance and incentives.
2.7: Assist landowners, water users and local governments in land-use planning and natural resource management by increasing the availability of relevant information and data and providing technical assistance.

Element No. 3 – Available Alternatives.

Alternative No. 1 (Recommended):

- Provide additional funding to maintain co-location of the Division with other state agencies in Colorado Springs.
- Allows cooperation among Natural Resources agencies and inherent efficiencies associated with co-location.
- Maintains efficient service to the public with one convenient location available to address multiple Natural Resources needs.
- Eliminates the risk of improper diversion of Federal Funds.

Alternative No. 2 (Not Recommended):

- Maintain presence in existing location by transferring appropriation spending authority from the Division's operating budget to the lease appropriation to finance the additional cost.
- Allows cooperation among Natural Resources agencies and inherent efficiencies associated with co-location.

- Maintains efficient service to the public with one convenient location available to address multiple Natural Resources needs.
- Eliminates the risk of improper diversion of Federal Funds.
- Requires a reduction in the agency's operating budget to finance the lease expense
- Provides no direct cost to the state.

Alternative No. 3 (Not Recommended):

- Remove DWR personnel from the existing site and relocate their offices to their homes.
- Eliminates the risk of improper diversion of Federal Funds.
- Provides no direct cost to the state.

Element No. 4 – Selected Analytical Technique.

The selected technique is to compare the cost of the request to the benefits estimated to be derived.

Element No. 5 – Assessment of Alternatives.

The greatest risk associated with not reimbursing DOW is the potential loss of Federal Aid, or at least significant costs associated with an audit if Federal Aid diversion is suspected. Consequently, all alternatives reviewed assume that this risk must be eliminated.

Comparison of Alternative 1 to Alternative 2:

Alternative 2 assumes a necessary reduction in Division operating expenses to fund this request. Mileage expense is the largest variable cost incurred by the Division, and most likely to be reallocated to lease cost. A reduction of $2,295 in mileage costs for FY 2006-07 equates to a reduction in miles driven of state-owned vehicles of 8,760 miles:

$2,295/.262 cost/mile = 8,760 miles

A reduction in miles driven is estimated to result in the illegal diversion (theft) of 5,188 acre-ft of water due to reduced administrative presence in this predominantly urban area. This conclusion was derived from earlier analysis for the Division's mileage decision item request which demonstrated that 121,000 acre-ft of water would be illegally diverted if the Division reduced its mileage by 204,327 miles. For this analysis, the same ratio is assumed.

121,000/204,327 = .5922 x 8,760 miles = 5,188 acre-ft

The current replacement cost is $250 to $300 per acre ft. in the Colorado Springs area.

Thus, the reduction in miles driven results in a total cost of $1,297,000 (5,188 acre-ft x $250).

The benefit-cost ratio for Alternative 1 vs. Alternative 2 is: 565: 1
($1,297,000/$2,295)

Comparison of Alternative 1 to Alternative 3:

Alternative 3 assumes there will be an additional cost to the public associated with reduced access to data. This will necessitate drive time of one hour one way to either Pueblo or Denver or half that much to locate and navigate to a water commissioner's suburban residence to access records. Since research clientele range from realtors to lawyers to school teachers, it is difficult to estimate the value of the public's lost time, but conservatively estimating $25 per hour and 2 customers per week it is reasonable to show a benefit to cost ratio of 2:1. ($25/hr x 2 hr/trip x 2 trips/wk x 52 wks/yr = $5,200.

The benefit-cost ratio for Alternative 1 vs. Alternative 3 is: 2:1.
($5,200/$2,295)

Recommendation: Adopt Alternate 1 to provide additional general funds to finance the required lease cost.

Element No. 6 – Cost Calculations and Assumptions.

All assumptions and calculations were documented in the previous section.

Exhibit II
Cost Benefit Analysis
Glenwood Springs Office space

Co-location assumptions

Office Space Square ft.	Common Area Square ft.	Garage space Square ft.	Discount Rate	Inflation Rate
5551	885	600	2.80%	2.80%

DWR facility at market rates

Office space Square ft	Time Period
3800	2007-2010
3986	2011-2015
4172	2016-2020
4358	2021-2025
4544	2026-2056

Note: Assumed a minium of 3800 sf would be required initially, to alleviate current overcrowding (and thus achieve compliance with Fire Code). Square footage is escalated over time to allow addition of 4 new employees; each addition requires 186 additional sf.

		Fiscal year																
Co-location estimated cost	Cost/sq ft.	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Moving costs		10,000																
Office space	$14.50	63,143	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490
Common space	$14.50	5,347	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833
Garage space	$6.60	1,650	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960
Operating cost	$3.50	9,386	23,157	23,805	24,472	25,157	25,861	26,585	27,330	28,095	28,882	29,690	30,522	31,376	32,255	33,158	34,086	35,041
Total Co-location estimated cost		89,526	120,439	121,087	121,754	122,439	123,143	123,867	124,612	125,377	126,164	126,972	127,804	128,658	129,537	130,440	131,368	132,323
DWR facility at market rates																		
Office space(all inclusive)	$20.00	76,000	78,128	80,316	82,564	89,031	91,524	94,086	96,721	99,429	106,982	109,978	113,057	116,223	119,477	128,298	131,891	135,584
Savings		-13,526	-42,311	-40,772	-39,189	-33,408	-31,620	-29,781	-27,891	-25,948	-19,181	-16,994	-14,746	-12,435	-10,060	-2,142	522	3,261
Present Value of Discounted cash flow		-13,526	-41,158	-38,581	-36,073	-29,914	-27,542	-25,234	-22,989	-20,805	-14,960	-12,894	-10,883	-8,928	-7,025	-1,455	345	2,096
Net Present value		**1,240,258**																

Exhibit II																				
Cost Benefit Analysis																				
Glenwood Springs Office space																				
Co-location estimated cost		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Moving costs																				
Office space		80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	80,490	46,952	0	0	0	0	0
Common space		12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	12,833	7,486	0	0	0	0	0
Garage space		3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	2,310	0	0	0	0	0
Operating cost		36,022	37,031	38,067	39,133	40,229	41,355	42,513	43,704	44,927	46,185	47,479	48,808	50,175	51,580	53,024	54,508	56,035	57,604	59,217
Total Co-location estimated cost		133,304	134,313	135,349	136,415	137,511	138,637	139,795	140,986	142,209	143,467	144,761	146,090	147,457	108,327	53,024	54,508	56,035	57,604	59,217
DWR facility at market rates																				
Office space(all inclusive)		139,380	143,283	153,581	157,881	162,302	166,846	171,518	176,321	181,258	186,333	191,550	196,914	202,427	208,095	213,922	219,912	226,069	232,399	238,906
Savings		6,076	8,970	18,232	21,466	24,791	28,209	31,723	35,335	39,048	42,865	46,789	50,823	54,970	99,768	160,898	165,403	170,034	174,795	179,690
Present Value of Discounted cash flow		3,800	5,457	10,788	12,356	13,882	15,365	16,808	18,212	19,578	20,907	22,199	23,456	24,679	43,571	68,354	68,354	68,354	68,354	68,354
Net Present value																				

Exhibit II															
Cost Benefit Analysis															
Glenwood Springs Office space															
		2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056
Co-location estimated cost															
Moving costs															
Office space		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common space		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Garage space		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating cost		60,875	62,579	64,331	66,133	67,984	69,888	71,845	73,856	75,924	78,050	80,236	82,482	84,792	87,166
Total Co-location estimated cost		60,875	62,579	64,331	66,133	67,984	69,888	71,845	73,856	75,924	78,050	80,236	82,482	84,792	87,166
DWR facility at market rates															
Office space(all inclusive)		245,596	252,472	259,541	266,809	274,279	281,959	289,854	297,970	306,313	314,890	323,707	332,770	342,088	351,666
Savings		184,721	189,893	195,210	200,676	206,295	212,071	218,009	224,113	230,389	236,839	243,471	250,288	257,296	264,501
Present Value of Discounted cash flow		68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354	68,354
Net Present value															

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: 21 of 21

Dept. Approval: Will H. Levi **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05

Division: Colorado Oil & Gas Conservation Commission
Program: Operations
Request Title: Increase Appropriation for the Environmental Assistance Projects Line

Statutory Citation: CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	**Total**	360,141	255,000			255,000	202,000	457,000		457,000	202,000
	FTE									0.0	
	GF									0	
	CF						202,000	202,000		202,000	202,000
	CFE	360,141	255,000			255,000		255,000		255,000	
	FF									0	
Line Item Name Environ-mental Assistance Projects	**Total**	360,141	255,000			255,000	202,000	457,000		457,000	202,000
	FTE									0.0	
	GF									0	
	CF						202,000	202,000		202,000	202,000
	CFE	360,141	255,000			255,000		255,000		255,000	
	FF									0	

Letter Notation: change footnote "b" to "These amounts shall be from the Oil and Gas Conservation and Environmental Response Fund established pursuant to 34-60-122(5), C.R.S."
Cash Fund name/Number, Federal Fund Name: Oil and Gas Conservation and Environmental Response Fund (Fund #170)
IT Request Yes x No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ **Emergency** ☐ **Technical Error** ☐ **New Data** ☐ **Unforeseen Contingency**
Request for New or Replacement Vehicles: ☐ **Yes** ☒ **No** **(If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)**
Request Affects Another Department(s): ☐ **Yes** ☒ **No** **(If yes, Name of other Department(s)_____)**

REQUEST TO CHANGE THE BASE OPERATING BUDGET

PART B - EFFICIENCY AND EFFECTIVENESS ANALYSIS

COMMON IDENTIFICATION INFORMATION

Department:	Natural Resources
Priority Number:	21 of 21
Long Bill Group/Division:	Colorado Oil and Gas Conservation Commission
Program Title/Work Package Title:	Operations
Change Request Title:	Increase Appropriation for the Environmental Assistance Projects Line
Statutory Cite:	CRS 39-29-109(1)(a)(II), CRS 39-29-109(1)(c)(I), CRS 34-60-102(1), CRS 34-60-106(2)(d)

SUMMARY OF REQUESTED ALTERNATIVE

This request is for an increase of $202,000 to the annual appropriation for the Environmental Assistance Projects of the Colorado Oil and Gas Conservation Commission (COGCC). The current appropriation for this Long Bill line item is $255,000, with $180,000 of that amount used for ongoing environmental projects and complaint responses and $75,000 reserved for response to, and investigation and short-term mitigation of environmental emergencies. The requested funding increase of $202,000 would be split between these two categories, with $70,000 added to the funding for environmental projects and complaint response, and $132,000 added to the funding for emergency response. This would result in a total line item amount of $457,000, with $250,000 allocated for environmental projects and complaint response and $207,000 for emergency response.

Funding for this change request is from the Oil and Gas Conservation and Environmental Response Fund (Fund170).

PROBLEM OR OPPORTUNITY DEFINITION

The Environmental Assistance Projects appropriation is used by staff, at the Commission's direction, to investigate, prevent, monitor, or mitigate conditions that threaten to cause, or that actually cause, a significant adverse environmental impact on any air, water, soil, or biological resource or to public health, safety, and welfare. Since FY 1998, the environmental staff has been allocated $180,000 annually for these purposes. An additional annual appropriation of $75,000 for response to environmental emergencies was added to this line through a FY 2005-06 budget request.

Since 1997, in addition to the annual $180,000, the COGCC has used other decision items to fund nearly $3,000,000 worth of proactive investigations to establish baseline and current conditions and to identify potential impacts from oil and gas activities in

the San Juan Basin, the Raton Basin, and the Piceance Basin. However, these cannot be, nor were they intended to be "one time" studies. With ever increasing numbers of oil and gas wells being drilled, aging existing wells and pipeline infrastructure, and with the encroachment of rural residential development it is necessary to revisit the areas covered by these investigations as well as other areas in the state, collect data from previously sampled and new locations, reexamine all of the data to determine whether changes or impacts are occurring as a result of oil and gas development.

In FY 2003-04 the COGCC requested an emergency supplemental for $50,000 to investigate and mitigate a natural gas seep at West Divide Creek near Rifle, Colorado. In FY 2004-05, the COGCC requested two supplemental appropriations. The first request, for $70,000, was needed to address a higher volume of public complaints and the higher cost of responding to those complaints. The second supplemental request for $200,000 was needed to investigate a natural gas explosion in La Plata County, which seriously injured one person and was caused by gas seeping from an "orphaned" gas well drilled in 1939.

It is anticipated that this trend of needing more than $180,000 per year for responding to landowner complaints and concerns in addition to documenting existing and baseline conditions is going to continue. The $75,000 in emergency funding is also projected to be inadequate. Reasons for these expected shortfalls include:

- The COGCC's annual appropriation for Environmental Assistance has not increased in eight years, except for the additional $75,000 of funding in FY 2005-06, which is earmarked for emergency response. Over this time there have been substantial cost increases for travel, laboratory analyses, and third party contractors.

- Strong energy prices have resulted in dramatic increases in the number of oil and gas wells being permitted and drilled, pipelines being laid, and production facilities being built. An indication of this increased level of activity can easily be seen by comparing the number of applications for permit to drill (APDs) processed by COGCC in FY 2004 (2,578 APDs) to the number that we expect to process in FY 2006 (4,000 APDs). Along with the increase in industry activity is an increase in rural residential development and associated water well drilling, which brings many more individuals into contact with oil and gas activities. The net result is a greater number of landowners who are concerned about real or alleged impacts to their land and water from these operations. Staff must investigate their complaints and allegations. If impacts are detected, staff must pursue appropriate enforcement.

- In FY 2004-05, the COGCC received an additional FTE, an Environmental Protection Specialist II, who is responsible for implementing the Onsite Inspection Policy, adopted on January 10, 2005. This employee is traveling extensively from Denver to all other parts of the state in which oil and gas drilling activities are occurring, which results in a significant increase in travel expenses. In addition, the increased field presence of an additional FTE will result in the discovery of more operations suspected of being out of compliance and more impacts from former operations, wells plugged and abandoned before current laws and rules were adopted,

and "orphaned" sites. These discoveries will require additional expenditures to investigate and determine whether the facilities are causing impacts to public health, safety, or welfare, or the environment.

- In FY 2005-06, the COGCC will be receiving two additional field inspectors in Garfield and Weld Counties, where most new oil and gas wells are being drilled. The additional field presence in both Garfield and Weld Counties should result in the discovery of more operations suspected of being out of compliance and more impacts from former operations, wells plugged and abandoned before current laws and rules were adopted, and "orphaned" sites. These discoveries will require additional expenditures to investigate and determine whether the facilities are causing impacts to public health, safety, or welfare, or the environment.

AVAILABLE ATERNATIVES

Description of Alternatives

Alternative 1: Increase Appropriation for the Environmental Assistance Projects Line as proposed.

Cost Estimate: $202,000

Assumptions & Calculations: The following cost estimates are based on the FY 2005-06 staffing level. Each additional Environmental Inspection Specialist and Field Inspector approved in the "Adjusting for a Changing Colorado" decision item, will require additional funding for the Environmental Assistance Line. It is expected that each of these FTE will drive expenditures, primarily analytical costs, of about $20,850 per year.

1. Environmental Projects

Ground water samples

a. Analytical costs:	50 samples @ $450/sample	$22,500
b. Consultant to collect samples:	20 days @ $700/day	$14,000
c. Consultant to evaluate & report findings:	7 days @ $500/day	$ 3,500
d. Travel (meals, lodging, airfare)		$ 2,500

Soil Samples

a. Analytical costs:	50 samples @ $150/sample	$ 7,500
b. Consultant to collect samples:	20 days @ $700/day	$14,000

c. Consultant to evaluate & report findings:	7 days @ $500/day	$ 3,500
d. Travel (meals, lodging, airfare)		$ 2,500
		$70,000
2. Emergency Response		
Ground water samples		
a. Analytical costs:	25 samples @ $450/sample	$11,250
b. Consultant to collect samples:	10 days @ $700/day	$ 7,000
c. Consultant to evaluate & report findings:	3 days @ $500/day	$ 1,500
Produced gas composition and isotope data expansion costs		
a. Analytical costs:	25 samples @ $450/sample	$11,250
b. Consultant to collect samples:	10 days @ $700/day	$ 7,000
Soil Gas Surveys and Residential Methane Monitoring		
a. Soil Gas Surveys:	20 square miles@ $2,200/mile	$44,000
b. Residential Methane Monitoring	5 houses @ $10,000/house	$50,000
		$132,000
Grand Total		**$202,000**

COGCC's Statutory Authority to Implement Alternative 1

CRS 39-29-109(1)(a)(II) (Senate Bill 96-170) One-half of the severance tax receipts credited to the Severance Tax Trust Fund ...shall be credited to the Operational Account of the Severance Tax Trust Fund and used to fund programs established within the Colorado Oil and Gas Conservation Commission, the Colorado Geological Survey, the Division of Minerals and Geology, and the Colorado Water Conservation Board that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water...

CRS 39-29-109(1)(c)(I) ...The General Assembly may appropriate moneys from the total moneys available in the Operational Account of the Severance Tax Trust Find to fund recommended programs as follows:
(A) For programs or projects within the Colorado Oil and Gas Conservation Commission, up to forty-five percent of the moneys in the Operational Account...

CRS 34-60-102(1): Oil and Gas Conservation Act – declares it is to be in the public interest to foster, encourage, and promote the development, production, and utilization of the natural resources of oil and gas in the state of Colorado in a manner consistent with protection of public health, safety, and welfare…

CRS 34-60-106(2)(d): The commission has the authority to regulate…oil and gas operations so as to prevent and mitigate significant adverse environmental impacts on any air, water, soil, or biological resource resulting from oil and gas operations to the extent necessary to protect public health, safety, and welfare, taking into consideration cost-effectiveness and technical feasibility.

Linkage to Specific Department Objectives:

Department of Natural Resources Strategic Objectives include:

1.4 Promote continued development of Colorado's mineral and energy resources in a manner that is consistent with environmental preservation and protection of public health and safety.

Alternative 2: No Action.

ANALYTICAL TECHNIQUE – BENEFIT-COST ANALYSIS

ASSESSMENT OF ALTERNATIVES

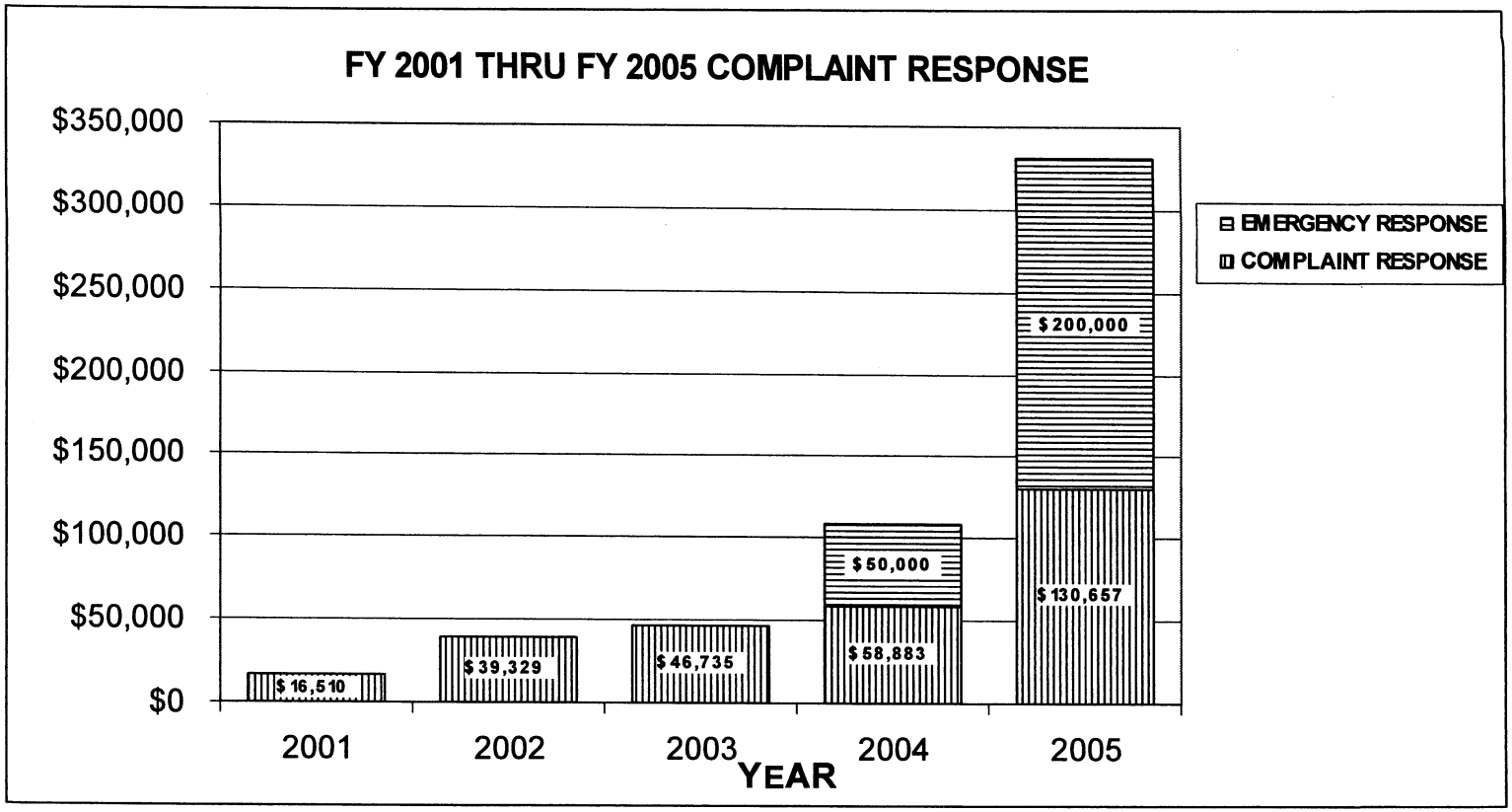
Alternative 1 - Increase Appropriation for the Environmental Assistance Projects Line ($202,000)

Much of the new oil and gas drilling and production activity is occurring near residential development or is being encroached on by residential development in Garfield, Weld, Las Animas, and La Plata Counties, creating the potential for conflicts between oil and gas development and other land uses. The COGCC responds to and investigates all complaints from concerned citizens and other interested parties regarding alleged impacts from oil and gas activities. Often this entails traveling to inspect the alleged impact, collecting ground water, surface water and/or soil samples for chemical analysis, purchasing, installing, and maintaining monitoring equipment, evaluating analytical data, purchasing historical aerial photographs, writing reports, and hiring third party contractors to support these efforts. More and more frequently these investigations are associated with "high profile" complaints that are a concern to local governments and receive both local and national media coverage. These demand an even higher level of staff time and funding.

The sheer number of wells being drilled increases the number of complaints and the probability of undesirable events, unfortunately some of these are emergency situations. Examples of recent emergencies that have required COGCC emergency hearings and supplemental appropriations from the Legislature include the West Divide Creek gas seep in Garfield County and the Bondad trailer explosion in La Plata County. Operators are developing resources in areas that have been avoided in the past, such as leases in close proximity to the former Project Rulison Nuclear Experiment site in Garfield County and the HD Mountains in La Plata and Archuleta Counties. Responding to public concerns and complaints over development in such areas requires more staff time, and third party contractors with relevant technical expertise. Growing concerns over potential impacts from Coal Bed Methane (CBM) development on surface water resources are also necessitating expenditures out of the Environmental Assistance Projects line.

Figure 1 demonstrates the growth in spending on complaint response and the supplemental appropriations needed to respond to emergency situations. In FY 2000-01, 9% ($16,510) of the $180,000 in the Environmental Assistance Projects line was spent responding to complaints. In FY 2004-05, 73% ($130,657) of this line was used for complaint response. This trend of increasing expenditures for complaint response is expected to continue. This leaves less money available to spend on proactive projects, such as baseline ground water sampling in advance of oil and gas development, or follow up ground water sampling after development to identify impacts, if any.

FIGURE 1



Alternative 2 – No Action - would require that the environmental staff continue to operate with the existing budget. In this situation, the Division would not have the funds necessary to respond to all complaints nor to conduct proactive and follow up investigations. In addition, should an emergency situation arise that requires more than the additional $75,000 appropriated in FY 2005-06 for response and investigation, then a COGCC emergency hearing and appropriation request would be necessary. This process would delay the Division's ability to respond in a timely manner.

The primary beneficial outcomes of Alternative 1 are:

Customer	Beneficial Outcome to Customer
The Public, Oil and Gas	• Provides funding to ensure that the COGCC can respond to all

Industry, and Local Governments	complaints requiring sampling, analysis, and monitoring in a timely manner. • Improves the COGCC's response time for ground water quality complaints. • Improves the COGCC's response time to emergency situations. • Reduces potential risk of impacts to public health, safety, welfare and the environment. • Provides funding to ensure that the COGCC can be proactive in collecting baseline data, documenting current conditions, and determining whether impacts from oil and gas development are occurring.
The Public, Oil and Gas Industry, Local Governments, and COGCC Staff	• Allows staff to find ground water problems earlier while the problems are easier to mitigate. • Lessens the liability of the State by earlier resolution of problems. • Improves understanding of the potential and actual impacts of oil and gas development on ground water resources.

Application of Analytical Technique/Assumptions and Calculations

The following chart provides an analysis of some of the major potential risks to public health, safety, and welfare and the environment created by oil and gas activity that the COGCC will not be able to identify and quickly address without the approval of this request.

Assessment of Annual Incremental Risk Attributed to Alternative 2 - "No Action" (not funding Appropriation for the Environmental Assistance Projects)								
Issue	**Impact to**	**Cost Per Occurrence**	**Annual Frequency**	**Annual Cost of Impacts**	**Health Safety and Welfare Impact**	**Incremental Risk Factor**	**Cost of Incremental Risk**	**Cost Incurred by**
Contamination from leaking production equipment and pits[A]	Surface owners, soils, ground water	$25,000	10	$250,000	High	10%	$25,000	Industry and COGCC
Contamination from leaking gas wells[B]	Ground water & surface water	$3,000,000	1	$3,000,000	High	10%	$300,000	Industry and COGCC
Total Annual Cost of Alternative 2 - "No Action"				**$3,250,000**			**$325,000**	

Footnotes:

A. Impacts to ground water from leaking production equipment and pits are quite common, but typically the impacted area is relatively small, often less than an acre. Remediation costs for impacted ground water can range from $10,000 up to $50,000. Remediation costs for soil impacts can range from $1,000 to $50,000.

B. In FY 2004-05 approximately 4 water wells and an approximately 6-acre area that includes a creek, several stock ponds, and alluvial ground water were impacted by contamination from leaking oil and gas wells. There is a wide range in the cost per occurrence for each of these events. The remediation costs for the 6-acre area are estimated to be approximately $5,000,000. The remediation

costs for impacted water wells can range from approximately $50,000 up to several million dollars and may include the cost for providing a replacement source of water, such as a new water well or public drinking water supply tap. One impacted water well or surface water feature per year is a conservative estimate.

Definition of terms used in above chart:

Annual Frequency – Annual average number of total occurrences in Colorado.
Incremental Risk Factor - Percentage of impact not currently being addressed (multiplier to calculate cost of incremental risk).
Cost of Incremental Risk – Portion of annual cost of impacts that is at risk due to current workload management.

Conclusion: Alternative 1 provides a satisfactory level of customer service and a lower risk of impacts to public health, safety and welfare and the environment.

Alternative 2 "no action" subjects the State to an increasing level of risk.

The Increase Appropriation for the Environmental Assistance Projects Line in this request has a first year cost of $202,000, which is substantially less than the $325,000 of incremental risk that is avoided.

Description of Key Issues for Decision Making

The key issues for decision-making are as follows:

- Colorado is experiencing incrementally increasing risk of impacts to public health, safety and welfare and the environment from increased oil and gas activity.
- With the projections of increased oil and gas activity, the level of risk is expected to increase if no action is taken to adequately monitor the State's ground water resources

Recommendation

The COGCC recommends that funding for Alternative 1 be approved.

Schedule 6
DECISION ITEM REQUEST for FY 2006-07

Department: Natural Resources
Priority Number: Non-Prioritized
Division: Parks and Outdoor Recreation
Program: State Park Operations
Request Title: Voice Over Internet Protocol

Dept. Approval: Willi H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-14-05
Statutory Citation: Section 33-10-101 to 33-15-112, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Total of All Line Items	Total		0		0	0	128,902	128,902		128,902	181,807
Voice Over	FTE		0.0		0.0	0.0		0.0		0.0	
Internet	GF		0		0	0		0		0	
Protocol	CF		0		0	0		0		0	
	CFE		0		0	0	128,902	128,902		128,902	181,807
	FF		0		0	0		0		0	

Letter Notation: This amount shall be from lottery proceeds (including reserves from prior years) and are shown for informational purposes only.
Cash Fund name/Number, Federal Fund Name: Lottery (Fund # 461)
IT Request ☒ Yes ☐ No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: ☐ Yes ☒ No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel/DPA)
Request Affects Another Department(s): ☐ Yes ☒ No (If yes, Name of other Department(s)_____)

Efficiency and Effectiveness Analysis

Identifying Information

Department:	Natural Resources – Division of Parks and Outdoor Recreation
Request Title:	Voice Over IP (VOIP) for State Parks
Priority number:	Non-prioritized
Summary of Requested Alternative:	This is to fund migration of phone systems at a number of Colorado State Parks locations to VOIP technology.
Performance Measures:	Reduce long distance charges: Reduce operating costs; Migrate State Parks principle offices to telecommunications technology that is consistent with other DNR divisions, enabling economies in scale for support and operational costs.

Problem or Opportunity Definition

Switch over existing phone systems to Voice Over IP systems. This is consistent with DNR direction, as the Division of Water Resources and Division of Wildlife have either switched to VOIP or are in the process of switching over. Voice Over IP offers substantial cost savings for long distance over traditional phone systems. Existing phone systems are outdated and do not provide adequate support options to customers or staff. Long distance costs are substantial at several offices, particularly central administrative offices (Denver, Littleton, and regional offices). Business operations, such as camping reservations and vehicle registrations, as well as administrative functions such as financial services, require frequent contacts to field offices around the state, with corresponding long distance service charges. Email and other communications options have helped reduce these costs somewhat, but VOIP offers an additional cost avoidance alternative.

State Parks requires the additional appropriation described herein as the costs for VOIP are primarily installation and equipment costs at the start of the VOIP effort. Savings accrue over time through reduced long distance and reduced maintenance or operational costs. The result is that State Parks can will experience lower phone over multiple years. This is a cost avoidance approach.

Additionally Parks customers will benefit, thereby enhancing services to those customers. Specifically, customers wanting information about conditions at a park, will be able to call the local State Parks office (in Clifton for example) and through that

office's VOIP, connect to a staff person at a park across the state (at Pueblo for example) over the VOIP connection, thereby avoiding long distance charges for the customer. Thus, VOIP would provide a stronger service for customers.

Internet Protocol Telephony (ITP) is expanding rapidly for use in the private as well as public sectors. VOIP is one of several aspects of the broader ITP technology. All ITP technology combines different types of communications, such as voice communications into a shared network approach with other IT communications functionality.

VOIP provides a lower total cost of ownership (TCO), since the combined systems share networked lines and equipment across several functions. For example, rather than deploy separate PBXs (Private Branch Exchange[1]), VOIP shares PBXs with other network systems, avoiding the need for two or more distinct systems. Some analyses indicate that network system devices, such as PBXs for Internet Protocol functionality are generally less expensive and easier to administer than telephone PBXs (IDC Executive Brief, 2005).

Other DNR agencies have deployed VOIP technology at offices around the state, with corresponding cost avoidance benefits. The Division of Water Resources pioneered VOIP technology, with a substantial cost benefit to that agency. The Division of Wildlife is currently deploying VOIP technology at DOW offices around the state. Where feasible, State Parks will share equipment with these other agencies and avoid duplicative systems. For example, State Parks will share VOIP technology at the Colorado Springs office with DWR, substantially reducing the equipment costs for that office. In most cases, State Parks cannot share technology as the proposed VOIP installations are at State Parks where other agencies to not have office space.

Although other DNR agencies did not propose specific decision items for their VOIP installations, State Parks does require such an allocation. State Parks does not have an existing telecommunications budgets. Other agencies were positioned to transition to VOIP technology from within existing budgets. State Parks is not so positioned. Specifically, State Parks does not have budget allocated to support phone systems. These costs are drawn from existing operational budgets and do not include funding that can readily be reallocated for the larger upfront costs of equipment purchase and installation. Without this decision item allocation, State Parks will not proceed with VOIP installation.

This is Parks second priority.

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[1] PBX stands for Private Branch Exchange, which was described as "an old Telecom term meaning that the equipment belongs to someone else." A PBX is a required piece of hardware/software that allows users to share a number of outside lines external to the enterprise internal phone system. The benefit of the PBX is that the business or organization pays for fewer external phone lines since users can share those lines.

Available Alternatives

Alternative #1- Convert specific State Park offices telecommunications to Voice Over IP technology

- Statutory authority for this alternative: Section 33-10-101 to 33-12-101, C.R.S., *et seq.*
- Specific Department objectives promoted by this alternative:
  This is consistent with State Parks Strategic Plan:
  Financial Objective – This action results in more efficient operations by reducing operating costs and reducing support requirements at the affected offices. There is no specific action strategy identified that relates to this.
- The costs, ($110,300 in Year 1 or 86% of the total cost in that year, and $148,550 in Year 2 or 82% of the total in that year) are infrastructure (i.e., equipment and installation) related costs. The maintenance and contingency costs make up the remainder in each year. By Year 3 the costs would be primarily maintenance/operations and would drop to about $18,400 per year unless additional installations were later proposed. Year 3 costs were not shown in the funding analysis but are available.
- Installation is only recommended for those offices already on the State's MNT network. Installation of VOIP at other, non-MNT locations would be substantially more expensive and more difficult to support. MNT connectivity provides high speed, broad band telecommunication services which enable effective support for VOIP.
- The proposed costs associated with this are shown in the table below:

Year 1 Costs Office	Equipment	Installation	Maintenance	Contingency	Total
Denver Office	$ 22,900	$ 6,100	$ 1,788	$ 3,079	$ 33,866
Littleton	$ 49,000	$ 11,850	$ 4,171	$ 6,502	$ 71,523
Colorado Springs	$ 3,575	$ 1,725	$ 100	$ 540	$ 5,940
Grand Jct.	$ 11,700	$ 3,450	$ 825	$ 1,598	$ 17,573
	$ 87,175	$ 23,125	$ 6,883	$ 11,718	$ 128,902

Year 2	Equipment	Installation	Maintenance	Contingency	Total
Other Offices	$ 118,075	$ 30,475	$ 9,220	$ 16,528	
Maintenance			$ 7,509		$ 181,807
					$ 310,708

Year 3	Equipment	Installation	Maintenance	Contingency	Total
Maintanance	0	0	$ 16,729	$ 1,673	$ 18,402

Note: Cost of Equipment, Installation and Maintenance were provided by Qwest, the State of Colorado provider for the MNT network and VOIP. The Contingency costs were estimated based on the 10% recommendation for new projects provided by OIT.

Alternative # 2 – Do not approve the VOIP conversion and continue to use existing telecommunications systems

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- Specific department objectives promoted by this alternative: None of the objectives listed under alternative #1 would be advanced or promoted by this alternative.
- State Parks would continue to use existing long distance services, with continued higher costs for those services.

Linking Budgetary Expenditures to the Full Range of Outcomes

Stakeholders	Beneficial Outcomes of Alternative #1
State operations	• More cost efficient operations are expected; This avoids increased demands for operational expenditures and budgets. • State Parks employees will be able to communicate with other locations in a more efficient manner through VOIP technology and options available from that technology.
Citizens	• Avoidance of increased budget expenditures, hence ability to focus limited operational funding elsewhere in the State Parks system. • Provide better or greater services to State Parks visitors due shifting expenditures from telecommunications costs.
Future Park Visitors	• Operate a significant portion of the State Parks system at a higher cost efficiency, thereby enhancing the opportunity for greater service levels in other areas. •

General types of potential benefits.
The key to this proposal is that required communications for effective State Parks administration and operations will be improved with VOIP deployment. Critical operations, including revenue producing operations, will have greater operational cost efficiencies as costs for long distance communications will be reduced. Lessen requirements for long distance communications translates into lower demand on tight operations budgets, effectively enabling managers to expend existing budgets on other operational requirements. Visitors to the park will benefit in having a greater array of services available. Stronger services enhances visitors enjoyment and use at the parks. Local economies then benefit through enhanced tourism and recreational opportunities and citizens' benefit statewide by this investment.

Potential reductions in budgetary costs.
This initiative requires no additional General Fund support and is expected to be funded through Cash Funds Exempt sources (e.g., Lottery).

Replacement of existing phone systems in the proposed locations is expected at the Denver office and several other locations (e.g,. Chatfield, Pueblo). These systems are out of date and need to be replaced as the existing systems have reached the end of their effective service life. This action would allow the division to replace those with systems that offer not only cost avoidance and greater efficiency but which could be deployed for greatest effectiveness in standardization.

Selected Analytical Technique

Benefit-Cost Analysis

The Division is already absorbing significant cost increases each year in operating lines, due to increasing in supplier charges. There is little the Division can do to adjust to these external cost increases every year. Other state agencies face the same problems, further exacerbating the demands on a limited budget statewide. There is very little flexibility in the Division's operating budget to absorb additional costs as those budgets are stretched to absorb continued increases associated with utilities, sewer and water, and electricity. More efficient phone services enables the Division to avoid cost increases in that area and to thereby refocus limited funding resources so as to address other demands.

Cost estimates based on CPE estimate provided by Qwest with 10% contingency. Contingency estimate based on OIT recommendation for "new" projects.

Office	Monthly	Annual Savings	Total
Denver Office	$ 1,975	$ 23,700	
Littleton	$ 2,125	$ 25,500	
Colorado Springs	$ 1,550	$ 18,600	
Grand Jct.	$ 1,625	$ 19,500	
Other Offices	$ 2,546	$ 30,555	
	Total Gross Savings:		**$ 117,855**

The estimated savings are based on average long distance charges for each of the offices recommended for VOIP installation. Originally the estimates were prepared for a different department wide analysis, and updated for this proposal. The savings were developed based on an estimated saving of 50% of the total long distance charges at each office. The 50% was estimated as an average amount of long distance calls that would convert to VOIP system, thereby avoiding the current long distance charges. The long distance charges for each office were averaged over multiple years and the 50% rate applied to determine the expected savings.

Assessment of Alternatives

Alternatives	Benefits and Objectives		
	Develop and implement appropriate strategies to stabilize and strengthen State Parks' financial condition.	Improve the management of State Parks' project and program funding and its strategic use of available resources	Assure that State Parks has a sufficient number of full-time and seasonal employees, and the necessary equipment and workspace to efficiently perform their job responsibilities.
Alternative #1 – Fund request	Yes	Yes	Yes
Alternative #2 – Do not fund request.	No	No	No

Key Issues for Decision Making:

- Recommendation is to complete Denver, Littleton, Colorado Springs and Grand Junction offices first. Other offices will be added to system later (projected for installation in FY 2007-2008).
- Savings estimates are shown in the table below.
- Annual gross savings are $117,855; After the projected maintenance costs are used to adjust for net savings, State Parks expects to realize savings of $92,750 annually.
- Payback on original investment is expected early in Year 4 after initial deployment.

Office	Monthly	Annual Savings	Total
Denver Office	$ 1,975	$ 23,700	
Littleton	$ 2,125	$ 25,500	
Colorado Springs	$ 1,550	$ 18,600	
Grand Jct.	$ 1,625	$ 19,500	
			$ 87,300
Other Offices	$ 2,546	$ 30,555	
		Total Savings:	$ 117,855

Assumptions and Calculations

- Our assumption is that installation and deployment can be completed within 3-4 weeks after initiation of the project. The intent is to schedule this in July 2006 with Qwest and in cooperation with DNR staff, and complete it as soon thereafter as possible. The actual installation dates will be determined in conjunction with Qwest. The Denver and Littleton office installations should take several weeks, likely between 4-6 weeks, to complete. The second phase installation at the other offices will depend on Qwest's ability to make technical staff available at those locations.
- Assume that maintenance costs are monthly and that those begin immediately after deployment.
- Service life – Routers and other key components likely replaced in years 4-5; other equipment replaced in year 10.

VOIP provides greater potential for business productivity as these systems allow users to readily access networks and other systems, even from remote locations. Internal VOIP network callers can contact anyone inside the VOIP network through the system. For example, Colorado Springs callers would be able to talk to Denver staff as part of the VOIP network and avoid the long distance call that currently is required. For external callers, calls to a local office can be transferred to someone in another office on the VOIP system. The phone call starts as a local call, and through the VOIP transfer continues as a local call for the external caller. VOIP systems provide the equivalent of bulk rate long distance calls or better.

VOIP saves money since it leverages existing investments, in this case the State of Colorado's MNT network. MNT is available virtually statewide, enabling users to link to MNT at the reduced rates that system provides, and at the high-speed broadband levels that MNT supports.

The combination of voice and IT systems provides a reduction in system operation and maintenance costs. There is no need for separate support structures (including staff) for two distinct systems. Colorado State Parks will avoid separate support requirements through the use of the existing State of Colorado MNT network and the support provided by MNT.

State Parks has already defined expected dollar benefits from installation of VOIP systems. The above-mentioned items are all proven from industry experience with VOIP. These items represent enhancements above the dollar figures provided, but ones that are less easily quantified in terms of fiscal impacts. However, these items are benefits that result in greater productivity and likely in better customer service.

State Parks is requesting this funding over two years (FY 06-07 and FY 07-08) so that the installation can take place at the core administrative offices first (Denver, Littleton, Grand Junction (Clifton) and Colorado Springs). The second phase, planned for FY 07-08, will complete the installation at all offices currently (July 2005) having MNT connectivity. State Parks is requesting that a footnote be added to this appropriation providing that the funding be made available for two years (through the end of FY 07-08.)

Total estimated benefits are shown below:

	Equipment Costs	Installation Costs	Maintenance Costs	Contingency	Total Costs	Expected Savings	Net Savings	Total Benefits
Year 1	$ 87,175	$ 23,125	$ 6,883	$ 11,718	$ 128,902	$ 87,300	$ (41,602)	$ (41,602)
Year 2	$ 118,075	$ 30,475	$ 16,729	$ 16,528	$ 181,807	$ 117,855	$ (63,952)	$ (105,553)
Year 3			$ 17,130	$857	$ 17,987	$ 120,684	$ 102,697	$ (2,857)
Year 4			$ 17,541	$877	$ 18,418	$ 123,580	$ 105,161	$ 102,305
Year 5			$ 17,962	$898	$ 18,860	$ 126,546	$ 107,685	$ 209,990
Year 6			$ 18,393	$920	$ 19,313	$ 129,583	$ 110,270	$ 320,260

Payback for all equipment, installation, maintenance and contingency costs occurs at the start of Year 4 after installation of Phase I is completed. Return on Investment over the 5 year period is 22%.

Schedule 6

DECISION ITEM REQUEST for FY 06-07

Department: Natural Resources
Priority Number: Statewide
Division: Executive Directors Office
Program: Information Technology
Request Title: FY 2006-07 Multi-use Network Statewide Decision Item

Dept. Approval: Will H. Levine **Date:** 11-10-2005
OSPB Approval: **Date:** 11-11-05
Statutory Citation: Sections 24-1-105, 24-1-124, & 24-33-101 through 24-33-111, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Line Item Name	Total	908,775	795,715	0	795,715	795,715	85,137	880,852	0	880,852	85,137
Exuective Directors	FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Office - Info. Tech.	GF	337,695	310,408	0	310,408	310,408	5,568	315,976		315,976	5,568
Multiuse Payments	CF	565,570	463,238	0	463,238	463,238	76,380	539,618		539,618	76,380
	CFE	0	19,199	0	19,199	19,199	633	19,832		19,832	633
	FF	5,510	2,870	0	2,870	2,870	2,556	5,426		5,426	2,556

Letter Notation: This amount shall be from various sources of cash funds and cash funds exempt
Cash Fund Name/Number, Federal Fund Name:
IT Request X Yes No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel & Administration)
Request Affects Another Department(s): X Yes No (If yes, name of other Department(s): _DPA_____)

Schedule 6

DECISION ITEM REQUEST for FY 06-07

Department: Natural Resources
Priority Number: Statewide
Division: Executive Directors Office
Program: Administration
Request Title: FY 2006-07 Vehicle Replacements Statewide Decision Item

Dept. Approval: William A. Levine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Sections 24-1-105, 24-1-124, & 24-33-101 through 24-33-111, C.R.S.

	Fund	1 Prior-Year Actual FY 2004-05	2 Appropriation FY 2005-06	3 Supplemental Request FY 2005-06	4 Total Revised Request FY 2005-06	5 Base Request FY 2006-07	6 Decision/Base Reduction FY 2006-07	7 November 1 Request FY 2006-07	8 Budget Amendment FY 2006-07	9 Total Revised Request FY 2006-07	10 Change from Base in Out Year FY 2007-08
Line Item Name	Total	2,926,475	2,559,483	0	2,559,483	2,559,483	126,721	2,686,204	0	2,686,204	253,443
Exuective Directors	FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Office - Vehicle	GF	832,421	723,076	0	723,076	723,076	48,115	771,191		771,191	96,230
Lease Payments	CF	136,059	147,465	0	147,465	147,465	1,560	149,025		149,025	3,119
	CFE	1,913,705	1,644,633	0	1,644,633	1,644,633	76,028	1,720,661		1,720,661	152,057
	FF	44,290	44,309	0	44,309	44,309	1,018	45,327		45,327	2,037

Letter Notation: This amount shall be from various sources of cash funds and cash funds exempt
Cash Fund Name/Number, Federal Fund Name:
IT Request Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: X Yes No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel & Administration)
Request Affects Another Department(s): X Yes No (If yes, name of other Department(s): _DPA_____)

Schedule 6

DECISION ITEM REQUEST for FY 06-07

Department: Natural Resources
Priority Number: Statewide
Division: Executive Directors Office
Program: Administration
Request Title: FY 2006-07 Vehicle Lease Line Reconciliation Statewide Decision Item

Dept. Approval: Willi H. Lavine **Date:** 11-10-2005
OSPB Approval: [signature] **Date:** 11-11-05
Statutory Citation: Sections 24-1-105, 24-1-124, & 24-33-101 through 24-33-111, C.R.S.

		1	2	3	4	5	6	7	8	9	10
	Fund	Prior-Year Actual FY 2004-05	Appropriation FY 2005-06	Supplemental Request FY 2005-06	Total Revised Request FY 2005-06	Base Request FY 2006-07	Decision/Base Reduction FY 2006-07	November 1 Request FY 2006-07	Budget Amendment FY 2006-07	Total Revised Request FY 2006-07	Change from Base in Out Year FY 2007-08
Line Item Name	Total	2,926,475	2,559,483	0	2,559,483	2,521,991	(42,313)	2,479,678	0	2,479,678	(42,313)
Exuective Directors	FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Office - Vehicle	GF	832,421	723,076	0	723,076	869,402	(14,781)	854,621		854,621	(14,781)
Lease Payments	CF	136,059	147,465	0	147,465	134,525	(855)	133,670		133,670	(855)
	CFE	1,913,705	1,644,633	0	1,644,633	1,475,684	(26,677)	1,449,007		1,449,007	(26,677)
	FF	44,290	44,309	0	44,309	42,380	0	42,380		42,380	0

Letter Notation: This amount shall be from various sources of cash funds and cash funds exempt
Cash Fund Name/Number, Federal Fund Name:
IT Request Yes X No (If yes and request includes more than 500 programing hours, attach IT Project Plan)
Supplemental and Budget Amendment Criteria: ☐ Emergency ☐ Technical Error ☐ New Data ☐ Unforeseen Contingency
Request for New or Replacement Vehicles: Yes X No (If yes, a copy of the Schedule 6 will be forwarded to the OSPB analyst assigned to Personnel & Administration)
Request Affects Another Department(s): X Yes No (If yes, name of other Department(s): _DPA_____)