JOINT
BUDGET
COMMITTEE

STAFF BUDGET BRIEFING
FY 2018-19

DEPARTMENT OF NATURAL RESOURCES

(Division of Reclamation, Mining, and Safety, Oil and Gas Conservation Commission, State Board of Land Commissioners, and Severance Tax Policy)

JBC WORKING DOCUMENT - SUBJECT TO CHANGE
STAFF RECOMMENDATION DOES NOT REPRESENT COMMITTEE DECISION

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CONTENTS

DEPARTMENT OF NATURAL RESOURCES

(Division of Reclamation, Mining, and Safety, Oil and Gas Conservation Commission, State Board of Land Commissioners, and Severance Tax Policy)

DEPARTMENT OVERVIEW

The Department of Natural Resources is responsible for developing, protecting, and enhancing Colorado's natural resources for the use and enjoyment of the State's present and future residents and visitors. The Department is comprised of the following divisions:

- The DIVISION OF RECLAMATION, MINING, AND SAFETY (DRMS) regulates development and reclamation at mining sites, reclaims abandoned mine sites, and provides safety training for mine operators and employees.

- The OIL AND GAS CONSERVATION COMMISSION (OGCC) promotes the exploration, development, and conservation of Colorado's oil and natural gas resources by issuing permits, conducting inspections, pursuing enforcement actions, and engaging in public outreach efforts.

- The STATE BOARD OF LAND COMMISSIONERS (State Land Board or Land Board) manages agricultural, commercial, mineral, and other leases on state-owned lands to generate reasonable and consistent revenue for public schools and other trust beneficiaries over time.

The four remaining divisions (THE EXECUTIVE DIRECTOR'S OFFICE, THE DIVISION OF PARKS AND WILDLIFE, THE COLORADO WATER CONSERVATION BOARD, AND THE WATER RESOURCES DIVISION) were discussed in a separate staff briefing today.

This packet also includes an overview discussion of STATEWIDE SEVERANCE TAX POLICY.

DEPARTMENT BUDGET: RECENT APPROPRIATIONS

FUNDING SOURCE	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 *
General Fund	$27,671,518	$28,742,941	$30,864,532	$31,975,510
Cash Funds	198,404,864	202,967,586	230,795,872	205,448,707
Reappropriated Funds	8,701,045	7,703,225	6,932,593	7,922,848
Federal Funds	29,141,800	26,641,222	26,699,468	26,557,074
TOTAL FUNDS	**$263,919,227**	**$266,054,974**	**$295,292,465**	**$271,904,139**
Full Time Equiv. Staff	1,462.6	1,462.7	1,458.6	1,459.5

*Requested appropriation.

DIVISION OF RECLAMATION MINING AND SAFETY: RECENT APPROPRIATIONS

Funding Source	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 *
General Fund	$0	$0	$0	$0
Cash Funds	4,492,845	4,485,633	4,460,425	4,502,244
Reappropriated Funds	30,000	0	0	0
Federal Funds	3,496,997	3,512,878	3,488,792	3,391,838
TOTAL FUNDS	**$8,019,842**	**$7,998,511**	**$7,949,217**	**$7,894,082**
Full Time Equiv. Staff	68.9	67.9	67.9	65.8

*Requested appropriation.

OIL AND GAS CONSERVATION COMMISSION: RECENT APPROPRIATIONS

Funding Source	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 *
General Fund	$0	$0	$0	$0
Cash Funds	12,719,508	12,397,060	12,370,025	12,990,067
Reappropriated Funds	0	0	0	0
Federal Funds	107,516	104,559	101,129	100,289
TOTAL FUNDS	**$12,827,024**	**$12,501,619**	**$12,471,154**	**$13,090,356**
Full Time Equiv. Staff	110.3	110.3	110.3	112.3

*Requested appropriation.

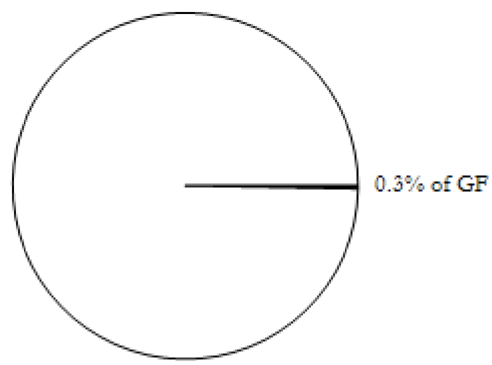
STATE BOARD OF LAND COMMISSIONERS: RECENT APPROPRIATIONS

Funding Source	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 *
General Fund	$0	$0	$0	$0
Cash Funds	4,576,909	4,766,219	4,864,096	4,879,666
Reappropriated Funds	225,000	225,000	225,000	225,000
Federal Funds	0	0	0	0
TOTAL FUNDS	**$4,801,909**	**$4,991,219**	**$5,089,096**	**$5,104,666**
Full Time Equiv. Staff	40.0	41.0	41.0	41.0

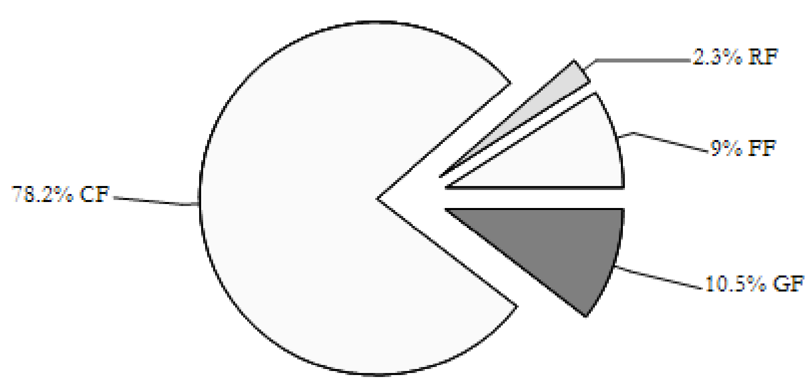
*Requested appropriation.

DEPARTMENT BUDGET: GRAPHIC OVERVIEW

Department's Share of Statewide General Fund

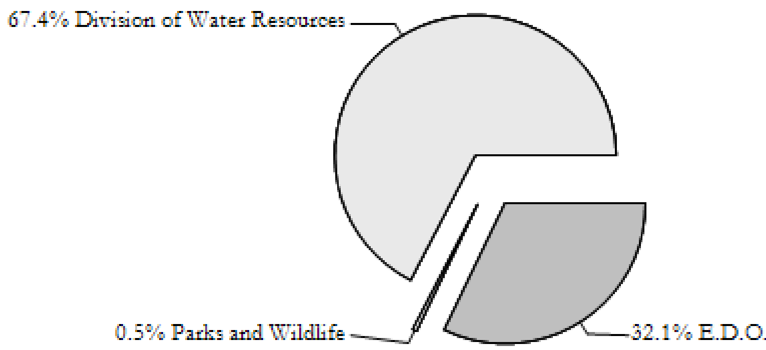


Department Funding Sources

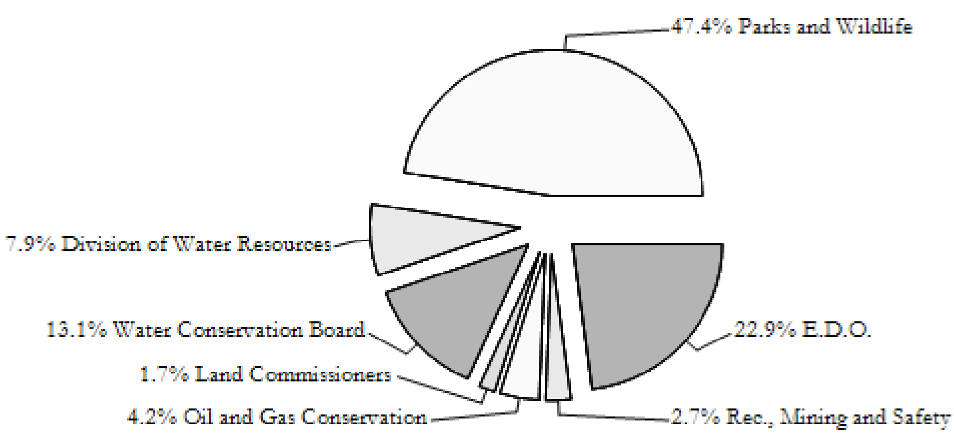


All charts are based on the FY 2017-18 appropriation.

Distribution of General Fund by Division



Distribution of Total Funds by Division



All charts are based on the FY 2017-18 appropriation.

GENERAL FACTORS DRIVING THE BUDGET

Funding for the Department of Natural Resources in FY 2017-18 consists of 10.5 percent General Fund, 78.2 percent cash funds, 2.3 percent reappropriated funds, and 9.0 percent federal funds.

Funding for the divisions covered in this briefing packet consists of 85.0 percent cash funds, 0.9 percent reappropriated funds, and 14.1 percent federal funds. These divisions received no General Fund appropriations in FY 2017-18 and have not requested General Fund appropriations in FY 2018-19. Some of the major factors driving the Department's budget are discussed below.

SEVERANCE TAX REVENUE (OPERATIONAL FUND)

The availability of severance tax revenues affects funding for many programs in the Department. Pursuant to Section 39-29-108 (2)(a), C.R.S., total severance tax revenues are divided equally between the State Severance Tax Trust Fund, administered by the Department of Natural Resources, and the Local Government Severance Tax Fund, which is administered by the Department of Local Affairs to provide funding to local governments impacted by mining activities. Of revenues credited to the State Severance Tax Trust Fund, 50.0 percent (or 25.0 percent of total severance tax revenues) are allocated to the Severance Tax Perpetual Base Fund, used by the Colorado Water Conservation Board for water construction projects. The other 50.0 percent of State Severance Tax Trust Fund revenues (or 25.0 percent of total severance tax revenues) are allocated to the Severance Tax Operational Fund for "programs that promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water."

Severance tax revenues are highly variable and programs supported by the Operational Fund are divided into two tiers to manage the impact of this variability. Tier 1 expenditures primarily support employee salaries and on-going costs for programs in the Department. The required reserve for Tier 1 programs is equal to total appropriations for Tier 1 programs in a given fiscal year. Tier 2 programs generally support grants, loans, research, and construction and the distribution of funding is staggered: 40.0 percent released July 1, 30.0 percent released January 4, and the remaining 30.0 percent released April 1 of a given fiscal year. The required reserve for Tier 2 programs is equal to 15.0 percent of the authorized expenditures for Tier 2 programs in that fiscal year. Tier 2 programs are subject to proportional reductions if revenue projections indicate there are insufficient funds available to support authorized expenditures.

SEVERANCE TAX REVENUE IS NOT KEEPING PACE WITH RECENT REVENUE FORECASTS

Based on the September 2017 Legislative Council Staff severance tax revenue forecast, total severance tax revenue in FY 2017-18 was expected to rebound to $150.4 million from $11.1 in FY 2016-17, *however*, monthly revenue collection has *not* been tracking on pace with this forecast. Information available at the time the September forecast was finalized did not have significant red flags and therefore was unable to take into account information since learned.

At the time this briefing document was finalized, severance tax revenue cash flow reporting is available through October 2017. It is not clear if the November 2017 report will be available to Legislative Council staff preparing the December forecast. The Department of Revenue reports that for the current fiscal year the state has refunded $6.5 million more severance tax than it has collected. In addition to that, the Department of Revenue estimates total severance tax refund activity over the next 18-months (fiscal years 2017-18 and 2018-19) could be $72.5 million. The refunds the Department of Revenue estimates are based on three categories of refunds, based on expected timing of the refund.

In FY 2017-18, there are $15.5 million of known refunds currently in the queue of the Tax Conferee's Office.

In FY 2017-18 and seeping into FY 2018-19, there is projected to be $25 million in refunds issued to taxpayers whom are currently under audit.

Finally, mostly unknown is the magnitude of returns attributable to taxpayers still preparing to file amended returns for tax years 2013 through 2016. The Department of Revenue estimates this could be $25.5 million. These estimates do not include refunds being made in the regular course of business and not attributable to the Supreme Court decision.

JBC staff and Legislative Council economic forecast staff agree that the December 2017 forecast will take this information into account and likely substantially reduce revenue expectations, even by as much as $100 million. It may be prudent at this time to assume revenue will be zero for planning purposes. Data from the first four months of the fiscal year, which represents all data currently available, indicate that severance tax refunds exceed severance tax revenue by $6.5 million.

SEVERANCE TAX CASH FLOW IN FY 2017-18					
	JULY 2017	AUGUST 2017	SEPTEMBER 2017	OCTOBER 2017	YEAR-TO-DATE TOTAL
Severance Tax Collections	$9,628,693	$9,122,157	$11,057,320	$10,542,631	$40,350,800
Severance Tax Refunds	6,157,587	23,075,639	362,252	17,287,907	46,883,384
Net Collections	3,471,106	(13,953,482)	10,695,068	(6,745,276)	(6,532,584)
Cumulative Total (if Deficit)	0	(13,953,482)	(3,258,414)	(10,003,690)	

To complicate matters further, severance tax revenue in the Severance Tax Operational Fund, which is the funding source for Tier 1 and Tier 2 severance tax programs, is distributed to Tier 2 programs three times a year. Distributions are based on a statutory trigger and if the June Legislative Council revenue forecast projects sufficient revenue, the July 1 transfer is made. Since the June forecast included a more optimistic forecast than the December forecast is expected to show, a distribution of $5.3 million was made to Tier 2 severance tax programs on July 1. This equates to approximately 14.6 percent of the authorized appropriations in FY 2017-18 for Tier 2 programs.

The final critical consideration for the Committee to be aware is that in FY 2017-18, if severance tax revenue does not rebound, the Department of Natural Resources may be <u>unable to meet payroll as soon as February 2018</u>. Thus, a supplemental funding request is nearly certain to be made in January and may even need to run separately from the supplemental budget package. JBC staff anticipates it will request General Fund.

The Operational Fund began the year with a balance of $14.4 million. This amount is inclusive of any reserves. The Tier 1 programs are appropriated $16.6 million in FY 2017-18. Taking into account the July distribution, the amount of General Fund anticipated to be requested to fund just Tier 1 programs will be at least $ 7.5 million ($14.4 million less $5.3 million less $16.6 million).

You will note that the typical table estimating severance tax distribution through the Severance Tax Operational Fund is not present in this year's briefing document. Due to the uncertainty in severance tax collections thus far, JBC staff believed providing such table based on the September forecast may invite even more surprised when the December forecast is published. Once more confidence is obtained regarding the direction of severance tax revenues JBC staff will provide that information. For now, it is prudent to assume Tier 2 programs have received all the funding from severance tax for the entire year in the July 2017 distribution.

STATE BOARD OF LAND COMMISSIONERS

The State Board of Land Commissioners (State Land Board) manages agricultural, commercial, mineral, and other leases on eight public trusts of land and is tasked with generating reasonable and consistent revenue for trust beneficiaries over time. Total trust revenues have more than tripled over the past ten years, with a record high of $191.4 million in FY 2014-15. This growth is largely driven by record bonus payments on mineral leases and by rental payments and royalties on oil and gas production, which accounted for more than 82 percent of total trust revenue last year. However, bonus payments are expected to taper off significantly over the next two years as the number of available land parcels decreases and payments for oil and gas development leases on the State Land Board's Lowry Range and 70 Ranch properties are completed.

The Public School Trust benefiting K-12 education is the largest of the trusts managed by the State Land Board, accounting for more than 98.0 percent of total trust revenues. House Bill 08-1335, also known as the Building Excellent Schools Today or BEST Act, significantly changed the distribution of state public school land revenue (see Section 22-43.7-104, C.R.S.). Fifty percent of the gross amount of income received during the fiscal year from state public school lands is deposited in the Public School Capital Construction Assistance Fund for the BEST program.

PUBLIC SCHOOL TRUST REVENUE

	FY 2013-14 ACTUAL	FY 2014-15 ACTUAL	FY 2015-16 ACTUAL	FY 2016-17 ACTUAL	FY 2017-18 FORECAST	FY 2018-19 FORECAST
Mineral Royalties	$101,215,660	$113,189,670	$63,157,705	$72,503,247	$59,253,000	$52,529,250
Mineral Bonuses	50,038,216	50,445,063	42,672,837	20,292,014	14,000,000	4,500,000
Mineral Rental	2,849,719	2,231,912	1,771,837	1,473,543	1,400,945	1,415,866
Surface Rental	10,010,655	11,744,758	13,149,443	13,336,103	13,814,288	13,939,547
Commercial/Other	7,449,732	7,208,034	9,124,821	8,998,807	8,104,779	10,048,505
Land and Timber Sales	86,250	58,558	32,431	79,120	80,702	82,316
Non-Reinvested Sales	0	3,750,892	5,302,996	1,354,697	0	0
Interest Income	185,148	875,725	952,322	319,329	319,329	319,329
Total Revenues	**$171,835,380**	**$189,504,612**	**$136,164,392**	**$118,356,860**	**$96,973,043**	**$82,834,813**

OIL AND GAS ACTIVITY

The Colorado Oil and Gas Conservation Commission (OGCC) is responsible for promoting the exploration, development, and conservation of Colorado's oil and natural gas resources. The OGCC is funded primarily by two sources of cash funds: the severance tax operational fund and the Oil and Gas Conservation and Environmental Response Fund. The level of oil and gas drilling activity, shown in the table below, impacts the OGCC's workload and necessary expenditures:

OGCC Workload Measures	FY 2013-14 Actual	FY 2014-15 Actual	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Estimate[a]	FY 2018-19 Estimate[a]
Active Wells	52,337	53,608	53,651	54,605	55,600	56,500
Drilling Permits Requested	4,401	3,895	3,317	4,624	5,800	5,800
Well Starts (Spud)	2,135	1,883	1,076	1,485	1,900	1,900
Active Drilling Rigs	66	58	25	24	34	35
Site Investigations & Remediation Workplans	546	551	514	456	580	550
Avg. Inspection Frequency (per year)	1.8	1.5	1.3	1.4	1.5	1.5
Hearing Applications	614	672	680	635	870	870
OGCC Expenditures[b]	$9,619,457	$10,307,697	$11,403,628	$12,501,619	$12,471,154	$12,743,993
Total FTE	82.4	94.6	104.0	110.3	110.3	110.3

[a] Data included for FY 2017-18 and FY 2018-19 are estimates provided by the Oil and Gas Conservation Commission.

[b] Division-only expenditures include all fund sources; does not include centrally appropriated items funded in the Executive Director's Office. Data for FY 2017-18 and FY 2018-19 reflect the appropriated and requested amounts.

The 2017 Long Bill included an increase of $750,000 cash funds from the Severance Tax Operational Fund for the OGCC to fill 9.0 FTE it was holding vacant because the appropriation from the Environmental Response Fund was unsupported by sufficient revenue from the mill levy. Since its passage, the Department has filled 4.0 FTE field inspectors. The Department made an offer to an administrative assistant, who declined citing insufficient pay. Of the remaining 4.0 FTE, 2.0 FTE are being reassigned to assist in permitting and vacancy savings from the other two are being spent on six temporary employees.

SUMMARY: FY 2017-18 APPROPRIATION & FY 2018-19 REQUEST

Department Of Natural Resources	Total Funds	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FTE
FY 2017-18 Appropriation:						
S.B. 17-254 (Long Bill)	$25,509,467	$0	$21,694,546	$225,000	$3,589,921	219.2
TOTAL	**$25,509,467**	**$0**	**$21,694,546**	**$225,000**	**$3,589,921**	**219.2**
FY 2018-19 Requested Appropriation:						
FY 2017-18 Appropriation	$25,509,467	$0	$21,694,546	$225,000	$3,589,921	219.2
R1 Additional staffing and equipment for flowline safety	351,252	0	351,252	0	0	2.0
R8 RMS coal program reduction	(189,276)	0	(39,748)	0	(149,528)	(1.0)
Annualize prior year budget actions	387,833	0	325,151	0	62,682	0.0
Indirect cost assessment adjustment	39,535	0	49,126	0	(9,591)	0.0
Non-prioritized request items	(9,707)	0	(8,350)	0	(1,357)	0.0
Technical Adjustments	0	0	0	0	0	(1.1)
TOTAL	**$26,089,104**	**$0**	**$22,371,977**	**$225,000**	**$3,492,127**	**219.1**
INCREASE/(DECREASE)	$579,637	$0	$677,431	$0	($97,794)	(0.1)
Percentage Change	2.3%	n/a	3.1%	0%	(2.7%)	(<0.1%)

R1 Additional staffing and equipment for flowline safety: The OGCC is requesting an increase of $384,875 from the Oil and Gas Conservation and Environmental Response Fund and 2.0 FTE to expand the capacity of the Facilities Integrity Program and improve flowline safety statewide and to implement contract services provided by a professional drone service provider. The reader will note only $351,252 is identified in the table above, the additional funding ($33,623) requested appears in the Executive Director's Office as common policy items related to the FTE included in the request.

R8 RMS Coal program reduction: The request includes a reduction of $189,276 total funds, including $39,748 cash funds from the Severance Tax Operational Fund and $149,528 federal funds, to reflect reduced federal funding beginning in the 2017 federal grant cycle. The cash fund reduction represents state-matching funds required for the previous grant award amount.

Annualize prior year budget actions: The request includes an increase of $387,833 total funds to annualize the prior year budget action for salary survey and merit pay.

Indirect cost assessment adjustment: The request includes an increase of $39,535 total funds comprised of an increase of $49,126 cash funds and a reduction of $9,591 federal funds for the Department's indirect cost allocation plan.

Non-prioritized request items: The request includes a reduction of $9,707 total funds for the Department's share of the request submitted by the Governor's Office of Information Technology for the Operating System and Microsoft Office productivity suite service offering.

TECHNICAL ADJUSTMENTS: The request includes the reduction of 1.1 FTE in the Division of Reclamation, Mining, and Safety to reflect the number of individuals employed by the Division.

ISSUE: R1 ADDITIONAL STAFFING AND EQUIPMENT FOR FLOWLINE SAFETY

The Department of Natural Resources and the Oil and Gas Conservation Commission regulate the activities of the oil and gas extraction industry, including private owned flowlines. After a recent tragedy, the safety of flowlines have come under close public scrutiny.

SUMMARY

- A 2014 report submitted by the Department of Natural Resources detailing implementation of a risk-based strategy for inspecting oil and gas facilities to prevent and mitigate spills and leaks. The report included the need to focus more of the Oil and Gas Conservation Commission attention on flowline integrity.

- Flowlines are privately owned connections between various stages of oil and gas facilities such as tanks, separators, and emission control devices. Flowlines do not include interstate pipelines, which are regulated by the Colorado Public Utilities Commission.

- The Department requests $384,875 cash funds from the Oil and Gas Conservation Commission Emergency Response Fund and 2.0 FTE to increase its ability to audit flowline integrity tests, have a flowline field specialist located on the West Slope, and to contract with a drone service provider 15 days a year for aerial imaging of some flowlines.

RECOMMENDATION

JBC staff recommendation is pending the staff figure setting presentation.

DISCUSSION

BACKGROUND

Since 2008, the Oil and Gas Conservation Commission (OGCC) rules have required that all operators with pipelines under its jurisdiction register as a member of the Utility Notification Center of Colorado and participate in the One Call notification system (CO811), the program that marks underground facilities before excavation, also known by the name "call before you dig".

Additionally, in 2013, the General Assembly passed S.B. 13-202 (Additional Inspections of Oil and Gas Facilities), which required the OGCC to study and submit a report to the General Assembly detailing implementation of a risk-based strategy for inspecting oil and gas locations and to focus on operational phases most likely to experience spills. The report concluded with four recommendations:

1. It should review flowline integrity test results and inspect production facilities more frequently.
2. It should increase inspections during production facility closures.
3. It should conduct more time-specific inspections of construction, reclamation, and drilling activities using improved notice from operators.

4 It should increase its inspection frequency of hydraulic fracturing operations.

The report also found that each of the recommendations could be implemented within existing statutory authority delegated to the OGCC, but would need additional appropriations to fund the additional staff and related technology changes to implement recommendations one and two.

Since submitting the report, the Facilities Integrity Program (Program) has implemented its risk-based inspection program and prioritizes its workload based on a priority score comprising the following data:

- flowlines years in service,
- environmental risks,
- proximity to population,
- the number of spills at a specific location, and
- time since last inspection.

The Program prioritizes its workload based on higher risk priority scores, but it also inspects flowlines during construction, repair, and abandonment. Inspections occur both proactively and upon request of the operator.

DESCRIPTION OF FACILITIES INTEGRITY PROGRAM

The OGCC's Facilities Integrity Program was created in FY 2015-16 in response to the aforementioned report. The Program is currently assigned 3.0 FTE, all based in the Denver area: a program supervisor, plus one flowline specialist, and one flowline engineer. Its main objectives are to prevent or reduce spills and help operators establish their own robust and proactive facilities integrity programs. However, it is important to note that the Program functions very differently than the OGCC's Field Inspection Unit, which is assigned 28.0 FTE, due to its small size.

In contrast, the Field Inspection Unit inspects oil and gas wells and related facilities to ensure compliance with Commission rules, policies, orders, and permits. It also evaluates site reclamation after drilling is completed and again after a well is plugged and abandoned or a location is ultimately closed. The Field Inspection Unit inspects between 19,000 and 23,500 oil and gas facilities each year. On average, wells are inspected once every 2.4 years, which represents a 37.0 percent improvement since 2009 when wells were inspected, on average, once every 4 years.

To make the best use of its limited staff resources, the Facilities Integrity Program relies on priority-based audits as well as operator education and outreach instead of a comprehensive inspection schedule that would require many more FTE.

As the program begun reviewing records to verify operators' compliance with OGCC rules for flowlines, it discovered relatively few were complying with the rule requiring One Call (CO811) notification system registration. Since that discovery, the Program registered 80 operators in 2016 through outreach efforts and issued 89 additional warning letters to other non-registered operators. To date, 50 of these have been resolved by operators submitting proof of One Call membership, which, in most cases, were new memberships, and continues to work to resolve the remaining 39.

PROGRAM FUNDING

The OGCC is funded primarily from two revenue sources, severance tax and the mill levy on oil and gas production authorized by Section 34-60-122(1)(a). The OGCC has authority to adjust the mill levy by rule up to a maximum of one and seven-tenths mills or down to zero; the current mill levy is seven-tenths mills. The Legislative Council Revenue Forecast from September estimates that in FY 2017-18, revenue subject to the limit imposed by Section 10 of Article X of the Colorado Constitution (the TABOR limit) is anticipated to fall below the limit by $511.6 million in FY 2017-18 and $549.1 million in FY 2018-19. Department staff estimate the amount of revenue generated by the current mill levy will be about $7.0 million in FY 2018-19. If the OGCC were to increase its mill levy to the maximum amount, JBC staff estimates it could generate over $16.0 million. The following table illustrates a range between the current mill levy and the maximum authorized by statute and estimates potential revenue.

POTENTIAL REVENUE IF MILL LEVY WERE INCREASED	
MILL LEVY	ESTIMATED REVENUE ($ MILLIONS)[1]
0.00007	$7.0
0.00009	8.9
0.00011	10.9
0.00013	12.9
0.00015	14.9
0.00017	16.9

[1]Calculated by dividing the Department-provided revenue estimate by the current mill and multiplying the result by the higher mill levy. Revenue estimate includes some minimal revenue generated by copying fees.

Revenue from the mill levy is deposited in the Oil and Gas Conservation and Environmental Response Fund (Response Fund) and is subject to annual appropriations. The fund may be expended, amongst other things, to "investigate, prevent, monitor, or mitigate conditions that threaten to cause, or that actually cause, as significant adverse environmental impact on any air, water, soil, or biological resource[.]" *See* Section 34-60-124(4), C.R.S.

RECENT DEVELOPMENTS

The Program does not have sufficient resources to complete the work it identified as crucial to fulfilling the goals it identified in the S.B. 13-202 Report effectively. The sheer volume of flowlines in the state is daunting. Typically, each oil and gas well uses several flowline segments to connect each type of production facility (e.g., tanks, separators, emission control devices) and each facility has numerous smaller connecting lines. The OGCC has regulatory oversight over the private connecting lines constructed by oil and gas operators, however, the Colorado Public Utilities Commission has oversight for all pipelines transporting products once they leave privately owned facilities.

The Department tracks over 54,000 active wells in the state and estimates flowlines associated with those wells total at least 334,500 statewide. Age of a flowline is the best indicator of its risk of failure and tracking existence of older flowlines is even more difficult due to less sophisticated regulations and record keeping requirements at the time the wells were drilled.

Oil and gas facility flowlines have also recently become subject of public scrutiny. The highest profile event was when an explosion occurred at a residential property in Firestone, which was linked to an abandoned flowline that was improperly cut. In response to the explosion, the OGCC issued a Notice to Operators (NTO) in May 2017. The NTO requires operators to: (1) document the location and integrity of, i.e. pressure test, all existing flowlines located within 1,000 feet of a building unit; and (2) inspect their inventory of existing flowlines statewide to ensure that any flowline not in active use has been properly abandoned according to OGCC rules.

The Program is responsible for ensuring these requirements are being met by reviewing paperwork and spot checking sites in the field. With current staffing levels, the Program cannot effectively absorb the additional workload associated with the NTO on top of its existing responsibilities. Furthermore, at current staffing levels, the Program can only audit 5 percent of the operators in the state and conduct 200 onsite inspections each year.

Currently, there is no flowline staff stationed on the West Slope, which creates logistical challenges in monitoring the active oil and gas development in the Piceance and San Juan Basins. This limits the Program's ability to provide timely and effective service to residents and operators on the West Slope. At present, it can take the Denver-based flowline specialist two to three days to travel and respond to a reported problem or operator request on the West Slope, which also leaves Front Range facilities without a flowline specialist for that period of time. At the current levels of staffing, covering Front Range facilities alone is a challenge. One flowline specialist simply cannot be in two places at once. The Department estimates 36 percent of flowlines are located west of the I-25 corridor, but cautioned JBC staff that flowlines on the West Slope are, on average, greater length than those along the Front Range and more geographically remote and difficult to access.

The Department highlighted several cases where the Flowline Integrity Program has demonstrated greater operator compliance after working with the Program to identify consistent causes of leaks and spills. For example, one operator was using an outdate practice to fuse segments of its flowlines together. Many other operators are in the process of updating their methodology regarding flowline construction. JBC staff believes the program needs to mature more before concluding whether it is an evidence-based program, but the anecdotal evidence seems promising.

DEPARTMENT-PROPOSED SOLUTION

To address these issues, the OGCC is requesting an increase of $384,875 from the Oil and Gas Conservation and Environmental Response Fund and 2.0 FTE to expand the capacity of the Facilities Integrity Program and improve flowline safety statewide. The request includes:

- 1.0 FTE flowline specialist, including one vehicle and field imaging equipment,
- 1.0 FTE flowline engineer, and
- Contract services for methane detection using drones (unmanned aircraft systems or UAS), estimated to cost $50,000.

Each aspect of the Department's request is described in further detail below.

Flowline specialists are responsible for conducting onsite flowline integrity inspections and responding to flowline-related spills and releases reported by operators. This includes observing and inspecting flowlines during construction, repair, testing, and abandonment, as well as observing flowline pressure tests. The requested flowline specialist would be located on the West Slope to improve statewide oversight. Like other OGCC field staff, flowline specialists require a rugged vehicle and specialized equipment to be effective, because sharing is either highly impractical or impossible in most cases.

The request includes the addition of one specialized camera capable of optical gas imaging, which the Department requests $96,950 to purchase and will require $2,750 annually to maintain. JBC staff was able to verify this price is the standard price one vendor selss this equipment. The OGCC currently has three of these cameras used by both the Facilities Integrity Program and the Field Inspection Unit. Both programs need to request/schedule use of the cameras a week or more in advance due to the high demand for their use. Shared equipment such as these cameras are distributed throughout the state.

Optical gas imaging cameras give inspectors the power to spot invisible gases as they escape. It allows them to find fugitive emissions faster and more reliably than with sniffer detectors. If additional information about how the cameras work and why they are useful equipment, JBC staff can provide vendor-supplied brochures electronically at any person's request.

Flowline engineers are office-based and primarily responsible for conducting audits of operators' flowline integrity programs and pressure testing records. The flowline engineer audits represent a critical piece of the Program's strategy to encourage the development of facility integrity programs within operators businesses and compliance with OGCC rules regarding flowlines by providing best practices advice. The requested flowline engineer would be located in Denver due to the high level of activity along the Front Range but would perform records audits statewide.

The use unmanned aircraft systems (UAS or drones) is an increasingly common and cost effective way of monitoring flowline integrity over large or inaccessible areas. Drones can carry a variety of instruments including high resolution and thermal imaging cameras and methane detection sensors, which can help identify flowline integrity issues from the air. Depending on the power source and the weight of the instrumentation, drones can stay in the air for up to an hour and cover a range of several miles or more. This would facilitate faster and more extensive monitoring of flowlines than flowline specialists could accomplish on the ground due to lengthy drive times and tough terrain. Drones are already in use by the oil and gas industry and would significantly expand the capacity of the Facilities Integrity Program at a much lower cost than adding the FTE the OGCC would need to achieve the same outcomes.

Drones utilized outside of personal-use exemptions require teams of three persons to operate under U.S. Federal Aviation Administration (FAA) rules, including at least one with certification as a drone pilot. Operators must also comply with the FAA rules adopted to protect other aviators and the public. Therefore, the Department is requesting $50,000 to contract with a company that provides professional drone services and have a specialty in the oil and gas industry. The Department expects this appropriation will allow it to purchase 15 days of drone services per year.

The Department of Public Safety is currently rolling out a pilot program on the use of drones for public safety purposes as directed by the passage of H.B. 17-1070 (Study Drone Use for Public Safety). This request falls outside the scope of the pilot program, even though the Department of Natural Resources was identified as a possible participant.

ISSUE: R5 FOOTNOTE FOR PLUGGING AND RECLAIMING ORPHANED WELLS

The Department of Natural Resources is appropriated $445,000 annually to plugging and reclaiming orphaned oil and gas wells.

SUMMARY

- Orphan wells are oil and gas wells that are not completely abandoned and reclaimed and where no operator can be found to be held liable for abandonment.

- The Oil and Gas Conservation Commission tracks known orphan wells and contracts with third parties to perform reclamation activities. As of September 2017, the Department tracked 244 oil and gas wells and 300 facilities associated with extraction that are orphaned. It estimates there may be up to 400 undiscovered orphan wells or facilities, more concentrated in historic oil fields.

- Due to state procurement rules, the Department identified one-year appropriations limit their ability to cost-effectively contract with third parties for reclamation projects. Projects that end up straddling a fiscal year may be required to de-mobilize and re-mobilize the next day, significantly increasing the cost of reclamation.

RECOMMENDATION

JBC staff recommendation for this request is pending, however, staff did not believe the request raised any red flags because the Department has managed similar allowances responsibly.

DISCUSSION

Since the inception of the Colorado Oil and Gas Conservation Commission (OGCC) in the early 1950s, oil and gas operators have been required to provide financial surety (bond or other mechanism) for eventual plugging of a well. In 1990, the Colorado legislature began to set aside part of the oil and gas conservation levy to fund the plugging and reclamation of wells for which no operator can be found, or to supplement the available bond. These wells are referred to as "orphan" wells. Not properly abandoning wells has the potential to impact surface and ground water resources, impair a surface owner's farming or ranching activity, harm wildlife, and endanger public safety.

The Plugging and Reclaiming Orphaned Wells (PROW) program administered by the OGCC is responsible for ensuring that orphaned oil and gas sites are properly plugged, reclaimed, and abandoned in accordance with OGCC rules. The PROW program is funded by an appropriation of $445,000 from the Oil and Gas Conservation and Environmental Respond Fund, which primarily consists of revenue from the mill levy on oil and gas production.

Summary of PROW Program Activities

The PROW program staff conduct initial investigations when orphan wells are identified. Investigations focus on identifying nearby populations and resources, and evaluating whether any on-going or historic release from the well has occurred. It then contracts with a third party for actual reclamation of the affected property. Unsurprisingly, when contractors are reclaiming wells they often make unexpected discoveries that can temporarily postpone or alter the scope of the reclamation project. These unknowns combined with the fact that the state fiscal year ends in the middle of "construction season" in Colorado has led to difficulty in managing projects to ensure cost-effective plugging and abandoning orphan wells takes place. While the program does not operate solely during warmer months, more projects tend to be completed at that time.

As of September 2017, the OGCC was tracking 244 known orphaned wells that require plugging and 300 associated locations that require reclamation. In addition, the Department estimates there are 400 undiscovered locations or wells, likely concentrated in historic oil and gas fields. As a point of reference, oil and gas development began in Colorado near Cañon City in 1862.

In recent years, likely linked to the dramatic fall of oil prices, the Department observed that the rate at which wells were being orphaned increased significantly. Seeking a solution to this observation, the OGCC undertook a LEAN process improvement event, which resulted in several changes to the PROW program organizationally and how it prioritized its projects.

Department Requested Solution

One process improvement identified that requires legislative action resulted in the Department submitting this budget request, which is asking the General Assembly to provide a footnote to the PROW program line item authorizing expenditure of the appropriation over a two-year period. The Department-proposed text follows:

> XX Department of Natural Resources, Oil and Gas Conservation Commission, Plugging and Reclaiming Orphaned Wells -- This appropriation shall remain available until it is fully expended or the close of FY 2019-20, whichever comes first.

This footnote is similar to other footnotes the Committee has introduced in the Long Bill for other reclamation projects in the Department's Division of Reclamation, Mining, and Safety (DRMS), however, those footnotes grant DRMS a three-year spending period.

One glaring example of wasteful spending undertaken due to the one-year appropriation is that the OGCC has documented cases where, due to state procurement rules, a contractor working on a project straddling two fiscal years has to completely shut down, including removing all of its equipment on June 30, only to start back up on July 1. Besides the time it adds to a project's completion, it is also extremely expensive and can result in additional costs of $10,000, which represents about a quarter of one of these projects typical total costs.

Finally, the single year appropriation of $445,000 can limit the size of the projects the PROW program can undertake. There are several large multi-well projects on the horizon that are expected to exceed the annual appropriation for the PROW program. Staff does not currently have the flexibility to manage these types of projects within existing resources. However, this is a purely structural issue with the current appropriation for the program. If, for example, a portion of one year's appropriation could be combined with the next year's appropriation, staff could procure large multi-well projects without requiring more resources in a single year than the program already receives.

The request does not include any additional funding in addition to $445,000 already appropriated to the program. The Department has reverted approximately $40,000 cumulatively since FY 2013-14 and has had a base appropriation of $445,000 since FY 2011-12.

Other programs that the General Assembly have granted this type of authority are asked to submit reports detailing expenditures through the letter the Joint Budget Committee sends to the Governor each year with the annual budget. JBC staff recommendation is pending but will likely include a similar request for information to retain legislative oversight.

ISSUE: R8 RECLAMATION, MINING, AND SAFETY COAL PROGRAM REDUCTION

The Department of Natural Resources regulates coal mining and reclamation of coal mines. Nationwide, the coal industry has seen a contraction as Natural Gas and renewable alternatives have become less costly to own and operate.

SUMMARY

- In 2006, there were 11 operating coal mines in Colorado and they produced a combined 35.5 million tons of coal. In 2016, 9 mines remained operating and produced 12.8 million tons. Currently only 6 mines are operating and an acquisition negotiation recently fell through that many hoped would bring Bowie #2 near Paonia back to production.

- The Department is requesting a reduction of $189,276 total funds and 1.0 FTE to reflect reduced grant awards from federal grants beginning in the 2017 grant cycle and reduced workload due to the existence of fewer mines.

RECOMMENDATION

Staff recommends the Committee approve the Department's request at the JBC staff figure setting presentation.

DISCUSSION

The Department of Natural Resources Division of Mining and Reclamation is the state agency tasked with regulating coal mines in Colorado. Regulation of coal mines originated under the Colorado Surface Coal Mining Reclamation Act (Section 34-33-101, C.R.S.) and through a state primacy cooperative agreement with the U.S. Department of the Interior/Office of Surface Mining as authorized by the federal Surface Mining Control and Reclamation Act of 1977, PL 95-87. The Coal Land Reclamation Program (Coal Program) exists to regulate the coal mining industry by ensuring that coal mining is conducted in compliance with the Colorado Surface Coal Mining Act, and associated regulations of the Colorado Mined Land Reclamation Board for coal mining.

This program ensures that the land disturbed by mining is reclaimed to beneficial use and that the environment and the health and safety of the people of the State are protected during and after mining. The program issues permits to conduct coal mining and exploration including the acquisition of required financial warranty instruments, and inspects coal mining and exploration projects to ensure compliance with the permits and the Act and Regulations.

There are currently six operating coal mines out of 31 active permitted sites that in total cover over 167,000 permitted acres. Active coal mines are inspected monthly and numerous permit revisions continue to be submitted annually, requiring detailed staff review. Reclamation at coal sites is phased in over a 10 year liability period to ensure plant regrowth is complete, which requires continued inspection by program staff over that duration of time. Reclamation is focused on returning the land to a state similar to how it existed prior to the surface excavation.

The Department's request is reacting to recent changes in federal funding provided to Colorado. Reductions in federal funding levels for the Coal Program did not become significant until the 2017 grant cycle. Federal grant funding from the U.S. Department of the Interior/Office of Surface Mining for FY 2017-18 was reduced by 4.3 percent from the prior grant cycle in response to a nationwide retraction in the coal industry. Colorado's Coal Program had already prepared for a possible reduction in federal grant funds by keeping 2.0 FTE vacant since 2016. One of the two vacant FTE was reduced from the Long Bill in FY 2015-16 and the second is proposed for elimination in this request.

The Division of Reclamation, Mining, and Safety proposes to reduce the Coal Land Reclamation Program Costs line item by $189,276 total funds and 1.0 FTE starting in FY 2018-19. This reduction is comprised of $39,748 cash funds from the Severance Tax Operational Fund and $149,528 federal funds. This is an ongoing reduction in overall spending authority and total FTE that will not affect the continued regulation and reclamation of all remaining coal mines in Colorado. A major expansion of the industry is not anticipated. The Department does not anticipate the reduced funding will impact its ability to fulfill its regulatory function.

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request		Request vs. Appropriation
DEPARTMENT OF NATURAL RESOURCES						
Bob Randall, Executive Director						
(2) DIVISION OF RECLAMATION, MINING, AND SAFETY						
Primary Functions: Provides regulation and enforcement related to the development and reclamation of mining sites. Primary sources of cash funds are fees on metal and aggregate mining operations and the severance tax.						
(A) Coal Land Reclamation						
Program Costs	2,159,334	2,243,667	2,243,667	2,091,993	*	
FTE	17.9	21.0	21.0	20.0		
Cash Funds	451,161	480,496	480,496	448,645		
Federal Funds	1,708,173	1,763,171	1,763,171	1,643,348		
Indirect Cost Assessment	132,650	124,048	102,623	108,517		
Cash Funds	28,581	26,050	21,551	22,789		
Federal Funds	104,069	97,998	81,072	85,728		
SUBTOTAL - (A) Coal Land Reclamation	2,291,984	2,367,715	2,346,290	2,200,510		(6.2%)
FTE	17.9	21.0	21.0	20.0		(4.8%)
Cash Funds	479,742	506,546	502,047	471,434		(6.1%)
Federal Funds	1,812,242	1,861,169	1,844,243	1,729,076		(6.2%)
(B) Inactive Mines						
Program Costs	1,625,389	1,861,137	1,861,137	1,892,035	*	
FTE	8.0	16.3	16.3	16.3		
Cash Funds	560,439	623,942	623,942	624,345		
Federal Funds	1,064,950	1,237,195	1,237,195	1,267,690		

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
Legacy Mine Hydrology Projects	319,335	382,783	382,783	384,636	
FTE	0.6	1.2	1.2	1.2	
Cash Funds	319,335	382,783	382,783	384,636	
Reappropriated Funds	0	0	0	0	
Reclamation of Forfeited Mine Sites	113,354	121,162	121,162	121,162	
FTE	0.1	0.3	0.3	0.3	
Cash Funds	113,354	121,162	121,162	121,162	
Indirect Cost Assessment	141,871	140,072	125,776	117,665	
Cash Funds	23,343	15,991	7,525	8,955	
Federal Funds	118,528	124,081	118,251	108,710	
Abandoned Mine Safety	0	0	0	0	
Cash Funds	0	0	0	0	
Federal Funds	0	0	0	0	
SUBTOTAL - (B) Inactive Mines	2,199,949	2,505,154	2,490,858	2,515,498	1.0%
FTE	8.7	17.8	17.8	17.8	0.0%
Cash Funds	1,016,471	1,143,878	1,135,412	1,139,098	0.3%
Reappropriated Funds	0	0	0	0	0.0%
Federal Funds	1,183,478	1,361,276	1,355,446	1,376,400	1.5%
(C) Minerals					
Program Costs	2,212,185	2,243,243	2,243,243	2,279,205 *	
FTE	20.3	24.1	24.1	23.0	
Cash Funds	2,212,185	2,243,243	2,243,243	2,279,205	

Appendix A: Number Pages

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
Indirect Cost Assessment	132,003	110,704	100,333	121,734	
Cash Funds	132,003	110,704	100,333	121,734	
SUBTOTAL - (C) Minerals	2,344,188	2,353,947	2,343,576	2,400,939	2.4%
FTE	20.3	24.1	24.1	23.0	(4.6%)
Cash Funds	2,344,188	2,353,947	2,343,576	2,400,939	2.4%
(D) Mines Program					
Colorado and Federal Mine Safety Program	459,865	539,837	539,837	545,071 *	
FTE	1.0	4.0	4.0	4.0	
Cash Funds	346,205	350,192	350,192	355,426	
Federal Funds	113,660	189,645	189,645	189,645	
Blaster Certification Program	112,008	112,878	112,878	114,302	
FTE	1.0	1.0	1.0	1.0	
Cash Funds	23,381	23,552	23,552	23,851	
Federal Funds	88,627	89,326	89,326	90,451	
Indirect Cost Assessment	5,541	18,980	15,778	17,762	
Cash Funds	18,200	7,518	5,646	11,496	
Federal Funds	(12,659)	11,462	10,132	6,266	
SUBTOTAL - (D) Mines Program	577,414	671,695	668,493	677,135	1.3%
FTE	2.0	5.0	5.0	5.0	0.0%
Cash Funds	387,786	381,262	379,390	390,773	3.0%
Federal Funds	189,628	290,433	289,103	286,362	(0.9%)

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
(E) Emergency Response Costs					
Emergency Response Costs	0	100,000	100,000	100,000	
Cash Funds	0	100,000	100,000	100,000	
SUBTOTAL - (E) Emergency Response Costs	0	100,000	100,000	100,000	0.0%
FTE	0.0	0.0	0.0	0.0	0.0%
Cash Funds	0	100,000	100,000	100,000	0.0%
TOTAL - (2) Division of Reclamation, Mining, and Safety	7,413,535	7,998,511	7,949,217	7,894,082	(0.7%)
FTE	48.9	67.9	67.9	65.8	(3.1%)
Cash Funds	4,228,187	4,485,633	4,460,425	4,502,244	0.9%
Reappropriated Funds	0	0	0	0	0.0%
Federal Funds	3,185,348	3,512,878	3,488,792	3,391,838	(2.8%)

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
(3) OIL AND GAS CONSERVATION COMMISSION					
Primary functions: Promoting and regulating responsible development of oil and gas natural resources. Cash funds are from the Oil and Gas Conservation and Environmental Response Fund and the severance tax.					
Program Costs	9,586,863	10,073,017	10,073,566	10,617,215	*
FTE	102.0	108.3	108.3	110.3	
Cash Funds	9,586,863	10,073,017	10,073,566	10,617,215	
Underground Injection Program	96,559	96,559	96,559	96,559	
FTE	2.0	2.0	2.0	2.0	
Federal Funds	96,559	96,559	96,559	96,559	
Plugging and Reclaiming Abandoned Wells	439,682	445,000	445,000	445,000	
Cash Funds	439,682	445,000	445,000	445,000	
Environmental Assistance and Complaint Resolution	262,703	312,033	312,033	312,033	
Cash Funds	262,703	312,033	312,033	312,033	
Emergency Response	14,338	750,000	750,000	750,000	
Cash Funds	14,338	750,000	750,000	750,000	
Special Environmental Protection and Mitigation Studies	106,531	325,000	325,000	325,000	
Cash Funds	106,531	325,000	325,000	325,000	
Indirect Cost Assessment	519,853	500,010	468,996	544,549	
Cash Funds	508,896	492,010	464,426	540,819	
Federal Funds	10,957	8,000	4,570	3,730	

Appendix A: Number Pages

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
TOTAL - (3) Oil and Gas Conservation Commission	11,026,529	12,501,619	12,471,154	13,090,356	5.0%
FTE	104.0	110.3	110.3	112.3	1.8%
Cash Funds	10,919,013	12,397,060	12,370,025	12,990,067	5.0%
Federal Funds	107,516	104,559	101,129	100,289	(0.8%)

Appendix A: Number Pages

	FY 2015-16 Actual	FY 2016-17 Actual	FY 2017-18 Appropriation	FY 2018-19 Request	Request vs. Appropriation
(4) STATE BOARD OF LAND COMMISSIONERS					
Primary Functions: Manages around 2.8 million surface acres and 4.0 million mineral acres of state trust lands for the benefit of 8 public trusts, the largets of which is the School Trust. Cash Funds are from the Trust Administration Fund. Reappropriated funds are from the Division of Parks and Wildlife.					
Program Costs	4,328,286	4,542,384	4,538,235	4,610,991 *	
FTE	39.8	41.0	41.0	41.0	
Cash Funds	4,328,286	4,542,384	4,538,235	4,610,991	
Public Access Program Damage and Enhancement Costs	201,398	225,000	225,000	225,000	
Reappropriated Funds	201,398	225,000	225,000	225,000	
Indirect Cost Assessment	248,149	223,835	325,861	268,675	
Cash Funds	248,149	223,835	325,861	268,675	
TOTAL - (4) State Board of Land Commissioners	4,777,833	4,991,219	5,089,096	5,104,666	0.3%
FTE	39.8	41.0	41.0	41.0	0.0%
Cash Funds	4,576,435	4,766,219	4,864,096	4,879,666	0.3%
Reappropriated Funds	201,398	225,000	225,000	225,000	0.0%
TOTAL - Department of Natural Resources	23,217,897	25,491,349	25,509,467	26,089,104	2.3%
FTE	192.7	219.2	219.2	219.1	(0.0%)
Cash Funds	19,723,635	21,648,912	21,694,546	22,371,977	3.1%
Reappropriated Funds	201,398	225,000	225,000	225,000	0.0%
Federal Funds	3,292,864	3,617,437	3,589,921	3,492,127	(2.7%)

APPENDIX B
RECENT LEGISLATION AFFECTING DEPARTMENT BUDGET

2016 SESSION BILLS

S.B. 16-167 (SEVERANCE TAX OPERATIONAL FUND RESERVE REDUCTION): Excludes $2.98 million from the Severance Tax Operational Fund Tier 1 reserve requirement in FY 2016-17. The bill reduces the impact of the Oil and Gas Conservation Commission fund source adjustment, which refinanced $2.98 million cash funds from the Oil and Gas Conservation and Environmental Response Fund with the same amount from Tier 1 of the Severance Tax Operational Fund in FY 2016-17. The Tier 1 reserve requirement is normally 100.0 percent of Tier 1 appropriations pursuant to Section 39-29-109.3 (3)(a), C.R.S.

S.B. 16-174 (CWCB CONSTRUCTION FUND PROJECTS): Appropriates $7,905,000 funds from the CWCB Construction Fund to the Department of Natural Resources in FY 2016-17 for various water-related projects. Authorizes the following transfers:

- $5,200,000 from Severance Tax Perpetual Base Fund to the CWCB Construction Fund to support appropriations made in other sections of the bill;
- $5,000,000 from the Perpetual Base Fund to the CWCB Construction Fund to secure funding in advance of anticipated expenditures in FY 2017-18 for the implementation of the Colorado State Water Plan; and
- $1,100,000 from the CWCB Construction Fund to replenish the Litigation Fund and the Flood and Drought Response Fund, both of which are continuously appropriated.

S.B. 16-218 (STATE SEVERANCE TAX REFUNDS): Specifies the funding mechanism for potential severance tax refunds associated with the Colorado Supreme Court decision in *BP America v. Colorado Department of Revenue*. In FY 2015-16, any required refunds will first be made from severance tax revenue collected during June 2016. If the amount of required refunds exceeds severance tax collections, the remainder will be made from the General Fund reserve and the statutory reserve requirement will be adjusted by the same amount. In FY 2016-17, refunds will be made from severance tax collections up to a cap of 15.0 percent of gross monthly severance tax revenues. If the amount required for refunds exceeds 15.0 percent of gross severance tax revenues in a month, the additional amount will be refunded from income tax revenue diverted from the General Fund. Includes provisions restricting a total of $72.9 million within the three cash funds that receive severance tax revenue:

- Severance Tax Operational Fund (Department of Natural Resources): $10.0 million
- Severance Tax Perpetual Base Fund (Department of Natural Resources): $19.1 million
- Local Government Severance Tax Fund (Department of Local Affairs): $43.8 million from the portion of revenue allocated grants.

These funds are restricted from being expended for any use unless released in whole or in part by a majority vote of the Joint Budget Committee.

H.B. 16-1256 (SOUTH PLATTE WATER STORAGE STUDY): Directs the CWCB to conduct or commission a storage study of the South Platte River basin in collaboration with the Division of Water Resources in the Department of Natural Resources and the South Platte Basin and Metro Roundtables. Appropriates $211,168 cash funds transferred into the CWCB Construction Fund from the Water Supply Reserve Account, contingent upon the approval of the study by the South Platte Basin and Metro Roundtables.

H.B. 16-1405 (LONG BILL): General appropriations act for FY 2016-17.

H.B. 16-1458 (SPECIES CONSERVATION TRUST FUND PROJECTS): Authorizes the Department of Natural Resources to obligate and expend $3.0 million from the Species Conservation Trust Fund in FY 2016-17 for programs to conserve native species listed as threatened or endangered under state or federal law, or are likely to become candidate species as determined by the United States Fish and Wildlife Services. The SCTF is supported by annual transfers from Tier II of the Severance Tax Operational Fund pursuant to Section 39-29-109.3 (2)(e), C.R.S.

2017 SESSION BILLS

S.B. 17-026 (STATE ENGINEER STATUTES CLEANUP): Removes obsolete provisions and modernizes the language of state statutes related to the State Engineer and the Division of Water Resources.

S.B. 17-202 (SPECIES CONSERVATION TRUST FUND PROJECTS): Authorizes the Department of Natural Resources to obligate and expend $3.9 million from the Species Conservation Trust Fund in FY 2017-18 for programs to conserve native species listed as threatened or endangered under state or federal law, or are likely to become candidate species as determined by the United States Fish and Wildlife Services.

S.B. 17-254 (LONG BILL): General appropriations act for FY 2017-18.

S.B. 17-259 (GENERAL FUND TRANSFERS TO PROTECT NATURAL RESOURCES): Makes transfers totaling $10.0 million General Fund to support four Severance Tax Tier 2-funded programs as described in the following table:

TRANSFERS OF FUNDS TO SUPPORT SEVERANCE TIER 2 PROGRAMS		
FY 2017-18 TRANSFER ON JUNE 30, 2018	CASH FUNDS	GENERAL FUND
FOREST HEALTH AND WILDFIRE PREVENTION AND MITIGATION PROGRAMS		
Health forest and vibrant communities program	$1,186,363	($1,186,363)
Forest restoration and wildfire risk mitigation grant program	954,545	(954,545)
Wildfire preparedness program	86,364	(86,364)
Wildland-urban interface training program	45,455	(45,455)
Species conservation trust fund	4,090,909	(4,090,909)
AQUATIC NUISANCE SPECIES		
Division of Wildlife--Aquatic nuisance species	2,452,193	(2,452,193)
Division of Parks--Aquatic nuisance species	1,184,171	(1,184,171)
TOTAL	**$10,000,000**	**($10,000,000)**

S.B. 17-260 (SEVERANCE TAX CASH FUND TRANSFER TO GENERAL FUND): Transfers $45.7 million funds originating as severance tax revenue to the General Fund.

H.B. 17-1030 (UPDATE 1921 IRRIGATION DISTRICT LAW): Updates the 1921 Irrigation District Act. The bill made the following changes: increases the compensation of board members and election judges; clarifies the definitions of agricultural land and landowner; allows an irrigation district to lease its surplus water for any beneficial use permitted by decree or applicable law; clarifies how irrigation district assessments are to be collected, held, and reported; eliminates the bonding requirement for district board members; and modernizes election procedures and procedures for selling surplus property.

H.B. 17-1248 (CWCB CONSTRUCTION FUND PROJECTS): Appropriates $30,134,000 funds from the CWCB Construction Fund to the Department of Natural Resources in FY 2017-18 for various water-related projects. Authorizes the following transfers:

- $30,000,000 from the Severance Tax Perpetual Base Fund to the Loan Guarantee Fund for repayment of loans made for water projects;
- $20,000,000 from the Severance Tax Perpetual Base Fund to the CWCB Construction Fund to support appropriations made in other sections of the bill;
- $10,000,000 from the Severance Tax Perpetual Base Fund to the Water Supply Reserve Fund to support water basin roundtable approved projects;
- $1,500,000 from the CWCB Construction Fund to replenish the continuously-appropriated Fish and Wildlife Resources Fund;
- $1,300,000 from the CWCB Construction Fund to replenish the continuously-appropriated Litigation Fund;
- $500,000 from the CWCB Construction Fund to replenish the continuously-appropriated Flood and Drought Response Fund;
- $300,000 from the CWCB Construction Fund to replenish the continuously-appropriated Feasibility Study Small Grant Fund; and
- $260,000 from the CWCB Construction Fund to the Public and Private Utilities Sector Fund to support appropriations made in other sections of the bill.

H.B. 17-1250 (RENEW AND EXPAND TAX CHECK-OFF TO BENEFIT WILDLIFE): Extends and modifies the Colorado Nongame Conservation and Wildlife Restoration voluntary checkoff program and establishes the Colorado Nongame Conservation and Wildlife Restoration Cash Fund Authority that is overseen by a board of directors. The bill also creates the Nongame Conservation and Wildlife Restoration Cash Fund. Money in the fund is used by the Division of Parks and Wildlife to support a variety of activities that aid nongame and endangered species work. In addition, a percentage of the checkoff revenue may be given in the form of grants for wildlife rehabilitation in Colorado. Grants will be overseen by the board of directors.

H.B. 17-1289 (STATE ENGINEER RULES HISTORICAL CONSUMPTIVE USE): Directs the State Engineer in the Department of Natural Resources (DNR) to adopt rules taking into account local conditions that an applicant can use to calculate the historical consumptive use of a water right. The use of the methodology, approach, or local factors developed by the State Engineer is voluntary, and the resulting calculation of historical consumptive use carries no presumptive effect in the determination by the State Engineer, water referee, or water judge.

APPENDIX C
FOOTNOTES AND INFORMATION REQUESTS

UPDATE ON LONG BILL FOOTNOTES

67 Department of Natural Resources, Division of Reclamation, Mining, and Safety, Inactive Mines, Legacy Mine Hydrology Projects -- This appropriation remains available until the completion of the project or the close of FY 2019-20, whichever comes first. At project completion or the end of the three-year period, any unexpended balance reverts to the Severance Tax Operational Fund, from which this appropriation was made.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

68 Department of Natural Resources, Division of Reclamation, Mining, and Safety, Inactive Mines, Reclamation of Forfeited Mine Sites -- This appropriation remains available until the completion of the project or the close of FY 2019-20, whichever comes first. At project completion or the end of the three-year period, any unexpended balance reverts to the Severance Tax Operational Fund, from which the transfer to the special account in the General Fund created in Section 34-32-122 (1)(a), C.R.S., was made.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

69 Department of Natural Resources, Oil and Gas Conservation Commission, Emergency Response -- It is the General Assembly's intent that this appropriation be expended if there is an oil and gas related emergency under the jurisdiction of the Oil and Gas Conservation Commission. The purpose of this appropriation is to fund investigation, prevention, monitoring, and mitigation of circumstances caused by or that are alleged to be associated with oil and gas activities and that call for immediate action by the Oil and Gas Conservation Commission.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

70 Department of Natural Resources, Oil and Gas Conservation Commission, Special Environmental Protection and Mitigation Studies -- It is the General Assembly's intent that the appropriation in this line item be used for special environmental protection and mitigation studies including, but not limited to, gas seepage mitigation studies, outcrop monitoring studies, soil gas surveys in the vicinity of plugged orphaned wells, and baseline water quality and subsequent studies.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

71 Department of Natural Resources, Division of Parks and Wildlife, Special Purpose, Off-highway Vehicle Direct Services -- The appropriation for this line item remains available until the completion of the project or the close of FY 2019-20, whichever comes first.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

72 Department of Natural Resources, Division of Parks and Wildlife, Special Purpose, Grants and Habitat Partnerships -- The appropriation for this line item remains available until the completion of the project or the close of FY 2019-20, whichever comes first.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

73 Department of Natural Resources, Division of Parks and Wildlife, Special Purpose, Asset Maintenance and Repairs -- The appropriation for this line item remains available until the completion of the project or the close of FY 2019-20, whichever comes first.

COMMENT: This footnote sets forth the purpose, conditions, and limitations of the line item.

UPDATE ON REQUESTS FOR INFORMATION

1 Department of Natural Resources, Division of Reclamation Mining and Safety, Emergency Response Costs -- The Division of Reclamation, Mining, and Safety is requested to include in its annual budget request a report detailing all expenditures made in the previous year from this line item.

COMMENT: The Department included a response to this request, which has been provided in Appendix F.

2 Department of Natural Resources, Oil and Gas Conservation Commission, Program Costs -- The Department of Natural Resources is requested to include in its annual budget request a report on the performance of the risk-based inspection program. The report should provide information on the development activities of the Facilities Integrity group, the inspection of process piping and flowlines, and the metrics used to measure the performance and effectiveness of the Facilities Integrity program.

COMMENT: The Department included a response to this request, which has been provided in Appendix G.

3 Department of Natural Resources, Oil and Gas Conservation Commission, Emergency Response -- The Oil and Gas Conservation Commission is requested to include in its annual budget request a report detailing all expenditures made in the previous year from this line item.

COMMENT: The Department included a response to this request, which has been provided in Appendix H.

4 Department of Natural Resources, Oil and Gas Conservation Commission, Special Environmental Protection and Mitigation Studies -- The Oil and Gas Conservation Commission is requested to include in its annual budget request a report detailing all expenditures made in the previous year from this line item.

COMMENT: The Department included a response to this request, which has been provided in Appendix I.

5 Department of Natural Resources, Division of Parks and Wildlife -- The Division of Parks and Wildlife is requested to provide the Joint Budget Committee with a report on Parks and Outdoor Recreation and Wildlife sources of revenue, as well as the expenditures of revenues by revenue type. The report should provide an analysis of lottery funds Great Outdoors Colorado Board Grants used for operations and capital projects. The report is requested to be submitted by November 1, 2017.

COMMENT: This Division is not discussed in this packet.

APPENDIX D
DEPARTMENT ANNUAL PERFORMANCE REPORT

Pursuant to Section 2-7-205 (1)(b), C.R.S., the Department of Natural Resources is required to publish an **Annual Performance Report** for the *previous fiscal year* by November 1 of each year. This report is to include a summary of the Department's performance plan and most recent performance evaluation for the designated fiscal year. In addition, pursuant to Section 2-7-204 (3)(a)(I), C.R.S., the Department is required to develop a **Performance Plan** and submit the plan for the *current fiscal year* to the Joint Budget Committee and appropriate Joint Committee of Reference by July 1 of each year.

For consideration by the Joint Budget Committee in prioritizing the Department's FY 2018-19 budget request, the FY 2016-17 Annual Performance Report dated October 2017 and the FY 2017-18 Performance Plan dated November 2017 can be found at the following link:

https://www.colorado.gov/pacific/performancemanagement/department-performance-plans

Department of Natural Resources – Division of Reclamation, Mining, and Safety (DRMS)
Emergency Response Costs Line Item
DNR RFI #1 - Annual Report of Expenditures

Special Study/ Project Name	Description of FY 2016-17 Activity	FY 2016-17 Expenditures
S Bar C Pit Farms	The Mined Land Reclamation Board revoked the S Bar C Pit Farms 112c Permit and forfeited the financial warranty amount of $52,600. After using the financial warranty and supplemental Tier 2 Severance Tax funds, there remained a significant highwall hazard at the site. To reduce the highwall hazard onsite, the Inactive Mine Reclamation Program requested use of $100,000 of Emergency Response funding to slope back the highwalls. Upon completion of the project, the state expended $97,558 to reduce the highwall hazard at the S Bar C Pit Farms site.	$97,558
Total Expenditures		**$97,558**

COLORADO
Department of Natural Resources

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

November 1, 2017

The Honorable Kent D. Lambert
Chair, Joint Budget Committee
Colorado General Assembly
200 E. 14th Avenue, Third Floor
Legislative Services Building
Denver, CO 80203

RE: Department of Natural Resources FY 2017-18 RFI #2

Dear Senator Lambert:

The Joint Budget Committee requested the Department of Natural Resources to include in its annual budget request a report on the performance of the risk-based inspection program, including information on the development of the facilities integrity group, the inspection of process piping and flowlines, and the metrics used to measure the performance and effectiveness of the facilities integrity program. This Request for Information was made in conjunction with the approval of the Colorado Oil and Gas Conservation Commission's FY 2015-16 request for the 12.0 FTE recommended by the Governor's Task Force on Oil and Gas. The following is the Department's two-part response to your request.

Risk Based Inspection Program

The Colorado Oil and Gas Conservation Commission (COGCC) uses a risk based strategy for inspecting oil and gas locations that targets the operational phases that are most likely to experience spills, excess emissions, and other types of violations and that prioritizes more in-depth inspections. To achieve this goal, the COGCC first conducted a study to determine the operational phases of oil and gas activity that resulted in relatively higher occurrence rates of adverse impacts to public health, safety and welfare, or the environment, including wildlife. The COGCC then developed a geographic information system (GIS) model that could be used alongside existing agency systems to prioritize field inspections based on risk.

This GIS model is a systematic, automated, statistical tool that relies on statewide environmental and demographic data from the COGCC, Colorado Division of Water Resources, Colorado Parks and Wildlife, Colorado Department of Local Affairs, and U.S. Census Bureau. The model uses

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the data to calculate a relative risk level (RRL), between 15 and 75, for each well in the state. The risk level is automatically updated as the factors affecting it change over time. Therefore, COGCC's database provides nearly real-time data for analysis, tracking, and spatial display on the COGCC's interactive map. Wells with a RRL of 45-75 are considered high priority; and the COGCC's goal is to inspect 100% of them on an annual basis, which currently aligns with the employees' performance review cycle (*i.e.* April 1 through March 31). On April 1, 2017 there were 2,733 wells with a "high" RRL. As of October 25, 2017, 43% of them had been inspected.

Corrective actions related to environmental and community protection that are issued to high priority wells are closely tracked to ensure 100% are re-inspected and that issues are resolved within 30 days. If corrective actions were not implemented by the operator within the scheduled time, the issue is referred to the COGCC's enforcement team.

Field staff, including inspectors, environmental specialists and engineers, statewide, use the calculated risk levels as an additional factor to consider when prioritizing inspections. This GIS model has improved the agency's response to operations that pose risks to public health, welfare, the environment, or wildlife.

<u>Facilities Integrity Program</u>

The COGCC's integrity group, formed in FY 2015-16, has designed and implemented a risk-based program focused on the installation and maintenance of flowlines. Flowlines are the network of pipelines connecting oil and gas wells to tanks, separators, and other vessels, and include the pipelines connecting these facilities to the point of sale. During the second year of the program the facilities integrity group accomplished the following:

Operator Guidance and Outreach:

- Updated the existing flowline guidance document, including adding new sections covering One Call requirements, flowline abandonment, and information on handling hazardous materials such as asbestos.
- Working with environmental staff, issued a guidance document for the Form 19 Spill/Release report. The Form 19 provides critical information for the Integrity group, including the root cause of flowline failure.
- Conducted outreach at events across Colorado, including Colorado Oil and Gas Association meetings in Denver, the Northwest Forum and Energy Advisory Board in Rifle, an Engineering seminar at University of Colorado-Denver, the City and County of Broomfield's Oil and Gas Comprehensive Plan Committee, and an international delegation from Tanzania visiting Colorado to learn about energy regulation.

Integrity Inspections:

- Performed field inspections of flowlines at over 200 sites. Inspections are conducted during flowline construction, repair, and abandonment, and include the observation of pressure testing methods. Non-compliance issues are immediately addressed with the operator. The most serious have resulted in formal enforcement actions.

Flowline Audits:

- Conducted audits of 20 operators – reviewed integrity programs and pressure testing records for flowlines associated with over 1,600 wells. Audits are prioritized based on a data-driven flowline ranking model and are designed to help ensure operators have systems in place to prevent damage to flowlines, prevent failures that cause spills and releases, identify systemic flowline issues, and identify and address instances of non-compliance.

Flowline-Related Spill Monitoring:

- Reviewed over 185 flowline and facility related spills to determine root causes, when possible, and the mitigations needed to prevent future releases. The largest percentages of spills have been caused by corrosion. Fusion failures in polyethylene plastic pipe have also caused a significant portion of the flowline spills, along with freezing-related issues.

- Worked with the Utility Notification Center of Colorado (CO 811) to ensure operators with pipelines are members of One Call. The 2016 CO 811 annual report, released in 2017, stated: "Another contributing factor to the increase in membership was the collaboration with the Colorado Oil and Gas Conservation Commission (COGCC). The COGCC referred 124 companies to Colorado 811. Of these, 98 registered as Tier One Members and 26 registered as Tier Two Members." In 2017, the COGCC issued 89 warning letters to operators concerning the mandatory CO 811 membership and 77 were resolved by operators joining CO 811 or demonstrating proof of no operatorship of flowlines in Colorado. Notices of Alleged Violation were issued to the remaining operators.

Notice to Operators Regarding Flowlines:

- On May 2, 2017, the COGCC issued a Notice to Operators (NTO) that required all operators to systematically inspect their inventory of existing flowlines to verify that any flowline not in active use, regardless of when it was installed or taken out of service, is abandoned pursuant to Rule 1103. As provided in the rule, the flowline must be abandoned by being cut off below grade at the lesser of three feet below ground surface or at the depth of the flowline, and sealed as described in the NTO.
- In addition, operators were required to document the location of all existing, active flowlines located within 1,000 feet of a building unit and ensure and document that those lines have integrity. These actions were required to be completed in two phases:
- **Phase I**, which had a deadline of May 30, 2017 required operators to inspect any existing flowlines and pipelines located within 1,000 feet of a building unit. The second part of Phase I was to clearly mark unused risers using fluorescent paint, have all operating valves removed, be capped until they can be cut-off below grade and sealed pursuant to Rule 1103.

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- **Phase II**, which had a deadline of June 30, 2017 required operators to ensure and document that all flowlines within 1,000 feet of a building unit have integrity. The second part of Phase II required operators to abandon any flowline or pipeline not actively operated, regardless of distance from a building unit.
- The COGCC received approximately 120,000 rows of data from operators and has reviewed about 20% of them, as of October 2017.

Flowline Rulemaking:
In addition to the accomplishments listed above, Governor Hickenlooper, on August 22, 2017, announced his seven policy initiatives developed during the State's review of oil and gas operations. The changes contemplated by two initiatives - strengthening COGCC's flowline regulations and enhancing the 8-1-1 "one-call" program - will be proposed through the COGCC's rulemaking process. COGCC staff has begun drafting amended rules related to oil and gas flowlines to be considered by the commission at the December hearing. Amendments to the current rules may include added or revised definitions, and changing the word "pipeline" to "flowline" throughout the rules in accordance with Commission Order 1R-103.

Proposed changes to the 1100 Series Flowline Rules include the following:

- Adding applicable installation or design standards for flowlines;
- Including integrity monitoring standards and testing regimes;
- Addressing integrity management for flowlines that operate at atmospheric pressure;
- Removing the low pressure exemption from pressure testing and requiring integrity management;
- Improving flowline integrity management record keeping and reporting requirements in the event of an integrity failure;
- Improving regulatory oversight of flowlines that are designed to transport fluids from a wellsite to a remote production facility location;
- Incorporating requirements from the COGCC's May 2, 2017 Notice to Operators
- Improving requirements for operators' membership in the Utility Notification Center of Colorado (UNCC or 8-1-1); and
- Improving flowline abandonment requirements.

Please contact me if you require additional information on the COGCC's risk based inspection program or the development and progress of its new facilities integrity group.

Sincerely,

William H. Levine

William H. Levine
Budget Director, Department of Natural Resources

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Department of Natural Resources - Colorado Oil and Gas Conservation Commission (COGCC)
Emergency Response Line Item
DNR RFI #3 - Annual Report of Expenditures

Project Name	Description of FY 2016-17 Activity	FY 2016-17 Expenditures
Total Expenditures	There were no expenditures from this line.	$0

Department of Natural Resources - Colorado Oil and Gas Conservation Commission (OGCC)
<u>Special Environmental Protection and Mitigation Studies Line Item</u>
DNR RFI #4 - Annual Report of Expenditures

Special Study/ Project Name	**Description of FY 2016-17 Activity**	**FY 2016-17 Expenditures**
Naturally Occurring Radioactive Material Analysis in Produced Water (*ongoing project*)	The "Naturally Occurring Radioactive Materials (NORM) in Produced Water" study is a follow up to the 2014 "Analysis of NORM in Drill Cuttings, Greater Wattenberg Field, Weld County". This Special Project is also responsive to the October 2011 State Review of Oil and Natural Gas Environmental Regulations' (STRONGER) review of OGCC regulations. The results of this study will determine if NORM is present in produced fluids tested as part of the study's sampling program. In FY 2016-17, the OGCC completed the collection of a total of 42 produced water samples and five production gas samples from 37 separate well sites statewide as part of this project. The sampling targeted water production from geologic formations producing oil and gas throughout Colorado, including the Sussex, Codell, Niobrara, Dakota, Mesa Verde (Williams Fork), Mancos, Leadville, J and D sands, Vermejo/Raton, Fruitland, Osage, Topeka, and Cherokee Formations. The OGCC also sampled source water for hydraulic fracturing (frac) fluids along with frac "flowback" fluids. The OGCC has received the first portion of the analytical laboratory results but publication of the study results are not expected until CY 2018.	$70,708
3M-4M (*ongoing project*)	Between 2001 and 2010, the OGCC installed 17 monitoring wells at 11 locations along the Fruitland Outcrop in La Plata and Archuleta Counties to monitor gas pressure changes in the Fruitland Coal Formation. All wells are	$41,136

3M-4M, cont. (*ongoing project*)	equipped with downhole pressure transducers that report data via a satellite telemetry system to a central data center. In 2008 and 2009, the OGCC and its contractor designed and installed methane seep mitigation systems at two locations in La Plata County. The OGCC retained third-party contractors knowledgeable in the monitoring and mitigation systems to provide ongoing operations and maintenance (O&M) support to ensure the systems stay in working order and continue to relay data as designed. In FY 2016-17, OGCC contractors provided the following services: • Conducted routine operations and maintenance activities of all system locations; • Reviewed gas quality measurements stored in all data loggers; • Collected weather station data; • Conducted a system-wide field inspection tour; • Collected well pressure measurements from a central data center; and • Analyzed data and prepared the annual report. To retrieve the FY 2016-17 Annual Report from the OGCC website (http://cogcc.state.co.us), navigate online to Library / Area Reports / San Juan Basin / 4M Project / 2016 4M Monitoring Report (May 2017).	
Exploration and Production Waste Facilities – Review of Environmental Remediation Procedures and Costs (*ongoing project*)	Centralized Exploration & Production (CE&P) Waste Management Facilities, which receive produced water, drilling fluids, and completion fluids for aggregation, treatment, temporary storage, and/or disposal, require the operator to seek a permit from the OGCC and post financial assurance that represents the full cost of remediation and reclamation. These facilities include land farms, water processing facilities, E&P waste storage pits, soil/cutting processing facilities, and drilling mud processing and management facilities. To better protect the state from financial liability, the OGCC retained a	$25,000

Exploration and Production Waste Facilities – Review of Environmental Remediation Procedures and Costs, cont. (*ongoing project*)	consultant in FY 2016-17 to provide third party reviews and cost estimates of the environmental remediation procedures the OGCC would use in the event of operator financial default and OGCC management of the cleanup. The unbiased information obtained from this project is being used to set the appropriate levels of financial assurance, which is typically somewhere between $500,000 and $4 million.	
Upper Pierre Aquifer Water Quality Study *(ongoing project)*	Several water court applications have been submitted to Colorado's Division of Water Resources requesting designation of the Upper Cretaceous Pierre Shale in eastern Weld County, Morgan County, and Logan County as nontributary ground water. The Upper Pierre Shale consists of shale with intervals of sandstone and silty sandstone that contain economic quantities of ground water. The water bearing sandstone intervals have collectively become known as the Upper Pierre Aquifer. Water well permit applications continue to be submitted in eastern Weld County for agricultural, commercial, and industrial uses, including applications for uses such as stock water and oil and gas drilling and completion. In response to this higher level of interest in the Upper Pierre Aquifer, the OGCC undertook a water quality study of the aquifer. The study's objective is to document current water quality conditions and the presence and origin of methane in the aquifer. In FY 2016-17, the OGCC sampled 20 water wells, evaluated the water quality results, and completed the first portion of a draft report. The OGCC will post the final report in its online Document Library by December 31, 2017.	$17,412
Rulison and Rio Blanco Environmental Monitoring (*ongoing project*)	**Project Rulison** was a 1969 underground nuclear blast conducted by the Atomic Energy Commission to investigate the use of nuclear explosives to stimulate gas production. **Project Rio Blanco** is the site of three, nearly simultaneous, subsurface nuclear detonations at depths between 5,000 and	$7,500

Rulison and Rio Blanco Environmental Monitoring, cont. *(ongoing project)*	7,000 feet in 1973. In both project areas, oil and gas operators with active and planned operations are required to conduct extensive monitoring, sampling, and analysis. In FY 2016-17, the OGCC revised the Project Rulison Sampling and Analysis Plan (RSAP). Department of Energy (DOE) studies have shown that fracture patterns tend to be oriented east-west as opposed to more uniform circular patterns. The major revisions to the plan included redefining the exterior buffer zones to align with hydrogeologic flow patterns, thus replacing the zones defined by arbitrary circular rings in the original plan.	
South Fork Texas Creek *(ongoing project)*	The South Fork Texas Creek (SFTC) mitigation site is a pilot project located in La Plata County where the creek intersects the Fruitland Formation Outcrop. Due to historic methane gas seeps along the outcrop, SB 07-198 authorized the OGCC to install, for demonstration purposes, a system to capture the gas and put it to beneficial use. This project collects gas from a French drain and vapor barrier system, compresses it, feeds it into a turbine, and generates electricity. In FY 2016-17, the OGCC retained a contractor to operate and maintain the SFTC mitigation site pilot project and present the results of a methane survey performed along the boundaries of the project site to the OGCC and other stakeholders attending the June 29, 2017 Gas and Oil Regulatory Team (GORT) meeting in Durango. To retrieve the FY 2016-17 Annual Report from the OGCC website (http://cogcc.state.co.us), navigate online to Library / Area Reports / San Juan Basin / La Plata County / 2016 Fruitland Outcrop Monitoring Report (November 2016).	$1,395
Total Expenditures		**$163,151**