

# MEMORANDUM

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**TO:** Joint Budget Committee Members

**FROM:** Megan Davisson, JBC Staff

**SUBJECT:** Department of Public

**DATE:** March 12, 2015

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Members the attached Budget Amendment #4 from the Department of Public Health and Environment was submitted to staff on March 12, 2015 at 4:50pm. Staff has not had time to analyze the request. The request is attached for the Committee's review and will be presented during staff comebacks on March 13, 2015. Staff is not making a recommendation at this time.



# COLORADO

## Department of Public Health and Environment

John W. Hickenlooper  
Governor

Larry Wolk  
Executive Director

FY 2015-16 Budget Amendment Funding Request | March 12, 2014

**Department Priority: BA-04**

**Request Detail: CDPHE Oil and Gas Task Force Recommendations**

Summary of Incremental Funding Change for FY 2015-16	Total Funds	Cash Funds
CDPHE Oil and Gas Task Force Recommendations	\$763,769	\$763,769

### **Problem or Opportunity:**

This request seeks \$763,769 Cash Fund and 4.0 FTE from the Oil and Gas Conservation and Environmental Response Fund in FY 2015-16, and \$427,563 Cash Funds and 4.0 FTE on-going to respond to, and collect and analyze information on, citizen's health concerns related to oil and gas activities. The request includes two components; 1) collecting, analyzing and responding to health concerns related to oil and gas operations received from citizens using a dedicated telephone line, and creating a website to provide additional oil and gas information; and 2) a mobile air quality monitoring unit capable of conducting localized air monitoring when citizen concerns are determined to warrant further on-site investigation.

Citizens have expressed the need for a process to report health concerns related to oil and gas operations to the Department that includes the ability to speak directly with public health professionals. Citizens have also expressed the desire for a clearinghouse of health information related to oil and gas operations. Concerns related to air emissions may be addressed by localized air monitoring, particularly where a large number of health concerns are registered in close geographic proximity. The proposed citizen oil and gas Health Concern Information Line and Website, and the Mobile Air Quality Monitoring Unit will address both of these needs.

Public health concerns related to the expansion of oil and gas development in Colorado have generated much debate. Citizens want their questions answered when concerns arise about emissions and potential health impacts from oil and gas operations, and are looking for an unbiased source of information on oil and gas operations. The Colorado Department of Public Health and Environment is the state agency positioned to handle citizen concerns about general health impacts and to respond to air quality concerns.

Historically, the Colorado Oil and Gas Conservation Commission has been contacted by citizens with complaints about oil and gas operations, but as these operations move closer to residential homes,

health concerns and air quality concerns have become the critical topics that citizens want to be addressed.

The bipartisan Oil and Gas Task Force created by executive orders B21014-005 and B214-006 began meeting in September 2014 and submitted its final report on February 27, 2015. The taskforce considered many issues and alternatives to address local impacts associated with oil and gas operations and unanimously approved several recommendations. This request is for the funding to implement those recommendations.

***Proposed Solution:***

This request for \$763,769 Cash Funds and 4.0 FTE in FY 2015-16, and \$427,563 Cash Funds and 4.0 FTE on-going funding will allow the Department to collect, analyze and respond to citizen concerns related to oil and gas activities. The proposed Health Concern Information Line would provide the citizens of Colorado with a central point to call with health concerns and questions related to oil and gas development, and the website will provide citizens with access to health information related to oil and gas operations. The proposed Mobile Air Quality Monitoring Unit would be used for emergency and complaint response, enforcement, hot-spot identification and fence line monitoring.

Colorado has seen a significant increase in oil and gas activity in recent years. As activity has grown and moved closer to residential areas, citizens have developed concerns about the impact oil and gas activity is having on their health. Currently there is no dedicated resource or centralized place for citizens to go to get information and express their concerns. CDPHE alone has 11 divisions, most of which have received calls from citizens about oil and gas issues. The Department of Natural resources also receives oil and gas related calls. Because there is not a centralized program to handle all of the calls, there is little consistency in the responses citizens receive. Additionally without a centralized program there is no way to identify potential trends or relationships between individual calls. Furthermore, the Department does not have the resources to conduct the extensive investigation necessary to determine if a negative health impact is occurring. Having dedicated, unbiased staff who can collect information, answer questions, investigate reports and provide resources is critical to helping citizens, industry and health professionals to be informed about, and respond appropriately to health and environmental effects of oil and gas activity.

***Health Concern Information Line and Website***

The Health Concern Information Line would provide citizens with a central point to log their health concerns and get information related to oil and gas development. A dedicated health professional would respond to calls, and would conduct an in-depth survey with the caller regarding health and environmental conditions. The professional would also map the location of the complaint. The Program would also create and maintain a website which would serve as a clearing house for information regarding the oil and gas industry by providing web-based links to information on industry practices, federal, state, and local regulations, as well as peer-reviewed health studies.

The Health Concern Information Line and website will not provide personal medical advice. Staff will refer callers with symptoms and medical conditions to their personal physicians or recommend a specialist for evaluation of their concerns. Medical information provided to callers or via the website will be general population-level information.

Three staff members are proposed for this initiative; one staff member serving as the Work Group Leader/Health Professional to design the workflow processes and guide the overall Health Concern Information Line; one staff member to maintain and update the website clearing house component; and one staff member to analyze the data collected. The data collected by the Health Concern line would be used to compare the rate of occurrence in particular areas and determine if a higher level of response is warranted. The Health Concern Information Line would involve two Tiers of response; Tier 1 is the collection of in-depth information from the complainant by a public health professional; and, Tier 2 would be triggered based on the findings in Tier 1, and involve a study of the ambient air quality at a particular location. Tier 2 would mobilize the air monitoring unit and staff to investigate the ambient air quality and potentially locate the source of emissions. All three staff members would be trained to return the telephone calls to collect the health concern information and to provide general health information and referrals to the caller.

### ***Mobile Air Quality Monitoring Unit***

The Mobile Air Quality Monitoring Unit would be dispatched to a defined location to monitor ambient air quality and to help determine potential sources of emissions. It would be fully equipped with a gas chromatograph for volatile organic compounds (VOCs, including benzene), oxides of nitrogen (NO<sub>x</sub>) analyzer, hydrogen sulfide analyzer, particulates monitor, meteorological sensors, data logger, and communications and calibration equipment. Data collected by the monitoring unit would be evaluated against the EPA's dose-response values for those pollutants expected to be associated with oil and gas development, including benzene. This list of air pollutants includes both chronic (long-term) and acute (short-term) values for inhalation exposures.

The Department would also use the Mobile Air Quality Monitoring Unit in other situations including emergency response, enforcement, hot-spot identification and fence line monitoring to supplement the times when the monitoring unit was not being used to respond to health concerns.

Monitoring data collected from the Mobile Air Quality Monitoring Unit could be used to support appropriate responsive actions including changes in operations or permit modifications. Monitoring data also would be added to air monitoring data currently being collected by various entities in other studies and contribute to the data used in a risk assessment. .

The taskforce also recommended conducting a health risk assessment. A human health risk assessment uses air monitoring data and a literature-based toxicity assessment of chemicals to describe potential public health risks. Several air monitoring studies are currently underway in Colorado. The data from the largest of those studies will be available in June of 2016. Once the data becomes available, the Department will need \$631,262 to fund the risk assessment. The risk assessment would characterize

risk by conducting a screening-level human health risk assessment using Environmental Protection Agency (EPA) methodology based on data from both monitoring and modeling. The reports from the assessment will describe potential increases in the risk of cancer and non-cancer health effects among those potentially exposed. The Department will use risk assessment consultant contractors to perform the assessment. CDPHE's air quality scientists and toxicologists will oversee the consultants.

Elements of the assessment will include:

*Data Analysis*

- Estimate exposure point concentrations;
- identify chemicals of potential concern; and
- develop a conceptual site model for inhalation exposure of various populations to chemicals of potential concern associated with oil and gas development.

*Estimation of Risk and Data Interpretation*

- Estimate acute, sub-chronic, and chronic non-cancer hazards and chronic cancer risks for chemicals with available toxicity values; and
- conduct a qualitative evaluation of risk by doing a literature search for the health effects of chemicals for which no reference toxicity information exists.

*Report Preparation*

- Prepare a draft human health risk assessment report using Environmental Protection Agency guidelines based on modeling data and monitoring data for internal review by CDPHE and other agencies providing oversight; and
- prepare a final human health risk assessment report by addressing review comments.

Since the data collected from the major studies will not be available until June 2016, the Department is not including the risk assessment component in this request. However, the Department anticipates an FY 2016-17 Decision Item to request the one-time \$631,262 needed to conduct the health risk assessment.

Responding to citizen calls, collecting and providing information and conducting investigations on health concerns is time consuming and labor intensive. The Department does not currently have staff dedicated to handling oil and gas concerns and investigating reports. If authorized, this request will provide citizens with a central point of contact for concerns and information related to health impacts of oil and gas activities. Increased access to unbiased information should alleviate anxiety over health concerns, concerns that have grown in recent years. Authorizing the request will also allow the Department to collect, compile and disseminate information that will be useful to individual citizens, the oil and gas industry and health and environmental professionals.

If this request is not authorized, there will continue to be a lack of access to information about the health impact of oil and gas activity. Citizens will continue to be uncertain about where to go to report concerns and to find accurate information and the Department will lose the opportunity to collect data that could be valuable in protecting citizen's health.

### ***Anticipated Outcomes:***

If this request is approved, a centralized resource for collecting and providing information on the impacts of oil and gas activity will be created. Citizens will have a place to call with questions and concerns about health impacts of oil and gas activities. The Department will have the resources to provide information and conduct investigations on reports of health concerns. The Department will be able to collect and disseminate data that policy makers and health care professionals can use to improve and protect health. The oil and gas industry and local governments will benefit by having a resource that provides unbiased information to respond to citizen concerns related to oil and gas operations.

Because there is currently no centralized management of calls relating to oil and gas, the department does not know how many calls it receives, but anecdotal information indicates that the number of oil and gas related calls is increasing every year. The Department anticipates that creating this resource center for oil and gas information will result in a significant volume of calls and visits to the website. Responding to citizen concerns providing a central place to report concerns and providing information will address an unmet need for data collection and dissemination in the State.

In order to achieve and monitor the impacts of these new programs the Department will:

- record the number of telephone calls to the health concern/information line;
- monitor trends and map the complaints;
- track the type and number of health complaints;
- produce fact sheets with pertinent information on oil and gas facilities;
- maintain a website with up-to-date information on oil and gas operations, regulations and studies;
- Prepare a report to the Colorado General Assembly with information on the number of visits to the oil and gas information website and number of times the mobile monitoring unit is used to address citizen concerns.

Success will be measured by the number of citizens talking to a public health professional about health concerns, the number of users of the web-based source of oil and gas health information, and the number of Department investigations and resolutions of health concerns.

Implementation of the Oil and Gas Taskforce recommendations will allow for effective and efficient collection and analysis of health data, responses to public health concerns, and distribution of accurate and unbiased health information, all related to oil and gas operations.

### ***Assumptions and Calculations:***

The Department is requesting \$763,769 Cash Funds and 4.0 FTE in FY 2015-16, and \$427,563 Cash Funds and 4.0 FTE on-going spending authority from the Oil and Gas Conservation and Environmental Response Fund for these initiatives; 3.0 FTE are being requested for the Health Concern Information Line, and 1.0 FTE will operate the Mobile Monitoring Unit.

Health Concern Information Line and Website:

The 3.0 FTE for the Health Concern Information Line includes a Health Professional III, a Physical Science Researcher II, and a Health Professional VI. The duties are as follows:

Health Professional III (HP III) duties will include:

- 2,080 hours per year answering and responding to citizen health concerns based on an estimated call volume of up to 8 calls per day and an average time of 1 hour to respond to the call;
- HP III will be required to collect detailed information from the caller on location, temporality, and nature of health concern;
- Follow-up activities can include the following: 1) Data entry and geocoding into database, 2) Contacting regulatory agencies and operators, 3) Requesting access to medical records, 4) Reviewing medical records when part of a larger public health investigation, 5) Follow-up with citizen, and 6) Summarizing environmental conditions and health concern;
- Additional duties will include querying the database to respond to information requests, developing and updating a website and assisting in the development of printed fact sheets and web-based resources.

The Health Professional III classification is justified based on:

- Need for a fully operational professional to work independently to manage and address concerns;
- Professional needs to come up to speed on complex regulatory and scientific issues and be able to respond to difficult questions posed by callers;
- Responding to concerns requires the use of discretion and creativity within the limits of oil and gas regulatory processes and scientific understanding of health concerns from chemical exposures;
- Need for a communication/Webster skills to develop and maintain/update website and educational materials, based on guidance from HP VI and PSR II; and
- Most importantly, this position must anticipate and analyze the impact of recommendations made.

Based on the need for a seasoned professional and recent experience in hiring at the entry level for this type of position, the Department is requesting 25% above the minimum of the salary range to hire the most qualified personnel for the project.

The Physical Science Researcher (PSR) II's duties will include:

- Use epidemiologic and spatial statistical methods to analyze and present health concern and exposure data. (192 hours per year);
- Assistance in performing the scientific literature review (320 hours in year 1 and 160 hours in future years for updating);
- Develop written and web-based resources explaining oil and gas exposures and potential health effects (120 hours);

- Providing technical assistance to callers in need of more detailed analysis of exposure data (24 hours per week based on 4 calls per week and 6 hours per call = 1248 hours per year);
- Developing and giving technical presentations (160 hours per year based on 10 presentations per year and 16 hours per presentation);
- Write reports summarizing health concern data (320 hours in year 2); and
- Ensure information on the website is scientifically accurate and current (40 hours per year).

The Physical Science Researcher II classification is justified based on:

- Need to be able to independently perform complex statistical analyses;
- Ability to educate citizens and policy makers on complex issues around exposure and response;
- Make formal, professional scientific presentations to high level state and national audiences;
- Need to help initiate health investigations when detecting unusual trends or clusters of cases;

Based on the need for a seasoned professional and previous experience in hiring at the entry level for this type of position, The Department is requesting 25% above the minimum of the salary range to hire the most qualified personnel for the project.

The Health Professional (HP) VI will be a physician, nurse, or experienced epidemiologist with medical experience. The duties of the HP VI will include:

- Perform and publish a scientific literature review on the potential health effects from oil and gas activities (320 hours in year 1, 160 hours in future years);
- Research and develop health questionnaire specifically for oil and gas type exposures (100 hours in year 1);
- Manage the other two staff in the unit (PSR II and HP III) – (260 hours per year based on 1 hour per day);
- Attend state and county level meetings related to oil and gas (208 hours per year based on one 4 hour meeting per week);
- Respond to calls from other health professionals that need specific medical expertise (16 hours per week based on 4 calls per week and 2 hours per call = 416 hours per year);
- Presentations to scientific audiences and oil and gas stakeholders (192 hours per year based on 2 presentations per month and 8 hours per presentation);
- Formal correspondence with callers (8 hours per week = 416 hours per year);
- Write reports and publications based on health concern data (416 hours in year 2);
- Website review and maintenance (48 hours in year 1 and 12 hours in year 2);
- Develop and maintain a list of medical resources with expertise in environmental/occupational medicine, including those that accept Medicaid or the uninsured. This list could be provided as a resource to a patient, based on their specific needs. It could also be used to send out Health Alert Network (HAN) or other communications if needed (roughly 20 hours per year to develop and 10 hours to update and maintain);
- Lead public health investigation if they are warranted based on data collected.

The Health Professional VI classification is justified based on:

- The need for a credible and experienced professional with knowledge in complex exposures and health effects;
- Understand the medical and epidemiologic principals necessary to lead potential public health investigations;
- This position will be the senior authority on health issues related to oil and gas exposures in Colorado and will directly influence CDPHE management decisions.

Based on the need for a seasoned professional and our experience in hiring at the entry level for this type of position, The Department is are requesting 25% above the minimum of the salary range to hire the most qualified personnel for the project.

Database Design:

This project requests \$50,000 to develop a customized multi-user database that will facilitate response to health concerns across multiple CDPHE divisions. The database costs breakdown as follows:

- Business Analyst: \$6000
- Developer: \$20,000
- Project Manager: \$9,000
- IV&V: \$5,000
- Database Services: \$10,000

Mileage Justification:

The request includes \$2,567 for travel, mileage, lodging and per diem. It is anticipated that one health staff member will be required to travel away from CDPHE an average of once per week. We anticipate 75% of the trips will be to a location in Weld County and 25% will be to a location in Garfield County.

#### Mobile Air Quality Monitoring Unit

Physical Science (PSR) Researcher II duties include

- Equipment operation and general maintenance (320 hours per year);
- Equipment calibration and audit (240 hours per year);
- Data collection, validation and analysis (770 hours per year);
- Report development (390 hours per year);
- Travel (360 hours per year).

The Physical Science Researcher II classification is justified based on:

- Need to be able to independently operate complex air monitoring equipment;
  - Ability to interpret detailed air monitoring data and perform complex statistical analyses;
  - Ability to develop reports and educate citizens and policy makers on monitoring results; and
- Based on the need for a seasoned professional and experience in hiring at the entry level for this type of position, the Department is requesting 25% above the minimum salary range to hire the most qualified personnel for the project.

Operating costs:

In order to establish the mobile monitoring unit the request includes

- \$215,000 in one-time funding and \$20,000 in on-going funding for equipment such as a gas chromatograph, air analyzers and calibration instruments;
- \$60,000 in one-time costs to configure the trailer
- \$13,192 for travel expenses.

Fund Balance Projections

Fund Balance, FY 2013-14 through FY 2016-17

Cash Fund Name	Cash Fund Number	FY 2013-14 Expenditures	FY 2013-14 End of Year Cash Balance Actual	FY 2014-15 End of Year Cash Balance Estimate*	FY 2015-16 End of Year Cash Balance Estimate*	FY 2016-17 End of Year Cash Balance Estimate*
Oil and Gas Conservation and Environmental Response Fund	1700	\$9,980,201	\$10,674,407	\$8,529,700	\$4,855,000	\$1,768,000

\*The Oil and Gas Conservation and Environmental Response Fund numbers are estimated based on current levy rate (.7 mills), production projections, and product price estimates. Spending related to the recommendations of the Governor’s Oil & Gas Task Force is not included in the projections for fiscal years 2015-16 and 2016-17.

Note: H.B. 07-1341 appropriated \$100,000 and 1.0 FTE to the Department of Public Health and Environment for efforts related to protecting the public health, safety, and welfare from the adverse impacts of oil and gas development. This funding was appropriated to CDPHE directly from the Oil and Gas Conservation and Environmental Response Fund (the OGCC’s main operating cash fund). Since that time, the Joint Budget Committee has appropriated moneys to CDPHE directly from OGCC’s Oil & Gas Conservation and Environmental Response Fund through the Long Bill for oil and gas related efforts.