

**THE HOUSE COMMITTEE ON ENERGY AND COMMERCE  
SUBCOMMITTEE ON ENVIRONMENT AND THE ECONOMY**

**“THE ROLE OF THE STATES IN PROTECTING THE ENVIRONMENT UNDER  
CURRENT LAW”**

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Mr. Chair, thank you for this opportunity to provide our perspective on how the state of Colorado regulates oil and gas exploration and production to develop our important, indigenous resources responsibly and in a manner that protects our environmental resources. My name is Matthew Lepore, and I am the Director of the Colorado Oil and Gas Conservation Commission, the state agency responsible for regulating oil and gas development.

I am here today on behalf of Colorado and the Groundwater Protection Council (GWPC) to describe the states' role in protecting the environment through progressive, balanced regulation of oil and gas exploration and production. GWPC is a nonprofit (501(c)(6)) organization whose members include state environmental, UIC, source water, ground water, and oil and gas regulatory agencies. GWPC promotes the use of best practices and fair but effective laws regarding comprehensive ground water protection. Among many other projects intended to protect groundwater, GWPC, in conjunction with the Interstate Oil and Gas Compact Commission, manages FracFocus, the national hydraulic fracturing chemical registry, which is discussed in greater detail below.

I would like to speak briefly about Colorado's regulatory regime, and the important ways GWPC enhances the Colorado Oil and Gas Commission's efficiency, effectiveness, and regulatory transparency.

Colorado has a long and proud history of oil and gas development, with our first oil well dating back to 1862. Today, we have 50,265 active wells, having passed the 50,000 mark just this past December. We have been adding at least 2,000 new wells per year for the past nine years, and expect 2013 to be similar. 2012 was a record-breaking year for oil production in Colorado; we expect production to top 47 million barrels when the final numbers are tallied. We rank fifth in the nation in natural gas production and tenth in oil production. Our diverse hydrocarbon resources encompass a variety of shale, tight sand, coal bed methane, and other formations that span the state. At the same time, we have a thriving resort and tourist economy, and our rugged mountains, clear streams, and abundant wildlife are an essential part of our heritage.

With respect to modern technologies that are very much in today's headlines, nearly one-third of all wells drilled in Colorado last year were horizontal wells, and we expect that percentage to grow steadily, as it has in each of the past four years. We have more than twenty years of experience with hydraulic fracturing, a technology that is absolutely vital to unlocking Colorado's rich natural gas and oil reserves. These reserves are a critical source of domestic

energy for our state and nation, and their exploration, development, and production provides good-paying jobs for our residents and needed tax revenues for our communities.

But it is also essential that this development occurs in an environmentally responsible manner that protects our water resources generally and our drinking water specifically. This is a fundamental part of our regulatory mission, and something that everyone at our agency takes very seriously. To that end, our Rules continue to evolve to keep pace with technological changes in the industry.

During 2007 and 2008, our agency devoted substantial time and effort to updating our regulations to address a broad range of environmental issues associated with oil and gas development. The final rules strike a responsible balance between energy development and environmental protection, and they reflect input from dozens of local governments, oil and gas companies, and environmental groups, as well as thousands of our residents. These rules have become the basis for regulatory initiatives in other states, and even other countries, most recently the Ukraine.

In December 2011, the COGCC worked with such diverse partners as the Environmental Defense Fund and Halliburton, to craft a hydraulic fracturing fluid chemical disclosure rule that has been hailed as a model and widely imitated by other states, including Ohio, Pennsylvania, and Tennessee.

In January of this year, Colorado adopted rules requiring mandatory testing of groundwater near new wells, both before and after drilling and completion operations. We are one of just three states in the country to require groundwater sampling, and the only state that requires post-drilling sampling.

Finally, just this week, on February 11, the COGCC adopted new rules that increase the minimum distance, or “setback,” between oil and gas facilities and occupied buildings, and require the most stringent set of mitigation measures in the country to ensure work occurs with the least disturbance to nearby residents. Among other measures, closed-loop or “pitless” drilling systems and “green completions” are required at all locations within 1,000 feet of occupied buildings. Increased notice to, and communication with, nearby residents is also a central tenet of these new rules. Operators are required to notify local governments and citizens well in advance of commencing operations, and to meet with interested or concerned citizens if requested to do so. We believe improving communications among these stakeholder groups at the front end will alleviate many questions, concerns, and potential conflicts as operations progress.

In partnership with our universities, we are launching a comprehensive study of the impacts of natural gas drilling on air quality and public health. This comes after several steps in recent years to reduce pollutants that originate at oil and gas facilities, including requiring emission-control devices to capture emissions that might otherwise escape.

These recent state rulemakings exemplify the benefits associated with state oversight and site-specific regulation. Colorado’s amended rules contain various provisions to ensure that oil and gas operations do not harm our drinking water or unreasonably interfere with other land use

activities, while recognizing the distinctions between, and idiosyncrasies of, different producing basins in different regions of our state. For example,

- Rule 205A requires operators to disclose the chemicals used to hydraulically fracture a well. Under this Rule, effective April 1, 2012, operators are required to disclose all known chemicals in hydraulic fracturing fluids to the public via the website [www.FracFocus.org](http://www.FracFocus.org) or, with respect to an operator's trade secrets, directly to the Commission or health professionals upon request. FracFocus.org is a national hydraulic fracturing chemical registry website created by the GWPC and the Interstate Oil and Gas Compact Commission. Public access to this information provides greater transparency to help build public trust and provide the tools to those who want to ensure their water supplies are protected.
- Rule 317 requires wells to be cased with steel pipe and the casing to be surrounded by cement to create a hydraulic seal and ensure that gas and fluids do not leak into shallower aquifers. Further, operators are required to run cement bond logs on all production casing to confirm that the cement has properly isolated the hydrocarbon bearing zones. Rule 341 requires operators to monitor well pressures during hydraulic fracturing and promptly report significant increases. Together, these requirements help to ensure that ground water is protected and that prompt action is taken if conditions arise that could lead to the subsurface release of hydraulic fracturing fluids.
- Rule 317B imposes mandatory setbacks and enhanced environmental protections on oil and gas development occurring near sources of public drinking water. These requirements provide an extra layer of protection for our public water supplies and help ensure that these critical resources are not inadvertently contaminated by energy development.
- Rules 608, 609, and 318A require operators to sample nearby water wells before, during, and after operations to ensure that they are not contaminated by gas or other pollutants. Rule 608 applies to coalbed methane basins in the state, Rule 381A applies in the DJ Basin in northeastern Colorado, and Rule 609 applies to all other areas of the state. The COGCC recognizes that each of these areas has unique characteristics, making a one-size-fits-all solution impractical; however, groundwater must be protected on a statewide basis. These rules provide an extra layer of protection, above and beyond our casing and cementing requirements.
- New Rule 604 establishes a 500 foot setback from occupied buildings, and a 1,000 foot setback from "high occupancy buildings" such as schools, hospitals, and day care centers. This Rule also mandates specific mitigation measures to alleviate potential noise, odor, light and dust issues associated with drilling and completion activities for wells located near occupied buildings.
- Amendments to Rules 305 and 306 require early and more detailed notification to residents living within 1,000 feet of new oil and gas operations, including an opportunity to meet with the operator regarding the planned operations and proposed mitigation measures.

The oil and gas industry is a dynamic one, and its methods and technologies are continually evolving. The industry's continued success depends upon its ability to develop new resources using innovative techniques, and the ability of state regulations and regulators to stay apace of these developments and apply appropriate, fast-adapting oversight. For many years now, the

GWPC has been an important partner in COGCC's efforts to regulate efficiently, effectively, and transparently. GWPC's Risk Based Data Management System (RBDMS) is an important tool COGCC and other state oil and gas regulatory agencies use to manage and analyze oil and gas program data and water resources management information. RBDMS can provide data about oil and gas well locations, permitting, and production to regulators, the public, and industry through its Web interfaces. COGCC is working with the GWPC and the Energy Information Administration on an effort to use an RBDMS interface to update the U.S. oil and gas production database in an automated fashion to provide timely and accurate information from its states online data.

Three specific RBDMS tools developed by or in collaboration with GWPC are critical components of COGCC's regulatory arsenal: our E-Forms application, which allows many of our regulatory forms, including drilling permits, to be filed electronically; FracFocus; and our interactive Environmental Database.

E-Forms is a software application that allows the agency to manage regulatory forms, including drilling permits, completion reports, and oil and gas location assessments, electronically. Users of these forms – primarily operators – are able to submit them electronically. Additionally, the agency can transmit electronic copies of these forms to parties, such as the surface owner or local governments, that are entitled to notification under our Rules. Furthermore, interested parties can access and provide comments on drilling permits and location assessment forms on-line. The automated functionality of e-forms has greatly reduced staff time spent entering data from paper forms, allowing them to spend more time on primary duties. Processing time for drilling applications has also been reduced. We continue to work with GWPC as we transition additional forms from paper to electronic format as quickly as we can.

FracFocus, the national hydraulic fracturing chemical registry, developed and managed by GWPC and IOGCC, also provides important benefits to the COGCC, industry, and the public. GWPC worked with us to develop a direct link between our COGIS interactive map and the FracFocus database, so that a user viewing a well on our map can go directly to FracFocus and read the hydraulic frac' fluid disclosure report for that well. The ability to use FracFocus as the repository for disclosure reports, rather than developing one from scratch, saved the COGCC both time and money. Industry has benefitted by having a single repository, with one set of submission requirements, rather than dealing with different requirements across the country. Finally, FracFocus lends invaluable transparency to, and increases confidence in, the regulatory process by enabling the public to see what chemicals are being used to frac' wells.

Our Environmental Database is a publicly-accessible database of environmental sampling data associated with specific wells or locations. The database is linked to our GIS Map, so a user can instantly call up, view, and download water, soil, or air sampling data associated with, for example, a well located near their home. The Environmental Database went "live" in September 2012, and will continue to grow as operators submit groundwater sampling data required under our new Rules. The Environmental Database also houses sampling results related to remedial investigations and environmental clean-up projects undertaken or directed by COGCC staff. GWPC originally developed an environmental database application for use by Ohio, and was

able to modify the application to work with Colorado's existing GIS map and related applications.

The COGCC was established by the Colorado General Assembly in 1951. The COGCC has a full time staff of 76; that includes PhDs, Professional Engineers, Groundwater Hydrologists, Geochemists, and other environmental specialists, all dedicated to ensuring compliance with our rules. We have learned much through experience, and our rules have evolved to keep pace with changing technologies. Today, advances in horizontal drilling, hydraulic fracturing, and three-dimensional seismic imaging have combined to open a new frontier in exploration and development in Colorado and across the country – shale oil and shale gas. The economic and energy-security benefits of developing these resources is potentially transformative. Yet, we must ensure that our respective regulatory regimes set the highest standards of conduct for industry and protect our air, water, and wildlife as these technologies are deployed. The recent changes to COGCC's Rules demonstrates Colorado's firm commitment to this course of action. Our experience, and that of other states, demonstrates exploration and production activities are most effectively regulated at the state level, where highly diverse regional and local conditions are more fully understood and where rules can be tailored to fit the needs of local basins, environments and communities. We believe in Colorado that we can best ensure that our precious natural resources and environment are protected while allowing for the innovation and experimentation that are the hallmarks of our nation.