

Oil & Natural GAS in Colorado

AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS



Your Questions Answered

Advances in proven technologies are delivering new opportunities in oil and natural gas exploration and production around Colorado.

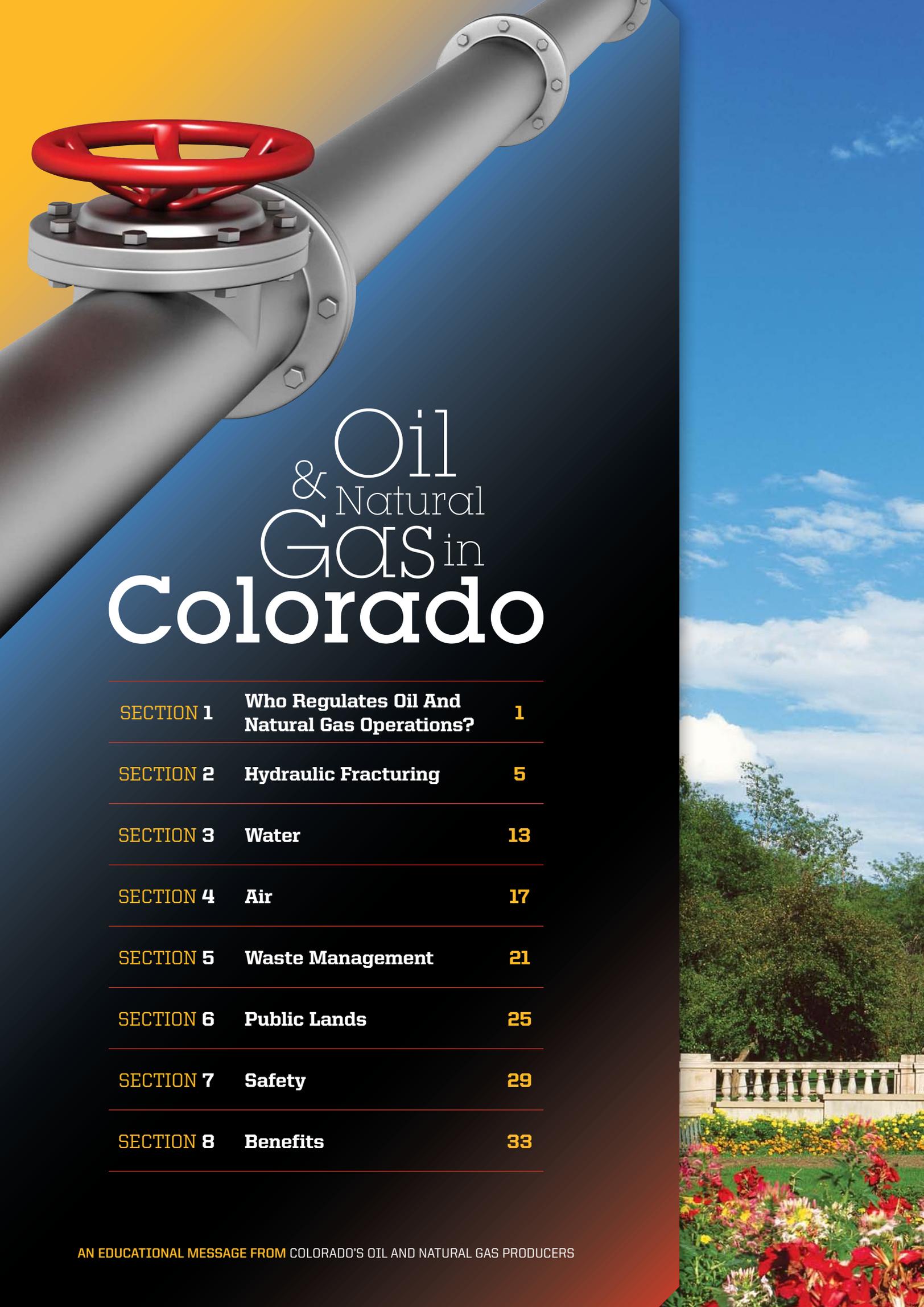




Colorado has a 100-year history of oil and natural gas development with over 60 years of hydraulic fracturing. Colorado-produced oil and natural gas represent an important part of the energy that we require every single day, delivering substantial economic and environmental opportunities. With this long history, it is expected and encouraged that local residents and elected officials have questions and want to learn more about the oil and gas industry.

To help further that dialogue, the Colorado oil and natural gas trade associations worked together to provide fact-based information about oil and natural gas operations, which explains Colorado's comprehensive environmental and safety regulations and the tremendous economic benefits provided to the state.

We hope you find this booklet a valuable resource to help answer your questions. You may also contact any of the participating organizations, which include the Colorado Oil & Gas Association, Colorado Petroleum Association, Western Energy Alliance, and America's Natural Gas Alliance.



Oil & Natural GAS in Colorado

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Who **Regulates** Oil and Natural Gas Operations?

AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS



Colorado has some of the most comprehensive and robust regulations governing oil and natural gas development in the United States. The state's oil and natural gas producers maintain steadfast commitments to safe and responsible operations to ensure Colorado's communities and environment are protected.

State agencies have delegated authority to enforce federal programs and Colorado law establishes any necessary additional requirements to protect the environment and public health.

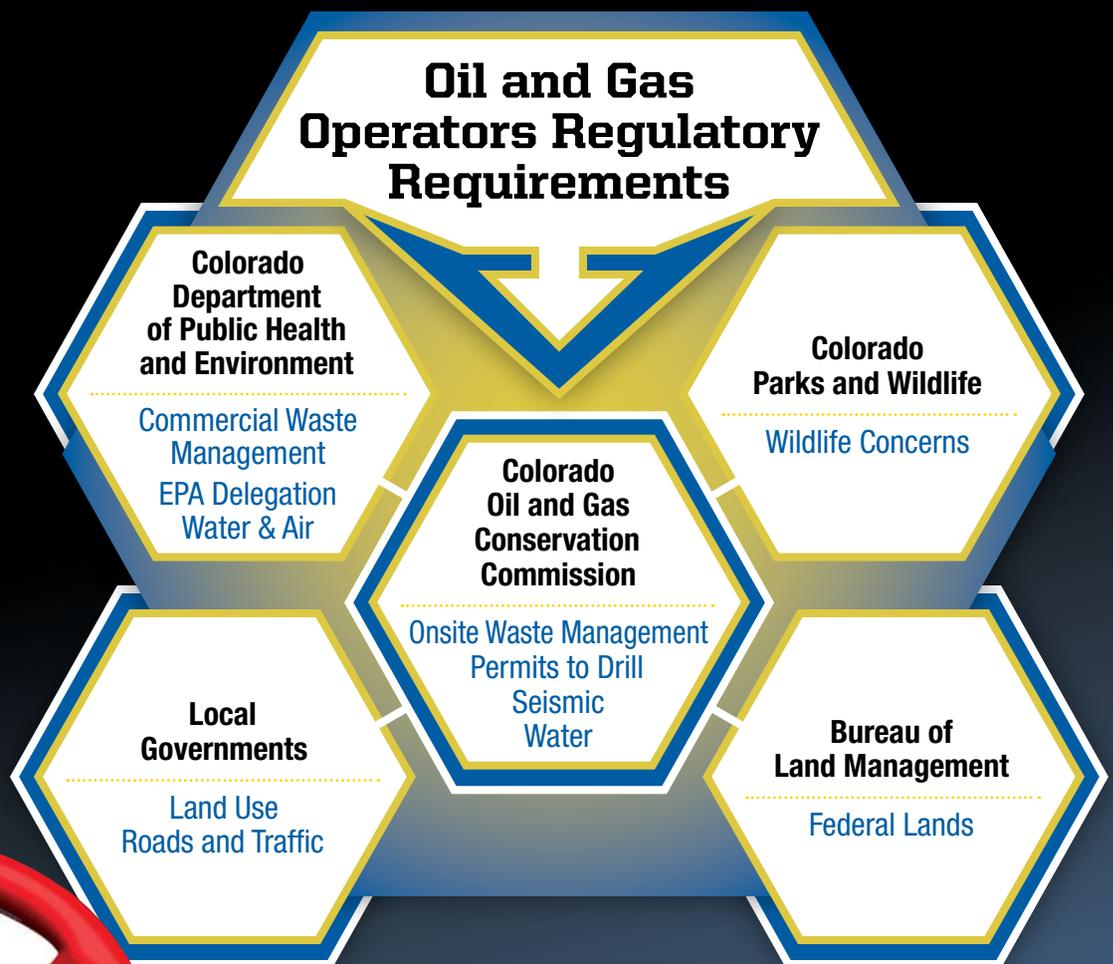
The Colorado Oil And Gas Conservation Commission (COGCC) is the state agency with most of the responsibility for establishing standards and enforcing regulations for oil and natural gas exploration and production.

The Colorado Oil and Gas Conservation Commission is the state agency with most of the responsibility for establishing standards and enforcing regulations for oil and natural gas exploration and production. The mission of the COGCC is to foster responsible development of Colorado's oil and natural gas resources while considering and incorporating input from those various stakeholders involved with the development of these resources.



Many Other State Agencies And Local Governments Regulate Oil And Gas

While the COGCC has the majority of responsibility to regulate oil and natural gas operations, a number of other state agencies, as well as local governments, play significant roles. The diagram below shows all the agencies and local entities involved in regulating oil and gas development in Colorado.



Did
You
Know?

Your local governments have opportunities to be involved in the COGCC oil and natural gas permit approval process. (300 Series COGCC Rules) Oil and natural gas development on federal lands is subject to both state and federal regulatory requirements. (Please see "Public Lands" chapter for more details)



Hydraulic Fracturing

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What Is Hydraulic Fracturing?

Hydraulic fracturing is a proven, traditional technology that has been used for more than 60 years to safely enhance the production potential of oil and natural gas from more than one million wells in the United States.

For years, oil and natural gas deposits in certain tight rock formations were thought to be too difficult to produce and therefore uneconomic.

Advances in drilling and completion technologies like hydraulic fracturing enable producers to develop these natural resources safely and economically.

Producers drill thousands of feet below freshwater supplies and then turn horizontally into rock formations where hydraulic fracturing releases vast oil and natural gas deposits that were once considered unreachable.

While the hydraulic fracturing technique has been used for decades, the process has been continuously updated and refined to be even more efficient and effective. More than 90 percent of all energy produced in the United States is done so by hydraulic fracturing. Simply put, you cannot have modern onshore energy production in the U.S. without hydraulic fracturing.

Did
You
Know?

More than 95 percent of all wells drilled in Colorado are hydraulically fractured.

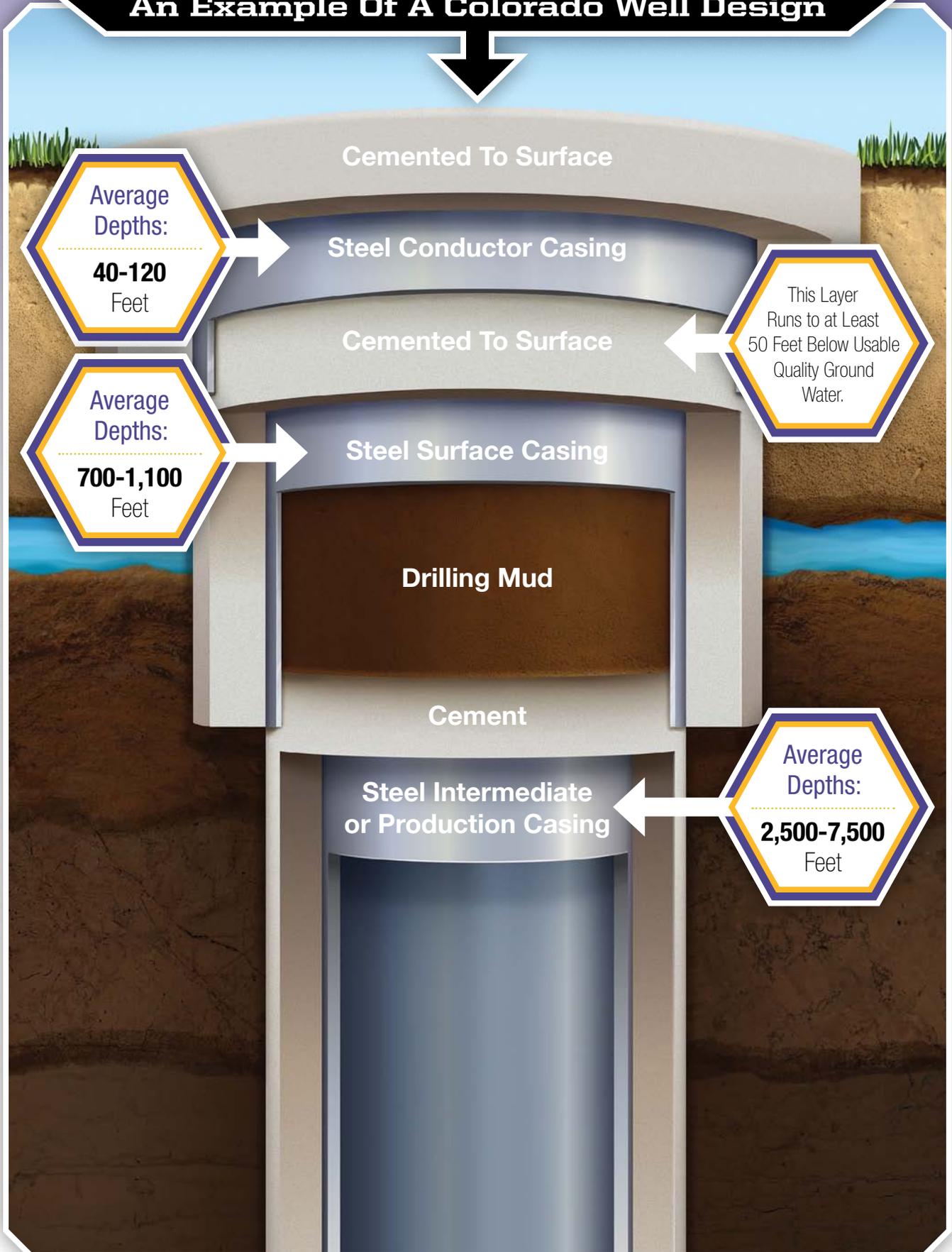
DOES HYDRAULIC FRACTURING IMPACT MY DRINKING WATER?

No. Hydraulic fracturing occurs thousands of feet below underground freshwater supplies, and state regulations require producers to incorporate several redundant layers of protection into well construction to ensure that the freshwater supplies are not affected. Please see the diagram on page 7 for an illustration of typical well design in Colorado.



Colorado Oil and Gas Conservation Commission rules 317, 326, and 341 are just some of the many rules that regulate hydraulic fracturing in Colorado. Stringent state regulations include quality and monitoring requirements for steel pipe and cementing to ensure that fresh groundwater zones are protected.

An Example Of A Colorado Well Design



HOW DOES HYDRAULIC FRACTURING WORK?



The Depth is Equal to 11 Wells Fargo Buildings



450-700 Ft.

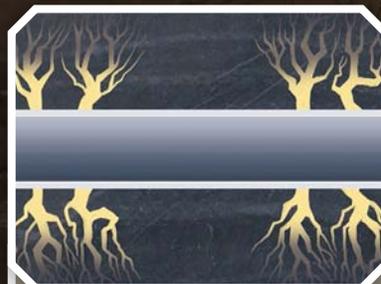
Multiple Layers of Steel Encased in Cement Protect Ground Water



Ground Water

Protective Steel Casing

Hydraulic fracturing occurs at a depth of approximately 7,000-8,000 Ft.



Shale Fractures: 1 mm wide

Did You Know?

7,000 feet is also greater than the elevation distance from Denver (5,280 feet) to Loveland Pass (11,990 feet).

Hydraulic fracturing occurs at great depths – generally a mile or more underground. With the safety of multiple steel casings and cement layers in place, oil and natural gas producers drill vertically thousands of feet down then horizontally into the targeted rock formation. Then a mixture of pressurized water, sand and a specifically-formulated fracturing compound is pumped down thousands of feet into the formation to create millimeter-thick fissures in carefully-targeted sections of the host rock.

The tiny fractures free the trapped oil or natural gas. Oil and natural gas producers in Colorado typically use a fracturing compound (or hydraulic fracturing fluid) that is 99.5 percent water and sand and 0.5 percent chemically-based additives. The sand helps to prop open the fractures to facilitate the flow of oil and natural gas.

Is Hydraulic Fracturing Safe?

Yes. Hydraulic fracturing has a 60-year track record of safe operations of more than 1.2 million wells. Colorado producers are constantly refining and improving the hydraulic fracturing process. The U.S. Environmental Protection Agency, the Groundwater Protection Council (composed of multiple state water pollution control officials) and the Interstate Oil and Gas Compact Commission all have studied hydraulic fracturing and found that existing regulations address and mitigate potential risks. U.S. Geological Survey studies do not suggest that hydraulic fracturing causes earthquakes.

Advances In Technology

Advances in technology significantly reduce the environmental impacts of drilling for oil and natural gas and enhance its efficiency. Hydraulic fracturing is essential to unconventional oil and natural gas development in Colorado and has strengthened our nation's energy security by helping to dramatically increase American oil and natural gas supplies.

Hydraulic Fracturing Disclosure

Per Colorado Oil and Gas Conservation Commission rule 205A, oil and natural gas producers are required to disclose the chemicals used in hydraulic fracturing fluid, as well as the amount of water used in the process, to a free, publicly-accessible website: www.FracFocus.org. FracFocus is a joint project of the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission. Proprietary chemicals are also required to be disclosed to the Colorado Oil and Gas Conservation Commission and emergency professionals if required during an emergency.

Environmental Benefits Of Efficient Horizontal Drilling And Hydraulic Fracturing

Significantly Decreased Surface Area

The average well site today is 30 percent smaller than the average size in 1970 and an average well can now access up to 60 times more below-ground area than was previously possible.

Fewer Wells

Today, oil and natural gas producers can drill as few as six to eight horizontal wells on a single site to access the same amount of natural gas that once required 16 or more wells drilled from individual locations.

Reduce Air Emissions

Greatly improved equipment and engine efficiency and evolving technologies are resulting in less energy consumption per unit of fuel produced, thus lower air emissions per unit of energy produced.

What Happens To Water After It's Used For Hydraulic Fracturing?

An increasing amount of hydraulic fracturing fluid is being recycled and reused for future operations. "Produced" water from the drilling process is either recycled or collected and disposed of according to stringent state and federal regulations in approved underground injection wells deep beneath the surface, far below freshwater sources. (Please see the section on "Waste" for more information.)

How Much Water Are Oil And Natural Gas Producers Using?

Oil and natural gas operations account for a small percentage of total water usage statewide. In an estimate compiled by the Department of Water Resources and the Colorado Water Conservation Board, oil and natural gas producers in Colorado account for approximately 0.13 percent of annual water use in Colorado, significantly less than other industries. (Please see the section on "Water" for more details.)

What Happens If There's An Incident, Such As A Water Spill On The Well Pad?

Safety is paramount to oil and natural gas producers. Operations are constantly monitored and adjusted as needed. The Colorado Oil and Gas Conservation Commission requires each site to have an emergency response plan in place to address a potential incident. These plans detail the proper steps needed to immediately "contain and clean" the area, minimize any impact on the environment, and notify the appropriate authorities. Additional regulations regarding water and waste spills are outlined in the COGCC's 900 Series of rules.

Is Colorado Effectively Regulating Hydraulic Fracturing?

Yes. The State Review of Oil and Natural Gas Environmental Regulations (also known as STRONGER), a nonprofit organization that conducts voluntary state reviews of oil and natural gas environmental regulations, recently completed its review of Colorado's hydraulic fracturing regulations and concluded that, "... the Colorado program is well-managed and professional." The state is widely recognized for having some of the strongest oil and natural gas regulations in the nation.

TO LEARN MORE ABOUT FRACTURING OR DRILLING, VISIT WWW.COGCC.STATE.CO.US



Drill Time Basics

STEP BY STEP

BASICS OF DRILLING

What Happens Before A Company Drills A Well?

Before a company drills a well, geologists and engineers study the size, structure and thickness of the rock formations to scientifically determine how and where drilling should take place. Producers must obtain information on the depth and location of all freshwater zones to ensure that protections are in place. Producers must file for all necessary state, federal, and local permits. State regulations require producers to engage nearby residents and local governments to share information and listen to and address concerns prior to beginning operations.

How Are Wells Constructed To Protect Freshwater Supplies?

Each well is encased in multiple layers of protective industrial-grade steel pipe, which is surrounded by cement to create a redundant safeguard for underground freshwater supplies. (Please see page 8 for a detailed diagram.)

How Long Does It Take To Drill A Well?

Bringing a well into production requires multiple stages. This includes transporting equipment, well pad construction, and completion. The drilling rig and related equipment are only temporary and are removed when the well is finished. Once completed, production sites average about 125 feet by 425 feet in size. Areas disturbed by this activity are also reclaimed (or restored) when necessary. In urban areas, completed well sites are often screened or landscaped. After completion, a well can produce for as long as 20 to 40 years, providing long-term tax revenue and sustaining jobs locally.

The hydraulic fracturing process typically accounts for one to five days in a well's 30-year production life.

1.

Site Preparation

Estimated Time: Typically 7-14 days depending on the size of the pad

On Site:

1. Construct roads to the well site
2. Clear the surface for the well pad
3. Average pad space is 5 acres

2.

Drilling & Hauling

Estimated Time:

Drilling: 3-4 days for directional wells and 10-15 days for horizontal wells

Hauling: 30-45 days – Depending on when the completion contractor can be scheduled, there may be some time when no hauling occurs directly after drilling

On Site:

1. Use fresh water and bentonite clay to drill the well
2. Install casing and cement
3. Conduct pressure testing and logging
4. Remove drilling equipment
5. Haul water and tanks for hydraulic fracturing operations

3.

Hydraulic Fracturing

Estimated Time: 1-5 days

On Site:

1. Hydraulic fracturing crews pump mixture of pressurized water, sand and a specifically-formulated fracturing compound into each well
2. Crews remove pumps and trucks

4.

Production & Reclamation

Estimated Time: 30 years production

On Site:

1. Reclaim surfaces not used for operations back to original conditions
2. Ongoing facility operations and monitoring



SECTION 3

Water

AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS

Water Is Vital To All And Can Be Scarce In Colorado.

Oil and natural gas producers understand that proper management and protection of the state's water resources are essential to all Coloradoans. Producers continue to find innovative ways to reduce water consumption and protect the quality of our water.

Where Do Oil And Gas Producers Get The Water Used For Exploration And Production?

Colorado water law strictly governs how this precious resource is obtained for industrial use. Common sources of water in Colorado may include, but are not limited to, purchased or leased water from municipal sources, water purchased from third parties or recycled from previous operations.

Who Oversees The Rules That Natural Gas Producers Must Follow To Protect The Water In Colorado?

The Colorado Oil and Gas Conservation Commission and the Colorado Department of Public Health and Environment oversee water protection laws and regulations in the state. These agencies administer wide-ranging rules to protect Colorado's surface and subsurface waters during oil and natural gas operations.

Producers with plans to drill or produce oil and natural gas in Colorado must apply for a permit with the Colorado Oil and Gas Conservation Commission, which consults with the Colorado Department of Public Health and Environment. The pre-drilling permit application provides the commission with detailed well construction information before a well is drilled to ensure protection of both groundwater and surface water.

Does Colorado Have Specific Rules That Prohibit Water Pollution?

Yes. Colorado Oil and Gas Conservation Commission's Rule 324A expressly prohibits pollution of surface and subsurface waters from oil and natural gas drilling, completion and production activities. This rule applies to water sources including rivers, streams, creeks, and surface drainage.

Operator Cleanup Programs

Although producers maintain performance-based procedures to prevent incidents like surface spills, the Colorado Oil and Gas Conservation Commission and Colorado Department of Public Health and Environment provide direction and oversight in the event that an environmental cleanup project is necessary.

TO LEARN MORE ABOUT WATER WELLS, GO TO WWW.COGCC.STATE.CO.US.

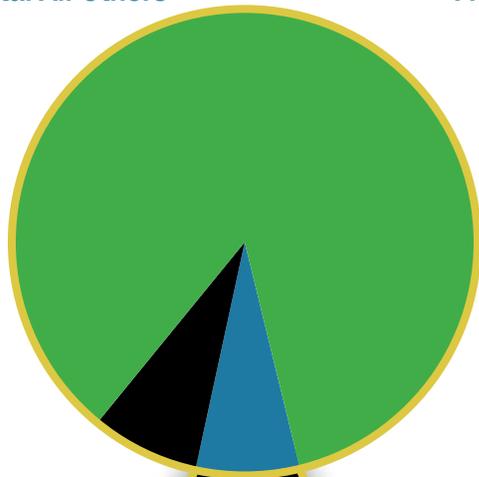


PUTTING WATER USE IN CONTEXT

According to an estimate compiled by the Department of Water Resources and the Colorado Water Conservation Board, oil and gas development in Colorado accounts for only 0.13 percent of total water usage in the state.

SECTOR

Agriculture	85.5%
Municipal and Industrial	7.4%
Total All Others	7.1%



BREAKDOWN OF ALL OTHERS

Recreation	5.64%
Large Industry	0.83%
Thermoelectric Power Generation	0.47%
Hydraulic Fracturing	0.08%
Snowmaking	0.03%
Coal, Natural Gas, Uranium, and Solar Development	0.03%
Oil Shale Development	0.00%

Source: Colorado Oil & Gas Conservation Commission 2010. In 2015, the GOGCC projects that water usage related to hydraulic fracturing is expected to be slightly more than one-tenth of one percent of total water used.

How Do Oil And Gas Producers Protect Drinking Water?

Colorado enforces stringent regulations and producers must follow a series of best practices to ensure drinking water is protected.

Steel Casing and Cement

Per COGCC rule 317, each well must be encased in multiple layers of protective, industrial-grade steel casing, which is surrounded by cement to create redundant layers of protection for underground freshwater supplies. (Please see page 7 for a detailed diagram.)

Integrity Tests and Logging

Per COGCC rules 317 and 326, companies are required to conduct integrity tests and submit detailed logs to state regulators. These logs provide graphic evidence that the steel and cement well casings are sound. They also allow the industry to precisely pinpoint any potential problem areas and quickly work to mitigate incidents or to contain and clean them.

Groundwater Sampling

Per COGCC rules 608, 609 and 318A.e.(4), sampled water wells close to oil and natural gas development must be tested prior to and after operations. Issues identified must be addressed immediately.

Impermeable Rock Separates Local Aquifers from Oil and Gas

Local aquifers (that contain drinking water) are close to the surface (around 450 to 700 feet down) and are generally separated by greater than a mile of impermeable rock from the oil and natural gas reservoirs being produced (usually around 7,000 to 8,000 feet down).



SECTION 4

Air

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Colorado's air must be protected and oil and natural gas producers are implementing new technologies to not only comply with existing stringent Colorado rules regarding air, but to exceed them.



Who Regulates Air Quality Associated With Oil And Natural Gas Operations?

The Colorado Department of Public Health and Environment – Air Pollution Control Division (APCD) has the primary authority and jurisdiction to ensure that oil and natural gas operations comply with federal and state air quality laws and regulations. APCD administers rules that have been developed and approved by the Environmental Protection Agency (EPA) and Colorado Air Quality Control Commission (CAQCC). These rules work to protect our air.

Oil and natural gas producers also must comply with air quality requirements enforced by the Colorado Oil and Gas Conservation Commission, as well as some local counties and communities.

How Can The Public Check On Air Quality?

Colorado has an extensive network of continuous monitors measuring levels of criteria pollutants 24-hours-a-day, 7-days-a-week. Anyone can check the air quality in real time, any time. In addition, the APCD provides air quality forecasts and indexes on its website. The Regional Air Quality Council assists the APCD with air quality and awareness throughout the Front Range.

DATA FROM CONTINUOUS MONITORS IS AVAILABLE AT:
WWW.COLORADO.GOV/AIRQUALITY/ALL_SITES_MAP_AGS.ASPX

AIR QUALITY ADVISORIES ARE AVAILABLE AT:
WWW.COLORADO.GOV/AIRQUALITY

How Do Oil And Natural Gas Producers Protect The Air?

At a minimum, oil and natural gas producers must comply with the many rules and regulations established by both the EPA and Colorado Air Quality Control Commission. Depending on the type of operation, size of equipment and potential emissions associated with a given oil and natural gas facility, more stringent requirements and emission controls could be required at the facility.

Many companies also employ high-tech observation programs to minimize potential environmental impacts associated with produced gas loss. Highly-trained employees carefully inspect each facility to ensure proper operation. Constant vigilance reduces potential gas releases into the environment and waste of a valuable resource.

Companies also make use of the most technically-advanced equipment available including, but not limited to, vapor recovery, enclosed thermal oxidizers, multiple stage separation, lean-burn combustion technology, and renewable energy-powered equipment.

Are There Studies That Show The Potential Air Impacts Associated With Oil And Natural Gas Development?

Yes. There have been multiple air quality studies associated with oil and gas development throughout the country. In Colorado alone, EPA Region 8, EPA Office of Research and Development, Colorado Department of Public Health and Environment, Colorado State University, University of Colorado, multiple counties and scientific institutions have conducted air quality studies associated with oil and natural gas development. These studies show the emissions associated with oil and gas development are below levels originally predicted and that oil and gas emissions are below thresholds established by the Environmental Protection Agency to protect public health. Results are available online and through the Colorado Department of Public Health and Environment.



SECTION 5

Waste Management

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Every industry produces waste. Oil and natural gas producers have an obligation to reduce and properly dispose of waste, which ensures the protection of Colorado's communities and environment.

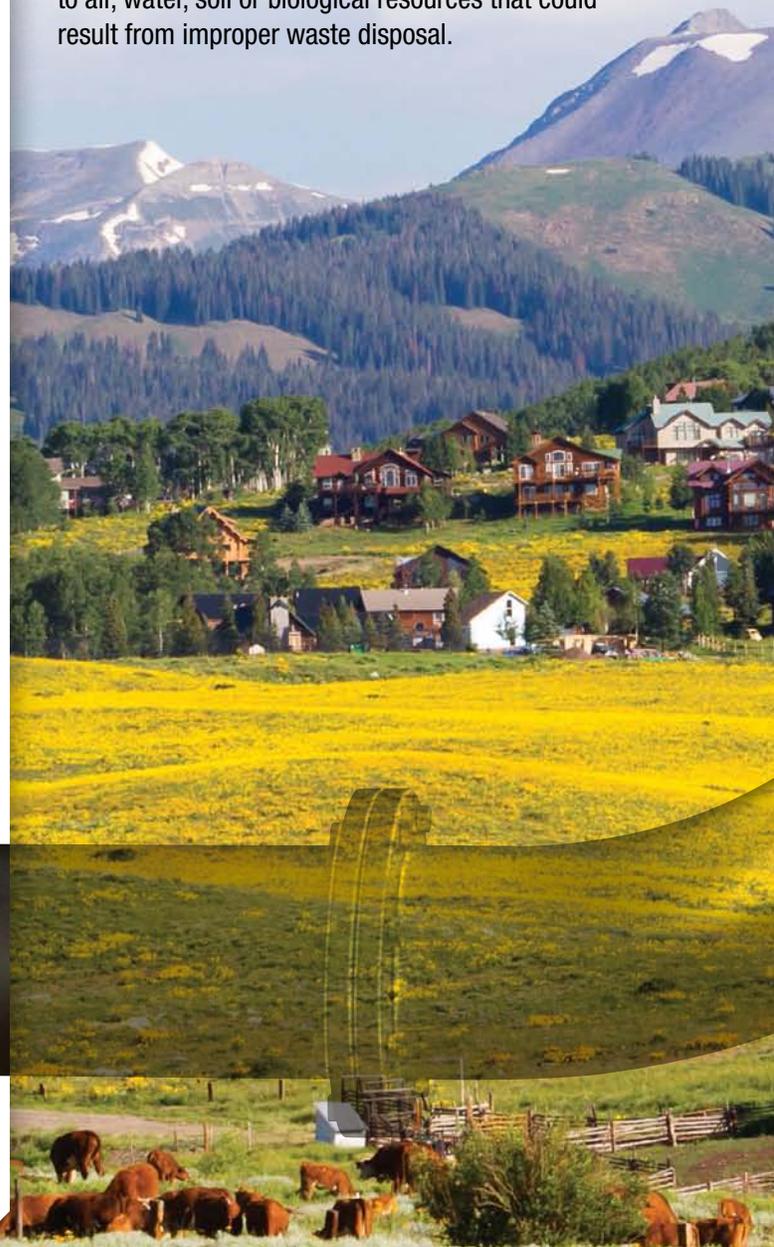
TO LEARN MORE ABOUT WASTE REGULATIONS,
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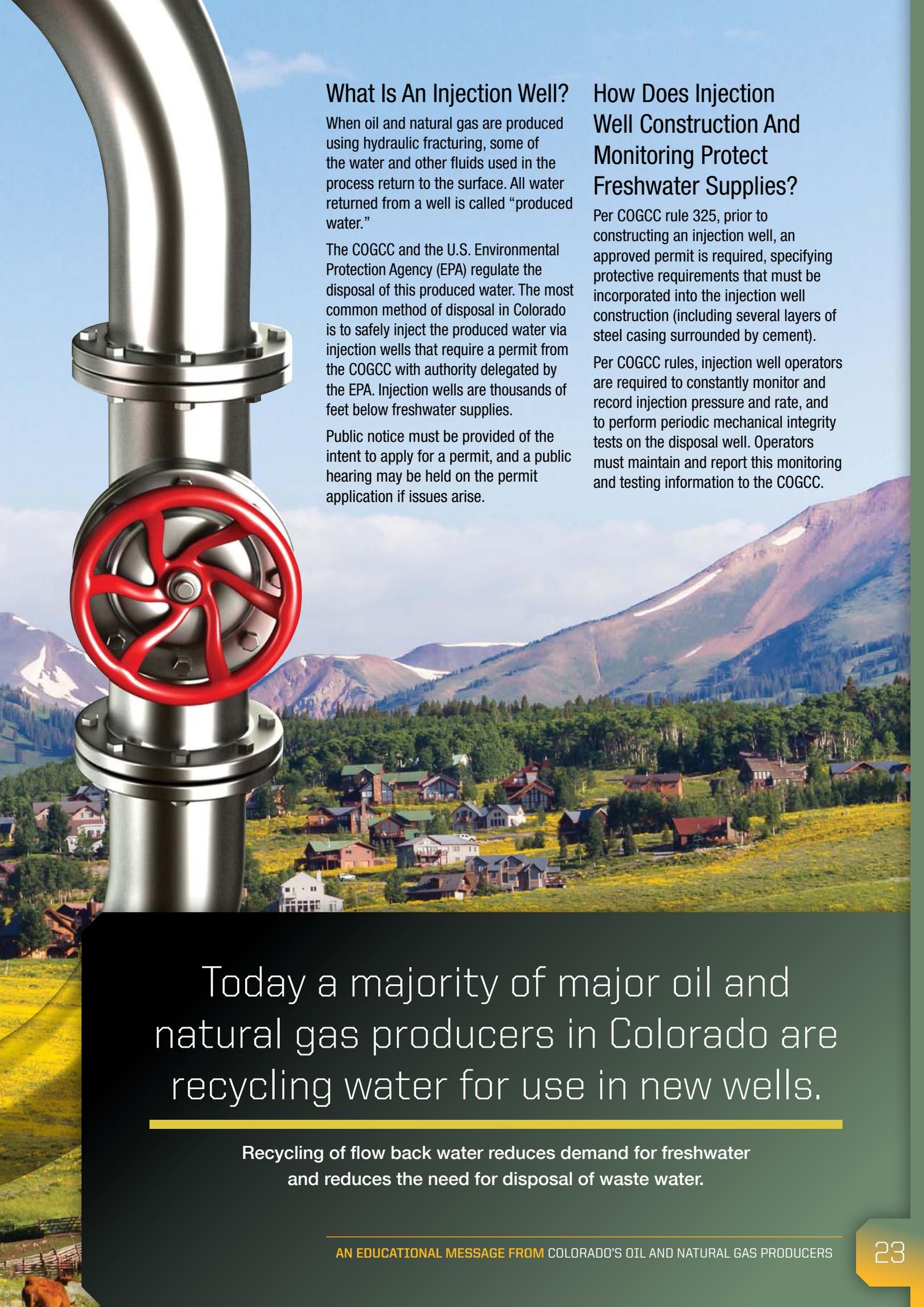
Who Oversees Waste From Oil And Natural Gas Operations?

The Colorado Oil and Gas Conservation Commission (COGCC) oversees the management of exploration and production waste at oil and natural gas operation sites. Such waste typically consists of drilling mud, produced water, salt water or drill cuttings (the soil and rock that come out of the ground when a well is drilled). Operators planning to drill or produce oil and natural gas in Colorado must obtain a permit prior to beginning operations, which includes a waste management plan stating how waste will be managed.

How Is Exploration And Production Waste Regulated?

The COGCC 900 Series rules regulate and require proper management of exploration and production waste, including proper storage, handling, transportation, treatment, recycling and disposal. These regulations are in place to prevent impacts to air, water, soil or biological resources that could result from improper waste disposal.





What Is An Injection Well?

When oil and natural gas are produced using hydraulic fracturing, some of the water and other fluids used in the process return to the surface. All water returned from a well is called “produced water.”

The COGCC and the U.S. Environmental Protection Agency (EPA) regulate the disposal of this produced water. The most common method of disposal in Colorado is to safely inject the produced water via injection wells that require a permit from the COGCC with authority delegated by the EPA. Injection wells are thousands of feet below freshwater supplies.

Public notice must be provided of the intent to apply for a permit, and a public hearing may be held on the permit application if issues arise.

How Does Injection Well Construction And Monitoring Protect Freshwater Supplies?

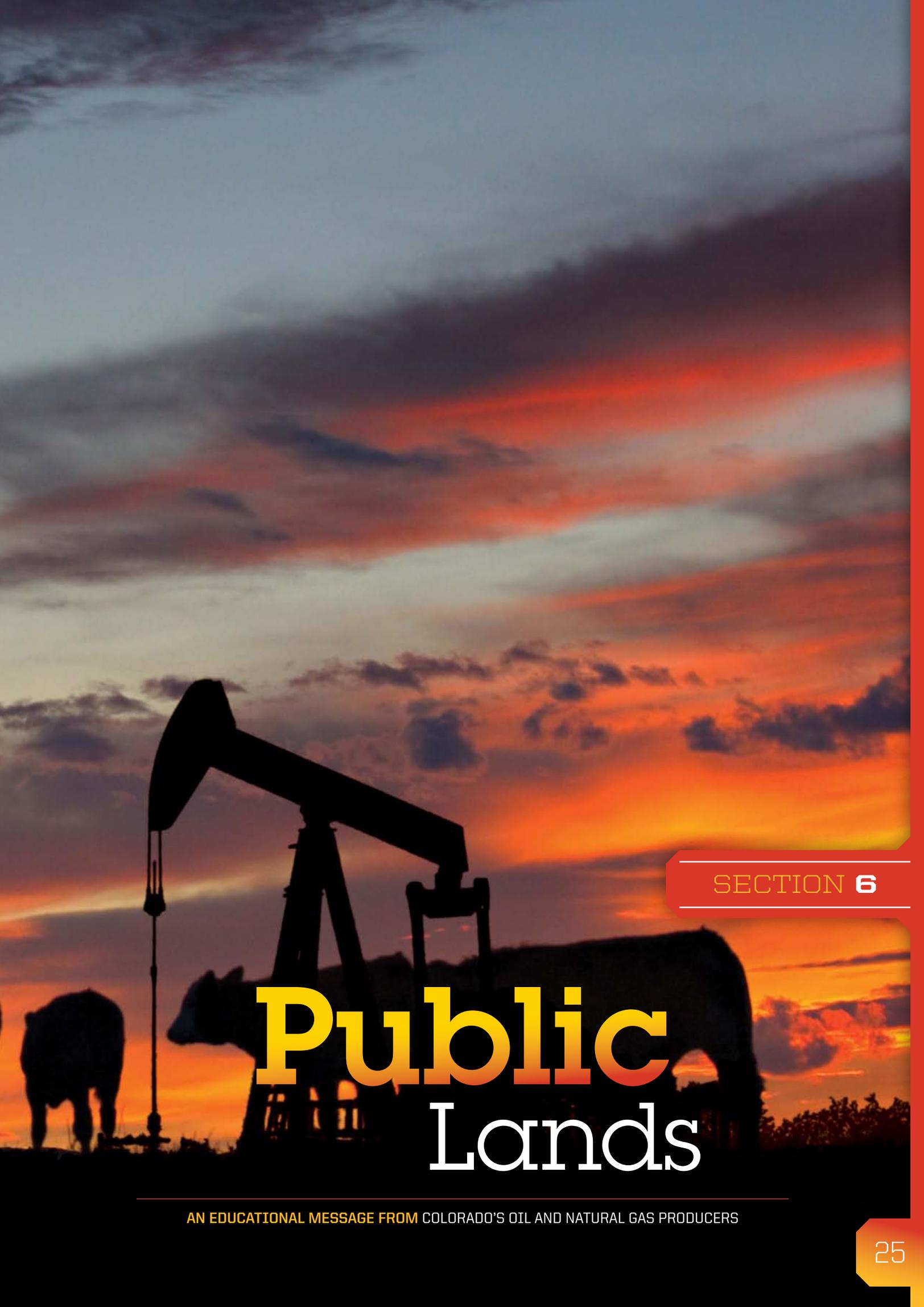
Per COGCC rule 325, prior to constructing an injection well, an approved permit is required, specifying protective requirements that must be incorporated into the injection well construction (including several layers of steel casing surrounded by cement).

Per COGCC rules, injection well operators are required to constantly monitor and record injection pressure and rate, and to perform periodic mechanical integrity tests on the disposal well. Operators must maintain and report this monitoring and testing information to the COGCC.

Today a majority of major oil and natural gas producers in Colorado are recycling water for use in new wells.

Recycling of flow back water reduces demand for freshwater and reduces the need for disposal of waste water.



The background of the entire page is a photograph of a sunset or sunrise. The sky is filled with horizontal bands of orange, red, and blue, with scattered white clouds. In the foreground, the silhouettes of an oil pumpjack and several cows are visible against the bright horizon. The pumpjack is on the left, and the cows are scattered across the lower half of the image.

SECTION 6

Public Lands

AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS

Roughly 37 percent of all lands in Colorado are federally managed and strictly regulated by the Bureau of Land Management (BLM), an agency of the U.S. Department of the Interior.

Can Recreation, Agriculture, And Oil And Natural Gas Production Co-exist?

Absolutely. More than 10,000 natural gas wells have been drilled in western Colorado as of 2012, demonstrating the successful co-existence of energy production with recreation and agriculture. All three are central to Colorado's economy and culture.

How Important To Colorado Is Oil And Natural Gas Development On Public Lands?

According to the Colorado School of Mines' Potential Gas Committee, western Colorado has the potential to produce a total of 41 trillion cubic feet of natural gas — enough natural gas to heat all 2.2 million Colorado homes for 279 years.



TO LEARN MORE ABOUT BLM REGULATIONS FOR NATURAL GAS DEVELOPMENT ON PUBLIC LANDS IN COLORADO, VISIT WWW.BLM.GOV/CO/ST/EN.HTML



BLM Field Offices are responsible for the review and approval of permits submitted by oil and natural gas companies for operations on federal lands. In addition to all required Colorado regulations, oil and natural gas producers who wish to operate on federally-managed lands are subject to the following:

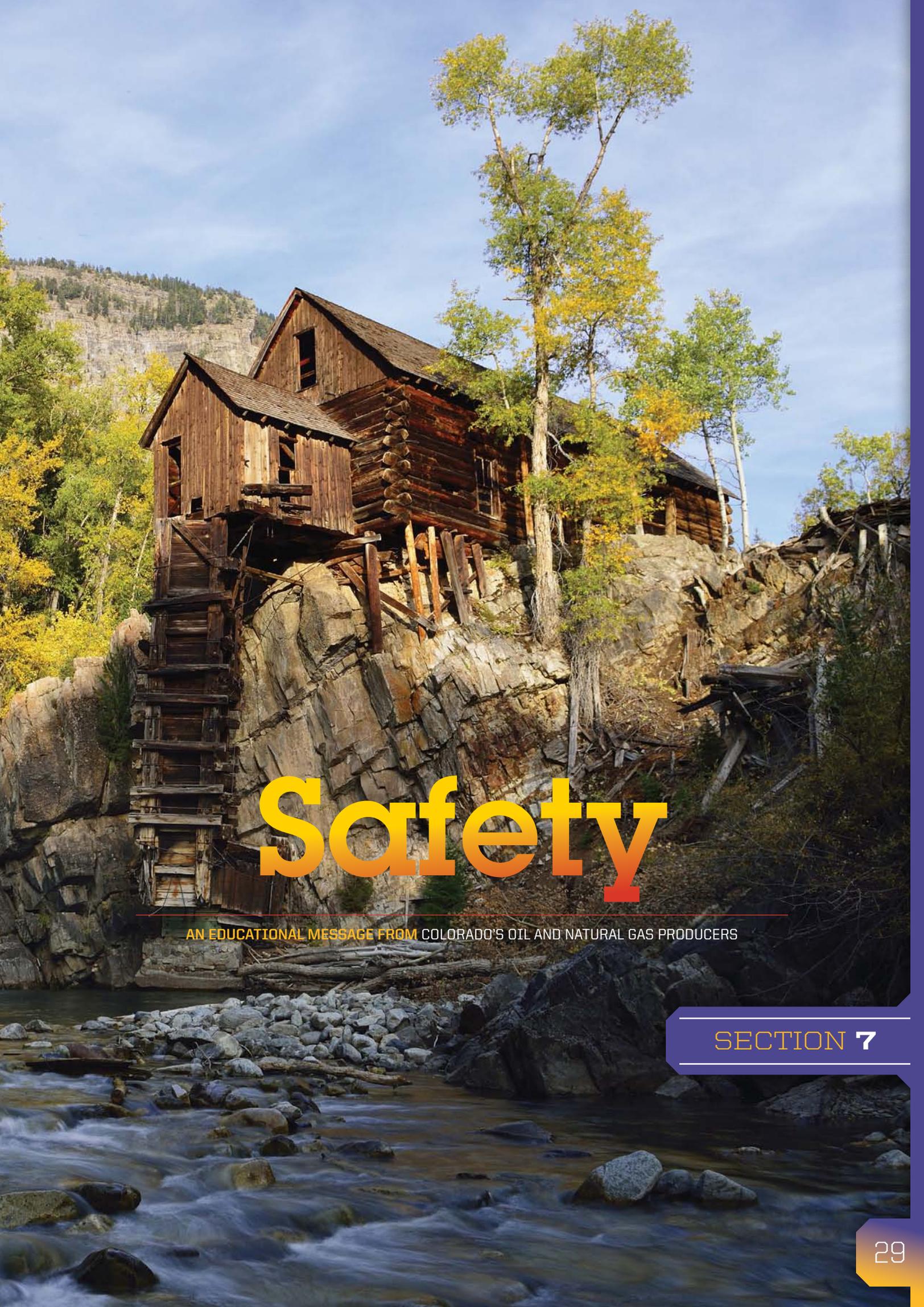
Federal Land Policy and Management Act (FLPMA), which requires the BLM to assess and allow “multiple use” on public lands

National Environmental Policy Act (NEPA)

Development and maintenance of Resource Management Plans, which specify how an overall area will be developed

Inspections to ensure approved projects comply with BLM regulations





Safety

AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS

SECTION 7

Protecting Our Communities

Colorado's oil and natural gas producers are committed to safe and responsible development in and near the communities where we live and operate. Protecting public health and ensuring safety in our communities are central to our operations.

The Colorado Oil and Gas Conservation Commission (COGCC) oversees many safety regulations designed to protect public health and safety during oil and natural gas operations. By regulation, nearby residents are notified early and provided an opportunity to comment before operations begin. Oil and natural gas producers agree that Coloradoans should be safe, involved and protected in our communities.

How Are Oil And Gas Producers Reducing Impacts On Local Communities During Operations?

Ensuring Safety in Communities: Oil and natural gas producers provide comprehensive training to all field employees, use automation equipment to quickly identify potential safety concerns early, implement comprehensive testing and inspection programs, and install safety equipment and liners under new tank batteries to reduce the effects of any potential spills.

Engaging Communities: In 2013, the COGCC approved rules that require oil and natural gas producers to engage homeowners to understand concerns before beginning operations. Producers encourage resident involvement and are committed to ensuring an open and transparent communication with communities.

During Operations



Do Oil And Natural Gas Producers Restore The Land After Wells Are Completed?

Yes. Land restoration, also called reclamation, is the process of bringing the land back to its original state, or better, prior to operations. These photos show examples of what a well looks during operations and during production years.

During Production Years



Reducing Truck Traffic: Oil and natural gas producers are reducing truck traffic by consolidating equipment locations away from communities, using automation to reduce trips to the well sites, installing safe and modern underground pipelines to transport oil and water instead of relying on trucks, and working with local governments and communities to reroute truck traffic away from sensitive areas.

Air Quality: Oil and natural gas producers are reducing emissions by installing vapor-recovery units, reducing truck traffic, using clean-burning natural gas in their own facilities, using solar panels to power equipment at wells sites, and expanding their use of natural gas-fueled fleet vehicles.

Reducing Impacts to Communities: Oil and natural gas producers use sound suppression techniques like hay bales to reduce noise near homes and mitigation measures to address light and dust. All field employees receive comprehensive training to reduce operations' impacts.

Each community has a Local Government Designee (LGD) assigned to represent local community interests and concerns during the COGCC's permit approval process. These LGDs help ensure that residents' issues and concerns are addressed prior to operations beginning. To find your Local Government Designee, visit www.cogcc.state.co.us.



Topsoil from locations must be preserved and returned to the site once well construction is complete and then again at the end of the well's productive life. (Please see COGCC 1100 Series Rules for details.)

Pipeline Safety

Pipelines play an integral role in transporting produced energy to processing locations. Whether they hold oil, natural gas, water, cable or electrical lines, pipelines are among the safest modes of transportation. Without pipelines, producers would have to transport products on the surface by trucks or railcar.

What Is Colorado 811?

It is extremely important for anyone planning an excavation project to know the location of pipelines before digging. In Colorado, anyone (including homeowners) digging near a pipeline is required to take specific safety measures before and during excavating.

Below are the required steps:

1.

Call 811 Before You Dig

2.

Wait the time required (two full business days not including the day the call was made) **to receive the locations of any underground pipelines and other facilities**

3.

Respect The Marks

4.

Dig With Care

VISIT COLORADO 811 AT WWW.CO811.ORG
FOR MORE INFORMATION ABOUT THIS.



LAW STATION

NOW OPEN



Benefits

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SECTION 8

Oil And Natural Gas: Fueling Colorado's Economy And Modern Living

Colorado's oil and natural gas producers are significant contributors to Colorado's economy and its diverse and vibrant business community.

Taxes and Royalties

Oil and natural gas production generated more than \$29.5 billion worth of economic activity in 2012 and contributed more than \$1.6 billion to Colorado coffers by way of state and local royalties, taxes, fees, and lease payments.

These taxes and public revenues support education, emergency responders, state outdoor and wildlife resources, road construction and upgrades to other important infrastructure, and many more public entities and projects across Colorado.

Fuel for Homes and Vehicles

In addition to providing significant financial support to Colorado's counties and treasuries, Colorado's oil and natural gas producers provide an essential product that fuels our modern society and maintains a high standard of living. Three out of four Colorado homes are heated by natural gas, nearly all of which is produced in-state. Colorado's oil production provides approximately 30 percent of the state's needs for transportation fuel.

Jobs

In addition to directly employing thousands of Coloradans, the industry also provides work for thousands of jobs in ancillary industries that rely on oil and natural gas development for business including welders, truckers, water recycling engineering firms, construction crews, environmental consulting firms, and many more.

In 2012, public revenue from the oil and natural gas producers totaled \$1.6 billion. According to Reed Construction Data, that is enough to build a new high school every week in Colorado.



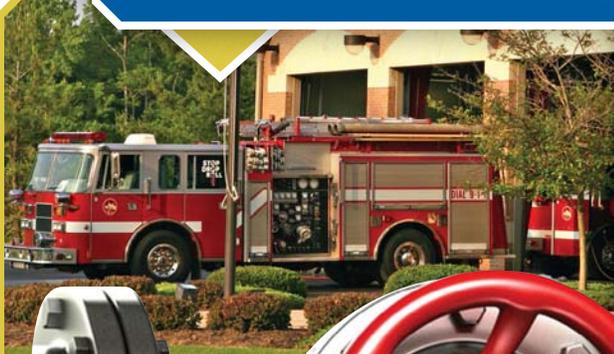
Colorado State Land Board (SLB) collects money from oil and natural gas royalties and lease bonus payments from state-owned lands. In 2012, the SLB directed more than \$130 million from oil and natural gas operations to school and education funds.



Keeping It Local

Of the many taxes oil and natural gas producers pay, the largest in Colorado is a property tax on the production value of a well. Unlike other taxes, property taxes stay in the county where the actual production occurs. Local governments collect hundreds of thousands of dollars in property taxes from oil and natural gas activities.

Property Tax Dollars Funded Many Critical Amenities And Public Services Including:



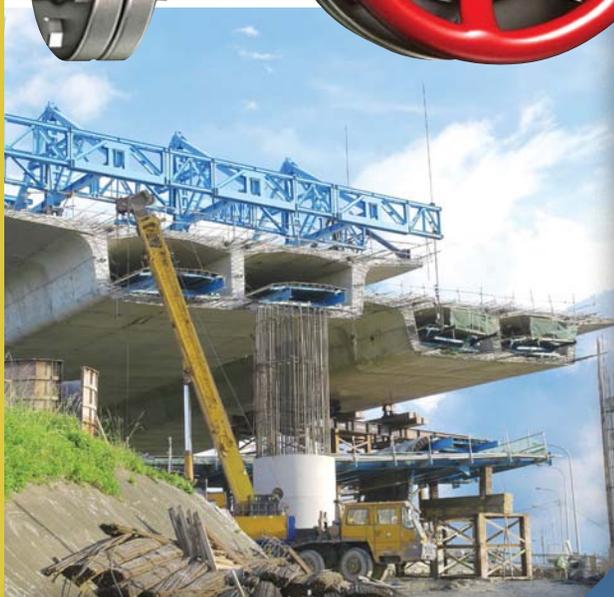
- Schools
- Cities and Towns
- Emergency Response
- Water and Sanitation Services
- Parks and Recreation
- Libraries and Cemeteries

See handout for specific local economic impact figures.



Statewide Benefits

Oil and natural gas producers also pay severance tax in Colorado. While property taxes are paid locally, severance taxes are collected and distributed by the state through the Department of Local Affairs (DOLA) and the Department of Natural Resources (DNR). DOLA distributions fund local grant projects like highway overpasses or telecommunications infrastructure improvements as well as direct funding to counties and municipalities. Severance taxes disbursed by DNR fund various agencies and commissions within DNR itself, including parks and wildlife programs and the Perpetual Fund used to finance loans for state water projects administered by the Colorado Water Conservation Board.



Department Of Natural Resources Agencies Funded By Severance Taxes



PETROLEUM: ESSENTIAL FOR COLORADOAN'S WAY OF LIFE

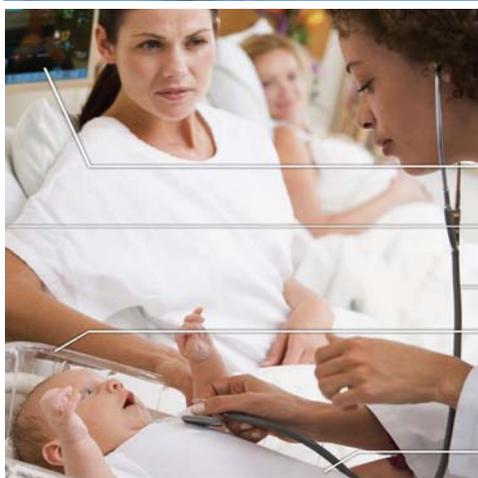
Petroleum In Action



- Helmet
- Sunglasses
- Earphones
- Shorts/Jersey
- Gloves
- Water Bottle
- Brakes
- Bike Tire/Tube
- Shoes
- Chain Lubricant



- Ski Lift Seat
- Goggles
- Lip Balm
- Ski Poles
- Sunscreen
- Ski Clothes (Outer & Base Layer)
- Ski Boots
- Skis



- Monitoring Equipment
- Bed
- Stethoscope
- Baby Carrier
- Petroleum Jelly

Improving Our Lives



- Helmet
- Rope
- Artificial Grass
- Safety Harness
- Climbing Hold
- Climbing Shoes

HELPFUL RESOURCES

America's Natural Gas Alliance www.anga.us

Colorado Oil & Gas Association www.coga.org

Western Energy Alliance www.westernenergyalliance.org

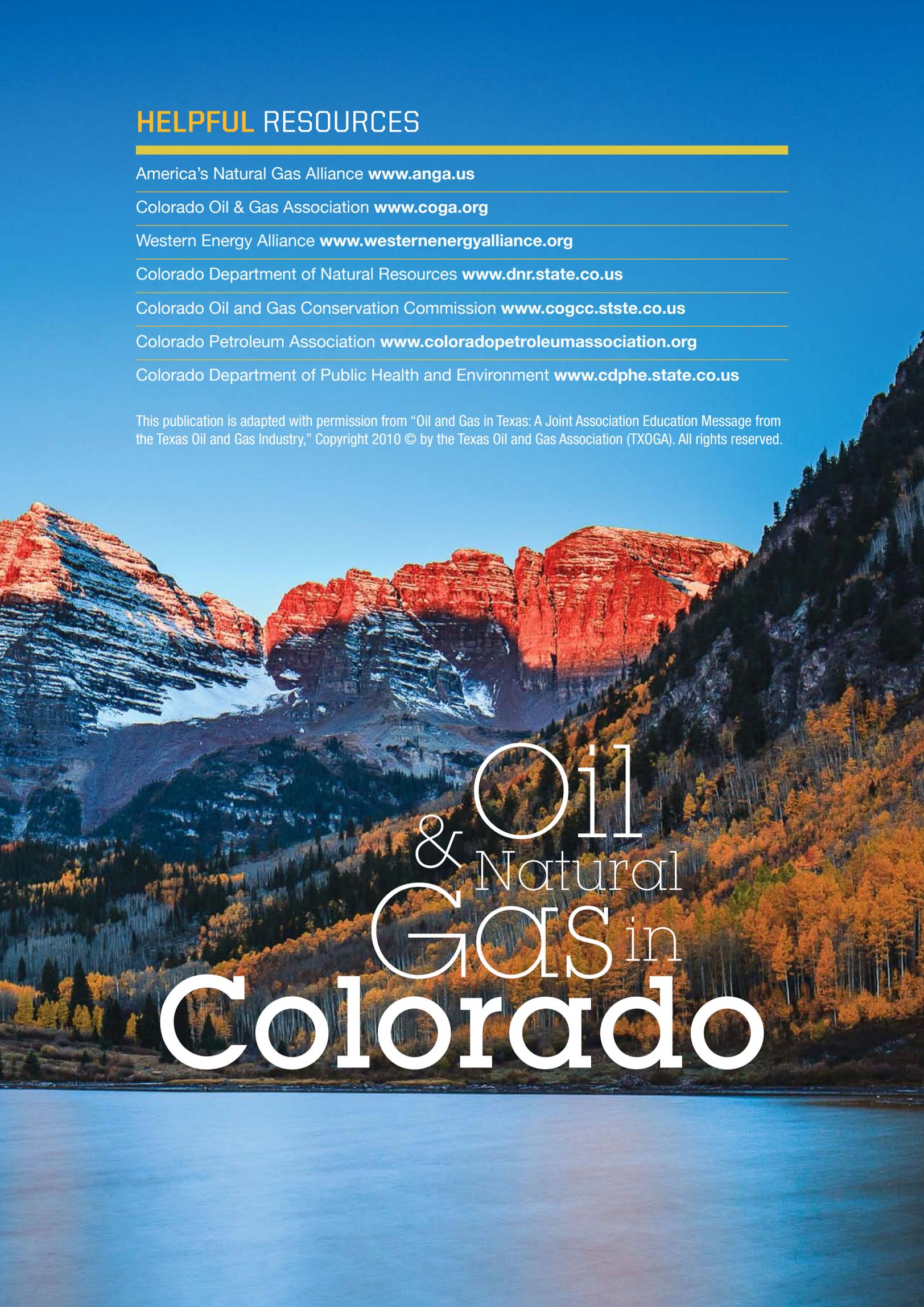
Colorado Department of Natural Resources www.dnr.state.co.us

Colorado Oil and Gas Conservation Commission www.cogcc.state.co.us

Colorado Petroleum Association www.coloradopetroleumassociation.org

Colorado Department of Public Health and Environment www.cdphe.state.co.us

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Oil & Natural GAS in Colorado



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AN EDUCATIONAL MESSAGE FROM COLORADO'S OIL AND NATURAL GAS PRODUCERS

