

Library Presentation on Regulations

BEE 4750

Fall 2022



Mel Jensen - Mann Library - mj533@cornell.edu



- ▶ Pick a topic of interest within the environment or natural resources arena.
- ▶ Identify a regulation within that subject area.
- ▶ Summarize the history of the regulation. Why did it come into existence?
- ▶ What is the current state of the regulation? What feedback has there been on its potential or real impact?
- ▶ How would the regulation impact the system model you have identified? What changes would need to be made, etc.?

The Rulemaking Process

- ▶ A proposed bill is passed by the Senate **AND** the House of Representatives.
- ▶ Goes to the President to sign. If s/he does sign, it becomes law (known as an Act).
- ▶ The House of Representatives then standardizes the language and it becomes part of the U.S. Code.
- ▶ **ALTERNATE ROUTE:** President issues an Executive Order! Rest of process is the same.
- ▶ There are A LOT of details that need to be worked out in terms of how the law will be applied (what is legal and what is not, definitions).
- ▶ So the Act is sent to one or more federal agencies to decide how it will be implemented.
- ▶ **Examples of federal administrative agencies:**
Department of Agriculture (USDA)
Environmental Protection Agency (EPA)
Department of Interior (DOI)

More steps in rulemaking...

- ▶ The agency does research to decide if a regulation is needed.
- ▶ If it is, the agency develops a **Proposed Rule**. The proposed rule is posted in the *Federal Register* and made available for **public comment**.
- ▶ Comments often result in the proposal being modified or discarded.
- ▶ After the proposed rule is modified, it becomes a **Final Rule**.
Added to the *Federal Register* and the *Code of Federal Regulations*.
It is **Final Law**.
But regulations DO get revised!
- ▶ For further explanation see:
https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf

1 Pre Rule Stage

Origins of a rule

An agency cannot issue a Rule unless granted authority to do so by law.

Alternative actions

Before the rulemaking process, an agency evaluates possible alternative solutions to a rulemaking and determines whether the benefits of the regulation justify the costs. Agencies will typically submit an "Advanced Notice of Proposed Rulemaking" to the Federal Register for the public to view at <http://www.federalregister.gov>. This notice allows the public the opportunity to comment on whether or not a rulemaking should be initiated.

[Read More](#) ▼

2 Proposed Rule Stage

Notice of Proposed Rulemaking

After an agency researches the issues and determines whether a new Rule is necessary, it often proposes a regulation, also known as a Notice of Proposed Rulemaking (NPRM). Typically these proposals are published in the Federal Register (FR) and made publicly available in print and on-line at <http://www.federalregister.gov> so that they are readily accessible to the public.

[Read More](#) ▼

3 Final Rule Stage

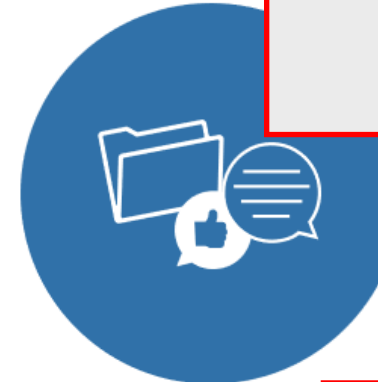
Post-comment period

After the comment period closes, the agency reviews all comments received and conducts a comment analysis. Then agencies decide whether to proceed with the rulemaking process or issue a new or modified proposal. In some cases they withdraw the proposal.

[Read More](#) ▼



- ✓ Unified Agenda (U.S. Code)
- ✓ Federal Register



- ✓ Federal Register
- ✓ Agency website
- ✓ Regulations.gov



- ✓ Federal Register
- ✓ Code of Federal Regulations (official)

What is the Federal Register?

Published every weekday by the Government Printing Office

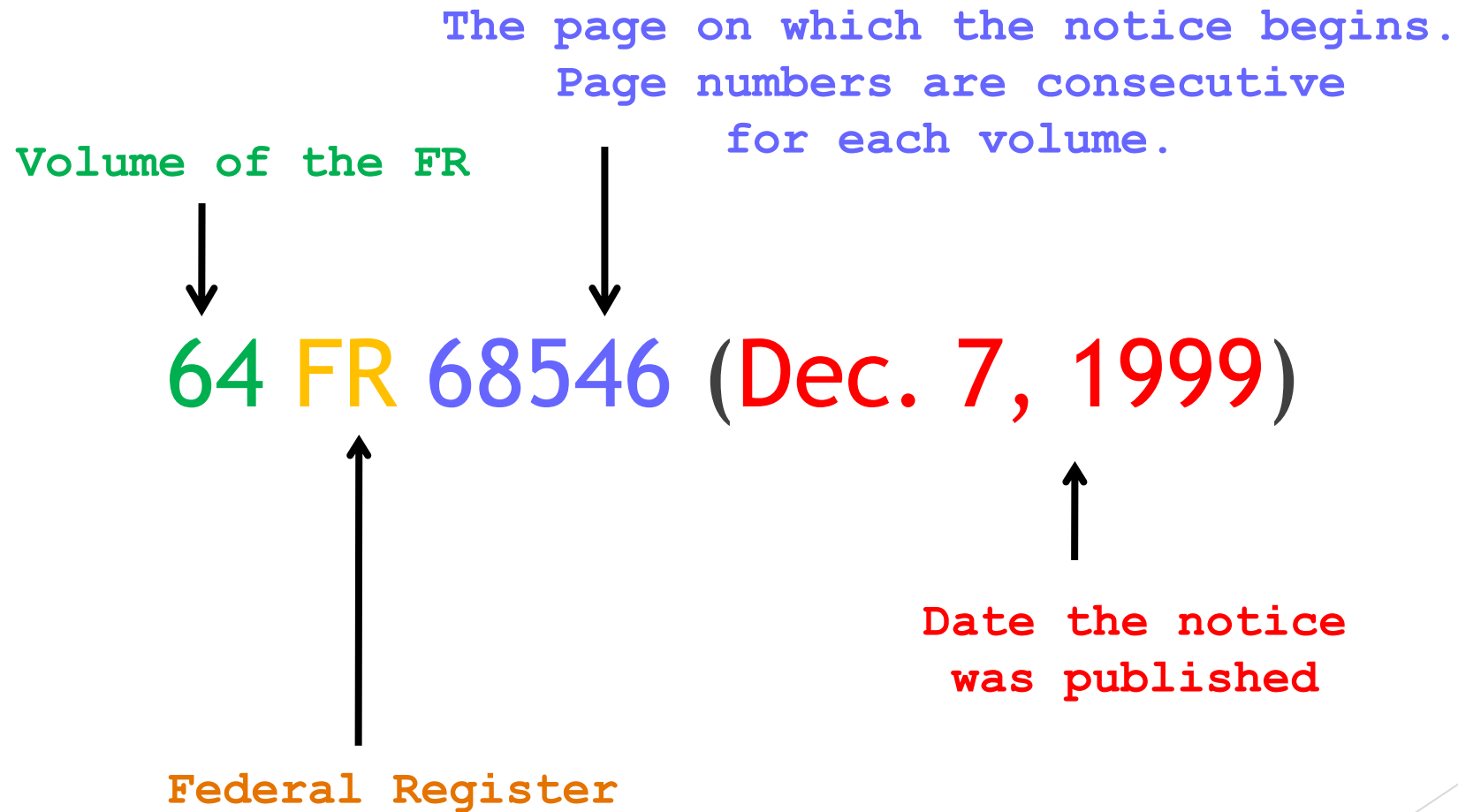
Includes all **Agency** actions taken the previous day

Includes **Proposed (in process) Rules**

Includes **Public Notices (for comments)**

Includes **Final Rules**

How to Read a Federal Register Citation



Page number

68546

Federal Register / Vol. 64, No. 234 / Tuesday, December 7, 1999 / Rules and Regulations

CFR parts impacted by the regulation

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9, 144, 145 and 146

[FRL-6482-2]

RIN 2040-AB83

Volume

Date

Regulation Identifier Number

Revisions to the Underground Injection Control Regulations for Class V Injection Wells

Title of the Regulation

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today the Environmental Protection Agency (EPA) is announcing revisions to the Class V Underground Injection Control (UIC) regulations. This rule adds new requirements for two categories of endangering Class V wells to ensure protection of underground sources of drinking water. In particular, it: bans existing motor vehicle waste disposal wells in ground water protection areas

and other sensitive ground water resources with a provision that allows owners and operators to seek a waiver from the ban and obtain a permit; and bans new motor vehicle waste disposal wells and new and existing large-capacity cesspools nationwide. The preamble also discusses EPA's decision to postpone finalization of new rule. EPA believes it would be worthwhile to further study this well category and will finalize the rule for industrial wells at a later date.

DATES: This rule will be effective April 5, 2000.

ADDRESSES: The rule and supporting documents, including public comments and EPA responses, are available for review in the UIC Class V W-98-05 Water Docket at the U.S. Environmental Protection Agency; 401 M Street, SW., EB57, Washington, D.C. 20460. For information on how to access Docket materials, please call (202) 260-3027

between 9 a.m. and 3:30 p.m. Eastern Time, Monday through Friday.

FOR FURTHER INFORMATION CONTACT: For general information, contact the Safe Drinking Water Hotline, phone 800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time. For technical inquiries, contact Robyn Delehanty, Underground Injection Control Program, Office of Ground Water and Drinking Water (mailcode 4606), EPA, 401 M Street, SW., Washington, DC, 20460. Phone: 202-260-1993. E-mail: delehanty.robyn@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: *Regulated Entities:* Although certain clarifications to the UIC regulations apply to owners or operators of any type of Class V well, the entities regulated by additional requirements are owners or operators of Class V motor vehicle waste disposal wells and large-capacity cesspools. Potentially regulated categories and entities include:

Category	Examples of regulated entities (if they have a Class V well)
Industry and Commerce	<i>Motor Vehicle Facilities:</i> gasoline service stations, new and used car dealers, any facility that does any vehicle repair work (e.g., body shops, transmission repair shops, and muffler repair shops). <i>Large-Capacity Cesspools:</i> residential or commercial facilities such as campgrounds, multi-unit residences, churches, schools.
State and Local Government	<i>Motor Vehicle Facilities:</i> road facilities, fire stations. <i>Large-Capacity Cesspools:</i> campgrounds, rest stops.
Federal Government	Any Federal Agency that owns or operates one of the above entities.

This table is not intended to be exhaustive, but rather provides a guide

B. National Drinking Water Advisory Council
C. Notice of Data Availability

3. Assessments for Ground Water Protection Areas Completed Before UIC Primary Revisions are Approved

IMPORTANT:

To assist your research, make note of important citations including the **Federal Register** citation, the **CFR** parts and the **RIN** (Regulation Identifier Number).

Knowing the **date** that the regulation went into effect is also important. It provides you with context for broader research.

What is the Code of Federal Regulations (CFR)?

Official document for all regulations and their related parts and specifications.

Divided into **50 titles** - general topic areas.

Each title is divided into **chapters** (a chapter usually relates to a specific government agency). Chapters are sometimes referred to as PARTS.

Each chapter (part) is divided into **sections and subsections** - provide specifics about the regulation.

Changes to regulations are made throughout the year.

Sometimes there are very minor changes to multiple parts!
The CFR is a living document.

Regulations relating to the environment can appear in a number of CFR titles.

Published once per year according to a schedule.

- Titles 1-16 are updated as of January 1st
- Titles 17-27 are updated as of April 1st
- Titles 28-41 are updated as of July 1st
- Titles 42-50 are updated as of October 1st

A full set of the CFR consists of approximately 200 volumes. The approximately 200 CFR volumes are revised at least once a year on a quarterly basis.

<ul style="list-style-type: none">• Titles 1–16 are updated on January 1• Titles 17–27 are updated on April 1	<ul style="list-style-type: none">• Titles 28–41 are updated on July 1• Titles 42–50 are updated on October 1
<ul style="list-style-type: none">• Title 1 – General Provisions• Title 2 – Grants and Agreements• Title 3 – The President• Title 4 – Accounts• Title 5 – Administrative Personnel• Title 6 – Domestic Security• Title 7 – Agriculture• Title 8 – Aliens and Nationality• Title 9 – Animals and Animal Products• Title 10 – Energy• Title 11 – Federal Elections• Title 12 – Banks and Banking• Title 13 – Business Credit and Assistance• Title 14 – Aeronautics and Space• Title 15 – Commerce and Foreign Trade• Title 16 – Commercial Practices• Title 17 – Commodity and Securities Exchange• Title 18 – Conservation of Power and Water Resources• Title 19 – Customs Duties• Title 20 – Employees' Benefits• Title 21 – Food and Drugs• Title 22 – Foreign Relations• Title 23 – Highways• Title 24 – Housing and Urban Development• Title 25 – Indians• Title 26 – Internal Revenue• Title 27 – Alcohol, Tobacco Products and Firearms	<ul style="list-style-type: none">• Title 28 – Judicial Administration• Title 29 – Labor• Title 30 – Mineral Resources• Title 31 – Money and Finance: Treasury• Title 32 – National Defense• Title 33 – Navigation and Navigable Waters• Title 34 – Education• Title 35 – [RESERVED]• Title 36 – Parks, Forests, and Public Property• Title 37 – Patents, Trademarks, and Copyrights• Title 38 – Pensions, Bonuses, and Veterans' Relief• Title 39 – Postal Service• Title 40 – Protection of Environment• Title 41 – Public Contracts and Property Management• Title 42 – Public Health• Title 43 – Public Lands: Interior• Title 44 – Emergency Management and Assistance• Title 45 – Public Welfare• Title 46 – Shipping• Title 47 – Telecommunication• Title 48 – Federal Acquisition Regulations System• Title 49 – Transportation• Title 50 – Wildlife and Fisheries



Code of Federal Regulations

A point in time eCFR system



Title 40

Displaying title 40, up to date as of 9/22/2022. Title 40 was last amended 9/22/2022. [view historical versions](#)

Go to CFR Reference

Go

Title 40 / Chapter I / Subchapter D / Part 146

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ECFR CONTENT

Table of Contents

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Compare

ENHANCED CONTENT - TABLE OF CONTENTS

▼ Part 146	Underground Injection Control Program: Criteria and Standards	146.1 – 146.95
▼ Subpart A	General Provisions	146.1 – 146.10
§ 146.1	Applicability and scope.	
§ 146.2	Law authorizing these regulations.	
§ 146.3	Definitions.	
§ 146.4	Criteria for exempted aquifers.	
§ 146.5	Classification of injection wells.	
§ 146.6	Area of review.	
§ 146.7	Corrective action.	
§ 146.8	Mechanical integrity.	
§ 146.9	Criteria for establishing permitting priorities.	
§ 146.10	Plugging and abandoning Class I, II, III, IV, and V wells.	
▼ Subpart B	Criteria and Standards Applicable to Class I Wells	146.11 – 146.16
§ 146.11	Criteria and standards applicable to Class I nonhazardous wells.	
§ 146.12	Construction requirements.	
§ 146.13	Operating, monitoring and reporting requirements.	

How to Read a CFR Citation

Title of
the CFR

Symbol
for
section

Section

40 CFR § 146.10

Code of
Federal
Regulations

Part

We are going to learn more about using the *Federal Register* and the *Code of Federal Regulations* later, but first let's figure out how to get there....




- ▶ Before you can move forward with this project, you are going to first need to identify the topic that you will be researching.
- ▶ You may already have an idea from class discussions or personal experience.
- ▶ But, if you haven't narrowed your topic, here are some first steps.

You can find background information by searching the [Cornell library catalog](#).
Do a general search like the following to get started:

environmental policy
environment legislation
wildlife legislation

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[ADVANCED SEARCH](#)


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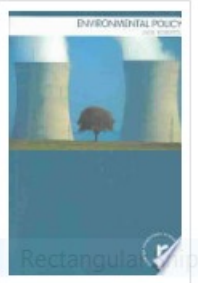
1. [Environmental policy](#) 2004

Roberts, Jane, 1954-

 Book London ; New York : Routledge, 2004. English.

✓ [Online](#)

☐ Select



Too many results? Narrow your search by putting quotation marks around a phrase -
"environmental policy"

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Subject: **environmental policy** ✕

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At the Library

13,139

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8,276

Format

16448 catalog results 

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Sort by relevance ▾

20 per page ▾

☐ Select all

1. [Breaking boundaries : innovative practices in environmental communication and public participation](#) 2019

 Book Albany : SUNY/State University of New York Press, [2019] English.

✓ Mann Library GE170 .B735 2019

☐ Select



2. [Environmental expertise : connecting science, policy, and society](#) 2019

New York, NY, USA : Cambridge University Press, 2019. English.

☐ Select



You also have the option to limit results to a certain publication year or even to just online items. Just click on the **filters on the left**.

If you know your topic you can be more specific in your search.

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All Fields



[ADVANCED SEARCH](#)

Start over

All Fields: **policy fracking** ✕

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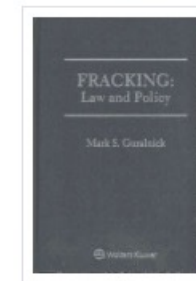
1. [Fracking : law and policy](#) 2016

Guralnick, Mark S., 1957- author

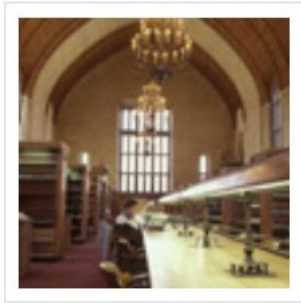
Book New York : Wolters Kluwer, [2016] English.

✓ Law Library (Myron Taylor Hall) KF1849 .G87 2016

☐ Select



Remember - you can request a book from one library to be delivered to another -- for contactless pickup!
Allow one day for this - longer on the weekend.



[Law Library.](#)

Reference: (607) 255-3242

Circulation: (607) 255-7236

lawref@cornell.edu | [Full hours](#)



[Mann Library.](#)

Reference: (607) 255-3296

Circulation: (607) 255-3296

mann-ref@cornell.edu | [Full hours](#)

And, of course, you can do a Google search to get background information.

“environmental regulation”

“environmental legislation”



“clean air act” history

“clean water act” history

<https://www.sciencedirect.com/topics/environmental-re...>

[Environmental Regulation - an overview | ScienceDirect Topics](#)

Environmental regulation is necessary. It can prevent the worst excesses, and the existence of regulation and enforcement is itself an important deterrent.

<https://www.oecd.org/env/outreach> PDF

[Implementing Environmental Regulation: Enforcement and ...](#)

by A Heyes · Cited by 330 — The enforcement dimension of **environmental regulation** has been widely studied, as the (far from exhaustive) bibliography to this paper attests. The aim here is ...
32 pages



fracking federal regulation



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About 930,000 results (0.52 seconds)

How is fracking regulated?

(e) Prohibition. —**Beginning on January 1, 2025, the practice of hydraulic fracturing for oil and natural gas is prohibited on all onshore and offshore land in the United States.**

Jan 28, 2020

<https://www.congress.gov> › [bill](#) › [senate-bill](#) › [text](#) ⋮

[Text - S.3247 - 116th Congress \(2019-2020\): Fracking Ban Act](#)

Who regulates fracking?

Oil and gas development is primarily regulated under **eight federal environmental and public health laws**. These laws apply to drilling and hydraulic fracturing from unconventional sources. However, exemptions or limitations exist within many of these laws which affect the applicability of federal law.

<https://www.watershedcouncil.org> › [hydraulic-fracturin...](#) ⋮

[Hydraulic Fracturing - Regulations and Exemptions](#)

Already have ideas for a topic?

Combine your topic with the word “regulation” or the phrase: “federal regulation”



fracking federal regulation .gov



All

News

Images

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Shopping

More

About 41,600 results (0.50 seconds)

<https://www.epa.gov> › uog



Unconventional Oil and Natural Gas Development | US EPA

Aug 1, 2022 — The regulations prohibit **discharges** of wastewater pollutants from onshore unconventional oil and natural gas (UOG) extraction facilities to ...

<https://www.congress.gov> › bill › senate-bill › text



Text - S.3247 - 116th Congress (2019-2020): Fracking Ban Act

Jan 28, 2020 — Introduced in Senate (01/28/2020) To ban the practice of hydraulic **fracturing**, and for other purposes. To ban the practice of hydraulic ...

People also ask



Are there federal regulations on fracking?

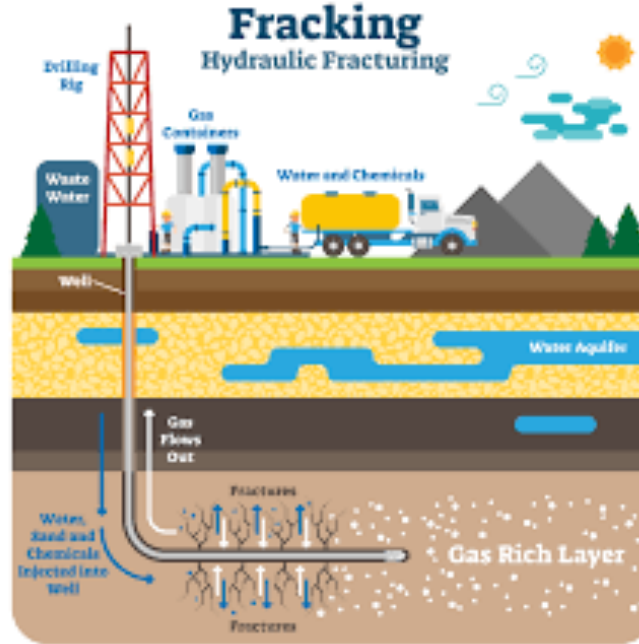


How is fracking regulated in the US?



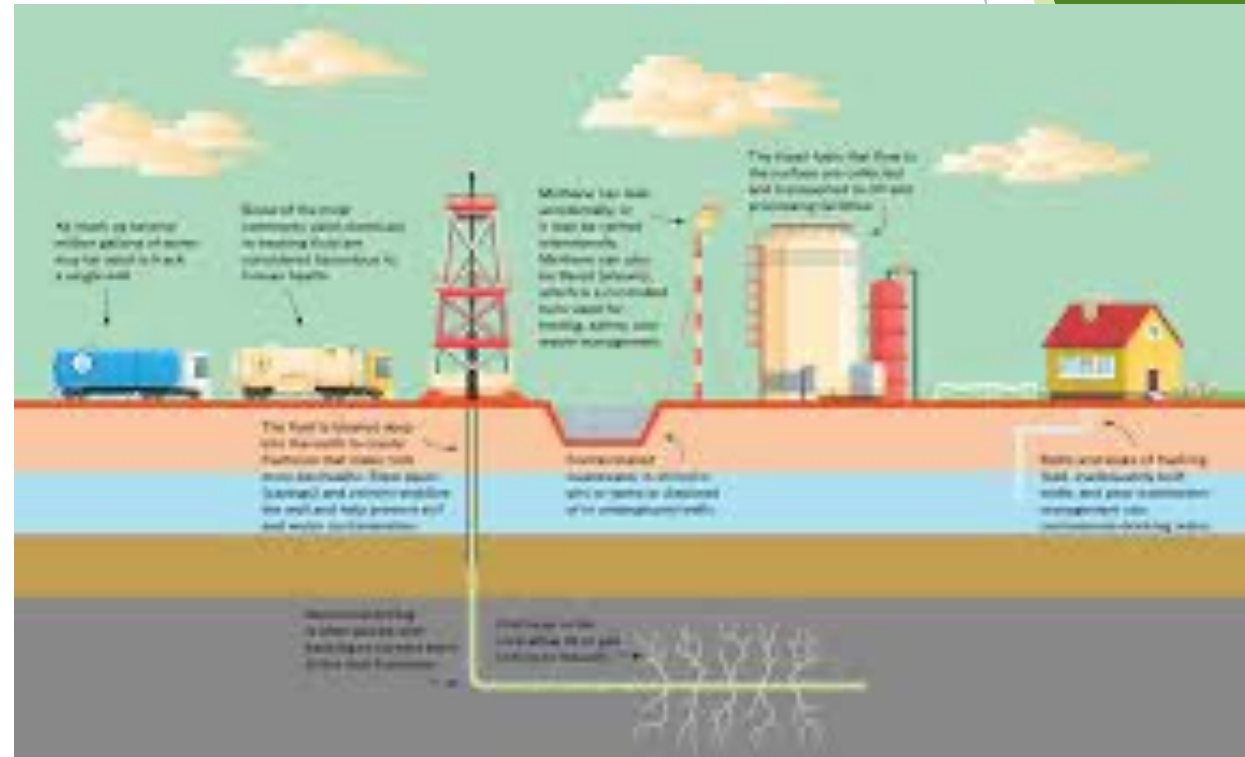
Add the .gov domain name to the search if you want to narrow to government sources.

And use Google Images as one source to find system diagrams.



www.investopedia.com/terms/f/fracking.asp

As you do your research, make note of technical terms - fracking is short for **Hydraulic Fracturing**.



<https://www.nrdc.org/stories/fracking-101>

Let's go back to this search and look at some of the results - and follow the leads.



federal regulation fracking



All



News



Images



Maps



Videos



More

Tools

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<https://www.congress.gov/bill/senate-bill/text>

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<https://www.watershedcouncil.org/hydraulic-fracturing>

[Hydraulic Fracturing - Regulations and Exemptions](#)

The first link looks as if fracking has been banned, BUT this is only a bill introduced to the Senate by Bernie Sanders in 2020. The bill did not come up for a vote and **there is no ban.**

(e) Prohibition. —**Beginning on January 1, 2025, the practice of hydraulic fracturing for oil and natural gas is prohibited on all onshore and offshore land in the United States.** Jan 28, 2020

<https://www.congress.gov> › bill › senate-bill › text

Text - S.3247 - 116th Congress (2019-2020): Fracking Ban Act

CONGRESS.GOV Advanced Searches Browse Legislation

Legislation Examples: hr5, sres9, "health care" MORE OPTIONS

Home > Legislation > 116th Congress > S.3247

S.3247 - Fracking Ban Act

116th Congress (2019-2020)

BILL Hide Overview

Sponsor: [Sen. Sanders, Bernard \[I-VT\]](#) (Introduced 01/28/2020)

Committees: Senate - Energy and Natural Resources

Latest Action: Senate - 01/28/2020 Read twice and referred to the Committee on Energy and Natural Resources. ([All Actions](#))

Tracker: **Introduced**

The 3rd link goes to the Federal Register and the rescission of a 2015 Rule.

Rescinded due to an executive order by President Trump in 2017 who stated that the regulations would be too burdensome on the gas and oil industry.



Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule

A Rule by the [Land Management Bureau](#) on 12/29/2017



PUBLISHED DOCUMENT

Start Printed Page 61924

AGENCY:
Bureau of Land Management, Interior.

ACTION:
Final rule.

SUMMARY:
On March 26, 2015, the Bureau of Land Management (BLM) published in the **Federal Register** a final rule entitled, "Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands" (2015 rule). With this final rule, the BLM is rescinding the 2015 rule because we believe it imposes administrative burdens and compliance costs that are not justified. This final rule returns the affected sections of the Code of Federal Regulations (CFR) to the language that existed immediately before the published effective date of the 2015 rule (June 24, 2015), except for changes to those regulations that were made by other rules published

DOCUMENT DETAILS

Printed version:
[PDF](#)

Publication Date:
12/29/2017

Agencies:
[Bureau of Land Management](#)

Dates:
This final rule is effective on December 29, 2017.

Effective Date:
12/29/2017

Document Type:
Rule

Document Citation:
82 FR 61924

Page:
61924-61949 (26 pages)

CFR:
16 CFR 5.100

Federal laws provide some basic protections from oil and gas development activities. For example, the federal Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) protect surface waters and groundwater from contamination and wastewater disposed of in injection wells are regulated to ensure that injected fluid does not endanger drinking water sources. However, in six of the federal laws, there are exemptions or limitations in regulatory coverage for preventative programs. These exemptions do not limit EPA's overall authority under federal environmental and public health laws to respond to environmental contamination, but there is less oversight of oil and natural gas development as a result.

The second link goes to the **Watershed Council of Michigan** - nonprofit organization that is anti-fracking. The page outlines some of the federal regulation relating to fracking - there isn't much!


Most of the regulation is under the major environmental acts of the 1970s and 1980s.

Federal Law	Applicable to Oil and Gas Development	Exemptions or Limitations	Source of Exemption Exemption or Limitation
Safe Drinking Water Act	<ul style="list-style-type: none"> Underground Injection Control Program Imminent and Substantial Endangerment Provision 	<ul style="list-style-type: none"> Hydraulic fracturing fluids other than diesel fuels do not require Underground Injection Control Permit 	Statutory – 2005 Energy Policy Act
Clean Water Act	<ul style="list-style-type: none"> National Pollutant Discharge Elimination System program Spill reporting and spill prevention and response planning requirements 	<ul style="list-style-type: none"> Federal stormwater permits not required for uncontaminated stormwater at oil and gas construction or well sites 	Statutory - 1987 Water Quality Act and 2005 Energy Policy Act
Resource Conservation and Recovery Act	<ul style="list-style-type: none"> Non-exempt wastes present at well sites may be regulated as hazardous Imminent and Substantial Endangerment Provision 	<ul style="list-style-type: none"> Oil and gas exploration and production wastes not regulated as hazardous waste 	1988 Regulatory/EPA decision
Comprehensive Environmental Response, Compensation, and Liability Act	<ul style="list-style-type: none"> Hazardous substance release reporting Imminent and Substantial Endangerment Provision for releases of a pollutant or contaminant 	<ul style="list-style-type: none"> Liability and reporting provisions do not apply to injections of fluids authorized by state law for production, enhanced recover, or produced water Petroleum releases not covered 	Statutory – 1980
Emergency Planning and Community Right-to-Know Act	<ul style="list-style-type: none"> Reporting on use, inventories, and releases into the environment of hazardous and toxic chemicals above threshold quantities 	<ul style="list-style-type: none"> Oil and gas well operations not required to report releases of listed chemicals to Toxics Release Inventory 	1997 Regulatory/EPA decision

Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act is the main federal law that ensures the quality of Americans' drinking water. EPA regulates the injection of fluids underground through the Underground Injection Control (UIC) Program. In 2005, the Energy Policy Act amended SDWA to specifically exempt hydraulic fracturing from the UIC program, except in instances where diesel fuel is injected as part of the hydraulic fracturing. Therefore, the process of injecting fracturing fluid into the target formation as part of oil or gas production is exempt from these requirements unless the fluid contains diesel. [SEP]

While fracking fluids are exempt under SWDA, wastewater from oil and gas operations, flowback and produced water, are not exempt if disposed of in deep injection wells. Wells used for the disposal of waste fluids associated with oil and production, including produced water, are Class II wells. UIC regulations include minimum federal requirements for most Class II wells including obtaining a permit from the EPA or state, demonstrating that casing and cementing are adequate, and passing an integrity test prior to beginning operation of the injection well and at least once every 5 years.



Class II Wells — *Injection wells associated with oil and gas production.*

Purpose: Regulate and manage safe injection (1) of fluid brought to the surface in connection with oil and gas production and some natural gas storage operations, (2) for enhanced recovery of oil or natural gas, or (3) for hydrocarbon storage operations. Prohibit movement of fluids into USDWs.

Examples of Fluids:

- Produced high salinity brine.
- Crude oil (for storage).
- Polymers and viscosifiers for enhanced recovery wells.
- Drilling fluids and muds.

Protective Requirements:

Construction and siting

- Cased and cemented to prevent movement of fluids into USDWs.
- Construction and design of well (casing, tubing and packer) varies.

Monitoring and Testing

- Internal/external mechanical integrity testing.
- Periodic monitoring and reporting.

Recordkeeping and Reporting

- Plan for safe plugging and abandoning of wells, including demonstration of financial responsibility.

Regulatory Citations:

- 40 CFR 144 Subparts A – E
- 40 CFR 146 Subparts A and C

Source: EPA Protecting Drinking Water Through Underground Injection Control: UIC Pocket Guide

This summary of the relationship between the Safe Drinking Water Act (SDWA) and fracking mentions two helpful leads -

The Underground Injection Control (UIC) Program and

Regulatory Citations - 40 CFR 146 Subparts A and C

Protecting Underground Sources of Drinking Water from Underground Injection (UIC)



Following the link in the article, I can get more information on Underground Injection Control from the EPA website.

The EPA site has a wealth of information on environmental regulations!!!

UIC Topics in the Spotlight

UIC Well Classes



- [Class I industrial and municipal waste disposal wells](#)
- [Class II oil and gas related injection wells](#)
- [Class III solution mining wells](#)
- [Class IV shallow hazardous and radioactive waste injection wells](#)
- [Class V wells that inject non-hazardous fluids into or above underground sources of drinking water](#)
- [Class VI geologic sequestration wells](#)
 - [Geologic Sequestration of Carbon Dioxide - Underground Injection Control Manual for UIC Program Directors](#)

Related Activities



- [Aquifer recharge and aquifer storage and recovery](#)
- [Aquifer exemptions](#)
- [Financial responsibilities](#)
 - [Revised guidance "Federal Financial Responsibility Demonstrations for Owners or Operators of Class II Oil- and Gas-Related Injection Wells"](#)
- [National Technical Workgroup](#)

About UIC Wells



- [Basic information](#)
- [UIC program primary enforcement responsibility](#)
 - [New Mexico Class I program revision](#)
 - [Michigan Class II primacy](#)
- [Compliance reporting requirements and 7520 forms for well operators and state regulators](#)
- [Grants](#)
- [UIC regulations](#)
- [Injection well inventory](#)

I can get more information on oil and gas related injection wells here.



Environmental Topics ▾

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Underground Injection Control (UIC)

[CONTACT US](#)

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[Class I Industrial and
Municipal Waste Disposal
Wells](#)

[Class II Oil and Gas Related
Injection Wells](#)

[Class III Injection Wells for
Solution Mining](#)

[Class IV Shallow Hazardous
and Radioactive Injection
Wells](#)

[Class V Wells for Injection of
Non-Hazardous Fluids into or
Above Underground Sources
of Drinking Water](#)

[Class VI Wells Used for
Geologic Sequestration of
CO₂](#)

General Information About Injection Wells

On this page:

- [Definition of injection well](#)
- [UIC Well classes](#)
- [Use of injection wells](#)
- [Categories of injection wells](#)
- [UIC fact sheet](#)
- [EPA regulation of injection wells](#)
- [Technical and program guidance](#)
- [Definition of underground sources of drinking water](#)
- [Protecting drinking water resources](#)
- [Regulating agency](#)

Scroll through the article or
follow the outline links.
Information on regulations
at the end of the article.

Definition of injection well

Code of Federal Regulations

Title 40 - Protection of Environment

Volume: 23

Date: 2014-07-01

Original Date: 2014-07-01

Title: PART 146 - UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS

Context: Title 40 - Protection of Environment. CHAPTER I - ENVIRONMENTAL PROTECTION AGENCY (CONTINUED). SUBCHAPTER D - WATER PROGRAMS (CONTINUED).

Pt. 146

PART 146—UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS

Subpart A—General Provisions

Sec.

146.1	Applicability and scope.
146.2	Law authorizing these regulations.
146.3	Definitions.
146.4	Criteria for exempted aquifers.
146.5	Classification of injection wells.
146.6	Area of review.
146.7	Corrective action.
146.8	Mechanical integrity.
146.9	Criteria for establishing permitting priorities.
146.10	Plugging and abandoning Class I-III wells.

The Code of Federal Regulations sets out detailed criteria, standards, etc.



Subpart B—Criteria and Standards Applicable to Class I Wells

146.11	Criteria and standards applicable to Class I nonhazardous wells.
146.12	Construction requirements.
146.13	Operating, monitoring and reporting requirements.
146.14	Information to be considered by the Director.
146.15	Class I municipal disposal well alternative authorization in certain parts of Florida.
146.16	Requirements for new Class I municipal wells in certain parts of Florida.

Subpart C—Criteria and Standards Applicable to Class II Wells

The subsections of regulations will outline more specific requirements.

In this example, make note of the methods for placement of cement plugs.

You can follow up on this when designing your system model.

§ 146.10 Plugging and abandoning Class I, II, III, IV, and V wells.

(a) Requirements for Class I, II and III wells.

- (1)** Prior to abandoning Class I, II and III wells, the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. The Director may allow Class III wells to use other plugging materials if the Director is satisfied that such materials will prevent movement of fluids into or between underground sources of drinking water.
- (2)** Placement of the cement plugs shall be accomplished by one of the following:
 - (i)** The Balance method;
 - (ii)** The Dump Bailer method;
 - (iii)** The Two-Plug method; or
 - (iv)** An alternative method approved by the Director, which will reliably provide a comparable level of protection to underground sources of drinking water.
- (3)** The well to be abandoned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director, prior to the placement of the cement plug(s).
- (4)** The plugging and abandonment plan required in [40 CFR 144.51\(o\)](#) and [144.52\(a\)\(6\)](#) shall, in the case of a Class III project which underlies or is in an aquifer which has been exempted under [§ 146.04](#), also demonstrate adequate protection of USDWs. The Director shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to insure adequate protection of USDWs.

(b) Requirements for Class IV wells. Prior to abandoning a Class IV well, the owner or operator shall close the well in accordance with [40 CFR 144.23\(b\)](#).

(c) Requirements for Class V wells.

- (1)** Prior to abandoning a Class V well, the owner or operator shall close the well in a manner that prevents the movement of fluid containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under [40 CFR part 141](#) or may otherwise adversely affect the health of persons. Closure requirements for motor vehicle waste disposal wells and large-capacity cesspools are reiterated at [§ 144.89](#).
- (2)** The owner or operator shall dispose of or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with all applicable Federal, State, and local regulations and requirements.

Regulatory Information By Business Sector

Additional regulations not listed on these pages may apply. Other sector-based resources are available through EPA's many voluntary and partnership programs, including [Compliance Assistance Centers](#), which can also direct businesses to state-specific compliance information.

Agriculture



- [Agriculture: Crop Production and Animal Products](#) (NAICS 111-112)

Construction



- [Construction](#) (NAICS 23)

Oil and Gas



- [Oil and Gas Extraction](#) (NAICS 211)

Automotive



- [Automotive Sectors](#) (NAICS 336, 4231, 8111)

Electric Utilities



- [Electric Power Generation, Transmission and Distribution](#) (NAICS 2211)

Transportation



- [Transportation and Warehousing](#) (NAICS 48-49)

Find more Sectors

- [Dry Cleaning](#) (NAICS 8123)
- [Educational Services](#) (NAICS 61)
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- [Healthcare & Social Assistance](#) (NAICS 62)
- [Manufacturing](#) (NAICS Sectors 31-33)
- [Mining](#) (NAICS 212)
- [Public Administration & Government](#) (NAICS Sector 92)
- [Water and Sewage Utilities](#) Sector (NAICS 2213)

Related Information

- [EPA Certifications](#) (608, 609, Lead, etc.)
- [Find regulatory information by topic](#)
- [Learn about major environmental laws](#)

You can browse the EPA website and explore some of the regulatory information related to these sectors.

NOTE: The format for how information is displayed differs by topic, so you will have to explore the links and headings.

Before learning about additional resources -- a reminder that it is good to keep track of the important information relating to your regulation.

- ▶ **Federal Register Citation:** 64 FR 68546 (Dec. 7, 1999)
- ▶ **CFR Title and Parts** 40 CFR 146.10
- ▶ **RIN** 2040-AB83
- ▶ **Date regulation was adopted:** December 7, 1999
- ▶ **Name of the regulation:**
Revisions to the Underground Injection Control Regulations for Class V Injection Wells.

Let's circle back to the **Federal Register** and look at its website to see how you can track what has happened with a regulation.



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The Daily Journal of the United States Government



Monday, November 9th

[federalregister.gov](https://www.federalregister.gov)



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You can search by the Federal Register citation or by the regulation title to find updates and proposed changes to the regulation that have occurred over time.



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8

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4

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3

AGENCY

Environmental Protection Agency

10

Centers for Medicare & Medicaid Services

2

Commerce

2

It looks like you were searching for the citation **64 FR 68546**.

We've found the following document on page 68546 of volume 64.

[Revisions to the Underground Injection Control Regulations for Class V Injection Wells](#)

Today the Environmental Protection Agency (EPA) is promulgating revisions to the Class V Underground Injection Control (UIC) regulations. This rule adds new requirements for two categories of...

A Rule by the [Environmental Protection Agency](#) on 12/07/1999

Pages 68546-68573 (28 pages)

DOCUMENTS FOUND

15

RELEVANT

NEWEST

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Then scroll through the results to find rules that have been proposed or finalized in the years after the original regulation.

If some results don't seem to apply, limit by Agency (in this case the Environmental Protection Agency).

Documents

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RELEVANTNEWESTOLDEST

Rule	8	
Proposed Rule	4	
Notice	3	

AGENCY

Environmental Protection Agency	10	(R) Modification of Regulations Regarding Benefit and Specificity in Countervailing Duty Proceedings by the International Trade Administration on 02/04/2020.	
Centers for Medicare & Medicaid Services	2	the People's Republic of China, Indonesia, and the Republic of Korea, 71 FR 68546 (November 27, 2006). Additionally, since the publication of Carbon ... reiterate these points here. 22 See 1998 Final Rule, 63 FR at 65349. 23 See id., 63	
Commerce Department	2	(R) Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO ₂) by the Environmental Protection Agency on 12/10/2010.	
Health and Human Services Department	2	December 7, 1999 (64 FR 68546), May 15, 2000 (65 FR 30886), June 7, 2002 (67 FR 39583), and November 22, 2005 (70 FR 70513). Under the SDWA, the injection ... August 27, 1981 (46	
International Trade Administration	2	(R) Medicare Program: Hospital Outpatient Prospective Payment System and CY 2011 Payment Rates; Ambulatory Surgical Center Payment System and CY 2011 Payment Rates; Payments to Hospitals for Graduate Medical Education Costs; Physician Self-Referral Rules and Related Changes to Provider Agreement Regulations; Payment for Certified Registered Nurse Anesthetist Services Furnished in Rural Hospitals and Critical Access Hospitals by the Centers for Medicare & Medicaid Services on 11/24/2010.	

view more agencies

TOPIC

Reporting and recordkeeping requirements	10	
--	----	--

- (R) National Emission Standard for Benzene Waste Operations
by the Environmental Protection Agency on 12/04/2003.



November 12, 2002, we issued a direct final rule (67 FR 68528) and a parallel proposed rule (67 FR 68546) to amend the national emission standard for benzene ... the UMRA. E. Executive Order 13132: Federalism Executive Order 13132 (64

- (R) Underground Injection Control Program-Notice of Final Determination
for Class V Wells
by the Environmental Protection Agency on 06/07/2002.



1993 (58 FR 63890), June 10, 1994 (59 FR 29958), December 14, 1994 (59 FR 64339), June 29, 1995 (60 FR 33926), and December 7, 1999 (64 FR 68546). Section

- (R) Notice of Final Decision on Motor Vehicle Waste Disposal Wells in EPA
Region 8; Underground Injection Control (UIC) Class V Program
by the Environmental Protection Agency on 06/04/2002.



On December 7, 1999, EPA revised its regulations for Class V wells. (64 FR 68546.) Effective April 5, 2000, all new motor vehicle waste disposal wells ... Administrator, Office of Partnerships and Regulatory Assistance, Region 8. [FR Doc....

- (PR) Underground Injection Control Program-Notice of Proposed
Determination for Class V Wells
by the Environmental Protection Agency on 05/07/2001.



1993 (58 FR 63890), June 10, 1994 (59 FR 29958), December 14, 1994 (59 FR 64339), June 29, 1995 (60 FR 33926), and December 7, 1999 (64 FR 68546). Section

The Federal Register
reported the Final Rule on
October 16, 1999, BUT it
also referred to a future
rule that it would be
making.

This is that future ruling.
67 FR 39583 June 7, 2002



Underground Injection Control Program-Notice of Final Determination for Class V Wells

A Rule by the [Environmental Protection Agency](#) on 06/07/2002



PUBLISHED DOCUMENT

Start Printed Page 39584

AGENCY:

Environmental Protection Agency.

ACTION:

Notice of final determination; and final rule.

SUMMARY:

Today, the Environmental Protection Agency (EPA) is announcing a final determination for all sub-classes of Class V injection wells not included in the final rulemaking on Class V motor vehicle waste disposal wells and large-capacity cesspools (December 7, 1999). These include shallow non-hazardous industrial

DOCUMENT DETAILS

Printed version:

[PDF](#)

Publication Date:

[06/07/2002](#)

Agency:

[Environmental Protection Agency](#)

Dates:

The final determination and rule revisions will be effective on June 7, 2002. Pursuant to [40 CFR 23.7](#), for the purposes of judicial review, this final determination and rule revisions are issued/ promulgated as of 1:00 p.m. Eastern Time on June 7, 2002.

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- New “Submit a Formal Comment” Feature!

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☐ Environmental Policy (4)

Authors

☐ Folger, Peter (3)

☐ Vann, Adam (2)

☐ Lattanzio, Richard K (2)

☐ Carter, Nicole T (2)

☐ Comay, Laura B (1)

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Content Types



[8] results for: injection wells hydraulic fracturing

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Relevance ▾

Hydraulic Fracturing and Water Use in CaliforniaJul 02, 2014


IF10189  



Nicole T. Carter, Mary Tiemann, Peter Folger

Hydraulic Fracturing and Safe Drinking Water Act Regulatory IssuesJul 13, 2015


R41760  



Mary Tiemann, Adam Vann

Hydraulic Fracturing: Selected Legal IssuesJul 20, 2016

R43152  

Adam Vann, Brandon J. Murrill, Mary Tiemann

Human-Induced Earthquakes from Deep-Well Injection: A Brief OverviewSep 30, 2016

R43836  

Peter Folger, Mary Tiemann

CRS reports provide background information on regulations and broader implications.

This report focuses on hydraulic fracturing and drinking water.

Summary

Hydraulic fracturing is a technique developed initially to stimulate oil production from wells in declining oil reservoirs. With technological advances, hydraulic fracturing is now widely used to initiate oil and gas production in unconventional (low-permeability) oil and gas formations that were previously uneconomical to produce. Nationwide, this process is now used in more than 90% of new oil and gas wells and in many existing wells to stimulate production. Hydraulic fracturing is done after a well is drilled and involves injecting large volumes of water, sand (or other propping agent), and specialized chemicals under enough pressure to fracture formations holding the oil or gas. The sand or other proppant holds the fractures open to allow the oil or gas to flow freely out of the formation and into a production well. In combination with directional drilling, its application for production of natural gas (methane) from unconventional shale formations, tight sands, and coal beds has resulted in the marked expansion of estimated U.S. natural gas reserves in recent years. Similarly, hydraulic fracturing is enabling the development of tight oil resources, such as the Bakken and Eagle Ford formations. The rapid growth in the use of fracturing has raised concerns over its potential impacts on groundwater and drinking water resources and has led to calls for more state and/or federal oversight of this activity.

The principal federal law regulating underground injection activities is the Safe Drinking Water Act (SDWA), administered by the Environmental Protection Agency (EPA). Historically, EPA had regulated injection of fluids for disposal and enhanced oil recovery but had not regulated the underground injection of fluids for hydraulic fracturing of oil or gas production wells. In 1997, the U.S. Court of Appeals for the 11th Circuit ruled that fracturing for coalbed methane (CBM) production in Alabama constituted underground injection and must be regulated under the SDWA. This ruling led EPA to study the risk that hydraulic fracturing for CBM production might pose to drinking water sources. In 2004, EPA reported that the risk was small, except where diesel fuel was used, and that national regulation was not needed. However, to address the regulatory uncertainty the ruling created, the Energy Policy Act of 2005 (EPA 2005) revised the SDWA term “underground injection” to explicitly exclude the injection of fluids and propping agents (except diesel fuels) used for hydraulic fracturing purposes. Thus, EPA lacks authority under the SDWA to regulate hydraulic fracturing except where diesel fuels are used. In February 2014, EPA issued final permitting guidance for hydraulic fracturing operations using diesel fuels.

As the use of the process has grown, some in Congress would like to revisit the 2005 statutory exclusion. Legislation to revise the act’s definition of underground injection to explicitly include

[reginfo.gov](https://www.reginfo.gov) is a useful source for additional information on regulations - particularly their history from proposal to enactment.

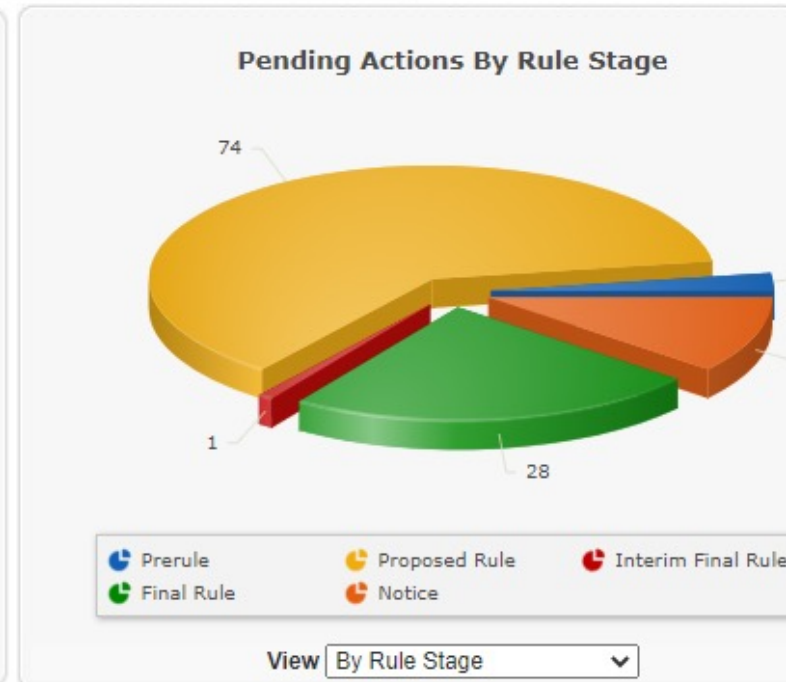
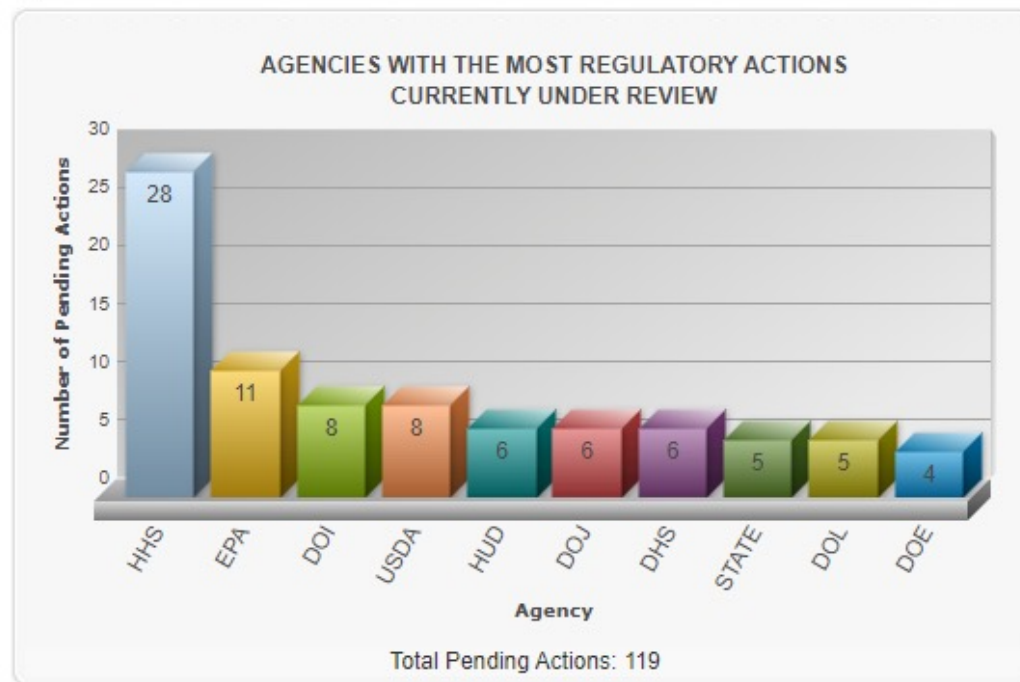
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U.S. General Services Administration GSA

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2040-ab83

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2040-ab83



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<u>Agency</u>	<u>Agenda Stage of Rulemaking</u>	<u>Title</u>	<u>Publication</u>	<u>RIN</u>
EPA/WATER	Proposed Rule Stage	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Fall 1997	2040-AB83
EPA/WATER	Proposed Rule Stage	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Spring 1998	2040-AB83
EPA/WATER	Final Rule Stage	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Fall 1996	2040-AB83
EPA/WATER	Final Rule Stage	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Spring 1996	2040-AB83
EPA/WATER	Final Rule Stage	Revisions to the Underground Injection Control Regulations for Class V Injection Wells	Fall 1999	2040-AB83
EPA/WATER	Final Rule Stage	Revisions to the Underground Injection Control Regulations for Class V Injection Wells	Spring 1999	2040-AB83
EPA/WATER	Final Rule Stage	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Fall 1998	2040-AB83
EPA/WATER	Long-Term Actions	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Fall 1995	2040-AB83
EPA/WATER	Long-Term Actions	Management of Class V Injection Wells Under Part C of the Safe Drinking Water Act	Spring 1997	2040-AB83
EPA/WATER	Completed Actions	Revisions to the Underground Injection Control Regulations for Class V Injection Wells	Spring 2000	2040-AB83



Click on the RIN for more information about each rule stage.

The results of this search is a timeline from proposed rule stage to completed actions.

This is an example of the kind of information you will get for each stage of the rulemaking process.

The final rule also provides a link to the *Federal Register*.

View Rule

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EPA/WATER

RIN: 2040-AB83

Publication ID: Spring 2000

Title: Revisions to the Underground Injection Control Regulations for Class V Injection Wells

Abstract: EPA finalized the Revisions to the Underground Injection Control Regulations for Class V Injection Wells. The rule adds new requirements for two categories of Class V wells: large-capacity cesspools and motor vehicle waste disposal wells. New large-capacity cesspools and new motor vehicle waste disposal wells are banned nationwide as of April 5, 2000. Existing large-capacity cesspools must be closed by April 5, 2005. Existing motor vehicle waste disposal wells are banned in areas identified by the State as being critical for protection of underground sources of drinking water. Owners and operators may be able to seek a waiver from the ban and obtain a permit. The rule sets minimum permit conditions.

Agency: Environmental Protection Agency(EPA)

Priority: Other Significant

RIN Status: Previously published in the Unified Agenda

Agenda Stage of Rulemaking: Completed Actions

Major: No

Unfunded Mandates: No

CFR Citation: [40 CFR 144](#) [40 CFR 145](#) [40 CFR 146](#) [40 CFR 9](#)

Legal Authority: [42 USC 300\(h\)](#) [SDWA 1421 to 1425](#)

Legal Deadline:

Action	Source	Description	Date
NPRM	Judicial		07/18/1998
Final	Judicial		11/28/1999

Timetable:

Action	Date	FR Cite
NPRM	08/28/1995	60 FR 44652
NPRM 2 Reproposal	07/29/1998	63 FR 40585
Final Action	12/07/1999	64 FR 68545

Additional Information: SAN No. 2778

Regulatory Flexibility Analysis Required: Yes

Government Levels Affected: Federal, Local, State, Tribal

Small Entities Affected: Businesses, Governmental Jurisdictions

Federalism: No

Included in the Regulatory Plan: No

Sectors Affected: 4411 Automobile Dealers; 4412 Other Motor Vehicle Dealers; 447 Gasoline Stations; 484 Truck Transportation; 485 Transit and Ground Passenger Transportation; 532 Rental and Leasing Services; 7212 RV (Recreational Vehicle) Parks and Recreational Camps; 8111 Automotive Repair and Maintenance

regulations.gov is a source for finding comments relating to the regulation or related topics - BUT most of them will be after 2002.

Click on the **COMMENTS** tab and then search by regulation title or topic keywords.

The screenshot displays the Regulations.gov website interface. At the top, the logo 'Regulations.gov' is accompanied by the tagline 'Your Voice in Federal Decision Making' and a 'SUPPORT' button. A search bar contains the text 'Revisions to the Underground Injection Control Regulations for Class V Injection Wells' with a green 'Search' button. Below the search bar, three tabs are visible: 'Dockets', 'Documents', and 'Comments', with 'Comments' being the active tab. The main content area is divided into two sections. On the left, under 'REFINE COMMENTS RESULTS', there are filters for 'Posted' (Last 3 Days, Last 7 Days, Last 15 Days, Last 30 Days, Last 90 Days, Custom Dates) and 'Agency' (Environmental Protection Agency, 1,311). On the right, under 'SEARCH RESULTS', a 'PUBLIC SUBMISSION' is shown. The submission is an 'Anonymous public comment' regarding the 'Drinking Water: EPA Needs to Collect Information and Consistently Conduct Activities to Protect Underground Injection Control (UIC) class II programs'. The comment text is highlighted in yellow and discusses the need for EPA to collect information and conduct oversight activities to protect underground sources of drinking water. The submission is dated 'Oct 23, 2019' and has the ID 'EPA-HQ-OW-2019-0405-0272'.

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SUPPORT

Revisions to the Underground Injection Control Regulations for Class V Injection Wells

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Environmental Protection Agency (1,311)

PUBLIC SUBMISSION

Anonymous public comment

report "Drinking Water: EPA Needs to Collect Information and Consistently Conduct Activities to Protect Underground ... information, or consistently conducted oversight activities, to assess whether state and EPA-managed Underground ... Injection Control (UIC) class II programs are protecting underground sources of drinking water.... EPA Needs to Collect Information and Consistently Conduct Activities to Protect Underground Sources of... To protect underground sources of drinking water, class II injection wells are subject to regulation ... injection wells.2 California's class II underground injection control (UIC) program is managed by the... 3EPA regulates six classes of underground injection wells Class V wells, in general, are used to inject nonhazardous fluids into or above underground drinking... II Programs and Well Inventory Appendix II: Status of California's Underground Injection Control Class

Agency Environmental Protection Agency | Posted Oct 23, 2019 | ID EPA-HQ-OW-2019-0405-0272

You can enter custom dates to view comments for a specific period of time.

But remember, the options for comments prior to 2002 might be limited.

"underground injection control" regulations

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01/01/2002 - 12/31/2005 Edit

Agency —

☐ Environmental Protection Agency (101)

☐ National Highway Traffic Safety Administration (21)

PUBLIC SUBMISSION

Comment attachment referring to "why the ICR (Information Collection Request) is incomplete and provide recommendations on how EPA can reduce the paperwork burden for those who must comply with the UIC (Underground Injection Control) program requirements" submitted by Susan Asmus, Staff Vice-President, National Association of Home Builders (NAHB)

recommendations on how EPA can reduce the paperwork burden for those who must comply with the UIC (**Underground**... **Injection** **Control**) program require Association... **Injection** **Control** Program, EPA ICR I Program.... NAHB members are impacted by the **Un** storm... **Injection** **Control** Program, OMB **Control** N 1999 Class V **Underground** **Injection** **Control** Study

Agency Environmental Protection Agency | Posted Dec 22

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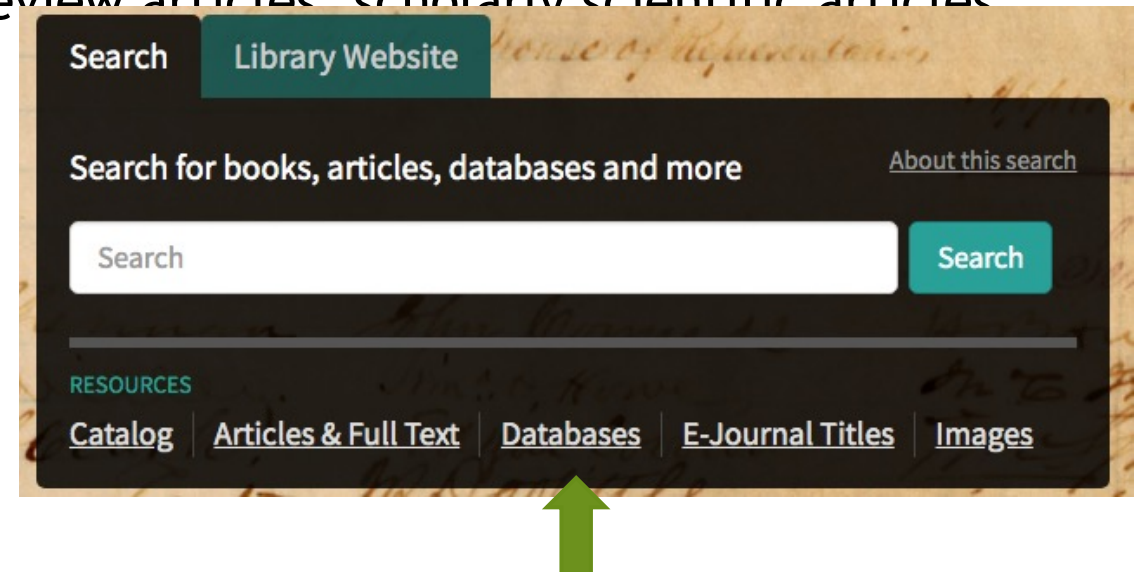
Nexis Uni - newspapers, publications focused on legal/government information

ProQuest Congressional - legislative history, current topics, hearings, reports (links to Congressional Research Service and **Regulatory Insight**)

Environment Index - magazine and journal articles - can help you understand impact of regulation - research studies

Science Direct - book and encyclopedia chapters, review articles, scholarly scientific articles

Engineering Village --




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Search for a topic OR Search for the name of an act OR Search for the regulation title.

“underground injection control” regulation

Nexis Uni Menu All Nexis Uni "underground injection control" regulation EN - English (US) History Help Sign In

Results for:"underground injection control" regulation Actions



Snapshot	
News	483
Law Reviews and Journals	1,030
✓ Cases	149
✓ Statutes and Legislation	2,630
Company and Financial	Get
Administrative Codes and Regulations	8,511
Administrative Materials	2,754
Legal News	118
Briefs, Pleadings and Motions	1,823
Directories	10,000+
More	

Snapshot

Jump To: Snapshot

News (483)

1. Mich. Environment, Great Lakes & Energy Dept.: Michigan Receives Primacy Over Class II Injection Wells

Sep 03, 2022

Targeted News Service, 317 words

... assumed primary **regulation** of Class II **Underground Injection Control** (UIC) wells. Class II UIC wells are related to oil and natural gas injection activities. On July 28, 2022 the U.S. Environmental Protection Agency (EPA) issued a final rule approving... several years to prepare the primacy application, including completion of three rule-making efforts to clarify **regulation** of Class II UIC wells. This pursuit of primacy makes the state program stronger and will provide excellent protection of the state's... Michigan's Class II UIC Program for primacy. Since passage of the Safe Drinking Water Act (SDWA), the EPA and the State of Michigan have been dually **regulating** these wells, requiring a permit and oversight by both the EPA and the EGLE's, Oil, Gas, and... Water (USDW). EGLE's OGMD has more than three decades of experience co-**regulating** Class II UIC wells in Michigan and looks forward to continuing protection of the USDW as the primary regulatory authority. In pursuing primacy, EGLE's OGMD worked for...

2. DNREC PUBLIC HEARING: Proposed Amendments to the Regulations Governing Underground Injection Control

May 10, 2017

US Official News, 251 words

Snapshot provides highlights from several categories.

You can search for **news** or for **law reviews** (helpful to see if there have been lawsuits related to the regulation).

ProQuest Congressional - Nonpartisan reports, hearings, background

Allows you to browse topics.

The screenshot shows the ProQuest Congressional website. The header is teal with the ProQuest Congressional logo on the left. A navigation bar below the header contains links: Legislative & Executive Publications, Members & Committees, Regulations, News & Social Media, Browse Topics (circled in red), and Congress in Context. Below the navigation bar is a large banner with the text 'Legislative & Executive Publications' and a search bar. The search bar contains the text 'Enter keywords to search within all fields including full text' and a magnifying glass icon. Below the search bar are links for 'Limit by Date', 'Find Terms', 'Advanced', 'Search tips', and 'Bookmark this search'. Below the banner is a section titled 'Want to learn more? Here are some useful starting places.' with a subtext 'Choose one of these Popular Topics or browse our Topic Pages to discover key concepts and policies.' Below this are six topic cards: 'Head Start' (image of children), 'Migrant and Guest Worker Programs' (image of a person in a field), 'COVID-19' (image of a virus), 'Commercial Space Ventures' (image of a space station), 'Filibuster' (image of a person in a suit), and 'Border' (image of a border fence). Below the topic cards are three boxes: 'SEARCH CRS REPORTS >' with text 'Looking for background information on a policy issue? Nonpartisan Congressional Research Service (CRS) reports are great starting points for research on a', 'SEARCH FOR A CITATION >' with text 'Got a citation? Use a dedicated citation search with help on formatting citations to find Bills, Public Laws, Statutes at Large, Public Resolutions, US Code,', and 'CONGRESS IN CONTEXT >' with text 'Need some historical context? Read our specially created historical profiles to discover more about the setting, personnel and events which may have influenced the legislation'.

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Topic Pages - A-Z

Topics provide background reports, laws that have been passed, etc.



Agricultural Credit



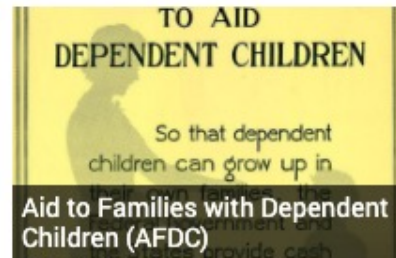
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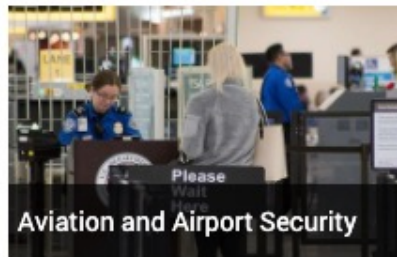
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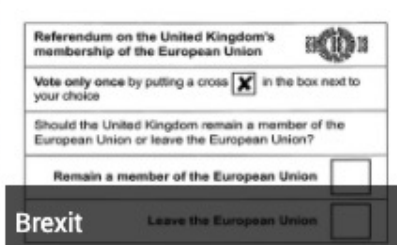
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Brexit



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Coal Mine Health and Safety


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Topic Pages	5
Hearings	1,009
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Miscellaneous Publications	316
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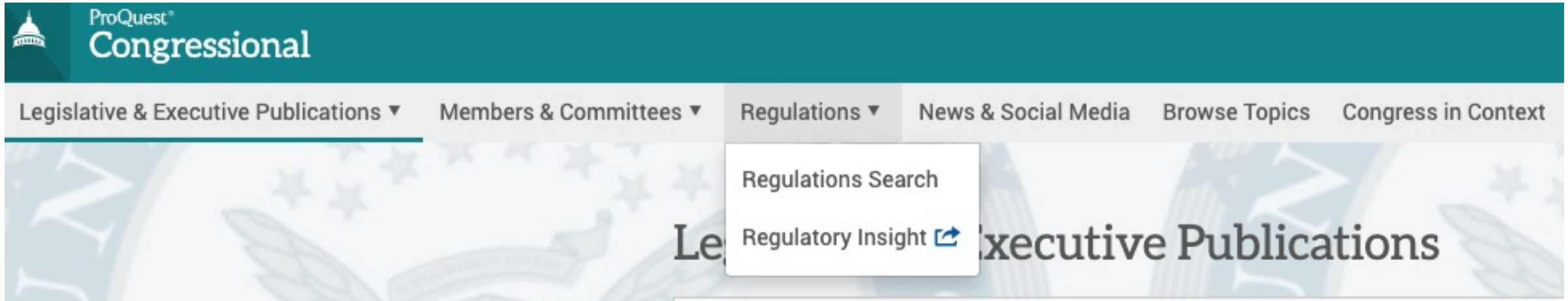
☐ 1 
Nuclear Power
Topic Page
There are 93 licensed nuclear power reactors at 55 sites in the U.S. that generate about 20 percent of the nation's electricity. The role of nuclear power in the U.S. energy mix and the policy debates around it are rooted in the technology's fundamental...

☐ 2 
Alternative Energy Sources
Topic Page
Renewable energy is energy that is collected from naturally replenishing sources, such as sunlight, wind, bodies of water, rain, geothermal heat, or biomass/biofuels. Although the majority of U.S. energy is still sourced from fossil fuels, concerns...

☐ 3 
Coal Industry
Topic Page
The coal industry is highly concentrated in the U.S., with just a handful of major producers. More than half of U.S. coal reserves are located in the West, dominated by Montana and Wyoming, which account for 43 percent. Three of the top producing...

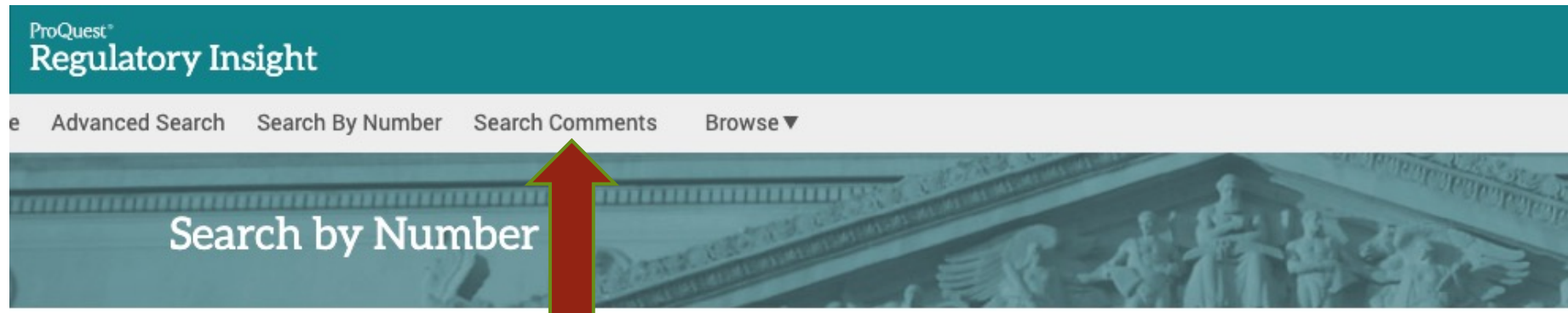
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"hydraulic fracturing" or fracking

AND

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Comments Agency

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for more
detailed
comments.




2926 Results Sort By Relevance

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- ☐ 1 Comments Archive of **Underground Injection Control**; Request for Information on Ground Water Contamination Incidents Believed to be Due to **Hydraulic Fracturing** of Coalbed Methane Wells.
- Comments Archive Comment period closed August 29, 2001
Category: Nonrulemaking
Docket Number: EPA-HQ-OW-2001-0002
- [Citation/Abstract](#) [Permalink](#)
- ☐ 2 Comments Archive of UIC Permitting Guidance for Oil and Gas **Hydraulic Fracturing** Activities Using Diesel Fuels – Draft
- Comments Archive Comment period closed August 23, 2012
Category: Nonrulemaking
Docket Number: EPA-HQ-OW-2011-1013
- [Citation/Abstract](#) [Permalink](#)
- ☐ 3 Comment submitted by William E. Freeman, A. A. P. G. Certified Petroleum Geologist #2291, Senior Hydrologist/Program Manager, Navajo Nation EPA **Underground Injection Control** Program - Shiprock
- Commenting on Proposed Rule:Hydraulic Fracturing Chemicals and Mixtures
Requesting Agency: Environmental Protection Agency (EPA)

Environment Index is a database that may be helpful if you need background on a topic or want to explore the impact of regulations. Magazine and journal articles.

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- Modeling fate and transport of hydraulic fracturing fluid in the presence of abandoned wells.**
 By: Taherdangkoo, Reza; Tatomir, Alexandru; Anighoro, Tega; Sauter, Martin. Journal of Contaminant Hydrology. Feb2019, Vol. 221, p58-68. 11p. 10.1016/j.jconhyd.2018.12.003.
Subjects: GAS reservoirs; ENVIRONMENTAL risk; AQUIFERS; STRATIGRAPHIC geology; **HYDRAULIC fracturing**
Cited References: (70) Times Cited in this Database: (2)
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- Influence of Hydraulic Fracturing on Overlying Aquifers in the Presence of Leaky Abandoned Wells.**
 By: Brownlow, Joshua W.; James, Scott C.; Yelderman, Joe C. Ground Water. Nov/Dec2016, Vol. 54 Issue 6, p781-792. 12p. DOI: 10.1111/gwat
Subjects: SEDIMENTARY basins; OIL wells; HYDROGEOLOGY; **HYDRAULIC fracturing**; GAS well hydraulic fracturing; FLUID pressure; F
fracturing)
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Review article

¹ Alaska-Sakhalin 2002 Symposium Discussion of Underground Injection Control in Arctic Oilfields

Developments in Water Science, 2005, ...

T. Cutler, D. Thurston

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Review article

² An Interpretation of the Safe Drinking Water Act's "Non-Endangerment" Standard for the Underground Injection Control (UIC) Program


Developments in Water Science, 2005, ...

B. J. Kobelski, R. E. Smith, A. L. Whitehurst

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1 The Appropriate Methodology for Determining The Use of a Fixed-Radius Area of Review or Zone of Endangering Influence, When Conducting an Area-of-Review Analysis for Underground Injection Control Operations

Developments in Water Science, 2005, ...

S. Stephen Platt, D. Rectenwald




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2 Alaska-Sakhalin 2002 Symposium Discussion of Underground Injection Control in Arctic Oilfields


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3 Project Assessment and Evaluation of the Area of Review (AoR) at the Citronelle SECARB Phase III Site, Alabama USA

Energy Procedia, 2014, ...

George J. Koperma, Steven M. Carpenter, ... Richard Esposito

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4 Additive and alternative materials to cement for well plugging and abandonment: A state-of-the-art review

Journal of Petroleum Science and Engineering, 3 June 2022, ...

Farhad Aslani, Yifan Zhang, ... Nick Manning

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In Summary

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- ▶ Keep track of Federal Register, CFR and RIN numbers. Also, the name of regulation and date of final rule.
- ▶ The Federal Register entry for your regulation also provides useful information.
- ▶ Comments are summarized in the Federal Register. Comments can also be found at regulations.gov and in the ProQuest Regulatory Insight database.
- ▶ Explore Nexis Uni and ProQuest Congressional databases for additional information on issues related to the regulation - after it became law. The online version of the Federal Register also provides updates on the regulation.
- ▶ Use Environment Index and Science Direct for research articles. Use Engineering Village for technical information.

Please complete this brief assessment of this session.

I will review your responses and provide Vivek with a handout with answers to any questions you still have about anything I covered today.



tinyurl.com/BEE4750F22

Thanks so much for your attention.

If you need help along the way, you can:

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