

TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 6 WATER QUALITY
PART 8 GROUND AND SURFACE WATER PROTECTION –
PRODUCED WATER

20.6.8.1 ISSUING AGENCY: Water Quality Control Commission.
[20.6.8.1 NMAC - N, mm-dd-yy]

20.6.8.2 SCOPE: All persons subject to the Water Quality Act, NMSA 1978, Sections 74-6-1 through 74-6-17, and the Produced Water Act, NMSA 1978, Sections 70-13-1 through 70-13-5.
[20.6.7.2 NMAC - N, mm-dd-yy]

20.6.8.3 STATUTORY AUTHORITY: Standards and regulations are adopted by the commission under the authority of the Water Quality Act, NMSA 1978, Sections 74-6-1 through 74-6-17 and the Produced Water Act, NMSA 1978, Subsection B of Section 70-13-3 and Subsection D of Section 70-13-4.
[20.6.8.3 NMAC - N, mm/dd/yy]

20.6.8.4 DURATION: Permanent.
[20.6.8.4 NMAC - N, mm-dd-yy]

20.6.8.5 EFFECTIVE DATE: Month Day, Year, unless a later date is cited at the end of a section.
[20.6.8.5 NMAC - N, mm-dd-yy]

20.6.8.6 OBJECTIVE: The objective of 20.6.8 NMAC is to regulate the use of produced water subject to the jurisdiction of the Water Quality Control Commission under NMSA 1978, §§ 70-13-3(B).
[20.6.8.6 NMAC - N, mm-dd-yy]

20.6.8.7 DEFINITIONS: The following terms as used in this part shall have the following meanings: terms defined in the Water Quality Act, but not defined in this part, will have the meaning given in the act.

A. Terms beginning with numerals or the letter “A,” and abbreviations for units. [RESERVED]

B. Terms beginning with the letter “B”.

(1) **“Bench-scale project”** means a small project or study conducted in an accredited laboratory.

C. Terms beginning with the letter “C”. [RESERVED]

D. Terms beginning with the letter “D”.

(1) **“Department”** means the New Mexico environment department.

(2) **“Discharge permit”** means a discharge plan approved by the department;

(3) **“Discharge plan”** means a produced water treatment or reuse off oilfield plan which shall be designed and stamped by a professional engineer with the intent and specific provisions to preclude any discharge and shall include a description of any operational, monitoring, contingency, and closure requirements and conditions for any unintentional discharge of effluent or leachate which may move directly or indirectly into ground water;

(4) **“Discharge site”** as defined in 20.6.2 NMAC.

(5) **“Disposal”** as defined in 20.6.2 NMAC.

E. Terms beginning with the letter “E”. [RESERVED]

F. Terms beginning with the letter “F”. [RESERVED]

G. Terms beginning with the letter “G”.

(1) **“Ground water”** as defined in 20.6.2 NMAC.

H. Terms beginning with the letter “H”.

(1) **“Hydraulic fracturing”** means an unconventional oil and gas production technique that fractures a rock formation that stimulates the flow of natural gas or oil, increasing the volumes that can be recovered. Fractures are created by pumping large quantities of fluids at high pressure down a wellbore and into the target rock formation. Hydraulic fracturing fluid, also referred to as fracking fluid, commonly consists of water, proppant, and chemical additives that open and enlarge fractures that can extend several hundred feet away from the wellbore.

I. Terms beginning with the letter “I”.

(1) **“Injection”** as defined in 20.6.2 NMAC

- J. Terms beginning with the letter “J”. [RESERVED]
- K. Terms beginning with the letter “K”. [RESERVED]
- L. Terms beginning with the letter “L”. [RESERVED]
- M. Terms beginning with the letter “M”. [RESERVED]
- N. Terms beginning with the letter “N”. [RESERVED]
- O. Terms beginning with the letter “O”. [RESERVED]
- P. Terms beginning with the letter “P”.

(1) “Person” as defined in 20.6.2 NMAC.

(2) “Pilot project” means a representative engineering scale model or prototype system that is beyond the bench-scale and tested in a non-laboratory environment. A pilot project represents an increase in the technological scale than otherwise achievable in a laboratory and often involves larger quantities of materials over longer periods of time. Pilot projects shall have a daily produced water capacity equal to or less than 2,000 barrels per day.

(3) “Produced water” means a fluid oil and gas waste resulting from drilling for or the production of oil and gas, and includes formation water (the water that occurs naturally within the pores of rock), flowback water (the fluid returned after the hydraulic fracturing process is completed), and any chemicals added downhole during drilling, production, or maintenance processes during the life cycle of an oil or gas well. Produced water includes known and unknown toxic pollutants, as defined in 20.6.2 NMAC and radionuclides, water contaminants, and water pollutants.

Q. Terms beginning with the letter “Q”. [RESERVED]

R. Terms beginning with the letter “R”. [RESERVED]

S. Terms beginning with the letter “S”.

(1) “State” means the state of New Mexico.

(2) “Surface water” means a “surface water(s) of the state” as defined in 20.6.4 NMAC.

T. Terms beginning with the letter “T”. [RESERVED]

U. Terms beginning with the letter “U”. [RESERVED]

V. Terms beginning with the letter “V”. [RESERVED]

W. Terms beginning with the letter “W”.

(1) “Water contaminant” means any substance that, if discharged, reused, or spilled, could alter the physical, chemical, biological or radiological qualities of water. “Water contaminant” does not mean source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, but may include all other radioactive materials, including but not limited to radium and accelerator-produced isotopes.

(2) “Water pollutant” means a water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or to unreasonably interfere with the public welfare or the use of property.

(3) “Water pollution” as defined in 20.6.2 NMAC.

X. Terms beginning with the letters “X” through “Z”. [RESERVED]

[20.6.8.7 NMAC – N, mm-dd-yy]

20.6.8.8 – 20.6.8.99 [RESERVED]

[20.6.8.8-20.6.8.99 NMAC – N, mm-dd-yy]

20.6.8.100 GENERAL PROVISIONS: Unless otherwise required by this Part, all persons are subject to the state’s Ground and Surface Water Protection Regulations (20.6.2 NMAC). This includes, but is not limited to, regulations relating to spills, notices of intent, permitting, fees, penalties, compliance orders, and abatement.

[20.6.8.100 NMAC – N, mm-dd-yy]

20.6.8.101 – 20.6.8.199 [RESERVED]

[20.6.8.101-20.6.8.199 NMAC – N, mm-dd-yy]

20.6.8.200 [RESERVED]

[20.6.8.200 NMAC – N, mm-dd-yy]

20.6.8.201 [RESERVED]

[20.6.8.201 – N, mm-dd-yy]

20.6.8.202-299 [RESERVED]

20.6.8.NMAC

[20.6.8.202-20.6.8.299 NMAC – N, mm-dd-yy]

20.6.8.300 [RESERVED]

[20.6.8.300 NMAC – N, mm-dd-yy]

20.6.8.301-399 [RESERVED]

[20.6.8.301-20.6.8.399 NMAC – N, mm-dd-yy]

20.6.8.400 PROHIBITION OF DISCHARGE, DISPOSAL, AND REUSE OF PRODUCED WATER: As provided in the Produced Water Act, Subsection B of Section 70-13-3, NMSA 1978, the following provisions apply to the discharge, disposal, and reuse of produced water for activities unrelated to the exploration, drilling, production, treatment, or refinement of oil or gas.

A. General requirements.

(1) **Treated or untreated produced water discharge, disposal, and reuse:** No person shall discharge, dispose of, or reuse treated or untreated produced water for activities unrelated to the exploration, drilling, production, treatment or refinement of oil or gas.

(2) The department shall deny any application for a groundwater or surface water discharge permit for any form of produced water or byproduct thereof.

(3) The department shall deny certification of any federal permit proposing to discharge, dispose of, or reuse treated or untreated produced water.

(4) **Use of produced water for research purposes:** Produced water may only be handled, transported, stored, treated, or used for activities unrelated to the exploration, drilling, production, treatment or refinement of oil or gas for bona fide research purposes within the context of a bench-scale project or pilot project. Any handling, transport, storage, recycling, treatment, or use of produced water off of the oil field for research purposes may only be conducted upon the issuance of a permit from the Department.

B. Authorized applications for research purposes.

(1) **Bench-scale projects and pilot projects:** Bench scale projects and pilot projects involving the handling, transport, storage, recycling, treatment, or use of produced water off of the oil field may be permitted, if authorized by a permit, as required by subsection C.

C. Permits required for bench scale or pilot projects.

(1) As established by the Produced Water Act, *see* NMSA 1978, § 70-13-4(D), a permit from the Department is required prior to any use of produced water, whether treated or untreated, in bench scale or pilot projects.

(2) No person may use produced water, whether treated or untreated, without first obtaining a permit from the Department.

(3) No permit shall allow the discharge of produced water, whether treated or untreated, recycled or any treated product or any byproduct of the produced water.

D. Issuance of permits.

(1) Any person desiring to conduct a bench-scale project using produced water shall submit a Produced Water Bench-Scale Research Permit Application to the Department.

(a) A Produced Water Bench-Scale Research Permit Application shall (a) include a research plan and a description of the objectives; (b) identify the accredited laboratory at which the research will be conducted (c) disclose all known or knowable chemical constituents within the produced water; and (d) explain how it is designed to provide information specific to untreated produced water quality, treatment technologies, treated produced water quality, treatment volumes, and toxicity studies.

(b) Upon receiving a Produced Water Bench Scale Research Permit Application, the Department shall grant a Produced Water Bench-Scale Research Permit, so long as it determines that the proposed research is bona fide research that will be conducted in an accredited laboratory and that no produced water will be discharged by the proposed research.

(c) All Produced Water Bench-Scale Research Permits shall require the applicant to (a) disclose all data and results of the research to the Department within 90 days of the testing, and (b) dispose of produced water and any materials that come into contact with untreated produced water or treated produced water, including soils, plant material, treatment equipment, and containment area materials in accordance with the provisions of 20.6.8.400(E) NMAC.

(2) Any person desiring to conduct a pilot project using produced water shall submit a

Produced Water Pilot Project Research Permit Application to the Department.

(a) A Produced Water Pilot Project Research Permit Application shall (a) include a research plan and a description of the objectives; (b) identify the volume of produced water to be treated and location of the proposed pilot project; (c) explain how it is designed to provide information specific to untreated produced water quality, treatment technologies, treated produced water quality, treatment volumes, and toxicity studies; (d) set forth the written procedures that will be followed to prevent releases onto the ground, directly or indirectly into ground or surface water; (e) provide a schematic of the treatment process; (f) provide a description of the treatment process and methodologies; (g) provide a full characterization of the source fluids with specificity, including levels; (h) disclose how the applicant proposes to dispose of all residual concentrated waste; and (i) identify any and all risks posed by the proposed handling, storage, transportation, and use of produced water and all procedures that will be followed to minimize such risks.

(b) Upon receiving a Produced Water Pilot Project Research Permit Application, the department shall conduct review of the application to determine whether it contains all required information.

(c) If the Produced Water Pilot Project Research Permit Application contains all required information, the department shall require the applicant to provide public notice in the methods and manners required in 20.6.2.3108 NMAC. All information regarding the application, the technical review, and the determination is to be provided on the Department's website in both English and Spanish.

(d) The department shall evaluate the application based on information contained in the department's administrative record. The department may request from the applicant, either before or after the issuance of any public notice, additional information necessary for the evaluation of the application. The administrative record shall consist of the application, all additional information required by the department, all information submitted by the applicant or the general public, all public comment, all other information considered by the department, and any other pertinent information.

(e) The department shall conduct a technical review and evaluate a Produced Water Pilot Project Research Permit Application. After providing at least ninety days for public comment, the department shall approve, approve with conditions, limitations, or modifications, or disapprove the application based on the administrative record. The department shall notify the applicant of the action taken and the reasons for such action. Notice shall be given by mail or email to persons who gave public comment and by publication on the department's website.

(f) The department shall only grant a permit, after public notice and comment, if it determines that the benefits of the proposed research outweigh the risks posed to health, safety, and environment by the proposed handling, storage, transportation, and use of produced water. This evaluation must consider the volume of produced water involved in the proposed research, the locations of the proposed handling, storage, transportation, and use of produced water, the proposed activities involved in the research, the character and history of the applicant, and any prior regulatory non-compliance by the applicant.

(g) The department shall develop and promulgate a schedule of analytes that have been scientifically observed in produced water and shall set forth a testing methodology that shall be employed to test for such analytes in both the untreated and treated produced water in any pilot project. Pilot projects operating at a volume of 500 barrels per day or less shall be required to perform such testing no less than once per week. Pilot projects operating at a volume of greater than 500 barrels per day but less than 2,000 barrels a day shall be required to perform such testing no less than four times per week.

(d) Any Produced Water Pilot Project Research Permit shall: (a) require the applicant to conduct the testing prescribed by the Department pursuant to subsection (g) above; (b) have a duration of one year, with the ability to extend the duration an additional year if the project is meeting all regulatory requirements; (c) require, at a minimum, quarterly monitoring by the Department, including land sampling and analysis; (d) require the procurement of sufficient financial security and assurance to ensure that remediation is performed in the event of contamination; (e) require certification by a professional engineer prior to operation; (f) require the applicant to maintain a repository of all scientific data generated during the research; (g) submit to the Department all research results within 90 days of completion; (h) permit the Department to inspect the project upon request; (i) permit the Department to review all scientific data generated during the research upon request; (j) dispose of produced water and any materials that come into contact with untreated produced water or treated produced water, including soils, plant material, treatment equipment, and containment area materials in accordance with the provisions of 20.6.8.400(E) NMAC; (k) construct the research project in such a manner as to ensure that no discharges of produced water occur throughout the entire duration of the project and allow the department to inspect and verify that the project is not resulting in the discharge of produced water; (l) require that all untreated and treated produced water shall be handled, transported, stored, used, and disposed of in accordance with all other applicable local, state, and federal regulations.

(5) Any permit issued pursuant to this subsection shall be subject to revocation if the applicant fails to comply with the requirements of the permit.

(6) Persons intending to conduct a bench-scale project or pilot project shall satisfy the Department's financial assurance requirements to ensure that any damages caused by the applicant are remediated.

E. Final Disposition of Treated Produced Water, Untreated Produced Water, Treatment Byproducts, and Components of Bench Scale and Pilot Projects

(1) All disposal of untreated produced water following a bench scale or pilot project shall use one of the following methods in accordance with the relative permit: discharge to a produced water disposal well permitted pursuant to the oil conservation commission's regulations for oil and gas injection at 19.15.26 NMAC, delivery to a surface waste management facility permitted pursuant to the oil conservation commission's regulations for oil and gas surface waste management facilities (19.15.36 NMAC), or disposal in a permanent pit permitted pursuant to the oil conservation commission's regulations for oil and gas pits, closed-loop systems, below-grade tanks and sumps at 19.15.17 NMAC.

(2) All disposal of treated produced water, any treatment byproducts, or components of a bench scale or pilot project using untreated or treated produced water, must characterize the waste and adhere to all local, state, and federal regulations for non-exempt, potentially hazardous waste, as applicable.

[20.6.8.400 NMAC – N, mm-dd-yy]