ESSENTIAL INFORMATION
December 2015

Oil and Gas Water Quantity Laws

Prepared by the Policy Surveillance Program Staff

SUMMARY

Across the United States as a whole, the average amount of water used for hydraulic fracturing is minimal compared to traditional uses of water by municipalities and agriculture. High-volume hydraulic fracturing is a new use of water, and the amount of water consumed and the timing of water usage has raised concerns in arid regions or areas experiencing water shortages.

This dataset includes laws for 17 states and federal rules for lands and minerals managed by the Bureau of Land Management, Bureau of Indian Affairs, and the U.S. Forest Service, current as of November 25, 2015.

ABOUT OIL AND GAS WATER QUANTITY LAWS & THE DATA

This dataset captures laws and regulations addressing the amount of water used in oil and gas development, including water administration systems, reporting requirements and disposal methods — all of which provide a more accurate picture of the life cycle of water use in the hydraulic fracturing process. The laws and regulations compiled in this database address whether operators need to identify the physical source of water used for development, submit a water plan, and to identify the amount of water used during completion of the well, the amount of water that flows to the surface after hydraulic fracturing, and the volume of disposed water. The laws and regulations also address how surface and groundwater rights are obtained and whether the state distinguishes types of surface water and groundwater.

NAVIGATING THE DATA

There are two ways to navigate the data by clicking the Filter tab or the Explore tab — for each option, the data can be visualized in a map and table format or in jurisdiction profiles.

Filter
The dataset homepage will default to the Filter tab. Here, users may answer a series of questions to learn more about the characteristics of the laws. Answering more than one question will show all the jurisdictions that meet the combined criteria. Criteria selected will be listed above the questions, and can be removed by clicking the white X or by clicking “Reset” above the questions.

Explore
Users can access Explore by clicking the Explore tab in the bar above the questions. Using Explore, users will see the answers to one question across all jurisdictions.

Oil and Gas Water Quantity Laws – December 2015
The primary questions in this dataset are:

1. What type of water administration system does the state have?
2. Does the state require reporting the physical source of water - surface or groundwater - used for oil and gas development?
3. Does the state require preparation of a water plan for oil and gas development?
4. Can groundwater legally be used for oil and gas development?
5. Can surface water legally be used for oil and gas development?
6. If oil and gas activities result in diminished or disrupted water quantity to a water right owner, does the owner have a legal recourse?
7. Does the state require reporting of water usage?
8. Does the state regulate the reuse and/or recycling of flowback/produced water during oil and gas development?
9. What methods of disposal does the state allow for produced water?

**DISPLAYING THE RESULTS**

There are two display modes once criteria have been selected by using either the Filter or Explore tab — Map display mode and Profiles display mode.

**Map Display**

LawAtlas.org dataset homepages default to the map display mode. When querying the data using the Filter tab, all jurisdictions that meet the criteria selected will display in one tone of yellow. Those jurisdictions that do not meet the criteria selected will be colored gray. When querying the data using the Explore tab, the map will illuminate with colors from yellow to red that are associated with the various answer choices (the color-coding is defined by the key to the left of the map).

Below the map, a table will appear. Using the Filter or Explore tab to navigate the questions will change the display:

- Using the Filter tab, you can select an unlimited number of criteria and the applicable jurisdictions that meet the combined criteria will be displayed in the table below.
- Using the Explore tab, you can isolate a single criterion and the applicable jurisdictions will appear in the table below.

**Profiles Display**

The Profiles display presents the results of the criteria selected in a text-based format for each applicable jurisdiction. Using the Filter tab, jurisdictions that meet the criteria selected will display. Using the Explore tab, jurisdictions that meet the criterion selected will display. If no criteria are selected, the full profiles for each state will appear under both Filter and Explore.

**Profile Legend**

Within each Profile box, above the questions and answers, there are additional options and information useful in exploring the law:
Toggle Legal Text – Selecting this option will show all the legal text used to answer questions for this jurisdiction.

Toggle Full Place Profile – Selecting this option will show all questions and answers for this jurisdiction, regardless of what was selected using the Filter or Explore tabs.

Toggle Size – Selecting this option will make the profile larger, but will not change the information displayed.

Legal Text History – This interactive timeline displays when changes in the law have occurred within a jurisdiction. Using the arrows to the left or right, users may explore how the law has changed over time as new amendments to the law have been enacted. The timeline will change from gray to a shade of yellow when the jurisdiction passed its first relevant law. Each change in the law after that is marked by a break in the timeline.

Map and Profile Legend
There are a few symbols to be aware of in both Map and Profiles display modes:

Section Symbol – Clicking this symbol will open a window that displays excerpts from the law that correspond to the question and answer.

Caution Note – Clicking on this symbol will open a small window that displays text that describes important caveats about the question and answer.

DATASET RESOURCES
Each dataset homepage includes the following resources available for download:

- Data: The Data file exports in CSV. format and may contain two tabs. The “Statistical Data” tab contains the legal variables coded in the dataset, displayed as values defined in the accompanying Codebook. The “Summary Data” tab contains the legal variables coded in the dataset in text form, as well as the accompanying citations and any caution notes that may be included. Note: if there is only one tab available for download it will be the “Statistical Data” as described above.

- Codebook: The Codebook defines all of the coded variables in the dataset. The Codebook lists the question, question type, variable name, variable value and variable label. The Codebook should be used in conjunction with the Statistical Data extract.

- Research Protocol: The Research Protocol is a comprehensive document that outlines the entire methodology of the project, including the scope, inclusion and exclusion
criteria, data collection methods, definitions, coding scheme decisions, as well as the quality control process.

- Summary Report: The Summary Report provides a snapshot of important findings from the dataset.

ADDITIONAL INFORMATION
For more information about oil- and gas-related laws, please see:

- Water Quantity – Intermountain Oil and Gas Best Management Practices:  
- State Review of Oil & Natural Gas Environmental Regulations (STRONGER):  
- Water Resource Reporting and Water Footprint from Marcellus Shale Development in West Virginia and Pennsylvania:  
- Hydraulic Fracturing & Water Stress: Water Demand by the Numbers:  

This collection of laws does not provide legal advice nor does it address enforcement of laws, administrative policies, case law, or any other sources of law. Should you have a specific question about these laws in your state, please contact an attorney in your jurisdiction.