Supplemental Information: Well Log Reporting by State

The information found below is a representation of the best available data and well reporting requirements we were able to obtain while conducting this research. This is meant to serve as a guide and by no means should supersede any information presently obtained from local or state agencies. The tables for each state are comprised of the following columns:

Records: Number of total well records within the dataset

Domestic: Number of records within the dataset that are considered domestic

Address: Dataset has address information for wells Y/N (Yes/No) GPS: Dataset has GPS (lat/lon) information for wells Y/N (Yes/No)

PLSS: Dataset has PLSS location information for wells Y/N (Yes/No)

Updated: The last update to the dataset prior to download for use within this analysis

Reporting Start: Year that state began requiring the reporting of well drilling.

Suitable for RW: Dataset is suitable for the RW method Y/N (Yes/No)

Alabama

Description

These records are scanned paper documents and have not been digitized. Unsuitable for GIS in present form

Location Requirements

Projections or roofs of adjacent building: 2 Feet, Secondary electrical services: 10 Feet, Primary electrical services: 75 Feet, Cess pool or sewage lagoon: 150 Feet, Septic tank or field lines: 100 Feet, Barnyard: 150 Feet

Reporting Requirements

ADEM Admin. Code R. 335-9-1-.03 (Revised May 1988): (1) Every person desiring to drill a water well shall file with the Board, on a form furnished by the Board, a Notification of Intent to drill a well. This form shall be filed prior to the commencement of work. (2) Every person who drills a well shall file a Certification of Completion on the form furnished by the Board within 30 days after completion of work. The board shall notify the local Health authorities within 7 days of the receipt thereof.

Notes

According to APH Private wells serve about 800,000 in Alabama (20%).

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
75,000		Y	N		Unknown	1988	No

Alaska

Description

The well log database is designed for finding specific records and not bulk downloading locations of several, though the data is in digital form and could probably be obtained directly through the state. It seems that a large number of wells in Alaska go unreported based on what reviewed materials.

Location Requirements

200 feet between public Non-Community Wells and on-site sewer systems

Reporting Requirements

"Upon completing the well construction, it's in your best interest, as a homeowner, to assure that the water well drilling log is submitted to the Department of Natural Resources (DNR) in order to record the information in WELTS. While water well contractors are required to submit this information to DNR, it is not always carried out. Failure to record this information in WELTS may lead to difficulties in future real estate transactions." Source

Link to Alaska best management practices - Construction of non-public water wells

Notes

According to the Alaska Division of Environmental Health: The State of Alaska, Drinking Water Program, does not sample, test, or regulate the construction of private drinking water wells. In fact, the only local governments that regulate and have established standards for private water wells are the Municipality of Anchorage and the City of North Pole. Separation distances from septic systems are only enforced when septic is installed. Source

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
> 25,000		Y	N	N	Unknown	1979	No

Arizona

Description

The Arizona Wells55 Database contains data on all known groundwater wells in the state. This data is readily usable for GIS work.

Location Requirements

All wells must be at least 100 feet from septic tanks or sewage disposal areas.

Reporting Requirements

R12-15-809. Notice of Intention to Drill A notice of intention to drill required to be filed pursuant to A.R.S. § 45-596 shall be signed by the owner or lessee of the property upon which the well is to be drilled. Historical Note Adopted effective March 5, 1984 (Supp. 84-2).

Notes

Wells are classified by exempt or non-exempt which are based on the pumping capacity of the well. Wells that are capable of pumping less than 35 gallons per minute.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
207,313	122,270	Y	Y	N	11/18/2016	1984	Yes

Arkansas

Description

This database produces a table which can be copied and reconfigured for use in GIS. It should be noted that latitude and longitude were input in reverse order for a few hundred records and must be switched.

Location Requirements

Cess Pools: 100 Feet, Leaching Pit: 100 Feet, Pit Privy: 100 Feet, Subsurface Seepage Tile: 100 Feet, Manure Piles: 100 Feet Septic Tank 100, Feet Sewers (Cast iron with water tight, leaded or mechanical joints): 50 Feet, Footing Drains (No connection to a sewer or a sump handling sewage): 10 Feet, Pump House Floor Drain (Cast iron with water tight joints and having free fall discharge to ground surface): 2 Feet

Reporting Requirements

'Within ninety (90) days after a water well has been constructed or repaired, the constructor shall submit a report of construction to the Arkansas Water Well Construction Commission on such forms as are prescribed and furnished by the Commission. The date of construction and time of completion shall be the date and time the rig is removed or pulled off the bore hole or well. Reports must be legible, must supply all requested information applicable to the type of work done, and must contain the longitude and latitude of the well location.'

Notes

It is unclear when reporting was first required, however well logs spiked in 1988 and it is reasonable to suggest they were required somewhere between 1988-1991

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
72,437	21,847	N	Y	N	Unknown	1988	Yes

California

Note: California, in recent years, has made extraordinary efforts in tracing well locations and the information here is likely now out of date.

Description

Up to 2 million California residents are served either by private domestic wells or by water systems serving fewer than 15 service connections

Location Requirements

Animal enclosures / septic systems: 100 ft (http://waterboards.ca.gov/gama/docs/wellowner_guide.pdf)

Reporting Requirements

California Well Portal

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
800,000	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	No

Colorado

Description

Full database includes denied permits as well as approved and constructed wells. The 522,388 refers to all of the available permits including those denied. The 215,828 wells refer to only those that were listed as constructed under the categories of 'domestic' and 'household use only'.

Location Requirements

"In most cases, exempt well permits limit the pumping rate to no more than fifteen gallons per minute. Household Use Only Wells - These types of well permits are issued for ordinary household uses in one single family dwelling and do not allow for outside water or livestock watering."

Reporting Requirements

It appears that requirements began in 1972 however this is not confirmed.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
522,388	215,828	N	Y	Y	2/3/2017	1972	Yes

Connecticut

Description

There are approximately 322,578 private residential wells in Connecticut that serve approximately 23% of the state's population of 3,574,097 persons (2010 census). About 822,575 people are served by their own private residential well.

Location Requirements

Reporting Requirements

Notes

'Local Health Departments and Districts have the authority over private wells in their respective towns. Private wells must be properly sited and approved before being constructed. For technical advice on well construction, maintenance, water quality or water treatment systems contact your Local Health Department/District or the Department of Public Health – Private Well Program at 860-509-7296.'

Link to more Information

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	No

Delaware

Description

At the start of this work, well logs appeared to exist in the TEPP (Technology Enabled Permitting Process) system, however data had to be requested through the state government. Presently, Delaware has created an open data portal and it may now be possible to apply the RW method to Delaware.

Location Requirements

Unknown

Reporting Requirements

Unknown

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	1985	No

Florida (NW)

Description

Location Requirements Florida (NW) maintains an extensive list of location requirements available here **Reporting Requirements**

Notes

Counties included: Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Walton, Washington Florida has listed some 'No Drilling' areas which are available on their data page. NW Florida seems to have corrupted XY coordinates for their well locations which have been located. In response to this, we have disregarded XY locations and run the entire database through the Navteq geocoding service to locate the residences using wells.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
73,722	Unknown	Y	Y	N	Unknown	1995	No

Florida (Saint Johns)

Description

These data were supplied directly via ftp download as a layer package from the Office of information technology services at the Saint Johns River Water Management District. Well completion reports can also be looked up via the url below.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
265,120	83,326	Y	Y	N	9/29/2015	Unknown	No

Florida (South)

Description

No data could be located for Florida (south)

Florida (Southwest)

Description

Records can be queried, however a complete dataset could not be obtained

Florida (Suwanee River)

Description

No records could be found

Georgia

Description

Georgia considers domestic well locations private information and does not disclose records publicly.

Location Requirements

10 feet from a sewer line, 50 feet from a septic tank, 100 feet from a septic tank absorption field, 150 feet from a cesspool or seepage pit, 100 feet from an animal or fowl enclosure.

Reporting Requirements

"prior to actual construction, the water well contractor must notify the county health department of the intent to drill a water well, providing such information as is required on forms prepared by the Water Well Council" (Georgia Water Well Standards Act of 1985, 12-5-134).

Notes

Georgia no longer permits public access to paper water well records due to restrictions for homeland security and because of the Privacy Act.

Hawaii

Description

The Hawaii commission on water resource management controls well permitting but the data for wells was compiled and published by the Hawai'I Groundwater & Geothermal Resources Center.

Location Requirements

"New wells shall be sited the maximum distance possible from sources of pollution. Some possible pollution sources include wastewater lines, cesspools, septic tanks, wastewater leaching fields, landfills, chemical storage and injection wells." (HAWAII Well Construction & Pump Installation STANDARDS 2.3)

Reporting Requirements

Permits are required for well construction and pump installation. The first edition of standards was published in 1997, and was revised in 2004

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
4,760	Unknown	N	Y	N	2014	1997	No

Idaho

Description

Permitting is regulated by The Idaho Department of Water Resources.

Location Requirements

Existing Public Water Supply well, separate ownership - 50', Other existing well, separate ownership - 25', Septic drain field - 100', Septic tank - 50', Drainfield of system with more than 2,500 GPD of sewage inflow - 300', Sewer line - main line or sub-main, pressurized, from multiple sources - 100', Sewer line - main line or sub-main, gravity, from multiple sources - 50', Sewer line - secondary, pressure tested, from a single residence or building - 25', Effluent pipe - 50', Property line - 5', Permanent buildings, other than those to house the well or plumbing apparatus, or both - 10', Above ground chemical storage tanks - 20', Permanent (more than six months) or intermittent (more than two months) surface water - 50', Canals, irrigation ditches or laterals, & other temporary (less than two months) surface water - 25' (IDAPA 37.03.09)

Reporting Requirements

"Prior to beginning construction of any well, or changing the construction of any well, the driller or well owner shall obtain a permit from the director of the department of water resources to protect the public health, safety and welfare and the environment, and to prevent the waste of water or mixture of water from different aquifers." (Idaho Statue 42-235, 1987)

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
174,450	163,662	Y	Y	N	12/30/2016	1987	Yes

Illinois

Description ISGS Wells and Borings Database includes every boring relating to oil / gas / water etc... (Updated weekly).

Location Requirements

"Prohibitions. No new water well may be located within 200 feet of any potential primary or potential secondary source or any potential route, unless some other distance is allowed or required in Table C. If the owner is the same for both the well to serve the private water system and a potential secondary source or a potential route, the well shall be no closer than 75 feet from the potential route or potential secondary source, unless some other distance is allowed or required in Table C." (IL Administrative Code Title 77, Section 920.50)

Reporting Requirements

The Illionois department of public health reviews and issues permits for well construction and requires completion reports. More information can be found here: http://www.idph.state.il.us/envhealth/waterwells.htm

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
590,726	285,436	N	Y	N	2/1/2017	1967	Yes

Indiana

Notes

The Water Rights and Use Section currently maintains, in original paper and digital form, the records of over 400,000 water wells drilled in Indiana. Of this number approximately 138,000 records have been field verified.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	1999	No

Iowa

Description

A combination of multiple well databases in Iowa (many duplicates) including Agricultural drainage, IGS, and Private well tracking system.

Location Requirements

567—49.6(455B) Earthen manure storage basin / runoff control basins / anaerobic lagoons: 1000, Domestic wastewater lagoon: 400, Sanitary landfills: 1000, Preparation or storage area for spray materials / commercial fertilizers / chemicals that may result in groundwater contamination: 100, Drainage wells: 1000, Conforming wells: 10, Nonconforming wells: 100, Soil absorption field / any sewage treatment system with an open discharge / pit privy or septic tank discharge line: 100, Septic tank / concrete vault privy / sewer of tightly joined tile or equivalent material / sewer-connected foundation drain / sewers under pressure: 50, Sewer of cast iron with leaded or mechanical joints / sewer of plastic pipe with glued or compression joints / independent clear water drains / cisterns / well pits / pump house floor drains: 10, Hydrants: 10, Property lines: 4, Liquid hydrocarbon storage tanks: 100, Ditches / streams / ponds / lakes: 25 Frost pit: 10

Notes

Well construction permitting and reporting were handled by counties prior to 2002. Prior to 2002, well reporting was taking place but it was not statewide.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
353,401	113,011	N	Y	Y	4/1/2015	2002	No

Kansas

Description

Location Requirements

K.A.R. 28-30-8(a): The horizontal distances between the well and the potential source of pollution or contamination such as sewer lines, pressure sewer lines, septic tanks, lateral fields, pit privy, seepage pits, fuel or fertilizer storage, pesticide storage, feed lots or barn yards shall be 50 feet or more as determined by the department. Proper drainage in the vicinity of the well shall be provided so as to prevent the accumulation and ponding of surface water within 50 feet of the well. The well shall not be located in a ravine or any other drainage area where surface water may flow into the well. (c) When sewer lines are constructed of cast iron, plastic or other equally tight materials, the separation distance shall be 10 feet or more as determined by the department. (d) All wells shall be 25 feet or more from the nearest property line, allowing public right-of-ways to be counted; however, a well used only for irrigation or cooling purposes may be located closer than 25 feet to an adjoining property.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
262,586	70,214	N	Y	Y	1/3/2017	1974	Yes

Kentucky

Description

Includes wells found from the Kentucky Groundwater Data Repository

Location Requirements

401 KAR 6:310. Water supply well construction practices and standards: Leaching Pit: 100 Feet, Petroleum Storage Tank: 100 Feet, Grave or Cemetery: 75 Feet, Manure Pile / Animal Waste Storage / Confined Animal Feeding Operation: 75 Feet, Wastewater Treatment Disposal System: 75 Feet, Side Wall of Lateral Trench / Bed / Lagoon: 70 Feet, Geothermal – Closed Loop / Un-grouted: 70 Feet, Water Supply Well: 50 Feet, Septic Tank or Sewer Line: 50 Feet, Livestock Pen / Corral / Stable:50 Feet, Surface Water Body:25 Feet, Geothermal – Closed Loop, Grouted / Abandoned Water Well Grouted: 20 Feet, Property Lines / Utility Lines / Roadway Right of Way:10 Feet

Reporting Requirements

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
98,482	45,290	N	Y	N	3/1/2015	1985	Yes

Louisiana

Description

GIS downloadable file from Louisiana DNR.

Location Requirements

"Title 56 PUBLIC WORKS Part I §313. Minimum Distance Requirements for Locating a Water Well: Septic Tanks: 50, Storm / Sanitary Sewer: 50, Cesspools / outdoor privies / oxidation ponds / subsurface absorption fields / pits: 100, Sanitary landfills / feed lots / manure piles / solid-waste dumps and similar installations: 100, Another water well: 25, Drainage canal / ditch / stream / pond / lake: 50"

Reporting Requirements

"Title 56 PUBLIC WORKS Part I. Water Wells §105: The contractor who drills or constructs a well or hole on or after November 1, 1985 shall be responsible for registering that well or hole by submitting to the department a completed water well registration Form within 30 calendar days after completing such well or hole"

Notes

The location requirements listed are the basic setback distances. Louisiana state law allows for several exceptions based on construction methods of contamination sources as detailed in the statute referenced.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
207,014	82,914	N	Y	Y	1/24/2017	1985	Yes

Maine

Description

CSV files from Maine department of Agriculture, Conservation and Forestry

Location Requirements

400.2: Wells from waste disposal fields (<2,000 gpd): 100 feet, Wells from waste water disposal fields (>2,000 gpd): 300 feet. 400.4: "The minimum horizontal setback distance of a water supply well from septic tanks, lift stations, and holding tanks is 60 feet."

Reporting Requirements

Notes

A data file (CSV(zipped) 2.8MB) containing over 50,000 located wells is available for download. This file contains information on all wells in the database which could be geographically located. Data points have been located by GPS, by street address locations, and by using tax maps in combination with air photos so location accuracy varies. The database includes coordinates and descriptive information such as well yield, depth, overburden thickness, well use, and well type. This information is also portrayed on the Bedrock Groundwater Resources Basic Data Maps in PDF format. There is also a data file (CSV(zipped) 2.2MB) available containing over 65,000 unlocated wells that is available for download. Many setback reduction exemptions exist per section 400.3. Also, there is no specific language written in the law providing setback distances from underground storage tanks.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
122,186	Unknown	Y	Y	N	5/25/2016	1987	Yes

Maryland

Description

Database obtained from public information request through the Maryland Department of the Environment. Native format is an Access database which can be converted into a geodatabase. Each record corresponds to a log and so it is possible for several rows in the database to refer to the same physical well. Metadata is included

Reporting Requirements

Drilling records seem to be required at the county level and are then forwarded on to the Maryland Department of Environment. It is unclear when reporting began to be required across counties. By looking at the data we can assume reporting began sometime in the 1940's.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
556,218	$444,\!435$	Y	Y	N	11/28/2017		Yes

Massachusettes

Description

"The MassDEP Well Driller Program has created a database of groundwater wells in Massachusetts. This information is used by the well drilling industry; local, state and Federal government; and the general public." Source

Location Requirements

Property Line: 10', Public/Private Roadway: 25', Right Of Way: 15', Sewer line/septic tank: 50', Leaching field or drywell: 100', Stable/ barnyard/ manure storage: 100', Aboveground fuel storage or pesticide tank: 100', Underground fuel storage or pesticide tank: 250', Surface water / wetlands: 25'.

Reporting Requirements

"Requirements of 310 CMR 46.00 state, in part, that within 30 days after completion of any well (productive or nonproductive), or after plugging of an abandoned well, a certified well driller shall submit to the Drinking Water Program, a Well Completion Report (Figures 3 and 4) with a copy to the local Board of Health"

Guidelines for Well Drilling

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
186,342	$92,\!457$	Y	Y	N	1/27/2017	1989	No

Michigan

Description

The Wellogic system is operated by the Michigan department of environmental quality. Since 2000, well drillers have input records directly to the database. Records from earlier than 2000 were added by MDEQ.

Location Requirements

"R 325.1622 Wells; distances from contamination sources. Rule 122. (1) A well that furnishes water for any beneficial use shall be located where it is not subject to contamination. 800 feet from: The active work area of a landfill, Land surface application of septage waste. 300 feet from: Land application or subsurface injection of effluent or digested sludge from a municipal wastewater treatment facility, Oil and gas wells, Petroleum product processing or storage facilities. 150 feet from: a preparation or storage area for fertilizers, agricultural chemicals, or other chemicals that might contaminate the soil or groundwater. 50 feet from: A buried sewer, A septic tank, A subsurface disposal field, A dry well, A sewage pump chamber, A pressurized sewer, A grease trap, A seepage pit, A cesspool, An animal or poultry yard, An outhouse, Any other wastewater handling or disposal unit or site of liquid wastes draining into the soil. 10 feet from: A buried gravity-flow sewer, A sump, pit, or unfilled space that is below the ground surface, except for a crawl space, A surface water body, such as a lake, pond, river, or stream. USTs: 300 feet: Underground or abovegrade storage tank systems of not less than 1100 gallons which are regulated under Act No. 423 of the Public Acts of 1984, as amended, being '299.701 et. seq. of the Michigan Compiled Laws, when secondary containment as defined by Act No. 423 of the Public Acts of 1984, as amended, is not provided. 50 feet from underground or abovegrade storage tank systems which have a capacity of not less than 1,100 gallons, which are regulated pursuant to the provisions of Act No. 423 of the Public Acts of 1984, as amended, being '299.701 et seq. of the Michigan Compiled Laws, and which have secondary containment as defined in Act No. 423 of the Public Acts of 1984. as amended. 50 feet: underground or above grade storage tank systems which have a capacity of less than 1,100 gallons and which store motor or heating fuels for noncommercial purposes or consumptive use on the premises where the fuel is stored."

Reporting Requirements

"333.12707 Record required; contents; copies; forms; sufficiency of record for drive point well. Sec. 12707. Not later than 60 days after the completion of a well, a well drilling contractor shall provide the owner with a copy and the department, or local health department, with 2 copies of a record indicating the well owner's name, location of the well, well depth, geologic materials and thicknesses of materials penetrated, amount of casing, static water levels, and any other information which may be required by the rules and construction code promulgated under section 12714. The department or local health department shall sent 1 copy of the record to the director of the department of natural resources not later than 30 days after its receipt from the well drilling contractor."

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
592,236	527,875	Y	Y	Y	1/27/2017	1978	Yes

Minnesota

Description

Obtained database access from Minnesota Geological Survey. The data is a full copy of the Minnesota County Wells Index database.

Location Requirements

4725.4450 WATER-SUPPLY WELL DISTANCES FROM CONTAMINATION SOURCE: 300 feet: Absorption area of a soil dispersal system with an avg design flow > 10,000 gpd / landfill / permitted demolition debris landfill / municipal or industrial wastewater rapid infiltration basin / municipal wastewater stabilization pond with > 500 gallons per acre per day leakage / liquid manure storage basin that is unpermitted. 150 feet: tank or container holding > 25 gallons or 100 pounds of agricultural chemicals / >56 gallons or 100 pounds of a hazardous substance not protected with safeguards / >1.100 gallons of petroleum / absorption area of a soil dispersal system serving a facility such as a hospital, nursing home, mortuary, veterinary clinic etc... an industrial wastewater stabilization pond / a municipal or industrial wastewater spray irrigation area / a liquid manure storage basin. 100 feet from: a solid manure storage area not covered with a roof, except that the minimum distance to a sensitive water-supply well is increased to 200 feet / a safeguarded area used to store agricultural chemicals, or clean or fill agricultural chemical application equipment that is protected with safeguards / an underground storage tank holding 56 or more gallons, or 100 pounds dry weight, of a hazardous substance, or with more than 1100 gallons of petroleum. (Many specifics written into law... refer to MN 4725.4450 for full definitions). Petroleum tank specifics: Tanks over 1,100 gallons: 150 feet without MPCA safeguards / 100 feet with safeguards. Tanks 56 to 1,100 gallons: 50 feet for below-ground tanks / 20 feet for above-ground tanks. Tanks 56 gallons or less: No required distance, but 50 feet recommended.

Notes Minnesota has required the disclosure of wells at the transfer of property since 1990, records available at: http://www.health.state.mn.us/divs/eh/wells/disclosures/index.html

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
511,403	368,734	N	Y	Y	2/3/2017	1974	Yes

Mississippi

Description

Location Requirements

Reporting Requirements

Notes

Spoke with a representative at MDEQ who provided a download link of current records. They were adamant that there was a lot of information missing, however data seems to go back well into the early 1960's and some records are older than that.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
100,446	Unknown	N	Y	Y	Unknown	Unknown	No

Missouri

Description

This data does not come directly from Missouri DNR which is responsible for collecting well logs. It comes from the Missouri Spatial Data Information Service which collects and distributes Missouri focused data. This organization is run out of the University of Missouri.

Location Requirements

Storage area for commercial fertilizers or chemicals: 300'. Demolition landfill: 300', Wastewater treatment plant or lagoon that serves commercial facilities, subdivisions, or mobile home parks: 300'. Above ground or underground storage tank: 300'. Tank distribution lines for liquid petroleum, petroleum products, or chemicals: 300'. Earthen, concrete, or other manure storage structures or lagoons: 300'. Land application areas for domestic or animal waste: 300'. Animal composting facilities: 300'. Unplugged abandoned wells: 100'. Subsurface wastewater disposal field, grave, residential lagoon, privy, lift station, or pressurized sewer line: 100'. Animal Feeding Operation (AFO): 100'. An animal composting facility constructed with a concrete floor cell design covered with a roof: 100'. Dry litter storage within a building: 100'. Other areas with contaminants that may leach into the groundwater: 100'. Septic tank or wastewater holding tank: 50'. Pit or cistern: 50'. Existing operating well: 50'. Non-pressurized buried sewer line: 25'. Solid waste disposal area, sanitary landfill, special waste landfill, utility waste landfill, waste stabilization pond (lagoon), or hazardous waste treatment, storage, or disposal facility: 1000'

Reporting Requirements

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
227,717	137,930	N	Y	Y	11/23/2015	1987	Yes

Montana

Description

The Ground Water Information Center in Montana regularly updates their well database with all Montana water well reports.

Location Requirements

"At a minimum, a well should be 10 feet from the property line, 50 feet from any septic tank or sewer lines, and 100 feet from the drain field." (see pdf in notes)

Reporting Requirements

"State law requires that a copy of the well log be submitted to the Montana Bureau of Mines and Geology within 60 days after completion of the well by the driller. The driller is also required to supply a copy of the completed well log to the well owner."

Notes

Extensive information is provided in the document here

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
285,141	157,729	N	Y	Y	2/2/2017		Yes

Nebraska

Description

Nebraska Department of Natural Resources registered groundwater wells database.

Notes

May be suitable for RW method if starting at 2000. Regulations can be found here: https://dnr.nebraska.gov/groundwater/faqs

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
231,115	231,115	Y	Y	Y	2/6/2017	1993	No

Nevada

Description State of Nevada division of water resources maintained database.

Location Requirements

Full Document Here

Reporting Requirements

NRS 534.170 Well driller to keep log and records; contents; information to be furnished to State Engineer; report of test.

1. The well driller shall keep:

- (a) A log of the depth, thickness and character of the different strata penetrated and the location of water-bearing strata; and (b)An accurate record of the work, including: (1)A statement of the date of beginning work; (2)The date of completion; (3)The length, size and weight of the casing and how it is placed; (4)The size of the drilled hole; (5)Where sealed off and the type of seal; (6)The name of the well driller and the type of drilling machine used; (7)The number of cubic feet per second or gallons per minute of flow from such well when completed; and (8)The pressure in pounds per square inch if it is a flowing well, and, if nonflowing, the static water level, and the water temperature.
- 2. The well driller shall furnish a copy of the log and the record of work for every well drilled to the State Engineer within 30 days after the well is completed.
- 3.If the well is to be tested by pumping by the holder of the permit, the report of the test must include the drawdown with respect to the amount of water pumped and any additional information requested by the State Engineer. This information must be reported and verified on forms prescribed by the State Engineer. The report must be returned: (a)Immediately following the completion of the test; or (b)Within 30 days following the completion of the well,whichever occurs later.
- 4. The log, record of the work and report of the test are a permanent record in the Office of the State Engineer.

[Part 7a:178:1939; added 1947, 52; A 1955, 328] — (NRS A 1981, 1842)

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
$\overline{125,272}$	60,781	Y	Y	Y	2/1/2017	1981	Yes

New Hampshire

Description

Location Requirements

Effluent Disposal Area (leach field/bed): 75'. Septic Tank: 75'. Property Boundary: 75'. Livestock Pen: 75' (100' for dug wells). Automobile Salvage Yard: 75'. Underground Storage Tanks (containing gas or diesel fuel): 250'. Storage of Regulated Substance (except gas or diesel fuel): 75'. Solid Waste Disposal Site: 75'. Bulk Storage of Material (ex. fertilizer, manure, salt) 75'. Stump Dump: 75'. State Highway Right-of-Way: 50'. Sewer Component: 50'. Surface Water / Swamp: 50'. Public Road Surface: 75'. Other Sources of Contamination: 75'.

Source

Reporting Requirements

Statute RSA 482-B which requires the licensing of water well contractors and the submission of well completion reports.

Notes

"The New Hampshire water well inventory database was initiated in 1984 in conjunction with the passage of state statute RSA 482-B which requires the licensing of water well contractors and the submission of well completion reports."

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
64,956	Unknown	Y	Y	N	12/15/2011	1984	No

New Jersey

Description

New Jersey has a very good electronic well tracking system that is regularly updated. It includes permits, reports and also decommissioning / sealing of wells.

Location Requirements

Wells must be located a minimum of: 25' from sewer, 50' from septic, 50' from distribution box, 100' from disposal field, 100' from seepage pit, 50' from dry well, 150' from cesspool, 25' from fuel storage tank. (http://marathonconsultants.com/wp-content/uploads/2016/05/njac7_9d.pdf)

Reporting Requirements

All newly constructed wells must be drilled by a licensed driller and require both a permit and a report to be filed upon completion

Well Testing Act

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
739,634	490,203	Y	Y	N	2/8/2017	1952	Yes

New Mexico

Description

The NM Office of the State Engineer (OSE) "Point of Diversions" (POD) layer includes well locations, surface declarations, or surface permits. These data were extracted from the OSE W.A.T.E.R.S. (Water Administration Technical Engineering Resource System) database and geo-located (mapped). All attribute fields are fully described in the metadata, including descriptions of field codes. Please read the metadata accompanying this GIS data layer for further information.

Location Requirements

"A new domestic well shall be set back a minimum of 50 feet from any existing well that another person owns. The New Mexico Environment Department (NMED) has established the following setback requirements for domestic wells (NMED's website lists additional setbacks): Septic Tank: 50 feet, Drain Field/1st opening in leach line: 100 feet, Seepage Pit: 100 feet, Sewer line: 50 feet."

Reporting Requirements

The well driller is required to file a complete Well Record with the Office of the State Engineer and the permit holder no later than 20 days after drilling completion. If the Well Record is not received by the expiration date of the permit, it automatically expires and a new permit and fee will be required to drill.

Reporting and location requirements can be found here

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
128,000	74,734	Y	Y	Y	2/3/2017		Yes

New York

Description

Very minimal records considering the size of New York. Although records are required, they don't seem to be actively updating the well log database (at least the public facing one).

Location Requirements

According to subsection RP2602.1.1.3 of the Residential Code of New York State, wells shall be located an appropriate distance from known sources of contamination: Wastewater treatment absorption systems located in coarse gravel or in the the direct path of drainage to a well (200 feet). Seepage Pit following a septic tank (150 feet). Absorption field (100 feet). Septic Tank / Aerobic Unit / watertight effluent line to distribution box (50 feet). Stream / lake / watercourse / drainage ditch / wetland (25 feet).

Reporting Requirements

NYS Water Well Driller Registration Law (ECL 15-1525): The certificate of registration shall require that before the commencement of drilling of any well or wells the water well driller shall file a preliminary notice with the department; it shall also provide that upon the completion of the drilling of any water well or water wells a completion report be filed with the department, giving the log of the well, the size and depth thereof, the capacity of the pump or pumps attached or to be attached thereto, and such other information pertaining to the withdrawal of water and operation of such water well or water wells as the department by its rules and regulations may require

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
24,562		N	Y	N	12/1/2016	2000	No

North Carolina

Description

North Carolina requires permitting and reporting, however this is handled at the county level. While these records appear to be reported to the state, there does not appear to be a singular dataset publicly available. North Carolina has one hundred counties, making this a formidable obstacle to building a singular dataset.

Location Requirements

 $15\ NCAC\ 02C\ .0107:\ The\ extensive\ setback\ requirements\ can\ be\ found\ at:\ http://reports.oah.state.nc.us/ncac/title%2015a%20-%20environmental%20quality/chapter%2002%20-%20environmental%20management/subchapter%20c/15a%20ncac%2002c%20.0107.pdf$

Examples: - Septic Systems: 100 feet - CAFOs: 100 feet

Reporting Requirements

Mandated by the state but handled at the county level: "North Carolina General Statute 87-97 requires counties to have programs for permitting, inspecting, and testing of private drinking water wells, which are constructed, repaired, or abandoned, on or after July 1, 2008. As a result, county health departments enforce state statutes and rules and receive technical and legal assistance from the Environmental Health Section. The program is designed to protect human health and groundwater quality by ensuring private drinking water wells are properly constructed, repaired, and abandoned." Source

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	2008	No

North Dakota

Description

North Dakota maintains two separate well databases: Ground/Surface water sites & Well Drillers logs.

Location Requirements

North Dakota Administrative Code: 33-18-01-04. (Location of wells): "At least one hundred feet [30.48 meters] (fifty feet [15.24 meters] for private wells) from privy pits, cesspools, septic tanks, absorption fields, barnyards, feedlots, high water marks of lakes, streams, sloughs, ponds, etc., when well is constructed in unconsolidated soils with filtering properties. At least thirty feet [9.14 meters] from sewerlines. At least ten feet [3.05 meters] from basements or pits. At least twenty feet [6.1 meters] from overhead powerlines and other hazardous devices."

Reporting Requirements

North Dakota Century Code 43-35-19. Standards for well drilling - Reports required. "All construction of water wells must comply with the rules adopted by the state department of health. Within thirty days after the completion of each well, each water well contractor shall furnish to the board on forms provided by the board such information as the state department of health shall require, including a log of formations penetrated, well depth, and casing size and weight. A copy of each report must also be furnished to the customer. All information submitted must remain the property of the board."

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
102,907	28,638	N	Y	N	3/16/2017	1982	No

Ohio

Description

Access Database obtained from ODNR includes domestic well records going back to the 1940's. ODNR possesses more than 800,000 well logs however the missing ones from this data have not been digitized.

Location Requirements

Setbacks: Fuel storage tanks under 1,100 gallons (50 feet), Fuel storage tanks over 1,100 gallons (150 feet). Fuel storage tanks over 1,100 gallons with no secondary containment (300 feet). Additional requirements: Ohio Revised Code 3701-28-07

Reporting Requirements

Well completion reports must be submitted in compliance with Ohio revised code 1521.05: Source

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
443,968	443,968	Y	Y	N	10/1/2015	1981	Yes

Oklahoma

Description

OWRB maintains very good records of well drilling reports which were updated about once a month at the time of download

Location Requirements

"Oklahoma Administrative Code 785:35-7-1: Minimum location standards. (1) Every new groundwater well, fresh water observation well and water well test hole shall be located a minimum distance from possible pollution sources as prescribed in this subsection or as otherwise authorized by a variance granted by the Executive Director. Possible pollution sources include but are not limited to existing or proposed septic tanks, sewer lines, absorption fields or beds, seepage pits, building foundations, waste pits, lagoons, oil or gas wells, and landfills. The minimum distance between the possible pollution source and the well or test hole shall be as follows, provided that other governmental agencies may require wells to be located at distances greater than the minimum distances set forth in this paragraph: (A) 10 feet from a closed or tight sanitary sewer line, 25 feet from aerobic (above ground) sprinkler spray, and 50 feet from an aerobic sprinkler head, (B) 300 feet from the outside perimeter of an existing or proposed waste lagoon for a feedlot or confined animal feeding operation, and (C) 50 feet from all other pollution sources, provided however, if the well is 50 feet to 75 feet and located down-gradient or level from a possible source of pollution, a twenty foot (20') surface seal shall be installed, and (D) 75 feet from all other pollution sources if the well is level with the pollution source and 100 feet from all other pollution sources if the well is located down-gradient from the pollution source."

Reporting Requirements

Oklahoma 785:35-5-3: Requirements for multi-purpose completion report Each licensee or certified operator as the case may be shall file a multi-purpose completion report for each groundwater well, water well test hole, fresh water observation well, or heat exchange well completed or plugged. The report shall be on forms provided by the Board or electronically online and shall be filed within sixty (60) days after the

date of completion or plugging. Each licensee or certified operator as the case may be shall file a multipurpose completion report electronically online for each monitoring well, site assessment observation well and geotechnical boring within sixty (60) days after the date completed or plugged. Information regarding multiple monitoring wells, geotechnical borings and heat exchange wells may be accumulated together in a single report if all of the excavations are located in the same ten-acre tract, have substantially the same lithology encountered in the subsurface, and have substantially the same depth and construction. If more than one boring or well is included on a multi-purpose completion report, a site map shall be attached to the report which indicates the distance of each well or boring from permanent reference points such as streets, roads or section lines. Provided, a report need not be filed for a geotechnical boring 20 feet deep or less in which groundwater or contamination is not present. Effective July 1, 2009, all multi-purpose completion reports shall be submitted with latitude and longitude data. [Source: Amended at 19 Ok Reg 2498, eff 6-27-02; Amended at 25 Ok Reg 1444, eff 5-27-08; Amended at 28 Ok Reg 987, eff 7-1-11]

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
178,650	70,655	Y	Y	Y	4/2/2017	1984	Yes

Oregon

Description

Searchable well database available online, with download feature. Most records do not have GPS coordinates.

Location Requirements

OAR 690-210-0030: (1) No person shall construct a water supply well: (a) Within 50 feet of any septic tank; or (b) Within 100 feet of a septic drainline or sewage disposal structure or facility; or (c) Within 50 feet of a closed sewage or storm drainage system (except those in or underneath a building); or (d) Within 50 feet of a confined animal feeding or holding area; or (e) Within 50 feet of any animal waste holding area such as a pond or lagoon; or (f) Within 100 feet of any sewage sludge disposal area; or (g) Within 5 feet from a permanent structure or the roof, eaves or overhangs of a permanent structure. This includes decks or other additions to the structure that may hinder the ability of a drilling machine to get over the well. This does not include pump houses or other outbuildings that are easily moved; or (h) Within 500 feet of a hazardous waste storage, disposal or treatment facility without written permission of the Director; or (i) Within 25 feet of an underground or aboveground petroleum storage tank that is used for residential purposes; or (j) Within 50 feet of an underground or aboveground petroleum storage tank that is used for commercial purposes.

Reporting Requirements

"Water supply well reports (also referred to as well logs or well reports) are prepared by a water well constructor and describe how the well was built, altered, deepened or abandoned. Well logs are to be provided to both the person who contracted the construction of the well and to OWRD. OWRD has copies of well logs for most water wells drilled in Oregon since 1955." Source

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
511,661	265,379	N	Y	Y	9/9/2015	1955	No

Pennsylvania

Description

"PaGWIS is a repository of hundreds of thousands of water well records. Most of the well records have been

submitted to the Bureau by water well drillers. Act 610, the Water Well Drillers License Act of 1955 (passed on May 29, 1956), began the statewide process of collecting groundwater data through the licensing of water well drillers. Starting in the mid-1960s, drillers sent paper water well completion reports to the Bureau. By the 1980s, reports were being entered into a digital database that has become PaGWIS." Source

Location Requirements

Pennsylvania has no legal setback requirements at the state level but local authorities may impose specific regulations. More info can be found in the water well handbook

Reporting Requirements

Act 610, the Water Well Drillers License Act of 1955 (passed on May 29, 1956), began the statewide process of collecting groundwater data through the licensing of water well drillers. Starting in the mid-1960s, drillers sent paper water well completion reports to the Bureau. By the 1980s, reports were being entered into a digital database that has become PaGWIS.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
551,328	290,891	Y	Y	N	3/13/2017	1955	No

Rhode Island

Description

Rhode Island department of health took over well completion records in 2013. Records are filed in paper form and as of 2017, they had about 45,000, around 6,000 of which have been scanned, however no digital database exists for them. In 2013, locations started to require GPS coordinates, mostly addresses prior to that. The E-911 GIS layer and the Public Water Display layer can create a water service buffer for the state of Rhode Island. Using negative inference, it is possible to identify all buildings in the state that by default must be on well water. The E-911 layer is available here. The water system layer is available here.

Location Requirements

RULES AND REGULATIONS GOVERNING THE ENFORCEMENT OF CHAPTER 46-13.2 RELATING TO THE DRILLING OF DRINKING WATER WELLS: 7.01 Well Location A. Wells shall be located in a manner to reduce the likelihood of contamination from sources of pollution at or near the ground surface. The following are minimum isolation distances from the oklisted potential contamination sources: distribution box and septic tank ——75 feet sewage disposal field ———100 feet sewer line ———50 feet road ————50 feet (from the edge of the road surface) Fuel storage tanks should be located as far as possible from wells or animal waste storage facilities. B. Wells shall not be located within 100 feet of livestock pens or animal waste storage facilities. A 20 foot wide distance shall be maintained between a well and active agricultural areas. Wells shall be located uphill from grazing areas whenever possible. Such wells are suggested to be analyzed for nitrate levels prior to use (Does not apply to wells used solely for irrigation)."

Source

Reporting Requirements

Upon completion of construction alteration or abandonment of a well, the well driller shall submit a well completion report to the department upon a form provided by the department. (See Appendix A). Such reports shall be submitted within 15 working days of the completion of the well and shall include the results of a 5 hour pump test.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
45,000						1989	No

South Carolina

Location Requirements

Sewer lines: 20 feet. Lakes, streams, surface-water bodies: 50 feet. Septic tank/tile fields: 75 feet. Animal feedlots, barns, stables: 50 feet. Waste disposal—land application sites: 100 feet. Waste treatment lagoons: 100 feet. Chemical, herbicide, pesticide and petroleum storage or handling sites: 100 feet. Landfills: 100 feet. Hazardous waste landfills/surface impoundments: 100 feet. Radioactive waste landfills: 100 feet. Property lines and buildings: 5 feet."

Source

Reporting Requirements

State Regulation requires that the Department be notified of a private drinking water well or irrigation well before installation.

Notes

Unable to find any records of intent to drill notices online, but they are required to be reported to the department of health and environmental control.

South Dakota

Description

Well completion reports are maintained by South Dakota DENR. GPS coordinates are not included, and the resolution for PLSS only goes down to the quarter section (.65 km2).

Location Requirements

- (1) Wells supplied by aquifers whose top is less than 100 feet deep may be located no closer than 150 feet horizontally from a pollution source, 75 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines as defined by subdivision 74:02:04:20(46);
- (2) Wells supplied by aquifers whose top is more than 100 feet deep may be located no closer than 100 feet horizontally from a pollution source, 50 feet horizontally from wastewater system components, or 30 feet horizontally from sewer lines as defined by subdivision 74:02:04:20(46);
- (3) No well constructed to supply water to water distribution systems as defined by SDCL 46-1-6(17) may be located any closer than:
 - (a) Five hundred feet horizontally from a wastewater treatment plant, wastewater pumping station, hazardous chemical warehouse, bulk petroleum storage facility, bulk fertilizer storage facility, or bulk pesticide storage facility; and
 - (b) One thousand feet horizontally from a sanitary landfill or dump, wastewater drainage ditch, or wastewater stabilization pond; and
- (4) All wells shall be located a minimum of 10 feet horizontally from permanent structures and overhead projections of the structure and 10 feet horizontally from overhead power lines.

Spacing for wells for which water permits are required may be determined individually by the water management board. Small removable structures or pump houses with roof access may be built over a well."

Source

Reporting Requirements

46-6-11. Records of well construction required. On each well drilled the driller shall keep accurate records and complete a record of well construction on a form supplied by the chief engineer. If for any reason well construction is begun but not completed, the well driller shall complete the record of well construction to the extent possible. Within one month of completion of a well driller's work on a well, he shall file all well construction records with the chief engineer for placement on permanent file. The public shall have access to the records at any time during normal business hours.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
34,570	34,570	N	N	Y	4/4/2017	1974	No

Tennessee

Description

Location Requirements

Sewage Lagoons; Leaching Pits: ————	——————————————————————————————————————
——- 100 feet Sludge; Sewage Disposal Sites —	100 feet Pit Privies —
75 feet Sewer Lines	——————————————————————————————————————
——————————————————————————————————————	Tank Connections (Tightline)——-10 feet

Source

Reporting Requirements

0400-45-09-.10 WELL CONSTRUCTION STANDARDS "Every well driller, within sixty (60) days after completion of a water well, shall submit a report on the construction or reconstruction of the well to the Department. The well completion report shall be made on a form provided by the Department or a reasonable facsimile approved by the Department."

Notes

Tennessee has kept well logs since the 1970's but the responsible agency has changed at least twice and not all records have been properly retained. Records since the mid 90's are considered relatively complete, but there are issues with underreporting from drillers (as with many other states).

Texas

Description

[The Submitted Drillers Reports Database](https://www.twdb.texas.gov/groundwater/data/drillersdb.asp#:~:text=The%20Submitted%20Drillers%20Report%20(SDR,drillers%20use%20to%20submit%20their) "The Submitted Drillers Report (SDR) Database is populated from the online Texas Well Report Submission and Retrieval System (TWRSRS) which is a cooperative Texas Department of Licensing and Regulation (TDLR) and Texas Water Development Board (TWDB) application that registered water-well drillers use to submit their required reports. This system was started 2/5/2001 and began collecting all reports in 2003. Be aware that the locations of the wells in this database are not verified by State staff and may be inaccurate. Updated Nightly"

Location Requirements

Reporting Requirements

Sec. 1901.251. Well Log.

- (a) Each driller who drills, deepens, or otherwise alters a water well in this state shall make and keep a legible and accurate well log in accordance with rules adopted by the commission and on forms prescribed by the executive director. The well log shall be recorded at the time of drilling, deepening, or otherwise altering the well and must contain:
- (1) the depth, thickness, and character of the strata penetrated; (2) the location of water-bearing strata; (3) the depth, size, and character of casing installed; and (4) any other information required by rules adopted by the commission.
- (b) Not later than the 60th day after the date of the completion or cessation of drilling, deepening, or otherwise altering the well, the driller shall deliver, send by first class mail, or provide electronically a copy of the well log to: (1) the department; (2) the Texas Commission on Environmental Quality; and (3) the owner of the well or the person for whom the well was drilled."

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
441,486	171,649	Y	Y	N	5/31/2017	2003	No

Utah

Description

The WRPOD shapefile is primarily used by the Division of Water Rights as a complete record of point of diversion locations. The shapefile is generated nightly from basic information in the Water Rights tabular database

Location Requirements

Rule R655-4-10.2 the licensee should also be familiar with local zoning ordinances, or county boards of health requirements which may limit or restrict the actual well location and construction in relationship to property/structure boundaries and existing or proposed concentrated sources of pollution or contamination such as septic tanks, drain fields, sewer lines, stock corrals, feed lots, etc. The licensee should also be familiar with the Utah Underground Facilities Act (Title 54, Chapter 8a of the Utah Code Annotated 1953 as amended) which requires subsurface excavators (including well drilling) to notify operators of underground utilities prior to any subsurface excavation.

Reporting Requirements

R655-4-4.1 "The well driller shall make certain that a valid authorization or approval to drill exists before engaging in regulated well drilling activity. Authorization to drill shall consist of a valid 'start card' based on any of the approvals listed below. Items 4.1.1 through 4.1.12 allow the applicant to contract with a well driller to drill, construct, deepen, replace, repair, renovate, clean, develop, or abandon exactly one well at each location listed on the start card or approval form. The drilling of multiple borings/wells at an approved location/point of diversion is not allowed without authorization from the state engineer's office. Most start cards list the date when the authorization to drill expires. If the expiration date has passed, the start card and authorization to engage in regulated drilling activity is no longer valid. If there is no expiration date on the start card, the driller must contact the state engineer's office to determine if the authorization to

drill is still valid. When the work is completed, the permission to drill is terminated. Preauthorization or pre-approval of pump installation/repair work is not required."

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
326,298	12,645	N	Y	Y	6/1/2017	Unknown	No

Vermont

Description

Private wells in this layer come from the Department of Environmental Conservation's Water Supply Data Composite. Managed by the Water Supply Division's Well Driller and Well Location Program, the database contains private well information submitted by Vermont licensed well drillers. Licensed well drillers have been required to submit well completion reports (well logs) to the state since 1966. Well tags have been required since 1986. NOTE: the data contained here is only as accurate as what was submitted - many wells were completed, but not reported, many reports have missing information, were recorded inaccurately or poorly located geographically.

Location Requirements

VERMONT ANR-DEC ENVIRONMENTAL PROTECTION RULES, WATER SUPPLY RULE: CHAPTER 21, APPENDIX A, PART 12 12.2.1.1 Buildings 10 ft. Edge of driveway serving fewer than 3 residences 15 ft. Property line 10 ft. Roadway shoulder, parking lot edge 25 ft. Surface Water 25 ft. Subsurface wastewater piping (sewer and related tanks (septic)) 25 ft. Limit of herbicide application, i.e. utility ROW 100 ft. Concentrated livestock holding areas, or manure storage 200 ft. Down slope sewage system disposal facilities (fields, beds, drywells, injection wells, etc.) 100 ft. Up slope sewage system disposal facilities 100 ft. Hazardous or solid waste disposal sites 200 ft.

Reporting Requirements

Environmental Protection Rules Chapter 15 (Revision to September 18, 1986 rule): 15-701 Each licensee shall file a report with the Department and well owner on each water well constructed, including but not limited to the name of the owner, location, depth, character of rocks or earth formations and fluids encountered, and other reasonable and appropriate information the Department may require. All well completion reports shall be signed by a Vermont licensed well driller.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
105,248	105,248	N	Y	N	1/18/2017	1966	Yes

Virginia

Reporting Requirements

The Code of Virginia §62.1-258 requires that certified water well system providers submit to the Virginia Department of Environmental Quality a water well completion report form for any private well constructed within a Virginia Groundwater Management Area within 30 days of construction.

Notes

A comprehensive well database is currently being compiled but was not available at the time of this publication: http://www.deq.virginia.gov/Programs/Water/WaterSupplyWaterQuantity/GroundwaterCharacterization/WellDatabase.aspx

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
						1973	No

Washington

Description

Points are located by 1/4 1/4 section centroid. Points contain all well log types including water wells, resource protection wells, and decommissioned wells.

Location Requirements

173-160 of the Washington Administrative Code (WAC) Building or Structure Drip line 5 ft Septic Tank 50 ft Building Sewer 50 ft Septic Drain Field 100 ft Permitted Landfill Boundary 1000 ft

Reporting Requirements

"A Notice of Intent to Construct a Well form to Ecology at least 72 hours prior to well construction along with the appropriate fee. Notice of Intent forms are available through any Ecology office and licensed well drillers. The forms can be filled out by the property owner or the well driller"

Notes

Well records go back to the early 1900's but it doesn't seem possible to distinguish between types of wells.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
728,969	NA	Y	Y	Y	4/21/2016	1987	No

West Virginia

Location Requirements

"WV 64CSR46: (64-46-4) property line:10 ft. Existing or potential contamination: as far as possible. May not terminate within a building or below ground level.

Reporting Requirements

64-19-5 (https://www.wvdhhr.org/phs/water/historical/64CSR19_-_Water_Well_Regulations.pdf) "Within thirty (30) calendar days after the water well has been constructed, altered, or abandoned, the certified well driller shall submit a completion report to the Comissioner. The date of construction and time of completion is the date and time the rig is removed or pulled off the borehole or well. The certified well driller who actually performed the construction, alteration or abandonment of the well or provided the onsite supervision of the well construction, alteration or abandonment shall sign the completion report. A master well driller is required to sign the completion report when a journeyman well driller conducts the on-site supervision and drilling."

Notes

While drilling records are required to be filed upon the drilling of a new, or the altering of an existing well, records appear to be filed at the county level. The form does provide space for gps coordinates and these records have been required since at least 1984. It is unclear how many records would exist in digital vs. paper format but there appears to be no online submission system indicating that paper copies are most likely to be the primary form of reporting.

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
NA	NA	N	Y	N	Unknown	1987	No

Wisconsin

Location Requirements

Extensive list provided in NR 812.08

Reporting Requirements

Well records are required to be submitted by drillers. Notes. The downloadable database includes a wealth of information on well construction but does not have location data.

Link to Data

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
136,300	Unknown				Unknown	1936	No

Wyoming

Description

Wyoming retains a general shapefile which was last updated in April 2016. However, they have a queryable database which appears to be updated either daily or weekly. The data can be exported to excel and can be converted into GIS format from there. The Wyoming state engineer's office makes note that most well locations are at a resolution of a plss quarter-quarter section (40-acres). They make it very clear that these data should be considered for regional analysis and not mistaken for perfect positional accuracy.

Location Requirements

Rules are set forth by the Water Well Minimum Construction Standards Document

(Given authority by Wyoming 41-3-909)

Livestock Containment Pens: 50 feet Livestock Sewage Lagoons: 50 feet Sewer: 50 feet Septic Tank: 50 feet Disposal (Leach) Field: 100 feet

Reporting Requirements

"W.S. 41-3-930:" Any person who intends to acquire the right to beneficial use of any underground water in the state of Wyoming, shall, before commencing construction of any well or other means of obtaining underground water or performing any work in connection with construction or proposed appropriation of underground water or any manner utilizing the water for beneficial purposes, file with the state engineer an application for a permit to make the appropriation and shall not proceed with any construction or work until a permit is granted by the state engineer..."

From state engineers website: "The 1947 legislature enacted the State's first groundwater laws. Although the legislation was not extensive, it did for the first time, require the owners of any groundwater wells drilled in the state prior to April 1, 1947 to register their wells by a "Statement of Claim" with the office of the State Engineer. It also required that any new well proposed to be drilled after that date (except those for stock or domestic uses) must also be registered, and thus began the application of the prior appropriation system to groundwater use in Wyoming. Well filings made under a statement of claim could receive their priority based on the claimed date of completion of the well, going back as far in time as could be justified, while registrations of wells after April 1, 1947 would receive a priority as of the date their new filing was made with the State Engineer. A process for adjudication of wells was also included in the legislation"

Records	Domestic	Address	GPS	PLSS	Updated	Reporting Start	Suitable for RW
158,678	74,435	N	Y	Y	4/19/2016	1947	Yes