

Weber-Morgan Health Department

Regulation For

INSTALLATION AND APPROVAL OF NONPUBLIC WATER SYSTEMS  
AND PRIVATE WATER PRODUCTION WELLS

Adopted by the Weber-Morgan Board of Health

January 26, 2009

Under Authority of Section 26A-1-121  
Utah Code Annotated, 1953, as amended

REGULATIONS FOR INSTALLATION AND APPROVAL OF NONPUBLIC WATER SYSTEMS  
AND PRIVATE WATER PRODUCTION WELLS

**1.0 TITLE AND APPLICABILITY.**

1.1 These standards shall be known as the Regulations for Installation and Approval of Nonpublic Water Systems and Private Water Production Wells, hereinafter referred to as “This Regulation.”

1.2 This regulation shall govern the permitting and approval of nonpublic drinking water systems serving 1-8 lots or fewer than 25 of the same persons per day.

1.3 This regulation establishes definitions; sets administrative requirements; potable water supply requirements; quality requirements; plan approval requirements; and quantity and storage requirements; and construction standards for nonpublic wells and springs.

**2.0 PURPOSE.**

It is the purpose of this regulation to ensure that nonpublic water systems are properly constructed to provide a potable water supply to the user(s); to ensure that all private wells and springs are located, constructed, developed and maintained in a manner which does not adversely affect public health and the environment; to regulate the use of nonpublic water systems and private water production wells within the Weber-Morgan Health Department’s jurisdiction; and provide standards for abandonment of private wells.

**3.0 AUTHORITY.**

3.1 It is the responsibility of the Weber-Morgan Health Department to provide nonpublic water protection standards for the citizens of Weber and Morgan Counties as legislated under Section 26A-1-106 and 26A-1-108 of the Utah Code Annotated, 1953 as amended.

3.2 The Weber-Morgan Board of Health is authorized to make standards and regulations pursuant to subsection 26A-1-121(1) of the Utah Code Annotated, 1953 as amended.

3.3 The Weber-Morgan Board of Health is authorized to establish and collect fees pursuant to Section 26A-1-114 of the Utah Code Annotated, 1953 as amended.

3.4 The Department may deny any application for a permit if it appears that the operation of the nonpublic water system will not comply with this regulation.

**4.0 PROHIBITIONS.**

4.1 It shall be unlawful to install, construct, or place into use any nonpublic water system unless a permit is issued by the Department.

4.2 It shall be unlawful to change the use of real property, convey real property, or expand a building, or dwelling without a review of the nonpublic water system by the Department.

4.3 It shall be unlawful to use or maintain any nonpublic water system that is not adequately functioning. Nonpublic water systems shall be maintained in good working order. There shall be no activities or conditions permitted which would interfere with the proper operation of a nonpublic water system.

## 5.0 DEFINITIONS.

As used in these regulations:

**“Annular Space”** means the space between the borehole wall and the outside of a water well casing pipe.

**“Aquifer”** means an underground geologic formation that contains and transmits groundwater

**“Board of Health”** means the Weber-Morgan Board of Health

**“Concentrated Sources of Pollution”** means sources that include, but are not limited to septic tanks, drain field systems, drain lines, ordinary sewer lines, garbage dumps, pit privies, pesticide or hazardous waste disposal storage locations, feedlots and where animals may congregate causing an accumulation of waste.

**“Construction of Well”** means acts necessary to construct private wells, including the location of private wells, the boring, digging, drilling, or otherwise excavating of a well hole and the installation of casing with or without well screens, and well curbing.

**“Department”** means the Weber-Morgan Health Department.

**“Director means”** the Director/Health Officer Weber-Morgan Health Department or authorized representative.

**“Grout”** means a fluid mixture of Portland cement or bentonite with water of a consistency that can be forced through a pipe and placed as required. Various additives such as sand, bentonite, and hydrated lime may be included in the mixture to meet different requirements.

**“Grouted Well”** means a well that has the following construction: The annular space between the drilled hole and the well casing shall be grouted or otherwise sealed to eliminate water of questionable quality from seeping alongside the casing into the water bearing aquifer. Such grouting shall be at least two inches thick, and extend a minimum of 30 feet below the surface, or into an effective geologic seal. The well casing shall extend to an elevation greater than the maximum floodwater elevation, but not less than 18 inches above the surrounding ground. However, casings terminated in underground vaults may be permitted on a case-by-case basis.

**“Individual Wastewater and Drinking Water Permit”** means a permit to construct an individual wastewater treatment system and has an approved on-site supply of potable water.

**“Owner”** means any person who alone, jointly or severally with others:

A. Has legal title to any premises, dwelling, or dwelling unit, with or without accompanying actual possession thereof, or

B. Has charge, care or control of any premises, dwelling, or dwelling unit, as legal or equitable owner, agent of the owner, lessee, or is an executor, administrator, trustee, or guardian of the estate of the owner.

**“Non-Community Water System (NCWS)”** means a public water system that is not a community water system. There are two types of NCWS’s: transient and non-transient.

**“Non-Transient Non-Community Water System (NTNCWS)”** means a public water system that regularly serves at least 25 of the same nonresidential persons per day for more than six months per year. Examples of such systems are those serving the same individuals (industrial workers, school children, church members) by means of a separate system.

**“Nonpublic Water System”** means any potable water system, which is not subject to the regulations of the Utah Drinking Water Board.

**“Peak Instantaneous Flow Conditions”** means the sum of the peak flows for indoor use, outdoor use, and fire flow requirement in accordance with the State of Utah Rules for Public Drinking Water Systems.

**“Person”** means any individual, public or private corporation and its officers, partnership, association, firm, trustee, executor of an estate, the state or its departments, institution, bureau, agency, county, city, political subdivision, or any legal entity recognized by law.

**“Pollution”** means such contamination or other alteration of the physical, chemical or biological properties of any waters of the state or such discharge of any liquid, gaseous or solid substance into any waters of the state as will create a nuisance or render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

**“Potable Water”** means water, which is satisfactory for drinking, culinary, and domestic purposes and meets the requirements stated in these rules.

**“Private Water Production Well”** means a privately owned well constructed to supply water for any purpose which has been approved by the state engineer (such as irrigation, stock water, domestic, commercial, industrial, etc.).

**“Private Spring”** means any spring constructed and developed for a person that is intended as a source of drinking water or water for household culinary use and is not intended for use by a public water system.

**“Private Well”** means any water well constructed for a person that is intended as a source of drinking water or water for household culinary use and is not intended for use by a public water system.

**“Public Water System”** means a system, either publicly or privately owned, providing water through constructed conveyances for human consumption and other domestic uses, which has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days out of the year and includes collection, treatment, storage, or distribution facilities under the control of the operator and used primarily in connection with the system, or collection, pretreatment or storage facilities used primarily in connection with the system but not under his control (see 19-4-102 of the Utah Code Annotated). All public water systems are further categorized into three different types, community (CWS), non-transient non-community (NTNCWS), and transient non-community (TNCWS). These categories are important with respect to required monitoring and water quality testing found in R309-205 and R309-210 (see also definition of "water system").

**“Recreational Property”** means property that is primarily intended for recreational use and is not occupied on a year-round basis.

**“Satisfactory Bacteriologic Sample”** means a water sample that tests negative for coliform organisms or other indicator organisms. Samples shall be tested by a laboratory certified by the Utah State Department of Health.

**“Shall”** means a mandatory term.

**“Ungrouded Well”** means a well that does not meet the criteria for a grouted well as defined in 1.9.

**“Spring means”** a water source issuing from the ground that is fed by precipitation that travels from a higher elevation through natural soil.

**“Transient Non-Community Water System (TNCWS)”** means a non-community public water system that does not serve 25 of the same nonresident persons per day for more than six months per year. Examples of such systems are those, RV park, diner or convenience store where the permanent nonresident staff number less than 25, but the number of people served exceeds 25.

**“Individual Wastewater Disposal Treatment Permit”** means a permit to construct an onsite wastewater treatment system issued by the Department.

**“Water System”** means all lands, property, rights, rights-of-way, easements and related facilities owned by a single entity, which are deemed necessary or convenient to deliver drinking water from source to the service connection of a consumer(s). This includes all water rights acquired in connection with the system, all means of conserving, controlling and distributing drinking water, including, but not limited to, diversion or collection works, springs, wells, treatment plants, pumps, lift stations, service meters, mains, hydrants, reservoirs, tanks and associated appurtenances within the property or easement boundaries under the control of or controlled by the entity owning the system.

**“Well”** means any excavation that is drilled, cored, bored, driven, dug, fitted, or otherwise constructed and the intended use of the excavation is to acquire groundwater.

## **6.0 GENERAL POWERS AND DUTIES.**

The Department, through the Division of Environmental Health, shall be responsible for the administration of these rules and regulations and any other powers vested in it by law and shall:

6.1 Require the submission of reports, plans and specifications for any use of individual water systems as necessary to implement the provision, requirements, and standards of these rules;

6.2 Issue permits and charge fees as necessary to implement the provisions, requirements and standards of these rules;

6.3 Make inspections of public or private property and issue orders as necessary to effect the purposes of these rules;

6.4 Take samples and make analysis of soils, waters and other materials as necessary to effect the purposes of these rules;

6.5 Review and comment on any proposed contract or agreement between any district, city, county, governmental unit, or person for the use of individual water systems within the jurisdiction of the department; and

6.6 Do any and all acts permitted by law that are necessary for the successful enforcement of these regulations.

## **7.0 EMERGENCY ORDER.**

7.1 If the Department finds that an emergency exists requiring immediate action to protect the public's health, safety, or well being, the Director may issue an order declaring the existence of an emergency and requiring that remedial action be taken. The order shall be effective immediately. Upon application to the Department, the recipient of the order shall be granted a hearing before the Director within 48 hours. On the basis of the hearing, and not more than 24 hours after the adjournment of the hearing, the Director shall continue, modify, or revoke the order.

7.2 Water hauling will only be allowed during water interruptions or other emergency situations. Where it is allowed, water must be hauled from a source and in a manner approved by the Department and in accordance with the local jurisdiction. At any rate, water hauling will not be allowed for new platted subdivisions.

## **8.0 APPROVED POTABLE WATER SUPPLY REQUIRED.**

8.1 No person shall occupy, lease or permit the occupancy of any building or structure within the jurisdiction of the Department, and no individual wastewater and drinking water permit shall be issued for a property:

A. Unless the building is to be connected to a public water system that is rated as "Approved" or "Corrective Action" by the Utah Department of Environmental Quality. Documentation must be provided by DEQ stating that the public water system has the capacity and that the water system agrees to provide the connection. Connections will not be allowed to a public water system that does not have an approved rating; or

B. Unless the building or structure is properly equipped with a nonpublic water system approved by the Department.

8.2 Proposed subdivisions shall have an adequate and safe water supply throughout the subdivision.

A. When a public water system is available, the subdivider shall provide the piped, public water supply to the property line of every lot in any subdivision. The water system shall meet all applicable state and local laws.

B. When a public water system is not available, the source of potable water may be approved only upon proof of adequate water rights, availability, quantity, flow, and quality meeting the Safe Drinking Water Standards outlined in this regulation. Samples shall be taken by, and have a complete chemical analysis performed and approved by the Department.

C. Test wells proving water availability shall be drilled on 10 percent of the lots rounded up to the next whole number.

## **9.0 PLAN APPROVAL FOR NONPUBLIC SYSTEMS.**

9.1 The Department shall approve the location of wells prior to drilling;

9.2 Where a nonpublic water system is proposed as a water supply, evidence of a valid water right, as issued by the Division of Water Rights, shall be provided to the Department;

9.3 Plans submitted for review must be drawn to scale (1"=8', 16', etc., but not exceed 1"=30'), or dimensions indicated. Plan information that may be required is as follows:

A. Direction of north;

B. Lot size and dimensions;

C. Location and dimensions of paved and unpaved driveways, roadways, and parking areas;

D. Location and explanation of type of dwelling to be served;

E. Location, type, the depth of all existing and proposed nonpublic water supply sources within 200 feet of onsite wastewater systems, and of all existing or proposed public water supply sources within 1500 feet of onsite wastewater systems; and

F. GPS coordinates of the proposed well.

9.4 Plans and specifications for development and construction of the new nonpublic water system, or as-built of the existing nonpublic water system including any proposed alteration to the existing nonpublic water system, in accordance with Construction Standards of Section 11.0;

9.5 Evidence that a potential contamination source does not exist within the protection zone for the well or spring as specified in 9.10 and 9.11 of this regulation;

9.6 The construction of nonpublic water systems shall be in accordance with the current plumbing code as adopted by the State of Utah and/or the local jurisdiction;

9.7 Whenever a nonpublic well and /or spring source subject to this regulation is proposed to be installed on property other than the owner's, a utility easement shall be recorded with the property title prior to the construction of the well or development of the spring. The easement shall be of sufficient area to permit access, construction, and placement of the distribution system and maintenance of the well and distribution system. A copy of the recording shall be submitted to the Department;

9.8 The well or spring owners shall be responsible for monitoring and maintenance of the utility easement;

9.9 Where it is proposed to connect to a previously existing nonpublic water system:

A. The water system shall be in compliance with this regulation;

B. Evidence shall be submitted that the owner(s) of the water system agree(s) to allow the connection to the system; and

C. The Utah Division of Public Utilities has approved the connection.

9.10 To ensure that a nonpublic well is protected from concentrated sources of chemical or biological pollution, a minimum allowable separation distance between the wellhead and pollution source(s) is necessary. A nonpublic well shall be protected from concentrated sources of pollution for a distance of at least 100 horizontal feet from the wellhead.

9.11 For newly created lots, the lot shall be so shaped and sized to allow for a 100 foot radius protection zone to protect the well from concentrated sources of chemical or biological pollution.

9.12 For exiting lots, the protection zone shall be accomplished as follows:

A. The nonpublic water system owner(s) shall either own the land for the well protection zone and agree not to locate or permit concentrated sources of pollution within it; or,

B. If the nonpublic water system owner(s) agrees by grant of restrictive easement agreeing not to locate or permit concentrated sources of pollution within the protection zone.

C. In all cases, said restriction(s) shall be binding on all heirs, successors, and assigns. Said land use agreement must be notarized and recorded with the appropriate county recorder.

D. Publicly owned lands, including state and county road easements, containing protection zones need not be recorded as such in the recorders' office. A written statement, however, shall be obtained from the administrator of the land in question. This statement shall meet all other requirements with respect to the establishment of a protection zone as described in this section.

E. The nonpublic water system owner(s) shall be responsible for the monitoring and enforcement of the protection zone.

## **10.0 QUALITY REQUIREMENTS FOR NONPUBLIC WATER SYSTEMS.**

10.1 Prior to approval, the following information shall be provided to the Department and must receive satisfactory review:

(A) An initial (within 2 years of date requesting plan approval) chemical analysis of the water that meets the following requirements as specified in Table 1, which are the maximum contaminant levels for inorganic chemicals that the Department will allow; and

Table 1	
CONTANMINANT	MAXIMUM CONTAMINANT LIMIT (mg/l)
Antimony	0.006
Arsenic	0.01
Barium	2.0
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide (as free Cyanide)	0.2
Fluoride	4.0
Mercury	0.002
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Total Nitrate and Nitrite (as N)	10.0
Selenium	0.05
Thallium	0.002

B. The samples for the analysis shall be collected by the Department after the well has been continuously pumped for 24 hours and have no residual chlorine present. All analyses shall be performed by a laboratory approved by the Utah State Laboratory.

C. A satisfactory bacteriological sample taken from the water system within the last six months.

## 11.0 QUANTITY AND STORAGE REQUIREMENTS.

All nonpublic systems must be capable of supplying water in adequate quantity for the intended usage. Failure to provide adequate capacity may cause intermittent flows and negative pressures, which may cause contamination of the system through cross connections or other system deficiencies.

11.1 Nonpublic wells used as a culinary water source must be capable of delivering a sustained flow of 5 gallons per minute per connection for 1 hour.

11.2 The system must be capable of providing at least 5 gallons per minute per connection for 2 hours if lawns or other residential areas are to be irrigated.

11.3 For indoor use only, wells that cannot meet the 5 gallons per minute per connection for 1 hour must provide storage at a capacity of 400 gallons for each connection.

11.4 For indoor and outdoor use, a storage capacity of 800 gallons per connection must be provided.

11.5 The Department may require witnessing the quantity test of the well.

## 12.0 CONSTRUCTION STANDARDS FOR WELLS.

If properly developed, water from wells may be suitable for potable use without prior treatment. A determination as to whether treatment may be required can only be made after the source has been

developed and evaluated. Construction and development requirements for nonpublic water systems shall be as follows:

12.1 The well shall be developed by a certified well driller and drilling procedures shall meet the requirements of the Utah State Division of Water Rights.

12.2 Wells must be grouted to a minimum of 30 feet in depth or pass through an effective geologic seal between the ground surface and the water bearing aquifer.

12.3 Well casing material and thicknesses shall meet the requirements of the State of Utah, Water Well Administrative Rules for Water Well Drillers, R655-4.

12.4 Water not meeting the requirements of the Utah Division of Drinking Water shall not be introduced into a well during the drilling operation.

12.5 The well must be grouted as specified in the State of Utah Rules for Public Drinking Water Systems; including witnessing of the grouting procedure by a representative of the Department.

12.6 The well casing shall extend to an elevation greater than the 25-year floodwater elevation, but not less than 18 inches above the surrounding ground.

12.7 After drilling is completed, the well shall be pumped free of all mud and sand and then disinfected by the introduction of sufficient chlorine solution into the well to produce a chlorine residual of at least 100 mg. per liter (ppm). After the chlorine solution has remained in the well for at least 24 hours, it shall be pumped out and the well water tested for bacteriological purity. Chlorine solution is harmful to fish and other aquatic wildlife and shall not be discharged to any waterways. Alternative methods of disinfection may be approved by the Department.

12.8 A sealed cover shall be installed at the upper terminal of the casing that will prevent the entrance of contamination.

### **13.0 CONSTRUCTION STANDARDS FOR DEVELOPMENT OF SPRINGS SERVING A NONPUBLIC WATER SYSTEM.**

Springs vary greatly in their characteristics and they should be observed for some time prior to development to determine any flow and quality variations.

13.1 The spring collection device, whether it be collection tile, perforated pipe, imported gravel, infiltration box or tunnels must be covered with a minimum of ten feet of impervious soil cover. Such cover shall extend a minimum of 15 feet in all directions horizontally from the spring collection device;

A. When it is not possible to achieve the ten feet of impervious soil cover, an acceptable alternate will be the use of an impermeable liner that is acceptable for contact with potable water. There shall be a minimum of two feet of soil cover above the liner.

B. All junction boxes or collection boxes shall comply with the State of Utah Rules for Public Drinking Water Systems for access manholes, air vents, and overflow piping. All lids for spring boxes shall have a gasket and the chamber adequately vented. Each spring

collection area shall be provided with at least one access box to permit spring inspection and testing. Access to the spring collection box shall be locked.

C. The spring collection area shall be surrounded by a fence located a distance of at least 50 feet uphill from all collection devices on land at an elevation equal to or higher than the collection device, and a distance of at least 15 feet downhill from all collection devices on land at an elevation lower than the collection device. The elevation datum to be used is the surface elevation at the point of collection. The fence shall be at least stock tight. Within the fenced area all vegetation that has a deep root system shall be removed. In remote areas where no grazing or public access is possible, the fencing requirement may be waived by the director, but vegetation that has a deep root system shall still be removed from the immediate area of the spring collection device(s).

D. A Diversion channel capable of diverting all anticipated surface water runoff away from the spring area must be constructed and should be located immediately inside the fenced area.

E. The spring shall be developed in such a manner as to minimize the possibility of excess spring water ponding within the collection area. Where ponding of spring water is unavoidable, the excess shall be collected by shallow piping or land drain and routed beyond the immediate collection area.

13.2 To ensure that a nonpublic spring source is protected from concentrated sources of chemical or biological pollution, all land at elevations equal to or higher than and within 200 feet horizontally in all directions from the spring source shall be protected. All land at an elevation lower than and within 100 feet horizontal to the spring sources shall be protected.

A. The nonpublic water system owner(s) shall either own the land for the spring protection zone and agree not to locate or permit concentrated sources of pollution within it; or,

B. If the nonpublic water system owner(s) agrees by grant of restrictive easement agreeing not to locate or permit concentrated sources of pollution within the protection zone.

C. In all cases, said restriction(s) shall be binding on all heirs, successors, and assigns. Said land use agreement must be notarized and recorded with the appropriate county recorder.

D. Publicly owned lands, including state and county road easements, containing protection zones need not be recorded as such in the recorders' office. A written statement, however, shall be obtained from the administrator of the land in question. This statement shall meet all other requirements with respect to the establishment of a protection zone as described in this section.

E. The nonpublic water system owner(s) shall be responsible for the monitoring and enforcement of the protection zone.

#### **14.0 Construction Standards for Private Water Production Wells.**

Private Production Wells shall meet all standards within this regulation with the exception of those contained in 10.0 (Quality Requirements for Nonpublic Water Systems) and 11.0 (Quantity and Storage Requirements). However, prior to approval for culinary use all quality and quantity requirements shall be met.

#### **15.0 Adjudicative Proceedings.**

In accordance with the Weber-Morgan Health Department Adjudicative Proceedings, a Department conference may be requested in writing within ten (10) days of any action in which a party is aggrieved.

#### **16.0 Conflict.**

In any case where a provision of this Regulation is found to be in conflict with a provision of any ordinance or local law, or with a provision of any statute, rule, or order of the State of Utah, the provision which established the higher standard for the promotion of the health, welfare, and safety of the citizens of Weber or Morgan Counties shall prevail. In any case where a provision of this Regulation is found to be in conflict with a provision of any other ordinance or local law existing on the effective date of this local law, or with a provision of any statute, rule, or order of the State of Utah, which established a lower standard for the promotion of the health, welfare, and safety of the citizens of the municipality, the provisions of this local law shall be deemed to prevail.

#### **17.0 Severability.**

The provisions of this Regulation shall be several, and if any clause, sentence, paragraph, subdivision, section, or part of this local law shall be judged by competent jurisdiction as being invalid, such judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined to the part thereof directly involved in the controversy in which such judgment shall have been rendered.

#### **17.0 Effective Date.**

This Regulation shall become effective all day following its adoption by the Weber-Morgan Board of Health and will supersede previous nonpublic water regulations adopted by the Board of Health. The Department may modify appendices without affecting the rest of this Regulation. Appendices when amended by the Board of Health shall become effective on the day following adoption.