

## Chapter 9

### Water Supplies and Closed Loop Well Ordinance

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#### 4-9-1 SCOPE

An Ordinance regulating water wells and closed loop wells, the construction, modification, sealing, and inspection of such wells and their components, and the regulation of non-community public water supplies within Rock Island County, Illinois.

WHEREAS, the Board of Health of the Rock Island County Department of Public Health has deemed it necessary and desirable to regulate water supplies and closed loop well systems for health purposes and groundwater protection, and accordingly has recommended adoption of the following Ordinance.

THEREFORE, BE IT RESOLVED by the County Board of Rock Island County, Illinois, that the following Ordinance is hereby made and adopted this 17 day of May, 2016.

#### 4-9-2 DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of this Ordinance:

1. ABANDONED WELL means a water well or monitoring well which is: 1) no longer used to supply water, or 2) no longer in use for the purpose for which it was intended, or 3) in such a state of deficient construction or disrepair that the well or boring has the potential for transmitting contaminants into an aquifer or otherwise threatens the public health or safety.
2. CLOSED LOOP WELL means a sealed, watertight loop of pipe buried outside of a building foundation intended to re-circulate a liquid solution through a heat exchanger but is limited to the construction of the borehole, piping in the borehole, heat exchanger fluid, and the grouting of the borehole and does not include the piping and appurtenances used in any other capacity. "Closed loop well" does not include any horizontal closed loop well systems where grouting is not necessary by law or standard industry practice. Closed loop wells are also commonly known as geothermal wells.
3. CLOSED LOOP WELL SYSTEM means a clustered group of closed loop wells that serve the same facility.
4. COMMUNITY PUBLIC WATER SYSTEM means a public water system which serves at least 15 service connections used by residents, or regularly serves 25 or more residents for at least 60 days per year.
5. DRIVEN WATER WELL means a well constructed by joining a drive point with lengths of pipe and then driving or jetting the assembly into the ground with percussion equipment or by hand. Driven water wells are also commonly known as sandpoint wells.
6. HEALTH AUTHORITY means that person or persons designated by the Rock Island County Board of Health to enforce this Ordinance.
7. HEALTH DEPARTMENT means the Rock Island County Department of Public Health, including its duly authorized representatives.
8. HEALTH DEPARTMENT ADMINISTRATOR means the individual selected by the Rock Island County Board of Health to administer and enforce the policies, ordinances, resolutions, and laws of said Board.
9. HORIZONTAL CLOSED LOOP WELL SYSTEM means any open cut excavation

- where a watertight loop of pipe is buried outside of a building foundation that is intended to re-circulate a liquid solution through a heat exchanger.
10. **LAWN SPRINKLER SYSTEM** means any irrigation system of lawn, shrubbery, and other vegetation from all water sources, whether potable or non-potable. Such system includes without limitation the water supply piping, valves, and sprinkler heads or other irrigation outlets. Lawn sprinkler system does not include an irrigation system used primarily for agricultural purposes.
  11. **MODIFICATION** means the alteration of the structure of an existing water well, including, but not limited to, deepening, installation of a pitless adapter, elimination of a buried suction line, installation of a liner, replacing, repairing or extending casing, or replacement of a well screen. Pertaining to closed loop wells, "modification" also means any alteration to the construction of the borehole of an existing closed loop well, including, but not limited to, regrouting and installation of additional boreholes.
  12. **MONITORING WELL** means a water well intended for the purpose of determining groundwater quality or quantity.
  13. **NON-COMMUNITY PUBLIC WATER SYSTEM** means a public water system which is not a community water system, and has at least 15 service connections used by non-residents, or regularly serves 25 or more non-resident individuals daily for at least 60 days per year.
  14. **NON-POTABLE WATER** means water that does not meet public health standards for drinking water and is not suitable for human consumption or culinary use, or is of unknown quality. Examples of situations where non-potable water sources may be used include commercial or industrial processing or cooling, irrigation of agricultural ground, or irrigation of other vegetated areas with or without use of a lawn sprinkler system.
  15. **POTABLE WATER** means water that is generally fit for human consumption in accordance with accepted water supply principles and practices.
  16. **PRIVATE WATER SYSTEM** means any supply which provides water for drinking, culinary, and sanitary purposes and serves an owner-occupied single family dwelling.
  17. **SEMI-PRIVATE WATER SYSTEM** means a water supply which is not a public water system, yet which serves a segment of the public other than an owner-occupied single family dwelling.
  18. **WATER WELL** means any excavation that is drilled, cored, bored, washed, driven, dug, jetted or otherwise constructed when the intended use of such excavation is for the location, diversion, artificial recharge, or acquisition of groundwater.

4-9-3

### ADOPTION BY REFERENCE

In addition to those provisions set forth, this Ordinance shall be interpreted and enforced in accordance with provisions set forth in the following statutes, rules, and regulations of the State of Illinois, Department of Public Health and any subsequent amendments or revisions thereto, which publications are incorporated herein and adopted by reference as part of this Ordinance.

1. Illinois Water Well Construction Code (77 Ill. Adm. Code 920)
2. Illinois Water Well Pump Installation Code (77 Ill. Adm. Code 925)
3. Public Area Sanitary Practice Code (77 Ill. Adm. Code 895)
4. Drinking Water Systems Code (77 Ill. Adm. Code 900)
5. Surface Source Water Treatment Code (77 Ill. Adm. Code 930)
6. Illinois Plumbing Code (77 Ill. Adm. Code 890)
7. Illinois Groundwater Protection Act (415 ILCS 55)
8. Water Well and Pump Installation Contractor's License Act (225 ILCS 345)
9. Illinois Water Well Construction Code (415 ILCS 30)
10. Illinois Water Well Pump Installation Code (415 ILCS 35)

One copy of each of the above rules and regulations shall be on file in the office of the Rock Island County Clerk.

4-9-4

### PUBLIC WATER SUPPLY USE

In those locations where a public water supply is reasonably available, that supply shall be the sole source of water for drinking and culinary purposes. A public water supply shall be deemed reasonably available when the subject property is located within 200 feet of the public water supply to which connection is practical and is permitted by the controlling authority for said water supply.

4-9-5

### POTABLE WATER SUPPLY REQUIRED

All premises intended for human habitation or occupancy shall be provided with a potable water supply. The potable water supply shall not be connected to non-potable water and shall be protected against backflow in accordance with the requirements of the Illinois Plumbing Code. Each potable water supply shall provide quantities of water that are sufficient for the drinking, culinary and sanitary needs of the dwelling or premises served. A minimum system pressure of 20 pounds per square inch shall be maintained throughout each potable water supply. Any premises intended for human habitation or occupancy which do not possess a potable water supply or provide sufficient pressure and quantities of water may be declared as unsafe or unfit for human occupancy and may be

so tagged by the Health Authority. Any such facility that has been tagged as unsafe or unfit for human occupancy shall be vacated within the time limit specified by the Health Authority.

#### 4-9-5.1 SURFACE WATER SUPPLIES

All water systems which receive their source of water from ponds, lakes, streams, rivers, or other surface collectors shall be designed, constructed and operated in accordance with the Surface Source Water Treatment Code. No surface water shall be utilized as a potable water supply unless the Health Authority has reviewed and approved the supply and its components.

#### 4-9-5.2 CISTERNS

Cisterns shall not be used as a potable water supply except where adequate groundwater resources are not available. Cistern water shall receive treatment in accordance with the Surface Source Water Treatment Code. No surface water shall be utilized as a potable water supply unless the Health Authority has reviewed and approved the supply and its components.

#### 4-9-5.3 PRE-EXISTING WATER WELLS

All water wells constructed prior to the effective date of this Ordinance shall comply with any provisions of this Ordinance deemed necessary by the Health Authority to protect groundwater and the public health. After the effective date of this Ordinance, whenever a water well is constructed or a new water source is obtained on a property, any pre-existing water wells located on said property shall be: 1) in substantial compliance with construction and/or location provisions contained within this Ordinance, or 2) renovated in order to be in substantial compliance with construction provisions contained within this Ordinance, or 3) sealed in accordance with provisions contained within this Ordinance.

#### 4-9-5.4 BACKFLOW PROTECTION

Where water wells are utilized to act as a non-potable water source, the groundwater supplying such wells shall be protected against backflow. Each water outlet shall be protected from backflow by having the outlet end from which the water flows spaced a distance above the flood-level rim of the receptacle or body of water into which the water flows sufficient to provide a

minimum fixed air gap. The size of the air gap shall be as specified in the Illinois Plumbing Code as it applies to the protection of potable water. Where it is not possible to provide a minimum fixed air gap, the water outlet shall be equipped with an accessible backflow prevention device (e.g. a vacuum breaker or backflow preventer) complying with either: 1) applicable standards of the Illinois Plumbing Code as it applies to the protection of potable water, or 2) applicable standards of the Illinois Water Well Pump Installation Code for agricultural irrigation as it applies to chemical injection systems. When there is question as to which type of protection device shall be utilized in a given situation, the higher standard of protection shall apply as determined by the Health Authority.

#### 4-9-6 SEALING OF ABANDONED WATER WELLS AND CLOSED LOOP WELLS

Water wells and closed loop wells that are abandoned shall be sealed in a manner prescribed by the Health Authority and the Illinois Water Well Construction Code. In questionable cases, the Health Authority shall make the determination as to whether a water well is considered abandoned, based upon the definition of an abandoned well in each particular case.

##### 4-9-6.1 Permit Required

No water well or closed loop well shall be sealed within Rock Island County unless a permit has been obtained in advance from the Health Authority. An application to seal a water well or closed loop well shall be submitted to the Health Authority on forms prescribed by the Health Department. Upon submission of the application for permit, the Health Authority shall review said application prior to issuance of a permit. If the Health Authority, upon review of said application, finds that such application meets the requirements of this Ordinance, and upon payment of the required fee, a permit shall be issued to the applicant. A sealing permit shall be valid for a period of twelve (12) months from the date of issuance.

##### 4-9-6.2 Inspections

The person responsible for sealing an abandoned water well or closed loop well shall also be responsible for arranging a date and time for inspection of the well sealing in progress by the Health Authority. This inspection shall be scheduled subject to notification procedures set forth in Section 4-9-8.2 of this Ordinance and the availability of the Health Authority inspection staff. The Health

Authority, at its discretion, may waive the inspection requirement based upon the type of well to be sealed and the availability of the Health Authority inspection staff. In cases when the Health Authority waives the in progress inspection requirement, the person sealing the well shall submit a site drawing which depicts the specific location of the sealed well using measurements and landmarks.

#### 4-9-6.3 Permit Fee

A permit fee shall be required to seal a water well or a closed loop well system. Payment of the appropriate permit fee shall accompany each application. The appropriate fee is established by the Board of Health and is listed on the Health Department fee schedule.

### 4-9-7 CONSTRUCTION OF WATER WELLS AND CLOSED LOOP WELL SYSTEMS

Water wells and closed loop well systems shall be constructed in a manner prescribed by the Health Authority and the Illinois Water Well Construction Code.

#### 4-9-7.1 Permit Required

No water well or closed loop well system shall be constructed or modified within Rock Island County unless a permit has been obtained in advance from the Health Authority. Failure by a person to obtain such permit or insure said permit has been obtained shall constitute a violation of this Ordinance, and penalty action may be taken.

#### 4-9-7.2 Application for Permit

An application to construct or modify a water well or closed loop well system shall be made in writing and in such a form as prescribed by the Health Authority. All applications shall include a plan and detailed drawing of the proposed construction and shall identify all sources of contamination. The Health Authority may require additional information, which may include determining the location of potential sources of contamination and/or water wells on adjacent properties. It shall be the responsibility of the applicant or an authorized agent to obtain and submit all necessary data as part of the application.

#### 4-9-7.3 Issuance of Permit

Upon submission of the application for permit, the Health Authority shall review said application prior to issuance of a permit. After review, if the Health Authority finds that such application meets the requirements of this Ordinance, and upon payment of all required fees, a permit shall be issued. The Health Authority shall include a statement on the approved application regarding any conditions or restrictions to be imposed relating to location, materials, or components.

#### 4-9-7.4 Permit Validity

A permit to construct or modify a water well or closed loop well system is valid for a period of twelve (12) months from the date of issuance. If construction has not started within this period, the permit shall be void.

#### 4-9-7.5 Permit Fee and Inspection/Sampling Fee

A permit fee and an inspection/sampling fee shall be required for a water well permit. A closed loop well system permit fee shall also be required; such fee shall be based upon the number of boreholes drilled. The permit fee and inspection/sampling fee, if applicable, shall accompany each permit application. The appropriate fee is established by the Board of Health and is listed on the Health Department fee schedule.

#### 4-9-7.6 Exception

A permit to construct or modify a water well in Rock Island County shall not be required by the Health Authority when such water well does or will serve a community public water system or function as a monitoring well.

#### 4-9-8 INSPECTIONS

Subject to constitutional limitations, the Health Authority shall have the authority to enter any property or inspect any applicable facilities at any reasonable time for public health purposes to determine compliance with the provisions of this Ordinance. It shall be the duty of the owner or occupant of a property to give the Health Authority free access to the property at reasonable times upon the request of the Health Authority.



#### 4-9-8.1 Inspection of Completed Work

Work done under a permit shall not be considered approved until the construction or modification of a water well or closed loop well system and its components have been inspected to verify compliance with the applicable provisions of this Ordinance. To the degree practical and permitted by the Health Authority, the completed installation shall remain uncovered and/or accessible for inspection purposes until approved by the Health Authority. If the Health Authority, upon inspection of the specified installation or component thereof, finds that such work meets the provisions of this Ordinance, the Health Authority shall approve such work. However, compliance with Section 4-9-9 shall be obtained prior to utilizing a potable water well system for drinking and culinary purposes.

#### 4-9-8.2 Notification for Inspection

Any person who constructs, modifies, or seals a water well or closed loop well shall notify the Health Authority at least two (2) working days prior to commencement of the work.

#### 4-9-8.3 Suspension of Permit

Upon inspection by the Health Authority, if it is found that any provisions of this Ordinance or any permit specifications for a stated property have been violated, the Health Authority shall notify the contractor or person responsible for the work to make such specified changes in the work to achieve compliance. If such changes are not made within a period of time specified by the Health Authority, said permit shall be suspended, and penalty action may be taken. In such cases, the water well system or closed loop well system may be deemed unsuitable for use, and the system prohibited from being put into use. In cases involving a potable water supply, the premises may also be tagged by the Health Authority in accordance with Section 4-9-5 of this Ordinance.

#### 4-9-8.4 Special Evaluations

The Health Department may conduct special evaluations concerning the operation of existing water supply systems. These evaluations are generally done for real estate transactions or mortgage refinancing. Special evaluations are conducted on a consultative basis upon the request of the property owner or authorized agent. Payment of a fee is required in order to conduct

a special evaluation. The appropriate fee is established by the Board of Health and is listed on the Health Department fee schedule.

#### 4-9-8.5 Routine Water Sampling and Shipping

The Health Department may collect and ship drinking water samples from a property on a request basis for an analysis, handling, and shipping fee. The Health Department may also accept drinking water samples from the public for an analysis, handling, and shipping fee. The appropriate fee is established by the Board of Health and is listed on the Health Department fee schedule.

#### 4-9-9 DISINFECTION AND ANALYSIS

All components of a new water well construction and/or modification shall be thoroughly disinfected with a strong chlorine solution which will yield a dosage of at least 100 parts per million to the water in the well and piping system. After purging the water system of any chlorine residual, a water sample shall be taken and analyzed by a certified laboratory and satisfactory results obtained prior to utilizing the water system for drinking and culinary purposes. The copy of the analysis shall be filed with the Health Department. The water obtained from a semi-private water supply shall meet the nitrate/nitrite chemical and bacteriological requirements of the Primary Drinking Water Standards (35 Ill. Adm. Code 611), and the water obtained from a private well shall meet the bacteriological and nitrate/nitrite requirements of the Primary Drinking Water Standards (35 Ill. Adm. Code 611). The water from a private water system, having surface water as its source, shall meet the nitrate/nitrite, bacteriological, and turbidity requirements of the Primary Drinking Water Standards (35 Ill. Adm. Code 611). A certified laboratory shall mean a laboratory operated by the Illinois Department of Public Health or a laboratory given certification approval by the aforementioned agency for the processing of official samples of water. It shall be the responsibility of the property owner to assure that a bacteriologically satisfactory water sample is obtained and to provide the Health Authority with the laboratory report as documentation. This sampling requirement is waived by the Health Authority for irrigation or other non-potable water wells.

#### 4-9-9.1 Sampling of New Water Wells

The Health Authority shall have the authority to collect water samples from new or modified water wells as provided in Section 4-9-8 of this Ordinance.

4-9-10

## REGISTRATION OF NON-COMMUNITY PUBLIC WATER SUPPLIES

Each non-community public water supply located and operating within Rock Island County shall be registered by the Health Authority.

### 4-9-10.1 Application for Registration Certificate

An application to operate a non-community public water supply shall be submitted to the Health Authority by the owner, operator, or agent for the water supply. Upon submission of the application for registration, the Health Authority shall review: 1) information provided on the application, and 2) the previous year's water sampling history, and 3) the most recent water supply facility evaluation, and 4) other pertinent information including any outstanding facility deficiencies and compliance activities, and the overall level of public health protection of the water supply. If the Health Authority determines that the water supply is in substantial compliance with applicable regulations and this Ordinance, and upon payment of the required fee, a registration certificate shall be issued for the facility. Registration certificates are issued annually and shall expire January 1<sup>st</sup> of each year.

### 4-9-10.2 Registration Fee

The fee for registration of a non-community public water supply in Rock Island County is established by the Board of Health and is listed on the Health Department fee schedule.

### 4-9-10.3 Renewal of Registration

Failure of a non-community public water supply to comply with applicable regulations, including the Drinking Water Systems Code and this Ordinance, will be just cause for the Health Authority to deny renewal of a registration certificate. A non-community public water supply shall not offer water to the public for drinking and culinary purposes if such facility does not possess a valid registration certificate.

4-9-11

## NOTICE OF VIOLATION

Whenever the Health Authority determines, through inspections or other means, that there is a violation of any provision of this Ordinance, the Health Authority shall give notice of such alleged violation. Such notice shall:

1. Be in writing.
2. Include a statement of the reasons for the issuance of the notice.
3. Contain an outline of remedial action and allow a reasonable time to effect compliance with this Ordinance.
4. Be served upon the owner, operator, or resident as the case may require, provided that such notice shall be deemed to have been properly served when the notice has been personally delivered or sent by registered or certified mail or if the owner, operator, or resident acknowledges receipt of such notice.

4-9-12

## HEARING BEFORE THE HEALTH DEPARTMENT ADMINISTRATOR

Any person affected by any order or notice issued by the Health Department in connection with the enforcement of any section of this Ordinance may file in the office of the Health Department a written request for a hearing before the Health Department Administrator. The Health Department Administrator shall hold a hearing at a time and place designated by him/her within thirty (30) days from the date on which the written request was filed. The petitioner for the hearing shall be notified of the time and place of the hearing not less than five (5) days prior to the date on which the hearing is to be held. If, as a result of the hearing, the Health Department Administrator finds that strict compliance with the order or notice would cause undue hardship on the petitioner and that the public health would be adequately protected and substantial justice done by varying or withdrawing the order or notice, the Health Department Administrator may modify or withdraw the order or notice, and as a condition for such action may make requirements which are additional to those prescribed in this Ordinance for the purpose of properly protecting the public health. The Health Department Administrator shall render a decision within ten (10) days after the date of the hearing which shall be reduced to writing and placed on file in the office of the Health Department, and a copy thereof shall be sent to the petitioner. Any person aggrieved by the decision of the Health Department Administrator may seek relief therefrom through a hearing before the Board of Health.

4-9-13

## HEARING BEFORE THE BOARD OF HEALTH

Any person aggrieved by the decision of the Health Department Administrator, rendered as the result of a hearing held in accordance with Section 4-9-12, may

file in the office of the Health Department a written request for a hearing at the next regular Board of Health meeting, if the agenda allows. The petitioner for the hearing shall be notified of the time and place of the hearing not less than five (5) days prior to the date on which the hearing is to be held. If, as a result of the hearing, the Board of Health finds that strict compliance with the decision of the Health Department Administrator would cause undue hardship on the petitioner and that the public health would be adequately protected and that substantial justice done by granting a variance from the decision of the Health Department Administrator, the Board of Health may grant a variance, and as a condition for such variance, may make requirements which are additional to those prescribed by this Ordinance, all for the purpose of properly protecting the public health. The Board of Health shall render a decision within ten (10) days after the date of the hearing which shall be reduced to writing and placed on file in the office of the Health Department, and a copy thereof shall be sent to the petitioner.

#### 4-9-14                      PENALTIES

Any person who violates any provision of this Ordinance shall be guilty of a Petty Offense, punishable by a fine of not to exceed \$1,000. Each day's violation constitutes a separate offense.

#### 4-9-15                      INJUNCTIONS

The State's Attorney of Rock Island County may bring action for an injunction to restrain any violation of this Ordinance or to enjoin the operations of any such establishment causing such violation.

#### 4-9-16                      CONFLICT OF ORDINANCE

In any case where a provision of this Ordinance is found to be in conflict with a provision of any zoning, building, fire, safety, or health ordinance or code of Rock Island County existing on the effective date of this Ordinance, the provisions which, in the judgment of the Health Authority, establishes the higher standard for promotion and protection of the health and safety of the people shall be deemed to prevail, and such other ordinances or codes are hereby declared to be repealed to the extent that they may be found in conflict with this Ordinance.

#### 4-9-17                      SEPARABILITY OF PROVISIONS

If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this Ordinance which shall remain in full

force and effect and, to this end, the provisions of this Ordinance are hereby declared to be severable.

4-9-18                      EFFECTIVE DATE

This Ordinance shall be in full force and effective immediately upon its adoption as provided by law. Previously adopted ordinances pertaining to the same subject are repealed. The above and foregoing resolution was adopted on the 17 day of May, 2016.

  
Chairman of the County Board of the  
County of Rock Island, Illinois

  
Clerk of the County Board of the  
County of Rock Island, Illinois