

**TOWNSHIP OF HIGHLAND
ADAMS COUNTY, PENNSYLVANIA
ORDINANCE 2009-01**

REVISED AS OF August 11, 2015

AN ORDINANCE PROVIDING FOR THE REGISTRATION, REGULATION AND CONTROL OF ALL WELLS, WHICH MAY BE CONSTRUCTED FOR OBTAINING WATER FOR DOMESTIC OR OTHER PURPOSES IN HIGHLAND TOWNSHIP, ADAMS COUNTY, PENNSYLVANIA.

NOW, THEREFORE, BE IT ORDAINED AND ENACTED by the Supervisors of Highland Township, Adams County, Pennsylvania, that Ordinance of the Township of Highland is amended to add a well ordinance as indicated below.

It is the intention of the Board that the provisions of this Ordinance shall become and be made a part of the Ordinances of the Township of Highland.

WELL ORDINANCE

SECTION 101 – SHORT TITLE

This shall be known and may be cited as the “Well Ordinance.”

SECTION 102 – PURPOSE

The intention of this Ordinance is to ensure and protect the quality and suitability and long-term availability of a domestic water supply, and to secure and maintain the minimum required isolation distances between water supplies and sewage disposal systems or other sources of contamination.

SECTION 103 – APPLICATION

This Ordinance shall apply to all wells which have not been started at the time of passage of this Ordinance. This excludes wells regulated by the PA Department of Environmental Protection as they are already regulated.

SECTION 104 – DESIGN STANDARDS

The following standards shall apply for water supplies:

1. DRILLED WELLS

Location: Drilled wells shall be located at the following minimum distances to existing or possible future sources of pollution:

WATER RELATED	MINIMUM DISTANCE
1. Delineated wetlands, flood plains, lakes, ponds, or other surface waters	10 feet
2. Storm water pits	10 feet
3. Storm drains, retention basins storm water stabilization ponds	25 feet
SEWAGE RELATED	MINIMUM DISTANCE
4. Subsurface sewage absorption areas elevated sand mounds, cesspools, sewage seepage pits	100 feet
5. Spray irrigation site perimeter, sewage sludge and seepage disposal sites	100 feet
6. Septic tanks, aerobic tanks, sewage pump tanks, privies, holding tanks	50 feet
7. Sewer drains, public sewer laterals	50 feet
CHEMICAL RELATED	MINIMUM DISTANCE
8. Preparation area or storage area of hazardous spray materials, fertilizers or chemicals, salt piles.	150 feet
9. Surface or subsurface containers or tanks of greater than 1000 gallons used for storage of materials that cannot be properly renovated by passage through soil. This includes, but is not limited to, gasoline and all other petroleum products	150 feet
10. Surface or subsurface containers or tanks of 1000 gallons or less used for storage of materials which cannot be properly renovated by passage through soil. This includes, but is not limited to, gasoline and all other petroleum products. For example, the type of tanks frequently used in homes using oil for heating purposes.	30 feet
11. Identified NPL Site (Superfund Sites) plume area	300 feet
MISCELLANEOUS	MINIMUM DISTANCE
12. Property lines, driveways, all right-of-ways, easements	10 feet
13. Principal structure/dwelling	20 feet

14. Geothermal Wells	10 feet
15. Any other source of pollution	As approved*

*“As approved” shall be interpreted as reviewed and accepted by the Township Engineer.

2. CONSTRUCTION

A. Source.

The source of supply shall be from a water bearing formation drawn not less than twenty-five (25) feet from the ground surface, with at least twenty (20) feet of properly grouted well casing, and from subject to known pollution.

B. Casing.

All wells serving as a water supply shall be equipped with a watertight and durable steel well casing. The casing shall be carried to a minimum depth of twenty (20) feet and then extended an additional five (5) feet into firm bedrock or other impervious strata and grouted in place. Casings shall terminate a minimum of one (1) foot above the surrounding, finished surface grade and shall not be cut shorter.

Ferrous Casings shall be new pipe meeting ASTM or API specifications for water well construction and have full circumference welds or threaded pipe joints.

An annular space shall be provided between the well casing and the earth formation of a radius of at least one and one half (1½) inches greater than the casing radius, excluding coupling for internal pressure grouting, or one and one half (1½) inches greater than the casing radius, excluding coupling for external grouting. The annular space shall be filled with impervious cement grout or equivalent sealing material from bottom of the casing to within five (5) feet of the ground surface. External grouting shall be accomplished utilizing a tremie pipe and grout pump to force out any standing water on the outside of the well casing.

The casing shall be sealed effectively against entrance of water from water bearing formations, which are subject to pollution, through which the casing may pass. If casings of smaller diameter are used in the lower portions of the well, effective watertight seals shall be provided between the casings where they telescope. In such instances, sections of casing shall telescope for a minimum distance of four (4) feet.

C. Well Covers.

Every potable water well shall be equipped with a vented insect resistant overlapping cover at the top of the well casing or pipe sleeve. Covers shall extend downward at least two (2) inches over the outside of the well casing or wall. All

well caps shall indicate well driller's name, depth of well, yield of well, date drilled, and depth of casing.

Where pump sections or discharge pipes enter or leave a well through the side of the casing, the circle of contact shall be watertight. The use of plastic/nylon adapters for this purpose is not acceptable. A brass pit less adapter with brass connectors or equivalent is required.

Any restoration/repair of wells with casing terminating below grade shall be raised above grade to twelve (12) inches minimum.

Electrical wiring for well pumps shall be encased in conduit from the bottom of the water supply line trench to the well cap.

D. Drainage.

All potable water wells shall be constructed so that surface drainage will be diverted away from the well.

3. FLOW REQUIREMENTS

All potable water supply wells intended to serve as an individual water supply shall be approved for yield in accordance with this section. Replacement wells servicing existing improved properties are exempt from this requirement.

The criteria for approval shall be a minimum well yield of 1/2 gallon per minute.

For wells with yields of 2 gallons per minute or less, a minimum of 400 gallons of storage capacity shall be provided. Borehole storage shall be measured from the pump level to the top of the static water column.

4. DISINFECTION

Following completion of the pump test, the well must be disinfected to eliminate any possible contamination from the drilling process. The disinfection, which must be performed by the well driller, is accomplished, in large part, by inserting a solution of chlorine bleach into the well. The disinfection procedure may be somewhat different depending upon whether the driller will be installing the water pump. Water is typically not available for use for 24 hours or so after disinfection."

5. WELL CERTIFICATION

A. Drillers Report

A report for each well shall be prepared by the driller and shall be submitted to the Township for compliance with the provisions of the Ordinance. The well report shall contain the following pertinent information:

Owner of Property	Address & Lot Number
Date of Completion	Depth of Casing
Depth of Well	Static Water Level
Well Driller	Yield in Gals/Min.
Type & Size of Casing	Grouting Type
Type of Test Pump Used	.

B. Water Quality

Highland Township requires that water quality be analyzed for all new well construction, solely in the interest of better informing its residents of potential health hazards that may arise. It shall not imply, nor necessitate any responsibility for the interpretation or mitigation of adverse results that may result as part of the new well testing process. It shall be the responsibility of the Owner to receive, review and take appropriate action with regard to all water quality tests and results associated with this Ordinance.

Subsequent to house construction, but prior to or concurrent with the “Request for Occupancy” the owner/contractor shall initiate appropriate action to have the on-site water supply tested by a certified laboratory, then provide to the Township a laboratory report containing the following information:

Coli form Bacteria
Nitrates
Nitrites
Iron
Hardness: equivalent calcium carbonates
Manganese
PH
Total Dissolved Solids (TDS)

Water Quality report is for informational purposes only.

6. DUG WELLS

No new dug wells will be permitted in the Township of Highland due to the great danger of pollution and unreliability of water supply.

7. ABANDONED WATER SUPPLIES

Wells, cisterns and water storage tanks, which are no longer in use, shall be removed, filled or otherwise maintained in a condition such as to prevent access by unauthorized persons or animals to prevent accidental injury, and to effectively prevent pollution of groundwater. Abandoned wells or wells with no future planned use or at risk to persons, animals or groundwater pollution, shall be tremie grouted from the bottom up in one continuous operation using cement with five percent (5%) bentonite grout or other DEP-approved method.

Wells and springs shall not be used for the disposal of liquid, gaseous and/or solid wastes.

8. GEOTHERMAL WELLS – Geothermal Heat Pump Systems (GHPS)

A. DEFINITION

1. Closed-Loop - a geothermal heat exchanger that circulates a nontoxic antifreeze heat transfer fluid through a loop or multiple loops of polyethylene piping installed below the ground surface or within a surface water body.

B. “CLOSED-LOOP” GEOTHERMAL SYSTEMS

1. ALLOWED SYSTEMS

Only closed loop geothermal systems shall be allowed in Highland Township

2. BOREHOLE LOCATIONS

Minimum isolation distances from the proposed Closed-Loop Borehole to the facilities listed as in section 104. Any proposed deviation from the isolation distances prescribed in section 104 must be approved in writing by the Township, or his designee, with reasons stated for such deviation.

3. CONSTRUCTION

- (a) Closed-Loop Geothermal Boreholes shall be located, drilled and finished in a manner that will protect the borehole structure from damage from surface activities or other natural occurrences so that the quality of the local groundwater cannot be affected.

- (b) The pipe loop is to be installed by a contractor who is certified in the proper method of heat fusion specified by the pipe manufacturer. The well contractor shall be responsible for insuring that the pipe loop is installed in accordance with the specifications of the ground source heat pump system manufacturer, the pipe manufacturer and that the borehole is properly backfilled.
- (c) The recommended backfilling material for these boreholes shall be bentonite.
- (d) Pressure testing is required with water at 100 psi for 30 minutes with no leaks observed.
- (e) Boreholes for the installation of a vertical closed loop may extend several hundred feet in depth. Since vertical closed loops may penetrate drinking water aquifers, it is critical that loop boreholes be properly grouted to protect drinking water. Sealing the space between the vertical loop piping and borehole from the bottom up to the ground surface with an appropriate low permeability grout, as recommended by the GHPS manufacturer and consistent with the state well code, is strongly advised.
- (f) The location of trenches and boreholes for GHPS closed loops should be well documented and recorded.

SECTION 105 - WATER CONSERVATION

1. Drought

When the Township, GMA and/or DEP declare a drought, the following water uses are declared non-essential and are prohibited within Highland Township during the declaration of the drought:

- A. The watering of lawns.
- B. The watering of outdoor landscaped areas except between the hours of 5:00 p.m., and 9:00 a.m. by means of a bucket or pail at the minimum rate necessary.
- C. The washing of automobiles and trucks except when required for safety and operational purposes.
- D. The washing of streets, driveways, and sidewalks.
- E. Ornamental water use, including but not limited to, fountains, artificial waterfalls, and reflecting pools.
- F. The use of water for flushing sewers or hydrants by any public or private individual or entity except as deemed necessary and approved in the interest of public health or safety by health officials or the Board of Supervisors.

- G. The use of fire hydrants by fire companies for testing fire apparatus and for fire drills except as deemed necessary in the interest of public safety and specifically approved by the township or its designee.
- H. The use of fire hydrants by contractors and all others except as necessary for firefighting or protection purposes.
- I. The use of water to fill and top off swimming pools.
- J. Agricultural, vegetable garden, or fruit and nut tree use of water are specifically exempted from this section of the ordinance.
- K. Any rainwater collected by a homeowner can be applied to any use the homeowner desires.

2. Water Usage

In order to conserve the quantity & quality of water in Highland Township aquifers, that will ensure the continued and long term supply of clean fresh water in the township, the following water usages are declared non-essential and are prohibited within Highland Township at all times:

- A. Any industrial or commercial use of water from wells or surfaces sources that contaminate the water in any way where it cannot meet DEP standards for being returned to the ground.
- B. Any industrial or commercial use of water that permanently removes the water from the township's, or a neighboring township's, aquifers, whether through water sales or substantial evaporative loss.
- C. Existing uses as of the date of this ordinance, and on-site use in commercial kitchens, restaurants, bathrooms and campgrounds are specifically accepted provided appropriate on-site septic facilities are utilized.

SECTION 106 - REGISTRATION

- 1. No construction, drilling, or digging for any well/water supply for the production of water for any purposes shall commence unless the property owner, or a duly authorized agent, has obtained a well permit for such construction activity from the Township of Highland.
- 2. Application for a well permit shall be made upon a form supplied by the Township of Highland and shall be submitted to the Township for review and approval.
- 3. The application shall set forth, as a minimum, the following:
 - a. Name(s) of property owners
 - b. Address or location of property
 - c. Scale/sketch of premises showing actual or proposed location of wells/water supply, buildings, septic or holding tanks, drain fields, boundary lines, storm drains, sanitary sewers, sewage disposal fields,

sewage seepage pits, cesspools, privies, fuel tanks, storm water easements, driveways, and waterways.

d. Name and license number of well driller.

4. There shall be no building permit without a completed drillers report approved by Highland Township.

SECTION 107 – INSPECTION

Upon receipt of an application for a well permit, the Township’s, duly authorized representative shall within three (3) business days, perform an inspection of the premises on which the well is to be constructed. The inspection shall be conducted in accordance with the provisions of this Ordinance and the provisions of the Township Code of Ordinances.

Upon completion of the inspection, the Township Representative shall either (a) issue a permit to the applicant indicating the approved location for the well and special instructions for construction, if any, or (b) refuse to issue the permit, and, in such event, shall provide the applicant with written reasons for such refusal.

SECTION 108 – WATER SUPPLY INSPECTION

Upon completion of construction, the township shall receive the Well Driller’s Report and the Well Quality Report of the well/water supply. Upon receipt of this document the Township shall issue an “APPROVAL OF OPERATION.”

A CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED AND/OR APPROVED IN THE ABSENCE OF AN “APPROVAL OF OPERATION” ISSUED UNDER THE TERMS AND CONDITIONS OF THIS ORDINANCE.

SECTION 109 – FEES

All applications for a well permit shall be accompanied by a fee payable to the Township of Highland in accordance with a schedule of fees established/revised from time to time by Resolution of the Township Board of Supervisors.

SECTION 110 – EFFECTIVE DATE OF PERMIT

1. All permits shall be in effect as of the date of issuance, and shall remain in effect for a period of twelve (12) months. In the event that water supply construction under the permit has not been completed at the expiration of twelve (12) months from the date of issuance, the permit shall expire unless renewed.

2. In the event a permit expires and construction has not begun, an application for a new permit must be submitted with appropriate fee.

SECTION 111 - VIOLATIONS

1. The Board of Supervisors, the Township inspection officer, or any other authorized officer or employee of Highland Township, is hereby authorized to give notice by personal service or by United States Mail to any person in violation of this Ordinance, setting forth the violation of the Ordinance, and directing said person to conform to the requirements of this Ordinance within 15 days after the date of issuance of such notice.

2. In case any person, firm, or corporation should neglect, fail, or refuse to comply with such notice within the period of time stated therein, the Board of Supervisors may order the completion of any work necessary to comply with the Ordinance, and the costs thereof, together with a penalty of 10% of the costs thereof, shall be collected by Highland Township from such person, firm, or corporation in the manner provided by law, including but not limited to, liening the property for said amount.

3. Any person, firm or corporation who shall violate any provision of this Ordinance, upon conviction thereof in action brought before a District Justice in the manner provided for enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be sentenced to pay a fine of not more than \$1,000.00 plus costs, and, in default of payment of said fines and cost, to a term of imprisonment not to exceed 90 days.

SECTION 112 – SEVERABILITY CLAUSE

The provisions of this Ordinance shall be severable, and if any of its provisions shall be held to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality or invalidity shall not affect the validity of any of the remaining provisions of this Ordinance.

SECTION 113 – LIABILITY

No responsibility or liability for the construction of any well/water supply shall be deemed to be placed upon the Township of Highland or its officers, agents, or employees by virtue of the terms of this Ordinance or otherwise.

SECTION 114 - REPEALER

All other Ordinances or parts of Ordinances inconsistent herewith be and the same are hereby repealed.

SECTION 115 - EFFECTIVE DATE

This Ordinance shall take effect immediately upon adoption and publication according to law, by the Board of Supervisors of Highland Township, County of Adams, Commonwealth of Pennsylvania.

Enacted and ordained this _____ day of _____, 2015

Board of Supervisors

Highland Township
Adams County, PA

Attest:

Secretary

By: _____
Craig Rockey, Chairman

Edward Steinour, Supervisor

Carl Keller, Supervisor