

DUNCAN TOWNSHIP  
TIOGA COUNTY, PENNSYLVANIA

Duncan Township

ORDINANCE NO. 1-2022

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AN ORDINANCE

**REQUIRING THE GROUTING AND SEALING OF WATER  
WELLS WITHIN THE DUNCAN TOWNSHIP SOURCE  
WATER PROTECTION AREA, AND PRESCRIBING  
PENALTIES FOR VIOLATIONS.**

**WHEREAS**, the Board of Supervisors of Duncan Township (the "Township") desires to protect the water supplies and source water areas for the Township against contaminated water or water having undesirable physical or chemical characteristics, and to require that any person who digs or constructs a well shall take all necessary precautions to prevent contaminated water, gasoline, or any other contamination from entering the well, and otherwise prevent contamination of water supplies and source water, in order to promote the health, safety, and welfare of the residents of the Township; and

**NOW, THEREFORE, IT IS HEREBY ORDAINED AND ENACTED**, by the Board of Supervisors of Duncan Township, Tioga County, Pennsylvania, as follows:

**Section 1. Definitions.** As used in this Ordinance, the term "well" shall refer to water wells, test holes for water wells, uncompleted wells, and monitoring wells.

**Section 2. Well Construction Requirements.** AWWA Standard A100-06, as amended and supplemented, or its successors provide the basis for the requirements set forth in this Ordinance, and should be followed in the Source Water Protection Area of the Township.

A. Construction by Licensed Driller:

1. All water wells in the Township's Source Water Protection Area shall be constructed in accordance with PA Act 610 (the Water Well Drillers License Act), as amended and supplemented.
2. The well owner shall submit a copy of the PA DCNR Well Completion Report to the Township and the Duncan Township Municipal Authority (the "Authority") within four (4) weeks of completion of the well.

B. Disinfection: The well owner or driller shall disinfect each water well prior to its use, and shall submit proof of disinfection and a post-disinfection water test to the Township and the Authority within four (4) weeks of performing the test.

C. Sanitary Seal: All wells shall be capped on top with a durable o-ring, sealed, vented sanitary seal (well seal), or cap. This seal must be vermin-proof and fastened into place.

D. Casing:

1. Permanent casing for all water wells shall be installed and project at least eighteen (18) inches above final ground surface. Geothermal wells are exempt from this rule only if two things can be demonstrated: (1) that the involved system requires that the casing be either removed or terminated lower than eighteen (18) inches above grade, and (2) that adequate measures are in place that will keep surface water or pollutants from spilling into the well.
2. The top of the well casing at sites subject to flooding shall terminate at least three (3) feet above the highest known flood elevation, as determined from Flood

Insurance Rate Maps or other hydrogeologic studies deemed acceptable by the Township.

3. Casing Length: All drinking water supply wells and observation wells shall be constructed in such a manner to be watertight to such depths as may be necessary to exclude pollution from surface runoff and from polluted aquifers above the aquifer being used as a source of supply. At a minimum, all well casing shall be at least fifty (50) feet in length below grade.
4. Casing Material:
  - a. The criteria established in AWWA Standard A-100-90 shall be followed.
  - b. Protective casing of wrought iron or steel shall have minimum weight and thickness as specified in AWWA's current Standard for Deep Wells. Well casing material other than wrought iron or steel must be resistant to the corrosiveness of the water and to the stresses to which it will be subjected during installation, grouting and operation. Casing and grouting materials must be compatible.
  - c. Ferrous casing shall:
    - i. Be new pipe meeting American Society for Testing and Materials or American Petroleum Institute specifications for water well construction.
    - ii. Have additional thickness and weight if minimum thickness is not considered sufficient to assure reasonable life expectancy of the well.
    - iii. Be capable of withstanding forces to which it is subjected.
    - iv. Be equipped with a drive shoe when driven.
    - v. Have full circumferential welds or threaded pipe joints.

- d. Nonferrous casing shall meet appropriate American National Standards Institute/American Society for Testing and Materials or National Sanitation Foundation Standards for well casing applications as outlined in AWWA Standard A-100-90. Nonferrous casing materials shall not impart taste, odor or toxic substances to the well water. Nonferrous casing, if used, shall not be driven.

E. Grout Requirements: Every well shall be grouted in accordance with this Section, and a statement confirming that shall be submitted to the Township and the Authority along with the Water Well Completion Report.

1. All wells/well casings shall be surrounded by a minimum of 1.5 inches of grout. The wellannular space shall be grouted with an approved grout to a depth of at least fifty (50) feet below grade. Grout shall be applied in one continuous application using a tremie pipe and shall conform with AWWA Standard A100-06 or its successors.
2. The following rules apply to grouting depending on the type of grout used:
  - a. Neat cement grout: Grout shall consist of a mixture of API Class G (or Class B similar to ASTM C150 Type II) and water in the ratio of 0.67 cubic feet of water per 94 pound sack weighing approximately 118 pounds/cubic foot. A maximum of six (6) percent by weight bentonite and two (2) percent by weight of calcium chloride may be added.
  - b. Pozmix-cement grout: Grout shall consist of a mixture of fifty (50) percent by volume of Pozzolan A (74 pounds/cubic foot) and fifty (50) percent by volume of API Spec. 10, Class G cement with 0.77 cubic feet of water per

84 pounds of mixture. To this mixture may be added a maximum of two (2) percent by weight, bentonite and a maximum of two (2) percent by weight of calcium chloride, at the discretion of the contractor.

- c. Concrete grout: Grout shall contain 5.3 sacks of Portland cement (ASTM C150 Type III) per cubic yard of concrete and a maximum of seven gallons of water per 94 pound sack of cement. The maximum slump shall be four (4) inches. The aggregate shall consist of forty-seven (47) percent sand and fifty-three (53) percent coarse aggregate, conforming to ASTM Designation C-33. The maximum size aggregate should be 0.75 inches. Concrete seal shall not be placed in an annulus of less than three (3) inches.
  - d. Sand cement grout: Grout shall consist of a mixture of Portland cement (ASTM C150 Type III), sand and water in the proportion of not more than two (2) parts of weight of sand to one (1) part of cement with not more than six (6) gallons of water per 94 pound sack of cement.
  - e. Bentonite grout may be utilized if the manufacture's specifications for use in water well construction are followed.
3. Application: All grouting shall be performed by adding the mixture, from the bottom of the annular opening upward, in one (1) continuous operation until the annular opening is filled. A curing time of at least twelve (12) hours for Type III Portland cement must be provided immediately following the placement of the grout. Drilling is not permitted during the curing period.

**Section 4. Sealing Required.** All abandoned test hole(s), including test well(s), uncompleted well(s), and completed well(s) hereafter abandoned which extend through any ground surface point within the boundaries of the Duncan Township Source Water Protection Area shall be sealed. The standards, specifications, requirements, and procedures for such sealing shall be in conformance with the AWWA Standard for Water Wells, Section 13, "Abandonment of Test Holes, Partially Completed Wells, and Completed Wells", June 10, 1984 edition, or such subsequent revised editions approved by the AWWA Board of Directors as of the date of enactment of this Ordinance and the pertinent sections hereunder pertaining to abandonment of test hole(s), partially completed well(s), and completed well(s), and sealing.

**Section 5. Administration.** No well shall be drilled, dug, repaired, replaced, or abandoned unless and until a well permit is issued by the Authority. A permit is not required for repairs that do not impact the well casing integrity such as to the pump, piping, instrumentation or electrical power. A filing fee shall accompany the application for a well permit. The amount of the fee shall be set by Authority Resolution. No application shall be accepted or acted upon unless payment has been made to the Authority. No person, partnership, or corporation shall occupy any structure on any lot, tract, or parcel of land serviced by a well for which a well permit has not been issued affirming compliance with the provisions of this Ordinance.

**Section 6. Designee.** The Township Constable and the Authority's Solicitor are each hereby designated and authorized to act on behalf of the Authority to implement and enforce this Ordinance, including without limitation the collection of sanction fees and initiating enforcement actions before the Magisterial District Judge on behalf of the Township and/or the Authority for

any violations of this Ordinance. In addition, the Township and the Authority may designate and authorize other individuals or entities to implement and enforce this Ordinance by Resolution.

**Section 7. Penalties.** Any person, partnership, corporation, or other entity who violates any provision of this Ordinance shall be subject, upon being found liable therefore in appropriate legal enforcement proceedings commenced by the Authority or the Township, to a penalty of not more than One Thousand (\$1,000.00) Dollars, or the maximum amount provided by law, together with all court and related costs and reasonable attorney fees. Each day that a violation continues shall be deemed and shall be taken to be a separate offense, and the violating party shall be liable as such. Penalties, fines and costs imposed under provisions of this Ordinance shall be enforceable and recoverable in the manner at the time provided by applicable law.

**Section 8. Repealer.** All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

**Section 9. Severability.** If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this Ordinance. It is hereby declared as the intent of the Township that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

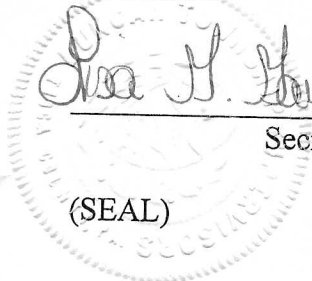
**Section 10. Effective Date.** This Ordinance shall be effective upon date of enactment.

DULY ADOPTED, this 14 day of March, 2022, by the Board of Supervisors

of Duncan Township, Tioga County, Pennsylvania in lawful session duly assembled.

**BOARD OF SUPERVISORS**  
**TOWNSHIP OF DUNCAN**  
Tioga County, Pennsylvania

**ATTEST:**

A circular seal with the text "TOWNSHIP OF DUNCAN" and "TIOGA COUNTY, PENNSYLVANIA" around the perimeter. In the center, there is a signature of "Dora H. Haygood - Everett" over a horizontal line.  
Dora H. Haygood - Everett  
Secretary  
(SEAL)

By: Chester L. Clark  
Supervisor

Rod A. Janow  
Supervisor

\_\_\_\_\_  
Supervisor



## CERTIFICATE

I, the undersigned, (Assistant) Secretary of the Township of Duncan, Tioga County, Pennsylvania (the "Township"), certify that: the foregoing is a true and correct copy of an Ordinance which duly was adopted by majority vote of the entire Board of Supervisors of the Township at a meeting of said Board duly convened according to law and held on \_\_\_\_\_, at which meeting a quorum was present; said Ordinance duly has been recorded in the minutes of said Board; and said Ordinance remains in full force and effect, unaltered and unamended, as of date of this Certificate.

I further certify that said Board met the advance notice and public comment requirements of the Sunshine Act, 65 Pa.C.S. 701 *et seq.*, by advertising said meeting, by posting prominently a notice of said meeting at the principal office of the Township or at the public building in which said meeting was held, and by providing a reasonable opportunity for public comment at said meeting prior to adoption of said Ordinance, all in accordance with such Act.

14 IN WITNESS WHEREOF, I set my hand and affix the official seal of the Township, this  
day of March, 2022.



Lisa B. Hayford - Swers  
(Assistant) Secretary