



CITY OF DUBLIN.

Office of the City Manager
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Memo

To: Members of Dublin City Council
From: Terry Foegler, City Manager *mf*
Date: February 18, 2010
Initiated By: Paul A. Hammersmith, P.E. – City Engineer
Kristin K. Yorke, P.E. – Civil Engineer
Re: Ordinance 12-10 – Amending Section 52.03 (“Water Wells”) of the Dublin Codified Ordinances

Background

Dublin Codified Ordinances Section 52.03, “Water Wells” refers to wells drilled for ground water removal and injection. The ordinance was approved in 1983 to address geothermal systems and other water wells drilled within the City. Recently, Engineering has been made aware of the re-emergence of the use of geothermal heating and cooling systems in homes and businesses.

Engineering reviewed building permits for five homes and one business in 2009 for compliance with this portion of the Code and recognized the need for updates. (Attached is a document reflecting the proposed changes to Section 52.03.)

The changes to Section 52.03 include the following:

- (A) Excluded irrigation wells from this permit process. The main purpose of this Section of the Code is to protect and preserve the integrity of ground water. Since irrigation wells are water removal (not injection), there should be no impact to ground water quality. In addition, the water removal rates for irrigation should not drastically impact ground water recharge, as this water should infiltrate again.
- (B) (1) Added the text, “unless otherwise excluded.”
- (B) (2) Added the text, “or their client, as appropriate.” The City does not typically receive bonds for private well work, however, the owner or developer does receive a bond for the work on their property.
- (C) Added the text, “or other appropriate governing body.” The county health departments do not regulate water wells to the degree they did in the 1980’s. Much of the review and record keeping is currently being done by the Ohio Environmental Protection Agency and the Ohio Department of Natural Resources.
- (D) (1) Added the text, “Ohio Environmental Protection Agency, and/or Ohio Department of Natural Resources.” Same reason as comment above.
- (G) Replaced the application fee “of \$20” to “established by ordinance.” Therefore, the City can update the fee as needed during the annual cost study review.

These Code amendments have also been reviewed by the City’s legal department.

Recommendation

Staff recommends that Council approve Ordinance 12-10 at the second reading/public hearing on March 8, 2010.

RECORD OF ORDINANCES

Ordinance No. 12-10

Passed _____, 20____

AN ORDINANCE AMENDING SECTION 52.03 (“WATER WELLS”) OF THE DUBLIN CODIFIED ORDINANCES

WHEREAS, the currently adopted Community Plan outlines an objective to promote high quality residential and commercial environments, including the use of alternate techniques for traditional systems; and

WHEREAS, the Community Plan further outlines an objective to create clear standards and policies for protection of natural resources and leadership in environmental stewardship, including sustainable building practices; and

WHEREAS, improperly installed ground water wells could potentially endanger human health and property; and

WHEREAS, the City has determined that amendments to Section 52.03, Water Wells are necessary to accomplish these objectives.

NOW, THEREFORE, BE IT ORDAINED by the Council of the City of Dublin, State of Ohio, _____ of the elected members concurring that:

Section 1. Section 52.03, “Water Wells” of the Dublin Codified Ordinances, attached hereto as Exhibit “A” is hereby amended.

Section 2. This ordinance shall take effect and be in force from and after the earliest date allowed by law.

Passed this _____ day of _____ 2010.

Mayor - Presiding Officer

Attest:

Clerk of Council

§ 52.03 WATER WELLS.

(A) No water well ([excluding irrigation wells](#)) shall be drilled in the municipality unless prior to such drilling a permit has been secured from the Engineering Department of the municipality.

(B) (1) A separate permit shall be required for each and every water well, [unless otherwise excluded](#), drilled in the municipality, including those intended for domestic potable water, ground water source heat pump systems, recharge wells and livestock wells and for changes in use of an existing water system.

(2) For each permit approved, the applicant shall provide the municipality [or their client, as appropriate](#), with a bond, irrevocable letter of credit from an insured financial institution, cash or other approved surety in an amount equal to the cost of the water distribution system which guarantees the obligations of the one year warranty required under division (E)(2) hereof.

(3) For purposes of this section, "water system" or "system" shall include the water supply system, geothermal heating and cooling unit and the water disposal system.

(4) The full compliance with this section shall be the responsibility of the installer and/or vendor of the geothermal heating and cooling unit regardless of the name of the person, firm or organization listed as "applicant" on the permits required by this section.

(C) Every water well for which a permit is issued shall be constructed in accordance with the requirements of the County Health Department [or other appropriate governing body](#) having jurisdiction. Such requirements shall be not less than those required for wells intended as a potable water supply.

(D) Supply wells used in conjunction with ground water source heat pumps shall be constructed so that:

(1) They are operated, maintained and abandoned in compliance with the Water Well Regulations, Ohio Administrative Code Sections 3745-9, 3745-41, and related sections, together with requirements of the Franklin County Health Department, [Ohio Environmental Protection Agency, and /or Ohio Department of Natural Resources](#).

(a) The manufacturers' recommended requirements for the quantity of water in gallons per minute, or equivalent measure, necessary to keep the system functioning properly under conditions of average daily use, and the expected potential maximum demands during 24-hour periods as a result of seasonal extremes.

(2) Water shall not be returned to an aquifer or portion of an aquifer containing water of a higher quality.

(3) Water returned to the subsurface through a well shall be of essentially the same quality both chemically and bacteriologically as it was prior to use except for the temperature differential.

(4) The heat pump system shall be equipped with an automatic device to shut down the entire system, if a leak occurs in the refrigeration system.

(5) An approved backflow prevention device shall be installed immediately ahead of the heat pump unit to protect the supply well from contamination and the water user from exposure to contaminated water.

(6) Suspended sediment concentration does not exceed five parts per million based upon a testing with an Imhoff cone.

(E) Each person, firm or corporation who constructs and installs geothermal heating and cooling type systems within the municipality, shall:

(1) Advise in writing each person or homeowner with whom the person, firm or corporation contracts for the installation of a geothermal heating and cooling type system of the following:

(a) The manufacturer's recommended requirements for the quantity of water in gallons per minute, or equivalent measure, necessary to keep the system functioning properly under conditions of average daily use, and the expected potential maximum demands during 24-hour periods as a result of seasonal extremes.

(b) Water quality conditions which exist in the individual homeowners water supply system that may have an effect on the system performance, maintenance requirements, and operating life of the system, including, but not limited to the presence of hydrogen sulfide, iron, sand and water hardness.

(c) The total requirements for heat supply system and domestic water use, if from the same water supply system, as compared with the ability of the existing and proposed water system to meet those demands.

(2) Each such person, firm or corporation shall guarantee the proper operation of the system and its component parts for a period of one year from the date the system first becomes completely operational.

(F) Each geothermal heating type system shall be so designed so that incoming water from one well or aquifer for use in the heating or cooling unit is returned below the watertable as wastewater by means of a second and separate well in accordance with division (D)(3) hereof. However, the system may be so designed as a "closed-loop system" using non-toxic fluids to provide satisfactory performance and when the same guarantee as required in division (E)(2) applies, including, but not limited to, "vertical or horizontal ground coils" and "doublet well

system" or may be directly discharged into one of the streams enumerated in Exhibit A of Ordinance 2B-82 from property which is immediately adjacent to such stream.

(G) Each application for a well drilling permit shall be accompanied by an application [fee established by ordinance](#).

(H) In accordance herewith the act of any property owner in discharging wastewater from a geothermal heating source onto a neighbor's property so as to constitute a flooding or which results in standing or stagnant water or unhealthy and hazardous conditions thereon is hereby declared a public nuisance, and, in addition to the other penalties herein, may be abated or enjoined as such public nuisance in accordance with law.

('80 Code, § 929.02) (Ord. 2B-82, passed, 1-17-83)