



NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Flanigan Square, 547 River Street, Troy, New York 12180-2216

INDIVIDUAL WATER SUPPLY WELLS - FACT SHEET #6 GUIDANCE FOR CODE ENFORCEMENT OFFICIALS

This fact sheet provides guidance for Code Enforcement Officials (CEO) when reviewing individual (residential) potable water supply (IWS) wells prior to issuing building permits and certificates of occupancy. To ensure that water wells provide adequate quantities of water fit for consumption and intended uses, wells need to be located and constructed to maintain long term water yield and reduce the risk of contamination. Improperly constructed wells can allow for easy transport of contaminants to the well and pose a significant health risk to users.

COMPLIANCE WITH WATER WELL CONSTRUCTION REGULATIONS AND WELL CONTRACTOR REQUIREMENTS

IWS are required to be in compliance with the New York State Residential Code, NYS DOH Appendix 5-B “Standards for Water Wells”, installed by a certified NYS Department of Environmental Conservation (DEC) registered water well contractor (driller) and have groundwater as the water source.

Residential Code: Subsection P2602.1.1: “Individual water supplies. Individual water supplies (private wells) shall be installed by a well driller registered with the Department of Environmental Conservation and be in compliance with the provisions of Appendix 5-B of the New York State Department of Health regulations (10NYCRR Appendix 5-B).”

It is recommended that CEOs check to determine if existing residences undergoing repair, alterations, enlargement, additions, relocation or demolition and replacement/reconstruction are jurisdictional to Residential Code Section R101 (“Title, Scope and Purpose”) and Appendix J (“Existing Buildings and Structures”).

Well Construction: Appendix 5-B, “Standards for Water Wells” This Appendix serves as the reference standard for construction of all new and replacement IWS. Approvals for deviations (e.g., “specific waivers”) from the standards can only be granted by the local health department (LHD i.e., county health department or NYS District Office) having jurisdiction. A complete version of Appendix 5-B can be found at: <http://www.health.state.ny.us/nysdoh/water/part5/appendix5b.htm>.

Water Well Contractor Registration: Environmental Conservation Law §15-1525: This law requires persons engaged in the business of water well contracting to be registered with the DEC. Water well contracting includes any excavation for the purpose of obtaining groundwater, which includes drilled wells, dug wells, springs, “driven points” and shore wells. The water well contracting supervisor needs to be “certified” (i.e. has passed an exam by the National Ground Water Association or equivalent) and onsite during water well construction activities.

KEY ITEMS TO CHECK

It is recommended that the following key items be checked prior to issuing a building permit or certificate of occupancy. A checklist CEOs may use that includes the following items is attached.

Well Contractor Requirements: The following DEC Well Contractor Law requirements should be verified:

1. **DEC registration:** Check that the well contractor is presently *registered* with DEC. A list of registered well contractors can be found at <http://www.dec.ny.gov/cfm/xtapps/WaterWell/index.cfm>
2. **Well Completion Report:** This report is required to be submitted by the water well contractor to DEC and the water well owner. CEOs, however, have authority to ask for a copy (e.g., from the well owner) to review before approving the well. (These reports may not be available until the well has been paid for.)

Contact the local DEC Region Office (http://www.dec.ny.gov/about/255.html#Regional_Offices) or Division of Water (877-472-2619 or 518-402-8291) for questions on water well contractor registration. Well contractors that are not registered can be referred to DEC.

Well Location and Separation Distances: Appendix 5-B requires that wells be located an appropriate distance from known sources of contamination and not subject to flooding or surface water contamination. The table below lists required separation distances from wells to commonly encountered contaminant sources. For a full list of separation distances see Table 1 in Appendix 5-B. Proposed separation distances need to meet Appendix 5-B requirements and should be verified. Deviations from these separation distances need approval from the LHD.

Contaminant Source	Distance (Feet)*
Land application or storage of manure	200
Seepage pit	150
Absorption (leach or tile) field or bed	100
Septic tank, aerobic unit, watertight effluent line to distribution box	50
Stream, lake, watercourse, drainage ditch, or wetland	25

***Note:** Separation distances from contaminant sources need to be significantly increased if the contaminant source is located upgradient from a well or if aquifer water enters the well (i.e., at the bottom of the casing) at less than 50-feet below grade. Refer to Table 1 of Appendix 5-B or contact your Local Health Department Official for questions concerning this Note.

ADDITIONAL WATER WELL CONSTRUCTION CONSIDERATIONS

Well Construction: The following details should be verified during site inspection and/or upon review of the NYSDEC Well Completion Report:

1. **Well depth** and **well casing length**. The well depth needs to be shown. The casing needs to extend at least 1-foot above grade and 19-feet below grade.
2. **Well cap** tightly secured to the casing; also watertight and vermin-proof. Split caps are not allowed.
3. **Grout**, if needed (not necessarily needed in sand or gravel; see Table 2, Appendix 5-B), is placed to fill the annular space around the casing to establish a watertight seal.
4. **Grading** of the area surrounding the well helps to eliminate ponding and direct surface water away from the top of the well casing; the well also needs to be located in an area not subject to flooding.
5. **Well yield** (if determined by the well contractor) is recorded before the well is placed into use.
6. **Pump** (if installed by the well contractor) or **well screen** (if needed) are recorded.

Well Points, Dug Wells, Springs and Shore Wells: A drilled well, located and constructed according to these criteria, should routinely be the water supply option selected. Well points, dug wells, springs and shore wells may need approval by the LHD. (Dug wells constructed with stone or brick shoring and single pipe driven point wells under suction are not in compliance with Appendix 5-B and should be avoided.) For more information on these types of sources refer to NYS DOH Fact Sheet #5, "Susceptible Water Sources".

Abandoned Wells: It is recommended to check the site for previously constructed wells that have been abandoned due to inadequate production. These abandoned wells should be properly decommissioned as described in Fact Sheet #4, "Decommissioning Abandoned Wells".

IWS Fact Sheets: <http://www.health.state.ny.us/environmental/water/drinking/part5/append5b/index.htm>
For copies and questions concerning this Fact Sheet, Appendix 5-B, or other Fact Sheets:

Contact Your Local Health Department
 Official
 (look for environmental health contacts)
www.nyscho.org/Directory/directory.html

or

Residential Sanitation Section
 Bureau of Water Supply Protection
 New York State Department of Health
 (518) 402-7650 or FAX (518) 402-7659
 E-mail: bpwsp@health.state.ny.us

CHECKLIST

Attachment to NYSDOH Fact Sheet #6: “Guidance for Code Enforcement Officials”

This checklist is produced by the New York State Department of Health (NYSDOH) for CEOs who wish to use it when inspecting an individual water supply and issuing a building permit or a certificate of occupancy. This checklist is for personal use and does not need to be submitted to any agency. The regulations governing water well standards for individual water supply are the Residential Code (Subsection P2602.1) and NYS DOH Appendix 5-B. A complete version of Appendix 5-B can be found at <http://www.health.state.ny.us/environmental/water/drinking/part5/appendix5b.htm> Fact Sheet #6 should also be reviewed when using this checklist.

Name of well/property owner:	
Address:	
Phone:	Date of Inspection:
GPS or approx. well location:	
Local or Town Permit Number:	

MANDATORY FOR COMPLIANCE WITH THE RESIDENTIAL BUILDING CODE:

The following are key items CEOs should verify regarding the contractor and water well location/construction prior to issuing a building permit or certificate of occupancy:

- NYS Department of Environmental Conservation (DEC) Registered Well Contractor:** A current registration sticker, like that shown, is to be located on the left front fender of the drill rig. The style and/or color of this sample sticker may change on a yearly basis. Contact the DEC Water Well Driller Program at 877-472-2619 for more information on the DEC registration program.



- Well Completion Report:** The well completion report needs to be submitted to the DEC and the well owner. Details on the report need to include: well depth, casing length, depth and type of grout, screen type (if applicable), well yield (if performed by well contractor), pump type (if installed by well contractor), etc. See reverse side for an example of a well completion report and where each item can be found. CEOs may request a copy of the report to review from the well owner.

- Well Location and Separation Distances:** The separation distances from the water well to potential contaminant sources need to be adhered to. The table below is a list of required separation distances from wells to the most commonly encountered contaminant sources. Refer to Appendix 5-B for a full list of separation distances. In addition, the well should not be prone to flooding or ponding of surface water.

Contaminant Source	Distance (Feet)
Land application or storage of manure	200
Seepage pit	150
Absorption (leach or tile) field or bed	100
Septic tank, aerobic unit, watertight effluent line to distribution box	50
Sanitary (public) or combined sewer	50
Stream, lake, watercourse, drainage ditch, or wetland	25

CHECKLIST (continued)

Attachment to NYSDOH Fact Sheet #6: "Guidance for Code Enforcement Officials"

ITEMS RECOMMENDED FOR VERIFICATION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

(1) COUNTY Oneida (3) DEC Well Number _____

(2) TOWN Barneveld

WATER WELL COMPLETION REPORT

(4) OWNER		LOG *	
(5) ADDRESS		Ground Surface EL. <u>210</u> ft. above sea level	
(6) LOCATION OF WELL (See Instructions On Reverse) Show Lat/Long if available and method used: <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Map Interpolation		Top Of Casing is located <u>+2</u> ft. above (+) or below (-) ground surface	
(7) DEPTH OF WELL BELOW LAND SURFACE (feet) <u>234'</u>	(8) DEPTH TO GROUNDWATER BELOW GROUND SURFACE (feet) <u>56'</u>	DATE MEASURED <u>3/31/03</u>	
CASINGS			
(9) DIAMETER <u>6</u> in.	(10) LENGTH <u>220</u> ft.	TOP OF WELL	
(11) GROUT TYPE / SEALING <u> Bentonite / Drive Shoe </u>		(12) GROUT / SEALING INTERVAL (feet) FROM <u>0</u> TO <u>20</u>	
SCREENS			
(13) MAKE & MATERIAL <u>na.</u>	(14) OPENINGS	TOP OF WELL	
(15) DIAMETER	(16) LENGTH	(17) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (feet)	
		YIELD TEST	
(18) DATE <u>3/31/03</u>	(19) DURATION OF TEST <u>2 hours</u>	(20) STABILIZED DISCHARGE (GPM) <u>3.0</u>	
(21) LIFT METHOD <input type="checkbox"/> Pump <input checked="" type="checkbox"/> Lift <input type="checkbox"/> Bail	(22) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing) <u>58'</u>	(23) MAXIMUM DRAWDOWN (Stabilized) (feet/inches below top of casing) <u>63'</u>	
(24) RECOVERY (Time in hours/minutes) <u>1 hour</u>	(25) Was there water produced during the test (discharge) from immediate area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yield	
PUMP INSTALLATION			
(26) PUMP INSTALLED? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	(27) DATE <u>4/28/03</u>	(28) PUMP INSTALLER	
(29) TYPE <u>submersible</u>	(30) MAKE <u>Gould</u>	(31) MODEL <u>5G505432</u>	
(32) MAXIMUM CAPACITY (GPM) <u>5.0</u>	(33) PUMP INSTALLATION LEVEL FROM TOP OF CASING (feet) <u>232'</u>	Well Pump	
(34) METHOD OF DRILLING <input type="checkbox"/> Rotary <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Other _____	(35) USE OF WATER (See instructions for choices) <u>Domestic</u>	Well Screen	
(36) DATE DRILLING WORK STARTED <u>3/16/03</u>	(37) DATE DRILLING WORK COMPLETED <u>3/31/03</u>	Well Cap	
(38) DATE REPORT FILED <u>5/13/03</u>	(39) REGISTERED COMPANY	Well depth	
(40) DEC REGISTRATION NO. <u>NYRD</u>	(41) CERTIFIED DRILLER (Print name)	Well Grout	
(42) CERTIFIED DRILLER SIGNATURE	(43) BOTTOM OF HOLE <u>234'</u>	Well Casing	

* Show log of geologic materials encountered with depth below ground surface, water bearing beds and water levels in each; casings, screens, pump, additional pumping tests and other matters of interest, e.g., water quality (sulphur, salt, methane). Describe repair work. Attach separate sheet if necessary.

LOCATION SKETCH - Indicate north

- Well Cap**
All wells need to have a properly vented, watertight, vermin proof well cap; Appendix 5-B.5 (g)
- Well depth**
- Grout**
Appendix 5-B.3(b) and Table 2 (if grout is needed)
- Casing**
Appendix 5-B.3(b) and Table 2
- Yield**
Appendix 5-B.4 (if yield determined by well driller)
- Well Pump**
Appendix 5-B.5 (if pump is installed by well driller)
- Well Screen**
Appendix 5-B.3(b)(19) and Table 2 (if screen is needed)

Electronic copies of this checklist and Fact Sheets 1 – 6 can be obtained at <http://www.health.state.ny.us/nysdoh/water/main.htm> or by contacting your Local Health Department or the NYS DOH Bureau of Water Supply Protection at bpwsp@health.state.ny.us