

# Upper Makefield Township

1076 Eagle Road | Newtown, PA 18940 | p 215.968.3340 | f 215.968.9228 | www.uppermakefield.org

## APPLICATION FOR PERMIT TO DRILL WELL

*In accordance with provisions of the Upper Makefield Township Codified Ordinance, Chapter 26, a permit to drill a water well is required prior to any drilling.*

OWNER: \_\_\_\_\_ DRILLER: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ ADDRESS: \_\_\_\_\_  
TELE # \_\_\_\_\_ TELE # \_\_\_\_\_  
FAX #: \_\_\_\_\_ FAX NO.: \_\_\_\_\_  
EMAIL: \_\_\_\_\_ EMAIL: \_\_\_\_\_

LOCATION OF DRILL: \_\_\_\_\_ TMP: \_\_\_\_\_

USE OF WELL(Circle): Domestic      Monitoring      Production      New      Replacement      Existing

PROPOSED DEPTH: \_\_\_\_\_ DIAMETER: \_\_\_\_\_ METHOD OF DRILLING: \_\_\_\_\_

METHOD OF STORAGE PROPOSED: \_\_\_\_\_

Is there an existing well on the property?    Yes      No

If yes, how will it be used? \_\_\_\_\_

If well is to be abandoned, method of abandonment \_\_\_\_\_

In accepting this permit, Owner agrees to abide by the following conditions:

1. Issuance of this permit does not convey any rights to divert water.
2. This well will not be used for disposal of wastes or contaminated water.
3. In the event this well is abandoned, Owner will assume responsibility for plugging or sealing it in a manner satisfactory to the Township.
4. All wells require the attached Well Registration Form to be completed and returned to Upper Makefield Township within ten (10) days after well completion.
5. This permit is valid for one (1) year from date of issuance, if issued.
6. Vertical centerline of well minimum distance to any part of building not less than two feet (2').
7. This application must be accompanied by a diagram, drawn to scale, showing the following: lot size, location of all existing structures, location of proposed wells including dimensions to all boundary lines and structures, location of any streams or other bodies of water or deemed easements and distance to centerline of same. This diagram must be signed and dated by the person who prepared it.
8. No person shall engage in the use of dry ice, detergents, chlorine, acids or other chemicals in wells for the purpose of increasing or restoring yield without prior notice to Upper Makefield Township.
9. NOTE: If upon inspection this information is found to be incorrect, this permit will be revoked and the persons involved will be considered in violation of the Codified Ordinances and prosecuted for same.

APPLICATION:    ( ) Denied    ( ) Approved to:

\_\_\_\_\_  
Planning & Zoning Director

\_\_\_\_\_  
Date

### Water test requirements:

- Table A: Large chemical with ecoli and bacteria
- Table B: Small chemical test with ecoli and bacteria
- Table C: Replacement well with ecoli and bacteria  
(See attached Ordinance)

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## Individual Water-supply Well Isolation Distances

### BCDH Rules and Regulations Governing Individual Water Supply Systems

<u>Potential Pollution Source</u>	<u>Isolation Distance (ft.)</u>
1. Delineated wetlands or 100-year floodplain.	25
2. Storm drains, retention basins, storm water stabilization ponds and rainwater pits.	25
3. Community spray irrigation sites, sewage sludge and septage disposal sites.	100
4. Lakes, ponds, streams or other surface waters.	50
5. Farm silos, barnyards, manure pits or tanks or other storage areas of animal manure.	200
6. Subsurface sewage absorption areas, elevated sand mounds, cesspools, sewage seepage pits, single family spray irrigation systems, etc.	100
7. Septic tanks, aerobic tanks, sewage pump tanks, holding tanks.	50
8. Gravity sewer lines and drains carrying domestic sewage or industrial waste (unless item 9 applies).	50
9. Gravity sewer lines and drains using cast iron pipe with watertight lead caulked or neoprene gasketed joints, or Schedule 40 polyvinyl chloride (PVC) pipe with solvent welded joints.	10
10. Sewer lines and drains carrying domestic sewage or industrial waste under pressure (except welded steel pipe or concrete encased pipe).	50
11. Commercial preparation area or storage area of hazardous spray materials, fertilizers or chemicals; salt piles.	300

PART 3

PERMITS

§301. PERMITS.

No private well or private onsite sewage disposal system may be constructed or installed on any lot on which a structure which shall be supported by such system or systems is to be constructed unless the owner or applicant has obtained a zoning permit pursuant to the provisions of the Upper Makefield Township Zoning Ordinance.

(Ord. 56, 3/21/1978, §1)

§302. WELL YIELDS.

1. Definitions. The following definitions shall apply to this Section:

**ANNULUS** - the annular space between the casing and the wall of the borehole.

**AQUICLUDE** - a part of a geologic formation, formation or group of formations with virtually no capacity to transmit water.

**AQUIFER** - rock or sediment in a geologic formation, part of a formation or group of formations which has the capacity to store and transmit water to wells and springs at a reasonable cost.

**AQUITARD** - a saturated, but poorly permeable part of a formation, formation or group of formations which does not transmit water freely to a well or spring. However, an aquitard may transmit appreciable amounts of water to or from adjacent aquifers.

**BOREHOLE STORAGE** - the volume of water contained in the well under non-pumping conditions. It is obtained by multiplying the area of the borehole cross-section for the height of the water column. In a domestic well (6 inch diameter), borehole storage equals approximately one and a half (1½) gallons per foot of water column.

**COMBINED YIELD** - the combination of well yield as defined below plus contribution to well flow from borehole storage over a minimum two (2) hour period.

**LONG-TERM PUMPING TEST** - the pumping test of a well lasting forty-eight (48) hours or longer.

**QUALIFIED GROUND WATER PROFESSIONAL** - professional geologist/hydrogeologist licensed to practice in the Commonwealth of Pennsylvania.

**WATER-BEARING ZONE** - fractures or other openings in the bedrock which yield measurable quantities of water on a continuous basis and contribute to the yield of the well.

## WATER

**WELL YIELD** - amount or volumen of water that flows from the aquifer into the well and measured at the completion of all drilling and well development in accordance with the procedures outlined below in subsection (3) of this Section.

2. A drill record, geologic log and testing report shall be prepared for each well and shall include the name, address, phone number and signature of the professional geologist and/or licensed Pennsylvania well driller. This information shall be provided to the Township along with a map which indicates the location of this well on the land development plan at a scale not exceeding one (1) inch equals four hundred (400) feet and will be required for the issuance of a building permit.
3. The information submitted to the Township pursuant to subsection (2) above shall include data on well yield collected in accordance with the following procedures:
  - A. Well yield shall be measured with an accuracy of +/- ten (10) percent and reported in gallons per minute (gpm). The yield of the well, at the completion of drilling and well development shall be determined by means of a continuous flow test of minimum two (2) hour duration. If the yield of the well is determined with the use of the drilling rig, by airlifting, the required two (2) hour period shall begin after the ground water stored in the borehole has been evacuated. If a submersible pump is used to ascertain the yield of the well, the two (2) hour period shall commence when the water level in the well drops at a rate of one-half ( $\frac{1}{2}$ ) feet per hour or less while maintaining the pumping rate constant.
  - B. Determination of well yield shall be accomplished in the absence of significant precipitation events, or the effect from precipitation shall be properly accounted for.
  - C. Any factors that may artificially inflate the well yield, including, but not limited to, recirculation of water, recharge from precipitation, addition of water by driller, etc. must be included in the information submitted to the Township.
  - D. Location and yield of water-bearing zones encountered during drilling shall be recorded as accurately as possible by the geologist present at the site and/or by the driller.
  - E. Daily measurements of water levels in the well shall be collected at the start and end of drilling and included in the record. Measurements shall be made with appropriate tools and with an accuracy of +/- 0.1 foot.
  - F. Yields of three (3) gpm or more are considered sufficient for domestic wells in Upper Makefield Township, provided:
    - (1) The yield of three (3) gpm or more is obtained from water-bearing zones located below one hundred fifty (150) feet and some of the yield is from a depth of two hundred (200) feet or more.
    - (2) The well can sustain a pumping rate of four and a half ( $4\frac{1}{2}$ ) gpm for a minimum of two (2) hours from aquifer contribution and borehole storage.

- G. Yields of less three (3) gpm are considered inadequate for domestic wells in Upper Makefield Township. However, a permit can be issued by the Township, at its sole discretion, when certification signed by a professional geologist/hydrogeologist indicates the well can provide a reliable, long-term supply.
- H. The yield of a well shall be determined based solely on the contribution of water-bearing zones located below one hundred fifty (150) feet. That is, water-bearing zones encountered to a depth of one hundred fifty (150) feet and the yield thereof shall not be included in the computation of well yield. Except as noted below (§304).
- I. The driller or professional geologist shall indicate on the well record the appropriate setting for the submersible pump.

(Ord. 56, 3/21/1978, §2; as amended by Ord. 115, 4/17/1985, §1; by Ord. 151, 8/16/1989, §1; by Ord. 156, 4/18/1990, §1; and by Ord. 216, 4/21/1999, §4)

### §303. WELL CASING.

All wells shall be cased for a minimum of forty (40) feet and the casing shall extend a minimum of five (5) feet into competent bed rock. The casing shall extend a minimum of one (1) foot above final grade and the annulus shall be grouted with cement or equal material so as to form a tight seal.

(Ord. 56, 3/21/1978, §3; as amended by Ord. 216, 4/21/1999, §5)

### §304. WELL DEPTH.

All domestic wells shall be drilled to a minimum depth of two hundred (200) feet (or more, where necessary) in order to meet Upper Makefield Township requirements pertaining to well yield. It should be noted that this is the minimum depth required and many wells may have to be drilled deeper. Conversely, when, due to above normal yields (for domestic wells), drilling of the well is terminated at less than two hundred (200) feet, the long-term reliability of the well as a source of water supply shall be certified by a professional geologist.

(Ord. 56, 3/21/1978, §4; as amended by Ord. 216, 4/21/1999, §6)

### §305. WATER QUALITY.

The quality of the ground water at the well shall be determined via bacteriological and chemical analysis of a sample collected after pumping the well for a minimum of two (2) hours. This information shall be submitted to the Township together with the information set forth in §302(2) above. The analysis shall be performed by a State-approved laboratory and shall include the following parameters:

## WATER

### SECONDARY CONTAMINANTS

	SMCL (mg/L)
pH*	6.5 - 8.5 units
Temperature*	N/A degrees
Chloride	250
Sulfate	250
Total Dissolved Solids	500
Color	15 color units
Odor	3 threshold odor numbers
Turbidity	0.5 to 1 NTU**
Iron	0.3
Manganese	0.05
Copper	1

SMCL = Secondary Maximum Contaminant Level

\* Can be measured in the field

\*\* Performance standard

### MICROBIOLOGICAL CONTAMINANTS

	MCLG
Total Coliforms*	0

MCLG = Maximum Contaminant Level Goal

\* If positive, analyze for fecal coliform

### INORGANIC CHEMICALS

	MCL (mg/L)
Arsenic	0.05
Barium	2.0
Cadmium	0.005
Chromium	0.1

Lead	0.005
Mercury	0.002
Nitrate + Nitrite (as Nitrogen)	10.0

#### VOLATILE ORGANIC CHEMICALS

	MCL (mg/L)
Benzene	0.005
Carbon Tetrachloride	0.005
o-Dichlorobenzene	0.6
para-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
Dichloromethane	0.005
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1.0
1,2,4-Trichlorobenzene	0.07
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes (Total)	10.0

#### SYNTHETIC ORGANIC CHEMICALS

## WATER

	MCL (mg/L)
Alachlor	0.002
Atrazine	0.003
Chlordane	0.002
Dibromochloropropane	0.002
Ethylenedibromide	0.00005
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.04
Simazine	0.004
Carbofuran	0.04
2,4D	0.07
Endothal	0.1

MCL = Maximum Contaminant Level

(Ord. 56, 3/21/1978; as added by Ord. 216, 4/21/1999, §7)

### §306. INFORMATION REQUIRED BY THE TOWNSHIP.

Prior to the issuance of a building permit and/or a certificate of use and occupancy, and upon completion of the installation of any private well (whether or not any permit is required), the owner of the premises upon which the well has been installed shall produce a certificate of quality for the water within the well, a certificate setting forth the rate of flow of water from the well and information stating the depth to water and the geologic description.

(Ord. 56, 3/21/1978, §5; as amended by Ord. 115, 4/17/1985, §2; and by Ord. 216, 4/21/1999, §8)

### §307. PENALTIES.

Any person, firm or corporation who shall violate any provision of this Part shall, upon conviction thereof, be sentenced to pay a fine of not more than six hundred dollars (\$600.00) plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed thirty (30) days. Each day that a violation of this Part continues shall constitute a separate offense.

(Ord. 56, 3/21/1978, §6; as amended by Ord. 186, 12/6/1995; and by Ord. 216, 4/21/1999, §8)



## PART 4

### WATER CONSERVATION

#### §401. PROSCRIPTIONS.

No water shall be provided for internal or external use to any residential, commercial, industrial, agricultural, recreational, governmental or public building or structure of any kind which is constructed or remodeled after the date of this Part, and in which plumbing, water piping or water fixtures are to be installed, extended or altered in any way, and for which construction a permit is required to be obtained from the Township of Upper Makefield unless the new, extended or altered plumbing, water piping and other water using fixtures therein conform to the requirements and standards of §402 of this Part. The provisions of this Part shall apply to any such building or structure for which such a building permit is issued on or after the effective date of this Part.

(Ord. 146, 9/21/1988, §1)

#### §402. STANDARDS.

For purposes of this Part, the following standards shall apply:

- A. Water Closets and Associated Flushing Mechanisms. The maximum volume for water closets and associated flushing mechanisms shall not exceed an average of one and six-tenths (1.6) gallons per flushing cycle when tested in accordance with the hydraulic performance requirements of ANSI A112.19.2M and ANSI A112.19.6M.
- B. Urinals and Associated Flushing Mechanisms. The maximum flow for urinals and associated flushing mechanisms shall not exceed one and one-half (1 1/2) gallons of water per flush when tested in accordance with the hydraulic performance requirements of ANSI A112.19.2M and ANSI A112.19.6M.
- C. Showerheads. The maximum flow for showerheads shall not exceed three (3) gallons of water per minute when tested in accordance with ANSI A112.18.1M.
- D. Sink and Lavatory Faucets. The maximum flow for sink and lavatory faucets shall not exceed three (3) gallons of water per minute when tested in accordance with ANSI A112.18.1M.

[Ord. 166]

- E. Blowout Toilets and Urinals. Replacement of blowout toilet and urinal fixtures with like-type fixtures may be granted by local officials upon request where adequate justification of special need is provided.

## WATER

- F. Pressure Reducing Valve. Where the service water pressure to a building is calculated to exceed sixty (60) feet psi, a water pressure reducing valve with strainer shall be installed immediately downstream of the building's main valve, so as to be accessible. Said valve may be installed after the outside line to provide for pressure adjustment within the range of fifty (50) to sixty (60) psi. The valve shall conform to the requirements of product standards ASSE 1003. Exemptions to this subsection are service lines to sill cocks, outside hydrants, and main supply risers to buildings where pressure from the main does not exceed sixty (60) psi at the fixture branches or at individual fixtures.
- G. Service Sewer Laterals. Service sewer laterals shall be installed with a minimum slope of two (2) percent, i.e., one-quarter (1/4) inch per foot.

(Ord. 146, 8/21/1988, §2; as amended by Ord. 166, 12/18/1991, §1)

### §403. EXCEPTIONS.

1. Any person(s) may apply to the Township of Upper Makefield for an exception to the terms of this Part, which exceptions may be granted in the discretion of the Board of Supervisors upon proof that some other device, system or procedure will save as much or more water as those set forth herein, or that those set forth herein cannot be complied with, without undue hardship.
2. The standards as set forth in §402 above, shall not apply to fixtures and fittings such as emergency showers, aspirations, faucets and blowout fixtures that, in order to perform a specialized function, cannot meet the standards specified in §402 above.
3. Manufacturers shall certify that their plumbing fixtures and fittings comply with the water conservation performance standard specified in §402. Such certification shall be based on independent test results.

(Ord. 146, 9/21/1988, §3)

### §404. ENFORCEMENT PENALTIES.

Any person, firm or corporation who shall violate any provision of this Part shall, upon conviction thereof, be sentenced to pay a fine of not more than six hundred dollars (\$600.00) plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed thirty (30) days. Each day that a violation of this Part continues shall constitute a separate offense. Provided, that such fine or penalty shall be in addition to any other penalty imposed by any other Section of this Part.

(Ord. 146, 9/21/1988, §4; as amended by Ord. 186, 12/6/1995)

**PART 5**

**WATER RESTRICTION USE PLAN**

**§501. PURPOSE.**

This local water use restriction plan is intended to establish measures for essential conservation of water resources and to provide for equitable distribution of limited water supplies, in order to balance demand and limited available supplies and to assure that sufficient water is available to preserve public health and safety within Upper Makefield Township.

(Ord. 184, 9/20/1995, §I)

**§502. SCOPE.**

This plan shall apply to all users of water in Upper Makefield Township and to all residents of Upper Makefield Township who own, maintain and/or use private wells as their source of water.

(Ord. 184, 9/20/1995, §I)

**§503. DECLARATION OF DROUGHT EMERGENCY.**

Once the Emergency Management Coordinator of Upper Makefield Township advises the Board of Supervisors that a drought emergency exists, the Board of Supervisors may, at its next regularly scheduled meeting, declare an emergency and adopt a resolution which provides for the implementation of a drought emergency and the prohibition of nonessential water uses as set forth in §504 hereof, and shall indicate the effective date of said prohibitions. When the Emergency Management Coordinator of Upper Makefield Township determines that the drought emergency has ended, the Board of Supervisors may, by resolution adopted at its next regularly scheduled meeting, terminate the water use restrictions and prohibitions on the date set forth in the said resolution.

(Ord. 184, 9/20/1995, §I)

**§504. WATER USE RESTRICTION; PROHIBITED NONESSENTIAL WATER USES.**

The following nonessential uses of water shall be banned in accordance with the provisions listed below:

- A. The use of watering lawns except:
  - (1) Water may be applied to grass areas as part of a sewage or stormwater treatment system utilizing spray irrigation.

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- (2) Water may be applied at the minimum rate necessary to maintain grass tennis courts to the extent that sources of water other than fresh water adequate to supply needs are not available or feasible to use.
  - (3) Water may be used at the minimum rate necessary to establish and maintain newly seeded and sodded grass areas when applied between the hours of 5:00 p.m. and 9:00 a.m. by means of bucket, can or hand-held hose equipped with an automatic shut-off nozzle.
  - (4) Water may be used at the minimum rate necessary to establish and maintain newly seeded or sodded nonresidential grass areas exceeding ten thousand (10,000) square feet when applied between the hours of 5:00 p.m. and 9:00 a.m., by any means designed and operated to assure effective conservation of the water.
- B. The use of fresh water for irrigation and watering of outdoor gardens, landscaped areas, trees, shrubs and other outdoor plants, by means of other than a bucket, pail or hand-held hose equipped with an automatic shut-off nozzle, when applied between the hours of 5:00 p.m. and 9:00 a.m. except:
- (1) Fresh water may be used for agricultural irrigation for the production of food and fiber, the maintenance of livestock and poultry or the production of nursery stock.
  - (2) Fresh water may be applied by means of a hand-held container or hand-held hose equipped with an automatic shut-off nozzle at the minimum rate necessary to establish and maintain newly planted gardens, trees, shrubs or other outdoor plants. Sources of water other than fresh water should be used where available.
  - (3) Fresh water may be used by commercial nurseries at the minimum rate necessary to maintain stock, only to the extent that sources of water other than fresh water adequate to supply needs are not available or feasible to use.
  - (4) Fresh water may be used by arboretums and public gardens of National, State or regional significance at the minimum rate necessary to preserve specimens to the extent that sources of water other than fresh water adequate to supply needs are not available or feasible to use.
  - (5) Fresh water may be used at the minimum rate necessary to implement revegetation following earthmoving, where such revegetation is required pursuant to an approved erosion and sedimentation control plan adopted pursuant to State law or regulation to the extent that sources of water, other than fresh water, adequate to supply needs are not available or feasible to use. Revegetation use shall comply with all applicable best conservation management practices of such revegetation as prescribed by the Pennsylvania Department of Environmental Protection and the Bucks County Conservation District.

- C. The use of fresh water for watering any portion of golf courses, except for tees and greens, for which water may be applied during the hours of 5:00 p.m. and 9:00 a.m.
- D. The use of any water for washing paved surfaces such as streets, roads, sidewalks, driveways, garages, parking areas, tennis courts and patios, except:
  - (1) Water may be used for prewashing in preparation of asphalt street or driveway recoating and sealing.
  - (2) Water may be used at the minimum rate necessary for the maintenance of tennis courts composed of clay or similar materials by means of a hand-held hose equipped with an automatic shut-off nozzle.
  - (3) Water may be used at the minimum rate necessary for sanitation of the premises of eating and drinking places.
- E. The use of any water for ornamental purposes including fountains, artificial waterfalls and reflecting pools.
- F. The use of any water for washing or cleaning of mobile equipment, including automobiles, trucks, trailers and boats, except:
  - (1) Water may be used by commercial car washers equipped with facilities that recycle water or with timed water dispensing equipment which restricts flow to three (3) gallons per minute.
  - (2) Water may be used for cleaning of construction, public transportation or government vehicles where necessary to preserve the proper functioning of the vehicle.
- G. The serving of water in restaurants, clubs or eating places unless specifically requested by the individual.
- H. The use of water to fill and top off swimming pools, except water may be used for the following:
  - (1) To fill and top off public swimming pools and residential pools serving twenty-five (25) or more dwelling units, if the pools have filtration equipment allowing for continued use and recycling of water over the swimming season.
  - (2) To fill and top off swimming pools operated by health care facilities used in connection with patient care and rehabilitation.
  - (3) To fill and top off other pools in accordance with the following requirements:

## WATER

- (a) The pool may be filled or topped off only if approved by the public water supply system from which the water is withdrawn. If water is obtained from other sources, permission from the owner of the source is required.
  - (b) Pools shall have filtration equipment allowing for continued use and recycling of the water over the swimming season.
- I. Exemption from the ban on nonessential uses may be granted as follows:
- (1) By the Pennsylvania Emergency Management Council in accordance with established procedures within the Commonwealth of Pennsylvania.
2. In addition to prohibited uses, all water consumers will be encouraged to save water on a voluntary basis.

(Ord. 184, 9/20/1995, §I)

### §505. VIOLATIONS AND PENALTIES.

Any person, firm or corporation violating any of the provisions of this Part shall, upon conviction thereof, be subject to a penalty not exceeding three hundred dollars (\$300.00) together with costs of prosecution, and/or imprisonment for a term not exceeding thirty (30) days.

(Ord. 184, 9/20/1995, §I)

**WELL REGISTRATION FORM (TO BE RETURNED TO U.M.T.)**  
**Must be signed by well driller and/or professional geologist**

**1. General Information:**

TMP#: \_\_\_\_\_ Well Use: (check one)  
 Subdivision/Lot #: \_\_\_\_\_  Domestic  
 Property Owner: \_\_\_\_\_  Monitoring  
 Address: \_\_\_\_\_  Production  
 Phone No.: \_\_\_\_\_  Other, specify: \_\_\_\_\_

Drilling Co. \_\_\_\_\_  
 Driller's Name \_\_\_\_\_ Estimated average daily use during peak  
 State License No. \_\_\_\_\_ 30-day period \_\_\_\_\_ gpd  
 Address \_\_\_\_\_  
 Phone No. \_\_\_\_\_ Wastewater disposal:  
 Onsite septic (locate on plan)  
 Spray Irrigation (locate on plan)  
 Other, specify \_\_\_\_\_

Is Well Metered?  Yes  
 No

Well Location Map (not to exceed 1"=400')  
 Attached to this form

**2. Well Construction Information:**

*bgs = below ground surface; btc = below top of casing  
 measurements must be in feet and gallons per minute (gpm)*

Start Date: _____	<u>Water bearing Zones</u>	
Completion Date: _____	Depth (bgs)	Yield (gpm)
Drilling method: _____	_____	_____
Depth drilled (bgs): _____	_____	_____
Depth of completed well (bgs): _____	_____	_____
Grout (bgs): _____	_____	_____
Top _____	Total yield at end of drilling: _____	
Bottom _____	_____	_____

<u>Casing:</u>	Top (bgs)	Bottom (bgs)	Diameter (in)	Material
Casing 1	_____	_____	_____	_____
Casing 2	_____	_____	_____	_____
Open hole	_____	_____	_____	_____

<u>Geologic Log (can be attached):</u>		
Description	Top (bgs)	Bottom (bgs)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

<u>Pump Information:</u>	<u>Optional Pump Information:</u>	<i>hp = horse power</i>
Pump intake (bgs): _____	Installation Date: _____	
	Pump installer: _____	
	Pump manufacturer: _____	
	Pump type: _____	
	Pump capacity (hp) _____	

**3. Pumping tests and yield certification:**

Pumping test method:

Airlifting with drill rig       Submersible Pump

Test date: \_\_\_\_\_  
 Start time: \_\_\_\_\_  
 End time: \_\_\_\_\_  
 Total time: \_\_\_\_\_

Pumping test notes:

Tests required

1. Peak yield (gpm): \_\_\_\_\_  
 >4.5 gpm during 2 hours of pumping

2. Constant Level Yield (gpm): \_\_\_\_\_  
 >3 gpm after water level drop is less than 1/2 foot per hour, or after borehole is evacuated by the drill rig.

Pumping test data:

Static water level (btc): \_\_\_\_\_

(Attach additional sheets if necessary)

Time	Water Level (btc)	Pumping Rate (gpm)	Notes:
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
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_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

**Professional Geologist may certify well yield and construction if yield is < 3 gpm and/or well is < 200' deep**

Geologist Name: \_\_\_\_\_      Geologist Signature: \_\_\_\_\_  
 Company: \_\_\_\_\_      Date: \_\_\_\_\_  
 Address: \_\_\_\_\_      Phone No. \_\_\_\_\_  
 \_\_\_\_\_

Driller Name: \_\_\_\_\_      Driller Signature: \_\_\_\_\_  
 Company\*: \_\_\_\_\_      Date: \_\_\_\_\_  
 Address\*: \_\_\_\_\_      Phone No.\* \_\_\_\_\_  
 \_\_\_\_\_

\* If different then information included in Section 1.



**WELL REGISTRATION FORM FOR EXISTING WELLS (TO BE RETURNED TO U.M.T.)**

**1. Well Construction:**

- 3 gallons per minute (gpm) certified rate of flow from the well
- depth to water information
- geologic descriptions

**2. Water Quality:**

**A. Small Chemical Test**

- Samples analyzed by a State approved laboratory for the following parameters:

Physical Characteristics	SMCL (mg/L)	Well P/F*	SMCL = Secondary Maximum Contaminant Level
Turbidity	5 NTU	_____	
Color	15 color units	_____	
Threshold Odor Number	3 threshold odor numbers	_____	
pH*	6.5-8.5 pH units	_____	*Well P/F = pass/fail
<b>Chemical Characteristics</b>			
Chloride	250	_____	Notes:
Nitrate + Nitrite (as Nitrogen)	10	_____	
Iron	0.3	_____	
Sodium	20	_____	
Manganese	0.05	_____	
Copper	1	_____	
Hardness	250	_____	
Detergent (MBAS)	0.5	_____	
Phenol	5	_____	
Total Dissolved Solids (TDS)	500	_____	
TCE (Trichloroethylene)	4.5 micrograms/L	_____	
<b>Bacteriological Characteristics</b>			
Total Coliform	0 per 100 mL	_____	
Total Plate Count	< 500 counts/mL	_____	
Fecal Coliform	< 1 per 100 mL	_____	

- Copy of the sample results to the Code Enforcement Officer within 30 days
- Any proposed treatment system must be certified by a professional engineer.

**3. Purchaser notification:**

- copy of water quality certification must be provided to the purchaser for the property specifying each contaminant not in compliance with the standards and a written description of treatment system, to include instructions on how to maintain the system