

PUMPS/PUMP FACILITIES AND CONTROLS

The evaluation of your water system's pump facilities indicates that the following deficiencies require corrective action.

Deficiency	Actions Required by You	Compliance Due Date
1. The pump location and/or discharge piping does not meet code. A NR 812 code complying artesian overflow is required to protect the well and pump installation.	1. Install an artesian controlled overflow on the well to regulate flow. Due to the low height of the existing overflow pipe a variance was granted to use a S shaped pipe on the overflow that will allow the discharge to be at least 12 inches above the surrounding grade. The overflow pipe discharge shall be screened. An air gap of at least 2 pipe diameters shall be provided at the well between the receiving drain and overflow pipe. The drain pipe for the overflow should extend to a point a minimum of 8 feet away from the well. A funnel receptacle shall be installed on the inlet of the drain to accept all of the overflow water, to prevent splashing and to prevent pending of water around the well casing pipe. Documentation on overflow requirements is included.	05/01/2014

Please respond by May 1, 2014 by submitting the enclosed verification of corrective action sheet or by replying that all deficiencies have been corrected in the survey summary email you will receive. If you are unable to complete the work by the compliance due date please notify me of an alternative date before May 1, 2014 to avoid additional follow up enforcement activities.

I understand the water system will also be acid chlorinated in Spring to treat for biofilm growth in the piping indicated by bacterial speciation samples collected in 2013. Please keep me up to date on the progress of this procedure so follow up sampling may be scheduled.

For a more detailed record of what was evaluated during the survey please see the attached survey checklist. You may also look up information for your system on line at [http://prodoasext.dnr.wi.gov/inter1/pws2\\$.startup](http://prodoasext.dnr.wi.gov/inter1/pws2$.startup).

Thank you for your assistance during the sanitary survey. You may contact me by phone at 920-746-2872, or by email at laurel.braatz@wisconsin.gov or by mail at the address on this letterhead. Your cooperative effort in maintaining a safe water supply is greatly appreciated.

Sincerely,



Laurel Braatz
Drinking Water & Groundwater Specialist

Encl. Survey Checklist

VERIFICATION OF CORRECTIVE ACTIONS

41502329 - WASHINGTON ISLAND JACKSON HARBOR

SOURCE

The evaluation of your water system's source identified the following recommended actions to assure that your water system continues to provide safe drinking water in the future.

Recommendation

1. The casing height is not two feet above the Federal Emergency Management Agency determined flood elevation as required by code. A variance was granted due to the historic Lake Michigan low water levels and an ongoing review of the determined elevation level. If the water in Lake Michigan rebounds to levels nearing record highs the well casing for well # YG919 shall be raised to a minimum of two feet above the determined flood elevation in effect at that time.

DISTRIBUTION SYSTEM

The evaluation of your water system's distribution system identified the following recommended actions to assure that your water system continues to provide safe drinking water in the future.

Recommendation

1. Maintain air gaps on ice machine drains and vacuum breakers on threaded faucets for hose connections without built in anti - siphon devices.

PUMPS/PUMP FACILITIES AND CONTROLS

The evaluation of your water system's pump facilities indicates that the following deficiencies require corrective action.

Deficiency	Actions Required by You	Compliance Due Date
1. The pump location and/or discharge piping does not meet code. A NR 812 code complying artesian overflow is required to protect the well and pump installation.	1. Install a controlled overflow pipe on the well to regulate the flow. The overflow pipe shall be screened, at least 12 inches above the surrounding grade. An air gap of at least 2 pipe diameters shall be provided at the well between the receiving drain and overflow pipe. The drain pipe shall extend at least 8 feet away from the well. A funnel receptacle shall be installed on the inlet of the drain to accept all of the overflow water, to prevent splashing and to prevent pending of water around the well casing pipe.	05/01/2014

By signing this document I am certifying that the above referenced deficiencies have been corrected.

System Owner/Operator _____

Name (Printed)

Signature

Date

Please email notification of completion of the work or return this documentation to Sturgeon Bay DNR Office, 110 S. Neenah Avenue, Sturgeon Bay, Wisconsin 54235. A label is provided. Document the date that work was completed and provide your signature.

Email: laurel.braatz@wisconsin.gov

Protecting your water supply by completing the requested action is appreciated and prevents the need for additional enforcement action.

Monitoring Site Plan for Transient NON-Community System

DATE: August 1, 2013

County: Door County

PWSID#: 41502329

System Name: WASHINGTON ISLAND JACKSON HARBOR

WUWN: YG919

Well Location Address: 1902 Jackson Harbor Road, Washington Island, WI

Sampling Frequency: Coliform quarterly, Nitrate annual

Sample	Tap Location	Faucet type	Comments
EP 1 /R/W/T	Tap Location		Use when instructed to collect Raw, Well or Triggered coliform bacteria water sample.
R1	Smooth end sampling faucet in well house	Metal, smooth end, stationary, downturned, at least 12 inches high	(If using a threaded faucet remove backflow preventer, and replace backflow preventer after sample collection.) Use to collect your annual Nitrate sample.
D1	Smooth end faucet in well house	Metal, smooth end, stationary, downturned at least 12 inches high	Use site for collecting quarterly coliform bacteria sample. Flush the faucet by running water at least 5-10 minutes. Stop the water flow to disinfect/flame the metal faucet with a torch. Next set the water flow at a steady, smooth stream. Do not adjust the flow or move faucet prior to collecting water sample.
D2	Faucet in dock closet	Metal downturned threaded faucet	" "
D3	Smooth end faucet on bathroom building	Metal downturned smooth end faucet	" - concern about airborne contamination

NOTES: Use a D site (Distribution after any point of entry filter, softener, or other treatment device) with D1 being first choice, D2 second, etc. This site used for collecting Coliform (bacti) samples. Sample D-sites are also used if instructed to collect Check & Repeat samples. Check sample should be collected from the same tap as the tap that tested unsafe. EP sample sites are to be used to sample for NITRATE. PLEASE contact Laurel Braatz, Drinking Water & Groundwater Specialist with any drinking water questions or to change/delete any sample site. Email: laurel.braatz@wisconsin.gov or 920-746-2872.

Coliform Sample Locations

COLIFORM SAMPLING

(Fill in phone and address information)

Sampler

If the laboratory has the ability to fax or e-mail results to you and you would like the lab to do that, please provide the appropriate information (leave blank if you prefer a paper copy):

Fax number: _____

E-mail: _____

Sample Source:

D - Distribution System

W - Well

Sample Type (check only one)

D - Routine Distribution Compliance and Follow-up

C - Check: Taken at same location as Unsafe Sample
Unsafe Sample Collection Date: ___/___/___

Unsafe Sample ID: _____

R - Repeat

N - New

I - Investigation

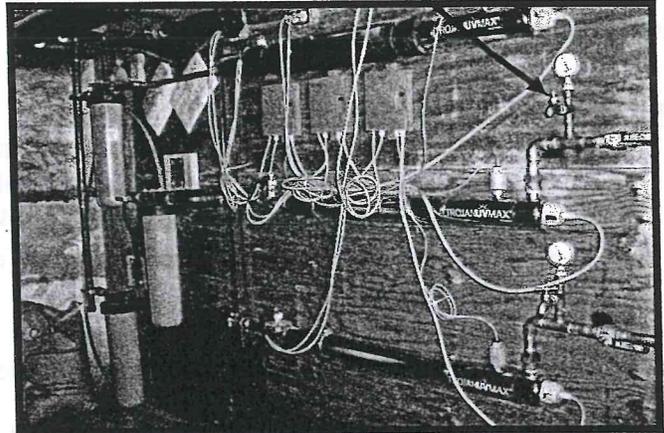
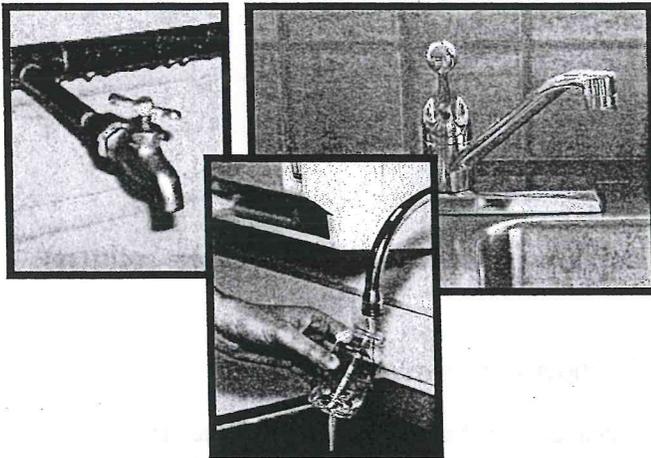
W - (Raw) Water

Entry Point ID: _____

REGULAR SAMPLING LOCATIONS

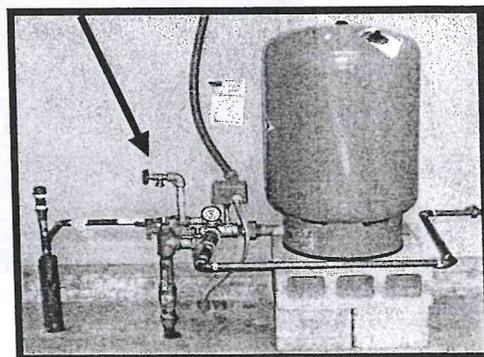
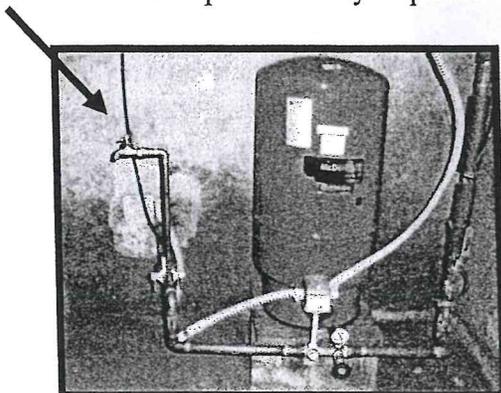
1. SOURCE & SAMPLE TYPE

Quarterly coliform bacteria samples are required to be collected from the **distribution system** per the Safe Drinking Water Act. A **distribution system** source sample is collected from a faucet after the pressure tank and treatment equipment. Distribution water is the water served to your customers.



2. WELL SOURCE & RAW WATER SAMPLE TYPE

A "well" or "raw" sample is collected from a faucet prior to the pressure tank or directly at the pressure tank. Regular "raw" water samples are only required for water systems with microbiological treatment devices.

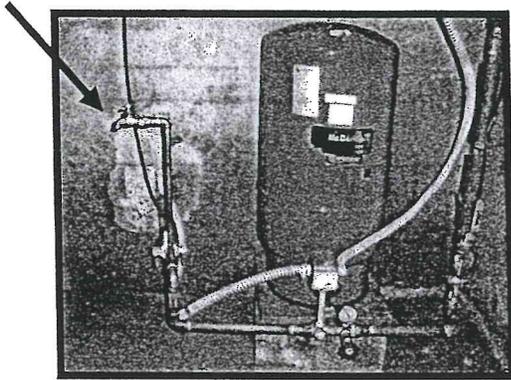


SAMPLE SLIP TRIGGERED WHEN AN UNSAFE OCCURS (COLIFORM POSITIVE)

1. SOURCE WELL & [REDACTED]

A [REDACTED] sample is collected from a faucet prior to the pressure tank or directly at the pressure tank prior to treatment devices.

Sample Source (location): <u>X</u> W - Well (before any treatment)	Sample Type (check one only): <input type="checkbox"/> T - Triggered Source Water sample following Total Coliform-positive Compliance sample WI Unique Well No: _____ EP/Source ID: _____ <input type="checkbox"/> R - Repeat Source Water sample following E Coli-positive Triggered Source Water sample WI Unique Well No: _____ EP/Source ID: _____
Special Instructions: _____	
Collect sample between: ___/___/___ and ___/___/___	

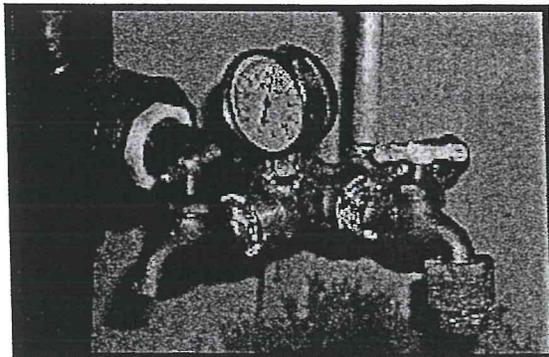


GENERAL GOOD SAMPLING SITES

Characteristics of good sampling sites:

- ❖ Metal faucets (these faucets can be flamed for disinfection)
- ❖ Stationary faucets are better than swivel faucets
- ❖ Shorter faucets are better than long necked faucets.
- ❖ Faucets with all attachments removed (ex. Backflow protection devices, aerators, splitters)
- ❖ Non leaking faucets
- ❖ Smooth ended faucets
- ❖ Has ample space to put a bucket/sample bottle under it (minimum 12 inches)

It is recommended that you install a dedicated sampling faucet if your system does not have a good sampling site. If both a smooth end sampling tap and threaded faucet with a vacuum breaker are needed for hose connections a tee with both style faucets may be installed.



Sanitary Survey Checklist

41502329 - WASHINGTON ISLAND JACKSON HARBOR
Door County

Water System Summary Information

Type: Transient Non-community
Non-transient Population: 2
Transient Population: 25
Season Dates: May - October

Affiliations

Name	Affiliation	Phone	Fax/E-mail	Address 1	Address 2	City,State,Zip
VALERIE CARPENTER	SAMPLER	920-847-2522	-- / townoffice@washingtonisland-wi.gov		PO BOX 220	Washington Island, WI 54246
TOWN OF WASHINGTON	OWNER	920-847-2522	-- /		PO BOX 220	Washington Island, WI 54246
LAUREL BRAATZ	DNR_REP	920-746-2872	920-746-2863 / laurel.braatz@wisconsin.gov	110 S NEENAH AVE		Sturgeon Bay, WI 54235
Jonathon Mann Greg Jensen	Town Crew Cell Crew office	920-535-0055 920-495-3740 920-847-2313				

SKETCH – see DNR file

Element 1 – SOURCE

Entry Points and Sources of Water (basic data)

Source ID	Name	WUWN	Status	Date Constructed	Type	Water Bearing Formation
1		JF674	Perm Abandoned		ENTRY PT/SOURCE	Dolomite
2	2011 Well	WQ087	Perm Abandoned	06/08/2011	ENTRY PT/SOURCE	Dolomite
3	2013 Well	YG919	Active	06/19/2013	ENTRY PT/SOURCE	Dolomite

Entry Points and Sources of Water (other data)

Source ID	Casing Depth	Casing Height	Casing Size	Grouted Depth	Cap/Seal Type	Is there a variance?
1		9	4		FULL SANITARY	
2	147			147	FULL SANITARY	
3	201	19	6	201	FULL SANITARY	Yes

I. Is the source adequate (protection, physical components)?	Yes X	No	N/A	Recommendation:	Comments
				1. Variance granted for well location in flood fringe. If lake levels rebound to high level then raise casing to a minimum height of 2 feet above the determined flood elevation.	- System has variance for location in flood fringe
A. If information available (i.e., construction report) does the well(s) meet the appropriate construction requirements?	X				
Yes No N/A Seal / Cap X <input type="checkbox"/> <input type="checkbox"/> Seal or cap complying (NR 812.42(8)) (NR 812.30(1)(2))					

Sanitary Survey Checklist

- X Electrical wires enclosed in conduit (NR 812.30(5))
- X Openings through well cap water-tight (bolts/wires/lines) (NR 812.30)
- Vent through the well cap code complying (> 0.25 sq.in., w/screen, terminates 12" from floor, downward facing) (812.30 (3))

Yes No N/A Casing / Well

- X Casing depth adequate (NR 812)
- X Condition ok (not corroded, cracked, or stovepipe) (NR 812.17)
- X Height adequate (> 12 inches above grade) (> 8 inches pre-1991, > 6 inches pre-1953) (> 2 ft if located in Floodway/Floodplain) (NR 812.29), (NR 812.42(7)) (NR 812.08 (3)) - Granted Variance
- X Unused wells properly filled and sealed (NR 812.26) - Old wells are filled and sealed.

Yes No N/A Well Pit / Subsurface Pumproom / Basement

- X Not located in noncomplying pit or alcove? (Subsurface Pumproom) (NR 812.42(3))
- X Not in unsanitary or illegal basement location? (NR 812.08 (2)) (NR 812.42(9))

B. Is the well adequately separated and protected from contaminant sources? (NR 812.08) X

Check if Noncomplying & Indicate Distance if <2X Allowable

Septic or Holding Tank, 25 ft., 1951 Pit Vault	<input type="checkbox"/>	~170'	Barn Gutter, 25 ft., 1975	<input type="checkbox"/>	
Sewage Absorption Field, 50 ft., 1951	<input type="checkbox"/>		Manure Sewer (see code)	<input type="checkbox"/>	
Wastewater Sump/Watertight, 25 ft., 1991	<input type="checkbox"/>		Perm. Manure Stack, 250 ft., 1991	<input type="checkbox"/>	
Grease Trap, 25 ft., 1951	<input type="checkbox"/>		Temp. Manure Stack, 150 ft., 1994	<input type="checkbox"/>	
Gravity Building Sewer, 8 ft., 1936	<input type="checkbox"/>		Silo, 50 ft., 1975, 1991	<input type="checkbox"/>	
Pressurized Building Sewer, 25 ft., 1975	<input type="checkbox"/>		Animal Yard or Shelter, 50 ft., 1975	<input type="checkbox"/>	
Collector Sewer > 6", 50 ft., 1975 (Number of Units served) _____	<input type="checkbox"/>		Buried Home Heating Oil Tank, 25 ft., 1975	<input type="checkbox"/>	
Noncomplying Pit, 8 ft., 1975	<input type="checkbox"/>		Buried Petroleum Tank & Piping, 100 ft., 1975	<input type="checkbox"/>	
Lake, Stream or River, 25 ft., 1975	<input type="checkbox"/>		Landfill, 1200 ft., 1975	<input type="checkbox"/>	
Yard Hydrant, 8 ft., 1951	<input type="checkbox"/>		Other _____	<input type="checkbox"/>	
Cemetery, 50 ft., 1991	<input type="checkbox"/>		Other _____	<input type="checkbox"/>	
	<input type="checkbox"/>		Other _____	<input type="checkbox"/>	

Is there a variance? Yes _____

Element 2 – PUMPS, PUMP FACILITIES & CONTROLS

Pump

Source ID	Pump Type	Pump Make	Pump HP	Pump Cap.	Above Ground Discharge? or Pitless Adapter?
1	Other	Star shallow well pump			ABOVE_GROUND
2					
3	Submersible				ABOVE_GROUND

II. Does the pump location and discharge piping meet code?	Yes	No	N/A	Deficiency:	Comments
		X		<p>1. Flowing well requires a complying overflow installation to prevent pump from jumping and ponding of water around the well.</p>	

Yes No N/A Pump/Supply Line

- X Offset pump height adequate (> 12 inches after 1991) (> 8 inches pre-1991, > 6 inches pre-1953) (NR 812.29), (NR 812.42 (6)(7))
- X No unprotected buried suction line (NR 812.28), (NR812.32(4))
- X Pressure conduit present (NR 812.31) (NR 812.32 (2)(4)), (NR812.42(6))
- X Check valve locations complying (NR 812.32(4)), (NR 812.42(6))

Sanitary Survey Checklist

- | | | | |
|-------------------------------------|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Complying sampling faucet present and in complying location (NR812.34) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Throttling valve and air gap present (flowing wells) (NR 812.32(9)) – Install throttling valve. Screened overflow to prevent kick back from pump when well recharges. Variance given for using existing overflow pipe in the side of the casing. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Other _____ |

Element 3 – STORAGE

Storage

ID/Location	Type	Vol. (gal)	Last Int. Inspect Date	Mfg.	Model
Pump house	PRESSURE TANK				

III. Do all visible portions of the storage facilities meet NR 812 requirements? (NA if no storage) (NR 812.33)	Yes X
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Element 4 - TREATMENT

Treatment Summary Data

Source ID	Type	Treatment Description	DNR Approval date if required	Begin	End	Objective(s)	Comments
1	000	None		10/04/2004	06/24/2011	No Treatment at Source	
2	000	None		06/24/2011	06/20/2013	No Treatment at Source	

IV. Does the Department approved water treatment device installation meet approval conditions, including operations and maintenance? (NA if no Department approved treatment) (NR 812.37)	Yes	No	N/A X
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Element 5 - DISTRIBUTION SYSTEM

V. Does the distribution system have all potential cross connections eliminated? (NR 812.27(9))	Yes X	No	N/A	Recommendation: 1. Maintain air gaps on drains, and vacuum breakers on threaded faucets for hose connections without built in anti - siphon devices.	Comments
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Element 6 - SYSTEM MANAGEMENT & COMPLIANCE

VI. Is water system operations and management adequate?	Yes X
A. Have past inspection deficiencies, outlined in previous inspection reports, been corrected as required? (Review / initiate stepped enforcement process)	X
B. Has the system made a significant effort to stay in compliance with state regulations?	X
C. Are adequate public notification procedures adhered to? (NR 809.950)	X

Element 7 - MONITORING, REPORTING, & DATA VERIFICATION

Bacteriological Sampling History

Year	Distribution Safe	Distribution Unsafe	Confirmed Unsafe	Missed Samples	Raw Safe	Raw Unsafe	Fecal Positive?
2013				0			N
2012	12	9	1	5		1	Y

Sanitary Survey Checklist

Year	Distribution Safe	Distribution Unsafe	Confirmed Unsafe	Missed Samples	Raw Safe	Raw Unsafe	Fecal Positive?
2011	2			0			N
2010	3			0			N
2009	2			1			N
2008	3			0			N
2007	3			0			N

Nitrate/Nitrite Sampling History

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2012	NITRATE	2	1	0	0
2011	NITRATE	1	1	0	0
2011	IOC	2	1	0	0
2010	NITRATE	1	1	0	0
2009	NITRATE	1	1	0	0
2008	NITRATE	1	1	0	0
2007	NITRATE	1	1	0	0

MCL Violations

Source ID	Contaminant	Concentration	MCL	Units	Viol. Start	Viol. End	Continuing Operation?
3100	Coliform (TCR)				09/07/2012		N
3100	Coliform (TCR)				09/07/2012	09/12/2012	N
3100	Coliform (TCR)				08/23/2012	08/29/2012	N
3100	Coliform (TCR)				07/12/2012	08/02/2012	N

VII. Is all monitoring/reporting accurate?

A. Has the system been in compliance with their monitoring requirements with respect to samples taken and frequency?

Yes
X

X

B. Are there updated monitoring plans on file with the department for bacteria (NR 809.31)

X

C. Does the system appropriately implement sampling plans in order to meet monitoring rule requirements? (NR 809.31)

X

Element 8 - OPERATOR COMPLIANCE

VIII. Has an operator/Primary Contact been identified? (certification not required)

Yes
X



August 26, 2013

PWS ID#: 41502329

Washington Island Jackson Harbor
Town Of Washington
PO BOX 220
Washington Island, WI 54246

Door County

RE: Variance Approval For The Well #YG919 Serving The Property Located At 1902 Jackson Harbor Road t,
Town Of Washington (T34N, R30E, S28, SE, NW,) Door County, Wisconsin

The Department is granting approval for a variance for the well #YG919 from the following Chapter NR 812 Natural Resources Wisconsin Administrative Code (Well Construction and Pump Installation).

- **NR812.08(3)(a) A potable well may be constructed, reconstructed or replaced in a flood fringe provided that the top of the well is terminated at least 2 feet above the regional flood elevation for the well site.**
- **NR 812. 32(9)(c)3. Overflow to prevent freezing shall be limited to a minimum to preserve groundwater and water pressure. The overflow pipe shall be installed to extend at least 12 inches above ground grade or shall extend from a surge tank. The overflow pipe shall terminate at least 2 pipe diameters above any drain at the well site, building or building basement. If the overflow is installed at the well, an air gap of at least 2 pipe diameters shall be provided at the well and the receiving drain shall discharge to the ground or to a gravel pocket at a point at least 8 feet from the well. A funnel receptacle shall be installed on the inlet of the drain to accept all of the overflow water, to prevent splashing and to prevent ponding of water around the well casing pipe.**

The well # YG919 is located within the flood fringe of Lake Michigan based on the flood elevation of 584 feet established in Federal Emergency Management Agency (FEMA) maps. The existing well casing for YG919 was measured to be 19 inches above the surrounding grade. The well is located at an elevation lower than 584 feet based on Door County maps. Therefore, the well casing height does not comply with NR 812.08(3)(a).

The well # YG919 is an artesian well. The overflow pipe installed for the well discharges less than 12 inches above the surrounding ground.

This variance to allow continued usage is subject to the following conditions.

1. **The well # YG919 continues to provide bacteriologically safe and low nitrate (less than 10 parts per million) water for potable use.**
2. **If the water level in Lake Michigan rebounds to levels nearing record highs the well casing for well # YG919 shall be raised to a minimum of two feet above the flood elevation in effect at that time. Currently, the flood elevation FEMA established for Lake Michigan is set at 584 feet. However, the established elevation should be reviewed at the time work is planned since the flood elevation data is in the process of being reviewed and may change.**

3. If work will be done on the casing that includes extending the height it shall be raised to a minimum of two feet above the determined flood elevation at that time. The artesian overflow, if it is still needed, will also be installed to code at that time.
4. The artesian overflow piping shall be installed watertight to the casing at the installed discharge point. The installed overflow piping shall curve upward to raise the height but finish in a downward facing position to discharge at a minimum height of 12 inches above the surrounding grade.
5. If a new well is constructed it shall comply with NR 812 requirements and the well # YG919 shall be properly abandoned.
6. If public water service becomes available to this area the well # YG919 shall be properly abandoned.
7. A copy of this variance shall be provided to any future owner prior to, or at the time of transfer of the property.

Failure to comply with any terms or conditions of this approval voids the approval. You are also responsible for acting in compliance with all other applicable statutory and administrative code requirements.

The Department is authorized by Chapters 144 and 162 Statutes, to have general supervision and control over the waters of the state and to establish and enforce standards and rules for obtaining drinking water and protecting public health against polluted water supplies. Chapter NR 812, Wis. Adm. Code, is adopted pursuant to that authority.

The Department has authority under s. NR 812.43, Wis. Adm. Code, to grant a variance from ch. NR 812 requirements when strict compliance is impracticable. Variance approval may be conditioned on compliance with comparable specifications prescribed by the Department. Comparable specifications are based upon the need to protect drinking water and groundwater from contamination.

The Department emphasizes that, while a variance from ch. NR 812, Wis. Adm. Code may be granted, compliance with ch. NR 812 requirements is recommended if at all possible. Chapter NR 812, Wis. Adm. Code requirements reflect measures which the Department has found to best protect drinking water and groundwater from contamination. A Department - approved variance does not guarantee acceptable water quality or quantity.

This variance approval and continued usage of the well is granted based on the following information.

1. The well # YG919 has 201 feet of casing grouted in place. The casing exceeds the minimum 140 feet casing requirement for this section of the Door County special casing advisory area.
2. The determined flood elevation for Lake Michigan and the area around Jackson Harbor is in the process of being reviewed by the Federal Emergency Management Agency (FEMA). The resulting flood elevation from this review change from the current determined elevation.
3. Lake Michigan is experiencing record low water levels and historic data suggests that despite swings in precipitation amounts the average high water level may be decreasing due to climate change and water loss from the Lake Michigan system.
4. If a rebound in Lake Michigan occurs it will be more gradual than the rise of a water body like a stream. Therefore, if water levels begin to rise to near record high levels the Town will have time to raise the casing before the shore line water levels near a level of concern for flooding to occur.

5. The overflow discharge for the artesian well was installed lower than the minimum 12 inches required by NR 812. Due to the low lake water levels and potential for required casing changes in the future the installation of a watertight S shaped pipe on the overflow that has a downturned discharge of at least 12 inches above the surrounding grade was allowed. This installation was also allowed to minimize changes to the casing and potential damage to the casing integrity.

WELL INFORMATION

The well # YG919 is 241 feet in depth. The casing depth is 201 feet. The water table was at 1 feet at the time of construction. The well was constructed on June 19, 2013 by Harvey Jorns. Dolomite bedrock was encountered at 2 feet in depth.

Notice of appeal right information is enclosed for your reference.

Sincerely;



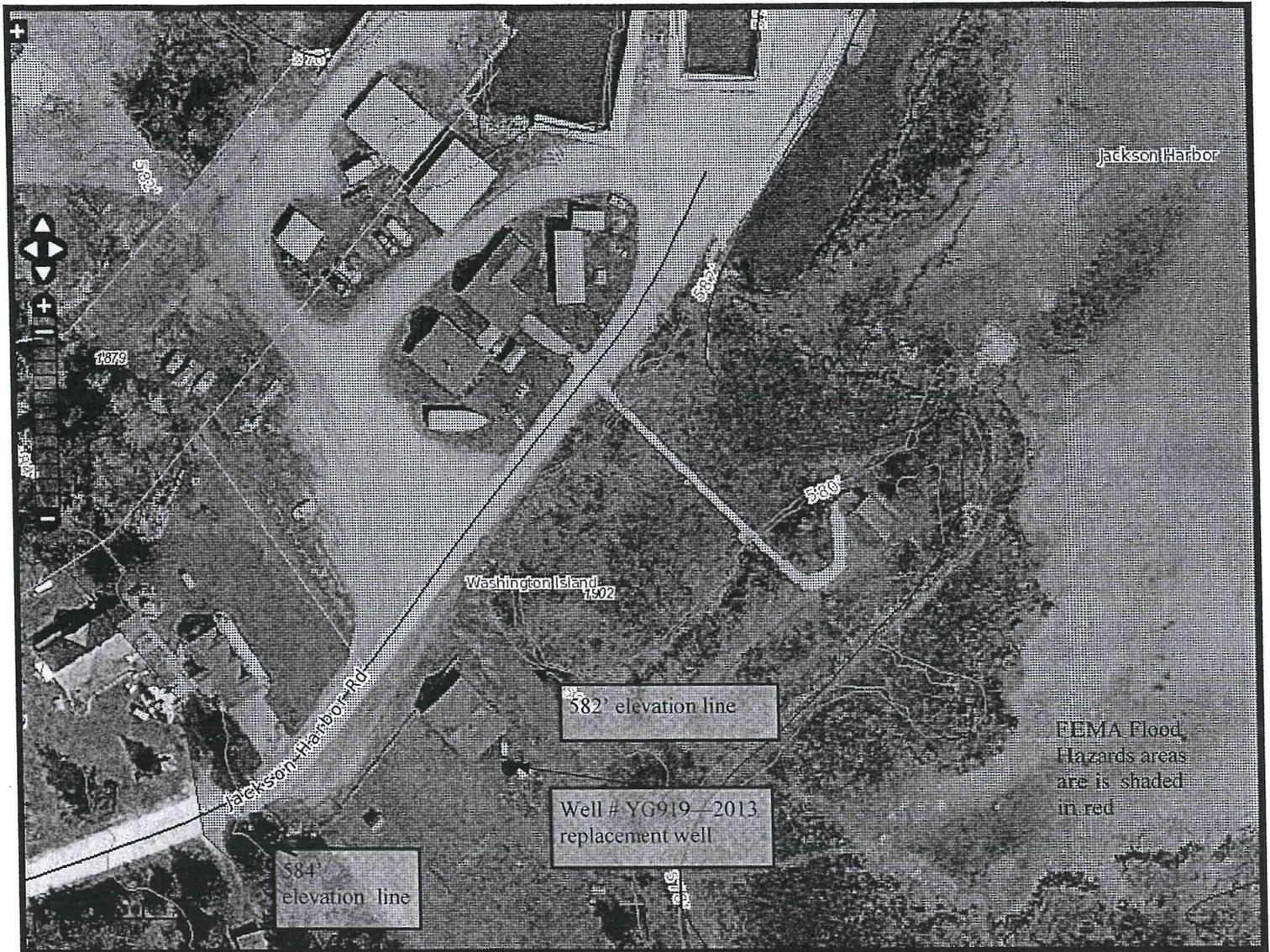
Laurel Braatz
Drinking Water and Groundwater Specialist

Enclosures

cc: Private Drinking Water and Groundwater Section - DG/2

Washinton Island Jackson Harbor

- Federal Emergency Management Agency 2013 Map



Parcel ID 0280428343042C
First Name TOWN OF
Last Name WASHINGTON
Mailing Address PO BOX 220
WASHINGTON ISLAND, WI 54246
Property Address 1902 JACKSON HARBOR RD

Public Land Survey System (PLSS) Public Land Survey System (PLSS)
Sub-section GovLot 3 (SE Qtr, NW Qtr, Qtr)
Section-Tier-Range 28-34-30

Artesian Wells – Overflow Requirements

NR 812.32(9)(c) Overflow piping.

1. When a flowing well is placed in use, the flow from the well shall be regulated by means of a control valve with a screened outlet or with a restricting orifice to prevent waste of water. The control valve shall be restricted as much as possible and closed if the flow ceases.
2. A **controlled overflow pipe** or **other means shall be installed** for a flowing well to prevent damage from overflowing water or to prevent freezing of the top of the well.
3. Overflow to prevent freezing shall be limited to a minimum to preserve groundwater and water pressure. The **overflow pipe shall be installed** to extend at least **12 inches** above ground grade or shall extend from a surge tank. The overflow pipe shall terminate at least 2 pipe diameters above any drain at the well site, building or building basement. If the overflow is installed at the well, an air gap of at least 2 pipe diameters shall be provided at the well and the receiving drain shall discharge to the ground or to a gravel pocket at a point at least 8 feet from the well. A funnel receptacle shall be installed on the inlet of the drain to accept all of the overflow water, to prevent splashing and to prevent pending of water around the well casing pipe.

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

NOTE:

Well overflow pipe shall only be installed if physical damage would otherwise occur due to water escaping upward around the casing or to prevent freezing of the top of the well, should it not be desired to construct an insulated structure over the well. However, the insulated structure would be preferred for frost protection, should the overflow pipe not be necessary to prevent physical damage to the well.

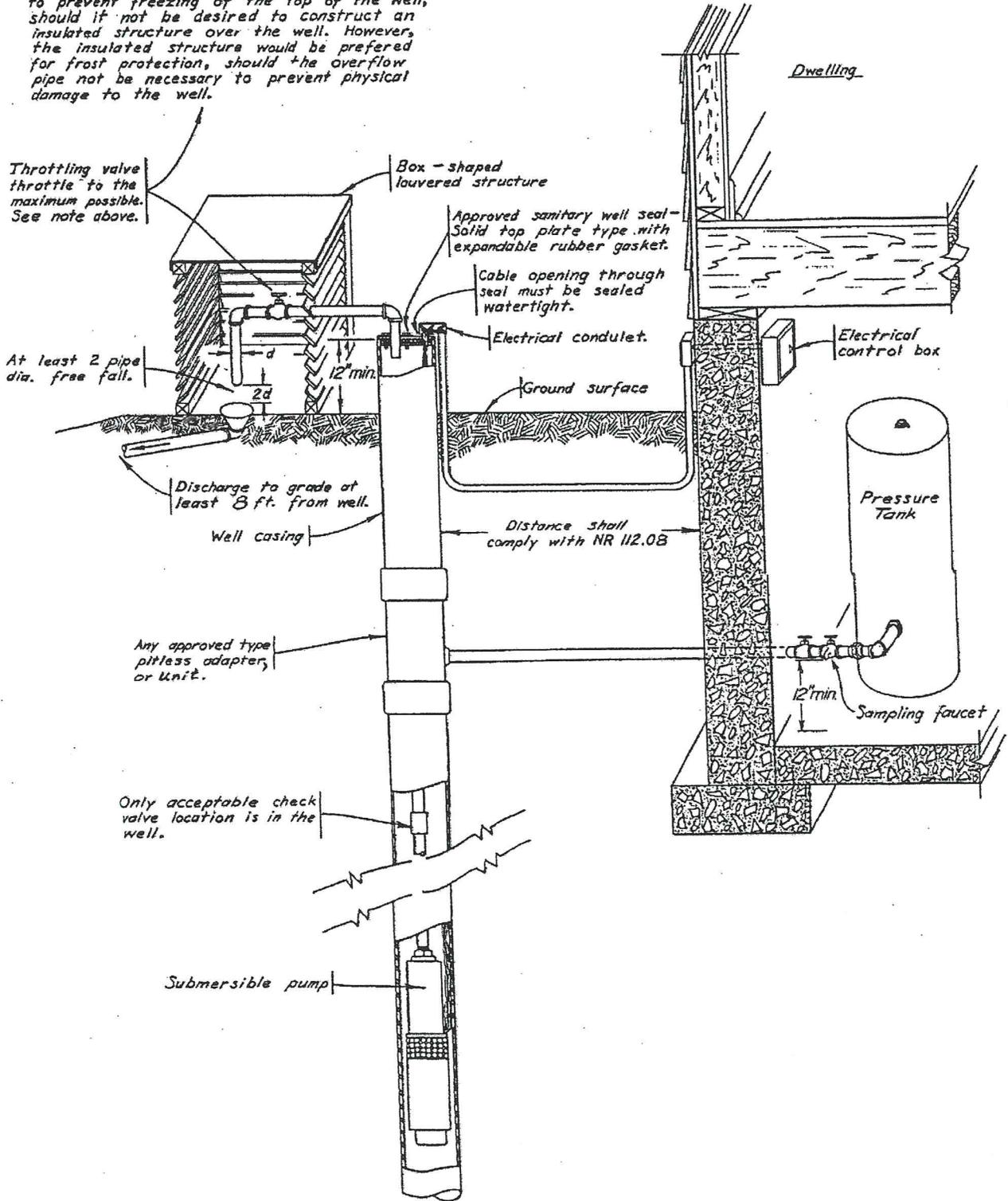


Figure 41. Overflow piping arrangement for a flowing well with a submersible pump.

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

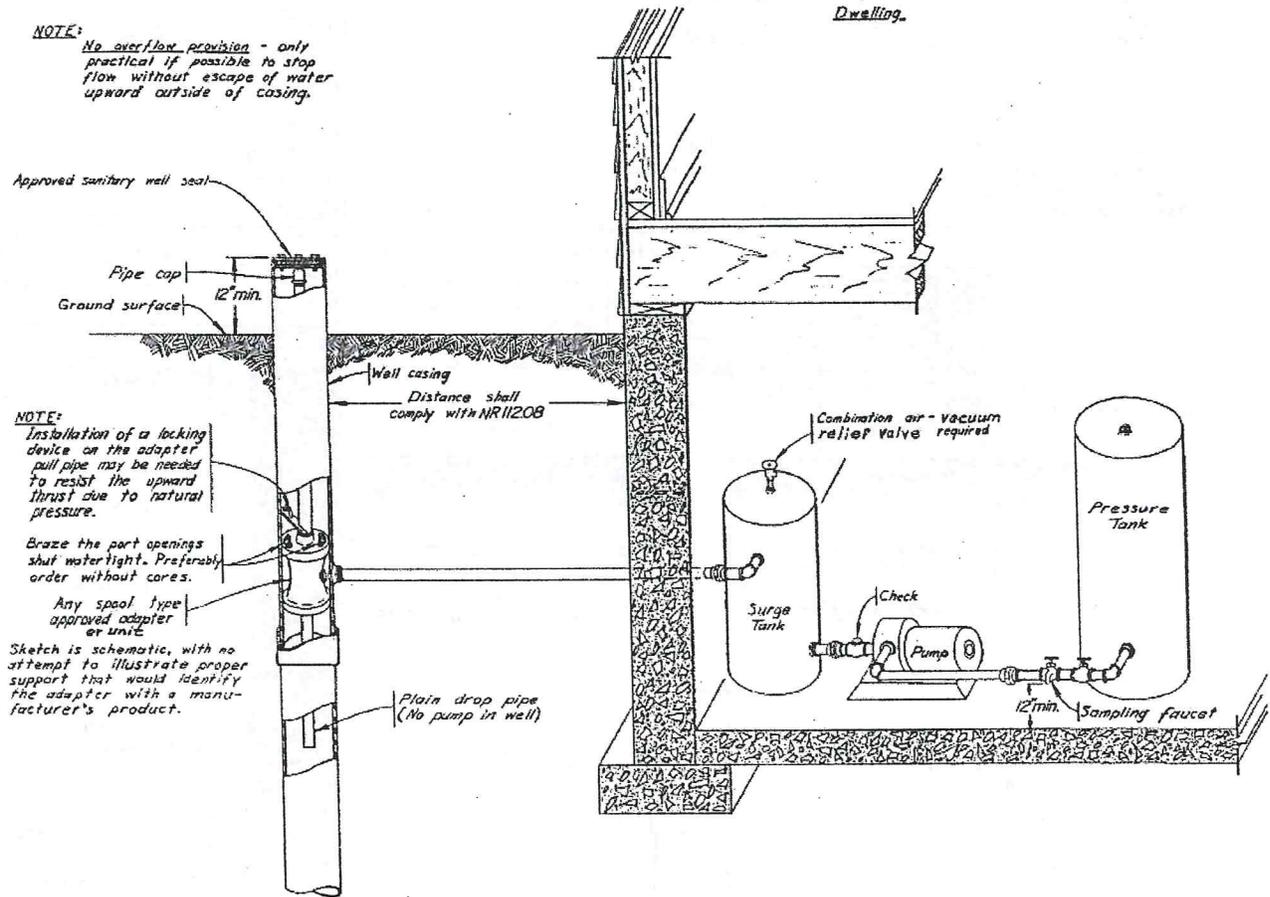
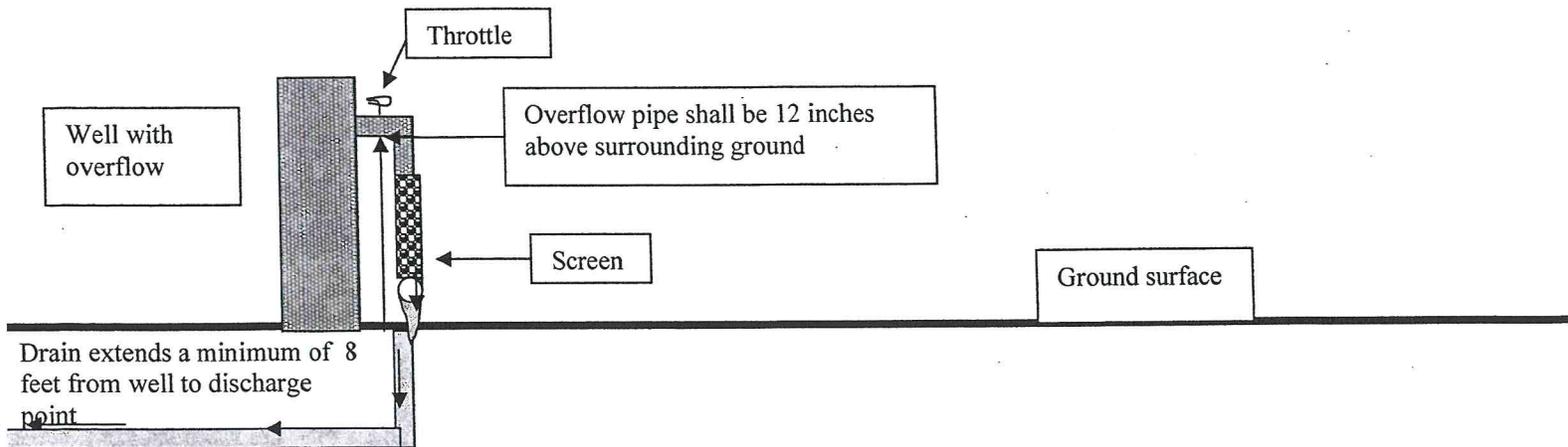


Figure 42. Flowing well installation with a surge tank instead of an overflow piping arrangement.

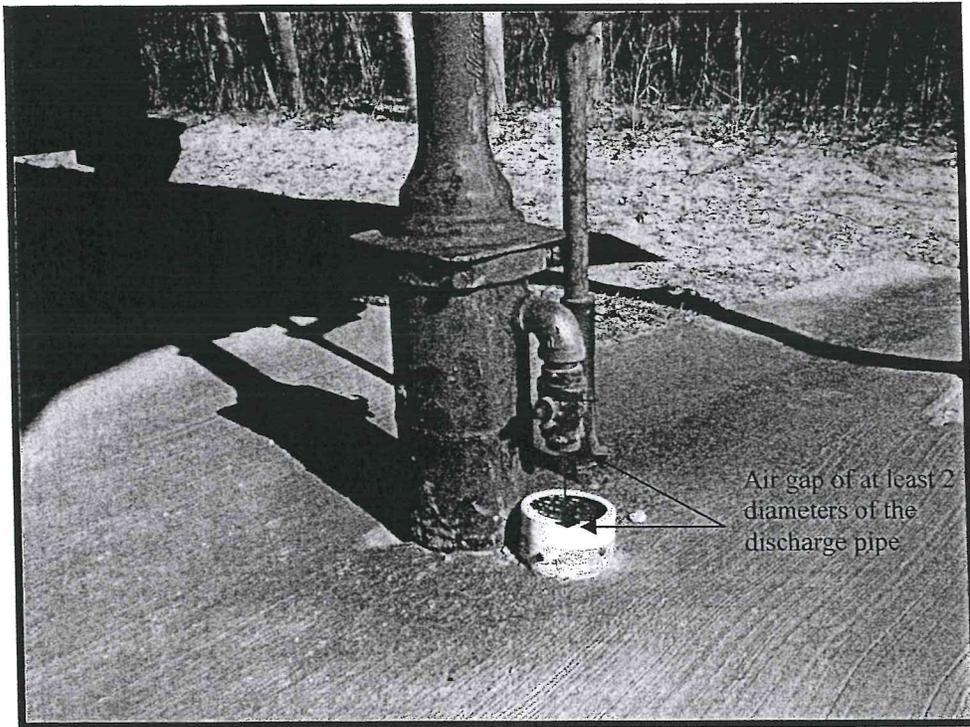
Options for Flowing Well (Artesian)

A

Install overflow pipe with throttle valve, screen, and drain.



The above diagram includes a screen from the overflow pipe to the drain. The screen would be attached at the overflow pipe and at the entrance to the drain. The screen would provide the air gap so suction doesn't occur. The screen area would need to be a minimum length of 2 diameters of the width of the discharge pipe. Screening will prevent the drain from getting clogged and keep out vermin.



Here's a picture of an option with screening both the drain and the overflow pipe.



B

The other option is stopping the flow with a well seal. This option is allowed if the well is not in danger of freezing in winter and if the pressure from the flow is not strong enough to erode the grout around the well. Wells that have seasonal flow in spring may utilize this option.

Artesian Chlorination Options

1. If the flow isn't strong it might be possible to stop it by adding a piece of casing or stopping the flow by some other method.
2. If the flow is seasonal it may be possible to chlorinate at a different time of the year.
3. Chlorine pellets may be used if the flow is not strong enough to push them out.
4. A basket of pellets or granules may be lowered & raised in the well. (The pump would have to be pulled & this would require a pump installer or well driller.)