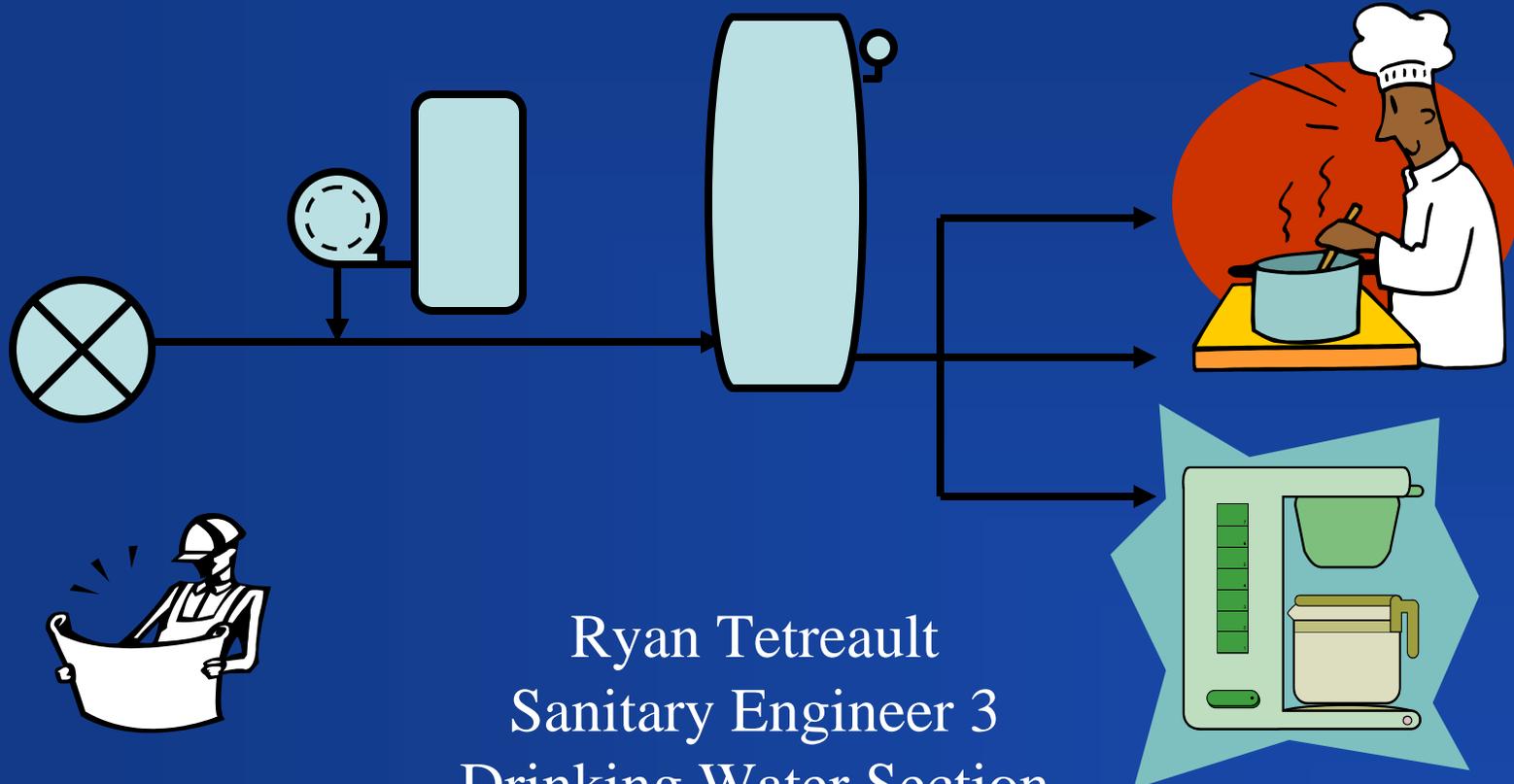


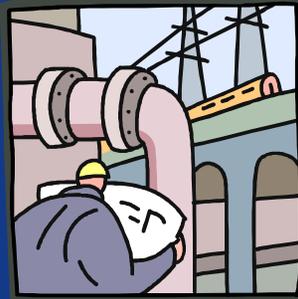
Sanitary Survey

Overview of a Public Water System Serving a Food Service Establishment



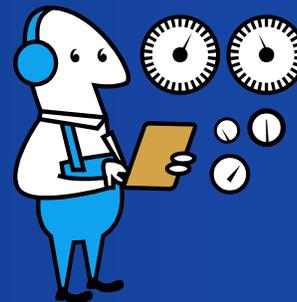
Ryan Tetreault
Sanitary Engineer 3
Drinking Water Section
Compliance – North Region 2

Sanitary Survey Frequency



Community PWS:	Every 3 years
NTNC PWS:	Every 5 years
TNC PWS:	Every 5 years

- "Sanitary survey" means an onsite inspection of the water source, treatment, distribution system, finished water storage, pumping facilities and controls, monitoring and reporting data, system management and operation, and operator compliance with department requirements. Components of the sanitary survey may be completed as part of a staged or phased review process by the Department within the established frequency.



Getting Started

- Review of PWS information on file with DPH DWS
 - PWS name (not name of a business in a plaza)
 - PWS location (physical address of PWS)
 - PWS classification (based on population and type of customers)
 - PWS contact information (Administrative, Owner, Legal)
- Review of last sanitary survey violations/requirements
 - Corrections made since last inspection
 - Information provided to DPH DWS for compliance determination

Well Construction

Regulatory Requirements

- Well casing projects at least 6 inches above the established grade at the well.
- Well is not subject to surface wash.
- Well is equipped with a watertight well cap and all connections to the well casing are watertight.
- Well is equipped with a shielded and screened air vent when the drawdown is 10 or more feet.
- Well casing is made of steel.
- Well casing has no flaws or defects.
- **RCSA Section 19-13-B51 (d), (f), (j)**















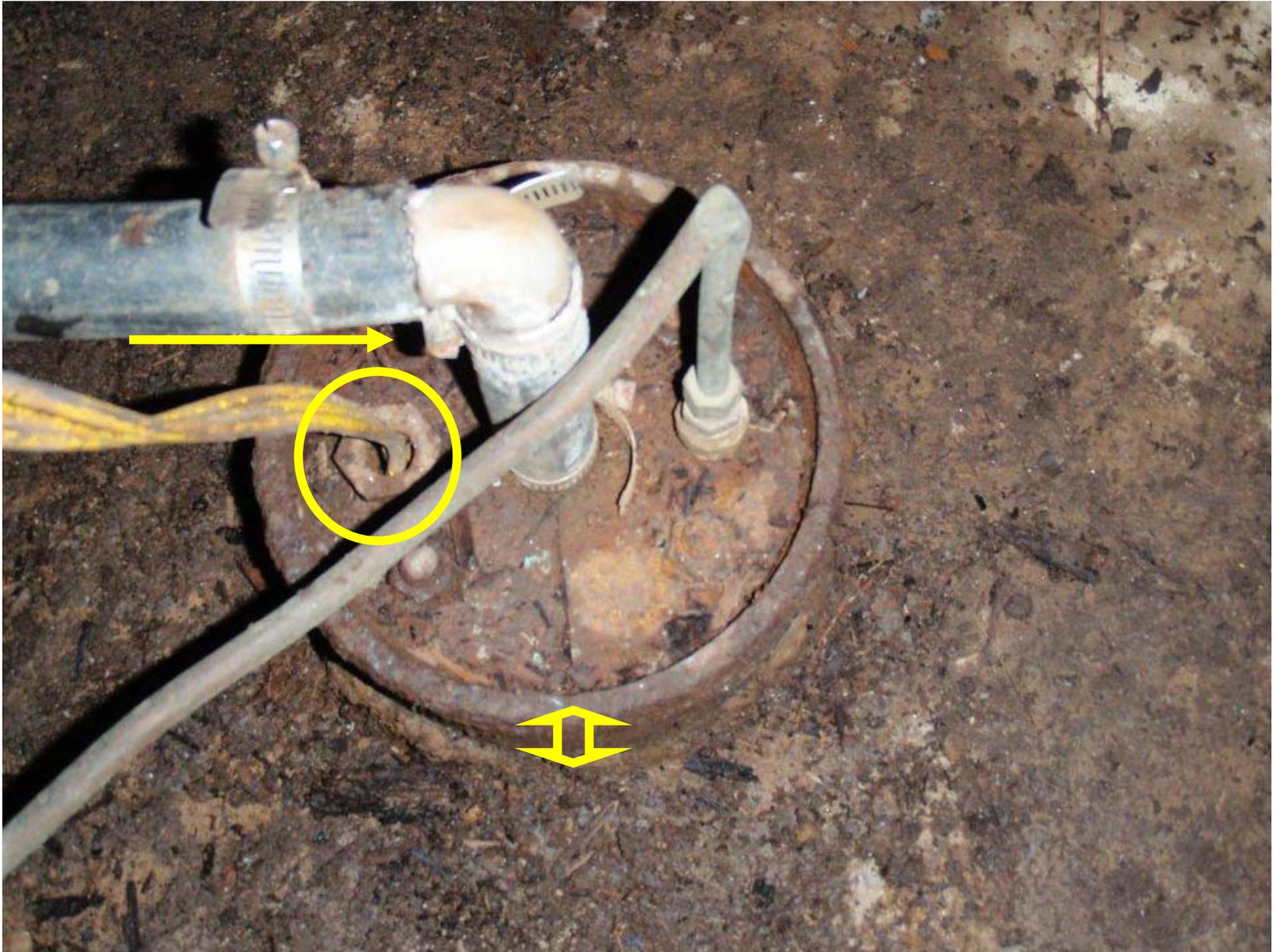














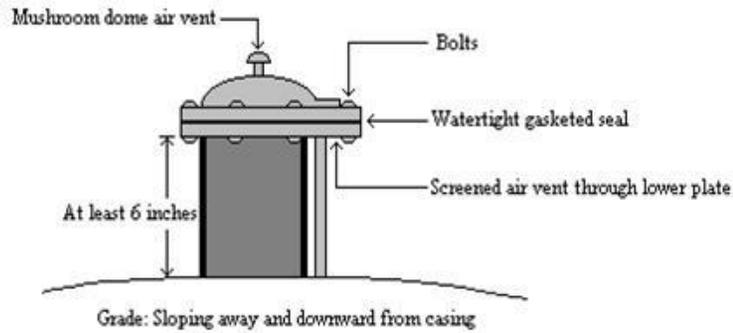
Regulatory Requirements

Dug Well Construction

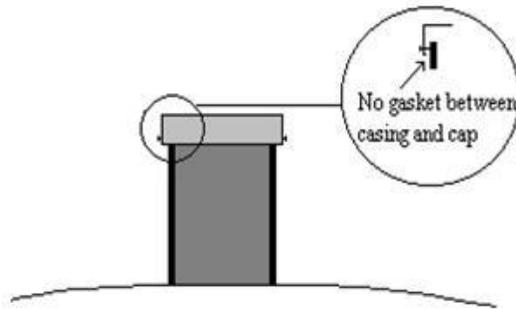
- The casing must extend at least 6 inches above grade.
- The casing must be constructed of watertight concrete a minimum of 4 inches thick to a depth of at least 10 feet below grade.
- The well must have a reinforced concrete cover a minimum of 4 inches thick and overlaps the sidewalls at least 2 inches.
- The well must have a watertight joint between the cover and sidewalls.
- If equipped with a manhole, it must have a minimum of 2 inches curbing above the concrete slab and a watertight overlapping cover. The manhole cover must be equipped with a lock or be bolted in place.
- **RCSA Section 19-13-B51 (f) and (g)**

Drilled Wells

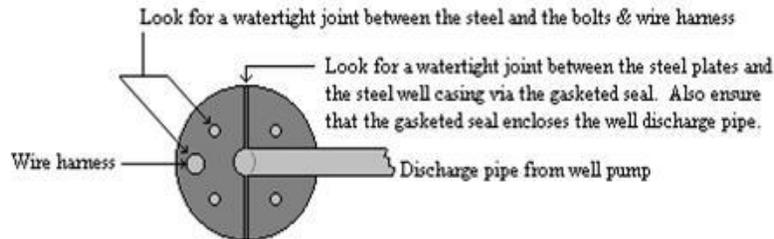
Typical construction of watertight well cap:



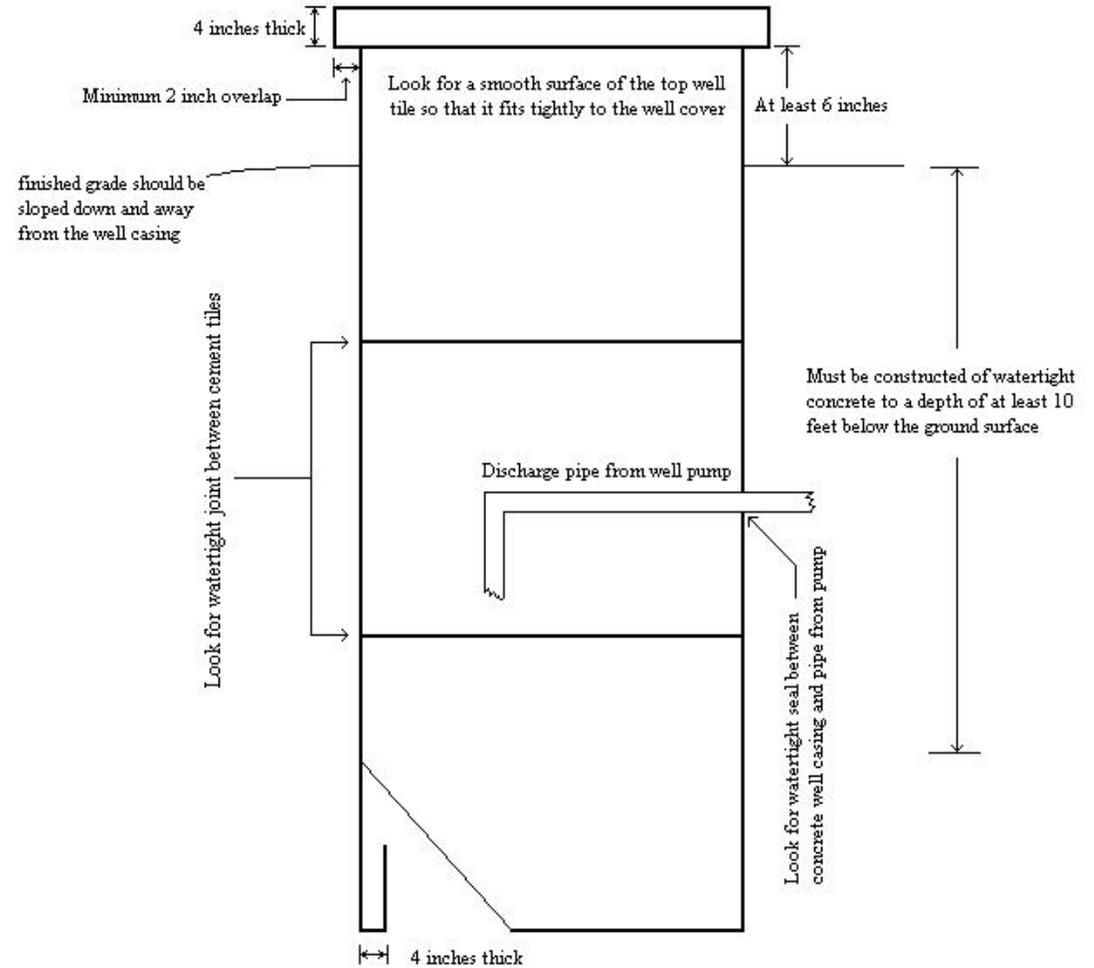
Typical construction of non-watertight well cap



Typical construction of split seal well caps designated for use when the well is not equipped with a pitless adapter unit: Top - Down View



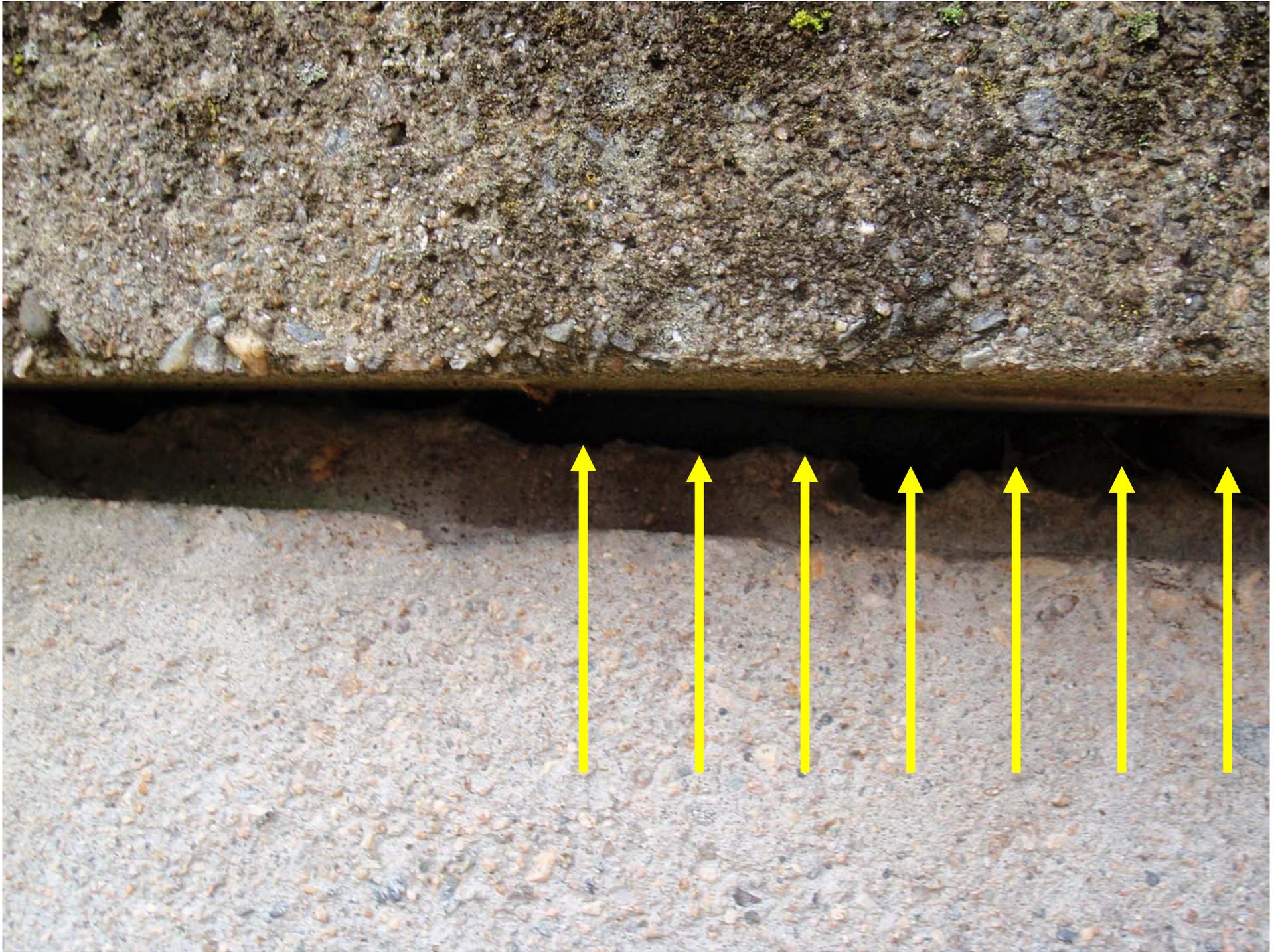
Dug (Shallow) Wells



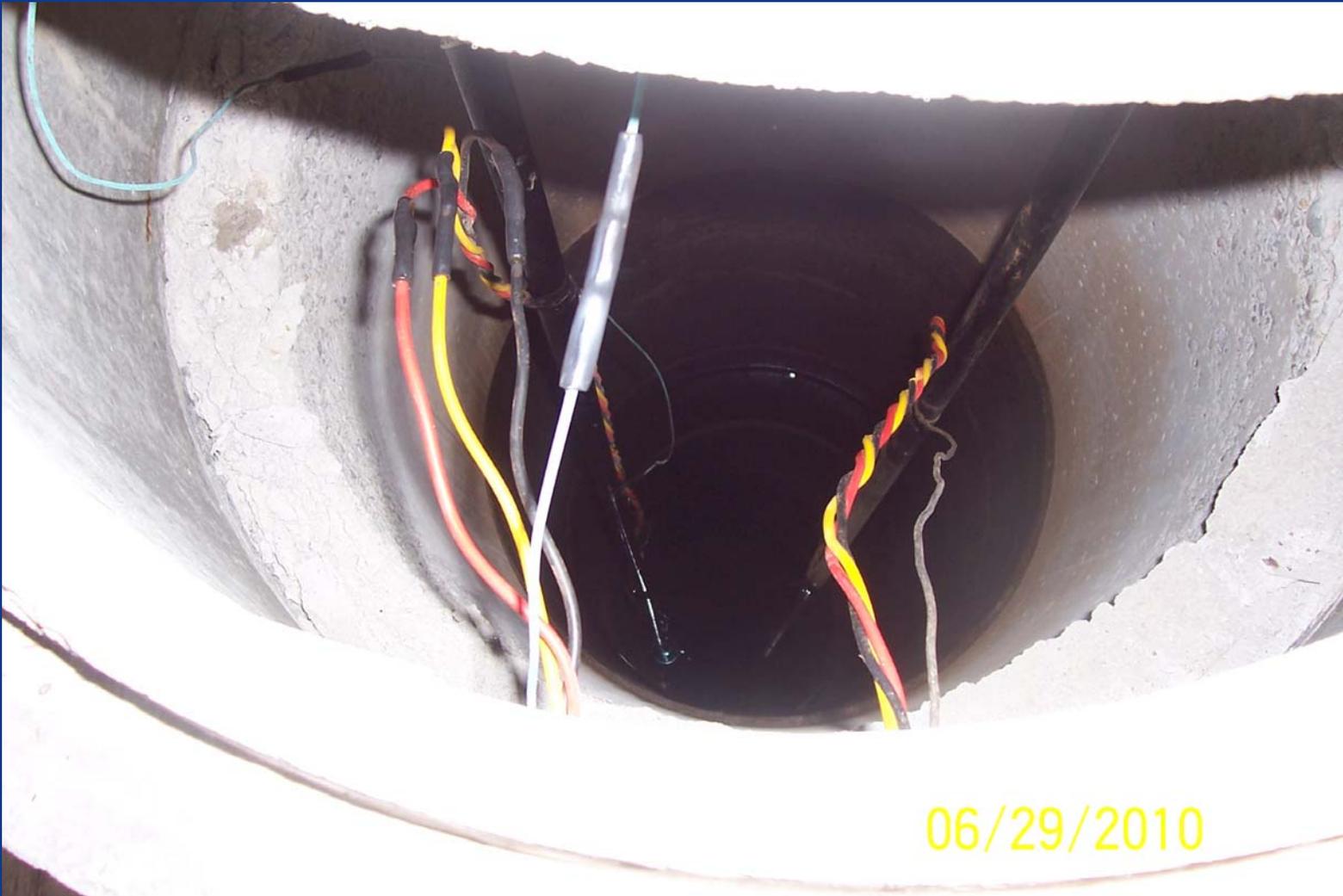












Regulatory Requirements

Well Pits

- Well pits shall be avoided whenever practical.
- Well pits must be watertight or suitably drained to ensure dryness of the pit.
- Well pits must be accessible (not buried).
- When equipped with a drain, the drain must extend at least 25 feet from the pit and drain to the surface of the ground.
- The well pit drain must slope at least 1/8 inch per foot toward the outlet and be screened.
- The well pit drain must not be connected to any sewer, house drain, or storm drain.
- When a well pit is constructed in impervious soil, no porous material shall be used under the well pit floor.
- **RCSA Section 19-13-B51 (h) and (i)**















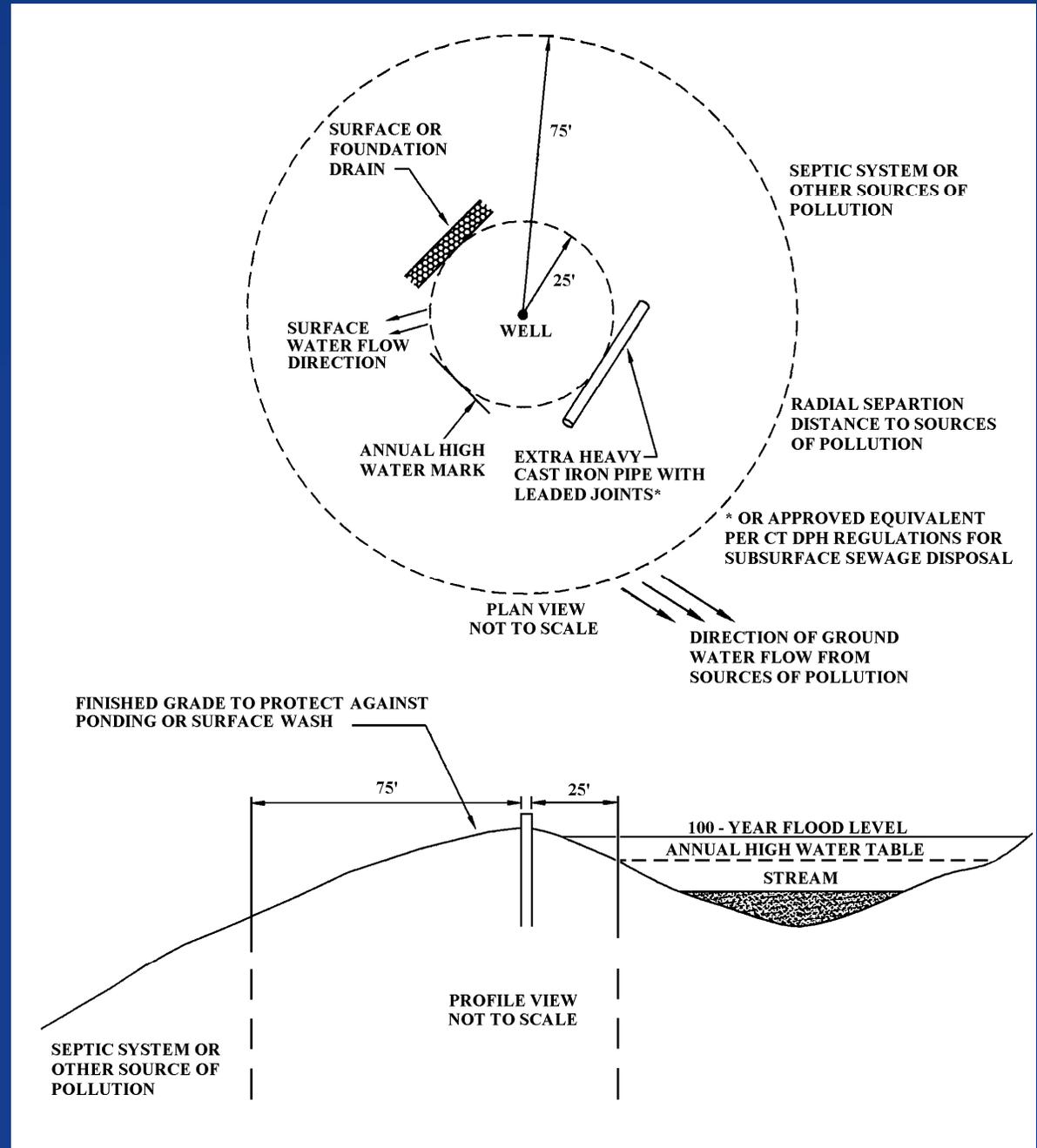




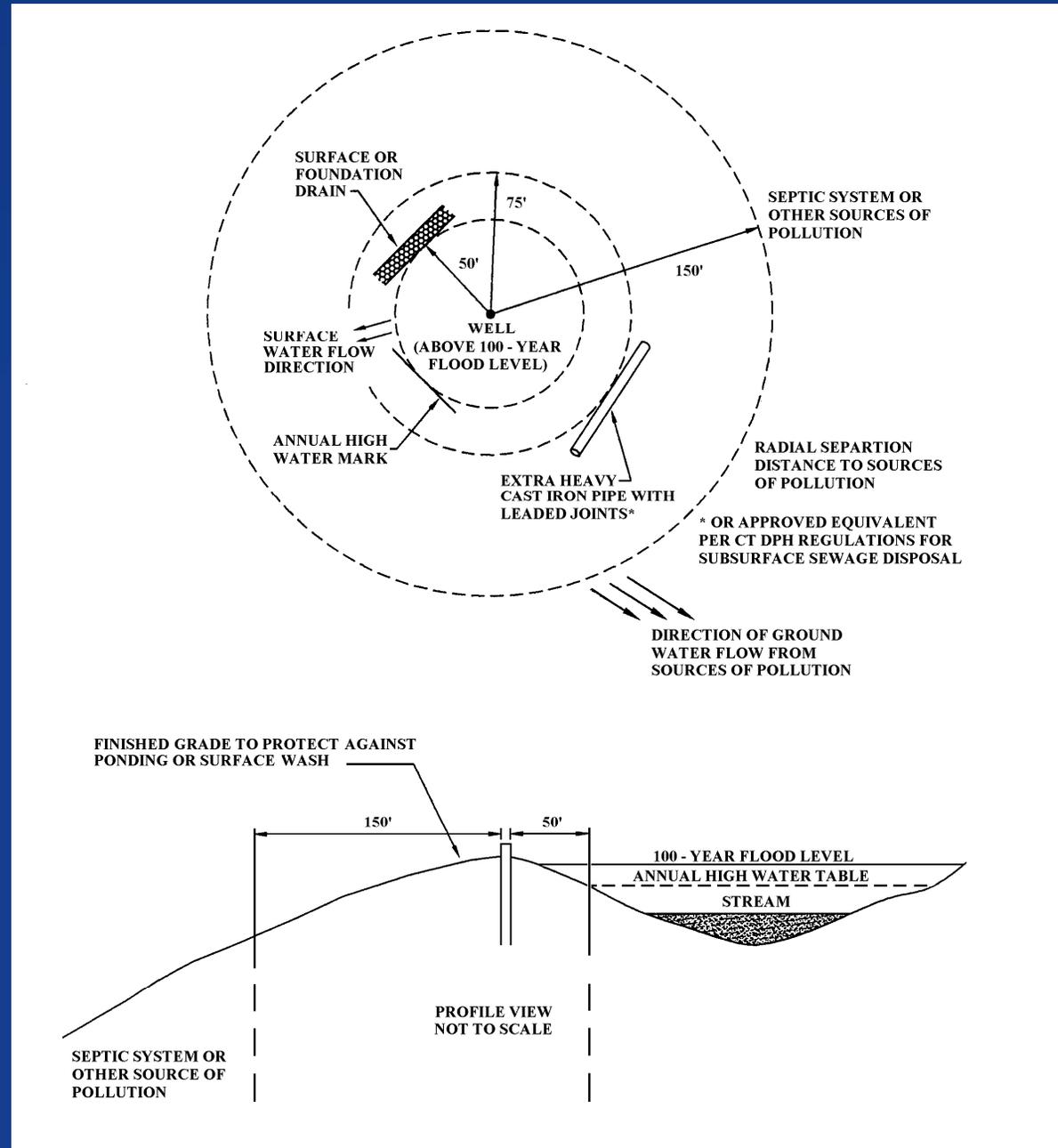
Well Location Regulatory Requirements

Pollution Source	Required separation distances (feet) based on well pump withdrawal rate		
	< 10 gpm	10-50 gpm	> 50 gpm
Subsurface Sewage System (septic tank/leaching fields)	75	150	200
Sanitary Sewer (unknown construction)	75	150	200
Sanitary Sewer (constructed of heavy cast iron pipe with leaded joints or approved equal - DPH technical standards for subsurface sewage disposal)	25	75	100
Storm Drain	25	50	50
Foundation, Floor Drain	25	50	50
Dry Well	75	150	200
High Water Mark for Surface Water Body	25	50	50
Liquid Fuel Storage Tank/Piping	75	150	200

Separation distances
 for a well approved
 for a withdrawal rate
 less than 10 gallons
 per minute:



Separation distances
 for a well approved
 for a withdrawal rate
 between 10 to 50
 gallons per minute:



Separation distances for a well approved for a withdrawal rate between greater than 50 gallons per minute:

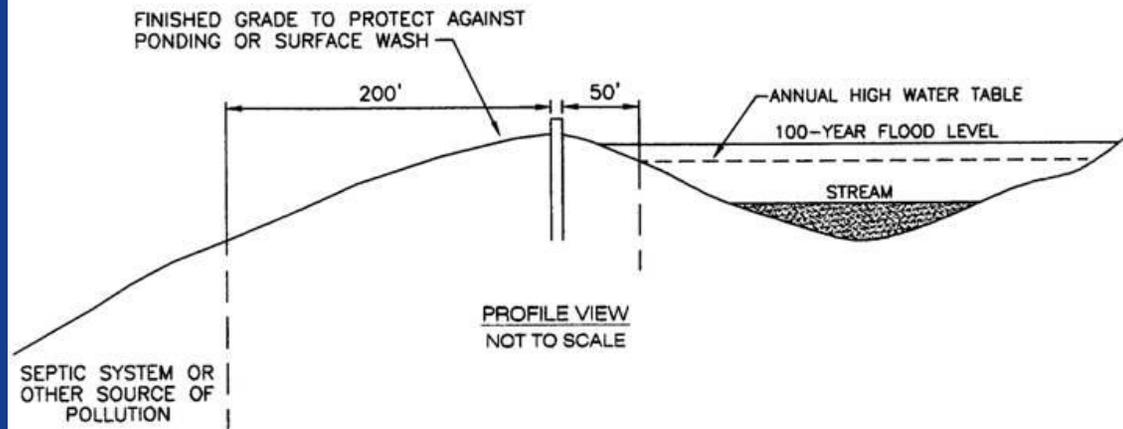
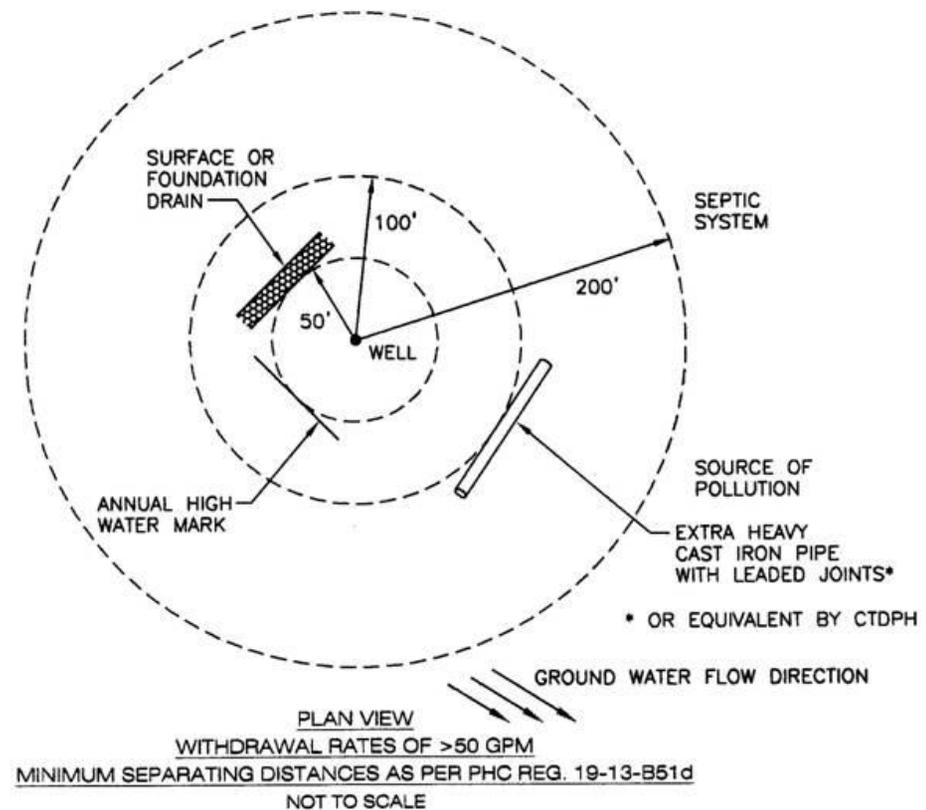
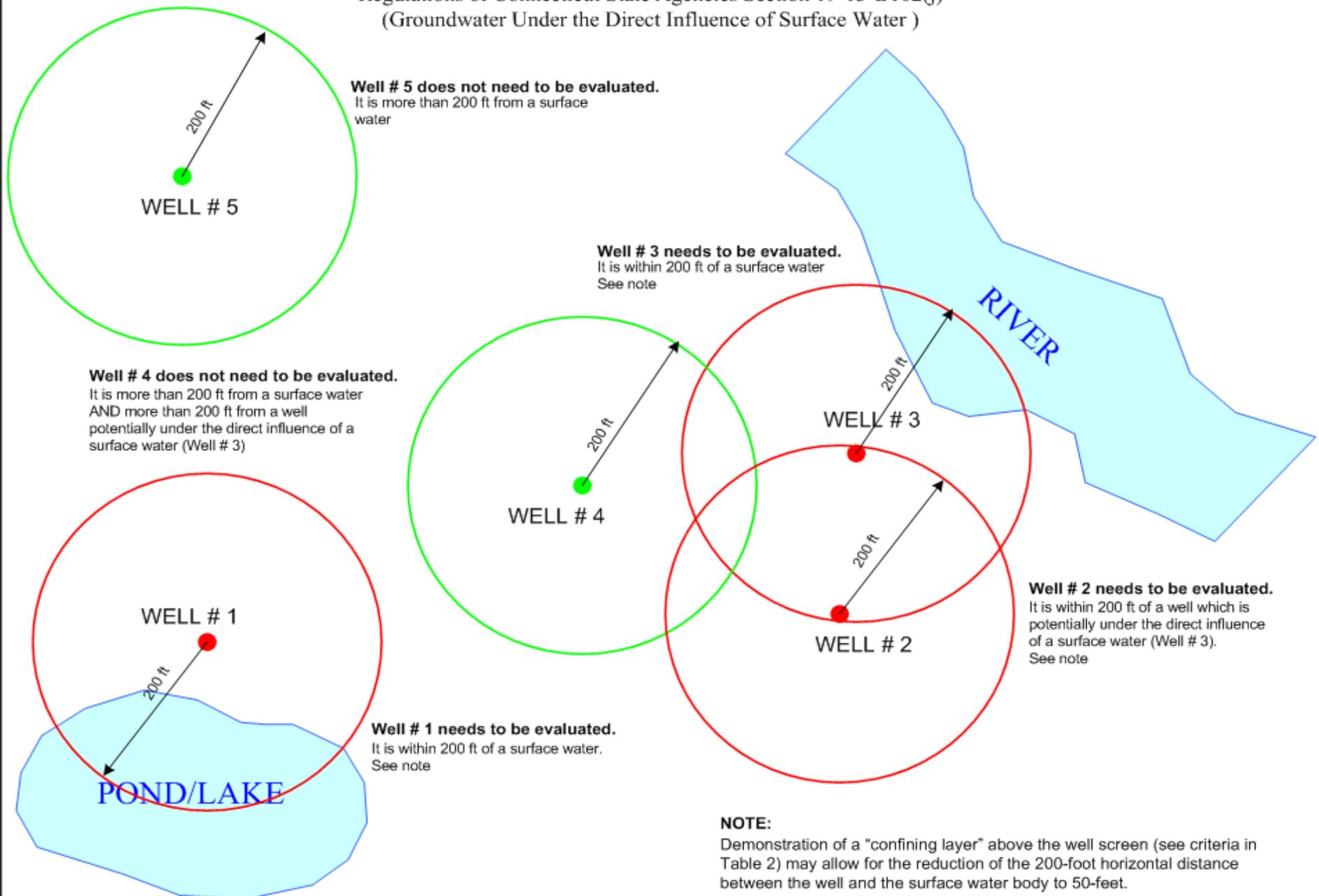


Figure 1-

EXAMPLE OF WELLS NEEDING EVALUATION UNDER THE SURFACE WATER TREATMENT RULE

Regulations of Connecticut State Agencies Section 19-13-B102(j)
(Groundwater Under the Direct Influence of Surface Water)



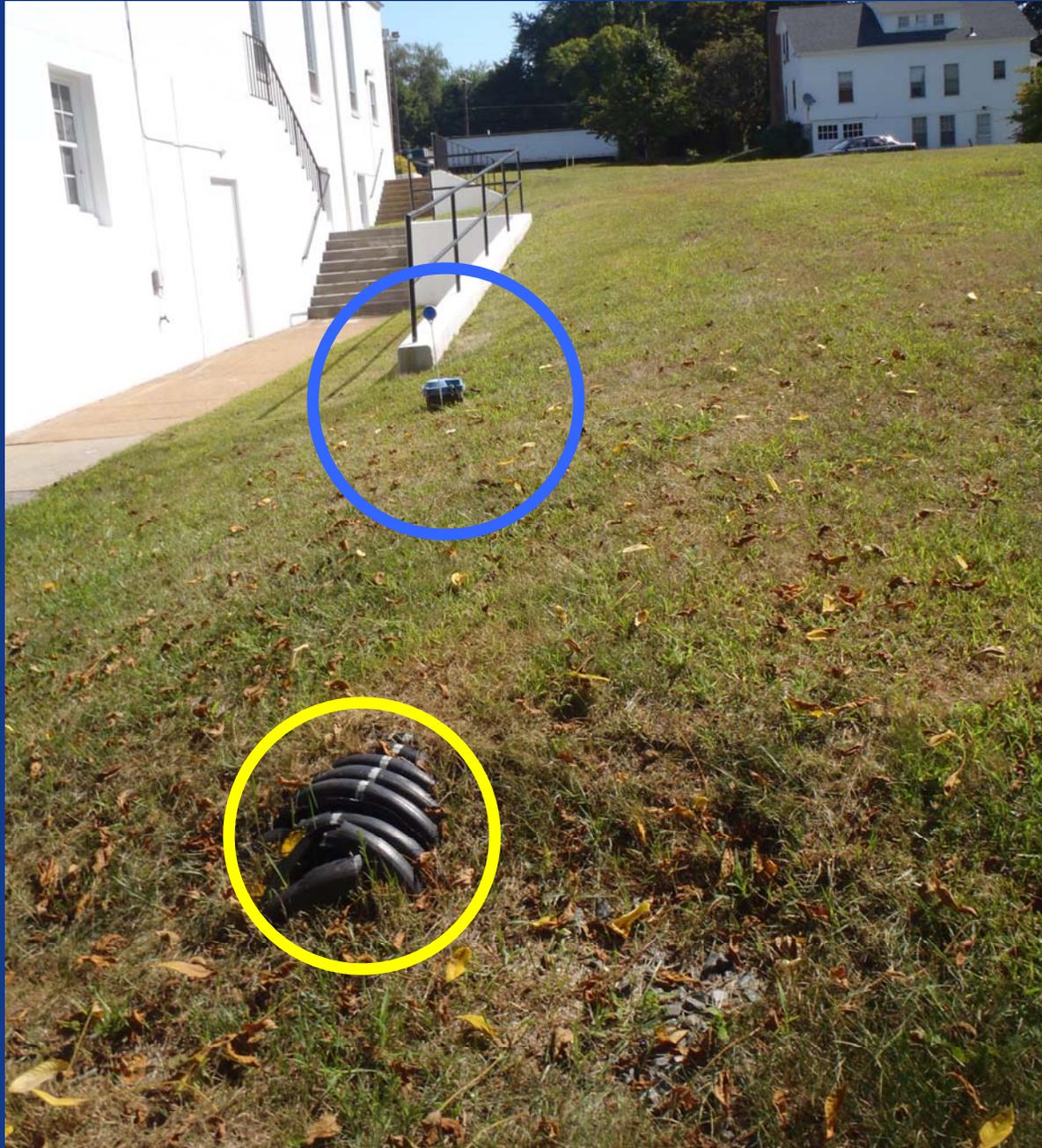












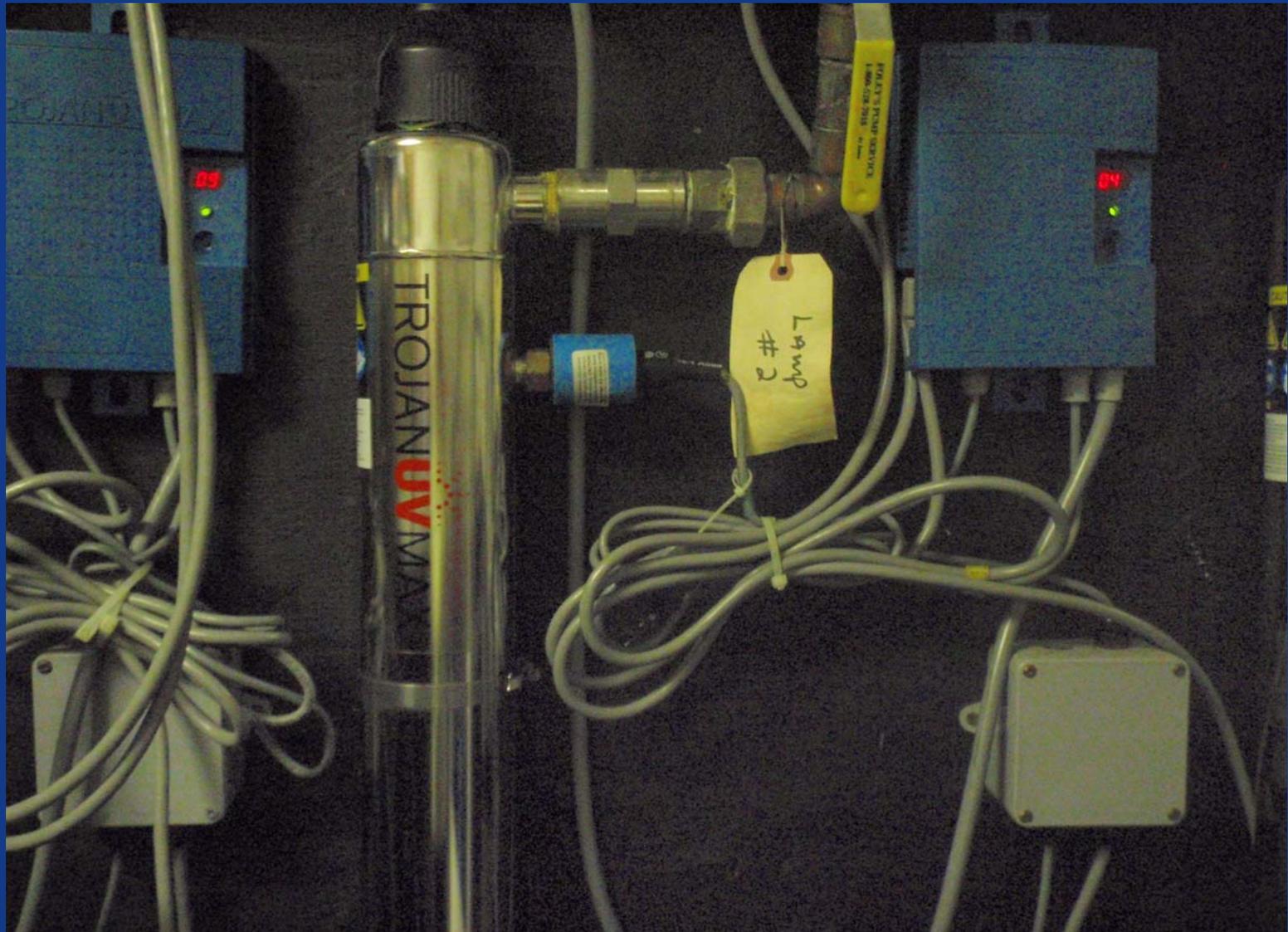


Treatment Systems

- ◆ Approval of treatment before installation
- ◆ Reason for treatment
- ◆ Treatment effectiveness
- ◆ Contact time
- ◆ Duplicate or backup chemical injection pumps
- ◆ Chemical solution tanks sealed and sanitary
- ◆ Sampling taps before and after treatment processes
- ◆ Treatment effluent logs
- ◆ Operation and maintenance logs
- ◆ ANSI/NSF standard 61 for drinking water chemicals
- ◆ Cross connections







Storage Tanks

Regulatory Requirements

- All finished water tanks must be adequately constructed to protect them from contamination and prevent the entrance of storm water and precipitation.
- Atmospheric tanks must have vents and overflows and they must be suitably protected and screened to prevent entry of insects, birds or other foreign matter.
- Atmospheric storage tanks shall minimally be inspected once every 10 years for sanitary and structural integrity. The inspection report shall be retained for reference and be made available on request.
- Uncovered finished water tanks, basins and clear wells are prohibited.
- **RCSA Section 19-13-B102f (5)**

Storage Tanks

Regulatory Requirements (continued)

- In-Ground Finished Water Storage Tanks shall be located at least:
 - 50 feet from any part of the nearest subsurface sewage disposal system
 - 25 feet from the nearest watercourse or storm drain or other source of pollution
 - 50 feet from the nearest sanitary sewer unless the sewer is constructed in accordance with the Technical Standards for Subsurface Sewage Disposal in which the tank must be at least 25 feet from the sewer.
- **RCSA Section 19-13-B102f (5)**



Air vent

Sight glass

Manhole
access port

Tank drain

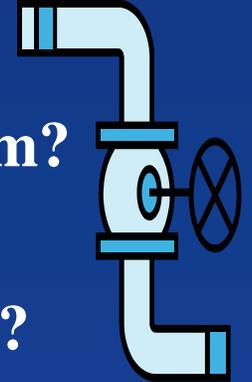
Over flow

Storage Tank Screens



- Atmospheric storage tank screens and overflows need to be checked to see if there is a screen in place to prevent the entrance of birds, insects and vermin.

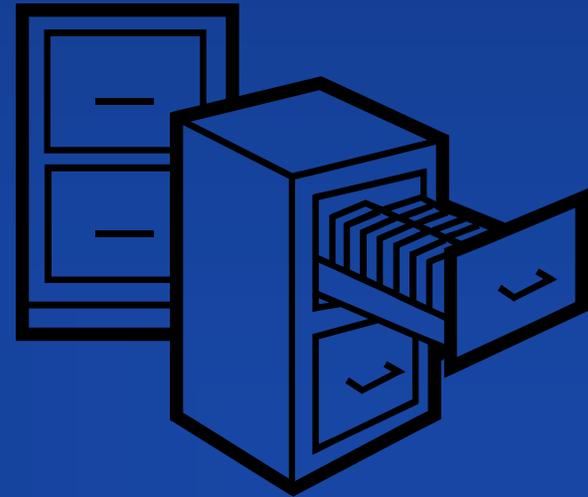
Distribution System



- Does the PWS have a cross connection control program?
 - Have all categories of concerns been identified?
 - Have all cross connection violations been corrected?
 - Have all backflow prevention devices been tested?
 - Has the cross connection report been submitted to DPH?
- Does the PWS have a sampling site plan with sampling points representative of water delivered to all customers?
- Does the PWS have an annual flushing program?
- Does the PWS maintain a minimum of 25 psi under normal conditions to all service connections?
- **RCSA Section 19-13-B102**

Monitoring, Reporting, and Data Verification

- Review of the water quality testing schedule to check for any:
 - Monitoring/reporting violations
 - Outstanding public notification requirements
 - Inventory of water system facilities
 - Inventory of sampling locations
 - Contact updates
- Record keeping requirements
 - Maps
 - Water quality results
 - Public notice documents
 - Water meter readings
 - Treatment effluent logs
 - Customer complaints
 - Records of actions taken to correct violations



Record Keeping Requirements

RCSA Section 19-13-B102(1)

Item to maintain on record	Time frame
Total coliform bacteria test results	Five years
Chemical test results	Ten years
Actions taken to correct violations	Three years
Sanitary survey reports and responses to such	Ten years
Records concerning a variance granted to the water system	Five years
Maps and records showing location of mains, hydrants and other facilities (community water systems)	Integrated map to be filed and updated every five years
Complaint log (community water systems)	Three years following resolution
Lead and copper records	Twelve years
Cross-connection control records	Five years
Consumer confidence reports (community water systems)	Five years
Filter turbidity measurements (surface water treatment plants)	Three years
Public notices issued and certification forms	Three years
Meter readings (community water systems)	Readings taken weekly from each source of supply

Review of Water Quality Testing Schedule

Water System Facility: DISTRIBUTION SYSTEM (WSF ID: 00600)
Sampling Point: Select from Inventory of Active Sampling Points for WSF ID: 00600

Analyte / Analyte Group (Code)	Monitoring Requirement	Monitoring Period	Seasonal Collection Period	Status
Total Coliform (3100)	1 every quarter	4/1/10 - 6/30/10		
Total Coliform (3100)	1 every quarter	7/1/10 - 9/30/10		Complete
Total Coliform (3100)	1 every quarter	10/1/10 - 12/31/10		
Physical Parameters (PPS)	1 every quarter	4/1/10 - 6/30/10		
Physical Parameters (PPS)	1 every quarter	7/1/10 - 9/30/10		Complete
Physical Parameters (PPS)	1 every quarter	10/1/10 - 12/31/10		

Water System Facility: ENTRY POINT (WSF ID: 00700)
Sampling Point: ENTRY POINT (Sampling Point ID: 3)

Analyte / Analyte Group (Code)	Monitoring Requirement	Monitoring Period	Seasonal Collection Period	Status
Nitrate And Nitrite (NOX)	1 every year	1/1/09 - 9/1/09		Complete
Nitrate And Nitrite (NOX)	1 every year	1/1/10 - 12/31/10		
Nitrate And Nitrite (NOX)	1 every year	1/1/11 - 12/31/11		

Public Notification Requirements

Monitoring and Reporting Violations (Mon)

Analyte / Analyte Group (Code)	Monitoring Period	Violation Tier	Public Notification Required	Public Notification Performed	Certification Due	Certification Received
Total Coliform (3100)	4/1/10 - 6/30/10	2	9/18/2010		9/28/2010	
Physical Parameters (PPS)	4/1/10 - 6/30/10	3	8/19/2011		8/29/2011	

Note: Violation Tier 1: Public Notification required no later than 24 hours after the system learns of the violation.

Violation Tier 2: Public Notification required no later than 30 days after the system learns of the violation.

Violation Tier 3: Public Notification required no later than 365 days after the system learns of the violation.

Public Notification Certification of Compliance is required no later than 10 days after completing the Public Notification Requirements..

Water System Facility Information

Distribution System



STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

|

Date

PWS Administrative Contact
Address Line 1
Address Line 2
City, State, Zip Code

PUBLIC WATER SYSTEM: *PWS Name*

CLASSIFICATION TYPE: *Classification*
TOWN: *Town/City*
PWSID: *PWSID Number*

SUBJECT: SANITARY SURVEY REPORT

Dear *Name*:

A sanitary survey was performed by *Name(s) of DWS Inspectors* of the Department of Public Health (DPH) at *PWS NAME* on *Date(s) of inspection* with *Name(s) and Affiliation of Individuals Present During Inspection*. This survey was conducted pursuant to Section 19-13-B102(e)(7)(E) of the Regulations of Connecticut State Agencies (RCSA) and consisted of an onsite review of the water source, treatment, distribution system, finished water storage, pumping facilities and controls, monitoring and reporting data, system management and operation, and operator compliance with DPH requirements.

SYSTEM DESCRIPTION:

SURVEY FINDINGS:

At the time of this survey, the following regulatory violations, requirements and recommendations were identified:

A) Regulatory Violations

Applicable Regulatory Section	Description of Violation	Recommended Corrective Action
1.		
2.		
3.		

B) Regulatory Requirements

Applicable Regulatory Section	Description of Requirement	Recommended Action
1.		
2.		
3.		

Phone: (860) 509-7333
Telephone Device for the Deaf (860) 509-7191

Name to Whom Report is Addressed
Sanitary Survey Report
PWSID
Date
Page 2 of 2

C) Recommendations

1. Effective December 1, 2009, public water systems are required to comply with the provisions of the Federal Groundwater Rule (GWR). One of the requirements of the Rule is that immediate source water monitoring must be conducted any time a system is notified that a routine Total Coliform Rule sample is positive for total coliform bacteria. Please consult with your certified laboratory as soon as possible to ensure that arrangements are in place to ensure that the new requirements are met. Unless the Department indicates otherwise, source water samples must be collected at every active source within 24 hours and analyzed for e.coli in accordance with CFR 141.402(c). In order to meet this requirement, a dedicated sampling tap will be necessary for raw water sampling for every source of supply. If your water system does not have adequate sampling capabilities, improvements should be completed as soon as possible. A guidance document that will help small systems understand and comply with the GWR, including specific information on source water monitoring and sampling taps, is available at the Drinking Water Section website at <http://www.ct.gov/dph/publicdrinkingwater>.
- 2.
- 3.

CONCLUSIONS:

The regulatory violations and requirements cited in this report must be addressed as noted in the survey findings section. A written response identifying corrective actions or providing requested information for all of the violations and requirements in this report must be submitted to this office by **30 days from date of report**. The written response must indicate how each violation will be corrected within 120 days of the date of this report. If correction of a violation is not possible within 120 days; the PWS and DPH must agree upon a corrective action plan prior to the end of the 120 day period. Upon completion of required corrective actions the PWS is required to provide written verification and the date the action(s) were completed to the DPH. If no written response is received or if the regulatory violations and requirements are not adequately addressed, formal enforcement action may be taken.

As a reminder, all necessary and required forms, reports, sampling schedules, regulations, fact sheets, etc. are available on the DPH Drinking Water Section website at <http://www.ct.gov/dph/publicdrinkingwater>.

If you have any questions regarding this matter please contact me at (860) 509-7333.

Sincerely,

DWS Staff
Title
Drinking Water Section

TC/DC:initials

cc:

Attachment(s):



Thank You

Presenter Information:

Ryan Tetreault, Sanitary Engineer 3

Connecticut Department of Public Health

Drinking Water Section

410 Capitol Avenue, MS#51WAT

P.O. Box 340308

Hartford, CT 06134

Email: Ryan.Tetreault@ct.gov

Phone: 860-509-7333

Fax: 860-509-7359