COWLITZ COUNTY HEALTH DEPARTMENT

1952 9th Avenue
Longview, WA 98632
TEL (360) 414-5599
FAX (360) 425-7531

www.co.cowlitz.wa.us/health

Board of County Commissioners

Kathleen A. Johnson	District 1
George Raiter	District 2
Axel Swanson	District 3

Volume 4

THE WATER FLOWS

January 2010

Program Contact Info

Environmental Health Lead
Audrey Shaver……..360-414-5592

Drinking Water Program Staff
Jesse Smith…….....360-414-5598

Environmental Health Secretary
Melissa Hilts……..360-414-5583

Water Sample Prices

Cowlitz County Group B Water Systems who submit Coliform Bacteria or Nitrate samples to the Cowlitz County Health Department in 2010 will be able to get the sample done **at cost** pricing:

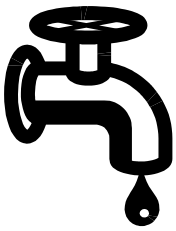
Bacteria: $28.00

Nitrate: $20.00

Arsenic: $25.00

Group B WAC Revision Process

The Group B regulations are still being revised but the timeline has been delayed.



Draft rule revisions are expected in the spring of 2010 with new rules in place by 2011.

Please see the DOH webpage listed below for more information regarding revisions.

http://www.doh.wa.gov/ehp/dw/groupb.htm

Water Samples required for Group B water systems are as follows:

Bacteria—Annually Nitrate—Every Three Years

Follow-up To Unsatisfactory Coliforms

When a Coliform Bacteria water sample comes back bad, steps need to be taken to identify the cause of the unsatisfactory sample. Group B systems are required to take 2 follow-up samples to confirm if there is a problem in the water system.

This would also be a good time to inspect the system for any potential sources of contamination. Below is a list of potential contamination issues taken from a DOH handout.

Do not disinfect the system prior to follow-up samples unless specifically approved by the Health Department.

If any follow-up samples come back unsatisfactory then the system operator must notify the users and the health department. An inspection of the system will be conducted to try and identify possible sources of contamination.

After any corrections are made to the water system it should be shock chlorinated, flushed and when chlorine is no longer present follow-up sampling needs to occur to verify corrections. **If any samples indicate fecal coliforms or *E. coli* in the water, please contact the health department immediately for follow-up on the system.**

Troubleshooting For Unsatisfactory Coliforms

Below are some possible causes to unsatisfactory samples from a water system. Any potential sources of contamination should be fixed prior to the disinfection process.

Well

- Well casing does not extend at least six inches from the ground
- There is standing water around the well
- The pump was replaced or repaired and was not effectively disinfected
- There are openings in the well casing such as around electrical wires or missing screen on vent
- Well does not have a inverted screened (minimum 24 mesh) vent
- The well has contamination sources nearby (septic tanks, animal grazing, garbage, etc)
- The area around the well is not clean and not protected from rodent harborage

Pressure Tanks

- Pressure tanks are waterlogged and may have damaged bladder
- Sediment has accumulated in the tank that can harbor bacteria

Storage

- There are openings in storage tank that allow entry of insects, animals or other contaminants
- The access hatch does not provide a good seal
- Vents, overflow and/or drain lines are not protected from contamination with screens or flapper valves
- There are signs of dirt, bugs, animals or debris on inside of tank
- There are cracks or leaks on the exterior of the tank

Distribution

- There are leaks or breaks in waterline(s)
- There has been a water outage recently
- System was not disinfected after construction or repair work

Disinfection After Repairs

Any time a water system is opened up for repairs it is possible that bacteria can be introduced into the system.

Bacteria can be introduced at the point of work being done or by the new equipment/pipe being installed on the system.

This work could include replacing piping, replacing the pump, replacing pressure tanks or any work that may have contact with water.

If you are hiring someone to perform the work, be sure to discuss with them how they plan to keep the parts as clean as possible and to see if they will be disinfecting the system as part of the work.

Prior to any disinfection taking place all users on the system must be notified of the planned disinfection.

When minimal contamination of the system is expected than a lower dose of chlorine compound around 5 ppm should be enough to handle the disinfection of the system.

However if a greater amount of contamination is believed to have occurred or if contamination level is unknown than 50 ppm might be a more appropriate level to chlorinate the system.

To calculate the amount of non-scented chlorine bleach to add to the well, please see the DOH handout Emergency Disinfection of Small Systems that is enclosed with this newsletter.

Remove the plug or well vent from the cap and pour the bleach down the space where the vent was located.

The chlorine should be cycled in the well to allow thorough mixing with a new garden hose. This hose then can be used to wash down the upper part of the casing with chlorinated water.

Ensure that the chlorine is circulated throughout the entire system by opening faucets until bleach can be smelled and then closing the faucets.

Try and allow the bleach to remain in the system for 24 hours prior to flushing the system.

High levels of chlorinated water should not be disposed of an a manner that will enter septic systems, surface water or destroy vegetation.

Following disinfection you should wait 7 days prior to taking a coliform sample.

Water System Approval Status

In last year's newsletter we indicated that we were intending to notify systems that were unapproved about what steps would need to be taken to gain approval.

At this time we have identified the approval status for all the Group B Systems in the county and will be sending out the needed information this year.

Unapproved water systems are those that have never gone through a formal review process with the Health Department and received approval during that process. Also, some systems may have been approved at one time but are no longer considered approved due to major changes made to the water system without approval.

Residents on unapproved water systems may have building permits or loans denied. Building permits and loans may also be denied for non-compliance with ongoing requirements of Group B Public Water Systems.

If you have questions regarding the approval status of your water system, please contact the health department for more information.

Developing an Operations Manual

Something a small water system should consider developing is an organized manual or notebook that provides a central location for information including system specific information that can be used in times of emergency, when there is an operator or owner change, or as a convenient place for materials related to the water system. Enclosed with the newsletter is the Emergency Disinfection handout, the Coliform Bacteria handout and the Coliform Sampling procedure brochure to include with an operations manual. Other useful documents are available on our webpage for your convenience.

Possible Information to Keep in a Water System Manual:

- Lists of routine operational procedures done such as:
  - Inspections of well, pump house and tanks (pressure or storage)
  - Water line flushing and valve exercising
  - Identifying potential cross connections (i.e. hose filling swimming pool/hot tub)
  - Meter readings & leakage identifying
  - Where, when and how to do routine sampling and water sample history
  - See DOH Guide Preventive Maintenance Program on our website for more information about troubleshooting and operational checklists.
- Well log
- Well information (recorded covenants, static level, drawdown, etc.)
- Pump information including pump curve
- Water system schematics that include:
  - Easements, line locations, sizes, materials, and when installed
  - Valve locations and when they were last exercised
  - Meter locations and there recordings
- Finances (billing information, expense information, reserve account info, replacement cost estimates, etc)
- Emergency Contact Info including contact info for all connections on system
- Group B newsletters
- Informational handouts
- Previous Group B Site Visit Checklists
- Water Treatment Information and Operations Manual