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Small Public Water Systems

A Publication For Group B Public Water System Owners and Managers

March 2012

Announcing The Group B Water System Management Guide Is Now Available For Download From Our Website

Owning and operating a Group B public water system is an important responsibility. The information in this *Group B Public Water System Management Guide* is intended to help you build technical, managerial, and financial capacity while ensuring a safe and reliable source of drinking water is provided to your customers. You can download a copy of the guide by visiting our Publications and Brochures link on our website at: www.co.thurston.wa.us/health/ehadm or contacting the Drinking Water staff to request a copy. Staff contact information is on the front of this newsletter.

Much of the guide will be useful on a day-to-day basis. Several water systems who have already used this guide tell us that it can serve many purposes including providing:

- a central location for numerous water system records and system policies,
- a process to evaluate present and future system deficiencies and improvements necessary for continued water system operation, and
- a list of operation and maintenance duties that can be reviewed, used and improved as necessary by existing and future operations so they may effectively manage and operate the water system.

The guide is organized into the following sections:

1. Water Facilities Inventory Form
2. Emergency Response Plan
3. Service Area and Facility Map
4. Water Quality Monitoring Plan
5. Operation and Maintenance Program
6. Component Inventory and Assessment
7. Operation Budget
8. Record Keeping
9. Reference Materials

Each section provides guidance and resources to help you build technical, managerial, and financial capacity. Drinking Water Program staff are also available to assist you including providing technical assistance, educational materials, and sanitary surveys of your water system to help evaluate your system. Please contact any of the staff by phone or email if you have any questions or would like to schedule a sanitary survey. Staff contact information is on the front of this newsletter.

An Ounce Of Prevention Is Worth A Pound Of Cure

Many infectious diseases can be spread by drinking contaminated water. In 1854, a cholera epidemic broke out in London's Soho neighborhood. Over 600 people died of the disease in only ten days. Dr. John Snow thought that the cholera was spread by drinking contaminated water. He used this epidemic to put his ideas to the test. Dr. Snow found that most people who died in the outbreak lived near one water well. Snow also interviewed sick victims and learned that nearly all had gone out of their way to get water from that same well because they preferred the taste of its water.

In the 1850s, most homes didn't have running water or public sewers, and people in cities often pumped their drinking water from wells in close proximity to raw sewage. People stubbornly believed that a "malaise" from "odors" was the cause of illness, not from bacteria or viruses. Eventually Snow proved the link between the well water and the cholera outbreak, and city authorities permanently removed access to the water well.

Theories about water-borne illnesses had been known for years prior to this event; however, John Snow's work was the first to be recognized and accepted as proof of water borne illnesses. While we all know that wonder drugs can save lives, many lives have been saved by the preventative work performed by water system operators and managers. Human health has benefited thanks to antibiotics and other medicines. But the longer lives and better health of people in developed nations today is as much or more the result of good disease prevention as it is from good cures.

(excerpts from "Antibodies In Action", 2002)

Quick Fixes To Prevent Water System Problems

After many years of water system inspections, Thurston County Environmental Health Drinking Water staff has identified three quick "fixes" that can be done to a water system that will help prevent future problems.

First, install an inverted vent pipe at the top of your well casing. It is important for your well to be able to cope with pressure changes when the water pump turns on and off. With the proper venting a well will function more efficiently and the life of your pump will be prolonged.

Second, plug any holes in the top cover of your well casing. Many wells we inspect have open bolt holes, holes for electrical wiring, or missing sample-hole plugs that can cause contaminants to enter the well water. Inspect your well case and plug these holes to prevent materials from dropping into your well and causing potential water quality problems.

Three, know your distribution system. If you don't have accurate maps showing where the pipes are, how big they are, what they're made of, and the location of your distribution valves and blow-offs, start collecting that information now. The better prepared you are for a waterline break, the faster and more effectively you'll be able to respond and restore service.

These three simple fixes may help you prevent many future problems and expensive repairs.

Please contact any of the Drinking Water staff by phone or email if you have any questions. Staff contact information is on the front of this newsletter.

What is Water System Capacity?

We define water system capacity as the system's technical, managerial, and financial capability to achieve and maintain compliance with all relevant local, state, and federal plans and regulations. In other words, the system has the knowledge, tools, and resources to ensure it can provide safe and reliable drinking water now and into the future.

What are the benefits for systems that achieve a high level of capacity?

All water systems, regardless of size or other characteristics, can benefit from a program of continuous improvement that includes self-assessment, strategic planning, and monitoring for accountability and performance. Doing so allows a system to:

- Save costs associated with minimizing liability, prolonging the useful life of infrastructure, and running the system efficiently.
- Protect public health by ensuring consistent compliance with drinking water standards, including federal, state and county regulations and other applicable standards of performance.
- Enhance performance beyond compliance through measures that bring about efficiency, effectiveness, and service excellence.

What does a water system with capacity look like?

Technical Capacity:

- System's source is adequate to meet demands, meets all applicable water quality standards, and is appropriately sampled and protected.
- Successfully implements the system's operation and maintenance plan.
- System can reliably produce and deliver an adequate supply of water that meets all drinking water standards. This is because its infrastructure, from source through distribution, is in good condition, and hasn't exceeded its useful life.

Managerial Capacity:

- Responsibilities of the governing board and operator/manager are clearly identified and communicated to prevent confusion and mistakes in the daily operation of the system.
- System personnel develops and periodically revisits strategic plans, including source water protection, water rights, emergency preparedness, future growth demands, finances and asset management (including short and long-term capital investment), and service policies.
- System personnel have adequate knowledge to manage operations and understand applicable regulatory requirements.
- System personnel build relationships with their customers, technical assistance providers, and regulatory agencies to increase their ability to solve problems quickly.

Financial Capacity:

- Rates and other water system charges cover the full cost of service.
- Reserves or savings are available for unexpected expenses.
- System personnel use appropriate budgeting, accounting, and financial planning methods.

For More Information:

To learn more about water system capacity visit the following resources online:

http://www.epa.gov/ogwdw/smallsystems/pdfs/final_asset_inventory_for_small_systems.pdf

<http://www.doh.wa.gov/ehp/dw/Publications/331-134.pdf>

Group B Water Supply Annual Permit Renewal

The Group B water supply annual permit for the next operating year is due July 1, 2012. A \$95 billing invoice for each water system will be mailed the first week of June, 2012. If you do not receive the invoice by July, contact any of the Drinking Water staff by phone or email to make sure the water systems contact information is current. Staff contact information is on the front of this newsletter. We will update the water systems information and resend the invoice.

Thank you to those who have paid their annual permit fees. As a reminder, the permit must be renewed annually to remain in compliance with regulatory requirements. If you do not have a Group B Water Supply Annual

Permit your water system is considered out of compliance. This may result in denial of home loans, building permits, on-site sewage system permits, or other permits for properties served by the water system. To return to compliance status, the water system will be required to apply for a sanitary survey and pay all applicable fees.

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REMINDER: Group B public water systems are required to test for coliform bacteria once a year and nitrate every three years.

Thurston County Public Health and Social Services
Always working for a safer and healthier community

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