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Small Public Water Systems

A Publication For Group B Public Water System Owners and Managers

March 2011

Thurston County Works With Water System Managers To Help Assure Safe, Clean Drinking Water

Together, water system managers and the Environmental Health Division have a responsibility to take whatever action is necessary to see that the citizens of Thurston County can rely on their drinking water supply. The annual permit fee implemented in July 2009 was established to ensure Drinking Water Program staff could continue to provide these important services after State funding for the program was eliminated.

Program Assistance Provided in 2009 and 2010:

- **Completed an information database to track the 600 Group B water systems.** The information tracked in the database includes water system name, state identification number, contact information, properties served by the water system, and compliance status.
- **Provided assistance and information.** Each year responded to approximately 500 telephone and email inquiries and countless number of face-to-face consultations at the service counter along with providing access to educational materials found on our web site.
- **Conducted sanitary surveys of water systems.** Completed comprehensive inspections of 20 water systems to determine if there were any water supply, water quality or management problems that existed.
- **Assisted with water quality problems.** Helped approximately 10 water systems respond to a water quality exceedence and conducted an inspection to help determine the cause and suggest potential solutions.
- **Provided assistance during flooding events.** Responded to approximately 100 telephone inquires from water systems located in areas flooded during 2009, including 24-hour on-call emergency response and several weeks of recovery response and investigative site visits. Over 200 free sample bottles were given out for water quality analysis.
- **Conducted well construction inspections.** Completed approximately 127 well sealing, tagging, and decommissioning inspections.

How the water system is managed and maintained is the front line defense to ensuring a safe and reliable source of drinking water is provided to their customers. Drinking Water Program staff can help you in the task of supplying a safe and reliable source of drinking water.

Several resources are available from the Drinking Water Program staff 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.

Does Your System Use Water Wisely?

As temperature rises, water consumption also increases. Water use on a summer day can average up to 3 times greater than average use on a winter day. Over watering is the number one waste of water during the summer, and the leading cause of disease and insect problems for plants. Below are several tips to help users on your water system use water wisely:

- **Mulch to retain moisture.** Mulch keeps roots cool, retains soil moisture, and reduces weed growth.
- **Mow it high and let it lie.** Set mowing height for 2-3 inches. Roots will stay shaded and will grow deeper, becoming more water efficient.
- **Water Wisely.** Most lawns require about 1 inch per week in the drier months (July through September). Use an empty tuna can or rain gauge to measure how much water your lawn is getting.
- **Water early or late so it won't evaporate.** Save water by watering your lawn early or late in the day. As much as 30 percent of water can be lost to evaporation if watering during the hottest part of the day.
- **Water efficiently.** Use soaker hoses and drip irrigation for trees, shrubs, and planting beds.
- **Be a leak seeker.** Check for and fix leaks in pipes, sprinklers, hoses, and couplings.
- **Concrete won't grow.** Adjust sprinklers and hoses so that sidewalks and streets don't get watered, too. Avoid watering on windy days.
- **Inform the users.** Meet or communicate with the users to discuss ways to conserve water during times of peak summer use.

For More Information:

To learn more water conservation, visit the following resources online:

- <http://www.doh.wa.gov/ehp/dw/Publications/331-375-J.pdf>
- <http://www.doh.wa.gov/ehp/dw/Publications/331-450a.pdf>
- http://www.doh.wa.gov/ehp/dw/Publications/331-120-1_indoor_water_conservation.pdf
- http://www.doh.wa.gov/ehp/dw/Publications/331-120-2_outdoor_water_conservation.pdf

Do You Know How Much Your Water System Uses?

Knowing how much your water system uses is important for protecting your system from over use and will assist in determining how much water your system can safely provide. To determine how much water your system is using, you can make a simple comparison between the amount of water being pumped by your water well and the amount of water shown on the design documents of your water system. Or if you have meters for each of your customers, you can compare the amount of water being pumped with their water use.

To determine how much water is being pumped by your water well you will need to take readings from your totalizing meter (the meter at the well pump that measures how much is coming out the well). It is recommended you take readings once a month. Most meters show the value in cubic feet. One cubic foot equals 7.48 gallons of water. To determine how much water is pumped over time: 1) Subtract the amount you recorded on the last meter reading from the current meter reading; 2) Take the resulting number and divide by the number of months between readings; and 3) Multiply that result by 7.48. The answer will be the number of gallons your well has pumped for one month.

Do You Know How Much Your Water System Uses? (con't)

For example lets determine water use from a water system over a 2 month time period.

$$\frac{\text{Current reading} - \text{Last reading}}{\# \text{ months between readings}} = \frac{\text{Volume of Water}}{\# \text{ of months}} = \text{Volume of Water} \times 7.48 \text{ gallons}$$

$$\frac{11,250 \text{ cubic feet} - 9,030 \text{ cubic feet}}{\# \text{ months between readings}} = \frac{2,220 \text{ cu. ft.}}{\# \text{ of months}} = 1,110 \text{ cu. ft.} \times 7.48 \text{ gal.} = 8,302 \text{ gal.}$$

For this example, the water system has pumped 8,302 gallons per month over the two month period. After you have calculated the amount of water your well has pumped, compare that amount with the design capacity of your water system or the amount calculated from the meters for each of your customers. If the amount exceeds the system's design capacity, the system may not have the capacity to meet peak demands. This may result in water outages, low pressure events, or well pump failure due to over pumping. If the amount used by the customers exceeds the amount of water pumped from the well, this may indicate there is a leak in the distribution pipes or at a service connection.

For More Information:

To learn more about meters and reducing leaks, visit the following resources online:

http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_dist_system_08-25-06.pdf

<http://www.doh.wa.gov/ehp/dw/Publications/331-388.pdf>

http://www.doh.wa.gov/ehp/dw/Publications/331-338_4-6-06.pdf

Source: Tacoma-Pierce County Health Department Drinking Water Program Group B Water Systems Newsletter

Are You Prepared For An Emergency?

The recent devastating quake and tsunami that hit Japan reminds us how important it is to be prepared for emergencies. At the same time, it reminds us that all emergencies are local events first, regardless of the type and severity of the emergency. Are you adequately prepared in the event there is an emergency at your water system? Below is a list of key components to consider when preparing your emergency response plan that will help ensure you are prepared.

Key Components To Include in Your Emergency Response Plan:

- **Teamwork.** The value of building strong relationships with your local responders can't be overstated. This teamwork is the mechanism that makes the plan effective. Local emergency responders often describe how helpful it was to have a working relationship with the utilities within their response community.
- **Evaluate Your System.** Determine how vulnerable your system is to all types of emergencies. Is your wellhead vulnerable to flooding? Is your storage reservoir vulnerable to quakes? How would you respond to a water outage? Do you have a response plan in place for these emergencies?
- **Exercise the Plan.** It is often the planning, not the plan, that matters. In other words, the most effective way to identify real and potential gaps in the plan is to exercise the plan.
- **Involve Your Customers.** Give your customers a sense of ownership in the plan. This will help them be prepared in the event of an emergency. This can be done through periodic emergency preparedness mailers, meetings or even conducting a table top exercise.

Group B Water Supply Annual Permit Renewal

The Group B water supply annual permit for the next operating year is due July 1, 2011. A \$95 billing invoice for each water system will be mailed the first week of June, 2011. 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 com-

pliance 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.

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.

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

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