ANN ARBOR PUBLIC SERVICES
WaterMatters
Only Tap Water Delivers
Spring 2009 Vol. 7, No. 3

No phosphorus fertilizer needed for healthy lawns and river

Since January 2007, city residents have stopped using lawn fertilizers that contain phosphorus. According to tests by the University of Michigan, the amount of phosphorus detected at several test sites in the Huron River dropped an average of 31 percent last year. Stopping the unnecessary use of phosphorus in fertilizers protects the river and helps us meet a federal mandate to reduce phosphorus in the Huron River by 50 percent. There is plenty of phosphorus in our soils. Surplus phosphorus washes off with the rainwater and flows into storm drains and creeks that run to the river. Once in the river, phosphorus encourages the overgrowth of algae. Too much algae blocks out sun and oxygen; kills healthy water plants, insects, and fish; and lowers the water quality for wildlife, recreation, and drinking water treatment.

Ann Arbor's phosphorus ordinance only applies to lawn fertilizers. Garden and tree fertilizers may contain phosphorus, as well as fertilizers for lawns where soil tests within the last three years indicate that phosphorus is needed. Local home and garden stores are well-stocked with river-safe fertilizers (the middle number on the bag is 0). For more information, please check the city's Web site at **www.a2gov.org/green**.

GOOD TO KNOW...

- The 8th Annual Mayor's Green Fair will be held on Friday, June 12, from 6 to 9 p.m. on Main Street **www.a2gov.org/green**.
- Ann Arbor Parks & Recreation registration is available online at **www.a2gov.org/parks**.

New Process at the Ann Arbor Water Treatment Plant

On June 8, 2001, the United States Environmental Protection Agency (USEPA) published the Filter Backwash Recycle Rule (FBRR). This rule regulates the point at which water can be reused and added to the treatment process at water treatment plants. The intent of this rule is to reduce the potential of passing Cryptosporidium oocysts and other biological pathogens such as bacteria and viruses into the finished drinking water.

The City of Ann Arbor uses filters in its treatment process to remove micron size contaminants from its raw water sources. These filters must be cleaned every few days by backwashing—or running water through the filters in reverse at a high rate to remove embedded particles and biological pathogens. This backwash water contains concentrated contaminants that, prior to this rule and the subsequent improvements made at the Ann Arbor Water Treatment Plant, were recycled to the front end of the plant and mixed with the water coming from the city's wells and the Huron River. This water is then treated with the raw water prior to distribution with the treated drinking water. Because the backwashing process is at such a high rate, this causes surges in the flow through the plant when filters are washed. These surges can potentially lead to contaminants making it through the treatment process into the finished drinking water.

The FBRR rule required Ann Arbor to add a new process to the Water Treatment Plant to address this surging of flow caused by backwashing filters. The city was required to add a 750,000 gallon concrete tank and associated pump station to hold the backwash water before it is pumped back into the plant for treatment at a low controlled rate. This new process was completed and put on line in the end of 2008. This process has resulted in more reliable treatment of the city's drinking water and better water quality.

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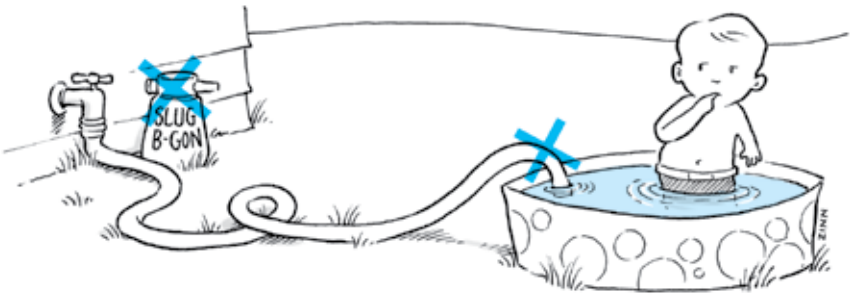


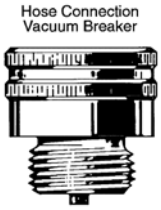
Prevent Water Backflow

Imagine this scenario: A woman sprays a commercial weed killer on her lawn by using a hose attachment. Afterwards she disconnects the applicator and takes a drink of water from the hose. A short time later she is admitted to the emergency room with symptoms of poisoning. What happened? At some time while the woman was spraying the weed killer, water pressure dropped, which resulted in the poison being sucked back into the hose. Later, when she drank from the hose, the poison inside was released with the water.

How do you protect yourself from backflow situations?

- First, keep all hoses and faucets away from direct contact with possible contaminants. Never submerge hoses in buckets, pools, tubs, or sinks. In the event of loss of water pressure, you need an air gap, otherwise; the hose will act like a straw and suck the liquid backwards.

- Second, protect yourself by installing inexpensive backflow protection devices on all hoses and threaded faucets in your home. These devices are available at hardware and home improvement stores for about $4-10 each. Backflow vacuum breakers provide safety valves that prevent liquids from flowing backwards into a hose or faucet.



Specialized backflow prevention devices are available for more elaborate installations, such as built-in lawn irrigation sprinklers, hot water boilers, in-ground swimming pools, heat exchangers, active solar heating systems, private wells, and specialized commercial locations such as dry cleaners, car washes, laboratories, and manufacturers. Backflow devices ensure that potentially contaminated water cannot be drawn back into the public water supply from a business or residence in the event of a negative water main pressure situation. If you receive a letter from the city informing you that a device is due for certification and inspection, please respond as quickly as possible to protect water quality and safety. Proper maintenance of backflow prevention devices requires a periodic certification, followed by a City of Ann Arbor inspection, and the subsequent annual reporting of those results to the Michigan Department of Environmental Quality (MDEQ). For more information on specialized backflow requirements, contact either a plumber certified on backflow prevention devices, or the City of Ann Arbor Customer Service Center at 994-2666.

Renovations to begin at the Wastewater Treatment Plant

The city's Wastewater Treatment Plant (WWTP) receives and treats wastewater from the City of Ann Arbor, as well as from portions of Pittsfield, Scio, and Ann Arbor townships and discharges a high quality effluent to the Huron River that meets or exceeds regulatory requirements on a consistent basis. The WWTP was constructed originally in 1937 and underwent several expansions and renovations over the years. The plant consists of an older portion identified as the West Plant (constructed in the 1930s and expanded in the 1940s and 1960s) and a newer portion identified as the East Plant (constructed in the late 1970s).

The city undertook two study efforts to evaluate the condition and performance of the WWTP's existing facilities for both the solids handling and liquid-treatment equipment and systems. The project teams for these studies included consultant engineers, WWTP staff, and members of the community. During these studies, the project teams evaluated and identified capital improvements needed at the WWTP to best provide for the continued efficient and cost-effective operation of the WWTP into the future.

As a result, two major capital improvements projects were initiated. A two-year *Residuals Handling Improvements Project* involves replacing worn and inefficient equipment and systems and increasing odor control measures. Construction of this project is to start during March 2009. The second *Facilities Renovations Project* is expected to take approximately seven years to replace the old West Plant and then upgrade the East Plant. These projects will be sequenced to minimize construction conflicts, risks, and financial impacts to the city, as well as to allow the plant to operate without interruption of service throughout the construction period.

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