



Stormwater Ponds: The Dark and Clear Sides of Their Purpose, Part 1

This is the first in a series of articles about the purpose of stormwater ponds throughout Waconia. Our stormwater system has many parts, including:

- 52.6 mi. of stormwater conveyance pipe of various sizes
- 54 mi. of streets
- 181 stormwater related features, 99 of which are ponds
- 2 stormwater pump stations
- 0.17 mi. of stormwater reuse distribution mains

In addition to the street and pipe systems, water that runs off private and public property impacts the water quality of the ponds. Prior to development, stormwater was captured, soaked into the ground, and absorbed by trees and other plant materials. Development of open spaces increased non-pervious surfaces (such as roofs, parking lots, and driveways) which increased run-off. Eventually this stormwater entered our streams and lakes along with contaminants such as fertilizer, pet waste, pesticides, grass clippings, and other materials picked up.

In today's environment, some of these contaminants are now captured with plant improvements or in devices such as rain gardens, porous pavements, green roofs, or filtration structures that capture sediment. Water is also conveyed directly into stormwater ponds designed to capture these contaminants. As a result, the impact of the degraded water quality can be seen as ponds capture these impurities, as designed.

Each of the ponds within the community was professionally designed by civil engineers to maintain rate control, capture contaminants, and discharge the water to match pre-existing site conditions. Some of the elements used in the design of the ponds include:

- **Rate Control:** the focus of rate control is to capture rainfall events in order to reduce downstream flooding. The excess water discharges over time to maintain the previous flow rates that existed before development.
- **Capture Contaminants:** ponds are constructed with inlet pipes that reduce flow rates to the ponds, allowing for the settling of contaminants. Most ponds are designed with the capacity to capture 15-20 years worth of contaminants. There are elements of pond design not seen by residents, such as: an aquatic bench, a pond drain, reverse pond discharge pipes, and a safety bench.
- **Discharge of water:** each pond is designed to simu-

late water run-off prior to the creation of roadways, homes, and other hard surfaces, which are part of development.

Although these ponds fill up with more contaminants and start to look worse as they age, they are actively working to prevent further contamination of our receiving streams and lakes. Algae, duckweed, and other plant growth are part of the process and assists in the treatment of the stormwater. The growth of this aquatic vegetation is the product of excess dissolved nutrients and contaminants in the stormwater coming from items like fertilizers and grass clippings. Gravel and dirt sediment also increase water turbidity (seen mostly as cloudiness or haziness in a pond) and decrease storm pond capacity.

Residents and businesses can help reduce the impact of contaminants in ponds, by:

- Capture grass clippings and prevent them from being blown onto hard surface areas.
- Reduce fertilizer use.
- If fertilizer is accidentally applied to hard surfaces, it should be swept or blown onto grass surfaces.
- Sweep, rather than wash down, driveway surfaces.
- Monitor oil leaks and make sure other potential contaminants do not enter the storm sewers from driveways or street surfaces.
- Manage parking areas off of existing hard surfaces.
- Clean up pet waste so as not to increase fecal contamination that impacts swimming beach areas.
- Keep a vegetative buffer strip between manicured lawn and water bodies such as storm ponds, streams, and lakes. This means not mowing down to the edge of the water. The wider the buffer strip, the greater the effect.

Our next article will provide details on initiatives the City conducts and researches annually to improve water quality for our community.

Talking 'Bout My Generation Survey

The Commission on Aging is distributing a survey to assist in preparing for the future. The results of the survey will be shared in a series of Focus Groups to be held later this summer/fall. The survey results will be used to help provide shape priorities for the City's work and will influence the City's Comprehensive Plan. The survey is included in this month's utility bill and is available at www.waconia.org. For questions, contact Jackie Schwerm, Assistant City Administrator at 952-442-3103 or jschwerm@waconia.org.

June Music in the Park Schedule

Below is the June line up for Music in the Park:

- June 8 – Tricia and the Toonies
- June 15 – Shakedown
- June 22 – BZ Girls
- June 29 – Traveled Ground



Music will start at 7:00 p.m. at City Square Park. Bring your chairs and blankets. In case of rain weather, Safari Island will host the event.

Recreational Fires

This summer, we expect many City residents to take to their backyards to enjoy outdoor fires. The City of Waconia permits outdoor recreational fires under conditions as set forth in Chapter 710.04 of the City Code. The City encourages residents who wish to have recreational fires to be respectful of your neighbors by only burning permitted items and being cognizant of where the smoke is traveling from the fire.

Here are the rules regulating recreational fires:

- Recreational fires are to not exceed 3' by 3' and not be more than 3' in height.
- Fuel source must be a dry and clean source such as twigs, limbs, branches, presto logs, charcoal, cord wood, or untreated dimensional lumber.
- Recreational fires are to not be closer than 15' to any structure and 10' to any property line.
- A responsible person shall attend the fire 100% of the time and have a means to extinguish the fire present.
- Burning of trash, leaves, treated wood, rubbish or hazardous material or waste is prohibited.



To view the entire code about recreational fires, visit the News section of www.waconia.org. If you have concerns regarding an active recreational fire please contact Carver County Sheriff Dispatch at 952-361-1231.

Compost Collection Schedule

Residents can bring grass clippings, garden waste, shrubs and branches no larger than 3" in diameter and 4' in length to Public Services at 310 East 10th Street.

Saturdays, June 3 & 17
8:00 a.m.-12:00 p.m.

Thursday, June 15
10:00 a.m. - 3 p.m.

Cost is \$1.00 per bag or \$10.00 per pick-up or trailer. A copy of the full schedule is available at www.waconia.org.

Water Conservation Reminder

Winter weather has finally left us behind! It is time to consider the impact of outside water usage on your residential utility account(s).

- The City of Waconia allows the maximum outdoor usage of 30,000 gallons per month over a residential property's winter average during the summer months within the standard tiers. Usage outside of this restriction will be charged 4th tier rates.
- Residential properties are allowed to irrigate on odd/even days based upon their house numbering. Odd-even watering assists in maintaining appropriate water reserve levels and puts less "peak" demand on the water supply system.
- Irrigation is not allowed between the hours of 9 p.m. and 7 p.m. on any day. This measure helps to combat unnecessary evaporation of treated water.

Watering outside of these restrictions is subject to a fine. The first violation will result in a warning, a \$75 fine for the second offense, and a \$250 fine for each successive offense. For new sod, a permit can be obtained to allow watering outside of the time/day restrictions however the maximum allotment is still intact.

For more information on City conservation efforts and tiered rates please call 952-442-3107 or visit the City website at www.waconia.org.



HOT TOPIC

Did you know that more than 50% of residential irrigation water is lost due to evaporation, runoff, overwatering, improper system design, installation, or maintenance?
Source: EPA WaterSense

Follow the QR code for more information on this month's Hot Topic or visit the Utility Billing section of www.waconia.org.



June Movie in the Park

Friday, June 9
MOANA

8:30 p.m.

City Square Park
101 East Main Street, Waconia

Popcorn will be available for purchase for \$1. Bring a lawn chair or blanket and enjoy the show!

Should it rain, the movie will be shown at Safari Island - lawn chairs, blankets, and pillows are allowed.