

Frequently Asked Questions About Storm Water Management Ponds

The City of Rochester, the Minnesota Department of Transportation, Olmsted County, and the Rochester Community and Technical College own and operate numerous storm water management ponds within Rochester’s city limits. Read their answers to these frequently asked questions to learn more about storm water management ponds.

1. Why build storm water ponds?

Untreated urban storm water is a leading cause of surface water pollution. This is because urban growth leads to the construction of more hard surfaces, like roads, driveways, buildings, parking lots and



sidewalks. Without proper management, more impervious surfaces means that storm water will flow faster, there will be more of it because it can’t penetrate the hard surfaces, and it will collect pollutants as it travels across the land. Storm water management ponds are designed and constructed to hold designated amounts of storm water runoff for specified periods of time, resulting in one or more of the following

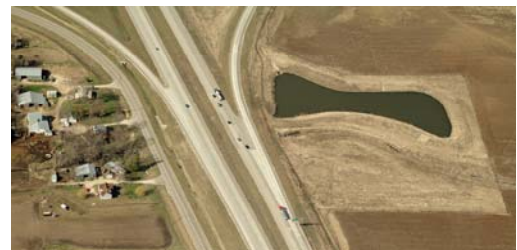
benefits:

- control of storm water discharge rates
- infiltration of storm water to recharge groundwater supplies, offsetting storm water volume increases
- treatment of storm water pollutants through chemical, physical and biological processes
- reduction of flooding
- prevention of downstream channel deterioration

Storm water ponds typically serve areas of at least 25 acres. Their effectiveness in treating pollution is a function of the how long storm water resides in the permanent, wet pool within the pond.

2. Who builds these ponds?

Ponds are built either by government agencies (like the City of Rochester, Olmsted County, or the Minnesota Department of Transportation) or by private developers to serve commercial or residential developments.

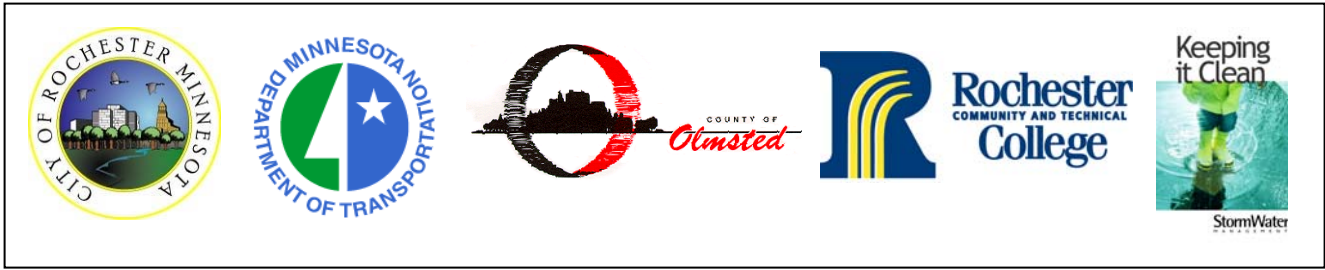


3. How do you decide where to build them?

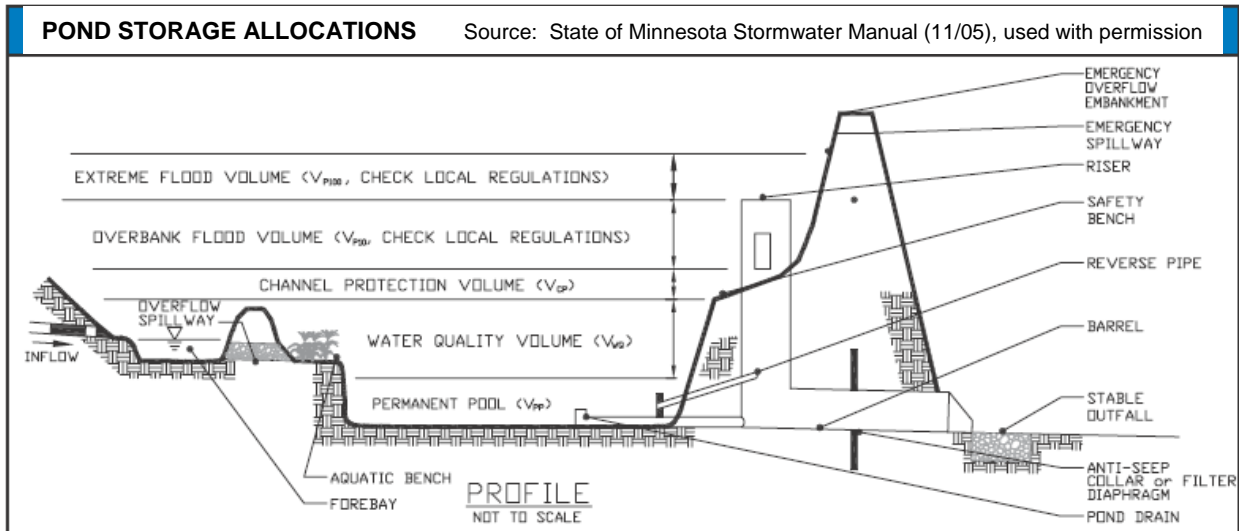
Ponds are typically constructed downstream of areas with new or expanding development, but upstream of receiving waters like rivers and streams

4. How do you address safety issues?

First, engineers calculate how much water will need to be stored and treated by the pond to prevent flooding and provide the required treatment. The size, shape, and depth of a pond will vary depending on the amount of land draining to it and the amount of land available for its construction. The side



slopes of ponds are usually designed to be less than 3H:1V and optimal depths are three to ten feet at normal water level elevations. Typically, a very shallow (10:H:1V) safety shelf surround the deeper portion of the pond to inhibit entry into the pond. Below is a typical cross section showing the components of a storm water management pond.



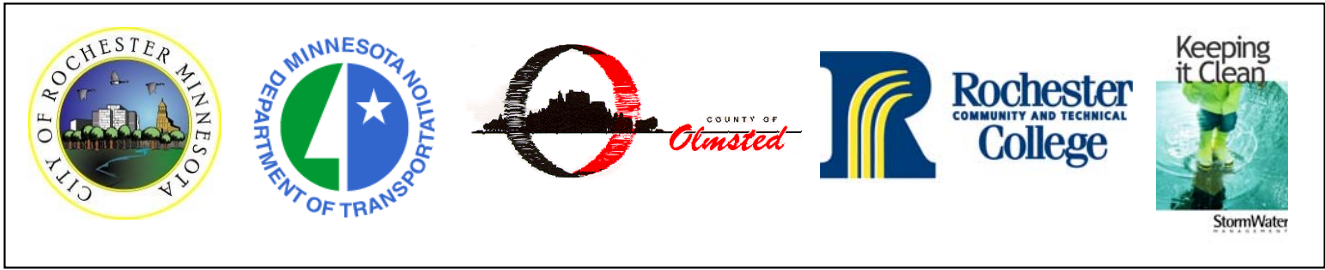
5. Why aren't ponds fenced?

It is not a common practice to install fences around storm water management ponds because the presence of fences can cause as many or more problems than the absence of a fence. If someone is intent on reaching a pond, a fence is not a good deterrent. In fact, if a rescue from a pond were needed, fences become unwanted barriers. Also, fences are viewed as unsightly and will cause additional maintenance costs and problems.

6. These ponds are a nuisance!

Ponds are designed and constructed to create natural habitats. Many people don't like to the wildlife or native vegetation associated with ponds in urban areas. Below are some common nuisance concerns and how they can be minimized.

- o Geese are especially attracted to open water habitats surrounded by turf grass. Do not extend your yard by mowing to the edge of a pond. This invites feeding and loafing by geese and eliminates the pollutant removal capacity of the vegetation. Geese are a federally protected species and cannot be killed without a license and only during hunting season. Oiling and shaking of eggs is illegal unless a federal permit has been obtained. Geese can be discouraged by harassment (loud noises, fencing, dogs) and withholding food.
- o When green mats of algae form in ponds, it is a sign that they are receiving too many nutrients. When algae dies and decomposes, stagnant odors can result. To prevent the growth of algae and the development of odors, avoid excess use of lawn and garden fertilizers, pesticides, and herbicides.
- o Ponds are designed to trap pollutants and litter so that it does not enter our rivers and streams. Prevent litter and collect it whenever you see it so that it does not wash down storm drains and into ponds.



- Native vegetation is planted around ponds to act as a natural filter to improve water quality, recharge groundwater, & provide wildlife habitat. Periodically, ponds are mowed by their owners to prevent the growth of woody vegetation, to eliminate weed species, and to stimulate the growth of desirable plants. In addition to preserving the native buffer around ponds by not mowing them, pond neighbors can consider reducing the amount of turf in their yards by planting areas with “no mow” grass mixes or native plant species.



- There are many different species of mosquitoes that are a natural part of our environment. Only a few species transmit diseases like West Nile Virus or Encephalitis. The disease-carrying mosquitoes typically prefer water habitat that is very warm, still, and shallow. Ponds are typically too cool, wavy and deep to support the disease-carrying species. Although the habitat along the shallowest edges of the ponds may have areas that support mosquito larvae, these are the same areas that also support mosquito predators.

7. Is there anything else that I can I do to help prevent nuisance issues in ponds?

- Direct your downspouts to pervious areas so the water soaks into your yard instead of draining to ponds.
- Report problems that you observe.
- Learn more by going to the City of Rochester storm water web site: www.rochesterstormwater.gov. The “What You Can Do” section suggests many actions that you can take to reduce storm water pollution.

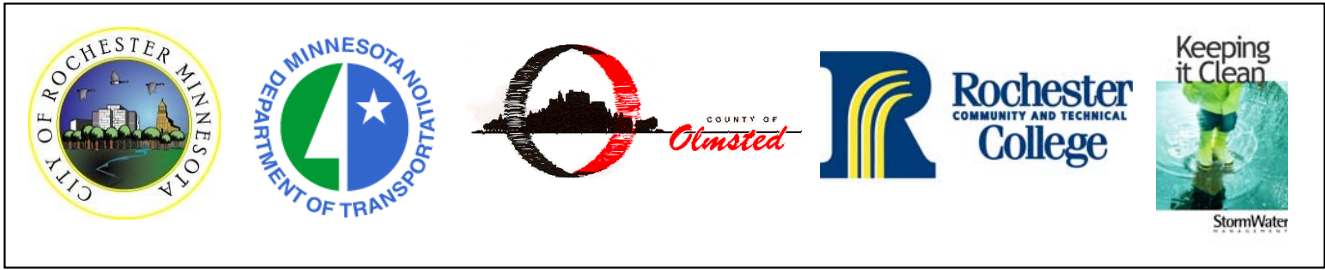
8. How can I report a storm water pond problem?

In the Rochester area, you may report a pond problem on-line at <http://www.rochesterstormwater.com>. Go to contact us and then to pollution reporting to explain the location and problem. Or you can call 328-2440. The receptionist will determine the ownership of the pond and direct it to the appropriate party for resolution.

9. How often are they maintained?

Twenty percent of public ponds are formally inspected each year. If a problem is discovered during an inspection that requires maintenance, work orders are prepared and forwarded to the maintenance division. Small or emergency repairs can be completed fairly quickly. Other, large repairs can take many months to acquire funding, engineer a design, let construction contracts, and fix.

If a problem is reported by the public, an inspector is sent to the pond to review the nature of the problem and determine the appropriate maintenance needs and schedule.



Ponds are designed to accumulate sediment, preventing it from flowing into our rivers, lakes and streams. Whenever the amount of sediment reduces a pond's capacity by 50%, the pond is scheduled for a sediment removal process. Depending on the type of pond and its location, it may be necessary to first apply for and obtain permits for wetland impacts, shoreland and floodplain impacts, erosion and sediment control, dredging, work in public waters, and/or dewatering. This involves coordination with state agencies, such as the Minnesota Department of Natural Resources, the Minnesota Pollution Control Agency, the Army Corps of Engineers, and the Rochester-Olmsted Planning Department.



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10. Can I fish or swim in a storm water pond?

It is not advisable to use storm water ponds for recreational purposes like fishing, swimming, or ice skating. Remember, they are intended to capture pollutants from storm water. You should avoid any exposure to even low levels of pollution that may or may not be obvious. Exposure can either be direct, like skin contact, or indirect, like fish consumption. Because water flows are erratic and water levels fluctuate, ice formation on these ponds should never be considered safe. Enjoy ponds and the wildlife they attract from a distance.

11. How many ponds are there?

Storm water ponds can be privately or publicly owned. Within the Rochester city limits, there are three county-owned ponds, 29 state-owned ponds, 118 privately-owned ponds, and 181 ponds that are the responsibility of the City of Rochester. These numbers will continue to grow with each new development project.