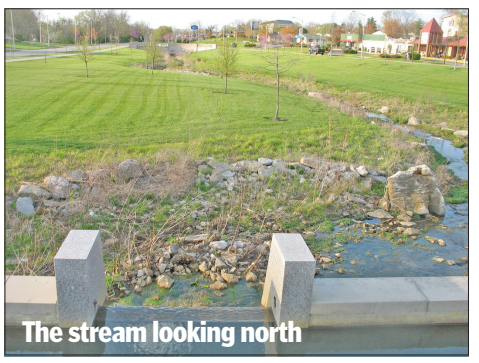
WATER WAYS

By Dawn Hewitt | 331-4377 | dhewitt@heraldt.com

Some people have suggested that the "new and improved" Miller-Showers Park on Bloomington's north side looks like a sewage treatment plant. In truth, it is a $6.2 million water treatment facility, filtering polluted surface water runoff from parking lots, rooftops and lawns, helping the city comply with state and federal requirements that water flowing into streams and rivers be clean.

Looking north from 17th St.

The park is 8 acres, with surface water occupying 1.9 acres in five cascading ponds. The southern-most pond is deepest: up to 8 feet. The other ponds are 3 to 4 feet deep. The park holds up to 1.2 million gallons of water. Part of the purpose of the ponds is to slow the water, so that "gully washers" no longer scour Cascades Creek north of the park.

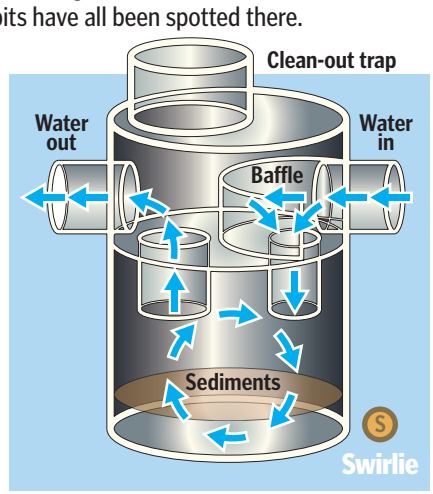


The stream looking north

Weir and waterfall

Weirs with waterfalls separate the ponds. The waterfalls oxygenate the water — good for fish, which ... mysteriously, live there. The ponds have not been stocked. Muskrats seem to have made a home in the water, too, and swallows, red-winged blackbirds, mallards, Canada geese and rabbits have all been spotted there.

Swirlies: Water enters the park from the east and west into the northern basins, and from under the 17th Street parking lot into the southern pond. Before entering the park, the water passes through underground "swirlies," which are vortex separation devices that whirl the water to make impurities fall out. After the swirlies, water flows into the ponds directly. Swirlies can remove some pollutants, including sediments, suspended solids, oils and grease, trash and other debris. The city's utilities department vacuums the sediment collected by the park's five swirlies regularly, and always after big storms.



The main waterfall

Floods: Miller-Showers has the capacity to store and gradually release water from a major storm. When flooding occurs, water rising over the top of each weir bypasses the cleaning and slowing process, but the floodplain at the north end of the park, planted with prairie plantings, will slow and clean the water.

The main waterfall is primarily for aesthetics, pumping and recirculating water in the upper pond, and it adds oxygen.

See for yourself

Bloomington Parks and Rec will offer free tours of Miller-Showers Park 6:30 - 8 p.m. May 27 and July 22. Call the department at 349-3700 to let them know you'd like to attend, or just show up.

Is it effective? Indiana University School of Public and Environmental Affairs student Allison Wade found that as water moved through the system, nitrate concentrations were reduced by an average 68.6 percent; soluble reactive phosphorus was reduced by an average of 75.9 percent; and total suspended solids were reduced by 64.3 percent. Fecal coliform bacteria decreases from the water, but not after heavy rains, she found. By the time the water leaves the park, 80 to 90 percent of the pollutants have been removed, and dissolved oxygen has increased. The creek north of the stream is alive with aquatic insects and crawfish.

The park collects surface runoff from a 170-acre watershed, from Kinser Pike to the west; south to 11th Street; as far east as Dunn Street, and nearly as far north as the Ind. 45/46 By-pass.

Water's edge vegetation serves multiple purposes. Primarily, the native plants ingest pollutants, helping to purify the water. The tall vegetation at water's edge deters Canada geese, but provides habitat for more desirable wildlife species. Native vegetation includes aquatic plants, wildflowers, native grasses and prairie plants. Plants at water's edge were selected for their ability to absorb pollutants and improve water quality.

Is it a mosquito factory? No. The water isn't stagnant, it's moving, which is not attractive to mosquitoes.