A Drop of News The Maple City Stormwater Toolbox

The Crossing Drainage Area



April 2023

The City of Goshen is nearly finished with a project on the southwest side of the City called The West Goshen Crossing Subdivision Drainage Improvement Project. This area has historically seen a very large amount of water moving through it, making its way north to the Elkhart River. To slow down the stormwater runoff and address flooding issues that have occurred, four detention basins were constructed and ten 1,200-gallon drywells were installed. These basins are designed to hold stormwater

runoff from a $60\pm$ acre area, with a total storage volume of 19.91 acre-feet, which is equal to the amount of water it would take to cover one acre in a foot of water.

The stormwater intercepted by these basins then has time to slow down, and filter out sediment, nutrients, and large pieces



Outflow structure and drywells in Basin #1, at the south end of the project.

of debris that have made their way into the stormwater before it is slowly released to the existing stormwater system to the north. This project intends to reduce the impact of stormwater runoff on adjacent properties and to prevent the existing stormwater infrastructure from being overwhelmed.

The stormwater draining from these basins is directed to the north through the Black Squirrel Golf Course to the storm sewer system on Berkey Avenue where it eventually drains to the Elkhart River where it flows on the northeast side of Wilden Avenue.



Project Location south of the Black Squirrel Golf Course & east of CR 19.



Basin #2, showing 1200 gallon drywells for more water storage.



Understanding Stormwater Basins

Retention vs Detention Basins

Controlling stormwater runoff is an important part of stormwater management and one way to do this is to construct a stormwater basin. These can be constructed in both commercial and residential developments. There are two types of stormwater basins: <u>retention (infiltration)</u> and <u>detention</u>. Stormwater basins collect stormwater runoff and allow the water to slow down, spread out, soak in, and at the same time filter out pollutants like sediment, nutrients, and trash.

Retention (Infiltration) Basins do not release water, except via an emergency overflow, and the water soaks into the soil within 36 hours after a rain event, leaving them dry.

Detention Basins release water via a controlled release structure and will drain dry within 36 hours after a rain event.



Detention Basin showing the release structure for water to flow from pond.

Both types of basins can have a permanent pool of water depending upon the design.

<u>Advantages:</u> Collects and improves water quality, improved stormwater collection and control, creates new habitats for animals, stores water during peak runoff, aesthetically pleasing.

<u>Disadvantages:</u> Can negatively impact water quality if poorly designed, drowning hazards, and maintenance must be kept up for the basin to function properly.

The basins constructed as part of the Crossing Project are **detention basins**, which, along with infiltration, allow for the drawdown of water over a longer period of time helping reduce stress on infrastructure and create better water quality that makes its way to the Elkhart River.

Report a Pollutant

Stormwater pollutants include anything other than rain that could flow or be washed into a storm drain. If you see a pollutant entering a storm drain, please call 574-534-2201, send an email to <u>stormwater@goshencity.com</u>, or submit a Stormwater Report through the City's "Report an Issue" button on the City of Goshen website, <u>www.goshenindiana.org</u>.

Public Works & Utilities Department of Stormwater 204 E. Jefferson Street Goshen, Indiana 46528 574-534-2201 bit.ly/goshen-stormwater



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