



What is a Storm Sewer and Who Owns It?

Stormwater runoff is the water from rain or snow melt that flows from the impervious surfaces on a property (i.e. buildings, paved areas, etc.) and is not absorbed into the ground. A storm sewer system can include any combination of enclosed and open conveyance systems, network of pipes, manholes, catch basins, and open ditches that captures the stormwater runoff and directs it to detention basins, green infrastructure, or a water body like a lake or river. Detention basins are designed to contain the runoff and release it to the downstream water body over time such that upstream runoff does not overwhelm the downstream drainage networks and cause flooding.

Historically, storm sewer design criteria focused on conveying stormwater away from developed areas quickly and efficiently downstream through large infrastructure systems as reported in the “2023 Report Card for Michigan’s Infrastructure”. Modern best management practices have evolved to provide greater flood control and improve stormwater quality, now focusing on opportunities to manage rainfall on-site through green infrastructure systems (e.g. infiltration/filtration and volume reduction), while also addressing flood control and conveyance alternatives. The report also states that the patterns in precipitation have also been changing across the Great Lakes Region. Since 1951, the amount of precipitation falling in the heaviest 1% of storms has increased by 35%. Further, the highest multi-year average precipitation since 1900 was recorded for the 2015 to 2020 period according to the National Oceanic and Atmospheric Administration (NOAA) State Climate Summaries.

In February, 2022 SEMCOG published the “Engineering Guidance for Changing Rainfall” that includes a study from The Great Lakes Integrated Sciences and Assessments (GLISA), which is a collaboration between the University of Michigan and Michigan State University and supported by NOAA, has this to say about extreme precipitation in the Great Lakes region (GLISA, 2021): *“Model projections of future precipitation vary greatly, but overall, the current observed trends of increasing frequency and intensity of extreme precipitation events is anticipated to continue. Climate models project the Great Lakes region to experience a greater increase in total precipitation than most other regions of North America. The amount of precipitation falling in the most intense 1 percent of precipitation events has increased significantly in the Midwest (42%) and Northeast (55%) from 1958 to 2016. These numbers are projected to increase by another 40% or more by late century (2070-2099), relative to 1986-2015 amounts. The frequency of severe thunderstorm environments is also projected to rise across the United States by mid to late century. The greatest projected increases occur during spring over the Midwest and northern Great Plains regions, with increases of up to 2.4 days of such environments per season. The number of days per year exceeding one inch of precipitation is projected to increase by 15 to 23% on average in the Midwest and Northeast regions of the United States through mid-century. The number of days exceeding 2 inches of precipitation is projected to increase at a faster rate, by 37 to 46%, on average.”* Because of the increased frequency of heavy rain events, Township residents and property owners are experiencing flooding or standing water conditions on a more regular basis.

What constitutes a flood?

The National Flood Insurance Program defines a “flood” as a general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters or from the unusual and rapid accumulation or runoff of surface waters from any source. The definition of a flood also depends on a municipalities’ specified level of service criteria for the storm drainage systems. The criteria is used for both private and public developments. As part of the standard, maximum allowable depth of water on roadways to maintain the desired access during severe storms is defined. The intent is to further

direct stormwater runoff away from homes and buildings while also managing road access during severe storms. On February 8, 2016 the Bloomfield Township Board of Trustees passed a Resolution to adopt the most current version of the Oakland County Water Resources Commissioners Office (OCWRC) Engineering Standards for Stormwater Facilities, which were most recently updated as of August 24, 2021. These standards are recognized as the stormwater management performance standards for future development within the Township where development takes place on Township-owned property, or property owned by a jurisdiction with no standards for post-construction stormwater runoff control.

Stormwater runoff can pick up pollutants and debris as it travels over land and through storm sewer systems. The possible pollutants include fertilizers, pesticides, leaked oil products, and pet waste. Storm water is not treated by a wastewater treatment plant like sewage. Any dissolved or suspended pollutants will eventually end up in our neighboring water bodies. This is why pesticides and herbicides should be used sparingly and pet waste should always be picked up immediately. Debris such as eroded soil, trash, grass clippings, and leaves can also wash into storm sewer systems. Over time debris will settle and reduce the carrying capacity of the sewer or even obstruct flow completely. To prevent buildup, storm sewers must be cleaned and maintained regularly.

Who owns the storm sewer systems in Bloomfield Township?

Bloomfield Township owns a very limited amount of storm sewer, which is primarily located on Township facilities, such as the Township Campus facilities and off-site fire stations. OCWRC owns and operates some large diameter County Drains throughout the Township. However, the vast majority of storm sewer systems within the Township are either privately owned, or owned and operated by the Road Commission for Oakland County (RCOC) or the Michigan Department of Transportation (MDOT). The catch basins within the curb line and the storm sewer directly under the road on residential streets, along with the ditches within the road right-of-way are owned and maintained by RCOC or MDOT. The other storm sewer pipes, manholes, and detention basins on private roads and property are either owned by the individual property owner or development that they directly benefit. This means that commercial properties are responsible for the operation, maintenance, and repair/replacement of the storm sewer that drains their parking lots, building runoff, and other areas on the property. In residential developments, like a single-family home subdivision, condominium development, or an apartment complex, the storm water drainage system outside of the RCOC right-of-way is typically the responsibility of the property owner, Home Owners Association, or management company that oversees the development.

The Township recognizes that flooding, standing, or pooling water can be concerning for any homeowner or property owner. In order for a storm water drainage system to function as designed, it should be cleaned and inspected regularly. For information on who owns and is responsible for maintaining the storm sewer system near you, or advice on who to contact to clean and inspect your storm sewer system, please feel free to contact the Engineering and Environmental Services Department at (248) 594-2800 or at EES_dept@bloomfieldtwp.org. For private storm drainage systems, consider contacting an engineering firm or landscape contractor to inspect your system and suggest ways of improvement. If there is a storm drainage concern that is associated with a system that is owned by the Road Commission for Oakland County, Oakland County Water Resources Commissioner, or Michigan Department of Transportation, please reach out to their respective agencies to file a concern:

RCOC

Department of Customer Service: (877) 858-4804

E- mail: dcsmail@rcoc.org

Website Contact Form: <https://www.rcocweb.org/FormCenter/Contact-Us-4/Contact-Us-Form-43>

MDOT

Phone: (517) 241-2400

Website Contact Form: <https://www.michigan.gov/mdot/about/contact-mdot#contactform>

OCWRC

Phone Number: (248) 858-0958

E-Mail: wrc@oakgov.com

Website: <https://www.oakgov.com/government/water-resources-commissioner/stormwater/county-drains>

For more information on location and jurisdiction of storm sewer systems within the Township, please see the attached map:

- Bloomfield Township Owned Storm Sewer Map: MAP COMING SOON.
- OCWRC Owned Combined Sewer and Drainage Map: <https://bloomfieldtwp.org/media/uqhh0amp/oaklandcountydRAINmap.pdf>
- Private, RCOC, and MDOT Road Jurisdiction Map: <https://maps.semcog.org/roadjurisdiction/>

For more information on floodplain and storm water management, please visit the following sites:

- Federal Emergency Management Agency (FEMA) National Flood Hazard Map: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>
- FEMA Flood Map Service Center: <https://msc.fema.gov/portal/home>
- Southeast Michigan Council of Governments (SEMCOG); Engineering Guidance for Changing Rainfall: <https://www.semcog.org/climate-resilience>
- Department of Environment, Great Lakes, and Energy (EGLE) FAQ: Floods and Floodplain Management: [FAQ: Floods and Floodplain Management \(michigan.gov\)](https://www.michigan.gov/egle/0,4570,7-153_1-123_1-127_1-128_1-129_1-130_1-131_1-132_1-133_1-134_1-135_1-136_1-137_1-138_1-139_1-140_1-141_1-142_1-143_1-144_1-145_1-146_1-147_1-148_1-149_1-150_1-151_1-152_1-153_1-154_1-155_1-156_1-157_1-158_1-159_1-160_1-161_1-162_1-163_1-164_1-165_1-166_1-167_1-168_1-169_1-170_1-171_1-172_1-173_1-174_1-175_1-176_1-177_1-178_1-179_1-180_1-181_1-182_1-183_1-184_1-185_1-186_1-187_1-188_1-189_1-190_1-191_1-192_1-193_1-194_1-195_1-196_1-197_1-198_1-199_200_201_202_203_204_205_206_207_208_209_210_211_212_213_214_215_216_217_218_219_220_221_222_223_224_225_226_227_228_229_230_231_232_233_234_235_236_237_238_239_240_241_242_243_244_245_246_247_248_249_250_251_252_253_254_255_256_257_258_259_260_261_262_263_264_265_266_267_268_269_270_271_272_273_274_275_276_277_278_279_280_281_282_283_284_285_286_287_288_289_290_291_292_293_294_295_296_297_298_299_300_301_302_303_304_305_306_307_308_309_310_311_312_313_314_315_316_317_318_319_320_321_322_323_324_325_326_327_328_329_330_331_332_333_334_335_336_337_338_339_340_341_342_343_344_345_346_347_348_349_350_351_352_353_354_355_356_357_358_359_360_361_362_363_364_365_366_367_368_369_370_371_372_373_374_375_376_377_378_379_380_381_382_383_384_385_386_387_388_389_390_391_392_393_394_395_396_397_398_399_400_401_402_403_404_405_406_407_408_409_410_411_412_413_414_415_416_417_418_419_420_421_422_423_424_425_426_427_428_429_430_431_432_433_434_435_436_437_438_439_440_441_442_443_444_445_446_447_448_449_450_451_452_453_454_455_456_457_458_459_460_461_462_463_464_465_466_467_468_469_470_471_472_473_474_475_476_477_478_479_480_481_482_483_484_485_486_487_488_489_490_491_492_493_494_495_496_497_498_499_500_501_502_503_504_505_506_507_508_509_510_511_512_513_514_515_516_517_518_519_520_521_522_523_524_525_526_527_528_529_530_531_532_533_534_535_536_537_538_539_540_541_542_543_544_545_546_547_548_549_550_551_552_553_554_555_556_557_558_559_560_561_562_563_564_565_566_567_568_569_570_571_572_573_574_575_576_577_578_579_580_581_582_583_584_585_586_587_588_589_590_591_592_593_594_595_596_597_598_599_600_601_602_603_604_605_606_607_608_609_610_611_612_613_614_615_616_617_618_619_620_621_622_623_624_625_626_627_628_629_630_631_632_633_634_635_636_637_638_639_640_641_642_643_644_645_646_647_648_649_650_651_652_653_654_655_656_657_658_659_660_661_662_663_664_665_666_667_668_669_670_671_672_673_674_675_676_677_678_679_680_681_682_683_684_685_686_687_688_689_690_691_692_693_694_695_696_697_698_699_700_701_702_703_704_705_706_707_708_709_710_711_712_713_714_715_716_717_718_719_720_721_722_723_724_725_726_727_728_729_730_731_732_733_734_735_736_737_738_739_740_741_742_743_744_745_746_747_748_749_750_751_752_753_754_755_756_757_758_759_760_761_762_763_764_765_766_767_768_769_770_771_772_773_774_775_776_777_778_779_780_781_782_783_784_785_786_787_788_789_790_791_792_793_794_795_796_797_798_799_800_801_802_803_804_805_806_807_808_809_810_811_812_813_814_815_816_817_818_819_820_821_822_823_824_825_826_827_828_829_830_831_832_833_834_835_836_837_838_839_840_841_842_843_844_845_846_847_848_849_850_851_852_853_854_855_856_857_858_859_860_861_862_863_864_865_866_867_868_869_870_871_872_873_874_875_876_877_878_879_880_881_882_883_884_885_886_887_888_889_890_891_892_893_894_895_896_897_898_899_900_901_902_903_904_905_906_907_908_909_910_911_912_913_914_915_916_917_918_919_920_921_922_923_924_925_926_927_928_929_930_931_932_933_934_935_936_937_938_939_940_941_942_943_944_945_946_947_948_949_950_951_952_953_954_955_956_957_958_959_960_961_962_963_964_965_966_967_968_969_970_971_972_973_974_975_976_977_978_979_980_981_982_983_984_985_986_987_988_989_990_991_992_993_994_995_996_997_998_999_1000)