

WATER FACTS

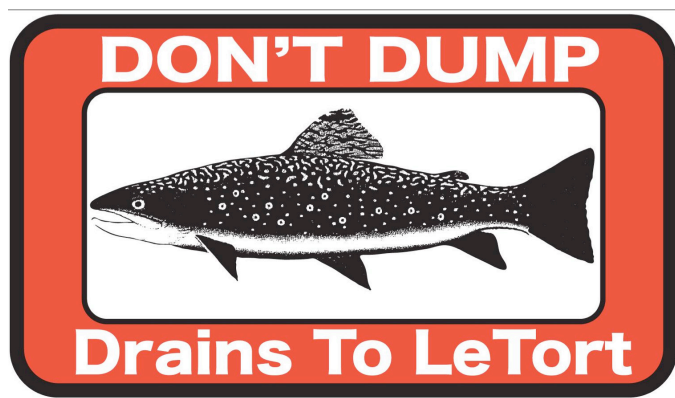
November 2023 - Local Stormwater

What is Stormwater Runoff?

Stormwater runoff refers to precipitation that can't immediately soak into the ground and dissipate. Instead, it flows towards the lowest elevation, taking with it all the chemicals, particulates, and objects it encounters, until it either reaches permeable ground or joins a body of water. Concrete, brick, and stone are all impervious materials: surfaces that don't allow water to seep through them. Even soil can become impervious if compacted which can occur after construction in cities. Stormwater runoff poses two main issues: damage to streams and rivers by transferring all the grime it has picked up along its route, and a flooding risk if there are not proper ways to siphon stormwater away from collecting in one area (EPA 2023).

How Does Carlisle Handle Stormwater?

Stormwater runoff in cities usually is funneled in one of two systems: a combined sewer system, where wastewater and stormwater are combined and sent to a water treatment plant, or a Municipal Separate Storm Sewer System (MS4), where wastewater is sent to a treatment plant and stormwater is sent directly to local streams and rivers (Yencha, 2023). The borough of Carlisle has a MS4 which is why you may notice the "DON'T DUMP- Drains to LeTort" plaques by stormdrains across campus and town.



Stormwater at Dickinson

Dickinson College, like the Borough, has been working to implement Pennsylvania's Best Management Practices (BMPs) over its 144 acres (Dickinson College, 2014). Rain gardens, bio-swales, and vegetative planters add green space to soak up water, pervious pavement lessens the formation of stormwater runoff, and rain barrels and an underground detention basin store stormwater for dispersal or alternate usage (Dickinson College, 2008). One of the most recent additions to the campus was done by the borough, the addition of bioretention basins along West Louther Street (across from Kaufman). These bright pops of green between stretches of pavement can store up to 40k gallons of runoff and make the campus a better, and dryer, place (Carlisle Borough Government, 2019)!

CITATIONS

EPA. (2023, February 2). NPDES Stormwater Program. <https://www.epa.gov/npdes/npdes-stormwater-program> / Yencha, A. (2023, June 13). What is an MS4? PennState Extension. <https://extension.psu.edu/what-is-an-ms4> / Dickinson College. (2014, March). Landscape Design Guidelines. <https://storage.googleapis.com/stars-static/secure/232/7/676/6071/Landscape%20Design%20Guidelines%20Smaller%5B1%5D.pdf> / Dickinson College. (2008, April). Campus Master Plan Part II. https://www.dickinson.edu/download/download/id/1414/campus_master_plan_part_2

