

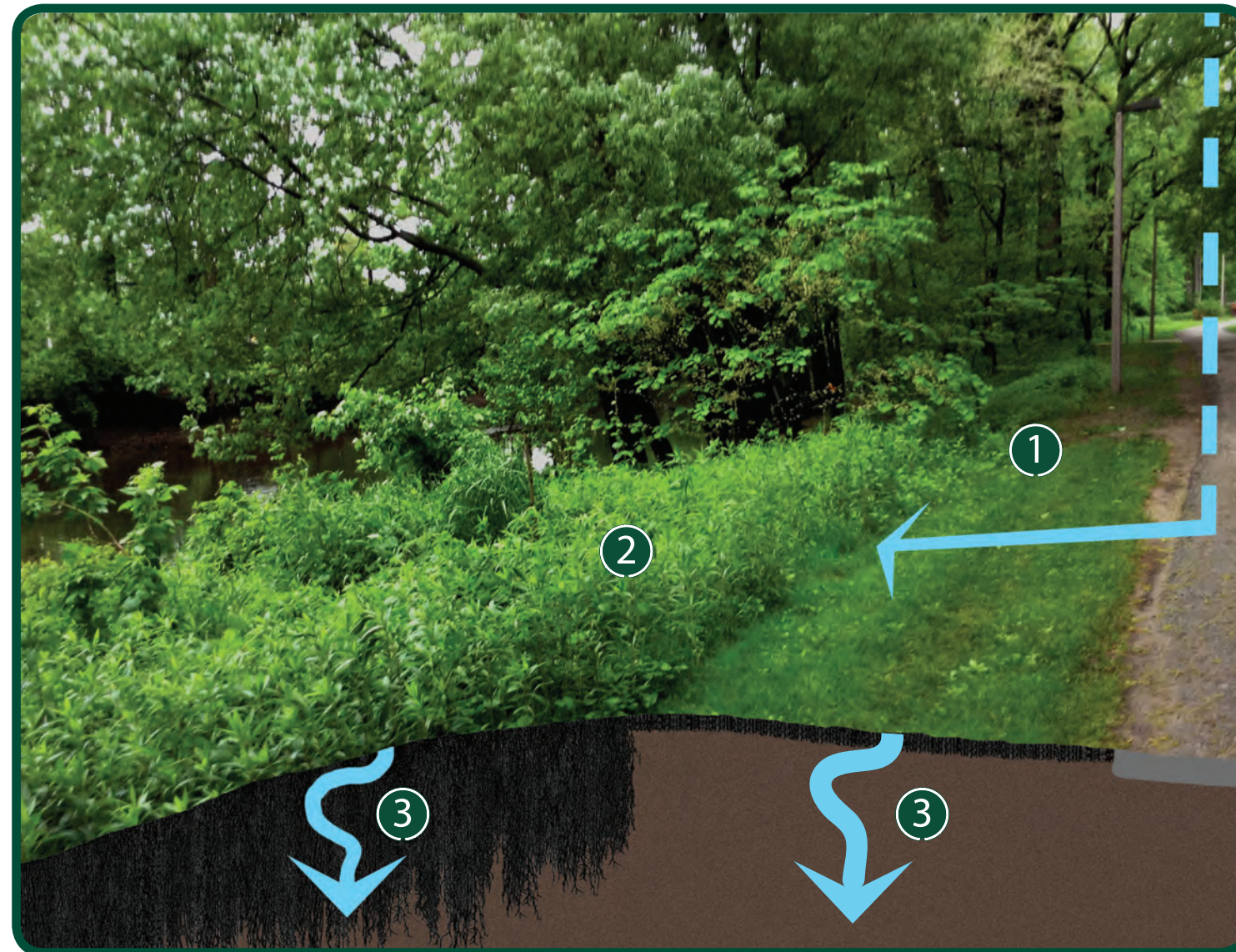
MSU SUSTAINABLE STORMWATER MANAGEMENT WALKING TOUR

W.J. BEAL BOTANICAL GARDEN RIPARIAN BUFFER

Michigan State University has implemented Low Impact Development (LID) practices to capture stormwater from surrounding roads, parking lots, and buildings.

Previously, water from these surfaces entered the storm sewer system, which led directly into the Red Cedar River.

Now, through a variety of LIDs, stormwater is captured and either reused or infiltrated on site. Capturing stormwater reduces pollutant runoff into the river therefore improving water quality.



① Stormwater runoff travels downhill towards the Red Cedar River, over pavement and lawns, into the vegetated buffer strip planted along the banks.

② The W. J. Beal Botanical Garden buffer strip intercepts the water flow where sediments, pesticides, and other pollutants are removed from the runoff before reaching the Red Cedar River.

③ Water slowly infiltrates the groundwater. The soil acts as a filter, breaking down stormwater pollutants, purifying the water. Buffers also slow the water reaching the Red Cedar River, reducing flooding.

Riparian Buffers

Consisting of a vegetated strip, riparian buffers are designed to provide control of the stream environment for the improvement of water quality from adjacent land uses. Riparian buffers are an effective practice used to reduce the amount of pollutants, such as sediments and nutrients, from draining into streams and rivers. By moderating fluctuations in stream temperature and controlling light levels, riparian buffers enhance stream quality. The deep root structure of native plants helps to stabilize the soil and reduce erosion. The vegetative environment also provides habitat and biodiversity.

Did You Know?

Stormwater drains into the Red Cedar River from surrounding urban areas. It carries pollutants and increases water levels during major rainfall events. Riparian buffer strips are key in cleansing stormwater, reducing water flow, and providing stream bank stabilization.

Contributing Departments

Infrastructure Planning and Facilities
Institute of Water Research
Department of Horticulture



SUSTAINABILITY

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or www.msu-water.msu.edu