MSU SUSTAINABLE
STORMWATER MANAGEMENT

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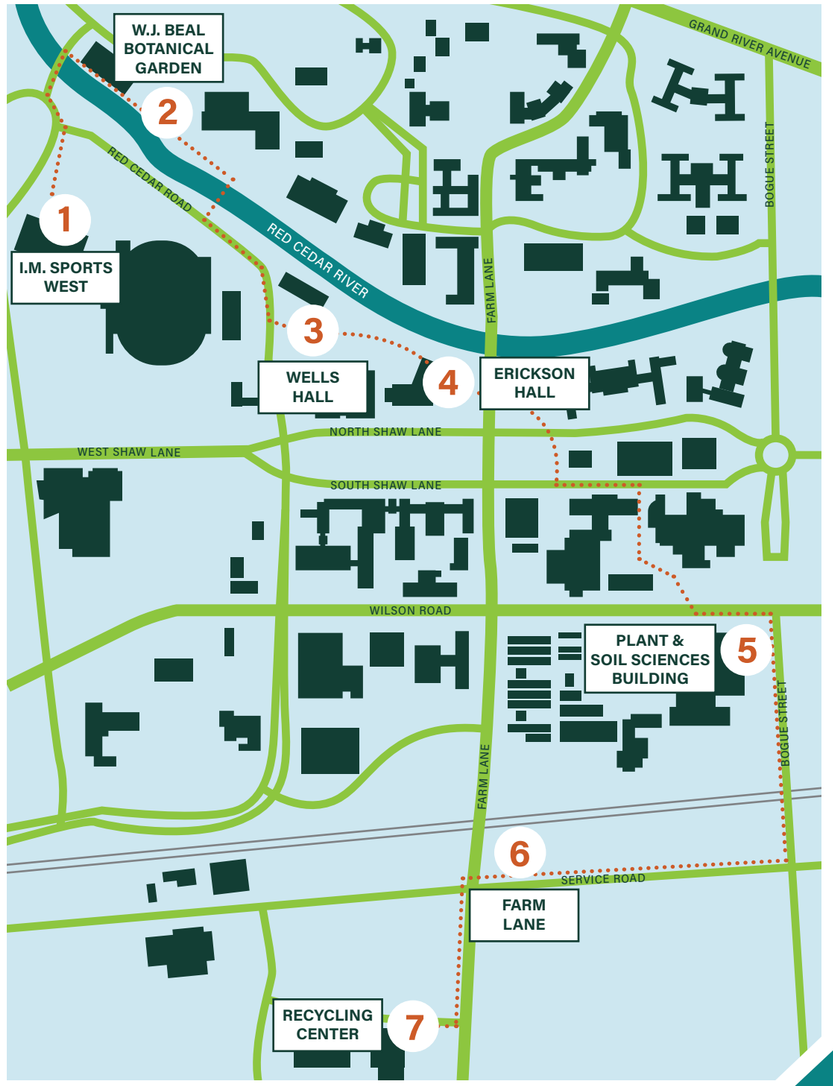
STORMWATER MANAGEMENT SYSTEMS



USE THIS MAP TO GUIDE YOU
on your walking tour of the Michigan State University campus, and view seven examples of sustainable stormwater management practices devised to capture stormwater. Stormwater that isn't properly managed flows over streets and other hard surfaces, washing pollutants into rivers and streams. Directing runoff to green infrastructure practices improves water quality by slowing runoff and allowing stormwater to infiltrate into the ground while plants and soils filter pollutants.

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WALKING TOUR

MICHIGAN STATE
UNIVERSITY

I.M. SPORTS WEST

POROUS ASPHALT

Some of the parking spaces located to the northeast of I.M. Sports West utilize porous asphalt as a way to manage stormwater runoff near the Red Cedar River. Pore spaces in porous asphalt allow water to infiltrate while providing the strength to hold vehicles. As water drains through the porous asphalt, pollutants are filtered out before entering the soil below.

W.J. BEAL BOTANICAL GARDEN

RIPARIAN BUFFERS

Along the north edge of the Red Cedar River, water flows from surrounding areas into the vegetated buffer. Riparian buffers act to intercept and reduce sediment, nutrients, pesticides, metals and other pollutants in surface runoff. The buffers also help stabilize the streambank.

WELLS HALL

GREEN ROOF

Take the stairs to the 2nd floor of Wells Hall to view the Green Roof. Plants and soil media on rooftops absorb water and can filter pollutants that would otherwise enter the Red Cedar River. Green roofs have additional benefits such as cooling the building, prolonging the life of the roof, and adding ecological diversity to an area.

ERICKSON HALL

RAIN GARDEN

Water comes off the roof of Erickson Hall and drains into the rain garden. This water either infiltrates into the ground or is slowly released through the stormwater system before entering the Red Cedar River. Plant roots help this infiltration process by creating channels for the water to enter. Thus the amount of water reaching the Red Cedar River is reduced. This also benefits the river by lessening bank erosion.

PLANT & SOIL SCIENCES BUILDING

RAIN GARDENS

Water coming from the roof of the Plant & Soil Sciences Building runs over pavement and drains into two rain gardens. Plants absorb water, hold pollutants, and release oxygen and moisture into the air through transpiration. The soil media acts as a filter to help break down stormwater pollutants and cleanse the water before it enters the groundwater and/or waterways.

FARM LANE

BIORETENTION BASIN

The Farm Lane Bioretention Basin serves as a facility to treat stormwater runoff from adjacent impervious roadways. Water that would normally flood the underpass beneath the railroad tracks is pumped up into the bioretention basin where common pollutants are removed during infiltration to allow clean water to leave the site. This site is also used as a research facility to enhance the use of bioretention as a stormwater management practice.

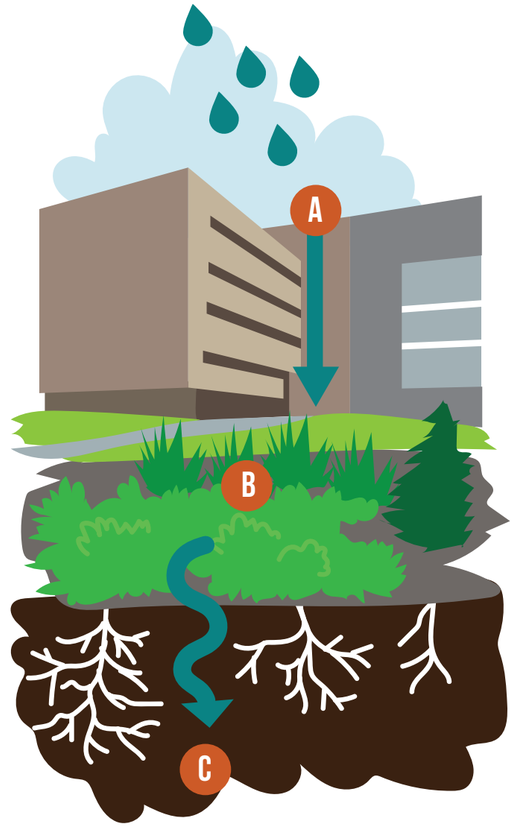
RECYCLING CENTER

STORMWATER MANAGEMENT SYSTEMS

The Recycling Center contains several systems to manage stormwater on site. Runoff from the building rooftop is drained into an internal cistern. Rain gardens infiltrate and cleanse runoff. A porous pavement parking lot helps filter stormwater pollutants.

For more information visit:

WWW.MSU-WATER.MSU.EDU



HOW DOES A RAIN GARDEN WORK?

A Stormwater that runs over the surrounding pavement and lawn is directed into a vegetated area set into the landscape.

B Rain garden plants use the nitrogen and phosphorus from stormwater for growth, while filtering metals and other pollutants. The roots of the plants help the infiltration process by creating porous channels for the water to infiltrate. Plants also release oxygen and moisture into the air through transpiration.

C Soil media filters stormwater. The soil is important for breaking down pollutants and reducing the volume of water reaching the Red Cedar River. By slowing and reducing stormwater volume, rain gardens help prevent bank erosion and flooding, promoting healthier river environments for plants and animals alike.