

# BENEFITS OF BIOSWALES AND RAIN GARDENS

## 1 WATER QUALITY IMPROVEMENT

"...protect water quality by managing stormwater as close to its source as possible via infiltration into soils, evapotranspiration via plants, and/or harvesting for use. These techniques reduce the opportunity for stormwater to run off, entrain pollutants, and discharge pollutants to waters."  
 - United States EPA

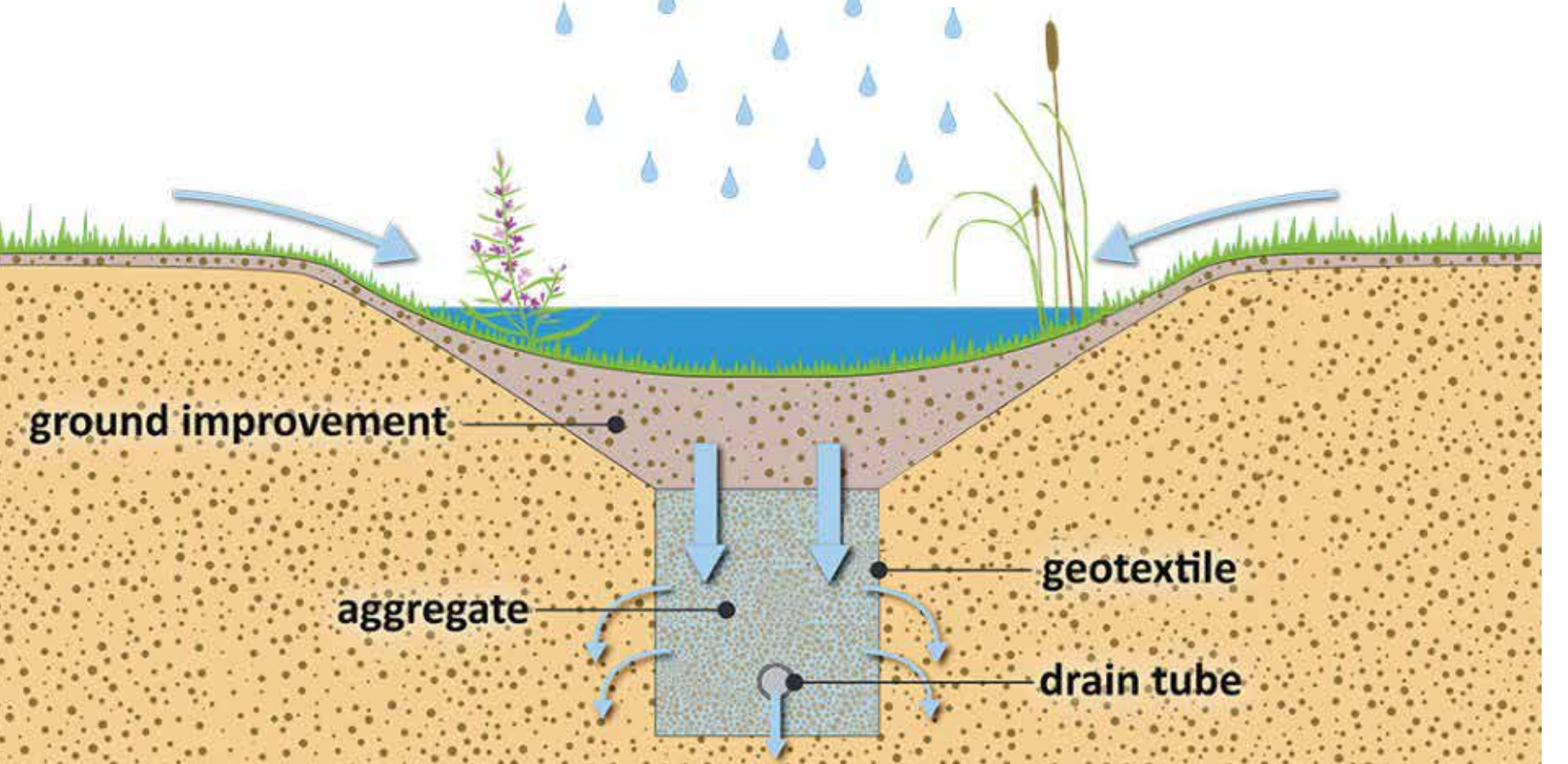
## 2 REDUCE PEAK DISCHARGE RATE

The natural processes of Infiltration and storage reduce runoff volumes and attenuates peak flows. Meanwhile, biological and chemical reactions occur in the mulch, soil matrix, and root zone. Stormwater is filtered through vegetation and soil.

## 3 AESTHETICALLY PLEASING

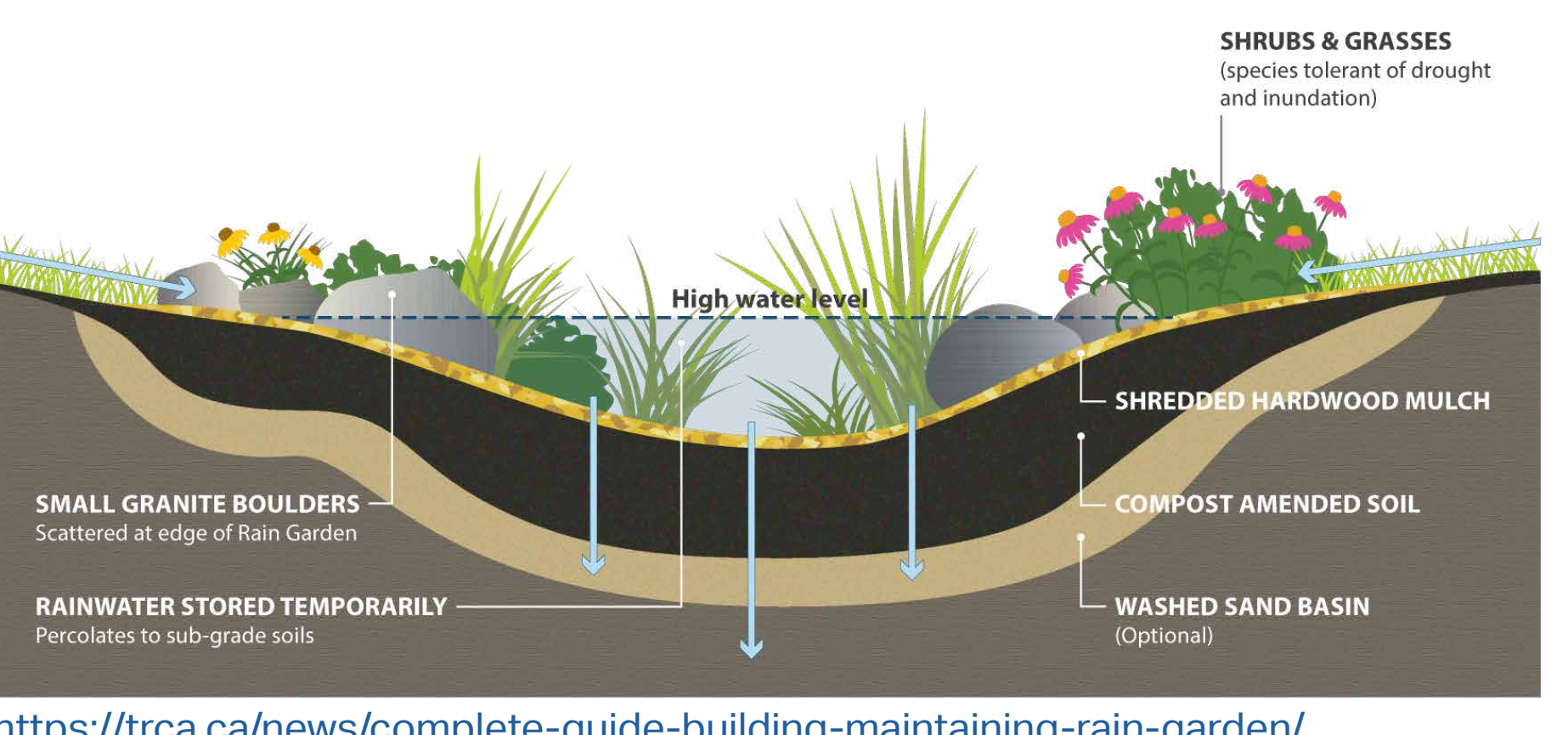
Bioswales are constructed channels with the purpose of directing and transporting stormwater runoff while simultaneously eliminating debris and pollutants. A variety of vegetation can also be used, including grass, perennial plants, shrubs, and trees.

### WHEN BIOSWALE IS DURING RAINFALL



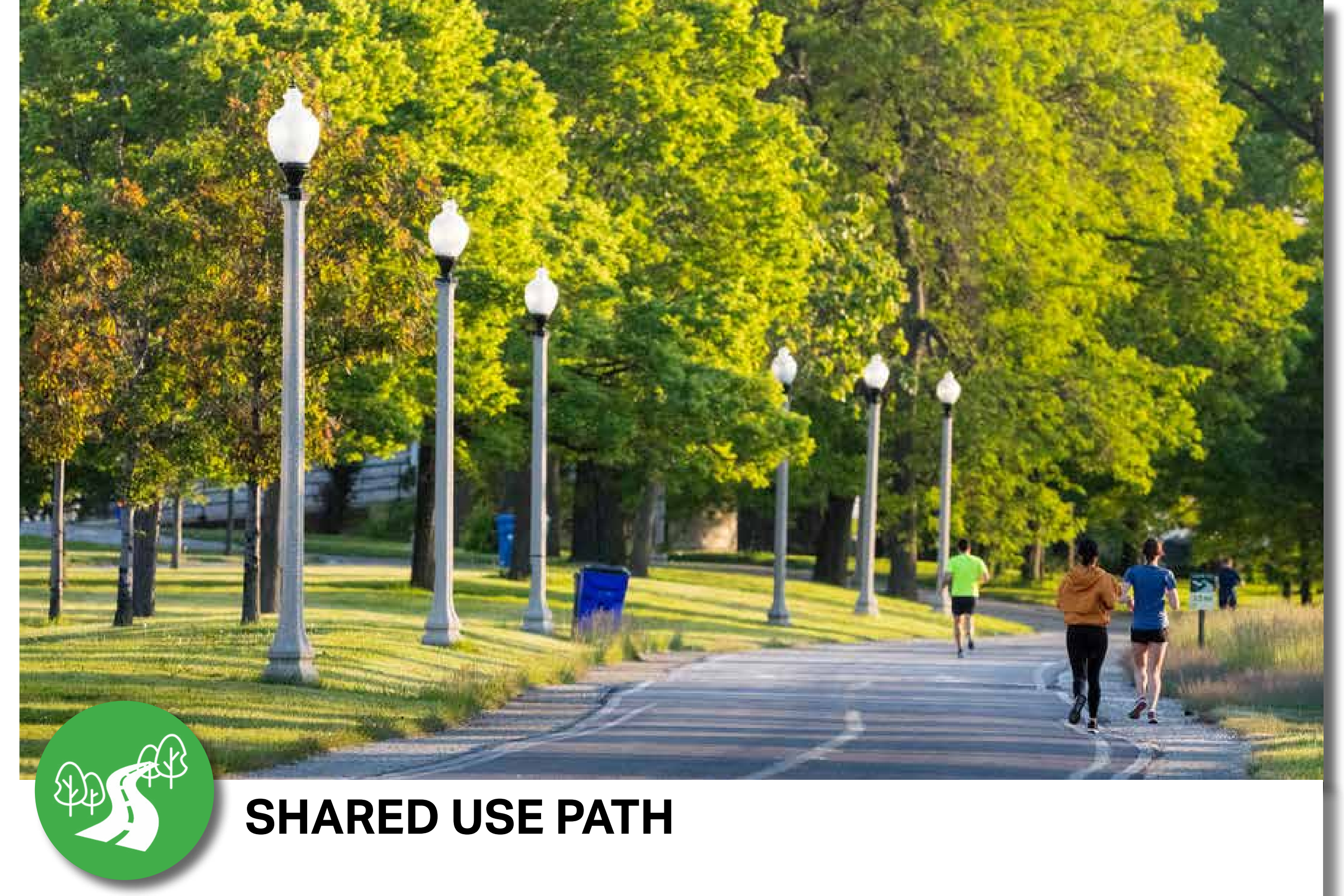
<https://theconstructor.org/water-resources/bioswale-design-applications-advantages/34380/>

### RAIN GARDEN LAYOUT



<https://trca.ca/news/complete-guide-building-maintaining-rain-garden/>

# EXAMPLES



**SHARED USE PATH**



**SIGNALIZED PEDESTRIAN CROSSING**



**ENVIRONMENTAL EDUCATION**

photo by DepositPhotos



**ENVIRONMENTAL ART**

Nathan Pierce Blue Bird - photo by John Becker



**BIOSWALE**

https://knursery.com/rain-gardens-and-bioswales/



**RAIN GARDEN**

https://photobotanic.com/news/bioswales-and-green-infrastructure/

# PLANTS AND POLLINATORS FOR CONSIDERATION



*Pennsylvania Sedge*



*Woolgrass*



*Fringed Sedge*



*Broomsedge*

Grass & Sedges



*Wild Blue Indigo*



*Dwarf Yaupon Holly*

Forb / Perennials



*Boneset*



*Purple Coneflower*



*Florida Leucothoe*



*Wax Myrtle*

Shrubs



*Fothergilla*



*Virginia Sweetspire*

## INSPIRATION IMAGES

# SOUTH COLUMBIA DRIVE SHARED USE PATH PHASE III



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