

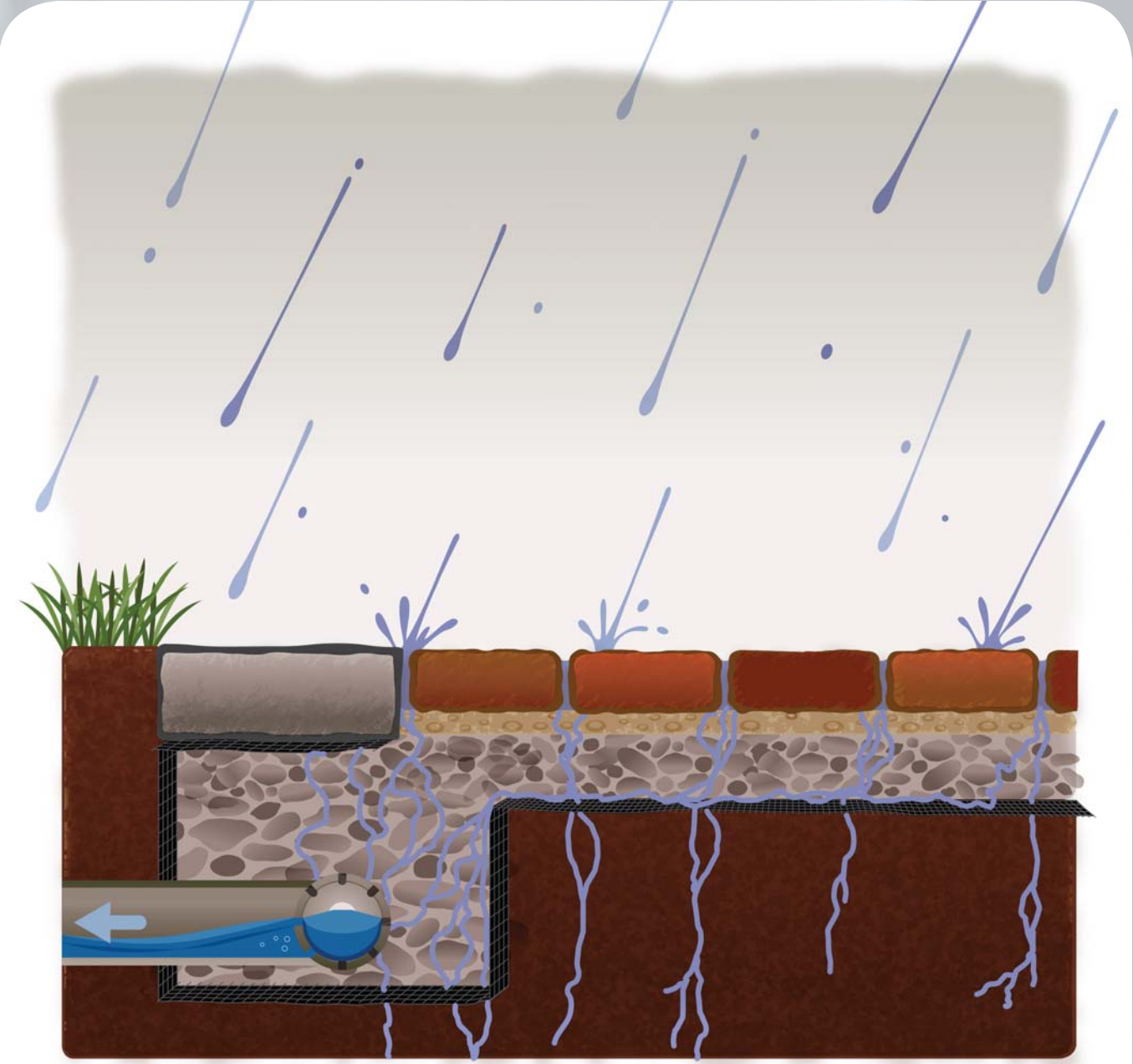
GREEN INFRASTRUCTURE IN FRENCH PARK

Green infrastructure planning and design integrates the management of stormwater with greenspaces, pavement surfaces, building design, and conservation.

Generally, pervious pavements allow stormwater infiltration into the subsoils or designed underground reservoirs. Infiltrating stormwater reduces the rate of water runoff from the site, trapping pollutants in sand filtration and gravel layers.

The French Park walking surface is a combination of permeable brick pavers and cobblestones allowing stormwater to flow through gaps and into an underground reservoir. Water is captured on-site and allowed to filter through the subbase. As the subsoil saturates, excess water is slowly conveyed through the gravel bed voids into a series of underdrains and eventually into the existing drainage system.

Integrating alternative stormwater management devices into the landscape reduces the quantity and the flow of stormwater entering the existing drainage system, as well as improving water quality.



What is Stormwater?

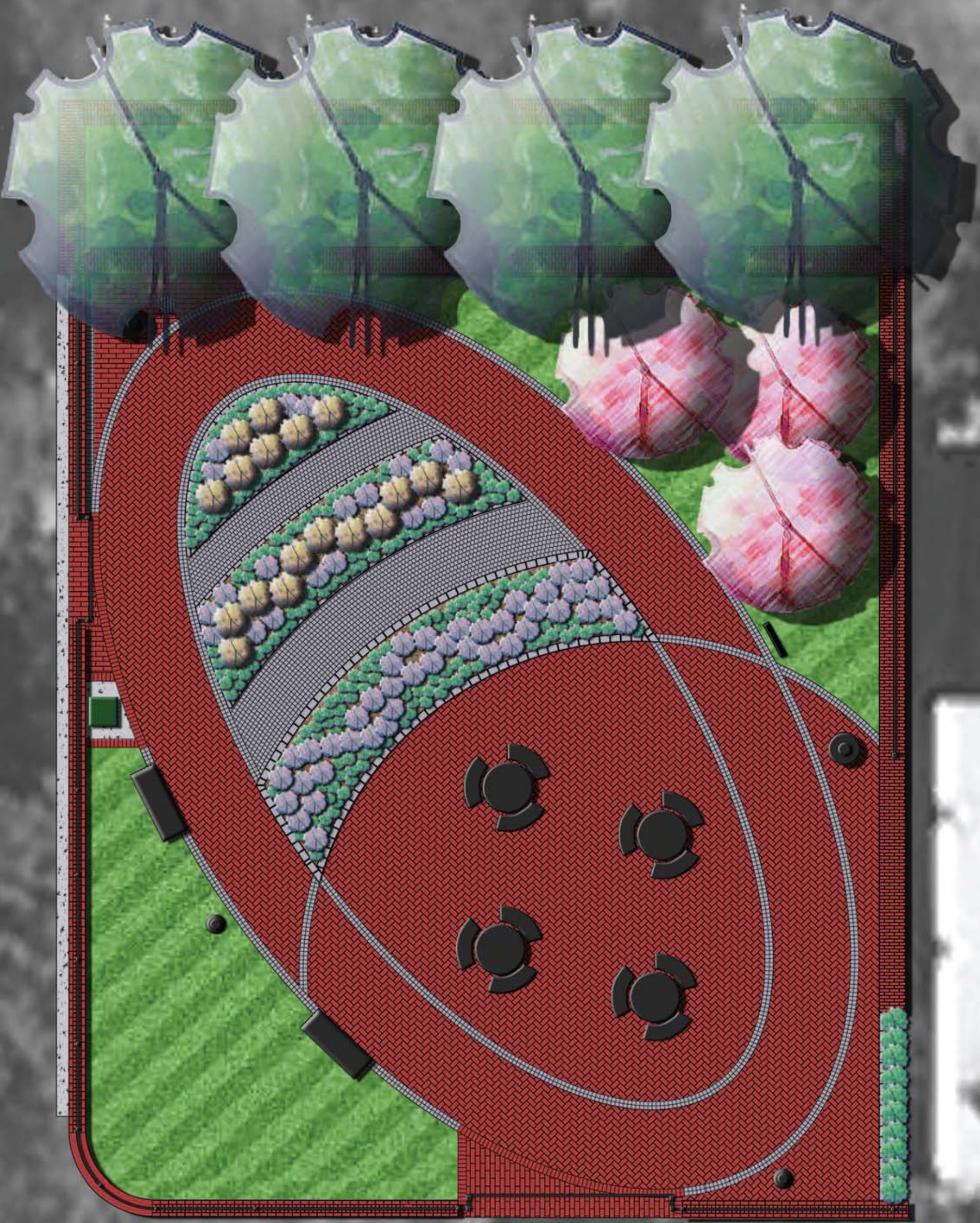
Any water that results from a storm or rainfall event is known as stormwater. Typically stormwater hits the impervious surfaces of the District's rooftops, roadways, sidewalks and flows rapidly out of sight through a series of buried pipes, discharging into the Potomac River, the Anacostia River, or the WASA Blue Plains wastewater treatment facility. The traditional approach to stormwater management has led to two concerns for the District:

- 1) Poor water quality: Traditional stormwater practices have been based on removing water from a site as fast as possible. This method conveys contaminated water directly to nearby rivers and streams, causing regional and localized problems downstream such as trash and sediment buildup, habitat degradation, and unhealthy living conditions.
- 2) Additional water quantity: Traditional stormwater discharge in an urban environment does not replicate natural systems, which control stormwater with three factors:
 - Runoff - Water flowing on the surface
 - Infiltration - Water soaking into the ground
 - Evapotranspiration - A combination of evaporation and transpiration
 - Evaporation - Heat and humidity turning water into vapor
 - Transpiration - Evaporation from the aerial parts of plants

Increasing the impervious surfaces in the built environment alters the balance between these factors. The result may include downstream erosion, reduced groundwater recharge, and flooding.

FRENCH PARK

WASHINGTON, D.C.



MONARCH BUTTERFLY WAYSTATION

Monarch butterflies migrate from all over the United States and Canada to overwintering areas in Mexico and California. The Monarch butterflies are in danger due to massive amounts of habitat loss in North America.

To combat the loss of habitat, Monarch butterfly waystations can be created for a refuge through out the migratory path. The French Park plant palette offers numerous species that offer a hospitable environment throughout the spring, summer, and fall seasons. Listed below is the original plant palette. The waystation is a living environment which will require replacement of plants over the years. By replacing with plants that are part of the same natural community, you can help sustain the habitat required for the waystation to succeed.

1. *Achillea millefolium* - Yarrow
2. *Amorpha canescens* - Lead Plant Amorpha
3. *Asclepias tuberosa* - Butterfly Weed
4. *Astilbe x arendsii* 'Fanal' - Fanal Astilbe
5. *Geranium nimbis* - Cranesbill
6. *Monarda didyma* - Bee Balm
7. *Perovskia atriplicifolia* - Russian Sage
8. *Sedum telephium* 'Autumn Joy' - Autumn Joy Sedum
9. *Schizachyrium scoparium* - Little Bluestem
10. *Phlox stolonifera* - Creeping Phlox



Basic Maintenance Requirements:

- Maintenance involves mulching, weeding, watering, pruning, and "working" the soil.
- Become familiar with the difference between desired plants and weeds. Weeds should be removed as they compete with plants for water, space, and nutrients.
 - In the fall, carefully loosen the soil and apply a fertilizer promoting root growth as instructed by the manufacturer. If you plan to use "home-grown" compost, follow composting guidelines carefully and maintain a balance of "green" and "brown" waste.
 - In the winter, prune perennials and grasses to four to six inches from the ground.
 - In the spring, carefully loosen the soil and apply a commercial fertilizer promoting flower growth as instructed by the manufacturer, and carefully place a two inch layer of shredded bark mulch uniformly over the planting bed.
 - Water and weed consistently.

IMPORTANT: While cutting flowerheads from the neighborhood park and taking them home is romantic, it destroys the purpose of the waystation. Please do not cut flowers to take home. Removing flowers takes away butterfly habitat.

PLEASE enjoy the flowers and watch them grow.

