

Green Infrastructure: A Truly Public Utility

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But this is not your grandma's
rain barrel...

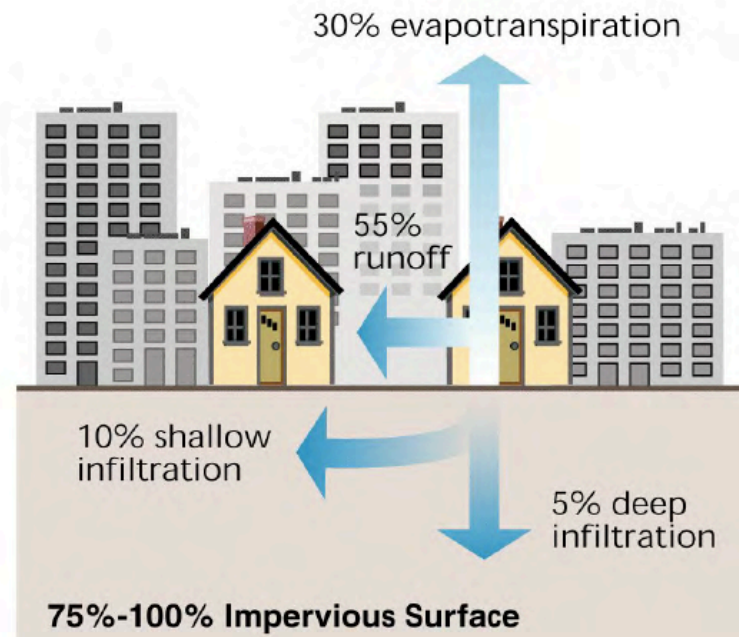
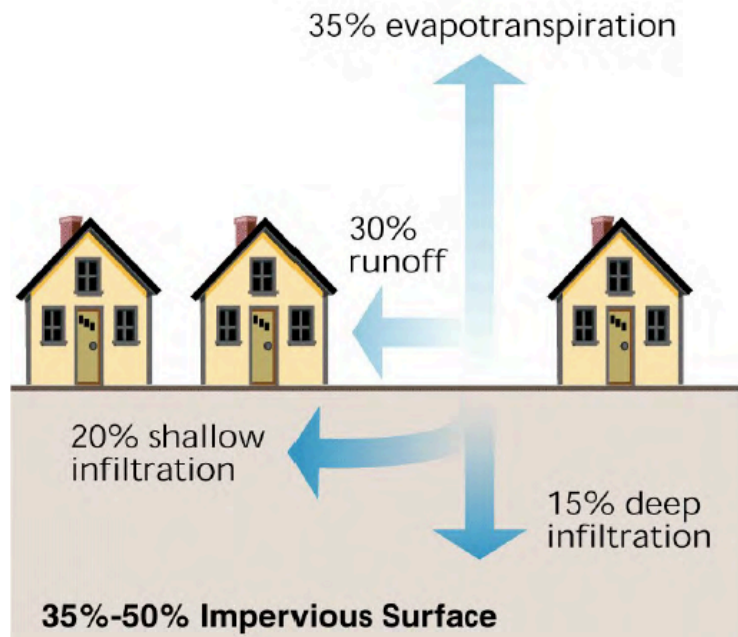
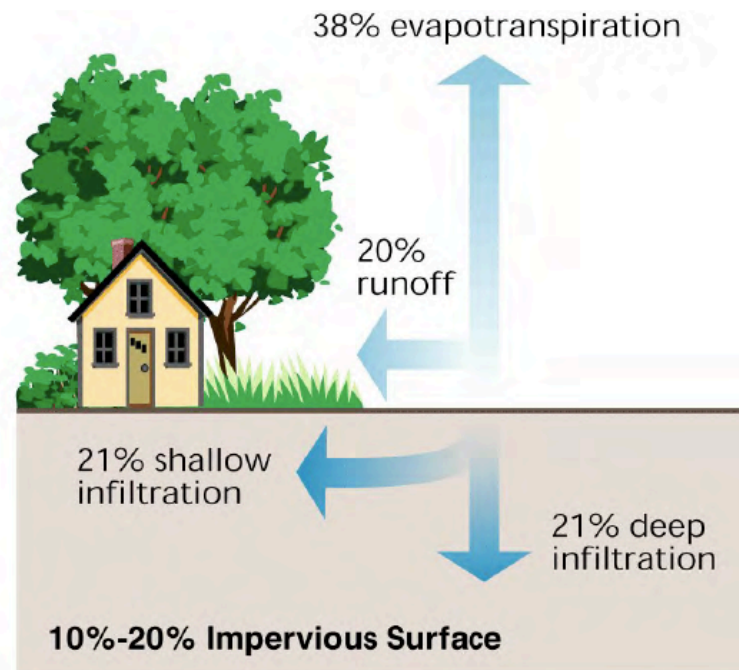
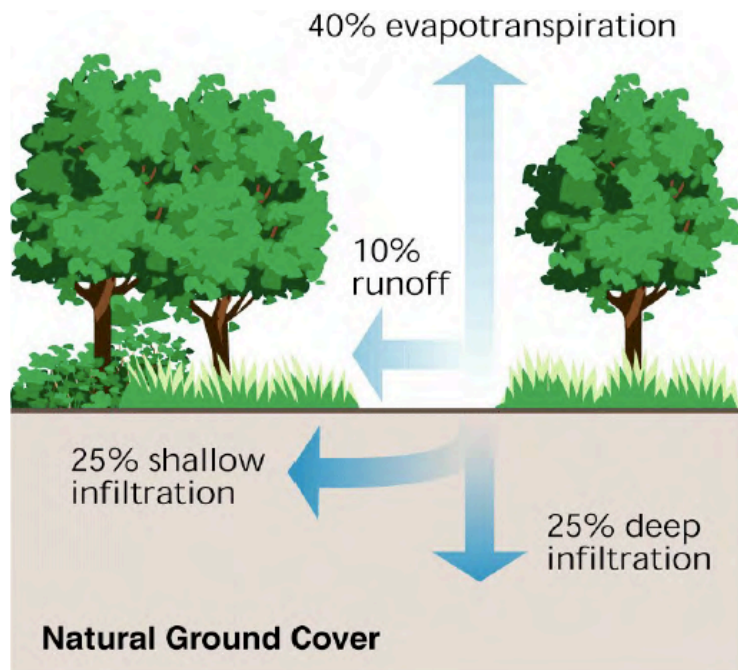


Green Infrastructure can improve:

- Water quality
- Air quality
- Neighborhood aesthetics
- Habitat and biodiversity
- Recreation and transportation opportunities
- Property values
- Community health and vitality

Green Infrastructure Reduces....

- Flooding
- Erosion
- Stormwater runoff volume
- Stormwater pollutant loadings
- CSOs
- Gray infrastructure operation, maintenance, energy and treatment costs

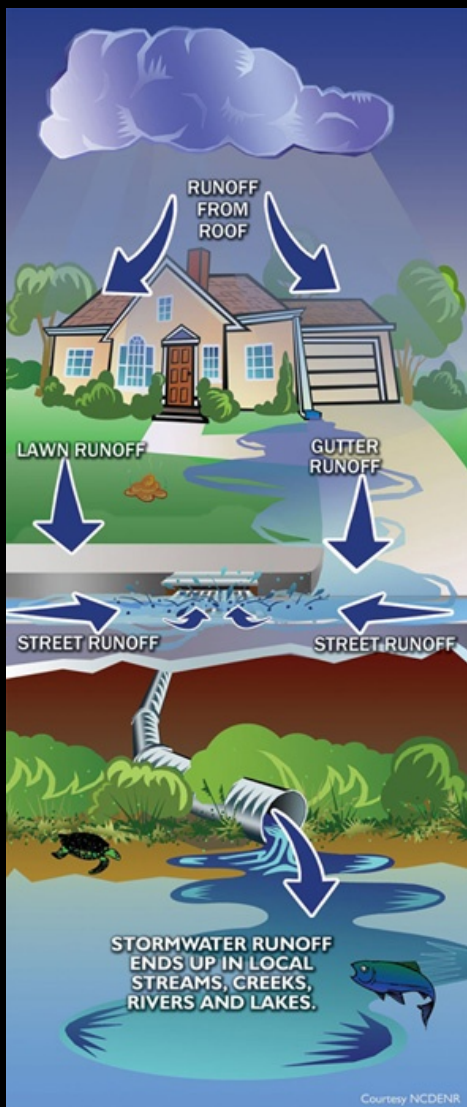






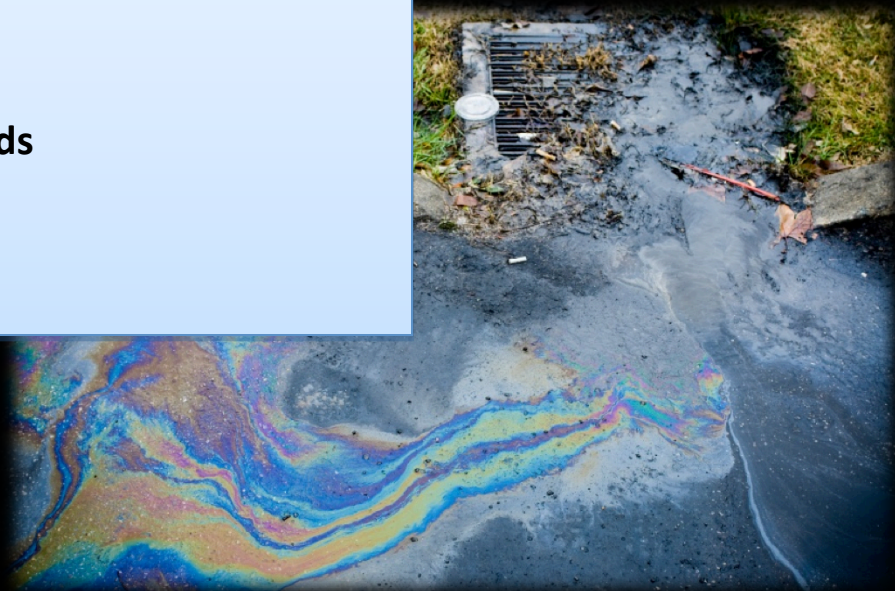


The Trouble with Runoff

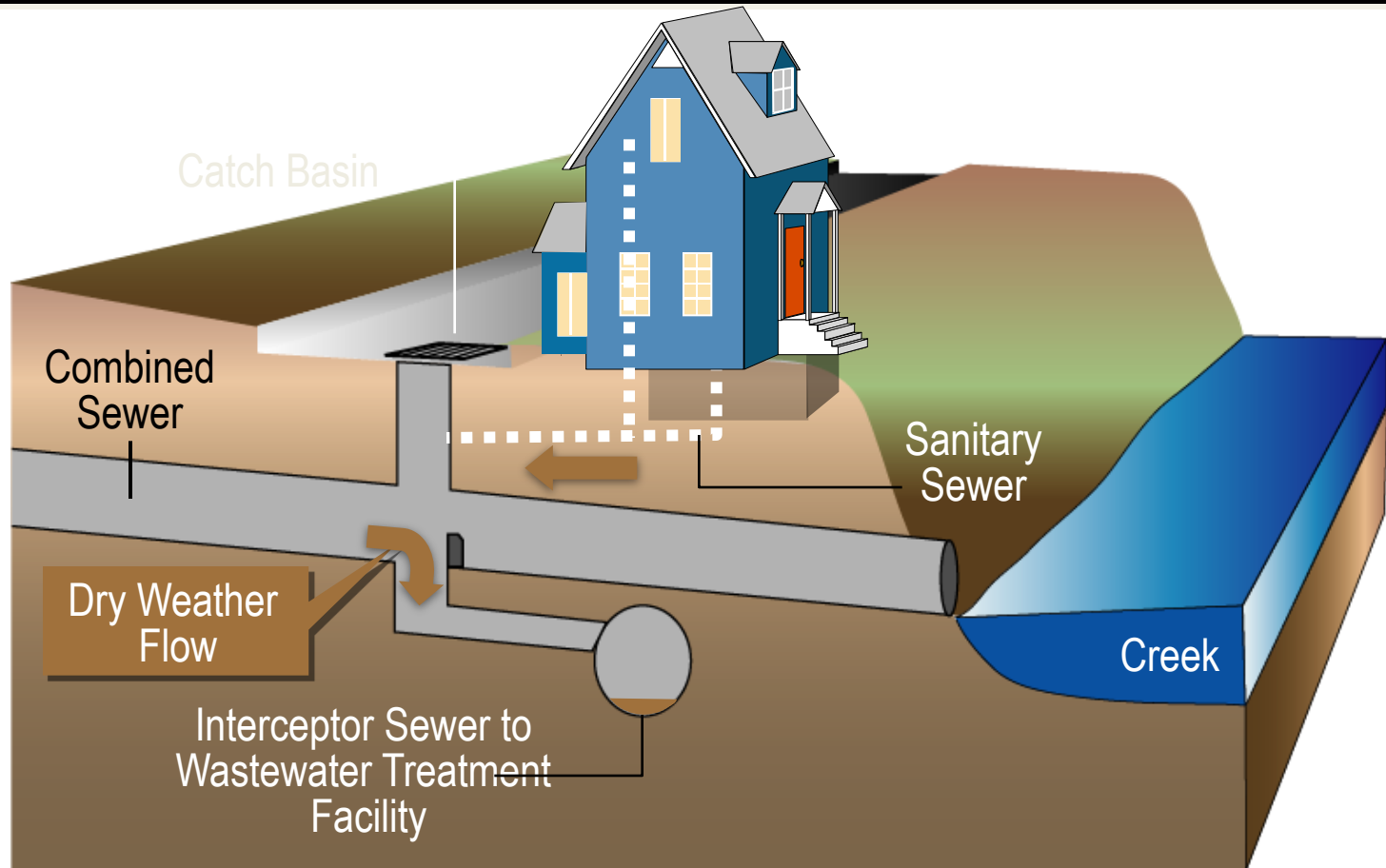


Stormwater Pollution

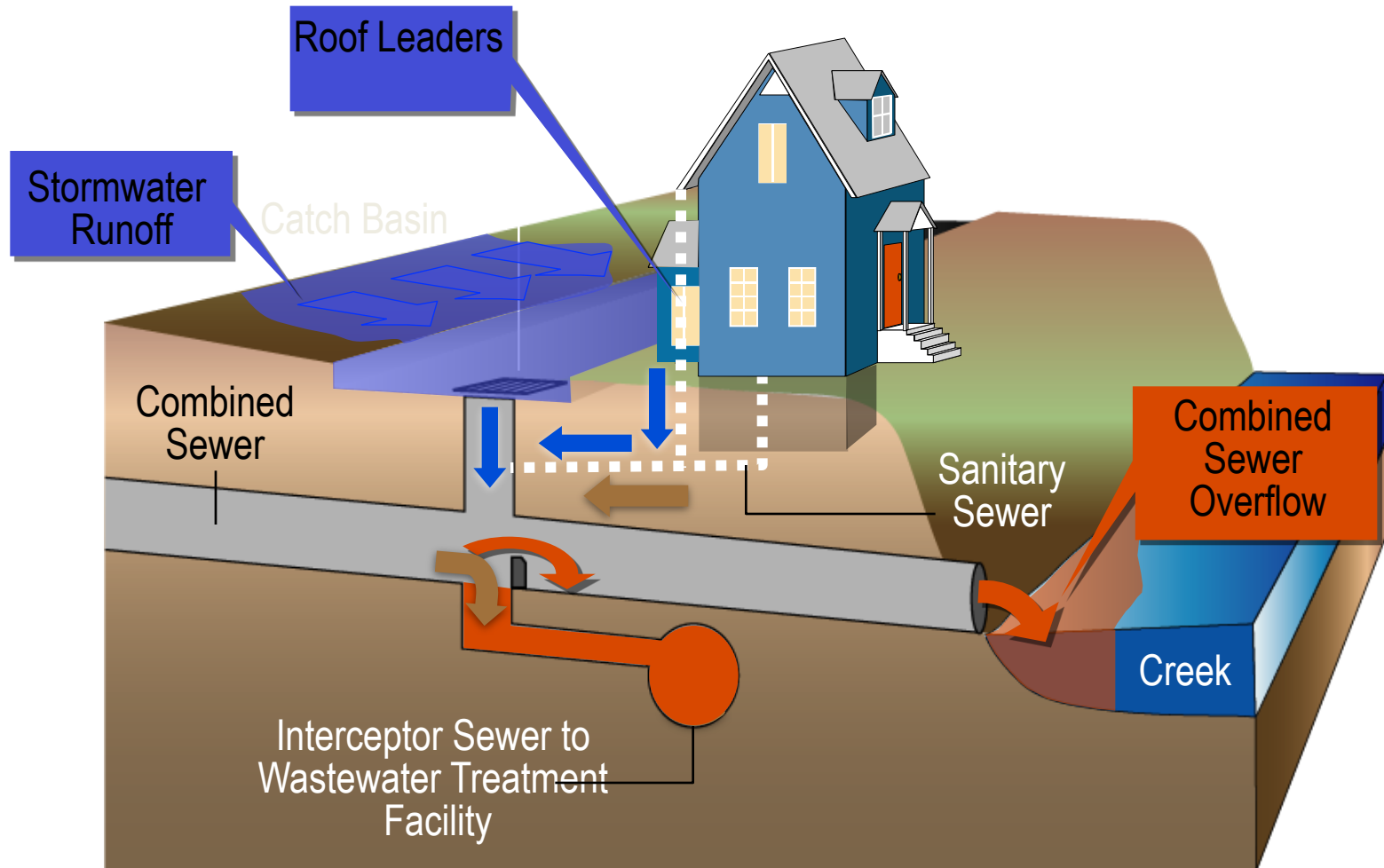
- Eroded Soil
- Lawn Chemicals
- Bacteria (Pet/Animal Waste)
- Road Salt
- Fuel/Gasoline
- Litter & Trash
- Automobile Fluids
- Pesticides



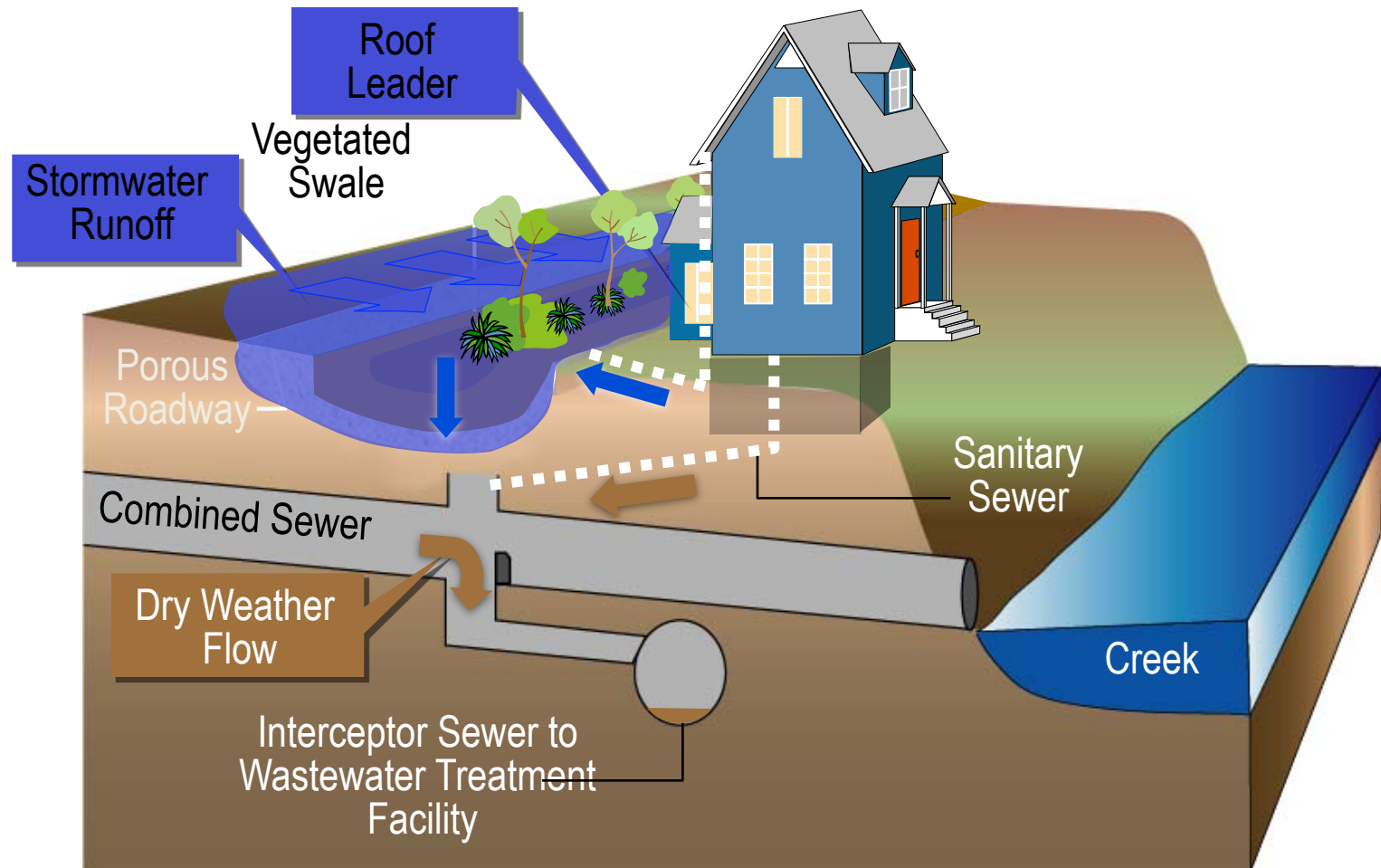
During dry weather, sanitary flows are collected in combined sewers for treatment at Wastewater treatment facilities



During wet weather, inflows exceed the collection system's capacity and trigger a CSO



Green solutions intercept and reduce stormwater flows to sewers, providing storage, infiltration, and treatment



Types of Green Infrastructure

Bioswales



Rain Barrels



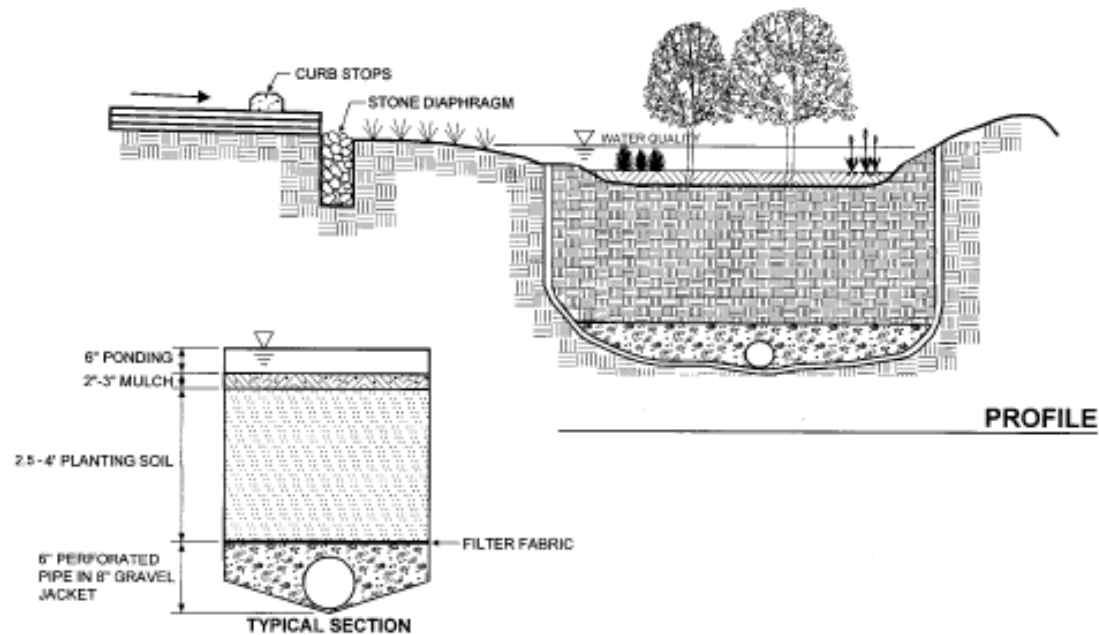
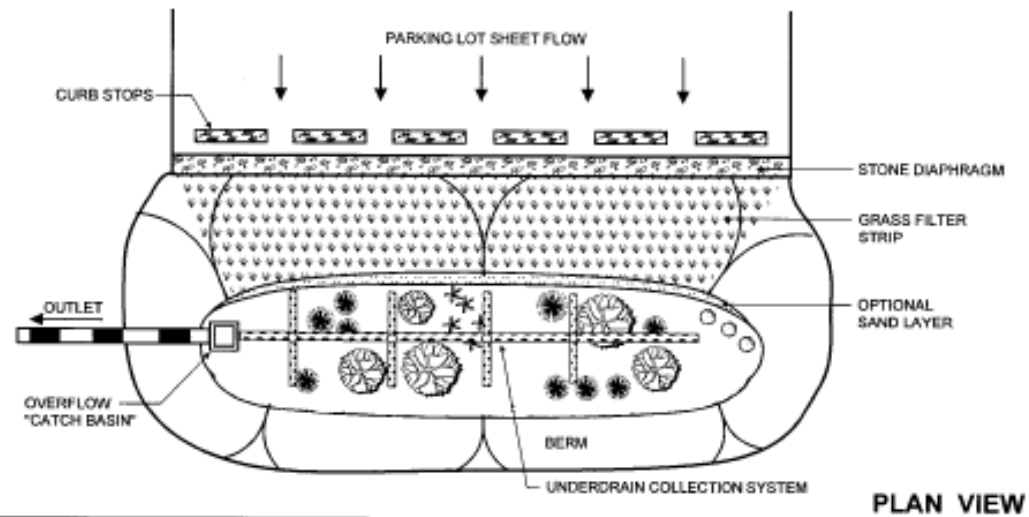
Rain Gardens



Seagrit Planting Bed – NYC Green Streets
NYC, NY



Rain gardens



Green Roofs



Walters Hall, SUNY ESF

Vegetation

Growing Medium

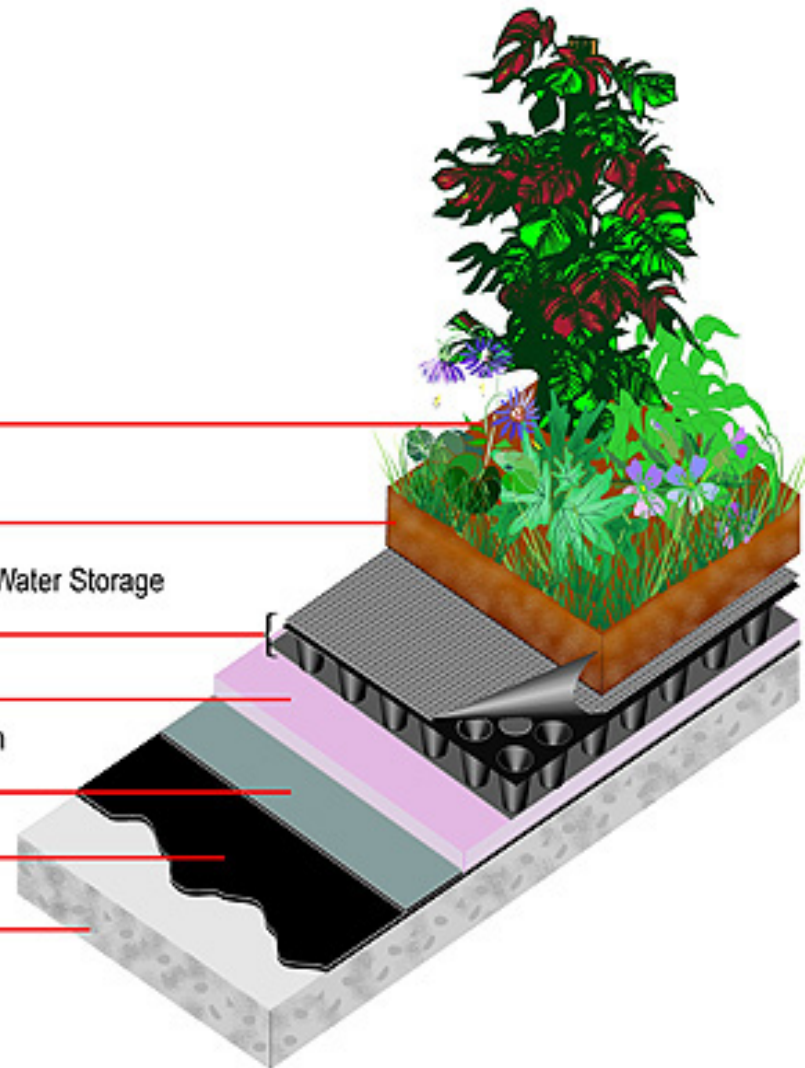
Drainage, Aeration, Water Storage
and Root Barrier

Insulation

Membrane Protection
and Root Barrier

Roofing Membrane

Structural Support



Vegetated Roof

under construction



finished roof

Jamesville Correctional Facility







Monroe Building - Green Improvement Fund

Cistern



Green Wall







Porous Pavements



Go Green { Use pervious concrete.
When it rains, it drains.



Porous pavers



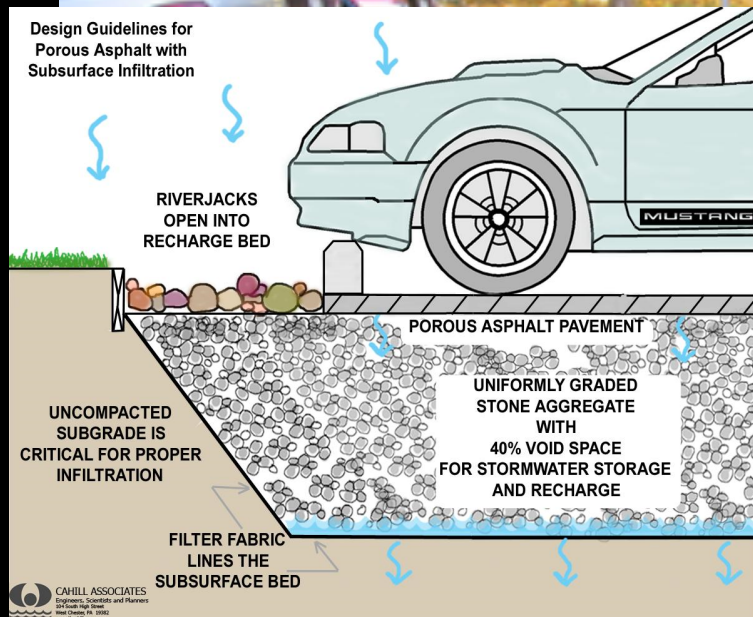


Porous Pavement Asphalt Roadway



*Porous Pavement
Paver Roadway*





Strip of porous concrete down the middle of an asphalt lot in Syracuse

Sidewalk at MOST in Syracuse





Village Hall Stormwater Retrofit
Greenwood Lake, NY



Peter Ward, director of Lindenhurst library, calls new lot "amazing."

Despite rain, library's parking lot flood-free

BY JENNIFER SMITH
jennifer.smith@newsday.com

The rain sloshing down on Long Island yesterday flooded roads and turned driveways into lakes.

But no water pooled in the new lot at Lindenhurst Memorial Library — even during the worst of the storm.

The parking lot is made of permeable paving stones atop a bed of absorbent gravel that soaks up excess water that would otherwise eventually end up in the Great South Bay. The lot was built last summer with the help of \$200,000 in federal stimulus money.

"It's amazing the way this thing sucks up water," said Peter Ward, the library's director. "Every time it rains like this I always check the parking lot."

It may be the first parking

NOW ONLINE
Watch director of
Lindenhurst library talk
about the library's
sustainable parking lot.
newsday.com/li

lot of its kind on Long Island. Nassau and Suffolk plan to build similar test sites this spring at county facilities.

It's one of the newer approaches to dealing with storm water runoff, which environmental officials say is one of the biggest pollution problems facing U.S. waters today.

Storm water is a particular problem along densely populated stretches of the South Shore, where pavement has replaced open space and storm sewers funnel rainwater to creeks and

estuaries. Excess water that would normally be soaked up by Long Island's sandy soils washes off roads and construction sites, picking up contaminants along the way that can lead to beach closures and prevent safe shellfish harvesting.

At the Lindenhurst library lot, the permeable paving stones themselves absorb some water; more is drained through the gravel that surrounds them. Precipitation trickles down through three progressively finer grades of gravel that help filter out pollutants before the rainwater reaches the soil, according to Bob Retnauer of RDA Landscape Architects in St. James, which designed the lot.

"We already have a great natural resource that has been severely compromised by storm water," Ward said. "This parking lot shows an alternative that is, in some part, an answer to a long-standing problem."

Porous Pavement
Lindenhurst Library - Suffolk County



Porous Pavement
Lindenhurst Library - Suffolk County



Pervious Pavement and Tree Inventory
North James Street, Rome, NY



Stormwater Trees
Utica, NY



Green Roofs
Monroe County, NY



Green Roofs
Monroe County, NY

367 East Water Street



Exit Street View

East Water Street

© 2012 Google

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Google earth

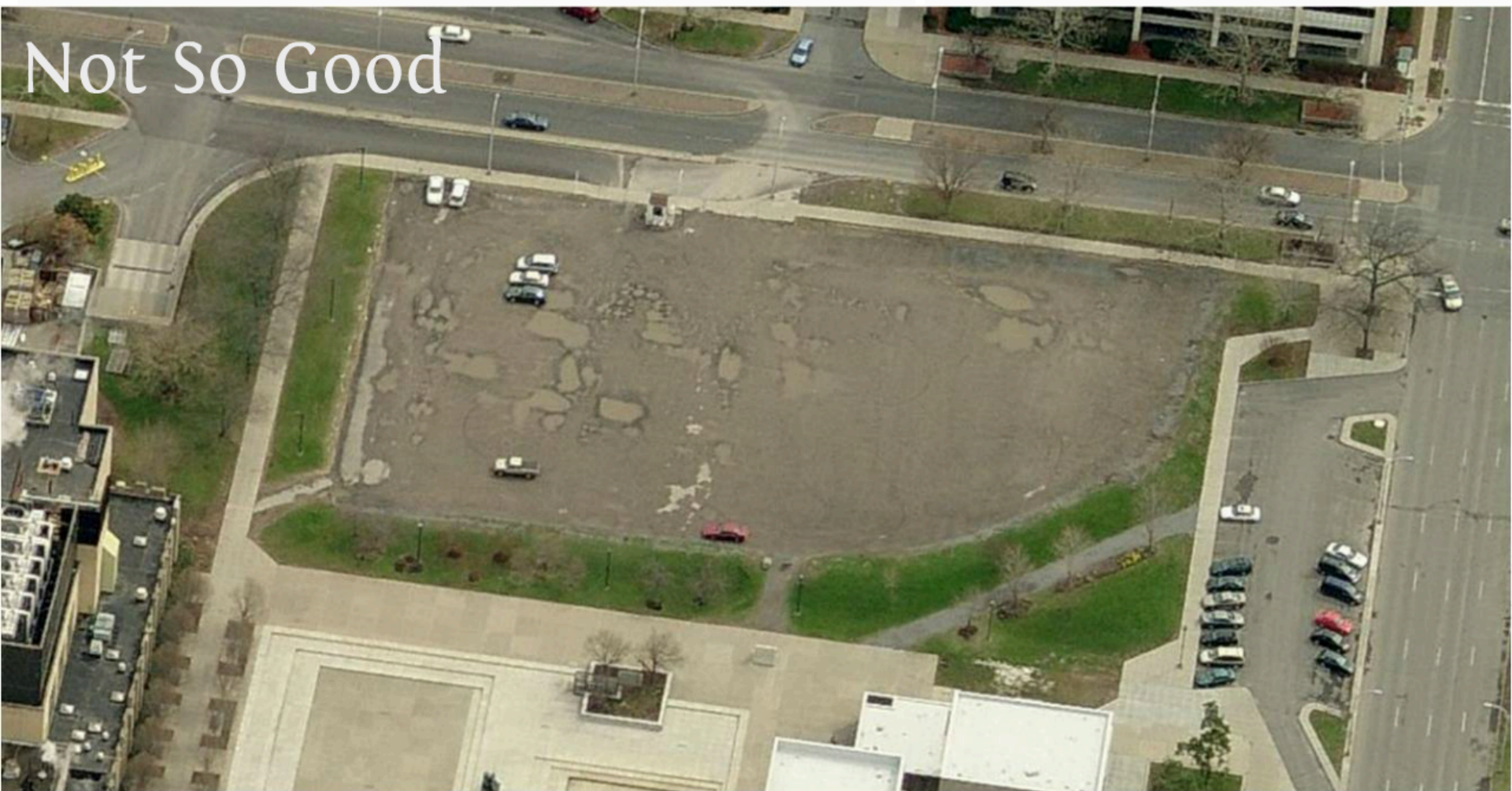
43°03'01.81" N 76°08'55.94" W elev. 428 ft

Eye alt 413 ft

Report a problem







Not So Good



Antenna Array Service S.L.C.
312-422-4700







Erie Boulevard

Warren
Street

James Street



Porous Concrete
Captures over 700,000 gallons of stormwater annually



Residential Demonstration Project, Syracuse





A Rain Garden for Bishop Foery



Two rain gardens, four rain barrels, some education and buckets of sweat!

➡ 29,300 gal/year of water captured and a whole lot of community building



Green Infrastructure

Resources

- Natural Resources Defense Council (NRDC), 2006
Rooftops to Rivers Green Strategies for Controlling Stormwater and Combined Sewer Overflows
<http://www.nrdc.org/water/pollution/rooftops/contents.asp>
- Green Playbook
<http://www.greenplaybook.org>
- The Low Impact Urban Development Center
<http://www.lid-stormwater.net>
- U.S. Environmental Protection Agency
Managing Wet Weather with Green Infrastructure
<http://epa.gov/npdes/greeninfrastructure>
- North East Community Forests
The Green Infrastructure Planning Guide
<http://greeninfrastructure.eu/>

Questions?

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