

Stormwater Training

Post Construction BMPs

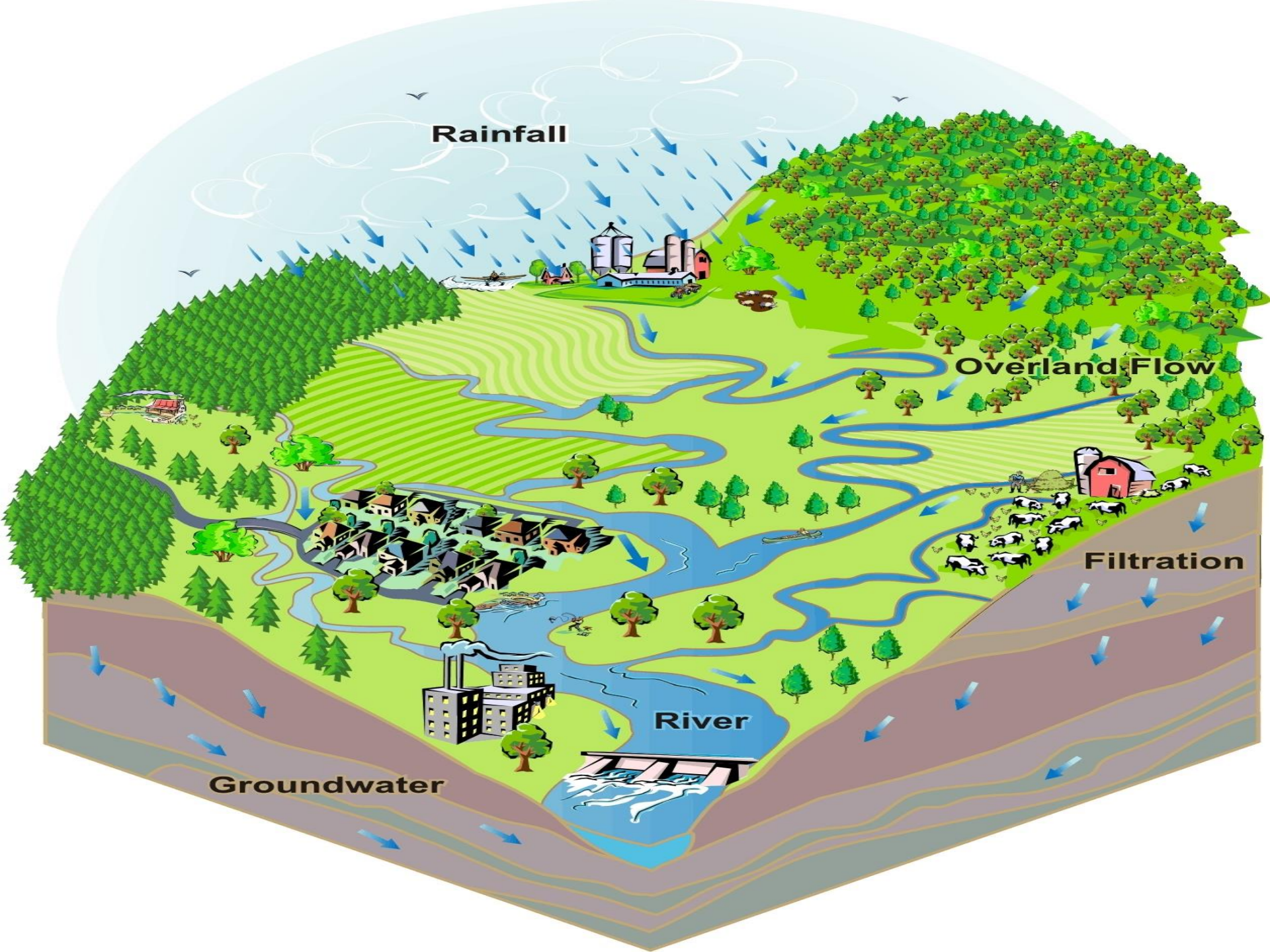
NPDES No. CAS004002

Order No. R4-2010-0108

Ventura County Municipal Separate Storm Sewer
System Permit (MS4 Permit)

What is a watershed?





Rainfall

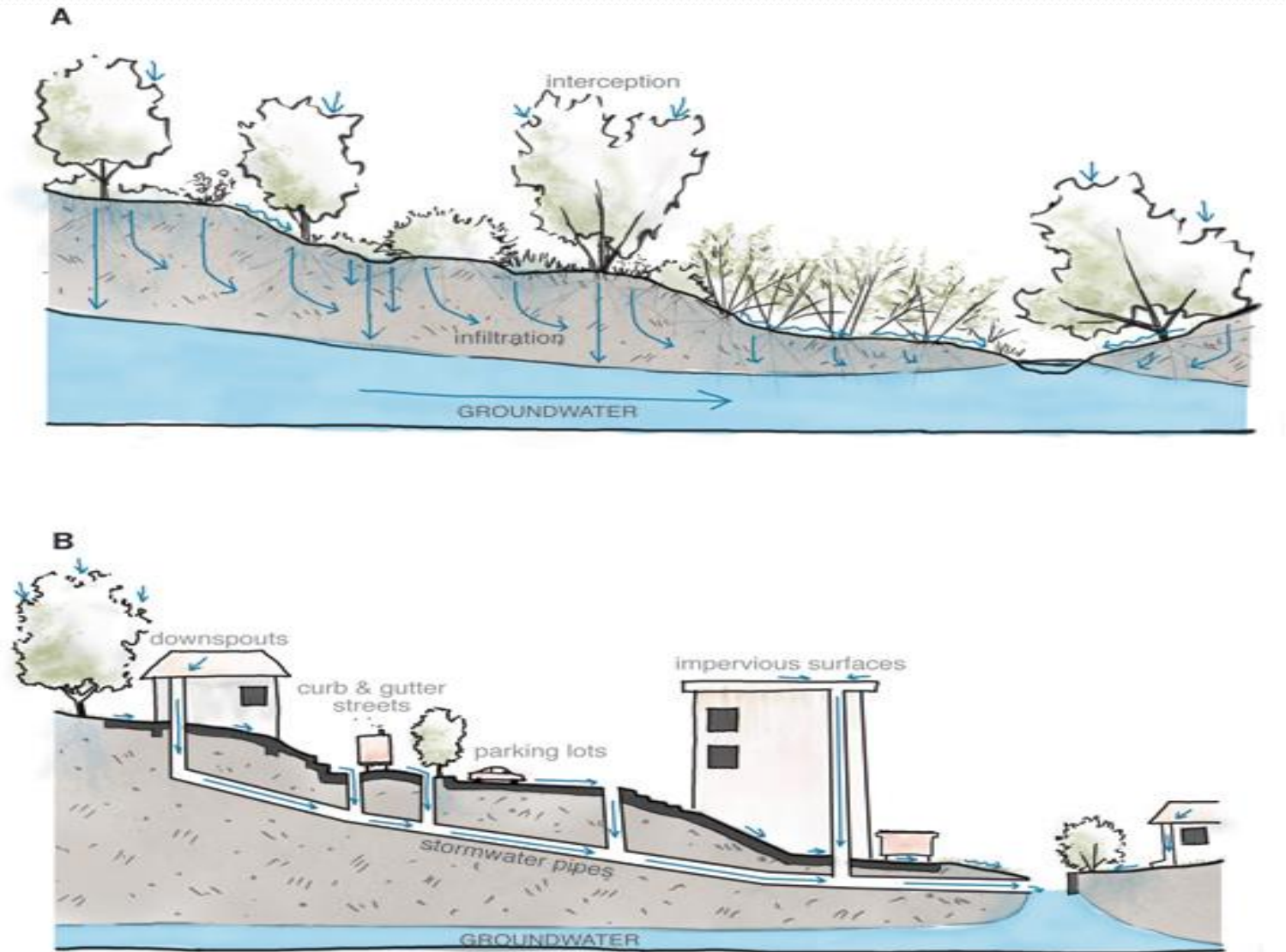
Overland Flow

Filtration

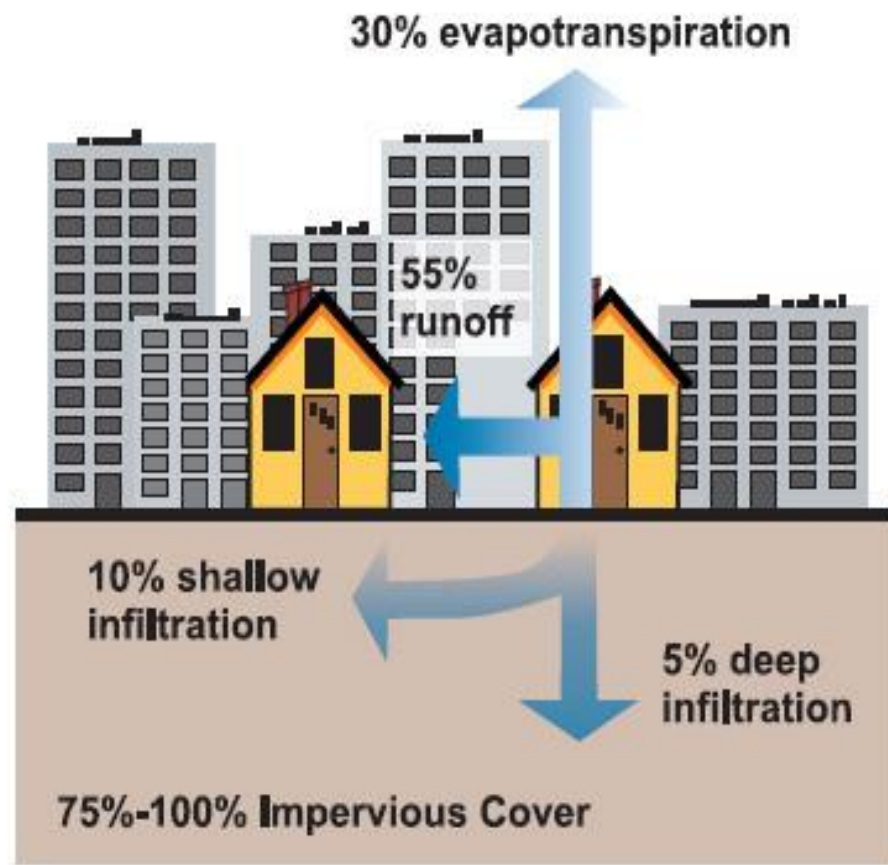
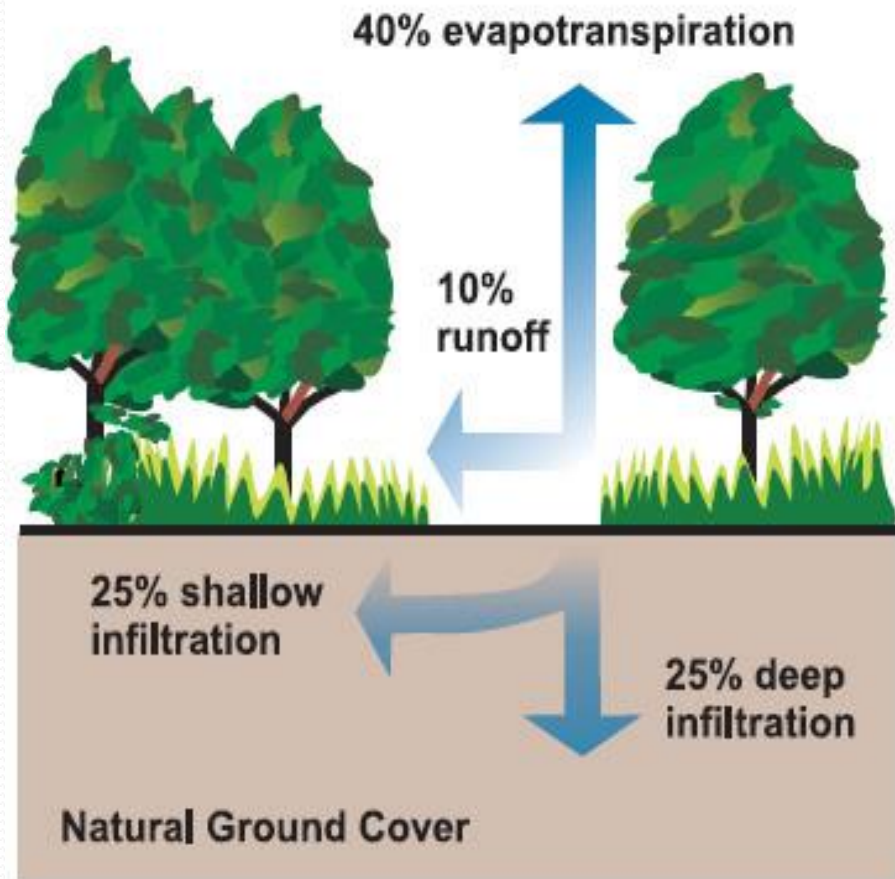
River

Groundwater

Hydromodification – alteration of the natural flow of water through a landscape



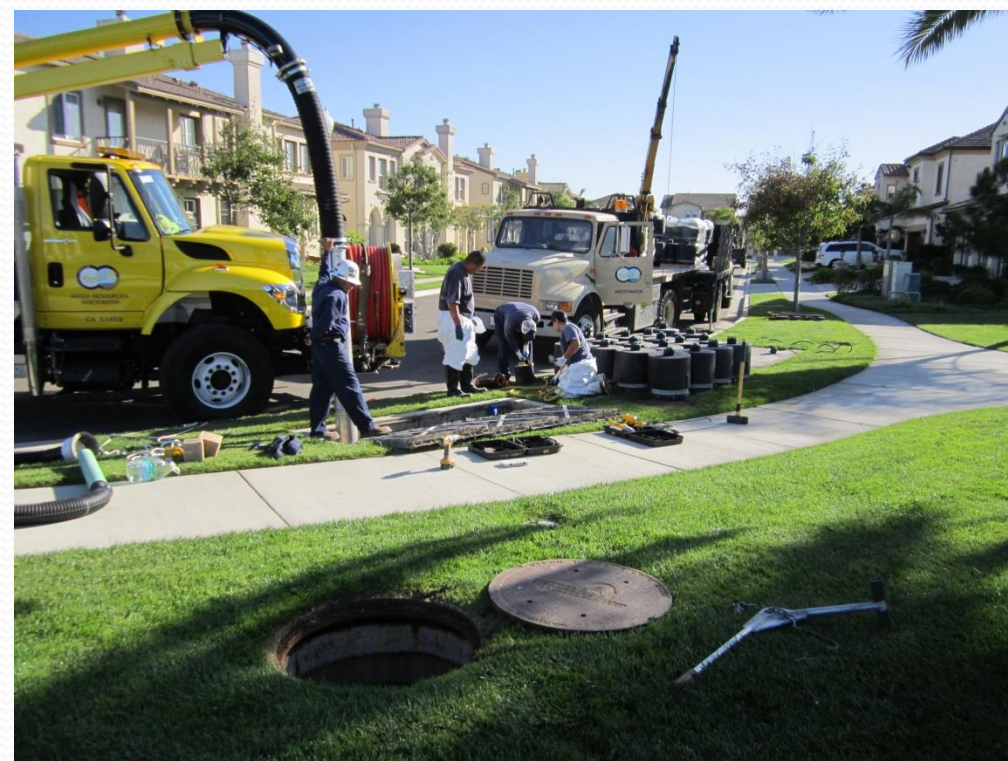
Relationships between land use and water resources.



Post Construction BMPs



Costly maintenance requirements



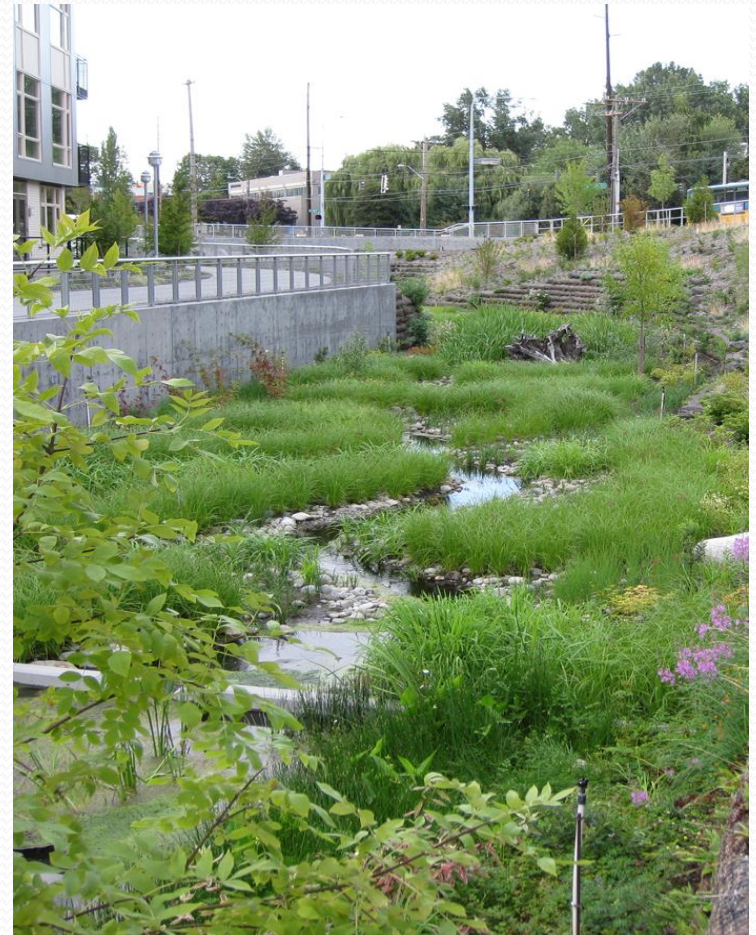
Grey Infrastructure



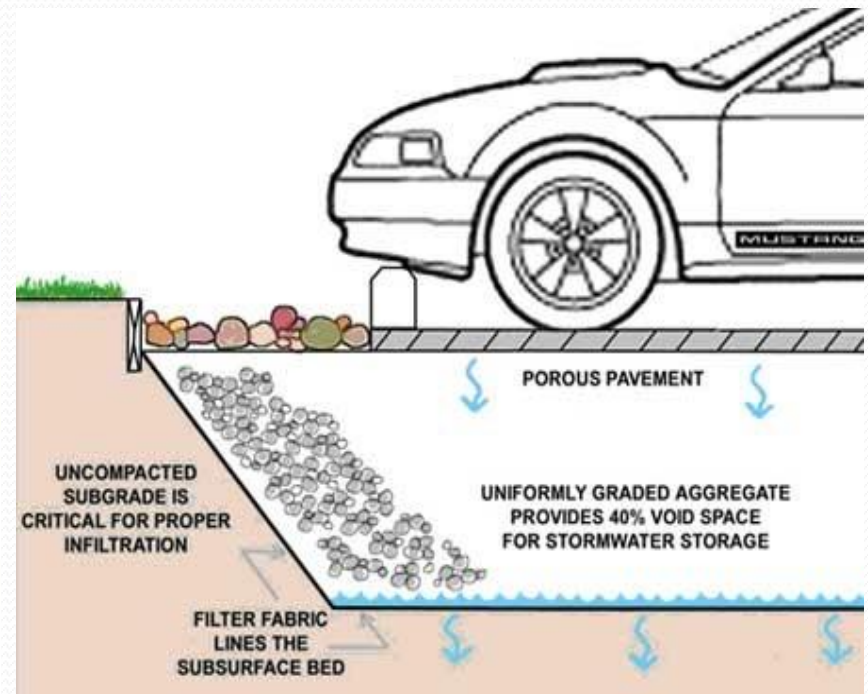
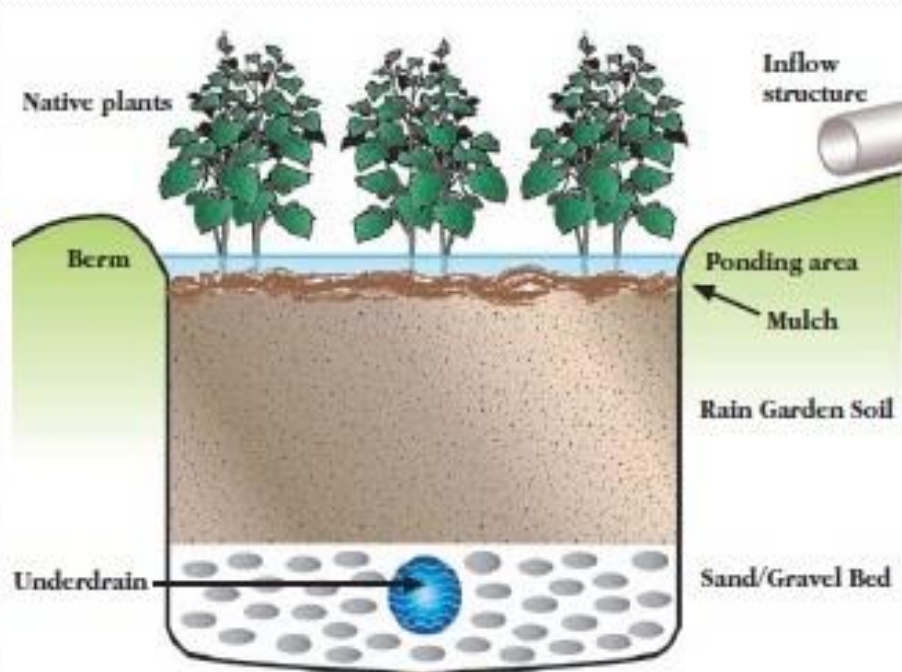


EPA supports expanded use of green infrastructure to protect and restore waters while creating more environmentally and economically sustainable communities.

Green Infrastructure



Low Impact Development



Green Streets

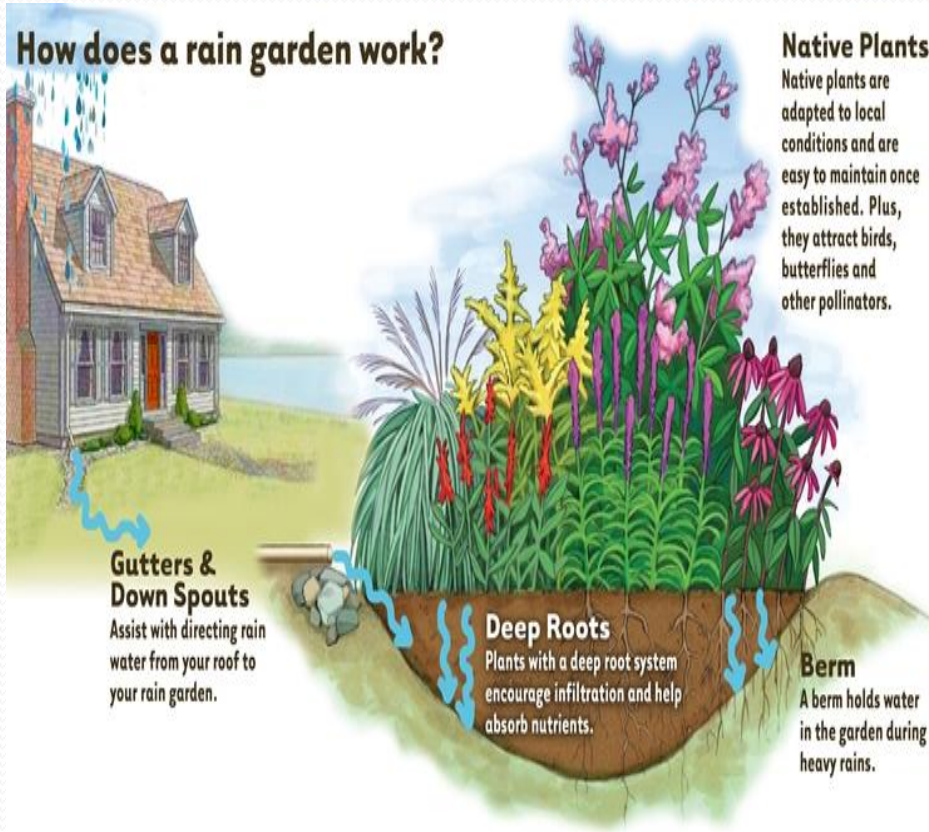


Green Roofs



Rain Gardens

How does a rain garden work?



Rain Barrels/Cisterns



Each Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities.

- i. Public Construction Activities Management.
- ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
- iii. Vehicle and Equipment Wash Areas
- iv. Landscape and Recreational Facilities Management
- v. **Storm Drain Operation and Management**
- vi. Streets and Roads Maintenance
- vii. Public Industrial Activities Management
- viii. Emergency Procedures
- ix. Employee Training
- x. **Infrastructure Maintenance**

Permittee Owned Treatment Control BMPs

- (1) Each Permittee shall implement an inspection and maintenance program for all Permittee owned treatment control BMPs, including post-construction treatment control BMPs.
- (2) Each Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all postconstruction treatment control BMPs.
- (3) Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:
 - (A) Hauled away and legally disposed of; or
 - (B) Applied to the land without runoff; or
 - (C) Discharged to the sanitary sewer system (with permits or authorization); or
 - (D) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS₄

Stormwater Links

Center for Watershed Protection

www.cwp.org

<http://youtu.be/coFbdMB-qoU>

Staying Green Strategies – Improve Operations and
Maintenance

www.americanrivers.org

<http://www.americanrivers.org/newsroom/resources/staying-green-joint-reports-on-operations-and-maintenance-of-green-infrastructure-in-the-chesapeake-bay/>

Questions?

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