Soak It Up!

Watershed-friendly techniques for your yard and garden

Erosion may result from increases in the amount and rate of runoff entering a creek.

Stormwater runoff may cause water pollution and erosion

A natural landscape acts like a sponge, allowing rainfall to soak into the ground. This replenishes the groundwater, which keeps creeks flowing after rains end. ***Paved surfaces prevent percolation*** and send runoff to creeks more quickly and in greater quantity, causing increased creek erosion and flooding. As rain water runs across roads, rooftops, driveways and parking areas in your neighborhood, it picks up pollutants such as motor oils, metals, pesticides and litter. Stormwater pollutants like these come from our everyday activities. The polluted water from our neighborhoods enters the storm drains and flows to local creeks and the San Francisco Bay, without any cleaning or filtering to remove pollutants.

Help rainfall soak into the ground to reduce these problems
You can use the following watershed-friendly or "Low Impact Development" (LID) techniques to absorb rainwater in your yard and break the chain of impervious surfaces – from roof, to driveway, to street, to storm drain, and to creek. LID site designs mimic the natural landscape, so rainwater can filter through vegetation and/or soil, to reduce the amount of water entering the storm drain.

What You Can Do

Techniques to help your yard soak it up!

Below are examples of watershed-friendly or LID techniques you can use to reduce the impacts of paved surfaces and let rainwater soak into the ground.

✓ **Increase permeability of driveways, patios, walkways, and parking areas**

Wheel tracks, also known as "Hollywood driveways," can be used in place of full-width asphalt or concrete driveways. Permeable pavement can also be used in wheel tracks. The photograph illustrates the use of a structural grid product that stabilizes the gravel using a series of vertical cylinders that can withstand the weight of automobiles.

Local wheel track examples: 735 Homer Avenue in Palo Alto[1], and 280 Serena Way in Santa Clara.

Wheel track driveway with gravel pavement

Pervious paving lets rain trickle through to the soil below. A layer of crushed rock beneath the paving will increase the amount of rainwater storage while it slowly percolates into the ground. Use pervious concrete or pavers with open joints filled with gravel or sand. The pavers themselves may also be pervious.

Local examples of pervious concrete: Menlo Park Parking Plaza #5[1] (southeast of Santa Cruz Avenue between Crane and Evelyn Streets), and 367 Addison Street in Palo Alto[1] (driveway of the historic Hewlett-Packard garage).

Local example of pavers with open joints: 735 Homer Avenue in Palo Alto[1].

Flagstone with permeable joints

[1] See Resources and Demonstration Sites section for a web link for more information on these demonstrations sites.

Water-wise and native plants

✓ Avoid synthetic fertilizers, herbicides and pesticides

Use ***water-wise and California native plant species*** to minimize the need for synthetic fertilizers, herbicides, and pesticides. This helps prevent rainwater and irrigation runoff from carrying pollutants into the storm drain and creeks. Nurture the soil with compost and apply organic mulch to encourage a healthy soil foodweb that resists pests and breaks down pollutants.

Local example: 96 Eldora Drive in Mountain View.

✓ Direct rainfall from rooftops to landscaped areas

If the runoff from your roof is piped directly to the storm drain, consider ***disconnecting your downspouts*** from the storm drain, driveway, street or sidewalk. Instead, direct water to landscaped areas where it can soak into the soil. This is generally advised where the landscaped area is at least one-half the size of the roof area that drains to it. Use downspout extensions and splash blocks to keep water away from the building foundations.

If your roof will drain to a landscaped area that is less than one-half the size of the roof area, you may consider ***installing a rain garden***. This is a landscaped area built with highly absorbent soil and set in a shallow depression where runoff collects. A rain garden can also absorb runoff from paved surfaces. Rain gardens should be installed away from the foundation; consult an engineer if the rain garden would be within 10 feet of your house.

Local example: 735 Homer Avenue in Palo Alto (see weblink below).

Runoff can also be captured in a ***rain barrel*** and used later for landscape irrigation. Due to West Nile virus concerns, ask your county vector control office about standing water regulations and recommendations before installing a rain barrel or cistern. Contact Santa Clara County Vector Control office at (408) 918-4770 or (800) 675-1155.

Splash block directs water to landscaping.

Runoff drains to landscaping.

Rain barrel system

Resources and Demonstration Sites

- ✓ Two **Acterra** demonstration projects (a Palo Alto residence at 735 Homer Avenue and a Menlo Park parking lot on Santa Cruz Avenue, between Crane and Evelyn Streets) are featured at **www.SanFrancisquito.org/runoff.**
- ✓ The **Purissima Hills Water District** has developed a demonstration garden (shown on this page above the caption, "Runoff drains to landscaping") at 26375 Fremont Road in Los Altos Hills.
- ✓ For lists of native plants for home landscaping, visit: **www.cnps-scv.org**, **www.gngt.org**, or **www.cnps.org**.
- ✓ **www.mywatershedwatch.org/pollutiontips.html** gives tips on preventing pollution of local creeks and the Bay.
- ✓ **www.bayfriendly.org** provides Bay-Friendly Landscaping guidance to reduce waste and prevent pollution.
- ✓ Info on rain barrel systems: **http://www.sanfrancisquito.org/runoff/techniques/Rainbarrel_Workshop.htm**.

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

SANTA CLARA BASIN WATERSHED MANAGEMENT INITIATIVE

Acterra

The original version of this flyer was developed by Acterra, an environmental education and action nonprofit, and updated by the Santa Clara Basin Watershed Management Initiative and the Santa Clara Valley Urban Runoff Pollution Prevention Program, a coalition of local government agencies working together to prevent the pollution of our creeks, watersheds, and the San Francisco Bay. The California Native Plant Society and Going Native Garden Tour reviewed the flyer and provided information.

March 2011