PHOTO BY ROGER WALDEN

Controlling stormwater runoff and its impact is a serious issue facing many local communities across California, including those in the Lake Almanor Basin. Stormwater runoff can cause serious flooding and state and federal governments are mandating local stormwater programs to control stormwater pollution.

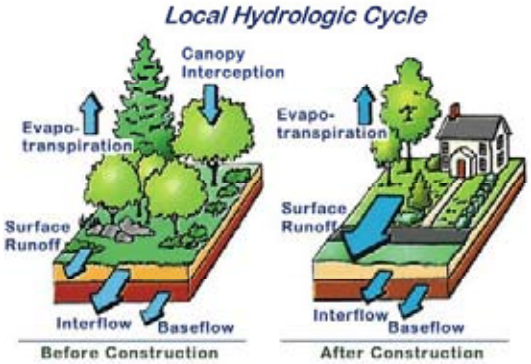
What is stormwater runoff?

Stormwater runoff is rainfall or snowmelt that flows over the ground. Impervious surfaces like buildings, roads, and parking lots prevent stormwater from naturally soaking into the ground and force it elsewhere. In some cases, stormwater runoff drains directly into creeks, streams, rivers, and lakes. This is true for most of the Lake Almanor Basin.

SOURCE: LAKE SUPERIOR DULUTH STREAMS

What is the cause of uncontrolled stormwater runoff?

Changes in land use have a major effect on both the quantity and quality of stormwater runoff. Under natural conditions, typically 10% of rainwater falling on the land runs into streams, rivers, or lakes. The remainder either evaporates into the air or infiltrates into the soil, replenishing groundwater supplies.



SURFACE RUNOFF INCREASES WITH DEVELOPMENT IN THE WATERSHED.
Source: Maryland DEP

Urbanization and development, if not properly planned and managed, can dramatically alter the natural water flows, or hydrology, of an area. Fewer trees means less precipitation can be intercepted by vegetation. Increased impervious cover decreases the amount of rainwater or snowmelt that can infiltrate into the soil, and increases the volume and rate of stormwater runoff.

Impacts of uncontrolled stormwater runoff

Uncontrolled stormwater runoff can have many impacts on property and the environment. Increases in stormwater runoff or poorly managed runoff may lead to more frequent and severe flooding, more erosion, and more sediment transported into streams and lakes. It may also lead to increased pollutants flowing into water bodies that harm fish and other wildlife, kill native vegetation, foul drinking water supplies, and make recreational areas unsafe.

SOURCE: PUGET SOUND LID HANDBOOK, 2005

Damage by stormwater runoff may appear as:

- Sediment and debris deposited on properties and roads
- Clogged stream channels, culverts, and pipes
- Flooded homes and yards
- A washout of a road or bridge
- Erosion of streambanks and additional sediment deposited into downstream creeks and lakes

Stormwater pollution

As the stormwater flows over the ground, it can pick up leaf and grass debris, chemicals, dirt, and other pollutants. Most of the pollution transported by stormwater is carried away during the first flush, or the first inch of rainfall.

Stormwater pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources

PHOTO BY SCOTT ZAITZ

So what can I do?

- Use fertilizers sparingly and sweep up driveways, sidewalks, and roads
- Never dump anything down storm drains
- Grow plants on bare spots in your yard
- Compost your yard waste
- Avoid using pesticides, if possible, or use them sparingly
- Direct rain gutter downspouts away from paved surfaces and onto the lawn
- Take your car to a carwash instead of washing it in the driveway or street
- Check your car for leaks and recycle motor oil
- Pick up after your pet
- Have your septic tank inspected and pumped regularly (every 3-5 years)
- Properly dispose of household chemicals

SOURCE: EPA "10 THINGS YOU CAN DO TO PREVENT STORMWATER POLLUTION"

SOURCE: EARTH 911

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For more information concerning the Lake Almanor Watershed planning effort and how you can become involved, contact the Watershed Coordinator, at (530) 284-1022 or WatershedInfo@SierraInstitute.us

Protecting the Almanor Basin from Stormwater Runoff

PHOTO BY ROGER WALDEN

Lake Almanor Watershed Project Fact Sheet #3