

# Sierra Nevada Alliance

**Low Impact Development Strategies**

**The Bigger Picture and Alliance  
Resources**



## The Sierra Nevada Alliance



*Since 1993, the Sierra Nevada Alliance has been  
protecting and restoring Sierra land, water, wildlife,  
and communities*



# **Sierra Nevada Alliance Sustainable Sierra Land Use Campaign**

**The Land Use Campaign protects Sierra lands, water, wildlife and rural quality of life by shaping smart land use planning in all Sierra Nevada counties.**



## **Alliance LID Resources**

- Sierra Nevada Yard & Garden

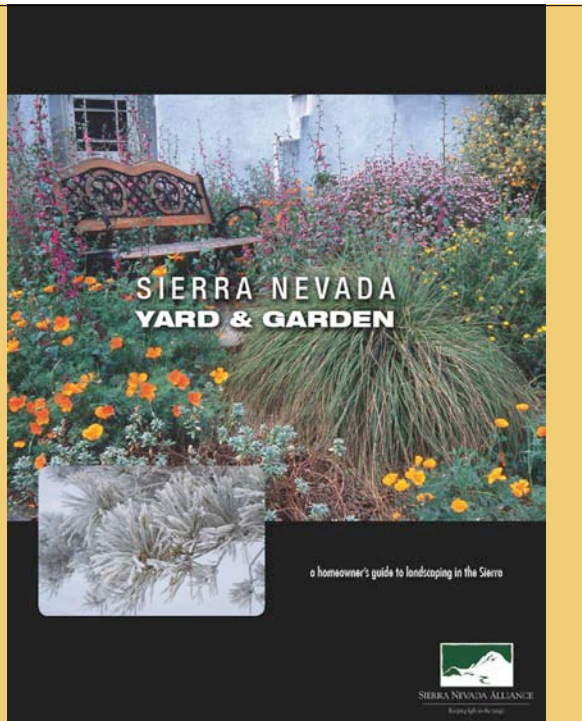
*A homeowner's guide to landscaping in the Sierra Nevada*

- Planning for Water-Wise Development  
in the Sierra

*A Water and Land Use Policy Guide*

The Sierra Nevada  
Yard & Garden

*A homeowner's  
guide to  
Conservation  
Landscaping*



## Sierra Nevada Yard & Garden

### Merges

1. Wildfire prevention
2. Water
3. Soil
4. Wildlife
5. Vegetation



Integrated recommendations.  
Holistic approach to landscaping

## Yardscape concerns addressed by LID strategies

- Slope
- Bare Soil
- Driveways
- Driplines



## Observe: slope

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## Design: slope examples



Terraces



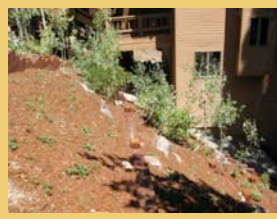
Rock retaining wall



Wood retaining wall



Rip rap (form of armoring)

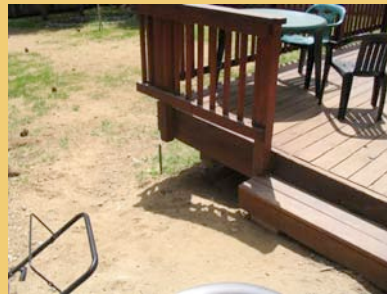
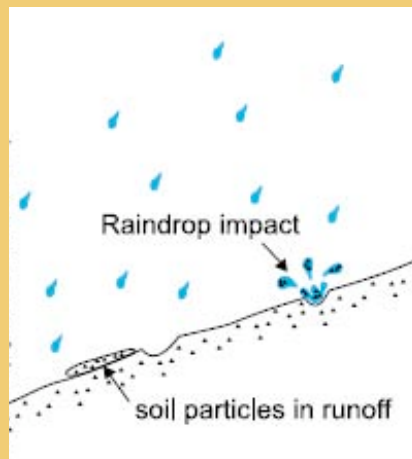


Mulch & vegetation



Terraces

## Observe: bare soil



## Design: bare soil

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- Mulch
- Vegetation



## Observe: driveway

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## Design: driveway

- Pervious pavement
- Conveyance systems
- Infiltration systems



# Observe: drip lines

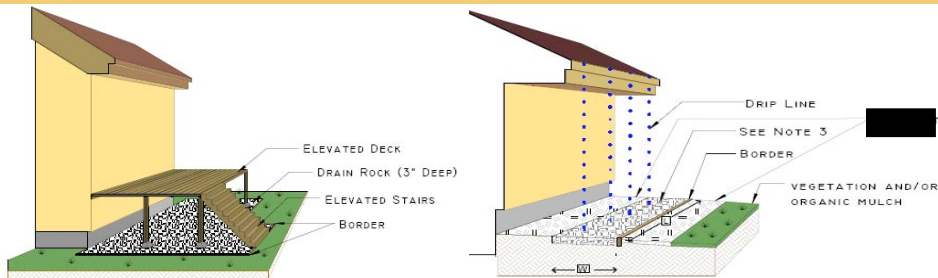
For roof & elevated structures



# Design: drip lines

For roof & elevated structures

- Drain rock
- Mulch
- Vegetation



## Roof drip line designs



## Sierra Nevada Yard & Garden



### MESSAGE

As a homeowner – if you are going to retrofit with LID techniques – you might as well take into account these other considerations....

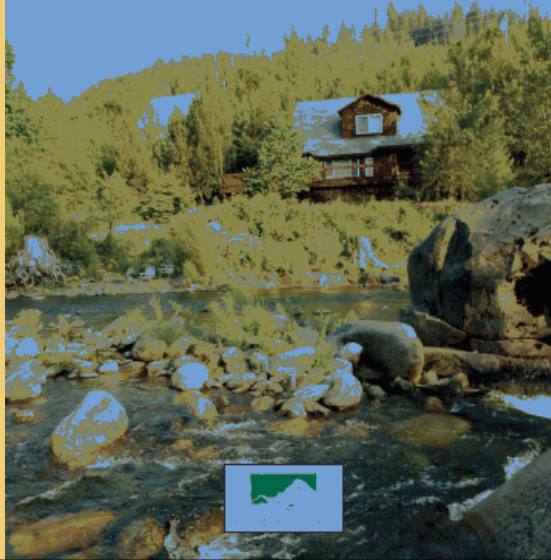


Planning for Water-  
Wise Development  
in the Sierra

*A Water and Land  
Use Policy Guide*

*Planning for  
Water-Wise Development  
in the Sierra*

A Water and Land Use Policy Guide



## Planning For Water-Wise Development in the Sierra

What is good growth from a watershed  
perspective?

- Where to grow
- How to grow
- Sustainable Site Planning and Design
- Integrated Water, Wastewater and Land Use Management



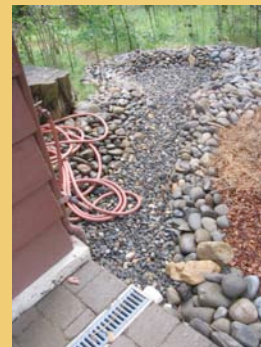
## LID Techniques promoted in the Guide

- Swales
- Bioretention Systems
- Filter Strips
- Permeable Paving Surfaces
- Using LID to Create “Green Streets”



## Messages on LID

- **LID** should be coordinated with planning for compact form and good location
- **LID** works best when multiple techniques are combined
- **Incorporating** LID is easiest when integrating the techniques into a site before a project is built





## Brockway Erosion Control Project (North Lake Tahoe)

- Joint project: CTC, TRCD, Placer County. Combines public and private BMP installations

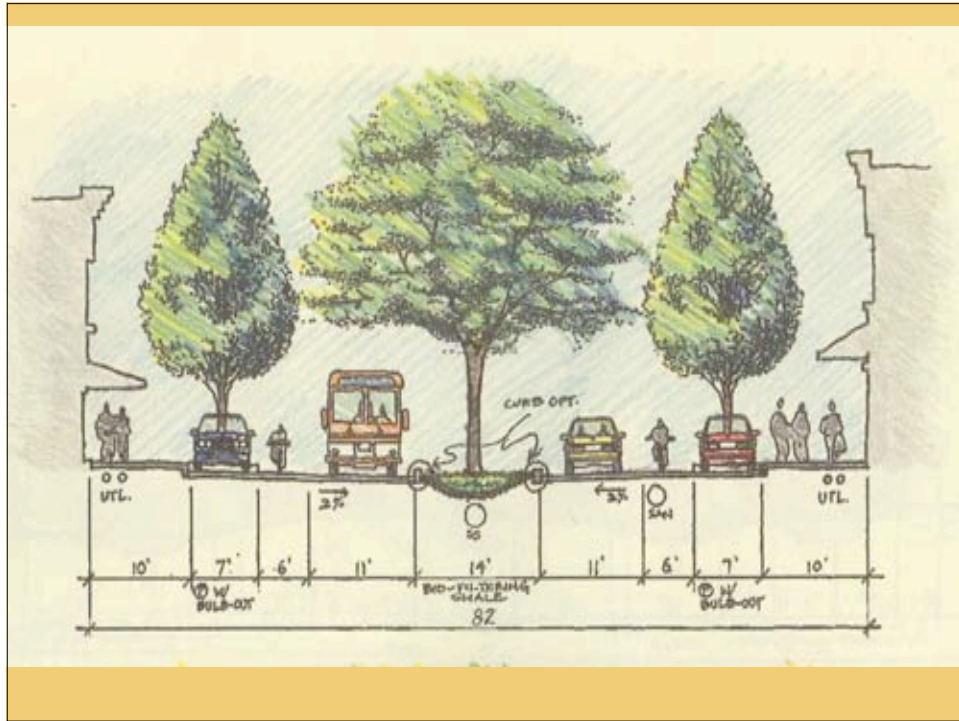


- Goal: Reduce the amount of nonpoint source pollutants flowing into Lake Tahoe
- Outreach to homeowners: 41% agreed to participate and took initial steps to install BMPs on their property

## Green Streets!

- Minimize Impervious Cover
- Use alternative paving materials
- Use on-site natural assets
- Incorporate on-street parking





## Portland's Green Streets and Seattle's Street Edge Alternatives



SEA Streets - After Construction  
2nd Ave NW - NW 117th St to NW 120th St

## Truckee's General Plan Policies

Policy Language  
from Truckee's  
GP: **Utilize Low  
Impact  
Development and  
Best Management  
Practices .... as guidelines for water quality  
and erosion control measures required by the  
Town**



## City and County Code: Obstacles to Green Streets?

ASK

- What types of material can be used for the full range of transportation infrastructure?
- How is erosion and stormwater addressed in the code? Is a specific erosion control ordinance referenced? Does it address street design?

## What LID doesn't do

**NOT A SUBSTITUTE FOR:**

- Protecting watershed infrastructure



## What LID doesn't do

**NOT A SUBSTITUTE FOR:**

- Compact growth in the right location



## What LID doesn't do

### NOT A SUBSTITUTE FOR:

- Protecting natural assets when designing a development site



## What LID doesn't do

### NOT A SUBSTITUTE FOR:

- Minimizing grading during construction



## What LID doesn't do

**NOT A SUBSTITUTE FOR:**

- Using water-wise landscaping practices



## Keep in touch...

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SIERRA NEVADA ALLIANCE

*Keeping light in the range.*

## Green Street Resources

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- *Green Streets: Innovative Solutions for Stormwater and Stream Crossings (Published by Metropolitan Council, 2003).*
- *Start at the Source - Design Guidance Manual for Stormwater Quality Protection (Published by Stormwater Management Agencies Association, 1999)*