

- ✓ Reduce impervious surfaces (i.e. streets) and saves money!
- ✓ Communities designed to maximize open space and preserve mature vegetation are highly marketable!
- ✓ Most homeowners perceive LID practices, such as bioretention, as favorable since such practices are viewed as additional builder landscaping!
- ✓ Reducing impervious surfaces, disconnecting runoff pathways, and using on-site infiltration techniques, can reduce or eliminate the need for costly storm water ponds!

By working together (designers, architects, planners and the City) can reduce land development and infrastructure costs while protecting a property's natural resources and functions. **Working together we can identify solutions that integrate the following concepts:**



1. Preserve Open Space and Minimize Land Disturbance;

- ✓ Protect and incorporate natural systems (creeks, streams, wildlife corridors, mature vegetation) as design elements;
- ✓ Utilize neo-traditional street and lot layouts and designs; and
- ✓ Decentralize and micromanage storm water at its source using LID storm water management practices.

2. LID and Stormwater Management

- ✓ LID aims to mimic natural hydrology and processes by using small-scale, decentralized practices that infiltrate, evaporate, and transpire rainwater. Specifically, LID aims to:
 - Minimize impervious surfaces;
 - Disconnect hydrologic elements (roofs, downspouts, parking areas);
 - Maintain/increase flow paths and times; and

To report a discharge or spill of **HAZARDOUS MATERIALS**, call the City's Hazardous Materials Coordinator at (805) 781-7383 or electronically at kboyle@slocity.org.

To report a discharge or spill of **SEWAGE** (*Known or suspected*) immediately call the City of San Luis Obispo Utilities Department at (805) 781-7215 or (805) 781-7220.

For **OTHER EMERGENCIES**, call 911.

To report a discharge or spill of **OTHER LIQUID MATERIALS** (*Non-sewage*) call (805) 781-7530 or call the City of San Luis Obispo 24-Hour Water Pollution Problem Reporting Hotline at (805) 783-7876 or visit <http://www.slocity.org/publicworks>, then stormwater to contact us electronically.

The information contained in this brochure is intended as a general overview for builders and developers in addressing the concept of LID. If you have other suggestions contact us at <http://www.slocity.org/publicworks>, then stormwater.

For additional information visit the following websites:

- CASQA - <http://stormwaterconference.com/>
- The Construction Industry Compliance Center - <http://www.cicacenter.org/swppp.html>
- Low Impact Development Center - <http://www.lowimpactdevelopment.org>
- NAHB Research Center Toolbase Services - <http://www.toolbase.org>
- U.S. EPA - <http://www.epa.gov/owow/nps/urban.html>

More Information Call

(805) 781-7530 or (805) 781-7170

Or visit our website at:

<http://www.slocity.org/publicworks>, then stormwater.

(DRAFT - Rev. 01/09/10)



Low Impact Development
(It's Easy & Economical)



The City of San Luis Obispo is committed to maintaining water quality and ensuring pollutants will not enter our precious waterways. As an organization we are also committed to the concept that new development will not harm the natural environment of our community which makes San Luis Obispo such a desirable place to live, work and play. With these thoughts in mind the City developed this brochure to assist developers in the benefits of sustainable development and its positive effects to our community.

More Information Call

(805) 781-7530 or (805) 781-7170

Or Visit our website at:

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Low Impact Development & Sustainability



WHAT IS LID?

Low Impact Development (“LID”) represents the most advanced stormwater management technology that has evolved from lessons learned over the past 30 years in the US and around the world. The LID approach is to incorporate cost effective storm water control devices to each site which are based upon individual site conditions to maintain water quality. *Maintaining watershed hydrology is crucial in LID!*

LID is a comprehensive source control technology that addresses the growing economic and environmental limitations of conventional stormwater management practices. LID is sensitive to addressing local government's unique environmental and regulatory needs in the most economical manner possible by reducing costs associated with stormwater infrastructure design, construction and maintenance.



LID IS ECONOMICAL

It costs less than conventional stormwater management systems to construct and maintain, in part, because of fewer pipes, fewer conveyance structures and less impervious surfaces. But the benefits do not stop there. Space once dedicated to stormwater ponds can now be used for other purposes. The greater use of on site multipurpose landscaping also offers "quality of life" opportunities by greening neighborhoods thus contributing to livability, value, sense of place, and aesthetics. Other benefits include enhanced property values and re-development potential, greater marketability, improved wildlife habitat, thermal pollution reduction, energy savings, smog reduction, enhanced wetlands protection, and decreased flooding. LID is a multi-dimensional approach with tremendous benefits.

LID IS FLEXIBLE

LID offers a wide variety of structural and nonstructural techniques to provide for both runoff quality and quantity benefits. LID works in highly urbanized constrained areas and environmentally sensitive areas for urban infill or retrofit projects. In a traditional storm water conveyance system (“SCS” - gutters, streets, storm drains, creeks, lakes) stormwater is directed as quickly as possible away from structures and urbanized areas, carrying numerous pollutants to our creeks, lakes and ocean.

LID IS SIMPLE & EFFECTIVE

Instead of large investments in complex and costly centralized conveyance and treatment infrastructure, LID allows for the integration of treatment and management measures into site features. LID encourages the multifunctional cost-effective use of green space, buildings, parking lots, landscaping, roadways, sidewalks, and various other **techniques to detain, filter, treat and reduce runoff.** LID is completely different from conventional management strategies.

Conventional practices use drainage systems to get water off a site as quickly as possible to a centralized treatment device (i.e., storm drain system – creek). LID uses many decentralized micro-scale “*at the source control techniques*” to manage runoff. This involves strategic placement of distributed lot-level controls that can be "customized" to

more closely mimic a watershed's natural hydrology, water quality regime and natural flow. One of the primary goals of LID design for new development is to reduce runoff volume through infiltration, recharge, evaporation and find beneficial uses for rainwater rather than disposing of it as a waste product into storm drains and our local streams, creeks, lakes and the ocean. *The result is a landscape that is functionally equivalent to predevelopment hydrologic conditions that generates less surface runoff, reduced risk for pollution, less erosion and possible damage to streams, creeks, lakes, and our ocean.*

LID reduces the volume of pollutants being carried away and greatly increases the recharge of our local watershed. Opportunities to apply LID principles and practices are infinite; as any feature of the urban landscape can be modified to control runoff (e.g., buildings, roads, walkways, yards, open space) or reduce the introduction of pollution.

LID TOOLS INCLUDE 5 BASIC TECHNIQUES

1. Encourages conservation of natural features (wetlands, streams, woodlands and buffers);
2. Promotes impact minimization techniques (reduce clearing and grading, limit lot disturbance, impervious surface reduction and disconnection);
3. Provides for strategic runoff timing (slowing water down to allow infiltration and evaporation);
4. Uses an array of integrated management practices (rain gardens, rooftop storage, rain water use, parking lot storage, and amended soils); and
5. Advocates pollution prevention measures to reduce the introduction of pollutants to the environment.

The more LID techniques are used in development the closer one can get to restoring the natural hydrologic and water quality regime of a watershed. LID gives us the tools to design the built environment to remain a functioning part of the ecosystem. The effectiveness of LID technologies increases as all involved in the development industry improve our knowledge and skills. **There is no one technique for LID.** Its power lies in the cumulative benefits of all its techniques.



For more information see www.lowimpactdevelopment.org or call the City of San Luis Obispo Community Development Department at (805) 781-7170.