



GREEN BUILDING PROGRAM



COUNTY OF LOS ANGELES
A joint effort by Department of Regional Planning and
Department of Public Works

Waste Management Board

SCAQD

Other Jurisdictions

Public Health

Fire Department

Town Councils

Citizen Action Groups

Realtors

Regional Planning

Conservancy

National Park Service

Air Resources Board

Community Development Commission

Interior Designers

GREEN BUILDING PROGRAM

Internal Services

Building Industry

SCAG

Utility Agencies

PUC

Parks and Recreation

Homeowners Associations

Health Services

Architects

Public Works

MTA

Energy Commission

Sanitation District

Engineers

GREEN BUILDING PROGRAM

Low Impact Development Ordinance



Green Building Ordinance



Drought-Tolerant & Native Landscaping Ordinance



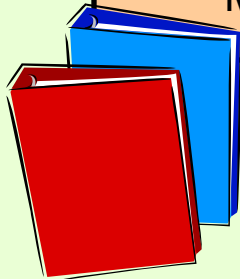
Cost-Benefit Analysis



Education & Outreach



Guidelines Manual



Cost Benefit Analysis

In examining the costs and benefits of Green Building, we note that there are two types of cost associated with building and maintaining a development.

- Upfront
- Lifetime



Cost Benefit Analysis

When examining the long-term costs and benefits of Green Building, it is also important to look at these various aspects:

- Maintenance costs
- Utilities costs
- Environmental impacts
- Total economic impact





Why include a Green Building program in our County Code at this time?

- Conserve energy and water
- Reduce carbon emissions and footprint
- Comply with AB 32 (2006)
- Incorporate Green Building program into the General Plan and Zoning Ordinance Updates



GREEN BUILDING PROGRAM

The built environment has a profound impact on our natural environment, economy, health, and productivity.

In the United States alone, buildings account for:

65% of electricity consumption,

36% of energy use,

30% of greenhouse gas emissions,

30% of raw materials use,

30% of waste output (136 million tons annually),
and

12% of potable water consumption.

Source: www.usgbc.org/DisplayPage.aspx?CMSPageID=1718



Encouraging **clustered development** within subdivisions.

Maintaining 70% **open space** within non-urban hillside management areas.

Recycling 50% of construction and demolition debris.

Updating the **General Plan** to address **climate change** and incorporate green building concepts.

The County's Commitment to Green

Supporting **Transit Oriented Development** through the granting of density bonuses.

Tree planting within subdivisions.

Water-efficient landscaping.

2% landscaping of commercial parking lots.

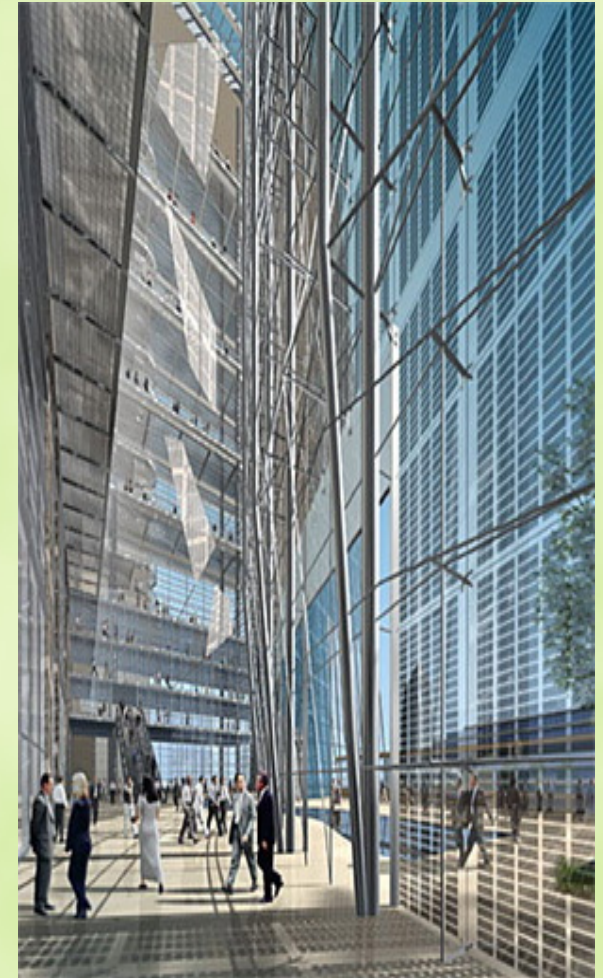
Conditioning Green Building practices for certain projects.

GREEN BUILDINGS STANDARDS

Purpose:





The goal of this ordinance is to minimize negative environmental and human health impacts as caused by construction, maintenance and operation of buildings.

By incorporating green measures into development practices, we can increase public health, save energy and water and maintain longer lasting and safer buildings.



GREEN BUILDINGS STANDARDS

Recommendations For Green Building Standards Nonresidential and Residential Construction

TITLE 22 (ZONING)		2008	2009	2010	2011
1	Large nonresidential or mixed use buildings ≥ 25,000 square feet of gross floor area 	LEED Checklist	LEED - Certified	LEED - Silver	LEED - Silver
2	Tenant improvement ≥ 25,000 square feet of gross floor area which requires a building permit as determined by the Department of Public Works	LEED Checklist	LEED – Certified	LEED – Silver	LEED - Silver
3	Remodels, additions or alterations to an existing building where the area of work is ≥ 10,000 gross square feet	LEED Checklist	LEED – Certified	LEED – Silver	LEED - Silver
4	Mid-Size nonresidential or mixed use Buildings ≥ 10,000 to 25,000 square feet of gross floor area 	Voluntary	LEED Checklist	LEED Checklist	LEED Checklist
5	Tenant improvement ≥ 10,000 to 25,000 square feet of gross floor area which requires a building permit as determined by the Department of Public Works	Voluntary	LEED Checklist	LEED Checklist	LEED Checklist
6	Large nonresidential or mixed use buildings Nonresidential or mixed use projects that include a building ≥ 75 feet in height of new construction 	LEED Checklist	LEED - Silver	LEED - Silver	LEED - Silver
7	Residential I: ≤ four residential units including single-family residences, two-family or three-family residences, and apartments 	Voluntary	Voluntary	GPR	GPR

GREEN BUILDINGS STANDARDS

Recommendations For Green Building Standards Nonresidential and Residential Construction

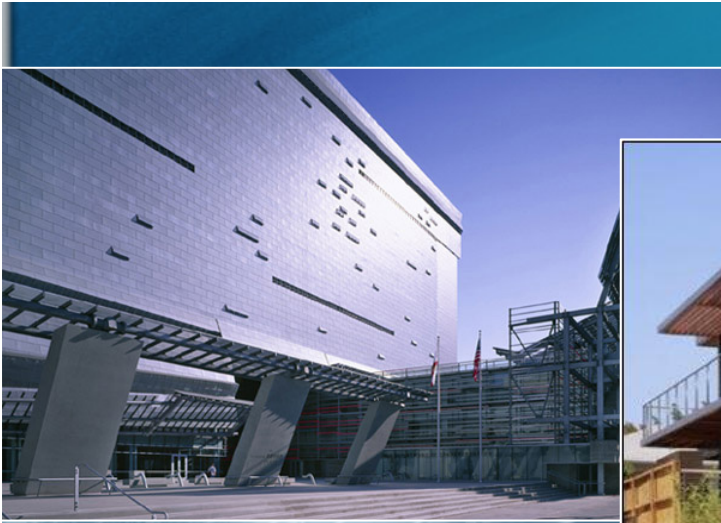
	TITLE 21 (SUBDIVISION)	2008	2009	2010	2011
8	Residential II: two to, and including four residential units with a parcel map	Voluntary	Voluntary	GPR	GPR
9	Residential III: ≥ five to 50 residential units	Voluntary	GPR	GPR	GPR
10	Residential IV: ≥ 51 Residential units 	Voluntary	GPR with additional measures for sustainable communities	GPR with additional measures for sustainable communities	GPR with additional measures for sustainable communities

GREEN BUILDINGS STANDARDS

Type of Standards:

- Leadership in Energy and Environmental Design (LEED) – U.S. Green Building Council
- GreenPoint Rated – Build It Green
- California Green Builder – The Building Industry Institute
- County's own standards (will take time)





Green Buildings

(all in L.A. County)





Northwest Innovation Center
45 Eureka Street
Pasadena
LEED-Gold Certified

Designed and Built by a
multidisciplinary team led
by J.L. Moseley Company

BUSINESS DISTRI

LOW IMPACT DEVELOPMENT STANDARDS

Purpose:

Low Impact Development (LID) is an approach to site design and development that manages stormwater and other urban runoff.



LID goals:

- Treat stormwater and other urban runoff
- Promote groundwater recharge through on-site infiltration
- Maintain and enhance natural resources systems while reducing infrastructure costs.



LOW IMPACT DEVELOPMENT STANDARDS

Recommendations:

1. Work with public agencies to identify the most effective LID development standards for private development and public roads.
2. Amend the county code to broaden requirements for landscaping parking lots to include a greater number of trees and explore the feasibility of landscaping building rooftops.



LOW IMPACT DEVELOPMENT STANDARDS

Recommendations:

3. Review and consider LID requirements for other jurisdictions.

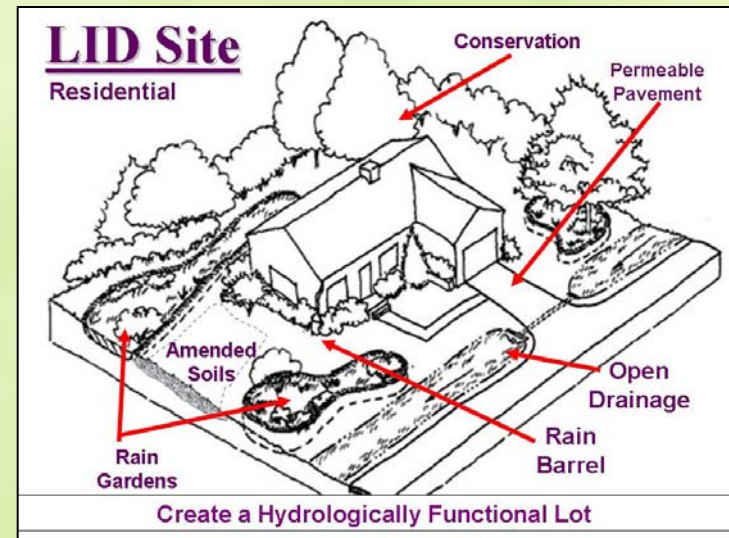
Municipality	LID Type	LID Requirements
City of Lacey, WA	Uniform	Zero percent effective drainage discharge
County of Ventura, CA	Uniform	Reduce effective impervious area to 5% of total project
City of Santa Monica, CA	Uniform	Reduce expected runoff by a minimum of 20%
City of Seattle, WA	Tiered (Size)	<p>Tier 1 - Any development (residential/commercial) over 750 square feet/building permit - max 0.2 cubic ft/sec discharge rate</p> <p>Tier 2 - Development over 9,000 square feet - max 0.15 cubic ft/sec discharge rate, additional restrictions - natural drainage systems to be maintained, etc</p>
Truckee Meadows, NV (City of Reno and Sparks Metropolitan Area) (Draft)	Tiered (Use)	<p>Tier 1 - Projects over one acre - reduce runoff peaks and volumes to pre-developed levels and incorporate design features that will address water quality.</p> <p>Tier 2 - Projects that include constructed open channels and local or regional detention basins for flood management</p> <p>Tier 3 – Projects that include industrial, commercial or civic facilities</p> <p>Tier 4 – Projects located within or directly adjacent to environmentally sensitive areas</p>



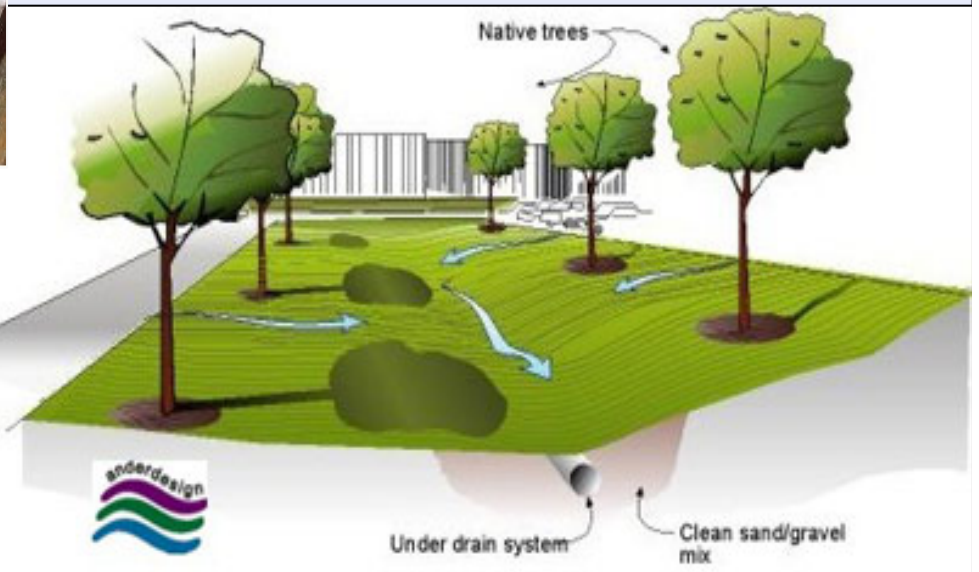
LOW IMPACT DEVELOPMENT STANDARDS

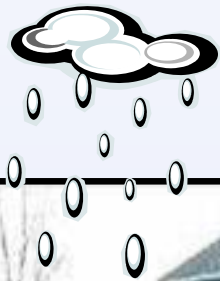
Types of Standards:

- Green roofs
- Vegetated filtration swales
- Filtration strips
- Permeable paving
- Retention ponds - micro and macro watershed
- Cisterns/rain barrels
- Rain gardens



Types of Low Impact Development



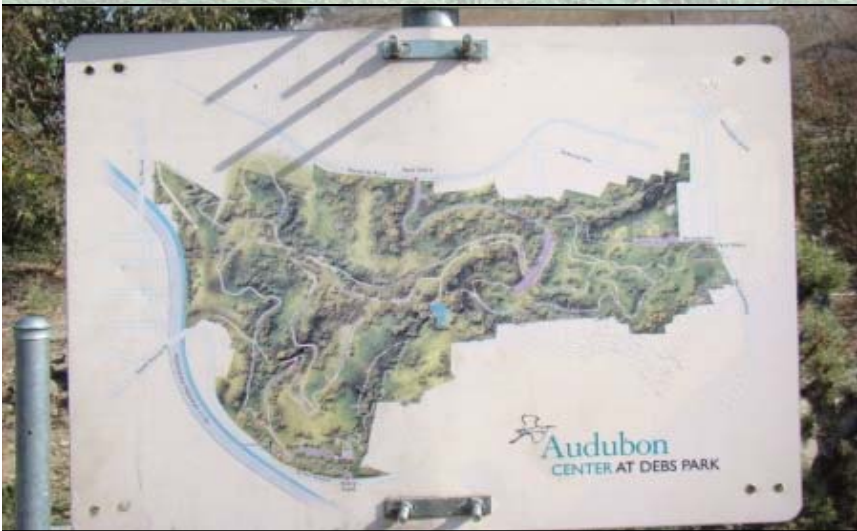
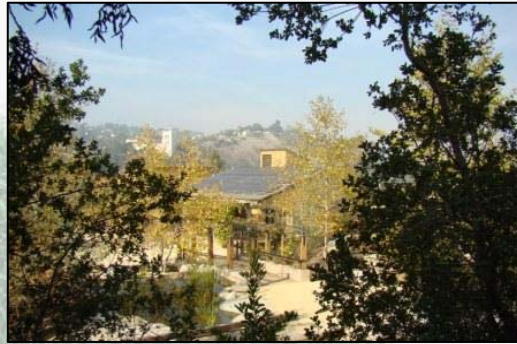


Rain Gardens



The Audubon Center at Debs Park in Los Angeles

A self-sustained nature park with Green Building, Native Landscaping and LID technology



Park site designed by Esherick, Homsey, Dodge & Davis and Campbell & Campbell



The Audubon Center at Debs Park

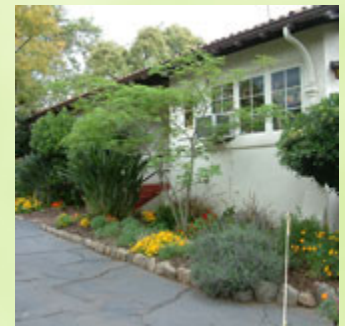
Los Angeles
LID technology throughout the park



DROUGHT-TOLERANT AND NATIVE LANDSCAPING STANDARDS

Purpose:

The Drought-tolerant and Native Landscaping ordinance establishes guidelines for plant material, planting techniques and maintenance of landscaped areas for the purpose of conserving water.



DROUGHT-TOLERANT AND NATIVE LANDSCAPING STANDARDS

Recommendations:

- Require that a minimum percentage of plants be climatically appropriate for the area.
- Limit the percentage of turf permitted in a landscaped area.
- Require plant positioning that allows for efficient watering.
- Position trees so that they shade sidewalk, patios and driveways.
- Require the installation of both indoor and outdoor water meters to monitor use in large developments.



DROUGHT-TOLERANT AND NATIVE LANDSCAPING STANDARDS

Type of Standards:

A. County-approved plant list by geographic zones

- Percentage required of total landscaped area
- Native species vs. climatically appropriate species

B. Turf Minimums

- % of total landscaped area;
- % of lot size; or
- Set size limit in square footage





Drought-Tolerant and Native Landscaping Scenes –
Homes, Sidewalks, Public Places





California Wild Rose



Purple Needle Grass



Buckbrush



False indigo



Desert Larkspur

A few examples of Drought-Tolerant and Native Plants naturally found in Los Angeles County



Desert Marigold



Heerman's Lotus



Claret Cup Cactus



Prettyface Triplet Lily



Links...



Leadership in Energy and Environmental Design
United States Green Building Council
www.usgbc.org



GreenPoint Rated Program
Build It Green
www.builditgreen.org



California Green Builder
The Building Industry Institute
www.cagreenbuilder.org



American Society of Landscape Architects
www.asla.org



For more information...

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Website: <http://planning.co.la.ca.us/spGreenBuildingProgram.htm>

Questions for Discussion...

Any other questions?

**Your comments and feedback
are welcome!**

