



## DEPARTMENT of COMMUNITY DEVELOPMENT

1700 WEST 162nd STREET / GARDENA, CALIFORNIA 90247-3732 / WWW.CITYOFGARDENA.ORG / PHONE (310) 217-9530

### LOW IMPACT DEVELOPMENT (LID) Requirements and Checklist

#### Residential Developments of Four (4) Units or Less

All development must comply with the County of Los Angeles' Title 12, Ch. 12.84 (LID).

Permit Application No. \_\_\_\_\_

Address: \_\_\_\_\_

LID standards are intended to distribute stormwater and urban runoff across developed sites to help reduce adverse water quality impacts and replenish groundwater supplies. The LID Manual is available at the following link: <https://pw.lacounty.gov/idd/web/Forms.aspx> - Select manual selected from the HYDROLOGY menu.

Under the NPDES permit and the County of Los Angeles LID ordinance, priority projects are required to prohibit the discharge of pollutants from property developments. Preventing these pollutants from entering stormwater discharge system will be accomplished by requiring the installation and maintenance of post-construction treatment controls.

#### **Step 1: Select Project Type from Table 1, below:**

<b>Table 1</b> Select Project Type	
<b>Project Type</b>	<b>Applies?</b>
New Development	
Hillside Development	
Redevelopment	
Addition or alteration which alters 50% or more of impervious surfaces	
None of the above	
<i>If "None of the Above" is selected, the project is exempt from LID requirements. No further action necessary.</i>	

Unless "None of the Above" in **Table 1** is selected, **residential development of 4 units or less** must implement a minimum of two LID Best Management Practice (BMP) alternatives as indicated in Section 3.2 and Appendix E (Stormwater Quality Control Measure Fact Sheets) of the LID Manual, as listed in **Table 2**, below.

Plans must show complete construction details, materials, manufacturer, model number, dimensions, location, structures, slopes, construction notes, specifications, cross sections, elevations, and setbacks from property lines needed to construct proposed LID BMPs. BMPs should be designed so as not to adversely impact building foundations, pavement, slope stability, or an adjacent property. For hillside properties all catch basins and inlets that discharge into existing or proposed storm drains must be labeled to discourage illegal dumping of pollutants. Stencils are available at your local Building and Safety office.

**Step 2: Select minimum two (2) BMP alternative from Table 2, below:**

Table 2			
Select minimum two (2) LID Best Management Practice (BMP) alternatives as indicated in the LID Manual, Section 3.2 and Appendix E.			
BMP Alternative	Description		Selected
Permeable Porous Pavement	Show detail of placement, base, geotextile, subgrade, and soil preparation per manufacturer’s specifications		
	The surface must support an AASHTO H20 load condition for Fire Department access		
	A minimum of 30”-deep impervious liner or edge restraint is required within 5’ of the public right-of-way, property lines, and structures unless otherwise recommended by a geotechnical engineer.		
Downspout Routing	Cistern/Rain Barrel	Show location of cistern/rain barrels. Rain barrels should be designed to store 200 gallons and be located such that roof run-off is equally distributed. Rain gutters & downspouts shall be shown on plans.	
		Plans shall show hose bibs or pump systems for discharge and watering of landscaping. (Note: A separate electrical permit is required for pump systems).	
		A plumbing permit is required for backflow prevention devices when the discharge system is tied into a landscaping irrigation system served by a potable water source.	
		AASHTO H20 loading is required for underground cisterns located in an area subject to traffic conditions.	
		Plans should include manufacturer specifications and notes for rain barrels	
	Rain Garden / Stormwater Planter	Surface area of flow through type planter box shall be designed and sized to treat 200 gallons.	
		Planter must have 18”-min. top soil layer, and 12”-min. gravel layer	
		The infiltration type planter box shall be designed to infiltrate 200 gallons over a 48-hour period.	

<b>Table 2</b> Select minimum two (2) LID Best Management Practice (BMP) alternatives as indicated in the LID Manual, Section 3.2 and Appendix E.		
BMP Alternative	Description	Selected
Divert Runoff / Disconnect Impervious Surfaces <b>(REQUIRED for hillsides sites ≥ 25%)</b>	Show driveway, roof, and other impervious surfaces to drain toward pervious landscaped areas. The ratio of impervious to pervious area shall be no less than 2:1. This ratio must be identified on plans for each affected area. A minimum of 90% of the untreated impervious area shall be routed toward vegetated areas or water quality BMPs.	
Dry Well	Show details including the following: Location, cross-section details, liner materials, subbase, and all manufacturer's specifications and/or recommendations from geotechnical engineer.	
	The required soils report shall address dry well and manufacturer's specifications and requirements.	
	The system should be designed to store and infiltrate 200 gallons of storm water within a 48-hour period.	
	Provide calculations to determine the infiltration volume for sizing of well, and determine time of infiltration to percolate 200 gallons.	
	A filter or sediment control is required to filter water entering a dry well.	
	Dry wells that are deeper than their widest dimension are defined by the EPA as Class V injections wells, and are subject to inventory requirements under the Safe Drinking Water Act and must be registered at the following link with the EPA as injection wells: <a href="http://www.epa.gov/region09/water/groundwater/injection-wells-register.html">http://www.epa.gov/region09/water/groundwater/injection-wells-register.html</a> .	
	If this type of dry well is proposed, provide copy of registration.	
Landscaping and Landscape Irrigation	Show a minimum of two (2) 15-gallon trees to be planted and maintained. Trees shall be located within 10' of impervious surfaces. One of the trees may be on the County's drought-tolerant list:  <a href="http://planning.lacounty.gov/assets/upl/project/green_drought-tolerant-garden.pdf">http://planning.lacounty.gov/assets/upl/project/green_drought-tolerant-garden.pdf</a>	
	Install smart irrigation controllers	
Green Roof	Show area of green roof on site plan	
	Structural calculations for design of green roof will be required as part of the building plan submittal	
	Fire Department approval will be required as part of the building plan check	

**All Infiltration basins, dry wells, or planters must comply with the setbacks in Table 3, below:**

<b>Table 3</b> Infiltration Facility Setbacks	
<b>Setback from</b>	<b>Distance in feet</b>
Property lines and public right-of-way	5' min.
Any foundation	15', or within a 1:1 plan drawn up from the bottom of the foundation*
Face of any slope	H/2, 5'-min. (H is the height of the slope)*
Seasonal high ground water	10' min. depth to invert
Water wells	100' min.

\*Unless otherwise recommended by a geotechnical engineer.

**Infiltration time shall comply with Table 4:**

<b>Table 4</b> Required Infiltration Time (due to vector control)	
<b>BMP Type</b>	<b>Duration</b>
Open above ground (includes planting soil or open gravel pit)	48-hrs. to drain completely
Underground retention	96-hrs. to drain completely

Additional requirements and documentation are outlined in Table 5, below:

<p><b>Table 5</b> Additional Documentation Requirements for LID</p>	
Document Description	Provided
An Infiltration Report by a Soils Engineer and the grading plans must be submitted for review to approval of an Infiltration/Retention - Low Impact Development (LID) BMP. The Infiltration Report must comply with Los Angeles County GMED Geotechnical Memo GS 200.1 and should be presented as its own report. All recommendations and notes as indicated in the soils engineering report and/or GMED review sheets must be incorporated into the grading plans. The GS 200.1 memo can be found at: <a href="http://dpw.lacounty.gov/gmed/permits/docs/policies/GS200.1.pdf">http://dpw.lacounty.gov/gmed/permits/docs/policies/GS200.1.pdf</a> .	
Rainwater harvest and reuse systems that are NOT gravity fed require approval from LA County Public Health, Cross Connection & Water Pollution Control Program. The application and further information is found at: <a href="http://publichealth.lacounty.gov/eh/EP/cross_con/cross_con_main.htm">http://publichealth.lacounty.gov/eh/EP/cross_con/cross_con_main.htm</a> . In addition, approval from LA County, Building and Safety Plumbing Section is required. Rainwater harvest design and plans must comply with County of Los Angeles, Plumbing Code, Chapter 16 –Non-Potable Rainwater Catchment Systems.	
Different types of infiltration facilities such as dry wells, unlined sumps, seepage pits, and infiltration galleries are some of the terms used to describe Class V injection wells as defined by the EPA. Register the proposed infiltration facility at the following online registration form: <a href="http://www.epa.gov/uic/forms/underground-injection-wells-registration">http://www.epa.gov/uic/forms/underground-injection-wells-registration</a> .	
A recorded covenant indicating that the owner of the subject development is aware and agrees to maintain all stormwater BMP features for this project is required. The covenant shall include operation and maintenance guidelines prepared by the project civil engineer/architect. See attached LID Covenant Preparation and Recordation instructions. A draft copy of the covenant including all exhibits must be reviewed prior to recordation.	

The following information must be provided on the plans for LID Projects:

Date of Maintenance Agreement: _____			
Proposed Impervious Area:	_____	sq. ft.	
Design Storm (check one):	<input type="checkbox"/> 85 <sup>th</sup> Percentile	<input type="checkbox"/> 0.75 in.	
SWQDv:	_____ cu. ft.	_____ Percent retained onsite	
LID Solution (check one):	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Biofiltration	

# INSTRUCTIONS FOR PREPARATION AND RECORDATION OF LID COVENANT AND SUPPORTING DOCUMENTS

1. SUBMIT the following documents to your Plan Checker:
  - a. LID Covenant
  - b. LID Site Diagram on 8 ½ x 11 sheets with X and Y coordinates of LID BMP's (Exhibit 1)
  - c. LID Maintenance Guidelines (Exhibit 2)

Submit these documents to your plan checker for approval as to form prior to signing and notarizing. Plan checker will notify applicant if documents are ready for recordation or if corrections are needed.

2. COVENANTS MUST BE SIGNED, NOTARIZED, AND RECORDED. Sign, notarize and record documents after notification that the documents are ready to record.

Note: RECORDATION is the responsibility of the applicant The main Recorder's Office is located at 12400 Imperial Highway, Norwalk, CA 90650. Additional branch offices for recording documents are available.

Information for the County's Recorder's office can be obtained on the internet at <http://www.lavote.net> or by calling (562) 462-2125 for more information.

Applicant must provide copy of the recorded LID Covenant and Exhibits stamped by the recorder's office. A conformed copy will be stamped by the County Recorder, if necessary, for immediate plan approval. (It is recommended applicants obtain a copy of the recorded document.) Otherwise, the original should be returned to the designated section by the County Recorder in approximately three (3) weeks.

3. For any required forms mentioned below please see:  
<http://dpw.lacounty.gov/bsd/publications/index.cfm> (under headings: Drainage and Grading, LID and NPDES)

RECORDING REQUESTED BY AND  
MAIL TO:

CITY OF GARDENA  
BUILDING AND SAFETY DEPARTMENT  
1700 West 162<sup>nd</sup> Street  
Gardena, CA 90247-3732

Space above this line is for Recorder's use

**COVENANT AND AGREEMENT**  
**REGARDING THE MAINTENANCE OF LOW IMPACT DEVELOPMENT (LID) &**  
**NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM (NPDES) BMPs**

The undersigned, \_\_\_\_\_ ("Owner"), hereby certifies that it owns the real property described as follows ("Subject Property"), located in the County of Los Angeles, State of California:

**LEGAL DESCRIPTION**

ASSESSOR'S ID # \_\_\_\_\_ TRACT NO. \_\_\_\_\_ LOT NO. \_\_\_\_\_

ADDRESS: \_\_\_\_\_

Owner is aware of the requirements of County of Los Angeles' Green Building Standards Code, Title 31 Section 4.106.4 (LID), and the National Pollutant Discharge Elimination System (NPDES) permit. The following post-construction BMP features have been installed on the Subject Property:

- ☐ Porous pavement
- ☐ Cistern/rain barrel
- ☐ Infiltration trench/pit
- ☐ Bioretention or biofiltration
- ☐ Rain garden/planter box
- ☐ Disconnect impervious surfaces
- ☐ Dry Well
- ☐ Storage containers
- ☐ Landscape and landscape irrigation
- ☐ Green roof
- ☐ Other \_\_\_\_\_

The location, including GPS x-y coordinates, and type of each post-construction BMP feature installed on the Subject Property is identified on the site diagram attached hereto as Exhibit 1.

Owner hereby covenants and agrees to maintain the above-described post-construction BMP features in a good and operable condition at all times, and in accordance with the LID/NPDES Maintenance Guidelines, attached hereto as Exhibit 2.

Owner further covenants and agrees that the above-described post-construction BMP features shall not be removed from the Subject Property unless and until they have been replaced with other post-construction BMP features in accordance with County of Los Angeles' Green Building Standards Code, Title 31.

Owner further covenants and agrees to maintain all drainage devices located within his or her property in good condition and operable condition at all times.

Owner further covenants and agrees that if Owner hereafter sells the Subject Property, Owner shall provide printed educational materials to the buyer regarding the post-construction BMP features that are located on the Subject Property, including the type(s) and location(s) of all such features, and instructions for properly maintaining all such features.

Owner makes this Covenant and Agreement on behalf of itself and its successors and assigns. This Covenant and Agreement shall run with the Subject Property and shall be binding upon Owner, future owners, and their heirs, successors and assignees, and shall continue in effect until the release of this Covenant and Agreement by the County of Los Angeles, in its sole discretion.

**Owner(s):**

By: \_\_\_\_\_ Date: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_

A notary public or other officer completing the attached certificate verifies only the identity of the individual who signed the document to which the certificate is attached, and not the truthfulness, accuracy, or validity of that document.

(PLEASE ATTACH NOTARY)

**FOR DEPARTMENT USE ONLY:**

**MUST BE APPROVED BY CITY OF GARDENA BUILDING AND SAFETY DIVISION PRIOR TO RECORDING.**

APPROVED BY: \_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Signature)

Date \_\_\_\_\_