



City of Vernon

Low Impact Development Guidance Manual

With public concern growing over the negative effects of urban runoff and stormwater pollution to the environment, local, state, and federal agencies have devised plans to infiltrate, control and/or treat stormwater-related pollution before it reaches receiving waters.

The Federal Clean Water Act is the principal vehicle for control of stormwater pollution. Under the Federal Clean Water Act, each municipality throughout the nation is issued a stormwater permit through the National Pollutant Discharge Elimination System (NPDES) program. The primary goal of each Stormwater permit is to stop polluted discharges from entering the storm drain system and local receiving and coastal waters. In California, the NPDES stormwater permitting program is administered by the State Water Resources Control Board (SWRCB) through its nine Regional Boards.

The requirement to implement the Permit is based on federal and state statutes, including Section 402(p) of the Federal Clean Water Act, Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990, and the California Water Code. The Federal Clean Water Act amendments of 1987 established a framework for regulating stormwater discharges from municipal, industrial, and construction activities under the NPDES program. The primary objectives of the stormwater program requirements are to:

- Effectively prohibit non-stormwater discharges, and
- Reduce and eliminate the discharge of pollutants from stormwater conveyance systems to the Maximum Extent Practicable statutory standard.

On November 8, 2012 the Regional Board adopted Order No. R4-2012-0175 (Municipal NPDES Permit). The Municipal NPDES Permit requires the Permittees to implement Low Impact Development under the Planning and Land Development Program provision.

The Planning and Land Development Program, focuses on preventing pollutants that could be generated from new development and redevelopment projects, termed Planning Priority Projects from reaching stormwater conveyance systems and receiving waters. Under this program, the Los Angeles Regional Board developed requirements for Planning Priority Projects to control post construction pollutants, pollutant loads, and runoff volume emanating from the project site by minimizing the impervious surface area and controlling runoff from impervious surfaces through infiltration, bioretention and/or rainfall harvest and use.

A relatively recent stormwater management approach aimed at achieving the primary goal of NPDES permits is through the use of Low Impact Development (LID). LID is a stormwater management strategy designed to retain stormwater runoff on-site by minimizing soil compaction and impervious surfaces, and by disconnecting storm water runoff from conveyances to the storm drain system. The Municipal NPDES Permit establishes criteria for the volume of stormwater to be retained onsite as required to help meet water quality goals. LID comprises a set of site design approaches and Best Management Practices (BMPs) that consist of building and landscape features designed to retain or filter stormwater runoff for infiltration, evapotranspiration, and use of stormwater. These LID practices can effectively remove nutrients, bacteria, and metals from stormwater while reducing the volume and intensity of stormwater flows offsite. With respect to urban development and redevelopment projects, it

can be applied onsite to mimic the site's predevelopment drainage characteristics. Through the use of various infiltration techniques, LID is geared towards minimizing surface area that produces large amounts of runoff and does not allow water to infiltrate into the ground.

In November 2013, the City of Vernon amended Chapter 21, Article V Storm Sewer System of the Municipal Code to include stormwater pollution controls for specific new development and redevelopment projects termed Planning Priority Projects (Ordinance No. 1216). The purpose of the provisions in Chapter 21 is to enhance and protect the water quality of the receiving waters of the United States in a manner that is consistent with the Clean Water Act and the Municipal NPDES Permit. The intent of Chapter 21 is to protect and control the City's sanitary sewer system; and to reduce Stormwater and urban runoff pollutants by improving the quality of Stormwater that are discharged into the regional Stormwater system within Los Angeles County known as the municipal separate storm sewer system (MS4).

Chapter 21 Article V Storm Sewer System can be accessed from the City of Vernon's website link at:

[http://www.amlegal.com/nxt/gateway.dll/California/vernon_ca/thecodeofthecityofvernoncalifornia?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:vernon_ca](http://www.amlegal.com/nxt/gateway.dll/California/vernon_ca/thecodeofthecityofvernoncalifornia?f=templates$fn=default.htm$3.0$vid=amlegal:vernon_ca)

Implementation of the County of Los Angeles Department of Public Works Low Impact Development Standards Manual (February 2014)

As a guidance manual to assist developers in complying with the City's requirements of the Planning and Land Development Program regulations the City of Vernon utilizes the County of Los Angeles Department of Public Works Low Impact Development Standards Manual (February 2014) except as further amended below (hereinafter referred to as the County's LID Standards Manual). Said manual can be accessed at: http://dpw.lacounty.gov/wmd/dsp_lowimpactdevelopment.cfm

As referenced in the County's LID Standards Manual, infiltration testing to determining the site specific design infiltration rates and feasibility must be performed according to the most recent Geotechnical and Materials Engineering Division (GMED) Policy GS 200.1, which is available online at: <http://dpw.lacounty.gov/gmed/permits/docs/policies/GS200.1.pdf>

Supplementary Information

The County's LID Standards Manual is tailored to comply with the Municipal NPDES Permit and to complement and be consistent with the Los Angeles County's November 2013 LID Ordinance requirements. The following revisions, changes, additions, deletions, etc. to the County's LID Standards Manual are made to tailor and be consistent with the City of Vernon's Municipal Code, Chapter 21 Article V Storm Sewer System:

Section 1 of the County's LID Standards Manual

- Chapter 21 Article V Storm Sewer System of the City of Vernon Municipal Code will be applied to all references of the November 2013 LID Ordinance.
- 1.6 - The projects subject to City of Vernon conditioning and approval for the design and implementation of post-construction controls to mitigate potential stormwater pollution, prior to completion of the project(s) are referred to as Planning Priority Projects in Chapter 21 Article V Storm Sewer System of the Vernon Municipal Code. Such projects are referred to

as Designated Projects in the County’s LID Standards Manual. All project documentation will refer to said project(s) as Planning Priority Project(s).

- 1.6 - Street and Road Construction projects shall be in accordance with the City of Vernon’s [Green Streets Policy](#) and [Green Streets Manual](#).
- 1.7 – In addition to the Project Plan Submittals listed under Section 1.7 of the County’s LID Standards Manual, please refer to the City of Vernon’s additional requirements on the LID Plan Check List attached herewith as Appendix A.
- 1.7 – All required documents are to be submitted to the City of Vernon Public Works, Water & Development Services Department (hereinafter referred to as the Public Works Department) for review. No documents are to be submitted to Los Angeles County.

Section 3 of the County’s LID Standards Manual

- Non-Designated Projects are not applicable to City of Vernon requirements.

Section 4 of the County’s LID Standards Manual

- Setbacks – The County of Los Angeles’s setback requirements detailed in the County of Los Angeles’ Administrative Manual GMED Policy GS 200.1 are amended as follows:

Infiltration facilities must comply with the following setbacks:

INFILTRATION FACILITY SETBACKS*	
Setback from	Distance
Property lines other than public right of way	15 feet
Public Right of Way	5 feet
Any foundation	The invert at least 15 feet outside a 1:1 plane drawn up from the bottom of adjacent foundations
Face of any slope	H/2, 5 feet minimum (H is height of slope)
Private water wells used for drinking water	100 feet

* Unless otherwise recommended by a Geotechnical Engineer and approved by the City.

Section 7 of the County’s LID Standards Manual

- Those Planning Priority Projects that are determined to be technically infeasible to reliably retain 100% of the SWQDv on-site, the City of Vernon may grant a waiver on condition that alternative compliance measures are implemented as described in section 7.4 of the County’s LID Standards Manual.

Section 9 of the County’s LID Standards Manual

- Template of Maintenance Covenant and Agreement for stormwater quality control measures is attached herewith as Appendix B.

Additional Requirements

Project Review and Permitting Process

The requirement to incorporate stormwater pollution control measures into the design plans of Planning Priority Projects in order to mitigate stormwater quality impacts is implemented through the City's plan review and approval process. During the review process, the plans will be evaluated for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications will be reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals. The reviewer will also determine if project designs need to be modified to address stormwater pollution prevention objectives.

Planning Priority Projects are processed through the Public Works Department. The Public Works Department will work jointly with the City of Vernon Health & Environmental Control Department (hereinafter referred to as the Health Department) to review respective Planning Priority Projects.

When an applicant files an application for a discretionary project, Public Works Department staff will determine whether the project qualifies for an exemption from CEQA. If the project is not exempt from CEQA, the project is subject to further review to determine any adverse impacts the projects may have on the environment, including those impacts from stormwater discharges. These project types (e.g., zone variances, conditional use permits, plan amendments, etc.) are considered discretionary review projects requiring review by an elected or appointed decision-making body. Site specific source control measures for stormwater quality impacts (such as stormwater BMPs) will be incorporated into the project during environmental and project reviews. The project will be reviewed to ensure that required stormwater BMPs are included.

For non-discretionary permits, the permit applicant must incorporate stormwater pollution control/source control measures into the design plans and submit these plans to the Public Works Department for review and approval. The Public Works Department will work cooperatively with the Health Department on applicable projects for review and approval. See Appendix C for contact information. Upon satisfaction that all stormwater requirements have been met, Public Works Department staff will approve the plans and issue the building/grading/encroachment permit(s).

To ensure the project will be in compliance with all City Codes, *it is recommended that the architect, engineer, and/or landscape architect contact and discuss the proposed project with Public Works Department staff and Health Department staff at the early stage of the project design.* The Public Works Department and Health Department staff are available for consultation regarding the applicable requirements based on the project concept.

Outlined below are some guidelines for permit applicants to follow in submitting design plans for review and approval.

Step One – Determine if the project is subject to a discretionary approval (Conditional Use Permit, Parcel Map, Variance, etc.) If so, submit appropriate application with environmental checklist form and conceptual designs.

Step Two - If the project is subject to LID requirements, permit applicant shall submit a Phase I Environmental Site Assessment for the site. Please note a Phase II report may also be required. The feasibility of infiltration at the site shall also be discussed in the geotechnical report. Percolation tests

shall be performed as part of the geotechnical review of the property. Percolation tests must be in accordance to the County of Los Angeles' Administrative Manual GMED Policy GS 200.1 and must be witnessed by the City of Vernon Health Department. The approval for the type of LID BMP to be utilized at the site should be obtained from the Public Works Department prior to commencing the grading and LID design.

Step Three - Prepare design plans. Identify, evaluate, and incorporate into the plan documents the appropriate BMPs for the project categories listed in Section 2 (Designated Project Requirements), and Section 5 (Source Control Measures), if applicable, of the County's LID Standards Manual and/or this Supplementary Information Sheet, whichever is applicable.

Step Four – Submit the plans. The permit applicant submits the design plans to the Public Works Department. During the plan review process, the Public Works Department will refer projects to the Health Department, Engineering division and Planning division for review of the LID provisions and site specific Source Control Measures, if applicable. For those projects where LID plans are not submitted, the Plan Checker will review the design plans and confirm whether the project is not subject to the LID provisions, determines whether the project falls under any of the Planning Priority Project categories or meets any of the characteristics identified under site specific Source Control Measures.

For projects subject to LID provisions for the first review, the following is a list of the minimum submittal requirements for all projects (see Appendix A):

- Three (3) sets of grading and/or site plans (may need plumbing, architectural, and landscape plans).
 - ◆ Plans must be wet-stamped and signed by an engineer or architect.
 - ◆ Plans must include, but not limited to, at least the following:
 - Location of all BMPs on plans, including elevations and drainage patterns.
 - Detailed drawings of all BMPs, including model, size, and capacity
 - Stenciling note and/or detail
 - Trash enclosure location and details
 - Landscaping areas
- A wet-stamped copy of the geotechnical report
- Hydrology and Hydraulic calculations identifying flow rate or volume of stormwater runoff that must be treated. LID design calculations. Submit the manufacturer's product specifications to verify that the selected BMP model can adequately handle the design flow rate.
- Draft Maintenance Covenant & Agreement Form (attached herewith as Appendix B) with an Operation & Maintenance Plan as discussed in Section 9 of the County LID Standards Manual.

Step Five - Public Works Department Approval

The Public Works Department Plan Checker will review the submitted documents and identify corrections. Once all LID Plan and site specific Source Control Measures, if applicable, requirements have been met, the Public Works Department Plan Checker will stamp **three (3) sets** of the approved plans, and issue the permit.

Approval for Planning Priority Projects and building/grading/encroachment permits will not be granted/issued until appropriate and applicable stormwater BMPs are incorporated into the project design plans. Also, a plumbing permit from the Public Works Department will be required for certain treatment control BMPs such as grease traps, sump pumps, clarifiers, and underground piping.

Inspection Process

To ensure that all stormwater related BMPs are constructed and/or installed in accordance with the approved LID or site specific Source Control Measures Plan the City requires a Stormwater Observation Report (SOR) (attached herewith as Appendix D) to be submitted to the City prior to the issuance of the Certificate of Occupancy.

All projects reviewed and approved will require a SOR which shall be prepared, signed, and stamped by the engineer of record (for example, a California-licensed civil engineer, architect, or qualified professional) responsible for the approved LID Plan and site specific Source Control Measures, if applicable, certifying that:

1. He/she is the engineer or architect responsible for the approved LID Plan, and
2. He/she or the designated staff under his/her responsible charge has performed the required site visits at each significant construction stage and at completion to verify that the BMPs shown on the approved plan have been constructed and installed in accordance with the approved LID Plan.

An original SOR needs to be submitted and not a photocopy. The Certificate of Occupancy will be issued by the Public Works Department only after all required clearances are obtained. At that stage the project has been determined, through the normal inspection process, to be built in accordance with the approved plan, including the construction and/or installation of appropriate stormwater-related BMPs and the project has been determined to comply with all applicable codes, ordinances, and other laws.

Appendix A



LOW IMPACT DEVELOPMENT (LID) PLAN SUBMITTAL CHECK LIST

Public Works Department - Engineering Division

Your Project Engineer: _____

Office: 323-583-8811 extension

Grading Permit # _____

Email: _____

The following is a list of outstanding items that are required to be submitted to the Public Works Department in order for the project to be reviewed by the Public Works, Development Services and the Health Departments for compliance with the stormwater runoff requirements and the City of Vernon Municipal Code Chapter 21 - Storm Sewer System:

- Submit a Phase I report to the Health Department. Please note a Phase II report may also be required.
- * It is recommended that approval be obtained by the Health Department of an infiltration BMPs prior to submittal of precise grading plans.
- Submit wet-stamped copy of geotechnical report and infiltration test (Infiltration test must be witnessed by a representative of the Health Department). Contact the Health Department at 323-583-8811 x204 and provide a minimum 72-hour notice prior to infiltration test.
- In addition to the County of L.A.'s requirements, show **on the plans** detail drawings (w/size and model) of the BMP device(s) including inlet and outlet elevations.
- In addition to the County of L.A.'s requirements, show **on the plans** roof drainage layout and connection(s) to treatment system(s). Include riser diagram.
- Submit draft Maintenance Covenant & Agreement Form with Exhibits A - D for approval (prior to County recordation). Terminate old Maintenance Covenant & Agreement.
- Submit documentation proving the individual's authority to sign the Maintenance Covenant and Agreement. (i.e. articles of organization, letter of authority, etc.)
- Stencil (e.g., "No Dumping – Drains to the Ocean") at all drainage inlets (i.e. catch basins, trench drains). Stencil requirements shall be noted **on the plans**. Stencil (e.g., "No Dumping – Drains to the Environment") at all drainage inlets (i.e. catch basins, trench drains) if installing infiltration BMP.
- Label Trash Enclosures and show detail **on the plans**.
- Identify Vegetated areas **on the plans**. Add a note "All slopes must be vegetated" **on plans**.

- Provide Hydrology Calculation to determine the volume (**V_m**) and/or flow rate (**Q_{pm}**) of mitigated stormwater runoff for each treatment system of a sub-drainage area. Show selected BMP type and size.
- Provide three (3) sets of full size plans with Engineer's wet stamp and signature.
- If applicable, return marked up plans with resubmittal.
- Maintain on-site BMP maintenance log for City Inspector's review.
- Other:** _____

Appendix B

Recording requested by and mail to:

Name: Owner's Name

Address: Owner's Address

***** Space Above This Line For Recorder's Use *****

**MAINTENANCE COVENANT AND AGREEMENT
REGARDING ON-SITE BMP MAINTENANCE**

The undersigned hereby certifies I am (we are) the owner(s) of the hereinafter legally described real property located at:

ADDRESS: Site Address ASSESSOR'S ID #: _____

in the City of Vernon, County of Los Angeles, State of California more particularly described in the legal description attached as Exhibit "A" and shown on Exhibit "B" attached herewith.

Pursuant to Section 21.5.9 of the Vernon Municipal Code relating to the control of pollutants carried by stormwater runoff, structural and/or treatment control Best Management Practices (BMPs) have been established at the aforementioned property.

The BMPs on said property include (list specific structural BMPs)

more specifically described in the attached Exhibit "C", we do hereby covenant and agree to and with said City to maintain the BMPs according to the Operations & Maintenance Plan attached herewith as Exhibit "D". The location, including GPS x-y coordinates, and type of each post-construction BMP feature installed on the subject property is identified in Exhibit "C".

This maintenance covenant and agreement shall run with the land and shall be binding upon any future owners, encumbrancers, their successors, heirs or assigns and shall continue in effect until the City of Vernon approves its termination.

It is hereby acknowledged that failure to properly maintain the subject BMPs may cause non-compliance with the National Pollutant Discharge Elimination System requirements resulting in the City of Vernon or State of California declaring a nuisance and/or issuing orders or citations resulting in fines or penalties and/or criminal prosecution.

Owner's Name

Owner's Name

BY: _____
Print Name

BY: _____
Print Name

Signature

Signature

Title

Title

Dated this _____ day of _____ 20 ____.

Dated this _____ day of _____ 20 ____.

SIGNATURES MUST BE NOTARIZED

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

State of California

County of _____

On _____ before me, _____,
(Insert Name of Notary Public and Title)

personally appeared _____

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf on which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the forgoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

CITY OF VERNON
SIGNATURE REQUIREMENTS FOR CITY AGREEMENTS

TYPE OF ENTITY	FIRST SIGNATURE	SECOND SIGNATURE	REFERENCE
Corporation	chairman of the board, president, any vice president	corporate secretary, assistant secretary, chief financial officer, any assistant treasurer (Note: A person can hold more than one corporate office; e.g., a vice –president can also be a secretary. That person can sign the agreement twice, <i>if both capacities are identified.</i>)	Corp. Code sec. 313 Corp. Code sec. 5214
Limited Liability Company (“LLC”)	if managed by members – by any member if managed by manager – by a manager (Note: A member or manager may have a title such as president or vice-president)	if managed by <i>members</i> – not required unless otherwise provided in governing documents if managed by <i>manager(s)</i> – by a second manager (unless articles of organization state there is only one manager)	Corp. Code sec. 17157
Partnership	any partner, unless authority restricted in “statement of partnership authority” recorded in County Recorder’s Office (for real property transactions) or filed with secretary of state (for contracts, etc.)	not required, unless “statement of partnership authority” provides otherwise	Corp. Code sec. 16301 Corp. Code sec. 16303
Limited Partnership	a general partner, subject to same exceptions for partnership	same as partnership	Corp. Code sec. 15509
Limited Liability Partnership (“LLP”)	same as partnership	same as partnership	Corp. Code sec. 16955.5
Sole Proprietorship	sole proprietor	not required	n/a

Parties executing an Agreement or Contract that are not identified above must also send a copy of the corporate minutes giving such person(s) the authority to sign on behalf of the corporation.

Appendix C

CONTACT LIST

For questions regarding the Municipal NPDES Permit, contact:

**STATE WATER RESOURCES CONTROL BOARD
LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD**

320 W. 4th Street, Suite 200
Los Angeles, CA 90013
Tel: (213) 576-6600
Fax: (213) 576-6640
www.swrcb.ca.gov/rwqcb4/

For questions regarding City of Vernon plan check and processing, contact:

**CITY OF VERNON
PUBLIC WORKS, WATER & DEVELOPMENT SERVICES DEPARTMENT**

4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 extensions 236 or 243
Fax: (323) 826-1435
<http://www.cityofvernon.org/departments/public-works/building-division>

**CITY OF VERNON
PUBLIC WORKS, WATER & DEVELOPMENT SERVICES DEPARTMENT**

Engineering Division
4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 extension 215
Fax: (323) 826-1435
<http://www.cityofvernon.org/departments/public-works/public-works-division>

**CITY OF VERNON
HEALTH & ENVIRONMENTAL CONTROL DEPARTMENT**

4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 extensions 204
Fax: (323) 588-4320
<http://www.cityofvernon.org/departments/health>

For questions regarding the City of Vernon Stormwater Program, contact:

HEALTH & ENVIRONMENTAL CONTROL DEPARTMENT OR THE PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION

Health & Environmental Control
4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 extensions 204
Fax: (323) 588-4320
<http://www.cityofvernon.org/departments/health>

Engineering Division
4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 ext. 258
Fax: (323) 826-1435
<http://www.cityofvernon.org/departments/public-works/public-works-division>

To report illicit discharges and other stormwater violations:

Tel: (323) 583-8811 extension 204

For questions regarding vector control and public health issues related to Stormwater Best Management Practices contact:

**CITY OF VERNON
HEALTH & ENVIRONMENTAL CONTROL DEPARTMENT**

4305 Santa Fe Avenue
Vernon, CA 90058
Tel: (323) 583-8811 extensions 204
Fax: (323) 588-4320
<http://www.cityofvernon.org/departments/health>

Appendix D



STORMWATER OBSERVATION REPORT FORM

LOW IMPACT DEVELOPMENT (LID)/SITE SPECIFIC SOURCE CONTROL MEASURES PLAN

STORMWATER OBSERVATION means the visual observation of the stormwater related Best Management Practices (BMPs) for conformance with the approved LID/Site Specific Source Control Measures Plan at significant construction stages and at completion of the project. Stormwater observation does not include or waive the responsibility for the inspections required by the City of Vernon Building Code.

STORMWATER OBSERVATION must be performed by the engineer or architect responsible for the approved LID/Site Specific Source Control Measures Plan or designated staff in their employment.

STORMWATER OBSERVATION REPORT must be signed and stamped (see below) by the engineer or architect responsible for the approved LID/Site Specific Source Control Measures Plan and submitted to the city prior to the issuance to the certificate of occupancy.

Project Address:	Building Permit No.:
Name of Engineer or Architect responsible for the approved LID/Site Specific Source Control Measures Plan:	Phone Number:
Name of LID/Site Specific Source Control Measures Plan Observer:	Phone Number:

I DECLARE THAT THE FOLLOWING STATEMENTS ARE TRUE TO THE BEST OF MY KNOWLEDGE:

1. I AM THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE APPROVED LID/SITE SPECIFIC SOURCE CONTROL MEASURES PLAN, AND

2. I, OR DESIGNATED STAFF UNDER MY RESPONSIBLE CHARGE, HAS PERFORMED THE REQUIRED SITE VISITS AT EACH SIGNIFICANT CONSTRUCTION STAGE AND AT COMPLETION TO VERIFY THAT THE BEST MANAGEMENT PRACTICES AS SHOWN ON THE APPROVED PLAN HAVE BEEN CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE APPROVED LID/SITE SPECIFIC SOURCE CONTROL MEASURES PLAN.

Signature

Date

Stamp of Engineer or Architect responsible