

DRAFT

LOW IMPACT DEVELOPMENT ORDINANCE

AMENDING SECTION(S) OF CHAPTER 21, SEWERS AND STORM DRAINS

Purpose and Intent: TO EXPAND THE APPLICABILITY OF THE EXISTING DEVELOPMENT PLANNING PROGRAM REQUIREMENTS BY IMPOSING STORMWATER LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING, GRADING AND ENCROACHMENT PERMITS

WHEREAS, the City of Vernon is authorized by Article XI, Section 5 and Section 7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity; and

WHEREAS, the Clean Water Act provides the statutory basis for the NPDES permit program and the basic structure for regulating the discharge of pollutants from point sources to waters of the United States under the National Pollutant Discharge Elimination System (NPDES) Program; and

WHEREAS, the State Water Resources Control Board is authorized by the United States Environmental Protection Agency to enforce the NPDES Program; and

WHEREAS, the City of Vernon is a permittee under the California Regional Water Quality Control Board, Los Angeles Region Order No. R4-2012-0175, issued on November 08, 2012 which establishes Waste Discharge Requirements for Municipal Separate Storm Sewer Systems (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4 (hereinafter referred to as the MS4 Permit); and

WHEREAS, the MS4 Permit contains compliance requirements for municipalities to establish a LID Ordinance in order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program; and

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region has adopted Total Maximum Daily Loads (TMDLs), which are maximum amount of pollutants that a receiving water can accept and still meet water quality standards, that must be achieved through effective LID implementation; and

WHEREAS, the City of Vernon has the authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity that might degrade receiving waters; and

WHEREAS, the City of Vernon is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social and economic considerations; and

WHEREAS, urbanization has led to increased impervious surface areas resulting in increased water runoff and less percolation to groundwater aquifers causing the transport of pollutants to downstream receiving waters; and

WHEREAS, it is the intent of the City of Vernon to expand the applicability of the existing Development Planning Program requirements by providing stormwater LID strategies for Development and Redevelopment projects as defined under "Applicability"; and

WHEREAS, Chapter 21 of the Code of the City of Vernon pertains to sewers and storm drains; and

WHEREAS, by memorandum dated June 18, 2013, the Director of Community Services & Water has recommended that Section ___ of Chapter 21, Sewers and Storm Drains, of the Code of the City of Vernon be amended to comply with the new requirements of the MS4 Permit; and

WHEREAS, it is the intent of this Ordinance to amend Section _____ of Chapter 21 of the Code of the City of Vernon.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF VERNON HEREBY ORDAINS AS FOLLOWS:

SECTION 1: Recitals. The City Council of the City of Vernon hereby finds and determines that the recitals contained hereinabove are true and correct.

SECTION 2: Exempt from CEQA. The City Council of the City of Vernon finds that this action is exempt under the California Environmental quality Act (CEQA) in accordance with:

a) Section 15308, actions by regulatory agencies for the protection of the environment; and

b) Section 15061(b)(3), the general rule that CEQA only applies to projects that may have an effect on the environment.

SECTION 3: Code Amendments. The City Council of the City of Vernon hereby amends Section _____ of Chapter 21, Sewers and Storm Drains of the Code of the City of Vernon, as set forth in Exhibit "A" which is attached hereto and made a part hereof by reference.

SECTION 4: Severability. The City Council declares that should any portion of this Ordinance be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining portions of this Ordinance shall remain in full force and effect.

SECTION 5: Publication. The Interim City Clerk, or Deputy City Clerk, shall attest and certify to the adoption of this Ordinance and shall cause this Ordinance and such certification to be entered in the Book of Ordinances of the City Council. Pursuant to Section 36933 of the Government Code, within 15 days of the adoption of this Ordinance, the Interim City Clerk, or Deputy City Clerk, shall cause this Ordinance to be published or posted with the names of those City Council members voting for and against the Ordinance as required by law.

SECTION 6. This Ordinance shall go into effect and be in full force and effect at 12:01 a.m. on the thirtieth (30th) day after its passage.

APPROVED AND ADOPTED this _____ day of _____, 2013.

Name: _____

Title: Mayor / Mayor Pro-Tem

ATTEST:

Interim City Clerk / Deputy City Clerk

APPROVED AS TO FORM:

By: Scott Porter, Deputy City Attorney
Nicholas G. Rodriguez

Exhibit “A” to LID Ordinance
Chapter 21
Sewers and Storm Drains

Section _____ of Chapter 21, Sewers and Storm Drains shall be amended to add the following definitions in alphabetical order, and to renumber all existing definitions accordingly in alphabetical order. If the definition of any term contained in this chapter conflicts with the definition of the same term in MS4 Permit , then the definition contained in MS4 Permit shall govern:

“Automotive Service Facility” means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes 5013, 5014, 5511, 5541, 7532-7534, and 7536-7539. For inspection purposes, Permittees need not inspect these facilities provided that they have no outside activities or materials that may be exposed to stormwater (Modified from MS4 Permit).

“Basin Plan” means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (MS4 Permit).

“Best Management Practice (BMP)” means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (MS4 Permit).

“Biofiltration” means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term “biofiltration” as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board’s Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from MS4 Permit).

“Bioretention” means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in this Ordinance, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by this Order as biofiltration (MS4 Permit).

“Bioswale” means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (MS4 Permit).

“City” means the City of Vernon, California.

“Clean Water Act (CWA)” means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to the storm sewers and/or Waters of the United States unless the discharge is in accordance with an NPDES permit.

“Commercial Development” means any development on private land that is not industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities; mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes (Modified from MS4 Permit).

“Commercial Malls” means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (MS4 Permit).

“Construction Activity” means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See “Routine Maintenance” definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (MS4 Permit).

“Control” means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (MS4 Permit).

“Development” means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (MS4 Permit).

“Directly Adjacent” means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (MS4 Permit).

“Discharge” means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance (Modified from MS4 Permit).

“Disturbed Area” means an area that is altered as a result of clearing, grading, and/or excavation (MS4 Permit).

“Executive Officer” means the Executive Officer of the California Regional Water Quality Control Board, Los Angeles Region.

“Flow-through treatment BMPs” means a modular, vault type “high flow biotreatment” devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (MS4 Permit).

“Full Capture System” means any single device or series of devices, certified by the Executive Officer, that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour storm in the sub-drainage area (MS4 Permit).

“General Construction Activities Storm Water Permit (GCASP)” means the general NPDES permit adopted by the State Water Resources Control Board which authorizes the discharge of stormwater from construction activities under certain conditions (Modified from MS4 Permit).

“General Industrial Activities Storm Water Permit (GIASP)” means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions (MS4 Permit).

“Green Roof” means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a

bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (MS4 Permit).

“Hillside” means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (MS4 Permit).

“Industrial/Commercial Facility” means any facility involved and/or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/or commodities, and any facility involved and/or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by either the Standard Industrial Classifications (SIC) or the North American Industry Classification System (NAICS). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition (MS4 Permit).

“Industrial Park” means land development that is set aside for industrial/commercial facility development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Modified from MS4 Permit).

“Infiltration BMP” means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (MS4 Permit).

“Low Impact Development (LID)” consists of building and landscape features designed to retain or filter stormwater runoff (MS4 Permit).

“Municipal Separate Storm Sewer System (MS4)” means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR Section 122.2.
(40 CFR Section 122.26(b)(8)) (MS4 Permit)

“National Pollutant Discharge Elimination System (NPDES)” means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA Section 307, 402, 318, and 405. The term includes an “approved program” (MS4 Permit).

“Natural Drainage System” means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (MS4 Permit).

“New Development” means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (MS4 Permit).

“Non-Stormwater Discharge” means any discharge to a municipal storm drain system that is not composed entirely of stormwater (MS4 Permit).

“Outfall” means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances with connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR Section 122.26(b)(9)) (MS4 Permit).

“Parking Lot” means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (MS4 Permit).

“Planning Priority Projects” means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from MS4 Permit).

“Pollutant” means any “pollutant” defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Section 13373 (MS4 Permit).

“Project” means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code Section 21065) (MS4 Permit).

“Rainfall Harvest and Use” means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (MS4 Permit).

“Receiving Water” means “water of the United States” into which waste and/or pollutants are or may be discharged (MS4 Permit).

“Redevelopment” means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (MS4 Permit).

“Regional Board” means the California Regional Water Quality Control Board, Los Angeles Region.

“Restaurant” means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (MS4 Permit).

“Retail Gasoline Outlet” means any facility engaged in selling gasoline and lubricating oils (MS4 Permit).

“Routine Maintenance” includes, but is not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.

4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.

** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (MS4 Permit).

“Significant Ecological Areas (SEAs)” means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.
4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (MS4 Permit).

“Site” means land or water area where any “facility or activity” is physically located or conducted, including adjacent land used in connection with the facility or activity (MS4 Permit).

“Storm Drain System” means any facility or any parts of the facility, including streets, gutters, conduits, natural or artificial drains, channels and watercourse that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City.

“Storm Water or Stormwater” means runoff, snow melt runoff, and surface runoff and drainage related to precipitation events (pursuant to 40 CFR Section 122.26(b)(13); 55 Fed. Reg. 47990, 47995 (Nov. 16, 1990)) (MS4 Permit).

“Urban Runoff” means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial or industrial activities involving the use of potable and non-potable water.

**SECTION _____ OF CHAPTER 21, SEWERS AND STORM DRAINS
LOW IMPACT DEVELOPMENT (LID) MEASURES FOR NEW DEVELOPMENT AND/OR REDEVELOPMENT
PLANNING AND CONSTRUCTION ACTIVITIES.**

- A. **Objective.** The provisions of this Section establish requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current MS4 Permit, lessen the water quality impacts of development and redevelopment by using smart growth practices, and integrate LID practices and standards for stormwater pollution mitigation through means of infiltration, evapotranspiration, biofiltration, and rainfall harvest and use. LID shall be inclusive of new development and/or redevelopment requirements.

- B. Scope.** This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Vernon to further define and adopt stormwater pollution control measures, and to develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the LID requirements, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City shall administer, implement, develop guidelines and enforce the provisions of this Section.
- C. Applicability.** Development and Redevelopment projects, termed “Planning Priority Projects,” subject to design and implementation of post-construction controls to mitigate potential stormwater pollution, prior to completion of the project(s), are:
- (1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.
 - (2) Industrial parks 10,000 square feet or more of surface area.
 - (3) Commercial malls 10,000 square feet or more of surface area.
 - (4) Retail gasoline outlets with 5,000 square feet or more of surface area.
 - (5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.
 - (6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
 - (7) Streets and roads construction of 10,000 square feet or more of impervious surface area. Street and road construction applies to standalone streets, roads, highways, and freeway projects, and also applies to streets within larger projects.
 - (8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.
 - (9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
 - a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and
 - b. Create 2,500 square feet or more of impervious surface area
 - (10) Single-family hillside homes.
 - (11) Redevelopment Projects
 - a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
 - b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire development site must be mitigated. If the development site was subject to post-construction stormwater quality control requirements, then only the area of alteration must be mitigated.
 - c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.
 - d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and

roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

- e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

D. Effective Date. The Planning and Land Development requirements contained in Section E shall become effective thirty (30) days from the adoption of the Ordinance. This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Ordinance. Projects that have been deemed complete within 90 days of adoption of the Ordinance are not subject to the requirements of this Chapter. Ministerial projects for which a grading plan was submitted prior to February 6, 2013 and approved by the City of Vernon Community Services & Water Department shall not be subject to the requirements contained in Section E.

E. Stormwater Pollution Control Requirements. The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

- (1) A new single-family hillside home development shall include mitigation measures to:
 - a. Conserve natural areas;
 - b. Protect slopes and channels;
 - c. Provide storm drain system stenciling and signage;
 - d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and
 - e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.
- (2) Street and road construction of 10,000 square feet or more of impervious surface shall follow the City of Vernon's Green Streets Policy to the maximum extent practicable.
- (3) The remainder of Planning Priority Projects shall prepare an LID Plan to comply with the following:
 - a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:
 - i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or
 - ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.
 - b. Minimize hydromodification impacts to natural drainage systems as defined in the MS4 Permit
 - c. To demonstrate technical infeasibility, the project applicant must demonstrate that the project cannot reliably retain 100 percent of the SWQDv on-site, even with the maximum application of green roofs and rainwater harvest and use, and that compliance with the applicable post-construction requirements would be technically infeasible by submitting a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect. Technical infeasibility may result from conditions including the following:

- i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.
 - ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;
 - iii. Locations within 100 feet of a groundwater well used for drinking water;
 - iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;
 - v. Locations with potential geotechnical hazards;
 - vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.
- d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the MS4 Permit.
- i. Additional alternative compliance options such as offsite infiltration and groundwater replenishment projects may be available to the project Site. The project Site should contact the City of Vernon to determine eligibility.
- e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the MS4 Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:
- i. 0.2 inches per hour, or
 - ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.
- (4) Yearly monitoring sample results for Infiltration system projects shall be provided to the City to ensure infiltration system is not causing any type of contamination on the project site.
- a. Monitoring sample results will be required through the lifetime of the infiltration system; and
 - b. Should contamination occur, the property owner will be required to remediate the site at its own expense; and
 - c. Additional stormwater LID strategies will be implemented on the project site.