

CITY OF LOMPOC

DRAFT

**INTERIM LOW IMPACT DEVELOPMENT (LID) /
HYDROMODIFICATION**

GUIDELINES

SEPTEMBER, 2009

(The text begins with Section E, corresponding to the post construction requirements found in Section E of the Ventura Countywide Storm Water Quality Management Program.)

E. Planning and Land Development Program

I. Purpose

1. The City shall implement a Planning and Land Development Program pursuant to part 4.E. for all New Development and Redevelopment projects subject to this Order to:
 - (a) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.
 - (b) Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100).
 - (c) Minimize the percentage of effective impervious surfaces on land developments to mimic predevelopment water balance through infiltration, evapotranspiration and reuse.
 - (d) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), Low Impact Development Strategies, and Treatment Control BMPs.
 - (e) Properly select, design and maintain Treatment Control BMPs and Hydromodification Control BMPs to address pollutants that are likely to be generated, assure long-term function, and to avoid the breeding of vectors.¹¹
 - (f) Prioritize the selection of BMPs suites to remove storm water pollutants, reduce storm water runoff volume, and beneficially reuse storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
 - (1) Infiltration BMPs

¹¹ Treatment BMPs when designed to drain within 72 hours of the end of rainfall minimize the potential for the breeding of vectors.

- (2) BMPs that store and reuse storm water runoff.
- (3) BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses
- (4) BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly
- (5) Approved modular/ proprietary treatment control BMPs that are based on LID concepts and that meet pollution removal goals

II. Applicability

1. New Development Projects.

- (a) Development projects subject to City conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
 - (1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
 - (2) Industrial park 10,000 square feet or more of impervious surface area
 - (3) Commercial development 10,000 square feet or more of impervious surface area
 - (4) Retail gasoline outlet 5,000 square feet or more of impervious surface area
 - (5) Restaurant (SIC 5812) 5,000 square feet or more of impervious surface area
 - (6) Parking lot 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
 - (7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.

- (8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of impervious surface area]
- (9) Redevelopment projects in subject categories that meet Redevelopment thresholds (identified in subpart E.II.2 below)
- (10) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
 - (A) Discharge storm water 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
- (11) Single-family hillside homes. To the extent that the City may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the City's Municipal Code and Ordinances, the City shall require that during the construction of a single-family hillside home, the following measures to be implemented:
 - (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
 - (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

2. Redevelopment Projects

- (a) Redevelopment projects subject to City conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:

- (1) 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 development categories identified in subpart 4.E.III.1.(a)-(c).
 - (2) 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 development storm water quality control requirements, the entire project must be mitigated.
 - (3) Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
 - (b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and drainage gradient, 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 drainage gradient and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads.
 - (c) 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.
3. Effective Date – The New Development and Redevelopment requirements contained in Section E shall take effect on October 18, 2009. After that date all 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 must comply with the requirements in Section E. For the City's projects the effective date shall be the date the governing body or their designee approves initiation of the project design.

III. New Development/ Redevelopment Performance Criteria

1. Integrated Water Quality/Flow Reduction/Resources Management Criteria
 - (a) Except as provided in subpart 4.E.III.1.(c) below, the City shall require all New Development and Redevelopment projects identified in subpart 4.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention / biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area.
 - (b) Impervious surfaces may be rendered "ineffective," and thus not count toward the 5 percent EIA limitation, if the stormwater runoff from those surfaces is fully retained onsite for the design storm event specified in provision (c), below. To satisfy the EIA limitation and low-impact development requirements, the City must require stormwater runoff to be infiltrated, reused, or evapotranspired onsite through a stormwater management technique allowed under the terms of these guidelines and implementing documents.
 - (c) The City shall require all features constructed or otherwise utilized to render impervious surfaces "ineffective," as described in provision (b), above, to be properly sized to infiltrate, store for reuse, or evapotranspire, without any runoff at least the volume of water that results from:
 - (1) The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
 - (2) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
 - (3) The volume of runoff produced from a 0.75 inch storm event.

- (d) To address any impervious surfaces that may not be rendered "ineffective," surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.II which have complied with subparts 4.E.III.1.(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.1.(c).

2. Alternative Compliance for Technical Infeasibility

- (a) To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the City may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.III.1, above, to comply with this permit through the alternative compliance measures described in subpart 4.E.III.2., below.
- (b) To utilize alternative compliance measures, the project applicant must demonstrate 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:
 - (1) Locations where seasonal high groundwater is within 5 feet of the surface;
 - (2) Locations within 100 feet of a groundwater well used for drinking water;
 - (3) Brownfield development sites or other locations where pollutant mobilization is a documented concern;
 - (4) Locations with potential geotechnical hazards;
 - (5) 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; and
 - (6) Other site or implementation constraints identified in the LID Technical Guidance provided by either Ventura County's Technical Guidance Manual, the City of Santa Barbara's Storm Water BMP Guidance Manual, or other technically-based BMP design criteria.

- (7) Project sites where it can be shown that compliance with the on-site volume retention requirement would result in damage to the existing structures on the subject site or on adjacent developed sites.
- (c) Alternative Compliance Measures. When a City finds that a project applicant has demonstrated technical infeasibility, the applicant may propose alternative compliance measures to substitute for the otherwise applicable post-construction requirements listed in subparts 4.E.III.1.(a)-(c) of this permit. In proposing alternative compliance measures the following requirements must be addressed:
- (1) Minimum onsite requirement. The project may reduce the percentage of Effective Impervious Area to no more than 30 percent of the total project area and shall treat all remaining runoff pursuant to the design and sizing requirements of subparts 4.E.III.1.(b)-(d).
 - (2) Offsite mitigation volume. The difference in volume between the amount of stormwater infiltrated, reused, and/or evapotranspired by the project onsite and the otherwise applicable requirements of subparts 4.E.III.1.(a)-(c) (the "offsite mitigation volume"), above, must be mitigated by the project applicant either by performing offsite mitigation that is approved by the City or by providing sufficient funding for public or private offsite mitigation to achieve equivalent stormwater volume and pollutant load reduction through infiltration, reuse, and/or evapotranspiration.
 - (3) Location of off site mitigation. Offsite mitigation projects must be located in the same sub-watershed (defined as draining to the same hydrologic area in the Basin Plan) as the new development or redevelopment project. A list of eligible public and private offsite mitigation projects available for funding shall be maintained by the City and provided to the project applicant, on request. Off site mitigation projects include green streets projects, parking lot retrofits, other site specific LID BMPs, and regional BMPs. Project applicants seeking to utilize these alternative compliance provisions may propose other offsite mitigation projects, which the City may approve if they meet the requirements of this subpart.

- (4) Timing and Reporting Requirements for Offsite Mitigation Projects. The City shall require a schedule for the completion of any approved offsite mitigation projects, including milestone dates to identify funding, design, and construct the projects. Offsite mitigation projects shall be completed as soon as possible, and at the latest, within 4 years of the certificate of occupancy for the first project that contributed funds toward the construction of the offsite mitigation project, unless a longer period is otherwise authorized by the Executive Officer. For public offsite mitigation projects, the City must provide in their annual reports a summary of total offsite mitigation funds identified to date and a description (including location, general design concept, volume of water expected to be retained, and total estimated budget) of all pending public offsite mitigation projects. Funding sufficient to address the offsite mitigation volume must be transferred to, or held by the City (for public offsite mitigation projects) or held in an escrow account (for private offsite mitigation projects) within one year of the initiation of construction.
 - (5) The project applicant must demonstrate that the EIA achieved onsite is as close to 5 percent EIA as technically feasible, given the site's constraints.
- (d) Watershed equivalence. Regardless of the methods through which the City allows project applicants to implement alternative compliance measures, the sub-watershed-wide (defined as draining to the same hydrologic area in the Basin Plan) result of all development must be at least the same level of water quality protection as would have been achieved if all projects utilizing these alternative compliance provisions had complied with subparts 4.E.III.1.(a)-(d) of the permit. The City shall provide in their annual report to the Regional Board a list of mitigation project descriptions and pollutant and flow reduction analyses (compiled from design specifications submitted by project applicants and approved by the City comparing the expected aggregate results of alternative compliance projects to the results that would otherwise have been achieved by meeting the 5 percent EIA requirement onsite).

IV. Implementation

1. Maintenance Agreement and Transfer

- (a) Prior to issuing approval for final occupancy, the City shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide an operation and maintenance plan and verification of ongoing maintenance provisions for LID practices, Treatment Control BMPs, and Hydromodification Control BMPs including but not limited to: final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/ or other legally binding maintenance agreements.
- (1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
- (A) A signed statement from the City assuming responsibility for BMP maintenance; or
- (B) Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or
- (C) Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or
- (D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.
- b) The City shall require all development projects subject to post-construction BMP requirements to provide a plan for the operation and maintenance of all structural and treatment controls. The Operation and Maintenance plan shall follow the examples found in Ventura County's Technical Guidance Manual Appendix D "Maintenance Plan Guidance" (or subsequent guidance manual) for each BMP component or specific BMP maintenance guidance found in Santa Barbara's Storm Water BMP Guidance Manual. In the alternative, the operation and maintenance plan shall follow the recommendations of the manufacturer or designer of the

equipment or BMP used to achieve the required EIA. The plan shall be submitted for review to ensure that its implementation can be expected to keep the BMPs in proper working order. Where BMPs are transferred to the City for ownership and maintenance, the plan shall also include all relevant costs for upkeep of BMPs in the transfer. Operation and Maintenance plans for private BMPs shall be kept on site for periodic review by City inspectors.

2. Tracking, Inspection, and Enforcement of Post-Construction BMPs
 - (a) The City shall implement a tracking system and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs as set forth in part 4.E no later than October 18, 2010.
 - (1) Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs. The electronic system, at a minimum, should contain the following information:
 - (A) Municipal Project ID
 - (B) State WDID No
 - (C) Project Acreage
 - (D) BMP Type and Description
 - (E) BMP Location (coordinates)
 - (F) Date of Acceptance
 - (G) Date of Maintenance Agreement
 - (H) Maintenance Records
 - (I) Inspection Date and Summary
 - (J) Corrective Action
 - (K) Date Certificate of Occupancy Issued
 - (L) Replacement or Repair Date

- (b) Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and Hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by trained personnel.
 - (c) Verify proper maintenance and operation of post-construction BMPs previously approved for new development and redevelopment and operated by the City. The post construction BMP maintenance inspection program shall incorporate the following elements:
 - (1) Post-construction BMP Maintenance Inspection checklist.
 - (2) Inspection at least once every 2 years, beginning October 18, 2010, of post-construction BMPs installed to achieve required EIA, since October 18, 2009, to assess operation conditions with particular attention to:
 - (3) Criteria and procedures for post construction Treatment Control and Hydromodification Control BMP repair, replacement, or re-vegetation.
 - (d) For post construction BMPs operated and maintained by parties other than the City, the City shall require annual reports by the other parties demonstrating proper maintenance and operations.
 - (e) Undertake enforcement as appropriate based on the results of the inspection.
3. Alternative Post Construction Storm Water Mitigation Programs
- (a) The City or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within the Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements.
 - (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:

- (1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit.
 - (2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of this section.
 - (3) Reduce the percentage of Effective Impervious Area (EIA) to a target of 5 percent or less of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in this Section.
 - (4) Be fiscally sustainable and have secure funding; and
 - (5) Be completed in four years of the adoption date of this permit.
- (c) The RPAMP should prioritize the implementation of LID stormwater mitigation measures, as described in this section.
- (d) The City may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) that takes into consideration the balancing of water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization
- (e) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board. The Regional Water Board Executive Officer may then consider the RPAMP for approval, or elect to submit it to the Regional Water Board for consideration.
- (f) The RPAMP, on approval, may substitute in part or wholly for post-construction requirements.
- (g) Redevelopment Project Areas include the following
- (1) City Center areas
 - (2) Historic District areas
 - (3) Brownfield areas

- (4) Infill Development areas
 - (5) Urban Transit Villages
 - (6) Any other redevelopment area so designated by the Regional Water Board
- (h) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements.
4. Developer Technical Guidance and Information
- (a) The City shall facilitate implementation of LID by providing builders, designers, and other stakeholders with information regarding LID objectives as contained in these requirements and LID specifications as contained in the Ventura County LID Technical Guidance Manual and/or the City of Santa Barbara Storm Water BMP Guidance Manual, or other technically-based BMP design examples.
5. Project Coordination
- (a) The City shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
 - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
 - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction.
- V. State Statute Conformity**
1. California Environmental Quality Act (CEQA) Document Update
- (a) The City shall incorporate into its CEQA process no later than April 18, 2010 those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
 - (1) The procedures shall require consideration of the following:

- (A) Potential impact of project construction on storm water runoff.
- (B) Potential impact of project post-construction activity on storm water runoff.
- (C) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters.
- (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and waterbodies.
- (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems.
- (G) Potential for significant increases in erosion at the project site or surrounding areas.

2. General Plan Update

- (a) The City shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended
 - (1) Land Use
 - (2) Housing
 - (3) Conservation
 - (4) Open Space
- (b) The City shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq.*

APPENDIX A – DEFINITIONS

Automotive Service Facilities

Auto-related facilities, including, but not limited to: distribution and/or sale of motor vehicle parts and supplies, sales of vehicles, gasoline and oil sales at service stations, body repair shops, automotive repair.

Best Management Practices (BMPs)

BMPs are maintenance procedures, prohibitions of practices, management practices and methods used to prevent or reduce the pollution of 'Waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Biologically Significant Areas

Biologically Significant Areas are those identified on the Biologically Significant Areas map in the Resource Management Element of the City's General Plan.

Effective Impervious Area (EIA)

That portion of a new project site or redevelopment project site from which storm water run-off flows unimpeded over impermeable surfaces to the City's storm drain system. Effective Impervious Area can be reduced by directing flows from hard surfaces to pervious areas that meet the following criteria:

1. Will infiltrate, reuse or evapotranspire the volume of water that results from the 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour drawdown time, from the formula recommended in Urban Runoff Quality Management WEF Manual of Practice NO. 23/ASCE Manual of Practice No. 87 (1998); or
2. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
3. Will infiltrate, reuse or evapotranspire the volume of runoff produced from a .75 inch storm event.

Hydromodification

Alterations of the hydrologic regime (natural flow of water through a landscape), as a result of land-use changes or dams (U.S. EPA 1997).

Low Impact Development (LID)

An approach to land development that uses land planning and design practices and technologies to increase infiltration of storm water in developed areas, in an effort to conserve and protect natural hydrology.

Maximum Extent Practicable (MEP)

MEP is the technology-based standard established in the Clean Water Act that establishes the level of pollutant reductions dischargers must achieve. MEP is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility.

Storm Water Pollutants

Material exposed to rain water that can be dissolved or transported by storm water including but not limited to: hazardous materials, chemicals, concrete components, landscaping material, soil, leaves, trash, and metals.

Single-Family Hillside Homes

Single-family homes on properties that have average slopes of five (5%) to ten (10%) percent.

APPENDIX B – GENERAL STORM WATER QUALITY / LID / AND HYDROMODIFICATION REQUIREMENTS

The following requirements shall be apply to all discretionary new construction and redevelopment projects.

1. All storm water that flows from paved areas of vehicle travel, maintenance, parking or uncovered outdoor storage shall be filtered for trash, sediment, oil and grease, prior to discharge into City streets, storm drains, on-site basins, filter strips, landscaped areas, biologically sensitive areas or the Santa Ynez River and its tributaries. Filter(s) location(s) and type(s) shall be shown/detailed on grading and drainage plans.
2. Provisions shall be made to ensure adequate maintenance and replacement of private storm water filters. Filters shall be cleaned out at least twice a year, before and after the storm season. Filters shall be cleaned out and replaced, if necessary, at any time they are not functioning correctly.
3. Roof drains and gutters shall be directed to landscaping, unless to do so would result in foundation damage or slope instability, as verified by a qualified engineer. The property must be sloped away from the foundation, and in homes without a basement, the downspout should not discharge rainwater to landscaping any closer than two-feet from the building's foundation. The area in which the storm water is discharged should be large enough to provide good drainage. Do not place downspouts closer than five-feet to property lines, closer than three-feet to a sidewalk or within 10 feet of a retaining wall. Do not extend downspouts across areas of foot travel, in order to avoid creating a tripping hazard.
4. All landscaping shall be drought-tolerant and low maintenance.
5. Slopes, natural vegetation and existing natural drainage channels shall be preserved, to the maximum extent practicable.
6. Storm drain inlets on private property shall be stenciled or marked "No Dumping, Drains to the River". Stenciling or markers shall be adequately maintained in perpetuity.