

COUNTY OF SANTA BARBARA

STANDARD CONDITIONS FOR PROJECT PLAN APPROVAL – WATER QUALITY BMPS

1. All new residential, commercial, industrial, and transportation development projects, including redevelopment projects, must address water quality through the use of best management practices (BMPs) as determined by the Director of Planning & Development and/or the Public Works Director. BMPs shall be applied in the following order of priority: site design, source control, and treatment control. Examples of good site design include reducing directly connected impervious areas and incorporating drainage system elements into site design. Examples of source control include covered parking or use of Integrated Pest Management techniques in landscape maintenance. Examples of treatment control include systems that either detain or filter water to remove pollutants prior to discharge. Furthermore, projects will seek to reduce post-development runoff volumes from pre-development volumes through such measures as infiltration, evapotranspiration, and storage/reuse.
2. Treatment control BMPs shall meet the following specific design requirements unless otherwise approved by the Public Works Director.
3. At a minimum, these specific design requirements for treatment control BMPs apply to all new or redevelopment projects of the following sizes: residential 1 acre or greater in disturbance; and commercial industrial , and transportation / vehicle facilities which are 0.5 acres or greater in disturbance. Treatment control BMPs may be required on new development or redevelopment projects at the discretion of the Public Works Director, based upon the categories listed in Attachment A. The selection of BMPs shall be based upon the ultimate use of the drainage area, unless the facility will be re-built/sized during subsequent phases of construction.
4. Projects cannot be subdivided or phased to avoid complying with these requirements. Development and redevelopment of the same or adjacent property(ies) permitted within 5 years may be considered together for purposes of assessing the above criteria..
5. All water quality facilities will require regular maintenance. Applicants are required to enter a maintenance agreement with the District to ensure adequate performance and to allow County emergency access. Maintenance of the basin is the responsibility of the development, unless otherwise agreed upon. |

6. **Detention Basins.** Detention of storm water runoff allows for the settling of fine particles and associated pollutants. Detention times for water quality control are longer than for flood control. Although a detention system for water quality control could be combined with a flood control system, the volume assigned for water quality control must meet minimum detention times. The required design volume for detention-based storm water quality treatment facilities is equal to the runoff volume that would occur from the contributing area from a 1.2-inch rainstorm event.

a) The volume calculation will be computed as follows:

$$WQDV = (.05 + 0.9 \times IMP) \times 1.2" \times A \times 3630$$

where,

WQDV	=	water quality design volume (cubic feet)
IMP	=	total impervious area, expressed as a percentage
A	=	tributary area (acres)
3630	=	factor to convert units from acre-inch to cubic feet

b) The draw-down (or draining) time for the detention volume, which is intended to drain down completely (vs. permanent wet volume), shall be greater than or equal to 36 hours. For the top half of the detention volume, the drawdown time shall be greater than or equal to 12 hours. The remaining bottom-half of the detention volume must drain in no less than 24 hours. The outlet shall be sized using Figure 1 to achieve the required detention times and shall be large enough that clogging is unlikely to occur. Pipes less than 4 inches in diameter should not be used. Perforated risers are acceptable for controlling the flow rate. However, potential clogging of the perforations should be addressed in the maintenance plan.

c) The detention system shall be designed to maximize the distance between the inlet and outlet, and to minimize "dead spaces" (areas where little or no exchange occurs during a storm event), thereby limiting short-circuiting. A minimum flow-path length to width ratio of 3 is recommended and can be achieved using internal berms or other means to prevent short-circuiting.

d) For ponds designed to be permanently wet, the applicant must show a water balance that demonstrates that there will be sufficient dry weather flows to maintain the planned pool volume, without creating stagnate conditions. A Mosquito Management Plan or Service Contract must be approved or waived by the Santa Barbara Coastal Vector Control District for any facility that maintains a pool of water for 72 hours or more.

e) For dry extended detention ponds, the applicant must show that the pond will be able to handle dry-weather flows (such as irrigation return flows) without causing a nuisance (visual eye sore, stagnate water, etc.).

f) Detention based water quality systems are recommended to be off-line from flood conveyance. If they are to be on-line or combined with a flood detention facility, then the facility must be designed to pass the appropriate flood without damage to the facility, as well as to minimize re-entrainment of pollutants.

7. **Flow-through Facilities.** Flow-through based storm water quality facilities are ones where either the flow is passed with little or no storage through a filtration media or infiltrated into a subsurface soil matrix. The purpose is to remove, through filtration, the smaller sized fraction of particles. Examples of these BMPs include vegetated swales, infiltration facilities, bioretention filters, and some types of commercial filters.

a) The required flow rate for flow-through based storm water quality treatment facilities is the runoff that would be produced from a rainfall intensity of 0.3 inches per hour. Water quality treatment shall be maintained at this rate for a minimum of four hours. Flows above this rate can either be by-passed, or routed through the facility if it can be demonstrated that velocities will not re-entrain captured pollutants.

b) The flow-through based facility must be able to completely treat the flow rate based upon the following:

$$WQFR = (0.05 + 0.9 \times IMP) \times 0.3 \times A$$

where,

- WQFR = water quality flow rate in cubic feet per second
- IMP = total impervious area, expressed as a fraction
- A = area of the site in acres

c) Infiltration facilities shall only utilize highly permeable soils with significant pollutant removal capacities. The applicant must demonstrate that slope stability, groundwater quality, and depth to groundwater are suitable for infiltration facilities. Infiltration facilities will require periodic maintenance to maintain permeability.

d) Vegetated (wetland/native plants and/or grass) swales shall be designed so that at the water quality flow rate (WQFR), the swale width is such that the flow depth is no greater than 4 inches and the hydraulic grade line is no greater than 2 percent (unless drop structures are employed) between structures. The inflow should be directed towards the upstream end of the swale as much as possible, but should at a minimum occur evenly over the length of the swale. The length of flow in the swale should be a minimum of 100 feet or the bioswale should provide 10 minutes of contact time with the vegetation.

e) Bioretention filters are vegetated (landscaped) areas where runoff is directed through vegetation and soils for filtration. In most cases, unless there is shown to be

adequate infiltration capacity, underdrains and overflow drains should be included to collect filtered runoff to discharge to the storm drainage system. The ponding depth should be 6 inches or less with a stabilized mulch layer of 2 to 3 inches. A sandy planting soil of 2 to 3 inches should be used. Each facility should have no more than 1 acre of tributary area, and shall be designed to convey larger flows in a manner that does not cause re-entrainment of trapped materials.

f) Commercial (media) filters or such devices shall be accompanied by a certification from a licensed civil engineer that the filter/device will maintain an effluent quality of 10-30 mg/L of total suspended solids with no visible oily sheen under design operating conditions.

8. Combination facilities, or treatment trains, are encouraged to provide better treatment capability. For example, short-term detention may be placed upstream of a flow-through facility to reduce the size of the flow-through facility. In such cases, each facility will be reduced in size accordingly based upon demonstrated water quality effectiveness for the pollutants of concern.
9. These are minimum requirements. If the County determines that additional controls and/or lower thresholds for developments are required to meet specific water quality regulatory requirements (NPDES, TMDL, etc.) in watersheds that drain to sensitive receiving waters (as defined by the Central Coast Regional Water Quality Control Board), additional requirements may be imposed. These may include design requirements that result in larger or more effective facilities as well as additional types of structural or non-structural controls. The design solution will be contingent upon the pollutants that are found to be impacting such water bodies and the regulatory status of the water body.
10. Easements, fencing, grading, access roads, ramps, etc. for water quality facilities shall be provided in accordance with current policies of the Flood Control District. Easements, if required, shall be dedicated on the Final Map or dedicated by a separate instrument. The Developer will pay the cost for easement acceptance by the County and processing through County Real Property Agents.
11. A Surety Bond for structural improvements will be posted with the Public Works Department in an amount approved by the Public Works Director prior to recordation of the Final Map or Zoning Clearance. Bond amounts will be based on the submitted cost estimates of proposed drainage improvements to be constructed outside the Public Road right-of-way.
12. The Flood Control District shall be notified 5 working days in advance of storm drain and attendant auxiliary construction. The District may provide periodic inspection during construction at the developers cost. A note shall be placed on the plans to this effect.

13. During the construction process, the County will review and approve in writing any significant design revisions to the approved Plans prior to construction of the proposed revisions.

14. Prior to occupancy clearance, the "As-Built" Plans shall be submitted to the Santa Barbara County Public Works Department.

15. A Flood Control Encroachment Permit is required for improvements in the Flood Control District right-of-way. An Encroachment Permit shall be executed prior to the start of construction within District right-of-way. District notification shall be required 5 working days prior to the start of construction. An Encroachment Permit fee is required. A note shall be placed in the plans to this effect.

16. Review by the Public Works Department of plans and granting of encroachment permits does not relieve the applicant, developer, contractor and/or owner from the responsibility to obtain all other required permits and approvals required by law, including but not limited to grading permits, building permits, environmental review for CEQA/NEPA requirements, Fish & Game permits, Army Corps of Engineers permits and other City, CalTrans or other County department approvals and the approval of the underlining property owner(s) of record

17. The County reserves the right to modify these conditions as site conditions warrant.

**STANDARD CONDITIONS OF APPROVAL FOR WATER QUALITY
RECOMMENDED BY:**

Signed copy on file Flood Control

Robert Almy
Water Agency Manager

**STANDARD CONDITIONS OF APPROVAL FOR WATER QUALITY
APPROVED AND ADOPTED BY:**

Signed copy on file Flood Control

Thomas D. Fayram, P.E.
Deputy Public Works Director

Attachment A

All discretionary development and redevelopment projects that fall into one of the following categories are subject to these conditions of approval:

- Single-Family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 or more housing units
- Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff

