

**Regulated Project Checklist\***

**Applicability.** Regulated Projects include all projects that create and/or replace 5,000 square feet or more of impervious surface. Impervious surfaces may include: roads, structures, driveways, sidewalks, patios, etc.

*\*This checklist is required to be submitted with construction/improvement plans to verify Regulated Projects have been designed to conform to Chapter 9.53 of the Merced County Code, "Regulation of Stormwater".*

**Exemptions.** The following projects are exempt from Chapter 9.53 of the Merced County Code. If applicable, check the appropriate exemption and complete all of Page 1 and the Developer Contact information on the bottom of Page 2.

- Detached single family home included in a residential subdivision approved before 8/12/2014
- Interior remodel
- Routine maintenance or repair project (as included on following list):
  - Repair or replacement work of existing underground utilities (water, sanitary sewer, etc.)
  - Exterior wall surface replacement
  - Roof replacement
  - Pavement or asphalt resurfacing within the existing footprint
  - Pavement grinding and resurfacing of existing roadways
  - Pavement repair such pothole repair or replacement of short, non-contiguous sections of roadway
- New Sidewalk or pedestrian ramp along existing roadway
- New bike lane along existing roadway
- Linear Underground Project with less than 5,000 SF of new contiguous impervious surface
- Project will retain 100% of storm water runoff on-site (no possible connectivity to Waters of the U.S.)

<b>Project Name:</b>  Enter Project Number	<b>Project Number:</b>  Enter Project Number
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**Project Location:**  
Enter Project Location.

**APN:** \_\_\_\_\_ Enter APN \_\_\_\_\_ (Assessor's Parcel Number)

- Project Type** (Check one or more):
- Subdivision Construction
  - Single Family Home
  - Landscaping (Includes: patios, pools, supplemental structures, walkways, etc.)
  - Commercial Development
  - Office Development
  - Industrial Development
  - Institutional Development (Church, School, Community Center, etc.)
  - Parking Lot, Paved/Concrete Outdoor Storage Area, or other similar impervious surface
  - Road Widening
  - Other: \_\_\_\_\_ Describe Other \_\_\_\_\_

- Project Category** (Check one or more):
- New Construction
  - Addition to Existing
  - Reconstruction
  - Other: \_\_\_\_\_ Describe Other \_\_\_\_\_

**Description of Project:**

Enter Project Description

**Project Area** (in square feet):

Total Project Area: Enter Area SF      Area to be Disturbed: Enter Area SF  
 Existing Impervious Surface Area Enter Area SF  
 New Impervious Surface Area: Enter Area SF  
 Replaced Impervious Surface Area: Enter Area SF  
 Total Post-Project Impervious Surface Area: Enter Area SF

Will more than 50% of the Existing Impervious Surface be Replaced?\*     Yes     No

*\*If yes, then runoff from all existing, new, and replaced impervious surfaces must be included in the storm water treatment and design calculations.*

**Status of Project** (to be completed by County):

Application Date: Click to Select Date  
 Application Deemed Complete Date: Click to Select Date  
 Project Approval Date: Click to Select Date

**Project Developer Contact Information:**

Name: Enter Name  
 Company: Enter Company  
 Mailing Address: Enter Address City ZIP  
(Street or P.O. Box) (City) (ZIP)  
 Phone: Enter Phone Number  
 e-mail: Enter e-mail Address

**PART A – SITE DESIGN MEASURES:**

Designate the Site Design Measures to be implemented to reduce project site runoff (Check one or more).

The SMARTS Post-Construction Water Balance Calculator is required to be used to quantify the runoff reduction resulting from implementation of the specified Site Design Measures. If post-construction water balance cannot be achieved with Site Design Measures, then additional storm water treatment and baseline hydromodification measures (See Part B of this Checklist) must be incorporated in the project design.

**Stream Setbacks and Buffers**

(A vegetated area including trees, shrubs, and herbaceous vegetation shall be retained or established to protect an adjacent stream system or lake reservoir.)

**Soil Quality Improvement and Maintenance**

(Improve and/or maintain the soil through the incorporation of soil amendments and creation of microbial community.)

**Tree Planting and Preservation**

(Plant and/or preserve healthy established trees including both evergreen and deciduous varieties.)

**Rooftop and Impervious Area Disconnection**

(Reroute of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or on-site permeable areas instead of to the storm drainage system.)

**Porous Pavement/Concrete**

(Incorporate use of porous pavement, porous concrete and/or other permeable materials for on-site flat work (driveways, walkways, patios, parking areas, etc.) instead of traditional pavement or concrete.)

**Green Roofs**

(Incorporate use of a vegetative layer grown on a roof (rooftop garden).)

**Vegetated Swales**

(Construct an on-site vegetated, open-channel swale designed to treat and attenuate storm water runoff.)

**Rain Barrels and Cisterns**

(Install a system that collects and stores storm water runoff from a roof or other impervious surface.)

**Additional Description of Site Design Measures to be Implemented for Project (if necessary):**

Enter Additional Description

**Post-Construction Water Balance Calculator Results\*:**

Pre-Project Runoff Volume: Enter Volume CF

Project-Related Runoff Volume Increase:  
(Before Implementation of Site Design Measures) Enter Volume CF

Project-Related Runoff Volume Increase:  
(After Implementation of Site Design Measures) Enter Volume CF = Treatment Volume (T<sub>v</sub>)

\*Must attach a copy of the Post-Construction Water-Balance Calculator Spreadsheet to this Checklist.

**PART B – STORM WATER TREATMENT & BASELINE HYDROMODIFICATION MEASURES:**

After implementation of Site Design Measures, remaining runoff from impervious Drainage Management Areas is required to be directed to one or more facilities designed to infiltrate, evapotranspire, and/or bioretain the excess runoff. The preferred method of storm water treatment is through construction of a bioretention swale or basin. Using the Treatment Volume ( $T_v$ ) determined in Part A, the minimum area of the bioswale shall be based on a maximum ponding depth of 6".

Alternative treatment BMPs may be used if the proper documentation and supporting calculations are provided. If Alternative BMPs are selected, all sizing and calculations shall be prepared by a Registered Civil Engineer.

**STEP 1: Determine Treatment Volume ( $T_v$ ):**

Treatment Volume ( $T_v$ ) = \_\_\_\_\_ Enter Volume \_\_\_\_\_ CF (From Part A of this Checklist)

**STEP 2: Select BMP (Note: A bioretention swale or basin is the preferred alternative.):**

**Bioretention Swale or Basin**

Bioretention Area Required: \_\_\_\_\_ Enter Area \_\_\_\_\_ SF =  $T_v/0.5'$

Bioretention Area Provided: \_\_\_\_\_ Enter Area \_\_\_\_\_ SF

*Bioretention Swales or Basins are required to be designed pursuant to the following criteria:*

- *The bioretention area shall be designed to have a maximum surface water ponding depth of 6". The capacity of the bioretention area shall be based on a design water depth of 6".*
- *The first layer of the bioretention area shall be filled with planting medium to a depth of 18". The planting medium shall consist of a mixture of sand (60% - 70%) meeting the specifications of ASTM C33 and compost (30% - 40%).*
- *A subsurface drainage/storage area consisting of washed drain rock (2" to 3") shall be placed below the planting medium. The minimum depth of this drainage/storage area shall be 12".*
- *An appropriate plant palette for the specified soil mix and maximum available irrigation water shall be planted.*
- *No liners or barriers interfering with infiltration shall be placed. No compaction of soils beneath the bioretention area shall occur.*

**Infiltration Basin**

*Most new development projects are required to design and construct a detention basin with sufficient capacity to contain the entire runoff from a 10-year, 24-hour storm. (See Chapter 3 of the Merced County Storm Drainage Design Manual.) An infiltration basin is a special-case detention basin located in an area where the native soils have a high infiltration rate. If a bioretention swale or basin is not feasible and this BMP is chosen, refer to Treatment Control BMP TC-11 in the CASQA BMP Handbook for additional design considerations that may be required.*

**Alternative BMP**

*If a bioretention swale or basin is not feasible, alternative BMPs will be considered. The following measures of effectiveness must be demonstrated for the alternative BMP:*

- *Equal or greater amount of runoff will be infiltrated or evapotranspired.*
- *Equal or lower pollutant concentrations in runoff will be discharged after treatment by alternative BMP.*
- *Equal or greater protection against shock loadings and spills.*
- *Equal or greater accessibility and ease of inspection and maintenance.*

**PART C – SOURCE CONTROL MEASURES:**

Regulated Projects with pollutant generating activities and sources are required to implement permanent and/or operation source control measures. From the following list, check all of the potential pollutant generating activities and sources that apply to this project.

- |   |   |
|---|---|
| <input type="checkbox"/> Accidental spills or leaks                                     | <input type="checkbox"/> Outdoor storage of equipment and materials   |
| <input type="checkbox"/> Interior floor drains  | <input type="checkbox"/> Vehicle and equipment cleaning   |
| <input type="checkbox"/> Parking/storage areas and maintenance                          | <input type="checkbox"/> Vehicle and equipment repair and maintenance   |
| <input type="checkbox"/> Indoor and structural pest control                             | <input type="checkbox"/> Fuel dispensing areas  |
| <input type="checkbox"/> Landscape/outdoor pesticide use                                | <input type="checkbox"/> Loading docks  |
| <input type="checkbox"/> Pools, spas, ponds, decorative fountains, etc.                 | <input type="checkbox"/> Fire sprinkler test water  |
| <input type="checkbox"/> Refuse areas   | <input type="checkbox"/> Unauthorized non-storm water discharges  |
| <input type="checkbox"/> Industrial Processes   | <input type="checkbox"/> Building and grounds maintenance   |
| <input type="checkbox"/> Restaurants, grocery stores, and other food service operations | <input type="checkbox"/> Drain or was water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources |

Describe the Source Control BMPs that will be implemented for the project for all pollutant generating activities checked above.

Describe Source Control BMPs