# cleanwater

## **Stormwater Requirements Checklist**

Municipal Regional Stormwater Permit (MRP 2.0) Stormwater Controls for Development Projects

#### City of Berkeley Public Works Dept. Engineering Division



### I. C.3.i Project Information

This form applies to development projects creating and/or replacing  $\geq 2500 \text{ ft}^2$  to  $< 10,000 \text{ ft}^2$  of impervious surface which are not Special Land Use Categories projects (auto service facilities, retail gasoline outlets, restaurants, and uncovered parking lots). This form also applies to detached single-family home projects, which create and /or replace  $\geq 2500 \text{ ft}^2$  of impervious surface. Interior remodeling projects and routine maintenance or repair projects such as roof or exterior wall surface replacement and pavement resurfacing within the existing footprint are exempt from C.3.i stormwater requirement.

I.A. Ent	er Project Data					
I.A.1	Project Name:					
I.A.2	Project Address (include cross street):					
I.A.3	Project APN:	I.A.4 Project Watershed1:				
I.A.5	Applicant Name:	I.A.6 Date Submitted:				
I.A.7	Applicant Address:					
I.A.8	Applicant Phone:	I.A.9 Applicant Email Address:	I.A.9 Applicant Email Address:			
I.A.10	Development type:	Residential Commercial Industrial Mixed-Use Streets, Ro	ads, etc.			
	(check all that apply)	'Redevelopment' as defined by MRP: creating, adding and/or replacing exterior existing impervious surface on a site where past development has occurred <sup>2</sup>				
		☐ 'Special land use categories' as defined by MRP: (1) auto service facilities³, outlets, (3) restaurants³, (4) uncovered parking area (stand-alone or part of a				
I.A.11	Project Description <sup>4</sup> :					
	(Also note any past or future phases of the project.)					
I.A.12	? Total Area of Site:	acres I.A.13 Slope on Site:	%			
I.A.14	Total Area of land disturb	ped during construction (include clearing, grading, excavating and stockpile area:	acres.			

#### I.B. Enter the amount of impervious and pervious surface¹ created and/or replaced by the project.

Table of Impervious and Pervious Surfaces

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	а	b	С	d
Type of Impervious Surface	Pre-Project Impervious Surface (sq.ft.)	Existing Impervious Surface to be Replaced <sup>7</sup> (sq.ft.)	New Impervious Surface to be Created <sup>7</sup> (sq.ft.)	Post-project pervious surface (sq.ft.)
Roof area(s) – excluding any portion of the roof that is vegetated ("green roof")				
Impervious <sup>5</sup> sidewalks, patios, paths, driveways				
Impervious <sup>5</sup> uncovered parking <sup>6</sup>				N/A
Streets (public)				
Streets (private)				
Totals:				
Area of Existing Impervious Surface to remain in place			N/A	
Total New Impervious Surface (sum of totals	for columns b and c):			

<sup>1</sup> Watershed is defined by the maps from the Alameda County Flood Control District at http://acfloodcontrol.org/resources/explore-watersheds

- <sup>2</sup> Roadway projects that replace existing impervious surface are subject to C.3 requirements only if one or more lanes of travel are added.
- <sup>3</sup> Standard Industrial Classification (SIC) codes are in Section 2.3 of the C.3 Technical Guidance (download at <a href="https://www.cleanwaterprogram.org">www.cleanwaterprogram.org</a>)
- Project description examples: 5-story office building, industrial warehouse, residential with five 4-story buildings for 200 condominiums, etc.
   Per the MRP, pavement that meets the following definition of pervious pavement is NOT an impervious surface. Pervious pavement is defined as pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in Provision C.3.d.
- <sup>6</sup> Uncovered parking includes top level of a parking structure.

I.C

7 "Replace" means to install new impervious surface where existing impervious surface is removed. "Create" means to install new impervious surface where there is currently no impervious surface.

. Identi	ify C.6 Construction-Phase Stormwater Requirements	.,	
I.C.1	Does the project disturb 1.0 acre (43,560 sq.ft.) or more of land? (See Item I.A.14). If Yes, obtain coverage under the state's Construction General Permit at <a href="https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp">https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp</a> . Submit to the municipality a copy of your Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) before a grading or building permit is issued.	Yes □	No
I.C.2	Is the site a "High Priority Site" that disturbs less than 1.0 acre (43,560 sq.ft.) of land? (Municipal staff will make the final determination.)  "High Priority Sites" are sites having any of the following criteria:  that require a grading permit,  are adjacent to a creek,  or are otherwise high priority for stormwater protection during construction (see MRP 2.0 Provision C.6.e.ii.(2)(c))		
I.C.3	Is the site a "Hillside Site" that disturbs 5,000 sq.ft. or more, but less than 1.0 acre (43,560 sq.ft.) of land? (Municipal staff will make the final determination.)  "Hillside Sites" are located on hillsides, as indicated on a jurisdictional map of hillside development areas or as indicated by meeting jurisdictional hillside development criteria.  If no map or criteria exist, then Hillside Sites are sites with a slope of 15% or more (see I.A.13 above and MRP 2.0 Provision C.6.e.ii.(2)(b)).		

- > NOTE TO APPLICANT: All projects require appropriate stormwater best management practices (BMPs) during construction. Refer to the Section II to identify appropriate construction BMPs.
- NOTE TO MUNICIPAL STAFF: If the answer is "Yes" to I.E.1, I.E.2, OR I.E.3, refer this project to construction site inspection staff to be added to their list of projects that require stormwater inspections at least monthly during the wet season (October 1 through April 30) and other times of the year as appropriate.

# II. Implementation of C.3.i Stormwater Requirements

#### II.A. Select Appropriate Site Design Measures

Starting December 1, 2012, projects that create and/or replace 2,500 - 10,000 sq.ft. of impervious surface, and stand-alone single family homes that create/replace 2,500 sq.ft. or more of impervious surface, **must include one or more of the following Site Design Measures a through f**, and are encouraged to implement the other Site Design Measures as practicable. See attached fact sheets for guidance on rain barrels / cisterns, vegetated areas and permeable surfaces, and attached sheets on recommended Source Control Measures and Construction BMPs.

II.A.1 Is the site design measure included in the project plans?

Yes	No	Plan Sheet No.
		a. Direct roof runoff into cisterns or rain barrels and use rainwater for irrigation or other non-potable use.
		b. Direct roof runoff onto vegetated areas.
		c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
		d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
		e. Construct sidewalks, walkways, and/or patios with pervious surfaces. Use the specifications in the C3 Technical Guidance (Version 4.1) or for small projects see the BASMAA Pervious Paving Factsheet. For these documents and others go to <a href="https://www.cleanwaterprogram.org">www.cleanwaterprogram.org</a> and click on "Resources."
		f. Construct bike lanes, driveways, and/or uncovered parking lots with pervious surfaces. Use the specifications in the C3 Technical Guidance (Version 4.1) or for small projects see the BASMAA Pervious Paving Factsheet. For these documents and others go to the program website at: <a href="https://www.cleanwaterprogram.org">www.cleanwaterprogram.org</a> and click on "Resources."
		g. Minimize land disturbance and impervious surface (especially parking lots).
		h. Maximize permeability by clustering development and preserving open space.
		i. Use micro-detention, including distributed landscape-based detention.
		<ul> <li>j. Protect sensitive areas, including wetland and riparian areas, and minimize changes to the natural topography.</li> </ul>
		k. Self-treating area (see Section 4.1 of the C.3 Technical Guidance)
		I. Self-retaining area (see Section 4.2 of the C.3 Technical Guidance)
		m. Plant or preserve interceptor trees (Section 4.5, C.3 Technical Guidance)

#### II.B. C.3.i projects are encouraged to implement the following Source Control Measure as practicable.

Are these features in project?		Features that require source control measures	Source control measures (Refer to Local Source Control List for detailed requirements)	Is source control measure included in project plans?		
Yes	No		Y		No	Plan Sheet No.
		Storm Drain	Mark on-site inlets with the words "No Dumping! Flows to Bay" or equivalent.			
		Floor Drains	Plumb interior floor drains to sanitary sewer <sup>8</sup> [or prohibit].			
		Parking garage	Plumb interior parking garage floor drains to sanitary sewer.9			
		Landscaping	<ul> <li>Retain existing vegetation as practicable.</li> <li>Select diverse species appropriate to the site. Include plants that are pest-and/or disease-resistant, drought-tolerant, and/or attract beneficial insects.</li> <li>Minimize use of pesticides and quick-release fertilizers.</li> <li>Use efficient irrigation system; design to minimize runoff.</li> </ul>			
		Pool/Spa/Fountain	Provide connection to the sanitary sewer to facilitate draining.9			
		Food Service Equipment (non- residential)	<ul> <li>Provide sink or other area for equipment cleaning, which is:</li> <li>Connected to a grease interceptor prior to sanitary sewer discharge.<sup>9</sup></li> <li>Large enough for the largest mat or piece of equipment to be cleaned.</li> <li>Indoors or in an outdoor roofed area designed to prevent stormwater run-on and run-off, and signed to require equipment washing in this area.</li> </ul>			
		Refuse Areas	<ul> <li>Provide a roofed and enclosed area for dumpsters, recycling containers, etc., designed to prevent stormwater run-on and runoff.</li> <li>Connect any drains in or beneath dumpsters, compactors, and tallow bin areas serving food service facilities to the sanitary sewer.<sup>9</sup></li> </ul>			
		Outdoor Process Activities <sup>9</sup>	Perform process activities either indoors or in roofed outdoor area, designed to prevent stormwater run-on and runoff, and to drain to the sanitary sewer. <sup>9</sup>			
		Outdoor Equipment/ Materials Storage	<ul> <li>Cover the area or design to avoid pollutant contact with stormwater runoff.</li> <li>Locate area only on paved and contained areas.</li> <li>Roof storage areas that will contain non-hazardous liquids, drain to sanitary sewer<sup>9</sup>, and contain by berms or similar.</li> </ul>			
		Vehicle/ Equipment Cleaning	<ul> <li>Roofed, pave and berm wash area to prevent stormwater run-on and runoff, plumb to the sanitary sewer<sup>9</sup>, and sign as a designated wash area.</li> <li>Commercial car wash facilities shall discharge to the sanitary sewer.<sup>9</sup></li> </ul>			
		Vehicle/ Equipment Repair and Maintenance	<ul> <li>Designate repair/maintenance area indoors, or an outdoors area designed to prevent stormwater run-on and runoff and provide secondary containment. Do not install drains in the secondary containment areas.</li> <li>No floor drains unless pretreated prior to discharge to the sanitary sewer.</li> <li>Connect containers or sinks used for parts cleaning to the sanitary sewer.</li> </ul>			
		Fuel Dispensing Areas	<ul> <li>Fueling areas shall have impermeable surface that is a) minimally graded to prevent ponding and b) separated from the rest of the site by a grade break.</li> <li>Canopy shall extend at least 10 ft in each direction from each pump and drain away from fueling area.</li> </ul>			
		Loading Docks	<ul> <li>Cover and/or grade to minimize run-on to and runoff from the loading area.</li> <li>Position downspouts to direct stormwater away from the loading area.</li> <li>Drain water from loading dock areas to the sanitary sewer.<sup>9</sup></li> <li>Install door skirts between the trailers and the building.</li> </ul>			
		Fire Sprinklers	Design for discharge of fire sprinkler test water to landscape or sanitary sewer. <sup>9</sup>			
		Miscellaneous Drain or Wash Water	<ul> <li>Drain condensate of air conditioning units to landscaping. Large air conditioning units may connect to the sanitary sewer.<sup>9</sup></li> <li>Roof drains shall drain to unpaved area where practicable.</li> <li>Drain boiler drain lines, roof top equipment, all washwater to sanitary sewer.<sup>9</sup></li> </ul>			
		Architectural Copper	<ul> <li>Discharge rinse water to sanitary sewer<sup>9</sup>, or collect and dispose properly offsite. See flyer "Requirements for Architectural Copper."</li> </ul>			

Any connection to the sanitary sewer system is subject to sanitary district approval.
 Businesses that may have outdoor process activities/equipment include machine shops, auto repair, industries with pretreatment facilities.

## II.C Implement Construction Best Management Practices (BMPs) where applicable.

Yes	No	Best Management Practice (BMP)
		Attach the municipality's construction BMP plan sheet to project plans and require contractor to implement the applicable BMPs on the plan sheet.
		Temporary erosion controls to stabilize all denuded areas until permanent erosion controls are established.
		Delineate with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
		Provide notes, specifications, or attachments describing the following:
		• Construction, operation and maintenance of erosion and sediment controls, include inspection frequency;
		<ul> <li>Methods and schedule for grading, excavation, filling, clearing of vegetation, and storage and disposal of excavated or cleared material;</li> </ul>
		• Specifications for vegetative cover & mulch, include methods and schedules for planting and fertilization;
		<ul> <li>Provisions for temporary and/or permanent irrigation.</li> </ul>
		Perform clearing and earth moving activities only during dry weather.
		Use sediment controls or filtration to remove sediment when dewatering and obtain all necessary permits.
		Protect all storm drain inlets in vicinity of site using sediment controls such as berms, fiber rolls, or filters.
		Trap sediment on-site, using BMPs such as sediment basins or traps, earthen dikes or berms, silt fences, check dams, soil blankets or mats, covers for soil stock piles, etc.
		Divert on-site runoff around exposed areas; divert off-site runoff around the site (e.g., swales and dikes).
		Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
		Limit construction access routes and stabilize designated access points.
		No cleaning, fueling, or maintaining vehicles on-site, except in a designated area where washwater is contained and treated.
		Store, handle, and dispose of construction materials/wastes properly to prevent contact with stormwater.
		Contractor shall train and provide instruction to all employees/subcontractors re: construction BMPs.
		Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, washwater or sediments, rinse water from architectural copper, and non-stormwater discharges to storm drains and watercourses.