Screencheck No.
Project Name
Project Number
Planning Area

Surface Water Quality Screencheck Comments by:
Mike Loving
Water Quality Administrator
Date

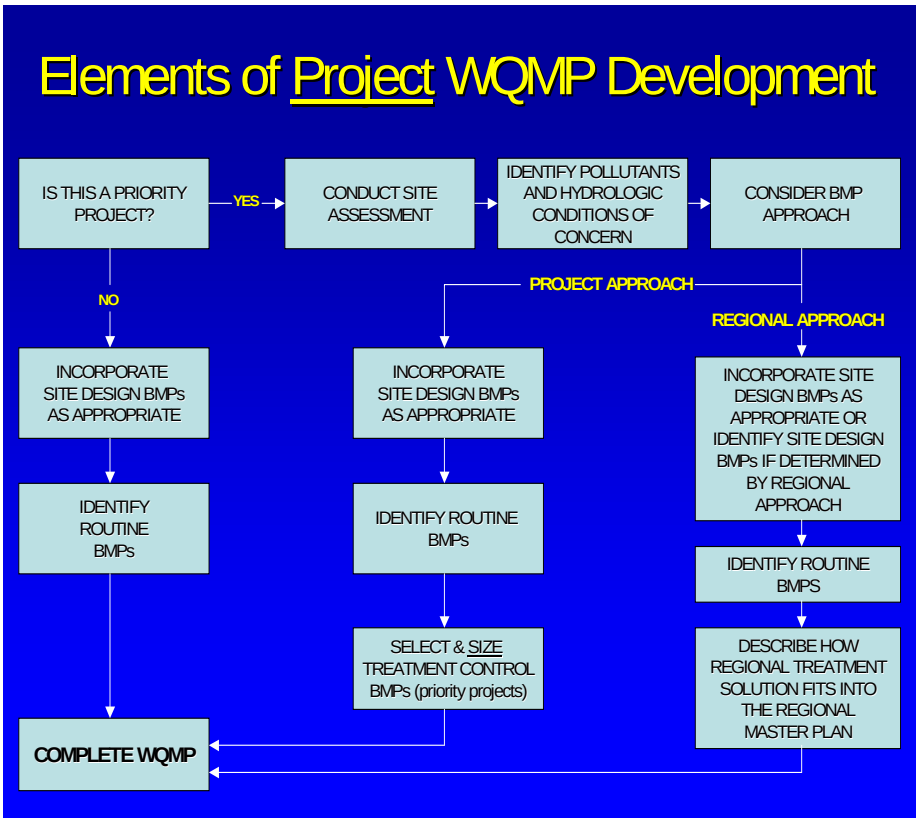
Note: The Regional Board is tentatively scheduled to adopt the fourth term MS4 permit in 2009. Projects that do not have their entitlements from the City by the date (as yet undetermined) set by the Regional Board may fall under the provisions of the fourth term permit. Please be aware that there is a possibility that no "grandfathering" will be allowed under the fourth term permit. Also, the final draft of the state general construction permit is available for review. Developers that are currently constructing projects that involve the disturbance of one acre or more of soil and developers that will be doing so in the future should become familiar with the draft permit and its potential impacts to current and future projects.

1) Any "yes" answers in the table below indicates a "priority project." If so, site design BMPs should be considered; and routine structural and non-structural source control BMPs, and treatment control BMPs must be implemented on-site.

Proposed Project Includes:	Yes	No
1. Residential development of 10 units or more		
2. Commercial and industrial development greater than 100,000 square feet including parking areas		
3. Automotive repair shop (SIC codes 5013, 5014, 5541, 7532-7534, and 7536-7539)		
4. Restaurant where the land area of development is 5,000 square feet or more including parking areas (SIC code 5812)		
5. Hillside development on 10,000 square feet or more, which is located on areas with known erosive soil conditions or where natural slope in 25 percent or more		
6. Impervious surface of 2,500 square feet or more located within, directly adjacent to (within 200 feet), or discharging directly to receiving water within Environmentally Sensitive Areas[2].		
7. Parking lot area of 5,000 square feet or more, or with 15 or more parking spaces, and potentially exposed to urban runoff		
8. All significant redevelopment projects, where significant redevelopment is defined as the addition of 5,000 or more square feet of impervious surface on an already developed site[1]		

[1] Significant redevelopment includes, but is not limited to the replacement of impervious surfaces, buildings and/or structures when 5,000 or more square feet of soil is exposed during replacement construction.

2) A project Water Quality Management Plan (WQMP) must be submitted, and be reviewed and approved by Building and Safety prior to issuance of grading or building permits (see the attached flow chart on the elements of project WQMP development). The project WQMP should include a description of site design BMPs, routine non-structural and structural source control BMPs, and on-site treatment control BMPs if the project does not drain to an operational regional treatment control facility. The elements of a project WQMP development are shown in the following table:



3) The project WQMP must consider Site Design BMPs

Site Design BMPs are design concepts intended to minimize changes to the natural hydrologic regime, by:

- Controlling peak storm water runoff rates
- Minimizing the project's impervious footprint
- Conserving natural areas, if applicable
- Minimizing directly connected impervious areas
- Protecting slopes and channels

The project WQMP must include Routine Non-Structural Source Control BMPs

Typical Routine Non-Structural Source Control BMPs include:

- Occupant/employee education and training
- Proper landscape management
- Facility maintenance (good housekeeping)
- Parking lot and street sweeping

The project WQMP must include Routine Structural Source Control BMPs

Typical Routine Structural Source Control BMPs include:

- Covered and/or bermed outdoor materials storage areas
- Trench drains at entrances to maintenance bays
- Roof or awnings over loading dock areas
- Signage for storm drain inlets

If the project is a "priority project" as defined in the Table on Page 1, the project WQMP must include on-site Treatment Control BMPs

Treatment Control BMPs are engineered technologies designed to remove pollutants from storm water and urban runoff, such as:

- Biofilters (vegetated strips or swales)
- Detention basins (dry)
- Infiltration basins
- Wet Ponds or wetlands
- Filtration systems
- Proprietary devices

If a treatment control BMP is required, the project WQMP must include:

- A separate, black and white site plan showing the areas that are treated by each treatment control BMP. 100% of the project site must be treated and the boundaries of each area should be shown using heavy black lines similar to the way drainage areas are shown on a hydrology map.
- A table showing each treatment control BMP and the area in square feet that it is designed to treat. 100% of the project area must be treated and included in the table.

Project requirements for Treatment Control BMPs may be met by a regional or watershed approach such as IRWD's Natural Treatment System (NTS), if:

- The project incorporates all applicable Routine Source Control BMPs
- The regional program incorporates BMPs sized to treat appropriate volume or flow for all new development within the watershed
- The implementation mechanism for the regional program is identified, including funding, timing, and ability to execute
- A "Consistency Determination" is made by the Executive Officer of the Santa Ana Regional Water Quality Control Board that confirms that the regional treatment BMP is consistent with:
  1. The Clean Water Act
  2. The City's current Municipal Separate Storm Sewer (MS4) permit, and
  3. The Countywide Drainage Area Management Plan (DAMP)

TREATMENT CONTROL SELECTION CRITERIA
FOR "PRIORITY PROJECTS"

1. Treatment control BMPs must be selected to address the pollutants of concern in downstream receiving waters and the pollutants expected to be generated from the type of new development or significant redevelopment being proposed.

Pollutants of Concern for Development Types

Constituent	Project-Based Anticipated or Potential Pollutant of Concern
TSS	Res, C, Hill, P, T
Nutrients	Res, C, Hill, P, T
Heavy Metals	C, P, T, A
Bacteria/Virus	Res, C, Hill, P, T, R
Pesticides	Res, C, Hill, P, T
Organic Compounds	C, P, T, A
Trash and Debris	Res, C, Hill, P, T, A, R
Oxygen Demanding Substances	Res, C, Hill, P, T, R
Oil and Grease	Res, C, Hill, P, T, A, R

Development Types: Res = detached or attached residential development
C = commercial/industrial (including automotive and restaurants)
Hill = hillside development
P = parking lots
T = transportation
A = automotive repair shops
R = restaurants

2. Any pollutant of concern that is expected to be generated by the project which are causing a Clean Water Act Section 303(d) impairment of receiving waters shall be considered primary pollutants of concern. Priority projects[2] shall select a single or combination of stormwater Treatment Control BMPs, which address the particular pollutants of concern.

303(d) & TMDL Listed Receiving Waters

Name	303(d)/TMDL Listing
Upper Newport Bay Ecological Reserve	Chlordane, Copper, DDT, Metals, PCBs, Sediment Toxicity, Chlorpyrifos, Nitrogen, Phosphorus, Zinc, Selenium, Diazinon, Dieldrin & Lead and Sediment
San Diego Creek, Reach 1 (Upper Newport Bay to Jeffrey Road)	Chlordane, DDT, PCBs, Chlorpyrifos, Nitrogen, Phosphorus, Zinc, Selenium, Diazinon, Dieldrin, Lead, Toxaphene, Cadmium, Sediment and Fecal Coliform
San Diego Creek, Reach 2 (Upstream of Jeffrey Road)	Chlordane, DDT, PCBs, Chlorpyrifos, Nitrogen, Phosphorus, Zinc, Selenium, Diazinon, Dieldrin, Lead, Toxaphene, Cadmium, Copper, Sediment, Fecal Coliform and Metals

[2] Priority projects with tentative tract or parcel maps approved by the City of Irvine after July 1, 2003

Peters Canyon Channel	DDT and Toxaphene

3. **Treatment** control BMPs must be sized to comply with one of the following numeric sizing criteria:

Volume

Volume-based treatment control BMPs shall be designed to infiltrate, filter, or treat either:

- The volume of runoff produced from a 24 hour, 85th percentile storm event, as determined from the local historic rainfall record; or,
- The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in *Urban Runoff Quality Management, WEF Manuel of Practice No. 23/ASCE Manual of Practice No. 87)1998*); or,
- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook – Industrial/Commercial (1993)*; or,
- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event;

OR

Flow

Flow-based treatment control BMPs shall be designed to infiltrate, filter, or treat either:

- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inches of rainfall per hour; or,
- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or,
- The maximum flow rate of runoff, as determined by the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

4. Before a proposed treatment control BMP may be used in an approved project WQMP, it shall first be evaluated and approved by the City for:

   a. Effectiveness in removing pollutants of concern based on available test results for similar installations
   b. Ease and frequency of maintenance
   c. Durability
   d. Cost effectiveness
   e. Vector minimization and control

IMPORTANT NOTE: The City's first preference is that extended detention basins, bio-filters, and constructed wetlands be used as treatment control BMPs for priority projects. The City has also

approved the use of Contech's *Stormfilter* system[3], and Americast's *Filterra* system, or a combination of these systems and natural systems as primary treatment control BMPs. These systems, **or an equivalent system**, that meets the City's evaluation criteria (listed above), may be used as the primary treatment control for this project provided they are sized to treat all the runoff from this site in accordance with the sizing criteria included in the City's NPDES permit. Please be advised that not all products evaluated are approved and that such evaluation may take considerable time and thus should be considered in overall project scheduling.

5. The applicant must demonstrate that appropriate vector minimization considerations and mitigation measures have been incorporated into the design, implementation, and maintenance schedule for each treatment control BMP. This would include but is not limited to:

    a. Rapid discharge of all captured standing water (within 72 hours) in dry systems
    b. Mosquito exclusion from devices (when applicable)
    c. Sediment/debris removal and vegetation management from treatment wetlands "as needed"
    d. Access for inspection and treatment control of mosquitoes and other vectors

For complete guidelines and information on vector minimization standards for treatment control BMPs, contact the Orange County Vector Control District at (714) 971-2421 or www.ocvcd.org.

Groundwater Protection

Any structural infiltration treatment control BMPs shall meet the following minimum requirements:

- Use of structural infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater water quality objectives.
- Source control and pollution prevention treatment control BMPs shall be implemented to protect groundwater quality.
- Structural infiltration treatment control BMPs shall not cause a nuisance or pollution, as defined in Water Code Section 13050.

Permits for Dewatering Operations

Applicants should be aware that short term and long term dewatering activities in the City of Irvine require a permit issued by the Santa Ana Regional Water Quality Control Board (Regional Board). This is primarily due to the presence of nitrates and selenium in the Newport Bay Watershed.

The short-term permit (Regional Board Order R8-2005-0079) prescribes discharge requirements for:

1. Short term (one year or less duration) discharges from activities involving groundwater extraction and discharge:

    a. Wastes associated well installation, development, test pumping and purging;
    b. Aquifer testing wastes;
    c. Dewatering wastes from subterranean seepage; and
    d. Groundwater dewatering wastes at construction sites.

[3] As of September 14, 2007, the City of Irvine will allow the use of the curb inlet type Stormfiler Media treatment control BMP for use within public street rights-of-way if it can be demonstrated that other City approved treatment control BMPs cannot be installed due to physical constraints

2. Discharges that pose an insignificant threat to water quality:

    a. Construction dewatering wastes not involving groundwater (except storm water dewatering at construction sites);
    b. Discharges resulting from hydrostatic testing of vessels, pipelines, tanks, etc.;
    c. Discharges resulting from maintenance of potable water supply pipelines, tanks, reservoirs, etc.;
    d. Discharges resulting from disinfection of potable water supply pipelines, tanks, reservoirs, etc.;
    e. Discharges from potable water supply systems resulting from system failures, pressure releases, etc.;
    f. Discharges from fire hydrant testing and flushing;
    g. Non-contact cooling water;
    h. Air conditioning condensate;
    i. Swimming pool drainage;
    j. Discharges resulting from diverted stream flows;
    k. Discharges from residential sump pumps; and
    l. Other similar types of wastes, which pose and *de minimus* threat to water quality, yet technically must be regulated under waste discharge requirements.

For longer term ground water discharges not covered under the aforementioned Order No. R8-2005-0079, individual permits are required by the Regional Board.

Please consult with the Regional Board to discuss specific permit requirements if there is a possibility that dewatering activities may be required for your project.

Community Car Wash Pads

For an apartment or condominium community that will provide a car wash pad, the following requirements apply:

Runoff from the car wash pad must be directed to the sewer provided that this is permitted by the local sewer agency. Roofing is required for outdoor car wash pads, which have a total area exceeding 150 square feet. If the roof structure does not include walls, then the roof's overhang must extend a minimum of 20 percent of the roof's height. All roof drains must be routed to a storm drain.

Appropriate measure must be taken to ensure that surface runoff from the exposed area around the car wash pad (e.g. parking lot, storage areas) does not enter the sewer. The surface runoff must be directed to a storm drain in accordance with stormwater discharge requirements.