

7.0 INDUSTRIAL AND COMMERCIAL COMPONENT

7.1 Introduction

This section describes the responsibilities of the City with respect to implementation of the Industrial and Commercial Component of the JURMP. This program is intended to: (1) reduce industrial and commercial discharges of pollutants from the MS4 to the MEP, and; (2) prevent municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

7.2 Stationary Sources Element

7.2.1 Background

Storm water inspectors identify pollution sources, assess the potential threat to water quality, and require BMP implementation to eliminate pollution sources from commercial businesses. Major industrial types in Carlsbad include high technology, multimedia and biomedical businesses, electronics, golf apparel and equipment manufacturers and several light industry parks. Stationary commercial types in Carlsbad are restaurants, automobile maintenance, gas stations, golf courses, and resorts. These high priority industrial and commercial sites and their activities have the potential to generate significant amounts of pollutants, if performed with disregard to the environment.

7.2.2 Source Characterization

Each year hundreds of new businesses are established in Carlsbad. The Storm Water Protection Program works closely with the Finance Department to obtain information about new businesses, including activities, SIC codes and descriptions, business types, and contact names and numbers. Each quarter the Storm Water Protection Program will download, sort, map, and prioritize new businesses by SIC and business type.

These new businesses are screened, evaluated, prioritized, and then added to the inventory list and scheduled for inspection. In some cases information provided on business license applications is not correct and a pre-inspection evaluation was necessary. Pre-inspection evaluations helped determine if a business' activities were subject to storm water requirements. Two types of pre-inspection source evaluations were used:

1. Reviews: During the review process, the inspector will evaluate the source and activity using relevant information from other City departments, databases, or licensing programs to determine whether the site/source should be inspected and tracked by the Storm Water Protection Program. A business could be excluded during the review process if it was found that their activities are not regulated by the City or General Permit. The most common reason businesses were excluded was because of an incorrect SIC code designation or low threat to water quality.
2. Telephone Contacts: If the review fails to provide enough information, the inspector will contact the business by phone to determine their status and schedule an inspection if necessary.

After physical inspections, reviews, or telephone contacts, any changes to a business' priority or status will be recorded on the Storm Water Inventory List and/or in the Permits Plus database. New businesses are also found by referral from other agencies, field discovery, or business directories.

The City's Commercial/Industrial inventory is located in Appendix 7-A.

As required by the permit, the following applicable stationary sites/sources are included in the inventory:

1. Commercial Sites/Sources:

- Automobile repair, maintenance, fueling, or cleaning;
- Airplane repair, maintenance, fueling, or cleaning;
- Boat repair, maintenance, fueling, or cleaning;
- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services;
- Eating or drinking establishments, including food markets;
- Cement mixing or cutting;
- Masonry;
- Painting and coating;
- Botanical or zoological gardens and exhibits;
- Landscaping;
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;
- Cemeteries;
- Marinas;
- Portable sanitary services;
- Building material retailers and storage;
- Animal facilities

2. Industrial Sites/Sources:

- Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- Operating and closed landfills;
- Facilities subject to SARA Title III; and
- Hazardous waste treatment, disposal, storage and recovery facilities.

3. All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

4. All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

Potential threats to water quality at each commercial and industrial site/source will be determined by evaluating a variety of site-specific factors including the criteria outlined in the Permit. Commercial and industrial facilities will be reviewed during the first year of implementation and prioritizations will be reviewed and updated annually in conjunction with the watershed-based inventory to reflect any changes in industrial and commercial uses. Individual prioritization criteria are described below in further detail:

Prioritization Criteria: Prioritization involves two steps: (1) initially classifying a facility as being a high threat to water quality based on site information; and (2) subsequently confirming or reclassifying the facility based on field observations and additional information. Initial classification of sites/sources will be accomplished administratively using the data provided in the existing industrial and commercial inventory. The confirmation and/or reclassification, when necessary, will be completed following the initial inspection of each site/source. In addition of the minimum criteria listed above, the City will also consider the following site/source attributes to evaluate the potential threat to water quality:

- i. Type of activity (SIC code): Standard Industrial Classification (SIC) codes will be used primarily to prioritize and identify specific commercial and industrial activities/sites that have the potential to contribute to storm water pollution. In addition, the NPDES General Industrial Permit (General Permit) defines specific SIC codes such that (1) coverage under the General Permit is mandatory (as defined in Categories ii, iii, vi, and viii of the General Industrial Permit) or (2) coverage under the General Permit is conditional, required only if material, machinery, or products are exposed to storm water (as defined in Category 10 of the General Permit). Industries not listed with an SIC code will be directly contacted and assigned an appropriate code based on a description of business activities.
- ii. Materials used at the facility: Materials, including hazardous materials, used at industrial and commercial sites have the potential to contribute significant pollutant loads to receiving waters if transported by storm water. A listing of all industrial and commercial facilities using or storing hazardous materials within the City has been obtained from the County of San Diego.
- iii. Wastes generated: If not properly disposed of, industrial and commercial wastes have the potential to degrade receiving waters when transported by storm water. A listing of all facilities generating industrial wastes within the City was obtained from the County of San Diego. Industrial Waste Permits issued by Encina Wastewater Authority will also be examined.
- iv. Pollutant discharge potential: When evaluating a commercial or industrial site/source's potential to discharge pollutants, the inspector will take into account all material handling equipment or activities, raw materials, intermediate products, final products, waste material, by-products, or industrial machinery exposed to storm water. Discharge potential will be assessed during site inspections at each facility.
- v. Non-storm water discharges: Authorized non-storm water discharges can contribute to water quality degradation by transporting pollutants into receiving

waters. Non-storm water discharges will be evaluated to determine whether they are a significant source of pollutants and whether the discharges may continue to be exempted from the prohibitions of Section B.1 of the Permit.

- vi. Size of facility: Size of the facility affects the amount of runoff and pollutant loads generated from the industry. The size of a facility will be taken into consideration during the threat evaluation process.
- vii. Proximity to receiving water bodies: The potential for pollutant transport to sensitive receiving water bodies is evaluated by determining the proximity and sensitivity of receiving water bodies using the ESA definitions from the Permit.
- viii. Sensitivity of receiving water bodies: All facilities directly discharging to or within 200 feet of the ESA's listed above were considered high priority.
- ix. Whether the facility is subject to the General Industrial Permit or an individual NPDES permit: A listing of facilities located in Carlsbad that have filed a Notice of Intent (NOI) and are covered under the General Permit are classified as high priority threats to water quality.
- x. Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability: Those facilities that were identified as "Conditional" (NONA and NEC filers) were evaluated using the "prioritization flowchart" and prioritized accordingly.
- xi. Facility design: The design of a facility, including whether structural BMPs has been installed and maintained, or there are outdoor activities, will be considered during the threat to water quality evaluation process.
- xii. Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff.
- xiii. The facility's compliance history: Inspectors will review the compliance history of each commercial and industrial site and consider any relevant enforcement actions in determine the threat potential on activities conducted onsite.
- xiv. Any other relevant factors: The City reserves the authority to consider any other relevant factors specific to the facility to utilize in the prioritization process.

7.2.3 Best Management Practice Requirements

7.2.3.1 BMP Requirements

The minimum BMPs required to be implemented by all commercial and industrial businesses are described below:

There are four key components to a pollution prevention program and a fifth component added for storm water. Reviewing the following five "Rs" will assist in identifying the pollution prevention opportunities for Industrial Facilities. The definitions of these terms are as follows:

- Reduce – BEFORE generating a waste stream, minimize the quantity or toxicity of the waste by substituting nontoxic chemicals.
- Reuse – Material, unwanted in one area, may be used for its intended purpose in another area.
- Recycle – Reprocess used materials and produce a new or useful product.

- Rebuy – Purchase a product that contains recycled-content materials.
- Redirect – Divert the flow of storm water to reduce or eliminate contact with potential pollution. Direct storm water away from contact with known pollutants.

Pollution prevention eliminates or reduces the management of polluted storm water runoff. Industrial facilities often handle a variety of pollutants, both indoors and outdoors, that pose potential environmental threats if transported by way of urban runoff. Although the primary goal of pollution prevention is to protect human and environmental health, if properly implemented, pollution prevention can also support production by decreasing labor time associated with excess pollutant waste handling, thereby re-directing labor time more efficiently to production. Specific pollution prevention procedures may vary from one industrial facility to another, and the City will inform industries of pollution prevention opportunities during site inspections or through workshops aimed at common industry groups, where feasible. However, the following pollution prevention principles apply to most industries:

- Affirmative Procurement – Use alternative, safer, or recycled products.
- Redirect storm water flows away from areas of concern.
- Reduce use of water or use dry methods.
- Reduce storm water flow across facility site.
- Recycle and reuse waste products and waste flows.
- Move or cover potential pollution from storm water contact.
- Provide on-going employee training in pollution prevention.

BMPs are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. In general, BMPs can be categorized as non-structural and structural. Non-structural BMPs consist of procedures and practices that prevent industrial pollutants from entering storm water. Because of their low cost and simplicity, non-structural BMPs should be considered first in the development of a facility's BMP program. Described below are minimum BMPs required to be implemented by stationary commercial and industrial facilities, as applicable:

1. Good housekeeping

Good housekeeping practices are designed to maintain a clean and orderly work environment. An orderly work environment may reduce the possibility of accidental spills caused by mishandling of chemicals or equipment and may reduce safety hazards to facility personnel. A clean work environment minimizes the discharge of pollutants into the storm water system. Specifically stationary facilities are required to:

- Protect materials and products that could potentially pollute storm water from rain, run-on, runoff, and wind dispersal by storing them indoors or covering them, and providing them with secondary containment as needed. For industries with conditional SIC codes, moving stored materials indoors may allow an exemption from the General Permit requirements.

- Use dry clean up methods (mops, brooms, rags or wire brushes to clean pavement, buildings and equipment as much as possible) instead of using water hose or pressure washing system to conduct washing or cleaning activities.
- Sweep up around dumpsters and other areas to prevent trash and debris from accumulating. Dumpsters must be kept closed when not in use. All trash must be kept in appropriate sized containers until it can be hauled away. When inspecting solid waste collection areas, inspectors will note if recyclable materials (cardboard, green waste, etc.) are placed in dumpsters.

2. Preventive maintenance

Preventive maintenance includes the regular inspection and maintenance of storm water structures (drains, catch basins, etc.) as well as other facility equipment and systems. Structures should be maintained in good working order and cleaned as needed to prevent discharge of pollutants into the storm water system. Facility equipment or systems should be properly maintained to prevent leaks or discharges of pollutants into the storm water system.

3. Material Storage and Handling

This includes all procedures to minimize exposure of significant materials to storm water and to minimize the potential for spills and leaks from storage, loading, unloading and transfer of materials.

4. Employee training

Appropriate personnel should be trained in good housekeeping, preventive maintenance, materials storage and handling, solid waste handling and recycling, and spill response as applicable to the facility. Records should be retained of employees attending storm water training sessions and the topics covered.

5. Solid waste (non-hazardous) handling and recycling

This includes the procedures or processes to handle, store, or dispose of waste or recyclable materials. Waste disposal areas should be kept free of litter and debris and waste and recyclable receptacles must have a cover or lid to prevent the contents from being dispersed by the wind or coming in contact with storm water.

6. Spill response

Spills and leaks can be a major contributor to storm water pollution. Facilities should identify potential locations and quantities of significant materials that may spill or leak, and should write and implement a response plan addressing spill containment, clean up and notification procedures. Appropriate spill clean-up equipment should be readily accessible to trained spill response personnel.

7. Record keeping

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel. Record keeping and internal reporting represent good operating practices as they increase the efficiency of the facility and the effectiveness of BMPs.

8. Self inspection/quality assurance

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures should be described to ensure adequate corrective actions are taken. Quality assurance includes the procedures to ensure that all elements of any required SWPPPs or monitoring plans are adequately conducted.

7.2.3.2 Additional Controls for Stationary Commercial Sites / Sources

All high priority industries will be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) as required by the General Industrial Permit of the Carlsbad Municipal Code. In addition, some high priority commercial stationary facilities will also be required to develop and implement SWPPPs if their activities have the potential to contribute to storm water pollution. These businesses will be given 60-90 days to develop and submit the SWPPP to the Storm Water Protection Program for review and approval. During follow up compliance inspections, businesses will be required to show documentation that the SWPPPs had been implemented as required. If the inspector found deficiencies, the facility operator will be required to revise the SWPPP and ensure compliance procedures and BMPs were implemented as outlined in the plan.

Since 1995, the City has required new industrial and commercial developments to implement structural BMPs for storm water runoff (e.g., drainage inlet filters/screens, sedimentation basins). During inspections, the City will observe and review the current BMPs and will recommend or require additional BMPs as appropriate to mitigate any potential or actual sources of pollution generated from the facility. Inspections of existing structural BMPs will verify installation of the planned BMPs, maintenance and operation. Since these BMPs are site specific, the determination or recommendation for specific BMPs will be made after inspections. When specific BMPs need to be designated, the City will refer to existing sources of published BMPs, including: the California Storm Water Best Management Handbooks (1993); County of San Diego Guidance Documents; CALTRANS, etc.

Structural BMPs consist of specialized equipment, structural components, or engineered technologies that can be used when non-structural BMPs are ineffective. Because structural BMPs are site specific, the facility operator needs to evaluate each proposed use. Proper installation and regular maintenance of structural BMPs are imperative to their effectiveness. Examples are as follows:

Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water.

Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the facility.

Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

Treatment

This includes inlet controls, infiltration devices, oil-water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges.

7.2.4 Program Implementation

7.2.4.1 Inspections

The City will conduct inspections to verify BMP implementation, Permit compliance, and municipal code compliance. Each month, several businesses will be selected from the inventory list for inspection and/or review. If a new business is not excluded by review or telephone survey, then a site visit will be scheduled and a comprehensive inspection conducted. The City will conduct scheduled, unscheduled, follow-up, and compliance inspections at commercial and industrial sites/sources at the frequencies as required by the Permit. During site visits, the inspector will:

- a. Review of the SWPPP or BMP implementation plans, if the site uses or is required to use such a plan;
- b. Review of facility monitoring data, if the site monitors its runoff
- c. Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.), if applicable;
- d. Assess compliance with ordinances and permits related to urban runoff;
- e. Assess BMP implementation, maintenance and effectiveness;
- f. Conduct visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
- g. Evaluate education and training on storm water pollution prevention, as conditions warrant.

The results will be compiled into an inspection report that includes observations made during the site visit, noted violations, and corrective actions needed to comply, if applicable. The inspection report will be left onsite and prompt compliance is expected.

When the responsible party is not available to sign and/or receive the inspection report, it will be mailed with a cover letter including a date to comply with the corrective actions. Copies of inspection reports and letters for high priority sites/sources will be maintained by the Storm Water Protection Program.

7.2.4.2 Inspection Frequency

High Threat to Water Quality – At a minimum, 50% of all sites (excluding mobile sources) determined to pose a high threat to water quality will be inspected in the first year of implementation of the JURMP. The inspection frequency will increase to 100% of the commercial and industrial sites in the second year, and will remain at 100% annually thereafter. Per Order R9-2007-0001, if the RWQCB inspects an industrial site within the City, it satisfies the City’s requirement to perform an inspection during that reporting period.

Overall Inventory – At least 20% of all inventoried stationary businesses will be inspected in the first year of program implementation. In subsequent years at least 25% of the inventoried stationary businesses will be inspected. In general, each year all high TTWQ sites will be selected for inspection, and then other, lower priority businesses will be selected based largely on their potential to contribute pollutants of concern for local receiving waterbodies and resource availability. If high TTWQ stationary sites comprise more than 25% of the inventory in a given year, the City will still inspect all high priority sites. Note that mobile businesses are not included when determining the inspection requirements based on percentages of the inventory. The City will track its inspections during each reporting period to ensure that it meets the minimum inspection frequencies required by the Order. More specific detail about the sites selected for inspection in 2007-2008 is provided later in this subsection.

The City will also continue to investigate all reported incidents of illegal discharges from industrial or commercial site/sources, including those arising from the results of the Dry Weather Monitoring Program. Investigations are performed according to the procedures described above.

As required by the Permit, the City has identified the businesses it plans to inspect within the first year of program implementation. The City’s present industrial and commercial inventory includes 595 stationary facilities, of which 559 are identified as high TTWQ and 36 are classified as non-high TTWQ. Therefore, twenty percent of the required stationary facility inventory to be inspected during the first year of implementation is 112 sites, and 50 percent of the high TTWQ inventory would be 280 sites. As of this writing, the City has inspected 323 stationary facilities in 2007-2008 and an additional approximately 127 mobile businesses. The City reserves the right to amend the planned inspection list as it deems necessary; rationale for changes, if necessary, will be explained in subsequent JURMP Annual Reports.

7.2.4.3 Enforcement

In the event that an inspector determines that a commercial or industrial site is out of compliance with the Permit and/or City requirements, the inspector will document the corrective actions necessary to bring the site into compliance. Documentation of the corrective actions includes a compliance date – a day and time at which the inspector has determined that the site needs to be in compliance. This compliance date is based on the best professional judgment of the inspector. The inspector will perform a follow-up inspection to determine compliance has been achieved. If compliance has not been achieved, the inspector will escalate the enforcement actions. The results of the follow-up inspection are included on the inspection form documentation.

The enforcement actions for industrial and commercial sites/sources are similar to the City's general enforcement as described in Section 2.

7.2.4.4 Reporting Industrial Non-Filers

In each JURMP Annual Report the City will provide a list of industrial sites that may require coverage under the General Industrial Permit but which, to the City's knowledge, have not filed NOIs. At minimum the list includes the name, address, and an assessment of the SIC code of each business.

7.3 Mobile Sources Element

The City has participated in the development of a Regional Mobile Outreach and Education Strategy. The City will work with the Copermittees to ensure the implementation and success of this strategy. A copy of the *Regional Mobile Outreach and Education Strategy*, which includes a discussion of Carlsbad's jurisdictional efforts, can be found in Appendix 7-B.

7.4 Enforcement

The enforcement activities for industrial and commercial sites/sources are similar to the City's general enforcement as described in Section 2.