

C-5.0 MUNICIPAL ACTIVITIES

C-5.1 Introduction

The Permittees own and operate facilities and build and maintain much of the infrastructure of the urban and sub-urban environment throughout their jurisdictions, and how these activities are undertaken significantly contributes to the control of urban stormwater pollution. Consequently, the most significant of these activities are recognized in the DAMP as *Baseline BMPs*.

With the adoption of the Third Term Permits, the Permittees were required to formally re-evaluate and revise the municipal activities program. This re-evaluation was achieved through the development and implementation of a Model Municipal Activities Program Manual and Model Integrated Pest Management, Pesticide and Fertilizer Guidelines. The objectives of these revised model programs are to provide the Permittees with:

- A program framework for reducing the adverse impacts that municipal activities may have on water quality;
- An iterative process by which they can effectively monitor and respond to problems as they are discovered; and
- Methodologies to meet Third Term Permit requirements.

C-5.2 Baseline BMPs

All of the Permittees routinely conduct preventive maintenance activities that are widely recognized as effective BMPs for pollutant control. These activities include litter control, solid waste collection/recycling, drainage facility maintenance, catch basin stenciling, street sweeping, household hazardous waste collection, and emergency spill response.

An annual evaluation of these activities is conducted and, where appropriate, improvements or new practices implemented to further reduce the amount of pollutants discharged into the storm drain system. An important component of this evaluation process is the documentation and collection of data related to these selected activities.

C-5.2.1 Trash and Debris Controls (formerly Litter Control)

Trash and debris control is an important element in the diversion of trash and other materials from the storm drain system. Although most Permittees historically viewed litter control as a public service program (i.e., preventing visual blight, etc.), rather than as a pollution control problem, it is also considered important as a visual indicator of water quality.

Trash and Debris Booms

Eleven (11) trash and debris booms have been installed in a number of flood control channels and harbors to remove floatable material.

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- *San Gabriel River/Coyote Creek*

A boom is maintained in Federal Channel located near the intersection of the 22 and 405 freeways.

- *Anaheim Bay/Huntington Harbour Watershed*

Debris booms are maintained at five locations in the watershed. Three booms are located in the Bolsa Chica Channel at: 1) upstream of Edinger Avenue, 2) at the confluence of Westminster Channel, 3) at Seabring Avenue. A fourth boom is located in the Anaheim-Barber City Channel, just upstream from the confluence of Bolsa Chica Channel, and a fifth boom is located near Farm Bridge at Pacific Coast Highway in the East Garden Grove-Wintersburg Channel.

- *Santa Ana River Watershed*

A debris boom is maintained upstream of Hamilton Avenue in the Greenville Banning Channel/Lower Santa Ana River.

- *Newport Bay Watershed*

The City of Newport Beach, in the 1980s, installed a log boom made of telephone poles connected together with chains in the Upper Newport Bay to reduce the amount of trash and debris entering Newport Harbor. Six years ago the boom was damaged by the El Niño rainstorms and was replaced by a new conventional trash debris boom. The City's General Services Department inspects the boom weekly and periodically performs maintenance on the boom. The amount of trash and debris in Newport Harbor has been reduced significantly since the installation of this boom.

Another boom is located upstream of Newport Bay in the Santa Ana-Delhi Channel. This boom has been in operation for many years effectively removing trash and debris flowing into Upper Newport Bay.

In 1999, the Principal Permittee received a Clean Water Act 319(h) grant to implement additional trash and vegetative debris booms in the watershed and focus on enhanced source control measures. The additional debris booms were installed in El Modena-Irvine and Peters Canyon Channel.

- *San Clemente Coastal Streams Watershed*

A trash boom is located near the mouth of Prima Deschecha Channel to help prevent trash and debris entering the Pacific Ocean and washing ashore on nearby Prima Deschecha Canada Beach.

Coastal Cleanup Day

Every year the California Coastal Commission and Trails-4-All sponsor the Inner-

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Coastal and Watershed Cleanup Day to help cleanup the trash and debris that accumulates along the coastline, fouling the beaches and tidal zone. This event has been heavily promoted by the Orange County Stormwater Program. In 2002, 1,722 volunteers joined in and collected 29,503 pounds of trash and 5,350 pounds of recyclables. In 2003, 2,473 volunteers collected 52,474 pounds of trash and 5,447 pounds of recyclables. In 2004, 6,001 volunteers collected 78,390 pounds of trash and 9,563 pounds of recyclables.

C-5.2.2 Solid Waste Collection/Recycling

The Permittees have solid waste collection programs for public, residential, commercial and industrial areas. The Permittees recognize that the public must be encouraged to properly dispose of their trash and educated in order to understand that the storm drain is not a waste receptacle. The Permittees conduct public education outreach through a variety of methods including community newsletters, radio and television public service announcements, brochures and utility bill inserts. Many Permittees have combined the recycling, litter control and hazardous materials disposal messages (**Section C-6.0**).

During the reporting period, 35 Permittees reported the collection of nearly 3.6 million tons of solid waste. Compared to the total of 3.62 million tons of solid waste reported by 30 Permittees in 2003-04, 3.64 million tons of solid waste reported by 26 Permittees in 2002-03, and 3.70 million tons of solid waste reported by 33 Permittees in 2001-02.

(Table C-5.1)

Headline Indicator – Solid Waste Collection: 3,959,590 tons of solid waste was collected during the reporting period. This effort appears to represent a 9.1% increase in the amount of solid waste collected over the previous reporting period, an 8.8% increase over the reported total in 2002-03, and a 7.0% increase over the reported total in 2001-02. However, there are significant discrepancies in the year-to-year reporting of individual jurisdictions.

C-5.2.3 Drainage Facility Maintenance

The Permittees inspect the drainage system within their jurisdictions routinely and clean out accumulated debris on an as-needed basis. Removal of accumulated debris and sediment is carried out either manually or by mechanical methods using flushing in emergency situations only. By removing this material from the catch basin inlets and stormdrain system, the Permittees make a significant contribution in preventing the passage of these materials in downstream receiving waters.

During the reporting period, 35 Permittees reported the collection of 5,612 tons of debris from drainage facilities. Compared to 9,878 tons of debris from drainage facilities reported by 32 Permittees in 2003-04, 24,663 tons of debris from drainage facilities reported by 29 Permittees in 2002-03, and over 6,000 tons of solid debris reported by 33 Permittees in 2001-02 (**Table C-5.2**). The reduction in debris recovery in 2004-05 compared to 2003-04 may reflect the very wet and late winter rains, which may have cleaned out the storm drain system.

Headline Indicator – Drainage Facility Maintenance: 5,612 tons of debris was removed from drainage facilities. This amount represents a 43% decrease in the amount of debris collected from drainage facilities when compared to the previous reporting period, a 77% decrease in the amount collected in 2002-03 and a 6.5% decrease in the amount collected in 2001-02. However, the 2002-03 reported total suggests inconsistent reporting of this Indicator or other environmental factors such as Santa Ana winds..

C-5.2.4 Catch Basin Stenciling

The goal of the stenciling program is to label and subsequently maintain those labels on over 37,000 stormdrain catch basins located throughout Orange County. During the reporting period, 22 Permittees reported re-stenciling 8,920 catch basins (**Table C-5.3**). During the previous reporting period, 5,916 catch basins were re-stenciled by 21 Permittees, 8,856 catch basins were re-stenciled by 17 Permittees in 2002-03. It should be noted that catch basins only need to be re-stenciled when the label is no longer legible or has become detached.

C-5.2.5 Street Sweeping

All Permittees maintain street sweeping programs in residential, commercial and/or industrial areas. In 1993 the Permittees compiled information regarding their existing street sweeping schedules and practices and subsequently changed elements of their programs such as the types of sweepers purchased, the frequency of sweeping, and the use of parking restrictions in order for the street sweeping program to aid in water quality improvements.

During the reporting period, 85,516 tons of material were removed from streets and gutters; compared to 76,294 tons of material removed during the previous reporting period and 68,155 tons of material removed in 2002-03 and 45,700 tons of materials removed in 2001-02 (**Table C-5.4**).

Headline Indicator – Street Sweeping: 85,516 tons of material was removed from the streets and gutters during the reporting period. This effort appears to represent a 12% increase for weight of material collected over the previous reporting period and a 25% increase over the tons of material reported in 2002-03. This amount represents a 87% increase in the weight of material collected over the 2001-02 total, indicating a marked increase in effort in this area of infrastructure maintenance in the Third Term Permit cycle.

C-5.2.6 Household Hazardous Waste Collection

Orange County has a household hazardous waste collection program administered by the Integrated Waste Management Department (IWMD). The program comprises four sites (Anaheim, Huntington Beach, San Juan Capistrano, and Irvine). A total of 6,303,938 pounds of household hazardous waste was collected in the reporting period; compared to 5,741,553 pounds in 2003-04; 4,238,534 pounds in 2002-03; and 3,736,917 pounds in 2001-02 (**Table C-5.5**).

Headline Indicator –Household Hazardous Waste Collection: A total of 6,303,938 pounds of household hazardous waste was collected in the reporting period representing a 9.8% increase from the previous reporting period, a 48.7% increase from the 2002-03 reporting period, and 68.7% increase from the 2001-02 reporting period. This increase is viewed as a confirmation and validation of the effectiveness of the extensive public education effort focused on encouraging the proper disposal of hazardous waste materials.

Oil Recycling

Most of the Permittees, as well as the County’s Health Care Agency, currently implement used oil recycling programs. These programs involve comprehensive public outreach including television and newspaper advertising, displays at community events, and the distribution of used oil containers at no cost to residents. In addition, some Permittees also conduct household hazardous round-ups or drop off events for their residents.

Twenty seven (27) Permittees reported having a Used Oil Grant participation program for 2004-05. A total of 1,290,177 gallons of used oil and 93,451 oil filters were collected during this reporting period compared to a total of 378,967 gallons of oil and 60,171 filters collected in 2003-04, 526,007 gallons of oil and 12,351 filters in 2002-03, and 269,444 gallons of oil and 19,204 filters in 2001-02 (**Table C-5.6**).

Headline Indicator –Used Oil Collected: A total of 1,290,177 gallons of used oil and 93,451 oil filters were collected during this reporting period, which is a significant increase over previous reporting years. The totals from this year’s reporting period represents a 240% increase in the amount of used oil collected and a 55% increase in the amount of oil filters collected from the previous reporting period; and a 145% increase in the amount of used oil collected and a 588% increase in the amount of oil filters collected from the 2002-03 reporting period. Although there is not a consistent yearly increase in amounts reported, the overall trend suggests an increase in the collection of used oil and filters. Additionally, the number of gallons of used oil collected dropped in 2003-04 and then dramatically increased for 2004-05 due to CIWMB regulations in 2003-04 when the CIWMB stated that only the used oil turned in by do-it-yourselfers could be counted. However, for the 2004-05 reporting year, the CIWMB reversed their decision and allowed all used oil to be counted, including oil from HHHCCs and certified collectors (Jiffy Lube, etc.).

C-5.2.7 Emergency Spill Response

The Permittees have all enacted the authority to control releases to the storm drain system through a common Water Quality Ordinance and each Permittee has designated the Authorized Inspector(s) responsible for enforcing the Ordinance (**Sections A-4.0 and A-10.0** in the LIP).

Emergency responses to water pollution incidents are routinely undertaken by Permittee Authorized Inspector staff as well as various fire and police departments. Depending upon the type and cause of the incident, the Authorized Inspector may pursue a variety of administrative or criminal enforcement actions as they are outlined

within the Water Quality Ordinance and accompanying Enforcement Consistency Guide.

Although each Permittee is responsible for responding to water pollution complaints and incidents within their jurisdiction, a number of cities have chosen to contract with the Orange County Flood Control District (OCFCD) to perform these services by entering into a Water Quality Ordinance Implementation Agreement. The agreement allows the Permittees to utilize the OCFCD Authorized Inspectors to provide high-end scientific, technical and enforcement services that the Permittees may be unable to provide.

Comparative spill data is located in **Section C-10.0** of this report.

5.3 Municipal Activities Program

The Municipal Activities Program Manual (**DAMP Section 5.0** and **Section A-5.0** of the **LIP**) provides the framework for conducting an iterative process of assessment and BMP implementation at municipal fixed facilities, field programs and drainage facilities comprising:

- Inventorying;
- Prioritization, based upon water quality threat;
- Identification of Model Maintenance Procedures and BMPs to be implemented;
- Inspections and enforcement;
- Assessments of program effectiveness through implementation of an Environmental Performance Reporting program; and
- Annual training for municipal staff, contractors, and lessors.

The key component of the assessment is the Environmental Performance Report (EPR), which provides documentary recordation of the process. The EPR was developed from ISO14000 principles. This EPR process emphasizes:

- Program elements with past and present problems in need of improvement;
- Improvements that occurred during the reporting year;
- Program elements that are currently in need of improvement; and
- Specific action plans and timeframes for implementing necessary improvements.

C-5.3.1 Municipal Facility BMP Implementation

As part of the facility inspections, Permittee inspectors determine the level of BMP implementation and also assess the effectiveness of the implemented BMPs. The inspector may encounter situations where BMPs are in place but not effective or may encounter no BMP implementation at all.

For the 2004-05 reporting period, the Permittees reported 1,968 municipal facilities have BMPs fully implemented, 309 municipal facilities have BMPs partially implemented, and 49 municipal facilities have no BMPs. For the 2003-04 reporting

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period, the Permittees reported 1,574 municipal facilities had BMPs fully implemented, 241 municipal facilities had BMPs partially implemented, and 10 municipal facilities had no BMPs. For the 2002-03 reporting period, the Permittees reported 2,136 municipal facilities had BMPs fully implemented, 65 municipal facilities had BMPs partially implemented, and 21 municipal facilities had no BMPs (**Table C-5.7**).

C-5.3.2 Municipal Facility Prioritization

A watershed-based inventory of all fixed facility, field program, and drainage facility sites has been developed. These include all sites meeting the definition of a fixed facility, field program, or drainage facility, as described in **DAMP Section 5.4.2**. After the inventory was compiled, fixed facility sites were prioritized into high, medium, or low categories based on the threat to water quality and the procedures set forth in **DAMP Section 5.4.3**. Drainage facility and field program sites are prioritized high based on the threat to water quality.

The Permittees reported that 1,070 municipal facilities have been designated high priority, 126 have been designated medium priority and 1,106 have been designated low priority for 2004-05. For the 2003-04 reporting period, the Permittees reported that 1,180 municipal facilities were designated high priority, 144 were designated medium priority and 1,094 were designated low priority. For the 2002-03 reporting period, the Permittees reported that 1,107 municipal facilities were designated high priority, 125 were designated medium priority and 1,148 were designated low priority (**Table C-5.8**).

Headline Indicator –Municipal Facility Prioritization: *The prioritization is very similar for the last three reporting periods which may point to this index being either insufficiently sensitive or needing a much longer comparative period.*

C-5.4 Integrated Pest Management, Pesticides and Fertilizer

Fertilizer and Integrated Pest Management (IPM) are key components to the Municipal Section PEA. Pests are best managed using an integrated system of tactics that include biological, mechanical, physical, cultural, and chemical control. This system, known as IPM, relies on careful monitoring of the plants to identify when a chemical or other control action should be taken. When pesticides are applied, the one least disruptive to the environment is considered first and applied only to the sites where the pest is found. IPM stresses that pesticide use is only one method of controlling pest populations, and the IPM system includes details on the implementation of a scouting program to track pest populations, determination of tolerance thresholds, and methods of controlling pest populations once the threshold has been reached. Furthermore, as with fertilizers, equipment must be calibrated in order to ensure that the correct amount is applied.

During the First Term Permit period, a model plan, entitled "Management Guidelines for use of Fertilizers and Pesticides," was developed to provide guidelines for application methods for fertilizers and pesticides, surface runoff minimization, accident

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mitigation and IPM. The Permittees subsequently implemented this model plan during the First and Second Term Permit periods.

The guideline document was reviewed and updated following the Third Term Permits to reflect an increased focus on IPM practices. The objectives of the updated guidelines, entitled "Management Guidelines for Integrated Pest Management, Pesticides, and Fertilizers" (**DAMP Section 5.0**) are to provide the Permittees with:

- A program framework for reducing the adverse impacts that municipal activities may have on water quality;
- An iterative process by which they can effectively monitor and respond to problems as they are discovered;
- Methodologies to meet Third Term Permit requirements;
- A process by which they can effectively re-evaluate their approach to using fertilizers and pesticides as needed and begin to move toward reducing their dependence on them by developing a comprehensive Integrated Pest Management Program;
- A program framework for reducing the adverse impacts that the use of fertilizers and pesticides may have on water quality; and
- General guidelines that can be used in conjunction with the *Landscape Model Maintenance Procedures (Municipal Activities Program Manual)* in order to minimize the potential threat to human health and environmental resources.

The guidelines highlight the implementation of an IPM program and stresses that pesticide use is only one method of controlling pest populations. The guidelines include details on the implementation of a scouting program to track pest populations, determination of tolerance thresholds, and methods of controlling pest populations once the threshold has been reached.

All fertilizer and IPM data is included in the Permittees PEA's. The data includes:

- Fertilizer analysis by brand name;
- Fertilizer analysis by amount applied;
- Pesticide analysis by brand name;
- Pesticide analysis by amount applied; and
- Pesticide management survey.

During the previous five reporting periods, the Permittees completed an extensive program evaluation assessment in order to assess the extent of the implementation of the guidelines. The program evaluation provides a method to track changes in management practices by the Permittees and the effects of these changes on overall fertilizer and pesticide use and is revised every year in order to improve the accuracy of the information collected.

C-5.4.1 Fertilizer Management

The majority of fertilizers are applied to turfgrass with a smaller amount utilized on

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landscape material (trees, shrubs, groundcovers, and vines). During this reporting period, thirty-five Permittees provided fertilizer use data and reported that approximately 363,146 pounds of nitrogen and 81,600 pounds of phosphorus were applied to 6,862 acres of public land (53 lbs/acre of nitrogen and 12 lbs/acre of phosphorus) (Tables C-5.9 and C-5.10; Figures C-5.1 and C-5.2). For the 2003-04 reporting period, 33 Permittees provided fertilizer use data and reported that approximately 406,779 pounds of nitrogen and 115,331 pounds of phosphorus were applied to 7,575 acres of public land (54 lbs/acre of nitrogen and 15 lbs/acre of phosphorus). For the 2002-03 reporting period, 31 Permittees provided fertilizer use data and reported that approximately 413,100 lbs of nitrogen and 102,400 lbs of phosphorus were applied to 5,658 acres of public land (73 lbs/acre of nitrogen and 18 lbs/acre of phosphorus). These amounts compare to a total application of 450,000 pounds of nitrogen and 102,000 pounds of phosphorus to approximately 7,500 acres of public land during the 2001-02 reporting period (60 lbs/acre of nitrogen and 13 lbs/acre of phosphorus).

Headline Indicator – Reduction in Total Fertilizer Usage (Nitrogen): Thirty-five Permittees reported that approximately 363,146 pounds of nitrogen were applied to 6,862 acres of public land during the reporting period (53 lbs/acre). This figure represents a 2% decrease from the pounds per acre of nitrogen usage in 2003-04; a decrease of 27% from 2002-03; and a 12% decrease from 2001-02.

Headline Indicator – Reduction in Total Fertilizer Application (Phosphorus): Thirty-five Permittees reported that 81,600 pounds of phosphorus were applied to 6,862 acres of public land during the reporting period (12 lbs/acre). This figure represents a 20% decrease from the pounds per acre of phosphorus applied in 2003-04; a decrease of 33% from 2002-03; and an 8% decrease from 2001-02.

Permittees continue to utilize slow-release fertilizers at the same level as the previous reporting period (89%) in an effort to minimize the potential for surface runoff of nutrients and leaching below the rootzone.

Fifty-one percent (51%) of the Permittees have both city personnel and contractors perform the actual application of fertilizers. The percentage of city personnel responsible for determining fertilizer application rates declined from 40% in the previous reporting year to 31% in the current year. However, the timing of fertilizer applications remained relatively constant (46%) from the previous year (49%).

Sixty-three percent (63%) of the Permittees conducted soil analyses on a routine basis or prior to the application of fertilizers to determine baseline nutrient levels. This level remains unchanged from the 2003-04 assessment. Although soil analyses can be extremely useful, proper interpretation is necessary in order to implement appropriate fertilizer management strategies.

The proper application of fertilizer requires that equipment be calibrated on a regular basis. Ninety-one percent of the permittees performed some type of calibration to insure correct rates of fertilizer application.

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C-5.4.2 Pesticide Management

The Permittees reported that, during 2004-05, pesticides were applied to roughly 12,230 acres of public lands, approximately 12% more than the 10,900 acres applied in the 2003-04 reporting year, and the 10,986 acres applied in the 2002-03 reporting year.

In order to provide a more accurate account of the actual amount of pesticide applied by Permittees, the pounds of active ingredient (AI) were calculated for each pesticide. During the 2004-05 reporting period, approximately 19,227 pounds (AI) of pesticides were applied by Permittees. During the 2004-05 reporting period, the pounds of herbicides, rodenticides, and fungicides decreased compared to 2003-04. Molluscides, used for the control of snails and slugs, remained relatively unchanged. The use of plant growth regulators to slow plant growth more than doubled compared to the 2003-04 reporting period.

Headline Indicator – Reduction in Pesticide Application: *During the 2004-05 reporting period, approximately 19,227 pounds (AI) of pesticides was applied by Permittees. This represents an approximately 30% decrease in pounds of pesticide applied compared to 25,022 pounds (AI) of pesticides applied in 2003-04, and 24,750 pounds (AI) applied in 2002-03.*

Fifty-three percent of the Permittees rely on a contractor to apply insecticides, 40% to apply herbicides, 52% to apply fungicides, and 45% to apply molluscides. The percent of Permittees that apply pesticides themselves is 20% or less in all pesticide categories except molluscides (23%), indicating that Permittees depend on contracted pesticide applicators to apply the majority of pesticides in their jurisdiction.

Twenty-one of the Permittees reported having at least one or more personnel possessing a Qualified Applicators License (QAL) or a Pest Control Advisor (PCA) license. It should be noted that at the minimum, all Permittees require either a QAL or equivalent County training for pesticide applicator personnel. All of the Permittees provide training in pesticide safety to personnel applying or handling pesticides. Some of this training is a requirement of maintaining a QAL or PCA license.

The calibration of pesticide application equipment is an important routine task implemented by 83% of the Permittees (**Table C-5.11**). This rate of calibration remains relatively unchanged from the previous two reporting years. Nearly all Permittees (97%) have an accident mitigation plan in place in case of a spill. If pesticides land off-target, 77% sweep up the material, if possible, to insure that it does not enter the storm conveyance system.

C-5.4.3 Integrated Pest Management

Fifty-seven percent (57%) of the Permittees reported that they operate under a formal written IPM policy. In addition, 89% regularly monitor for pests and 83% keep records of pest occurrences and the actions that were taken to correct the problem. These percentages represent small increases from the previous reporting year.

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An important component of an IPM program is the monitoring and identification of pests. Methods used for monitoring pests include the presence and absence of a particular pest, visual counts, and the symptoms or signs of pest presence. The most common pests that the Permittees monitor for are ants (77%), aphids (77%), whiteflies (71%), broadleaf weeds and grasses (94% and 89%), and gophers (91%). Permittees also monitor for ground squirrels (60%), spider mites (57%), psyllids (63%), leaf diseases (77%), root diseases (54%), and whole plant diseases (63%).

The majority of permittees identified pests with the assistance of a pest control advisor (86%), utilizing books and magazines (83%), and consulting with UC Cooperative Extension (71%). Seventy-one percent (71%) of the permittees, a slight increase from the previous reporting year (63%), also enlisted the expertise of the County of Orange Agricultural Commissioner's Office, an important resource to utilize due to the increased rate of exotic pest introductions into California.

The level of adoption of various alternative pest control methods remained relatively unchanged from the 2003-04 reporting period. Examples of specific alternatives to the use of pesticides utilized by Permittees include:

- Mechanical weed removal (hand weeding/hoeing) (94%);
- Utilizing mulch to suppress weed growth and reduce water loss from the soil surface (94%);
- Adjust the height of mowing equipment (91%);
- Selection of plants not susceptible to specific insects (83%);
- Maintain proper fertilization levels to reduce disease frequency (74%);
- Maintenance of the irrigation system to avoid stress and disease promoted by over or under watering (86%);
- Physically remove insects from plants (77%);
- Improving overall landscape design to control weeds (71%);
- Improve drainage in areas that remain excessively wet to discourage the germination of weeds (83%); and
- Utilizing biological control (43%).

Ninety-one (91%) percent of the Permittees reported using "caution" pesticides as much as possible, down eight percent from the previous reporting period. "Caution" pesticides are generally less toxic to mammalian organisms. Examples of "caution" pesticides are insecticidal soaps and horticultural oils.

C-5.4.4 Collaboration with the State of California Department of Pesticide Regulation

In June 2001, the Principal Permittee and State of California Department of Pesticide Regulation (DPR) jointly funded a study of organophosphate pesticides in runoff from residential neighborhoods. The study was conducted as a peripheral element of a more comprehensive multi-agency characterization of Irvine residential neighborhood runoff termed the Residential Runoff Reduction (R3) Study.

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The study collected water quality data on urban pesticides in both dry weather irrigation overflow and storm water runoff from residential neighborhoods. The study utilized the R3 study data base, which evaluated the reduction of flow and corresponding pollutant loading from test neighborhoods where evapotranspirative irrigation controllers were employed and where information on responsible homeowner irrigation, fertilization, and pesticide practices was distributed.

The monitoring phase of the pesticide study was initiated in January 2001. Sufficient dry weather flow monitoring was collected to suspend non-storm sampling in June 2002. However, given the relatively dry 2001-02 water year, additional storm flow characterization for pesticide analysis was extended into the first quarter of 2003. The report on the pesticide element of the study was completed and submitted on June 19, 2003.

C-5.4.5 Assistance from the University of California Cooperative Extension Program

In June 2001, the Principal Permittee entered into a five-year agreement with the University of California Cooperative Extension program to conduct water quality monitoring studies and implement water quality improvement programs in areas where the University has special expertise, particularly related to fertilizer and pesticide applications. Much of the work focuses on, but is not restricted to, the impairments to the beneficial uses in the Newport Bay watershed that have resulted in the development of Total Maximum Daily Loads (TMDLs). On May 6, 2005, the agreement was revised and extended for an additional five years.

The tasks that were completed during the reporting period include:

- Annual review and update of the fertilizer and pesticide section of the NPDES Program Evaluation Assessment;
- Analysis of the raw data for the fertilizer and pesticide section of the 2004-05 annual progress report;
- Developed the third in a series of Integrated Pest Management training modules (weed identification and management) delivered directly to municipal landscape field personnel on April 18th at the Irvine Ranch Historic Park in Irvine;
- Distributed pesticide and fertilizer-related outreach materials developed by UCCE to the general public utilizing 250 volunteer Master Gardeners at various venues throughout the County such as the Anaheim Home and Garden, Orange County Fair, South Coast Plaza Garden Show, the San Juan Capistrano Garden Show, and several Earth Day celebrations;
- Conducted an urban landscape water quality training sessions for UCCE Master Gardeners and the general public on October 2nd at Orange Coast College in Costa Mesa;
- Developed an urban nutrient outreach program targeting independent gardeners operating in the San Diego Creek/Newport Bay Watershed with Proposition 13 funding awarded to the County to investigate the sources of nutrients from the urban environment and test the effectiveness of a structural and non-structural BMP;

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- Initiated construction at the South Coast Research and Extension Center in Irvine of a landscape demonstration project designed to provide homeowners, landscape professionals, and developers with information on landscape management practices to mitigate pesticide runoff;
- Provided technical oversight on outreach materials related to areas where UCCE has particular expertise, such as fertilizers and pesticides.

C-5.5 Program Training and Outreach

To assist the responsible municipal and contract/lease staff in understanding the Municipal Activities Program Manual and the Model Maintenance Procedures, five training modules were developed.

The five training modules are 1) *Municipal Activities Program Training*; 2) *Fixed Facility Model Maintenance Procedure Training*; 3) *Field Program Model Maintenance Procedure Training*; 4) *Program Management: Integrated Pest Management, Pesticide and Fertilizer Guidelines*; and 5) *Integrated Pest Management Approaches*.

Integrated Pest Management Approaches (**DAMP Appendix B-5.V**).

On July 7, 2004, training was conducted for the Permittees on the IPM, Pesticide and Fertilizer Program at the University California Cooperative Extension (UCCE) Center in the City of Irvine. The training focused on five key components of the program, including:

- The five components of Integrated Pest Management (IPM)
- Mechanical tactics;
- Pest identification;
- Monitoring; and
- Prevention and Action Thresholds.

Fifty-six (56) staff members from twenty-one (21) Permittees attended the training session.

On April 18, 2005, training was conducted for the Permittee staff on Weed Identification and Control Tactics. The training focused on identification of common landscape weeds, integrated pest management weed control tactics, and safe use and disposal of herbicides.

Thirty-two (32) staff members from seventeen (17) Permittees attended the training session.

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Table C-5.1: Solid Waste Collection

PERMITTEE	Total Quantity of Solid Waste Collected 2002-03 (Tons)	Total Quantity of Solid Waste Collected 2003-04 (Tons)	Total Quantity of Solid Waste Collected 2004-05 (Tons)
Aliso Viejo	41,000	43,723	38,063
Anaheim	453,015	460,000	460,000
Brea	406,000	407,543	86,877
Buena Park	NA	80	100,000
Costa Mesa	287,090	279,850	186,753
Cypress	45,197	46,197	52,673
Dana Point	52,480	79,909	32,348
Fountain Valley	63,743	53,702	59,376
Fullerton	177,555	NA	187,385
Garden Grove	NA	NA	197,550
Huntington Beach	274,853	272,836	286,717
Irvine	295,000	292,600	287,500
La Habra	NA	31,043	37,000
La Palma	16,000	NA	18,000
Laguna Beach	48,390	58,550	47,700
Laguna Hills	43,783	39,803	56,031
Laguna Niguel	81,046	79,655	82,059
Laguna Woods	NA	23,000	25,000
Lake Forest	103,000	86,200	89,612
Los Alamitos	NA	NA	NA
Mission Viejo	105,600	108,000	108,252
Newport Beach	NA	39,992	40,000
Orange	234,040	210,836	215,400
Placentia	58,861	NA	63,000
Rancho Santa Margarita	NA	NA	63,356
San Clemente	85,339	85,339	88,956
San Juan Capistrano	68,417	76,166	81,652
Santa Ana	258,408	354,000	474,350
Seal Beach	45,292	45,000	26,136
Stanton	NA	35,004	41,500
Tustin	80,629	80,000	84,024
Villa Park	NA	10,200	10,500
Westminster	94,750	85,372	93,294
Yorba Linda	88,680	88,680	83,233
County of Orange/OCFCD	132,584	153,707	155,293
Total tons of solid waste collected	3,640,752	3,626,987	3,959,590

NA = Not Available

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.2: Drainage Facility Maintenance

PERMITTEE	Total Length of Channel/Pipe Cleaned (in Miles)			Number of Catchbasins Within Jurisdiction			Number of Catchbasins Cleaned Within Jurisdiction			Percentage of Catchbasins Cleaned			Total Volume From Facilities (Tons)		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
Aliso Viejo	0.23	0.24	0.24	625	625	625	625	625	625	100%	100%	100%	60.0	111.0	82
Anaheim	37.06	36.00	36	3,500	3,500	3,500	3,500	3,500	3,500	100%	100%	100%	1500.0	1500.0	1500
Brea	NA	NA	2.93	1,158	965	965	1,158	965	965	100%	100%	100%	50.5	50.0	50
Buena Park	0.01	2.25	2.25	20	857	758	20	28	949	100%	3%	125%	1.0	2.4	10.3
Costa Mesa	0.60	0.60	0.6	1,165	1,165	1,165	1,165	1,165	1,165	100%	100%	100%	25.0	25.0	20
Cypress	0.39	0.37	0.37	567	567	569	430	48	194	75%	8%	34%	2.0	0.5	1.5
Dana Point	0.03	0.00	0.29	430	555	526	386	446	459	90%	80%	87%	13.6	508.0	26.04
Fountain Valley	1.50	0.40	0.44	1,965	750	750	1,965	750	750	100%	100%	100%	422.0	217.0	281
Fullerton	7.82	5.90	6.5	1,255	1,322	3,424	3,268	2,216	3,424	50%	100%	100%	1697.0	1629.0	2.1
Garden Grove	0.01	0.01	0.01	907	907	936	907	907	936	100%	100%	100%	108.5	108.5	94
Huntington Beach	8.00	8.40	8.4	1,706	1,706	1,715	1,706	1,706	1,715	100%	100%	100%	934.4	894.9	687
Irvine	0.56	0.60	0.3	3,300	3,300	3,840	1,574	1,584	1,430	100%	48%	37%	14174.8	91.5	74.4
La Habra	NA	2.50	2.5	NA	545	545	NA	542	545	NA	99%	100%	NA	10.0	18
La Palma	5.00	4.70	5.2	201	201	201	201	201	201	100%	100%	100%	15.5	15.7	16
Laguna Beach	0.20	0.20	0.10	633	910	910	633	633	910	75%	70%	100%	227.9	NA	192
Laguna Hills	0.02	0.20	NA	521	515	487	481	304	472	92%	60%	97%	13.6	68.0	5.7
Laguna Niguel	0.73	0.20	0.6	NA	1,209	1,350	1,035	1,197	1,300	80%	99%	96%	1133.0	388.0	124
Laguna Woods	0.02	NA	NA	17	17	17	18	18	17	100%	100%	100%	0.2	NA	0.5
Lake Forest	0.00	0.00	0.03	438	483	1,082	200	331	1,042	47%	76%	96%	15.5	20.8	3.9
Los Alamitos	NA	NA		114	114	114	114	114	114	100%	100%	100%	DNR	15.5	15.5
Mission Viejo	0.02	0.02	3.63	1,800	1,830	1,830	360	651	781	10%	100%	43%	18.2	27.7	4.88
Newport Beach	1.45	3.33	3.33	2,853	3,057	3,087	2,551	2,733	3,087	89%	89%	100%	963.0	834.0	860
Orange	3.33	4.00	1.33	1,625	1,625	1,625	76	147	91	5%	9%	6%	1.9	2.0	12
Placentia	0.10	0.00	0	240	447	447	200	175	175	83%	39%	39%	7.8	0.5	0.5
Rancho Santa Margarita	NA	0.00	41.6	669	669	669	669	669	669	100%	100%	100%	NA	7.0	181.35
San Clemente	10.25	1.50	3.42	1,236	1,236	1,239	1,104	620	1,606	95%	50%	130%	NA	3.0	3
San Juan Capistrano	0.18	0.09	1400	1,200	1,200	1,200	500	99	150	41%	9%	13%	37.0	28.0	45
Santa Ana	NA	2.10	10.1	1,500	1,270	1,665	129	1,175	1,586	9%	92%	95%	3058.0	3058.0	1042
Seal Beach	0.02	0.02	0.02	195	195	195	195	195	195	100%	100%	100%	4.5	16.8	32
Stanton	DNR	1.30	1.42	DNR	NA	145	DNR	142	145	DNR	99	100%	DNR	19.3	19.3
Tustin	NA	0.20	0.2	942	942	962	1,258	1,034	962	100%	>100%	100%	64.0	114.0	76
Villa Park	1.00	0.90	0.9	150	150	80	150	150	25	100%	100%	31%	NA	NA	70
Westminster	0.83	0.83	0.83	622	622	622	622	622	622	100%	100%	100%	6.0	5.0	5
Yorba Linda	1.06	1.06	0.8	1,550	1,575	1,728	1,500	1,575	1,728	97%	98%	100%	56.3	70.5	21
County of Orange/OCFCD	46.00	29.00	78	2,325	2,353	2,353	2,133	1,485	1,835	91%	63%	78%	52.0	36.0	36
Totals	126	107	1,612	35,429	37,384	41,326	30,833	28,752	34,370	83% (Ave.)	80% (Ave.)	86% (Ave.)	24,663	9,878	5,612

NA = Not Available
DNR = Did Not Report

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.3: Catch Basin Stenciling

PERMITTEE	Total Number of Catch Basins Re-Stenciled	Percentage Of Basins Re-Stenciled	Type of Application Used					Phrase Used *	Volunteer Organizations	
			Spray Paint	Curb Markers	Heat	Adhesives	Other		Present?	# of Basins Re-Stenciled
Aliso Viejo	0	0%								
Anaheim	0	0%								
Brea	100	10%		100%				X	X	0
Buena Park	80	11%				100%			X	0
Costa Mesa	11	1%	100%					X	X	11
Cypress	0	0%	100%					X	X	0
Dana Point	526	100%	100%					X		
Fountain Valley	750	100%	100%					X	X	750
Fullerton	0	0%	100%							
Garden Grove	0	0%						X	X	
Huntington Beach	1,000	58%	100%					X	X	0
Irvine	2,877	75%	75%				25%	X	X	
La Habra	25	5%	95%		5%			X	X	25
La Palma	0	0%								
Laguna Beach	0	0%						X		
Laguna Hills	8	1%		100%				X	X	
Laguna Niguel	16	1%			100%			X		
Laguna Woods	0	0%				100%		X		
Lake Forest	52	5%			100%					
Los Alamitos	0	0%								
Mission Viejo	46	3%		100%				X		
Newport Beach	308	15%		100%				X	X	0
Orange	91	2%			100%			X	X	0
Placentia	0	0%								
Rancho Santa Margarita	121	18%			100%			X	X	121
San Clemente	0	0%	100%					X	X	0
San Juan Capistrano	10	1%		100%				X		
Santa Ana	1,580	95%		100%				X	X	
Seal Beach						100%			X	0
Stanton	145	100%	100%					X		
Tustin	480	50%	100%					X		
Villa Park	0	0%								
Westminster	600	95%		100%				X	X	600
Yorba Linda	65	4%		100%				X	X	0
County of Orange/OCFCD	29	1%		100%				X		
Totals	8,920									

* Phrase used is "No Dumping Drains to Ocean" unless otherwise noted.

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.4: Volume of Street Sweeping Material Collected

PERMITTEE	Total Weight of Material Collected (Tons)* FY 2002-03	Total Weight of Material Collected (Tons)* FY 2003-04	Total Weight of Material Collected (Tons)* FY 2004-05	Commercial				Industrial				Residential			
				Tons	% Soil	% Leaves	% Trash/Debris	Tons	% Soil	% Leaves	% Trash/Debris	Tons	% Soil	% Leaves	% Trash/Debris
Aliso Viejo^^	96	120	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anaheim	4,500	4,500	4,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Brea	800	800	1,179	102	40	40	20	102	40	40	20	975	40	40	20
Buena Park	1,830	1,475	1,475	431	35	40	25	144	35	40	25	900	25	60	15
Costa Mesa	1,730	1,810	1,846	497	75	23	2	268	70	25	5	1,081	60	35	5
Cypress	526	525	525	175	20	40	40	175	5	50	45	175	5	90	5
Dana Point	465	984	160	160	50	10	40	0					20	40	40
Fountain Valley	2,104	2,000	2,000	1,400	20	65	15	100	20	65	15	500	20	65	15
Fullerton	15,925	19,102	12,832	2,485	5	5	90	237	5	5	90	10,110	5	70	25
Garden Grove	NA	NA	2,940	840	30	40	30	420	30	40	30	1,680	30	40	30
Huntington Beach	3,282	3,434	3,516	107	5	40	55	133	5	40	55	3,276	5	80	15
Irvine	2,500	2,500	2,700	540	19	37	44	1,350	19	37	44	810	19	37	44
La Habra	7	5	5	1	10	60	30	2	5	60	35	2	10	70	20
La Palma	375	384	1,170	390	30	40	30	390	30	40	30	390	30	40	30
Laguna Beach	684	675	771	310	10	30	60	0	0	0	0	461	10	30	60
Laguna Hills	194	NA	315	152	70	20	10					163	70	20	10
Laguna Niguel^	449	NA	423	198	65	25	10					225	65	25	10
Laguna Woods	3	62	14	7	39	60	1					7	39	60	1
Lake Forest^^	550	1,044	630	630	NA	NA	NA								
Los Alamitos	NA	3,500			10	75	15		10	75	15		10	75	15
Mission Viejo	1,192	1,503	1,502	751	10	70	20	0				751	10	70	20
Newport Beach	4,044	4,150	28,800	9,500	20	30	50	9,500	20	30	50	9,800	15	70	15
Orange	11,880	12,000	3,000	600	60	20	20	300	35	40	25	2,100	35	40	25
Placentia	104	572	531	177	20	60	20	177	20	60	20	177	20	60	20
Rancho Santa Margarita	NA	12	92	22	50	45	5	5	50	45	5	65	50	45	5
San Clemente	1,164	1,177	523	145	2	20	78	97	2	20	78	281	5	45	50
San Juan Capistrano	525	605	676	163	40	20	40	34	40	15	45	479	30	50	20
Santa Ana	6,825	6,825	6,825	1,365	50	25	25	341	50	25	25	5,119	15	60	25
Seal Beach	2,085	2,084													
Stanton	NA	843	2,529	843	10	40	50	843	10	40	50	843	10	40	50
Tustin^^	874	904	1,025	1,025	35	50	15								
Villa Park	89	134	135	0	0	0	0	0	0	0	0	135	70	15	15
Westminster	1,749	1,041	1,175	188	10	30	60	59	10	30	60	928	10	30	60
Yorba Linda^^	608	690	720	720	10	60	30								
County of Orange/OCFCD	996	834	873	NA	NA	NA	NA	218	39	60	1	655	39	60	1
Totals	68,155	76,294	85,516												

*Tons=3 cubic yards per Michigan Department of Environmental Quality, Waste and Hazardous Materials Division

^ Commercial and Industrial data not separated out, data reported under Commercial

^^ Commercial, Industrial, and Residential data not separated out, data reported under Commercial

NA = Not Available

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.5: 2004-05 Integrated Waste Management Household Hazardous Waste Program Collection Totals

Category	Type Of Waste	Collection Center Waste Volumes Collected (pounds)											
		Anaheim			Huntington Beach			Irvine			San Juan Capistrano		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1. Flammable & Poison	Flammable Solid/Liquid	202,451	218,456	247,962	236,740	282,013	279,665	99,074	151,510	170,366	70,550	99,450	99,050
	Bulked Flammable Liquids	0	800	0	0	1,600	0	0	800	0	0	0	0
	Oil-Base Paint	346,307	395,469	512,372	327,172	347,123	387,257	213,166	247,271	249,331	162,400	245,700	221,260
	Poison (Excl aerosols)	38,301	50,713	64,974	47,496	53,486	58,972	27,172	39,395	41,169	16,650	16,650	27,720
	Reactive & Explosive	0	200	360	0	318	171	0	160	160	0	0	0
	Subtotal	587,059	665,638	825,668	611,408	684,540	726,065	339,412	439,136	461,026	249,600	361,800	348,030
2. Acid	Inorganic Acid	5,400	4,649	8,443	6,564	7,992	6,014	2,740	4,143	4,266	2,520	2,520	2,520
	Organic Acid	5,191	5,597	5,514	7,560	7,173	7,790	3,908	6,372	7,281	2,310	2,970	2,970
	Subtotal	10,591	10,246	13,957	14,124	15,165	13,804	6,648	10,515	11,547	4,830	5,490	5,490
3. Base	Inorganic Base	1,260	1,889	2,380	3,136	2,296	4,111	796	1,819	2,120	0	1,260	720
	Organic Base	7,555	10,117	4,070	10,168	12,282	13,802	3,810	6,896	7,462	2,640	4,950	2,310
	Subtotal	8,815	12,006	6,450	13,304	14,578	17,913	4,606	8,715	9,582	2,640	6,210	3,030
4. Oxidizer	Neutral Oxidizer	1,055	2,243	1,977	2,076	2,733	2,207	1,276	1,665	3,164	400	1,000	800
	Organic Peroxides	20	0	10	45	0	0	10	0	20	20	0	10
	Oxidizing Acid	0	94	136	1,240	504	1,186	10	29	30	0	0	0
	Oxidizing Base	0	171	115	0	414	1,167	136	421	166	0	0	0
	Subtotal	1,075	2,508	2,238	3,361	3,651	4,560	1,432	2,115	3,380	420	1,000	810
5. PCBs (Containing)	PCB Containing Paint	0	0	0	0	0	0	0	0	0	0	0	0
	Other PCB Waste	0	1,300	1,000	200	200	4,000	100	200	500	0	0	500
	Subtotal	0	1,300	1,000	200	200	4,000	100	200	500	0	0	500
6. Aerosol	Corrosive Aerosols	400	1,232	3,066	3,584	3,145	2,955	236	693	805	200	0	400
	Flammable Aerosols	22,760	28,106	35,258	35,741	39,875	48,539	16,101	24,101	26,364	10,450	11,525	14,250
	Poison Aerosols	1,810	4,033	5,592	7,196	5,903	7,685	2,128	4,338	5,161	800	1,200	100
	Subtotal	24,970	33,371	43,916	46,521	48,923	59,179	18,465	29,132	32,330	11,450	12,725	14,750

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.5: 2004-05 Integrated Waste Management Household Hazardous Waste Program Collection Totals (continued)

Category	Type Of Waste	Collection Center Waste Volumes Collected (pounds)											
		Anaheim			Huntington Beach			Irvine			San Juan Capistrano		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
7. Reclaimable	Antifreeze	31,461	35,675	19,453	31,620	25,995	21,098	13,667	16,851	6,525	7,360	3,017	0
	Car Batteries	130,500	135,450	147,595	71,280	98,440	175,280	41,765	72,200	73,465	24,255	39,720	42,605
	Fluorescent Bulbs	3,000	3,800	3,400	4,400	4,600	4,600	1,200	3,200	3,400	600	1,200	1,800
	Latex Paint	268,300	349,243	379,840	315,558	358,846	410,495	159,584	269,382	294,413	135,090	97,470	182,400
	Motor Oil/Oil Products	157,833	169,939	179,892	131,309	123,238	123,193	72,121	88,387	93,325	43,275	49,062	39,975
	Oil Filters	5,000	4,600	5,800	4,600	4,000	4,000	2,200	2,600	2,600	1,000	1,400	1,000
	Mercury (Metallic)	80	120	100	78	100	200	54	80	250	0	40	150
	Subtotal	596,174	698,827	736,080	558,845	615,219	738,866	290,591	452,700	473,978	211,580	191,909	267,930
8. Other	Medical Waste	0	0	0	0	0	0	0	0	0	0	0	-
	Household Batteries	2,370	3,750	6,871	2,556	3,108	6,571	2,700	3,630	8,858	600	3,035	4,631
	Other	316,052	567,729	22,254	178,783	387,154	27,682	80,394	273,493	12,785	36,858	171,835	7,650
	Subtotal	318,422	571,479	29,125	181,339	390,262	34,253	83,094	277,123	21,643	37,458	174,870	12,281
9. Propane	Propane	NR	NR	28,060	NR	NR	36,613	NR	NR	94,039	NR	NR	5164
	CRT	NR	NR	427,976	NR	NR	323,695	NR	NR	273,539	NR	NR	190,971
	Subtotal	0	0	456,036	0	0	360,308	0	0	367,578	0	0	196,135
Collection Center Totals		1,547,106	1,995,375	2,114,470	1,429,102	1,772,538	1,958,948	744,348	1,219,636	1,381,564	517,978	754,004	848,956
<p>Grand Total Collected for FY 2002-03 = 4,238,534</p> <p>Grand Total Collected for FY 2003-04 = 5,741,553</p> <p>Grand Total Collected for FY 2004-05 = 6,303,938</p>													

NR = Not Reported

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.6: Used Oil Grant Participation

PERMITTEE	Has or Participates in a Used Oil Grant	Begins	Ends	Amount Collected As a Result of the Used Oil Grant FY 2002-03		Amount Collected As a Result of the Used Oil Grant FY 2003-04		Amount Collected As a Result of the Used Oil Grant FY 2004-05	
				Motor Oil/Oil Products (Gallons)	Oil Filters (Units)	Motor Oil/Oil Products (Gallons)	Oil Filters (Units)	Motor Oil/Oil Products (Gallons)	Oil Filters (Units)
Aliso Viejo	X	07/01/04	06/30/05			NA	NA	63,647	27,109
Anaheim	No	NA	NA	135	74	0	0	NA	NA
Brea	X	07/01/05	06/30/06	900	165	720	144	31,680	3,867
Buena Park	X	07/01/05	06/30/06	NA	NA	9,495	NA	12,289	220
Costa Mesa	X	07/01/05	06/30/07	7,869	90	8,886	101	473	59
Cypress	X	07/01/04	06/30/05	NA	NA	43,000	0	75,000	
Dana Point	X	07/01/04	06/30/05	624	NA	28,930	NA	5,610	NA
Fountain Valley	X	07/01/04	06/30/08	1,834	27	74	15	147	28
Fullerton	X	07/01/04	06/30/05	15,840	35	50,856	132	79,942	
Garden Grove	X	01/01/01	12/31/05	31,837	1,154	19,471	NA	3,170	809
Huntington Beach	X	06/01/04	07/01/05	1,499	368	702	203	887	239
Irvine	X	06/01/04	07/01/05	71,784	NA	71,784	NA	59,645	NA
La Habra	X	6th Cycle	9th Cycle	NA	NA	7,630	NA		
La Palma	No								
Laguna Beach	X	07/01/04	06/30/05	41	0	1,014	0	153	NA
Laguna Hills	X	07/01/04	06/30/05	DNR	DNR	NA	NA	44,800	11,000
Laguna Niguel	No	NA	NA	DNR	DNR	NA	NA	NA	NA
Laguna Woods	X	07/01/04	06/30/05	14,400	3,000	84	NA	25	6
Lake Forest	X	07/01/03	06/30/06	9,297		NA	NA	63,614	NA
Los Alamitos	No								
Mission Viejo	X	07/01/04	06/30/07	12,145	147	14,280	NA	14,372	55
Newport Beach	X	07/01/03	06/30/06	NA	NA	19,471	NA		
Orange	X	07/01/02	06/30/07	2,966	NA	418	NA	2,158	554
Placentia	X	07/01/02	06/30/05	707	209	91	18	148	160
R S Margarita	X	07/01/04	06/30/05	NA	NA	NA	NA	33,544	133
San Clemente	X	07/01/04	06/30/05	19,455	2,500	19,455	2,500		
S J Capistrano	X	07/01/04	06/30/05	5,770	667	1,620	1,296	98,000	13,500
Santa Ana	X			5,804	3,815	12,037	3,698	12,583	4,004
Seal Beach				0					
Stanton	No	NA	NA					NA	NA
Tustin	X	07/01/04	07/01/05	NA	NA	NA	NA	NA	NA
Villa Park	No	NA	NA	NA	NA	NA	NA	NA	NA
Westminster	X	07/01/04	06/30/05	64,100	NA	7,620	3,000	34,442	1,000
Yorba Linda									
County of Orange/OCFCD*	X	07/01/04	06/30/05	259,000	1,333	61,330	49,064	653,848	57,817
Totals				526,007	13,584	378,967	60,171	1,290,177	93,451

* The number of gallons of used oil collected dropped in 2003-04 and then dramatically increased for 2004-05 due to CIWMB regulations in 2003-04 when the CIWMB stated that only the used oil turned in by do-it-yourselfers could be counted. However, for the 2004-05 reporting year, the CIWMB reversed their decision and allowed all used oil to be counted, including oil from HHHCCs and certified collectors (Jiffy Lube, etc.).

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.7: BMP Implementation

PERMITTEE	FULLY Implemented 2002-03	FULLY Implemented 2003-04	FULLY Implemented 2004-05	PARTIALLY Implemented 2002-03	PARTIALLY Implemented 2003-04	PARTIALLY Implemented 2004-05	No BMPs Implemented 2002-03	No BMPs Implemented 2003-04	No BMPs Implemented 2004-05
Aliso Viejo	5	11	9	NA	0	0	NA	0	
Anaheim	147	52	65	NA	9	13	NA	0	
Brea	18	NA		0	NA	1	0	NA	
Buena Park	756	16	151	0	2	102	0	0	29
Costa Mesa	7	8	8	3	2	2	0	0	
Cypress	21	0		2	1	1	NA	0	
Dana Point	NA	NA	19	NA	NA	4	NA	NA	
Fountain Valley	79	51	53	2	0		2	0	
Fullerton	84	95	95	NA	0		NA	0	
Garden Grove	6	53	55	0	3	1	0	0	
Huntington Bch.	69	4	79	5	9	19	1	5	3
Irvine	54	54	59	0	0		0	0	
La Habra	0	1	29	4	2	26	NA	0	16
La Palma	1	1	1	3	3	3	0	0	
Laguna Beach	NA	NA	74	NA	NA		NA	NA	
Laguna Hills	16	20	35	2	0		0	0	
Laguna Niguel	NA	6	7	NA	12	29	NA	0	
Laguna Woods	3	6	3	1	7	3	NA	0	
Lake Forest	7	8	9	0	0		0	0	
Los Alamitos	NA	140	141	NA	1		NA	0	
Mission Viejo	23	23	28	26	44	25	18	0	
Newport Beach	8	19	19	0	7	7	0	0	
Orange	39	58	63	0	0		0	0	
Placentia	28	0		7	34	32	NA	0	
R S Margarita	672	669	673	0	0		0	0	
San Clemente	NA	NA		NA	NA		NA	NA	
S J Capistrano	54	56	37	0	0		0	0	
Santa Ana	NA	114	117	NA	0	1	NA	0	
Seal Beach	NA	NA		NA	NA		NA	NA	
Stanton	NA	20	19	NA	0	1	NA	0	
Tustin	NA	12	20	NA	31	23	NA	0	
Villa Park	0	0	0	2	2	0	0	0	1
Westminster	28	29	29	1	0		0	0	
Yorba Linda	2	29	14	0	15		0	0	
County of Orange	9	19	57	7	57	16	0	5	0
TOTALS	2,136	1,574	1,968	65	241	309	21	10	49

NA = Not Available

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.8: Countywide Permittees' Fixed Facility Inventory and Prioritization

Permittee	Low 2002-03	Low 2003-04	Low 2004-05	Medium 2002-03	Medium 2003-04	Medium 2004-05	High 2002-03	High 2003-04	High 2004-05	Total 2002-03	Total 2003-04	Total 2004-05
Aliso Viejo	0	1	0	0	0	0	1	0	1	1	1	1
Anaheim	99	63	0	0	0	0	15	0	62	114	63	62
Brea	27	30	31	0	0		1	1		28	31	31
Buena Park	3	14	14	15	0	0	2	5	5	20	19	19
Costa Mesa	51	51	51	0	0		10	10	10	61	61	61
Cypress	17	14	14	8	8	8	1	1	1	26	23	23
Dana Point	14	13	13	0	0	0	8	9	10	22	22	23
Fountain Valley	28	28	28	0	0		1	1		29	29	28
Fullerton	90	94	94	0	0		1	1	1	91	95	95
Garden Grove	55	55	55	1	1	1	0	0		56	56	56
Huntington Beach	66	78	79	2	7	7	12	8	8	80	93	94
Irvine	39	39	44	12	12	12	1	3	3	52	54	59
La Habra	39	31	31	0	15	15	3	7	7	42	53	53
La Palma	1	1	2	1	1	1	2	2	1	4	4	4
Laguna Beach	46	46	46	48	45	46	73	75	74	167	166	166
Laguna Hills	0	0	0	0	0	0	20	20	20	20	20	20
Laguna Niguel	15	15	18	0	0		19	19	39	34	34	57
Laguna Woods	3	3	3	0	0		1	34	1	4	37	4
Lake Forest	7	0	0	0	0	0	0	8	9	7	8	9
Los Alamitos	14	14	14	NA	0	0	116	127	0	130	141	14
Mission Viejo	40	40	40	2	2	2	25	23	22	67	65	64
Newport Beach	20	21	21	1	1	1	4	4	4	25	26	26
Orange	27	26	29	25	29	29	2	2	2	54	57	60
Placentia	25	35	35	9	0		1	1	1	35	36	36
R S Margarita	3	0	4	0	0		669	669	669	672	669	673
San Clemente	73	20	73	0	19	0	17	51	17	90	90	90
S J Capistrano	18	18	18	0	0	0	38	38	38	56	56	56
Santa Ana	108	112	116	1	1	1	1	1	1	110	114	118
Seal Beach	32	32	39	0	0	0	3	3	5	35	35	44
Stanton	NA	19	19	NA	0	0	NA	1	1	NA	20	20
Tustin	24	22	22	0	0	0	4	4	4	28	26	26
Villa Park	0	1	1	0	0	0	2	1	1	2	2	2
Westminster	28	28	28	0	0	0	1	1	1	29	29	29
Yorba Linda	34	29	29	0	3	3	3	2	2	37	34	34
County of Orange	102	101	95	0	0	0	50	48	50	152	149	145
TOTALS	1,148	1,094	1,106	125	144	126	1,107	1,180	1,070	2,380	2,418	2,302

NA = Not Available

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)	
		Nitrogen	Phosphorus	Potassium		
Aliso Viejo	Nitra King	22	3	9	1,000	
Anaheim	Turf Supreme	16	6	8	10910	
	Nitra King	22	3	9	2950	
	Sul. Ammonium	21	0	0	2100	
	First Choice	30	5	10	3900	
	Grow Power	5	3	1	3800	
	Best Triple Power	15	15	15	800	
	Triple 16	16	16	16	40	
	Bio Blend	8	6	8	40	
	<i>Applied by Contractors:</i>					
	Turf Supreme	16	6	8	862	
	Nitra King	22	3	9	250	
	Sul Ammonium	34	0	0	75	
	Best Triple Pro	15	15	15	1136	
	Lesco Pro Turf	21	7	14	110	
	Sul Ammonium	21	0	0	100	
	<i>Golf Division:</i>					
	Nutriculture	20	20	20	100	
	Lesco	6	0	0	500	
	Calcium Nitrate	15	0	0	1224	
	Lesco Pro Turf	21	7	14	60	
	Lesco Mag. combo	0	0	0	500	
	Lesco Pro Turf	15	5	10	17500	
	Lesco Fert.	22	5	8	8000	
	Lesco Novex	19	2	19	2250	
	Lesco Macron	23	0	23	30	
	Lesco Chelated Iron +	12	0	0	3711	
	Lesco Green flo	0	0	25	917	
	Lesco	0	0	50	166	
	Lesco Novex	18	2	18	1400	
	Lesco	24	5	11	11400	
	Lesco Green Flo	18	3	6	1167	
	Lesco Flo	18	6	8	166	
	Lesco Flo	12	0	12	625	
Lesco Flo	0	0	18	834		
Urea	46	0	0	400		
Lesco Novex	16	4	11	600		
Brea	Best Turf Supreme	16	6	8	1500	
	Nitra King	22	3	9	515	
	Super Turf	25	5	5	2,700	
	Turf Royale	21	7	14	100	

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee (continued)

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)
		Nitrogen	Phosphorus	Potassium	
Buena Park	Ammonia Sulfate	212	0	0	10,000
	Turf Supreme	16	6	8	5,000
	Nitro King	22	3	9	5,000
	Triple 9 W Iron	9	9	9	2,000
	Triple 15	15	15	15	1,500
Costa Mesa	Turf Royal	21	7	14	0
	Best 9-9-9	9	9	9	1,200
	Growth Products Nitro K22-0-16	22	0	16	160
	Growth Products Nitro 30	30	0	0	160
	Growth Products Xtra Iron	6	0	0	180
	Growth Products Liquid Potassium	0	0	25	80
	Best Nitra King 22-3-9	22	3	9	54,000
	Best 6-20-20XB	6	20	20	750
County of Orange	Turf Supreme	16	6	8	20,300
	Best Turf Supreme	16	6	8	14,900
	Turf Supreme	16	16	8	6,000
	Best Ammonium Sulfate	21	0	0	2,000
	Best Ammonium Phosphate	16	20	0	3,850
	Hydro Calcium Nitrate	15.5	0	0	3,850
	Hydro Urea	46	0	0	2,000
	Scotts Starter	16	25	12	250
	Scotts Turfbuilder	29	10	10	62
	Scotts Best	16	6	8	70
	Scotts Turfbuilder with Weed Control	28	3	3	22
	Scotts Turfbuilder	27	3	4	15
	Nitra King Fertilizer	16	6	8	1,200
	Nitra King Fertilizer	22	3	9	600
	Nitro King	21	6	9	100
	Best Products	16	16	16	96
	Turf Supreme Weed & Feed	16	6	8	1,250
	Trimec Turf Supreme	16	6	8	1,500
	United Professional	16	6	8	1
	Turf Royal	21	7	14	11,800
	Turf Super	16	6	8	100
	Gro-More Water Soluable	20	20	20	150
	Grow Power	12	8	8	1,500
	Lesco Pro Fertilizer	15	15	15	895
	Miracle Grow	15	30	15	11
	Calcium Nitrate	15	0.5	0	75

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee (*continued*)

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)
		Nitrogen	Phosphorus	Potassium	
Cypress	Turf Royale	21	7	14	1,000
Dana Point	Turf Supreme	16	6	8	6,000
Fountain Valley	Best/Triple	15	15	15	750
	Greenway Biotech Pro Golf	16	8	4	12,600
	Parex	25	5	5	1,250
Fullerton	Best Turf Supreme	16	6	8	10,250
	Best Nitra King	22	3	9	450
	Best Triple 15	15	15	15	500
	<i>Applied by Contractors:</i>				
	Best Turf Supreme	16	6	8	10,000
Garden Grove	Best Turf Supreme	16	6	8	16,000
	Best Nitraking	22	3	9	11,750
	Best Preplant	6	20	20	2,000
Huntington Beach	Scott Pro Turf	30	3	9	55,000
	Turf Supreme	16	6	8	53,960
Irvine	Ammonium Sulfate	21	0	0	105,977
	Best 6-20-20 XB	6	20	20	21,650
	Best Nitra-King	22	3	9	42,800
	Best SCU	42	0	0	4,600
	Best Turf Supreme	16	6	8	126,560
	Calcium Nitrate	16	0	0	13,050
	Grow-More	20	20	20	18
	Nitroform Blue Chip	38	0	0	2,000
	Tri coat urea	42	0	0	4,600
	Best Triple Pro 15	15	15	15	7,500
	Triple 9	9	9	9	2,000
Ironite				80	
La Habra	Best Turf Supreme	16	6	8	8,400
	Best Turf Supreme	42	0	0	1,100
	Best Turf Supreme	15	15	15	2,000
	Best Turf Supreme with Trimec	16	6	8	2,300
La Palma	Super Turf	16	6	8	4,000
Laguna Beach	Turf Supreme	16	6	8	6,000
	Gro Power Plus	16	6	8	250
	Grow More	20	20	20	3

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee (continued)

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)
		Nitrogen	Phosphorus	Potassium	
Laguna Hills	Roots Foliar (gallons)	1	2	3	70
	Gypsum	2	5	0	10,000
	Nitra Form	38	0	0	4,000
	Turf Gold	21	3	5	10,500
	Turf Supreme	16	6	8	3,000
	Nitra King	22	3	7	4,500
	Pro Balance	15	15	15	7,000
	Best Tabs (one gram tablets)	20	10	5	150
	Ammonium Sulphate	21	0	0	8,000
Laguna Niguel	Tri C				38,909
	Soil Buster				165,640
	Royal	15	15	15	2,490
	Turf Supreme	16	6	8	53,025
	Turf Gold	25	5	5	37003
	Nitra King	22	3	9	11951
Laguna Woods	Best	12	12	12	500
	Best	16	6	8	1,000
	Best	22	3	9	500
	Best	15	15	15	500
	Best	21	0	0	500
Lake Forest	Best	16	6	8	30,000
	Best	25	5	5	30,000
	Best	9	9	9	16,700
Los Alamitos	Super Turf	25	5	5	400
Mission Viejo	Best Ammonium Sulfate	21	0	0	187,900
	Best Turf Supreme	16	6	8	29,800
	Best Nitra King	22	3	9	148,300
	Best Super Iron	9	9	9	6,700
	Best Triple Pro	15	15	15	7,700
Newport Beach	Lesco	28	3	7	3,500
	Target Bent Special	28	8	18	100
	Lesco Sustane	4	6	4	1,000
	Lesco	15	15	15	3,000
	Lesco	13	3	13	300
	Lesco	21	7	4	400
	Lesco	15	15	15	1,000
	Lesco	16	6	8	9200
	Lesco	14	14	14	600
	Lesco	10	10	10	9,000
	Lesco	30	0	0	400
	Best	15	15	15	2,200
	Best	16	6	8	50
	Best	34	0	0	100
	Best	9	9	9	900

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee (*continued*)

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)
		Nitrogen	Phosphorus	Potassium	
Orange	Nitra King	22	3	9	7,150
	Turf Supreme	16	6	8	9,900
	Super Iron	9	9	9	500
	Grow Power	5	3		100
	Triple Pro	15	15	15	2,000
	Urea	46			4,420
	Turf Supreme	21	7	14	4,600
Placentia	Super Turf	25	5	5	8,000
	Nitra King	22	3	9	2,000
	Turf Supreme	16	6	8	2,000
Rancho Santa Margarita	Best Fertilizer	16	6	8	50
San Clemente	Butlers Mill Pro Green	12	4	6	45,000
	Best Fertilizer Super Turf	25	5	5	8,000
	Best Fertilizer Nitra King	22	3	9	10,000
	Super Turf	20	10	10	3,000
San Juan Capistrano	Amonium Sulfate	21	0	0	1,000
	Hi Kal	15	2	15	200
	No Foam 0-16-9	0	16	9	53
	Peters 20-20-20	20	20	20	200
	Iron 4.5%				88
	Best Turf Supreme	16	6	8	17,000
	Calcium Nitrate	15			360
	UREA	46	0	0	1200
Santa Ana	Turf Supreme	16	6	8	45,750
	Calcium Nitrate	15	0	0	2,500
	Nitra King	22	3	9	8,000
	Amonium Sulfate	21	0	0	1,425
Seal Beach	Turf Supreme	16	6	8	2,000
Stanton	Best	16	6	8	1,800
	Best	15	15	15	800
	Best	21	0	0	300
Tustin	Growth Products Nitro 30	30	0	0	310
	Hydro Agri N.A. Hydro Prils 15-15-15 (s)	15	15	15	500
	39-00-50 Release	39	0	0	2,300
Villa Park	EX Super Turf	20	10	10	2,000
Westminster	Turf Supreme	16	6	8	3,000
	Pro Choice Custom Fertilizer	7	7	7	500
	Super Iron	9	9	9	1,000

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.9: 2004-05 Fertilizers and Amounts Applied By Permittee (*continued*)

PERMITTEE	Brand Name	Fertilizer Analysis			Amount Applied (lbs)
		Nitrogen	Phosphorus	Potassium	
Yorba Linda	15-15-15	15	15	15	3,200
	16-6-8	16	6	8	3,000
	20-20-20	20	20	20	125
	21-7-14	21	7	14	3,000
	22-3-9	22	3	9	3,000
	39-0-0	39	0	0	6,650
	Best	16	6	8	2,000
	Ferroy GC	15	0	0	N/A
	Nitra King	6	20	20	4,000
	Nitra King	15	15	15	12,000
	Nitra King	20	3	9	33,000
	Nitra King	39	0	0	4,000
	Signiture 12-08-06	12	8	6	4,800
	Signiture	16	6	8	27,300
	Sulphur Coated Urea	39	0	0	8,000
	Super Iron	9	9	9	1,200
	Turf Supreme	16	6	8	52,280
	Uer	21	7	14	10,000
	Viking Cal Nitrate	15	0	0	2,000

SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.10: Fertilizers and Amounts Applied By Permittee

Permittee	Acres	Total N	Total P	N/acre	P/acre
Aliso Viejo	6.0	220.0	30.0	36.7	5.0
Anaheim	311.0	13,852.0	3,429.4	44.5	11.0
Brea	118.7	1,049.3	247.5	8.8	2.1
Buena Park	55.0	23,505.0	855.0	427.4	15.5
Costa Mesa	200.0	12,127.0	1,878.0	60.6	9.4
Cypress	9.0	210.0	70.0	23.3	7.8
Dana Point	50.0	960.0	360.0	19.2	7.2
Fountain Valley	200.0	2,441.0	1,183.0	12.2	5.9
Fullerton	NA	3,414.0	1,303.5	NA	NA
Garden Grove	170.0	5,265.0	1,712.5	31.0	10.1
Huntington Beach	606.0	25,133.6	4,887.6	41.5	8.1
Irvine	846.6	61,240.4	14,516.2	72.3	17.1
La Habra	108.0	2,474.0	942.0	22.9	8.7
La Palma	15.0	640.0	240.0	42.7	16.0
Laguna Beach	50.0	1,000.6	375.6	20.0	7.5
Laguna Hills	125.0	8,155.7	2,196.4	65.2	17.6
Laguna Niguel	151.0	20,737.5	5,763.7	137.3	38.2
Laguna Woods	5.0	510.0	210.0	102.0	42.0
Lake Forest	71.8	13,803.0	4,803.0	192.2	66.9
Los Alamitos	14.3	100.0	20.0	7.0	1.4
Mission Viejo	702.0	78,611.0	7,995.0	112.0	11.4
Newport Beach	300.0	4,800.0	2,760.0	16.0	9.2
Orange	243.0	6,506.2	1,478.5	26.8	6.1
Placentia	108.0	2,760.0	580.0	25.6	5.4
Rancho Santa Margarita	0.2	8.0	3.0	40.0	15.0
San Clemente	180.0	10,200.0	2,800.0	56.7	15.6
San Juan Capistrano	176.0	3,606.0	1,072.5	20.5	6.1
Santa Ana	400.0	9,754.3	2,985.0	24.4	7.5
Seal Beach	55.0	320.0	120.0	5.8	2.2
Stanton	10.0	471.0	228.0	47.1	22.8
Tustin	184.0	1,065.0	75.0	5.8	0.4
Villa Park	10.0	400.0	200.0	40.0	20.0
Westminster	15.0	605.0	305.0	40.3	20.3
Yorba Linda	699.0	34,325.3	10,661.8	49.1	15.3
County of Orange	667.0	12,875.8	5,312.4	19.3	8.0
Totals	6,861.6	363,145.6	81,599.5		

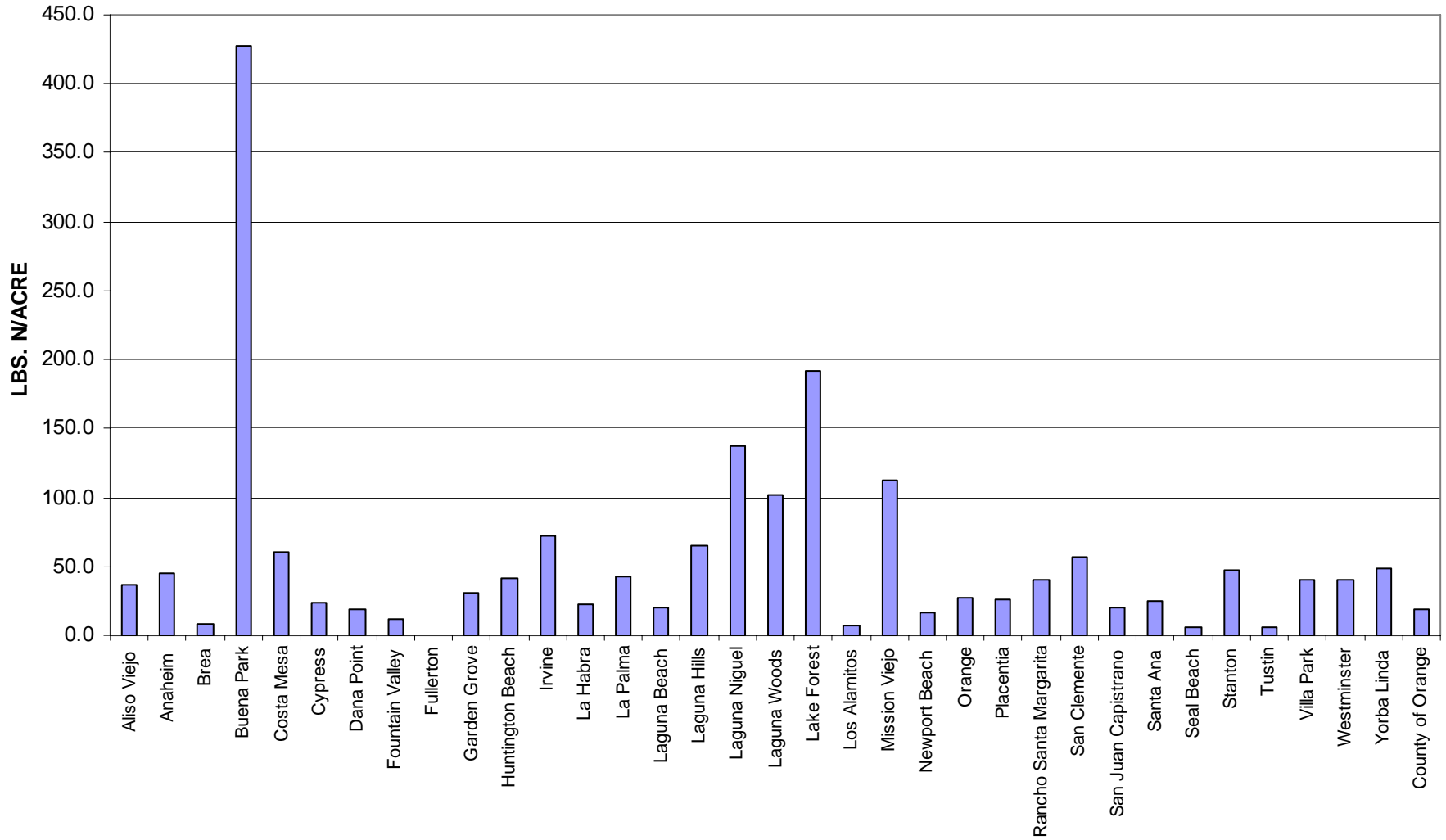
SECTION C5, MUNICIPAL ACTIVITIES

Table C-5.11: Calibration of Pesticide Application Equipment

Permittees	Calibrate?	Frequency of calibration				Calibration method			
		Each application	Every 1-5 applications	Once a year	Other: (specify)	Test application on small area	Estimate coverage	Setting on sprayer/spreader	Other: (specify)
Aliso Viejo	X	X				X	X	X	
Anaheim	X		X						manufacturer specs
Brea	No				per product label				by setting on bag
Buena Park	X	X					X	X	
Costa Mesa	No								
Cypress	X		X			X		X	
Dana Point	X				computer rigs are calculated daily, other equipment 1-5 times per year	X			
Fountain Valley	X	X				X		X	
Fullerton	X		X			X	X	X	
Garden Grove	X	X			every other month	X	X	X	
Huntington Beach	X	X			per product label				label
Irvine	X		X			X	X		
La Habra	X			X		X			
La Palma	X	X						X	
Laguna Beach	X	X						X	
Laguna Hills	X	X				X		X	
Laguna Niguel	X	X						X	
Laguna Woods	X	X					X	X	
Lake Forest	X	X			1 - 5 times per year using a computer	X		X	
Los Alamitos	No								
Mission Viejo	No				per product label			X	
Newport Beach	X				3 times per year				
Orange	X	X						X	
Placentia	X			X		X			
Rancho Santa Margarita	X	X						X	
San Clemente	X	X						X	
San Juan Capistrano	X	X				X		X	
Santa Ana	X			X		X			
Seal Beach	X	X				X		X	
Stanton	X	X							manufacturer specs
Tustin	X	X			The City calibrates with each application and the contractor performs their calibration once per year	X		X	
Villa Park	No								
Westminster	No								
Yorba Linda	X	X	X	X	Depends on contractor	X	X	X	
County of Orange/OCFCD	X				Varies with applicator				Varies by applicator
	29	54%	14%	11%					

SECTION C5, MUNICIPAL ACTIVITIES

Figure C-5.1: Lbs. Nitrogen per Acre by Permittee (2004-05)



SECTION C5, MUNICIPAL ACTIVITIES

Figure C-5.2: Lbs. Phosphorous per Acre by Permittee (2004-05)

