COUNTY OF ORANGE

OC PUBLIC WORKS DEPARTMENT

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April 9, 2008

Stuart Drown
Executive Officer
Little Hoover Commission
925 L. Street, Suite 805
Sacramento, CA 95814

Subject: Hearing on the State Water Resources Control Board

Dear Mr. Drown:

Thank you for the invitation to address the Little Hoover Commission on April 24. I am pleased to participate and believe my role as a stormwater manager in Orange County and as Chair of the California Stormwater Quality Association (CASQA) will provide useful information to your Commission as it tackles the challenging issues associated with the governance structure of water in California.

As requested, please find attached the written testimony in response to the questions posed in your March 17, 2008 letter. The responses to Questions 3 through 6 were developed in conjunction with CASQA and I would request that CASQA's Executive Officer, Geoff Brosseau, and Vice-Chair, Scott Taylor, be available with me to answer questions from your Commission.

Please contact me at (714) 834-6662 or chris.crompton@rdmd.ocgov.com if you have any questions regarding the testimony.

Very truly yours,

Chris Crompton, Manager
Environmental Resources

Cc: Geoff Brosseau, CASQA
Scott Taylor, CASQA

Attachments: Written testimony and exhibits
Biography

Little Hoover Commission Hearing on State Water Resources Control Board
Written Testimony in Response to Questions Posed

1. How have stormwater regulations affected your county? Please explain the steps your county takes to meet stormwater permit regulations, the costs associated with meeting the regulations and your assessment of the regulations' impact on water quality.

Steps taken to meet stormwater permit regulations

- The Orange County Stormwater Program was created in 1990 as a cooperative local government response to a 1987 amendment to the federal Clean Water Act. The Program includes all cities (now numbering 34), the Orange County Flood Control District and the County of Orange (collectively Permittees). The County is the Principal Permittee and the Program is underpinned by a cooperative agreement that defines responsibilities and establishes a shared cost budget (currently $6 million) for program management and common compliance program elements including, new program development, environmental quality monitoring and public education.

- The first Orange County municipal permits were issued in July 1990; Order 90-71 from the Santa Ana Regional Board and Order 90-38 from the San Diego Regional Board. The First Term Permits were essentially similar and required the Permittees to develop and implement a Drainage Area Management Plan (DAMP). The DAMP identifies the Best Management Practices (BMPs) for water quality protection that will be required through local regulatory oversight of the built environment and integrated into local government's construction, operation, and maintenance of public urban infrastructure.

  The DAMP has undergone continuing development (1993, proposed 2000, 2003 and proposed 2007 versions) in response to new permit requirements (Second Term [1996-2002]; Third Term [2002-present]) and the iterative process of stormwater program assessment. The DAMP remains the principal policy, guidance and reporting document for the Orange County Stormwater Program. As part of the DAMP, each Permittee has developed a Local Implementation Plan (LIP) describing stormwater management program implementation at a jurisdictional level and Watershed Actions Plans have been developed for all 11 watersheds within Orange County (see **Exhibit 1** for a detailed discussion of the DAMP). Concurrently, jurisdictions have been required to appoint stormwater program managers and inspection staff to ensure full jurisdictional program implementation and permit compliance.

- The Orange County Stormwater Program has a comprehensive management framework providing program overview and guidance to the Permittees, who are ultimately responsible for program funding approval and permit compliance:

  - The County of Orange through its Stormwater Section coordinates countywide compliance activities and submittals to the Regional Boards under direction of the Permittees.
  - There are a number of working groups—committees, sub-committees, ad hoc working groups, and task forces—that provide input and guidance to address

various program implementation issues. These working groups encourage inter-agency/jurisdiction coordination and engage staff from all levels, including city managers, public works directors, NPDES program coordinators, code enforcement officers, field technicians, etc. to collaborate to meet regulatory requirements (see **Exhibit 2** for a detailed discussion of the Stormwater Program management framework).

- The effectiveness of the Stormwater Program is assessed annually in a Program Effectiveness Assessment Report, as well as in the Report of Waste Discharge at the end of each Permit term. This iterative process allows for adaptation to address changes in regulatory requirements as well as new findings from the implementation of the Stormwater Program, such as monitoring data and effectiveness studies on Best Management Practices (BMPs). For example, the Third Term Permits have, with varying degrees of specificity, required the Permittees to develop and implement a watershed-based approach to urban stormwater management to complement the established jurisdictional-based approaches.

- The stormwater permit requirements for a watershed-based approach, coupled with watershed-based TMDLs and grant funding opportunities geared to Integrated Regional Water Management Plans (IRWMPs) has placed an emphasis on the watershed as the planning area with the expectation of multi-jurisdictional solutions to problems that cut across programs and jurisdictions. In Orange County, these efforts focus additional effort on the highest priority water quality constituents of concern in each watershed.

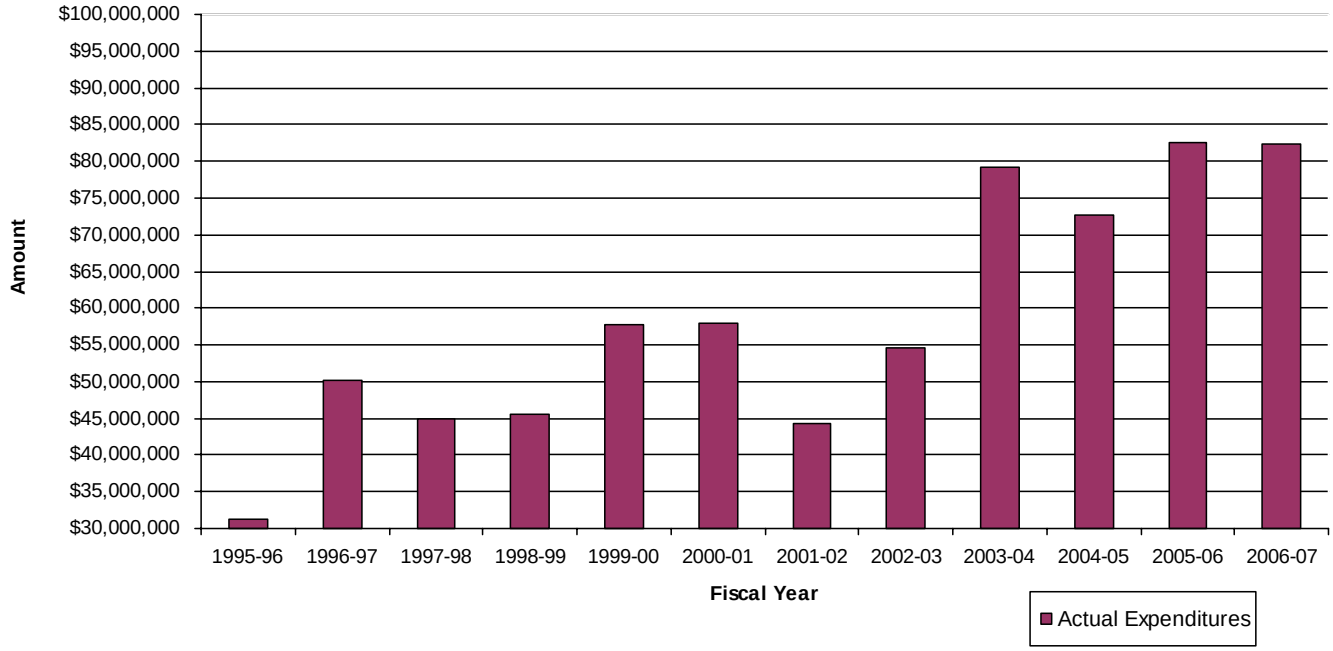
  Recognizing the need for a coordinated approach to resource management and capital improvement planning to leverage partnerships with regional stakeholders, the County of Orange Board of Supervisors has identified the development and implementation of regional water quality improvement strategies to preserve, protect, and enhance coastal resources and surface waters throughout Orange County as on of its top priorities and approved the apportionment of the County into three hydrologic sub-areas, or Watershed Management Areas (WMAs) for planning purposes:

  - The North WMA comprises the San Gabriel River/Coyote Creek, Anaheim Bay/Huntington Harbour, and Santa Ana River (within Orange County) watersheds
  - The Central WMA comprises the Newport Bay and Newport Coastal Streams watersheds
  - The South WMA, which wholly falls under the jurisdiction of the San Diego Regional Board, comprises the Aliso Creek, San Juan Creek, Laguna Coastal Streams, Dana Point Coastal Streams, San Clemente Coastal Streams and San Mateo Creek watersheds.

  The governance of each WMA is currently under development and is likely to follow use the existing structure of the Central County WMA as a model, consisting of Executive, Management and Stakeholder committees underpinned by a watershed cooperative agreement.

Stormwater Program Costs

- The annual costs incurred by the Permittees in developing, implementing and maintaining programs in order to comply with the NPDES permits has increased 163% to date, since detailed expenditures were tracked beginning with the 1995-96 reporting year (see figure).



Using census data for housing units counts, the calculated cost in 2006-07 for the Permittee's costs ranged from $14.64 to $124.39 per housing unit per year with the average being about $64. A study completed by California State University Sacramento[1] indicated that the reported annual costs for Phase I MS4 Programs were in the range of $18 to $46 per household (through 2002-03). While the time periods are not directly comparable, Orange County's program cost data suggests spending substantially above reported averages from other programs.

Assessment of Stormwater Program Impact

- The most recent and detailed assessment of the Orange County Stormwater Program was provided in the 2006 Report of Waste Discharge (ROWD). The Third Term Permits significantly transformed the Orange County Stormwater Program developed under the First and Second Permit Terms. The major escalation in compliance obligations included new requirements for local governments' oversight of construction and development, regulation of industry and commerce, and its construction, operation and maintenance of the public urban infrastructure. These new compliance obligations required a major realignment of the program implemented over two years with the consequence that program performance metrics are generally available for three years.

[1] NPDES Stormwater Cost Survey, Office of Water Programs, CSU Sacramento, January 2005.

- Program effectiveness assessments over the limited period of full implementation have indicated positive programmatic impacts. However, annual assessments have also indicated significant variability in performance reporting between jurisdictions. In addition, regulatory agency reviews have identified differences in regulatory agency and Permittee expectations in key areas of the Program, particularly with respect to regulation and oversight.

- The Stormwater Program's accomplishments over the last three reporting years (through 2006-07) have been in the main program implementation ones rather than water quality outcomes. These include:

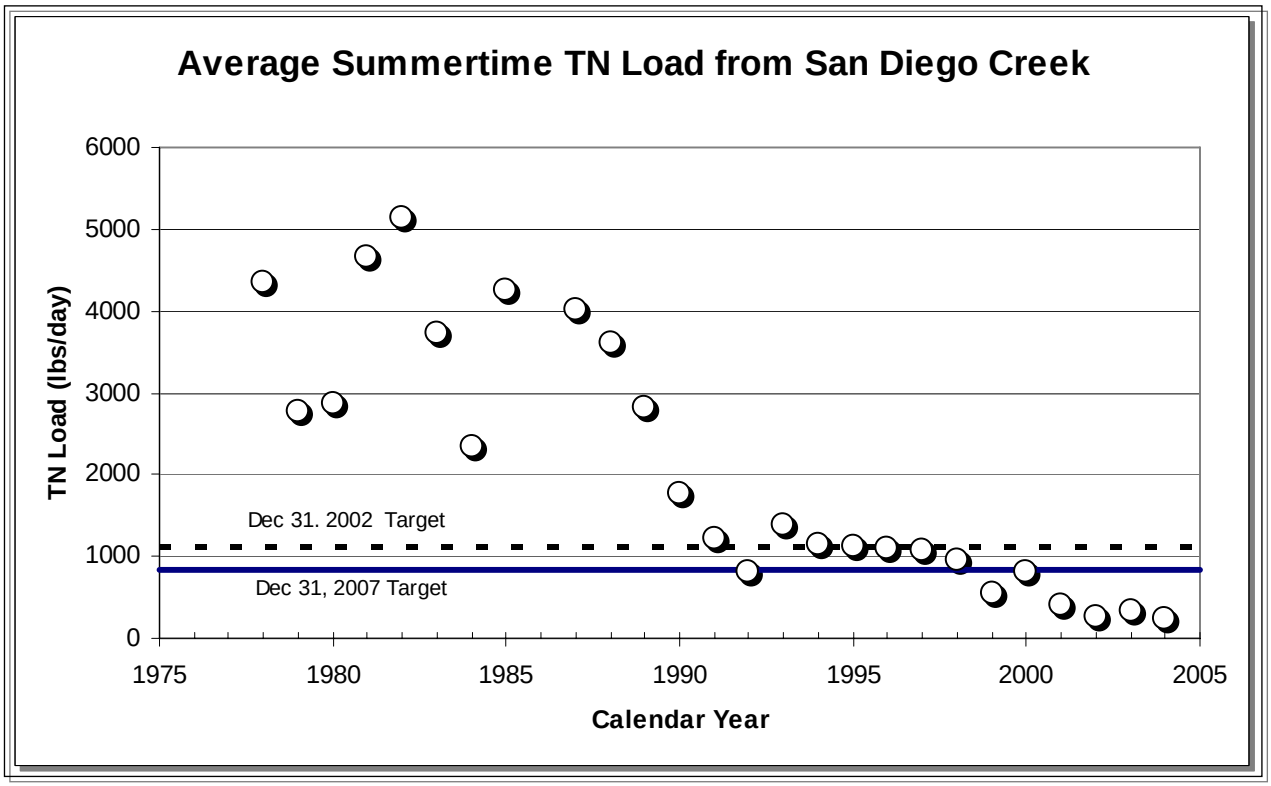
  - Completion of the 2003 DAMP including 34 jurisdictional LIPs, a formal training program, a program effectiveness assessment strategy, and 6 (now all) Watershed Action Plans;
  - Completion of studies to evaluate the effectiveness and applicability of various source control and treatment control BMPs;
  - Validation, through independent administrative and trial court review, of the robustness of the Permittees' local legal authority for DAMP implementation;
  - Development and implementation of (1) a Model Municipal Activities program applicable at 2,302 municipal facilities, (2) Model Integrated Pest Management Guidelines which have reduced municipal fertilizer and pesticide use at municipal facilities, and (3) established a BMP performance reporting program that has indicated the increased effectiveness of street sweeping and trash and debris collection practices;
  - Development and implementation of a public education program that has created over 160,000,000 media impressions and produced measurable and positive changes in public awareness and behavior;
  - Development and implementation of a Model Water Quality Management Plan (WQMP) based program for new development and significant redevelopment, the approval of over 1,400 project WQMPs, and the creation and ongoing development of a web-based expert system to support coastal urban wetland management;
  - Development and implementation of a Model Construction Program under which 6,570 enforcement actions were taken with a pattern of increasing compliance in the most recent annual reporting period;
  - Development and implementation of a Model Industrial/Commercial Program under which over 31,000 facilities have been subject to local regulatory review and 7,266 enforcement actions were taken with a pattern of increasing compliance in the most recent annual reporting period;
  - The investigation of 8,866 complaints regarding illegal discharges or illicit connections, increased use of a telephone hotline for the reporting by the public of water quality concerns, and implementation of enhanced cooperative local agency procedures and practices for sewage spill response;
  - Development and approval of the Third Term Permit water quality monitoring program with the Santa Ana regional Board area and development and implementation of a sophisticated environmental data management system (Labtrack); and

- In assessing stormwater program effectiveness, a series of performance metrics, termed Headline Measure, have been identified that are intended to confirm

program implementation and validate achievement of outcomes. The basis of this approach draws on the hierarchical taxonomy of programmatic outcomes, being advocated by the California Stormwater Quality Association (CASQA), which creates a framework for defining the relationships between compliance actions and, ultimately, positive changes in water quality. See **Exhibit 3** for a detailed breakdown of the assessment findings as reported in the ROWD. While many positive programmatic outcomes have been achieved, validation in terms of improved water quality remains elusive because:

- Baseline water quality conditions are not readily established;
- Water quality changes in response to program implementation are likely to be very slow; and
- Establishing a link between receiving water condition and program activities is difficult at the watershed scale when programs are being implemented incrementally with the development/redevelopment cycle.

Nonetheless, some success stories do exist. For example long term reductions in loadings of total nitrogen to Newport Bay have been achieved (see graph) and certain sections of beaches in Orange County have been proposed for delisting from the 303(d) list of water quality limited segments.



2. Because your county is regulated by two regional water quality control boards, please explain the differences in approach and philosophy of the two boards and the difficulties your county faces in meeting requirements imposed by two boards.

- Orange County is regulated by the Santa Ana and San Diego Regional Water Quality Control Boards. The boundary between the two Boards is a hydrologic boundary that approximately follows El Toro Road (a busy commercial thoroughfare). As a consequence the cities of Lake Forest, Laguna Woods, and Laguna Hills, as well as the County of Orange and the Orange County Flood Control District are regulated under two permits.

  Interestingly, the boundary between the Santa Ana and Los Angeles Regional Water Quality Control Boards is the county line rather than a hydrologic boundary (see **Figure 1**).

- Until the Third Term Permits (2002 to present), the stormwater permits issued to Orange County by both Regional Boards were largely the same. The permit issued by the San Diego Regional Board in 2002 represented a significant course change. Instead of starting with either the Second Term Santa Ana Regional Board permit or an evaluation of the Orange County Stormwater Program, the Board started with the permit that it had recently issued to San Diego County - a program operating for over 10 years on its first term early permit. The result was a highly prescriptive permit that, in the main, did not recognize the significant progress made in Orange County under the DAMP.

  With the adoption of a Third Term Permit by the Santa Ana Regional Board that was based on its prior approach, Orange County for the first time had significantly different permit requirements from the two Regional Boards.

- One of the major challenges for the Orange County Stormwater Program since the issuance of the Third Term Permits has been to maintain the coordinated countywide approach that has been developed over the years since 1990 while reconciling the differences between the two Regional Board permits. This challenge has been addressed through the following:

  - The DAMP underwent a complete revision and emerged as the 2003 DAMP with model programs covering the different requirements of both permits. Previously, the 1993 DAMP constituted a self-contained policy and program for reducing the discharge of pollutants from municipal storm drains to the maximum extent practicable; and
  - The reconciliation between the two permits was achieved through the development of a Local Implementation Plan by each Permittee. Permittees could use the model programs in the 2003 DAMP and tailor local programs to their specific permit requirements. Potentially, jurisdictions covered by both permits could have different programs in different parts of their area, although, in practice, this was not especially practical.

- The consequence of having two permits created considerable initial coordination problems and additional program development costs. In addition, the separate reporting and regulatory liaison efforts required in dealing with two Regional

Boards continue to exacerbate administrative costs. The development of the Local Implementation Plan process, however, has had a number of significant benefits for program implementation at a jurisdictional level, including greater local accountability.

- Increasingly, the major issues facing Orange County from being regulated under two permits are the fundamental philosophical differences between the two Boards. The San Diego Regional Board seems opposed to treatment as a tool for addressing water quality improvement. As a result, for example, the Santa Ana Regional Board is supportive of the development of regional scale treatment BMPs while the San Diego Regional Board is opposed to this approach believing the focus should be on controls close to the source. Indeed, the long-term operation of a number of State Water Resources Control Board Clean Beach Initiative funded projects in Orange County is potentially threatened by the San Diego Regional Boards' position on regional treatment approaches. Similarly, the Santa Ana Regional Board has been supportive of diverting contaminated urban dry season runoff to the sanitary sewer which has had demonstrable benefit on coastal water quality, while the San Diego Regional Board is opposed to diversion believing that sources should be found and eliminated. The Permittees believe that the full tool box of options should be available in order get meaningful water quality improvement at the earliest time.

3. What are the key challenges for both regulators and the regulated community in developing effective and fair stormwater regulations?

Regulatory/Permitting Challenges

- Regulating a non-point source as a point source.

- Providing consistency between municipal permits but still allowing individual discharger flexibility.

- Improving the technical understanding of stormwater so that the current trial and error approach to permitting is eliminated, (e.g., performance standard for new development has morphed from treatment to hydromodification to low impact development).

- Using the water quality program to address water quantity issues (hydromodification).

- Addressing stormwater pollutant sources that are not under the control of stormwater permittees (e.g. airborne pollutants, pesticide use, manufactured products such as automobiles, legacy pollutants from historic agriculture, mining, etc.).

Technical/Implementation Challenges

- Balancing MS4's accountability of program implementation between relevant assessment and "bean counting".

- Demonstrating near-term improvement in water quality from stormwater program implementation.

- Stormwater science and technology lag behind regulatory implementation: The regulatory program is more sophisticated than the technology (as an example the state of technology for stormwater is similar if not lagging the state of technology for wastewater before the Clean Water Grant Program (circa 1975) but the current stormwater regulatory program reflects sophisticated/complicated NPDES point source permitting program).

- Addressing stormwater requires a multidiscipline approach (e.g., land use planning, air quality, public behavior, etc.) It's not a simple engineering job as was the case in the wastewater field.

- Integration of TMDL implementation and stormwater programs. Stormwater permitting should support TMDL implementation in a reasonable and systematic manner.

- Developing a monitoring approach within permits that is strategically relevant. Monitoring is expensive and adds little value if not developed based on questions relevant to the stormwater management program and the practical realities of the field.

- Regional Water Board members meeting once a month or less and with limited technical skills are being asked to rule on technically complex and controversial issues associated with stormwater permitting.

4. What are the pros and cons of a statewide stormwater policy? What aspects of stormwater regulations should be set statewide, and are there aspects that should be controlled at the regional board level?

Pros

- Provides consistency and a level playing field for stormwater program implementation and assessment and permit compliance determination.

- Avoids current method of setting stormwater policy through the individual permits, i.e. permit by permit setting of policy.

- Allows for broader and consistent integration of other water quality related policies/programs (e.g. ASBS, Ocean Plan, 401 certification, Surface Water Ambient Monitoring Program, etc.).

- Optimizes resources. Frees up Regional board staff for enforcement and program oversight, and not developing policy through permit reissuance.

- Expedites permit reissuance. Current process is ineffective/inefficient and leads to continuous hearings and appeals.

Cons

- Appearance that Regional Boards lose control of programs within their regions.

- Resource and time intensive to develop statewide policy.

Statewide vs. Regional

- Program implementation should be defined at the statewide level (similar to defining "secondary treatment" in the wastewater field). Such a program should be practical and reasonable. The TMDL program should be used at the regional level to augment program implementation and monitoring.

- Monitoring should be developed with a statewide perspective (while recognizing distinct climatic subregions) including identifying consistent protocols and procedures.

5. Does the state board have sufficient accountability measures and authority to ensure that California can protect and improve water quality through the actions of the nine regional boards? Should it have more power to direct the regional boards' actions? What is the appropriate relationship?

- The control of airborne pollutants, pesticide registration, the sale of many potentially polluting goods used in commerce, etc. are outside the domain of the Regional Boards. Better statewide coordination/integration with these programs is needed.

- Current legislation provides for a relatively autonomous Regional Board, which has lead to the inconsistent implementation of the stormwater program. This inconsistency should be addressed through either a statewide stormwater policy or providing more authority to the State Board in its dealing with the Regional Boards.

- Coordination between the State Board and the Regional Boards needs to be modified. Most 'coordination' is reactive and happens at the end of processes when something goes wrong and there are appeals or lawsuits. This back-end 'coordination' is inefficient and hence costly, and has real environmental impacts from delayed decisions/actions. The Water Boards should institutionalize proactive front-end coordination by:

  - The State Water Board developing and setting statewide policy whenever possible to reduce the likelihood of appeals and lawsuits based on inappropriate inconsistency or precedent-setting arguments;
  - All Water Boards optimizing their personnel allocations (as described below in response to the next question) to free up and identify new resources necessary to conduct proactive coordination; and
  - All Water Boards establishing as standard first steps in most processes, interagency coordination procedures, as well as early and informal, public and stakeholder participation processes to reduce the likelihood of appeals and lawsuits.

6. How can the state and regional boards improve consistency, timeliness and transparency in performing duties, such as basin planning, adopting Total Maximum Daily Load projects and permitting? What other processes or structures need to be re-examined to ensure effective and efficient water quality regulation?

- Current Water Board activities require professional disciplines not always found at the Water Boards. The Water Boards lack staff disciplines key to managing water quality (particularly for stormwater), including disciplines such as public participation, public outreach, economics, and land use planning/CEQA. The Water Boards should either create and fill these positions or let on-call / retainer contracts to provide immediate access to such assistance when it is needed.

- The Water Boards' allocations of personnel to programs/projects and tasks need to be optimized. The Water Boards have a systemic lack of funding relative to their allocation of personnel that, for some programs/projects and tasks, has a significant negative affect on the productivity and quality of the Water Boards' work. The Strategic Plan Update 2008-2012 starts to address this systemic problem by establishing environmental, planning, and organizational performance priorities as well as goals and objectives to address those priorities. To complete the process of making sure the personnel allocations are commensurate with the available funding, the Water Boards should:

  - Check existing personnel allocations against the Strategic Plan and establish non-priority tasks and programs/projects.
  - Within the priority programs/projects and tasks, identify the other agencies that have legislative / regulatory purview, resources, and experience relative to the Water Boards' priorities. Identify the lead agency and the support agency (ies) for each priority program/project and task.
  - Identify the extent to which Water Board resources can be transferred away from non-priorities, and the extent to which other agencies can take the lead or support the Water Boards.
  - Revise the Water Boards' personnel allocations accordingly.

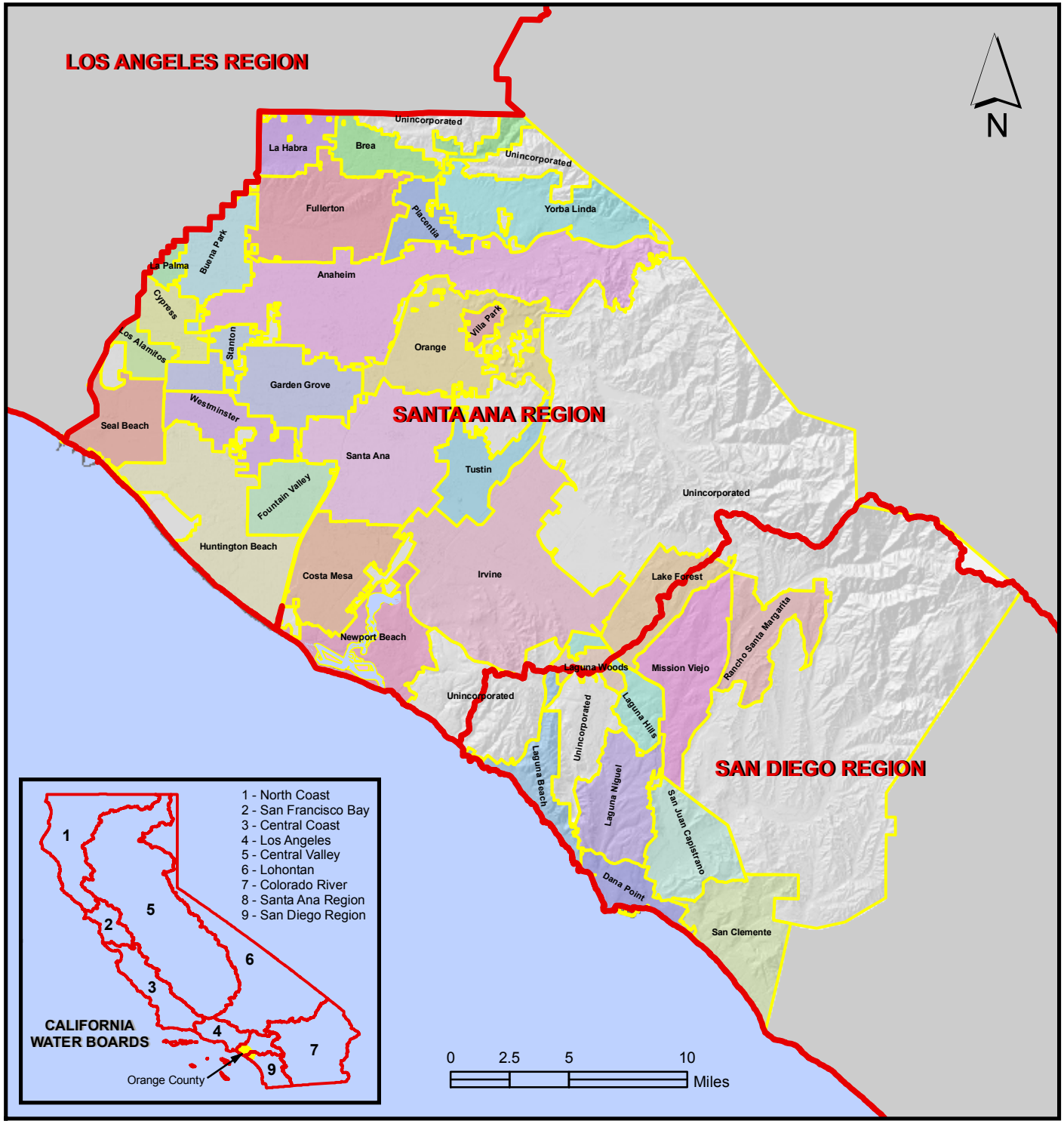
- The State should evaluate various options for improving stormwater permitting. Such options might include:

  - The development of a statewide stormwater policy to guide Regional Board staff in developing consistent and effective stormwater permit;
  - The State assuming permitting responsibilities from the Regional Boards. The state would still hold local hearings on permits, but the permits would be developed by a single state board division and approved by a program administrator rather than by the Board itself. Appeals could be heard by administrative law judges rather than the Board itself. Such an approach is used in other States. Alternatively, the Regional Board Executive Officers could issue individual permits with the State Board serving, if necessary, as a final review panel (similar to USEPA model and its Environmental Appeals Board);
  - Establish a tiered general permit approach for both stormwater (e.g., Phase 1, 2, construction, industrial) and wastewater discharges (e.g., secondary,

nitrification, and filtration). This concept is currently in place in some cases but may need to be expanded. Individual permits could still be issued pending local conditions and circumstances.

- Regarding TMDLs, the Regional Boards should enter into a collaborative process (similar to the 208 planning process) to develop the TMDLs. Until the TMDL is developed water quality based effluent limits should not be incorporated into wastewater or stormwater permits. The TMDL is the best process to evaluate the standards, because it involves the development of implementation programs and implementation programs are necessary to determine whether standards are reasonably achievable and otherwise consistent with Porter-Cologne and federal law. This is preferred approach to a review of the Basin Plan standards through the Triennial review process.

FIGURE 1 - REGIONAL BOARD BOUNDARIES IN ORANGE COUNTY



SANTA ANA REGION BASIN PLAN

"The boundary between the Los Angeles and Santa Ana Regions is the Los Angeles County line. Since that county line only approximates the hydrologic divide, part of the Pomona area drains into the Santa Ana Region, and, in Orange County, part of La Habra drains into the Los Angeles Region."

SAN DIEGO REGION BASIN PLAN

"The western boundary of the San Diego Region consists of the Pacific Ocean coastline which extends approximately 85 miles north from the United States and Mexico border. The northern boundary of the Region is formed by the hydrologic divide starting near Laguna Beach and extending inland through El Toro [Lake Forest] and easterly along the ridge of the Elsinore Mountains into the Cleveland National Forest."

Exhibit 1

Orange County Stormwater DAMP: Structure & Function

1.0 INTRODUCTION

1.1 Background

The Drainage Area Management Plan (DAMP) is the principal policy, programmatic guidance and planning document for the Orange County Stormwater Program (the Program), a municipal regulatory compliance initiative focused on the management and protection of Orange County's streams, rivers, creeks and coastal waters. The participants in this program are the County of Orange, the Orange County Flood Control District and the cities of Orange County.

The primary focus of the DAMP is addressing the impacts of urban runoff on water quality. Urbanization creates rooftops, driveways, roads and parking lots which increase the imperviousness of the land. This imperviousness increases the timing and volume of rainfall runoff (compared to pre-development conditions) and provides a source of pollutants that are flushed or leached by rainfall runoff into aquatic systems. The potential environmental consequences of these impacts are loss or impairment of the aquatic beneficial uses of streams, rivers, creeks, and coastal waters.

The stormwater program was initiated in 1990 as a cooperative local government response to requirements stemming from the Clean Water Act regulations. The 1972 Federal Water Pollution Control Act, subsequently known as the Clean Water Act (CWA), established the National Pollutant Discharge Elimination System (NPDES) permitting program. As a result of court decisions and the overriding need to clarify stormwater permitting requirements, the CWA required the Environmental Protection Agency (EPA) to issue regulations to be effective by 1983 that included stormwater runoff from rainfall. Congress passed a Clean Water Act Amendment in 1987, the Water Quality Act, which brought stormwater discharges into the NPDES Program. EPA issued subsequent regulations on November 16, 1990.

In response to those regulations, the County of Orange (subsequently referred to as the Principal Permittee), the Orange County Flood Control District and the incorporated cities of Orange County (collectively referred to as Permittees) have obtained, renewed and complied with the following NPDES Stormwater Permits from the Santa Ana and San Diego Regional Water Quality Control Boards (subsequently referred to as the Santa Ana Regional Board, the San Diego Regional Board or collectively as the Regional Boards):

Permit term	Santa Ana Regional Board			San Diego Regional Board		
	Order No.	*NPDES No.*	*Date Adopted*	*Order No.*	*NPDES No.*	*Date Adopted*
First (1990-1995)	90-71	CA 8000180	July 1990	90-38	CA 0108740	July 1990
Second (1996-2002)	96-31	CAS618030	March 1996	96-03	CAS0108740	August 1996
Third (2002-2008)	R8-2002-0010	CAS618030	January 2002	R9-2002-0001	CAS0108740	February 2002

Each permit renewal has required the Permittees to continue to implement ongoing stormwater quality management programs and update and develop additional programs in order to control pollutants in stormwater discharges. This "iterative management" approach which is based on a continuous improvement process of implementation is a fundamental underpinning of the Orange County program and consistent with the intent of the Permits.

One of the major challenges for the Permittees in updating the programs is the reconciliation between the two Regional Board permits and the resulting program requirements that had significant differences for the first time with the issuance of the Third Term Permits. As a result of the need to reconcile the differences between the two permits, the 2003 DAMP represented a departure from its 1993 predecessor. Previously, the 1993 DAMP constituted a self-contained policy and program for reducing the discharge of pollutants from municipal storm drains to the maximum extent practicable. It addressed the requirements of permits that, although issued by two separate Regional Boards, did not differ. Under the Third Term Permit period, the 2003 DAMP addressed the two permits that achieve similar objectives through different sets of requirements.

The reconciliation between the two Third Term Permits has also been achieved through the development by each Permittee of a Local Implementation Plan (LIP) (also termed Jurisdictional Urban Runoff Management Plan or JURMP in the San Diego Regional Board Third Term Permit). The 2003 DAMP laid the detailed foundation for Permittees to develop their LIPs by establishing Model Programs and providing a measure of accountability for each of the major program areas. In developing their Local Implementation Plans, the Permittees modified the DAMP Model Programs as necessary to ensure that their local conditions were addressed and developed a plan for the implementation of the program within their jurisdiction.

1.2 Regulatory Requirements

Section 402(p) of the CWA, as amended by the Water Quality Act of 1987, requires that municipal NPDES Permits include:

1. A requirement to effectively prohibit non-storm water discharges into municipal storm sewers; and

2. Controls to reduce the discharge of pollutants from municipal storm drains to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

Regulations promulgated by EPA on November 16, 1990 (40 CFR 122.26 (d)(2)(iv)) require municipal NPDES permit applicants to develop a management program to effectively address these requirements.

The federal regulations also indicate that the proposed management program, such as the DAMP, "*shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate*".

The First Term Permits similarly required the development of a management program to address the regulatory requirements and defined "maximum extent practicable" as follows:

> "*Maximum extent practicable (MEP) means to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concern, and social benefits.*"

This definition set the foundation for the Orange County Stormwater Program and places upon the Permittees the continuing responsibility of weighing economic, societal, and equity issues as they define the policies and standards to be employed in implementing the program.

1.3 Objectives of the Drainage Area Management Plan

The main objectives of the DAMP are to fulfill the commitment of the Permittees to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban stormwater discharges on receiving waters. An increasingly important aspect of the DAMP is to identify additional commitments for the municipal stormwater programs that may be needed to address urban Total Maximum Daily Load requirements that are being incorporated into the NPDES permits.

There are a number of important public policy issues which have influenced the Permittees in framing this DAMP and which consequently define the objectives. Resources, both public and private, are limited and public support is essential. In implementing this program it is the intent of the Permittees to proceed in a measured, deliberate way designed to obtain the maximum benefit for the resources expended and to secure maximum public awareness, understanding and support.

The Permittees are aware that a successful stormwater quality management program depends on the awareness, commitment, cooperation and support of the various segments of the public, including businesses, industry, development, utilities, environmental groups, institutions, homeowners and the general public. Accordingly, it is a continuing objective of the plan to

assure an open planning process, with ample opportunity for public participation and meaningful consideration of the input obtained. Accomplishment of this objective will be furthered by the management structure provided herein and by public meetings, hearings, workshop, and web postings as part of the planning and decision making process.
The DAMP is the principal policy, guidance and reporting document for the Orange County NPDES Stormwater Program that is implemented within each Permittee's jurisdiction as documented within its LIP.

The DAMP describes the programs that will serve to:

1. Provide the framework for the program management activities (*Section 2.0, Program Management*).

2. Establish a plan for continuous program improvement and a Watershed Management context for the program (*Section 3.0, Plan Development*);

3. Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment (*Section 4.0, Legal Authority*);

4. Improve existing municipal pollution prevention and removal BMPs to further reduce the amount of pollutants entering the storm drain system. *(Section 5.0, Municipal Activities*);

5. Educate the public about the issue of urban stormwater and non-stormwater pollution and obtain their support in implementing pollution prevention BMPs (*Section 6.0, Public Education);*

6. Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control and Treatment Control BMPs to address specific water quality issues. (*Section 7.0, New Development/Significant Redevelopment*);

7. Ensure that construction sites implement control practices that address control of construction related pollutants discharges including erosion and sediment control and on-site hazardous materials and waste management (*Section 8.0, Construction*);

8. Ensure that existing development will address discharges from industrial facilities, selected commercial businesses, residential development and common interest areas/homeowner associations. (*Section 9.0, Existing Development*);

9. Detect and eliminate illegal discharges/illicit connections to the municipal storm drain system (*Section 10.0, ID/IC*);

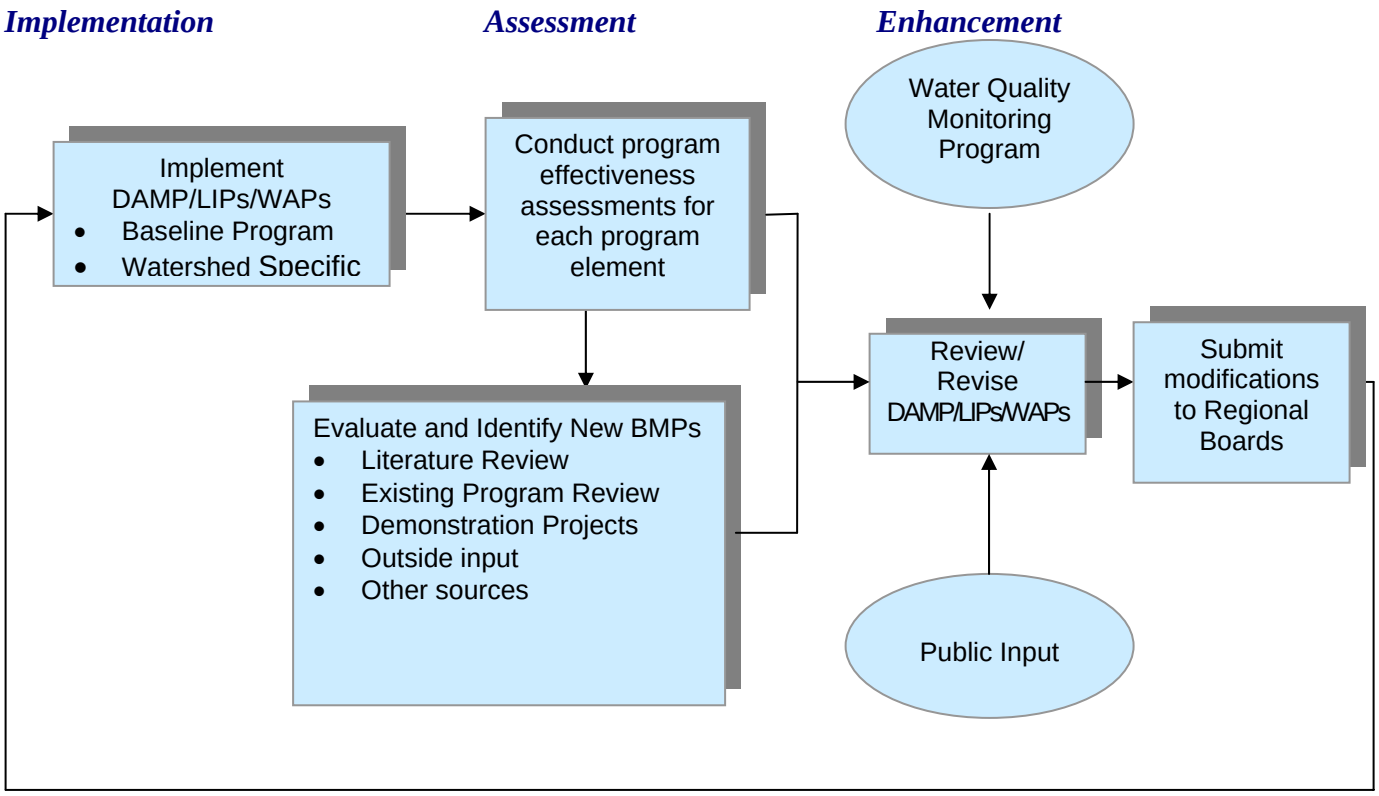
10. Conduct a stormwater monitoring program to identify impacted receiving waters to assist in the prioritization of watersheds for analysis and planning, and to assist in the prioritization of pollutants to facilitate the development of specific controls to address these problems (*Section 11.0, Water Quality Monitoring*); and

The emphasis of the program will continue to provide for equitable consideration of all DAMP objectives. This consideration involves the use of a strategic framework of water quality planning and BMP investigation and is a systematic and iterative process of:

1. Implementing additional BMPs and revising current BMPs based upon site specific water quality problems, technical, institutional and economic feasibility, and the protection of beneficial uses of the receiving waters;
2. Monitoring to ensure that the BMPs are correctly applied and to determine BMP effectiveness in achieving water quality standards; and
3. Adjustment of BMPs if water quality standards are not being achieved or possible adjustment of water quality standards if they are not appropriate.

This approach is consistent with the intent of the Permittees to reduce the discharge of pollutants from municipal storm drains to the MEP and to commit to the 2007 DAMP as an ongoing step in a comprehensive planning process rather than its culmination (**Figure 1-1**).

Figure 1-1
Stormwater Program Iterative Process



1.4 Structure of DAMP

As noted above, the 2003 DAMP was redesigned to provide a series of model programs, local implementation plans, and watershed action plans rather than a single document as in the past. The 2003 DAMP was developed through a process that involved public and private sector input and public review through the California Environmental Quality Act (CEQA) process.

In 2006, the Permittees again undertook an update of the DAMP in response to anticipated requirements of fourth term permits that are expected to be issued by the two Regional Boards in early 2007.

The proposed 2007 DAMP includes the following program components:

- DAMP Model Programs
- Appendix A – Local Implementation Plans
- Appendix B – Training and Outreach Programs
- Appendix C – Program Effectiveness Assessments
- Appendix D – Watershed Action Plans
- Appendix E – Technical Reports

The following **Figure 1-2** shows this organizational layout:

Figure 1-2
Drainage Area Management Plan Structure

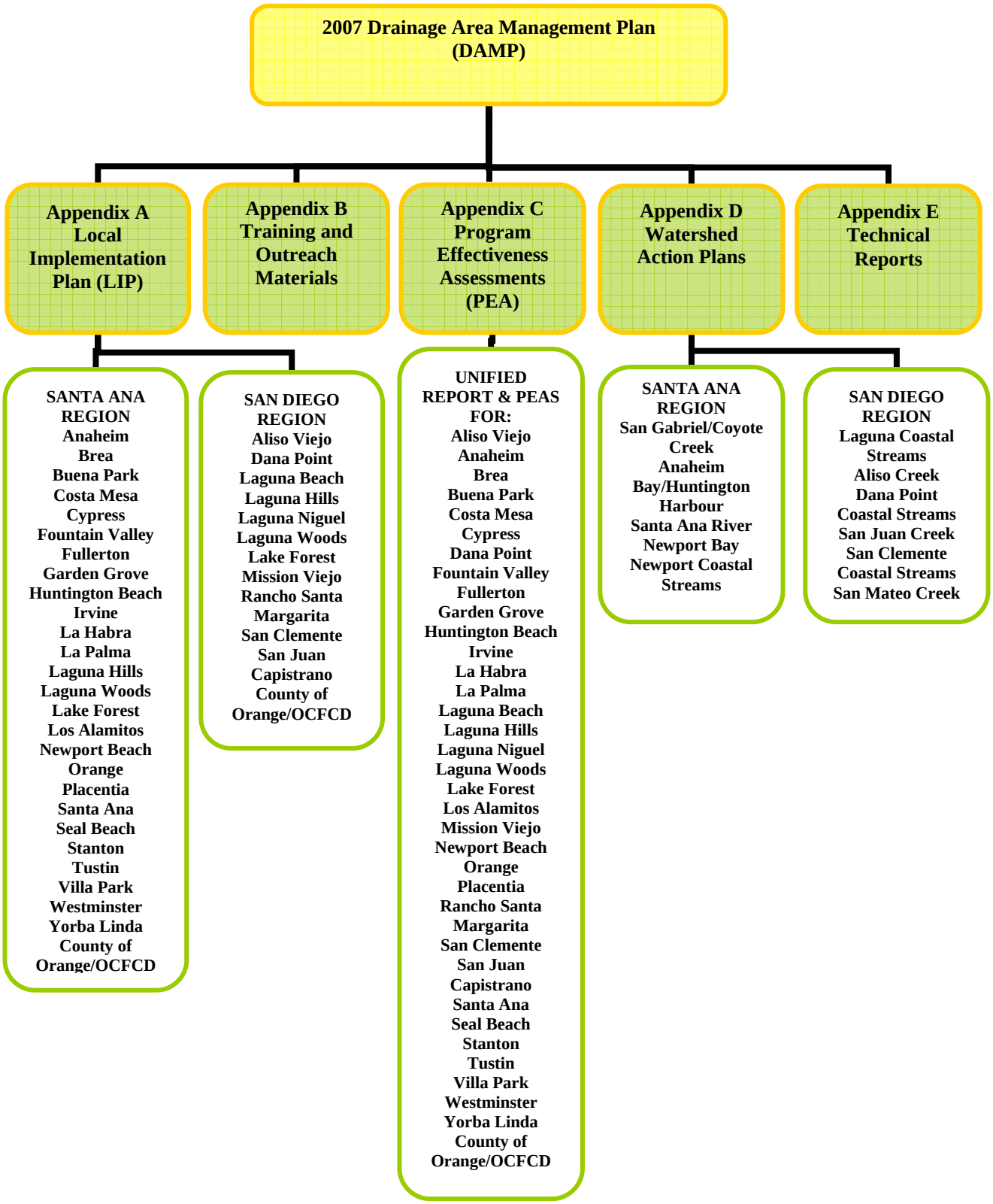


Exhibit 2

Orange County Stormwater Program: Program Management

2.0 PROGRAM MANAGEMENT

2.1 Introduction

The major management activities for the Orange County NPDES Stormwater Program include:

- Providing administrative and technical support for the Permittees and the committees within the management structure;
- Developing and executing inter-governmental agreements necessary for program implementation;
- Planning and implementation needed to direct and implement the program;
- Developing BMPs;
- Developing reports and other materials required by the Fourth Term Permits;
- Developing budgets and fiscal analyses;
- Reviewing and developing policy positions and representing the NDPES Stormwater Program before appropriate agencies; and
- Program coordination with all affected local government agencies.

In order to more effectively carry out the requirements of the NPDES Stormwater Program, the Permittees in both Regional Board areas agreed during the First Term Permit period that the County of Orange would be the Principal Permittee and the Orange County Flood Control District and the incorporated cities would be Permittees on the permit.

The designation of the County of Orange as the Principal Permittee has provided for cost effective management of the overall stormwater program by combining resources to complete those activities which benefit all of the Permittees. During the Fourth Term Permit period, the County of Orange will continue as the Principal Permittee and conduct those tasks identified as being the responsibility of the Principal Permittee within the permits.

A more detailed discussion of these management tasks is provided below.

2.2 Major Management Activities

2.2.1 Management Framework

The management framework consists of four major levels of program overview and guidance to the Permittees who are ultimately responsible for program funding approval and permit compliance. As in the past, the Principal Permittee continues to provide administrative support for the various committees which includes maintenance of mailing lists, reserving meeting venues, preparing agendas, notifying participants and providing meeting summaries.

The Principal Permittee has a Stormwater Section that coordinates the countywide compliance activities and submittals to the Regional Boards under direction of the Permittees.

In addition there are a number of working groups - committees, sub-committees, ad hoc working groups, and task forces - that provide input and guidance to address various program implementation issues **(see Figure 2-1)**. These are further described below.

Committees

The following committees formed from the NPDES permittees and their roles are as follows:

City Manager's Water Quality Committee

The City Manager's Water Quality Committee meets annually and provides budget and overall program review and governance direction. The Committee is comprised of several City Managers and is attended by County staff.

City Engineer's Technical Advisory Committee (TAC)

The TAC serves in a program advisory role and provides policy direction on program development and program budget and implementation. The TAC is comprised of one City Engineer, or selected representative, from each of the County Supervisorial Districts and a representative from the County of Orange. It meets 4-6 times annually.

City Planner's Planning Advisory Committee (PAC)

The PAC is currently being developed and will serve in a program advisory role and provide policy direction on program development pertaining to land use planning. The PAC will be similar to the TAC in form and function.

General Permittee Committee

The General Permittee Committee is the principal forum for disseminating information for program coordinators. The Committee meets monthly (except November). The Committee periodically evaluates the need for creating standing sub-committees and ad hoc committees as needed in order to accomplish the objectives of the Orange County NPDES Stormwater Program.

Sub-Committees and Ad-hoc Working Groups

Sub-Committees and ad-hoc working groups provide for the continued development of the program in a specified area of program responsibility and oversight. The groups currently active include the following:

- LIP/PEA Sub-Committee

  Purpose: To provide oversight and technical direction to the management of core DAMP/Local Implementation Plan (LIP) programs (Bi-monthly meeting schedule).

- Public Education Sub-Committee

  Purpose: To provide regional consistency and oversight for the stormwater public education program efforts (Monthly meeting schedule). The sub-committee directs development and dissemination of all education and outreach materials.

- Inspection Sub-Committee

Purpose: To provide a forum for the coordination, investigation, enforcement and training aspects of the existing development inspection program and Illegal Discharges/Illicit Connections (ID/IC) programs (Bi-monthly meeting schedule). Recent products include the Investigative Guidance Manual and self-audit checklist

- Water Quality Sub-Committee

  Purpose: To provide oversight and technical input for the revision of the water quality monitoring programs, ongoing water quality data evaluation, and special water quality investigations and BMP effectiveness studies (Quarterly meeting schedule).

- Ad-Hoc Group – Wastewater Disposal

  Purpose: To develop a list of BMPs for the disposal of washwater/wastewater generated by mobile businesses. The Group was convened specifically to address wastewater disposal issues and worked cooperatively with the sewering agencies to produce best practice guidance (BMP Fact Sheet IC24).

- Ad-Hoc Group – BMPs for Small Public Works Projects

  Purpose: To develop a list of recommended BMPs for small public works projects such as roadway turn pockets.

- Ad-Hoc Group – Orange County Vector Control District Coordination

  Purpose: To promulgate vector education and principals of vector minimization for treatment control BMPs as well as develop and grow a mutually beneficial working relationship to leverage resources and stormwater BMP monitoring efforts.

- Watershed Action Plan Sub-Committees

  Six Watershed Action Committees (Laguna Coastal streams, Aliso Creek, Dana Point Coastal Streams, San Juan Creek, San Clemente Coastal Streams, and San Mateo Creek) were established and have met bi-annually since their inception.

Task Forces

Periodically task forces are formed to address specific issues relevant to the Permittees and community. These tasks forces are characterized by external participation. The following task forces are currently in existence:

- Trash and Debris Task Force

  Purpose: To foster and sustain partnership approaches to dealing with trash and debris in stormwater and urban runoff with the goal of ensuring that such materials do not become the basis for a formal designation of coastal beneficial use impairment (quarterly meeting schedule). Recent products include a strategic assessment of Orange County's trash and debris control efforts.

- Legal/Regulatory Authority Task Force

  Purpose: To review the legal authorities that the Permittees have in complying with the permit requirements and recommend changes as needed and to track stormwater related litigation that may affect the Orange County Stormwater Program (quarterly meeting schedule).

- Water Use Efficiency Task Force

  Purpose: To study and support a comprehensive effort to curb urban runoff through efficient water usage in Orange County (Quarterly meeting schedule).

2.2.2 Agreement for Program Implementation

The agreement underpinning County and city cooperation is the NPDES Stormwater Permit Implementation Agreement (subsequently referred to as the Implementation Agreement) which establishes the responsibilities of the Permittees with respect to compliance with the Third Term Permits issued by the Regional Boards. The Implementation Agreement also establishes a funding mechanism for the shared costs of the Orange County NPDES Stormwater Program based on each municipality's area and resident population and includes a provision that allows newly incorporated cities to become additional parties to the Implementation Agreement.

The Implementation Agreement, originally entered into in December of 1990, was amended in October of 1993 to include two additional Permittees (Laguna Hills and Lake Forest) and formally established the TAC. The Implementation Agreement was amended again, effective June 25, 2002, to include three additional Permittees (Aliso Viejo, Laguna Woods and Rancho Santa Margarita) and to incorporate modifications to the management structure and cost-sharing formulas.

2.2.3 NPDES Permit Responsibilities

The responsibilities of the Principal Permittee and Permittees are defined within the Implementation Agreement, the Third Term Permits, or as otherwise identified within separate funding agreements.

Principal Permittee

The role of the Principal Permittee is the same as the other Permittees with the addition of certain overall programmatic and management responsibilities. However, the Principal Permittee has no regulatory authority over the Permittees. The primary responsibilities are:

- Initiating, developing and coordinating any area-wide programs and activities necessary to comply with the Third Term Permits;
- Developing and implementing mechanisms, performance standards, etc., to promote uniform and consistent implementation of BMPs among the Permittees;
- Monitoring the implementation of the plans and programs required by the Permit and determining their effectiveness in protecting beneficial uses;

- Providing administrative and technical support and informing the Permittees and the TAC of the progress of other pertinent municipal programs, pilot projects, research studies, etc.;
- Representing the Orange County NDPES Stormwater Program before appropriate agencies;
- Developing and executing inter-governmental agreements necessary for program implementation;
- Conducting chemical and biological water quality monitoring;
- Cooperating in watershed management programs and regional and/or statewide monitoring;
- Developing standardized formats for all reports;
- Preparing and submitting unified reports, plans and programs as required by the Fourth Term Permits including the unified Annual Progress Report, Program Effectiveness Assessment;
- Developing budgets and unified fiscal analyses and reports; and
- Coordinating the program with affected local government agencies.

Permittees

Each Permittee is responsible for implementing the NPDES Stormwater Program within its jurisdiction. The main responsibilities of each Permittee include:

- Reviewing, approving and commenting on budgets, plans, strategies, management programs and monitoring programs developed by the Principal Permittee or any sub-committee;
- Implementing the various stormwater management programs as outlined in the Third Term Permits and 2006 DAMP, including LIP and watershed chapters, within its jurisdiction;
- Establishing and maintaining adequate legal authority;
- Coordinating among internal departments and agencies, as appropriate, to facilitate the implementation of the Permit and the DAMP/LIP;
- Responding to/or arranging for response to emergency situations, such as accidental spills, leaks, illegal discharges/illicit connections, etc., to prevent or reduce the discharge of pollutants to the municipal storm drain systems and waters of the U.S. within its jurisdiction;
- Conducting inspections of and performing maintenance on the infrastructure within its jurisdiction;
- Taking appropriate enforcement actions as necessary within its jurisdiction to ensure compliance with applicable ordinances;

- Conducting and coordinating any surveys and source identification studies necessary to identify pollutant sources and drainage areas;
- Participating in the General Permittee Committee meetings and any sub-committee meetings as necessary; and
- Preparing and submitting all reports or requests of information to the Principal Permittee in a timely fashion.

2.2.4 NPDES Permit Reporting Requirements

The Fourth Term Permits will require the preparation of an Annual Progress Report for submittal to the Regional Boards and United States Environmental Protection Agency (USEPA) Region IX no later than November 15 of each year (it should be noted that the San Diego Regional Board administratively approved a Permittee request to modify the Annual Progress Report due date in the Third Term Permit from November 9 to November 15).

The Annual Progress Report is now an integral component of the Program Effectiveness Assessment in **DAMP Appendix C** and includes:

- Jurisdictional assessments completed individually by each Permittee
- Watershed assessments based on the watershed chapters with reporting commencing with the 2003-04 Annual Progress Report.
- Countywide assessment through a Unified Annual Progress Report

In addition to the Annual Progress Reports, the required submittals may also include any other requirements specified by the Regional Boards pursuant to permit conditions, California Water Code Section 13225 and 13267, or other regulatory provisions.

2.2.5 Fiscal Analysis

The Principal Permittee is responsible for preparing draft annual budgets for shared program costs, to be approved by the Permittees. In addition, the Principal Permittee is responsible for tracking shared program cost expenditures and preparing financial reports that are distributed to the Permittees.

The total cost to each Permittee for the area-wide stormwater program is the sum of shared costs plus individual costs.

Total Cost to Permittee = Shared Costs + Individual Costs

Shared Costs

Shared costs are those that fund activities performed by the Principal Permittee, under the stormwater program's Implementation Agreement. Each municipality's contribution to the shared costs is determined by a formula established in the Implementation Agreement, based on the population and land area of each jurisdiction.

The program management activities handled by the Principal Permittee include development of model compliance program, elements, development and execution of intergovernmental

agreements, representation of the Permittees at meetings with other organizations, preparation of compliance reports, budgets and other program documentation, representation of the program before appropriate agencies such as the Regional Boards and the State Water Resources Control Board, procurement and subsequent coordination of consultant studies and coordination with Permittees representatives.

Individual Costs

Individual costs are those incurred by each Permittee through implementation of its LIP. These BMPs include a wide range of activities, such as street sweeping, litter control and emergency spill response, facility inspection; drain inlet/catch basin stenciling and dissemination of public education materials.

The individual costs are comprised of capital and operation and maintenance costs:

- Capital Costs – refers to expenditures for land, large equipment, and structures;
- Operation and Maintenance Costs - refer to normal costs of operation including the cost of keeping equipment and facilities in working order.

The sum of the capital and operation and maintenance costs is the total cost that each Permittee has incurred individually to meet the requirements of the Third Term Permits through the implementation of its LIP.

2.2.6 Program Representation

The Principal Permittee represents the Permittees on the California Stormwater Quality Association, the Stormwater Research Program of the Water Environment Research Foundation, and other stormwater forums. Information on the activities of these organizations is provided to the Permittees on a regular basis.

2.2.7 Coordination with Other Agencies

Successful implementation of the Orange County NPDES Stormwater Program requires cooperation and coordination with other public agencies or organizations within and adjacent to Orange County that have programs or activities that have an impact on stormwater.

Southern California Counties

During the Third Term Permit period, significant examples of such an approach were a greater level of participation in regional monitoring and research programs coordinated by SCCWRP, and the joint participation with Riverside and San Bernardino Counties in the Santa Ana Stormwater Quality Standards Study being undertaken through SAWPA These examples represented a collective opportunity for the County to cooperatively participate in an integrated watershed monitoring program and development of appropriate stormwater quality standards and cost-effective means of achieving water quality goals and meet a common permit objective.

This coordination on monitoring has further developed into a region-wide monitoring and research cooperative program with the neighboring counties, SCCWRP and the three Regional Boards. This coordination has resulted in several ongoing and planned cooperative projects.

California Department of Transportation (Caltrans)

The Principal Permittee has actively coordinated with Caltrans through respective attendance at NPDES meetings. This joint participation has allowed for the sharing of information and resources and has provided for a greater understanding of the respective programs and challenges.

Phase II Agencies

The Permittees anticipate that there may be additional opportunities for cooperative efforts with other stormwater dischargers that may be permitted separately under Phase II of the federal stormwater regulations. These dischargers include federal and state lands, including, but not limited to military bases, national forest, hospitals, colleges and universities; and highways; utilities and special districts; and Native American tribal lands.

Orange County Agencies

Coordination with other county agencies has and continues to occur on many levels. The following are some examples:

- Coordination on common public education messages. For example, joint public education flyers have been coordinated with Orange County Sanitation District for sewer spills and food facilities and with Orange County Integrated Waste Management on a brochure for household hazardous waste.
- Coordination on public outreach events. For example, municipal agencies participate together at the Orange County Fair and the Children's Water Festival.
- Coordination on school outreach programs. For example, after school programs have been developed in conjunction with the Department of Education to provide stormwater education materials.
- Coordination on preventing sanitary sewer overflows. For example, the Tustin Area Spill Control demonstration project has been coordinated with the Orange County Sanitation District.

Figure 2-1: Orange County Municipal NPDES Management Framework

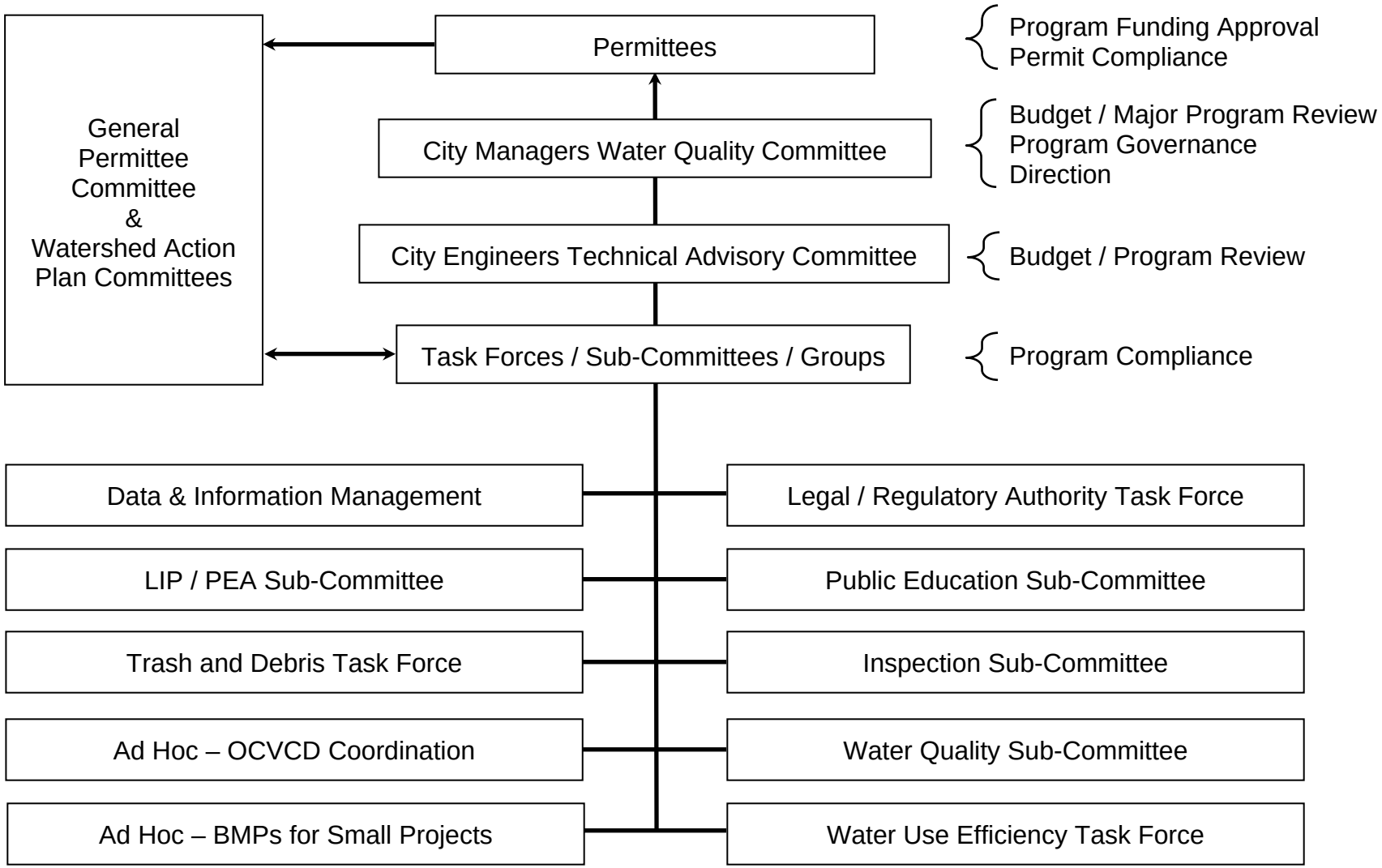


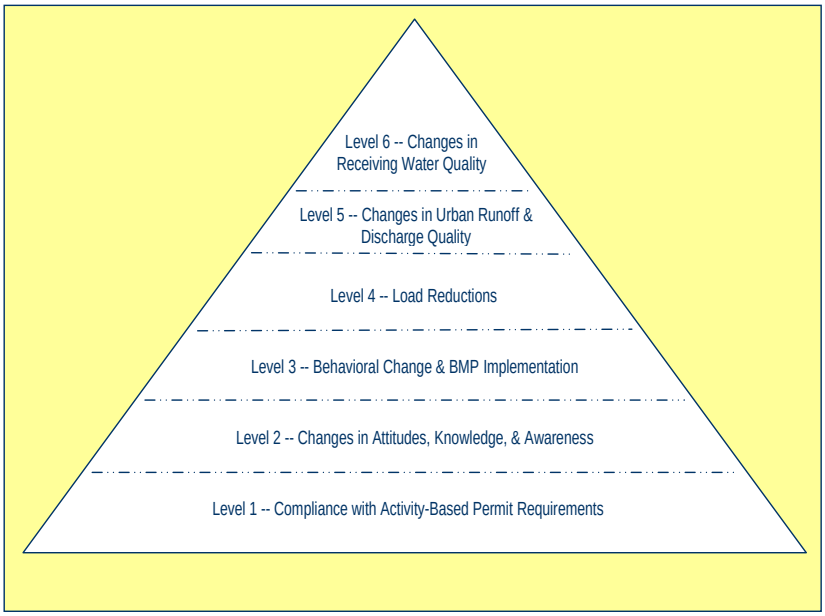
Exhibit 3

Orange County Stormwater Program:
Performance Effectiveness
Assessment

Exhibit 3

PROGRAM EFFECTIVENESS ASSESSMENTS

An activity, program element, or overall program is effective if it is producing a desired outcome. The figure below, *General Classification of Outcome Types*, shows that outcomes can be construed in terms of six levels and illustrates the progression of each successive level toward the ultimate goal of environmental improvement. In general, Levels 1 to 3 can be considered *Implementation Outcomes*, Levels 5 and 6 *Water Quality Outcomes* and Level 4 a combination of the two. Each level has value in informing the management process. However, it bears emphasis that not all are necessary or possible in every instance (CASQA, 2005).[1]



General Classification of Outcome Types

Assessment measures may be variously categorized related to (1) the shorter term confirmation of BMP implementation (Implementation or Process Measures, also termed Programmatic Indicators), corresponding to Levels 1-3, and (2) the longer term verification of environmental improvement (Validation or Results Measures, typically actual indicators of environmental change). In essence, the categorization of measures reflects two basic assessment questions:

- Are program elements being implemented correctly?
- Are environmental improvements being realized?

Effectiveness assessment requires the establishment of a set of baseline conditions. Thereafter effectiveness can be determined by comparisons of successive years of indicator information against the baseline data. Where the period of evaluation is characterized by the implementation of new program requirements, determinations of program effectiveness will be limited to confirmation of program implementation. Indeed, it must be recognized that evidence of positive environmental outcomes can be elusive because:

- Water quality changes in response to program implementation are likely to be very slow; and
- Establishing a link between receiving water condition and program activities is difficult at the watershed scale when programs are being implemented incrementally.

[1] California Stormwater Quality Association (CASQA). 2005. "An Introduction to Stormwater Program Effectiveness Assessment." Available at: http://www.scvurppp-w2k.com/pdfs/0405/CASQA%20White%20Paper_An%20Introduction%20to%20Stormwater%20Program%20Effectiveness%20Assessment4.pdf.

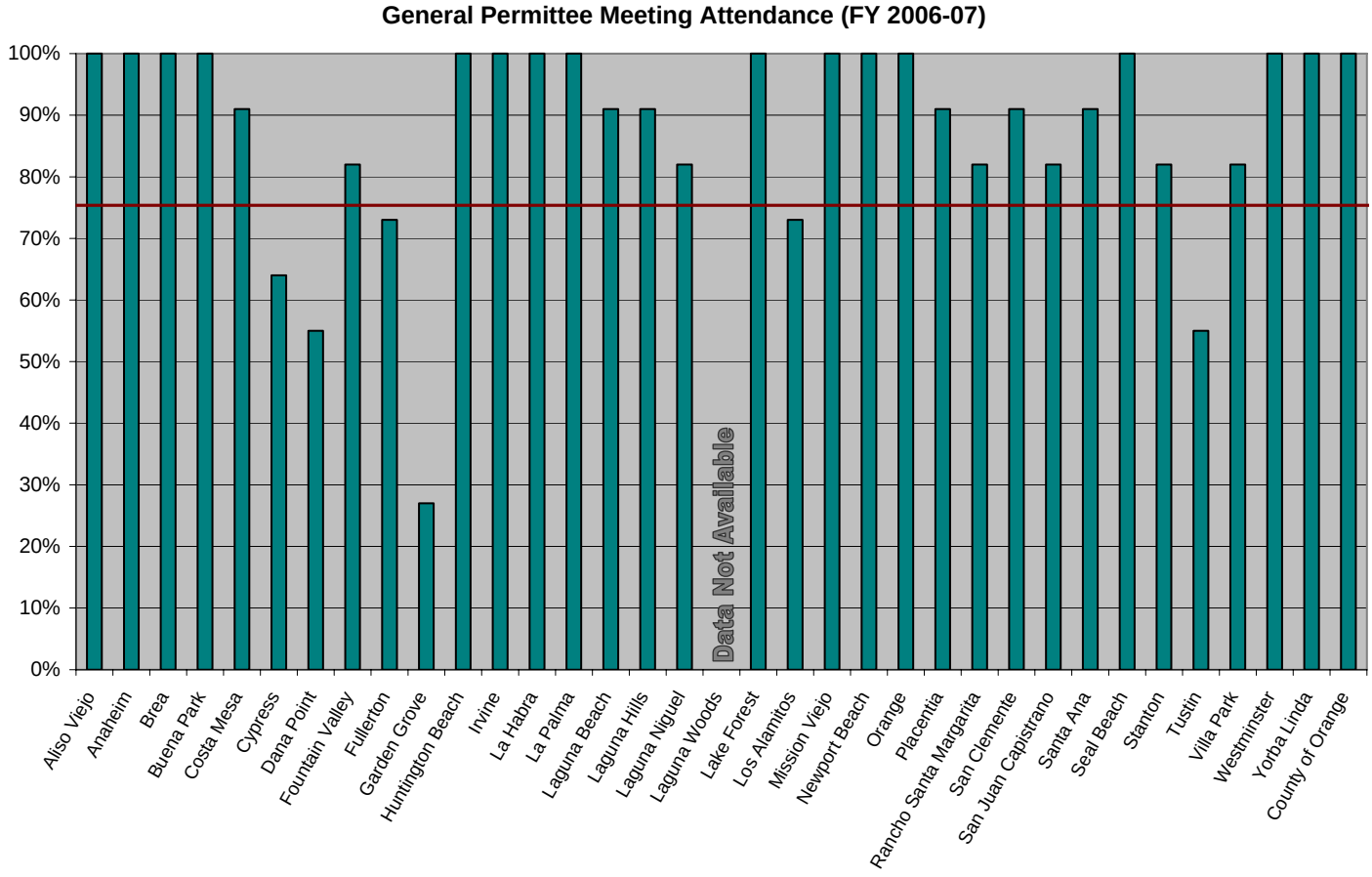
Exhibit 3

While program effectiveness assessment is a key step in the iterative process of program implementation, it should be realized that effectiveness assessment tools are still evolving. Assessing program effectiveness is recognized as a challenge for program managers across California, and the Orange County Stormwater Program is supporting the effort of the California Stormwater Quality Association (CASQA) to develop guidance in this area at a statewide level.

The tables and figures presented below are a summary of the Orange County Stormwater Program Effectiveness Assessment throughout the Third Term Permit.

Exhibit 3

Program Management – Management Framework/General Permittee Committee



Program Effectiveness Assessment: In 2006-07, twenty nine (29) out of thirty five (35) Permittees reported 80% or higher participation in the General Permittee Committee compared to thirty-three (33) Permittees in 2005-06, thirty four (34) Permittees in 2004-05, and thirty two (32) Permittees reporting 80% or higher participation in 2003-04.

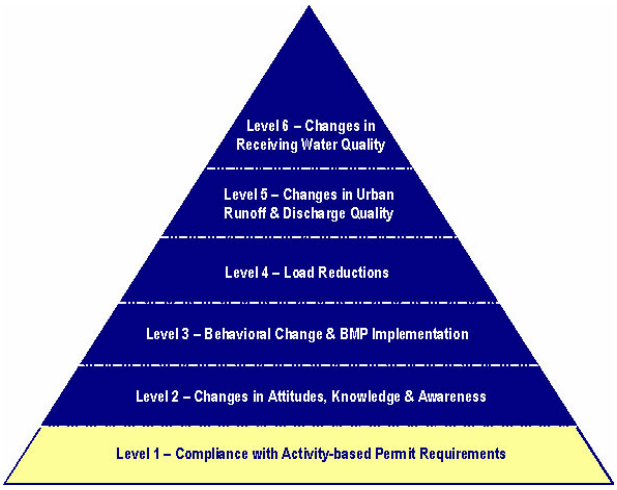
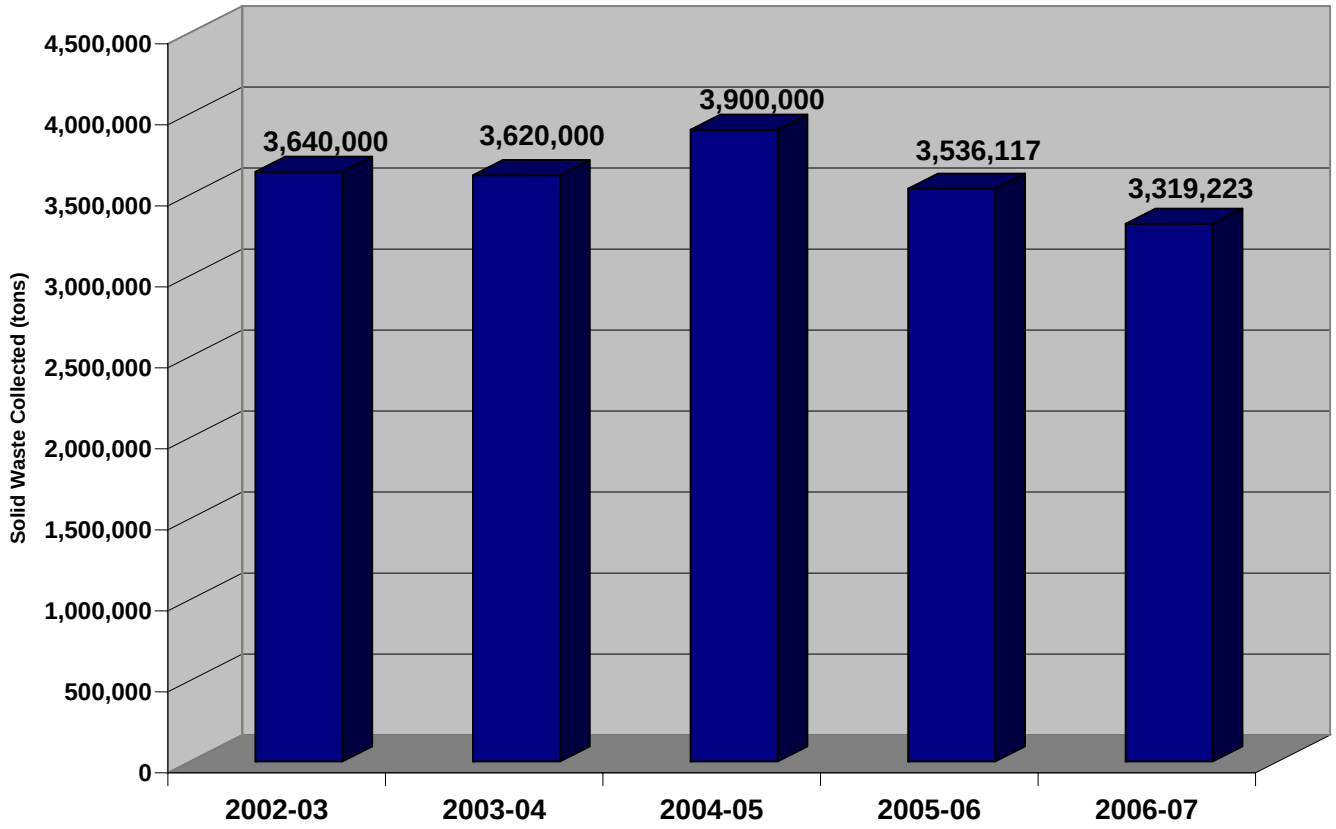
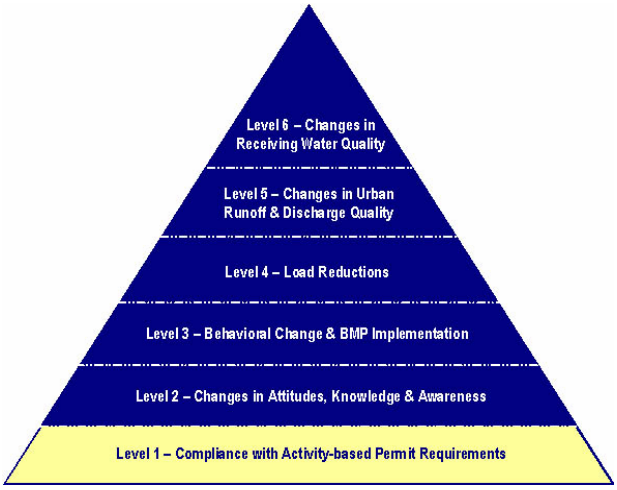


Exhibit 3

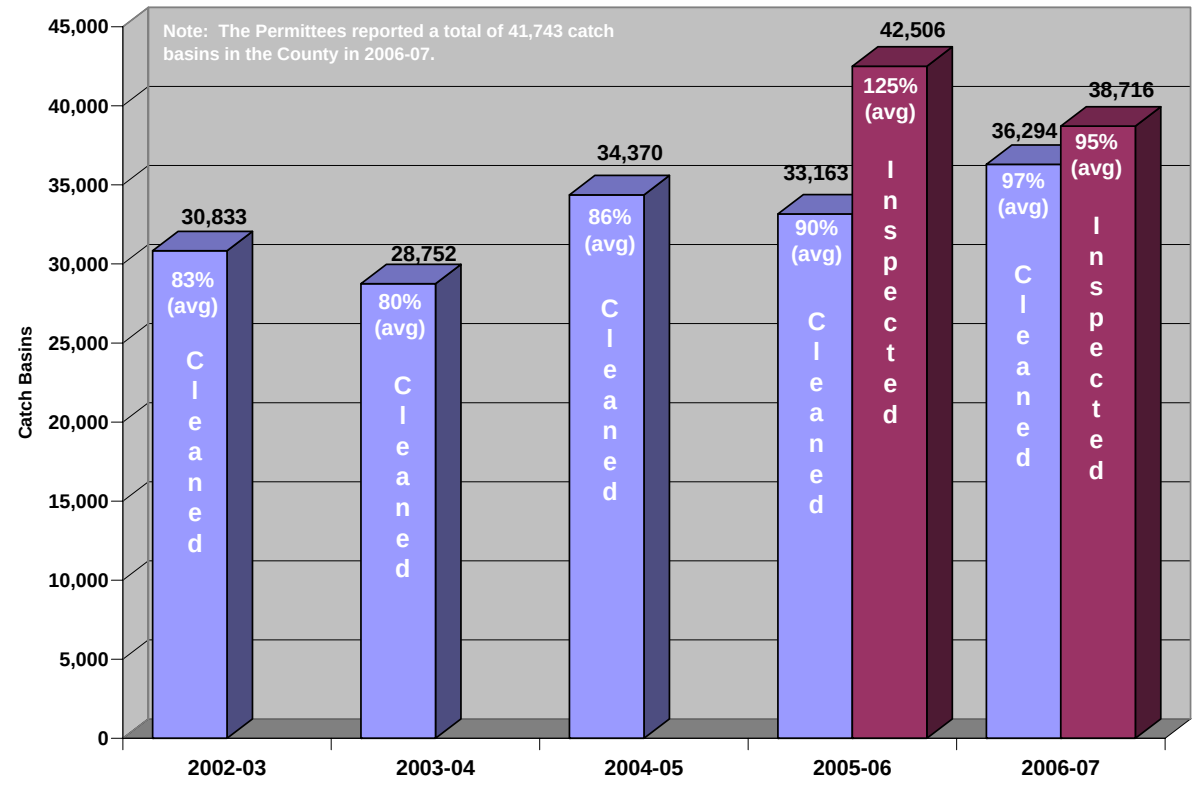
Municipal Activities –- Solid Waste Collected

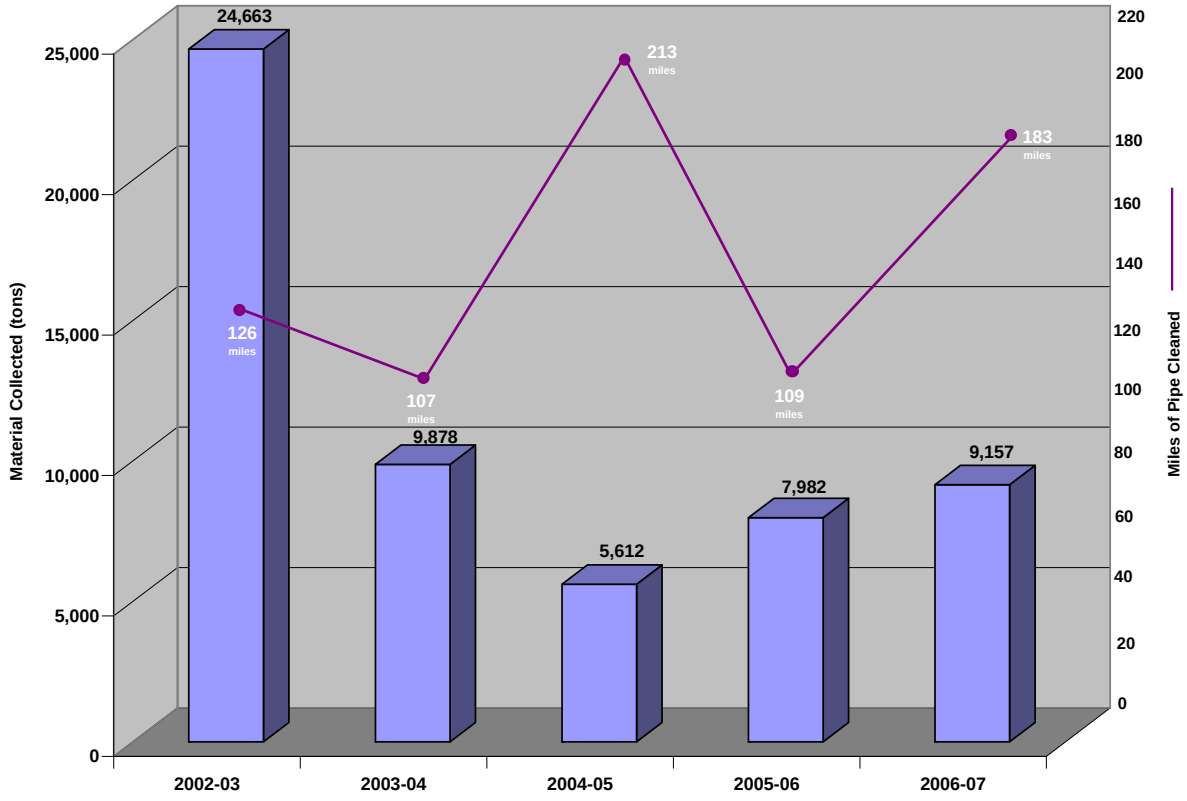


Program Effectiveness Assessment: For 2006-07, the Permittees reported the collection of 3.32 million tons of solid waste. This effort compares to a reported collection of 3.5 million tons of solid waste in 2005-06, 4.0 million tons of solid waste in 2004-05, 3.62 million tons of solid waste (reported 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. While the Permittees encourage the public, through education and outreach, to properly dispose of their trash, the total amount of solid waste being collected appears to have been relatively constant over the period of the Third Term Permits.



Municipal Activities –- Drainage Facility Maintenance

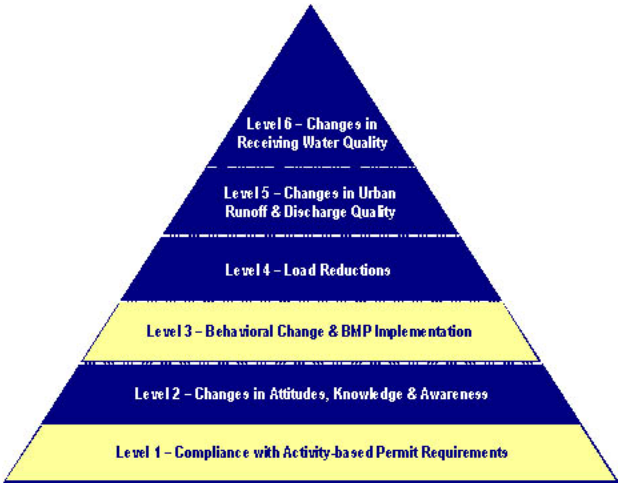




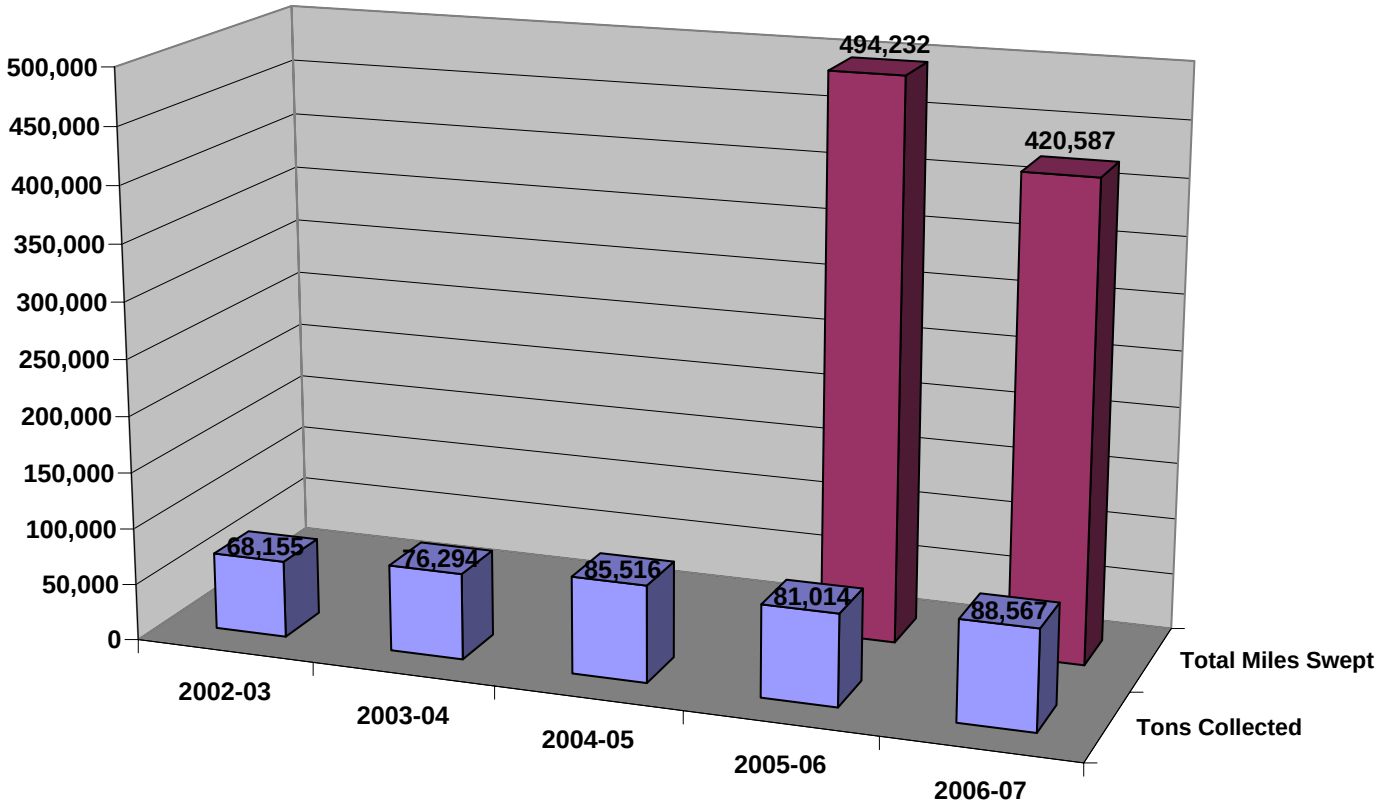
Municipal Activities –- Drainage Facility Maintenance

Program Effectiveness Assessment: The Permittees inspect the drainage system within their jurisdictions annually 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 – in accordance with established maintenance procedures (Model Maintenance Procedure DF-1). By removing this material from the catch basin inlets and storm drain system, the Permittees make a significant contribution in preventing the passage of these materials in downstream receiving waters. Twenty three (23) Permittees reported inspecting (and cleaning if necessary) 100% or more of their catch basin inlet inventories.

36,294 catch basins were cleaned during 2006-07 compared to 33,163 for 2005-06. Also in 2006-07, 9,157 tons of debris was reported removed from drainage facilities compared to 7,892 tons in 2005-06 and 5,612 in 2004-05. While the reported activity in 2006-07 represents a third year of further increase, the influence of environmental factors such as Santa Ana winds and the severity of the wet season cannot be discounted.

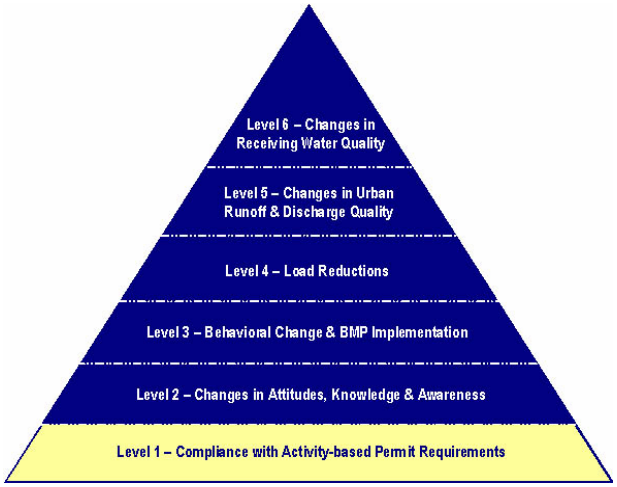


Municipal Activities –- Street Sweeping

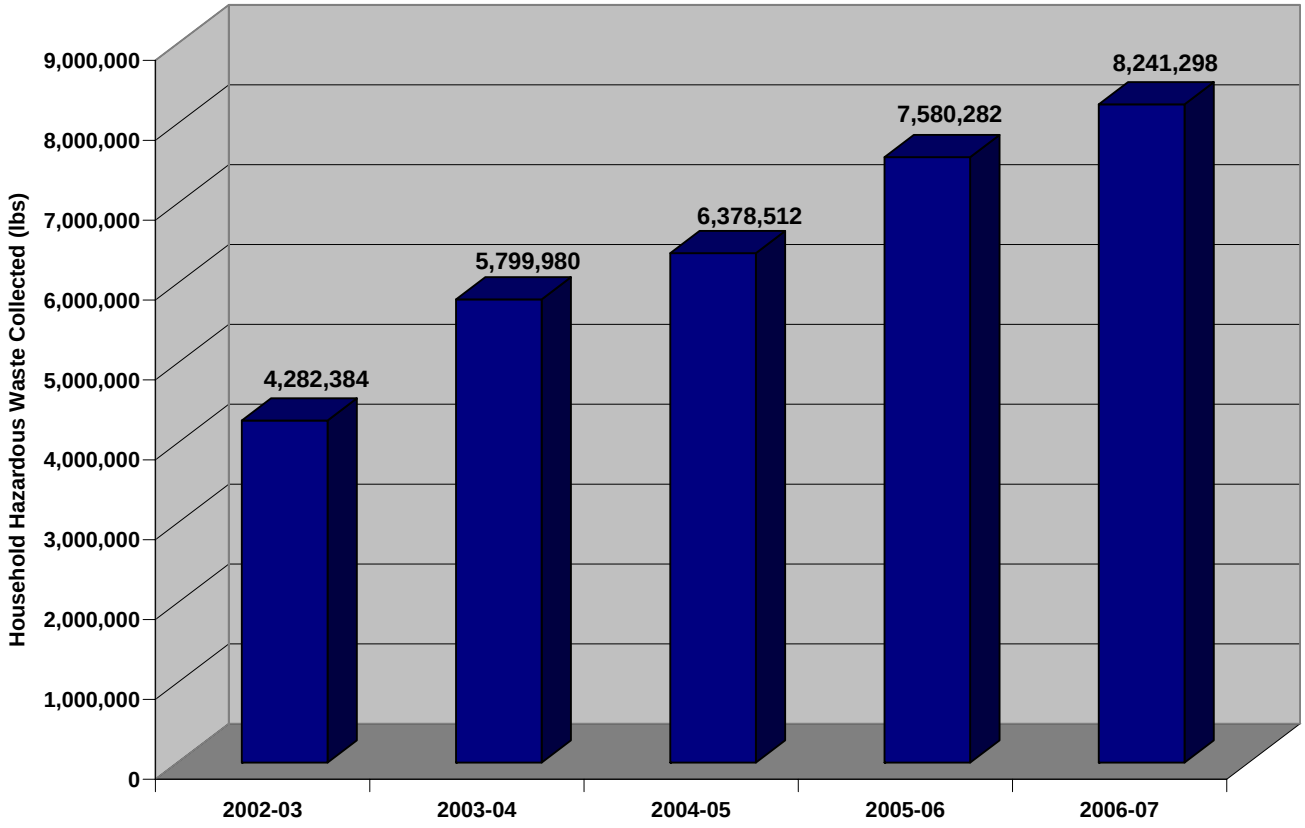


Program Effectiveness Assessment: All Permittees maintain street sweeping programs in residential, commercial and/or industrial areas. In 1993 the Permittees compiled information regarding their existing street sweeping schedules and practices and have subsequently changed elements of their programs 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.

88,567 tons of material was removed from the streets and gutters during the 2006-07 reporting period (compared to 85,514 tons in 2005-06 and 85,516 tons in 2004-05). This effort appears to represent a sustained increase in weight of material collected compared to 2003-04 and a marked increase in effort in this area of infrastructure maintenance in the Third Term Permit cycle.

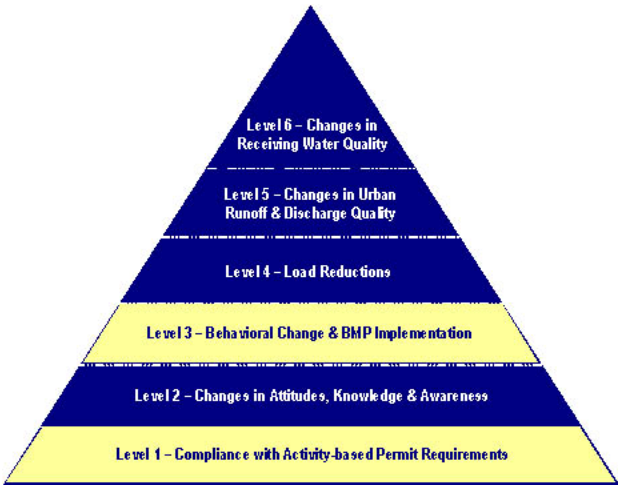


Municipal Activities –- Household Hazardous Waste Collected



Program Effectiveness Assessment: 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 8,241,298 pounds of household hazardous waste were collected in 2006-07. Compared to 7,580,282 pounds in 2005-06, 6,378,512 pounds in 2004-05, and 5,799,980 pounds in 2003-04; 2006-07 represents a 9% increase from 2005-06 and follows increases in total waste materials collected of 18% in 2005-06, 10% in 2004-05 and 35% in 2003-04.



Municipal Activities -- Used Oil Grant

Jurisdiction has or participates in a Used Oil Grant		Jurisdiction does not have or participate in a Used Oil Grant
Aliso Viejo	Lake Forest	Fullerton
Anaheim	Los Alamitos	La Palma
Brea	Mission Viejo	Laguna Niguel
Buena Park	Newport Beach	Seal Beach
Costa Mesa	Orange	Villa Park
Cypress	Placentia	
Dana Point	Rancho Santa Margarita	
Fountain Valley	San Clemente	
Garden Grove	San Juan Capistrano	
Huntington Beach	Santa Ana	
Irvine	Stanton	
La Habra	Tustin	
Laguna Beach	Westminster	
Laguna Hills	Yorba Linda	
Laguna Woods	County of Orange/OCFCD	

Program Effectiveness Assessment: 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.

Thirty (30) Permittees reported having a Used Oil Grant participation program in 2006-07 compared to 30 Permittees in 2005-06, 27 Permittees in 2004-05, 28 Permittees in 2003-04 and 27 Permittees in 2002-03.

A total of 1,121,116 gallons of used oil and 341,062 oil filters were collected in 2006-07 compared to 1,970,141 gallons of used oil and 507,386 used filters in 2005-06, 1,290,177 gallons and 93,451 filters in 2004-05, 378,967 gallons and 60,171 filters in 2003-04 and 526,007 gallons and 13,584 filters in 2002-03.

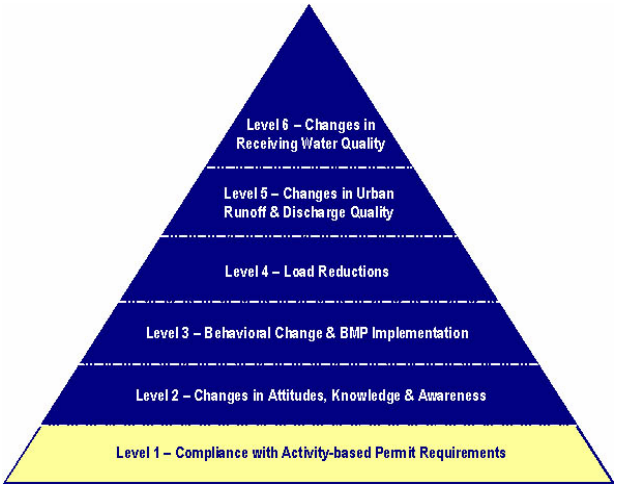
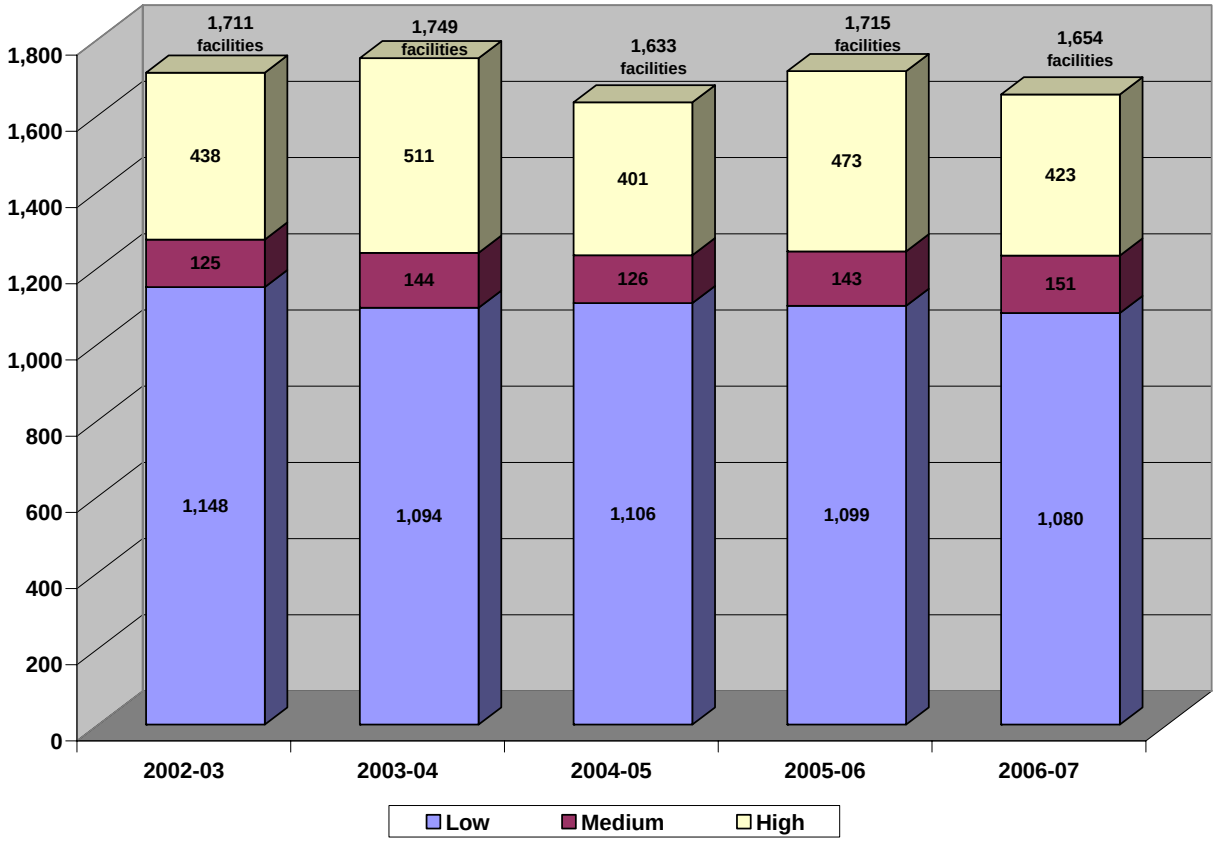
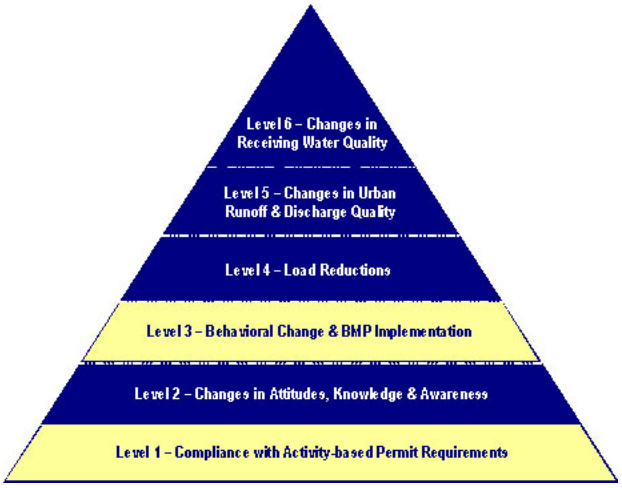


Exhibit 3

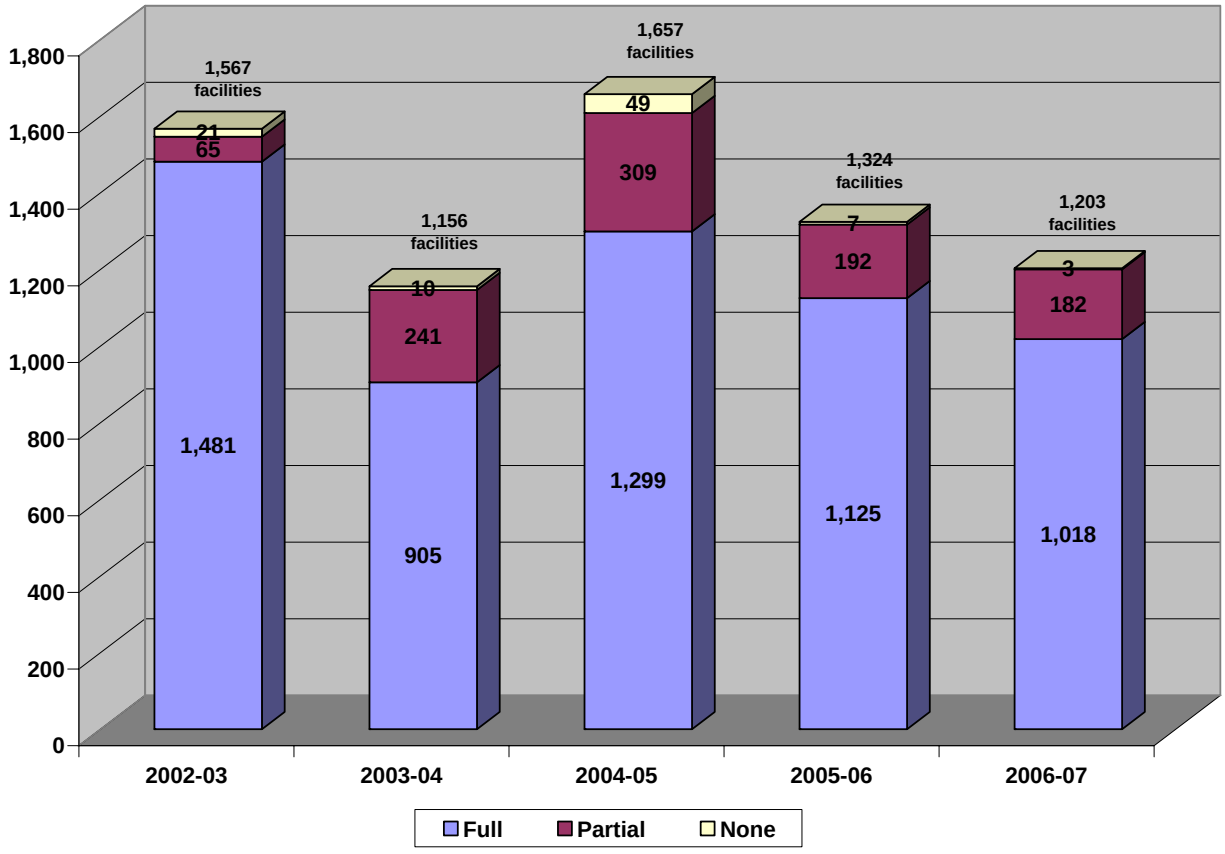
Municipal Activities -- Municipal Facility Inventory/Prioritization



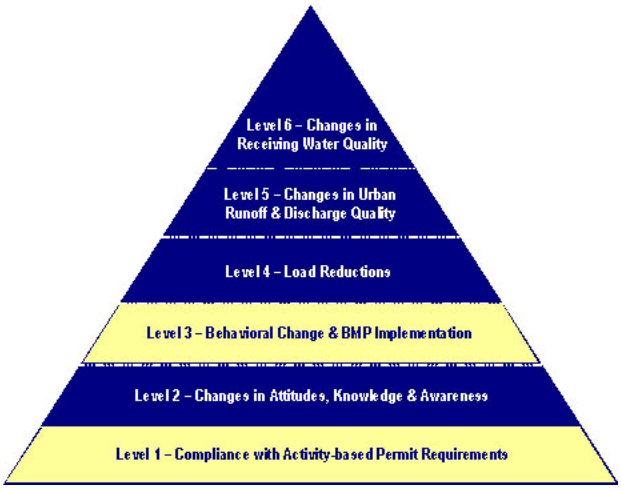
Performance Effectiveness Assessment: For 2006-07 1,654 municipal facilities were prioritized, 25% of which were high priority. In 2005-06 1,715 municipal facilities were prioritized, 27% of which were high priority; for 2004-05, 1,633 facilities were prioritized, 25% of which were ranked as high priority; for 2003-04, 1,749 facilities were prioritized, 29% of which were ranked as high priority; and for 2002-03, 1,711 facilities were prioritized, 26% of which were ranked as high priority.



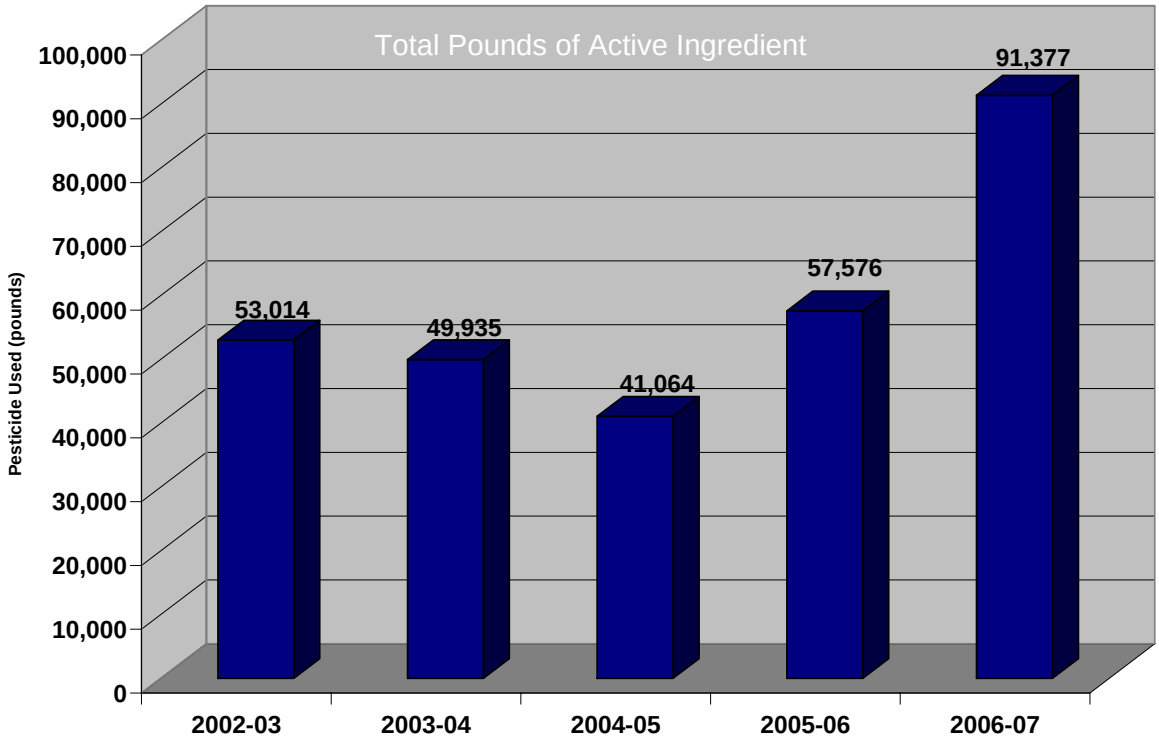
Municipal Activities –- Municipal Facility Inspection & BMP Implementation



Performance Effectiveness Assessment: In 2006-07, a total of 1,203 facilities were inspected, 1,018 of which had full BMP implementation, 182 partial and 3 with no BMP implementation. This compares to 2005-06 with 1,125 sites with full BMP implantation, 192 sites with partially implemented BMPs and 7 sites with no BMP implementation; 2004-05 with 1,299 sites with full BMP implementation, 309 with partial and 49 with no BMP implementation; 2003-04 with 905 sites with full BMP implementation, 241 sites with partial and 10 with no BMP implementation; and for 2002-03, 1481 sites had full BMP implementation, 65 with partial and 21 with no BMP implementation.

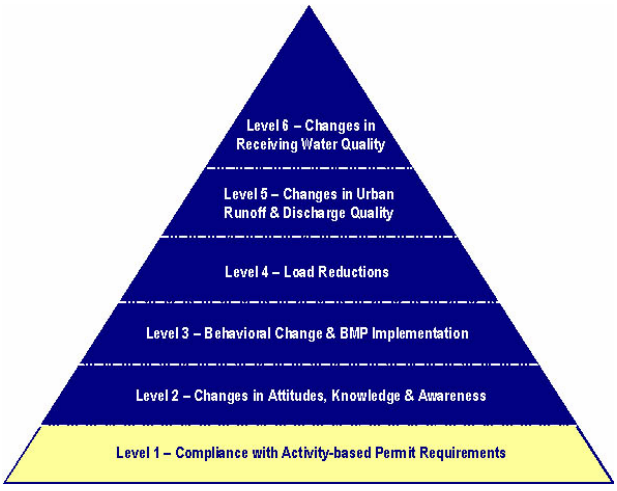


Municipal Activities –- Integrated Pest Management

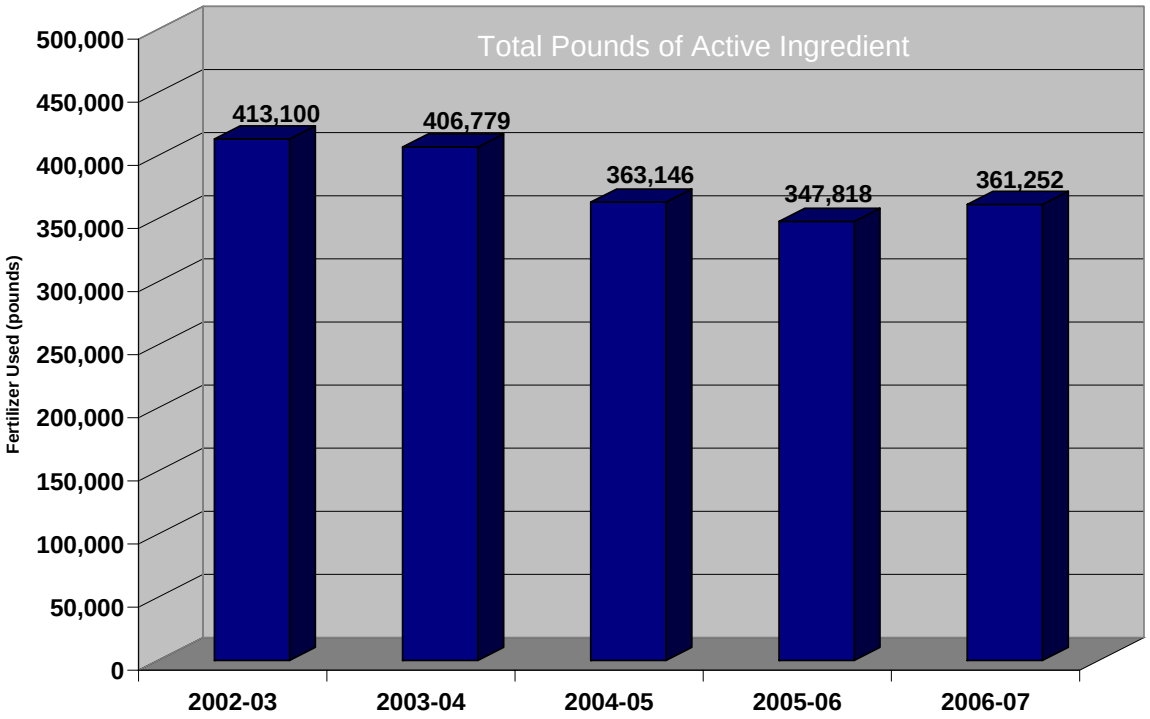


Program Effectiveness Assessment: During 2006-07, the total pounds of pesticide active ingredient rose to 91,377 lbs. The increase is a result of the use of weed management chemicals for significant landscape improvement projects being conducted by several municipalities. For example, approximately 35,000 pounds of active ingredient can be attributed to the use of several thousand gallons of two specific herbicides used by two Permittees.

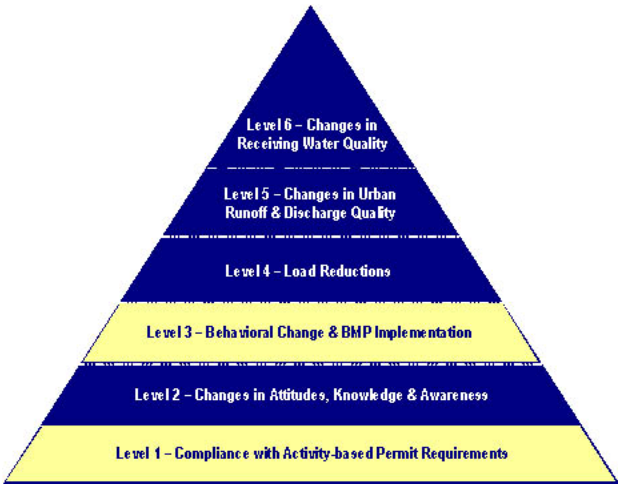
Sixty-two percent (62%) of the Permittees reported that they operate under a formal written IPM policy, a slight increase from the previous year. In addition, 91% regularly monitor for pests and 76% keep records of pest occurrences and the actions that were taken to correct the problem. These percentages represent small decreases from the previous reporting year.



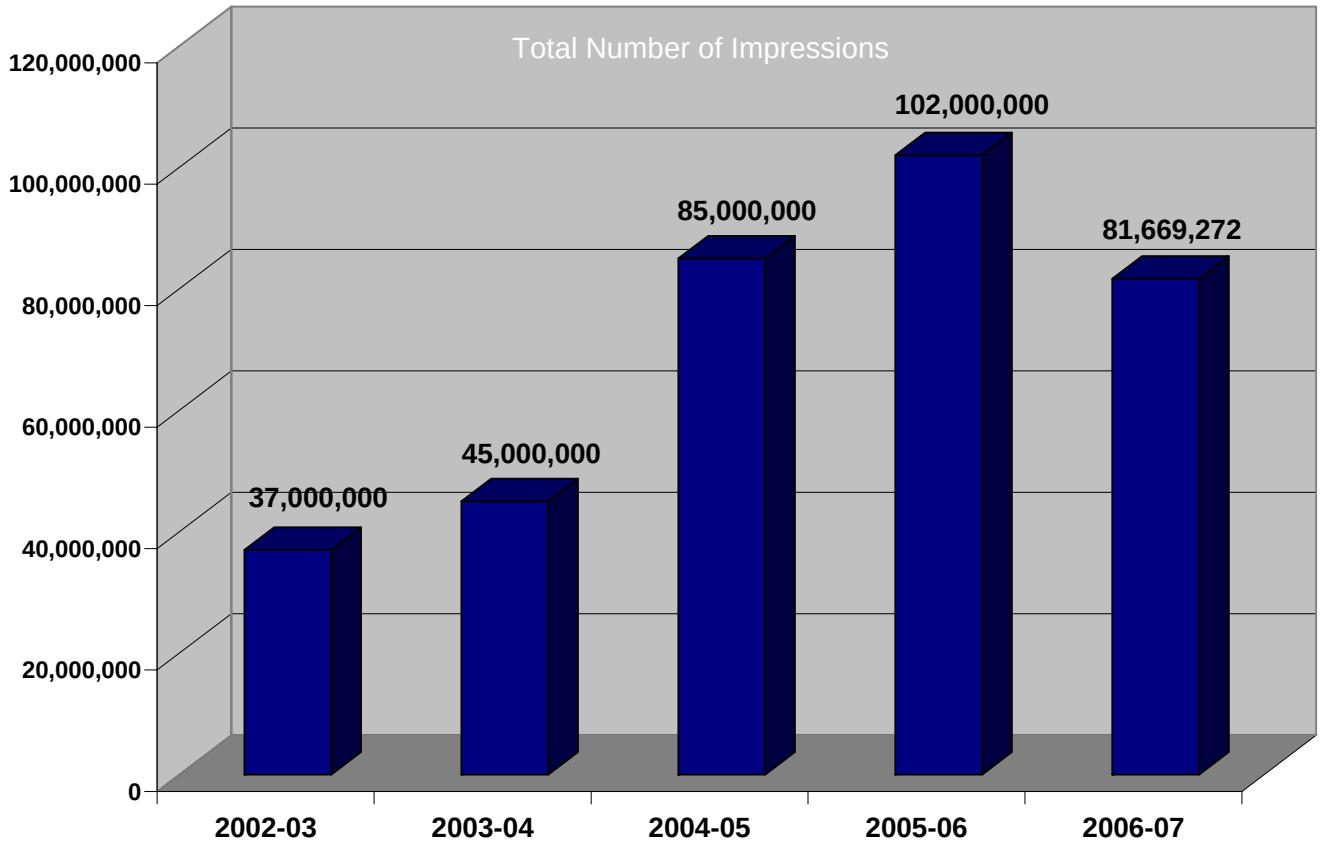
Municipal Activities –- Fertilizer Usage



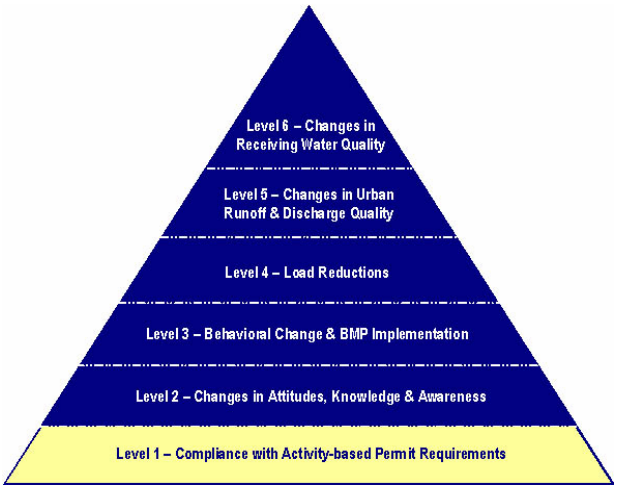
Program Effectiveness Assessment: Maintaining the health and color of turfgrass is the main reason for the application of fertilizers by Permittees. Much fewer fertilizer applications are made to landscape trees, shrubs, groundcovers, and vines in order to maintain their health and color. During 2006-07, thirty-four Permittees reported the use of approximately 360,982 pounds of nitrogen and 97,799 pounds of phosphorus were applied to 7,933 acres of public land (45 lbs/acre of nitrogen and 12 lbs/acre of phosphorus). Although the total pounds of nitrogen applied have increased since the 2004-05 reporting year, the pounds applied per acre have remained constant at approximately 45 lbs/acre. The amount of phosphorus applied per acre has also remained constant at 12 lbs/acre over the last three reporting periods.



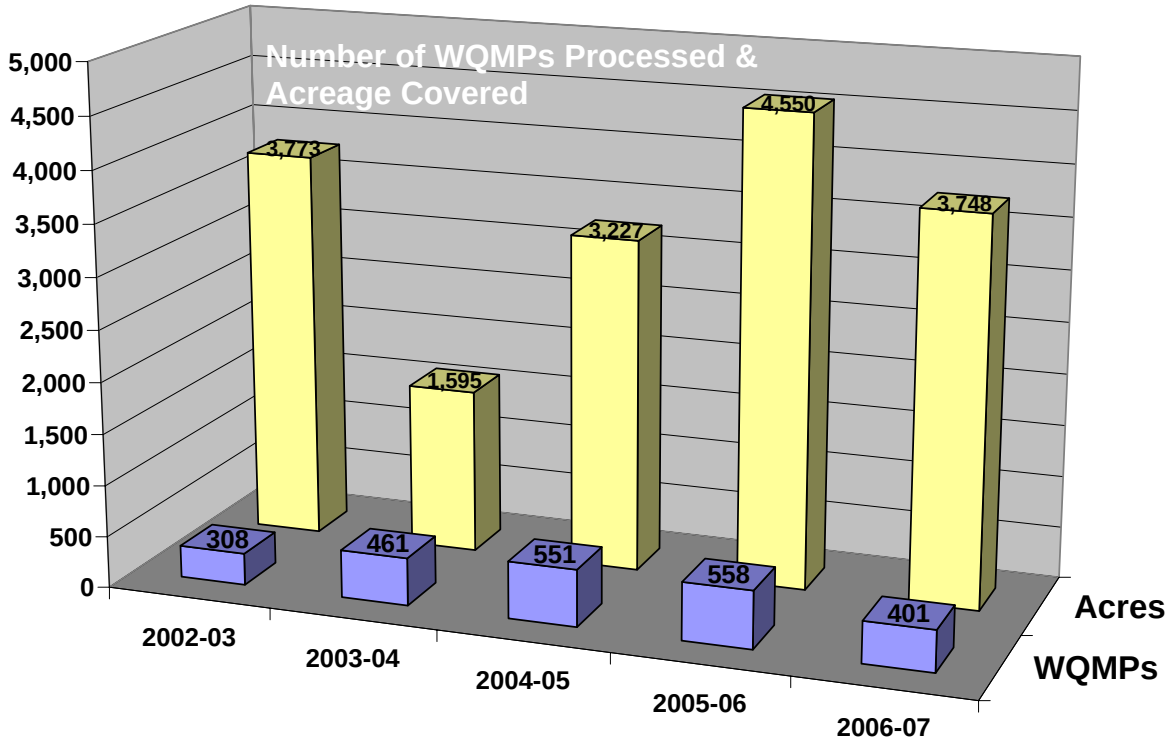
Public Education



Performance Effectiveness Assessment: The Permittees' education programs created 81,669,272 impressions during the 2006-07 reporting period. One of the goals of the public education program is to target 100% of the residents of Orange County. Orange County has a population of approximately 3 million people. It is estimated that in order to be successful the campaign should make approximately 12 million impressions or 4 per person in the County. This also correlates with the Third Term Permit requirement to deliver a minimum of 10 million impressions within the Santa Ana Regional Board Area. The campaign far exceeded this requirement and therefore, it can be concluded that the outreach campaign was indeed successful.



New Development/Significant Redevelopment -- Water Quality Management Plans (WQMPs)



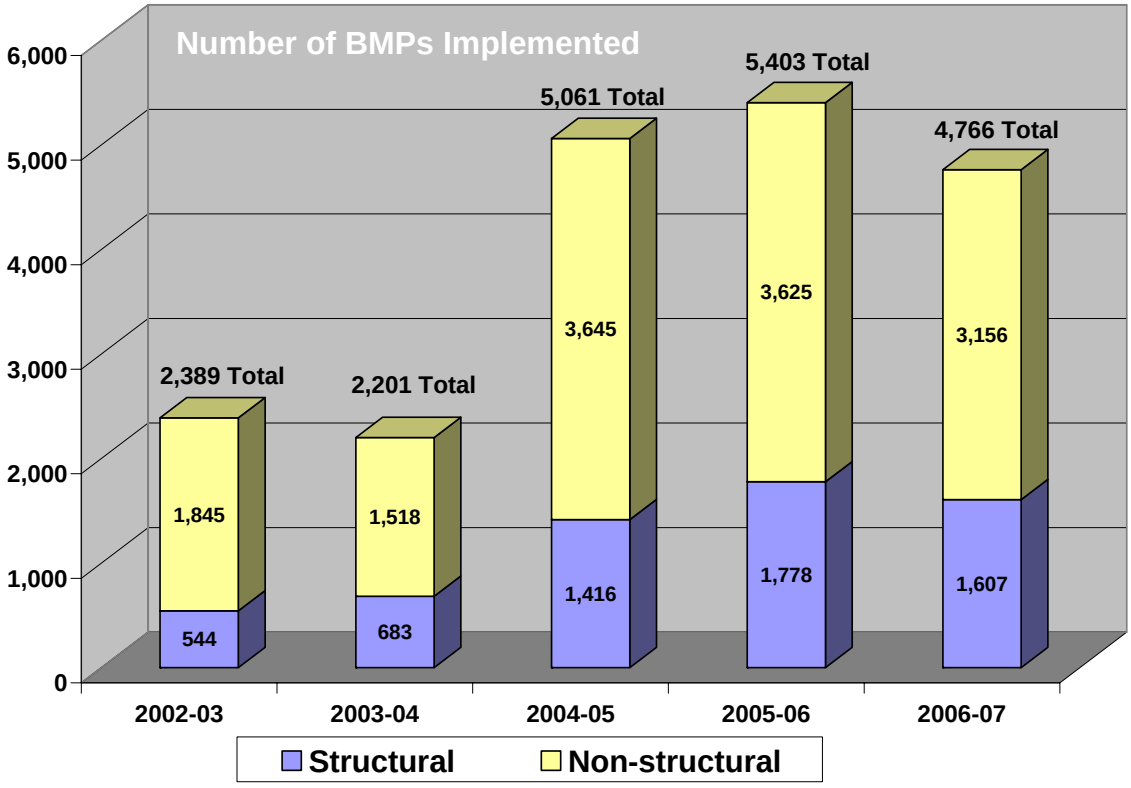
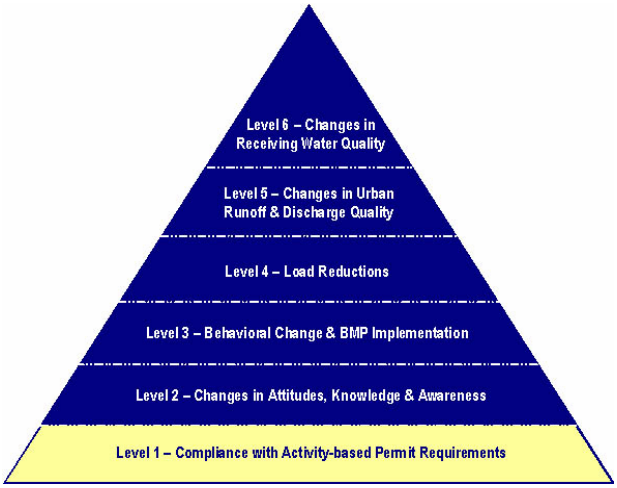


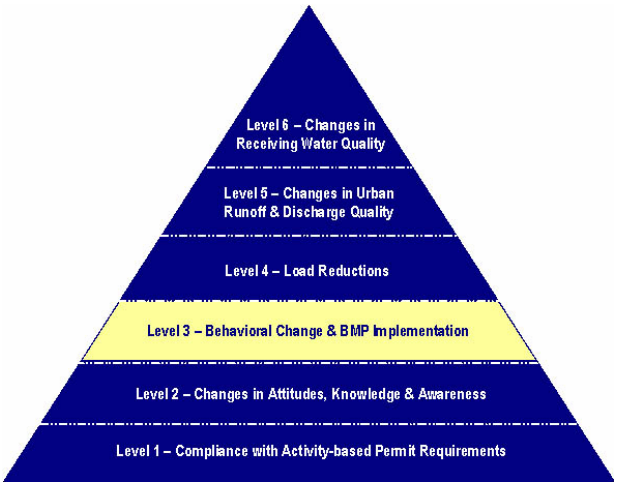
Exhibit 3

New Development/Significant Redevelopment -- Water Quality Management Plans (WQMPs)

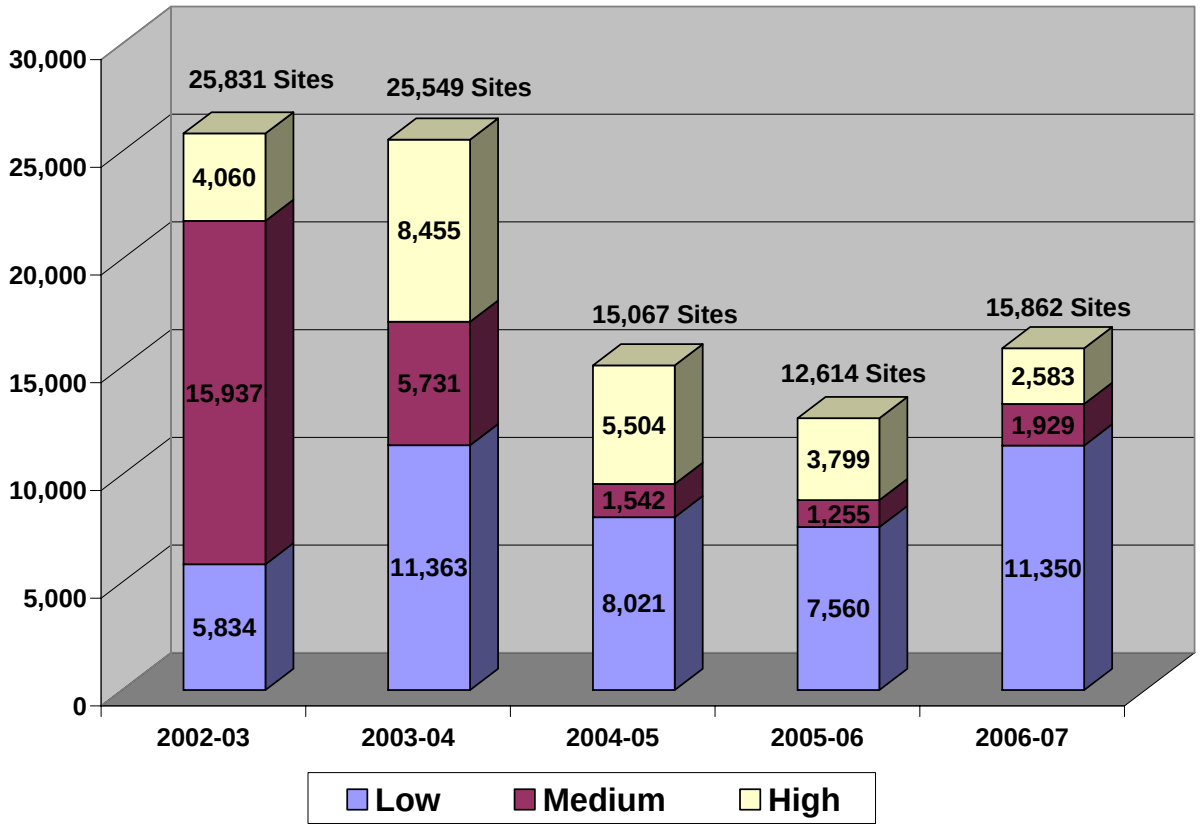
Performance Effectiveness Assessment: *Number of WQMPs processed and the area to which BMPs have been applied:* During 2006-07, 401 WQMPs were processed for 3,748 acres of development. These figures compare to 558 WQMPs processed for 4,550 acres of development in 2005-06; 551 WQMPs processed for 3,227 acres of development in 2004-05; 461 WQMPs processed for 1,595 acres of development in 2003-04, and 391 WQMPs processed for 2,836 acres of development in 2002-03.



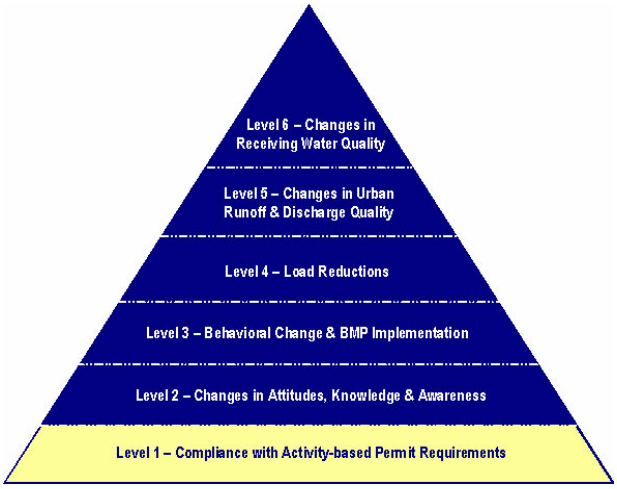
Performance Effectiveness Assessment: *Number of BMPs Implemented:* A total of 4,766 BMPs were implemented in the 2006-07 reporting period contributing a total number of BMPs implemented over the period of the Third Term Permits of 19,820. The annual figure compares to a total of 5,403 BMPs implemented in the 2005-06 reporting period; 5,061 BMPs implemented in 2004-05; 2,201 BMPs implemented in 2003-04; and 2,389 BMPs implemented in 2002-03.



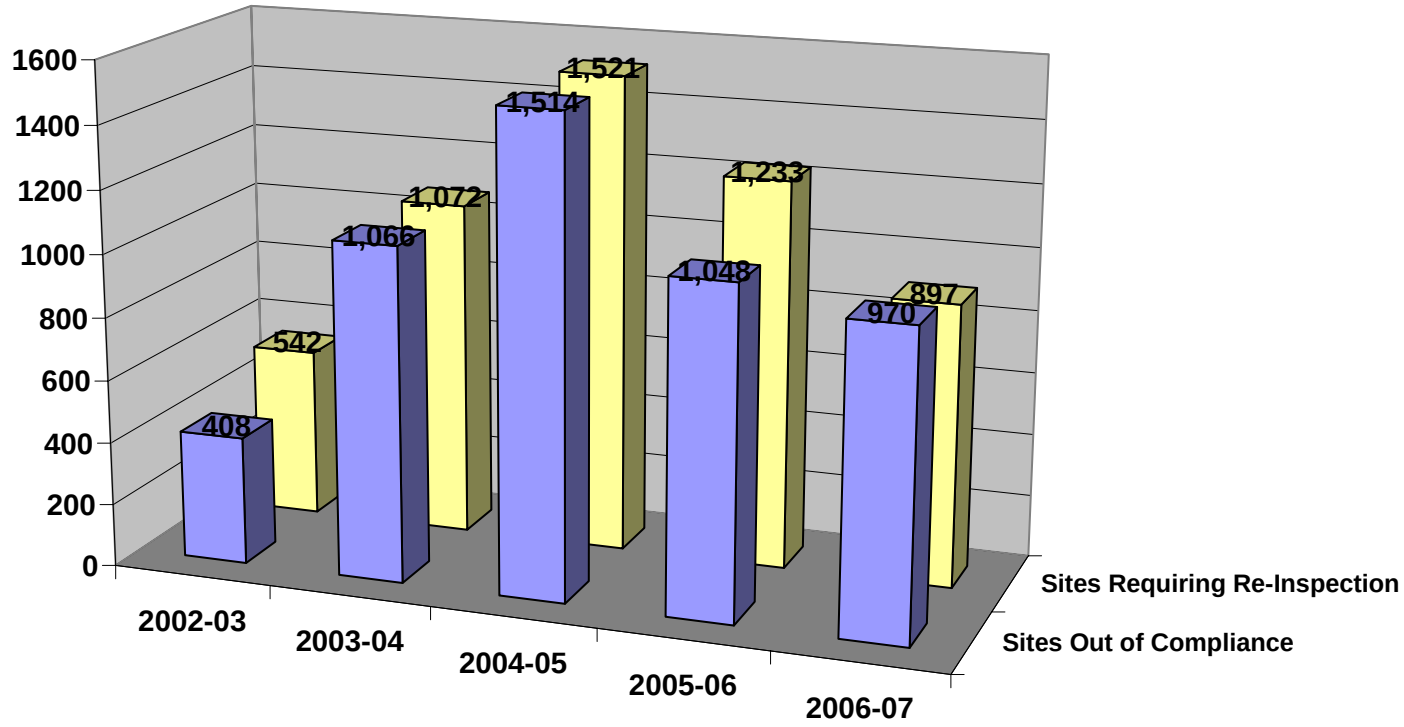
Construction –- Site Inventory & Prioritization



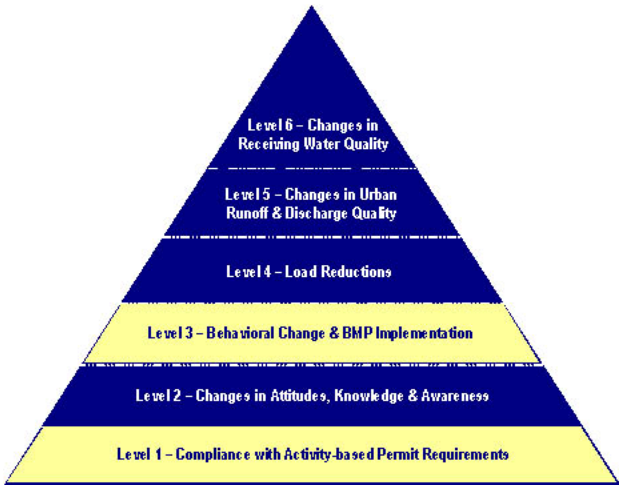
Performance Effectiveness Assessment: In 2006-07, 34 Permittees completed 2,583 high priority, 1,929 medium priority, and 11,350 low priority construction site inspections. In 2005-06 34 Permittees completed 3,799 high priority, 1,255 medium priority, and 7,560 low priority construction site inspections; in 2004-05 5,504 high priority, 1,542 medium priority, and 8,021 low priority construction site inspections were completed; in 2003-04, 8,445 high priority, 5,731 medium priority, and 11,363 low priority construction site inspections were completed; and in 2002-03, 4,060 high priority, 15,937 medium priority, and 5,834 low priority construction site inspections were completed.



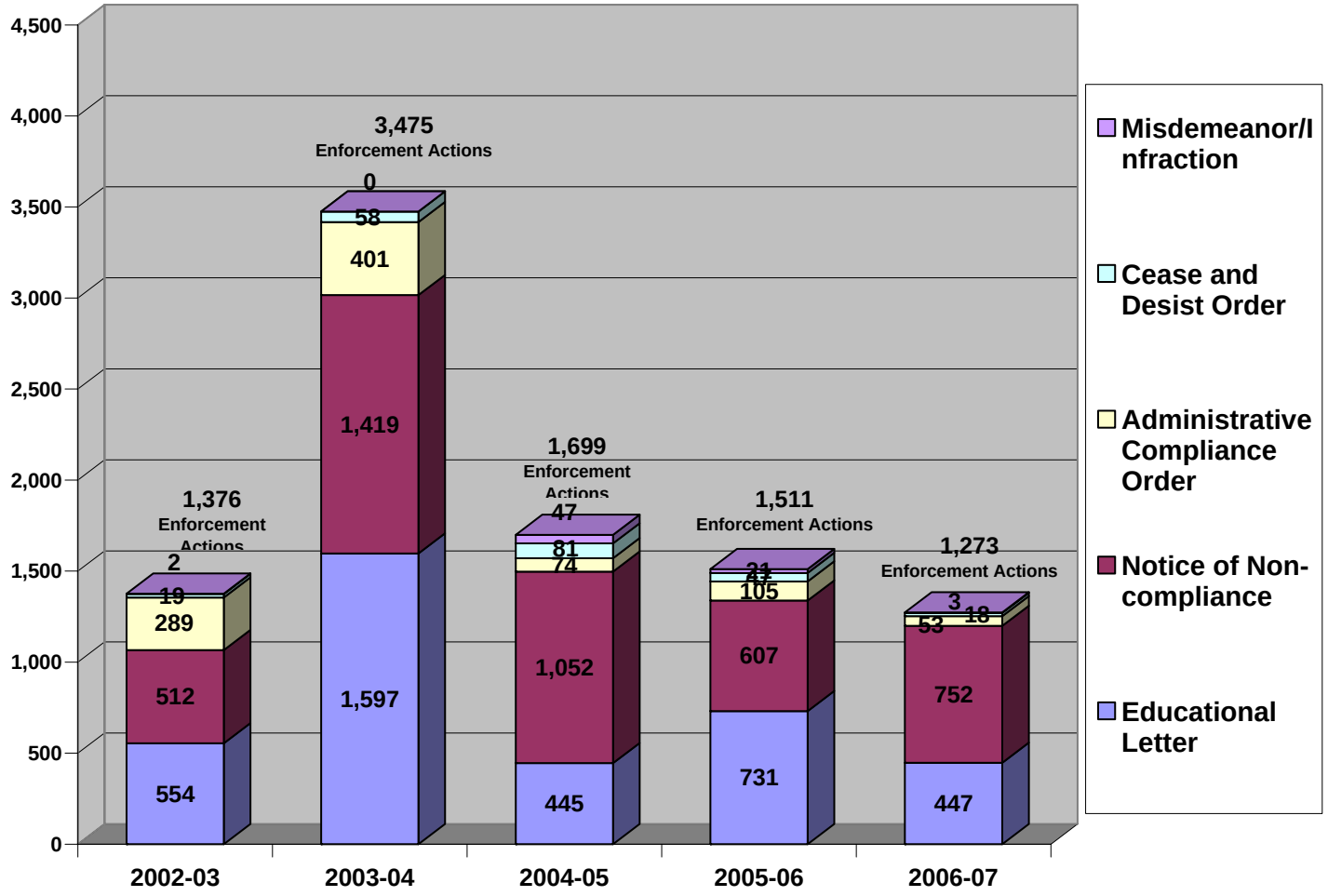
Construction -- Site Inspection & Compliance



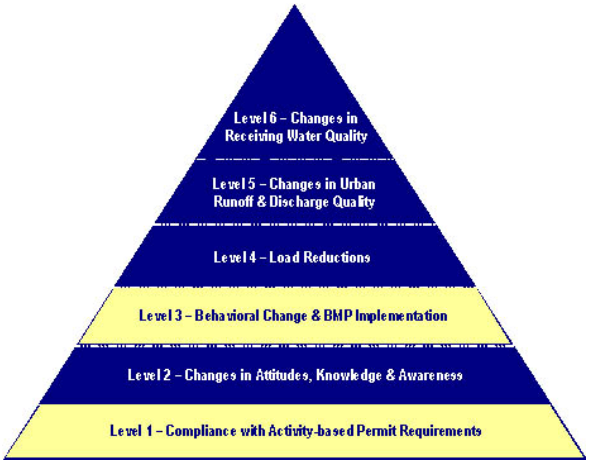
Performance Effectiveness Assessment: In 2006-07, 970 construction sites required 897 re-inspections. During 2005-06, 1,048 construction sites required 1,233 re-inspections compared to 1,514 construction sites requiring 1,521 re-inspections in 2004-05; 1,066 construction sites requiring 1,072 re-inspections in 2003-04; and 408 construction sites requiring 542 re-inspections in 2002-03.



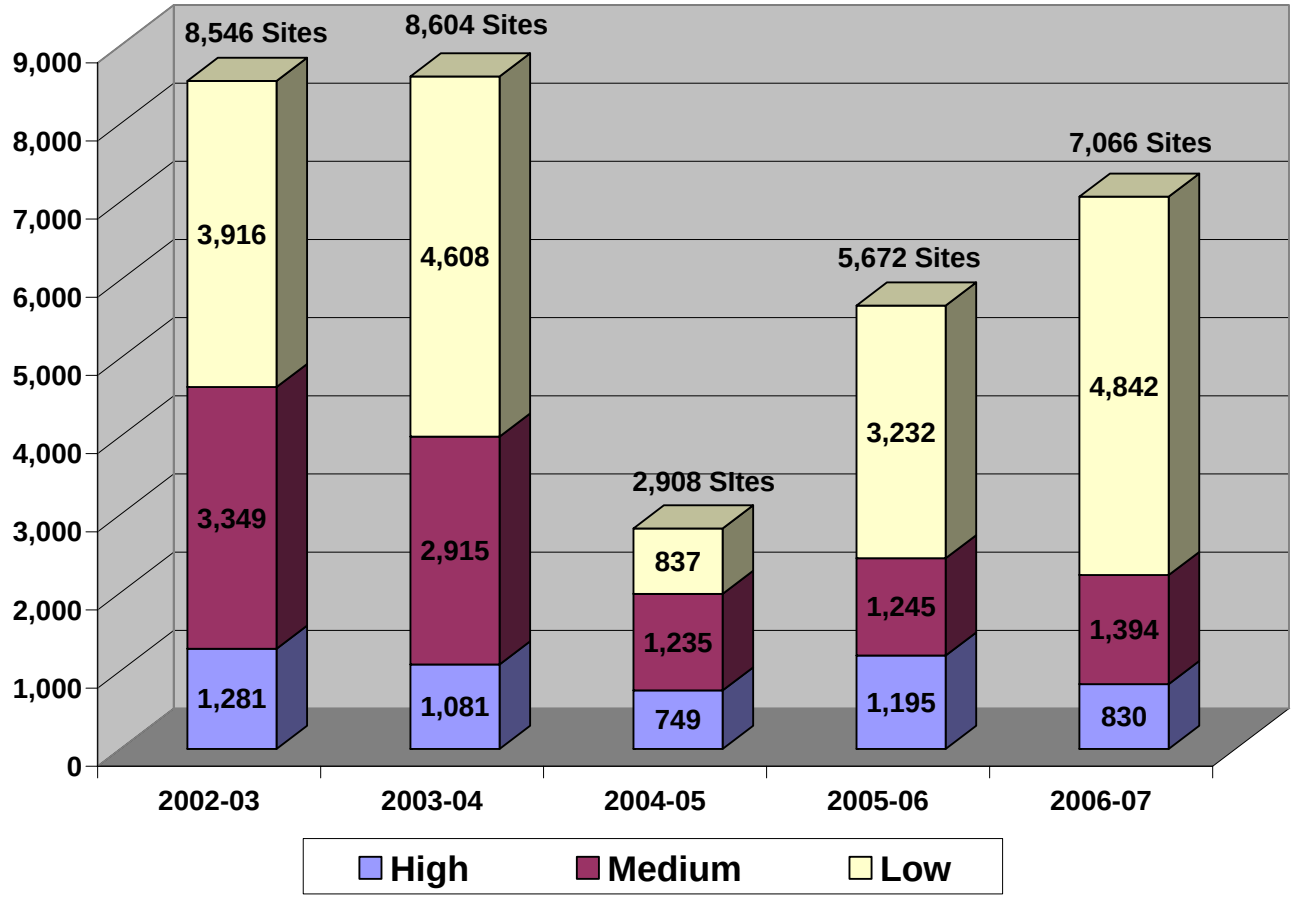
Construction –- Site Enforcement



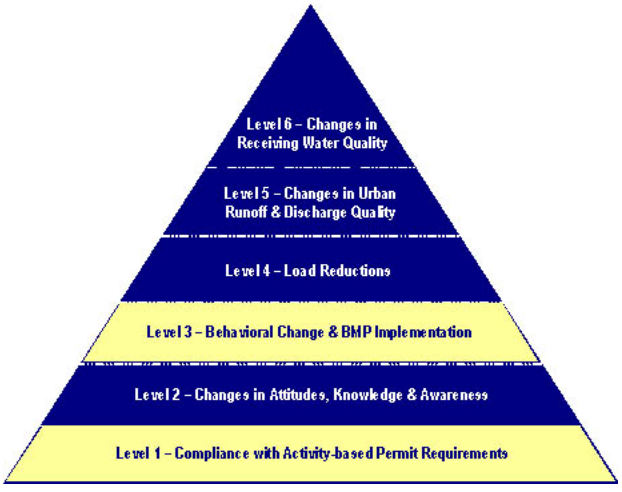
Performance Effectiveness Assessment: *Number and Level of Enforcement Actions:* Arising from the 2006-07 inspections, there were 1,273 enforcement actions, comprising 447 Educational Letters, 752 Notices of Non-compliance, 53 Administrative Compliance Orders, 18 Cease and Desist Orders, and 3 Misdemeanor/Infractions. In 2005-06, Permittees reported taking a total of 1,305 enforcement actions, compared to 1,699 enforcement actions taken in 2004-05; 3,475 enforcement actions taken in 2003-04; and 1,395 enforcement actions taken in 2002-03. The pattern of a peak in enforcement activity in 2003-04 and a subsequent reduction in the 2004-05, 2005-06 and most current reporting periods in construction suggests an increased level of compliance within the regulated community.



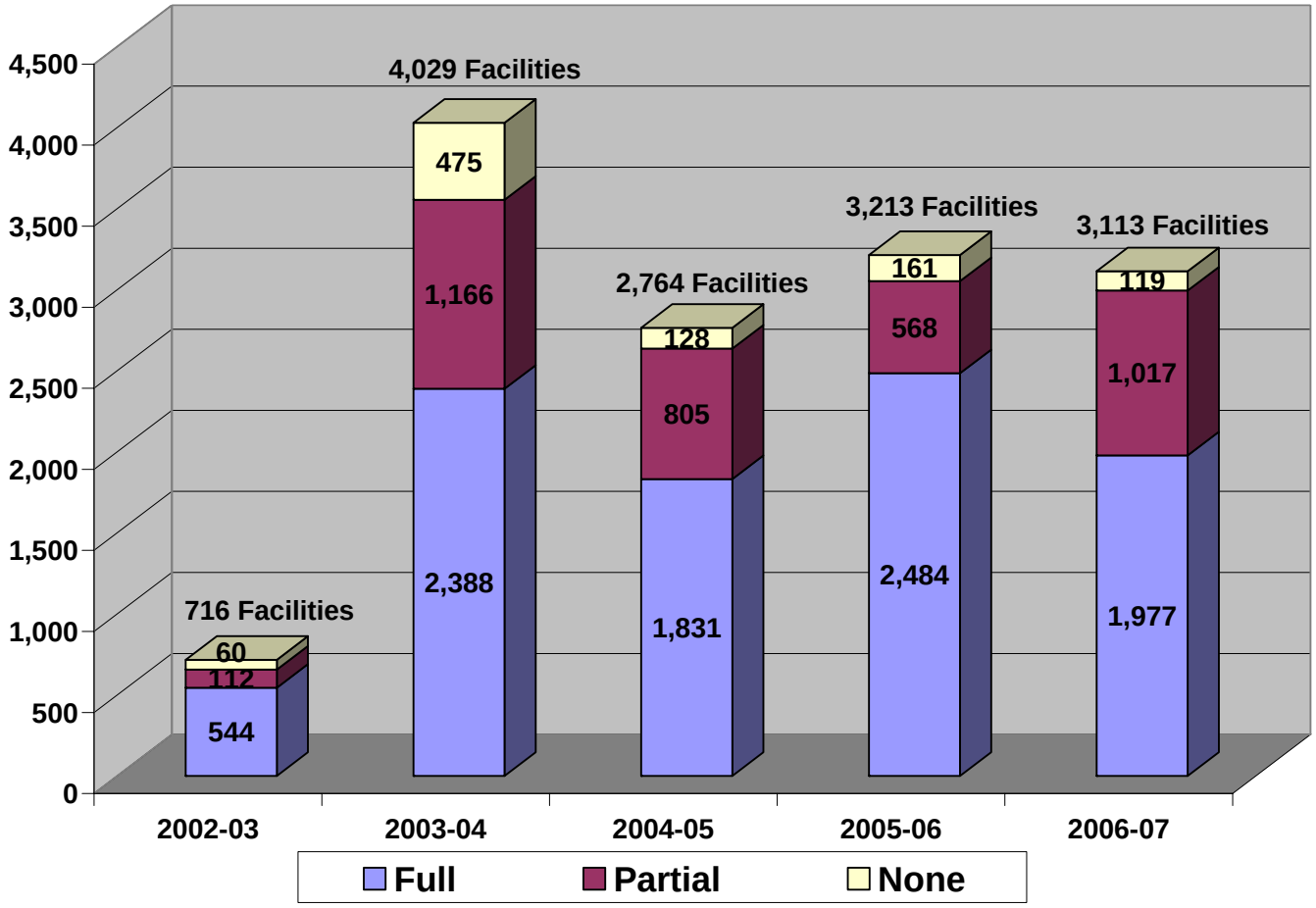
Existing Development –- Industrial Facility Inventory & Prioritization



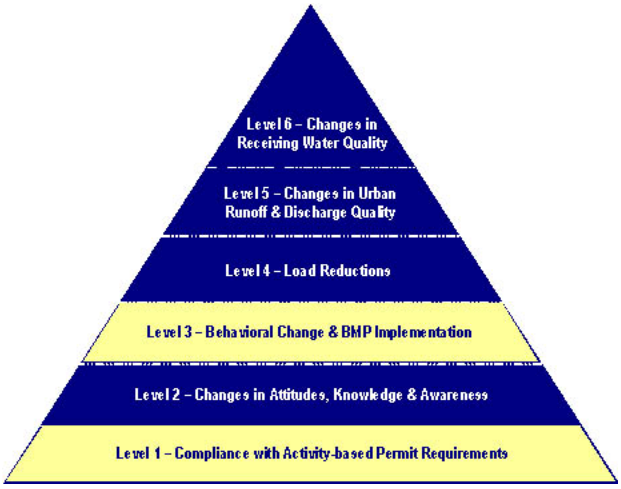
Performance Effectiveness Assessment: For 2006-07, 7,066 industrial facilities were prioritized, of which 12% were ranked as high priority. These figures compare to 2005-06 (5,672 industrial facilities were prioritized, 21% of which were ranked as high priority), 2004-05 (2,908 industrial facilities were prioritized, 26% of which were ranked as high priority), 2003-04 (8,604 industrial facilities were prioritized, 13% of which were ranked as high priority), and 2002-03 (8,546 industrial facilities were prioritized, 15% of which were ranked as high priority).



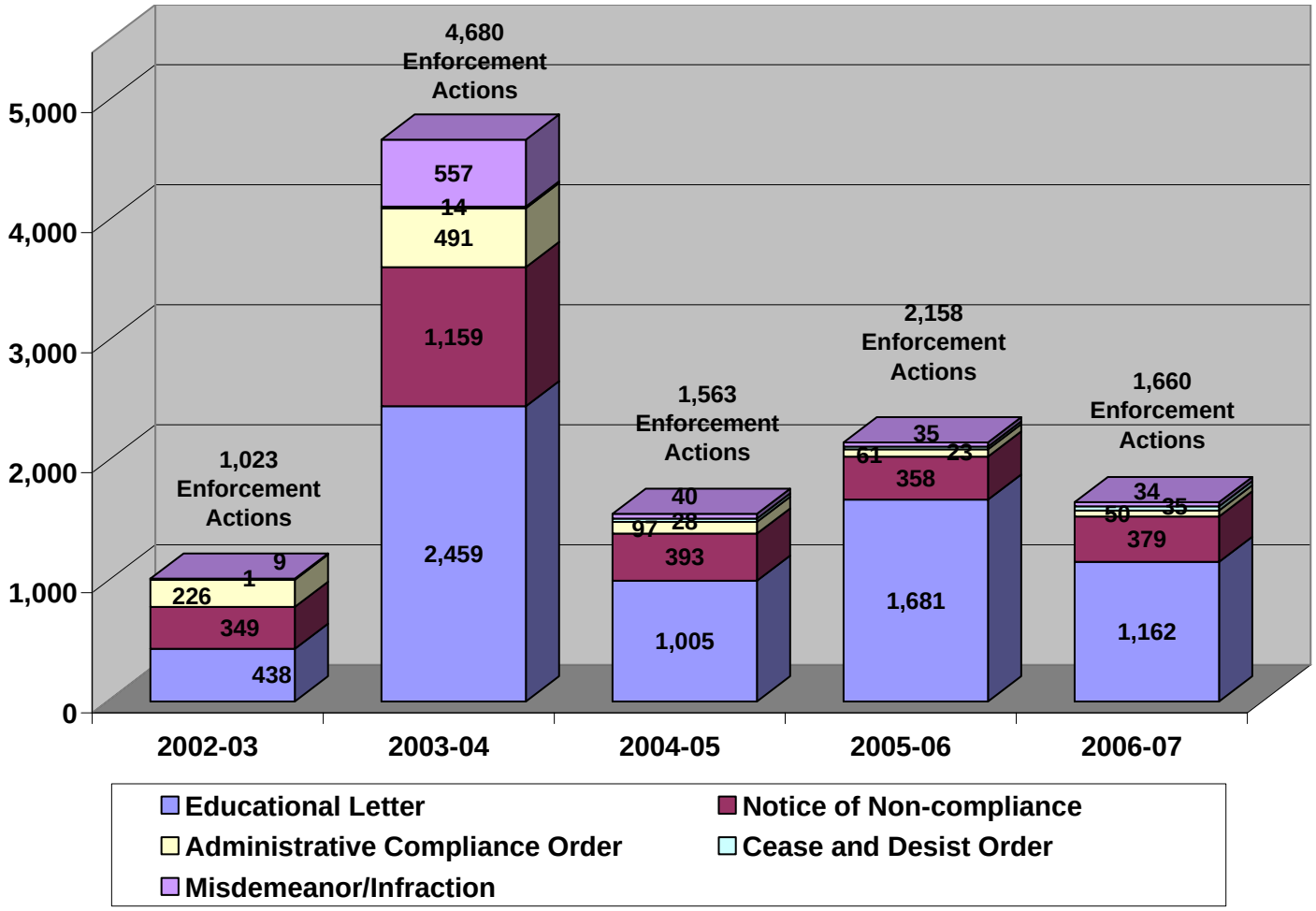
Existing Development –- Industrial Facility BMP Implementation



Performance Effectiveness Assessment: Number of BMPs Implemented (Industrial Facilities): In 2006-07, 1,977 (64%) of 3,113 industrial facilities were determined to have fully implemented BMPs. This figure compares to 2005-06 (77% of 3,213 industrial facilities were determined to have full BMP implementation), 2004-05 (66% of 2,764 industrial facilities were reported to have full BMP implementation), 2003-04 (59% of 4,029 industrial facilities were reported to have full BMP implementation), and 2002-03 (76% of 716 industrial facilities were reported to have full BMP implementation).

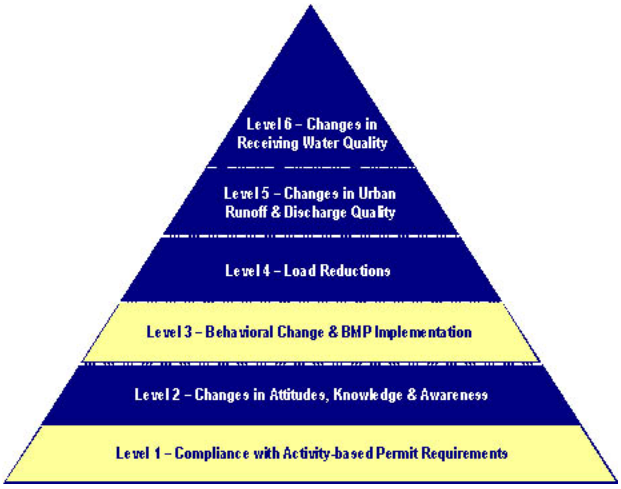


Existing Development -- Industrial Facility Enforcement

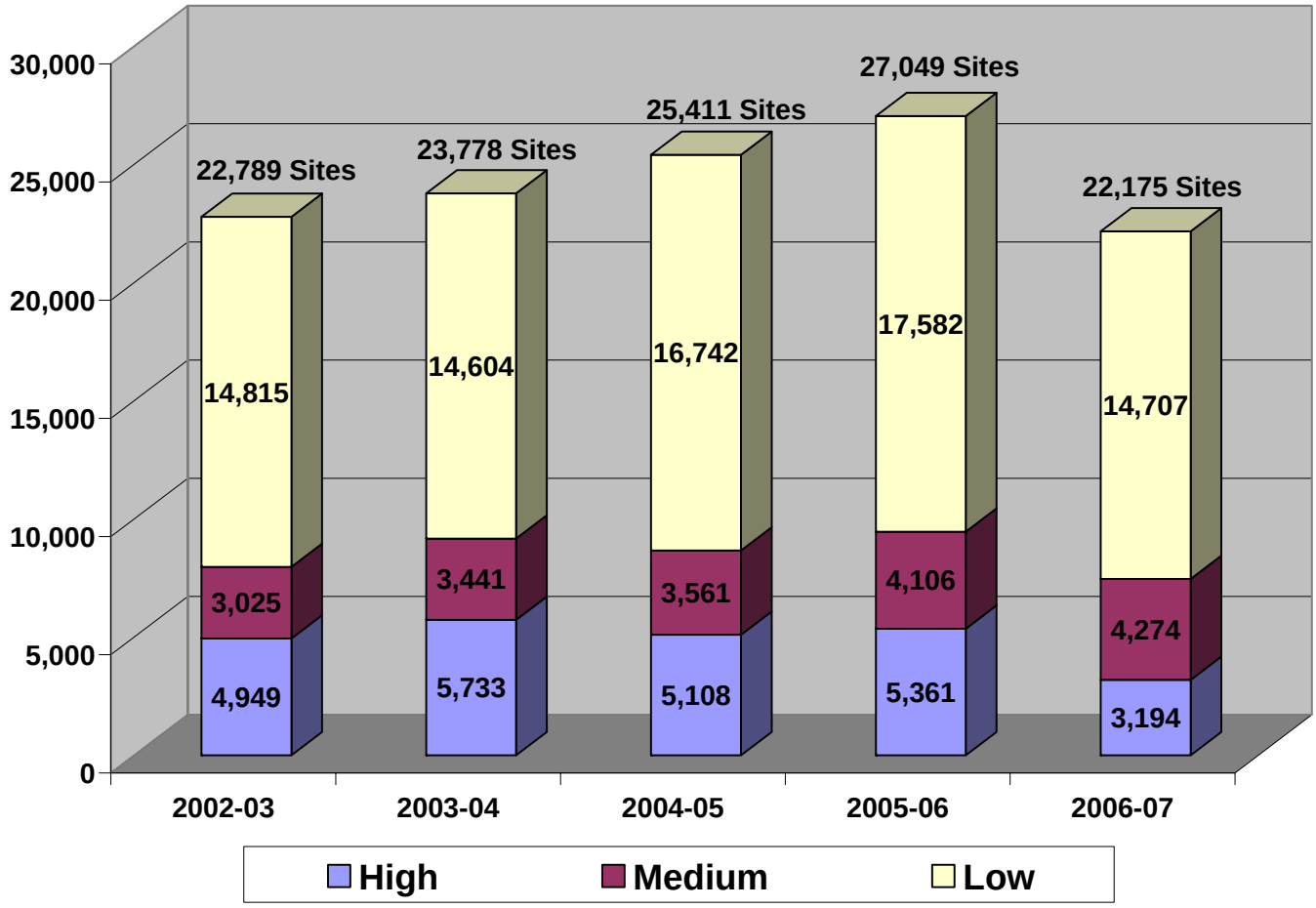


Note: Enforcement Actions reported in the figure above are for both Industrial and Commercial Facilities.

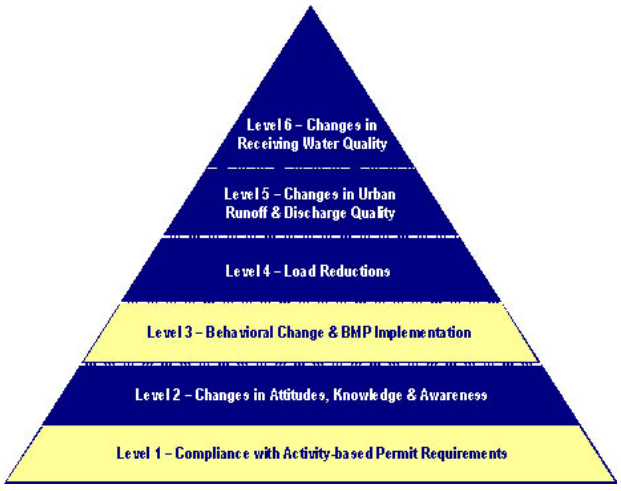
Performance Effectiveness Assessment: *Number and Level of Enforcement Actions (Industrial Facilities):* The Permittees reported a total of 254 enforcement actions against industrial facilities during the 2006-07 reporting period. This figure compares to a reported total of 448 enforcement actions against industrial facilities during 2005-06; 371 enforcement actions during 2004-05; 3,146 enforcement actions during the 2003-04; and 533 enforcement actions during 2002-03.



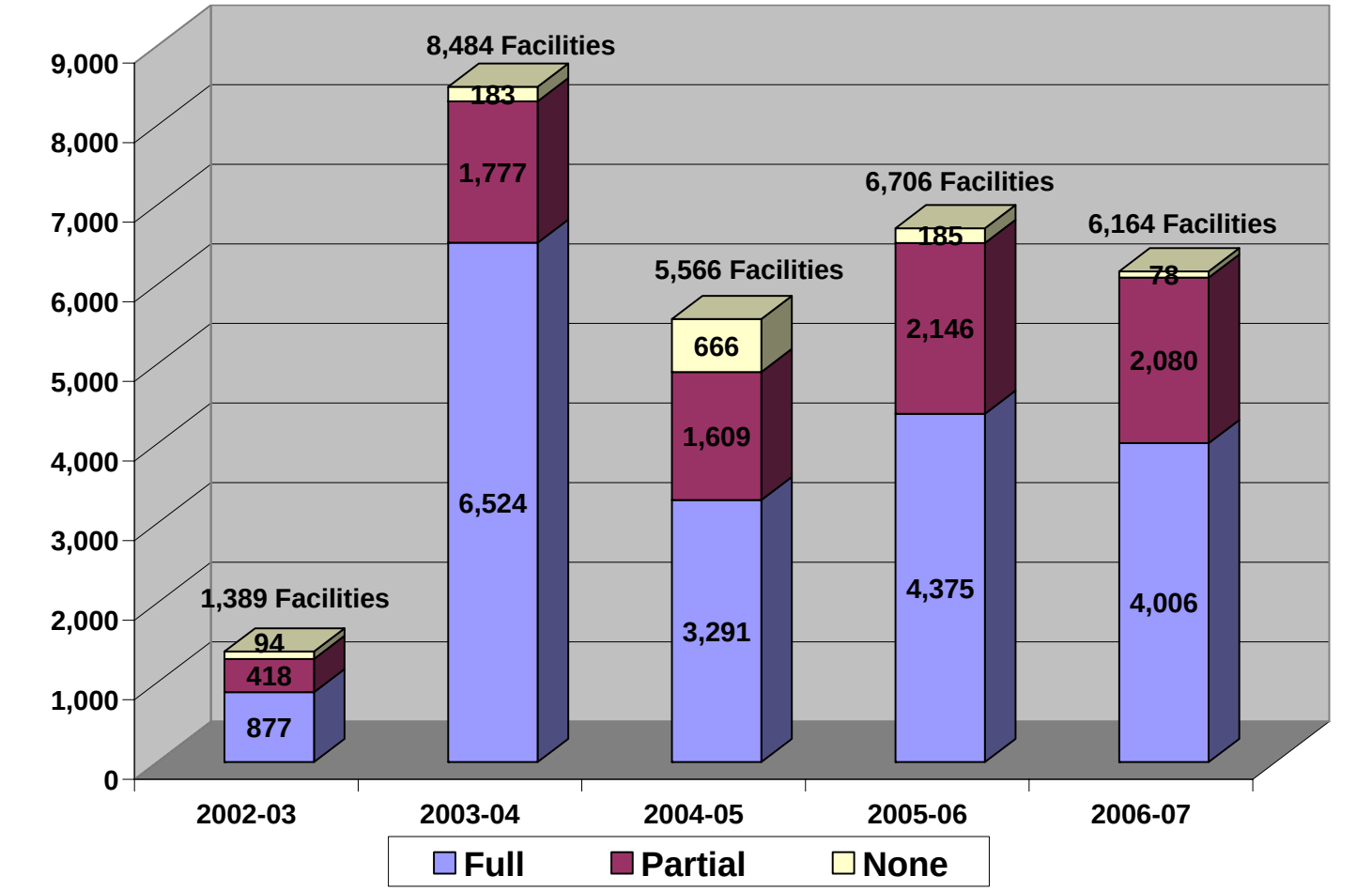
Existing Development –- Commercial Facility Inventory & Prioritization



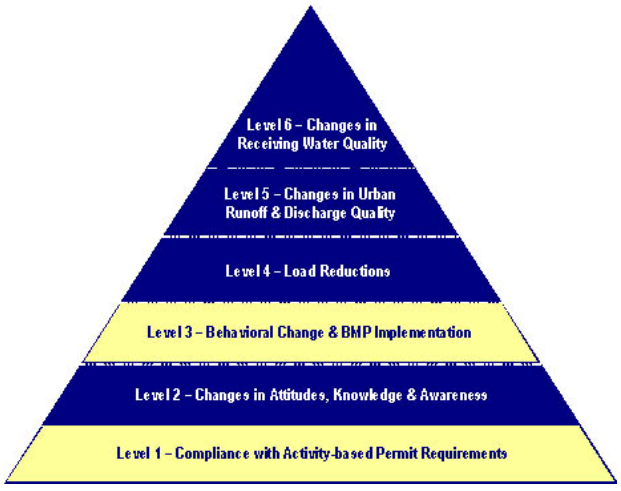
Performance Effectiveness Assessment: For 2006-07, 22,175 commercial facilities were prioritized, of which 15% were ranked as high priority. These figures compare to 2005-06, (27,049 commercial facilities were prioritized, of which 20% were ranked as high priority), 2004-05 (25,411 commercial facilities were prioritized, 20% of which were ranked as high priority), 2003-04 (23,778 commercial facilities were prioritized, 24% of which were ranked as high priority), and 2002-03 (22,789 commercial facilities were prioritized, 22% of which were ranked as high priority).



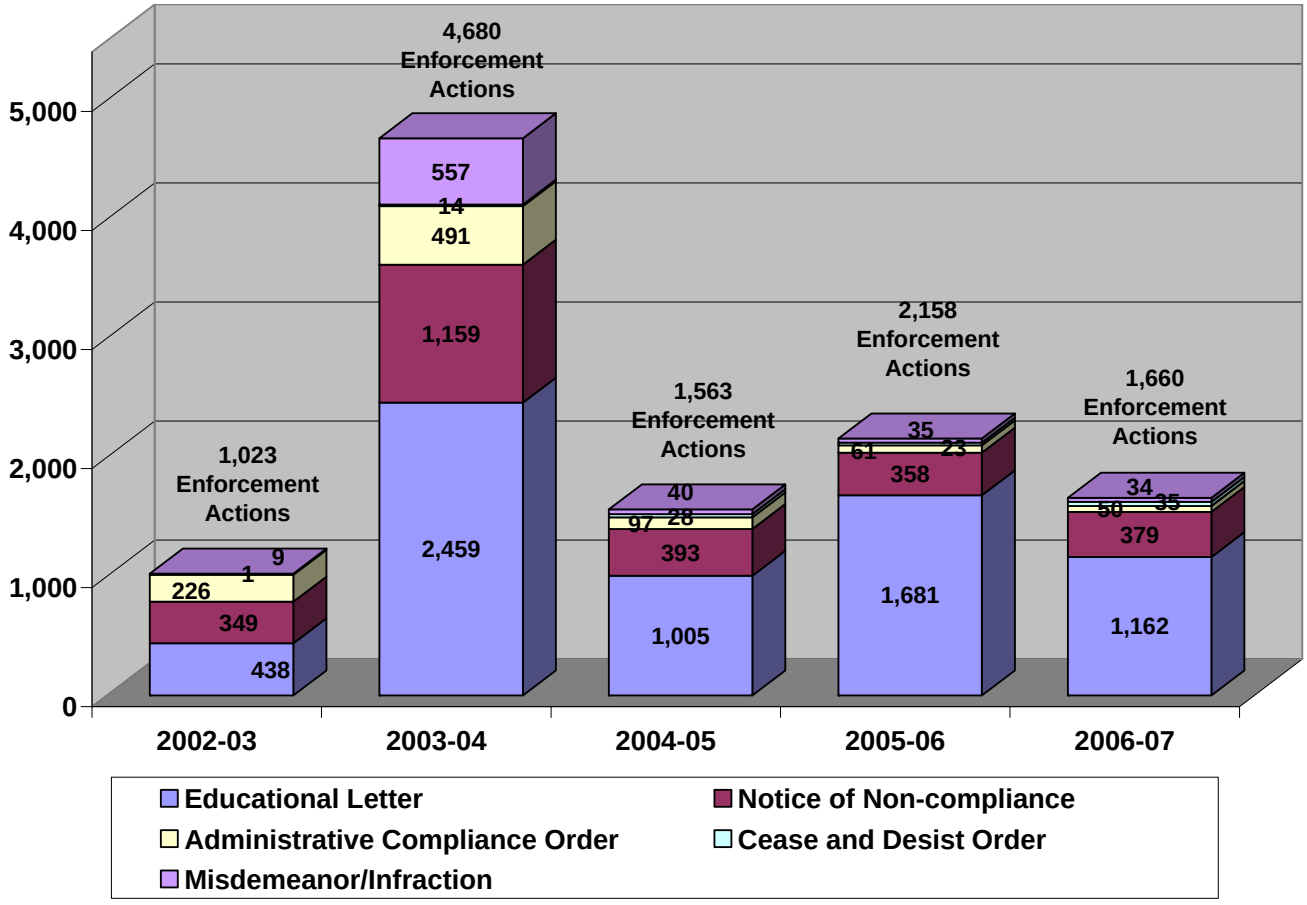
Existing Development –- Commercial Facility BMP Implementation



Performance Effectiveness Assessment: In 2006-07, 4,006 (65%) of 6,164 commercial facilities were determined to have fully implemented BMPs. This figure compares to 2005-06 (65% of 6,706 commercial facilities were determined to have full BMP implementation), 2004-05 (59% of 5,566 commercial facilities were reported to have full BMP implementation); 2003-04 (77% of 8,484 commercial facilities were reported to have full BMP implementation), and 2002-03 (63% of 1,389 commercial facilities were reported to have full BMP implementation).

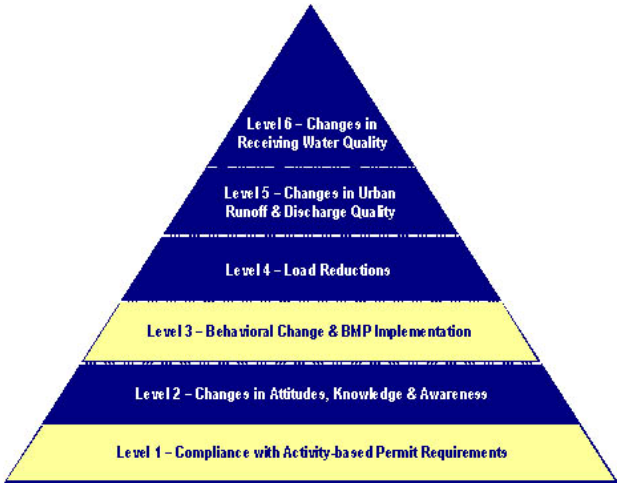


Existing Development -- Commercial Facility Enforcement

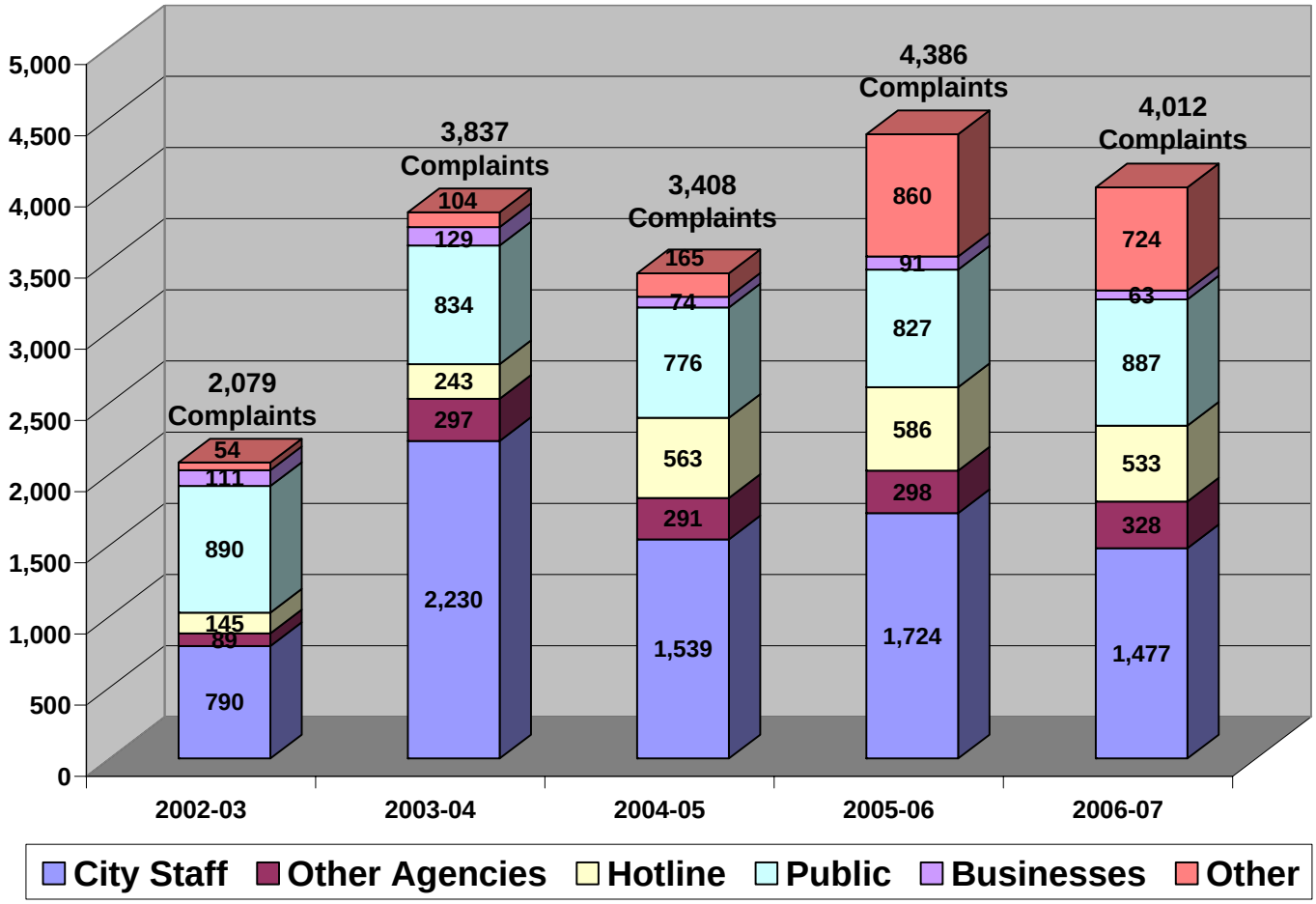


Note: Enforcement Actions reported in the figure above are for both Industrial and Commercial Facilities.

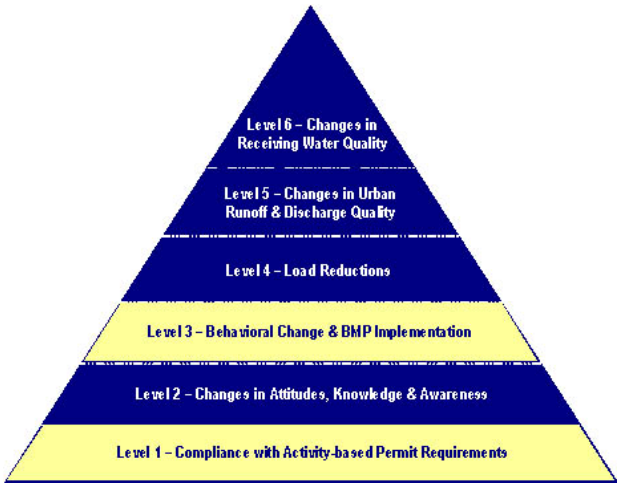
Performance Effectiveness Assessment: *Number and Level of Enforcement Actions (Commercial Facilities):* The Permittees reported a total of 1,406 enforcement actions against commercial facilities during the 2006-07 reporting period. This number compares to a reported total of 1,711 enforcement actions against commercial facilities during the 2005-06 reporting period; 1,192 enforcement actions against commercial facilities in 2004-05; 1,534 enforcement actions during 2003-04; and 490 enforcement actions during 2002-03. While the 2004-05 number represented a 22% decrease from the total reported in 2003-04, 2005-06 appears to indicate a significant escalation in enforcement activity. In 2006-07, however, enforcement actions decreased again by 16%.



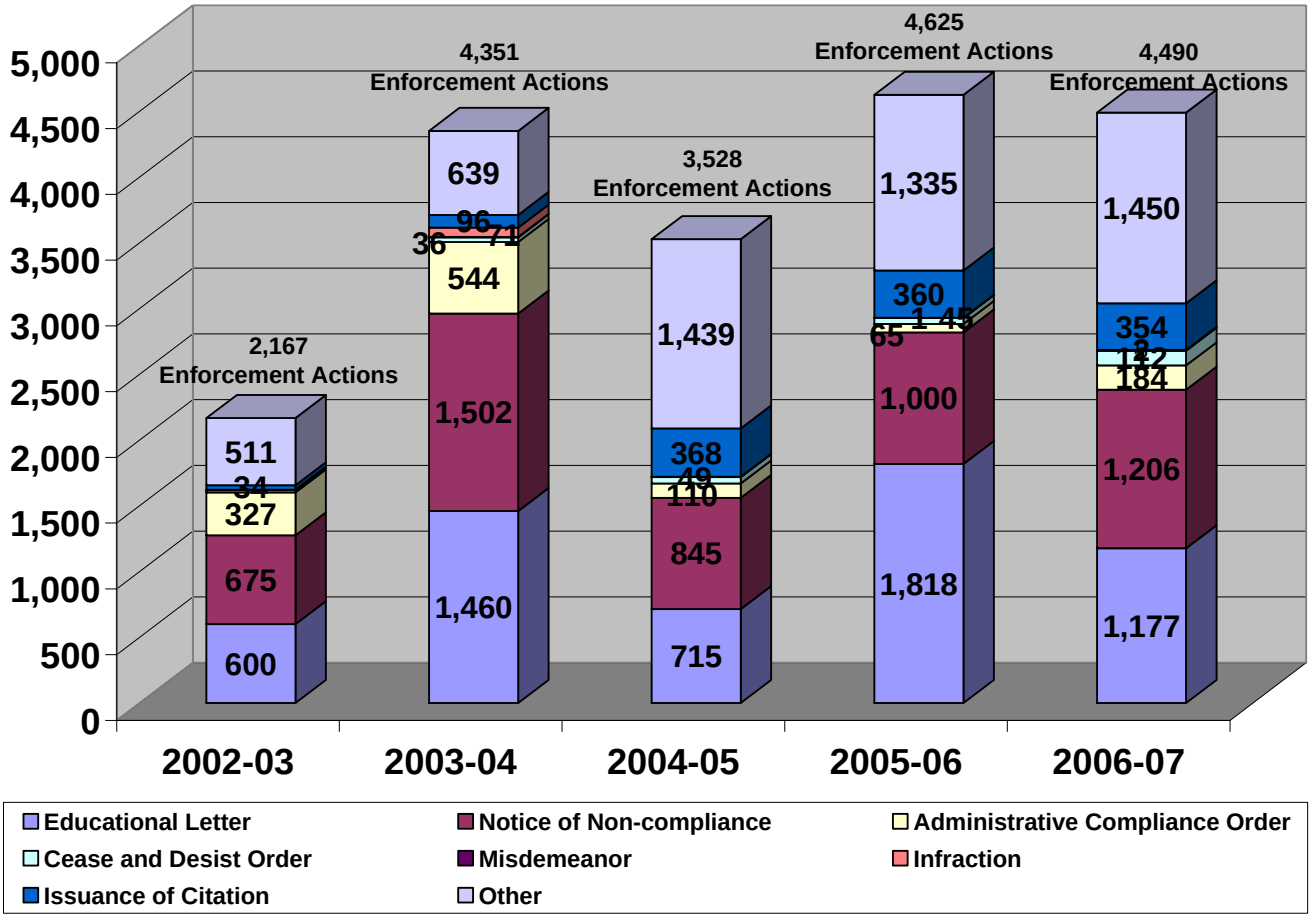
Illegal Discharge/Illicit Connections (ID/IC) -- Detection & Source of Complaints



Performance Effectiveness Assessment: *Number of Complaints:* The Permittees reported a total of 4,012 complaints/incidents during the 2006-07 reporting period. This figure compares to a reported 4,386 complaints/incidents during 2005-06, a reported 3,408 complaints/incidents during 2004-05, a reported 3,837 complaints/incidents in 2003-04, and a reported 2,079 complaints/incidents in 2002-03.



Illegal Discharge/Illicit Connections (ID/IC) -- Enforcement Actions



Performance Effectiveness Assessment: *Number and Level of Enforcement Actions:* The Permittees reported a total of 4,490 enforcement actions during 2006-07. This figure compares to 4,625 enforcement actions in 2005-06; 3,528 enforcement actions in 2004-05; 4,351 enforcement actions in 2003-04; and 2,167 enforcement actions in 2002-03.