An Evaluation of the City of Escondido's Municipal Separate Storm Sewer System (MS4) Stormwater Program

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1.0 EXECUTIVE SUMMARY

Between November 2007 and May 2008 San Diego Coastkeeper (Coastkeeper) conducted a program evaluation of the City of Escondido (City) concerning its implementation of the San Diego Municipal Stormwater Program (Program) between 2003 and 2006. The purpose of this evaluation was to determine the City's levels of compliance with the permit issued by the San Diego Regional Water Quality Control Board (Order R9-2001-0001) during this time frame, to evaluate the current implementation status of the Copermittee's Jurisdictional Urban Runoff Management Program (JURMP), and to suggest upgrades or changes to comply with the current permit.

The stormwater permit was updated and renewed on January 24, 2007 by San Diego Regional Water Quality Control Board Order No. R9-2007-0001. The new permit, which came into effect in March 2008, requires significant updates to the City's JURMP and program implementation. However, Copermittees were not required to implement the new provisions of Order 2007-0001 (2007 Permit) until March 2008. This report evaluates the City's storm water practices under Order R9-2001-0001 (2001 Permit) and provides recommendations for meeting the requirements of the new 2007 Permit and to enhance program areas to better protect water quality.

This report is not a formal finding of violation. Program deficiencies are areas of concern for successful program implementation. Positive attributes indicate highlights in the overall progress in implementing the Program.

Areas in which the City may require improvement are generally consistent throughout different program areas. In conducting inspections for industrial, commercial, and construction projects the City has a well-developed program in place, but inspectors lack clear enforcement authority. Enforcement is often slow-paced and could be expedited through a more precise enforcement scheme. The City already utilizes an electronic database and GIS, but would benefit from electronic record-keeping in most program areas. Additionally, the City's JURMP Annual Report contains data discrepancies and lacks transparency in certain areas. Overall, the City is doing a good job of implementing the 2001 Permit, but can improve its program to ensure water quality is protected.

2.0 INTRODUCTION

Launched in 1995, San Diego Coastkeeper is a locally-based non-profit environmental organization focused on the protection of the San Diego region's bays, beaches, watersheds and ocean for the people and wildlife that depend on them. Coastkeeper is San Diego's official agency of the international Waterkeeper Alliance. Coastkeeper's mission includes the near-term goals of dramatically reducing pollution from stormwater runoff by ensuring effective implementation of municipal, industrial and construction stormwater permits. To further these goals of clean water and a healthy coastal ecosystem, Coastkeeper promotes community outreach and involvement programs, education, and advocacy and legal action.

2.1 Program Evaluation Purpose

The purpose of the program evaluation was to determine the City of Escondido's (City) compliance with the past and current MS4 permits and to evaluate the current implementation status of the City's Jurisdictional Urban Runoff Management Program (JURMP) with respect to these Permits. Coastkeeper hopes a review of the program's positive attributes and any deficiencies will provide the City with an opportunity to improve its JURMP in several specific areas. Compliance with the permit will ensure a healthier coastal ecosystem for the area waters impacted by the City's stormwater runoff. Moreover, the public will experience the benefit of reduced pollution from stormwater runoff to San Diego region's bays, beaches, watersheds, and ocean.

2.2 Permit History

The municipal stormwater permit was first issued on July 16, 1990. It was renewed in 2001 by Order No. 2001-01. The permit was subsequently renewed on January 24, 2007 by Order No. R9-2007-0001, which went into effect in March 2008. Compliance with the 2007 Permit was delayed due to the wildfires in San Diego County in October 2007. The current permit, the third issued to the Copermittees, requires the City to develop and implement a JURMP with specific requirements. While this evaluation was necessarily limited to data gathered under the 2001 Permit, comparisons to the 2007 Permit requirements were made where possible.

2.3 Program Evaluation Logistics and Areas Evaluated

In November 2007, Coastkeeper submitted Public Records Act request to the City of Escondido requesting documents related to stormwater runoff and the City's implementation of the MS4 permit requirements, and the City's JURMP and stormwater program implementation. On December 3, 2007, the City Clerk notified Coastkeeper that the City's research was complete and several documents were found to be responsive. Subsequently, Coastkeeper conducted document review at the City of Escondido on December 19, 2007. Per an informal request, the documents were made available for a second document review on February 11, 2007.

On February 25, 2007, Coastkeeper submitted a second PRA request for documents that were not received in the initial review. The City Clerk's office responded on March 6, 2008, stating that the City would require a fourteen day extension. On March 24, 2008, the City stated that many documents were responsive to Coastkeeper's request, all of which were subject to City review prior to being made available. The City also stated that there were too many documents to produce for review at a single session. Therefore, the City would be sending a letter summarizing responses to all of the items listed in Coastkeeper's PRA request at a future date. This letter was emailed to Coastkeeper on April 9, 2008 and mailed on April 10, 2008.

Pursuant to the Public Records Act, the City was required to respond to the February 25, 2007 PRA request no later than March 20, 2008. Though the City sent a response letter, a truly responsive document was not received until April 9, 2008, nor was Coastkeeper permitted to conduct any document review until such letter was received. The letter and spirit of the Public Records Act require public access to information by specified deadlines.

Because of the City's delay and reluctance to answer any questions related to the City's stormwater program, Coastkeeper's document review was limited in both time and scope. Coastkeeper reviewed all documents provided by the City until May 19, 2008, ending the 7-month long document review process. Though the review process spanned 7 months, much of this time was spent waiting for a response from the City Clerk's office. In reviewing the City's Program, Coastkeeper was unable to gain clarification or explanation from any City staff. Thus, Coastkeeeper's review was truly limited to a review of the City's JURMP, Annual Reports, and documents produced pursuant to the PRA requests.

Coastkeeper reviewed and evaluated the following program areas:

1. Development Component including Land Use Planning for Development, Land Use Planning for Redevelopment Component, and Standard Urban Stormwater Mitigation Plans (SUSMPs)
2. Construction Component
3. Municipal Component
4. Industrial/Commercial Component
5. Residential Component
6. Illicit Discharge Detection and Elimination Component
7. Education and Public Participation Components
8. Public Participation, Program Assessment, Special Investigations, Non-Emergency Firefighting, and JURMP Revisions

Though all program areas were evaluated, this Report provides analysis for areas in which the City's Program implementation was exceptional, deficient, or substantially different from that which was described in the JURMP or Annual Reports.

2.4 Documents Not Produced by the City

Of particular note and concern is the City's response to Coastkeeper's second PRA request for certain documents mentioned specifically in the City's JURMP. Either the City's document search was incomplete or the City is not fully implementing its JURMP requirements. One of Coastkeeper's requests was for "all quarterly self-inspections for municipal sites as outlined in the City of Escondido JURMP 2001 section 2.7, including but not limited to, any spot inspections of selected sites conducted by the Storm Water Manager and outlined in the City of Escondido JURMP 2001 section 2.7." The City response letter of April 9, 2008 stated that the City did not have any documents responsive to such a request. Though the JURMP states these inspections are conducted at municipal facilities, the City either lacks or refused to provide records of any such inspections.

A request was also made for "[a]ny documents providing the number of treatment control BMPs inspected, including a summary of inspection results and findings." The City's response letter dated April 9, 2008 stated that the City had no documents responsive to this request. The City is required to provide a list of treatment control Best Management Practices (BMPs) in its model SUSMP, require such treatment control BMPs for all priority projects, and update grading ordinances to require maintenance of treatment control BMPs.[1] It is highly unlikely that the City

[1] 2001 Permit sections F.1.b.(2)(b) and (c), F.2.b.(8)

does not require any facilities to install treatment control facilities, or that the City does not inspect construction sites for such BMPs. In fact, Coastkeeper's review of twice-weekly construction inspection logs implies that field inspectors do check for treatment control BMPs. In this instance, it is likely the City does have responsive documents and did not produce them.

3.0 PROGRAM EVALUATION RESULTS

The following results highlight areas of potential concern as well as areas of positive permit implementation. Results are only included if they stood out in either category, this section is not meant to serve as a full catalog of all aspects of the stormwater permit. Complete evaluation checklists are available as appendices to this report.

3.1 Dry Weather Monitoring

3.1.1 The City's Dry Weather Monitoring Efforts Are Extensive

The City has done a good job of identifying a large number of monitoring stations throughout the city, and in different waterbodies and watersheds. Over 140 stations are used during sampling events, ensuring that even if a large number of stations do not have flows, many sites will still be available for sampling. The importance of dry weather monitoring is two-fold, to detect and eliminate any illicit discharges, but also to ensure any dry weather flows do not negatively impact water quality.

The City also has an up-to-date GIS database that is used during the dry weather monitoring to locate monitoring stations and possible sources of dry weather discharges. Cityworks (AZTECA Systems) is a city master database which includes inspection report results, site history, photography, work order scheduling, cost recovery, and a map display. (2003-2004 JURMP 9-6)

3.1.2 Reporting Metrics Are Misleading

Dry weather monitoring is required under the 2001 Permit section F.5.b. The purpose of these monitoring efforts is to detect possible illicit discharges and connections and eliminate them. The City has 140 monitoring stations, but not all of these stations have flows during the monitoring events. During the 2005-2006 monitoring, 55 stations had dry weather flows. Of these 28 had elevated constituent levels. Though the 2005-2006 Annual Report states that the exceedance frequency was only 20 percent, that percentage is calculated using total stations. A more accurate and useful percentage reflects the number of stations that exceeded an action level as a percentage of those stations sampled that had dry weather flows. Thus, 28 stations with exceedances out of 55 sampled stations is actually a 51 percent exceedance rate. Similarly, for the 2004-2005 season, 31 stations of 51 with dry weather flows had exceedances, which is a 67 percent exceedance frequency. Although the number of exceedances has decreased from the period of 2004-2005 to 2005-2006, it still remains high and is not accurately reflected in the Annual Reports.

3.1.3 Monitoring Does Not Match Impairments

Although some of the constituents tested during dry weather monitoring are not required by the 2001 Permit, the City pays the additional expenses for these parameters for its own "edification and data consistency." Tested parameters not required are water temperature, salinity, and dissolved oxygen. Though it is commendable that the City currently monitors beyond the

minimum requirements, it would be more helpful if the City also monitored for constituents for which a particular waterbody is impaired.[2]

Although total maximum daily loads (TMDLs) have not been implemented for these waterbodies, the City could be proactive in testing for these constituents, particularly during mandatory monitoring events. Further, some of these waterbodies have potential sources listed as agriculture, dairies, urban runoff/storm sewers, flow regulation/modification, unknown nonpoint sources, and unknown point sources. The loads from these sources could be either eliminated or reduced through the City's stormwater monitoring and regulations, limiting the need for a more stringent TMDL program.

3.1.4 Reports Contain Inconsistencies or Errors

Because the dry weather monitoring is used to detect and eliminate illicit discharges, it is critical that the information gathered is accurate. Though the City provides all the monitoring results in the Annual Reports, the 2005-2006 Annual Report contains several discrepancies. Station 822.1.4 was highlighted in the 20005-2006 Annual Report for having exceedances for bacteria for two sampling events. On page 9-11 of the Annual Report, Table 9-5 lists this station at Birch Street, while other Annual Reports and tables list the location as Beech Street. The same table also shows a total coliform level of 285,100 MPN/100mL, fecal coliform level of 52,900 MPN/100mL, and *enterococcus* level of 12,997 MPN/100mL during resampling. However, Table 9-9 shows station 822.1.1 total coliform levels at 1.2 million, fecal coliform levels at 31,000, and *enterococcus* levels at 14,000 for the resample. (Annual Report, p. 9-28) The other station listed in Table 9-5, station 826.0.1, is also represented in Table 9-9. The numbers for station 826.0.1 are the same for both tables. Yet another set of sampling information for station 822.1.4 is represented in Table E-2. (Annual Report, p. E-1) These resampling numbers are different from those listed in Table 9-5 and Table 9-9 and seem to be from 2005 instead of 2006. Station 822.1.4 was originally sampled on 8/14/06 according to Table E-2 and Dry-Weather Sampling Results in Appendix E. However, the resample date in Table E-2 is listed as 8/16/05. This date is either a typo, or the data given is from 2005. In addition, the 2006-2006 Annual Report Table 9-9 lists total coliform levels for the 2004-2005 sampling event as 110,000. However, the 2004-2005 Annual Report lists all bacteria levels as "N/A" in Appendix E, p. 10. To add to the confusion, the 2004-2005 Annual Report shows station 822.1.4 as a station with elevated bacteria levels on the Dry Weather Monitoring Station Elevated Bacteria map, Figure 9-3. In any event, station 822.1.4 sampling results are inconsistent throughout the Annual Reports. Of particular concern is the sampling data listed for station 822.1.4 in Table 9-9 because the resample data for all three bacteria samples are well above the action levels. Moreover, the City seems to be reporting historical monitoring data (Table 9-9) in a misleading fashion. For example, station 826.0.1 was sampled three times in 2004-2005 and had elevated total coliform and enterococcus levels during the first sampling event. However, Table 9-9 only lists the last sampling data total coliform data from 2004-2005. For those years that the

[2] For example, Escondido Creek is listed on the 2006 Clean Water Act Section 303(d) impaired waterbody list for DDT, manganese, phosphate, selenium, sulfates, and total dissolved solids (TDS). The only constituent currently monitored from this list is TDS. In addition, Reidy Canyon Creek is listed as impaired for phosphorous; Lake Hodges is listed for color, manganese, nitrogen, pH, phosphorous and turbidity; the San Luis Rey River is listed for chloride and TDS; San Marcos Creek is listed for DDE, phosphorous, and sediment toxicity; Kit Carson Creek is listed for pentachlorophenol (PCP) and TDS.

station did not have flows, no data is given. The blank data sets could be construed as non-exceedances rather than years without flow.

3.1.5 Illicit Discharge Control Response is Lacking

In addition to data discrepancies, the lack of concrete action to eliminate illicit discharges is troubling. Assuming that either the data listed in Table 9-5 or Table 9-9 is correct, station 822.1.4 exceeded action levels for all three bacteria indicators during the second sampling event. Yet the City's response to these exceedances was minimal. No potential sources of bacteria were found and a pipe video investigation was recommended. (Annual Report, Appendix E, GIS of 822.1.4) The report states that "detailed field investigations of these monitoring stations that followed revealed no discernable potential bacterial source for Station 822.1.4." (Annual Report, p. 9-14) No information relating to these detailed investigations was made available, although Coastkeeper asked for all documents relating to the implementation of the stormwater permit. Therefore, no conclusions can be made as to the sufficiency or depth of the investigation.

However, some conclusions can be drawn from stations for which sources were identified. For example, station 826.0.1 had elevated bacteria levels for the 2005-2006 and for the 2004-2005 dry weather sampling event. Station 826.0.1 was found to be "associated with livestock operations within its storm drain conveyance tributary." (Annual Report, p. 9-14) As a result, the facility was "targeted for outreach through the City's program and will be monitored for compliance." (Annual Report, p. 9-14) The City's response to continually elevated nitrate levels is also outreach material. (Annual Report p. 12-14-12-18) It is encouraging to see the City actively engaging the community to practice better stormwater management practices, such as passing out educational materials to 568 parcels and a golf course in order to reduce nitrate levels, but consistently elevated sample levels during dry weather monitoring events warrant a more focused and prompt response.[3]

3.1.6 The Usefulness of City's Hotline is Undetermined

Though a request was made to see the City's records of hotline and website reports of illicit discharges or complaints, the City did not provide these records.[4] The City's Annual Reports contain summary information of the number of calls received and the City's eventual response and resolution of these calls. The 2005 -2006 Annual Report states that in response to "complaints called in to the City's storm water personnel and/or hotline, 9 NOCs and 5 follow-up NOVs were issued due to the failure of the operators to comply timely with the NOCs," and that as a "result of these enforcement measures, all of the facilities were brought into compliance." (Annual Report, p. 5-3) The reason for the calls, the time elapsed before the City responded to the calls, and the process for eventual compliance could not be verified due to the lack documentation.

Despite lack of specific information, the City's hotline and website program as described in the 2005-2006 Annual Report, is extensive. Calls from the City's hotline are entered into and tracked by the City's AZTECA program, which is linked to the GIS program. This enables staff to locate

[3] Section F.5.d.of the 2001 Permit states "Each Copermittee shall eliminate all detected illicit discharges, discharge sources, and connections *immediately*." (emphasis added); Similar language is found in the 2007 Permit, section D.4.e.

[4] Coastkeeper requested "Any and all records of residential complaints of possible storm water violations made via telephone hotline or website submission, including but not limited to any hotlines paid for or operated by the City of Escondido, and any follow-up site visit documentation relating to complaints."

the address phoned in and the nearest storm drain. In the 2005-2006 reporting period, 680 hotline calls were made. The Annual Report states that 18 percent of these calls were related to debris. (Annual Report, 6-2) This information, while useful, provides only a limited snapshot of the City's efforts. The City operates a GIS-linked hotline that receives hundreds of calls. The 9 NOCs issued represent only 1.3 percent of all calls. Without further information, one can conjecture that the City's hotline receives a high volume of calls that are either not followed up, are not actual violations, or result in compliance without the need for issuance of an NOC. However, it is unclear which of these scenarios is accurate. Further, the City is obviously tracking what type of calls are being made, ie. whether they are related to debris, illicit discharges, etc. However, this information was not provided. This type of data is important in gauging the effectiveness of the hotline and any continuing problems related to stormwater compliance.

To take advantage of public involvement, the City stated in its 2005-2006 Annual Report that it will begin a new marker program to replace the stenciling program already in place. These markers will display the watershed to which the storm drain flows and the hotline number. This will likely increase the number of hotline calls and the accuracy of information reported. It would be useful for the City to not only track detailed hotline information and follow-up responses, but to report this information as well.

3.1.7 Conclusion

For the two monitoring stations highlighted by the City in the 2005-2006 Annual Report, a simple check of data consistency found several discrepancies and inadequate follow-up by the City. Though other data was not verified, and could well be correct, these two stations stand out for their exceedances. It is discouraging to see that the two monitoring stations that are most likely to contribute to a degradation of water quality have been inconsistently reported and that the City is not reporting all data transparently. We disagree with the City's stated plans to reduce the number of monitoring stations and believe the City should continue to monitor its 140 existing sites. In addition, the City should continue to be proactive with its hotline outreach program, while both tracking and reporting its outcomes.

3.2 Industrial and Commercial

3.2.1 All High Priority Industrial Sites Are Inspected

Before annual inspections are conducted, the City prioritizes industrial facilities based on "pertinent historical inspection information, as well as new business types and their pollution potential. Industrial facilities were then prioritized for focused inspections relative to water quality threats." (Annual Report, p. 4-3) High priority sites are those tributary to a Clean Water Act section 303(d) impaired water body, within or directly adjacent to or discharging directly to coastal lagoons, or other environmentally sensitive areas, or subject to the statewide General Industrial Storm Water Permit. (Annual Report, p. 4-3) During the 2005-2006 reporting period, all high priority sites were inspected and reassessed for prioritization. Of the 485 industrial facilities the City evaluated, 178 were considered high priority. During the 2004-2004 reporting period, 343 of 517 sites were considered high priority. Even though the total number of industrial facilities was lower in 2006 than in 2004, it seems that substantially more facilities were considered high priority during the 2004-2005 reporting period than the 2005-2006 reporting period. However, the

specific reason for this change is unclear from the Annual Reports and could be either a result of reprioritization, change in business activities, or a reduction in new facilities.

3.2.2 Industrial Facilities Should Be Tracked Electronically

Though commercial facilities are tracked electronically, it is unclear how industrial facilities are tracked. (Annual Report, p. 5-2) It seems that industrial facilities are not tracked using the City's GIS, as inspections are mapped out using a Thomas Brothers Guide. (Annual Report, p. 4-4) Because the City uses previous inspection data and prioritization information for subsequent annual inspections, an electronic database would be useful for storing and accessing such data.

3.2.3 City Inspections are Not Accurately Reflected in Annual Reports

Commercial sites are inspected annually or semi-annually, depending on the type of establishment. The City focuses its annual commercial inspections on restaurant and motive establishments, as together they represent one-third of the City's high priority commercial sites. Although the City does a thorough job of inspecting commercial sites, the Annual Reports are missing critical data. During Coastkeeper's document review, two commercial site files were chosen at random and reviewed.

The motive site chosen was Rick's Concrete, located at 546 Redwood Street. Rick's Concrete was issued several NOCs and an NOV in 2006 and an NOC in 2004. However, this information was not reflected in any of the Annual Reports. The Annual Reports list the site in Appendix B in the Storm Water Inspection Inventory, Industrial Inventory. This inventory indicates whether any NOCs were issued at a particular site from 2003 to 2006. Rick's Concrete is listed, but does not show any NOCs.

A food service establishment file chosen at random revealed inconsistencies in the Annual Reports as well. North County Cash and Carry (renamed Georgie's), located at 1170 Industrial Avenue, received several NOCs in 2005 and 2006 and an NOV in 2006. However, this site is not listed in any Annual Report under either name. Although the Commercial Facility Inventory in Appendix C does not contain NOC or NOV information, it nonetheless should provide a complete list of commercial facilities in Escondido.

3.2.4 Individual Files are Not Transparent

The file for Rick's Concrete contained many different photos, inspection reports, notices, correspondence, a permit application, and notes. From 2002 to 2007 various inspections were conducted, with eventual resolution of all problems. In January of 2002, the owner was told to install a clarifier, berms, and a sewer connection. Follow up inspections were completed in March, in July, and in August, when all of the required corrections were completed. In December 2004 the site was issued an NOC requiring rain valve repair, interceptor service, rain valve sensor testing, hazardous water clean up and pressure washing. This NOC was apparently issued for a diesel spill at the facility. The spill was called in by a code enforcement investigator, who diked the spill before it reached the storm drain. Pretreatment investigators returned later the day of the spill to verify that a clean-up response team had arrived. The investigators also returned the next day to make sure the site was cleaned up. From email correspondence located in the file, it seems that the site was issued a fine. Several follow up investigations were conducted that week in order to ensure that waste was hauled and that the facility remained in compliance.

In March 2006, the site was issued an NOC which, among other things, called for installation of a diversion drain. Problems with the installation of the drain in the City's public right of way resulted in delay and a Notice of Violation (NOV) was issued in April. After the June deadline elapsed without compliance, a copy of the file was sent to the City Attorney's office for review. On September 12, 2006, the City Attorney's office sent the owners an NOV calling for compliance within 30 days, and outlining the consequences of failure to comply.

In February 2007, the City surveyed the site and the Engineering Department was worked on street modifications that would possibly correct the drainage issues at the site. This is the last entry in the log. No additional NOCs or NOVs were found, but no clear resolution of the drainage issues is mentioned. However, the last entry suggests that the City of Escondido Engineering Department fixed the problem.

The information found in the Rick's Concrete file gives an indication of the City's efforts, but is not easy to navigate through. Moreover, the Rick's Concrete story was pieced together through many documents within the file. No one document or subfolder in the file revealed historical activity. Additional information, such as the City's assessment of fines, eventual resolution of problems and violations, and logs of routine inspections or site visits should be located in individual files. This type of information would be useful for any outside review, for compiling Annual Reports, and for information transfer in the event of staff turnover. It would also likely streamline enforcement efforts and City Attorney action by creating individual files that contain all relevant information. As with other areas, electronic management of this data would further improve transparency and accessibility.

3.2.5 Stormwater Compliance May Require More Enforcement Authority

The Rick's Concrete file suggests that the City actively inspects sites and issues NOCs for any issues identified. Follow up seems to be timely and consistent. However, compliance was difficult to achieve in a timely manner and enforcement seems constrained by the City investigator's ability to take action. Rick's Concrete was issued several NOCs, then an NOV, and was then issued a warning by the City Attorney's office. The City tried to resolve the drainage issue at the site for over three years. City pretreatment staff seems knowledgeable and thorough, and their expertise can be relied upon to ensure compliance. By giving investigators more enforcement authority, the City may be able to streamline enforcement and compliance, improving water quality outcomes.

3.2.6 An Electronic Database Would Streamline the City's Pretreatment Investigation Efforts

The City Pretreatment Department keeps thorough records of all investigations conducted. All inspectors write their daily activities in a daily logbook. All NOCs are kept in chronological order in binders that contain all NOCs for residential, commercial and industrial facilities for stormwater ordinance violations. All NOCs are also located in the individual commercial and industrial facility files. All of the information cross-referenced in reviewed files was consistent throughout the different locations.

In order to free up some of the investigators' time, the City could streamline the recordkeeping process by using either an electronic database or spreadsheet to compile the data, storing all data in one central location. This would likely lead to more accurate reporting in Annual Reports and

be useful for both historical perspective and analysis. For example, currently all NOCs are filed in annual binders in chronological order. This allows for data trend evaluation by date, but not by site, and does not reveal trends in violation type. Electronic data can be more easily sorted, manipulated, and graphed. In addition, storing this data on an internal website or server would allow for easy access by investigators, supervisors, other departments, and reviewers. The City is already utilizing electronic tools such as GIS and AZTECA, and electronic record keeping would be in line with the City's efforts to stay at the forefront of technology.

3.2.7 Further Suggestions for Future Improvements

The industrial site listing does not currently contain information about what type of pollutant load the site may contribute to the MS4. For future compliance with 2007 Permit, the City should update these lists with the site-specific pollutant information.

The City is considering several improvements for industrial inspections:

- Inspect industrial facilities prior to the wet season and spot-inspect select facilities as needed during the wet season to improve pollution prevention.
- Conduct wet-weather inspections at facilities assigned general NPDES industrial storm water permits.
- Perform quarterly inspections at sites identified as posing a greater threat to water quality than other high priority facilities.

These suggestions, if incorporated into the City's industrial inspection program, would enable the City to meet the requirements of the 2007 Permit, and help the City identify problems with BMP implementation during the wet season, which is critical to protecting water quality.[5]

3.2.8 Conclusion

Of the two files inspected, both led to the discovery of discrepancies in the Annual Reports. Although the City seems to be complying with the reporting requirements of the 2001 Permit, the accuracy and completeness of the information is questionable. Further, the City has experienced staff available to inspect sites and ensure compliance. In order to fully utilize staff expertise, the City should streamline record keeping activities and empower them with more enforcement authority.

3.3 Residential

3.3.1 Residential Education Efforts Are Extensive

The City uses various techniques to educate the public about urban runoff, water quality and best management practices (BMPS). The City also conducts surveys to assess the public's change in knowledge. The City acknowledges that results have not significantly changed from the 2004-2005 program year and that the City, and the region in general, needs to continue outreach programs and "continue to incorporate broad storm water concepts as a foundation for more specific environmental issues, such as particular [pollutants of concern] associated with various jurisdictions and/or watersheds."[6] It is also encouraging to see that the City has identified bacteria as one of its pollutants of concern as a result of dry weather monitoring results.[7]

[5] 2007 Permit Section D.4.b.(2) and (3)
[6] 2005-2006 JURMP, p. 10-11
[7] 2005-2006 JURMP, p. 10-9

In order to reach the target audiences, the city used various mass media tools, including a website, phone hotline, workshops, storm drain stenciling, hand-outs, keychains, pens, fridge magnets, and brochures. The City also hands out pet waste bags and broadcasts slides and ads on the local television station. The City's figures on educational material dissemination are impressive and the City's stormwater website contains a great deal of useful educational information such as BMPs, a watershed map, the most recent ordinances and regulations, and the 2007 Permit. Additionally, website hits have increased 84 percent since 2004-2005.

The City also makes efforts to reach out to the bilingual community as well as others who may not have access to stormwater education information. The City distributes brochures in Spanish, which is important as a large portion of the Escondido population is Hispanic. The City has also created a program called the "neighborhood porch" program to address various issues and bring city hall to diverse areas. The City's stormwater staff participates in this program as well.

3.3.2 Municipal Education Efforts Have Improved

The City has several programs aimed at educating municipal personnel. The citiline newsletter discusses stormwater permits and lists BMPs. In addition, the City's stormwater contractor conducted stormwater compliance audits, which led to a 2005 BMP workshop. Presentations made to municipal staff were thorough and outlined various aspects of stormwater compliance.

3.3.3 Future Construction and Development Education Efforts will Need to be Expanded

In order to meet the 2007 Permit education requirements for construction and development, preconstruction meetings, currently provided for developers, should be expanded to include other groups including property owners, project applicants, community planning groups, construction personnel and other responsible parties.[8]

3.3.4 Stormwater Program Assessment is Improving

The City's program assessment contains all of the six categories outlined in the Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs, October 16, 2003. Assessments for level one through three are thorough and positive. However, assessment of level four, load reductions, is lacking for wet weather assessment because the only wet weather monitoring is conducted by the County. The "County sponsored wet-weather water quality mass-loading monitoring program is the region's sole evaluation tool for assessing pollutant load reductions because it is the only composite storm water runoff sampling campaign sponsored under the auspices of the NPDES municipal storm water permit." (Annual Report, p. 12-19) Only two monitoring stations exist, making it difficult to assess water quality in a particular region, and conversely, easy to attribute poor water quality to other sources and municipalities. In order to accurately assess mass loading, stations should be set up throughout the County.

3.4 Construction

3.4.1 Construction Sites Were Inspected As Stated in the JURMP and Annual Reports

A document search at the City of Escondido produced log books for two inspectors, each with logs of inspections. It seems that each inspector is assigned a certain number of construction

[8] 2007 Permit section D.5.b.(2)

projects and inspects them twice a week, briefly noting simple details of the project. Each construction project also has a file containing discharge and self-inspection checklists. A review of one construction file showed that Storm Water Quality Construction Site Self-Inspection Checklists had been filled out every two weeks, but were transmitted well after the inspections were conducted. For example, for Lot 683J, inspections from October 2006 to February 2007 were not faxed to the City until February 2007. This site was issued two NOCs, in September and October of 2006. The September NOC noted that all BMPs were not in place and the rainy season was fast approaching. In October the second NOC was issued, listing a variety of BMPs to be put in place within seven days, with failure to comply resulting in a Stop Notice. No other notices were found in the file, but inspection checklists faxed in February imply that a Stop Notice was not issued and that BMPs were installed. It is also unclear whether BMPs were in place before, after, or during rain events.

3.4.2 The City Lacks Adequate Enforcement Action

The Regional Board issued a Notice of Violation to the City in 2005 for two sites that were violating the Waste Discharge Regulations and for the City's failure to reduce the discharge of pollutants to the maximum extent practicable (MEP) and to enforce the City's ordinances. The sites lacked BMPs to prevent sediment laden water from entering the City's MS4 and BMPs to control erosion. Only one NOC had been issued to the sites before the City was issued an NOV. However, 13 NOCs and four Stop Notices were issued to the sites after the Regional Board issued an NOV to the City. The 2005-2006 Annual Report makes mention of the NOV issued and states that, as a result of a meeting with the Regional Board in response to the NOV, the City "agreed to take more stringent enforcement actions, when other punitive measures, such as verbal warnings or NOCs, fail to compel timely compliance from project proponents." (Annual Report, 8-5) However, the City's persistent use of NOCs and Stop Notices does not signal a change in enforcement strategy. Though the City did require an updated Water Quality Technical Report for improved BMPs at the sites, the violations continued until April 2007, which was the last NOC in the file.

3.4.3 Deficiencies Noted in the Tetra Tech Audit in 2003 Remain

The Tetra Tech Audit conducted in April 2003 revealed some deficiencies in the City's construction program. (Program Evaluation Report San Diego Area Stormwater Program: Cities of Escondido, National City and Oceanside, April 8, 2003) Many of these deficiencies are still evident. For example, it was noted that inspectors' daily logs lacked "specific information to assist in determining compliance" and that inspectors "lack written procedures for conducting consistent inspections." (Program Evaluation Report San Diego Area Stormwater Program: Cities of Escondido, National City and Oceanside, April 8, 2003, p. 5) The field inspectors are conducting the bi-weekly inspections of construction sites, but inconsistencies in the forms used and entries by inspectors remain. The entries made are also not consistent for one inspector, and do not contain sufficient detail, as mentioned in the Tetra Tech Report.

In addition, the lack of enforcement by inspectors and private inspector inadequacy highlighted in the Tetra Tech Report also remain a problem. As evident from the Regional Board's NOV, the City is under-enforcing. Though it seems that inspectors have the knowledge to assess compliance, they lack enforcement authority or are unaware of their enforcement authority.

3.4.4 Supervising Engineer's Inspection Reports Are Inadequate

Although the City requires supervising engineers to supply inspection reports for construction projects, these reports seem to be of little use. Of approximately 20 files reviewed, the majority of the Supervising Engineers Inspection Reports in the files systematically consisted of boiler plate language, rarely mentioning any deficiencies. For example, the two sites for which the City was issued an NOV by the Regional Board always received the same Supervising Engineers Inspection Report. The reports simply had different dates and no issues were ever mentioned. The City should rework or replace this requirement with increased inspections from trained City staff. Funding for additional investigators might be possible through increased permitting fees, offset by the reduction of costs associated with hiring third-party supervising engineers to complete the reports.

3.4.5 Construction Document Review was Hindered by City's Slow Response

Coastkeeper's original PRA Request in November 2007 and subsequent follow-up PRA Request in February 2008 asked for all construction related documents. The responsive documents for the second PRA were reviewed by the City Attorney's Office and were not made available until May 19, 2008, seven months after the first and 90 days after the second PRA Requests. Due to the delay, Coastkeeper was unable to devote the time and resources to review these documents.

3.4.6 Conclusion

The City seems to have knowledgeable staff and pre-construction education programs in place, as well as a frequent inspection program. However, the City is slow to enforce its ordinances and once enforcement action has been taken, slow to escalate to a higher level of enforcement. The result of under-enforcement is a potential detrimental impact on water quality. For future compliance the City should increase the number of field inspectors; standardize inspection logs; and standardize and streamline enforcement procedures.