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Program Evaluation Report

Alameda Countywide Clean Water Program (Board Order No. 97-030; NPDES Permit No. CAS0029831)

Executive Summary

The San Francisco Bay Regional Water Quality Control Board, with assistance from Tetra Tech, Inc., conducted a program evaluation of the Alameda Countywide Clean Water Program in November 2001. The primary goal of the program evaluation was to identify and document positive elements of the program that could benefit other Phase I and Phase II municipalities. The evaluation team also reviewed the copermittees' progress in meeting the National Pollutant Discharge Elimination System (NPDES) permit requirements and the Stormwater Management Plan performance standards, and conducted an in-field verification of program implementation. The evaluation focused on two specific program areas: illicit discharge control and industrial and commercial inspections. The program evaluation also only considered five of the 17 copermittees—the cities of Dublin, Fremont, Hayward, Livermore, and Oakland. Therefore, the evaluation results are specific to these copermittees and are not intended to represent the entire Clean Water Program or other copermittees not evaluated.

This program evaluation report identifies positive attributes and program deficiencies only. No specific potential permit violations were identified. Positive attributes are indications of the copermittees' overall progress in implementing a multifaceted program to address stormwater discharges. Program deficiencies represent areas of significant concern for successful program implementation.

Several elements of the copermittees' programs were particularly notable:

- A countywide management committee and eight subcommittees help provide program direction, consistency, and guidance to the copermittees.
- Identification of pollutants of concern and the development and implementation of pollutant reduction plans is commendable.
- Annual illicit discharge and industrial inspection planning provides for better program direction and accountability (compared to 5-year plans developed by most municipal stormwater programs.)
- Inspection files in Fremont are exceptionally well organized and will be accessible from the field.
- Geographical targeting is used in Oakland.
- A GIS is available for illicit discharge data analyses in Oakland.

The following program deficiencies were identified as the most significant:

- Countywide data collection is oriented primarily toward reporting compliance with performance standards.
- It is difficult to determine copermittee compliance with industrial and commercial discharge control performance standards.
- Information on potential non-filers is not being submitted to the Regional Board.
- Dublin lacks adequate program planning.
- The classification of screening points and high priority areas in Livermore makes determining compliance with performance standards difficult.
- Program implementation and evaluation suffer in Oakland because of a lack of resources.
- The Oakland inspection program lacks an efficient enforcement mechanism.

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1.0 Introduction

1.1 Program Evaluation Purpose

The primary goal of the program evaluation was to identify and document positive elements of the program that could benefit other Phase I and Phase II municipalities. Secondary goals included the following:

- Determine the overall compliance status of selected copermittees with conditions and requirements contained in the Board Order 97-030 NPDES Permit No. CAS0029831 (NPDES permit) and the Alameda Countywide Stormwater Management Plan (Alameda Countywide SMP);
- Acquire data to assist in reissuing the permit; and
- Review the overall effectiveness of the program.

40 CFR 122.41(i) and Standard Condition 7 of the NPDES permit provide the authority to conduct the program evaluation.

The Alameda Countywide Clean Water Program includes 17 copermittees. The program evaluation reviewed the practices and stormwater programs of five of the 17 copermittees—the cities of Dublin, Fremont, Hayward, Livermore, and Oakland. These cities volunteered for the program evaluation.

1.2 Permit History

The NPDES permit was issued on February 19, 1997, and is scheduled to expire on February 19, 2002. This is the second NPDES permit issued to the copermittees under the stormwater Phase I regulations.

1.3 Logistics and Program Evaluation Preparation

Before initiating the on-site program evaluation, Tetra Tech, Inc., conducted a review of available program materials. The goals for the file review were (1) to gain greater knowledge of the existing program, permit requirements, performance standards, and past activities, and (2) to prepare for on-site activities. The following materials were reviewed:

- NPDES Permit No. CAS-0029831;
- Alameda Countywide Clean Water Program performance standards;
- Fiscal year 1999/00 annual report for year ending June 2000 (Sept. 15, 2001);
- Mid-Fiscal year progress report for January 1 to June 30, 2000;
- Illicit discharge control action plans – fiscal year 2001/02;
- Industrial and commercial business inspection plans – fiscal year 2001/02;
- County and copermittee web sites; and
- File correspondence with the permittees and permitting authority.

The authority, scope, and schedule of the program evaluation were communicated to the copermittees by written notice in October 2001. On November 5-8, 2001, the San Francisco Bay Area Regional Water Quality Control Board (Regional Board), with assistance from Tetra Tech, Inc., conducted the program evaluation. The evaluation schedule was as follows:

Monday, November 5	Tuesday, November 6	Wednesday, November 7	Thursday, November 8
<p><i>All Parties</i> - Program evaluation kick-off.</p> <p><i>Alameda County</i> - Program management, annual reporting, financial reporting, institutional arrangements, and measuring progress.</p>	<p><i>Oakland</i> – Industrial and illicit discharge control (I&IDC) and industrial and commercial site visit.</p> <p><i>Hayward</i> – I&IDC and industrial and commercial site visit.</p>	<p><i>Fremont</i> – I&IDC and industrial and commercial site visit.</p> <p><i>Livermore</i> – I&IDC and industrial and commercial site visit.</p>	<p><i>I&IDC Subcommittee meeting</i> – Exit interview.</p> <p><i>Dublin</i> – I&IDC.</p>

Upon completion of each on-site review and during the I&IDC subcommittee meeting, an exit interview was held with the copermittees to discuss the preliminary findings. During the exit interview, the copermittees were informed that the findings were to be considered preliminary pending further review by EPA and the Regional Board.

1.4 Program Areas Evaluated

The evaluation focused on the following two program areas:

- Illicit Discharge Control; and
- Industrial and Commercial Discharge Control.

1.5 Program Areas Not Evaluated

The following program areas were not evaluated in detail as part of the program evaluation:

Countywide

- Watershed assessment;
- Public information and participation;
- Municipal maintenance activities;
- New development and construction controls;
- Monitoring program details (e.g., sample locations, types, frequency, parameters);
- Monitoring reports (e.g., analytical methods, QA/QC or interpretations);

- Other NPDES permits issued to the permittees (e.g., industrial or construction NPDES stormwater permits);
- Legal authority. (The Regional Board reviewed the legal authority when the permit was initially issued); and
- Inspection reports, plan review reports, and other relevant files. The program evaluation team did not conduct a detailed file review to verify that all elements of the programs were being implemented as described. Rather, observations by the evaluation team and statements from copermittees' representatives were used to assess overall compliance with permit requirements and performance standards. A detailed post-evaluation file review of specific program areas could be included in a subsequent evaluation.

Other Copermittees

- City of Alameda
- City of Albany
- City of Berkeley
- City of Emeryville
- City of Newark
- City of Piedmont
- City of Pleasanton
- City of San Leandro
- City of Union City
- Alameda County (Unincorporated Area)
- Alameda County Flood Control and Water Conservation District
- Zone 7 of the Alameda County Flood Control and Water Conservation District

1.6 Program Areas for Additional Review

The evaluation team recommends the following areas for additional review:

- The copermittees not evaluated as part of this evaluation;
- The program areas not evaluated as part of this evaluation;
- A detailed file review to cross-compare and verify that all elements of the programs were being implemented as reported in the annual and mid-fiscal year reports;
- A more in-depth review of each copermittee's annual industrial and commercial inspection plan, focusing on the identification of high priority facilities, inspection tracking and follow-up procedures, and determinations of compliance with performance standards; and

- A more in-depth review of each copermittee’s annual illicit discharge control action plan; specifically, the identification and suitability of local screening points, interpretation of collected data, and triggers for copermittee follow-up investigations.

2.0 Program Evaluation Results

Evaluation results for each copermittee are presented below by program area.

This evaluation report only identifies positive attributes and program deficiencies. No specific potential permit violations were identified. Positive attributes are indications of the city’s overall progress in implementing a multifaceted program to address stormwater discharges. The evaluation team identified only positive attributes that were innovative (i.e., beyond minimum requirements) and that might benefit other Phase I and II municipalities. Program deficiencies represent areas of concern that could significantly affect program effectiveness.

As indicated in Section 1.0, the evaluation team did not review all components of the copermittees’ programs. Therefore, the copermittees should not consider the enclosed list of program deficiencies, or the evaluation report itself, as a shield against undetected violations nor as a comprehensive endorsement of individual program elements. This report does not limit EPA’s or the Regional Board’s authority to identify additional program deficiencies and potential permit violations.

The most significant positive attributes and program deficiencies found during the evaluation are listed in the Executive Summary and are identified below with text boxes.

2.1 Alameda Countywide Clean Water Program

The evaluation team met with representatives of Alameda’s Countywide Clean Water Program (Clean Water Program) to discuss general program implementation and prepare for the individual copermittee evaluations. The following countywide review findings are based on this meeting and general observations made throughout the copermittee evaluation. They do not represent a comprehensive evaluation of the entire Clean Water Program.

The following program elements were reviewed in the Clean Water Program, and positive attributes and deficiencies were noted.

2.1.1 Evaluation of Program Management

Positive Attributes:

- *A countywide management committee and eight subcommittees help provide program direction, consistency, and guidance to copermittees.*

The management committee and the eight subcommittees in the Alameda Countywide Clean Water Program have been instrumental in the continued success and growth of the program. The management committee and subcommittees have provided invaluable assistance to all the cities in the program by developing standard forms, reports, and other information for use. These save all cities time and money while ensuring program-wide consistency. The subcommittee structure also allows

all copermittees to share implementation experiences. This coordinated management committee and subcommittee structure could be a model for Phase II cities in a common area wishing to share resources and information. The copermittees indicated that Regional Board participation at subcommittee meetings is especially useful and they encourage the Regional Board's continued participation.

- *Identification of pollutants of concern and the development and implementation of pollutant reduction plans is commendable.*

As a result of a 1998 assessment of water bodies in the Bay Area, San Francisco Bay, several creeks in Alameda County, and Lake Merritt in Oakland were identified as impaired due to a variety of pollutants. To address the contribution of these pollutants from urban runoff, the Clean Water Program is developing pollutant reduction plans (PRPs). PRPs provide a comprehensive list of actions the Clean Water Program will take to further reduce the discharge of pollutants that are the highest priority for the Regional Board. To date, PRPs have been developed for diazinon, mercury, copper, and polychlorinated biphenyls. The PRPs have only recently been developed and their effectiveness has yet to be determined.

- *The development of annual action and inspection plans provides increased program direction and accountability as compared to 5-year plans developed by most municipal stormwater programs.*

Each copermittee is required to annually develop illicit discharge control action and industrial and commercial business inspection plans. The plans require the copermittees to (1) evaluate the past year's activities, (2) identify priorities for the coming year, (3) quantify the number and types of field surveys and investigations of high priority screening points, and (4) identify the types of businesses that will be inspected during the upcoming year. The development of annual plans provides opportunities for frequent program assessment and updates to program direction and priority setting. The inclusion of these plans in the annual reports also allows the Regional Board to review and participate in priority setting. Additionally, both plans serve as enforceable components of the NPDES permit. This process ensures greater program accountability and responsiveness than 5-year plans developed by most municipal stormwater programs.

Although the evaluation team did not thoroughly review the details, a brief review of the *draft Alameda Countywide Clean Water Program Stormwater Management Plan, July 2001 – June 2008* indicates that the Clean Water Program is proposing to eliminate the development and submittal of annual plans in favor of 2-year inspection plans and 5-year illicit discharge action plans.

Deficiency Noted:

- *Countywide data collection is oriented primarily toward reporting compliance with performance standards.*

Excessive staff resources are expended collecting and reporting data that are solely used to demonstrate compliance with the applicable performance standards. These

“bean counting” exercises limit the amount of time city staff have to analyze collected data and potentially identify and respond to trends or “problem areas.” It also limits the staff hours that would otherwise be available for more beneficial activities such as public education activities, industrial inspections, pursuing enforcement cases, etc. Specific examples included collecting and reporting data on screening point investigations and accounting for the industrial and commercial inspection process. Opportunities to streamline the reporting process and reduce the burden on staff are available. For example, Union Sanitation District in Fremont has inspection forms computerized, with data entry handled by administrative staff. A more balanced approach between compliance assurance and program evaluation would provide additional staff hours that could be used for program improvement.

2.1.2 Evaluation of Illicit Discharge Control Program

Positive Attribute:

- *The Industrial and Illicit Discharge Control (I&ICD) subcommittee has evolved beyond traditional discharge identification and elimination programs.*
The evaluation team participated in a monthly I&ICD subcommittee meeting during the program evaluation. Topics discussed during the meeting demonstrated the comprehensiveness of the Clean Water Program and the subcommittee expansion beyond basic functions and into nontraditional illicit discharge identification and elimination activities. Discussions focused on the potential reduction of pollutants discharged from fire fighting activities, the development of best management practices (BMPs) for school district maintenance staff, stormwater incident recognition and reporting guidelines for 911 operators, and collaboration with the county’s Green Business Program.

Deficiencies Noted:

- *The programs rely on 911 systems for public reporting of spills, dumping, and other stormwater complaints.*
The Clean Water Program has established the 911 systems as its primary mechanism for public reporting of spills, dumping, and complaints. The benefits of the 911 systems include a universal and widely available number for all county residents and a consistent incident recognition, response, and call routing process for 911 operators. However, this process could discourage the reporting of minor spills or illegal dumping, as citizens believe 911 is to be used for emergency purposes only. The Livermore, Hayward, and Oakland programs do not have an alternative number or other public reporting system. 911 is the only number advertised in public education materials. Other cities such as Long Beach and Los Angeles have established a separate stormwater hotline to promote public reporting of minor spills and illegal dumping.

Additionally, city fire departments respond to spill/dumping events and stormwater staff is often unaware incidents occur until submission of periodic reports. For example, in Oakland, the city stormwater staff receives 911 incident reports from the

fire department on a monthly basis, which generally precludes their involvement in response and abatement activities. The city of Fremont has identified this as a potential problem and is actively considering establishing an alternative number and explicit procedures to answer and address citizen calls. The Clean Water Program should evaluate its exclusive reliance on the 911 systems.

- *Variability in how cities interpret the screening point requirement makes it difficult to determine compliance with the performance standard.*

The illicit discharge control performance standard requires cities to identify “prioritized field screening areas” or screening points, for investigation. Some cities have established specific points for regular investigation, while other cities define a screening point as anywhere a city employee performs maintenance or conducts inspections. This variability makes compliance determinations with the illicit discharge control performance standards difficult. Additionally, the lack of established screening points for some cities appears to undermine the intent of the performance standard. The Clean Water Program should set clear guidance on the designation of screening points and on how cities are expected to screen for and identify illicit discharges.

2.1.3 Evaluation of Industrial and Commercial Discharge Control Program

Positive Attribute:

- *The Clean Water Program provides coordinated training programs for inspectors.*
The Clean Water Program conducts annual training sessions for copermittee industrial and commercial business inspectors. Training sessions are oriented toward new inspectors and provide an overview of the overall program goals and the responsibilities of the inspector. These coordinated training sessions are intended to provide a consistent inspection focus and procedure for all inspectors in the County.

Deficiencies Noted:

- *It is difficult to determine copermittee compliance with industrial and commercial discharge control performance standards.*

The industrial and commercial discharge control performance standards require the inspection of “all high priority facilities (as defined in the inspection plan) at least once per year.” However, the industrial and commercial business inspection plan template provided by the Clean Water Program does not require the copermittees to provide the information necessary to determine compliance with this standard. For example, the template asks copermittees to “attach a priority list of businesses that will be inspected during the coming fiscal year, **OR** describe the business types and an estimate of the number of facilities that will be inspected during the coming fiscal year.” None of the copermittees evaluated provided a definitive list of high-priority facilities. Instead, the copermittees listed generalized business categories with estimates of the number of inspections to be performed. In several cases, the categories listed were nondefinitive and included statements such as “a variety of food establishments” or “a selection of facilities which have not yet received a

stormwater inspection.” Therefore, it is very difficult to determine if all high-priority facilities are inspected each year.

Additionally, the performance standards state “the goal is to inspect the business community that has the potential to impact stormwater quality, at least once during the five year permit period.” Because the copermittees are not required to report the number and names of facilities with the “potential to impact stormwater,” it is impossible for the Regional Board, and potentially the cities themselves, to determine what percentage of these facilities are inspected over the 5-year permit term. As an example, Livermore’s recent inspection plan states, “There are approximately 1,900 commercial and industrial facilities in Livermore, however the vast majority are small commercial spaces with limited impact on stormwater quality.” The inspection plan fails to identify, or even estimate, the number of commercial or industrial facilities with potential to impact stormwater quality. Similar deficiencies exist with the inspection plans from the other evaluated copermittees.

To adequately determine compliance with the performance standards, the Clean Water Program should work with the copermittees and the Regional Board to (1) devise criteria for the identification of “facilities with the potential to contaminate stormwater,” (2) have the copermittees apply the criteria to their local commercial and industrial facilities and establish the number of applicable facilities, (3) clearly identify and list the high-priority facilities to be inspected, (4) devise a procedure to demonstrate annual and term-of-permit inspection compliance, and (5) update their business listings on at least an annual basis.

As an alternative to devising criteria for the identification of “facilities with the potential to contaminate stormwater,” the Regional Board or the Clean Water Program could simply require inspections for all facilities in certain categories. For example, the Los Angeles County MS4 permit requires inspections at all restaurants, automotive service facilities, retail gasoline outlets, automotive dealerships, Phase I industrial facilities, and other Federally-mandated facilities.

- *Industrial and commercial database tracking tool could be improved.*
The Clean Water Program has developed a database tool to track the industrial and commercial inspection process. The database has been distributed to the copermittees, and four of the five copermittees evaluated were using it. In most instances, the database is used solely to compile copermittee data for inclusion in annual reports. The system would provide greater value if the copermittees could more easily evaluate their compliance with performance standards. The Clean Water Program should consider revising the current database to include enhanced functionality. Or, if such capabilities currently exist but are not being used, the Clean Water Program should provide additional guidance/training to the copermittees.

• *Information on potential non-filers is not being submitted to the Regional Board.*

The Standard Stormwater Facility Inspection Report Form used by the copermittees provides an area for the inspectors to identify those facilities that may have failed to

file for coverage under the State Board Industrial General Permit. Facilities identified as potential non-filers should be referred to the Regional Board for follow-up activities. A review of past inspection reports indicates that this portion of the standard report is routinely being completed by the inspection staff; however, neither the copermittees nor the Clean Water Program is compiling this information and reporting these facilities to the Regional Board. The Clean Water Program should work with the Regional Board to determine the best method to report non-filers so the Regional Board can target these facilities for inspection/follow-up action.

2.2 City of Dublin

The city of Dublin is located on the southeast side of San Francisco Bay with a population of about 32,000 people. The city covers an area of approximately 12 square miles. The evaluation team conducted a limited review of the city's program with city staff after the I&IDC subcommittee meeting; no on-site review occurred.

The following program elements were reviewed for the city of Dublin, and positive attributes and deficiencies were noted.

2.2.1 Evaluation of Illicit Discharge Control Program

Positive Attribute:

- *Developers provide storm drain stenciling for new projects.*
The city has stenciled existing storm drain inlets with an anti-dumping message. For new developments, the city requires the developers to install thermoplastic stencils on all storm drain inlets. City inspectors verify installation of these stencils.

2.2.2 Evaluation of Industrial and Commercial Discharge Control Program

Deficiency Noted:

- *There is a lack of program planning.*

The city only conducts about 40 industrial and commercial inspections per year. There are approximately 1,300 commercial and industrial facilities in Dublin. Not all of these need to be inspected; however, the city does not have a definitive list of businesses that have the potential to impact stormwater. The city's industrial and commercial inspection plan states that the city has no tangible industrial base, although a later check of Regional Board records indicates that nine facilities with industrial stormwater NOIs have Dublin addresses. General inspection priorities for the city are restaurants, auto facilities, grocery stores, and businesses that handle hazardous materials, yet the inspection plan does not list the number of facilities in these categories. The city needs a better plan to prioritize and inspect industrial facilities for potential stormwater pollution. Growth pressures may also increase the number of facilities requiring oversight. According to the city's web site, Dublin is the fastest growing city in Alameda County, with a 12.8-percent population growth rate from January 1999 to January 2000.

2.3 City of Fremont

The city of Fremont is located on the southeast side of San Francisco Bay. It has a population of about 208,000 people and covers an area of about 90 square miles. It is the fourth most populous city in the Bay Area and California's fifth largest city in area. The city has contracted with Union Sanitation District (USD) to conduct inspections of commercial and industrial facilities for compliance with the city's stormwater management plan and ordinance. The USD is an independent special taxation district that provides wastewater collection, treatment, and disposal services to the cities of Fremont, Newark, and Union City.

USD is also conducting construction inspections for the city. Two USD inspectors conduct construction inspections in cooperation with city building and inspection staff. Each year USD sends out notices for the city to all active construction projects on October 1 notifying them that rainy season stormwater controls must be in place by October 15.

The following program elements were reviewed in the city of Fremont, and positive attributes and deficiencies were noted.

2.3.1 Evaluation of Illicit Discharge Control Program

Positive Attributes:

- *The city is developing an enhanced system for public reporting of spills and illegal dumping.*
The city currently uses the 911 system for the reporting of all spills, but is working on a system that will improve the efficiency of handling public reports of spills or illegal dumping and direct calls to the appropriate city department based on the type of spill.

Deficiency Noted:

- *The city has eliminated the use of designated screening points for illicit discharge investigations.*
The city no longer has designated screening points for illicit discharge investigations. The city stated that designated points were eliminated because of the large amount of resources previously expended inspecting such points, versus the few illicit discharges identified. Instead, the city uses the annual cleaning and inspection of all 6,000 storm drain inlets, industrial and commercial inspections, county inspection of flood control channels, and public complaints as its method of defining screening points. As discussed in section 2.1.2, this variability in how cities define screening points makes it difficult to determine compliance with the current performance standards.

2.3.2 Evaluation of Industrial and Commercial Discharge Control Program

Positive Attributes:

- *Contracting with USD for industrial and commercial inspections has proven effective.*

The city has contracted with USD to conduct inspections of commercial and industrial facilities. USD also operates an established industrial pretreatment program; therefore, their inspectors have inspection and enforcement experience, knowledge of significant pollution sources in the city, and considerable experience in water quality protection. Contracting these inspection services from the USD has proven to be a more cost-effective and efficient solution for the city than training separate stormwater inspectors.

- *Inspection files are exceptionally well organized and will be accessible from the field.*

The USD's industrial and commercial inspection files were exceptionally well organized and easily accessible. The USD is also in the process of making past inspection reports available to inspectors remotely in the field with the use of a laptop computer and a cellular-based modem. The ability to retrieve past inspection reports will allow inspectors to review past violations and site conditions while in the field and ensure that the required remedies have been implemented.

- *The list of industrial and commercial businesses is routinely updated.*
The USD routinely updates the list of industrial and commercial inspection candidates by analyzing its records of new businesses discharging to the sanitary sewer system. This process ensures that new businesses with a sanitary sewer connection are considered for stormwater inspections.

2.4 City of Hayward

The city of Hayward is located on the east shore of San Francisco Bay, about 14 miles south of Oakland. The city has a population of about 140,000 people and covers an area of about 61 square miles.

The following program elements were reviewed in the city of Hayward, and positive attributes and deficiencies were noted.

2.4.1 Evaluation of Illicit Discharge Control Program

Positive Attribute:

- *A process is in place for effective tracking of illicit discharge investigations.*
The city uses a grid map and spreadsheet to plan for and track illicit discharge investigations. A grid is placed over a city map and a spreadsheet is used to identify the specific grids to be inspected each year. The spreadsheet also tracks which grids have been previously inspected. This systematic and orderly progression ensures that the entire city is investigated for illicit discharges during the 5-year permit term. This simple process could be a model for other Phase I and II municipalities that frequently struggle with prioritizing and tracking infrastructure inspections.

Deficiency Noted:

- *The database software for the I&IDC program is inefficient.*
The database software used for I&IDC tracking and reporting is not user-friendly for city staff. This results in a significant amount of time spent on data entry. Using administrative staff to enter data, with QA/QC by inspector staff, could free resources for additional inspections. The city is also not using the information in the database to prioritize industrial and illicit connection inspections.

2.4.2 Evaluation of Industrial and Commercial Discharge Control Program

Positive Attribute:

- *Inspection staff are effective and well trained.*
The evaluation team accompanied city inspectors on two site visits. During both visits, the inspectors were firm and direct about correcting stormwater problems. The staff also effectively described stormwater requirements and recommended actions to correct problems. Stormwater inspection staff in Hayward, similar to staff in Livermore and Fremont, also perform pretreatment inspections.

Deficiency Noted:

- *Updates to the industrial and commercial inspection list are lacking.*
The city lacks a systematic method for updating its list of industrial and commercial inspection candidates. The list is generally updated based on observations of new businesses made by inspectors while in the field. The city should investigate alternative methods and attempt to use the resources of other city departments to routinely and systematically update their list of applicable businesses.

2.5 City of Livermore

The city of Livermore is located inland, approximately 20 miles east of Hayward. It has a population of about 74,000 people and covers an area of about 22 square miles.

The following program elements were reviewed in the city of Livermore, and positive attributes and deficiencies were noted.

2.5.1 Evaluation of Illicit Discharge Control Program

Positive Attribute:

- *Illicit discharge tracing and elimination procedures are in place.*
An illicit discharge consisting of a rapid increase in flow and turbidity was observed exiting a storm sewer outfall during the program evaluation. The city's Source Control Section was proactive in tracing this discharge and used their knowledge of the sewer system and local businesses to ultimately identify two contributing sources, a makeshift truck wash in a moving van company parking lot and fire hydrant flushing at a new light industrial development. Enforcement responses at both locations were appropriate and Source Control inspectors interviewed facility representatives, took digital photographs, and ensured discontinuation of the

discharge. Observations made throughout the evaluation indicated that the Source Control Section has the appropriate tools, knowledge, staff resources, and desire to effectively identify and eliminate illicit discharges. Appropriate enforcement mechanisms are in place and have been used effectively in the past.

Deficiency Noted:

- *Classification of screening points and high-priority areas makes determining compliance with performance standards difficult.*

The city's illicit discharge control program is primarily reactive and is based on observations and complaints made by citizens, city crews, and direct identification by Source Control Section staff. The city indicated that previous attempts to proactively survey the storm sewer system to identify illicit connections and discharges were largely unsuccessful. Therefore, efforts in recent years have focused on periodic observations of generalized screening points throughout the city. Observations of channels and storm drain outlets appear to occur on a "drive-by" basis only.

The annual action plan defines the screening point as "a location visited by city staff to look for an illicit discharge" and acknowledges that the "definition of a screening point is somewhat vague." High-priority areas are defined primarily as industrial and commercial business parks, but the action plan states that "We may choose to include areas with multiple construction projects as high priority screening points." Observations made during the evaluation verified that the action plan is being implemented as described. However, the vague nature of the plan, the definition of screening points, and the identification of high-priority areas make it difficult to determine compliance with the performance standards.

2.5.2 Evaluation of Industrial and Commercial Discharge Control Program

Positive Attribute:

- *Source control oversight and integration complements the stormwater activities.*
The industrial and commercial inspections occur in conjunction with pretreatment program inspections, where applicable. This allows inspectors to combine inspection responsibilities. Source control inspectors are well trained in water quality protection.

2.6 City of Oakland

The city of Oakland has the largest and most urban population in Alameda County. The city population is about 400,000 people.

The following program elements were reviewed within the city of Oakland, with positive attributes and deficiencies noted.

2.6.1 Evaluation of Illicit Discharge Control Program

Positive Attributes:

- *Geographical targeting of resources.*

The Environmental Services Division (ESD) has adopted a geographical targeting approach to reduce the frequency and magnitude of illicit discharge incidents in certain parts of the city. This approach maximizes the efficient use of available resources by concentrating public education, business inspections, and field investigations on particular problem areas. As an example, Lake Merritt was identified as a priority area due to impairment and listing on the federal 303(d) list. The city delineated five contributing drainage areas to the lake and initiated a concentrated inspection and educational site visit effort for all industrial and commercial businesses and restaurants within one of the five drainage areas. The effort was intended to raise the awareness of local businesses and to identify and eliminate illicit discharges. The city also installed and is currently testing the performance of a stormwater quality structural control in one of the other Lake Merritt drainages. Although the effects of this targeted approach have yet to be determined, ESD staff plan to continue focused efforts in other Lake Merritt drainages and in other “problem” areas of the city.

- *A GIS is available for illicit discharge data analyses.*

The city uses Map Info, a GIS product, to record the locations of 911 spill response calls, screening point observation data, and illicit discharge identification and response information. The GIS is primarily used for data storage, retrieval, and map generation. The GIS could also be used to identify illicit discharge problems areas, evaluate data collected from the city’s screening points, and develop long-term trend analyses to track the effectiveness of the program.

Deficiencies Noted:

- *Program implementation and evaluation suffer because of a lack of resources.*

For a city its size, the resources allocated to the stormwater program are insufficient. The ESD has approximately 25 staff members, of which only an estimated 1.75 FTE are available to administer the stormwater program. This 1.75 FTE is allocated among four staff with no single person fully dedicated to program implementation. Staff responsibilities include:

- Responding to citizen, city crew, and other jurisdictions nonemergency illicit discharge complaints.
- Screening point investigations and data collection.
- Coordination of the geographical targeting approach.
- Periodic enforcement support for the industrial and commercial business inspection program.

- Participation in the countywide subcommittee meetings.
- Data collection, management, and reporting for the annual and mid-fiscal year reports, and performance standards and NPDES permit requirement compliance determinations.
- Training the staff of other city departments in stormwater protection and the BMP use.
- Public outreach activities and events.

The lack of resources has caused the city's illicit discharge control program to be largely reactive, not proactive. Staff resources are insufficient to proactively survey the storm sewer system to identify illicit connections and discharges. Although the city conducts regular investigations of screening points, resources are lacking to adequately evaluate the collected data and to respond to all potential illicit discharges. Lack or unavailability of equipment also appears to be a significant hindrance. For example, the illicit discharge control staff must provide 72 hours advance notice to request video surveillance equipment and has limited field-screening equipment. This lack of equipment makes tracing and eliminating potential illicit discharges very difficult.

Stormwater program staff is focused on data collection, reporting, and demonstrating compliance with performance standards. As a result, little, if any, time appears available for data interpretation and program evaluation.

- *Illicit discharge investigations and responses are handled exclusively by the Fire Department.*
Illicit discharge incidents reported through the 911 system are handled exclusively by the Fire Department. The ESD is not contacted by the Fire Department and is therefore generally unaware of the incidents and spill response activities. Details of illicit discharge incidents are provided to the ESD at the end of each month in the form of a computer printout. ESD staff reviews the printout and applicable events are entered into the Map Info database. Given the lack of stormwater program resources this process might be the city's most efficient spill response method; however, the complete reliance on the Fire Department reduces the opportunity for ESD staff to assist with a full range of spill response activities and limits their understanding of the nature and magnitude of incidents citywide.

2.6.2 Evaluation of Industrial and Commercial Discharge Control Program Positive Attribute:

- *The city inspector was well trained and direct.*
The evaluation team accompanied a city hazardous materials inspector on three site visits. During all three visits, the inspector was knowledgeable, firm, and direct about

correcting stormwater problems. The inspector also effectively described the stormwater requirements and actions required for compliance.

Deficiencies Noted:

- *The inspection program lacks an efficient enforcement mechanism.*

Both the ESD and the Hazardous Materials Inspectors lack an efficient means to enforce city stormwater regulations. Inspectors do not possess the authority or have a mechanism to write “fix it tickets,” or their equivalents, and cannot impose administrative fines for identified violations. “Cease and Desist” and “Order to Abate” are the only mechanisms available to city inspectors and both have been used sparingly due to their severity. Observations made during the evaluation indicated that the inspectors are required to make numerous trips to each facility and that it was their perseverance, rather than a particular enforcement mechanism, that ultimately achieved compliance. The city should work with inspectors to evaluate enforcement options and should consider providing Notice of Violation (or equivalent) authority, including with monetary penalties, to inspection staff.

- *Program implementation appears to suffer from a lack of cross-departmental coordination.*

The industrial and commercial inspection program is largely administered by Hazardous Materials Inspectors within the Fire Service Agency. While ESD is often asked to participate or otherwise support enforcement cases, their day-to-day involvement with the inspection program is limited. The list of businesses to be inspected, the inspection schedules, and the need and urgency for recurring inspections appear to be the sole responsibility of the Fire Service Agency. It is unclear whether there are routinely scheduled meetings between the ESD and hazardous materials inspection staff to discuss progress and identification of problems. Additionally, the roles and responsibilities for the development of and adherence to the annual inspection plan were unclear. Improved coordination would likely increase the effectiveness of both the illicit discharge and industrial and commercial inspection programs.

- *Updates to the industrial and commercial inspection list are lacking.*

The city appears to lack a systematic method for updating its list of industrial and commercial inspection candidates. The list is primarily updated based on observations of new businesses made by inspectors while in the field. The city should investigate alternative methods, including using the resources of other city departments, to routinely and systematically update its list of applicable businesses.