

Phoenix Area
Municipal Separate Storm Sewer System (MS4)
Compliance Interviews

Industrial and Commercial Program Interviews

City of Tempe
City of Mesa
City of Glendale
City of Scottsdale
City of Phoenix

Report: October 16, 2008
Interviews Conducted: August 25- 28, 2008

Report Prepared by Scott Coulson, PG Environmental and John Tinger, USEPA

Overview

A program evaluation to assess compliance with the MS4 permit conditions for the control of pollutants from Industrial and Commercial facilities was held with the following MS4 permittees: the Cities of Tempe, Scottsdale, Glendale, Mesa, and Phoenix.

On August 28, 2008, PG Environmental, LLC (PG), subcontractor to Eastern Research Group, Inc., conducted a series of interviews of Municipal Separate Storm Sewer System (MS4) permittees located in the Phoenix area. These activities were performed under contract for the U.S. Environmental Protection Agency (EPA), with attendance of the Arizona Department of Environmental Quality (ADEQ). The Phoenix-area permittees are regulated by individual National Pollutant Discharge Elimination System (NPDES) permits issued by EPA Region IX. Each permit requires the permittee to develop a program to control pollutants from industrial facilities in accordance with Title 40 of the *Code of Federal Regulations* (CFR), §122.26(d)(2)(iv)(C). The permittees were interviewed regarding the Industrial and Commercial Facilities component of their MS4 program. The interviews did not include a field component, oversight inspections, or detailed file review.

The interview with the City of Phoenix MS4 Program was conducted by U.S. EPA, with attendance from ADEQ, on August 26, 2008. While the program interview for Phoenix was similar to that of the other permittees, there was an additional component to the evaluation due to the previous audit conducted by EPA in 2001. Therefore, the purpose of the evaluation was also

to conduct a follow-up to the findings of EPA's 2001 audit. EPA targeted for evaluation two of the areas of program deficiency identified in the 2001 audit, namely the control of pollutants from industrial and commercial sources and the detection and elimination of illicit discharges. The evaluation was more extensive than the interviews conducted for Tempe, Glendale, and Scottsdale, but did not include a field component or oversight inspections.

In addition to the program element interviews for Industrial and Commercial Facilities, the audit team conducted a comprehensive audit of a large portion of the City of Mesa's MS4 Program in the days preceding the industrial and commercial interviews. Although the City of Mesa's Industrial and Commercial Facilities program element was evaluated through a more formal process than that used for the other permittees, the results of the assessment are incorporated into this memorandum.

Executive Summary

- The City of Tempe's program is highly developed and advanced in comparison to other local jurisdictions. Specifically, the City's regulatory mechanisms and inspection program appeared to be well developed. The City has a comprehensive city-wide approach, utilizing the industrial pretreatment program and the development of a sewer connection permit for non-domestic users, as well as the fats, oils and grease (FOG) program for stormwater inspections. The City has included industrial facilities subject to the MSGP in its assessment of facilities contributing pollutants to the stormdrain. The City has established a comprehensive inspection prioritization. However, the City has not yet fully implemented the levels of inspection as stated in the SWMP. The city has developed an excellent program effectiveness measure to measure the success of its industrial program by assessing the compliance rates of inspected facilities and comparing to previous years. The City has demonstrated an increase in compliance rates from 49% to 94% from 2002/3 to 2007/8.
- The City of Scottsdale program is unstructured and underdeveloped. The City has drafted several supporting tools for the program element (e.g., an inspection checklist and enforcement response plan), but the program has not progressed beyond the development of these draft tools. The City has identified only 2 facilities in its industrial/commercial program and has not evaluated the contribution of other commercial/industrial pollutant sources in its inventory. The City appears to lack an effective ordinance and an effective enforcement mechanism.
- The City of Glendale Industrial and Commercial Facilities program requires several improvements in order to support adequate advancement of the program. Specifically, the City could improve its inspection plan and prioritization methods, ordinance and enforcement capabilities staffing and, most important, the organization and unification of the MS4 program. To some extent, the City has included non-industrial facilities (restaurants) in its facility inventory. The City has not identified

measurable goals for the industrial/commercial program nor has it evaluated the effectiveness of the program.

- The City of Mesa Industrial and Commercial Facilities program requires several improvements in order to support adequate advancement of the program. Specifically, the City could improve the scope of its inspections, its enforcement policy, and its assessment of potential pollutant sources within its jurisdiction. The City has not evaluated the contribution of other commercial/industrial pollutant sources in its inventory. The City has not identified measurable goals for the industrial/commercial program nor has it evaluated the effectiveness of the program. The annual report does not provide information on the results and outcomes of inspections (other than the number of inspections conducted).
- The City of Phoenix is not adequately implementing a program to control pollutants from Industrial and Commercial facilities. The City has not addressed the deficiencies identified in the program evaluation conducted in 2001, and does not appear to have made progress since that time. Inspections are not being conducted at a reasonable pace to measure compliance and track progress. The City lacks city-wide program involvement and oversight. The City has not identified measurable goals for the industrial/commercial program nor has it evaluated the effectiveness of the program. The annual report does not provide information on the results and outcomes of inspections (other than the number of inspections conducted). The City needs to evaluate results of ongoing inspections in terms of prioritization, potential exposure to stormwater, and common problems observed.

A Table Summarizing the results is attached.

Purpose

This memorandum is intended to provide regulatory agencies with insight that supports advancement of MS4 oversight and the development and issuance of renewal MS4 permits. Specifically, the interviews were intended to rapidly assess the implementation status of each permittee's Industrial and Commercial Facilities program element. On-site activities consisted of a 1½–2-hour interview with permittee staff coupled with a brief discussion of observations made. Due to the objectives and time constraints, no attempt was made to assess and formally document a permittee's compliance with specific permit requirements.

The remainder of this memorandum provides permittee-specific observations regarding the implementation status of the Industrial and Commercial Facilities program element.

Permittee-specific Observations

Below are observations regarding each permittee's Industrial and Commercial Facilities program. Notable highlights of each program, including both positive and negative aspects, are provided. The observations contained herein represent the inspector's interpretation of each

permittee's Industrial and Commercial Facilities program element, based solely on the interviews and records provided.

I. City of Tempe

A. Industrial and Commercial Source Inventory

The City of Tempe (hereafter, the City or Tempe) maintains an extensive industrial and commercial source inventory. The Tempe staff stated that they have placed specific emphasis on the development of this program element because of the large industrial land base in the City. The industrial land use category makes up approximately 17 percent of the City, and the staff stated that Tempe likely has the most industries per capita in Arizona. The City uses a sanitary sewer connection permit system, water bill tracking, Maricopa County information, infoUSA® information, and coordination with the City's planning department in developing, tracking, and updating its industrial and commercial source inventory. Tempe staff explained that the resulting source inventory consists of 66 facilities that are subject to the City's pretreatment regulations and 963 facilities that are subject to EPA's multi-sector general permit (MSGP). Because of the industrial nature of the city and the fact that new construction consists primarily of infill, Tempe expressed a desire to deemphasize the construction program element in its next permit.

B. Method of Regulating Industrial and Commercial Sources

As described in the City of Tempe Storm Water Management Plan dated October 2003 (hereafter, Tempe SWMP), Section II.C, "Tempe's first term MS4 permit, either directly or by reference to Tempe's October 1996 storm water management plan, required Tempe to maintain a priority industrial facility list based on storm water pollution potential, *to inspect facilities on this list that were also subject to Tempe's pretreatment regulations on an annual basis*, and to inspect all other listed facilities at a rate of 20% per year for the duration of the permit [emphasis added]." The Tempe staff explained that in-house NPDES expertise from the industrial pretreatment program (IPP) and wastewater treatment disciplines provided a valuable resource in program development and organizational control. The staff further explained that the City leveraged the strong relationship between its IPP and the storm water requirements to develop its industrial and commercial program. On July 1, 2008, for example, Tempe implemented a sewer connection permit system for all nondomestic users of its sanitary sewer system. This permit system uses a Notice of Intent (NOI) form associated with a general permit by rule under the City's sewer use ordinance.

Tempe's program differentiates between industrial and commercial sectors. The industrial component uses a facility prioritization system that incorporates the MSGP and includes the following inspection frequencies: (1) annual inspections of facilities that are subject to the MSGP and located in a drainage area leading to waters of the United States (WOUS); (2) inspections once every 5 years of facilities that are subject to the MSGP and drain to City retention; (3) inspections once every 5 years of facilities that have submitted a No Exposure Certification (NEC) and, in Tempe's assessment, appear to be compliant with the NEC requirements; and (4) inspections, at least every 6 months until the facility is determined to be

compliant, of any facility that, in Tempe's assessment, is not compliant with the MSGP requirements or has violated Tempe's storm water ordinance.

Tempe's approach leverages the MSGP requirements with the view that the City's MS4 program can benefit from facilities having MSGP coverage, industrial pollution prevention controls, and state and federal regulatory oversight. In this manner, Tempe uses its inspections to heighten a facility's awareness of the MSGP requirements and to advise the facility on how to comply. Tempe's inspectors explained that facility operators have been generally appreciative of this compliance assistance approach, which in turn can foster a cooperative relationship with the facility, thereby furthering compliance with both the MSGP and MS4 requirements.

In the 2007/8 annual report, the City stated that it has not yet implemented the levels of inspection as stated in the SWMP, and that Tempe will begin inspections of all facilities at SWMP prescribed frequencies upon issuance of Tempe's 2nd term permit.

During inspections conducted in the first permit term, the City found that the vast majority of facilities in its jurisdiction were NEC-eligible. Staff explained that as a result, by simply advising the facility to submit an NEC and comply with the NEC requirements, the City could take credit for bringing facilities into compliance with the MSGP. Furthermore, the City has been able to use compliance rates as a defined, measurable goal, and it appeared that the City's use of the MSGP requirements has resulted in favorable compliance numbers for reporting purposes.

As described by City staff, Tempe's commercial component focuses on deterrence, detection, and elimination of illicit discharges. The commercial inspection component also incorporates elements of the City's post construction program by conducting annual inspections of facilities located in an area where the City has specified relaxed criteria or requirements for retention through the use of structural controls. This alternative retention criteria area (ARCA) is a focus location for inspections because less retention is provided in the area. As the ARCA is redeveloped, infill projects are required to provide retention at sites that did not originally provide any runoff storage. Inspections of commercial facilities outside the ARCA are conducted in conjunction with the City's fats, oils, and greases (FOG) reduction program on an annual basis. As described earlier, Tempe is also using its sewer connection permit system as a regulatory tool in its commercial component.

C. Enforcement Escalation Mechanisms and Their Use

Tempe has developed a storm water ordinance that includes a prohibition on illicit discharges and requirements for implementing best management practices. The ordinance also includes provisions for escalated enforcement based on identified noncompliance. In addition, the City has developed an enforcement response plan (ERP) for use in its IPP. Staff explained that the City plans to roll out the ERP for use in its MS4 program, but no rollout date was provided.

D. Conclusions for the City of Tempe

The information gathered during the evaluation indicates that Tempe's Industrial and Commercial Facilities program element is highly advanced in comparison to other local

jurisdictions. Specifically, the City’s regulatory mechanisms and inspection program appeared to be well developed, prioritized, and utilize city-wide resources.

II. City of Scottsdale

It should be noted that it was difficult to discern the status of the City of Scottsdale (hereafter, the City or Scottsdale) Industrial and Commercial Facilities program element based solely on the interview conducted in the time allotted. The City acknowledged that it is lagging behind in terms of program development. City staff also explained that there have been recent improvements to the City’s storm water management programs, including organizational restructuring and growth in storm water staffing from 3 to 10 employees. On the basis of the discussion, however, it appeared that the overall MS4 program is highly unstructured and underdeveloped.

A. Industrial and Commercial Source Inventory

The City primarily relies on the EPA Toxics Release Inventory (TRI) database to identify facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (hereafter, SARA Title III). City staff explained that they had eliminated facilities from the TRI list on the basis of changes in operation or plant closures. The resulting industrial source inventory consists of only two facilities—a General Dynamics plant and a Microsun facility.

The permit states that the source inventory “shall also include other industrial facilities, and non-industrial sources or categories of sources which the permittee believes may discharge significant quantities of pollutants in storm water runoff.” The City has not included other industrial facilities (e.g., those which are not subject to SARA Title III) and nonindustrial facilities (e.g., commercial businesses such as restaurants and automobile repair shops) in its source inventory. Without including the commercial land use component and an expanded industrial inventory, the City may not be addressing all significant pollutant sources. The City must assess the potential pollutant sources in its jurisdiction, including municipal, industrial, and commercial facilities, for inclusion of additional facility types in its source inventory and the inspection process.

B. Method of Regulating Industrial and Commercial Sources

The City acknowledged that it uses a reactive inspection process whereby inspections are conducted based on complaints and has not developed a formally structured inspection program for industrial facilities. The City did, however, provide a copy of a draft inspection form that would be used for both industrial and construction storm water inspections. City staff also explained that they have not been reviewing industrial storm water pollution prevention plans (SWPPPs); it should be noted that this failure to review SWPPPs may be inconsistent with the City’s MS4 permit.

C. Enforcement Escalation Mechanisms and Their Use

The City has developed a storm water ordinance that prohibits illicit discharges and contains provisions for escalated enforcement based on identified noncompliance, but the storm water ordinance appears to rely heavily on the elements of nuisance law. City staff explained that they anticipate the need to revise the ordinance based on their review of the draft MS4 permit for the City of Phoenix. In addition, the City has written a draft ERP for use in its Industrial Facility and Construction program elements, but the plan has not yet been approved or implemented.

D. Conclusions for the City of Scottsdale

The information gathered during the evaluation indicates that the Scottsdale Industrial and Commercial Facilities program element is highly unstructured and underdeveloped. The City has drafted several supporting tools for the program element (e.g., an inspection checklist and ERP), but the program has not progressed beyond the development of these draft tools. The City has identified only 2 facilities in its industrial/commercial program and has not evaluated the contribution of other commercial/industrial pollutant sources in its inventory. Without including the commercial land use component and an expanded industrial inventory, the City may not be proactively regulating all significant pollutant sources. The City appears to lack an effective ordinance and an effective enforcement mechanism.

III. City of Glendale

A. Industrial and Commercial Source Inventory

The City of Glendale (hereafter, the City or Glendale) maintains its industrial source inventory through the use of the EPA TRI database and City tax and license data. To some extent, the City is also addressing nonindustrial facilities (e.g., commercial businesses such as restaurants) in its source inventory and in coordination with its IPP staff. Glendale's industrial and commercial source inventory has a predominantly commercial makeup. The Glendale staff stated that there are approximately 350 facilities in the City's industrial and commercial source inventory, including five significant industrial users (SIUs) within its jurisdiction. The City uses Linko Data Systems software in both the IPP and the MS4 program to track regulated facilities.

Glendale did not appear to have an effective method of prioritizing its industrial and commercial source inventory to guide its inspection activities. Rather than assessing its facility inventory for threat to water quality prior to inspection, the City has prioritized the facilities based on past inspection results. Although this information is valuable, it appeared that the City could more effectively use its inspection resources by conducting an overall initial assessment of the facilities to identify those with the highest potential to adversely affect storm water quality. The City also did not appear to have a well-defined inspection plan for conducting the Industrial and Commercial Facilities component over the length of the permit term. During the interview, City staff stated that the City is developing a Geographic Information Systems (GIS)-based map of its MS4 system (storm drain system). The MS4 map will include outfalls from the MS4 and contributing drainage areas; it will also be capable of calculating the most likely flow pathway for drainage or illicit discharges. Moreover, the MS4 map will include a layer showing industrial

and commercial facilities. It appeared that the GIS could be used in prioritizing the source inventory using a variety of metrics (e.g., proximity to receiving storm drain inlets/receiving waters, inclusion of retention).

B. Method of Regulating Industrial and Commercial Sources

The Glendale staff explained that they have leveraged the strong relationship between the City's IPP and storm water programs to develop the Industrial and Commercial Facilities program element. The City appeared to heavily rely on its IPP staff and their NPDES experience in carrying out the following responsibilities related to the Glendale MS4 permit: dry-weather sampling, quarterly inspections of permitted outfalls, annual inspections of City municipal facilities, proactive inspections of Glendale businesses subject to the MSGP (the facilities on the source inventory), and investigation of complaints of spills and illicit discharges. These responsibilities appeared to include a major portion of the City's Industrial and Commercial Facilities program element, in addition to portions of the Illicit Discharge Detection and Elimination and Municipal Operations program elements. Furthermore, the City is using its IPP inspectors to identify and address storm water issues during IPP inspections, and the checklist used by the IPP inspectors includes a separate storm water component. However, the program appears to be significantly understaffed. City staff explained that there is only one designated storm water inspector in the IPP group who is responsible for carrying out the previously mentioned MS4 activities. They stated that the City's IPP group allocates approximately 90 percent of its efforts to IPP and that the MS4 obligations have received far less emphasis. Furthermore, the City did not appear to have a fully unified overall MS4 program. The staff explained that the City does not staff a storm water coordinator position; instead, it hires a consultant to gather information from the various departments involved for annual reporting purposes. According to the annual report, the City only conducted 10 industrial stormwater inspections last year.

C. Enforcement Escalation Mechanisms and Their Use

Glendale has not developed a storm water ordinance and instead relies on separate sections of the city code to address storm water quality issues. City IPP/industrial inspection staff explained that they typically call the city code compliance staff to enforce storm water issues. It appears that the lack of adequate ordinance and direct enforcement authority hinders adequate enforcement of stormwater violations. The City has developed an ERP for use in its IPP activities, but it has not developed an ERP for use in its MS4 program.

D. Conclusions for the City of Glendale

The information gathered during the evaluation indicates that the Glendale Industrial and Commercial Facilities program element appeared functional, but improvements are needed to support adequate advancement of the program. Specifically, the City could improve its inspection plan and prioritization methods; its ordinance and enforcement capabilities; its staffing; and, most important, the unification of its MS4 program through organizational control.

IV. City of Mesa

A. Industrial and Commercial Source Inventory

The City of Mesa (hereafter, the City or Mesa) maintains its industrial source inventory in several ways. Mesa collects Notice of Intent (NOI) information for dischargers within its jurisdiction. Under City ordinance, an entity discharging into the MS4 who is required to submit an NOI in association with any federal or state storm water requirements must also submit a copy of the NOI to the City. The City then assesses the NOI information and determines whether the industrial activity or facility must be added to its source inventory. Mesa also conducts annual reviews of the EPA TRI database to identify facilities that are subject to SARA Title III. Additional facilities are added from lists of facilities with hazardous substances, which the Maricopa County Local Emergency Planning Committee maintains. The resulting source inventory consists of 35 facilities that are subject to SARA Title III and 2 facilities that were added as a result of a formal complaint.

The permit states that the source inventory “shall also include other industrial facilities, and non-industrial sources or categories of sources which the permittee believes may discharge significant quantities of pollutants in storm water runoff.” The City has not included other industrial facilities (e.g., those which are not subject to SARA Title III) and nonindustrial facilities (e.g., commercial businesses such as restaurants and automobile repair shops) in its source inventory. Without including the commercial land use component and an expanded industrial inventory, the City may not be addressing all significant pollutant sources. The City’s program to address other industrial and nonindustrial facilities is reactive in the sense that such facilities are assessed only in response to a formal complaint made to the City’s environmental complaint hotline. The City maintains a complaints database to track resolution of complaints, but has not analyzed its data to identify trends and assist in prioritization of sources, or for targeting of specific jurisdictional areas. Although no effort was made to verify the validity of complaints, a cursory review of the City’s complaints database suggests that commercial businesses may be a significant pollutant source within the community. City personnel explained that the source inventory has not been expanded because of apprehension about committing to do proactive inspections of additional facility types. The City must assess the potential pollutant sources in its jurisdiction, including municipal, industrial, and commercial facilities, for inclusion of additional facility types in its source inventory and the inspection process.

B. Method of Regulating Industrial and Commercial Sources

Mesa has developed an inspection program as a tool for regulating the facilities included in its source inventory. According to the City’s Industrial Facility Inspection Standard Operating Procedures dated August 2008 (hereafter, Mesa Industrial Inspection SOP), Section 3.7, the City conducts inspections of industrial facilities only to ensure compliance with the City code. The City limits its review of industrial facility SWPPPs; the plan review is used to familiarize the inspector with the facility’s operations and as a mechanism for providing compliance assistance support to the facility operator. According to the annual report, the City only conducted 8 industrial stormwater inspections last year. It should be noted that Mesa’s process contrasts sharply with the approach used by the City of Tempe. Tempe’s approach leverages the MSGP

requirements with the view that its MS4 program can benefit from facilities having MSGP coverage, industrial pollution prevention controls, and state and federal regulatory oversight.

In its annual report, the City lists the number of inspections conducted as a performance measure but the City has not identified measurable goals for the industrial/commercial program nor has it evaluated the effectiveness of the program. The annual report does not provide information on the results and outcomes of inspections (other than the number of inspections conducted).

C. Enforcement Escalation Mechanisms and Their Use

Mesa has developed a “Storm Water Pollution Control” ordinance, which grants the City broad authority to regulate both the actual discharge and the potential to discharge pollutants to the City MS4. In addition, this ordinance empowers the City to require all practicable best management practices identified by the City Engineer, including requirements imposed by applicable NPDES Storm Water Permits. However, the City Engineer has not designated or formally adopted a set of minimum BMPs (i.e., an industrial and commercial BMP manual). Furthermore, the Mesa Industrial Inspection SOP, Section 4.2, states that the “City only uses this [enforcement] authority [under the Storm Water Pollution Control ordinance] when all other options have failed....The City prefers to operate under a voluntary compliance program.” Although this approach might have been functional to date, situations in which this cooperative tactic would not adequately ensure compliance with the City’s MS4 permit could arise.

D. Conclusions for the City of Mesa

The information gathered during the evaluation indicates that the Mesa Industrial and Commercial Facilities program element appeared functional, but improvements are needed to support adequate advancement of the program. Specifically, the City could improve the scope of its inspections, its enforcement policy, and its assessment of potential pollutant sources within its jurisdiction. The City has not evaluated the contribution of other commercial/industrial pollutant sources in its inventory. The City has not identified measurable goals for the industrial/commercial program nor has it evaluated the effectiveness of the program. The annual report does not provide information on the results and outcomes of inspections (other than the number of inspections conducted).

V. 1. City of Phoenix Industrial and Commercial Program

A. Background

EPA conducted a Program Evaluation of the MS4 Program on October 2-4, 2001. The final Report was issued on February 25, 2002. The report is available on EPA's website at <http://www.epa.gov/region09/water/npdes/ms4audits.html>. The following program deficiencies were identified in the evaluation:

- SWMP (and permit) do not include measurable elements to quantify and track progress.
- Storm Water Section lacks resources to meet permit requirements in a timely manner.
- Lack of BMPs for routine and emergency road and infrastructure projects.
- Failure to file a Notice Of Intent (NOI) for the 19th Avenue road project (101 Loop to Deer Valley).
- Lack of ongoing maintenance of erosion and sediment controls at construction sites.
- City inspectors' lack knowledge of EPA's storm water general permit conditions.
- Failure to eliminate illicit discharges in a timely manner.
- Lack of criteria by which to determine whether "conditional" non-storm water discharges are sources of pollutants.
- Lack of cost-recovery mechanism for non-storm water releases to the storm drain system.
- Limited interdepartmental coordination.
- Public survey results showing decreasing storm water awareness.
- Limited monitoring data.

The following is an excerpt from the 2001 Program Evaluation:

The SWMP (and the NPDES permit) do not contain measurable elements necessary to quantify and track progress. Two specific examples observed during the evaluation include the inspections of industrial facilities and the inspections of storm drains for illicit discharges. For example, the city inspects industrial facilities to ensure compliance with the city's Chapter 32C storm water ordinance and currently conducts an average of only two industrial inspections per week. Based on the city's assumption that about 5,000 industrial/commercial facilities are located within the city limits, at the current pace it would take 50 years to visit all facilities. The city should set specific annual goals for industrial inspections such that all facilities will be inspected within a reasonable time frame (e.g., 5 years). While the city also has a program to periodically inspect and sample storm drains for illicit discharges, no time frame has been established for elimination of the more than 60 discharges that have been identified to date...The lack of such goals and related schedules is preventing the city from implementing important program elements in a timely manner.

A. Industrial and Commercial Source Inventory

The City of Phoenix only uses InfoUSA® database to identify facilities. It is unclear if InfoUSA® is a comprehensive source for identifying industrial and commercial facilities within

the City that may contribute to stormwater pollution. Our understanding is that InfoUSA® is a voluntary database, and therefore may not include all facilities. Additionally, it is unclear if the data is accurate; for example, it is unclear how the list identifies 23 Oil and Gas extraction facilities (Sector I) and 6 metal mines (Sector G) within the city limits. The City should use additional sources in order to verify the data.

The resulting inventory is approximately 4,000 facilities. The City developed the industrial inspection priority list at the beginning of the program to evaluate 31 industrial/commercial sectors, 27 of which were included in a prioritized list ranked from 1 to 27. (The number of the facilities on the list varies due to the economy, with up to 5,200 facilities listed at one time, which fell to 4,000 last year and is currently estimated at approximately 3,600.) The list was prioritized based on the number of facilities within a sector and the potential pollutants generated within the sector. The City is to be commended for developing an expansive list of industrial/commercial facilities within the stormwater program and for attempting to prioritize the list of facilities. However, the prioritized list of industrial/commercial sites does not appear to be an accurate reflection of the facilities with significant potential to cause stormwater pollution.

For example, several elements of the prioritization scheme are not consistent with the priorities established by most MS4s. It is unclear, for example, how the City identified “printing/publishing” as the number 5 priority, above sectors such as “Scrap & Waste processing & recycling facilities” (Priority # 7) and Automotive Salvage (priority #12). Typically, industries such as scrap and waste recycling and automotive salvage sites have outdoor activities, toxic materials on-site, and a large potential for stormwater contamination that would place this sector as a priority.

Additionally, the City does not appear to be updating or revising its priorities or inspections based on findings or “ground-truthing” its original list. For example, the city is currently undergoing inspections of 614 printing/publishing facilities. The City estimates that it will take approximately 3 years to complete this one category, during which time the City will not be conducting inspections of other categories. The City has not identified measurable goals for this sector, and is not in the process of assessing the results of the inspections.

The permit states that the source inventory “shall also include other industrial facilities, and non-industrial sources or categories of sources which the permittee believes may discharge significant quantities of pollutants in storm water runoff.” The City has not included nonindustrial facilities (e.g., commercial businesses such as restaurants and automobile repair shops) in its source inventory. Without including the commercial land use component and an expanded industrial inventory, the City may not be addressing all significant pollutant sources. The City must assess the potential pollutant sources in its jurisdiction, including municipal, industrial, and commercial facilities, for inclusion of additional facility types in its source inventory and the inspection process.

B. Method of Regulating Industrial and Commercial Sources

As noted in the 2001 evaluation, the City is not conducting facility inspections at a reasonable pace to evaluate the facilities in its inventory. To date, the City has conducted approximately 1500 inspections since the City received its NPDES permit in 1997. This is approximately 30% of the identified commercial and industrial facilities identified in the city. At the current rate of approximately 185 inspections per year, it will take over 30 years to inspect each facility once on the existing list, not including new business openings, business transfers, etc.

This also means that re-inspections of priority sites are not occurring. The City has conducted a random check of about a dozen facilities that had already been inspected, and found about 50% of those were out of compliance, further supporting the conclusion that one inspection of a facility within a 30 year timeframe is insufficient to maintain compliance.

As noted in the 2001 evaluation, the City lacks integrated program management and coordination to address stormwater pollution. The Department of Transportation appears to be implementing the majority of the programs evaluated, and does not have support from other organizations within the city. The Department of Transportation does not coordinate stormwater inspections with other parts of the City already conducting environmental inspections. Many municipalities have found that coordinated inspections involving the pretreatment program, health inspectors, or other environmental offices have led to increased efficiencies for conducting inspections of potential stormwater violations. For example, at restaurants there are many potential stormwater issues (such as overflowing grease traps, improper wastewater disposal, unsecured trash areas, etc.) which have a public health component and which have been effectively integrated into public health inspections in other communities.

There are several positive elements of the City's program which include: The City has established a comprehensive "Storm water Assessment / Inspection Report" for conducting industrial/commercial inspections and the City has established a comprehensive "No Potential" to discharge Checklist for Industrial Facilities. Additionally, the City has developed a detailed record of training materials for inspectors that includes numerous activities related to NPDES and stormwater discharges.

C. Enforcement Escalation Mechanisms and Their Use

If an industrial facility is determined to be out of compliance, the City pursues a multiple step process to encourage compliance. The City rarely resorts to enforcement, although this has been necessary in a few instances.

The City gives prior notice to all industrial inspections, setting up all stormwater inspections in advance with the facility. Advanced-noticed inspections do not always give an accurate measure of compliance.

D. Conclusions for the City of Phoenix

The City of Phoenix is not adequately implementing a program to control pollutants from Industrial and Commercial facilities. The program does not appear to have progressed since the last program evaluation was conducted in 2001. The deficiencies continue in the areas of number of inspections, interdepartmental coordination, and lack of measurable goals to track progress.

The program lacks measurable goals developed for the industrial/commercial program. The annual report does not provide information on the results and outcomes of inspections (other than the number of inspections conducted). The City should identify measurable goals for the industrial/commercial program and evaluate the effectiveness of the program. The City should evaluate results of ongoing inspections in terms of prioritization, potential exposure to stormwater, and common problems identified. The City should revisit the list of priority industrial/commercial sites targeted for inspections.

Recommendation

The City does not use mapping or geographic areas to target inspections. Inspections are conducted in alphabetical order according to the list developed from Info USA® at a rate of one inspection per day. The City of Phoenix covers over 500 square miles and driving times can be significant, severely limiting the efficacy of the program.

The City should at a minimum use a mapping program or street addresses to conduct multiple inspections at a destination, especially for those commercial facilities where potential stormwater exposure is not significant and actual field inspection time may not be significant.

The City expressed concern that it did not want to be accused of deliberately targeting certain areas of the city, and that they thought that alphabetical inspections were the most fair. This could be resolved in a number of ways, including rotating geographic areas of the city targeted for inspection, or randomly selecting geographic areas for multiple inspections.

Recommendation

The City has a much more expansive definition of “potential to discharge” to stormwater than EPA has developed in the MSGP and its “no exposure certification”. For example, according to the City’s “No Potential Checklist for Industrial Facilities”, the City concludes that a facility that stores “anything” outdoors or that uses bulk chemicals > 5 gallons (even if those chemicals are stored indoors) has a “potential to discharge”. These types of facilities would likely qualify for EPA’s “no exposure certification” and would be exempt from EPA’s stormwater requirements. While the City’s desire be more inclusive for protection of their ordinance is laudable, the City may wish to evaluate the utility of including facilities that may qualify for EPA’s “no exposure certification” within the stormwater program. The City may also need to create a prioritized system for those facilities that do not conduct industrial activities or store materials outdoors. For example, the City of Tempe conducts inspections of No Exposure Certification once every 5 years, and conducts more frequent inspections for higher priority sites.

The City may wish to review EPA’s “Guidance Manual for Conditional Exclusion from

Storm Water Permitting Based On “No Exposure” of Industrial Activities to Storm Water”, available at: <http://www.epa.gov/npdes/pubs/noxguide.pdf>

Recommendation

It is recommended that the City consider using other sources to supplement the InfoUSA® database such as business licenses issued by the City of Phoenix, applicants under the MSGP, the phone book, or other databases.

Recommendation

The City should involve other departments, including pretreatment inspectors and the water services department (which conducts grease trap inspections) and investigate coordination with other environmental compliance programs such as the County health department to implement a comprehensive, city-wide stormwater program.

2. City of Phoenix: Illicit Discharge Detection and Elimination Program

A positive element is that the City is actively evaluating over 20% of outfalls each year and collecting valuable information at each outfall. There are 772 outfalls identified within the city, 460 of which are major outfalls. If flow is visible, a field screening test is done, and visual inspections are done at each outfall. In the last 5 years, 31 outfalls have had flows observed. The City noted that many of the dry weather flows are due to flows from the over 300 connections to the SRP canal system. The City has developed an “Outfall Monitoring Survey Input (Field Screening) form” where standardized data is collected for a visual inspection, field testing data, and laboratory analysis if necessary.

However, the City has not developed criteria by which to determine whether dry weather flows are a result of illicit connections or discharges. Therefore, the City is not using the data collected to evaluate or to trigger action to identify, investigate, and eliminate illicit discharges.

Conclusion

The City is not actively identifying, investigating, and eliminating illicit discharges. The City does not appear to have progressed since the findings of the 2001 evaluation. The City needs to develop criteria for sampling protocols and “typical” dry weather flow characterization so that any changes or suspicious results will result in actionable information to identify illicit discharges.

See the “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments” for a description on how to establish an IDDE program, available at http://www.cwp.org/Resource_Library/Controlling_Runoff_and_Discharges/idde.htm

Appendix A –Attendees List

City of Tempe 8/28/08

Scott Coulson, PG Environmental, EPA Contractor

Deb Schedewald, Chris Henninger, ADEQ

Michael Golden, Jeremy Mikus, Zoltan Dregely, Lupe Hernandez, David McNeil: City of Tempe

City of Scottsdale 8/28/08

Scott Coulson, PG Environmental, EPA Contractor

Deb Schedewald, Chris Henninger ADEQ

Ashley Couch, Gebre Aberra, William Erickson: City of Scottsdale

Lisa Spahr (?), EEC, Scottsdale Contractor

City of Glendale 8/28/08

Scott Coulson, PG Environmental, EPA Contractor

Deb Schedewald, Chris Henninger ADEQ

Jerry Carlson, John Watkins, Lee Robinson, Michelle Wilson, Greg Rodzenki, Michael Munrie, Larry

Broyles, Michelle Moyteake(?), Doug Kukino, Stephen Rot, Stuart Kent: City of Glendale

City of Phoenix 8/26/08

John Tinger, Laura Bose, EPA

Chris Henninger, ADEQ

Linda Palumbo, Ray Dovalina Jr, Stephen Wetherel, Michael Loffa, Tauny Woo, Sam Aguilar, Paul

Driver: City of Phoenix