

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STATE SUMMARY REPORT (Lila Tang)
MEETING DATE: January 11, 2006

ITEM: 9

SUBJECT: **NPDES Wastewater Program – Status Report**

DISCUSSION: This report reviews the NPDES program's recent successes and future challenges, and presents a schedule of anticipated NPDES permit actions that we will present to the Board in 2006. The program regulates the wastewater discharges from sewage treatment plants, petroleum refineries, and other industries. For our region, this includes 51 major permittees, 39 minor permittees, and over 250 enrollees in 6 general permits (2 statewide, 4 region-wide).

NPDES Wastewater Program Background

The federal Clean Water Act, adopted in 1972, mandated a nationwide permit system with the goal of eliminating the discharge of pollutants to waters of the United States by 1985. As such, that permit system was named the National Pollutant Discharge Elimination System or NPDES. California was the first state in the union that was delegated authority by U.S. EPA to issue NPDES permits, and this Board issued its first NPDES permits in 1974.

While the goal of eliminating pollutant discharges by 1985 proved too ambitious, the system of issuing (and reissuing every five years) NPDES permits to all wastewater discharges has proven to be the most successful program for controlling water pollution in the nation's history. For instance, since its 1974 inception, it has reduced pollutant discharges in our region by over 80% despite the 45% increase in the region's population. Currently, for about \$2.3 million in Board staff resources each year, we oversee the removal of over 42,000 tons of waste annually from the region's wastewater discharges.

NPDES Wastewater Program Successes

This Board has a long history of supporting innovative projects that enhance the effectiveness of the NPDES program. Below is a short list of some innovation successes, the first three of which we continue to support with staff resources:

- **Sanitary Sewer Overflow (SSO) Reduction Program** – As described further in Item 10 on the January Board agenda, since 2003, we have dedicated staff resources to work in collaboration with the Bay Area Clean Water Agencies (BACWA) to reduce SSOs. Through this effort, we have established a web-based SSO reporting system, consistent SSO reporting guidelines and requirements, and guidance for sewer system management programs. We have also outreached to over 100 sewage collection system agencies. Consistent requirements and electronic reporting allow us to proactively identify and prioritize poor performing systems for enforcement or other actions to reduce SSOs.

- **Electronic Discharge Reporting System** – In 1999 this Board, in coordination with a number of major permittees, developed and piloted a first-in-the-nation electronic reporting system. We have enhanced the system over the years, and it continues to operate today as a user-friendly system for many of our permittees to report their data, and for us to accurately check compliance. With its archive of up to 5 years of electronic data, it has become a tremendous asset that saves time, and ensures accuracy and completeness of the data for Board decisions, both in the NPDES as well as the TMDL and Basin Planning programs.
- **Pollution Prevention and Pretreatment Reduces Toxic Pollutants** – Since the late 1980’s, we have made this a high priority and continue to do so, by designating staff to oversee, coordinate and steer municipal permittees in their implementation of pollution prevention and pretreatment. The success of this effort is reflected in the discharge reduction of toxic metals by about 60%. Additionally, municipal agencies in this region have won 13 national awards from the U.S. EPA since 1989; eight of which have been first place awards. Since many pollution prevention activities also help control urban runoff, continued support of this program will have added benefits as sewage treatment agencies seek partnerships with their urban stormwater counterparts.
- **Selenium Reduction** – In the 1990’s, this Board was the first to impose permit limits for selenium that lead to over 50% reduction from petroleum refineries. Aside from the permit requirement, this accomplishment involved enforcement orders, permit petitions, millions of dollars of research, and finally a court-ordered settlement agreement and over \$45 million in wastewater treatment upgrades.
- **Dioxins - Raising Awareness and Improving Analytical Methodology** – Starting in the mid-1990’s this Board was the target of much heated attention over the discharge of dioxins, which continues today to a lesser degree. Staff organized the first workshop in the State comprised of national and state experts in the field. We learned that dioxins are a multi-media pollutant, originating from air sources and finding their way into stormwater and sediment. Though we were the first in the nation to impose stringent dioxin limits, some stakeholders felt it was not enough and filed a lawsuit. The courts have recently ruled in favor of our permitted approach. On the technical front, we continued to work with the permittees and contract laboratories to be the first to establish in permits in 2003 better detection limits for dioxins that are one half of the U.S. EPA standard.
- **Whole Effluent Toxicity for a “Fishable” Discharge** – This Board was the first in the 1970’s to require that discharges not kill more than 50% of the receiving water’s fish. Over the years, that standard has been tightened to 90%, which for the most part, means all permittees keep 100% of their test fish alive. In the 80’s and 90’s, we expanded the program and were the first to include chronic toxicity permit requirements using organisms such as mussels, larval fish, shrimp, algae, and abalone. These requirements remain in permits today to ensure that if toxicity is observed, the permittee takes appropriate steps to stop it.
- **Improving Science Through the Regional Monitoring Program and Site-Specific Objectives** – NPDES resources and the studies required in NPDES permits have provided the seed to establish better science such as the Regional Monitoring Program, and setting site-specific objectives. Currently, because of cut backs in the NPDES program, that work

is funneled more directly through the Clean Estuary Project, though NPDES staff still participate in Basin Plan amendments that impact permits.

In the short-term, these projects have taken resources away from completing core program work products that U.S. EPA expects delegated authorities to produce, such as permit reissuances. But, in the long-term, they pay off in improving the quality of the wastewater discharges, or increasing our efficiency in overseeing the NPDES, TMDL, and Basin Planning programs.

Future Challenges

Resource cutbacks have been and remain the greatest challenge in meeting U.S. EPA's goal of no "backlogged" permits – permits that have not been reissued before the end of their five-year life. During the 1999-2000 fiscal year, the State Board reallocated resources from our region to others around the state. In January 2001, then-Executive Officer Barsamian notified both the State Board and U.S. EPA that based on this reallocation, this region would never be able to reissue permits to all backlogged permits. Since that time, further resource cuts (largely due to the elimination of General Fund use during the state's 2002-03 budget crises) have meant that NPDES program staffing has been reduced from 26 positions to 16 this fiscal year. The program efficiencies described below, however, have helped keep the number of permits we have annually reissued generally constant during this period of staff reduction. Nonetheless, the number of permittees has grown, such that twenty-eight (28) of the 90 individual permits are currently on U.S. EPA's "backlog list". By the end of 2006, 17 more permits will expire.

These cutbacks are compounded by increased demands to support statewide initiatives (e.g., the issuance of mandatory minimum penalties (MMPs), the implementation of "CIWQS," and the call by CalEPA to increase our enforcement), and an increased level of regulatory complexity and public interest during the development of TMDLs. These demands, along with other factors such as the high cost of Bay Area living have led to staff retention and recruitment problems. Last fiscal year, due to lack of staff, we underspent the program's budget by over 13% and expect to do nearly the same this fiscal year.

The most important State initiative impacting workload has been the 2000 legislation establishing MMPs for specified violations of NPDES permit limits. This legislation was "fixed" by the Legislature in 2003 to apply MMPs to required reports received late. It was fixed again in 2005 to have MMPs also apply to our over 250 general permit enrollees. Each fix increases the MMP workload, which takes staff away from both permitting and discretionary enforcement actions.

"CIWQS" is the California Integrated Water Quality System - another statewide initiative that will demand more and more Board staff time over the next two to three years. It replaces an earlier statewide electronic system for tracking permits, violations, enforcement actions, and fees. CIWQS will add discharge data linked to each permittee - similar to our existing electronic report system, described above. As with our system, its initial implementation and development will take time away from producing core work products. Aside from weekly CIWQS coordinators meetings with State Board, data entry in CIWQS also appears to be more complex than before. For our region, its disadvantages are multiplied because our existing electronic reporting system is different than CIWQS. As such we will need to double our efforts to maintain our current system until all bugs in CIWQS are worked out.

Another challenge comes with implementing TMDLs, such as the mercury TMDL. Implementation of most TMDLs will require some level of NPDES permit amendment. For mercury, TMDL implementation may involve issuance of a watershed-wide permit. While recognizing TMDL development as one of its highest priorities, U.S. EPA does not count such a watershed permit towards an NPDES program accomplishment in the same way as reissuing an expired permit. Nonetheless, in the long-term, a watershed permit simplifies individual permit reissuances, and is the correct approach for addressing baywide pollutant issues.

Facing the Challenge

To meet all program goals (including having no expired permits), our current staffing level would need to increase by 2 to 3 times. Knowing that this is impossible, we have directed staff to focus on the two priority areas: permits and enforcement. We have also implemented measures to increase our efficiency in order to allow us to continue to support the innovative projects listed above that provide long-term benefit across broad program areas. These measures include:

- **Improve efficiency through General Permits** – General permits are essentially a single permit issued to a group of similar wastewater dischargers, and represent a more efficient way to regulate such dischargers than individual permits. In the 1990's, the Board issued two general permits for discharges of two types of groundwater cleanup discharges, and issued two additional general permits in the past five years for other categories. Though it is a great efficiency tool, general permits cannot be used on most of the remaining individual permittees. Current regulations require that each discharge's limits reflect discharge-specific factors, and there are too many differences between the discharges. Despite this, we will continue to explore opportunities for general permits.
- **Improve efficiency through templates** – starting about 2002, many of the findings in our permits and MMP complaints are template-based language from previously issued items. Refinements are allowed only to update facts (e.g., Basin Plan amendments), or for legal reasons. Use of such templates should save staff time in permit and MMP development.
- **Streamline permit report requirements** – our previous practice was to require submittal of specific reports covering routine subjects such as changes to operation and maintenance. Permit provisions are being streamlined to consolidate those reporting requirements into just one or two reports. This eases the burden for both the permittee and Board staff.
- **Defer review of study proposals** – because of our focus on permit actions, we have often deferred review and comment on study proposals and reports. To avoid being a regulatory bottleneck, we will start allowing the permittee to proceed with any necessary studies if we do not comment within a set timeframe. We believe this is an acceptable approach so long as the permit provisions are clearly spelled out, which we endeavor to do.
- **Utilize outside resources** – we will seek and utilize appropriate outside resources, from both governmental and permittee sources, to help accomplish program goals. We have successfully partnered with BACWA to reduce SSOs, as discussed above. Also, U.S. EPA has provided contractor support in the past three years for compliance and pretreatment inspections to make up for an equivalent of about two staff. They have also provided

contractor support to draft permits, albeit with mixed success. We will seek future opportunities from U.S. EPA, the State Board, and others.

- **Advocate reallocating or increasing the budget** – we continue to look at the potential for internal reallocations to augment our NPDES program. Unfortunately, either our other priorities (TMDL development, stormwater permitting, etc.) preclude such reallocation or our fund sources limit what we use our funding for. Seeking a reallocation statewide meets with broad resistance, as other regions are equally challenged to meet their goals. Though increasing the budget is unpopular politically, it may necessary to maintain the viability and effectiveness of the program. Also, using State employees to oversee the NPDES program has been shown to be about 1.5 to 2 times more cost-effective than outsourcing to contractors, and avoid conflict of interest problems that we have experienced in a few cases using U.S. EPA contractors.

Projected Permit Actions in 2006

Barring significant changes in staffing, the table below presents an optimistic best-case projection of the actions that staff will bring before the Board for consideration.

2006	Permit (Re-)Issuance – Best Case Projection	Enforcement
First Calendar Quarter	<ul style="list-style-type: none"> • PG&E Shell Pond, Pittsburg • Bae Systems San Francisco Ship Repair • Caltrans Devil’s Slide Tunnel Boring (new) • <i>Fairfield-Suisun Sewer District (amendment)</i> • <i>City of Livermore</i> • <i>Livermore-Amador Valley Water Management Agency</i> 	3 Mandatory Minimum Penalty (MMP) Complaints
Second Calendar Quarter	<ul style="list-style-type: none"> • Mirant Potrero Power Plant • USS-Posco Industries, Pittsburg Plant • Chevron U.S.A., Richmond Refinery • Hayward Shoreline Marsh • <i>City of American Canyon</i> • <i>Mt. View Sanitary District, Martinez</i> • <i>Dublin San Ramon Services District</i> • <i>Contra Costa Water District, Bollman Water Treat Plant (new)</i> • <i>San Francisco PUC, Pulgas Water Treatment Plant (new)</i> 	2 MMP Complaints 1 Administrative Civil Liability (ACL) Complaint
Third Calendar Quarter	<ul style="list-style-type: none"> • Fuel Groundwater Cleanup General Permit • <i>Rodeo Sanitary District</i> • <i>City of Pacifica</i> • <i>Vallejo Sanitation and Flood Control Dist.</i> • <i>East Bay Dischargers Authority</i> • <i>Central Contra Costa Sanitary District</i> • <i>City of Benicia</i> 	3 MMP Complaints 1 ACL Complaint
Fourth Calendar Quarter	<ul style="list-style-type: none"> • <i>C&H Sugar, Crockett</i> • <i>Shell Oil, Martinez Refinery</i> • <i>Hanson Aggregates, Oakland Yard</i> • <i>Hanson Aggregates, San Francisco Yard</i> • <i>Hanson Aggregates, Marina Vista Facility, Martinez</i> • <i>Sausalito-Marin City Sanitary District</i> • <i>International Business Machines, San Jose</i> 	2 MMP Complaints 1 ACL Complaint

Items in *italics* are actions that could be delayed due to unanticipated circumstances such as new discharge applications, shifts in priorities, new stakeholder opposition, or complex issues unknown at this time. An example of an unknown issue is the EBMUD Wet Weather Facilities permit adopted last October, which took nearly two years to reach consensus between EBMUD, U.S. EPA, and local stakeholders, due to the issue of the applicability of technology standards. Also, the Potrero Power Plant permit will take just as long, because of the community's desire to close the facility (see the current E.O. Report, as well as those of December, April, and January 2005). Such delays have a domino effect of postponing future items.

It should be noted that we will meet our work plan commitments to the State Board for this fiscal year (2005/06) if the permits not listed in italics are adopted. Annual work plan commitments are more closely based on allocated resources, and allow for performance of discretionary tasks other than permit issuances. These include review of discharge monitoring reports and response to public requests for information. If we defer the less critical of the discretionary tasks, as we have done in the past, more permits issuances can be accomplished than the annual commitment.

The permittees targeted for enforcement are not listed for obvious reasons. An ACL or a Cease and Desist Order may take the place of some MMPs if violations warrant a more severe level of enforcement.

Conclusion

In spite of its challenges, the NPDES program remains our "flagship" program for water pollution control. We will continue to look for ways to improve and make the program more innovative and efficient, while striving to meet the goals and requirements of the State and U.S. EPA. We welcome Board input and direction on meeting these goals.