



California Regional Water Quality Control Board

San Francisco Bay Region



Alan C. Lloyd, Ph.D.
Agency Secretary

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger
Governor

January 10, 2005
File No.: 1217.00(LCR)

TO: San Francisco Bay Area POTW Managers and Staff

SUBJECT: POLLUTION PREVENTION REPORTING FOR POTWs WITH NPDES PERMITS

This document provides general recommendations to Publicly Owned Treatment Works (POTWs) in the preparation of pollution prevention or pollutant minimization reports. It is intended to answer questions posed to us by cities (and districts) about Water Board staff's expectations on report content, and to clarify how we evaluate the reports. These recommendations are consistent with current permit requirements as well as Resolution R2-2003-0096. This is a non-regulatory document and, therefore, does not take the place of current requirements specified in each city's NPDES permit.

Pollution Prevention in the San Francisco Bay Area

The Bay Area is home to some of the most productive pollution prevention (P2) programs in the nation. The San Francisco Water Board first began requiring P2 implementation in 1988, and with critical local and state agency collaboration, significant reductions in the mass of a number of pollutants have been achieved. Presently, about 40 Bay Area municipalities operate P2 programs tailored uniquely to the water quality concerns of each service area. Common goals of these programs include the following:

- Implement short and long-term efforts that will reduce and/or eliminate Pollutants of Concern (POCs), thereby protecting the San Francisco Bay environment;
- Take action to respond to existing water quality concerns as required in each city's permit and service area;
- Educate businesses, the public, and schools about where pollutants come from, how they enter the environment, and how changes in behavior (product use, substitution, and recycling) will reduce pollution;
- Monitor the effectiveness of P2 actions and programs using effectiveness performance measures;
- Coordinate regionally among agencies to share knowledge, experience, and materials to achieve regional successes (e.g., through the Bay Area Pollution Prevention Group [BAPPG]); and
- Address emerging POCs based on new science, environmental conditions, and current water quality initiatives of local, state and federal agencies.

Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years

Basic Content of a P2 Program

There is no such thing as a "one-size-fits-all" pollution prevention program. Municipalities are comprised of varied industrial, commercial and residential communities; have varied POCs; collect, treat, and discharge waste differently; and have unique permit requirements based on these differences. There are noteworthy similarities, however, with regard to the qualities of effective programs, whether small or large. For this reason, when reviewing and evaluating P2 reports and programs for POTWs, Water Board staff look to see that the municipality is: taking action to reduce pollutants reaching the plant; planning for an effective program achieving results, and; evaluating progress, as described below.

Action: Is the municipality actively working to reduce pollutants according to the priorities of its permit and the collective priorities of the BAPPG/Bay Area Clean Water Agencies (BACWA), Water Board, and U.S.EPA?

Planning: Has the municipality clearly stated the strategies and goals of its program? What effectiveness measures are to be used to evaluate its efforts? How do last year's results factor into what the municipality plans to do this year?

Results: What happened as a result of last year's efforts? How much of each pollutant was collected, reused, recycled, or removed from shelves (i.e. not introduced to the environment)?

Evaluation: Is the municipality measuring the success of its program both on an overall programmatic basis as well as for individual tasks? Were goals met? (Evaluating success involves using effectiveness measures developed at the start, to assess a program throughout. Such measures generate feedback to support further refinement of goals set for next year.)

Evaluating P2 Reports- Ranking System

Staff has requested feedback from the BAPPG in evaluating P2 reports and will continue to utilize input from municipalities to derive a meaningful evaluation process. Because the P2 report is a window into the each municipality's program, it is important to thoroughly report to the Water Board what activities and results the P2 program has undertaken and achieved. Generally, Water Board staff evaluate P2 reports based on whether they are complete and therefore satisfy permit requirements, clearly present information, show progress, identify results, and respond to past Water Board evaluations.

Reported results are also compared with other municipalities with similar resources that are addressing the same pollutants. Smaller municipalities are not expected to achieve the same results as larger municipalities. Therefore, to enable fairer assessments, municipalities are now grouped by their resource base or design flow capacity into small, medium and large programs. A municipality's program is then evaluated within that group. The BAPPG has recommended a more or less even number of municipalities per group, which works out as follows:

Small POTW:	6 MGD and under
Medium POTW:	7 MGD — 20 MGD
Large POTW:	Greater than 20 MGD

In the report evaluation, strengths are recognized and weaknesses are identified. Based on the information provided a city's report/program is given a ranking between 1- Excellent and 5- Unacceptable:

1-Excellent; 2-Good; 3-Satisfactory; 4-Less than satisfactory; 5-Unacceptable

A ranking of 3 or "Satisfactory" means that a report satisfies the requirements of its permit, with an average level of effort as compared to other municipalities in its resource category, as explained below. Rankings 4 and 5 reflect less information and effort than this. Programs ranking 1 or "Excellent" go beyond the minimum requirements outlined in the municipality's NPDES permit by demonstrating any of the following qualities:

Innovation; responsiveness; collaboration; creativity; and pursuit of solutions that benefit multiple media (air, water, sediment) across multiple programs (wastewater, stormwater, solid waste).

These qualities are detailed below.

Recognizing Excellence in P2 programs

P2 programs are considered excellent whose mission and work extend beyond minimum permit requirements by including at least one of the features described in the list below:

- **Broad Programmatic Scope:** Does the municipality pursue pollutant reductions that benefit a variety of media (i.e., sewer, stormdrain, sludge, water, and air) across a variety of programs (i.e., wastewater, stormwater, solid waste)? Is the municipality pursuing regulatory and non-regulatory approaches? Is the municipality preparing to address upcoming POCs in its service area (i.e., forthcoming TMDLs, emerging contaminants, or pollutants that are difficult to quantify and control but have a definite environmental impact, like dioxins and pesticides, etc.)?
- **Resourceful Collaboration:** Is the municipality taking advantage of all partnering opportunities in its region and beyond (watershed groups, BAPPG, outreach and communication resources, trade groups, etc.)?
- **Wide Outreach:** Does the municipality have a website and periodically hold public events with targeted messages? Is it actively working to create awareness of a problem or change a behavior where it has the power to influence better public purchasing, use or disposal, where doing so will reduce an environmental or health concern?
- **Responsiveness and Adaptiveness:** Does the municipality anticipate new environmental changes and work in varied forums to address them (environmental, scientific, political, educational) by developing partnerships in advance of problems? This could involve pursuing legislative fixes, exploring gaps in data availability, and/or conducting research

and pilot projects to better understand a pollutant's behavior and health effects. Does the municipality respond to a problem in the absence of complete information?

- **Innovation:** Is the municipality willing to try new things (i.e., conduct pilot projects to apply an untried technology, test a BMP, or forge a new alliance for those pollutants known to pose health concerns and for which little is known)?
- **Wide-Ranging Solutions:** Does the municipality pursue wide-ranging solutions to problems within and beyond its service area? Has it sought regional, national or global solutions by participating in national initiatives with trade organizations/manufacturers, professional organizations, hospitals, etc.; pushed for legislative change; proposed product bans; pursued county-wide initiatives; or passed ordinances for bans of products or practices?
- **Green or Sustainable Business Practices:** Does the municipality adopt green or environmentally sound practices within its area of operation consistent with good P2 philosophies (reduced wastestream, recycling, lower level pollutant product alternatives, reduced emissions, services, etc)?

Current Program Requirements

P2 requirements in most NPDES permits include the following:

- Periodic analysis to determine POCs
- Identification of sources of POCs, including potential sources
- Identification of tasks to reduce POCs
- Outreach to municipality employees
- Public outreach program
- Development of criteria to measure program and task effectiveness
- Documentation of efforts and progress
- Evaluation of program and tasks based on criteria
- Identification of specific tasks and time schedules for future efforts

Suggested Reporting Features

- When first writing a P2 report, the municipality should consult (1) the requirements of one's NPDES permit, (2) the "P2 Guidance and Tools for POTWs" document (www.bacwa.org/documents.asp), (3) suggested reporting formats provided by the Water Board to the BAPPG, and (3) P2 plans of other municipalities within its resource base.
- Send both a hard copy of the P2 report and an electronic version to the Water Board's ftp website. The hard copy should be addressed to:

Pollution Prevention Manager, NPDES
CA Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Attention: Linda Rao

Please do not e-mail documents to individual staff mailboxes greater than 1-megabyte, as they are deleted. Instead, post them to the ftp website <ftp://swrcb2a.swrcb.ca.gov/> (Type this address, right click and choose login. Type “rb2ftp” for the user name. For the password, type “sfbayrb2”. Then click on the staff folder of the P2 Program Manager [i.e., Linda Rao].)

- The P2 report can be a stand-alone document or can be submitted in a combined format with the municipality’s pretreatment report. However, if combined, the P2 portion should be a complete, stand-alone section (i.e., if key information is to be found elsewhere, clearly reference this). Also, if in a combined report, send two hard copies to the Water Board.
- Specifically address changes implemented in response to Water Board comments from past review letters.

Additional Planning and Reporting features: The more clearly information is presented, the easier it is to evaluate the report and the municipality’s P2 program. Several municipalities use tables or report formats that present information clearly making them easy to follow. Examples of these reports can be found on many municipalities’ websites or can be obtained by contacting the Pretreatment or P2 coordinator of a given agency.

1. Table of Contents (TOC). This may not be needed for small programs or small reports. Including a TOC enables ease in finding information and shows that the municipality has included minimum information. Sections that should be included in a report and highlighted in a TOC are- current pollutants of concern, sources, tasks to reduce sources, implementation of tasks, outreach to employees, discussion of criteria used to measure effectiveness, evaluation of efforts and progress, tasks and time schedules for future efforts, and attachments/outreach materials.
2. Program History/Highlights. It is important to provide a brief history of a program’s annual achievements (or challenges) by year. Most municipalities report this in table format with two columns: the year and top achievements for that year. For each year since the beginning of the program, one to three program highlights are listed. At a minimum, the date of the last POC analysis should be included along with the date of the last analysis identifying sources for each pollutant of concern (i.e., a mass balance, or evaluation of sources identified from wastewater, stormwater, industry, etc.). Ideally, this table of achievements introduces the report.
3. Planning and Results Tables. The planning table shows what you intended to do before you started, and the results table tells what happened. Another format combines the two tables and uses three columns: one with the achievements/results of the year covered by the report, one with the coming year’s goals, and one with effectiveness measures to be used to measure the coming year’s goals. This demonstrates a key link between results and goals. While it is not critical to link the two in a table, some discussion of setting next

year's goals based on the past year's results is critical feedback that demonstrates planning.

4. Pollutant-Specific Tables. Water Board staff recommends that pollutant-specific information be organized and presented by pollutant rather than by P2 activity (i.e., public outreach, business programs, etc.). For example, a mercury table that shows all P2 activities undertaken that year is easier to evaluate than one that has its mercury information distributed between sections or tables on commercial (dental, hospitals), residential (thermometer exchange, public events), and school programs. Further, reporting results by pollutant will likely ease future reporting requirements associated with forthcoming watershed permits, now being discussed by BACWA and Water Board staff.

5. Quantify the Results of P2 Activities. Present results using a format such as a table that summarizes and highlights the results. Quantify results *everywhere* possible. We acknowledge that the results of many P2 efforts are long-term, making short-term assessments of results a tough task. However, long-term impacts of outreach, education, and implementation campaigns can be measured and are important results to report. P2 results that can be quantified include (1) message dissemination and retention; (2) changes in behavior (i.e., less product purchased, increased recycling); (3) the amount of a pollutant collected (mass amounts collected, taken off shelves, not purchased, recycled, reused, reduced in sludge, etc.); (4) reduction trends in influent, effluent, or sludge concentrations; (5) data collected on the effects of implementing a new approach or pilot project (e.g., lateral line impacts before and after BMPs are implemented); and (6) progress made in pursuing agency collaboration, legislative changes, or product bans. Additionally, some pollutant reductions will reduce a pollutant's entry across several media (air, water, sediment) and should be reported as such. Some P2 successes will reduce the avenues by which a pollutant enters the environment (i.e., the sewer, storm drain, sludge, solid waste, air) and should be called out in the report. For this reason, reporting should not be limited to successes that benefit only wastewater. Finally, unintended or unexpected results are ideal to report; lessons learned educate everyone.

The Water Board recognizes the efforts of all POTWs whose efforts continue to create excellence in P2 throughout the San Francisco Bay area, as well as to the member cities and districts of the BAPPG who provided feedback in the preparation of this document.

If you have questions, please contact Linda Rao, at (510) 622-2445 or e-mail lrao@waterboards.ca.gov.

Sincerely,



Lila Tang, Chief
NPDES Section