

**Revised Resource Alignment Proposals
POTW Stakeholder Group
May 21, 2013**

A. *Establish Processes for Evaluating & Potentially Reducing Monitoring Requirements in NPDES Permits [Correlated to Proposal A, p. 2-5]*

It has been the experience of many wastewater agencies that monitoring and reporting requirements are added over time in their NPDES Monitoring and Reporting Programs. However, rarely are ongoing monitoring requirements evaluated for their efficacy, nor are they removed or reduced, even when it is evident that a significant amount of the data are collected that do not answer relevant questions, or that the data reveal that constituent levels are either consistently below the detection level and/or are in compliance with effluent limits or receiving water objectives.

One of the primary opportunities for potential reductions in the cost of compliance is establishing a process for the evaluation of monitoring requirements in NPDES permits to identify opportunities for streamlining. These include addressing duplicative or unnecessary ambient monitoring requirements, reducing in unnecessary monitoring for entities with a positive compliance record, and streamlined use of surrogate sampling as described in greater detail below.

1. Duplication of Ambient Monitoring Requirements

Issue: NPDES permits are typically specific to the receiving water impacts from a specific agency. Upstream and downstream samples may be analyzed, but the purpose of this monitoring is to determine whether the POTW discharge impacts the receiving water and habitat at the outfall and some distance downstream. The monitoring programs for individual agencies are developed independently of each other. Watershed and special study permits, on the other hand, seek to determine whether the collective impacts of multiple discharges to a watershed are impacting the multiple waterbodies and habitats within the watershed. Multiple stakeholders have differing interests in the analysis. Significant effort goes into crafting the management questions the monitoring program is expected to answer. Statistical techniques are used to select monitoring stations throughout the watershed or study area. Regulatory board staff overseeing the individual and watershed permits often act independently of each other. Therefore, there is little coordination of monitoring efforts. The result is duplication of ambient and effluent monitoring requirements. The State Water Board should develop, in conjunction with stakeholders, a process to review existing compliance monitoring programs to identify triggers and procedures for reducing routine monitoring requirements. This process would assist the State Water Board and individual permittees to identify monitoring and reporting requirements that are costly to agencies and not beneficial to improving water quality. This review process could also consider whether regional monitoring, partially funded by the permit-holder, would meet the State Water Board's need for information pertaining to a particular constituent in lieu of effluent monitoring.

Cost Savings and Specific Examples: The potential costs savings are significant. Approximately \$100 million is spent annually by POTWs on gathering data specified in monitoring requirements. For example, a 2001 report published by SCCWRP estimated that Southern California NPDES POTWs spent \$17 million dollars on monitoring requirements.¹ Identifying efficiencies in monitoring that could be implemented without jeopardizing water quality assessment could yield savings of thousands of dollars per year, per discharger, which could result in millions of dollars per year in the aggregate. More specific examples include:

- Many of the wastewater agency effluent VOC concentrations are below the detection level, and several metals such as silver, beryllium, cobalt, antimony, thallium, and vanadium are never detected. These samples could be collected less frequently, such as prior to the permit renewal for NPDES permits or every five years for WDRs. This would ensure that wastewater treatment continues to remove these constituents while freeing up resources for constituents that require regulatory attention.
- There is some overlap between monthly monitoring of priority pollutants and metals in the NPDES permits, Pretreatment (quarterly monitoring), and the Coordinated Monitoring Program. Significant staff time is spent for the stakeholders to coordinate this sampling to minimize duplication and reduce costs, while at the same time ensuring that each of the program needs are met (correct sample collection method, test method, reporting limits, etc.). Minimizing duplication of monitoring also means that data maintenance costs are potentially reduced.
- Effluent Characterization monitoring overlaps with Pretreatment sampling of priority pollutants. Pretreatment sampling already identifies all priority pollutants, and while the Effluent Characterization has a few extra constituents, these are primarily obsolete pesticides that are potentially unnecessary. In this regard, monthly monitoring is unnecessary and quarterly sampling should be sufficient.
- Fecal Coliform monitoring in the receiving water has been required even when daily effluent monitoring for Total Coliform is already conducted, along with effluent limits. Monitoring effluent coliform should already demonstrate there is no impact on river coliform levels. In addition, Effluent Temperature by grab is redundant as temperature is already monitored continuously by meter.
- Effluent Chromium is required monitoring as priority pollutants and did not need to be specifically listed for the Other Constituents of Concern.

2. Reduce Unnecessary Monitoring for Entities With a Positive Compliance Record for Specific Parameters:

Issue: Many wastewater facilities have a demonstrated positive record of compliance with specific parameters, yet these entities are required to continue monitoring for that parameter on a frequent basis. This expends valuable agency resources with no notable water quality benefit. If a wastewater treatment plant has demonstrated a record of good

¹ Schiff, K., S. Weisberg, V.E. Raco-Rands. 2001. Inventory of Ocean Monitoring in the Southern California Bight. pp. 212-217 in: S.B. Weisberg and D. Elmore (eds.), Southern California Coastal Water Research Project 1999-2000 Annual Report. Southern California Coastal Water Research Project. Westminster, CA. cited in the SWRCB, Draft Staff Report Substitute Environmental Documentation for Amendment of the California Ocean Plan, September 26, 2012.

compliance for a certain parameter, allow for the reduction in monitoring frequency of that parameter.

Cost Savings and Specific Examples: Cost savings would be realized by reducing the monitoring frequency of parameters consistently in compliance. For example:

- The City of San Bernardino Municipal Water District and Western Municipal Water District each spends between \$150,000 and \$200,000 annually on monitoring, reporting, and participation in special studies for treated effluent. A reduction in monitoring frequency could lead to significant cost savings for both municipalities. Larger municipalities could achieve even larger cost savings.
- As part of its permit renewal process, the City of Davis reviewed monitoring requirements and requested reduced monitoring frequencies for constituents for which there were no compliance issues and elimination of monitoring locations that were duplicative. The total estimated cost reduction is approximately \$60,000 per year. This represents a substantial reduction when compared to the City's current monitoring budget of approximately \$140,000 per year.
- It appears that many of the MRPs in NPDES permits are developed from a template. For example, the draft 2010 NPDES permit for Sacramento Regional Water Treatment Plant (SRWTP) increased the monitoring for some constituents without consideration of historical data. Effluent Oil & Grease was historically a monthly sample, with values ranging between 5-10 mg/l (no compliance issues). The draft permit increased this to weekly monitoring, but upon identification the permittee was able to request to maintain monthly monitoring.

3. Use of Surrogate Sampling Where Appropriate

Issue: Many wastewater entities are frequently required to perform redundant and unnecessary sampling and monitoring that consume valuable, limited agency resources and do not improve water quality. Often, the same information can easily be obtained through the use of surrogate sampling. When two or more similar parameters are required to be monitored in an NPDES permit, the Water Boards should allow for a reduction or elimination of the monitoring requirements for one or more of the parameters.

Cost Savings and Specific Examples: The potential costs are significant. As an example, many wastewater treatment plants sample daily for both total and fecal coliform. Fecal coliform is more indicative of the presence of treated effluent. Each sample costs approximately \$50 - \$75. For a \$65 analysis, annual savings would amount to almost \$24,000. A turbidity sample costing \$20 each would lead to an additional \$7,300 annual savings.

B. Eliminate Irrelevant and Unnecessary Reports [Correlated to Proposal B, p. 5-6.]

Issue: It has been the experience of the many wastewater agencies that the Regional Water Boards frequently adopt new NPDES and WDR permits for POTWs with increasing numbers of required studies and reports, some of which are unnecessary or inapplicable to the entities

ultimately subject to these requirements. A good number of the POTWs who submit to these unnecessary requirements report that they do not receive responses from the Water Board regarding their content; thus leading the POTWs to believe that they are never actually even read. Elimination of irrelevant and unnecessary reports not only presents an opportunity for reductions in the cost of compliance, but would also potentially free Regional Water Board and POTW staff to concentrate on relevant water quality concerns. Rather than being automatically incorporated into new permits, reports and/or studies should be more closely considered for inclusion or exclusion based on discharge-specific issues prior to the Water Boards requiring them.

Cost Savings and Specific Examples: The potential cost savings to POTWs will vary widely depending on factors such as if work is done in house or contracting with a consultant, what level of effort is required, what implementation efforts are required, etc. However, the potential cost savings is estimated to be tens of thousands of dollars per report/study. Examples include:

- The listing of a required Salinity Evaluation and Minimization Plan (SEMP) with every new discharge permit issued, regardless of whether or not the effluent poses a threat to water quality objectives for salinity-based constituents, can be irrelevant and unnecessary. Salinity in the discharged effluent should be evaluated during the reasonable potential analysis. POTWs with reasonable potential to exceed water quality objectives of the receiving water, or those for whom the discharged effluent is currently exceeding water quality goals for salinity, should be required to prepare an SEMP. POTWs who do not show reasonable potential should not be required to prepare this plan, or to conduct follow up activities in an effort to “reach compliance”. For small, non-complex systems, a Salinity Evaluation and Minimization Plan can cost a discharger approximately \$25,000 (on average) including consultant fees, staff requirements, and contracting efforts. This does not include costs associated with special sampling, or facility or operational modifications identified as a result of the report. This cost can increase as facility complexity increases.
- In the case of the Sacramento Regional County Sanitation District (SRCSD) Permit, the requirement for an Ammonia Pollution Prevention Plan was unnecessary when it is known that this cannot be reduced via source control. The permit already had a mechanism to reduce effluent ammonia. Labor costs for conducting the Ammonia PPP (not including Operations Support or PPD) were approximately \$14,000. Several other studies associated with that permit were similarly unnecessary, irrelevant, and costly, including the Hyalella study (which is a research tool, not EPA approved, not industry standard for POTWs, and could have very serious and unintended consequences) and the studies for Perchlorate and 1,2-Diphenylhydrazine, which were not necessary if the scientific data showed no detections for perchlorate using an improved EPA method and 2 DNQ values for 1,2-diphenylhydrazine.
- Another example includes the requirement to prepare Constituent Studies for constituents that already have permitted effluent limits (a few examples are included below). It is our understanding that this discrepancy is being resolved at the State Water Board level, but is a great example of a new permit requirement that had not been fully evaluated prior to its implementation, thus costing POTWs money without benefitting water quality. The cost to conduct a Constituent Study is approximately \$15,000 (on average) including consultant fees, staff requirements, and contracting efforts.

- Order No. R5-2010-0019 (City of Chico) required the submittal of Constituent Studies for copper, chlorodibromomethane, and dichlorobromomethane. This same Order assigned effluent limits for each.
- Order No. R5-2010-0080 (City of Corning) required the submittal of a Constituent Study for dichlorobromomethane. This same Order assigned effluent limits for dichlorobromomethane.

C. *Facilitate Use of Regulatory Tools by Making Processes more Clear and Consistent [Correlated to Proposal C, p. 6-8.]*

Issue: There are several regulatory tools available to POTWs for reducing the costs of compliance associated with meeting effluent limitations. Some examples are water effect ratio (WER) studies, translator studies, or mixing zone and dilution studies; all aimed at allowing relaxed effluent limitations without compromising true water quality. However, even though the tools have been available for some time, efforts to use them have at times been overly costly or unsuccessful because of the manner in which the studies (or the results of those studies) are viewed by the Regional Water Boards. There needs to be consistent guidelines for how WERs, translator studies, mixing zones, and dilution credits can, and should, be used so that POTWs are provided clear direction for their pursuit of relaxed effluent limits using these study results.

Cost Savings and Specific Examples: The potential costs savings are significant. Defining the approach that the Regional Water Boards should take in assigning dilution credits or relaxed effluent limits based on WER or translator study results, for example, could save municipalities hundreds of thousands of dollars in failed attempts at obtaining them. Conversely, for those POTWs who benefit from the conformed directive, the costs savings is potentially in the millions, even billions, of dollars in savings due to the avoidance of unnecessary facilities.

- The Quincy Community Services District (QCSD) has spent over \$0.5 million (to date) in their pursuit of dilution credits for their effluent discharge to Spanish Creek. QCSD initiated this quest well before their current NDPEs permit was adopted (in 2010), which has included the relocation of their diffuser (to a location where adequate dilution had been established), and the completion of several studies (including a mixing zone and dilution study, an antidegradation analysis, and a biological assessment). QCSD is permitted to only discharge effluent in proportion to a measured stream flow (at 20:1 dilution), but is still regulated by end-of-pipe effluent limits despite repeated requests for issuance of dilution credits.
- To further evaluate water quality impacts from copper discharges to the LA River and to address compliance concerns, the cities of Burbank and Los Angeles worked cooperatively with the Los Angeles Regional Board, USEPA Region 9, an independent technical advisory committee and a stakeholder group to conduct a Copper Water-Effect Ratio (WER) Study. The process began in 2004 and the WER was incorporated into the LA River Metals TMDL in 2010. To address input from stakeholders, the scope of the study was expanded considerably resulting in a doubling of samples collected compared to the number specified in the original work plan or required by USEPA guidance. This study was conducted over several years at a cost of approximately \$1,000,000 and numerous hours of city and Regional Water Board staff time. While the TMDL acknowledged that the wasteload allocation (WLA) for the Burbank Water Reclamation

Plant (BWRP) could be as high as 75.2 ug/L (i.e., original WLA of 19 ug/L multiplied by the WER of 3.96) and be protective of the environment, effluent limits established in the BWRP's 2012 permit were based on performance and set at levels that are less than half of the approved WLA. Because of the method used to calculate the performance based limit, it is uncertain that the BWRP can comply with these limits. If plant performance continually improves, these performance based limits will continue to decline. Based on the results of the WER study, performance based limits are overly protective and, in addition to the expense of the study, there is potential for the cities to incur additional costs if the effluent limits are exceeded.

- As another example of the cost associated with complying with effluent limits that are set below water quality criteria and based on performance, during the negotiation of its 2008 NPDES permit, Victor Valley Water Reclamation Authority (VWVRA) was faced with a proposed total nitrogen average monthly effluent limit of 6 mg/L. VWVRA estimated that it would cost \$80,000,000 in treatment process improvements to meet that limit. A compromise was reached and an average monthly effluent limit of 8.2 mg/L was established. This limit was still below the water quality objective of 10 mg/L and was based on projected performance. VWVRA completed improvements to its process and has been able to meet the 8.2 mg/L limit. During the negotiation of its next permit, the Regional Board again proposed a new performance based limit of 7.3 mg/L based on the well performing treatment process. VWVRA modeled its treatment plant performance to evaluate its ability to meet these limits and determined that the hydraulic capacity that would ensure compliance with the existing limit of 8.2 mg/L was less than their current average dry weather flow. If the limit was lowered further to 7.3 mg/L, the flow that could be reliably treated would be substantially less. VWVRA estimates that the loss in capacity would be equivalent to a loss of \$35,000,000 and would result in a building moratorium for the service area. At the same time, the improvements in the treatment process have resulted in improvements in downstream receiving water quality with nitrate levels well below the 10 mg/L objective. Because beneficial uses were being protected and anti-degradation policies were addressed, the Regional Board agreed to essentially maintain the existing limit.

*D. Duplicative/Overlapping Sanitary Sewer System Requirements and Monitoring
[Note: After discussion and consideration of the issues associated with our original proposal relating to SSOs and "progressive enforcement", the stakeholders decided to refocus this proposal on issues of duplication and report overlap and costs, which seemed to fit more appropriately within the framework of this initiative.]*

Issue: The State Water Board adopted the General Order for Sanitary Sewer Systems, Order 2006-003 (General Order) after determining that all sanitary sewer collection systems should be subject to consistent regulation. Concurrent with adoption of the General Order, the State Water Board Executive Director issued a guidance memorandum indicating that individual NPDES permits should be revised to refer to the independently applicable General Order as the source of sanitary sewer overflow requirements and reporting. The NPDES permit would include only the three federally required provisions. There has been significant variation in the implementation of the order. Some regional water boards, such as Region 5, have adhered to the process set forth in the guidance, and simply require enrollment in the General Order. Others, including Regions 4

and 9, have either adopted competing regional general orders or included overlapping and duplicative monitoring and reporting requirements in individual permits. As a consequence, the State Water Board's goal of a consistent statewide program has been undermined, and many collection systems are incurring increased costs for water quality sampling and additional reporting that are not required under the Statewide General Order.

Cost Savings and Specific Examples: Cost savings would be realized in several ways from elimination of duplicative requirements addressing sanitary sewer overflows:

- First, unwarranted liability under two permits for the same requirements would be removed. While it is difficult to predict how and where such liability would be incurred, the effect could be up to several millions of dollars in the event of a large overflow event.
- Second, additional monitoring and reporting requirements imposed by the Regional Boards can be costly to implement. Such extensive requirements take significant staff time to review and prepare comments during the permitting process, attempt to interpret the language, and provide training regarding implementation. A conservative estimate of staff time associated with these activities would be 80 hours. At \$50/hour, the cost per POTW would be \$4000 per permit cycle.
- Finally, implementation of the additional requirements takes additional resources, including sample collection, sample analysis, preparation of required 5-day confirmation letters, and preparation of required 30-day reports. Assuming 20 hours per spill to prepare duplicative reports and 30 hours to collect sampling, the cost per spill would be \$2500. No additional water quality benefit is expected to result from the duplicative requirements. This is in stark contrast to a discharger in Region 5, where there are no duplicative requirements for spill reporting in NPDES permits. The NPDES permit for this discharger simply contains the language: Some dischargers in Region 5 recently received a permit renewal with language "The Discharger has applied for and has been approved for coverage under Order 2006-0003 DWQ for operation for its wastewater collection system." Prior to the renewal of this dischargers permit, they were required to report one spill multiple times and multiple variations, i.e. SSO-CIWQS database, monthly eSMR reporting, cover letter statements, telephone notification.

E. Reduce Sanitary Sewer Spill Reporting Requirements When No Spills Occur

Issue: The Statewide General Order requires that, even when there are no SSOs during a calendar month, a statement must be submitted through the Online SSO Database for certification purposes. Even though each certification only takes a few minutes, the cumulative impact of all the no-spill certifications statewide adds up over time. There is no water quality benefit directly associated with the no-spill certifications. While this may serve as a means of distinguishing between dischargers with no spills and those that have spills but fail to report them, there is still a cost to the compliant agency. However, the frequency of the no-spill certifications does not have to be monthly; the same need could be fulfilled if the no-spill certifications are filed less frequently, such as quarterly. Reduction of the frequency could also potentially reduce the burden on State Water Board staff to track the no-spill certifications and take action against non-submitters.

Cost Savings and Specific Examples: For every 1,000 no-spill certifications performed on a monthly basis at approximately 15 minutes each, 3,000 hours are spent annually just on the no-spill certification requirement. Assuming a rate of \$50 per hour, this equates to an annual cost of \$150,000 for no-spill certifications by collection systems. If the frequency of no-spill reporting was reduced to quarterly, the costs would be reduced by two-thirds, for a cost saving of approximately \$100,000 per year. Similarly, staff time required to submit monthly small spill reports would be reduced by converting to batch reporting or annual reporting.