

Resource Alignment Initiative – Proposals Document (June Draft)
NPDES Permittees - POTW Stakeholder Group
June 18, 2013

The National Pollutant Discharge Elimination System (NPDES) stakeholders appreciate the opportunity to provide the following proposals to the State Water Resources Control Board (State Water Board or Board) as part of Phase 2 of the Board's resource alignment initiative. This is an important effort designed identify ways to reduce the costs of compliance for specified types of entities regulated by the State and Regional Water Boards, including wastewater treatment agencies. This effort is particularly significant and timely in light of recently proposed increases in water quality fees for the upcoming year, which include a 5.4% (and potentially up to 7%) increase to all NPDES categories and a 25.2% increase to all Waste Discharge Requirements (WDR) categories. These increases are not generally associated with any change in level of service (i.e. program changes or additional staff), have a noticeable impact on affected agencies, and underscore the need to find other ways to reduce the costs of compliance for these entities.

The following proposals, developed by the wastewater stakeholders, would reduce the costs of compliance and result in significant cost savings for Publicly Owned Treatment Works (POTWs) (both NPDES and WDR permit holders) and other entities subject to NPDES Permits. Each of these proposals is designed to maximize the utility/benefit arising from permittee compliance actions, including benefits to the regulated community and to the environment at large. Implementation of these proposals would allow agencies to focus their scarce resources in areas where each dollar will go further while simultaneously maintaining and improving water quality. As described in greater detail below, our short-term proposals for reducing the costs of compliance are as follows:

1. Reduce Frequency of SSO Reporting Requirements When No Spills Occur
2. Establish Processes for Streamlining Monitoring Requirements
3. Eliminate Irrelevant and Unnecessary Reports
4. Eliminate Duplicative/Overlapping SSO Requirements
5. Facilitate Use of Regulatory Tools by Making Processes More Clear and Consistent

These have been prioritized in numerical order (highest priority to lowest) based on considerations that include ease of implementation, significance of potential cost savings, and potential to benefit the greatest number of wastewater entities.

In addition to these proposals, we have also developed two other concepts for the Water Board's consideration: a model economic template designed to identify the costs of compliance for new policies prior to their adoption and a long-term approach to the adoption of Total Maximum Daily Loads (TMDLs) that could significantly reduce the costs of compliance. As it relates to the first concept, we believe it is critical to establish a process to evaluate, in advance of adoption, the costs of compliance for pending and future regulatory actions that have cost impacts on NPDES and WDR permittees. This

type of resource alignment effort will be in vain if new policies and requirements continue to substantially increase costs and contain some of the same underlying inefficiencies and issues as existing policies and requirements. Thus, we would recommend that the State Water Board begin proactively developing procedures or protocols to address the costs of new requirements *before* they are imposed, and we have provided a draft economic guidance document or “checklist” that could serve that purpose. This checklist contains criteria that the State and Regional Water Boards could consider when adopting policies, considering permit requirements, and taking other actions that impose substantial new burdens on permittees. This type of approach would increase transparency and improve decision-making as it relates to new policies, and is a crucial part of any effort to reduce the costs of compliance for dischargers going forward.

Part 1: Proposals to Reduce the Costs of Compliance

<p>1. Proposal E: Reduce Frequency of Sanitary Sewer Spill Reporting Requirements When No Spills Occur</p>
<p>Issue: The General Order for Sanitary Sewer Systems, Order 2006-003 (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, yet there is still a cost to the compliant agency. While this may serve as a means of distinguishing between dischargers with no spills and those that have spills but fail to report them, the frequency of the no-spill certifications does not have to be monthly in order to achieve this goal. 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.</p>
<p>Cost Savings and Specific Examples: For every 1,000 no-spill certifications performed on a monthly basis, which take (estimating conservatively) 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.</p>
<p>Proposed Implementation Approach: The State Water Board Executive Director should revise the Statewide General Order Monitoring and Reporting Program (MRP) to reduce the frequency of the no-spill certification requirement to quarterly. For example, a discharger who does not spill within a 60 day period, but has a spill the following month, will still certify no spills for the appropriate calendar month. The information is still being reported, it is simply reported on less frequent basis. This change can easily be incorporated into the proposed changes to the MRP that are currently under consideration.</p>
<p>Response to Staff Comments: We appreciate that Water Board staff have been working with us on the revised MRP and that this issue may be addressed therein.</p>

2. Proposal A: Establish Processes for Evaluating, Streamlining and Potentially Reducing Monitoring Requirements in NPDES and WDR Permits

Summary: It has been the experience of many POTWs that monitoring and reporting requirements are frequently added over time in their NPDES and/or WDR 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 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. The following proposals represent the three primary ways in which this problem manifests itself, and suggest potential approaches to address these issues.

A1: Address Duplication of Ambient Monitoring Requirements

Issue: POTW discharge permits are typically specific to the receiving water impacts from a specific agency. Upstream and downstream or upgradient and downgradient samples may be analyzed, but the purpose of this monitoring is to determine whether the POTW discharge impacts the receiving water and its beneficial uses at the point of discharge and some distance downstream/downgradient. However, the monitoring programs for individual agencies are developed independently of each other. A more collaborative approach may provide greater benefits.

Watershed permits and collaborative special studies, 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, and statistical techniques are used to select monitoring stations throughout the watershed or study area. Yet regulatory board staff overseeing the individual and watershed permits often act independently of each other, and consequently here is a lack of coordination of monitoring efforts. The result is often duplication of ambient and effluent monitoring requirements when a more collaborative approach is available or can be used.

Specific Examples: There are several examples of where this approach could prove beneficial, including the following:

- There is some overlap between monthly monitoring of priority pollutants and metals in the NPDES permits, Pretreatment (quarterly monitoring for some POTWs), 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.). AS an additional benefit, minimizing duplication of monitoring also means that data maintenance costs are potentially reduced.

- Effluent Characterization monitoring overlaps with Pretreatment sampling of priority pollutants in some regions. 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. Where this occurs, monthly monitoring is unnecessary and quarterly sampling should be sufficient.
- Coliform monitoring in the receiving water has been required in some permits 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, requiring effluent temperature by grab samples is redundant when temperature is already monitored continuously by meter.
- As a representative example, a MeHg Control Study is being undertaken for approximately 20 POTWs collectively in the Central Valley. This process is estimated to cost around \$560,000, but if each study had been done individually it would have cost between \$50,000 and \$200,000 per POTW. Thus, the collective study represents a significant cost savings, and approach which can and should be replicated in other regions and contexts.
- Another Central Valley example is the requirement for certain Central Valley POTWs to pursue a WER for aluminum, which can cost between \$50,000 and \$150,000 each individually, though the Central Valley Regional Board has allowed a collaborative study in this context instead of multiple, expensive individual studies.

Cost Savings: The potential costs savings associated with implementing this proposal are significant. It has been estimated that 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. In addition, in cases where POTWs have been able to collaboratively work to address water quality questions, cost savings have been in the \$10,000 to \$100,000 range.

Proposed Implementation Approach: The State Water Board should develop, in conjunction with stakeholders, a process to review existing compliance monitoring programs to identify triggers and procedures for utilizing collaborative monitoring requirements and studies over individual monitoring and/or studies and removing the requirements from individual permits when the information is captured by a collaborative effort. Overall, this process would assist the State Water Board and individual permittees to identify monitoring and reporting requirements that are costly to agencies and not

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.

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. As an additional safeguard, the elements of this process could also include the following:

- These requirements could still be subject to periodic review, which would allow the State Water Board to adequately confirm continued compliance with permit requirements.
- Procedures could be developed to define when increased monitoring might be needed (e.g. if a new water quality objective exceedance is detected or if other specified changes in the discharge facility occur).

Response to Staff Comments: Staff had questions related to whether the proposal is “to review permit requirements for all existing permits at one time (as a short term project) or to review permits on an individual basis when they come up for renewal (ongoing process).” The proposal is not to review all existing permits, but rather to review permits as they come up for renewal as part of an ongoing process, and at the request of an individual permittee. We recognize, as staff comments noted, that the Regional Boards already work with affected entities to refine permit conditions and remove unneeded monitoring requirements in some cases. However, there should be a more formal process, including guidelines, for evaluating monitoring requirements could bring additional consistency to NPDES program implementation. As noted, monitoring requirements are often site-specific and facility-specific. However, this proposal does not seek strict standardization in requirements, but rather a transparent process designed to identify duplicative or necessary monitoring requirements at the individual level.

A2: Reduce Unnecessary Monitoring for Entities With a Positive Compliance Record for Specific Parameters

Issue: Many wastewater facilities have demonstrated a 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 compliance for a certain parameter, regulators should allow for a 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 spend 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. In the Central Valley, where monitoring frequencies have been reduced, POTWs have similarly saved in the range of \$10,000 - \$20,000 per year.
- 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.

- 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.
- As a more general matter, 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 Wastewater Treatment Plant (SRWTP) increased the monitoring for some constituents without consideration of historical data. In that particular permit, Effluent Oil & Grease was historically a monthly sample, with values ranging between 5-10 mg/l (with no compliance issues), yet the draft permit increased this requirement to weekly monitoring. Upon identification of this inconsistency, the permittee was able to request to maintain monthly monitoring. It is not clear how many of these types of increases are "caught" before being implemented in permits across the state, or which standardized terms have been unnecessarily applied to other permittees because of the use of templates, though the savings of avoiding those types of unnecessary increase in monitoring could be substantial.

Proposed Implementation Approach: The State Board should utilize language that already exists in some permits that allows monitoring frequency to be reduced if several consecutive samples indicate compliance. For example:

- An example of this is contained in Order No. R8-2012-0027², General Groundwater Cleanup Permit for Groundwater Polluted by Petroleum Hydrocarbons and/or Solvents. Section VII.B.2 includes language that allows for the reduction in monitoring frequency if certain conditions are met, including extended evidence of compliance with limits outlined in the Order. If language like this were routinely included in NPDES permits, routine monitoring could be reduced significantly for dischargers who are consistently in compliance with their effluent limits. This language can be justified as protective of water quality, as Sections VII.B.3 and VII.B.4 in the same permit outline increases in monitoring frequency that would be triggered by exceedances.
- As another example, if a treatment plant runs a BOD test five times per week and goes an entire permit cycle (or perhaps a lesser period of time) without an exceedance of BOD objectives, it would make sense to allow the monitoring frequency to be reduced to two or three times per week. As a safeguard, there could also be a backstop in place to require agencies to return to the normal monitoring frequency if they have an exceedance or approach a certain percentage of the permit limit.

² Renewal of General Groundwater Cleanup Permit for Discharges to Surface Waters of Extracted and Treated Groundwater Resulting From the Cleanup of Groundwater Polluted by Petroleum Hydrocarbons and/or Solvents, http://waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2012/12_027_Renewal_General_GW_Cleanup_Permit_for_Discharges_to_Surface_Waters.pdf

- Some requirements appear to be simply carry-overs that are no longer needed to demonstrate compliance, such as oil and grease, which is a legacy from the days of primary treatment. Such parameters should be eliminated altogether. Additionally, wastewater agencies are required to collect samples regularly for constituents that may never be detected. Some examples are many of the volatile and semi-volatile organic compounds, as well as silver, beryllium, cobalt, antimony, thallium, and vanadium. Samples for these parameters could be collected less frequently, such as prior to the permit renewal for NPDES permits or every five years for WDRs. This would still ensure that wastewater treatment plants continue to monitor levels of these constituents, while freeing up resources for constituents that require regulatory attention.
- When new policies are adopted that specify monitoring frequency, these policies should also include language that allow the reduction of monitoring frequency after a specified period without a change to the policy itself.

Response to Staff Comments: We appreciate staff's comment that the Water Boards have already been reducing monitoring frequency for constituents where a history of good compliance has been demonstrated in some circumstances, but emphasize that this practice could be expanded and greater savings could be achieved if this were standard in all Regions. The State Board could potentially develop and implement some general guidance that defines the constituents and situations that should trigger an assessment of whether monitoring frequency can/should be reduced or eliminated, and/or incorporate the types of permit language described above, without impinging on the site-specific nature of monitoring or reducing flexibility.

A3: Encourage Use of Surrogate Sampling Where Appropriate

Issue: Many wastewater entities are frequently required to perform redundant and unnecessary sampling and monitoring, a practice that consumes valuable, limited agency resources and does not improve water quality. Often, the same information can easily be obtained through the use of surrogate sampling. Wastewater entities are frequently required to perform redundant monitoring, whereby sampling and analysis is specified for several surrogate parameters that essentially measure the same thing. This consumes valuable, limited agency resources and does not improve protection of water quality. 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 (and thus, potential cost savings) are significant. As one example, many wastewater treatment plants sample effluent daily for both total and fecal coliform, despite the fact that fecal coliform is more indicative of the presence of treated effluent. Each sample costs approximately \$50 - \$75, meaning if one \$65 analysis could be eliminated, savings would amount to almost \$24,000 annually. Similarly, elimination of a daily turbidity sample costing \$20 each would lead to an additional \$7,300 annual savings. These savings are just one example for one agency, and if aggregated for multiple constituents across multiple agencies, would result in significant reductions in the costs of compliance.

Proposed Implementation Approach: 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.

- For example, if a plant has both turbidity and total suspended solids (TSS) requirements, it would both reduce the cost of compliance and maintain environmental protection to eliminate the TSS monitoring and use turbidity for compliance.
- As another example of a surrogate scenario, if a wastewater treatment plant has multiple fecal indicator bacteria monitoring requirements (i.e., fecal coliform and/or total coliform and/or enterococcus), it would reduce the costs of compliance to use only one indicator for compliance.

Response to Staff Comments: We appreciate staff's recognition that this approach works well for some constituents and recognize that it may not work in some circumstances due to other requirements. However, we would encourage the State Water Board to find ways to encourage this practice wherever feasible and consistent with state and federal statutes and regulations.

2. Proposal B: Eliminate Irrelevant and Unnecessary Reports

Issue: It has been the experience of many POTWs 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 these unnecessary reports indicate that they do not receive responses from the Water Board regarding their content, leading the POTWs to believe that many of these are never actually reviewed or put to beneficial use. Elimination of irrelevant and unnecessary reports not only presents an opportunity for reductions in the cost of compliance for the POTWS stakeholders, 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. For small communities, a permit-required report usually results in additional cost because the permit contains a requirement that any reports must be signed by a professional engineer or geologist. For the majority of small communities that do not have this expertise in-house, the small community must contract and procure an engineer at significant additional cost. In some cases, the in-house expertise is adequate to address the issue at hand, but does not have the authority under the permit to sign and submit the report.

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, and a variety of other factors. 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.

- 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 in the process of being resolved at the State Water Board level, but is a prime 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. Representative examples include:
 - 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.

Proposed Implementation Approach: 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. To the extent that a study or report is necessary, but could be done collaboratively, the option to do so could be incorporated into the requirement. For small communities, special attention should be paid to what reports are absolutely necessary and what reports should be signed by a professional engineer or geologist, and alternative methods for gathering and producing the information should be explored. The State Water Board should adopt a resolution that provides specific direction to the Regional Water Boards detailing when specific reports and/or studies should be required.

Response to Staff Comments: Our proposal on this specific issue changed somewhat between the time that staff provided comments and now, and thus staff’s comments on the previous iterations may not be as applicable to the revised proposals. Nonetheless, we appreciate staff’s recognition that SEMP’s are not needed for all discharges under all circumstances.

4. Proposal D: Address Duplicative/Overlapping Sanitary Sewer System Requirements and Monitoring

[Please note that after discussion and consideration of the issues association 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, and that the NPDES permit would include only the three federally required provisions.

Unfortunately, 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. This is in stark contrast to a collection system in Region 5, where there are no duplicative requirements for spill reporting in NPDES permits. For example, one NPDES permit for a discharger in Region 5 simply contains the 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 POTW’s 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) at a significant cost of both time and money.

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. For example:

- 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.
- 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, and assuming a rate of \$50/hour, the cost per POTW would be \$4,000 per permit cycle.

- Implementation of these 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.

Proposed Implementation Approach: The State Water Board should adopt a resolution that provides specific direction to the Regional Water Boards regarding how to address sanitary sewer systems in NPDES permits and individual WDRs. The elements of the resolution would generally track what is included in the existing non-binding guidance memo,³ including:

- Regional Water Boards should rescind individual or general WDRs and NPDES permits issued solely for regulating sanitary sewer systems and require the sanitary sewer system agency to enroll for coverage under the Statewide General Order.⁴
- Upon renewal, the Regional Water Boards should remove the sanitary sewer system provisions in the individual WDRs and NPDES permits (except the EPA required minimums), and include a provision stating that the collection system is regulated under the Statewide General Order. If the Regional Water Board makes specific findings justifying a different or unique approach to a particular sewer system, the sanitary sewer system shall be regulated solely by the individual permit or WDR and the agency shall be notified by the Regional Water Board that it is no longer required to obtain coverage under the General Order.

Response to Staff Comments: Because of changes in focus relating to this proposal, staff's comments were no longer applicable to the revised approach described above.

5. Proposal C: Facilitate Use of Regulatory Tools by Making Processes more Clear and Consistent

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, and mixing zone/dilution studies. All of these tools are designed to allow relaxed effluent limitations without compromising true water quality or beneficial use protection. 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.

³ "Transition from Existing Regulatory Measures to Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems", from Celeste Cantu to Regional Water Board Executive Officers, November 8, 2006.

⁴ This has been done in some regions (i.e. Region 5) but not in many others.

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. For example:

- The Quincy Community Services District (QCSD), a very small community, 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 NPDES 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. Even 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 (VWRA) was faced with a proposed total nitrogen average monthly effluent limit of 6 mg/L. VWRA 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. VVWRA 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. VVWRA 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. VVWRA 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.

- In 1994, the Los Angeles Regional Water Board adopted ammonia objectives into the Basin Plan. The Basin Plan provided a compliance pathway via plant upgrades or by developing site specific objectives (SSOs). The cities of Los Angeles and Burbank and the Los Angeles County Sanitation Districts (Agencies) installed N/DN facilities, while also pursuing a parallel path of developing SSOs. The SSO Study was conducted at a cost of approximately \$1,000,000 and numerous hours of Agency and Regional Water Board staff time. The Agencies invested close to \$100 million to build facilities to reduce the discharge of ammonia and other nitrogen compounds resulting in the LA River consistently meeting ammonia objectives. A TMDL was adopted in 2003 addressing ammonia in the LA River and included a reopener to consider the SSOs. The SSOs, which were adopted in 2005 and approved by USEPA in 2007, were incorporated into a revised TMDL in 2012. However, rather than revising the TMDL to incorporate the SSOs, the TMDL requires effluent limits to be no higher than performance at the time of permit reissuance. This language is counter to the intended purpose of the SSOs as stated in administrative record for the adoption of the SSOs. Specifically, the administrative record includes the Final Staff Report, in which Regional Water Board staff supported the need for SSOs to account for the variability and complexities of the treatment process. Establishing performance based requirements places the Agencies in a position of rigidly maintaining effluent concentrations regardless of the impact (or lack of adverse impacts) to the receiving waters or the cost to do so. This approach places the Agencies in non-compliance --even though the water quality objectives are met-- in the event that effluent quality changes or is variable due to factors for which the SSOs were developed and adopted to address such as an increase in plant inflows, changes in influent quality, or optimization of plant processes for other constituents of concern.
- Lastly, the concept of performance based effluent limits is not new to the Los Angeles region as highlighted by a 1993 report put together by the Water Quality Advisory Task Force and accepted by the Regional Water Board. The Task

Force members, in addition to public members, included representatives from the Board of Directors of Heal the Bay, the Board of Directors of the League of Conservation Voters and the Deputy Division Director of the Water Management Division at EPA Region 9. The Task Force clearly recommended that performance-based goals rather than limits be used to maintain the incentive for future voluntary improvement of water quality wherever feasible without fear of being punished with more stringent numeric limits based on the improved performance and to avoid noncompliance with provisions of the Clean Water Act regarding anti-backsliding, which do not allow numeric limits in permits to be set less stringently than any set previously, except under certain limited circumstances.

Proposed Implementation Approach: The State Water Board should adopt a resolution that provides specific direction to the Regional Water Boards that includes consistent guidelines for:

- How WERs and translator studies can, and should, be used.
- How mixing zones and dilution credits can, and should, be used.

With specific regard to the use of mixing zones and assignment of dilution credits, the resolution should include encouragement for the Regional Water Boards to be more open to these options, and should more clearly define precisely: (1) how the “discretion” afforded to the Regional Water Boards in assigning dilution credits can, and should, be used, and (2) that separate mixing zones (for aquatic life acute and chronic and human health criteria) are appropriate for each discharge and that each constituent does not have its own mixing zone

The resolution should reinforce that mixing zones are an acceptable regulatory tool and should address how existing policies are to be applied in mixing zone decisions; such as the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP)(2005), the USEPA Technical Support Document for Water Quality-based Toxics Control (1991), and existing state and federal antidegradation policies. For mixing zones and allowance of dilution credits, specifically, there is guidance provided in the SIP for calculation of appropriate effluent limits (that are protective of beneficial uses outside of the mixing zone) using dilution credits. The calculated limits can then be further evaluated to determine compliance with antidegradation policies. The guidance should restrict the discretion allowed to the Regional Water Boards when the science supports the assignment of the full dilution allowed within a particular mixing zone, beneficial uses are protected and anti-degradation is appropriately considered.

Response to Staff Comments: Staff noted that they were not aware of any specific situations where good WER or Translator studies are not being implemented, and hopefully the above examples shed some light on that issue. We also appreciate staff’s comment that guidance on use of these studies from one POTW for permits on another POTW may be helpful tool for the Water Boards and would encourage this approach. As staff notes, there may be instances where proposals for dilution meet all technical criteria, but there are overriding considerations that cause denial, such as for a discharge to already heavily stressed waterbodies where increased loadings may not be warranted.

However, it is important to be made aware of those considerations in advance of preparing, and a Regional Board rejecting, a particular study, and it is important to have a better and more consistent understanding of what those “considerations” are, lest their imposition be arbitrary. We are not necessarily advocating for a “statewide rule for the application of dilution credits” beyond the existing statewide policy (SIP), but rather guidance that informs the exercise of discretion allowed to the Regional Water Boards when the science supports the assignment of the full dilution allowed within a particular mixing zone, beneficial uses are protected and anti-degradation is appropriately considered.

Part 2: Draft Economic Guidance Checklist Document

The need for an up-front look at the cost of compliance was a key component of the original POTW stakeholder proposals, as described in greater detail above. We understand that existing law requires the Water Boards to consider economics when adopting water quality objectives, and we are not proposing an expansion of this requirement, nor an in-depth evaluation or cost benefit analysis of the numerous actions that would be covered. Rather, the draft checklist is intended to provide transparency regarding the costs of compliance with new requirements and facilitate dialogue between the Water Boards and the regulated community regarding the cumulative financial impact of these requirements and establish realistic expectations regarding their benefit in terms of water quality and/or beneficial use protection. The draft economic checklist represents our initial attempt to design a tool to provide this evaluation.

Elements of the checklist were derived from concepts contained in *A Guide to Consideration of Economics Under the California Porter-Cologne Act*⁵ as well as suggestions made by member participants in the NPDES permitting workgroup. To be meaningful, and to ensure consistent application, we suggest that the mechanism for implementation related to this economic checklist be something more than guidance or suggestion.

Types of Actions Covered (Examples Only, Not Exclusive):

- Adoption of statewide plans or policies that result in increased costs of compliance (i.e. Toxicity Policy, Nutrient Policy, Biological Objectives, etc.)
- Major changes to monitoring and reporting programs and special study requirements for individual permittees and categories of permittees.

Considerations for Evaluating Costs:

1. Identify entities or categories of the regulated community affected by the proposed action;
2. Provide a qualitative description of the economic impacts of the proposed action on these entities (i.e. increases in monitoring and reporting costs, increases in costs associated with additional treatment, etc.) and possible alternatives;
3. Consider information provided by the regulated entity or sector related to estimated costs of compliance in relation to the budgets, revenue, rates, and other costs of affected entities;
4. Estimate the costs of the proposed action and, if the Water Board's estimate differs significantly from estimates provided by the affected entities, identify why this is the case;
5. Include a description of the purpose/value to be achieved by the proposed action.

These considerations are not designed to restrict the ability of the State and Regional Boards to enact and implement policies that are costly, but rather to increase

⁵ David Sunding and David Zilberman UC Berkeley, March 31, 2005, (hereafter "Sunding Report")

transparency and allow the boards to consider in a straightforward way the costs of complying with proposed actions. While the Sunding Report suggested the initial economic checklist as a precursor or indicator of whether to perform a deeper investigation, we would suggest that the initial checklist has significant value as a standalone process to measure the estimated costs of compliance.

Items to Be Included as Part of an Initial Economic Checklist:

- (1) List of Affected Agencies/Entities:**
- (2) Expected Costs to Affected Entity [Individual and Aggregate]:**
- (3) Expected Percentage Increase in Cost Area:** *[For example, if the proposed policy requires additional monitoring, the checklist would identify what percentage increase – or possibly actual costs or rate impacts - in the agency’s monitoring budget would result from implementation of the proposed policy as well as the aggregated increases on all agencies identified.]*
- (4) Availability of New Fees/Rate Increases and Expected Rate Increase on a Per Customer Basis:** *[Indicate the magnitude and/or viability of fee or rate increases, if estimated to be necessary, and what percentage of costs could or would be recovered in this manner]*
- (5) Cost to the Regulatory Agency:** *[New requirements not only impact the affected dischargers/entities, but can also affect the very government agencies imposing the regulations, in this case the State and Regional Water Boards. Depending on the scale of the new policy or regulations, the Boards may need to expand their staff, conduct or review studies and report, and/or establish mechanisms and organizational capacity to monitor and enforce compliance.]*
- (6) Effectiveness of Proposed Action in Improving Water Quality:** *[This is meant to be a short narrative description of what the proposed policy is expected to result in in terms of tangible improvements in water quality. This is not a dollar “value” to be placed on the expected water quality improvements, just a sense of the realistic expectations associated with a specific proposed regulatory action.]*
- (7) Possible Methods of Reducing Costs of Compliance Related to Proposed Policy:** *[This is meant to ensure that the Board has reviewed other less costly options for achieving the same water quality goals. Even if the Board has dismissed such options, it is important to note that they have been brought to the attention of the Board (either internally or through stakeholder comments) and that they are not being incorporated for a specified reason.]*

Part 3: Long-Term Proposal

As articulated in the original proposal document submitted on February 4, 2013, the NPDES stakeholders have also developed more long-term proposals for achieving reductions in the costs of compliance. While we believe that all of the ideas in the original proposals have merit and the potential to significantly reduce the costs of compliance, those concepts involve more fundamental changes to the manner in which wastewater entities are currently regulated and require additional steps before implementation. Thus, we have selected only one of those proposals for further discussion and development in this phase of the process: Implementing a phased approach to TMDLs.

Long-Term Proposal: Implement a Phased Approach to TMDLs

Issue: Although the State Water Board has indicated that the TMDL strategy in California should rely on an adaptive process that matches management capabilities with scientific understanding, TMDLs often focus on permitted discharges first, requiring expensive treatment technologies or other requirements that may not result in a measureable improvement to water quality. In many cases, the pollution stems from legacy sources, requiring creative solutions to the water quality issue. In others, additional data is needed to truly understand the sources, waterbody processes, and impacts to beneficial uses in order to craft strategies for TMDL implementation. These challenges require thoughtful and comprehensive processes rather than textbook approaches of setting wasteload allocations and implementation plans.

Cost Savings and Specific Examples: The cost savings associated with this approach are incredibly significant, potentially in the hundreds of millions or billions of dollars if advanced treatment is avoided on a widespread basis across the state. The Delta Mercury TMDL is one example of this process. Specifically:

- In the San Francisco Bay Region, POTWs collectively contribute less than 2 percent of the mercury loads to the Bay, as the majority of the loads come from sources such as runoff from historic mining areas and bed erosion. One of the largest sources of mercury is uncontrolled runoff from abandoned mercury and gold mines. This is also true in the Delta, where POTWs are a de-minimus source. Thus, the levels of mercury and methyl mercury in POTWs' discharges are relatively low. The guiding principles for the Delta Mercury TMDL include a phased approach to increase scientific knowledge and contain both regulatory and non-regulatory components, as well as various options to achieve compliance, such as pollution prevention activities or an offset program.⁶
- As one example of potential cost savings associated with this approach, in addition to a POTW's regular activities and contributions to regional monitoring, the POTW watershed permit implementing the mercury TMDL in Region 2 requires fish risk reduction efforts that cost approximately \$20,000 per year, and

⁶ The fact that this was a "phased" approach of the TMDL was positive, but not necessarily ideal. POTWs were still required by the Mercury TMDL to implement extensive source control and contribute to risk reduction programs. Jointly, Region 2 POTWs successfully reduced their loads by 35 percent since the TMDL was adopted in 2006. This effort was commendable, but this outlay of significant funds and effort resulted in less than one percent reduction of the total loads to the Bay.

the previous watershed permit also required a mercury loading report at a cost of \$25,000 per year and a dental mercury reduction program at a cost of \$25,000 per year per POTW. While the cost of this particular program may not appear large when examined in isolation, these types of costs will continue to grow as TMDLs are developed for more constituents in more water bodies.

Proposed Implementation Approach: In many instances, the State Water Board should move towards a phased implementation approach that selects the most appropriate approach as the first step for certain statewide water quality objectives (and TMDLs). The first phase should include a stakeholder process that engages all potential sources, and a regional monitoring program, where available, to ensure that good quality data is obtained to guide policy decisions, source control studies, and potentially a pollution prevention component to work toward achieving near-term load reductions. The second phase of TMDL implementation should evaluate the results of phase 1 monitoring and control studies, determine if waste load allocations and/or water quality objectives should be revised and what actions can be reasonably and feasibly achieved that also provide a measurable water quality benefit. It is important that all actions to control the pollutant in the watershed be fairly and comparatively evaluated on a cost versus benefit basis to develop plans that yield the best use of all public resources. For some constituents, it can be very cost-effective for POTWs to employ pollution prevention (P2) techniques to reduce effluent levels. Where appropriate, this can avoid or reduce the need for expensive and energy-intensive advanced treatment technologies. However, P2 strategies may be less reliable in terms of guaranteed pollutant reductions and may take more time to implement than deployment of traditional end-of-pipe treatment, and, moreover, in some cases, treatment may still be needed after implementation of P2 techniques, although less treatment may be necessary. Therefore, phased approaches that encourage pollution prevention and source control should be built into implementation policies and programs for new water quality objectives and TMDLs.⁷

A solution to this issue should incorporate the following elements: (1) TMDLs must appropriately address all discharge sources equitably; (2) all actions to control the particular constituent of concern in the watershed must be fairly and comparatively evaluated on a cost versus benefit basis to develop plans that yield the best use of all public resources; (3) public outreach and exposure reduction efforts should incorporate a proportional cost sharing methodology based on the amount of the constituent contributed by individual dischargers; (4) incentives and innovative strategies to reduce loadings should be encouraged, such as an offset program; and as identified above, (5) there should be a minimum threshold below which point sources should not be required

⁷ Some dischargers, such as the City of Palo Alto, have led the way in advancing source control and P2 techniques in order to avoid having to install costly and environmentally unfriendly end-of-pipe treatment. One driver for them has been the use of sewage sludge incinerators for biosolids disposal. Palo Alto has documented that source control for mercury is far cheaper than end-of-pipe air quality control technologies. See *City of Palo Alto Comments on the Proposed Rule on Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources Sewage Sludge Incineration Units*, 75 Fed. Reg. 63260 (Oct. 14, 2010).

to implement costly monitoring/reporting programs, special studies and contributions to risk reduction efforts.⁸

⁸ This issue of “de minimis sources” is another important issue that fits into the phased TMDL approach. TMDLs need to recognize that there are a number of approaches other than merely setting low limits for entities that are de minimis sources for the specific constituent, particularly when the only way to meet those limits is costly and energy-intensive advanced treatment. For example, the use of performance-based wasteload allocations (WLAs), the use of pollution prevention (P2) in circumstances where it is warranted, and considering the possibility of offsets or group approaches are better options that should be considered. Monitoring relief can also include shifting monitoring priorities from parameters already in compliance to TMDL-specific ones (e.g. a shift from total to dissolved metals). There should be a minimum threshold below which point sources should not be required to implement costly monitoring/reporting programs, special studies and contributions to risk reduction efforts. We would propose that source categories (i.e. POTWs) for constituents with TMDLs be considered “de minimis” if, as a group source, they collectively contribute less than two percent of the total load.