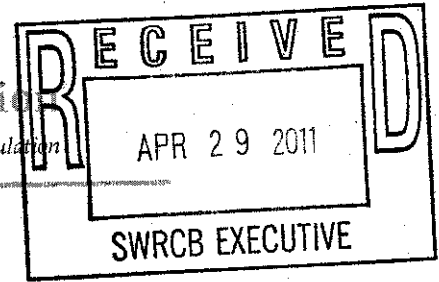




California Stormwater Quality Association  
Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation



April 29, 2011

Ms. Jeanine Townsend, Clerk of the Board  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

**Subject: Comment Letter – Draft Industrial Storm Water NPDES General Permit issued  
January 28, 2011**

Dear Ms. Townsend and Members of the Board:

The California Stormwater Quality Association<sup>1</sup> (CASQA) appreciates this opportunity to participate in the review and development of the draft Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for the Discharge of Storm Water Associated With Industrial Activities (Industrial General Permit).

CASQA's Industrial Subcommittee carefully reviewed, considered, and developed the comments and recommendations contained herein. The Industrial Subcommittee includes a broad representation of the entities that will be affected by the Industrial General Permit, including municipalities, regulated industries, stormwater professionals, academics, and attorneys. The subcommittee also includes a member of the State Water Resources Control Board's (State Water Board) Blue Ribbon Panel Report on *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities*<sup>2</sup>.

CASQA has been involved with each issuance of California's Industrial General Permit, and has been a steadfast advocate for industrial stormwater permits that protect water quality and are practical for industrial operations, providing both technical resources to the State Water Board and a voice for stakeholders affected by the permits. Further, CASQA has actively participated in the State Water Board's evaluation of quantitative performance measures for stormwater discharges. CASQA has carefully evaluated feasible approaches to implementing quantitative measures, and has shared these evaluations with the State Water Board through numerous stakeholder processes.

CASQA appreciates the step taken by the State Water Board to release a preliminary draft of the Industrial General Permit. However, we did find it challenging to provide comment on an incomplete draft, and a draft that did not provide the rationale or analysis necessary to explain the significant shift in the approach to regulation of industrial stormwater dischargers or the specific technical proposals in the draft

<sup>1</sup> CASQA is comprised of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout California. Our membership provides stormwater quality management services to more than 22 million people in California. CASQA was originally formed in 1989 as the Stormwater Quality Task Force to recommend approaches for stormwater quality management to the California State Water Resources Control Board.

<sup>2</sup> Currier et al., 2007

Industrial General Permit. Further, our review was hampered by technical ambiguities in the draft language. We assume some ambiguities were administrative or editorial oversights, since in several of the workshops staff made statements and provided opinions that seemed different than the draft language. CASQA looks forward to working with the State Water Board as you advance this draft from the current stage, through the stakeholder processes mentioned during the State Water Board Staff Workshops, to fully develop the next version of the draft Industrial General Permit that the regulated community and stakeholders can consider.

CASQA supports the State Water Board's staff's expression of the goals of this permit reissuance: a performance based permit model; with focus on improved data quality; and provision of flexibility and incentives. However, CASQA does not believe that the draft permit achieves these goals. The permit removes flexibility, has become overly prescriptive, and includes new requirements that will be extremely costly for the regulated industries and the municipalities, who have key roles in helping to assure compliance at regulated facilities.

CASQA's significant concerns, noted here are summarized in this letter.

- Issue 1. Use of Numeric Action Levels and Numeric Effluent Limits
- Issue 2. Use of the Compliance and Design Storm Events
- Issue 3. Increased Inspections and Monitoring
- Issue 4. Establishment of Industrial Qualified SWPPP Developers and Qualified SWPPP Practitioners
- Issue 5. Accounting for Atmospheric Deposition and Background Water Quality
- Issue 6. Incorporation of Total Maximum Daily Loads
- Issue 7. Conditional Exclusions – No Exposure and No Discharge
- Issue 8. Proprietary Business Information
- Issue 9. Removal of Group Monitoring
- Issue 10. Mandating Minimum Best Management Practices
- Issue 11. Receiving Water Provisions
- Issue 12. Local Compliance Assistance

Attachments to the letter provide detailed comments and recommendations on specific language (Attachment 1); provide responses to the questions that Board Member Tam Doduc asked during the hearing on March 29, 2011 (Attachment 2); and provide addition technical or regulatory detail on our concerns (Attachments as noted in the text).

#### **Issue 1. Use of Numeric Action Levels and Numeric Effluent Limits**

##### Summary Comment

CASQA must object to the use of Numeric Actions Levels (NALs) and Numeric Effluent Limits (NELs) as proposed in the draft Industrial General Permit. Use of the benchmark values from the United States Environmental Protection Agency's (EPA) *Multi-Sector General Permit for Stormwater Discharges Associated With Industrial Activity* (MSGP)<sup>3</sup> as NELs or NALs is

<sup>3</sup> Federal Register Vol. 73, No. 189, September 29, 2008.

inconsistent with EPA's intended use of the benchmarks. EPA found in 2008 that it was infeasible to establish effluent limitations for industrial stormwater discharges. The draft Industrial General Permit does not cite any new studies conducted by the State Water Board that support the issuance of new numeric effluent limitations. Additionally, the approach taken in the draft Industrial General Permit is not consistent with the recommendations of the State-convened Blue Ribbon Panel that evaluated the feasibility of NELs. Finally, any use of NALs must carefully describe their role as evaluation tools. The term "action level" is not defined in regulations; they must not create mandates that make them "virtual numeric effluent limits."

#### Comment Discussion

The draft Industrial General Permit includes a list of numeric values from the MSGP reissued in 2008, and declares them to be both NALs and technology-based NELs. EPA clearly states that the MSGP benchmarks are not effluent limits. In fact, they are in the MSGP's monitoring section, and are designed as an evaluation tool to use in monitoring the effectiveness of a site's Stormwater Pollution Prevention Plan (SWPPP).

*EPA notes that Part 6.2.1 emphasizes that the benchmark thresholds used for monitoring are not effluent limits, but rather information that is primarily for the use of the industrial facility to determine the overall effectiveness of the control measures and to assist in understanding when corrective action(s) may be necessary.<sup>4</sup>*

Under EPA's MSGP, reports and evaluation are required if average annual values (not counting natural background contributions) are higher than benchmarks, and these measures are required only for particular constituents selected for particular industry sectors. CASQA understands that EPA's position is clear – that the only use of the benchmarks EPA would support is the same use EPA designed them for.

When developing numeric limits is infeasible, EPA regulations allow non-numeric effluent limits to be included in NPDES permits, as has been the general practice in stormwater permits to date. Since the State Water Board previously considered reissuing the Industrial General Permit in 2005, EPA itself has exhaustively reviewed the question of whether numeric limits are feasible in an Industrial MSGP. In 2008, after thousands of pages of administrative record review and several Federal Register notices and extensive public comment, EPA concluded it was not feasible to establish NELs. EPA based this determination on currently available data, variability in stormwater discharges, and the variety of industrial activities and site features that the law requires to be considered in calculating NELs. The Blue Ribbon Panel convened by the State Water Board in 2006 reached similar conclusions.

Therefore, CASQA does not support the inclusion of EPA's benchmarks as either NALs or NELs in the Industrial General Permit, because this use would be inconsistent with EPA's stated intended use of the benchmark values. Adoption of new NELs has not been supported in the draft Industrial General Permit, and has been found infeasible both by the State's Blue Ribbon Panel and EPA.

Attachment 3 provides additional statutory background comments on NELs and NALs. Further, CASQA refers to and requests that you place in the record of this proceeding the additional materials listed in Attachment 4. This list represents previous comments and information

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<sup>4</sup> Federal Register Vol. 73, No. 189, September 29, 2008 pg 56574.

submitted by CASQA regarding the establishment of NELs or quantitative measures to regulate stormwater discharges. This list includes information submitted in response to questions asked by former Board Member Dr. Gary Wolff, which contain substantial technical material relevant to special characteristics of stormwater and industrial stormwater regulation, and establishment of NALs and NELs.

## **Issue 2. Use of the Compliance and Design Storm Events**

### Summary Comment

CASQA has significant concerns about the use of design and compliance storms as proposed in the draft Industrial General Permit. The approach to selecting these events is not supported and it is our understanding based upon statements by State Water Board staff at the workshops and at the March CASQA meeting that the language regarding a design storm event was not intended to be used as written. This language needs to be carefully evaluated and revised.

CASQA supports the use of both design storm and compliance storm events in the Industrial General Permit, but suggests an alternate approach to establishing these performance standards that is consistent with the process used to design post-construction treatment controls. Additionally, once established, the compliance event should apply to all analytical parameters, not just TSS as stated in the permit. Finally, it is not appropriate to apply a design storm event to the majority of erosion and sediment control BMPs. This provision of the draft Industrial General Permit language should be deleted.

### Comment Discussion

#### *Design Storm Event – Treatment Control BMPs*

A 10-year 24-hour design storm event is inconsistent with the current design standards in most California communities under Municipal Separate Storm Sewer System (MS4) permits and is inconsistent with current guidance. Treatment control BMPs typically are designed to capture the most frequent storm events and design approaches maximize treatment efficiency and reduce diminishing returns. The proposed design storm ignores many valuable BMPs that may be based on a flow rate rather than a volume.

*Targeting large infrequent storm events can actually reduce the pollutant removal capabilities of some BMPs... When BMPs are over designed, the more frequent, small storm events that produce most of the annual runoff pass quickly through the oversized BMPs and therefore receive inadequate treatment.<sup>5</sup>*

Treatment control BMPs are designed based on an analysis of the frequency of various size storm events and the maximal point of efficiency tends toward the 85<sup>th</sup> percentile event. The value of this approach has been recognized in MS4 permits throughout California.

CASQA recommends establishing a design storm event in the Industrial General Permit that defers to a MS4's established standard. These local standards typically use local rain and more recent rainfall records than used in the NOAA Atlas referenced in the draft Industrial General Permit. For industrial facilities located in an area where an MS4 standard has not been established, the design storm event should be established consistent with existing practice and

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<sup>5</sup> CASQA 2003, *New Development and Redevelopment Handbook*, pp 5-15

guidelines. CASQA's *New Development and Redevelopment Handbook* (2003) offers several suggested options to establish flow and volume based performance standards including:

#### Volume-Based

- 80% of the annual runoff, determined in accordance with the methodology set forth in Appendix D of the California Stormwater Quality Task Force (SWQTF) BMP Handbook (1993) Appendix D, using local rainfall data.
- The maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and manual capture coefficients set forth in the WEF Manual of Practice No. 23/ASCE Manual of Practice 87.

#### Flow-Based

- 10% of the 50 year peak flow rate.
- The flow of runoff produced by a rain event equal to two times the 85<sup>th</sup> percentile hourly rainfall intensity for the applicable area based on historical records of hourly rainfall depths.
- The flow of runoff resulting from a rain event equal to at least the 0.2 in/hr intensity.

Additionally, the CASQA Basin Sizer calculates flow-based and volume-based design storms based on continuous simulation of historic local data and the user's selection of the desired percentage of historic *runoff* that is treated from the watershed that has its particular level of imperviousness (<http://www.water-programs.com/BasinSizer/Basinsizer.htm>).

#### *Design Storm Event – Erosion and Sediment Control BMPs*

CASQA urges eliminating the design storm event for all erosion and sediment control BMPs. With the exception of sediment basins, sediment control BMPs are not designed for a return frequency event. Erosion control BMPs are almost never designed for a return frequency event. Erosion control BMPs include a wide variety of practices ranging from preserving existing vegetation, to rolled erosion control products, to mulches, and slope drains. Each may have a design or performance standard, such as percent cover, sheer stress, or longevity, based upon the primary operating principle. With the exception of practices designed to direct or hold water, the size of a storm event is seldom a critical consideration and in many cases will not be known. Establishing an inappropriate design standard will eliminate BMPs from being used. Engineers will not employ BMPs for which test data is not available to inform their design decision. This may result in the avoidance of vegetation and other less structural BMPs from being employed. See Attachment 1 for specific language recommendations.

#### *Compliance Storm Event*

If and when NALs or NELs are established, the compliance storm event should apply to all pollutants for which NALs or NELs have been established, regardless of the BMPs that are implemented. The permit language must explicitly state that when the compliance storm event is exceeded, any monitoring data associated with any amount of runoff in excess of that event are not to be used to trigger NAL-exceedance site evaluations or used to assess NEL-exceedance non-compliance penalties.

CASQA recommends once having established a design storm event based on the comments in the first part of this comment that the compliance storm event be set equivalent to the design storm event.

Regulatory agencies have selected a variety of storm events as a compliance storm event, typically without any technical justification. EPA used the 2-year 24-hour event in the Effluent Limitation Guidelines for the Construction and Development Industry. The State Water Board established the 5-year 24-hour event as the compliance storm event in the 2009 Construction General Permit and established the 10-year 24-hour event for discharges from Active Treatment Systems. CASQA does not believe that any of these events are appropriate for a developed site, where treatment is likely to be a retrofit situation, and the most sites will be predominantly paved.

### **Issue 3. Increased Inspections and Monitoring**

#### Summary Comment

CASQA is opposed to the significant increase in the monitoring requirements contained in the draft Industrial General Permit. CASQA also found it difficult to assess the requirements as they were distributed throughout the Industrial General Permit and recommends that all inspection and sampling requirements be combined into one section of the Industrial General Permit.

#### Comment Discussion

The technical ambiguities and mistakes in the permit language, as well as the complexity and dispersed nature of inspection and monitoring requirements, are likely to cause significant confusion and difficulty demonstrating compliance for dischargers. The draft Industrial General Permit appears to require approximately 400 more documented inspections annually than what is currently required. CASQA has compiled a list of the inspections required throughout the draft permit, see Attachment 5. CASQA believes that this increase is not needed to protect water quality. Significant streamlining of the inspection requirements is needed. CASQA notes that in the 2008 update of the MSGP, EPA maintained the quarterly inspection regime, but noted that in certain circumstances monthly inspections could be warranted.

The draft Industrial General Permit does not identify the rationale for the number of increased inspections. Absent such a rationale, CASQA cannot propose an alternate program that would be more practical. CASQA is willing to work with State Water Board staff to develop a streamlined program that meets the permit objectives and is efficient for dischargers to implement, including consideration of consolidating many inspections.

The draft Industrial General Permit similarly proposes significant increases in stormwater sampling requirements. Baseline sampling has doubled the number of storm events that need to be sampled. The elimination of the option for dischargers to sample representative discharge locations, however, also significantly increases baseline sampling requirements. As it will increase the number of locations many dischargers must sample, increase staff efforts, and increase analytical costs, without any identifiable increase in protectiveness of water quality. The increased sampling efforts and frequency escalate for facilities with land disturbing activities (sampling each day of the qualifying event), and daily sampling for every storm for facilities in Corrective Action Tier 3.

The elimination of the option to reduce the number of locations sampled based on representative substantially identical drainage areas poses many potential challenges. Facilities have used this representative sampling approach to work around structural and safety issues with specific

outfalls. Representative sampling provides a cost effective method to monitor substantially similar drainages. Eliminating representative sampling increases costs without increasing water quality protection.

The proposed concept of qualified combined samples initially appears to be a substitute for the reduction in samples from substantially identical drainage areas. However, this approach does not eliminate the need to collect the samples from all drainages, which is a significant labor cost. CASQA compiled preliminary costs associated with the proposed monitoring, see Attachment 6. Costs associated with sampling efforts under the draft Industrial General Permit could increase anywhere from 90% to over 2000% for a facility.

CASQA recognizes that a robust and well defined monitoring and inspection program is a critical element of this permit. CASQA's suggestions detailed in Attachment 1 will result in early detection of potential BMP deficiencies while minimizing pollutant discharges from industrial activities, and provide a clear process for facilities to demonstrate compliance with the permit requirements without being overly burdensome to the regulated community.

#### **Issue 4. Establishment of Industrial Qualified SWPPP Developers and Qualified SWPPP Practitioners**

##### Summary Comment

CASQA has concerns about the establishment of Qualified SWPPP Developers (QSDs) and Qualified SWPPP Practitioners (QSPs) as identified in the draft Industrial General Permit. While CASQA concurs with the approach of not requiring pre-requisite registrations or certifications for Industrial QSPs, CASQA is opposed to the list of pre-requisite registrations or certifications for Industrial QSDs. CASQA recommends an alternate approach to assuring qualification of QSDs based on demonstrated knowledge and experience. Based on the recent experience with the Construction General Permit, CASQA recommends a longer phase-in time for the training requirements.

##### Comment Discussion

First, a matter of nomenclature, the draft Industrial General Permit should clearly identify the QSD and QSP as Industrial QSDs and Industrial QSPs (IQSD and IQSPs) or develop a unique title for these roles under the Industrial General Permit. While the details of the training program have not been developed, CASQA anticipates that the industrial QSD and QSP requirements will differ from the construction program. Clearly distinguishing the nomenclature should help reduce confusion and help assure facilities seek and obtain the services of the correct type of QSD or QSP.

CASQA concurs with the approach of not requiring any pre-requisite registrations or certifications for Industrial QSPs.

CASQA understands based on State Water Board staff comments during the workshops and hearing that the list of 'pre-requisite' registrations or certifications for Industrial QSDs was intended to start the conversation and not as final proposal. CASQA does not believe that the initial proposed certifications will necessarily ensure that SWPPPs are developed correctly or result in programs that adequately control stormwater discharges and offers the following observations and suggestions.

CASQA is concerned about the limitation of the QSD to certain professions, especially when it is not evident that the professions provide an adequate background in industrial stormwater pollution prevention plan development. The specification of these professions will limit the pool of otherwise qualified and experienced SWPPP developers and likely raise the cost for SWPPP development. In particular, CASQA believes it is most important to promote industrial stormwater pollution control, experience and knowledge of industrial operations, pollutant sources, and stormwater or environmental management activities at the facility, superseding the need for training as a geologist, landscape architect, hydrologist, or engineer. Services of these registered or certified professionals may be important for some specific measures included in a SWPPP. However, it is not necessary to make these professionals responsible for the development of the whole SWPPP, which is likely to heavily feature staff training, process knowledge, source control, and pollution prevention opportunities.

Unlike the recent experience with the Construction General Permit, to our knowledge, there are no professional certifications that specifically address industrial stormwater management as there were for erosion and sediment control. Each industrial sector and facility type may have unique needs that call for specific types of professional skills for particular stormwater control tasks. Some specific tasks at a mine site, for example, may require attention of a mining engineer. At various types of unpaved sites, a professional in erosion and sediment control can provide useful services for specific tasks, though not mandated by law.

CASQA recommends the permit language be revised to reflect one of the options provided below. Both of the options include eliminating a listing of 'pre-requisite' licenses or certifications. CASQA suggests that the State Water Board convene a stakeholder group tasked with choosing one of these options and developing the specific details (such as defining the required relevant education and experience discussed in option #2).

- Option 1 The appropriate qualifications for an Industrial QSD should be determined by the completion of the state-sponsored or approved training program and examination. The training program would focus on the requirements of the permit, and provide exposure to a variety of industrial discharge conditions/situations. The examination should be comprehensive and detailed, and include practical applications, such that, in order to pass, examinees will have to combine their personal experience and skills with the knowledge they gain from the training program.
- Option 2 Require Industrial QSD applicants to demonstrate a specified level of relevant education and experience. The education and experience can be demonstrated during the application process for the Industrial QSD course or examination. This would be similar to the processes currently used by other professional certification programs. The definitions of "relevant education and experiences" would be developed by the stakeholder group or the Industrial General Permit Training Team to be convened.

Should the State Water Board want to maintain a list of pre-requisite registrations or certifications, CASQA suggests this requirement be limited to facilities engaged in particular response actions. The State Water Board's stakeholder group should investigate potentially relevant certifications and identify the ones that should be included in the final permit. CASQA suggests that the following professional certifications be additionally considered:



- Certified Professional in Storm Water Quality (CPSWQ) – EnviroCert International
- Certified Professional in Erosion and Sediment Control (CPESC) – EnviroCert International
- Registered Environmental Assessor I or II (REA) – Department of Toxic Substances Control
- Certified Hazardous Materials Manager CHMM – Institute of Hazardous Materials Management
- Industrial Waste Treatment Plant Operator – California Water Environment Association
- Environmental Compliance Inspector – California Water Environment Association
- Certified Municipal Separate Storm Sewer System Specialist (CMS4S) – EnviroCert International.

Notwithstanding professional registration or certification, the State Water Board should maintain the requirement for training and testing potential Industrial QSDs. Stormwater control is a multi-disciplined process, and knowledge of pollution prevention techniques beyond a specific field is necessary.

The Industrial General Permit should include a reminder that specific services such as engineering or landscape architecture must be performed by an appropriately licensed professional. The clarification should be expanded to note that not all aspects of SWPPP development necessarily constitute a specific professional service, e.g., that while a SWPPP may include a Civil Engineer designed feature, development of the whole SWPPP does not constitute the practice of civil engineering.

Similar to the Construction General Permit, the Industrial General permit should allow Industrial QSPs to train and delegate SWPPP implementation responsibilities to others, such as inspections and sampling.

#### **Issue 5. Accounting for Atmospheric Deposition and Background Water Quality**

##### Summary Comment

CASQA is pleased that State Water Board has recognized that pollutants in stormwater discharges caused by atmospheric deposition and/or run-on from forest fires, or any other natural disaster, would not apply toward NAL corrective action trigger determinations (see Finding E. 46 and Provision XVII.D.2). However, Finding 46, as written, is confusing. It could be interpreted to mean that only atmospheric deposition from natural disasters would not count toward exceedance of a NAL corrective action trigger. This interpretation appears to be reflected in existing provision XVII.D.2, which states, "NELs do not apply if the industrial facility receives run-on or atmospheric deposition from a forest fire or any other natural disaster." This narrow language is inappropriate in areas of the state with significant air pollution problems. In these areas, atmospheric deposition is a major source of metals and other pollutants over which the industrial discharger has no control. Finding 46 and Provision XVII.D.2 need to be re-written to clarify that industrial dischargers are responsible only for discharges of pollutants associated with their industrial discharges – not atmospheric deposition, background conditions, run-on, or the results of a natural disaster. Please see Attachment 1 for language that CASQA recommends be included in the revised draft Industrial General Permit.

### Comment Discussion

Natural background should be added to the list of sources of pollutants in stormwater discharges that will not apply toward any NAL corrective action trigger determination, nor result in the imposition of NELs. The January 28, 2011, draft Industrial General Permit does not include the lessons learned by EPA and excludes any discussion of natural background conditions. EPA's 2008 MSGP recognizes that permittees should not be held responsible for pollutants generated by the natural background conditions. Monitoring for a particular pollutant discharged from an industrial site may be waived if the permittee documents that the presence of a pollutant of concern in its discharge is attributable to natural background pollutant levels and not to the activities of the permittee. The MSGP also contains provisions allowing dischargers to eliminate corrective actions and subsequent monitoring requirements if the exceedance of benchmarks is attributable solely to natural background levels of that pollutant. In addition, the MSGP provides for a determination that a discharge of pollutants, although not solely due to natural background, cannot be further reduced using control measures that are technologically and economically practicable.

EPA had not allowed for a consideration of natural background in the 2000 version of the MSGP, but through experience came to recognize that there could be circumstances when their benchmark values reasonably might not be able to be achieved because of high natural background levels of certain constituents in soils or groundwater, or from vegetation and wildlife sources. Similar provisions should be included in the Industrial General Permit. Recommended changes to the draft Industrial General Permit are included in Attachment 1.

California should also look to neighboring states for approaches for accommodating natural or background conditions in the new Industrial General Permit. Oregon, for instance, has published guidance on evaluating natural or background conditions. This guidance recognizes anthropogenic background conditions, such as low pH caused by acid rain, in addition to natural background conditions. The Industrial General Permit should recognize anthropogenic background conditions, such as low pH caused by acid rain and atmospheric deposition, in order to produce a workable and affordable permit.

At the staff workshop held in Irvine, several industrial permittees expressed concern about atmospheric deposition of zinc and copper, ubiquitous metals in urban environments. CASQA encourages the State Water Board to address pollutants like these through true source control rather than imposing treatment control requirements on industries and municipalities.

### **Issue 6. Incorporation of Total Maximum Daily Loads**

#### Summary Comment

CASQA is concerned about the manner in which Total Maximum Daily Loads (TMDLs) are addressed in the draft Industrial General Permit. In particular, CASQA is concerned with the inadequate explanation of the relationship of TMDLs to the Industrial General Permit in the Findings section, and with what CASQA understands to be the proposed method of addressing TMDLs in the yet to be completed Attachment G – TMDL Implementation.

#### Comment Discussion

Findings 42 and 54 are the only findings that directly reference TMDLs. Finding 42 speaks to the EPA benchmarks and Finding 54 is in a section of findings concerned with sampling, monitoring, reporting, and record keeping. Since the previous and current Industrial General

Permits pre-dated the adoption of TMDLs across the state, the draft Industrial General Permit should provide a set of findings explaining TMDLs and their relationship to the permit.

The Findings section should explain TMDLs and how the Order is consistent with applicable Waste Load Allocations (WLAs) and Load Allocations (LAs) in approved TMDLs. The findings should acknowledge that federal regulations require that NPDES Water Quality-Based Effluent Limitations (WQBELs) must be consistent with the assumptions and requirements of TMDL WLAs.

The findings should also acknowledge that neither federal regulations nor EPA guidance mandates that permits express TMDL WLAs as numeric WQBELs. Furthermore, the findings should reiterate that the State has the authority to express WQBELs in the form of BMPs for stormwater discharges from MS4s, small construction sites, and industrial sites.

The permit requirements should specify that industrial sites will comply with TMDL WLAs through source control and, when necessary, the implementation of treatment control BMPs. To that end, if the discharger is subject to a TMDL for a specific constituent, the Industrial General Permit should provide that implementation of TMDLs will be determined by TMDL implementation plans and implementation schedules, and no additional BMPs or other implementation measures should be required to reduce or prevent pollutants in stormwater discharges in compliance with BAT/BCT. In this case, any numeric performance levels (such as NALs or NELs) in the Industrial General Permit should be suspended in favor of the TMDL requirements. CASQA has recommended modified TMDL language in Attachment 1.

#### **Issue 7. Conditional Exclusions – No Exposure and No Discharge**

##### Summary Comment

CASQA recommends eliminating the redundancy and providing one set of compliance instructions for the No Exposure Certification. CASQA strongly recommends modifications to annual recertification requirements for both the No Exposure and No Discharge Certifications.

##### Comment Discussion

The No Exposure Certification provisions in the draft Industrial General Permit are called out in paragraph XXI and then duplicated in Attachment C. Notwithstanding this duplication, the varying level of detail and slightly different definitions in the two sections will lead to varying interpretations of the requirements.

CASQA believes that assessing an annual fee associated with annual recertification for No Exposure Certification is unnecessary. Subjecting dischargers who pose no threat to stormwater quality to recurring annual fees is unwarranted for dischargers who are merely certifying no change in their status. Should the no exposure status change, the discharger would be required to apply for coverage and would pay permit annual fees as required by the Water Code.

Similarly, CASQA believes that assessing an annual fee associated with annual recertification of the No Discharge exclusion is unnecessary. Further, because the infrastructure in place to manage the 100-year 24-hour storm event is unlikely to change on an annual basis, annual recertification by a Professional Engineer is not necessary. The discharger in the annual renewal of the exclusion should be able affirm the basis of the original certification and certify to no infrastructure changes. Facilities where the infrastructure has changed would go through a full recertification, and pay an appropriate fee for that certification.

**Issue 8. Proprietary Business Information**Summary Comment

CASQA is concerned that no allowance has been provided in the draft Industrial General Permit for proprietary business information. Similar to the Homeland Security provision in Section II.8, the State Water Board should include language to allow the protection of proprietary and trade secret information.

Comment Discussion

Dischargers should not be required to make public lists of raw materials, products, and by-products or technological process descriptions that could compromise the competitiveness of their business. This information should be required in the on-site SWPPP and can be provided to local, state, or federal inspectors upon request, but it should not be made available in publicly posted SWPPPs. Further, CASQA members have expressed a concern about public disclosure of unique pollution prevention approaches and BMPs developed for individual companies. These innovations should similarly be considered proprietary business information and excluded from publicly posted SWPPPs. The protection of confidential business information should be consistent with provisions of Water Code section 13267(b)(2), as well as the Public Records Act and Freedom of Information Act.

**Issue 9. Removal of Group Monitoring**Summary Comment

CASQA is concerned that the removal of the group monitoring provisions in the draft Industrial General Permit has eliminated benefits of the groups in an effort to mandate that every facility sample stormwater discharges. Rather than consider this a group monitoring program, CASQA suggests that it is more accurately a group compliance program. CASQA believes the group programs should continue into the new permit term. Even if the State Water Board does not choose reductions in sampling of the same magnitude as the current Industrial General Permit, some lowering of sampling frequency should be provided, to retain one of the incentives for group members to continue to participate in groups. This issue is discussed in detail in Attachment 2.

Comment Discussion

Group members subject themselves to additional scrutiny through inspections, additional training and additional reporting in order to produce better quality data and to have some additional control in the selection of BMPs for their industry. One of the significant problems cited by staff and permittees in the State Water Board's workshops and in the Blue Ribbon Panel Report was stormwater sample data quality. The increased QA/QC from the existing group monitoring programs has resulted in data quality far superior to the State Water Board's existing database and this improvement in data quality is expected to continue into the new permit. The increase in data quality at group member sites can be attributed to intense training oversight and involvement by the group leader.

Group members have received a sampling reduction in exchange for these benefits that accrue to the State Water Board and the Regional Water Boards, e.g., professional data collection and control and more stringent oversight. The decision to discontinue group monitoring does not recognize the additional benefits the State Water Board receives by using monitoring groups to

generate higher quality data and to reduce the inspection burden currently placed on resource-strained Regional Water Boards and MS4s.

Group leaders can play a more extensive role in oversight, inspections and sampling quality assurance in any revised group monitoring scheme. Group leaders could serve as the QSD for group participants and be required to fill many of the QSP functions for the group members. This is central to ensuring that the quality of stormwater sample data sets for monitoring groups. This level of implementation oversight by someone qualified as a QSD, and the attendant rigorous site visits and training can justify a reduction in sampling for group members, which would retain one of the incentives for group members to continue to participate in groups.

#### **Issue 10. Mandating Minimum Best Management Practices**

##### Summary Comment

The draft Industrial General Permit mandates that minimum BMPs be implemented throughout the facility. CASQA does not object to additional guidance on BMPs. However, because the listed BMPs cannot reasonably be implemented at all types of industrial facilities, CASQA requests that this section be revised as discussed below. Details on the individual BMPs are provided in the detailed comments in Attachment 1.

##### Comment Discussion

The language of the introduction to Section VIII is overly restrictive, as written, allowing a discharger to vary from a specified minimum BMP only if it is "inapplicable". CASQA notes that many of the listed minimum BMPs are needed for many facilities, but not all facilities, though if omitted entirely from mention by the permit would seem to endorse less than a rigorous SWPPP. Attention to these BMPs can be achieved while still retaining some flexibility to allow the necessary application of appropriate standards in tailoring to each industry and facility. In addition, CASQA requests clarification of language in Section VIII regarding the discharger's "burden of proof" and the areas in which minimum BMPs apply.

To make BMPs truly mandatory would require findings by the State Water Board that the BMPs actually represent BCT for conventional pollutants and BAT for other pollutants. Each of these standards requires specific consideration, in varying respects, of costs and technological feasibility. Because the State Water Board has not performed or provided such a detailed analysis, leeway must be provided in the selection of BMPs to properly implement the BAT and BCT standards. CASQA also notes that there is no legal requirement under the Clean Water Act that a zero pollutant load be achieved. Since some mandatory BMPs, such as covering storage areas, are designed to completely eliminate discharges from a particular area, it is impossible to state an alternative that provides strictly "equivalent reduction" of pollutants.

In addition, the areas of the facility that do not produce (originate or carry) stormwater associated with industrial activity that discharges to waters of the US (United States) should be more clearly excluded from the mandatory minimum BMPs. Such areas include, for example, areas where stormwater drains only to retention ponds, for evaporation, percolation and/or reuse, or is otherwise contained.

Finally, the draft Industrial General Permit inappropriately states that a discharger "has a burden of proving" certain judgments. The discharger's obligations should be clearly outlined in the permit, and in any enforcement action the burden of proof should be appropriately placed based

on applicable principles of law. The permit can simply require adequate justification for variance from the minimum BMPs. Suggested revisions to permit language are provided in Attachment 1.

As noted above, if dischargers are allowed to provide justification of variance from BMPs under appropriate circumstances, there may be little need to debate the exact wording of individual BMPs. If the inflexible draft Industrial General Permit language currently contained in the introduction remains, the State Water Board must tailor mandatory BMPs appropriately to types of facilities and activities. Otherwise, the mandatory BMPs may make even well-run facilities with no significant impact on water quality infeasible to operate.

### **Issue 11. Receiving Water Provisions**

#### Summary Comment

CASQA recommends that receiving water provisions that are contained in the current Industrial General Permit be added into the permit. While mentioned in the Fact Sheet of the draft Industrial General Permit, they are not in the Order. CASQA recommends language in its supporting statutory background comments, see Attachment 3.

#### Comment Discussion

The draft Industrial General Permit contains a standard provision that prohibits discharges that cause or contribute to a water quality exceedance. (Section VI.A. at p. 15.) The Fact Sheet to the 2011 draft Industrial General Permit (Section II.A.3. at pp. 8-9) appears to refer to a process regarding potential receiving water quality exceedances (observed by the Regional Water Board or discharger) that is identified in Section V.6 of the Draft Permit. Section V.6 does not exist in the draft Industrial General Permit.

### **Issue 12. Local Compliance Assistance**

#### Summary Comment

CASQA is concerned about the additional regulatory and fiscal burden the draft Industrial General Permit will have on local agencies administering MS4s NPDES permits. MS4s own and operate facilities covered under the Industrial General Permit and will be negatively impacted by the increased costs associated with the draft Industrial General Permit requirements. Additionally, many MS4s provide regulatory oversight of facilities covered under Industrial General Permit. The draft Industrial General Permit will require additional resources from these already-stretched MS4 budgets. CASQA recommends that the revenues collected by the State Water Board associated with the Industrial General Permit be equitably distributed to municipalities to fund an appropriate level of local regulatory oversight at facilities covered under and mitigate industrial water quality impairments.

#### Comment Discussion

MS4s will be subject to direct fiscal impacts at the many and varied MS4-owned Industrial General Permit facilities under proposed mandates of the draft Industrial General Permit. Costs will increase as a result of the increased inspection, sampling, reporting and recordkeeping requirements. MS4s across the state operate a variety of critical and essential public facilities currently permitted under the Industrial General Permit. These facilities include landfills, airports, wastewater treatment plants, and fleet facilities. The increased regulatory requirements of the draft Industrial General Permit and the cost burden associated with them will negatively impact the operation of these critical public facilities.

The draft Industrial General Permit will also impact MS4s responsible for implementing the industrial/commercial inspection programs outlined in their NPDES permits. Currently, many MS4 permittees are required to routinely inspect Industrial General Permit facilities in their jurisdictions. Although these MS4s do not enforce the Industrial General Permit, often, they are required to notify their Regional Water Board of Industrial General Permit violations and of facilities that fail to obtain coverage under the Industrial General Permit. Significant local resources are currently dedicated to this effort. The more detailed requirements of the proposed Industrial General Permit such as NALs/NELs, additional sampling, mandatory minimum BMPs, and corrective action requirements will necessitate an increase in the resources necessary to provide regulatory oversight and the expertise to identify violations. Regulatory responsibilities between State and local jurisdictions need to be clearly delineated in order to avoid duplicity and confusion.

Under the current MS4 permitting structure, MS4s appear to have effectively become a functional arm of the Regional Water Boards at Industrial General Permit facilities. The responsibility of regulating industrial dischargers to ensure the substantive provisions of the Industrial General Permit are met appears to be delegated to the MS4. Without the necessary resources to implement an industrial stormwater program, the requirement to inspect industrial dischargers' performance and compliance with the Industrial General Permit appears to be a potential unfunded State mandate. If MS4s are forced to charge local fees for Industrial General Permit inspection and education programs, businesses will be double charged for regulatory oversight of their industrial stormwater discharges. This is a significant burden for industry to bear in these tough economic times.

The expansion of industry types subject to the draft Industrial General Permit will raise substantial new revenues for the State NPDES program (ranging from \$360,000 to 1 million dollars, depending on the eligibility of industries for the No Exposure Exemption). The draft Industrial General Permit does not address how these fees will be used; whether the revenue will go to local compliance assistance, enforcement or merely to cover the administrative costs of the State's water quality programs. What is known is that the draft Industrial General Permit will place extraordinary demands on local agencies charged with the oversight and enforcement of its provisions.

Currently, the responsibilities and resources associated with overseeing compliance at Industrial General Permit facilities are not reasonably distributed between State and the MS4 permittees. CASQA advocates for an equitable apportionment between State and local government of the revenues generated by the Industrial General Permit fees to provide for the administration of local industrial stormwater inspection and education programs. Without a redirection of revenues back to MS4s and their affiliated Regional Water Boards for local compliance assistance, the permit will lack meaningful enforcement and compliance at the local level yielding predictable results: limited understanding of the regulation by operators, poor compliance, minimal improvements in stormwater quality, and plenty of legal exposure.

In closing, thank you for your consideration of our comments. CASQA recognizes the difficult technical and practical challenges of developing a permit to regulate industrial stormwater runoff and hopes that our comments will assist the State Water Board in improving the draft permit, making it a better tool for industrial site operators to meet their challenge of protecting water quality. Given the significant issues raised by this draft permit and the breadth of the suggested changes, CASQA looks forward to working with the State Water Board to help develop a permit that maximizes the likelihood of achieving staff's goals for this permit reissuance of a performance based permit model, with focus on improved data quality, and provision of flexibility and incentives. Also, given the anticipated substantive changes to the draft Industrial General Permit, CASQA formally requests that the State Water Board issue another draft permit and provide another workshop to allow for adequate participation by stakeholders in the development of the proposed permit.

Please feel free to contact me at (760) 603-6242 if you have any questions regarding these comments.

Sincerely,



Scott Taylor, Chair  
California Stormwater Quality Association

Attachments

1. Detailed comment table
2. Response to Board Member Tam Doduc
3. Statutory Background comments
4. List of previously submitted CASQA evaluations of quantitative performance measures
5. List of inspections required by the draft Industrial General Permit
6. Summary of monitoring costs

cc: Greg Gearheart, State Water Board  
Bruce Fujimoto, State Water Board  
CASQA Executive Program Committee and Board of Directors



# Attachment 1 –CASQA’s Detailed Comments on the Draft Industrial Stormwater General Permit

| Item No.                            | Identify Permit Element/Issue/Concern         | Location in Draft Industrial General Permit                           | Comment   |
|-------------------------------------|---|---|---|
| <b>Corrective Actions/NALs/NELs</b> |   |   |   |
| 1.                                  | Invalid Numeric Effluent Limits               | XVII.D.1 (pg 41)<br>Fact Sheet (p. 8)<br>Fact Sheet Section K (pg 29) | <p>The draft Industrial General Permit and draft Fact Sheet do not establish the legally required basis for imposing numeric technology-based effluent limits. The draft Industrial General Permit and related Fact Sheet do not support the adopting NELs as technology-based numeric effluent limitations. The State Water Board has not set forth specific data, other technical basis imposing numeric TBELs in the draft Industrial General Permit, nor has it specifically considered any of the required factors set forth in CWA Section 304 or implementing regulations pursuant to 40 C.F.R. 122.44(a)(1) and 125.3. In addition, US EPA has not promulgated comparable effluent limitations guidelines.</p> <p>TBELs establish performance-based levels of pollutant controls to achieve the applicable technology-based standards (Best Conventional Technology for conventional pollutants (BCT), Best Available Technology Economically Achievable (BAT-EA)) established by the CWA and provide equity among dischargers within industry categories or sub-categories. TBELs aim to prevent pollution by requiring a minimum level of effluent quality that is <i>attainable</i> using <i>demonstrated technologies</i> for reducing discharges of pollutants. The NPDES Permit Writers’ Manual describes a detailed, nine-step process that the permit writer must employ to develop TBELs from effluent guidelines.</p> <p>The “Suspension of Numeric Effluent Limitation” concept is ineffective and off ramps cannot remedy inappropriate NELs or NALs.</p> <p>Additional detail on the subject of NELs and NALs is contained in the attached CASQA Legal Comments.</p> |
| 2.                                  | Level 3 imposition of Numeric Effluent Limits | Section XVII.D.2 (pg 41)  | <p><i>Delete Level 3 Corrective Action entirely; the numeric effluent limits must be eliminated.</i></p> <p>The “off ramps” for suspension of numeric effluent limits, and emergency conditions and natural disasters are problematic, and cannot substitute for correcting the error in setting these NELs. See the attached Legal Comments for further discussion.</p>  |

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|----------|--|---|--|
| 3.       | Numeric Effluent Limits have not been developed using Best Professional Judgment as stated | Fact Sheet (p. 8) Section XVII              | <p>The draft Industrial General Permit indicates it is establishing TBELs through the use of best professional judgment (BPJ). Use of BPJ is allowed on a case-by-case basis pursuant to CWA section 402(a)(1), where EPA-promulgated effluent limitations are inapplicable. 40 C.F.R. 125.3(c)(2). The permit writer must apply the factors listed in 40 C.F.R. 125.3(d). Depending upon whether the applicable standard is BPT, BCT, or BAT, 40 C.F.R. 125.3(d) requires the consideration of such items as cost compared to pollutant reduction, the age of equipment and facilities involved, the process employed, engineering aspects, process changes and non-water quality environmental impacts. In addition, 40 C.F.R. 125(c)(2) requires the permit writer to consider the appropriate technology for the category or class of point sources of which the applicant is a member and any unique factors relating to the applicant.</p> <p>The draft Industrial General Permit does not follow the legally required process to develop TBELs on a case-by-case basis using BPJ. The draft Industrial General Permit does not attempt to address the required factors that must be considered in setting TBELs. (Fact Sheet p. 8 actually states this analysis is needed but has yet to be done.) Therefore, implementation of the TBELs as proposed is not appropriate.</p> |
| 4.       | EPA Benchmarks are not appropriate Numeric Effluent Limits                                 |   | <p>EPA clearly stated that benchmarks are not effluent limitations. In its 2008 MSGP (Part 6.2.1), EPA confirms:</p> <p style="padding-left: 40px;"><i>The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2.</i></p> <p>In light of EPA’s unequivocal position, benchmarks have never and cannot now legally serve as NELs. Finding 42 in the draft Industrial General Permit is particularly objectionable, asserting that “[t]he State Board finds that the USEPA benchmarks serve as an appropriate set of technology based effluent limitations that demonstrate compliance with BAT/BCT.” This unsupported statement cannot substitute for an appropriate effluent limitations development process, and is inconsistent with EPA’s clear regulatory conclusions and intent regarding the benchmarks.</p>  |
| 5.       | Numeric Effluent Limits are infeasible   |   | <p>In 2006, the Blue Ribbon Panel concluded that the establishment of numeric limits for industrial sites required a reliable database describing current emissions by industry types or</p>   |

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|          |   |   | <p>categories, and performance of existing Best Management Practices (BMPs). The Blue Ribbon Panel concluded that the current Industrial General Permit had not produced such a database.</p> <p>In 2008, EPA similarly concluded in the MSGP that it was infeasible to establish numeric effluent limits because "variability in the system and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers" as required by 40 C.F.R. 122.44(k)(3). EPA reached this conclusion after a detailed review of monitoring data, after which EPA was unable to determine whether benchmark value exceedances provide any useful indicators of control measure inadequacies or potential water quality problems. (MSGP Fact Sheet, p. 96.)</p> <p>Through its NPDES permit regulations, EPA has interpreted the CWA to allow BMPs to take the place of numeric effluent limitations to control or abate the discharge of pollutants when: (1) "[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges"; or (2) "[n]umeric effluent limitations are infeasible." 40 C.F.R. § 122.44(k). EPA cited that regulation and the ample case support for non-numeric limits when finding numeric limits infeasible and choosing to include only non-numeric limits in the 2008 MSGP.</p> |
| 6.       | NELs not appropriate in this General Permit |   | <p>Development of TBELs on a case-by-case basis using BPJ requires a detailed analysis of the operations of the applicant, the available technology and the specific industrial category involved. Such a case-by-case analysis is difficult enough in an individual permit; it is impossible to do in a general permit that has application to a wide variety of industries. (See 40 C.F.R. § 125.3(d).)</p>   |
| 7.       | Background as factor in applying NALs/NELs  |   | <p>Another factor to be considered is the variability in stormwater quality caused by atmospheric pollution, dry deposition, and storm water run-on, all of which are beyond the control of individual facilities and make it difficult to distinguish between background stormwater quality and anthropogenic effects. The differences in measured stormwater quality also may result from changing business conditions that affect a facility's operational hours, the amount and type of materials stored and handled, the volume of products produced, and the amount of loading and unloading that occurs on site. To that end, EPA's MSGP recognized a "background" pollutant allowance system to use with the benchmark monitoring and related technology-based controls to ensure that individual facilities were only required to control those "discharges associated with industrial activity" at the site, as intended by Congress</p>  |

## Attachment 1 –CASQA’s Detailed Comments on the Draft Industrial Stormwater General Permit

| Item No. | Identify Permit Element/Issue/Concern  | Location in Draft Industrial General Permit | Comment   |
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| 8.       | Numeric Action Levels may be premature; they must not be virtual effluent limits | Section X, pgs 32 and 24                    | <p>when it added CWA Section 402(p) to the Act. This is discussed further in comment 70, below.</p> <p>Because the use of “action levels” is not built upon a firm legal basis, use of numeric values as benchmarks or “action levels” must be very carefully and clearly defined in an NPDES permit. Such numeric values cannot serve as or be converted into NELs. NELs can only be established and implemented through the legally required procedures for the developing NELs and including NELs in NPDES permits.</p> <p>CASQA supports the use of properly derived and statistically valid numeric action levels in a manner similar to EPA’s use of benchmarks or as recommended by the Blue Ribbon Panel (as upset values) as one of many mechanisms to assess program effectiveness, as long as they are appropriately derived and are not used as numeric effluent limits or “virtual” numeric effluent limits.</p> <p>In response to a specific request by Board Member Doduc, CASQA reviewed potential methods of setting outlier-based action levels, and describes a possible approach in line with the Blue Ribbon Panel suggestions in Attachment 2 to these comments. The analysis addresses possible future establishment of sector or group-specific levels, in addition to an approach that the State Water Board may consider pursuing for industry-wide TSS outlier-based action levels, as long as they are not used as actual or “virtual” numeric effluent limits.</p> |
| 9.       | Sector-specific NALs, phased as quality data is available                        | Section X (pgs 32 and 24)                   | <p>Any NALs should be technology-based and rely on sector- or group-specific data that would be augmented during the coming permit cycle. This approach is consistent with the recommended approach of the Blue Ribbon Panel report.</p> <p>CASQA has a recommendation for how to develop sector-specific NALs in the CASQA responds to Board Member Doduc’s question on NALs in Attachment 2.</p>  |
| 10.      | Assistance from industry-led NAL development teams                               | Section X (pgs 32 and 24)                   | <p>Consider a provision to allow industry-specific groups to convene to propose sector-specific NALs based on the BMPs that are appropriate and economically achievable for that group. These groups can assist regulators in identifying representative sites to analyze, based on discharge data sufficient for establishing NALs, and accompanying BMPs as desired.</p>  |

# Attachment 1 – CASQA’s Detailed Comments on the Draft Industrial Stormwater General Permit

| Item No. | Identify Permit Element/Issue/Concern   | Location in Draft Industrial General Permit | Comment   |
|----------|---|---|---|
| 11.      | Establishing NALs based on technology, acknowledging that BAT/BCT differs for different sectors | Section X (pgs 32 and 24)                   | The baseline technology will differ among sectors. For example, the varying drainage patterns in some industrial sectors would not allow permanent placement of treatment BMPs that less dynamic operations allow. Also, existing facilities may have limited right-of-way that precludes the use of some treatment technologies. Allowing for different NALs for existing and new facilities is consistent with the Blue Ribbon Panel report.  |
| 12.      | NALs/Corrective Action/Triggers   | Section XVII.E(pg 42)                       | Large-scale non-attainment of inappropriately-low NALs (based on EPA benchmarks rather than technologies) will place a tremendous burden of regulatory staff and does not lead to a prioritization of gross polluters. This could place unfair and unnecessary attention on dischargers that are responsibly managing stormwater discharges. As describe in CASQA’s cover letter and in the reply to Board Member Doduc, NALs should not be numeric limits that trigger corrective action but trigger a response action to evaluate the Stormwater Pollution Prevention Plan (SWPPP) and BMPs. As stated in our cover letter, exceedance of an NAL should not be a violation of the permit, the term corrective action implies a violation of the permit. CASQA recommends a different term be used, such as response action. |
| 13.      | Corrective Action   | Section XVII.2.b (pg 39)                    | Exceedance of any applicable NAL should result in a site-specific assessment of BMP practices to determine if response action is necessary and if so, what the corrective action should be (as in Section XVII.B.2.b). When NALs are consistently exceeded after follow-up action by the discharger, allow for a Regional Board to verify that the SWPPP and BMPs are being properly implemented. When NALs are adopted, the permit should state that an exceedance of a NAL is not a permit violation as long as the discharger is engaged in the response action process.   |
| 14.      | Corrective Action tiers and off ramps   | Section XVII, (pg 43), new item             | CASQA objects to the manner in which the draft Industrial General Permit sets NALs and NELs, and thus to the entire permit approach to tiered corrective action. CASQA has also responded to Board Member Doduc’s question on off ramps in Attachment 2.  |
| 15.      | Compliance Storm Event and Design Storm Event   | Sections V.E (pg 15)                        | <p><i>Edit section as follows:</i></p> <p><u>1. Treatment control BMPs shall be designed to meet post construction stormwater requirements of the local MS4 permit. Where a standard has not been established by the MS4 the design storm event will be established by a Professional Engineer based on the methodology identified in the CASQA 2003 New Development and Redevelopment Handbook or methodology acceptable to the Regional Water Board. This requirement shall not apply to existing treatment controls unless they are reconstructed and trigger the local</u></p>  |

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|                                 |                                       |   | <p><u>MS4 redevelopment requirements.</u></p> <p><u>2. This General Permit establishes a Compliance Storm Event equivalent to the design storm event that would be used when sizing a treatment BMP (regardless of whether a treatment BMP is implemented), expressed as a depth of precipitation that is based on local rainfall data. The SWPPP shall identify the compliance storm event.</u></p> <p><u>3. The compliance storm event standard does not supersede any storm water effluent limitation guidelines in 40 CFR Subchapter N.</u></p> <p><u>1. This General Permit establishes a 10-year, 24-hour (expressed in inches of rainfall) Compliance Storm Event for Total Suspended Solids. In addition, all treatment BMPs for any other pollutants shall be designed for no less than a 10-year, 24-hour storm event. Storm event (expressed in inches of rainfall) can be determined by using these maps:</u><br/> <a href="http://www.wree.dri.edu/pepnfreq/nea10y24.gif">http://www.wree.dri.edu/pepnfreq/nea10y24.gif</a><br/> <a href="http://www.wree.dri.edu/pepnfreq/sea10y24.gif">http://www.wree.dri.edu/pepnfreq/sea10y24.gif</a></p> <p><u>2. Compliance storm event verification shall be done by reading an on-site rain gauge.</u></p> <p><u>3. The 10-year, 24-hour compliance storm event standard does not supersede any storm water effluent limitation guidelines in 40 CFR Subchapter N</u></p> <p><i>Edit section as follows:</i></p> |
| 16.                             | Erosion and Sediment Control Design   | Section VIII.C.3 (pg 18)                    | <p>Erosion and sediment BMPs to control the discharge of sediment shall be designed in accordance with standard industry practice as represented in a CASQA or CalTrans BMP Fact Sheet for no less than a 10-year, 24-hour (expressed in inches of rainfall) Compliance Storm Event. In addition, all treatment BMPs for any other pollutants shall be designed for no less than a 10-year, 24-hour storm event.</p>   |
| <b>BMPs/SWPPP/Run-on/G-SIRT</b> |                                       |   |  |
| 17.                             | SWPPP Team                            | Section VIII.D.2.a (pg 18)                  | <p><i>Edit section as follows:</i></p> <p>a. The names and titles of the “Specific individuals or the positions within the facility organization” (team members) that assist the QSD/QSP to implement the SWPPP and conducting all monitoring requirements required in Section IX.</p>   |

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| Item No. | Identify Permit Element/Issue/Concern | Location in Draft Industrial General Permit | Comment  |
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| 18.      | Pollutant Source Assessment           | Section VIII.G.7.b (pg 22)                  | <p><i>Edit section as follows:</i></p> <p>“... the discharger should identify any...”</p>  |
| 19.      | SWPPP Implementation                  | Section VIII.H (pg 22)                      | <p><i>Edit introductory paragraph as follows:</i></p> <p>“The QSD shall include in the SWPPP all the planned and implemented BMPs at the facility. The SWPPP shall identify the relevant minimum BMPs (Section VIII.H.1) that will be implemented and shall identify any minimum BMPs determined not to be relevant to the facility. Dischargers shall implement all <del>minimum</del> BMPs identified in the SWPPP by the QSD, in Section VIII.H.1 and identify...”</p>  |
| 20.      | Employee Training Program             | VIII.H.1.e.ii (pg 25)                       | <p><i>Edit section as follows:</i></p> <p>ii. Identify which personnel position/job description shall be trained, their responsibilities, and the type of training they shall receive;</p>   |
| 21.      | Minimum BMPs                          | Section VIII.H.1 (pg 22)                    | <p><i>Edit as follows:</i></p> <p>“Dischargers shall implement the following minimum BMPs described below throughout their facilities in areas of the facility from which storm water associated with industrial activity is discharged to waters of the U.S. unless clearly determined by the QSD to be inapplicable, infeasible, or otherwise inappropriate to for the facility. If any of the minimum BMPs are not applicable to the facility included in the SWPPP, the QSD shall, dischargers shall include an written explanation of inapplicability these determinations in their SWPPP. Determination of feasibility and appropriateness of a BMP may take into consideration operational, regulatory, and physical constraints.” Dischargers have the burden to prove inapplicability. Dischargers may use alternative BMPs instead of the minimum BMPs only if the dischargers provide specific justification in their SWPPP explaining why the minimum BMPs can not be implemented, and what alternative BMPs shall be implemented that will reduce or prevent pollutants in storm water discharges at least to the same degree. Dischargers have the burden to show that its alternative BMPs are at least as effective as the minimum BMPs.</p> |
| 22.      | Good Housekeeping - Tracking          | Section VIII.H.1.a.ii (pg 23)               | <p><i>Edit section as follows:</i></p> <p>“Implement BMPs to reduce or prevent material tracking at the end of each working day and implement BMPs on-site in preparation of a forecasted storm event”.</p>  |

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| 23.      | Good Housekeeping - Material Storage  | Section VIII.H.1.a.iv (pg 23)               | Cover all stored industrial materials, when not in use for at least 14 days, that can be readily mobilized by contact with storm water;  |
| 24.      | Good Housekeeping -- Outdoor Storage  | Section VIII.H.1.a.v (pg 23)                | <u>Add the new item to this section.</u><br><u>For facilities with outdoor storage or stockpiles subject to on-going use and/or mechanized activity, alternate BMPs are acceptable in order to meet storm water goals and prevent disruption of operations.</u>  |
| 25.      | Good Housekeeping – Run-on Diversion  | Section VIII H.1.a.vii (pg 23)              | Diverting flows from non-industrial areas at existing facilities will be impractical and potentially costly at many facilities. Flow diversion should only be considered where the cost of the diversion is commensurate with the water quality benefits and in full consideration of other environmental impacts.               |
| 26.      | Material Handling                     | Section VIII H.1.d.i (pg 24)                | <u>Edit section as follows:</u><br><u>Adopt procedures to minimize the potential of <del>Prevent or minimize handling of materials or wastes that can be readily mobilized</del> of waste during by contact with storm water during a storm event;</u>   |
| 27.      | Material Handling                     | Section VIII.H.1.d.ii (pg 24)               | <u>Edit section as follows:</u><br><u>Adopt procedures to minimize dispersal of <del>Coarse non-solid</del> finely-graded materials or wastes that can be dispersed via wind erosion during handling;</u>  |
| 28.      | Material Handling                     | Section VIII.H.1.d.v (pg 24)                | <u>Edit section to clarify the requirement on timelines:</u><br><u>Inspect, and clean as appropriate, <del>daily</del> any outdoor material/waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes on a weekly basis and in preparation for forecasted storm events.</u> |
| 29.      | Erosion and Sediment Controls         | Section VIII.H.1.g.i and ii (pg 25)         | <u>Edit section as follows:</u><br><u>Implement effective wind erosion controls designed to minimize wind erosion</u><br><u>Provide methods to stabilize inactive areas and all finished slopes, and utility project backfill prior to an anticipated storm event.</u>   |
| 30.      | Sediment Basin Design                 | Section VIII.H.1.g.iv (pg 25)               | CASQA’s Industrial Commercial Handbook does not contain a BMP Fact Sheet for sediment basins. Sediment basins are a temporary BMP used at construction sites. The Industrial   |



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|          |                                       | 25)   | <p>Commercial Handbook does reference BMPs for Infiltration Basins (TC-11), Wet Ponds (TC-20), and Extended Detention Basins (TC-22). Designs of these BMPs are based on a calculated Water Quality Volume as noted in comment 15 above.</p> <p>The draft Industrial General Permit should grandfather any existing basins if they do not meet the specified design event.</p> <p><u>Add the following language to this section.</u></p> <p><u>Existing basins that have previously been designed for a different return interval are grandfathered from this requirement unless they are being reconstructed.”</u></p>   |
| 31.      | Run-on and Runoff Management          | Section VIII.H.1.g.v (pg 26)                | <p>Diversion of run-on from off-site areas may not be technically practical given topography, and could be in conflict with municipal ordinances, legal rights associated with diverting flows to neighboring properties, or prescriptive easements.</p> <p>The draft Industrial General Permit should allow a facility operator to sample run-on from offsite areas at the time that stormwater runoff samples are being collected. A facility should not be responsible for what is running on to their property and there should be a mechanism for determining a facility’s actual contribution of stormwater pollutants to its runoff. For example, a facility located near an agricultural field should not be responsible for a exceeding a nitrate NAL if that facility’s industrial operations did not contribute to the nitrate concentrations.</p> <p><u>Edit section as follows:</u></p> <p><u>“Effectively manage all run-on to the site, and all runoff within the site and all runoff...collectively not exceed the NALs in this General Permit. Sampling can be performed to determine the run-on levels that are contributing to the exceedances.”</u></p> |
| 32.      | Erosion and Sediment Control          | Section VIII.H.1.g.vi and vii (pg 26)       | <p><u>Delete item vi and combine with vii as follows:</u></p> <p><u>“Implement and maintain erosion/sediment controls at the site to achieve optimal performance minimize erosion and off site sedimentation during storm events.”</u></p>  |
| 33.      | SWPPP Revisions                       | Section XVII.B.6 (pg 39)                    | <p><u>Edit section as follows:</u></p> <p><u>“...dischargers shall submit an implementation plan and schedule to the Regional Board. The implementation plan will implement identify additional BMPs and SWPPP measures, and will be revised, with the corresponding revise the SWPPP in response to...”</u></p>  |

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| 34.  | G-SIRT Standards   | Section XXIII.E (pg 49)                     | CASQA supports the idea of developing G-SIRT standards and looks forward to working with the State Water Board in a stakeholder process to further develop the details of the program.  |
| <b>PRDs/Reporting/No Exposure and No Discharge</b> |  |   |   |
| 35.  | Conditional Exclusion - No Exposure Certification Requirements | Section XXI (pg 4) and Attachment C         | CASQA is concerned that the Conditional Exclusion - No Exposure Certification provisions in Section XXI and Attachment C are duplicative and inconsistent. Compliance would be facilitated if the Industrial General Permit contained one set of compliance instructions.   |
| 36.  | No Discharge Certification                                     | Section XXII (pg 48)                        | <p>The nature of the clarifications may warrant a permit attachment to fully describe the requirements and consequences of the certification.</p> <p><i>Edit section as follows:</i></p> <p>To obtain this conditional exclusion, dischargers shall electronically submit a No Discharge Certification (NDC) in SMARTS and pay the initial associated NDC fee <del>on an annual basis</del>. Dischargers must annually recertify the NDC <del>and pay an annual fee</del>. The NDC must include documentation that the facility’s storm water satisfies the definition of no discharge. The NDC shall be certified by a California registered professional civil engineer. Regional Boards may reject NDCs or require additional supporting documentation. Dischargers of rejected NDCs shall file PRDs for coverage under this General Permit.</p> |
| 37.  | Proprietary Business Information                               | Section II (pg 11) add new item             | Dischargers should not be required to make public lists of raw materials, products, and by-products or technological process descriptions could compromise the competitiveness of a business. This information should be required in the on-site SWPPP and can be provided to local, state, or federal inspectors, but it should not be made available in publicly posted SWPPPs. Further, CASQA members have expressed a concern about public disclosure of unique pollution prevention approaches and BMPs developed for individual companies. These innovations should similarly be considered proprietary business information and excluded from publicly posted SWPPPs. The protection of confidential business information should be consistent with provisions in the Freedom of Information Act.  |
| <b>Monitoring and Inspections</b>                  |  |   |   |
| 38.  | Monitoring requirements Inspection Triggers - General          | Section IX (pg 28)                          | Section IX should explicitly state that inspections and visual observations are required only during daytime scheduled operating hours.   |

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|          |  |   | <p>Additional clarification should be added for facilities that stop operations during rain events: these facilities should not be required to conduct monitoring or inspections during these events.</p> <p>An additional consideration for monitoring is the safety of monitoring personnel. If scheduled operating hours are during night time, visual monitoring and/or inspection may not be possible, simply due to visibility and may not be safe. The draft Industrial General Permit should provide this clarification.</p> <p>Once the Qualifying Storm Event definition is finalized, it should be applied to all visual observation and inspection requirements.</p>  |
| 39.      | Monitoring requirements<br>Inspection Triggers – Pre-storm | Section IX.C.4 (pg 29) and Section IX.C.6 (pg 30) | <p>See proposed inspection program below for a full discussion of this topic. Generally, we request that the draft Industrial General Permit provide workable guidance for facility inspections. Specific questions that are raised by the draft Industrial General Permit include:</p> <ul style="list-style-type: none"> <li>- What is the trigger for the pre-storm inspection?</li> <li>- What is the objective of the pre-storm inspections?</li> <li>- Can weekly and pre-storm inspections be combined?</li> <li>- Can daily and pre-storm inspections be combined?</li> <li>- Should pre-storm inspections be eliminated since the QSP will already be doing daily and weekly inspections?</li> </ul> <p>CASQA strongly recommends basing pre-storm inspection triggers on a reliable predictor, such as the NOAA forecast. Because the NOAA forecast provides both probability of rain and predicted amount of rain, either or both of these factors may be used as inspection triggers. We are concerned that waiting for a storm event to become a QSE will cause unnecessary burden on the Industrial QSP due to the uncertainty of storm events. It is better to use a definite predictor for storm based monitoring. We ask that the State Water Board reconsider the large increase in required inspections and work with CASQA to develop a streamlined program that meets the permit objectives and is efficient for dischargers to implement.</p> |
| 40.      | Sampling and Analysis requirements<br>Missed Storm Events  | Section X.A and X.G pg 30                         | <p>Permit language should be modified to clarify the consequence of missing the first qualifying storm event for a quarter. The draft Industrial General Permit language appears to imply that all subsequent events during that quarter must be sampled.</p>   |

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| 41.      | Sampling and Analysis requirements<br>Rain Gauges and Qualifying Storm Events | Section X.E.2 (pg 30)                         | <p>Revise language to say, “Dischargers who fail to sample the first qualifying storm event of a quarter shall sample the next qualifying storm events that occurs during the quarter.”</p> <p>1/8-inch is not a typical unit of measure for commercially available rain gauges. A more appropriate increment of rainfall measurement would be 1/10-inch to allow for use of a wide-variety of rain gauges and to be more compatible with other increments of measurements typically used for both on-site automated rain gauges and NOAA weather stations.</p> <p>State Water Board staff indicated during the February 23 workshop that use of a publicly available rain gauge may be appropriate in some cases, especially when a site is located adjacent to a rain gauge with publically available data. The permit language should be modified to allow for flexibility related to the use of nearby, publically available rain gauges.</p>   |
| 42.      | Sampling and Analysis requirements<br>Sampling Trigger                        | Section X.F<br>Footnote 3 (pg 31)             | <p>The four hour window is triggered at the opening of business on the next business day. This is important given Monday holidays and the fact that some businesses may be closed on Mondays</p> <p><i>Edit as follows:</i></p> <p>“...and the discharger must sample within 4 hours, of the opening of business on <del>that Monday</del> the next business day.”</p>  |
| 43.      | Monitoring Methods and Exceptions Qualified Combined Samples                  | Section XI.2 (pg 32)<br>Section XII.B (pg 35) | <p>This is the first introduction of “qualified combined samples”. This concept needs to be defined in Appendix K or introduced earlier, or refer to where this is discussed.</p> <p>It is unclear as to whether the combined samples must be of similar volume or weighted based on flow rates, flow totals, surface area, or other parameter?</p> <p>Within the CGP, a concept of weighting the individual samples based on the proportion of the flow or the area of the site they represent is being introduced into SMARTS now. This concept has some merit, but if it will be used in the draft Industrial General Permit it should be detailed and discussed during the permit development.</p> <p>There are concerns about the stipulation that only laboratories are allowed to combine samples. Some dischargers have qualified laboratory staff and may prefer to combine samples in-house.</p> <p>A set of protocols and a Standard Operating Procedure reference complete with QA/QC should be given to maximize consistency in sampling techniques.</p> |

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| 44.      | Daily Average                         | Section XI pg 32                            | <p>There is a requirement for dischargers to collect samples from all drainage areas. Some sites have structural obstacles in place that prevent sampling of each individual drainage area before combining with offsite discharges. How will situations like these be addressed?</p> <p>The Daily Average concept as stated is unclear. It is not known whether SMARTS will average all locations sampled each day, all samples from a single location on a given calendar day, or if the result will be a running average of all samples. It states in the draft Industrial General Permit that this will be performed electronically “when dischargers are required to report multiple analytical results (applies to facilities with multiple discharge locations)”.</p> <p>How will this averaging of multiple discharge locations be different than the Qualified Combined Sample techniques?</p> <p>Further definition of the Daily Average concept must also describe:</p> <ul style="list-style-type: none"> <li>- How will sampling at night around midnight affect this?</li> <li>- Is this intended to be a running average?</li> <li>- Will this just be used for intraday sampling or will it continue throughout the event?</li> <li>- Will SMARTS notify a discharger if any one of the NAL Corrective Action Triggers has been met?</li> </ul> |
| 45.      | Monitoring/inspection Frequency       |   | <p>Attachment 5 provides a tabular summary of the inspections required by the draft Industrial General Permit. As proposed, the draft Industrial General Permit will significantly increase the inspection and monitoring burden on facilities without providing a comparable benefit to water quality. The number of inspections under the existing Industrial General Permit is estimated to be approximately 40. By contrast, the number of inspections expected under the draft Industrial General Permit is approximately 450. This is an increase of approximately 1,150%</p> <p>As an alternative, we propose the following suggested Routine Inspection Program that would use a combination of documented monthly inspections and quarterly SMARTS reporting as the backbone of the inspection program. Specific elements of the proposed Routine Inspection Program include:</p> <ul style="list-style-type: none"> <li>- Annual pre-storm inspection to be completed by September 15<sup>th</sup>, which documents inspection and corrective actions (if needed) for all areas that contain potential</li> </ul>   |

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|          |                                       |  | <p>pollutant sources.</p> <ul style="list-style-type: none"> <li>- Monthly documented inspections to meet requirements of Section VIII.H.a, b, and d</li> <li>- SMARTS should be programmed to send an inspection and reporting reminder email each month to the QSP assigned to each project</li> <li>- Weekly, undocumented inspection, to meet the requirements of Section VIII.H.1.a, b, and d</li> <li>- Quarterly reporting to SMARTS to certify that all undocumented weekly inspections were completed</li> </ul> <p>In addition to the proposed Routine Inspection Program, we have developed an alternate Event-Based Inspection Program. This proposed program, which uses some of the lessons learned from the CGP event-based inspection program, would consist of the following:</p> <ul style="list-style-type: none"> <li>- Sampling only for storm events when the noaa.gov website predicts greater than 0.25-inch of rain for the event with a minimum 50% probability.</li> <li>- Where noaa.gov predicts a small volume event, sampling is not required</li> <li>- Requirement to document non-discharging events will be met by completing an event log in SMARTS during quarterly reporting</li> <li>- Pre-storm inspection documentation shall be uploaded to SMARTS during the first quarterly reporting.</li> </ul> |
| 46.      | Field Measurements                    | Section X.H Table 1 (pg 32)<br>Section X.K (pg 32)<br>Section XI Table 4 (pg 34) | <p>The requirement for conducting pH and specific conductance measurements is not consistent in the various noted sections of the draft Industrial General Permit. Further these descriptions appear to preclude the use of stationary sampling equipment installations and use of certified laboratories for pH and specific conductance analyses. Table 1 and Section X.K in the draft Industrial General Permit limit dischargers to using calibrated portable instruments for analyzing pH and specific conductance in the field. However, Attachment D, Item 15 states that dischargers may conduct field analyses if they have properly trained personnel, implying that field analysis for pH or specific conductance is optional. Table 4 further indicates that calibrated pH paper is an approved test method. However, it is noted that a calibrated stationary device that is permanently installed at the point of discharge or the ability to transport the sample to a State certified laboratory for analysis within the required hold time would also meet the intent of this requirement.</p>   |

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| 47.      | Consistent Compliance/Sampling Exemptions | Section I.J Finding #57 (pg 9),             | <p>Requiring field analyses for pH and specific conductance using calibrated equipment will require significant additional training for staff that is traditionally not qualified to perform instrument calibration and field testing. And, while the hold time restrictions associated with pH analyses may warrant field analysis for this parameter, there is no real value in requiring specific conductance to be measured in the field. We suggest consideration be given to simply requiring the discharger determine the most appropriate method for their site to ensure that pH analysis is performed within the required hold time and eliminating the requirement for field analysis of specific conductance.</p> <p>While this concept is forward thinking and provides incentive to consistently compliant dischargers, there are a few items that should be clarified in the draft Industrial General Permit.</p> <ul style="list-style-type: none"> <li>- Must all permit requirements be met in order to reduce sampling?</li> <li>- Can data from sampling conducted pursuant to the current Industrial General Permit be used to demonstrate a historical compliance trend?</li> <li>- Over what duration must the discharger demonstrate consistent compliance?</li> <li>- What is the minimum number of samples that will be required?</li> </ul> <p>We ask that the State Water Board clarify and fully detail the requirements and process related to Reduction of Sampling for dischargers consistently meeting permit requirements.</p> |
| 48.      | Inactive Landfill and Mine Sites          | Section XVII. (pg 43) and Attachment A      | <p>CASQA recommends expanding this allowance to include inactive landfills and inactive areas of mine sites. Some areas of landfills and mines are inactive and stabilized (e.g., revegetated) and so the term “Inactivity” needs to be better defined. We recommend that inactivity starts one year after no earth disturbing or other associated landfill or mining activities (processing material, etc.). A site or area of a site that only has compliance monitoring occurring should be considered inactive.</p> <p>The exemption given to coal mining operations in Attachment A for operations meeting the definition of a reclamation area (per the Surface Mining Control and Reclamation Act) should also be extended to all mining operations that have completed reclamation. Tying reclamation to the bond process may be problematic. Bond releases may be subject to the Office of Mine Reclamation and/or County approval. Often, these bureaucratic processes can lag behind actual site vegetation. The reclamation exemption should be tied to exposed disturbed soil</p>   |

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| 49.      | Large Areas of Land Disturbance       | Section XII. (pg 36)                        | <p>areas being protected and not financial instruments that may not mirror current site conditions.</p> <p>CASQA recommends that closed landfills and inactive portions of landfills be removed from the definition of facilities with “Significant Land Disturbances.” Landfill areas that are inactive or in post-closure phase are no longer operating or conducting industrial activities that result in significant land disturbances. Inactive or previously active areas of a landfill are typically capped with a vegetated cover to provide protection from wind and erosion. Most of these inactive or closed areas are no different from a recreational facility, a golf course, or a local community park and therefore should not be subject to additional sampling requirements developed for facilities with significant land disturbances.</p> <p>CASQA recommends that aggregate/sand mines and quarries be removed from the definition of facilities with “Significant Land Disturbances.” Aggregate mine sites typically consist of two main areas: the mine pit and the processing area. Stormwater that comes into contact with slopes in the mine pit is captured and remains in the pit and does not typically discharge off-site. Also, slopes in the pit area are stable and compacted to meet Mine Safety and Health Administration and Surface Mining And Reclamation Act regulations, which regulate slope stability. As such, the pit slopes do not pose a significant erosion problem. The area on which a processing plant sits has usually been scarified and the ground is compacted to withhold the weight of the plant equipment and so the land is much less erodible than a non-compacted disturbed surface. Sometimes this area is even paved. Aggregate quarries also tend to mine materials that are not very erodible; the overburden at a quarry can be erodible and is managed so that it does not have a significant impact on storm water runoff. The stripping of the overburden is typically done at the start of a mining phase and then is managed to avoid erosion and sedimentation. The exposed mining areas are typically materials like rock or aggregates that are not very erodible. In addition, not all parts of the mine are stripped at the same time. A large mine may actually have a small area of land that is actually disturbed.</p> <p>This requirement adds a significant and unnecessary burden to the industry. Mining operators typically have several phases of mining/land disturbance over the period of many years and, in many cases, will concurrently reclaim land as new land is disturbed. The fact sheet states that “these operations [are] more like construction sites.” In fact, construction sites are far more dynamic than a mining facility and are intended to expose large amounts of soil in a short period of time. Based on short time periods, construction sites are limited on the</p> |



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| 50.      | Test Methods and Detection Limits     | Section XI Table 4 (pg 34)                                | <p>structural and non-structural BMPs they can use to reduce sediment runoff. On the other hand, mining facilities tend to design long-term and more robust structural and non-structural BMPs (e.g., sized sediment basins, vegetated swales, regular grading of the site to eliminate discharge, rills.) that reduce erosion and, thereby, sediment runoff. Large pervious surfaces can actually help reduce sediment runoff by allowing infiltration of some storm water into the ground.</p> <p>Several parameters listed in Table 4 identify only one approved test method, rather than both the EPA and the equivalent Standard Method. Many laboratories are certified only to one method for a given parameter. This restriction will reduce the number of laboratory options available to dischargers, particularly in remote areas where options are severely limited. The Test Method column of Table 4 should be modified to include both the EPA and the equivalent Standard Method.</p> <p>Additionally, the detection levels for several parameters are inconsistent with the methods identified and are below levels achievable by several state certified laboratories. For example, the method detection limit for oil and grease using EPA method 1664 is 1.4 mg/L; however, Table 4 of the draft Industrial General Permit identifies a detection limit of 1 mg/L. Because detection levels vary with methods and most of the parameters identified in Table 4 can be analyzed using either the EPA or an equivalent Standard Method, a numeric detection limit should not be specified in the permit.</p> |
| 51.      | Qualifying Storm Event                | Section IX.C.1 (pg 29)<br>Section X.E (pg 30)<br>Glossary | <p>A qualifying storm event is defined in Sections IX and X as producing 1/4" of rainfall; however, the Glossary of the Draft permit indicates that a qualifying storm event must produce 1/2-inch of rainfall. Neither the draft Industrial General Permit nor the glossary specifies the period of time over which a storm must produce the minimum rainfall indicated, nor is the end of a qualifying storm event clearly specified. Rain events typically include periods of dry weather lasting anywhere from a few minutes to several hours. Discrepancies in the definition between the text of the draft Industrial General Permit and the Glossary, ambiguities in how the end of a storm event is defined, as well as a lack of guidance on how a qualifying storm event should be predicted could lead to further confusion and difficulty demonstrating compliance with the permit requirements. It is recommended that the definition of a qualifying storm event be modified in both the text of the permit as well as in the Glossary to state that a qualifying storm event is an event that produces 1/4-inch of rainfall in a period of 24-hours or less.</p>  |

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| 52.   | Sampling for Parameters Causing or Contributing to Existing Exceedances of Water Quality Standards (WQS) | Section IX.H.4 (pg 31)                      | <p>The draft Industrial General Permit requires that dischargers must sample for “Parameters indicating the presence of pollutants that may be causing or contributing to an existing exceedance of a WQS in the facility’s receiving waters.” The statement, as currently written is overly broad and would result in industrial dischargers monitoring for constituents that are not related to their industrial processes (i.e., bacteria).</p> <p>Additionally, the intent of collecting data on such parameters could be easily misunderstood. The draft Fact Sheet states:</p> <p>“The monitoring program requirements are designed to provide useful, cost-effective, timely, and easily obtained information to assist dischargers to identify pollutant sources, implement corrective actions, and revise BMPs.”</p> <p>That statement, as well as the acknowledgement in the 2004 draft Industrial General Permit that numeric effluent limits cannot be scientifically supported in this permit make the intended use of data on such parameters very clear, although not in one location in the permit. Therefore, the draft Industrial General Permit should include a clarification that data collected as a part of the proposed analytical monitoring program is only intended to be used for assessing the adequacy of a facility’s SWPPP and BMPs.</p> <p><i>CASQA recommends that the language be clarified as follows:</i></p> <p>Parameters indicating the presence of pollutants that may be causing or contributing to an existing exceedance of a water quality standard in the facility’s receiving waters. Such parameters are limited to only site- and industry-specific pollutants that are under the direct control of the discharger and that can reasonably be expected to cause or contribute to an exceedance of water quality standards in an impaired body of water. Data on parameters linked to existing exceedances of WQS are to be used solely for assessing the adequacy of a facility’s SWPPP and BMPs, and not for determinations of cause or contribution. An updated map of the 303(d) listed water bodies and associated impairments for each facility location is available at <a href="#">[INSERT WEB ADDRESS]</a>.</p> |
| <b>Professional Roles: QSDs/QSPs/Training</b> |  |   |  |
| 53.   | QSD/QSP  | Section I.50 (pg 8)                         | Use of the same terms (QSD and QSP) as used in the Construction General Permit will likely lead to confusion. Training for Industrial SWPPP activities will be different than that for Construction SWPPP activities. CASQA suggests referring to these qualified parties as   |

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| 54.      | SWPPP Certification Requirements Subtitle        | Section VII.B (pg 16)                       | <p>“Industrial Qualified SWPPP Developer/Practitioner” (IQSD/IQSP) to distinguish them from those qualified for Construction General Permit SWPPP activities.</p> <p>The contents of this subsection do not address SWPPP certification, but rather the required qualifications for preparing and implementing a SWPPP. Suggest replacing “SWPPP Certification Requirements” with “Qualifications for SWPPP Preparation and Implementation.”</p>   |
| 55.      | QSD Pre-Requirement Certifications/Registrations | Section VII. B.1.b (pg 16)                  | <p>The list of registrations or certifications required for an IQSD is very limiting, and the proposed certifications will not necessarily ensure that SWPPPs are developed correctly or result in programs that adequately control stormwater discharges. Also, many individuals who have the proposed certifications do not have experience with industrial operations, pollutant sources, or stormwater and environmental management activities. For example, civil Professional Engineers in California are not specifically trained in stormwater quality management and it is only through voluntary continuing education or experience that they develop this expertise. Similarly, California Professional Geologists do not undergo training in stormwater quality management and are unlikely to have experience in the management of industrial sources of stormwater pollution. Registered Landscape Architects and Professional Hydrologists may have very little experience with industrial sites outside of the design or retrofit of landscape based practices or hydrology modeling.</p> <p>Services of these registered or certified professionals may be important for some specific measures included in a SWPPP. However, it is not necessary to make these professionals responsible for the development of the whole SWPPP, which is likely to heavily feature staff training, process knowledge, source control, and pollution prevention opportunities.</p> <p>CASQA suggests that the State reconsider the list of pre-requisite professional certifications. Unlike the recent experience with the CGP, there are not many professional certifications that specifically address industrial storm water management as there were for erosion and sediment control. However, for some sectors, such as landfills, a professional in erosion and sediment control might be very appropriate.</p> <p>In lieu of the currently-defined list of required certifications, we suggest the permit language be revised to reflect one of the options provided below. It is suggested that the State Water Board-sponsored Industrial General Training Team (referenced in Section I, page 8, Item G. 50) be tasked with choosing one of these options and developing the specific details (such as</p> |

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|          |                                       |   | <p>defining the required relevant education and experience discussed in option #2) :</p> <ol style="list-style-type: none"> <li>1) The appropriate qualifications for an IQSD should be determined by the completion of the state-sponsored or approved training program and examination. The training program would focus on the requirements of the permit, and provide exposure to a variety of industrial discharge conditions/situations. The examination should be comprehensive and detailed, and include practical applications, such that, in order to pass, examinees will have to combine their personal experience and skills with the knowledge they gain from the training program.</li> <li>2) Require IQSD applicants to demonstrate a specified level of relevant education and experience. The education and experience can be demonstrated during the application process for the IQSD course or examination. This would be similar to the processes currently used by other professional certification programs. The definitions of “relevant education and experiences” would be developed by the stakeholder group or the Industrial General Permit Training Team to be convened.</li> </ol> <p>Should the State Water Board want to maintain a list of pre-requisite registrations or certifications, CASQA suggests this requirement be limited to facilities engaged in particular response actions. The State Water Board’s stakeholder group should investigate potentially relevant certifications and identify the ones that should be included in the revised draft of the Industrial General Permit. CASQA suggests that the following professional certifications be additionally considered:</p> <ul style="list-style-type: none"> <li>• Certified Professional in Storm Water Quality (CPSWQ) – EnviroCert International</li> <li>• Certified Professional in Erosion and Sediment Control (CPESC) – EnviroCert International</li> <li>• Registered Environmental Assessor I or II (REA) – Department of Toxic Substances Control</li> <li>• Certified Hazardous Materials Manager CHMM – Institute of Hazardous Materials Management</li> <li>• Industrial Waste Treatment Plant Operator – California Water Environment Association</li> <li>• Environmental Compliance Inspector – California Water Environment Association</li> </ul> |

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| 56.      | Training Courses Required within 1 Year | Section VII.B.2 and B.3 (pg 16)             | <ul style="list-style-type: none"> <li>• Certified Municipal Separate Storm Sewer System Specialist (CMS4S) – EnviroCert International</li> </ul> <p>Notwithstanding professional registration or certification, the State Water Board should maintain the requirement for training and testing potential IQSDs as stormwater control is a multi-disciplined process and knowledge of pollution prevention techniques beyond a specific field is necessary.</p> <p>The Industrial General Permit should include a reminder that specific services such as engineering or landscape architecture must be performed by an appropriately licensed professional. The clarification should be expanded to note that not all aspects of SWPPP development necessarily constitute a specific professional service, e.g., that while a SWPPP may include a Civil Engineer designed feature, development of the whole SWPPP does not constitute the practice of civil engineering.</p> <p>IQSDs and IQSPs are required to have successfully completed training within one year from the effective date of the Industrial General Permit. Based on the CGP training experience, this may be unrealistic; it will likely take at least several months for the IQSD and IQSP training programs to become established once there is a clear requirement in the draft Industrial General Permit. CASQA recommends that the language be revised to require the training within two years of the announcement from the State Water Board that the training programs have officially been established.</p> |
| 57.      | QSPs                                    | Section VII.B.3 (pg 16)                     | <p>CASQA concurs with the State Water Board that the Industrial General Permit should not include pre-requisite certifications/licenses for QSPs.</p> <p>Similar to the CGP, the Industrial General Permit should allow Industrial QSPs to train and delegate SWPPP implementation responsibilities to others, such as inspections and sampling. Given that sampling is a specialized skill set, the Industrial QSP should be able to delegate this work to appropriately qualified staff, contractors, or consultants.</p> <p>There appears to be a word missing in the statement "...the discharger shall employ a &lt;?&gt; to evaluate and select additional structural source control BMPs and/or treatment BMPS..."</p> <p><i>Suggest revising this statement as follows</i></p> <p>"the discharger shall employ the services of an Industrial QSD to evaluate and select additional structural source control BMPs and/or treatment BMPs."</p>   |
| 58.      | Level 2 Treatment BMP designs           | Section XVII.C.2 (pg 40)                    | <p>There appears to be a word missing in the statement "...the discharger shall employ a &lt;?&gt; to evaluate and select additional structural source control BMPs and/or treatment BMPS..."</p> <p><i>Suggest revising this statement as follows</i></p> <p>"the discharger shall employ the services of an Industrial QSD to evaluate and select additional structural source control BMPs and/or treatment BMPs."</p>   |

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| 59.      | Level 2 & Level 3 Reports Require Civil PE Certification | Section XVII.C.8 and C.8 (pgs 40-41)        | <p>A professional civil engineer is required to certify all reports for Level 2 &amp; Level 3. Suggest providing some clarification as to what needs to be certified. This requirement may be interpreted as a certification of the commitment of the facility to implement/install as prescribed in the report, or a certification that the BMPs described were developed in accordance with standard practice. If the intent is to certify the commitment, then the discharger is the appropriate person or entity to certify the report. Page 41 of the permit indicates the “Level 2 NAL Exceedance Evaluation Report” must include a schedule for completing required structural and/or treatment controls. Page 42 says, “All submitted reports described in this subsection must be certified by a California registered professional civil engineer.” It does not seem efficient or necessary for a civil PE to certify the entire report, including the commitment to a schedule by the facility.</p> <p>Suggest revising the language such that an IQSD needs to supervise submittal of all reports, but a professional civil engineer must conduct and certify all engineering work as described in the Professional Engineers Act (Bus. &amp; Prof. Code Section 6700, et seq.).</p> |
| 60.      | Costs & Feasibility of IQSD/P Training                   | NA  | <p>The cost of training for IQSDs and IQSPs is anticipated to be quite high. CASQA estimates that costs may range \$1.0 to \$1.2 million statewide for IQSDs and \$7.6 to \$8.4 million for IQSPs. These estimates were developed assuming:</p> <ol style="list-style-type: none"> <li>1) Training fees, exam fees, and travel expense costs would be similar to those currently incurred for construction QSDs and construction QSPs under the Construction General Permit</li> <li>2) 9,549 facilities, which is the number of facilities regulated under the current Industrial General Permit</li> <li>3) Each facility would need at least 1 QSP</li> <li>4) An IQSD might provide services to 10 facilities.</li> </ol> <p>Note that these cost estimates do not account for wages or overhead costs of an employee. These costs would increase 25-100% if these costs were included, and will likely be even higher given that more facilities will likely be registered under the forthcoming Industrial General Permit.</p> <p>Additionally, following the process used for the CGP, training may be difficult to obtain for people outside of major population centers. For example, as we approach the deadline for</p>   |

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|                                  |                                       |   | <p>construction QSDs and construction QSP training under the Construction General Permit, the availability of exams is limited for facilities in Northern California, especially outside of the Sacramento and San Francisco Bay regions.</p> <p>To reduce costs and make training more feasible, CASQA suggests the State Water Board and the Industrial General Permit Training Team consider the following items:</p> <ol style="list-style-type: none"> <li>1) Consider ways to integrate the construction QSD/P and IQSD/P training for areas of overlap.</li> <li>2) Consider offering on-line training, or establish a training program that allows for all industrial facilities to train their staff within reasonable distance of the facility.</li> <li>3) Consider cost feasibility of training requirements. For example, if multiple compliance levels are maintained in the permit, provide two levels of QSP training. Those facility’s under baseline or Level 1 compliance would need an Industrial QSP with a basic level of training (an Industrial QSP-1), while facilities at higher levels on the risk/compliance hierarchy would require the SWPPP be implemented by an Industrial QSP having more extensive training (an Industrial QSP-2). This would be somewhat similar to the two levels of Registered Environmental Assessors.</li> <li>4) Consider maintaining a list of IQSPs (both levels) and SWPPP implementers (i.e. those trained by IQSPs) to ensure facilities can still comply with the permit during circumstances of IQSP turn-over. (Compliance with this permit can be difficult in circumstances of employee turn-over, e.g. an IQSP leaves the company.)</li> </ol> |
| <b>Group Monitoring/ Sectors</b> |                                       |   |   |
| 61.                              | Retention of Group Monitoring         | NA  | <p>CASQA is concerned that the removal of the group monitoring provisions in the draft Industrial General Permit has eliminated benefits of the groups in an effort to mandate that every facility sample stormwater discharges. Rather than consider this a group monitoring program, CASQA suggests that it is more accurately a group compliance program. CASQA believes the group programs should continue into the new permit term. Even if the State Water Board does not choose reductions in sampling of the same magnitude as the current Industrial General Permit, some lowering of sampling frequency should be provided, to retain one of the incentives for group members to continue to participate in groups. Attachment 2 includes detailed comments/suggestions related to continuation of the group monitoring</p>   |

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|              |   |   | <p>program.</p> <p>Group members subject themselves to additional scrutiny through inspections, additional training and additional reporting in order to produce better quality data and to have some additional control in the selection of BMPs for their industry.</p> <p>The benefits to continuing the group monitoring option in the reissued Industrial General Permit include:</p> <ul style="list-style-type: none"> <li>• Reduction in overall regulatory burden on the individual permittees by providing compliance expertise oversight as a function of Group participation;</li> <li>• Development and implementation of a rigorous monitoring program with oversight from a qualified Group Leader;</li> <li>• Generation of sector-specific monitoring data that is reliable and defensible;</li> <li>• Identification industry-specific BMPs and compliance strategies; and</li> <li>• Promotion of industry-wide cooperation, compliance and consistency.</li> </ul>  |
| 62.          | Use of a Multi-Sector Approach                    | NA  | <p>CASQA finds merit in several aspects of EPA’s 2008 MSGP as it pertains to identifying permit requirements by industrial sectors. CASQA recommends that the State Water Board consider sector or group based approaches to the requirements of the Industrial General Permit.</p>   |
| <b>TMDLs</b> |   |   |   |
| 63.          | Discharge evaluation for 303(d) listed pollutants | Finding 49, (pg 8)                          | <p>CASQA recommends deleting Finding 49. Requiring dischargers to evaluate their potential industrial pollutants and sample their discharges for 303(d) listed pollutants simply because a receiving water has been 303(d) listed is inappropriate, potentially very costly, and, if no TMDL has been adopted, unwarranted and premature. The water body-pollutant combination may be delisted before a TMDL is adopted, in which case the exercise would be pointless. The same is true for indirect dischargers. Even if a TMDL is adopted, it may be revised before it is finally approved by EPA, creating confusion during the interim period. Additionally, in many cases, TMDL WLAs are not framed in a manner that allows facility-specific sampling data to be meaningful. (In those cases, BMPs are the better approach.) Given the wide range of industries and facilities subject to the Industrial General Permit, and the variability in sampling data, the resulting data is not of the quality necessary to provide</p> |



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| 64.      | Total Maximum Daily Load (TMDL) Requirements | Finding 54 (pg 8)                           | <p>the basis for further regulation. Finally, the requirement in Finding 49 imposes an additional, unnecessary burden and cost on dischargers already facing a substantial increase in burden and cost from implementing other new elements of this permit.</p> <p><i>CASQA recommends that Finding 54 be deleted and the following language should be included in a new Findings section I.</i></p> <p>The only findings referencing Total Maximum Daily Loads (TMDLs) in the draft Industrial General Permit are findings 42 and 54, neither of which fully addresses the relationship between TMDLs and the Industrial General Permit. Finding 42 is about the USEPA benchmarks and finding 54 is in a section of findings concerned with sampling, monitoring, reporting, and record keeping. Since previous Industrial General Permits pre-dated the adoption of TMDLs across the state, this permit should provide a set of findings explaining TMDLs and their relationship to the Industrial General Permit.</p> <p><b>Total Maximum Daily Load (TMDL) Requirements</b></p> <p>XX. TMDLs are numeric calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is a sum of the allowable loads of a single pollutant from contributing point sources (the waste load allocations, or WLAs) and non-point sources (load allocations, or LAs), plus the contribution from background sources and a margin of safety. Discharges from the industries covered by this general permit are considered point source discharges. In accordance with 40 CFR 122.44(d)(1)(viii)(B), NPDES water quality-based effluent limitations (WQBELS) shall be consistent with the assumptions and requirements of TMDL WLAs. This Order is consistent with applicable WLAs and LAs that have been adopted by the Regional Water Boards and approved by the Office of Administrative Law and the USEPA as of the date of this Order.</p> <p>XX. Many industries will be subject to multiple TMDLs. WLAs and LAs for many TMDLs are assigned to multiple stormwater dischargers, or across multiple industrial sectors, or both, with no specific mass loads assigned to individual dischargers. Due to the nature of stormwater discharges, and the typical lack of information on which to base numeric WQBELs, federal regulations (40 CFR 122.44(k)(2)) and this Order allow for the implementation of BMPs to control or abate the discharge of pollutants from stormwater.</p> <p>XX. This Order requires industries subject to this general permit to comply with all adopted and approved TMDLs for which they have been assigned a WLA as of the time the permit is</p> |

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|          |   |   | <p>adopted. Compliance may include, but not be limited to, implementation of BMPs and control measures contained in TMDL implementation plans.</p> <p>This Order does not contain TMDL-specific monitoring requirements. Since TMDL monitoring may be shared by multiple dischargers, it is best coordinated at the Regional Water Board level. TMDL monitoring requirements will be addressed by the Regional Water Boards as part of their TMDL-related implementation activities. For stormwater discharges to waters for which there is an EPA approved or established TMDL, industry is not required to monitor for the pollutant for which the TMDL was written unless the Regional Board informs the industry, upon examination of the applicable TMDL and/or WLA, that a facility is subject to such a requirement consistent with the assumptions of the applicable TMDL and/or WLA. The Regional Board’s notice will include specifications on which pollutant to monitor and the required monitoring frequency. These requirements, including the requirement to implement BMPs contained in the TMDL implementation plans, are expected to be sufficient to implement the WLAs in each TMDL for which an industry has been assigned a WLA.</p> |
| 65.      | Hardness adjustments, direct discharges   | Section XV.A.1. (pg) 37)                    | <p>Provision XV.D.1 applies an adjustment of NALs/NELs for hardness dependent metals to dischargers that operate facilities with direct discharges into Waters of the U.S. If the waterbody is impaired for a metal and a TMDL has been adopted, the hardness used in the TMDL should be used so there is not a conflict between this provision and an adopted TMDL. The language should be modified to clarify the relationship to adopted and approved TMDLs.</p> <p><i>The following language should be substituted for current provision XV.A.1:</i></p> <p>1. Dischargers that operate facilities with direct discharges into Waters of the U.S. that analyze for one or more of the six hardness dependent metals (cadmium, copper, lead, nickel, silver, and zinc), unless the facilities are regulated under a TMDL for the specific metal or metals; or</p>   |
| 66.      | Hardness adjustments, indirect discharges | Section XV.A.2. (pg) 37)                    | <p>Provision XV.A.2 applies an adjustment of NALs/NELs for hardness dependent metals to dischargers that operate facilities with indirect discharges into Waters of the U.S. impaired for metals and that are required by a Regional Board to comply with adjusted NAL/NEL values for one or more hardness dependent metals. The actions required by this provision could be in conflict with an adopted TMDL. Therefore, the language should be modified to clarify the relationship to adopted and approved TMDLs.</p>   |

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|          |   |   | <p><i>The following language should be substituted for current provision XV.A.2:</i></p> <p>2. Dischargers that operate facilities that indirectly discharge to Waters of the U. S. impaired for metals and that are required by a Regional Board to comply with adjusted NAL/NEL values for one or more hardness dependent metals unless the facilities are regulated under a TMDL for the specific metal or metals.</p>  |
| 67.      | Atmospheric Deposition  | Finding 46 (pg 7)                                     | <p>Finding 46 as written is confusing; it could be interpreted to mean that only atmospheric deposition from natural disasters would be considered. This is inappropriate in areas of the state with significant air pollution problems.</p> <p><i>Finding 46 should be modified to address background/offsite sources. We suggest the following language to replace the existing Finding language:</i></p> <p>“46. Pollutants in stormwater discharges caused by background conditions, atmospheric deposition, run-on, or by any natural disaster, including forest fires, do not apply toward any NAL corrective action trigger determinations.”</p>  |
| 68.      | Atmospheric Deposition:<br>Level 3 Imposition of<br>Numeric Effluent Limits | Section XVII.D<br>(pg 41)                             | <p>CASQA recommends revisions to Section XV11. D.2 to clarify that the exception. <i>Edit the introductory paragraph and item 2 as follows:</i></p> <p>If in any subsequent reporting year the sampling results meet an NAL corrective action trigger for the same constituents subject to the Level 2 corrective actions the following will apply, the discharger shall:</p> <p>2. The quantity of pollutants in a facility’s stormwater discharge that results from background conditions, atmospheric deposition, run-on, or NALs do not apply if the industrial facility receives run-on or atmospheric deposition from a forest fire or any other natural disaster (such as forest fires), does not count toward the exceedance of an NAL or NEL.</p> |
| 69.      | Atmospheric Deposition:<br>Acid (Low pH) Precipitation                      | Finding 46 (pg 7)<br>and Section<br>XVII.D.2. (pg 41) | <p>Based on stormwater runoff monitoring records at a school bus maintenance facility in Northern California, the pH in the precipitation falling on the site in November 2010 was determined to be 5.65 (which is outside the range for the proposed pH NAL). This indicates that acid rain or atmospheric deposition may at times cause the pH NAL trigger to be exceeded. Rainfall pH data from the National Atmospheric Deposition Program also indicates the pH of rain falling in most areas of California is well below 6.0 historically (<a href="http://nadp.sws.uiuc.edu">http://nadp.sws.uiuc.edu</a>).</p>   |

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| 70.      | <p>Natural Background:<br/>                     Natural background is currently not acknowledged in the discussion of the Numeric Action Levels (NALs), Numeric Effluent Limits (NELs), and Corrective Actions in the Draft Industrial General Permit</p> | <p>Section XVII,<br/>                     pages 38-43</p> | <p>If the Level 1 trigger is exceeded because of the pH in the runoff, there should be a procedure for the permittee to:</p> <ul style="list-style-type: none"> <li>• Demonstrate that there is no operational source through testing of on-site runoff and the precipitation falling on the site; and</li> <li>• Avoid being required to take Level 2 Corrective Actions if the pH NAL is exceeded because of low pH in the precipitation falling on the site or atmospheric deposition during a subsequent reporting year (rather than an operational source).</li> </ul> <p>Like EPA’s MSGP, the draft Industrial General Permit should acknowledge natural background. Industries should not be subject to corrective actions or monitoring for exceedances of NALs or NELs caused by natural background. Following the first four quarters of NAL monitoring (or sooner if the exceedance is triggered by less than four quarters of data) if the average concentration of a pollutant exceeds a NAL or a NEL value, and the industry determines that the exceedance of the NAL is attributable solely to the presence of that pollutant in the natural background, industry is not required to perform corrective action or additional background monitoring, provided that:</p> <ul style="list-style-type: none"> <li>• The average concentration of the NAL monitoring results is less than or equal to the concentration of that pollutant in the natural background;</li> <li>• Industry documents and maintains with the facility SWPPP, the supporting rationale for concluding that NAL exceedances are in fact attributable solely to natural background pollutant levels. This supporting rationale must include any data previously collected (including literature studies) that describe the levels of natural background pollutants in stormwater discharge; and</li> <li>• Industry notifies the State Water Board on its final quarterly NAL monitoring report that the NAL exceedances are attributable solely to natural background pollutant levels.</li> </ul> <p><i>Add the following definition of natural background to Appendix K:</i><br/>                     “Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity at a site, or pollutants in run-on from neighboring sources which are not naturally occurring.”</p> |

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| 71.      | Natural Background                    | Section XVII, (pgs 38-43)                   | <p>Background specific conductance is not considered in relation to Level 1 and Level 2 Corrective Actions. Based on stormwater runoff monitoring records for a school bus maintenance facility in Southern California, the specific conductance NAL may be exceeded when the runoff also includes shallow rising groundwater that commingles with the storm runoff leaving the site. In Southern California this has been experienced in the La Mesa-Spring Valley vicinity. The specific conductance concentration in shallow groundwater in Southern California is often much greater than the proposed specific conductance NAL (200 umhos/cm). Further, in most cases, the specific conductance in the potable water supply serving the facility will be much higher than the 200 umhos/cm NAL (e.g. the specific conductance in the City of San Diego potable water supply in 2009 averaged between 902 and 960 umhos/cm).</p> <p>If the Level 1 trigger is exceeded because of the specific conductance in the runoff, there should be a procedure for the permittee to:</p> <ul style="list-style-type: none"> <li>• Demonstrate through the results of on-site specific conductance testing of the runoff and rising groundwater that there is no operational source; and</li> <li>• Avoid being required to take Level 2 Corrective Actions if the specific conductance NAL is exceeded during a subsequent reporting year and is not caused by an operational source.</li> </ul> |

## **Attachment 2 – CASQA’s Response to Board Member Tam Doduc’s Questions during Hearing of March 29, 2011 on the Draft Industrial Stormwater General Permit**

This attachment to CASQA’s comments was developed to specifically address the questions asked by Board Member Tam Doduc during the March 29, 2011, hearing on the draft Industrial General Permit. These questions (as documented from verbal communication) are listed below with associated responses. We would also like to draw the Board’s attention to elaboration on many of these concepts and facts in the previous proceedings relating to this permit, such as comments on the 2005 draft Industrial General Permit and comments provided during the development of and in response to the 2006 Blue Ribbon Panel Report. In particular, we draw the Board’s attention to the documents in the public record that were developed to address somewhat similar questions from Dr. Gary Wolff in 2006. Those questions posed in 2006 and responded to in various documents submitted by a September 1, 2006, deadline were:

1. Input on what is feasible versus what is infeasible for particular settings and parameters.
2. What is feasible versus infeasible in terms of costs, ability to comply, and other issues associated with implementing/managing the program, and why individual dischargers “view things the way they do.”
3. Address/describe alternatives, including addressing their preferred approaches to stormwater regulation, with discussion of why those approaches are superior to the alternatives.

CASQA’s submittals in the foregoing proceedings included the following, which we request be considered as part of our response and included in the record:<sup>1</sup>

1. *Comment Letter – Stormwater Blue Ribbon Panel Report, September 1, 2006*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/busath090106.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/busath090106.pdf)
2. *Presentation to Blue Ribbon Panel/State Water Board, September 14, 2005 (and accompanying Board package)*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/casq\\_com.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/casq_com.pdf)
3. *State Water Board Process for the Development of Quantitative Measures for Stormwater Program Compliance, August 15, 2005*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/casqa.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/casqa.pdf)
4. *Recommendations for the Revision of the Industrial General Permit, Water Quality Order No. 97-03-DWQ, February 18, 2005 (including Attachments 1 and 2)*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/indcomments/casqa2.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/indcomments/casqa2.pdf)

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<sup>1</sup> We hope that the extensive past efforts and submittals, particularly associated with the 2006 Blue Ribbon Panel proceedings, will be reviewed in detail and considered by the State Water Board in working toward an effective and equitable revision of the Industrial General Permit.

Specific additional responses to Board Member Doduc's questions are set forth below and discussed in turn in this attachment.

1. Specific recommendations on how numeric action levels could be developed/calculated, including how to incorporate sector specific action levels.
2. Specific recommendations for off ramps from the corrective action process. This would focus on how a facility could move back down from a higher corrective actions level.
3. Specific data/analysis for sectors/sites that have implemented treatment controls showing their ability or inability to meet NAL values.
4. Specific recommendations on the QSD/QSP qualifications process.
5. Specific recommendations on how the group monitoring program could be modified moving forward.
6. Specific information on potential economic impacts to dischargers. Include a range of potential costs (not just the high end). The more specific, with backup documentation, the better.

**1. Specific recommendations on how numeric action levels could be developed/calculated, including how to incorporate sector specific action levels.**

CASQA has previously acknowledged that the recommended Blue Ribbon Panel's approach may be an appropriate methodology to set numeric action levels (NALs). Unfortunately, as described below and as was recognized in the Blue Ribbon Panel report itself<sup>2</sup>, the existing database is not adequate to support the Blue Ribbon Panel approach or any derivation of NALs by other methods. However, if adequate data become available, then NALs could be established and used as a trigger for follow-up BMP review and implementation. Compliance would be based on the discharger efforts to provide follow-up action and not on exceedance of the NAL. Such actions are referred to here-in as response actions to clarify their intent.

The following recommendations address data limitations, appropriate statistical methods, industrial discharge categories, and an approach to collect adequate data for future establishment of NALs for constituents that are specific to industrial discharge categories.

**Issues with Current Data and an Alternative Approach to Setting NALs**

The statistical approach for setting NALs should be consistent with both the statistical methods and the definition of an upset value action level described in the Blue Ribbon Panel report.<sup>3</sup> This report suggests two possible numeric methods to develop NALs; a statistically-based population parameters approach and a ranked percentile distribution approach. In determining which approach to use, the quality of the existing discharge monitoring data and database needs to be considered.

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<sup>2</sup> *Storm Water Panel Recommendations to the State Water Resources Control Board: The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities*, June 19, 2006 (Blue Ribbon Panel report) (p.21).

<sup>3</sup> "For the purposes of this document, we are calling this 'upset' value an **Action Level** because the water quality discharged from such locations are enough of a concern that most all could agree that some action should be taken." Blue Ribbon Panel report (p.8).

*Statistically-Based Parameters Approach*

As reported by Stenstrom et al.,<sup>4</sup> there are significant data quality problems with the existing State Water Board database with respect to QA/QC during sample collection and analysis and with poor QA/QC during entry of results into the State Water Board database. This makes use of all the data problematic, particularly for developing NALs derived from statistically-based population parameters. For example, improper field technique can result in sample contamination or in obtaining non-representative samples, which could result in extreme values that do not represent actual conditions. Further, the existing data set is unlikely to represent the range of conditions that may occur at industrial facilities, particularly for infrequent, large events or storm intensities. Likewise, as expressed by State Water Board staff, there are QA/QC concerns regarding entry of the data into the database, making the overall reliability of the database questionable.

Developing NALs based on statistically-based population parameters (e.g., confidence intervals) is sensitive to extreme values resulting from improper sampling or data entry.<sup>5</sup> If confidence intervals were used, decisions are also required such as choosing the level of confidence and the population parameter about which to construct the interval. These may be perceived as arbitrary decisions. In any case, the use of statistical methods should consider the statistical distribution of the population (likely an extreme value distribution rather than a log-normal distribution) and should be designed to accommodate events and observations that are infrequent.

*Ranked Percentile Distributions Approach*

Alternatively, a ranked percentile distributions approach can be less sensitive to extreme values and does not require arbitrary selection of statistical parameters. Such a method could identify high-priority discharges that may indicate a need for response action. However, this approach would also need to recognize the inadequacies of the underlying data set, in that the data set is unlikely to represent the full range of conditions that may occur. Even with a fully represented data set, *any* location may have an occasional, random excursion above an NAL. Therefore, in response to Board Member Doduc's Question 2, CASQA is providing some recommendations for such occurrences before response actions are required.

**NAL Development**

The existing data set is inappropriate for developing industry-wide<sup>6</sup> NALs. As described below, Total Suspended Solids (TSS) is the only parameter that might be potentially suitable for use as an industry-wide NAL based on the existing State Water Board database. Only TSS is potentially generated at almost every industrial activity. Though pH is also a ubiquitous constituent, pH data may be even more questionable since it may be plagued with unique data quality problems in the field such as meter maintenance and calibration. Since the existing pH data is of highly questionable quality, pH would also benefit from additional years of monitoring under the new Industrial General Permit. All other constituents are not universally generated by all sector activity and type of site, and should be developed separately. (See, *Development of Group-Specific NALs*, below.)

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<sup>4</sup> *Industrial Storm Water Monitoring Program Existing Statewide Permit Utility and Proposed Modifications*, January 2005.

<sup>5</sup> Mendenhall and Sincich, *Statistics for Engineering and the Sciences, Fourth Edition*, p.61

<sup>6</sup> "Industry-wide" may still need to exclude certain categories of discharger (e.g., dischargers with natural erosion processes) and the State Water Board may need to consider whether the data from such dischargers is also excluded from the development of the "industry-wide" NAL.



I. Development of Industry-Wide NALs:

a. *Constituent: TSS*

As mentioned above, TSS is the only parameter that might be potentially suitable for use as an industry-wide NAL, as only it is potentially generated at almost every industrial facility. In the following example, CASQA is outlining an approach to developing NALs using the currently available data set for TSS simply for the sake of education and discussion. We should note that in any case, any use of such level would have to include a process that allows findings and actions to be tailored to varied site conditions, and must not be conclusive evidence of the need for costly structural and treatment BMPs.

b. *Method*

As recommended by the Blue Ribbon Panel, the selected methodology should identify upset values for TSS. A statistical, non-parametric method for identifying outliers such as the method of highly suspect outliers appears most analogous for developing NALs. In many statistical texts, highly suspect values are defined as values that exceed the limits of the outer fences of a box plot. The upper limits of the outer fence are calculated by adding three times the inter-quartile range (25<sup>th</sup> to 75<sup>th</sup> percentiles) to the upper-end of the inter-quartile range (the 75<sup>th</sup> percentile).<sup>7</sup>

c. *TSS Example and Issues with an Industry-wide NAL*

Review of the State Water Board entire database shows a 25<sup>th</sup> percentile value for TSS of 13 mg/L and a 75<sup>th</sup> percentile value of 110 mg/L. This would result in an upper outer fence value of  $110 + 3 * (110 - 13)$  or 401 mg/L TSS, see Figure 1.<sup>8</sup> Using highly suspect outliers for NALs is appropriately analogous to the 'upset' values described in the Blue Ribbon Panel report. This method is also consistent with the panel's recommendation to use California data as much as possible. However, if it were possible to use a more refined evaluation of the data set to exclude extreme events (high rainfall amounts and high rainfall intensity) and loading from natural erosive processes, a different NAL could result. For example, TSS loading from stabilized mining and landfill operations can frequently exceed 401 mg/L as demonstrated by past comparisons of residential and open space runoff<sup>9</sup>. This makes 401 mg/L an inappropriate standard for determining an upset value for sites employing erosion control BMPs. And of course, the NAL would have to be adjusted to cover such site-specific natural background conditions.

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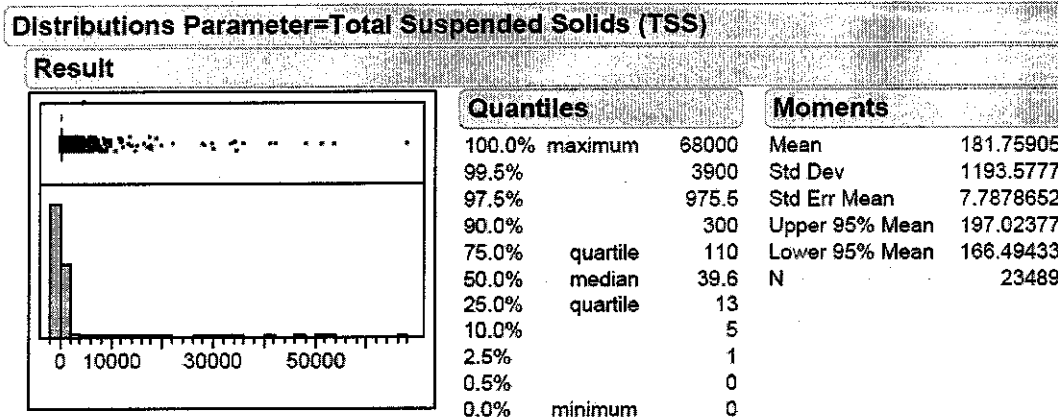
<sup>7</sup> Mendenhall and Sincich, p 60

<sup>8</sup> Supporting output from *JMP Software v.9*

<sup>9</sup> FlowScience, p 48.

[http://www.swrcb.ca.gov/water\\_issues/programs/stormwater/docs/constpermits/comments/cbia\\_nel.pdf](http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/constpermits/comments/cbia_nel.pdf).

**Figure 1. Statistical Output for TSS Analysis**



*d. Continued Refinement*

Hopefully, the new Industrial General Permit will result in additional data, not only discharge data, but storm size and storm intensity data, as well as improved data quality. Further, we would hope that the data set could be coupled with site specific data such as BMP information (structural and non-structural, pervious and impervious land use, etc.) that would allow the data set to be assessed after additional data collection in the new Industrial General Permit term, to re-evaluate any industry-wide TSS NAL. Obviously, the Industrial General Permit would have to be written to allow for the NAL to be updated when the additional data provides such indication, using the same statistical approach to identify outlier NAL values. The procedure for revision would require proposal and adoption as a permit amendment, after public notice and comment.

II. Development of Group-Specific NALs:

*a. Alternative TSS NALs*

The overall, existing data set is not representative of discharges from certain operations or facilities, particularly those that are exposed to natural processes (such as activities on un-paved surfaces), because the existing data is dominated by operations on paved surfaces. A mechanism is needed for industry groups to petition the State Water Board with a subset of data that represents that industry. For example, facilities with paved surfaces likely have lower sediment quantities than those with unpaved surfaces. Because much of the existing data is based on water quality from paved surfaces, using the existing data to develop NALs and requiring unpaved facilities/activities (such as landfills and mines) to continually respond to these NALs, without allowing discharger evaluation to determine the levels are acceptable under the Industrial General Permit, would be inappropriate. In addition to industry type, topography, geology, and climate may be critical factors, so some industrial groups may need to petition on a regional, rather than statewide, basis. The Industrial General Permit should allow industrial groups to form and propose TSS NALs based solely on data from their group. When accepted by the State Water Board, the proposed NALs would replace the industry-wide NALs for participants of that group.

*Group-specific, alternative NALs for TSS could be adopted as follows:* A group monitoring program, or other entity or organization, could submit to the State Water Board a proposed NAL or set of NALs for its program, along with supportive analysis and, optionally, proposed accompanying mandatory BMPs. NALs could be developed following the statistical process described above for the industry-wide NAL for TSS.

The State Water Board should then provide public notice that it has commenced consideration of the proposal, and make the proposal publicly available for preliminary review and comment. If the State Water Board were to propose to approve the proposal, or a revised version after negotiation and agreement, then the State Water Board would propose a permit amendment to incorporate such NAL and/or mandatory BMPs, which will apply to participants in the group monitoring program (or other entity/organization making the proposal). The amendment could also describe the manner in which other non-participants in the proposing entity or group may elect to be covered by such provisions.

*b. NALs for Constituents other than TSS*

Standard Industrial Codes (SIC) codes alone do not provide appropriate differentiation of operations for developing group-specific NALs. Site conditions and specific activities are likely more influential in impacting stormwater discharge water quality than a facility's general business type. Because the existing data set does not include site-specific information such as site activities and BMP implementation, grouping data on a site-specific basis and establishing group-specific NALs cannot be done at this time using the existing data set.

Additional site-specific information may be compiled in conjunction with additional analytical data under the new Industrial General Permit. Appropriate groups may be identified and established based on the site-specific information gathered, including the relevant analytical data. The method for developing group-specific NALs should follow the process described above for industry-wide NALs, and should consider at least three years of data (from old and new permit terms, as technically appropriate). This approach provides additional justification for continuing group monitoring programs which can facilitate data collection and BMP effectiveness determinations on a group-specific basis.

### III. Recommendation for Appropriate and Quality Data Development

As is noted throughout our comments, the existing data set is inadequate and inappropriate for NAL development. CASQA recommends that the State Water Board convene a workgroup of stormwater experts to recommend a process to identify and gather the appropriate data, in a cost-effective manner that can be suitable for use in NAL development. CASQA would be willing to be a participant in such an effort.

#### **2. Specific recommendations for off ramps from the corrective action process. This would focus on how a facility could move back down from a higher corrective actions level.**

It is critical that any discussion of off ramps be part of a well developed program of benchmark monitoring and response actions that are appropriate, clear, lawful, and reasonable. Off ramps cannot remedy inappropriately established NELs or NALs, as discussed in more detail in CASQA's comment letter. **However, we offer our thoughts for consideration in the event NALs and potential responsive actions are otherwise agreed upon.** Note that the term "corrective actions" is

used as a matter of recent convention, but is not ideal, as in other contexts it implies violation of an applicable requirement – CASQA recommends the use of the term as response actions.

The off ramps are the sampling of consecutive storm events without an excursion above an NAL, or certain certifications that justify not repeating the response action process. The off ramps are offered within the following comments on response actions that show one way in which outlier-based NALs as discussed above might be incorporated into the permit. Again, this is merely a discussion draft concept, not a final proposal and does not attempt to address all relevant language in the draft Industrial General Permit.

The concept described would simplify the response to NAL excursions into a single action level, that has somewhat different requirements if excursions are repeated, and a period during which one must continue evaluations after the first year of triggered responses. Thus, the emphasis is on the discharger, in conjunction with its QSD, making appropriate evaluations, without attempting to create punitive measures (such as constant sampling of every storm, or creating NELs) as part of corrective action.

The following language would replace XVII B, C, and D

Response Actions

The response action process described below would be required after a single excursion above the NAL, for the constituent involved. This process is required for industrial runoff that occurs up and until the volume of runoff exceeds the design/compliance storm for the specific facility:

- 1) Evaluate areas of the facility to identify where additional operational source control BMPs and/or SWPPP implementation measures are necessary to prevent or reduce pollutants in stormwater;
- 2) Based upon the above facility evaluation, certify one of the following:
  - a) Pollutant source(s) associated with industrial activity have been identified and additional BMPs and/or SWPPP implementation measures have been included in the SWPPP to meet the non-numeric technology-based requirements of the Permit.<sup>10</sup> The certification should include a description of the pollutant source(s) causing the exceedance, a summary of the existing BMPs associated with the pollutant source(s), and a detailed description of the additional BMPs and SWPPP implementation measures necessary to meet the non-numeric technology-based requirements of the Industrial General Permit.

If the discharger has triggered response action under this Section in previous years, and if the new proposed additional BMPs do not include structural source controls or

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<sup>10</sup> The phrase “the non-numeric technology-based requirements of the Permit” means the provisions of the Industrial General Permit designed to meet requirements for technology-based effluent limitations. The Industrial General Permit should clarify that the program of BMPs and any other specified, relevant requirements constitute the non-numeric technology-based effluent limitations.

treatment, the discharger should specifically explain how such controls were considered and why they are not proposed for the facility.<sup>11</sup>

- b) Pollutant source(s) associated with industrial activity have been identified but no additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in stormwater discharges to meet the non-numeric technology-based requirements of the Permit. The certification should include a description of the pollutant sources and a summary of the existing BMPs, and a discussion of possible BMPs that could be effective in reducing pollutant concentrations below the NAL trigger absent technical or economic factors that make adoption of the BMPs inappropriate to meet the technology-based requirements of the permit; or
  - c) Pollutant source(s) causing the exceedance of the NAL are not related to the facility's industrial activities and no additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants related to the discharger's industrial activity to meet the non-numeric technology-based requirements of the permit. The certification should describe the non-industrial related source(s); or
  - d) The discharge is in compliance with applicable requirements implementing a Waste Load Allocation, Interim Waste Load Allocation, or implementation schedule of an applicable TMDL (TMDL-based requirements), and no additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in stormwater discharges to meet the non-numeric technology-based requirements of the permit.<sup>12</sup>
- 3) Implement additional BMPs and SWPPP implementation measures when required pursuant to Section XVII.B.1 and revise the SWPPP, as soon as practicable but no later than October 1 of the following reporting year.
  - 4) Prepare, and upload into SMARTS no later than the Annual Report due date, an NAL Exceedance Evaluation Report, which includes the following items for each constituent exceeding an NAL at least once during the reporting year:
    - a) A summary of the facility evaluation required in Section XVII.B.1
    - b) The certification required in Section XVII.B.2.
    - c) A description and implementation schedule for additional BMPs and SWPPP revisions that have not been implemented as of the submittal date of the NAL Exceedance Evaluation Report.
  - 5) If the Regional Water Board provides written comments on the NAL Exceedance Evaluation Report, the discharger shall, within 30 days of receipt of the Regional Water Board's comments, revise the NAL Exceedance Evaluation Report, SWPPP, and/or monitoring program to address the comments.
  - 6) No later than 90 days after receiving comments from the Regional Water Board or October 1 of the next reporting period (whichever is later), dischargers shall implement

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<sup>11</sup> For example some treatment BMPs are not feasible at individual sites due to lack of available land or due to economic limitations (e.g., cost for land purchases, advanced treatment, etc.) cannot be supported by the overhead of the business in question.

<sup>12</sup> In this case, the NAL would be suspended in favor of the TMDL-based requirements.

additional BMPs and SWPPP implementation measures, and revise the SWPPP in response to the Regional Water Board comments. Extensions to this implementation schedule should be granted by the Regional Board to allow for necessary engineering, permitting, and equipment procurement. If the certification submitted pursuant to XVII.B.2.a-d is accepted by the Regional Water Board, or no comment is received from the Regional Water Board within 30 days, the discharger shall be considered in compliance with the non-numeric technology-based requirements of the permit for the parameters addressed.

- 7) The evaluation and response actions defined in this Section must be repeated in the years following the trigger, until the sooner of to occur of the following:
  - a) There are no excursions above an NAL either i) within two years, or ii) within 8 consecutive samples: or,
  - b) If NAL excursions for the same constituent are repeated, then until the certifications in XVII.B.2.b-d are made in two consecutive years.

There is no requirement that additional BMPs or SWPPP implementation measures be adopted in years following an initial NAL Exceedance Evaluation Report merely due to excursion above the NAL, as long as appropriate evaluation is performed and certifications made under Section XVII B.2.<sup>13</sup>

**3 Specific data/analysis for sectors/sites that have implemented treatment controls showing their ability or inability to meet NAL values.**

There is a concern that large-scale non-attainment of inappropriately-low NALs (based on benchmarks rather than available technologies) will place a tremendous burden on regulatory staff and does not lend to a prioritization of gross polluters. There is significant concern among dischargers that the proposed corrective action process and NALs will force dischargers into design and installation of treatment controls that have not been proven effective at meeting the proposed NALs. At the request of Board Member Doduc, we have compiled stormwater data from sites (from industrial sites when available) that have implemented treatment controls in an attempt to achieve discharge limits similar to the proposed NAL values.

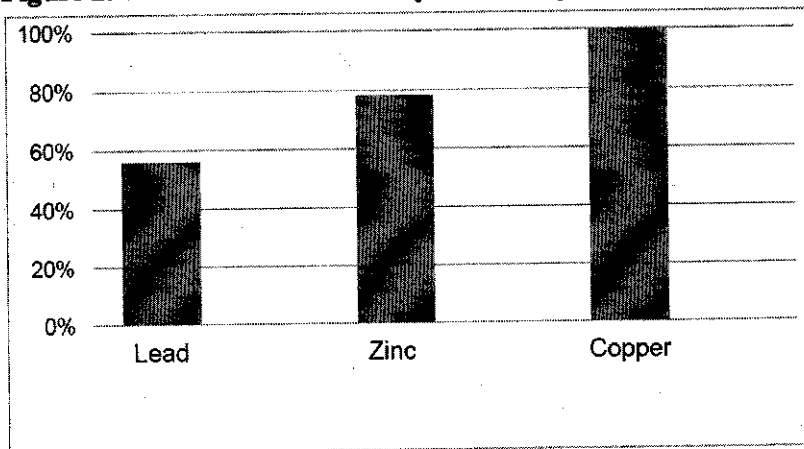
The Figure 2 represents approximately 25 effluent data points from scrap recycling facilities that have implemented similar treatment controls and the percent of their effluent results that have exceeded the proposed NALs for the constituents identified. All of these sites are located in California and each of the sites installed a similar stormwater "treatment train" approach that is considered by many to be the best available technology economically achievable for treatment of stormwater at these sites. The treatment systems each included significant storage capacity for stormwater, a pretreatment system to settle solids and separate oils followed by an enhanced media filtration system. While the post treatment results from these systems demonstrate significant improvements in the removal of metals, these results also show that a sophisticated treatment system specifically designed and installed (at significant expense) to reduce metals concentrations in stormwater is not capable of consistently meeting the proposed NALs in the draft Industrial General Permit. The costs to design and install these systems ranged from

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<sup>13</sup> For example, such certifications may note that there is reason to believe that BMPs already adopted appear to satisfy the requirements.

approximately \$150,000 to more than \$400,000 per site, with no apparent assurances of compliance with NALs for the business owner.

**Figure 2. Percent of Treatment System Analytical Results Above the Proposed NAL Values**



Note: For data evaluation purposes, a receiving water hardness value of 100 mg/L was assumed. The corresponding NAL/NEL values for copper, lead, and zinc were, 0.014 mg/L, 0.082 mg/l, and, 0.12 mg/L, respectively. Data was collected in 2009 and 2010 and has not been formally published as of the date of this comment package.

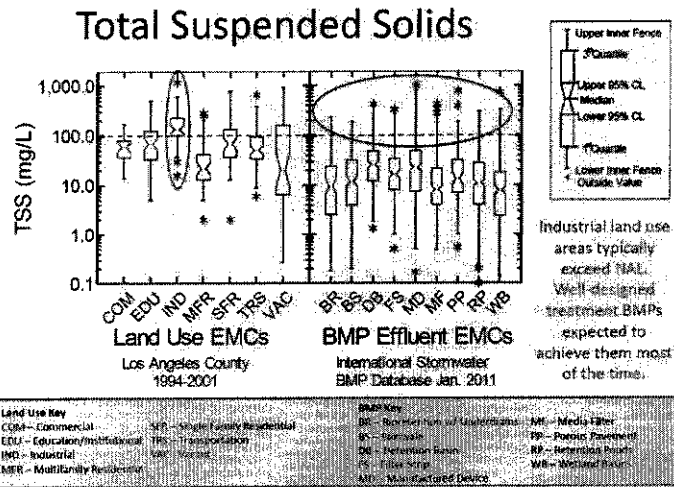
These data strengthen the need to develop technology-based standards as described in the response to Question #1.

Additional data analysis was presented recently at CASQA's March 2011, quarterly meeting (Figures 3 through 6<sup>14</sup>). Data presented is based on analysis of BMP Effectiveness data from the ASCE/EPA International BMP Database<sup>15</sup> as well as other land use data from the Los Angeles County Land Use Event Mean Concentration data set. It should be noted that much of the data analyzed does not represent discharges from industrial sites. However, it still shows the relative ability of stormwater treatment controls to remove constituents to meet the proposed NAL/NEL values in the draft Industrial General Permit.

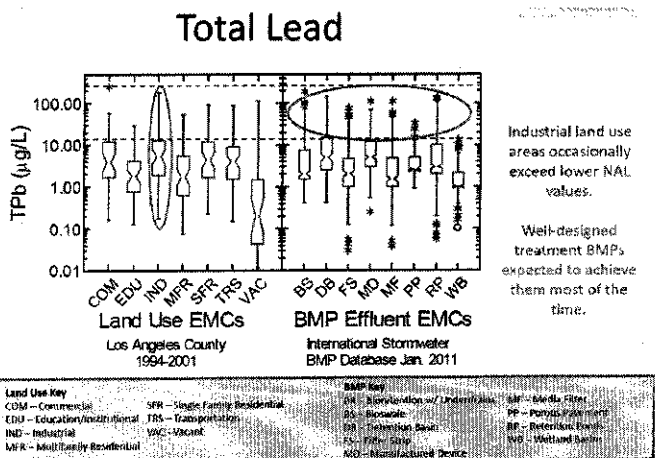
<sup>14</sup> As presented by Brandon Steets, Geosyntec, CASQA March 10, 2011 Quarterly Meeting.

<sup>15</sup> American Society of Civil Engineers Urban Water Resources Research Council and United States Environmental Protection Agency (ASCE/EPA), 2003. International Stormwater Best Management Practices Database.

**Figure 3. TSS BMP Effectiveness Data**

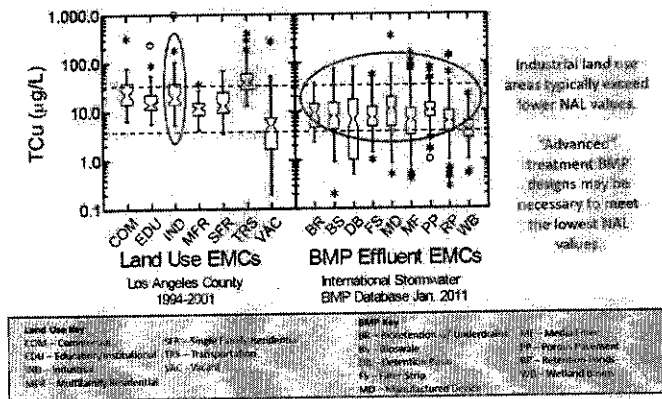


**Figure 4. Lead BMP Effectiveness Data**

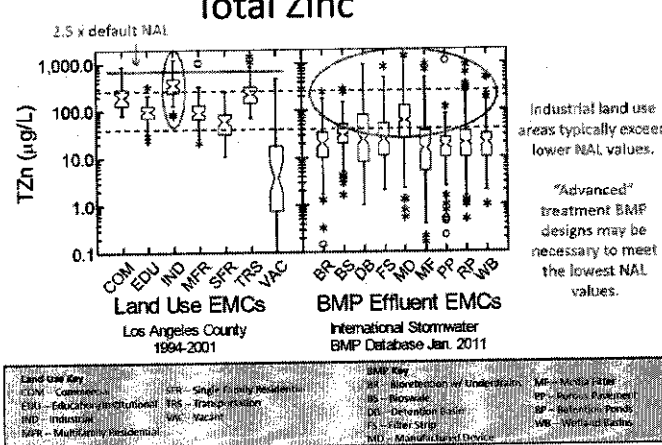




**Figure 5. Copper BMP Effectiveness Data**  
 Total Copper



**Figure 6. Zinc BMP Effectiveness Data**  
 Total Zinc



These data show the relative ability to remove constituents to sometimes meet the proposed NALs through BMPs for the constituents displayed and further supports the need to follow established and appropriate statistically-based methods for developing technology based NALs. The lack of suitable data from specific industries also points to the need to gather additional data (preferably sector-specific) and better understand the technology capabilities of industrial BMPs before implementing a stringent corrective action process that ultimately leads to numeric effluent limits. CASQA supports continued Group Monitoring as part of the next Industrial General Permit as a means of collecting the high quality, sector-specific data to support the eventual development of technology-based NALs (see response to Question # 5).

**4. Specific recommendations on the QSD/QSP qualifications process.**

The list of registrations for certifications required for an Industrial QSD is very limiting, and the proposed certifications will not necessarily ensure that SWPPPs are developed correctly or result in programs that adequately control stormwater discharges. In particular, CASQA believes that to promote industrial stormwater pollution control, experience and knowledge of industrial operations, pollutant sources, and stormwater or environmental management activities at the

facility is paramount, and supersedes the need for training as a geologist, landscape architect, hydrologist, or engineer. Many individuals who have the proposed licenses do not have experience with industrial operations, pollutant sources, or stormwater and environmental management activities. For example, civil Professional Engineers (PEs) in California are not specifically trained in stormwater quality management and it is only through voluntary continuing education or experience that they develop this expertise. Similarly, California Professional Geologists (PGs) do not undergo training in stormwater quality management and are unlikely to have experience in the management of industrial sources of stormwater pollution, although the expertise of a PG or PE would be relevant to SWPPP development if it included the design of retention or of infiltration BMPs and/or ground water monitoring. Registered Landscape Architects and Professional Hydrologists may have very little experience with industrial sites outside of the design or retrofit of landscape based practices or hydrology modeling.

Unlike the recent experience with the Construction General Permit, to our knowledge there are no professional certifications that specifically address industrial stormwater management as there were for erosion and sediment control. Each industrial sector and facility type may have unique needs that call for specific types of professional skills for particular stormwater control tasks. Some specific tasks at a mine site, for example, may require attention of a mining engineer. At various types of unpaved sites, a professional in erosion and sediment control can provide useful services for specific aspects of SWPPP design.

CASQA recommends the permit language be revised to reflect one of the options provided below. Both the CASQA recommended options include eliminating a listing of 'pre-requisite' licenses or certifications. CASQA suggests that the State Water Board convene a stakeholder group be tasked with choosing one of these options and developing the specific details (such as defining the required relevant education and experience discussed in option #2).

- Option 1 The appropriate qualifications for an Industrial QSD should be determined by the completion of the state-sponsor or approved training program and examination. The training program would focus on the requirements of the Industrial General Permit, and provide exposure to a variety of industrial discharge conditions/situations. The examination should be comprehensive and detailed, and include practical applications, such that, in order to pass, examinees will have to combine their personal experience and skills with the knowledge they gain from the training program to pass.
- Option 2 Require Industrial QSD applicants demonstrate a specified level of relevant education and experience. The education and experience can be demonstrated during the application process for the Industrial QSD course or examination. This would be similar to the processes currently used by other professional certification programs. The definitions of "relevant education and experiences" would be developed by the stakeholder group or the Industrial General Permit Training Team to be convened.

Should the State Water Board want to maintain a list of pre-requisite registrations or certifications, CASQA suggests this requirement be limited to facilities at higher levels on the risk hierarchy. The State Water Board's stakeholder group should investigate potentially relevant certifications and identify the ones that should be included in the next draft of the Industrial General Permit. CASQA suggests that the following professional certifications be considered:

- Certified Professional in Storm Water Quality (CPSWQ) – EnviroCert International

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- Certified Professional in Erosion and Sediment Control (CPESC) – EnviroCert International
- Registered Environmental Assessor I or II (REA) – Department of Toxic Substances Control
- Certified Hazardous Materials Manager CHMM – Institute of Hazardous Materials Management
- Industrial Waste Treatment Plant Operator – California Water Environment Association
- Environmental Compliance Inspector – California Water Environment Association
- Certified Municipal Separate Storm Sewer System Specialist (CMS4S) – EnviroCert International

Notwithstanding professional registration or certification, the State Water Board should maintain the requirement for training and testing potential Industrial QSDs as stormwater control is a multi-disciplined process and knowledge of pollution prevention techniques beyond a specific field is necessary.

CASQA concurs with the approach of not requiring any pre-requisite registrations or certifications for Industrial QSPs.

**5. Specific recommendations on how the group monitoring program could be modified moving forward.**

CASQA believes it is important to understand the benefits that have been and can continue to be provided by the group monitoring program. Many of these benefits are directly in line with goals identified by the State Water Board in developing this draft Industrial General Permit (e.g., improved data quality) and will lead to the collection of improved sector-specific data moving forward (see response to Question #1 above). The benefits to continuing the group monitoring option in the reissued Industrial General Permit include:

- Reduction in overall regulatory burden on the individual permittees by providing compliance expertise oversight as a function of Group participation;
- Development and implementation of a rigorous monitoring program with oversight from a qualified Group Leader;
- Generation of sector-specific monitoring data that is reliable and defensible;
- Identification industry-specific BMPs and compliance strategies; and
- Promotion of industry-wide cooperation, compliance and consistency.

Group members subject themselves to additional scrutiny through inspections, additional training and additional reporting (not required of any non-group member) in order to produce better quality data and to have some additional control in the selection of BMPs for their industry. One of the significant problems cited in the State Water Board's workshops was stormwater sample data quality. The increased QA/QC from the existing group monitoring programs has resulted in data quality far superior to the State Water Board's existing database and this improvement in data quality is expected to continue with the re-issued Industrial General Permit. The improved data quality at group member sites can be attributed to intense training oversight and involvement by the Group Leader.

Group quantitative and narrative data developed under professional and experienced guidance can be used to determine whether numeric action values are necessary for an industry group. This function should not be underestimated. The State Water Board states the need to develop industry specific BMPs but concludes that because of the diversity of industries, they are infeasible (Fact Sheet pg 18). Group Leaders, therefore, can complement the data gathering of the State Water Board and the Regional Water Boards. The State Water Board's decision to discontinue group monitoring appears to focus only on the benefits group members receive. The State Water Board has not taken into account balancing these benefits with the additional benefits it can receive by using monitoring groups to generate increased data quality and to reduce the inspection burden currently placed on resource-strained Regional Water Boards and MS4s.

CASQA has several recommendations on how the group monitoring program could be modified, or better utilized, moving forward with the next version of the Industrial General Permit. At a minimum, Group Leaders should play a more extensive role in oversight, inspections, and sampling quality assurance in any revised group monitoring scheme.

- Group Leaders could serve as the QSD for group participants and potentially and would fill many QSP functions for the group members.
- Group Leaders could develop a group-wide sample and analysis plan to clearly convey data quality objectives, providing an additional level data validation and data evaluation not available to non-Group members.
- The Group Leader would be also be responsible for providing the following:
  - Providing annual mandatory training
  - Completing detailed stormwater compliance assessments every other year
  - Limiting group membership to facilities complying with group compliance requirements

As stated above, Group members subject themselves to additional scrutiny through inspections, additional training and additional reporting (not required of any non-group member). Because the current draft Industrial General Permit requires sampling four times per year, a reduction in analytical monitoring to a minimum of once or twice per year is a justifiable offset for the increased requirements and scrutiny of group monitoring participants.

To better understand the State Water Board's concerns and work on an equitable framework to best utilize the group monitoring program, CASQA suggests convening a Group Leader stakeholder meeting to discuss the details of a group monitoring program that effectively balances costs and benefits.

**6. Specific information on potential economic impacts to dischargers. Include a range of potential costs (not just the high end). The more specific, with backup documentation, the better.**

In response to Board Member Doduc's request, CASQA has compiled costs for several aspects of the draft Industrial General Permit that will pose a significant economic burden on industrial dischargers. Areas of the draft Industrial General Permit that appear to have the greatest economic impact are:

- Labor costs associated with increased inspections
- Training costs for QSD/QSP certification
- Increased sampling and analytical costs

- Costs associated with additional BMPs, including treatment controls

#### *Increased Inspection Requirements*

As proposed, the draft Industrial General Permit will significantly increase the inspection burden on industrial dischargers but does not provide rationale for the significant change. The draft Industrial General Permit appears to require approximately 400 more documented inspections annually than what is required under the current Industrial General Permit. CASQA has compiled a list of the inspections required throughout the permit (see Attachment 5). The number of inspections under the existing Industrial General Permit is estimated to be approximately 40. By contrast, the number of inspections expected under the proposed Industrial General Permit is approximately 450. This is an increase of approximately 1,150%. From CASQA's analysis, individual dischargers effort and costs will range significantly based on facility size and type of operations, but with hourly labor costs ranging from approximately \$60-\$95 for dischargers, the potential economic impact of just this one aspect of the draft Industrial General Permit could range from \$24,000 to \$38,000 per facility (assumes one hour for each additional inspection).

#### *Training Costs*

The cost of training for QSDs and QSPs is also anticipated to be significant based on recent experience gained through the Construction General Permit QSD/QSP programs. CASQA estimates that costs may range \$1.0 to \$1.2 million statewide for QSDs and \$7.6 to \$8.4 million for QSPs. These estimates were developed assuming

- 1) Training fees, exam fees, and travel expense costs would be similar to those currently incurred for construction QSDs and QSPs under the Construction General Permit
- 2) 9,549 facilities, which is the number of facilities regulated under the current Industrial General Permit
- 3) each facility would need at least one QSP
- 4) A single QSD might provide services to up to 10 facilities (that is each facility would not need an in-house QSD)

Note that these cost estimates do not account for wages or overhead burden associated with employees (such as benefits). These costs would increase 25-100% if wages and burden were included, and will likely be even higher given that more facilities will be registered under the forthcoming Industrial General Permit. Many facilities may not have a civil engineer, landscape architect, hydrologist or geologist on staff and may need to hire consultants or new staff on a long-term basis to address these requirements.

#### *Increased Sampling and Analytical Costs*

As shown in Attachment 6, costs associated with sampling efforts under the draft Industrial General Permit could increase anywhere from 90% to over 2000%. Sampling and analytical costs estimates are based on information provided to CASQA from a cross-section of industrial discharger types, representing the pharmaceutical manufacturing, saw mills, aerospace manufacturing, landfills, and municipally operated facilities. Costs were developed to represent the obligations under the existing Industrial General Permit and were then compared to the proposed changes to the monitoring program in the draft Industrial General Permit. To provide insight into the economic implication to dischargers moving through the corrective action process (and not focus on only the most stringent requirements), estimates are also provided for each corrective action tier (baseline through level 3). While the types of facilities participating in CASQA's sampling/analytical cost survey provide a

good cross-section of industry in California, the range in sampling costs is driven by a variety of factors, primarily related to the size of the facility, constituents required to be sampled, and the total number of discharge points from industrial sources.

*Additional BMP Costs, Including Treatment Controls*

While difficult to quantify, we urge State Water Board staff to consider the significant economic burden associated with required installation of structural controls such as overhead cover, secondary containment, or diversion of flow, as well as for installation of the types of advanced treatment controls and package treatment plants that would be required to attempt to reduce stormwater concentrations to proposed NAL levels. As summarized in CASQA's response to Question #2 above, there does not appear to be a viable treatment control that has been shown to consistently meet proposed NAL values; thus, it would not be feasible to provide an accurate estimate of costs to comply with the proposed NALs. As indicated in the response to Question #2, the costs to install the treatment control systems with data summarized in Figure 2, ranged from \$150,000 to \$400,000. Even with extremely costly improvements, in some cases there will be no guarantee that NELs would be met, exposing facilities to continual risks of state and federal agency and private enforcement actions.

*Overall Economic Impacts*

While the information above provides insight into the economic impacts associated with various aspects of the draft Industrial General Permit, CASQA refers State Water Board Members to other economic impact information provided in comments being submitted by organizations such as Coalition of Adequate School Housing (CASH), California Construction and Industrial Materials Association (CALCIMA), California Trucking Association, and the Port of Long Beach. Cost estimates developed by these groups show overall economic impacts ranging from nearly \$30,000 to several hundred thousand of dollars. These values are associated with program implementation (inspections, sampling, training, and document development) and do not represent the costs of installing treatment controls that could be triggered in the corrective action process.

Contrary to State Water Board's stated goals, it appears the draft Industrial General Permit removes flexibility, has become overly prescriptive, and includes new requirements that will be extremely costly for the regulated industries and for municipalities, who operate critical public facilities under the Industrial General Permit and who may have key roles in helping to assure compliance at regulated facilities. CASQA asks the State Water Board look closely at the overall economic impacts to industrial dischargers in California, and looks forward to working in a stakeholder process to provide additional information to State Water Board staff during development of the next draft of the Industrial General Permit.

## **Attachment 3 – Statutory Background to Support CASQA’s Comments on the Draft Industrial Stormwater General Permit**

CASQA submits the following comments on the numeric effluent limitations (NELs) and numeric action levels (NALs) included in Section XVII of the draft Industrial General Permit.

Section XVII of the draft Industrial General Permit sets forth a sequence of corrective actions that are triggered when a facility’s monitoring data exceed certain concentrations listed in Table 4, titled “Numeric Action Levels.” Section XVII.D.1 of the draft Industrial General Permit converts Level 2 corrective actions into NELs in various circumstances, stating that the “applicable NAL(s) *become NEL(s), effective October 1 of the following compliance year.*” Draft Fact Sheet Section K explains that the “*corrective action Level 3 requirements, where NALs become NELs, constitute technology-based numeric effluent limitations.*” Both the NEL process itself and the technical and legal basis for any such a process are unclear.

There are significant consequences for the regulated community associated with the State’s proposed approach, if it becomes law. Exceeding NELs results in strict liability under the Clean Water Act (CWA) subject to State, EPA and citizen suit enforcement, including substantial penalties up to \$37,500 per day, per violation (federal CWA Section 1319) or \$25,000 per violation per day plus \$100 per gallon (California Water Code Section 13385). In addition, any facility that has reached Level 3 must sample each and every storm throughout the year. For certain facilities, this means sampling every day of every storm throughout the year. This can generate “mandatory minimum penalties” under State law, of \$3,000 per violation for serious violations of numeric effluent limitations (serious being defined as certain repeat violations or violations exceeding a certain percentage above the limit). Therefore, the stakes are high for creating a defensible and fair permit compliance scheme.

### **I. THE DRAFT PERMIT AND DRAFT FACT SHEET NEED TO ESTABLISH THE LEGALLY REQUIRED BASIS FOR IMPOSING NUMERIC TECHNOLOGY-BASED EFFLUENT LIMITS.**

The CWA and its implementing regulations establish a defined and rigorous process for developing NELs and for the translating such NELs into NPDES permits as enforceable numeric requirements. (CWA §§ 301, 304(b) and 402(a)(1); 40 C.F.R. 122.44(a)(1) and 125.3.) These processes must be followed for the legally valid development and implementation of NELs that are technology based effluent limitations (TBELs) or, as necessary, water quality based effluent limitations (WQBELs).

Properly developed numeric TBELs establish performance-based levels of pollutant controls to achieve the applicable technology-based standards of Best Practicable Control Technology (BPT), Best Conventional Pollutant Control Technology (BCT) for conventional pollutants (BOD, TSS, coliform, pH, oil and grease), or Best Available Technology Economically Achievable (BAT) for toxic and other nonconventional pollutants. Numeric TBELs aim to prevent pollution by requiring a minimum level of effluent quality that is, *inter alia*, attainable using *demonstrated technologies* for reducing discharges of pollutants. While there is a certain level of discretion afforded EPA or States in establishing broadly applicable technology

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standards pursuant to CWA Section 304(b), there also are a number of minimum factors that the State Water Board must analyze and consider before adopting such standards.

The draft Industrial General Permit and related Fact Sheet do not include analysis to support adopting NELs as technology-based numeric effluent limitations. The State Water Board has not set forth specific data, other technical basis for imposing numeric TBELs in this Permit, nor has it discussed any of the required factors set forth in CWA Section 304 or implementing regulations pursuant to 40 C.F.R. 122.44(a)(1) and 125.3. In addition, the United States Environmental Protection Agency (EPA) has not promulgated comparable effluent limitations guidelines.

The draft Industrial General permit bases the NELs in the permit on EPA's use of "benchmarks" contained in EPA's *Multi-Sector General Permit for Stormwater Discharges Associated With Industrial Activity* (MSGP), 73 Fed. Reg. 56572 (September 29, 2008).<sup>1</sup> However, EPA has stated that the benchmarks are not effluent limitations. In its 2008 MSGP, EPA confirms:

The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data are primarily for your use to determine the overall effectiveness of your control measures and to assist you in knowing when additional corrective action(s) may be necessary to comply with the effluent limitations in Part 2. (2008 MSGP at Part 6.2.1.)

This statement is even more strongly supported in EPA's Response to Comments document.

In light of EPA's statements and position, its benchmarks should not serve as NELs without appropriate CWA-based analyses and justifications. For these reasons, the State Water Board should delete Finding 42 in the draft Industrial General Permit which reads: "[t]he State Board finds that the USEPA benchmarks serve as an appropriate set of technology based effluent limitations that demonstrate compliance with BAT/BCT."

**II. THE NELs INCLUDED IN THE DRAFT PERMIT WOULD CREATE UNINTENDED CONSEQUENCES AND ARE UNWORKABLE.**

The NELs in the draft Industrial General Permit create unintended consequences and the "off ramps" to provide relief from inappropriate application of the NELs are not workable. As other portions of CASQA's comments demonstrate, the draft Industrial General Permit and draft Fact Sheet underestimate the number of dischargers who will be unable to meet these legally unsupported NELs, even after attempting costly treatment – the only possible option for many under the corrective action scheme. Such dischargers will be subject to regulatory and third-party enforcement.

<sup>1</sup> Information on the Multi-Sector General Permit can be found at <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>.

<sup>2</sup> EPA explained its decision in detail in the MSGP Fact Sheet, concluding on page 53 as follows:

"While EPA continues to study the efficacy of various types of pollution prevention measures and BMPs,



The draft Industrial General Permit's inclusion of NELs with substantial economic and environmental impacts is also inconsistent with the Water Code Section 13300 for reasonableness in water quality regulation, and the Water Code Section 13263 for permitting to consider the "balancing factors" in Section 13241. Even if the balancing factors may not be required to be explicitly addressed in detail where a permit imposes minimum requirements under the CWA, the draft Industrial General Permit's should discuss these factors. Furthermore, the draft Industrial General Permit is demonstrably more stringent than minimum CWA requirements, for example, in showing much more stringency than EPA's MSGP.

The State Water Board's proposed mechanisms to reverse or avoid the NELs it has established appear unworkable for two major reasons. First, the draft Industrial General Permit does not address the legal and practical consequences of having an NEL go into effect. These consequences include, among other things, incurring substantial costs to attempt compliance, exposure to enforcement, and potential applicability of anti-backsliding provisions that could limit relief from an NEL.

Second, the draft Industrial General Permit attempts, but does not provide, a workable procedure for ensuring that an inappropriate NEL never goes into effect. The draft Industrial General Permit provides that dischargers subject to the imposition of an NEL(s) "may electronically submit to SMARTS a Suspension of Numeric Effluent Limitations (SNEL) request," but does not say when relief is effective. The draft Industrial General Permit also states that "NELs do not apply if the industrial facility receives run-on or atmospheric deposition from a forest fire or any other natural disaster," but leaves applicability uncertain even for these limited emergency conditions. In any event, off ramps cannot rectify inappropriately established action levels or NELs.

### **III. THE NELs INCLUDED IN THE DRAFT PERMIT ARE INCONSISTENT WITH THE BLUE RIBBON PANEL'S REPORT AND WITH EPA'S PRIOR CONCLUSIONS THAT NUMERIC LIMITS ARE NOT FEASIBLE AND ARE NOT REQUIRED.**

In 2006, the Blue Ribbon Panel concluded that the establishment of numeric limits for industrial sites required a reliable database describing current emissions by industry types or categories, and performance of existing Best Management Practices (BMPs). The Blue Ribbon Panel concluded that the current Industrial General Permit had not produced such a database.

In 2008, EPA similarly concluded in the MSGP that it was infeasible to establish numeric effluent limits because "variability in the system and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers" as required by 40 C.F.R. 122.44(k)(3). EPA reached this conclusion after a detailed review of monitoring data, after which EPA was unable to determine whether benchmark value exceedances provide any useful indicators of control measure inadequacies or potential water quality problems. (MSGP Fact Sheet, p. 96.)

Through its NPDES permit regulations, EPA has interpreted the CWA to allow BMPs to take the place of numeric effluent limitations to control or abate the discharge of pollutants when: (1) "[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges"; or (2) "[n]umeric effluent limitations are infeasible." 40 C.F.R. § 122.44(k). EPA cited that regulation and

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the ample case support for non-numeric limits when finding numeric limits infeasible and choosing to include only non-numeric limits in the 2008 MSGP.<sup>2</sup>

The draft Industrial General Permit and draft Fact Sheet do not discuss how conditions have changed since the Blue Ribbon Panel's 2006 conclusions or EPA's 2008 conclusions regarding the lack of data to support the development of NELs. The draft Industrial General Permit's inclusion of NELs is inconsistent with the conclusions of the Blue Ribbon Panel and EPA.

**IV. THE EVIDENCE REQUIRED FOR THE DEVELOPMENT OF LEGALLY VALID NELs DOES NOT EXIST AT THIS TIME, AND CASQA DOES NOT SUPPORT THE INCLUSION OF NELs IN THE PERMIT**

For the reasons expressed above, currently available data are insufficient to support the development and implementation of NELs. Until such data exist, CASQA cannot support the inclusion of NELs in the Industrial General Permit.

**V. CASQA SUPPORTS THE CONTINUED USE OF NON-NUMERIC EFFLUENT LIMITATIONS.**

The CWA defines "effluent limitation" as "any restriction" on the amounts of pollutants discharged, not just a numerical restriction. (CWA § 502(11).) The technology based standards of BPT, BAT, and BCT can be implemented through BMPs instead of NELs. (40 C.F.R. 122.44(k).) As recognized by EPA in the MSGP, "[b]ecause of the nature of stormwater dischargers, it is infeasible to use numeric effluent limits to demonstrate the appropriate levels of controls. In such situations, the CWA authorizes EPA to include non-numeric effluent limits in NPDES permits." (See MSGP, p. 35.) EPA indicated its general expectation that compliance with non-numeric technology-based effluent limitations "will control discharges as necessary to meet applicable water quality standards." (MSGP, Part 2.2.1.)

Consistent with EPA's findings, CASQA supports the continued use of non-numeric effluent limitations as the best approach to the regulation of stormwater dischargers. The nature of such stormwater dischargers has not changed since 2008, and EPA's conclusion that the use of

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<sup>2</sup> EPA explained its decision in detail in the MSGP Fact Sheet, concluding on page 53 as follows:

"While EPA continues to study the efficacy of various types of pollution prevention measures and BMPs, EPA at this time does not have a record basis for developing numeric limits that would reasonably represent a well-run application of BMPs. Because the flow and content is so variable, if EPA were to try to base numeric limits on a few sites, it is likely that any number it would develop would not be technologically available and economically achievable by all well-run facilities.

"These factors create a situation where, at this time, it is generally not feasible for EPA to calculate numeric effluent limitations, with the limited exception of certain effluent limitations guidelines that have already been established through national rulemaking. For example, covering exposed areas where feasible and cleaning them regularly where they are not covered may be an effective way of significantly reducing stormwater pollutant discharges, but the degree of pollutant reduction will be highly site-specific and cannot be generally quantified. Therefore, EPA has determined that it is not feasible for the Agency to calculate numeric, technology-based limits for many of the discharges covered under this permit and, based on the authority of 40 CFR 122.44(k), has chosen to adopt non-numeric effluent limits."

numeric effluent limits to demonstrate the appropriate levels of controls is infeasible remains as true today as it was in 2008.

**VI. ANY USE OF NUMERIC VALUES AS "BENCHMARKS" OR "ACTION LEVELS" FOR INDIVIDUAL POLLUTANTS MUST BE LIMITED; THEY CANNOT SERVE AS OR BE CONVERTED INTO NELS.**

The CWA and its implementing regulations do not recognize or define the term "action level." While EPA in the MSGP uses monitoring program benchmarks to help in the evaluation of Storm Water Pollution Protection Plan (SWPPP) effectiveness, the EPA benchmarks in the MSGP are not called "action levels" and are not applied in the way described under any of Corrective Action Levels 1, 2, or 3 in the draft Industrial General Permit. EPA's benchmarks are listed in the monitoring section of the MSGP. The MSGP contains a Corrective Action section that defines responses to various conditions. It requires, among other things, that facilities evaluate whether corrective actions are necessary, if an average of four quarterly samples exceeds one of the benchmarks specifically identified as relevant to each industry sector (not all sectors even perform benchmark monitoring; each remaining sector only compares results to specific benchmarks identified by EPA as required for that sector). Facilities summarize corrective actions in an annual report. If infeasible to modify control measures either due to limited available technology or financial constraints, facilities may discontinue benchmark monitoring and record their rationales in their SWPPP. The MSGP also allows contributions from natural background sources to be considered. The MSGP does not include any additional requirements for facilities that have a history of exceeding benchmarks.

EPA also cautions against anyone looking solely at benchmarks to assess overall effectiveness of any particular site's stormwater management program because benchmarks are merely one of many mechanisms for quantifying effectiveness. Of course, EPA (as would the State Water Board under a MSGP-type approach) always retains its authority to demand that any particular site cease discharging under the MSGP and apply for an individual permit, where more site-specific effluent limits may be developed. However, as a general permitting scheme, EPA has refused to adopt any approach similar to that which the State Water Board is proposing.

CASQA supports the use of properly derived and statistically valid numeric action levels in a manner similar to EPA's use of benchmarks or as recommended by the Blue Ribbon Panel (as upset values) as one of many mechanisms to assess program effectiveness, as long as they are appropriately derived and are not used as numeric effluent limits or "virtual" numeric effluent limits. In response to a specific request by Board Member Doduc, CASQA reviewed potential methods of setting action levels, and describes a possible approach in line with the Blue Ribbon Panel suggestions in Attachment 2 to these comments. The analysis addresses possible future establishment of sector or group-specific levels, in addition to an approach that the State Water Board may consider pursuing for industry-wide Total Suspended Solids (TSS) action levels, as long as they are not used as actual or "virtual" numeric effluent limits. The use of "action levels" must be built upon a specific legal basis and must be very carefully and clearly defined in an NPDES permit.

Alternatively, the use of benchmarks in the monitoring section of EPA's MSGP may be worth discussing further as a generally acceptable use of numeric action values and a first step

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for California to adopt a more industry-specific (sector) approach to stormwater permitting. Specifically, EPA expressly provides that the benchmarks are not numeric effluent limitations, and serve as just one of many mechanisms for quantifying BMP and stormwater program effectiveness. EPA also recognizes and considers natural background and uses long-term averages. CASQA recognizes that pollutant-specific and industry-specific numeric action approach could be used as part of an overall system for measuring program effectiveness.

**VII. IF NUMERIC VALUES ARE USED AS "BENCHMARKS" OR "ACTION LEVELS" AS ONE METHOD FOR THE ASSESSMENT OF PROGRAM EFFECTIVENESS, THE PERMIT MUST CONTAIN A CLEAR STATEMENT THAT COMPLIANCE WITH THE TRIGGERED REQUIREMENTS IS COMPLIANCE WITH THE PERMIT.**

If numeric values are included in the draft Industrial General Permit as part of an overall method for the assessment of program effectiveness, the draft Industrial General Permit must contain clear language that the compliance with the progressive process that is followed in connection with an exceedance is itself compliance with the Industrial General Permit. Numeric values used to evaluate program effectiveness must not trigger an endless loop of actions that end only when the level is met. This was a flaw in the 2004-2005 version of the draft Industrial General Permit. The draft Industrial General Permit should proceed using the established non-numeric limit approach, combined with other improvements to the permit that will provide high quality data collection, properly qualified and trained personnel managing the program, and more guidance for the selection of pollution prevention and control BMPs. During the next permit term, the State Water Board should work with stakeholder groups to use data collected under the new program to develop a benchmark program tailored to industry activities and site conditions.

**VIII. RECEIVING WATER PROVISIONS SHOULD BE RETAINED FROM THE EXISTING PERMIT.**

The draft Industrial General Permit contains a standard provision that prohibits discharges that cause or contribute to a water quality exceedance. (Section VI.A. at p. 15.) The Fact Sheet to the draft Industrial General Permit (Section II.A.3. at pp. 8-9) appears to refer to a process regarding potential receiving water quality exceedances (observed by the Regional Water Board or discharger) that is identified in Section V.6 of the draft Industrial General Permit. Section V.6 does not exist.

The current Industrial General Permit analogue is Receiving Water Quality Limitation in Section C.2 (1997 Industrial General Permit at p. 4). During the 1997 permit proceedings there significant concerns expressed interpretation of what "cause or contribute" means.<sup>3</sup> The State Water Board established a process, codified in Section C.3-4 of the current Industrial General Permit to allow the Regional Water Board or a discharger, upon identifying a potential water quality limitation exceedance. It involved the submittal and approval of a report with additional BMPs to be implemented at the facility. As noted in the State Water Board's Response to Comments on the General Industrial Stormwater Permit April 17, 1997:

<sup>3</sup> It is CASQA's belief that there is no bright line standard for "exceeding a water quality standard." As is outlined in other sections of CASQA's comments, receiving water quality standards are not, and should never be, applied as numeric, end of pipe limitations.

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Implementation of BMPs that achieve BAT/BCT involves (1) considering economics and (2) the BMPs generally adequate for treatment or source control of storm water discharges. The procedure in Section C.3. requires taking additional steps necessary to achieve water quality standards. These steps go beyond the standard BMPs that would be adequate at most sites because of the impact on receiving waters. Examples of BMPs might include treatment or no longer using a material that is causing the impact.

*To be consistent with the current Industrial General Permit, CASQA recommends that Section VI. be amended to include a new section E. as follows:*

New Section VI.E.

1. A facility operator will not be in violation of Receiving Water Limitation Section VI.A. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:

a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

2. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;

b. Submit a report that is approved by the Regional Water Board; or

c. Revise its SWPPP and monitoring program as required by the approved report.

## **Attachment 4 – Listing of CASQA’s Previous Submittals to Support Comments on the Draft Industrial Stormwater General Permit**

CASQA would also like to draw the State Water Board’s attention to many of the concepts and facts addressed in our comments on the draft Industrial General Permit during previous proceedings relating to reissuance of this permit, such as comments on the 2005 Draft Industrial General Permit and comments provided during the development of and in response to the 2006 Blue Ribbon Panel Report. In particular, we draw the State Water Board’s attention to the documents in the public record that were developed to address questions posed by Dr. Gary Wolff in 2006 (see Attachment 2). CASQA’s submittals in the foregoing proceedings included the following, which we request be considered as part of our response and included in the record. We hope that the extensive past efforts and submittals, particularly associated with the 2006 Blue Ribbon Panel proceedings, will be reviewed in detail and considered by the State Water Board in working toward an effective and equitable revision of the Industrial General Permit.

1. *Comment Letter – Stormwater Blue Ribbon Panel Report, September 1, 2006*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/busath090106.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/busath090106.pdf)
2. *Presentation to Blue Ribbon Panel/State Water Board, September 14, 2005 (and accompanying Board package)*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/casq\\_com.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/casq_com.pdf)
3. *State Water Board Process for the Development of Quantitative Measures for Stormwater Program Compliance, August 15, 2005*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/numericcom/casqa.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numericcom/casqa.pdf)
4. *Recommendations for the Revision of the Industrial General Permit, Water Quality Order No. 97-03-DWQ, February 18, 2005 (including Attachments 1 and 2)*  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/indcomments/casqa2.pdf](http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/indcomments/casqa2.pdf)

Attachment 5: Summary of Inspection Requirements in the draft Industrial General Permit to Support CASQA's Comments

| Permit Section <sup>1</sup>                         | Permit Page                     | Inspection Type  | Frequency/Trigger                      | Estimated Number Per Year                          | Estimated Additional to Current Permit | Additional Notes   |
|---|---------------------------------|--|--|--|--|--|
| Fact Sheet E.2<br>Order Section VIII.H.1.h          | Fact Sheet p. 19<br>Order p. 26 | Facility inspection to determine whether SWPPP should be revised to address physical or operational changes at facility, and to detect BMP deficiencies  | Quarterly                              | 4  | 4                                      | The Annual Comprehensive Facility Compliance Evaluation may substitute for one of the quarterly inspections<br>Prepare a summary and status of the corrective actions and SWPPP revisions resulting from the quarterly inspection; include with the Annual Report<br>Weekly inspections may be suspended during periods when there is no exposure of industrial activities or materials.   |
| Fact Sheet E.1<br>Order Section VIII.H.1.a          | Fact Sheet p. 16<br>Order p. 23 | Weekly Inspection<br>- outdoor/ exposed areas<br>- BMPs for controlling material tracking and rinse/wash water activities<br>-Covering and containing stored industrial materials<br>-Diverting stormwater from industrial process areas   | Weekly                                 | 52   | 52                                     | Weekly inspections may be suspended during periods when there is no exposure of the equipment and systems<br>Follow up promptly with maintenance and repair when inspections detect leaks or potential for leaks   |
| Fact Sheet, E.1<br>Order Section VIII.H.1.b         | Fact Sheet p. 16<br>Order p. 23 | Inspection of Equipment<br>-All equipment that may spill or leak<br>-Identify conditions that may result in the development of leaks   | Weekly                                 | 52   | 52                                     |  |
| Fact Sheet, E.1<br>Order Section VIII.H.1.d         | Fact Sheet p. 16<br>Order p. 24 | Inspect and clean outdoor areas and equipment that may come into contact with industrial materials or wastes   | Daily                                  | 260 (approximate number of working days in a year) | 260                                    |  |
| Fact Sheet E.1, Order Section IV.B.5, VII.8, IX.B.1 | Fact Sheet p. 17<br>Order p. 14 | Visual Inspection of all areas of industrial activity and associated potential pollutant sources. Inspect all authorized non-storm water discharges and look for the presence of unauthorized non-storm water discharges. Inspect all areas of industrial activity and associated pollutant sources. | Quarterly                              | 4  | 0                                      | <ul style="list-style-type: none"> <li>•Directly enforceable</li> <li>•Must be certified complete in the AR</li> <li>•Implementation of corrective actions and subsequent SWPPP revision is part of the inspection</li> <li>•During daylight hours, on days without precipitation, and during scheduled facility operating hours</li> <li>•Includes evaluation of drain inlets/outlets to identify whether they connect to the storm drain system</li> </ul> |
| Order Section IX.C.1                                | Order p. 29                     | Storm Water Discharge Visual Monitoring<br>Visually observe storm water discharge quality. Record and maintain observations, dates, locations, and responses.  | First QSE each month                   | 12   | 0                                      | Visual monitoring must occur during first four hours of any discharge event after determination that the discharge is from a QSE.<br>Note that Fact Sheet Figure 3 states that this requirement applies from October - May   |
| Order Section IX.C.2                                | Order p. 29                     | Visual Observation of discharge of stored or contained storm water at the time of discharge  | Upon discharge of contained stormwater | 20 (estimated, highly variable by location)        | 0                                      | During scheduled facility operating hours  |

<sup>1</sup> Note: references on Fact Sheet Figure 3 are incorrect and the Fact Sheet inconsistent with the text within the permit itself

Attachment 5: Summary of Inspection Requirements in the draft Industrial General Permit to Support CASQA's Comments

| Permit Section           | Permit Page | Inspection Type   | Frequency/Trigger   | Estimated Number Per Year                   | Estimated Additional to Current Permit | Additional Notes   |
|--------------------------|-------------|---|---|---|--|--|
| Order Section IX.C.4     | Order p. 29 | Pre-Storm Event - Storm Water Storage and Containment Area Inspections.<br>Visually inspect storm water storage and containment areas   | Prior to anticipated storm events, monthly at a minimum     | 20 (estimated, highly variable by location) | 20                                     | During scheduled facility operating hours  |
| Order Section IX.C.5     | Order p. 30 | Documentation of Non-Discharging Storm Events.<br>Document storm events that do not produce a discharge but that occur before a monthly visual monitoring   | Daily for all storms each month before the first QSE occurs | 20 (estimated)                              | 20                                     | Only for events that occur each month prior to performing Monthly Storm Water Visual Monitoring<br>Note that Fact Sheet Figure 3 states that this requirement applies from October - May |
| Order Section IX.C.6     | Order p. 30 | Pre-Storm Inspections.<br>Inspect all storm water drainage areas for spills and leaks or materials exposed to storm water   | Prior to anticipated storm events                           | 20 (estimated, highly variable by location) | 20                                     | Inspect all storm water drainage areas<br>Only required during scheduled facility operating hours  |
| Order Section VIII.G.5.a | Order p. 21 | Facility inspection for non-storm water discharges, sources, and drainage areas   | During SWPPP Development                                    | 1   | 1                                      |  |
| Order Section VIII.I     | Order p. 27 | Annual Comprehensive Site Compliance Evaluation (ACSCE)<br>Review all records, visually inspect all potential pollutant sources, review and evaluate all BMPs and revise as necessary, visually inspect equipment needed to implement SWPPP, prepare evaluation report. | Annually  | 1   | 0                                      | Within 8 - 16 months of prior ACSCE  |



Sampling Cost Estimates  
1997 Industrial General Permit Compared to 2011 Draft Industrial General Permit

| Site Description:   | Permit Requirements Applied          | Corrective Action Level | Total Number of Discharge Points | Number of Discharge Points Sampled | Average Days/Storm (If Land Disturbance) | Number of Storms Sampled per Year | Total Number of Samples Collected | Number of Field Analyses per Discharge Point Sampled | Number of Parameters to be Analyzed by Laboratory | Number of Additional Sample Containers per Discharge Point Sampled | Total Labor Cost<br><small>(See Assumptions and Footnotes)</small> | Total Laboratory Costs | Total Estimated Sampling Cost | Estimated Sampling Cost Increase per Year | Estimated Sampling Cost Increase per Discharge Point per Year |
|---|--------------------------------------|-------------------------|----------------------------------|------------------------------------|--|-----------------------------------|-----------------------------------|--|---|--|--|------------------------|-------------------------------|---|---|
| Riverside Aerospace Facility;<br>No Land Disturbance;<br>SIC Code 3728          | Current Industrial General Permit    | N/A                     | 11                               | 5                                  | N/A                                      | 2                                 | 10                                | 0  | 8   | 3  | \$2,030  | \$4,948                | \$6,978                       |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 11                               | 11                                 | N/A                                      | 4                                 | 44                                | 2  | 6   | 3  | \$7,724  | \$16,329               | \$24,053                      | \$17,075                                  | \$1,552   |
|   |                                      | 1                       | 11                               | 11                                 | N/A                                      | 4                                 | 44                                | 2  | 6   | 3  | \$7,724  | \$16,329               | \$24,053                      | \$17,075                                  | \$1,552   |
| Humboldt County Sawmill Facility;<br>No Land Disturbance;<br>SIC Code 2421      | Current Industrial General Permit    | N/A                     | 5                                | 4                                  | N/A                                      | 2                                 | 8                                 | 0  | 7   | 2  | \$2,040  | \$3,464                | \$5,504                       |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 5                                | 5                                  | N/A                                      | 4                                 | 20                                | 2  | 5   | 2  | \$5,200  | \$6,185                | \$11,385                      | \$5,881                                   | \$1,176   |
|   |                                      | 1                       | 5                                | 5                                  | N/A                                      | 4                                 | 20                                | 2  | 5   | 2  | \$5,200  | \$6,185                | \$11,385                      | \$5,881                                   | \$1,176   |
| Humboldt County Camp Facility;<br>No Land Disturbance;<br>SIC Code 7699         | Current Industrial General Permit    | N/A                     | 1                                | 1                                  | N/A                                      | 2                                 | 2                                 | 0  | 5   | 0  | \$1,480  | \$619                  | \$2,099                       |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 1                                | 1                                  | N/A                                      | 4                                 | 4                                 | 2  | 3   | 0  | \$3,304  | \$742                  | \$4,046                       | \$1,948                                   | \$1,948   |
|   |                                      | 1                       | 1                                | 1                                  | N/A                                      | 4                                 | 4                                 | 4  | 2   | 3  | \$3,304  | \$742                  | \$4,046                       | \$1,948                                   | \$1,948   |
| San Joaquin County Federal Facility;<br>SIC Codes 4953, 8733, and 9711          | Current Industrial General Permit    | N/A                     | 9                                | 9                                  | N/A                                      | 2                                 | 18                                | 0  | 13  | 10   | \$3,708  | \$14,473               | \$18,181                      |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 9                                | 9                                  | 3  | 4                                 | 108                               | 2  | 11  | 10   | \$25,776   | \$73,480               | \$99,256                      | \$81,074                                  | \$9,008   |
|   |                                      | 1                       | 9                                | 9                                  | 3  | 4                                 | 108                               | 2  | 11  | 10   | \$25,776   | \$73,480               | \$99,256                      | \$81,074                                  | \$9,008   |
| Solano County Pharmaceutical Facility;<br>No Land Disturbance;<br>SIC Code 2834 | Current Industrial General Permit    | N/A                     | 10                               | 3                                  | N/A                                      | 2                                 | 6                                 | 0  | 5   | 0  | \$1,560  | \$1,856                | \$3,416                       |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 10                               | 10                                 | N/A                                      | 4                                 | 40                                | 2  | 3   | 0  | \$6,640  | \$7,422                | \$14,062                      | \$10,647                                  | \$1,065   |
|   |                                      | 1                       | 10                               | 10                                 | N/A                                      | 4                                 | 40                                | 2  | 3   | 0  | \$6,640  | \$7,422                | \$14,062                      | \$10,647                                  | \$1,065   |
| Southern California Landfill;<br>SIC Code 4953                                  | Current Industrial General Permit    | N/A                     | 6                                | 5                                  | N/A                                      | 2                                 | 10                                | 0  | 8   | 7  | \$4,150  | \$4,948                | \$7,098                       |   |   |
|   | 2011 Draft Industrial General Permit | 0                       | 6                                | 6                                  | 2  | 4                                 | 48                                | 2  | 6   | 7  | \$11,184   | \$17,813               | \$28,997                      | \$21,899                                  | \$3,650   |
|   |                                      | 1                       | 6                                | 6                                  | 2  | 4                                 | 48                                | 2  | 6   | 6  | \$11,184   | \$17,813               | \$28,997                      | \$21,899                                  | \$3,650   |
|   |                                      | 2                       | 6                                | 6                                  | 2  | 8                                 | 36                                | 2  | 6   | 7  | \$22,368   | \$35,627               | \$57,995                      | \$50,896                                  | \$6,483   |
|   |                                      | 3                       | 6                                | 6                                  | 2  | 9                                 | 108                               | 2  | 6   | 7  | \$25,164   | \$40,080               | \$65,244                      | \$58,146                                  | \$9,691   |

Attachment 6  
CASQA's Comments on the draft Industrial General Permit

Assumptions:

- 0.500 Average sample collection time per discharge point sampled, base parameters only (hours)<sup>3,3.5,6</sup>
- 0.025 Average sample collection time per additional sample container (hours)<sup>3,5</sup>
- 0.0833 Assumes five (5) minutes average travel time between each discharge point sampled (hours)
- 0.25 Assumes fifteen (15) minutes average travel time between each discharge point sampled, large sites (hours)
- 0.5 Assumes 30 minutes pre-storm calibration for field analysis equipment, with no calibration between discharge locations (hours)
- 0.25 Average field analysis time per discharge point, two (2) analyses (hours)<sup>7</sup>
- 1.50 Average pre-sampling mobilization time and post-sampling equipment cleaning as well as documentation and delivery prep time (i.e., packing, icing) (hours)
- 0.02 Average data entry time per sample/per analysis for annual reporting (hours)
- 2.00 Average supervisory effort per storm event, including monitoring weather, monitoring runoff status, reviewing field data, reviewing analytical data, and entering monitoring results (hours)
- 1.00 Average roundtrip drive time for sample delivery to laboratory per storm event (hours)
- 2.00 Average roundtrip drive time for sample delivery to laboratory per storm event, remote sites only (hours)
- \$120 Average sampling technician labor rate per hour, two (2) persons each at \$60 per hour
- \$120 Average supervisor labor rate per hour
- \$62 Average laboratory cost per parameter

<sup>1</sup> Current Industrial General Permit allows for reducing the number of sample locations by sampling a representative discharge point for "substantially identical" drainage areas. It is assumed that the samples collected under the 2011 Draft General Industrial Permit at each discharge location are analyzed separately and not as Qualified Combined Samples (XII, B.)

<sup>2</sup> Assumes field analysis of pH and SC, and lab analysis of O&G and TSS along with any additional site specific parameters. It is also assumed that no new parameters for analysis would be identified in Table 2 of the 2011 Draft IGP, during the pollutant source assessment required in Section VII.G.7 of the 2011 Draft IGP, or as a result of identifying receiving water quality standard exceedances.

<sup>3</sup> Number of laboratory containers includes four (4) containers per discharge location for base parameters plus approximately one (1) additional container for each additional parameter, also assumes same number of containers if performing field analysis

<sup>4</sup> Does not include QA/QC sample costs, will vary by site.

<sup>5</sup> Assumes each discharge point has sufficient flow rates to fill a 5.1 liter sample container in 30 seconds or less

<sup>6</sup> Sample collection time includes filling out COC and visual observation forms at each discharge location