

**California Building Industry Association (CBIA)
Construction Industry Coalition on Water
Quality (CICWQ) and Coalition Members**

*Technical Comments on Waste Discharge Requirements for
Discharges of Storm Water Runoff Associated With
Construction Activity*

Order No. 2009-XX-DWQ

General Permit No. CAR000002

Prepared by:

**Mark Grey, Ph.D.
Technical Director, CICWQ**

Contributors:

**Susan Paulsen, Ph.D., P.E.
Vice-President and Senior Scientist, Flow Science, Inc.
Ed Othmer, P.E.
Vice-President, URS Corporation**

June 24, 2009

Table of Contents

Submitting Parties and Comment Letter Organization	3
Introduction.....	3
Section 1. Findings	5
Section 2. Conditions for Permit Coverage	8
Section 3. Discharge Prohibitions	9
Section 4. Special Provisions	9
Section 5. Effluent Standards	9
Section 6. Receiving Water Limitations	13
Section 7. Training Qualifications and Certification Requirements	14
Section 8. Risk Determination	15
Section 9. Risk Level 1 Requirements	16
Section 10. Risk Level 2 Requirements	17
Section 11. Risk Level 3 Requirements	19
Section 12. Active Treatment Systems	20
Section 13. Post-Construction Standards.....	20
Section 14. SWPPP Requirements	21
Section 15. Regional Board Authorities	21
Section 16. Annual Reporting Requirements	21
Section 17. Miscellaneous Comments	21
Attachment 1. Bridge Approach	
Attachment 2. Flow Science Incorporated Report	
Attachment 3. Geosyntec Consultants Report	
Attachment 4. URS Corporation Report	

Submitting Parties and Comment Letter Organization

The California Building Industry Association (CBIA) is one of the principal stakeholders in the process to issue a revised general construction permit for storm water discharges and, as such, continues to have many serious concerns about the Draft Order's content and direction. Our technical and policy comments here reflect those of CBIA, the Construction Industry Coalition on Water Quality (CICWQ), and several other statewide coalition members affiliated with the building industry; they specifically address the Draft Order released on April 23, 2009 and subsequent Errata released on June 10, 2009.

Under separate cover assembled by outside counsel, CBIA and its coalition partners are submitting all comments and related attachments to the State Water Resources Control Board (State Board or SWRCB) concerning this matter since the State Board first released a preliminary draft permit for public review and comment on March 2, 2007.

Our technical and policy comments are organized according to the Draft Order Table of Contents issued on April 23, 2009. Issues and concerns within each permit area in the Table of Contents are identified and discussed, with relevant references to the fact sheet incorporated as necessary, and then alternative approaches and recommendations provided where applicable. The letter concludes with comments and recommendations on those areas of concern not directly addressed within Table of Contents items.

Introduction

We recommend the numeric effluent limit (NEL) on stormwater discharges be deleted; conduct during the next 5-year permit term a discharger-supported, 3rd-party data collection and analysis program to provide information to inform future numeric criteria development.

The Draft Order imposes a numeric effluent limit on stormwater discharges that is 50% less than the previously proposed NEL—1000 NTU to 500 NTU (April 2008 Draft Order). The State Board staff has not confirmed—now or in previous drafts—demonstrated that it has sufficient data to: a) develop an NEL that accounts for the known natural variability in climatological and physical conditions in California; or b) accurately relate stormwater discharges from construction sites to the highly variable and site-specific background receiving water conditions that exist in California. Data we have submitted to the State Board and data provided by the state itself clearly shows that for certain areas of the state, many projects will routinely exceed the proposed NEL of 500 NTU even with well designed and implemented best

management practices (BMPs), with tremendous consequences (financially for conducting additional monitoring defined in the permit and installing and maintaining additional BMPs to achieve the NEL and legally, to prepare a defense for such a violation). For these and more reasons that we discuss further in this letter, the NEL section should be deleted. We have titled our recommended methodology the “Bridge Approach,” and this approach is described in detail in Attachment 1.

We recommend the section on risk level be amended to address language and omissions that undermine establishing an effective risk management program.

The Draft Order has been improved by creating a more straightforward approach to assigning project site risk level, which determines specific stormwater management compliance activities that must be performed. When 14 example building projects were tested using the revised risk approach, a more “normal” distribution of risk resulted, with most projects risk established at a Level 2. A similar analysis was done for the entire state of California to project sediment and receiving water risk factors onto areas of probable development. Again, this analysis indicated that the current draft permit results in a more “normal” distribution of project risk compared to the risk calculation procedure proposed in 2008. Several problems remain, however, with the risk approach; particularly with calculation procedures that rely on gross assumptions (e.g., slope length and the R factor calculation, which does not allow for starts and stops in construction activity) that we believe will lead to great and unnecessary uncertainty. In addition, we are concerned about the use of hydrologic sub-areas rather than planning watershed areas, as the use of hydrologic sub-areas substantially expands a site’s potential to be considered to be hydraulically connected to a receiving water and is an unjustified approach for determining receiving water risk. As a result, many construction sites located miles from a receiving water will be assigned a Risk Level of 2 or 3 despite the fact they have little potential to impact the receiving water.

We recommend removing all receiving water discharge monitoring requirements and adopting a 3rd-party data collection and analysis program to better define the parameters for establishing BMP Action Levels for job sites.

The Draft Order includes a costly and extraordinary level of effort for job site discharge monitoring and receiving water monitoring. We are opposed to several monitoring requirements and especially requirements that a discharger faces at Risk Level 3. The State Board has not justified receiving water monitoring of any type, nor has it demonstrated that the receiving water data would be used in any meaningful way to improve construction site erosion

and sediment control practices. We maintain that a well designed and inspected system of BMPs is the most effective way to ensure protection of receiving waters. The State Board's proposal moves clearly away from this approach to one of simple numeric performance measurements with the attendant legal jeopardy and liability.

We recommend the authority given to the Regional Boards to redo the risk assessment approach be removed.

A final area of great concern for the building industry is the sweeping new authority given to Regional Boards to require dischargers to redo or revise their risk assessment approach. This may occur if Regional Board staff determines that a discharger's risk analysis insufficiently addresses factors believed by the Regional Board to contribute to a higher risk level. This authority creates tremendous jeopardy and uncertainty for a discharger because the scope and budget of a construction project may be increased substantially should the risk level for a project be adjusted upward. Our legal comment letter submitted under separate cover addresses this issue and provides our recommendations.

Section 1. Findings

Finding No. 42

Finding No. 42 states that "this General Permit prohibits the discharge of any debris from construction project sites". This finding appears to be another numeric effluent limit which could be interpreted as a zero discharge requirement. It is a finding that requires clarification and definition in order to be effective and workable. Clearly, garbage and other anthropogenic debris generated at a construction site should not be discharged to receiving waters. However, "all debris" could include natural un-decomposed organic debris, plant detritus, and various mulches or other organic amendments (wood chips and bark) that may already exist on a project site at various project phases or be introduced as BMPs to control erosion and sediment (rolled fiber products, straw wattles, or hay bales, for example). The word "any" could be interpreted to prohibit trace amounts.

Recommendation: remove the word "any" and clearly define "debris" in the glossary (Appendix 7) to include anthropogenic, non-organic waste.

Finding No. 49

Finding No. 49 states in part that "Discharges located in a drainage area where a Total Maximum Daily Load (TMDL) has been adopted....." This finding's wording (drainage area) is

inconsistent with that of the Fact Sheet, Page 17. (b) TMDLs and Waste Load Allocations which states “Dischargers located within the watershed of a CWA S 303(d) impaired water body.....”.

Recommendation: Correct this inconsistency in terms and use “watershed area” (defined in Appendix 7 as “the area of land that drains water, sediment, pollutants, and/or dissolved materials to a common outlet”) rather than the term “drainage area.”

Finding No. 50

Finding No. 50 is an oversimplification of the findings and recommendations of the Blue Ribbon Panel (BRP) convened by the State Board and, in the CBIA coalition’s opinion, a misreading of the Panel’s conclusions. In addition, the Fact Sheet lists a selective summary of findings on construction activities that fails to recognize some of the most important conditions and concerns the BRP expressed in guiding the process to establish relevant numeric limits for construction best management practices. Finding No. 50 states in part “The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered.” The State Board fails to include important other conclusions from the report such as the recommendation that the state consider when establishing an NEL “the site’s climate region, soil condition, and slopes, and natural background conditions (e.g. vegetative cover) as appropriate and as data are available.” Other statements are made such as “it is important to consider natural background levels of turbidity or TSS in setting Numeric Limits or Action Levels for construction activities. The difficulty in determining natural background concentrations/levels for all areas of the state could make the setting of Numeric Limits or Action levels impractical from an agency resource perspective.” Moreover, the report concluded that for discharges from construction sites NELs are likely “not feasible” unless chemical addition is permitted. It is clear, therefore, that the State Board has not “provided that certain conditions are considered” in establishing the factual basis for setting one-size-fits-all numeric effluent limits for pH and turbidity in the Draft Order.

Recommendation: Delete Finding No. 50, or include all direct quotes and citations from the BRP that address the feasibility of establishing numeric limits

Finding No. 51

Finding No. 51 in part states that “a high risk of high pH discharge can occur during the complete utilities phase, the complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations to background pH of any discharge.” The phrases “high risk of high pH discharge” and “significant amounts of materials” are vague, subjective, and undefined.

Recommendation: Finding No. 51 clearly identifies in the second sentence those high pH materials which create a riskier situation for high pH discharge compared to when those materials are not located on or used on the job site. We suggest editing finding No. 51 to state the following: “a high risk of high pH discharge can occur during any portion of any phase only where hydrated lime, concrete, mortar, cement kiln dust, Portland cement treated base, fly ash, recycled concrete, or masonry work is located and/or performed and could result in significant alterations to background pH of any discharge.”

Finding No. 52

Finding No. 52 specifies that an NEL of 500 NTU will apply to discharges from Risk Level 3 sites. This finding is unsupported in the technical and scientific literature, and the State Board has presented incomplete and regionally unrepresentative data in the Draft Order and Fact Sheet to justify the establishment of an NEL.

Recommendation: Remove requirement for an NEL and adopt the “Bridge Approach” as described in Section 5. Effluent Limits.

Finding No. 53

Finding No. 53 states that the General Permit “establishes a 5-yr, 24-hr Compliance Storm Event for Risk Level 3 discharge exemption from the technology-based NELs”. The State Board has produced no substantial evidence to support the requirement for a design storm of the magnitude of a 5-year, 24-hour event. The State Board fails to recognize the great variation in storm patterns across the state and the general weather pattern of back-to-back storms; both storm intensity and antecedent moisture conditions dictate runoff and frequency and should be considered on a site-specific basis before a design storm is established.

Recommendation: Replace the 5-year, 24-hour storm with the 2-yr, 24-hour storm event. For some construction sites, the 2-yr, 24-hour event has been used as a target for sizing sediment basins and a limited subset of other BMPs. While it may not be possible to size all BMP components at all sites to a 2-yr, 24-hour event, this event may be suitable for use as a NAL design storm. The State Board should examine a range of storm sizes to determine the appropriate design storm for use with NELs. Additionally, we recommend that the State Board perform an analysis to examine sizing requirements (or compliance storms) that evaluates basin sizing and operation v. the amount of runoff captured and treated, similar to that done to arrive at the 24-hour, 85th percentile storm event for post-construction runoff control. Basin sizing and operation vs. the amount of runoff captured and treated should be evaluated to assess whether proposed increases in a design storm (or compliance storm) are worth the increase in costs and land area needed for treatment BMPs.

Finding No. 56.

See comments on Finding No. 52.

Recommendation: Delete Finding No. 56.

Finding No. 71

Finding No. 71 supports the inclusion of post-construction runoff reduction measures into the general construction stormwater permit. As we have pointed out before, the inclusion of post construction requirements in the general construction stormwater permit is inappropriate, unnecessary, and duplicative of efforts already underway to regulate hydromodification impacts from new and redevelopment projects. See Section 13 for additional comments.

Recommendation: Delete Finding No. 71

Section 2. Conditions for Permit Coverage

The Draft Order states on Page 17, Section D. 1. f. that a construction project will be considered complete when (among other conditions): “Post-construction storm water management measures have been installed and a long-term maintenance plan has been established.” This is supported by footnote #6, which reads: “For the purposes of this requirement a long term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.” Many questions and concerns arise: How do you establish a long term plan in a construction permit? Is it written in the SWPPP? Where is it kept? What does it include? Does it include HOA requirements or maintenance requirements for public agencies that will maintain post-construction BMPs? How does the permit holder require a municipality or new homeowners to comply with this requirement? How does the plan ensure that post-construction measures are adequately maintained when they are the responsibility of the new land owner and not the permittee? How will the State Board enforce a permit violation for post-construction maintenance plans when the construction permit has been terminated?

Recommendation: Delete this requirement from the permit or change it to list known post construction structural BMPs and simply identify the parties that will operate and maintain them.

Section 3. Discharge Prohibitions

Section D. Debris Definition

The CBIA coalition has concerns with Section D, which states: “Debris resulting from construction activities are prohibited from being discharged from construction project sites” and is supported by footnote 7 which defines debris as “litter, rubble, discarded refuse, and remains of something destroyed.” What constitutes “remains of something destroyed?” We are concerned this is in effect a new limit on natural organic debris or detritus and could include organic, non-toxic, non-polluting organic materials such as mulch, bark, compost, straw, rolled fiber products, or straw wattles used for soil erosion and sediment control.

Recommendation: Define “remains of something destroyed” to mean inorganic anthropogenic debris or waste.

Section 4. Special Provisions

Section I.2 states that “All SWPPP revisions, annual reports, or other information required by the General Permit (other than PDRs and NOTs) or requested by the Regional Water Board, State Water Board, USEPA, or local storm water management agency shall be certified and submitted by the LRP as described above or by the LRP’s duly authorized representative.” Do weekly and storm event inspection forms need to be certified by the inspector?

Recommendation: Clarify whether weekly and rain event inspection forms need to be certified with the statement contained in Section 4. J.

Section 5. Effluent Standards

Part B. Numeric Effluent Limitations

The CBIA coalition opposes numeric effluent limits (NELs) in the General Construction Permit for any project regardless of risk. We have submitted extensive technical and scientific comments supporting this position that we believe cannot be ignored in establishing permit conditions. The State Board lacks data to credibly establish BAT/BCT NELs; the data analysis, findings, and conclusions presented in the Draft Order are flawed; and the State Board approach lacks a clear plan to use the data that will be collected by thousands of dischargers. Establishing a single compliance value for pH and turbidity for all of California totally ignores the known great variability of conditions within the state and it is not supported by the data

assembled by the State Board. Flow Science Incorporated analyzed the latest draft permit's numeric performance requirements and prepared a detailed response, which we are including as Attachment 2.

Flow Science's analysis documents and concludes that the State Board does not have the data necessary to establish a numeric effluent limit at this time based on the use of non-ATS erosion and sediment controls. Instead, a better approach would be to use this permit term to collect additional data to support NEL development and to use the additional data with appropriate analysis to set meaningful performance criteria. Many parts of California have highly erosive natural soil conditions, and receiving waters in those areas are naturally and normally turbid (i.e., exceed the proposed NEL for turbidity) during storm events. Similarly, pH values exceed the proposed limits on occasion under natural conditions. We are unaware of any evidence or research that indicates that the NELs in the draft permit can be achieved in those regions and under those conditions without the use of ATS systems, even with appropriate and responsible erosion and sediment control BMP deployment. In fact, in some cases if a site discharges less turbid water than natural, there could be potential for negative impacts.

The CBIA coalitions' principal conclusions regarding NELs are:

- 1) The eco-region data used for the development of the NEL for turbidity are limited and should not be used as the basis for NELs
- 2) The proposed pH NEL is not "clearly above the normal observed variability," as recommended by the Blue Ribbon Panel for even action levels (NALs)
- 3) The typical pH of rainfall falls outside the proposed NEL
- 4) The enforcement data (only four data points) used to develop the turbidity NEL are not representative of conditions encountered throughout California
- 5) The pH and turbidity NELs do not consider background conditions in receiving water
- 6) Numerous studies demonstrate that turbidity in receiving waters, including non-impacted waters, often exceeds the NEL of 500 NTU
- 7) No scientific basis was given for the assumed 1:3 relationship between turbidity and suspended sediment concentrations. There is no scientific basis that we are aware of for this assumption.
- 8) Although the proposed NEL is called a "technology-based NEL," no evidence is provided to define the technology (or more appropriately the combined technologies that are employed over a construction site) that would consistently achieve a turbidity of 500 NTU in construction site effluent

As shown in Attachment 3, background turbidity in Muddy Creek and Los Trancos Creek (Orange County) exceeds both the proposed NELs and NALs. Although BMPs improve water

quality significantly, multi-year monitoring indicates that they may not consistently produce effluent below the NELs and NALs during the construction phase and/or following routine, required maintenance activities.

Recommendation: Remove NELs from the Draft Order. Adopt a “Bridge Approach” to collect the necessary data for an Action Level and associated BMP-based compliance approach, and begin collecting data necessary to derive numeric targets that account for regional variation of discharges and receiving water characteristics.

Part B. Numeric Effluent Limitations, No 5. Compliance Storm Event

The CBIA coalition supports using a design storm to size and evaluate construction site erosion and sediment control BMPs and to set action levels. We are opposed to establishing an NEL at this time. The State Board is proposing to use a storm event with a 5-year, 24-hour recurrence interval for discharges from Risk Level 3 sites. This size of event is very large and may result in the installation of oversized and unnecessary BMPs. It is unlikely that a storm of this size will occur during the life of most construction projects. The State Board has provided no rationale or evidence to support the selection of the 5-year, 24-hour event. In fact, the Caltrans data, the eco-region dataset, and the enforcement data upon which the NELs for pH and turbidity are based do not include information on storm size or intensity for individual storm events. In addition, the analysis in Attachment 4 indicates that large storm events may occur over multi-day periods, so that some provision for a multi-day design storm is recommended.

Recommendation: Make the storm size consistent with the basin sizing requirement for now (e.g. 2-yr, 24-hr storm event for the NAL design storm). During the permit term conduct an analysis similar to that performed to arrive at the 85th Percentile storm event for post-construction control to ascertain appropriate sizing vs. environmental benefits/effectiveness. See comments on Finding No. 53.

Part C. Numeric Action Levels (NALs)

The CBIA coalition proposed a numeric action level “Bridge Approach” to the State Board in 2008 for using construction site BMP numeric performance measures (Attachment 1). The Bridge Approach couples the BMP approach in the current permit (No. 99-08-DWQ) with the collection of consistent and uniform data to guide BMP performance assessment and to develop scientifically valid numeric effluent limits (NELs) or other numerical targets in subsequent permits. Table 1 identifies the approach’s core elements. The coupled BMP/NAL approach would serve as a “bridge” to future permits; future permits could incorporate numeric measures when sufficient data exist to support these additional measures. We reiterate from our prior comments that establishing workable and scientifically supported

numeric performance measures will require a well-designed, consistently executed program of data collection. The monitoring program proposed in the current draft permit (requiring data collection by each individual project site, and not requiring collection of data related to storm size, intensity, or to pollutant variations within a storm or BMPs used onsite) will provide data of insufficient quality and breadth to support development of an NEL (or NALs) for California and is a recipe for program inefficiency and waste of resources.

Table 1. Effluent Limit Bridge Approach

Proposed Permit Requirements	Proposed “Bridge” Approach	Future Outcomes
<p>The proposed permit requires in some cases that permittees meet NALs for turbidity and pH that have been set without calibration or validation and that may not be applicable to construction activities. These NALs are likely to be exceeded by natural conditions across large areas of the state.</p>	<p>Proposes a statewide benchmark or NAL of 500 NTU. Contractors would participate in a comprehensive, well-designed statewide data collection and analysis program designed to establish necessary data for uniform sediment content standard.</p>	<p>The bridge approach would serve both to improve water quality and lead to a better understanding of BMP effectiveness, and to provide the data necessary to develop scientifically valid NELs or to refine NALs.</p>
<p>Sediment Numeric Effluent Limits (NELs) establish a statewide limit (500 NTU—previously 1000 NTU) that is not technically supported.</p>	<p>No NELs now. Design a statewide data collection and analysis program to collect data necessary to develop scientifically valid sediment and pH standards.</p>	<p>If feasible based on data collected during the current permit term, develop NELs and design storm conditions for future permits.</p>
<p>PH NEL establishes a statewide limit (<6.0 or >9.0) that is not technically supported.</p> <p>Because they do not recognize natural or background conditions, the proposed NELs are likely to be exceeded across much of the state.</p>		

Proposed Permit Requirements	Proposed “Bridge” Approach	Future Outcomes
Permit includes a 5-yr, 24-hr storm for Level 3 sites for compliance purposes. This storm size has no technical basis.	Use the 2-year, 24-hour storm to make it consistent with basin sizing requirements. State (or CBIA) to conduct a technical evaluation of BMP sizing and operation to ascertain appropriate basin sizing design storms and develop compliance storm recommendations for future permits. Include in compliance storms features that would address need for erosion control and runoff conveyance systems to be functioning at higher design flows.	Design a compliance storm that considers environmental outcomes and costs for sizing of treatment BMPs as well as erosion and sediment control BMPs.

Draft Order Section V.C.4.a. requires the site evaluation to be documented in the SWPPP to establish the source(s) of pollutants causing any NAL exceedance, and requires determination of whether or not additional BMPs are required to “reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives”. It is wholly inappropriate to assume that a NAL exceedance indicates that a discharge would always be causing or contributing to an exceedance of a water quality objective in the receiving water. It should be clear that this determination should include whether the site runoff actually contributed to an exceedance. NALs are intended to inform site operators about overall BMP performance, not individual BMP performance or the nature of all activities in the watershed that may contribute to receiving water quality. This is particularly evident where natural or background conditions contribute to the presence of constituents in the receiving water.

Recommendation: Delete “(2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives” from Section V.C.4.a and from Section V. C.4.b.

Section 6. Receiving Water Limitations

No comments on this section.

Section 7. Training Qualifications and Certification Requirements

The CBIA coalition supports the SWRCB's efforts to create baseline program curricula for SWPPP preparers, SWPPP implementers, and SWPPP inspectors, including industry personnel responsible for SWPPP preparation and implementation/inspection, and regulatory staff responsible for document review and in-field inspections. The program requirements continue to create some concern among industry professionals and below we identify those issues and where clarification is needed.

B. SWPPP Certification Requirements. 1. Qualified SWPPP Developer

Many CBIA coalition members raised concerns about the vagaries and potential documentation difficulties of allowing SWPPP practitioners (QSP) to demonstrate qualifications by showing a "minimum of five years experience in developing SWPPPs for construction sites to comply with NPDES permits." The certifications listed in the Tentative Order on page 32 and on Table 9 of the Fact Sheet, page 45, include certification programs or licenses, each of which have professional experience requirements. The five-year professional experience requirement is redundant and may result in abuse. In addition, many coalition members feel that if the QSD or QSP has the required certifications, they should not be required to take a state-approved class. If the state wants to offer an approved class to train and qualify QSDs or QSPs, then the State Board should use that training as one of the stand alone qualifiers to become a QSD or QSP.

Recommendation: delete Section VII, B.1.g; add clause to recognize a state-approved training course for qualifying QSDs or QSPs as meeting the minimum certification requirements.

Other Comments and Clarifications

The Permit states that "In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP)." Can you have more than one per company/NOI/Permit/site? If so, for the QSD, do they each have to certify the SWPPP? What about inspection reports? Who certifies inspections – the QSP, QSD, both, or the LRP?

The Permit states that “The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner.” This is all-encompassing and unnecessary. What if the QSP is the construction manager or site superintendant? Does the QSP need to list every trade that will be on the job because he or she is also directing work that is not stormwater related? The current permit is vague and can be interpreted as requiring that every trade on the job is listed. The list should be specific to include the names and addresses and contact information of those responsible for stormwater management only. The specific list should include those responsible for:

- 1) installation and maintenance of erosion and sediment controls,
- 2) Installation and maintenance of temporary and permanent stabilization,
- 3) Installation and maintenance of non stormwater BMPs,
- 4) Those responsible for non structural BMPs, i.e. housekeeping, spill response, stormwater sampling, etc.

The permit refers to “qualified personnel (other than the QSDs and QSPs)” in several areas of the permit, without defining the qualifications needed. These personnel may perform such tasks as installing, maintaining, and repairing BMPs. The discharger must provide documentation of the training in the annual report. The CBIA coalition requests clarification on the training and documentation required for construction workers installing, maintaining and repairing BMPs (especially if the predominant form of training is on-the-job).

Section 8. Risk Determination

The CBIA coalition is supportive of a risk determination process to select appropriate erosion and sediment controls for construction sites. We are not supportive of linking numeric effluent limits to the risk level determination because the state lacks credible data and processes to establish numeric limits. The current Draft Order presents an improved risk assessment process from the standpoints of ease of use and statistical distribution of sites into a more normal, or bell-shaped curve (See Attachment 4). In 2008, our coalition examined 14 case study projects geographically distributed throughout California using the risk determination requirements of soil and receiving water risk, and performed an analysis of statewide soil and receiving water risk data for areas of probable development to understand the statistical distribution that would result when risk factors were combined. That analysis showed that the 2008 draft permit produced a poor statistical representation of a normal distribution for both case studies and statewide probable development areas, with a weighting (bias) toward high risk sites. In addition, it demonstrated the complexity of the risk calculation process.

In contrast to the 2008 results for the 14 project sites, the combined risks are now reflective of a more normal distribution, with the sediment risk factors being slightly skewed low, and the receiving water risk slightly skewed high. The statewide and probable area of development results indicate that the combined risk is more reflective of a normal distribution compared to the 2008 assessment. Despite the improvement, there are some corrections required within the 2009 risk determination procedure to clarify risk factors and to improve data sources. The report prepared by URS Corporation identifies the areas of needed improvement and is included in Attachment 4.

Many CBIA coalition members raised concerns about the practical definition of “drains to” in the statement contained on page 28 of the Fact Sheet: “Receiving water risk is based on whether a project drains to a sediment-sensitive water body.” Our coalition questions this requirement and suggests that more clarification and limitations be provided. There may be many instances where a project is located within a watershed where a stream is listed as impaired, yet there is no direct connection to that water body (e.g., isolated valleys or depressions not hydraulically connected via surface flow). If a project is miles from the receiving water and proper controls are in place, how can a discharger be reasonably expected to collect receiving water samples and be reasonably assured the effects (or lack of) of a discharge come from the construction project?

The Draft Order needs to make a distinction between sediment impaired receiving waters that have and are implementing TMDL Implementation Plans and those that are not. For example, in the Newport Bay Watershed the County of Orange, cities, and landowners have cooperatively joined together the past 30 years to dramatically reduce and control sediment into the Bay. The collective parties have invested more than \$100 million in this effort meeting and exceeding TMDL targets and are committed to maintaining strategically placed sediment control basins to protect the Bay. Based upon implementation of the TMDL this receiving water should not be considered a high risk water. Doing so would discourage similar watershed efforts that can effectively address the impairment.

Section 9. Risk Level 1 Requirements

Attachment C, Section D. 1. states that “Risk Level 1 dischargers shall implement effective wind erosion control.” The CBIA coalition believes this is a redundant regulatory requirement, as all air districts in California permit and enforce fugitive dust control standards.

Recommendation: Delete Section D.1. The above statement appears in Attachment D and E. We recommend deleting in both attachments as well.

Attachment C, Section D. 3. states that “Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.” The CBIA coalition is not supportive of this requirement because it unnecessarily prescriptive and the phrase “when more sustainable, environmentally friendly alternatives exist” is highly subjective and open to wide interpretation.

Recommendation: Delete Section D.3. The above statement appears in Attachment D and E. We recommend deleting in both attachments as well.

The fact sheet and Attachment C makes clear that REAPs are not required for risk level 1 sites, yet Attachment C makes reference to certain documentation being included in the SWPPP/REAP for risk level 1 sites.

Recommendation: Remove REAP from Attachment C, Section H.2.d and Section H.3.e.ii

Attachment C, Section 6. ii. states that “Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).” The CBIA coalition seeks clarification on this, as the statement suggests that dischargers do not need to monitor non-stormwater discharges during regular weekly inspections. Dischargers are required to install non-stormwater BMPs to protect against erosion and the discharge of pollutants. Dischargers are required to observe all in place BMPs during regular inspections. Inspecting non stormwater BMPs is part of a “normal” inspection process and we question the inclusion of this permit language.

Recommendation: Delete Section 6. ii, as non-storm water BMPs are already included in weekly inspections

Attachment C, Section I.4. contains exemptions for visual observation and sample collection. This clause is confusing and should be incorporated into the previous section, I.3.

Recommendation: Since no sampling is required at risk level 1 sites, we suggest renaming the section as Visual Observation Exemptions.

Section 10. Risk Level 2 Requirements

The CBIA coalition seeks a number of clarifications on items contained in Attachment D, Risk Level 2 Requirements.

B. Good Site Management “Housekeeping”

The permit states in Attachment D. B. 7. “Additional Risk Level 2 Requirement: Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. What does it mean to document all housekeeping BMPs in the SWPPP mean? Does it mean that you are supposed to include what housekeeping BMPs you intend to use? Does it mean you are supposed to document all that you are currently using or have used at the site?”

E. Sediment Controls

The permit states in Attachment D. 3. “Additional Risk Level 2 Requirement: Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active² construction.” Footnote 2 provides a definition of active: “Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.” How does a discharger provide soil stabilization (erosion control) on areas you are actively working? Soil stabilization and erosion controls include erosion control blankets, vegetation, mulch etc. A discharger cannot work in these areas if they are covered with a soil stabilization measure.

Recommendation: Clarify expected BMP types to be used during “active” construction.

The permit states in Attachment D. E.4. “Additional Risk Level 2 Requirement: Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at grade breaks of exposed slopes to comply with fact sheet flow lengths.” Table 1 gives a slope percentage of 0-25% with sheet flow not to exceed 20 feet. CBIA feels this is too restrictive and could be easily misinterpreted as applicable to pad areas, resulting in excessive amounts of silt fence or straw wattle.

Recommendation: Provide a fourth slope percentage of 0-10% with a corresponding increase in sheet flow length. Clarify any exceptions for pad or level areas. The same recommendation applies to Risk Level 3 sites: Attachment E. Section E.4.

I. Risk Level 2 Monitoring and Reporting Requirements

The permit states in Attachment D. I. 10. (Effluent Sampling Locations) B. i: “Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.” When do dischargers perform this sampling? At quarterly inspections? At regular inspections? What if there is not sufficient volume to sample?

Recommendation: Clarify when sampling is to occur and what flow conditions triggers monitoring.

The Permit states in Attachment D. I. 13: “Risk Level 2-Particle Size Analysis for Sedimentation Basin or Project Risk Justification: Risk level 2 dischargers utilizing a sediment basin and/or justifying an alternative project risk shall report a soil particle size analysis, using test method ASTM D-422.....” The CBIA coalition is not familiar with “justifying an alternative project risk” process or procedure. We seek clarification on this process and how sediment basin performance relates to this process.

Section 11. Risk Level 3 Requirements

The CBIA coalition is opposed to numeric effluent limits as described in Section 5, and supported by our extensive technical comments and suggestions made on previous drafts in 2007 and 2008. We ask the State Board to strike all references to NELs in Risk Level 3 requirements and instead implement an Action Level approach consistent with the a 3rd party led data collection program and consistent with the recommendations of the Blue Ribbon Panel concerning how upset values should be derived.

The permit states in Attachment E. Section D. 4: “Additional Risk Level 3 Requirement: Risk Level 3 dischargers shall ensure that soil loss during each phase of construction is equivalent to or less than the pre-construction soil loss for the same time period.” The procedure to perform this analysis is given as Caltrans RUSLE2. The CBIA coalition strongly opposes the inclusion of this measure, as it is a numeric limit for sediment discharge. In our past comments, we provided an extensive critique of the RUSLE predictive model and its inapplicability to construction projects (See June 2008 Technical Comments). Where would actual measurement of the predictive soil loss occur? Is it at the property line? Is it a summed value if multiple discharge points are located within one construction project boundary? Would additional discharge analysis be necessary above and beyond turbidity measurements? (recall that our coalition believes the 1:3 relationship between turbidity and suspended sediment concentration is faulty).

Recommendation: Delete this requirement as it is unnecessary and unjustified.

The permit states in Attachment E. Section F: “Risk Level 3 dischargers shall evaluate the quantity and quality of run-on and runoff through observation and sampling.”

Our coalition seeks clarification on the following: when do dischargers sample run on and for what constituents? Is sampling a requirement or an option? We found only one statement in Section D & E that relates to reporting or monitoring of run on and that is where

“dischargers shall monitor and report site run on from surrounding areas if there is reason to believe run on may contribute to an exceedance of NALs or NELs” (attachment D page 13 item 5.d). This language does not include a sampling requirement.

Recommendation: Please provide clarification on run-on sampling procedures.

The permit requires bioassessment monitoring in Attachment E, Section I, 17. The CBIA coalition cannot support this requirement, as we question the relevance of including an expensive and time-consuming receiving water analysis; the 30-acre trigger appears to be arbitrarily developed; and there is no apparent purpose or plan for utilizing the information for placing it in context (See Flow Science Technical Report, Attachment 2). The State Board has given no justification for a 30-acre trigger for bioassessment monitoring. We ask for clarification and an explanation of why 30 acres was selected as a trigger. We can find no references in the literature to support this threshold. Moreover, it is unlikely that the bioassessment could differentiate an impact of a construction project from an impact of natural variability or processes occurring within a given watershed over such a short time period as most construction projects. There will be no way to differentiate temporal variations in stream biology from impacts caused by large storm events, a variety of ambient factors including other processes occurring in the same watershed, or by the construction project itself. Finally, we can find no information on how the assessment would be used by the State Board. Will there be any follow-up after reporting of habitat assessment and macroinvertebrate monitoring? What will the outcome be if effects are noted?

Recommendation: Delete bioassessment monitoring.

Section 12. Active Treatment Systems

See Flow Science Technical Report, Attachment 2.

Section 13. Post-Construction Standards

The CBIA coalition remains opposed to the inclusion of post-construction runoff control standards in the General Construction Permit for stormwater discharges from construction sites. The Permit is not the appropriate mechanism for regulating post-construction hydromodification impacts; the standards as proposed are not sufficiently protective and/or, in some cases, unnecessary or overly protective; and the standards as proposed are too broad to be implemented and do not address the range of elements that scientific literature indicates is required to manage hydromodification impacts comprehensively. Because many projects

undergo a multi-year design and entitlement process well before a construction permit application is filed (and because many projects that will be built in the next five to ten years are already well into or through that process), regulation of post-construction impacts via a construction permit is not appropriate nor the best way to accomplish the State's goals. We do recommend that the permit include some language that indicates that hydromodification impacts both pre-construction and post-construction be addressed during the California Environmental Quality Act (CEQA) process using appropriate, technically accepted methods and/or meet the requirements established under the local MS4 permit.

The CBIA coalition has prepared and presented to the State Board extensive technical comments on this topic in 2007 and 2008, including a comprehensive analysis done by Geosyntec Consultants (See June 2008 CBIA comment letter).

Recommendation: Delete Post-Construction standards; implement these requirements through statewide municipal and industrial permits.

Section 14. SWPPP Requirements

No comments on this section.

Section 15. Regional Board Authorities

See CBIA legal letter submitted under separate cover.

Section 16. Annual Reporting Requirements

No comments on this section.

Section 17. Miscellaneous Comments

Grandfathering Clause

The Draft Order provides a grandfathering exception to existing dischargers subject to Water Quality Order No. 99-08-DWQ in Draft Order Section II.B.4.b. The Fact Sheet states "Construction projects covered under Water Quality Order No. 99-08-DWQ that are beyond the design stages shall obtain permit coverage at the Risk Level 1." The CBIA coalition seeks clarification about projects that are "beyond design stage" that have not started and do not yet have permit coverage under 99-08-DWQ. The description of the grandfathering exception

described in Draft Order Section II.B.4.b. and Fact Sheet Section D, as it applies to projects that are “beyond the design stages”, is too vague and needs clarification.

Lack of Substantive Economic Analysis

The CBIA coalition continues to be concerned about the inadequate and inappropriate level of economic analysis done to evaluate the financial effects of the Draft Order to the construction industry. In our June 2008 comment package we submitted a study entitled Economic Analysis of the 2008 Draft General Permit for Stormwater Discharges Associated with Construction Activities by Berkeley Economic Consultants which described clearly some of the cost impacts of the Draft Order, not least of which is the cost to comply with new runoff monitoring requirements. Additional costs to the discharger on a per acre basis ranged from approximately \$5,000 to \$40,000 per acre depending upon site risk level. In this version of the Draft Order, we can find only one reference to the consideration of the economic effect of a requirement (instrument purchase for measurement of pH and turbidity related to NAL and NEL testing):

“The State Water Board estimates these measurement costs to be approximately \$1000 per construction site for the duration of the project. This represents the estimated cost of purchasing (or renting) monitoring equipment, in this case a turbidimeter (~\$600) and a pH meter (~\$400).”

The State Board’s cost analysis for measuring turbidity and pH at construction sites does not take into consideration cost of labor to perform the testing, training costs, transportation, consultant’s fees if an outside consultant is used, or report writing. Additionally, the State Board’s cursory analysis doesn’t address the likely exceedances to proposed NEL’s and NAL’s on projects that have implemented well-designed BMP’s that meet the requirements of the permit and the legal and administrative costs to the permittee and the State. We believe that this permit will further discourage companies from expanding in California and reinforce the State’s reputation as unfriendly to business.

The failure to consider any other cost impacts from the sweeping new compliance provisions in the Draft Order results in a gross underestimate of the costs borne by the discharger. We are identifying below areas where cost impacts have not been considered. Our coalition again urges the State Board to perform a credible economic analysis supported by substantial evidence that examines the costs to implement all areas of the Draft Order.

Some Areas of Significant Cost in the Draft Order Not Considered:

Design storm compliance—The State Board has not included any economic analysis of the impact of designing and sizing construction BMPs to meet the 5-year, 24 hour storm event standard. In designing to this standard, a discharger must assume worst-case conditions and this would include, but not be limited to, saturated soils, back-to back storms, soil analysis and particle settling time and allowable discharge rates, and number of facilities within the construction project to handle runoff given site conditions. This type of design and implementation effort could easily cost hundreds of thousands of dollars for a storm size whose probability of occurrence is quite low.

Bioassessment monitoring—The State Board provided no cost analysis for conducting bioassessment monitoring other than providing a fee option equal to \$7500 per sample (4 total required), if applicable and approved by the State Board for discharger participation. This equates to at least an additional \$30,000 for a project to comply.

Post-construction control requirements—No analysis has ever been provided for the cost to comply with post-construction runoff control standards by the State Board. This would include the cost to perform the analysis required (typically performed by consulting engineers) and the additional cost to install control measures, which also requires engineering calculations and plans and specifications, and the cost to install and maintain control structures.