



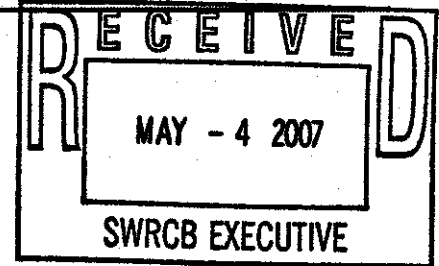
California Stormwater Quality Association™

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

Construction General
Permit – Stormwater
Deadline: 5/4/07 5pm

May 4, 2007

Ms. Song Her, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



Subject: Comments on the March 2007 Preliminary Draft Construction Stormwater Permit

Dear Ms. Her and Members of the Board:

On behalf of the California Stormwater Quality Association (CASQA), thank you for the opportunity to provide comments on the Preliminary Draft Construction General Permit. CASQA appreciates the extra effort taken by the State Water Resources Control Board (State Water Board) to release a preliminary draft of the permit and commends the State Water Board leadership in taking this path. Given the substantial changes proposed in the Preliminary Draft Permit these extra efforts allow stakeholders to participate more fully in the development of the new permit, and in the end will provide for a better product for all involved.

CASQA is composed of stormwater quality management organizations and individuals, including both Phase I and II cities and counties, special districts, industries, and consulting firms throughout the state, and was formed in 1989 to recommend approaches to the State Water Board for stormwater quality management in California. In this capacity, we have assisted and continue to assist the State with the development and implementation of stormwater permitting processes.

CASQA is particularly pleased to see that several of the practical elements that we recommended in our comments during the Blue Ribbon Panel workshops have been incorporated into the Preliminary Draft Permit and while we may have recommendations on the specific implementation of these elements they are welcome changes to the permit. Among these items is the inclusion of:

- a qualifying storm event;
- stronger emphasis on erosion and sediment controls;
- certification requirements for Storm Water Pollution Prevention Plan (SWPPP) Developers and Practitioners;
- minimum Best Management Practices (BMPs) to establish a baseline; and
- a risk-based approach to permit requirements.

The Preliminary Draft Permit represents a significant departure from the current regulatory program. The Fact Sheet lays out the foundation of a state stormwater strategy that goes beyond the construction permit at hand, extending to all aspects of California's stormwater program, and suggests that the strategy will serve in-lieu of a statewide stormwater policy by having *"the same benefits as development of a statewide storm water policy, at lower cost and in less time"*.

CASQA Comments on the March 2007 Preliminary Draft Construction Stormwater Permit

CASQA has significant concerns about the departure from the current regulatory approach, i.e., use of an iterative BMP based approach to a technology based effluent limit (TBEL) and action level (AL) based approach. While CASQA agrees that elements of stormwater programs can be improved and has suggestions for doing so, the regulatory approach utilized by the State must be carefully considered and developed within an overarching statewide policy so that there is clear direction instead of a permit by permit ad hoc approach.

CASQA understands that the State Water Board is attempting to address the recommendations of the Blue Ribbon Panel Report within the Preliminary Draft Permit. We feel however, that the use of TBELs is premature and unnecessary. CASQA and others in the regulatory and scientific communities, including USEPA, recognize that, although the science of stormwater quality management continues to emerge and develop, there is currently not enough information to derive appropriate TBELs for construction dischargers. Further, before TBELs can be appropriately derived and incorporated into stormwater permits, the processes to derive numeric limits for stormwater discharges must be fully developed and must incorporate a scientifically sound and defensible methodology that is in accordance with USEPA protocols. However, since such protocols were not followed, the Construction General Permit must continue to clearly emphasize the iterative BMP-based approach as the process for demonstrating permit compliance.

CASQA offers the attached recommendations and observations regarding policy issues and significant changes in the practical requirements proposed in the Preliminary Draft Permit. CASQA anticipates and looks forward to working with the State Water Board to provide further details on our comments and to assist in the development and refinement of the permit worksheets and any additional permit tools.

In closing, thank you for your consideration of our comments and for your efforts to resolve the issues addressed during the preliminary draft comment period. CASQA understands that a formal draft permit will be released subsequent to the informal workshop period during which stakeholders will have another opportunity to provide comment.

Please feel free to contact me at 916-808-1434 if you have any questions regarding these comments, alternately you may contact Sandra Mathews 925-423-6679 or Ron LaMaster 949-283-0410, Co-Chairs of CASQA's Construction Subcommittee.

Sincerely,



Bill Busath, CASQA Chair

cc: Dorothy Rice, Executive Director – State Water Board
Bruce Fujimoto – State Water Board
Greg Gearheart – State Water Board
CASQA Construction Subcommittee
CASQA Executive Program Committee
CASQA Board of Directors

CASQA Recommendations and Observations on the March 2007 Preliminary Draft Construction Stormwater Permit

1. Risk Based Approach

CASQA supports a risk-based approach that assigns permit requirements based on the water quality risk posed by individual construction projects and recognizes that a risk-based approach is a better way to make a one-size fits all permit better suited to the diversity of construction activities requiring permit coverage. A risk based approach benefits regulators, dischargers, and the public by allowing the focus of resources on those projects that pose the greatest potential threat to water quality if not managed properly.

An effective risk assessment should consider both uncontrollable (e.g., site location, soil type) and controllable (e.g., slope length, period of disturbance, season of exposure) risk factors. Assessing controllable risk factors is critical to encourage/reward sites that voluntarily control risk.

Given the breadth of projects that require permit coverage CASQA expects that a significant number of projects would fall in to the low risk and medium risk categories with the high risk category being reserved for those projects where controllable and uncontrollable risk factors warrant extra attention. However, as proposed it appears most projects will be high risk. This dilutes the effectiveness of a risk-based approach.

The Preliminary Draft Permit proposes a risk-based worksheet that yields highly generalized results, and as such does not provide adequate risk gradation. More significantly, the Preliminary Draft Permit does not provide for much distinction between medium- and high-risk projects (except in the response to single exceedances of action levels). The Preliminary Draft Permit does not appear to allow for the re-assessment of a project's risk during the evolving stages of a construction project, or as the risk factors change.

CASQA suggests that the worksheet point system be modified to reflect the fact that soil type, site slope gradient and proximity to potential receiving waters are not yes or no values; but vary continuously from nearly zero risk contribution to completely dominating a site's risk/discharge potential. Further, the matrix needs to include other key factors such as; the *length of construction period* where soil is exposed; the *time of year* construction will take place; whether the site has any *potential to discharge to 303(d) impaired waters*; whether the project is *designed to retain runoff on the project site during construction*.

2. Technology Based Numeric Effluent Limits

The Preliminary Draft Permit proposes technology based numeric effluent limits (TBELs) for pH, turbidity, and toxicity. Although CASQA concurs with the State Water Board's efforts to develop a Construction General Permit that improves accountability and ensures that water quality will be improved in a reasonable time frame, CASQA strongly disagrees with the incorporation of TBELs since it is premature and raises significant concerns.

The significant concerns that CASQA has with the incorporation of TBELs include:

- Given the fact that incorporating Action Levels is an enhancement of the construction program, it has not been demonstrated that TBELs are necessary.

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- The proposed TBELs were not developed using standardized or rigorous protocols similar to what EPA uses when developing TBELs and did not appear to consider important factors such as cost, feasibility, and effectiveness.
- The proposed TBELs did not consider many of the Blue Ribbon Panel concerns.
- If TBELs are necessary they should be developed with a robust dataset and this permit term should be used to collect the necessary data and/or conduct the necessary special studies.
- The use of TBELs that have not been well developed and are in the process of being tested may result in unintended consequences such as antibacksliding conflicts should the TBEL need to be revised in the future.
- The use of TBELs in this experimental fashion puts the dischargers at significant risk for third party action.

These points are discussed in more detail below.

It Is Unclear that TBELs Are Necessary

The Blue Ribbon Panel Report recommendations regarding the use of TBELs for stormwater discharges from construction activities were as follows:

“It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with stormwater discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller site, including small drainages within a larger site, as these technologies have seen limited use at small construction sites” (Page 15)

However, they also noted that – *“Whether the use of Numeric Limits is prudent, practical, or necessary to more effectively achieve nonpoint pollution control is a separate question that needs to be answered, but is outside of the scope of this Panel” (Page 15)*

Thus, while the Blue Ribbon Panel concluded that TBELs can be developed and may be feasible for discharges from construction sites that utilize active treatment technologies, they did not determine whether the use of TBELs was practical, prudent, or necessary at this time; rather they left that policy decision to the State Water Board.

The response to the Blue Ribbon Panel Report was two-fold. First, State Water Board staff determined that TBELs are necessary, and, second, staff incorporated Action Levels to enhance the program. The Fact Sheet (page 20) states that:

- *“...Staff does not recommend relying primarily on NELs to improve storm water quality...staff believes that there is other less costly and contentious ways to increase performance that are worth trying first.”*
- *“...selected NELs will be used to supplement the AL approach, for two reasons. First, this will allow for lessons learned about how both the NEL and AL approach work. If the AL approach does not work well, an NEL approach can be considered. Second, using a few NELs will create an incentive for dischargers to make the AL approach work.”*

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While the Fact Sheet identifies that the use of NELs within the permit are likely to be costly, it suggests that the dischargers can experiment with the use of ALs and NELs to determine what works. Given the fact that the dischargers will expend significant resources, face potential fines/penalties, and potential ramifications regarding anti-backsliding if they are unable to comply with such an experiment, this type of rationale should not form the basis of the regulatory approach for this permit.

In addition, CASQA agrees with staff that TBELs should not be considered “necessary” unless it is determined that Action Levels were not effective. In addition, we submit that it is more appropriate to use Action Levels and TBELs in sequence instead of concurrently. This is especially true in the initial stages when it is necessary to determine the effectiveness of these new approaches and allow time for “lessons learned”.

The TBELs Were Not Developed With the Rigors of EPA Protocols to Develop TBELs

CASQA and others in the regulatory and scientific communities recognize that, although the science of stormwater quality management continues to emerge and develop, there is currently not enough information to derive appropriate technology based numeric effluent limits for construction dischargers. In addition, USEPA recognizes this through its continued support of the interim permitting approach, which is applicable to discharges from municipal separate storm sewer systems (MS4s) and stormwater discharges associated with industrial activity.

Further, before technology based numeric effluent limits can be appropriately derived and incorporated into stormwater permits, the processes to derive numeric limits for stormwater discharges must be developed and must incorporate a scientifically sound and defensible methodology. The development of technology-based effluent limits should follow a similar process used by USEPA when developing national technology-based effluent guidelines (consistent with the pretreatment programs) (**Attachment A**). The use of the EPA or similar well-established process is critical for the successful development of appropriately derived TBELs. Anything short of this effort would likely cast the limits into question.

Since such a process has not yet been defined or demonstrated, the permit must continue to clearly emphasize the iterative BMP-based approach as the process for demonstrating permit compliance. As a result, CASQA strongly recommends the continuation of the iterative BMP-based approach (enhanced with the use of Action Levels) to improve the quality of stormwater discharges from construction sites, rather than the imposition of numeric effluent limits.

Notwithstanding the above, CASQA recognizes that this permit term could be used to identify the methodology and develop the robust dataset that would be necessary for an appropriately derived TBEL.

The TBELs Do Not Address Many of the Blue Ribbon Panel Concerns Regarding Their Implementation

The Blue Ribbon Panel Report recommendations regarding the use of TBELs for stormwater discharges from construction activities were as follows:

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“It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with stormwater discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller site, including small drainages within a larger site, as these technologies have seen limited use at small construction sites” (Page 15)

However, while the Blue Ribbon Panel concluded that technology based Numeric Limits were technically feasible, the Blue Ribbon Panel had several reservations and concerns including the following:

- The use of active treatment systems may be more cost-effective for larger construction sites (> 5 acres);
- When using ATS, full consideration must be given to toxicity-related issues and other environmental effects;
- Seasonality should be considered when applying NELs;
- Construction site activity/conditions should be considered when applying NELs;
- Action Levels should be considered when NELs are not feasible or applicable;
- NELs or ALs should be considered for pH commensurate with the capacity of the dischargers and support industry to respond;
- Phased implementation should be used for NELs and ALs
- Average discharge concentrations should be used to determine compliance with NELs and ALs;
- NELs and ALs may need to be different for water quality limited water bodies for sediment and turbidity;
- A design storm should be established for NELs and ALs;
- NELs and ALs should encourage load reductions; and
- The monitoring of discharges to comply with NELs and ALs may be costly – this needs to be considered.

Although the Fact Sheet identified that State Water Board staff relied heavily on the Blue Ribbon Panel Report, the permit provisions and Fact Sheet do not comprehensively address the issues raised by the Blue Ribbon Panel. For example, the Preliminary Draft Permit and Fact Sheet do not address the need to establish a design storm during which the NELs would be in effect, and beyond which the NELs would not apply. For example, Finding 11 (page 4) states:

“This General Permit includes a NEL for pH because it is feasible, regardless of storm size event, for the discharger to isolate, contain and, if necessary, treat storm water that comes into contact with any of these construction materials.

In fact, CASQA submits that, in proposing TBELs for the Preliminary Draft Permit, the State Water Board did not consider many of the Blue Ribbon Panel concerns, and that the very issues that were requested of the Blue Ribbon Panel when answering the “Question” regarding the feasibility of developing numeric limits were not considered, including:

- (1) The ability of the State Water Board to establish appropriate objective limitations or criteria;

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- (2) How compliance determinations would be made;
- (3) The ability of dischargers and inspectors to monitor for compliance; and
- (4) The technical and financial ability of dischargers to comply with the limitations or criteria.

The Preliminary Draft Permit Does Not Address The TBEL For Toxicity

Although the Fact Sheet states that technology based numeric effluent limits are only being proposed for pH and turbidity, in fact, numeric effluent limits are established for pH, turbidity and toxicity within Section IV. 3. and 4. of the permit. The toxicity limit is particularly troublesome since the Fact Sheet clearly acknowledges that, although the Permit requires the use of ATS, State Water Board staff are concerned about the potential acute and chronic impacts of the polymers and other chemical additives that may be used in such systems. In addition, it is currently unclear what type of technology-based limits could even be expected for toxicity and how the existing number was derived.

CASQA recommends that toxicity issues associated with ATS operations and discharges be determined in before such systems are implemented in California, and that the numeric effluent limit for toxicity be eliminated from the permit.

Conclusions Regarding TBELs

Although CASQA understands that the State Water Board is attempting to address the recommendations of the Blue Ribbon Panel Report within the Preliminary Draft Permit, the use of TBELs is premature and unnecessary. CASQA and others in the regulatory and scientific communities recognize that, although the science of stormwater quality management continues to emerge and develop, there is currently not enough information to derive appropriate TBELs for construction dischargers. Further, before TBELs can be appropriately derived and incorporated into stormwater permits, the processes to derive numeric limits for stormwater discharges must be fully developed and must incorporate a scientifically sound and defensible methodology that is in accordance with USEPA protocols. However, since such protocols were not followed, the Construction General Permit must continue to clearly emphasize the iterative BMP-based approach as the process for demonstrating permit compliance.

CASQA strongly recommends that the TBELs be removed from the Preliminary Draft Permit and that this permit-term be used to collect data to support TBELs in the next permit should they be deemed necessary. However, CASQA does support the use of action levels as a constructive “next step” to provide more accountability and direction to construction dischargers as they implement SWPPPs and evaluate their effectiveness

3. Action Levels (ALs)

The Preliminary Draft Permit proposes Action Levels (ALs) for pH, turbidity, and TPH. CASQA supports the use of ALs where they are scientifically defensible and where adequate data is available to appropriately establish them. Consistent with the Blue Ribbon Panel Report, CASQA supports the use of ALs that are designed and selected to identify upset conditions that would allow “bad actors” to receive additional attention and use of a monitoring strategy that provides immediate feedback.

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The parameters pH and for turbidity appear to be well selected to target common construction site pollutants and allow dischargers to use commonly available field meters to make in-field assessments of BMP performance and effect immediate responses to field measurements.

Although we concur with the State Water Board's efforts to incorporate ALs, we have a few concerns/issues that we would like addressed within the Permit.

CASQA's concerns include:

- The definition for ALs within the Preliminary Draft Permit needs to be consistent with the Blue Ribbon Panel definition.
- Appropriate statistics should be used to identify "bad actors" and establish corresponding ALs.
- CASQA strongly recommends that for the AL concept to be effective, it must rely upon the use of indicators that can be measured with field meters.

Definition Should Reflect Blue Ribbon Panel Definition

The Preliminary Draft Permit Action Level definition is not consistent with the Blue Ribbon Panel Report.

The Blue Ribbon Panel Report (page 8) identified an Action Level as an "upset" value that is clearly above the normal observed variability and is an interim approach that would allow the identification of "bad actors" to receive additional attention. The Blue Ribbon Panel called the Action Level an "upset" value because the water quality discharged from such locations would be enough of a concern that most all would agree that some action should be taken.

The Preliminary Draft Permit defines Action Level as follows (Glossary page 32):

The Action Level is used to determine if best management practices are effective; it is not an effluent limit. If any storm water sample exceeds the action level, then the discharger shall evaluate the BMPs and their adequacy and take the necessary corrective actions.

The Fact Sheet goes on to state (page 34) that the "primary purpose of ALs for the dischargers is to inform them of the effectiveness of their on-site measures. However, since these are technology based numbers, they are not necessarily good indicators of compliance with downstream water quality standards."

While CASQA agrees with the application of the Action Levels, the definition needs to be revised to reflect the definition within the Blue Ribbon Panel Report so that the ALs reflect "upset" values and are not de facto TBELs, especially since they were not developed utilizing TBEL methodologies.

Appropriate Statistics Should Be Used to Identify Bad Actors

As noted above, the Preliminary Draft Permit currently uses an AL definition that is not consistent with the Blue Ribbon Panel Report and, as a result, incorporates ALs that are technology based instead of upset values. In addition, the methodology used to develop the ALs was inconsistent from constituent to constituent.

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- pH - ALs were calculated by using one standard deviation above and below the mean pH of runoff from highway construction sites (Fact Sheet page 35).
- Turbidity - ALs were calculated by using the average sediment loads for each of the five California ecoregions (Fact Sheet page 35).
- TPH - ALs were calculated by an evaluation of literature that identified that typical oil water separators should be designed and maintained to reduce effluent concentrations to 15 mg/L (Fact Sheet page 37).

Since the Preliminary Draft Permit utilizes a definition for ALs that resulted in technology based values instead of upset values, the ALs need to be recalculated and, when recalculating them, use a consistent methodology.

CASQA recommends that additional data, representing construction projects from all regions of the state be considered before establishing an AL and that at minimum two standard deviations be used to calculate the upset value.

Use of AL for TPH is Not Appropriate for Construction Activities

The use of TPH to assess construction site runoff does not appear to have the same universality applicability to construction operations, and may only be suitable for certain stages of the construction. Further, analysis of discharge samples for TPH requires the use of an analytical laboratory. Certified results are available at best several days and at worst more than 30 days after sample submission. This parameter, therefore does not allow for the type of timely feedback into the construction process that achieved by pH and turbidity measurements. CASQA recommends that the AL for TPH be deleted.

Use of AL for pH and Turbidity

The parameters pH and turbidity appear to be well selected to target common construction site pollutants and allow dischargers to use commonly available field meters to make in-field assessments of BMP performance and effect immediate responses to field measurements.

Relationship of Turbidity and Suspended Sediment

The Fact Sheet states an assumption of a 1:1 ratio between turbidity (NTU) and suspended sediment concentration (mg/L). This statement should be supported with citation of scientific studies or removed from the Fact Sheet. Many studies show no relationship. Although the Caltrans study cited does indicate a correlation between TSS and turbidity in construction site discharges where the turbidity is expected to be related to sediment, it was not a 1:1 ratio, and most of the literature on turbidity, especially in natural waters where there are numerous factors that can influence turbidity, indicate no consistent relationship between TSS and turbidity.

4. Statewide Stormwater Policy

The regulatory approach proposed in the Preliminary Draft Permit (i.e., use of numeric effluent limits and action levels) represents a significant departure from the current regulatory approach

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(i.e., use of iterative BMP based approach) and begins to define a new statewide policy for the regulation of stormwater discharges within the state. Although the proposed regulatory approach is defined as a part of a storm water program strategy, the fundamental shift from an iterative BMP based approach to a TBEL and action level based approach clearly represents a shift in policy in how the State Water Board is proposing to regulate stormwater discharges from construction sites.

Section III of the Fact Sheet presents the General Construction Permit rationale and the “overall storm water program strategy” for Construction, Industrial and Municipal permits. In defining the problem the Fact Sheet states that “it is critical to recognize that the BMP solution to stormwater problems has been inadequate, based on 15+ years of experience with construction, industrial, and Phase I MS4 storm water permits” and that this is evidenced by the growing number of impaired water bodies. The Fact Sheet then concludes that “more effective regulatory tools for storm water management are needed” and that the solution is the use of numeric effluent limits and action levels.

Although it is called a strategy or solution approach, we believe that the discussion constitutes a framework for a statewide stormwater policy and begins to define when the regulatory approach should shift from:

Iterative Approach ⇒ Iterative Approach with ALs ⇒ TBELs

It appears that the State Water Board has gone to great length to craft terms that seem to imply a general discussion but in reality is the framework for a stormwater policy. This solution approach, although informative lacks supporting documentation as to when and how one transitions from one element to another. Furthermore the “strategy” is missing discussion regarding the development of TBELs, the use of water quality based effluent limits, and TMDLs. Finally, it is unclear how the performance based stormwater program discussed on page 21 of the Fact Sheet is integrated into the “solution approach”. Given the implications of this “solution approach” CASQA submits that this policy/framework needs to be developed outside the Preliminary Draft Permit so that it receives full public review and participation. Our additional concerns and suggestions are detailed below.

The State Water Board Needs to Develop a Statewide Policy

While CASQA agrees that elements of stormwater programs can be improved and has suggestions for doing so, the regulatory approach utilized by the State must be carefully considered and developed within an overarching statewide policy so that there is clear direction instead of a permit by permit ad hoc approach.

For the past few years CASQA has been calling for the development of a statewide stormwater policy. This call has been based on our collective experience with the first 15 years of stormwater permit implementation and the fact that such policy direction is necessary for the success of the stormwater program. Although the State Water Board staff held two workshops in 2005 to discuss the development of a stormwater policy, no additional emphasis has been placed on developing the policy. However, the lack of a Stormwater Policy is leading to inconsistent approaches to permit compliance and program assessments.

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These inconsistencies are most recently evidenced by the conflicting regulatory approaches that have been proposed in the Preliminary Draft Permit and the Draft Ventura Municipal Permit. Regardless of the fact that they are addressing different types of stormwater discharges, the State Water Board staff and Regional Water Quality Control Board staff (absent direction from the State Water Board) clearly interpreted the Blue Ribbon Panel report in different ways and are attempting to define an appropriate regulatory response through the corresponding Permits. In fact, the very definition, derivation, and implementation of Action Levels within both permits are inconsistent with one another.

Consistent with our previous comments, the State Water Board would be well served to use the development of a statewide stormwater policy as the vehicle to describe the process for having stormwater dischargers meet and protect water quality standards. Among other things, the policy could identify when it is appropriate to shift from an iterative BMP-based approach to technology-based effluent limits and/or water quality-based effluent limits as well as the process that should be followed in order to derive appropriate and scientifically sound numeric limits and how performance based metrics can be incorporated. The policy should also reflect the integration of TMDLs.

Once developed, this policy would provide the necessary guidance in the development of general permits, be they construction, industrial or municipal. Therefore, we strongly recommend, prior to the State developing a construction general permit that switches from an iterative BMP-based process to technology based numeric effluent limits, that the State identify a constructive and progressive approach through the development of a statewide policy.

Absent a Statewide Policy the State Water Board Should Consider the Progressive Approach Developed by CASQA

Instead of declaring the program as inadequate and assigning TBELs and ALs, the State Water Board should consider the Progressive Approach for Regulating Stormwater Discharges (*Progressive Approach*) that was developed by CASQA so that there is a clear roadmap for how stormwater dischargers will be regulated in California and when one should progress from one regulatory approach to another.

As you may already know, CASQA has developed guidance for regulating stormwater discharges through our proposed *Progressive Approach*. This approach was presented to the State Water Board during the initial Sacramento workshop on the Blue Ribbon Panel Report. The State Water Board members were interested in the approach and requested CASQA to make an expanded presentation at the Los Angeles workshop. We also have shared our approach with selected environmental groups; again, with relative agreement in principle that accountability is needed as well as follow up action. A graphic representation of our approach is provided below (Figure 1). Embedded in our approach is the concept of quantifiable measurements that may be used to assess the progress and effectiveness of the stormwater management program. Such quantifiable measurements may take the form of the “upset values” for monitoring as well as “performance standards” for program implementation.

The *Progressive Approach* identifies various regulatory options that can be used when regulating stormwater dischargers and identifies that there may be a progressive shift in the regulatory

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approach. However, the *Progressive Approach* also identifies that the regulatory option may succeed in progression as warranted and that the information collected in a particular option would support the development of the next option.

While the regulatory approach that is used in California is currently at Option 1, CASQA has acknowledged that more can be done and has proactively identified how the industrial, construction and municipal discharges may evolve their programs to move to Option 2. CASQA supports the use of “Option 2” and Action Levels, however we do not support the use of technology based or water quality based numeric effluent limits at this time due to the reasons noted above.

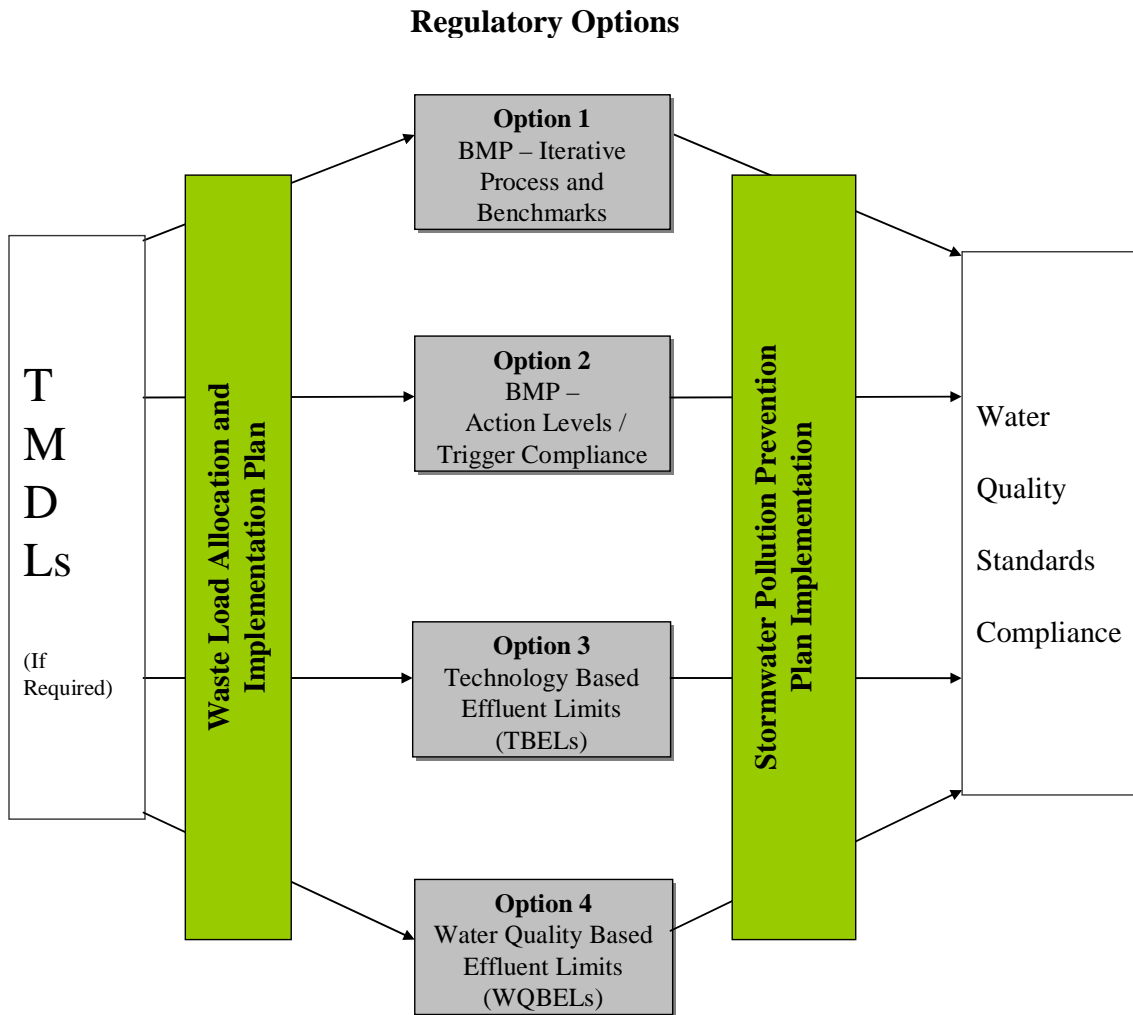


Figure 1. CASQA Progressive Approach

5. Hydromodification

CASQA believes that hydromodification requirements are inappropriate for the general construction activity permit, that it distracts focus from the water quality threats posed by

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construction activity, that it fails to consider regional and watershed specific issues, and that it does not consider long-term maintenance and long-term effectiveness of the practices.

Other regulatory mechanisms through Phase I and Phase II MS4 permits, California Environmental Quality Act (CEQA), 401 Water Quality Certifications, and development plan approvals are all more appropriate tools to regulate these potential impacts. Given the current emphasis on including regional and watershed-specific hydromodification controls in municipal stormwater permits the inclusion of these requirements in the construction permit is duplicative and confusing, as well as inconsistent with the recently adopted hydromodification control requirements in some MS4 permits.

Construction is the final stage in the development of a project site. The Fact Sheet (pg. 13) defines hydromodification impacts as being due to urbanization and the introduction of impervious surfaces and alteration of stream channels. The decisions associated with the creation of impervious surfaces and alterations of streams are not made during construction nor do they manifest themselves for a significant period of time during construction; these decisions are evaluated and selected during project planning and to a lesser extent during project design.

The Fact Sheet (pg. 10) stated that the new hydromodification standards of the Permit are designed to “avoid, minimize and/or mitigate the hydromodification impacts.” The use of the terms “avoid,” “minimize” and “mitigate” are commonly associated with environmental evaluations under the requirements of the CEQA, which are conducted during the project planning stage. Thus the proper project stage to evaluate hydromodification and determine strategies for avoidance, minimization or mitigation is during project planning and design prior to coverage under the Construction General Permit. This is also the appropriate stage of the project to handle the costs associated with strategies and features of the project that fundamentally change the hydraulic design and layout of major elements of the project.

A primary component of hydromodification assessment that is absent in the proposed program is the assessment of the project receiving water. There are numerous cases where hydromodification will have no environmental impact such as when the receiving channel is engineered or is a large water body such as a lake.

While CASQA recommends that the hydromodification requirements be removed entirely from the construction permit, should the State choose to keep some form of this requirement, significant revisions are needed to completely defer to the hydromodification requirements of an MS4 program for projects within the jurisdiction of such a program.

Additionally, if any form of the hydromodification requirements remain in the permit in some form, it will be critical to establish a phase in schedule for these requirements as suggested in the Fact Sheet. Projects already in construction, those that have completed their land development approval processes with local agencies, and those projects funded by public entities will not be able to redesign to meet the new requirements.

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6. Certification Requirements

Specifying minimum requirements for SWPPP writers and implementation staff is appropriate and a needed element of the program. The Preliminary Draft Permit specifies two levels of qualifications: qualified SWPPP developers (QSD); and qualified SWPPP Practitioners (QSP).

Conceptually, it is critical that the QSP, who is the on-site SWPPP responsible person, be authorized by the permit to make and implement decisions regarding field activities to comply with the permit. To this end, the QSP must be able to write and modify Rain Event Action Plans, modify sampling plans, modify SWPPPs, write ALEERs, etc.

CASQA is concerned about the limitation of the QSD to certain professions or degrees, especially when it is not evident that the professions or degrees specified provide an adequate background in construction storm water pollution prevention plan development. The specification of these professions and degrees will also limit the pool of otherwise qualified and experienced SWPPP developers.

The intended content and expected length of the QSD and QSP courses should be discussed in the Fact Sheet to give dischargers and idea of the resource commitment that will be expected. CASQA supports the phase-in of this requirement and recognizes that it will be important that these courses be offered concurrent with the release of the permit, and numerous times across the State, as there will be many professionals seeking the training.

As an alternative to the limitation of either the QSD or QSP to specified professions or degrees, CASQA recommends that these qualifications be awarded to those that demonstrate competency by completing the state-sponsored or other state-approved training programs. For instance, the CPESC certification could be recognized by the state as providing demonstration of competency. Until such a program could be fully implemented, individuals with 5+ years of demonstrated experience and training in writing construction SWPPPs be considered qualified to develop SWPPPs (QSD) and implement SWPPPs (QSP).

7. Minimum BMPs

Conceptually CASQA supports the specification of minimum BMPs in the permit language as a way to establish a baseline of BMPs that all sites must implement. Therefore permit specified minimum BMPs must be achievable for all projects from the smallest infill project to the largest master planned community.

The Preliminary Draft Permit recognizes five stages of construction activities that a project may go through; preliminary, mass grading, streets and utilities, vertical construction, and post-construction. CASQA believes that inclusion of the first four of these stages is a good method of evaluating the potential sources of pollution from construction activity as the project progresses and suggests that this model be incorporated more fully developed in the SWPPP and permit requirements. (Post-construction, as defined in the permit is not part of the construction activity, and should be eliminated from this discussion.) This model establishes a strategy by which to phase the development of the SWPPP or trigger the revision of the REAP. Additionally,

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minimum BMPs would be different for each stage, and projects that do not include one of the stages could eliminate that set of minimum BMPs from consideration. This staging approach would also facilitate land transfers that may occur during the course of a project, especially large land development projects.

CASQA is concerned that while, many of the specified minimum BMPs are appropriate minimum controls for different stages of construction, they are not appropriate for all stages, for instance landscape material management is not appropriate for the Preliminary Stage. Some of the proposed minimum feasible for all construction projects, such the requirement to place a potable toilet in a soil area may not be feasible for an urban infill project. Additionally, some of the required BMPs would significantly interfere with normal construction operations and good alternatives exist for the required BMP, such as requiring fueling and maintenance in a designated area where simple housekeeping practices can prevent releases during these activities. **Attachment B** provides suggestions for language changes for proposed minimum BMPs and assesses their general applicability and feasibility to the Preliminary/Mass Grading Stages, Vertical Construction Stage, and the Streets and Utilities Stage.

8. Permit Registration Documentation (PRD) and Public Review

The process for obtaining permit coverage and achieving public review is not clear in the Preliminary Draft Permit. Specifically, it is unclear whether construction may proceed once a discharger has submitted the permit registration documents and fee or whether the discharger must wait until the end of the public review period.

CASQA recommends that the language be clarified to state that the permit is effective once all the required documentation is submitted, with the condition similar to the Order 99-08-DWQ that an adequate SWPPP has been developed, certified, and implemented.

Submission of final SWPPP as part of the PRD will be very difficult to achieve, without significant delays in the construction process. While some elements of the SWPPP can be developed long in advance of the actual construction project on traditional design projects, other elements such as the specific construction subcontractor (and likely the QSP) will not be known until just before construction starts, at which point a 90-day delay may well mean forcing a project into the rainy season. Similarly, for design-build projects, SWPPP elements might not be known until just before they are constructed.

The Preliminary Draft Permit alludes to submitting the permit fee within seven days of submitting the PRD, and indicates a fee statement will be generated automatically. CASQA recommends that fee calculations be available independently from the permit registration process to allow public agencies and organizations to meet the internal time lines of accounting processes, which can take two weeks or more to authorize the issuance of a check.

CASQA recommends an alternate of developing an expanded NOI that would contain some of the key SWPPP elements that would be submitted for the public review process and additionally that the public review process be limited to no more than 60 days (Phase II SWMP review period) but preferably 30 or 45 days, which is consistent with other State review time frames.

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9. Annual Report

CASQA supports the inclusion of the annual reporting requirement in the Preliminary Draft Permit. More clarity from the current vague annual certification requirement will improve annual assessment by dischargers. We request that the detailed requirements of the Annual Report and format be included in the formal tentative draft to allow for further review of this element of the permit.

CASQA recommends that new permit retain the current annual reporting cycle with the annual report due in the Summer, July 1, and report on the previous rain year (October through April). Setting the report date in the winter will take resources away from implementation. Summer is the best time to plan for coming season based on assessment of previous year. The July report provides adequate time to assess the previous year and plan alterations for the coming rainy season.

10. Effluent and Receiving Water Sampling

CASQA supports the inclusion of effluent monitoring requirements in the permit that focus on providing information to the discharger and regulator to use in the evaluation of BMP implementation.

Effluent monitoring for pH and turbidity using field meters is consistent with past CASQA recommendations as a way to assess and respond to BMP performance.

TPH analysis, however, requires the use of an analytical laboratory and does not meet the objective of the monitoring program to provide feedback to immediately improve BMPs on a dynamic construction site. CASQA recommends that TPH monitoring be eliminated or restricted to stages more likely to generate TPH from fixed infrastructure e.g., the streets and utilities and the vertical construction stages.

Theoretically, receiving water monitoring allows a discharger to demonstrate whether effluent is negatively affecting the receiving water. In practice, receiving water monitoring may be significantly difficult for a single construction site to implement. CASQA recommends that other alternatives be developed to allow dischargers to monitor effluent at the point of discharge from the project site and utilize regionally developed datasets that represent wet-weather turbidity and pH values to assess impact of discharges on receiving water.

CASQA strongly opposes the use of only one to two samples for evaluation of effluent quality and as a trigger for reporting or receiving water monitoring. The BRP suggested that average discharge concentration be used to assess compliance with the AL. CASQA supports using a statistical approach for effluent data to assess compliance with an action limit.

CASQA further recommends, as a means of keeping the sampling cost effective and balanced with the threat to water quality, that sample collection be required for one qualifying event (QE) that generates runoff per month unless the AL is exceeded. If AL is exceeded then the

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discharger should be required to collect samples during each QE and until exceedance is corrected.

The pH receiving water limitation is not consistent with the language in other NPDES permits or Basin Plans. As written, the effluent pH cannot differ from the receiving water by more than 0.2 pH units. This could lead to circumstances where the receiving water limitation could be violated when the discharge meets the AL/NEL. Typically permits and Basin Plans specify an allowable percent change or state that the discharge shall not alter receiving water by more than 0.5 pH units.

11. Qualifying Event

Defining a qualifying event is an excellent addition to the permit. CASQA recommends that the interceding dry period be defined consistent with the General Industrial Permit (3 days – 72 hours). CASQA also recommends that days with less than 0.1-inch of rain, or lacking observable runoff be defined as “dry”.

12. Sampling Safety Factors

CASQA strongly supports the inclusion of the noted safety factors for sample collection.

13. Regional Water Board Approvals

The Preliminary Draft Permit identifies numerous approvals of SWPPP elements by the Regional Water Board or other authority. Given the number of permitted construction projects (more than 24,000 per CIWQS), CASQA has significant concerns about the ability of the agencies involved to provide timely approvals for those elements that the Preliminary Draft Permit specifies Regional Water Board approval. Among the more significant reviews and approvals required by the Preliminary Draft Permit are:

- SWPPP (Regional Water Board may review, accept or reject CGP coverage or require other application; pg 30, XII.1.)
- ATS (Regional Water Board must approve; pg 19, G.2.)
- Structural measure used to comply with hydromodification requirement (Regional Water Board must approve; pg 24 K.1.)
- NOT (Regional Water Board must approve; Fact Sheet pg 16)
- TMDL/WLA (State TMDL authority must confirm SWPPP is consistent with approved TMDL; Fact Sheet pg 19)

As noted in section 8 of this letter, CASQA recommends that the tentative draft permit clearly state that the permit is effective once all required documentation is submitted. Additionally, the permit must specify the review and approval timeframe for all the items requiring agency approval after which approval is automatically deemed if the agency has taken no action.

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14. SWPPP and REAP

CASQA is concerned that the relationship between the SWPPP and REAP is not clearly expressed in the Preliminary Draft Permit and that phases of construction (defined in the findings) are not reflected in the SWPPP and REAP requirements, minimum BMPs, and re-evaluation of the project risk factors.

CASQA supports the concept of the relationship between the SWPPP and REAP where the SWPPP is the master plan for the project relative to protection of water quality and establishes the “library” of practices and activities to be implemented across the life of the construction project, and the REAP is the implementation plan. In essence the SWPPP takes the permit requirements and minimum BMPs and applies them in a systems approach to the specific project. The REAP then takes the SWPPP requirements and applies them to a specific phase or time period of the construction activity to identify the specific activities and BMPs that are applicable to the work and season. REAPs would be the dynamic implementation of the SWPPP requirements and routine modifications would be expected. SWPPPs would only be modified when significant changes are made to the project that directly affect the system, e.g., addition of significant new practices such as an ATS when it was not originally anticipated.

CASQA recommends that the SWPPP and REAP requirements outlined in the Preliminary Draft Permit be revised to be consistent with this concept. For instance, SWPPP requirements that specify contractors, detailed implementation schedules for particular BMPs, and identification of sub-contractors are more appropriate for the REAP.

15. Soil Characterization

CASQA agrees that soil characterization is a necessary element of good SWPPP design. However, it is important that the soil horizon that will be exposed during the rainy season be characterized. However, the additional testing of imported fill is not likely to lend additional information as this material is usually assessed for its engineering properties, e.g. compaction, and therefore this aspect of additional characterization is unnecessary and should be eliminated.

16. Emergency Construction and Maintenance Projects

Two allowances contained in Order 99-08-DWQ are missing from the Preliminary Draft Permit, exemptions for emergency construction and the permit exemption for maintenance projects. CASQA recommends that these allowances be carried into the new permit and that all exemptions and discussions of applicability of the permit be contained within the findings of the permit rather than only in the Fact Sheet or application instructions.

17. Weather Forecast Triggers

CASQA believes that the specified threshold of a 30% prediction of precipitation is too low of a trigger. Alternatively, CASQA suggests a two-level trigger:

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Level 1 - Alert trigger, when there is a 30% chance of precipitation in 72 hours at which point the REAP is reviewed by the QSP and deployment is planned.

Level 2 – Deployment trigger, when there is a 70% chance of precipitation in 48 hours, and which point the QSP and site staff deploy additional sediment and erosion controls.

Alternately, the State Water Board could utilize quantitative precipitation forecasts in combination with the probability forecast to trigger implementation of the REAP and inspections while minimizing false positives.

18. Active Treatment Systems (ATS) and Advanced Source Control

CASQA does not believe that the use of ATS is appropriate for stormwater treatment at this time. CASQA agrees with the concept that discharges from ATS need to be operated carefully to prevent unintended negative impacts in receiving waters and support specific provisions in the permit to control such discharges, and therefore recommends a more limited and carefully studied phase-in of ATS so that dischargers and regulators can assess their appropriate use.

CASQA has significant reservations with the permit requirements that appear to encourage the use of ATS for projects based on a soil particle size that is present in the specified percentage in most soils throughout California.

CASQA recommends that the trigger for ATS be re-evaluated and at minimum the technical justification for the allowable percentage of 0.2 mm or smaller particles be included in supporting documents released with the formal tentative draft.

Most soils in California will trigger the advanced source control or ATS requirements given the particle size and percent stated in the preliminary draft without consideration for other risk factors, whether there will be runoff from a project, size of area exposed, length of exposure, proximity of sensitive water body, etc.

CASQA strongly recommends that if ATS is to be used, then the use of ATS should be limited to high risk projects that are directly adjacent to water bodies or that directly discharge into sensitive water bodies (e.g., 303(d) listed for sediment-related pollutants), and have large areas of soil exposed in the rainy season, i.e., 10 or more acres exposed (based on the EPA CGP trigger for sediment basins).

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**Attachment A
Technology-Based Effluent Limits**

Although CASQA strongly recommends that 1) the regulatory approach proposed within the 2007 Preliminary Draft Permit be allowed sufficient time for program implementation and effectiveness monitoring; and 2) the State Water Board utilize the development of the statewide stormwater policy to identify a progressive policy and approach for regulating stormwater discharges, CASQA is also offering some initial thoughts regarding the development of technology-based numeric effluent limits (TBELs). However, it should be noted that, given the inherent time constraints in providing the comment letter and the significance of shifting from a BMP-based approach to a numeric limit-based approach, CASQA reserves the right to provide additional comments.

CASQA recognizes that the intent of the TBELs is to require a minimum level of treatment for point source discharges (including construction discharges) based on available treatment technologies while allowing the discharger to use any available control technique to meet the limits¹. CASQA also recognizes that, since TBELs are technology-based (i.e., based on the performance of treatment and control technologies), they are not based on risk or impacts on receiving waters, and, as a result, may or may not meet water quality standards.

Although the State Water Board should utilize the development of the statewide stormwater policy to identify an approach for regulating stormwater discharges, CASQA is providing a series of initial recommendations that should be considered when and if the State Water Board evaluates the feasibility of developing TBELs.

CASQA's initial recommendations include the following:

- Prior to developing TBELs, the State Water Board should develop clear guidelines specifying methodologies and criteria for developing TBELs, considering the variability of stormwater and its inherent differences, compared to traditional wastewater effluent discharge.
- Since the best control technology for some sites/regions may not necessarily be the same as another, TBELs may have to be developed based on sub-categories.
- The development of TBELs (effluent guidelines) should utilize a performance-based approach and follow a similar process used by USEPA when developing national effluent guidelines. The process should be modified where appropriate, to make the process compatible with the unique, variable features of stormwater discharges and the difficulties associated with sampling stormwater discharges. In fact, the State should consider following a process similar to what USEPA used when evaluating effluent limitations guidelines for discharges of stormwater from construction sites².
- If TBELs (effluent guidelines) are developed, it should also include guidelines on methodology for sampling and determination of compliance.

¹ <http://cfpub.epa.gov/npdes/generalissues/watertechnology.cfm>

² Similar guidance is identified in USEPA's Development Document for Proposed Effluent Guidelines and Standards for the Construction and Development Category (June 2002)

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- If developing TBELs, the State should consider:
 1. The performance of the best pollution control technologies or prevention practices that are available for an industrial category or subcategory; and
 2. The economic achievability of that technology, which can include consideration of costs, benefits, and affordability of achieving the reduction in the pollutant discharge.And follow a process similar to the one that is outlined below.

In order to appropriately derive a TBEL, the State should consider a number of parameters including, but not limited to, the following: (see also USEPA's Effluent Guidelines Flow Chart Exhibit 5-2 and USEPA's Development Document for Proposed Effluent Guidelines and Standards for the Construction and Development Category (June 2002))

- i. Data Collection** - Existing technical and economic data should be obtained from various sources and evaluated so that the industry may be profiled with respect to general industry description, trends, environmental impacts, best management practices and economics. Once the information is obtained, data gaps could be identified and prioritized. The data sources that could be used include:
 - Literature searches – obtain information on various BMPs that pertain to the industry (journal articles, professional conference proceedings). This information could be used to summarize the most recent BMP effectiveness data, design and installation criteria, applicability, advantages, limitations and cost.
 - Existing Control Strategies - municipal stormwater permits, state and local guidance materials, and web sites could be reviewed to identify typical BMPs utilized to control industrial stormwater discharges.
 - Other Sources – Other data sources that could be reviewed include (but are not limited to):
 - The 2003 California Stormwater Industrial/Commercial BMP Handbook
 - The ASCE National Stormwater BMP Database
 - EPA's National Menu of BMPs
- ii. Industry and Site Profile** - Industry specific information should be obtained through surveys, site visits, etc. and a profile developed. The profile should address items such as:
 - General description/definition and NAICS and/or SIC codes
 - Industry practices and trends
 - Manufacturing processes used
 - General facility information (age of equipment and facilities involved)
 - Discharge characteristics
 - Based on the data gaps identified as a part of the existing data collection efforts, additional field sampling and statistical analyses may be necessary
 - Local climatological data.
- iii. Technology Assessment** - The technology assessment should determine the depth and breadth of effectiveness data for various industry related source and treatment BMPs and identify the quantity and quality of data available to describe the

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performance of all currently used and innovative practices, the ability of each to effectively control impacts due to runoff and the design criteria or standards currently used to size each practice to ensure effective control of runoff. The assessment should include an assessment of difficulties or practicality issues related to the inherent variability of stormwater and the challenges associated with sampling. For each source and treatment BMP, the assessment should include:

- General Description of the BMP
- Applicability
- Design and installation criteria
- Design and/or siting considerations and/or variations
- Effectiveness
- Limitations
- Maintenance
- Cost

iv. Regulatory Options - Once the Data Collection, Industry Profile and Technology Assessment has been completed, the State should identify the regulatory options that are available. This effort should identify industry impacts, which pollutants to address as well as other non-water quality related impacts (such as energy requirements). For example, the regulatory options pursued by USEPA for Construction and Development essentially included:

- Promulgation of effluent guidelines that include minimum requirements deemed to result in an effective stormwater program; and
- Continued reliance on the current State and local programs

v. Economic analysis³ - Once the regulatory options are identified (see above), the State should evaluate the costs and environmental benefits and determine the appropriate option based on factors such as:

- Total Costs
- Monetized and non-monetized environmental benefits⁴
- Ease of implementation
- Industry financial impacts
- Industry acceptance

Although CASQA is not supporting the development of TBELs at this time, we clearly note that the use of this or a similar well-established process would be critical for the successful development of appropriately derived TBELs. Anything short of this effort would likely cast the limits into question.

³ Similar guidance is identified in USEPA's Economic Analysis of Proposed Effluent Guidelines and Standards for the Construction and Development Category (May 2002)

⁴ Similar guidance is identified in USEPA's Environmental Assessment for Proposed Effluent Guidelines and Standards for the Construction and Development Category (June 2002)

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Attachment B

Review of Applicability and Feasibility of Proposed Minimum BMPs for Preliminary/Mass Grading Stages, Vertical Construction Stage, and Linear Construction Stage (or Projects), with Suggested Changes (highlighted in yellow)

Permit Section	Permit Language	Preliminary / Mass Grading Stages	Vertical Construction Stage	Streets and Utilities Stage
Erosion Control C.1	Provide appropriate erosion control (i.e., soil cover) for inactive areas of soils disturbed by construction activities that are inactive and not scheduled to be disturbed until the next stage of construction. Inactive = areas that have been disturbed and not schedule to be disturbed for at least 14 days.	Applicable	Applicable	May not be applicable for all projects
Erosion Control C.2	At a minimum, the discharger shall stabilize all active disturbed areas regardless of time of year from all erosive forces, including rainfall, non-storm water runoff, and wind. Active areas of construction are areas undergoing disturbance.	Not feasible, recommend deleting requirement	Not feasible, recommend deleting requirement	Not feasible, recommend deleting requirement
Erosion Control C.4	The discharger shall stabilize all finished slopes, open space, utility backfill, and lots as soon as possible they have been completed	Applicable	Applicable	Applicable
Sediment Control E.3	For areas under active construction, the discharger shall implement erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs in conjunction with the erosion and runoff controls specified in IX.C and IX.D	Applicable	Applicable	Applicable
Sediment Control E.4	The discharger shall apply linear sediment controls along the toe, top, face, and at the grade breaks of exposed and erodible slopes to comply with sheet flow lengths in accordance with Table 3 below, or as specified by the designing civil or geotechnical engineer.	Applicable	May not be applicable	May not be applicable
Sediment Control E.5	The discharger shall, at all times, establish effective perimeter controls and stabilize all construction entrances/exits sufficient to control erosion and sediment discharges from the site.	Applicable	Applicable	May not be applicable
Sediment Control E.6	At all times during the year, the discharger shall appropriately protect and maintain all storm drain inlets and perimeter controls, runoff control BMPs, and stabilized entrances/exits	Applicable	Applicable	May not be applicable

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Permit Section	Permit Language	Preliminary / Mass Grading Stages	Vertical Construction Stage	Streets and Utilities Stage
Sediment Control E.7	The discharger shall limit traffic to stabilized construction entrances driveways.	Applicable	Applicable	May not be applicable
Source Control Option H.1.a	Maintain or establish vegetative cover as much as possible by developing the project in a phased approach to reduce the amount of exposed soil at any one time.	Applicable, but may not be feasible for all projects	Not applicable	Not applicable
Source Control Option H.1.b	Limit the areas of active construction to five acres at any one time.	Applicable, but may not be feasible for all projects	Not applicable	Applicable, but may not be feasible for all projects
Source Control Option H.1.c	Provide 100 percent soil cover for all areas of inactive construction throughout the entire time of construction, on a year-round basis.	Applicable	Applicable	Applicable
Source Control Option H.1.d	Provide appropriate perimeter control at all appropriate locations along the site perimeter and at all inlets to the storm drain system at all times during the rainy season.	Applicable	Applicable	Applicable
Source Control Option H.1.e	Provide vegetated buffer strips or otherwise control direct discharge runoff between the active construction area and any water bodies.	Applicable	Applicable	May not be applicable feasible for all projects
Source Control Option H.1.f	Provide stabilized construction entrances and limit all vehicle and foot traffic to those entrances.	Applicable	Applicable	May not be applicable or feasible for all projects
Good Housekeeping 1.b	b. Covering and berming loose stockpiled construction materials (i.e., soil spoils, aggregate, e.g. fly-ash, stucco, hydrated lime, etc., and covering or providing perimeter control for soil spoils and aggregate.	Applicable	Applicable	Applicable
Good Housekeeping 2.b	Berming sanitation facilities (e.g., Porta Potties) and preventing them from being kept within the curb and gutter or on sidewalks or adjacent to a storm drain.	Applicable, but may not be feasible at all locations	Applicable, but may not be feasible at all locations	Applicable, but may not be feasible at all locations

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Permit Section	Permit Language	Preliminary / Mass Grading Stages	Vertical Construction Stage	Streets and Utilities Stage
Good Housekeeping 2.e	Berming or securely protecting stockpiled waste material from wind and rain at all times unless actively being used.	Applicable	Applicable	Applicable
Good Housekeeping 3.a	Minimize oil, grease, or fuel to leaks in to the soil and have materials available to clean up incidental drips and leaks.	Applicable	Applicable	Applicable
Good Housekeeping 3.b	Placing all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs or inspecting equipment or vehicles that are stored remotely and using drip control practices (plastic sheets, drip pans, absorbent pads when conducting remote fueling or maintenance).	May not be applicable or feasible for all projects or equipment	May not be applicable or feasible for all projects or equipment	May not be applicable or feasible for all projects or equipment
Good Housekeeping 4.a	Covering or providing perimeter controls for berming stockpiled materials such as mulches and topsoil.	Applicable	Applicable	Applicable
Good Housekeeping 4.b	Not applying any landscape material within 2 days before a forecasted rain event or during periods of precipitation.	May not be applicable or feasible for all projects and may not be recommended depending on plant types	May not be applicable or feasible for all projects and may not be recommended depending on plant types	May not be applicable or feasible for all projects and may not be recommended depending on plant types
Good Housekeeping 4.c	Applying landscape material at quantities and applications rates according to manufacture recommendations or based on knowledgeable and experienced field personnel.	Not applicable	Applicable	May not be applicable to all projects
Good Housekeeping 4.d	Stacking landscape material (other than plants, and stockpile materials) on pallets and covering, or storing under cover away when not being used or applied.	Not applicable	Applicable	May not be applicable to all projects