CALIFORNIA CHAMBER of COMMERCE

September 1, 2006

VIA EMAIL AND FACSIMILE

California State Water Resources Control Board
Attn: Ms. Song Her, Clerk to the Board
P.O. Box 100
Sacramento, CA 95812-0100

Re: Comment Letter—Storm Water Panel Report

Dear Ms. Her:

The California Chamber of Commerce ("Chamber") appreciates this opportunity to comment on the State Water Resources Control Board's ("SWRCB" or "Board") use of the report recently issued by the Storm Water Panel regarding the feasibility of numeric effluent limits for stormwater permits ("Panel Report" or "Report").[1] These comments are accompanied by a technical appendix of relevant materials, filed under separate cover and entitled "Technical Appendix To The California Chamber of Commerce's Comments On The Storm Water Panel Report."

The Chamber's members include over 15,000 California businesses, including many of the non-governmental parties regulated by stormwater permits in the State. Accordingly, it has a very strong interest in encouraging reasonable and cost-effective approaches to control of stormwater discharges. The Chamber appreciates the work of the Storm Water Panel and believes the Panel Report can provide a point of departure for further investigation of ways to improve the existing program for regulating stormwater discharges. Nevertheless, the Chamber believes the Report has some significant shortcomings that the Board should recognize and take into account as it moves forward. The Chamber offers comments on four general points:

(1) *The Board Should Clarify The Process Governing Consideration Of The Panel Report.* As a preliminary matter, the Board should, as expeditiously as possible, clarify the

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1 Storm Water Panel Recommendations to the California State Water Resources Control Board: The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated With Municipal, Industrial, and Construction Activities (June 19, 2006).

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process governing its consideration of the Report. The public, and regulated parties in particular, are entitled to prompt, full notice as to whether the Board intends to rely on the Report to resolve the continuing controversy regarding numeric limits that, for seven years, has been the subject of litigation and related adjudicatory proceedings.

(2) *The Panel Report Is Not, And Should Not Be Viewed As, A Thorough Or Balanced Evaluation of The Current Program's Effectiveness.* The Report contains unsolicited and unfounded expressions of opinion critical of the State's current stormwater program and its effectiveness in reducing stormwater pollution. These observations stray from the Panel's charge, are not based on a thorough, empirical, or balanced review of the program, and as such are unsupported opinion—not expert findings. The Report makes no mention of the many fine examples of effective stormwater management under the current program, dating back many years. Nor does the Report mention the California Environmental Quality Act, through which water quality mitigation has been occurring throughout the State for many years. These omissions alone should lead the Board to disregard the Report's unsolicited comments on the current program's effectiveness.

(3) *Numeric Effluent Limits Are Not Required By The Clean Water Act, Technically Feasible, Or Cost-Justified.* The U.S. Environmental Protection Agency ("EPA") is the nation's leader in setting numeric limits, having developed, during the course of the past three decades, over 50 national, technology-based, numeric effluent limit guidelines for different categories of industrial discharges. EPA also has many years of experience with evaluating the feasibility of numeric limits for stormwater discharges, and has opted to impose such limits only in very limited and discrete contexts. Accordingly, when EPA expresses a clear preference for *non*-numeric effluent limits in stormwater permitting, the Board should pay close attention. The Report makes no attempt to address the myriad factors that have prevented EPA from setting numeric stormwater limits on a general basis; it should be given little weight when compared with the results of EPA's many years of expert deliberation on the subject. The Board staff itself has joined this issue over the years, and generally has reached the same conclusions as has EPA. Numeric stormwater limits are not required by the federal Clean Water Act; the Report fails to make the case that they are technically feasible or cost-justified.

(4) *The Board Should Focus On Improving The Implementation Of Best Management Practices ("BMPs") Through Design Standards And Maintenance Obligations*. The program for prevention and reduction of stormwater pollution can be improved. Design standards for BMPs could be established to promote more uniform performance and to provide guidelines for BMP selection, and maintenance obligations could be made clear and enforceable on a more routine basis. Progress of this nature will help to ensure that the next generation of stormwater permits make meaningful further water quality gains. By contrast, a fundamental paradigm shift in California's stormwater permitting approach towards numeric effluent limits, as some advocate, would be imprudent and certainly unwarranted based on the Report.

A. The Board Should Clarify The Process Governing Its Consideration Of The Panel Report

The Board needs to provide the regulated community with a clear understanding of the nature of the administrative process relating to the Panel Report. The Board's notice for the workshops held on the Report states that the Board's current consideration of the Report is not an adjudicatory process. Nevertheless, the Report itself states that SWRCB asked its staff to convene the Storm Water Panel in response to ongoing disputes about the feasibility of including numeric effluent limits in the draft Industrial General Permit ("IGP").

Given the nexus between the Report and the ongoing IGP process (as well as the other general permits), the regulated community is entitled to a full and prompt explanation as to the relationship between the Board's decision making process and both the Panel and the Report. The Board has not yet explained its understanding of the Panel's role—whether, for example, the Board considers the panelists to be agency experts participating in the Board's internal policy making process, or merely outside experts engaged in a separate and independent process. If the Board intends to give the Report weight in the IGP permit proceedings initiated last year, or other permit proceedings which may overlap with the report proceedings, the regulated community may be prejudiced substantially unless it is given process and procedural protections in line with these implications. In other words, we are concerned that the report proceedings will be considered part of, or may be inseparably bound with, the Board's evidentiary process. The Board should draw clear lines between policy review and evidentiary process, providing the regulated community with assurances that it has done so; otherwise, it should afford the regulated community with a full opportunity for discovery and fact investigation.

B. The Panel Report Is Not, And Should Not Be Viewed As, A Thorough Or Balanced Evaluation Of The Existing Stormwater Program's Effectiveness

The Board gave the Panel a specific charge: to examine whether it is technically feasible to establish numeric effluent limitations, or some other quantifiable limits, for inclusion in storm water permits; if so, how such limitations could be established; and what information and data would be required. While the Panel Report provides a starting point for further examination of these questions, the Report at times—particularly the section regarding municipal activities—strays well beyond the Panel's mandate by offering critical observations about the effectiveness of the current stormwater program.

With due respect to the Panel, the Board should not give weight to these unsolicited observations. In order to evaluate the current program's effectiveness, an extensive and rigorous study would be required. Any such study would require statewide on-the-ground field research and evaluation of empirical data on the current program's effectiveness. To yield meaningful policy recommendations, the study's findings regarding effectiveness would have to be compared with the likely real-world effectiveness and the marginal costs and benefits of any proposed alternative regulatory approach. The Panel undertook no on-the-ground study or comparative analysis of this nature, and the Panel Report's critical observations about the current program appear to reflect only the panelists' qualitative, general opinions and, in some instances, apparent bias. Those opinions are neither empirically-based nor balanced. It would be imprudent for the Board to rely on opinions of this nature as the basis for any decision to move

toward quantitative effluent limits—especially given the technical complexity of the stormwater problem, the significant investments that have been made in the existing system, and the major costs that would likely accompany any such shift.

A thorough evaluation of the current regulatory program would reveal that it has been quite successful. In large part as a result of the implementation and progressive improvement of BMPs under the current program, the potential pollutant load to receiving waters from industrial, construction and municipal stormwater has dropped significantly since the early 1990s—when the IGP, Construction General Permit ("CGP"), and municipal separate storm sewer system ("MS4") programs were brought on line. The Report fails to acknowledge these substantial gains. The Report does not mention the substantial influence of the California Environmental Quality Act ("CEQA") on BMP implementation. CEQA requires lead agencies and project proponents to identify and mitigate to the extent feasible the negative impacts on water quality from new projects. As a result, project proponents must implement BMPs—either as project design features or as mitigation measures—that are tailored to site-specific water quality issues. The Report also fails to take account of the increasingly sophisticated and effective BMPs implemented by many regulated parties either (1) as part of stormwater pollution prevention plans ("SWPPPs") adopted pursuant to the IGP or CGP, or (2) in compliance with programs administered by municipalities in connection with their MS4 permits. Under these programs, too, BMPs typically must be tailored to address pollutants of concern, must be maintained, and are periodically reviewed and revised to address changing site conditions or regulatory requirements.

All this is not to say that the current stormwater program cannot be improved, a point to which we return below. But given the significant investment that parties are making in BMPs and the impressive results that have been achieved, the Panel Report's generalized criticisms—for example, that BMPs are not well matched to water quality problems or that they commonly are maintained only for aesthetic purposes[2]—do not present an accurate or balanced picture of the current program's effectiveness.

C. Numeric Effluent Limits For Stormwater Discharges Are Not Required By The Clean Water Act, Technically Feasible, Or Cost-Justified

The Panel Report concludes that numeric effluent limits are not feasible for municipal activities (though some form of "Action Levels" may be); that some form of numeric limits may be technically feasible for construction activities through the application of active treatment technologies involving the use of polymers, but that such technologies raise significant cost and environmental concerns and therefore may not be advisable; and that numeric limits are feasible for "some" unspecified industrial categories. The Chamber strongly disagrees with the Report's

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[2] *See* Panel Report, at 4.

generalized and unsupported conclusion as to the feasibility of numeric effluent limits for industrial activities, and urges the Board not to rely upon it as the basis for any change of policy.[3]

1. Stormwater Is Qualitatively Different From Other Discharges And Is Not Susceptible To Numeric Effluent Limitations

Numeric effluent limits generally are feasible and appropriate for publicly owned treatment works ("POTWs") and major industrial process wastewater effluents because the flows discharged from those sources are relatively constant, and the pollutant load in these wastewaters is generally predictable, consistently within range of a median or average value, and typically characterized by a normal (bell-shaped) or lognormal (positively skewed) frequency distribution curve. These manageable flow volumes and predictable pollutant loads lend themselves to capture and treatment via various technologies which, in turn, produce a consistent treated wastewater effluent. Under such circumstances, one can have a high degree of confidence that effluent concentrations will not exceed a prescribed limit, as long as the treatment unit is designed and operated properly. Accordingly, it is feasible to calculate appropriate numeric limits and compliance with such limits is possible.

Stormwater discharges are qualitatively and dramatically different. Stormwater volumes are highly unpredictable and are largely dependent on weather. Stormwater quality is highly variable, typically characterized by intermittent extreme values that are much higher than the vast majority of concentrations.[4] These extreme-value distributions are much different than the bell-shaped curve of a normal distribution, or even than a lognormal distribution. Extreme and highly variable stormwater flow volumes, together with uncertainty regarding stormwater quality, make stormwater treatment an inexact science—not one generally capable of consistent, reproducible results.

Absent the ability to capture vastly divergent stormwater volumes and to treat highly variable stormwater quality to a consistent and reproducible result, strict compliance with numeric limits is neither feasible nor prudent. To support a claim of feasibility, such results must be capable of being repeated at all regulated sites (*i.e.*, many thousand sites), under dramatically divergent conditions, influenced by a myriad of site-specific and climatic factors. Attempting to avoid this complexity by setting numeric limits to some first-year statistical measure—such as

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[3] The Chamber takes no position at this time on the Panel's feasibility conclusions with regard to municipal and construction activities, other than to agree that numeric limits are not feasible with regard to municipal activities and that the use of active treatment technology to control effluent from construction activities presents serious concerns. The Chamber reserves the right to comment further on these issues at a later time.

[4] "Extreme values" are values that are mathematically markedly different from the general population of values—in other words, outliers. When used in this context, the term "extreme" does not connote risk to human health or the environment. In fact, "extreme values" can be so isolated and episodic, and might be relevant to such a small quantity of water, that they may be toxicologically irrelevant.

median concentration or even 90th percentile concentration—is a recipe for failure given the extreme-value nature of stormwater.

2. The Clean Water Act Does Not Require Numeric Effluent Limitations For Stormwater Dicharges; EPA Consistently Has Rejected Such Limits

The federal EPA has made clear that the Clean Water Act ("CWA" or "Act") does not require the use of numeric effluent limits for stormwater discharges. EPA regulations provide that National Pollutant Discharge Elimination System ("NPDES") permits may rely on BMPs to control or abate pollutant discharge where authorized under CWA Section 402(p) for stormwater discharges, where numeric effluent limitations are infeasible, or where reasonably necessary to achieve effluent limitations and standards and carry out the purposes of the Act. 40 C.F.R. § 122.44(k)(2)-(4).

As to water quality-based limits, EPA explained in its 1996 *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits* that

> ". . . [a]though NPDES permits must contain conditions to ensure that water quality standards are met, this *does not require the use of numeric water quality-based effluent limitations*. Under the CWA and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including best management practices, performance objectives, narrative conditions, monitoring conditions, monitoring triggers, action levels (*i.e.*, monitoring benchmarks, toxicity reduction evaluation levels), etc., as the necessary water quality-based limitations, *where numeric water quality-based effluent limitations are determined to be unnecessary or infeasible*." 61 Fed. Reg. 43,761 (Aug. 26, 1996) (emphasis added).[5]

EPA consistently has rejected the application of numeric effluent limits to stormwater discharges for the vast majority of industrial sources. As a general matter, the Agency has explained that it is both technically difficult and expensive to develop numeric limits for stormwater because—as discussed above—such discharges "are highly variable both in terms of flow and pollutant concentrations, and the relationships between discharges and water quality can be complex."[6] In both the current and recently proposed Multi-Sector General Permits

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[5] *See also* Questions and Answers Regarding Implementation of an Interim Implementation Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 Fed. Reg. 57,425, 57,426 (Nov. 6, 1996) (explaining that CWA § 301 requires that discharger permits include "effluent limitations" necessary to meet water quality standards and that "effluent limitation" is defined by CWA Section 502 as "*any* restriction on quantities, rates, and concentrations of constituents discharged from point sources.") (emphasis in original).

[6] *Id.* at 57,246.

("MSGP") for Industrial Activities, EPA applied numeric effluent limits only to coal pile runoff and five other discrete categories of runoff.[7] For all other discharges covered by the MSGP, EPA requires BMPs that are non-numeric "flexible requirements for developing and implementing site specific plans to minimize and control pollutants in storm water discharges associated with industrial activity."[8]

In its proposed effluent limitation guideline for stormwater discharges from construction activities (subsequently withdrawn), EPA specifically rejected the viability of numeric effluent limitations:

> "The stochastic nature of rainfall and runoff makes verification of the design standards difficult. In some cases, the nature of local rainfall and runoff characteristics make it difficult to even design BMPs to a specified performance level. In addition, site-specific soil conditions greatly influence the amount of sediment mobilized during runoff events, and the soil settling characteristics greatly influence the performance of sediment controls. *Designing an entire suite of erosion and sediment controls for a site to perform to a specified level would likely require use of a computer model, which could add significant costs with little assurance of increased effectiveness.* Similarly, monitoring to verify attainment of numerical requirements can be very difficult . . . with little demonstrated results. *As a result, EPA did not consider numeric pollutant control requirements a viable option.*"[9]

Similar concerns apply in the context of industrial stormwater discharges.

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7 *See* Final Reissuance of National Pollutant Discharge Elimination System ("NPDES") Storm Water Multi-Sector General Permit for Industrial Activities, 65 Fed. Reg. 64,746, 64,761 (Oct. 30, 2000); Proposed 2006 Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity (MSGP) § 1.4.1 ("Proposed 2006 MSGP"), available at http://www.epa.gov/npdes/pubs/msgp2006_all-proposed.pdf.

8 65 Fed. Reg. at 64,759.

9 Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, 67 Fed. Reg. 42,644, 42,658 (June 24, 2002) (emphasis added); *see also, e.g., San Francisco Baykeeper, et al. v. California State Water Resources Board*, Case No. 99CS01929, Ruling on Submitted Matter, at 11 (Cal. Super. Ct. Sac. Div. May 18, 2005) ("*Connelly III*") (finding, in context of California construction general permit that "[t]he scientific and technical difficulties of obtaining and analyzing storm water discharge samples that accurately reflect the impact of the discharges on water quality of receiving waters would . . . preclude use of the sampling results as numeric water quality-based effluent limitations.").

Indeed, even in the context of the TMDL program, where numeric limits typically play a dominant role, EPA has emphasized that "[water quality-based effluent limits] for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs) under specified circumstances. *See* 33 U.S.C. § 1342(p)(3)(B)(iii) [governing municipal stormwater discharges]; 40 C.F.R. § 122.44(k)(2)&(3) [authorizing non-numeric limits for stormwater discharges regulated under CWA Section 402(p) or where numeric limits are infeasible]."[10]

3. Available Options For Numeric Limits For Stormwater Permits Are Technically Infeasible And Are Not Cost-Justified

All of the available options for numeric requirements—including "Action Levels," technology-based effluent limits, and water quality based limits—present serious feasibility and cost-justification problems.

Action Levels. The Report suggests it may be possible to set Action Levels as "upset values," which, if exceeded, indicate that BMPs are not doing their job and should be adjusted. Although some form of benchmarking may be appropriate for monitoring purposes,[11] the use of Action Levels in the stormwater context presents two serious problems. First, it is very difficult to set Action Levels at a meaningful level because of the extreme variability in storm events and stormwater pollutant concentrations and the uncertainty regarding contributing factors discussed above. This inherent variability and uncertainty makes it difficult to have confidence that a high pollutant concentration actually indicates there is any problem with a BMP. As a result, using Action Levels as a basis for targeting particular BMPs for evaluation and improvement may be, in many cases, a costly exercise with dubious benefits. That is especially true for pollutants, such as copper or dioxin, which cannot be measured in the field, but rather require lab tests. For such pollutants, it is not possible to determine in real time whether adjustment of the BMP is actually reducing pollutant levels. A second concern with Action Levels is that implementation likely would require a very costly investment in an extensive monitoring program. Given the high degree of uncertainty about marginal benefits, the Board should be cautious about going down this road.

Technology-Based Effluent Limits ("TBELs"). The Report appears to suggest that numeric TBELs can be developed for "some" unspecified set of industrial categories. Panel Report, at 19. As explained above, the extreme variability in pre-treatment stormwater flows and

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10 *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*, Memorandum From Robert H. Wayland, III and James Hanlon to Water Division Directors Regions 1-10 (Nov. 22, 2002).

11 Where EPA has used numeric benchmarks, it has emphasized that they "do not constitute direct numeric effluent limitations; a benchmark exceedance, therefore, is not a permit violation." Proposed 2006 MSGP § 1.4.2. Benchmark monitoring data, EPA has stated, are primarily for the permit-holder's use. *Id.* It would not be appropriate to use benchmarks as evidence of noncompliance.

pollutant concentrations render the attempt to set technically defensible TBELs a long-term and uncertain journey. To our knowledge, there is no California precedent for setting numeric TBELs on the basis of extreme-value influent (flow and concentration) distributions. Even if those distributions were well defined—which they are not—and even if treatment technologies could be found to provide consistent and reproducible effluent quality, any such technology would have to be designed to handle a certain amount of stormwater volume. Thus, any TBEL could be applicable only up to a specific design storm event.

Before considering the development of numeric TBELs, the Board should be fully aware of the exceptional costs and practical difficulties that exercise would involve. Development of state numeric TBELs would be analogous to setting national effluent limitation guidelines ("NELGs"); to be technically (and perhaps legally) defensible, state TBELs for stormwater would have to be developed through a similarly rigorous process.

NELGs are determined based on the identification of best conventional pollutant control technology ("BCT") for conventional pollutants (*i.e.*, biological oxygen demand, total suspended solids, pH, fecal coliform, and oil and grease) and best achievable control technology ("BAT") for toxic and other pollutants.[12] Determining BAT requires EPA to evaluate available technology in light of a number of factors, including: the age of equipment and facilities involved, the process employed, engineering aspects of the applications of various types of control measures, process changes, non-water quality environmental impacts (including energy), and such other factors as EPA deems appropriate.[13] BCT determinations require EPA, in addition to considering the BAT factors, to subject candidate technologies to a complex two-part test to determine whether such technologies are reasonable in light of implementation costs.[14]

Even for discharges that (unlike stormwater) are readily susceptible to numeric TBELs, the process of developing a NELG is long and costly. In order to develop a NELG,

> "EPA typically (i) gathers extensive information on the industry (through questionnaires, wastewater sampling, literature reviews, and other methods); (ii) performs detailed statistical analyses of this information; (iii) develops sets of proposed control options for the industry; (iv) estimates the effluent reductions, costs, economic impacts, and environmental effects of those options; (v) shapes the options into a proposed set of limits; (vi) explains the proposed limits in a *Federal Register* publication and additional supporting documents; (vii) reviews comments on the proposed limits; and (viii) incorporates those comments into a final regulation (again

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12 *See* 33 U.S.C. §§ 1311(b)(2), 1314(b)(2) & (4).

13 33 U.S.C. § 1314(b)(2)(B); *see also* 40 C.F.R. § 125.3(d)(3).

14 33 U.S.C. § 1314(b)(4)(B); *see also* 40 C.F.R. § 125.3(d)(2); Best Conventional Pollutant Control Technology; Effluent Limitations Guidelines, 51 Fed. Reg. 24,974 (July 9, 1986) (explaining EPA's methodology for determining BCT).

> with considerable supporting documentation). *From start to finish, this process often takes five years or more*."[15]

The standard-setting process would be significantly more technically difficult, time-consuming, costly, and vulnerable to legal challenge for stormwater discharges, which do not lend themselves to numeric effluent limits, technology-based or otherwise. In addition, as the Panel points out, there currently is not even a reliable database describing discharges and BMP performance necessary to assess currently available technologies. Panel Report, at 19. In light of these difficulties, coupled with the low likelihood that numeric TBELs would achieve significant marginal water quality benefits (compared with what can be achieved through iterative improvement of BMPs), the Board should be skeptical regarding any suggestion in the Panel Report that numeric TBELs are feasible or appropriate for industrial stormwater discharges. At a minimum, significant further inquiry—with full public participation and expert advice from persons versed in the practical regulatory challenges of setting TBELs—would be necessary before taking any step in this direction.

Water Quality Based Effluent Limits ("WQBELs"). The Panel Report makes no suggestion that numeric WQBELs are feasible for stormwater discharges; in fact, setting WQBELs for stormwater discharges would present an even greater challenge than would setting numeric TBELs.

WQBELs can be imposed on a point source only where there has been a determination that the specific pollutant discharges "will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." 40 C.F.R. § 122.44(d)(1)(i). In reaching that determination, the permitting authority must "use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water." 40 C.F.R. § 122.44(d)(1)(ii). Reaching a determination that any particular discharge has a reasonable potential to contribute to an exceedance of water quality standards is difficult in the stormwater context—yet again, because of the lack of understanding regarding factors contributing to pollutant concentrations in effluent.

A further, even more vexing problem, is that many water quality standards (*e.g.*, acute and chronic toxicity criteria in the California Toxics Rule) were developed under idealized laboratory conditions that are not representative of conditions that would result in toxicity in receiving waters, resulting in criteria that are frequently lower (more conservative) than necessary to protect beneficial uses. Studies have shown that test species can tolerate levels much higher than certain water quality standards in natural waters when the exposure conditions are similar to a stormwater matrix—with ambient natural water chemistry, highly heterogeneous and episodic. (Please see the accompanying Technical Appendix for more on this issue.) Even more importantly, stormwater constituent concentrations cannot be described by lognormal distributions, as they are far more "heavy-tailed" than a lognormal distribution (*i.e.*, the highest

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[15] The Clean Water Act Handbook 24 (Mark A. Ryan, ed. 2003) (emphasis added).

concentrations in storm water flows are far higher than would be predicted by a log-normal distribution). Thus, traditional methods for translating water quality standards into WQBELs, which rely upon assumptions that data are lognormally distributed, are inappropriate, and in large part useless, for stormwater permits. For example, the approaches to development of WQBELs described in the State of California's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* and in EPA's *Technical Support Document For Water Quality-Based Toxics Control* ("State Implementation Policy" or "SIP") are based on assumptions that do not hold for stormwater, including relatively constant (as opposed to intermittent) discharges and frequency distributions for effluent concentrations that are normal or lognormal.[16] For all of these reasons, the methods for developing effluent limits described in SIP the are inapplicable to stormwater permitting, as acknowledged in footnote 1 of that policy.[17]

Nor, as a general matter, is it proper to avoid translation by inserting water quality standards directly into a stormwater permit. This approach assumes, among other things, that the receiving waters have zero assimilative capacity. The weight of the evidence suggests that receiving waters can assimilate discharges characterized by extreme-value distributions, like stormwater from industrial sites, at least where the extreme values are not excessive from a very short-term episodic exposure perspective. But properly addressing assimilative capacity, and thus achieving a proper translation of the water quality standard, is a great challenge as high variability in stormwater discharges makes accurate assessment of assimilative capacity during such events difficult. This is so both because storm events change the receiving water's hydrological characteristics (such that assimilative processes vary from storm to storm), and because the current understanding of aquatic organisms' tolerance for pollutant exposure is not based on exposures (such as those produced by stormwater discharges) that are random and highly variable as to magnitude, frequency, and duration.

In sum, presently and generally, numeric WQBELs are not technically feasible for stormwater discharges. At a minimum, development of numeric WQBELs would require a massive investment in data collection, and development of complex dynamic models. Again, while such an effort would be very costly and time-consuming, there is no reason to believe that it would yield appreciable marginal benefits with regard to water quality in comparison with the iterative BMP approach.

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16 *See* U.S. Environmental Protection Agency, *Technical Support Document For Water Quality-based Toxics Control*, EPA/505/2-90-001, at 93-121, App. E (Mar. 1991).

17 State Water Resources Control Board, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of Californa* 1 n.1 (Mar. 2, 2000) ("This Policy does not apply to regulation of storm water discharges.").

D. The Board Should Focus On Improving The Implementation Of Best Management Practices Through Design Standards And Maintenance Obligations

The Report suggests that significant improvements can be made in designing and implementing BMPs. As discussed above, many regulated parties in California have demonstrated that it is possible to design, implement, and consistently maintain sophisticated BMPs that yield impressive results in terms of improving water quality. These leaders have proven that the iterative BMP approach can work. Rather than embarking on a costly effort to develop numeric effluent limits with highly uncertain benefits, the Board should focus its efforts on the establishment of design standards and maintenance obligations that will bring all regulated parties up to the high standards achieved by others. That approach offers the greatest prospects for a cost-effective path towards continuing improvement of stormwater quality.

We appreciate the Board's consideration of our comments, and we look forward to the opportunity to further engage in the public dialogue associated with the Report. Paul Singarella, Esq., of Latham & Watkins, LLP, is available at the Board's convenience to discuss this matter on the Chamber's behalf or to answer any questions the Board may have. Mr. Singarella can be reached at (714) 755-8168.

Sincerely,

Valerie Nera

Valerie Nera, Director
Agriculture, Resources & Privacy
California Chamber of Commerce

cc: Paul Singarella, Esq., Latham & Watkins, LLP