Public Comment
Draft Phase II Small MS4 General Permit
Deadline: 7/23/12 by 12 noon

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

July 23, 2012

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Subject: Comment Letter – 2nd Draft Phase II Small MS4 General Permit

Dear Ms. Townsend and Members of the Board:

The California Stormwater Quality Association (CASQA) appreciates the opportunity to provide comments on the subject of the 2nd Draft Phase II Small MS4 General Permit (draft Phase II permit). As you are aware, CASQA is a statewide association with active membership from representatives of the Phase I and Phase II stormwater community. We have extensive experience in the development and implementation of stormwater management programs to protect water quality and have been actively engaged with the State Water Board staff during the development of the Draft Phase II permit. In addition, CASQA's Phase II Subcommittee has thoroughly reviewed the draft Phase II permit and developed comments and recommendations contained herein. The Phase II Subcommittee includes a broad representation of Phase II traditional, non-traditional, new and existing designees.

We would like to acknowledge and thank State Water Board staff for conducting additional meetings and conference calls to discuss revisions to the first draft Phase II permit. The discussions translated into many mutually beneficial revisions in the 2nd draft Phase II permit.

While the revisions have resulted in a more practical permit, several significant challenges for the Phase II community remain, including the liability presented in the current receiving water limitation language and the cumulative impact of the compressed nature of requirement deadlines. In addition, the Phase I community is seriously concerned that if the receiving water limitation language is adopted in its current form, it may serve as a precedent for future Phase I MS4 permitting as well.

Our overarching comments are summarized below and our specific comments and requests for clarification are included in the attached table (Attachment A). In addition, a red-line version of a significant portion of the post-construction provision is provided in Attachment C to clarify comments provided in Attachment A.

Comment #1: Receiving Water Limitation Language

As currently written, some or all Phase II permittees may not be able to comply with the Receiving Water Limitations Provision (Provision D). Furthermore, CASQA submits that the provision is contrary to the historic interpretation of Board policy(WQ 99-05). Multiple constituents in stormwater runoff on occasion may be higher than receiving water quality standards before it is discharged into the receiving waters, and may, in some situations, through no fault of or pollutant contribution by a municipality, cause or contribute to exceedances in the receiving water itself. Previously, MS4s have presumed that permit language like that expressed in Provision D in conjunction with Board Policy (WQ 99-05) established an iterative management approach for a municipality to implement and which provided them with a basis for compliance.

However, contrary to the practical implementation of receiving water provisions, the State Water Board's intent as stated in prior State Water Board decisions, and the understanding of CASQA, on July 13, 2011, the Ninth Circuit County of Appeals issued an opinion in *Natural Resources Defense Council, Inc., et al., v. County of Los Angeles, Los Angeles County Flood Control District, et al.* (NRDC v. County of LA) that apparently reasoned that because the iterative process paragraph did not explicitly state that a municipality which was implementing the iterative process was deemed to be in compliance with the other receiving waters limitations provisions in the permit, they were subject to a third party lawsuit for a permit violation, even if the municipality was implementing the iterative process in a manner beyond reasonable dispute. It should also be noted that the U.S. Supreme Court has recently announced that it will review this Ninth Circuit's opinion in its next term; however, it has not requested briefing on this particular issue.

As a result, CASQA believes that the draft language needs to be changed to avoid a situation where municipalities implementing the permit, including the iterative process, are subject to (and required to devote their limited resources towards) enforcement and third party lawsuits for alleged violations of their permit's terms. Although an important goal, as State Water Board policy has consistently reflected, it is not reasonable or feasible to expect MS4 permittees to be able to meet an instantaneous goal of avoiding all potential contributions from stormwater to temporal water quality standard exceedances. Unless this language is changed, Phase II MS4s will be vulnerable to enforcement actions by the state and third party citizen suits regardless of current or future enforcement policy(ies) of the State or Regional Water Boards. For example, the City of Stockton was engaged in the iterative process per the terms of its Permit, but was nonetheless challenged by a third-party on the basis of the Receiving Water Limitations language. There is no regulatory benefit to imposing a permit provision that results in potential instantaneous non-compliance for the Permittee for something they have no reasonable ability or feasible technical means to control. To the contrary, additional municipal resources would have to be channeled to respond to legal challenges, rather than environmental benefit. This inherently unfair approach that flies in the face of State policy can be fixed with a few revisions as we propose, and there is no legitimate reason not to do so.

Recommendation: Direct staff to revise the Receiving Water Limitation Language as provided in Attachment B.

Comment #2: Timeline
Several elements of the implementation timeline remain unrealistic. Individually, the requirements and associated timeline may be feasible, but collectively, the comprehensive and more complex nature of the requirements makes compliance difficult, if not infeasible for Phase II permittees. Notably, many significant milestones are required in the second year including, but not limited to:

- Developing and implementing receiving water monitoring program
- Completing and submitting a Program Effectiveness Assessment and Improvement Plan
- Developing and implementing a comprehensive stormwater public education and outreach program
- Inventorying all outfalls and map associated drainage areas
- Inventorying of permittee-owned or operated facilities that may impact stormwater
- Assessing and prioritizing all catch basins
- Submitting a landscape design and maintenance program to reduce water, pesticides, herbicides and fertilizers
- Requiring new development projects that create or replace 5,000 sq. ft. of impervious cover to implement low impact development runoff standards
- Implementing an O&M Verification Program for regulated new development projects

Phase II Permittees request some spacing of significant milestone requirements within the implementation timeline. Small communities need adequate time to obtain the resources and expertise needed to ramp up their stormwater programs to meet new permit requirements.

Recommendation: Direct State Water Board staff to incorporate the revised timeline recommendations made in Attachment A.

Comment #3: Other Significant Concerns
There a few additional requirements of concern to Phase II permittees and we wish to ensure that the State Water Board is aware of these areas, which are further discussed in Attachment A:

- Incidental Runoff Requirements (B.4): This requirement goes above and beyond what is required of Phase Is and as written could present a significant enforcement burden on Phase IIs.
- Municipal Watershed Pollutant Load Quantification (E.14.b): A written, this section would require Phase IIs to annually quantify subwatershed pollutant loads and estimate loads reduced by BMPs. This requirement could result in a large amount of work with very little value to stormwater programs.
- Urban Areas: Although State and Regional Water Boards have discretion to determine what areas outside of urbanized areas may be regulated as Small MS4s, CASQA requests that the State Water Board clarify that when the Small MS4 in question is a County, that the requirements contained in the draft Phase II permit do not automatically apply County-wide. Rather, the Phase II permit requirements should only apply to those urbanized areas within the County's jurisdiction, and other areas made on a case-by-case determination if the non-urbanized area contributes substantially to the pollutant loadings of the MS4 system within the urbanized area that is subject to the Phase II requirements.

Recommendation: Direct State Water Board staff to incorporate the revisions as provided in Attachment A and clarify applicability of Phase II permit to un-urbanized portions of Counties as indicated above.

CASQA appreciates the opportunity to provide our comments and ask that the Board consider them and our suggested revisions. If you have any questions, please contact CASQA Phase II Subcommittee lead Rebecca Winer-Skonovd at (530) 753-6400 or CASQA Executive Director Geoff Brosseau at (650) 365-8620.

Sincerely,

Richard Boon, Chair
California Stormwater Quality Association

cc: Eric Berntsen, State Water Board
Ali Dunn, State Water Board
Christine Sotelo, State Water Board
CASQA Phase II Subcommittee
CASQA Executive Program Committee and Board of Directors

Attachments
A. Detailed comment table
B. CASQA Proposed Language for Receiving Water Limitation Provision
C. Suggested changes to Post-Construction Provision in track changes format

General			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
1	Applicability of Provision E Comments to Provision F	Throughout	Provision E comments also apply to the non-traditional provision (Provision F), where applicable.

Application Requirements			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
2	Permit Fee	A.1.a [page 13]	Permittees are required to submit their NOI and permit fee within six months of the effective date of the permit. For renewal MS4s that already pay fees, if the six months falls within the fiscal year where a permittee has already paid a fee, the fee should be prorated. *CASQA Recommendation* *Indicate that Renewals should only need to submit the NOI and other information as requested and continue to pay the fee as they already do – upon being billed by their Regional Water Quality Control Board.*

<table>
<tr><th colspan="4">Discharge Prohibitions</th></tr>
<tr><th>Comment #</th><th>Permit Element/ Issue/ Concern</th><th>Location in Draft Permit</th><th>Comment/Recommendation</th></tr>
<tr><td>3</td><td>Discharge Prohibitions</td><td>B.3
[page 16]</td><td>CASQA Recommendation
There are 2 “b”s in the list – please correct.</td></tr>
<tr><td>4</td><td>Incidental Runoff – Conditions</td><td>B.4
[page 16]</td><td>Incidental runoff is identified as a “Low Threat Discharge” by several Regional Boards including North Coast and Central Coast. The permit requirement that municipalities control and enforce incidental runoff discharges within 72 hours is not in keeping with established Regional Board policies.
Similarly, many Phase I permittees do not have an equivalently stringent requirement. The majority of Phase I permittees allow landscape irrigation discharges so long as the permittee implements an education and outreach program that addresses water conservation. The table below provides a sample of current Phase I landscape irrigation/ incidental runoff conditions:
<table>
<tr><th>Permit</th><th>Conditions</th></tr>
<tr><td>Phase II Admin Draft</td><td>• B.4 indicates that incidental runoff must be controlled.
• Permittees must require responsible parties to detect and repair leaks within 72 hours and not water during precipitation (among other things)</td></tr>
<tr><td>MRP (Order No. R2-2009-0074)</td><td>Education and outreach to address conservation and landscape selection</td></tr>
<tr><td>Ventura County
(Order No. R4-2010-0108)</td><td>Implement conservation program</td></tr>
<tr><td>Greater Los Angeles County Ten. Order
(Order No. R4-2012-XXXX)</td><td>Implement efficient landscaping ordinance; conduct water conservation outreach program</td></tr>
<tr><td>San Bernardino County
(Order No. R8-2010-0036)</td><td>Education and outreach re: weather-based irrigation controllers</td></tr>
<tr><td>Orange County – Santa Ana Region
(Order No. R8-2010-0062)</td><td>Education and outreach to address</td></tr>
</table></td></tr>
</table>

Discharge Prohibitions			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
4, cont.			*CASQA Recommendation* *The State Water Board should align incidental/landscape irrigation discharge requirements with the requirements established by Regional Boards via Phase I permits. CASQA strongly recommends that the language in B.4 be wholly replaced with the following:* *Potable water incidental runoff: Discharge allowed if minimized through adoption and enforcement of a Water Efficient Landscape Ordinance (or other regulatory mechanism, if a Non-Traditional permittee) and through coordination with water purveyors to conduct joint education and outreach to the public on measures to reduce and eliminate incidental runoff.* *Reclaimed or recycled water incidental runoff: Discharge allowed if the discharge is in compliance with the producer and distributor operations and maintenance (O&M) plan, and all relevant portions thereof, including the Irrigation Management Plan (Source: Greater Los Angeles County NPDES MS4 Tentative Order: CAS004001)*
5	Incidental Runoff – Definition Part I	B.3 and B.4 [pages 15 – 17]	The references to incidental runoff are contradictory. Incidental runoff from landscaped areas is listed in Section B.3.n as *not* prohibited provided that any pollutant discharges are identified and appropriately controlled. However in Section 4. Discharges of incidental runoff are required to be controlled including "any other actions necessary to prevent the discharge of incidental runoff to the MS4 or the waters of the US. *CASQA Recommendation* *Identify incidental runoff as a "conditionally exempt discharge." Recommendations regarding conditions provided in Comment #4*

Discharge Prohibitions			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
6	Incidental Runoff – Response Timeline	B.4.a. [page 16]	This requirement will be very difficult to implement logistically from a personnel and resource standpoint. The time limitation of 72 hours is too short of a timeframe. For example, it may not be possible for incidental runoff to be corrected on weekends when contractors and equipment may not be readily available. *CASQA Recommendation* *CASQA strongly recommends replacing these conditions with those specified in Comment #4. If the time limitation remains, CASQA recommend that the 72 hour limitation be modified to notify responsible party, if immediately available, to abate leak and continue to implement a progressive enforcement process as specified by the MS4's Enforcement Response Plan within 3 working days..*

Receiving Water Limitations			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
7	Modification	D.	See cover letter comment #1 and Attachment B.

Program Management			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
8	Legal Authority – Prohibit and Eliminate Non-Stormwater Discharges	E.6.a(ii)(a)&(b) [page 19] & F.5.a.1.(ii) (a) & (b) [page 78]	This section requires the Permittee to have adequate legal authority to prohibit and eliminate non-stormwater discharges to the MS4. It also requires the Permittee to prohibit and eliminate illicit discharges and illegal connections to the MS4. Eliminating all non-stormwater discharges and illegal connections may not be possible. *CASQA Recommendation* *Recommend striking "eliminate" as follows:* *Prohibit ~~and eliminate~~ non-stormwater discharges to the MS4.*
9	Legal Authority – Industrial and Commercial Facilities	E.6.a(ii)(f) [page 20]	*CASQA Recommendation* *Delete "industrial and commercial facilities" from this requirement as it is a relic from previous iterations of the draft permit.*
10	Legal Authority – Compliance Information	E.6.a.(ii)(g) [page 20]	This section requires the Permittee to have the legal authority to obtain "information pursuant to local development policy or public health regulations, and other information deemed necessary to assess compliance with this Order." This requirement as written is open-ended and could have broad implications. *CASQA Recommendation* *The intent of this requirement is unclear – as currently written, it is difficult to determine what the expectation of this requirement. Please clarify.*

Program Management			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
11	Legal Authority – Private Property Entry	E.6.a.(ii)(h) [page 20]	Authority to enter private property to inspect for active or potential stormwater discharges on various types of property such as commercial, industrial, and residential is required by this section. Entry to private property usually requires a property owner to grant consent. Without consent, an inspection warrant is necessary which cannot be granted by this ordinance. *CASQA Recommendation* ~~*Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential storm water discharges, or non-compliance with local ordinances/standards or requirements in this Order.*~~ *Grant the right-of-entry to private property for inspections with the understanding that further legal remedies outside the purview of the Permittee may need to be obtained. The Permittee shall pursue these remedies from the court system, as necessary.*
12	Legal Authority – Enforcement Response Plan Reference	E.6.a.(ii)(k) [page 21]	The reference to Section E.4.c is incorrect. We believe this should be E.6.c.
13	Certification – Modification	E.6.b.(i) [page 21]	The Reporting section (ii) requires the certification be signed by "...both the Permittee's legal counsel and an authorized signatory." The Task Description (i) only indicates one signature is required. *CASQA Recommendation* *Revise the first sentence of (iii) to delete the requirement for the annual report to also be signed by legal counsel.*

Program Management			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
14	Legal Authority – Certification	E.6.b.(ii) a [page 21]	This section requires certification of an organizational chart of the jurisdiction, designation of all key personnel, and their contact information and responsibilities. This task will be time consuming and require very frequent revisions to keep up-to-date. *CASQA Recommendation* *Revise to reduce the level of detail required as follows:* *…and an up-to-date organizational chart specifying these departments~~,~~ and contact information.*
15	Legal Authority – Certification Timing	E.6.B [page 21]	The certification is required within the first year of the online Annual Report. However, the certification requirements must include a description of enforcement actions such as administrative orders. This requirement is not consistent with the Enforcement Response Plan Report which is required by year 3. It may not be feasible for a new designee to certify that enforcement mechanisms are in place prior to finishing the Enforcement Response Plan. *CASQA Recommendation* *Change the signed certification deadline from "first year" to "third year".*

Program Management			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
16	Legal Authority – NPDES Permit Referrals	E.6.c.(ii) d [page 22]	This section requires Permittees to refer Industrial General Permit and Construction General Permit non-filers to the appropriate Regional Board. Please include the State web address utilized to submit non-filer information. This section also requires the Permittee to follow a prescriptive progressive enforcement process in relationship to the violations at construction projects or industrial facility locations and to report very specific information to the Regional Boards regarding these sites. Permittees will not inspect industrial facilities. Permittees will only interface with industrial facilities on a complaint basis for illicit discharges and not routine inspection. This process will be very resource intensive for the Permittee and somewhat redundant with already existing State programs. *CASQA Recommendation* *Provide state web address to submit non-filer information* *Clarify that the Permittees' role with respect to the IGP and CGP is to follow a progressive enforcement policy when illicit discharges occur from an IGP facility or site regulated under the CGP, but the provisions of the IGP and CGP are enforced by the State.*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
17	General – Definitions	E.7	There are many references to "changing behavior", "increasing awareness" or "increasing knowledge". *CASQA Recommendation* *Please define terms such as changing behavior, knowledge, awareness, etc. and either specify how changes in knowledge, behavior, awareness are measured and demonstrated, or specify the Permittee has the authority to establish this criteria.*
18	Community Based Social Marketing (CBSM) – Determination Process	E.7 [page 24]	The Regional Board will determine, on a case-by-case basis, whether a permittee will have to implement "Community-Based Social Marketing" requirements. These are complex and would likely require a consultant to develop and help with implementing. The basis for making such a determination by the Regional Board will be is not clear. *CASQA Recommendation* *Describe the determination process so permittees will be able to anticipate whether or not these requirements will be applied to them.*
19	Collaborative Options – Reporting	E.7.a.(i), (ii), and (iv) [page 24] & F.5.j.4. [page 107]	The requirement in E.16.c that Permittees involved in regional programs are mandated to report ALL aspects of the permit collectively does not allow enough flexibility. As written, this requirement would be too cumbersome and burdensome and is perceived to far outweigh any benefits garnered from shared programming. This reporting provision would act as a deterrent to the formation of new or maintenance of existing regional groups. *CASQA Recommendation* *Modify language to allow Permittees to select whether or not they report as a group or individually.*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
20	Targeted Communities and. Target Audiences – Clarification	E.7.a.(i) [page 24]	*CASQA Recommendation* *Please define "targeted communities" and "target audiences" to clarify if they are intended to be the same or are somehow different. Please provide examples of how Permittees determine targeted communities and target audiences.*
21	Public Education and Outreach – Formatting and Numbering	E.7.a [page 24]	*CASQA Recommendation* *Please correct outline numbering so that the Options (i), (ii), and (iii) can be easily referenced and distinguished from (i) Task Description, (ii) Implementation Level, and (iii) Reporting.*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
22	Task Description – Changing Behavior	E.7.a(ii) and the second (i) (format off in this section - there are two (i)s) [page 24] & F.5.b.2.(i) [page 80]	The order requires the Permittee to implement a "storm water Public Outreach and Education program" that shall measurably increase the knowledge and awareness of the target audiences. A Permittee must also determine how to facilitate behavior changes. Measuring and demonstrating an increase in awareness and change in behavior is not always a good indicator of the success of a program. For example, Monterey Regional has been educating different sectors for over five years. As a result, it is difficult to show significant changes in awareness and behavior since target populations have been exposed to messaging for quite some time. As some of the experienced existing traditional Permittees have found, measuring the efficacy of education and outreach programs has been quite difficult and measuring an increase in improved behavior is not always feasible. Additionally, the language as currently worded, makes the Permittee responsible for behavior changes. The Permittee cannot be held accountable for industries and audiences that are not receptive to outreach and education programs. Behavioral changes take years (often 10 – 20) to occur. For example, recycling has taken over 20 years to get to where it is now. *CASQA Recommendation* *Rewrite section to read: "Permittee will measure the effectiveness of the Public Outreach and Education program with the goal being increased knowledge and ultimately changed behavior."*
23	Surveys – Modification	E.7.a.(ii).b [page 25] & F.5.b.2.(ii) [page 80]	*CASQA Recommendation* *Specify the 'target audiences" are determined by the Permittee.*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
24	Multiple Language Levels – Modification	E.7.a.(ii)(d) [page 25] & F.5.b.2.(ii)(d) [page 81]	Permittees are required to "develop and disseminate appropriate educational materials in multiple languages when appropriate". There should either be a specific population threshold defined, or authority for this determination should be given to the Permittee. The word "develop" should be deleted, as many agencies will use material developed by others. *CASQA Recommendation* *Recommended language: "Disseminate educational materials to target audiences, and in applicable multiple languages, as determined by Permittee".*
25	School-Aged Children Outreach – Clarification	E.7.a(ii)(j) [page 25] & F.5.b.2.(ii)(j) [page 81]	The provision requires the Permittee to conduct stormwater education to school-age children. Permittees may use California's Education Initiative Curriculum or equivalent. California's Education Initiative Curriculum (CEIC) has not been adopted by districts or teachers statewide and may not be implementable. Additionally, none of the 85 modules of the CEIC program contain any information related to stormwater pollution prevention or urban runoff. *CASQA Recommendations* *Sentence should read: "Make available storm water education for school-age children."* *Please clarify: Does the requirement include private schools? What ages are considered "school-age" children?* *By equivalent do you mean the California Science Standards? Since the CEIC does not contain stormw3ater information, the State may want to re-evaluate this as an option.*
26	Car Washes – Modification	E.7.a(ii)(k) [page 26]	Charity car washes, mobile cleaning and pressure washing operations and irrigation activities are not always known to the Permittee. This makes it very difficult for a Permittee to measure a reduction. *CASQA Recommendation* *Sentence should read: "Develop (or coordinate with existing programs) and convey outreach messages specific to reducing discharges from charity car washes…"*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
27	Reporting – Clarification	E.7.a(iii) [page 26] & F.5.b.2.(iii) [page 82]	This section states to "annually report number of trainings…." Who gets training and what training? What studies and results are being reported on? This section indicates education of "elementary" children; is this same as "school-age"? *CASQA Recommendation* *Delete "training" from the Annual Reporting requirements as education and outreach of target audiences does not necessarily result in a formal training.* *Suggest the word "study" be replaced with the word "survey".* *Replace "elementary" children with "school-age" children for consistency.*
28	Construction Outreach and Education – Training Requirements	E.7.b.2.a. (ii) [page 27]	The Permit requires Permittee staff to have training including Qualified SWPPP Developer (QSD) or Qualified SWPPP Practitioner (QSP) certifications for staff members involved in reviewing development Plans and/or inspecting sites. This was not previously required unless the development projects were > one acre in size. The cost and effort associated with having Permittee staff members obtain and maintain these certifications is not warranted, if those staff members are only reviewing and/or inspecting small projects such as single family residential construction or remodeling, small additions, or remodels of commercial establishments. *CASQA Recommendation* *These certification requirements should only be applicable to staff members involved in reviewing and/or inspecting projects that are > one acre in size.* *Recommend staff reviewing plans on small projects be QSD trained, but do not necessarily need to have the underlying certification for full-certification, especially if they work under the direction of a fully certified individual.*
29	Construction Site Operator Education – Website	E.7.b.2.b.(ii).(d) [page 28]	*CASQA Recommendation* *Change language under reporting to say "Update Permittee's website, <u>as necessary</u>, to include…."*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
30	Construction Site Operator Education – Reporting	E.7.b.2.b (ii) and (iii) [page 28]	According to this section a Permittee can "provide information" on training opportunities. However, the reporting section seems to indicate the Permittee has to conduct the training. It should not be the responsibility of Permittees to educate the construction contractor community. Providing contractors with information regarding training that is being held in the area and providing information on a website should suffice. Getting training should be the responsibility of the contractor or engineer, not the Permittee. *CASQA Recommendation* *Modify language to align with requirements:* *…complete and submit a report including the following information:* ~~*(a) Training topics covered;*~~ ~~*(b) Dates of training;*~~ ~~*(c) Number and percentage of Permittee's operators, inspectors, and number of contractors attending each training;*~~ ~~*(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.*~~ *(a) list of training opportunities shared with construction operators* *(b) outreach materials provided to construction operators* *(c) website modifications, if any, made to address information on BMPs.*
31	Good Housekeeping – Staff Training Frequency	E.7.b.3 (i) and (ii) [pages 28-29] & F.5.b.4.(i) & (ii) [page 83]	This section is unclear as to the training frequencies required. The Task Description indicates training every two years (biennial) with evaluations in the alternate years, and the Implementation section indicates annual training with annual assessments of staff. *CASQA Recommendation* *Recommend training frequencies in the "Implementation Level" be changed from "annual" to "biennial" for consistency with the Task Description and as annual training is too frequent.*

Education and Outreach			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
32	Reporting – Clarification	E.7.b.3 [page 29] & F.5.b.4.(ii) & (iii) [page 83]	This section states that the annual report is to include "oversight procedures." *CASQA Recommendation* *Please clarify the intent of this language.*

Public Involvement			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
33	Public Involvement Implementation Level – Modification	E.8.(ii)(a) [page 29]	The requirement to submit information on "who" is responsible for specific tasks and goals appears redundant to what is already required under the Certification requirements E.6.b(ii)(a) that requires information on staff roles and responsibilities. It is unclear why the Permittee must establish a "budget" for this element. *CASQA Recommendation* *Limit E.8.(ii)(a) to development of a public involvement and participation strategy but do not specify what must be included within it.* *If the word "budget" is not referring to establishing specific funding for this effort, delete that requirement. If the word "budget" is meaning "allowances or timeline" then please use a different word to be clear this is not a monetary requirement.*

IDDE			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
34	General	E.9 [page 30] & F.5.d. [page 84]	During conversations with State Water Board staff, they indicated that an annual outfall walk was required. If an annual or permit term walk of all outfalls is intended, this is not clearly stated in the draft permit. *CASQA Recommendation* *This version of the IDDE provision includes an industrial/ commercial inventory that was not included in the most recent administrative draft that was shared with a limited stakeholder group. The addition of the Commercial/Industrial inventory plus the potential addition of a walk of all outfalls, presents a significant change and increased demand on limited Permittee resources. CASQA requests that the IDDE section remain largely as is except as noted in the comments below. If the State's intent is for the Permittee to walk down all of their outfalls in year 1 and sample those that are flowing >72 hours after the last storm event then that needs to be clearly stated.*
35	Outfall Mapping – Flexibility	E.9.a. [page 30] & F.5.d.(ii) [page 84]	Development of an outfall map was required with first permit term. This provision requires that an outfall map include, among other things, coordinates and photographs. *CASQA Recommendation* *Allow a database or photographs of outfalls to reduce redundant work for existing Permittees who already have a up-to-date outfall map in place. A database is searchable and parameters used are measurable. Databases can provide a better baseline than photos.*

IDDE			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
36	Outfall Mapping – Field Sampling Station	E.9.a.(ii)(d) [page 31]	It is not clear what is meant by "field sampling station". Does this mean a permanent flowmeter and shed needs to be implemented or just designation of sampling site? *CASQA Recommendation* *Recommend a minimum outfall size limit of 18" or greater be utilized for field sampling stations.*
37	Illicit Discharge Source/Facility Inventory – Reporting Consistency	E.9.b.(i) [page 31]	The Task Description specifies that the Permittee maintain an inventory in the second year but the Reporting section (iii) states by year three. *CASQA Recommendation* *Revise the Task Description to allow for maintaining the inventory in the third year.*
38	Illicit Discharge Source/Facility Inventory – Storm Drain Location Modification	E.9.b.(ii)(a) [page 31]	The requirement for the inclusion of the physical location of a storm drain receiving discharge from an industrial or commercial facility is very onerous as there may be multiple locations where discharge from these facilities occurs and it may require site visits in order to verify/determine. This information should be required of industrial permittees in their industrial permits and should not be required as part of a desktop inventory. *CASQA Recommendation* *Modify language as follows:* *"Physical location (decimal latitude-longitude) of storm drain receiving discharge, if available."*

IDDE			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
39	Illicit Discharge Source/Facility Inventory – Clarification	E.9.b.(ii)(c) [page 32]	This element requires "The Permittee shall determine if the facilities that are required to be covered under a NPDES storm water permit have done so." As simply interpreted this requires Permittees to *actively* contact all facilities within the inventory to make this determination. It is our understanding this is not the intent of this item. Rather if in the course of a municipal inspection or IDDE investigation staff are made aware that a facility should be but is not permitted then the Permittee is obligated to notify the Regional Board. *CASQA Recommendation* *Please clarify this section by making the following modifications:* ~~*The Permittee shall determine if the facilities that are required to be covered under a NPDES storm water permit have done so.*~~ *Upon discovering any facilities requiring permit coverage but are not yet permitted during outfall inventories and/or IDDE investigations, the Permittee shall notify the appropriate Regional Water Board, and include copies of the notification in the online Annual Report.*
40	Illicit Discharge Source/Facility Inventory – Delete Inspection Reference	E.9.b.(ii)(d) [page 32]	This item requires a Permittee update the facility inventory annually through "collection of new information obtained during inspections". During stakeholder meetings with the State, the State agreed to remove inspections of industrial and commercial facilities and yet this item implies those are still required. *CASQA Recommendation* *Remove reference to inspections:* *The update shall be accomplished through collection of new information obtained during* ~~*inspections and*~~ *contacts with commercial and industrial facility…*

IDDE			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
41	Field Sampling – Clarification	E.9.c.(i) [page 32] & F.5.d.1. [page 85]	The Task Description indicates that priority area outfalls shall be sampled annually. When? During dry weather only? All outfalls or just outfalls 18" or greater? *CASQA Recommendation* *Modify language as follows:* *The Permittee shall also sample outfalls in priority areas that are >18" in diameter and are flowing more than 72 hours after the last rain event annually ~~identified as priority areas~~.*
42	Field Sampling – Modification	E.9.c.(ii)(a) [page 32] & F.5.d.1.(ii)(a) [page 85]	This sections states that the Permittee is required to conduct monitoring for source tracking. Are these the parameters that are required to be sampled during the once/permit term outfall walk down? *CASQA Recommendation* *Modify language to indicate that the Permittee has flexibility around what parameters to sample for based on local knowledge of pollutants of concern that may vary from those indicated in Table 1.* *At a minimum, surfactants and fluoride should be removed from the table as they cannot be determined via field test kits (and are therefore not included in Table 2). These constituents require laboratory analysis which goes beyond the intent of this section which has a focus on quick field test identification.*
43	Field Sampling – Clarification	E.9.c.(ii)(c) [page 33] & F.5.d.1.(ii)(a) [page 86]	What happens if the exceedances of action levels on outfall monitoring are due to discharges coming into a Permittee's jurisdiction (i.e. agriculture)? The Permittee has no jurisdictional authority to resolve the exceedances. *CASQA Recommendation* *Add language that clarifies that if the source of an illicit discharge or connection is outside of the MS4 (e.g., an agricultural area), that the Permittee should forward the information to the appropriate responsible party.*

IDDE			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
44	Field Sampling – Source for Table 2 and Clarification	E.9.c(ii)(b) [page 33]	Where did the Table 2 Action levels come from? *CASQA Recommendation* *Please provide a source for Table 2 Action Levels.* *Also specify that these results are intended to be compared against field test kit results (vs. laboratory analysis). If field test kits cannot test to these action levels, then guidance should be provided of the table revised to adjust to field kit levels of accuracy.*
45	IDDE Source Investigation – Timeline	E.9.d.(i) [page 33] & F.5.d.2.(i) [page 86]	When are the written procedures required to be in place? *CASQA Recommendation* *Require written procedures by year 3.*

Construction			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
46	Definition of Project	E.10	*Most Traditional Permittees track basic information of State storm water permitted construction projects over one acre or under one acre if part of a larger project. This draft now requires the tracking, inspection and reporting of **all projects** less than one acre as described by Ordinance regardless of scope.* *CASQA Recommendation* *Define "all projects." Permittees should only be required to track, inspect, and report on construction projects that could potentially discharge pollutants from construction sites including projects less than one acre (which are subject to local ordinance). All other construction projects, as defined by the Permittee via ordinance, which are not a threat to receiving waters, should be excluded from the program.*
47	Terminology – Consistency	E.10 throughout	The terms Construction Site Storm Water Runoff Control Ordinance and Erosion and Sediment Control Ordinance seem to be used interchangeably. Is the intent of the permit to have both or are multiple terms being used to present one item? *CASQA Recommendation* *Only use the term Construction Site Storm Water Runoff Control Ordinance as it is all encompassing.*
48	Construction Site Inventory – Clarification	E.10.a [page 35]	Inventory has to have a starting point, and it would be easier for Permittees to have that starting point defined. *CASQA Recommendation* *For small Permittee's that do not currently have an ordinance or for Permittees who choose to use the same 1 acre requirement as the CGP, the permit should state that until such time as an ordinance is in place the CGP database will function as the inventory for that jurisdiction.*

Construction			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
49	Construction Site Inventory – Clarification	E.10.a. (ii)(d) [page 36]	Project threat to water quality is too vague. Define threat with respect to risk level analysis or other method to be considered. *CASQA Recommendations* *Limit this inventory item to CGP projects and define project threat to water quality as defined by the Risk/Type level characterization per the CGP.*
50	Construction Site Inventory – Clarification	E.10.a. (ii)(e) [page 36]	Provision states, "Current construction phase, as described in this Section." There does not appear to be a description of current construction phase within the Section. *CASQA Recommendations* *Describe "current construction phase" or delete item. An option for describing "current construction phase":* *Four construction phases are currently described in the Construction General Permit, (Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase). Reference to these phases seems appropriate.*
51	Construction Site Inventory – Modification	E.10.a. (ii) (f) [page 36]	Most if not all Permittees' Stormwater Ordinances do not have an inspection frequency component. *CASQA Recommendation* *Defer the reporting requirement to the second year of the effective date of the permit in order to allow Permittees sufficient time to identify inspection frequencies and update ordinances accordingly.*

Construction			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
52	Construction Plan Review and Approval Procedures	E.10.b(ii)(b) [page 36]	The erosion and sediment control plan would include the rationale, selection, and identification of preferred BMPs for the proposed project. No benefit would be achieved for including rejected BMPs not planned for use. *CASQA Recommendation* *Do not require QSDs to include unnecessary submittal data ("rejected BMPs") with his/her SWPPP that would be considered irrelevant to the design of the SWPPP. This would only increase expenditures to project budgets without foreseeable benefit. Modify as follows: "Require that the erosion and sediment control plan include the rationale used for selecting ~~or rejecting~~ BMPs, including supporting soil loss calculations, if necessary."*
53	Construction Site Inspection and Enforcement – Public Construction Project Definition	E.10.c.(i) [page 37]	Define "public construction project." Both competitive bid and service agreement projects use public funds, thus typically defined as "public construction projects". Competitive bid projects are larger in nature (over one acre) and include provisions for contractor reimbursement for BMPs during construction. However, the majority of smaller type service agreement projects, (less than one acre), do not involve stormwater issues and shouldn't be included in site inspection and enforcement requirements. A clear and descriptive definition is needed. *CASQA Recommendation* *Define public construction project and clarify that public construction projects less than one acre that do not involve stormwater issues are exempt. Annual reporting of these type projects (<1ac with no stormwater issues) should be excluded as well.*
54	Construction Site Inspection and Enforcement – Inspection Frequencies	E.10.c(ii) [page 37]	CASQA appreciates the replacement of arbitrary minimum inspection frequencies with minimum inspections at milestones based on the Permittee's local ordinances or via a program approved by the Regional Water Board Executive Officer. *CASQA Recommendation* *none*

Construction			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
55	Construction Site Inspection and Enforcement – Reporting Modification	E.10.c.(iii)(f) [page 37]	The number of sites with discharges of sediment or other construction related materials, both actual and those inferred through evidence, is not directly be representative of actual occurrences as defined above in E10.c.ii. Reporting by inferred occurrences would not generate useful and/or accurate data which would lead to subjective interpretation, should State legal representatives utilize for potential litigation purposes. *CASQA Recommendation* Eliminate requirement to report number of sites with discharges of sediment "inferred through evidence." Modify as follows: "Number of sites with discharges of sediment or other construction related materials~~, both actual and those inferred through evidence~~."

Pollution Prevention/Good Housekeeping			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
56	Facility Assessment – Timeline Conflict	E.11.c.(ii) [pages 39-40] & F.5.f.3.(ii) [page 88]	The requirement to annually assess facilities conflicts with time frames described in E.11.e in which non-hotspots require inspections 1 time per permit term. Also, the traditional section requires a comprehensive hotspot review annually, with non-traditional required quarterly. The non-traditional section also has the same facility assessment time frame conflict as stated above. *CASQA Recommendation* *Change facility assessment to one time per permit term.*
57	Storm Water Pollution Prevention Plans – Acknowledge Existing BMPs	E.11.d.(ii)(a) [page 40] & F.5.f.4.(ii)(a) [page 89]	Include identification of existing BMPs. BMPs may include existing infrastructure and/or management practices. Not all sites will need additional BMPs. *CASQA Recommendation* *"The Permittee shall develop and implement a site-specific SWPPP that identifies existing BMPs and a set of storm water BMPs to be installed, implemented, and maintained, as needed…"*
58	Storm Water Pollution Prevention Plans – Acknowledge Existing BMPs	E.11.d.(ii)(c) [page 40] & F.5.f.4.(ii)(c) [page 89]	*CASQA Recommendation* *to #4 add "…and existing BMPs identified". To #7 add "Existing BMPs, proposed BMPs, if necessary"*
59	Inspections, Visual Monitoring and Remedial Action – Inspection Frequency	E.11.e.(ii)(b) [page 41]	*CASQA Recommendation* *Allow annual inspections to count as one of the required quarterly inspections provided the quarterly inspection requirements are also met.*

Pollution Prevention/Good Housekeeping			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
60	Inspections, Visual Monitoring and Remedial Action – Inspection Records	E.11.e.(ii)(a) - (c) [page 41] & F.5.f.5.(ii)(a)-(c) [page 90]	Permit language should allow records to be kept electronically as paper is inefficient and wasteful. *CASQA Recommendation* *Please insert permit language to allow electronic keeping of inspection records.*
61	Permittee O&M – Inspection Frequency	E.11.h.(i-ii) [page 44] & F.5.f.8.(i) [page 92]	E.11.h.i states all O&M BMPs are to be inspected quarterly, while E.11.h.ii.d states annually. *CASQA Recommendation* *Modify Task Description to align with the Implementation Level:* *Within the third year of the effective date of the permit, the Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all O&M BMPs on ~~a quarterly~~ an annual basis.*
62	Permittee O&M – Clarification	E.11.h.(iii)(d) [pages 44-45] & F.5.f.8.(iii) [page 92]	It is unclear what is meant by documentation of high priority designated facilities for this section as it is for O&M activities and these are not classified as facilities or low/medium/and high priority. *CASQA Recommendation* *Suggest removing this item from reporting requirements.*

Pollution Prevention/Good Housekeeping			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
63	Landscape Design and Maintenance Implementation – Modification	E.11.j.(ii)(b)(2)(h) [page 46] & F.5.f.9.(ii)(b)(2)e) [page 93]	This requirement prohibits the "application of pesticides, herbicides and fertilizers within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body." This may not be feasible, beneficial or practical for several reasons: 1. Some turf areas have storm drain inlets in them or the turf area is adjacent to a sidewalk or pathway. Prohibiting fertilizer would decrease the health of the turf causing uneven footing that could cause a tripping hazard, or cause exposed soil areas that would be susceptible to erosion. 2. Proper fertilization (that incorporates water quality considerations) reduces the need for herbicides and is part of some IPM programs. 3. Municipalities with strong IPM programs should be allowed to prioritize their program as needed. A parks department may be able to reduce overall fertilizer and pesticide use by converting turf to native grasses/plants, however, some flexibility is needed for municipalities to properly manage some turf areas. *CASQA Recommendation* *Change this provision to a recommendation instead of a prohibition.*
64	Landscape Design and Maintenance – Drought Resistant Soils Modification	E11.j(ii)(b((2)a and b [page 45]	The requirement for agencies to create drought resistant soils and to create microbial this will significantly increase on-going maintenance costs to ensure there are sufficient compost layers to be effective. The language does not indicate when this is to be done. Is this for new and/or existing landscaping areas? *CASQA Recommendation* *Remove requirement a) and b) from this section*.

Pollution Prevention/Good Housekeeping			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
65	Landscape Design and Maintenance – Use of native plants	E11.j(ii)(b((2)c [page 45]	Native plants are not always the best choice depending on site conditions. There is a larger variety of plants that are water-conserving and have a longer life. Further agencies are implementing their Water Efficient Landscape Ordinance which should address water savings needs. *CASQA Recommendation* *Remove requirement to use native plants. Allow agencies to use the Water Efficient Landscape Ordinance (WELO) as direction.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
66	General Post-Construction Comment – see CASQA Comment Letter Attachment C	Throughout E.12	Due to the number of recommended formatting, reorganizational, and technical edits for this provision, a track changes version of this provision is provided in **Attachment C**. Please see Attachment C to better understand how these changes come together in one document. Note that Attachment C goes through E.12.f and does not cover all of the Post-Construction Provision language or CASQA's recommendations related to this section.
67	General Comment –Reorganization	Throughout E.12 and F.5.g	Reorganize outline levels, provide consistent outline content, adjust schedules / timing *CASQA Recommendation* *Specific suggestions provided below.*
68	General Comment – Implementation Schedule	Throughout E.12 and F.5.g	Allow enough time for Permittees to 1) analyze, change, and adopt ordinances and policies to give them authority to require projects to implement the permit provisions; 2) develop guidance and standards; and 3) provide education and outreach to municipal staff and the development community. *CASQA Recommendation* *Coordinate implementation schedules for the small project site design measures, reduced Regulated Project thresholds, LID standards and Hydromodification Management standards with the schedule for Enforceable Mechanisms.*
69	General Comment – Application of previous Phase II permit requirements	E.12.a and F.5.g	It is not clear what stormwater treatment measures are required during Year 1 and Year 2 before Provisions E.12.b-E.12.e take effect. *CASQA Recommendation* *The permit should explicitly state that the requirements of the previous Phase II permit (e.g. Attachment 4 and other provisions) apply until the new requirements take effect.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
70	Post-Construction and Hydromodification Measures – Edits for Clarity	E.12.a and E.12.b. [page 46-47]	Combine E.12.a and E.12.b for clarity. Remove reference to Timing and Reporting because these vary by requirement and are defined later in the text. Consider removing this introductory summary of requirements altogether, since it adds nothing to permit. *CASQA Recommendation* *Modify language as follows:* *Remove reference to E.12.f implementation because that is role for State and Regional Water Boards. Move hydromod requirements from E.12.b to E.12.f.* ***E.12.a Post-Construction ~~Treatment~~ Measures*** *All Permittees shall regulate development to ~~implement~~ ~~post-construction treatment measures for new and redevelopment projects and~~ comply with the following Sections:* *E.12.b~~c~~ Site Design Measures* *E.12.c Regulated Projects* *E.12.d ~~Low Impact Development~~ Source Control Measures* *E.12.d~~e~~ Low Impact Development (LID) ~~Runoff~~ Design Standards* *E.12.e~~f~~ Hydromodification Management* *E.12.f~~g~~ Implementation Strategy for Watershed Process Management* *E.12.h. Enforceable Mechanisms* *E.12.g~~i~~ Operation and Maintenance of ~~Post Construction~~ Storm Water Control ~~Management~~ Measures* *E.12.h~~j~~ Post-Construction Storm Water Management Measure Condition Assessment* *E.12.i~~k~~ Planning and Building Document Updates* *~~Reporting – By the third year Annual Report, all Permittees shall complete and have available an inventory of projects subject to post-construction treatment measures for new and redevelopment projects.~~*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
70, cont.			~~*E.12.b. Hydromodification Measures*~~ ~~*All Permittees shall implement post-construction hydromodification measures and comply with the following Sections:*~~ ~~*E.12.e Hydromodification Management 14*~~ ~~*E.12.f Implementation Strategy for Watershed Process-Based Storm Water Management*~~ ~~*E.12.g Operation and Maintenance of Post Construction Storm Water Management Measures*~~ ~~*E.12.h Post-Construction Storm Water Management Measure Condition Assessment Reporting -*~~ ~~*1. Permittees located within a Phase I MS4 permit boundary with a Regional Water Board approved Hydromodification Plan shall complete and have available a summary report in the year one Annual Report describing the strategies to implement and coordinate with the surrounding Phase I MS4 Permittee Hydromodification Plan. In subsequent Annual Reports, the Permittee shall complete and have available an inventory of projects subject to the surrounding Phase I MS4 Hydromodification Plan requirements.*~~ ~~*2. By the third year Annual Report, Permittees located within a Phase I MS4 permit boundary without a Regional Water Board approved Hydromodification Plan or where a plan does not exist shall have available an inventory of the projects subject to Section E.12.e.*~~ ~~*3. By the third year Annual Report, Permittees not located within a Phase I MS4 permit boundary area shall have available an inventory of the projects subject to Section E.12.e.surrounding Phase I MS4 Hydromodification Plan requirements.*~~ ~~*2. By the third year Annual Report, Permittees located within a Phase I MS4 permit boundary without a Regional Water Board approved Hydromodification Plan or where a plan does not exist shall have available an inventory of the projects subject to Section E.12.e.*~~ ~~*3. By the third year Annual Report, Permittees not located within a Phase I MS4 permit boundary area shall have available an inventory of the projects subject to Section E.12.e.*~~

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
71	Site Design Measures –Clarification	E.12.c.(i) [page 47]	Site Design Measures should follow same schedule as LID and align with Planning and Building updates. Residential projects of any size greater than 2,500 sf should follow Site Design Measures, whereas other projects > 5,000 sf will address Source Control and Site Design as defined in E.12.d.2. *CASQA Recommendation* *Modify language as follows:* *Task Description – ~~Within the first year of the effective of the permit,~~ By Year 3, the Permittee shall ~~implement~~ require implementation of site design measures on ~~for~~ all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet ~~or more~~ of impervious surface, ~~including~~ and detached single family homes that are 2,500 square feet or more and ~~that are~~ not part of a larger plan of development.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
72	Maximum Extent Technically Feasible – Delete	E.12.c(ii) & E.12.d.2(ii)(2) [pages 48 & 52] F.5.g.1.(ii) & F.5.g.2.(ii)(2) [pages 95 & 96]	Delete METF for small projects' site design measures. METF creates uncertainty since these measures have no numeric criteria to determine if METF threshold is met. Additional edits to the site design list are provided below. Treatment BMPs such as green roofs and vegetated swales should not be listed as site design BMPs. *CASQA Recommendation* *Modify language as follows:* *(ii) Implementation Level - ~~The Permittee shall implement the following site design measures for all projects that create and/or replace 2,500 square feet or more of impervious surface, including detached single family homes that are not part of a larger plan of development.~~ Regulated Projects may implement one or a combination of the following site design measures to reduce project site runoff ~~to the maximum extent technically feasible~~:* *(a) Follow development ~~Stream~~ setbacks and buffers* *(b) Amend soils ~~Soil Quality Improvement and Maintenance~~* *(c) Protect and replace trees and native vegetation ~~Tree planting and preservation~~* *(d) Direct rooftop runoff onto vegetated areas ~~and Impervious Area Disconnection~~* *(e) Direct runoff from walkways, driveways, patios, and uncovered parking areas onto vegetated areas* *(f) Construct walkways, driveways, patios, and uncovered parking areas with permeable paving surfaces~~Porous Pavement~~* *(g) Direct roof runoff into rain barrels and cisterns* *(h) Other design measures that are approved as effective means of reducing site runoff.* *~~(f) Green Roofs~~* *~~(g) Vegetated Swales~~*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
73	Regulated Projects – Header Edit	E.12.d.1 [page 48]	Change header and delete subheader that's repeated below. *CASQA Recommendation* *Modify language as follows:* *E.12.~~d.1~~c ~~Low Impact~~ Regulated Projects ~~Development Runoff Standards~~* *~~E.12.d.1. Regulated Projects~~*
74	Regulated Projects – Reorganization	E.12.d.1(i) [page 48]	Move details on Implementation Level and Reporting to those appropriate sections. *CASQA Recommendation* *Modify language as follows:* *Task Description – The Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from development projects as defined below. ~~Within the second year of the effective of the permit, the Permittee shall regulate projects that create and/or replace (no net increase in impervious surface) 5,000 square feet or more of impervious surface for low impact development runoff standards.~~*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
75	Regulated Projects – Modification	E.12.d.1.(ii) [pages 48 - 49]	The current provision does not differentiate between projects that create or replace 5,000 sf impervious and those that are "Regulated Projects." Listing individual "Regulated Projects" types may imply that other types of projects are not be regulated (winery, school, clinic, greenhouse, etc.). It is particularly unclear why industrial is listed, but not commercial. *CASQA Recommendation* *Delete different project type listings. Recommend making Regulated Projects all those that are ≥5,000 sf impervious.* *(ii) Implementation Level – By Year 3, the Permittee shall regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface. The permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.* *(a) Regulated Projects do not include:* ~~*Regulated projects as they are defined below do not include the following specific exclusions:*~~ *(1) Detached single family home projects that are not part of a larger plan of development;* *(2) Interior remodels;* *(3) Routine maintenance or repair such as: exterior wall surface replacement, pavement resurfacing within the existing footprint.* ~~*Regulated Project Categories include the following:*~~ ~~*(a) New Development or redevelopment projects that fall into one of the categories listed below and that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site). This category*~~ *Development includes new and redevelopment projects* ~~*of the following types*~~ *on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred.* ~~*This category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.*~~

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
75, cont.			~~*(i) Restaurants (SIC 5812);*~~ ~~*(ii) Automotive Repair Shops (SIC 5013,5014, 5541, 7532 – 7534,7536-7539);*~~ ~~*(iii) Retail Gasoline Outlets;*~~ ~~*(iv) Uncovered parking that is stand-alone or part of any other development project. This category includes the top uncovered portion of parking structures unless drainage from the uncovered portion is connected to the sanitary sewer along with the covered portions of the parking structure;*~~ ~~*(v) Industrial projects;*~~ ~~*(vi) Residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments);*~~ ~~*(vii) Mixed-use projects, or*~~ ~~*(viii) Public projects.*~~
76	Redevelopment Projects – Modification	E.12.d.1(b) and (c) [page 49]	Delete "treatment" since these provisions refer to Site Design, Source Control, and LID. Include MEP to address conditions where measures cannot be applied at a redeveloped site. *CASQA Recommendation* *Make the following edits:* *(b) Where a redevelopment project* ~~*in the categories specified above*~~ *results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included* ~~*in the treatment system design*~~ *to the Maximum Extent Practicable.* *(c) Where a redevelopment project* ~~*in the categories specified above*~~ *results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included* ~~*in the treatment system design.*~~

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
77	Public Projects – Modification	E.12.d.(2) [page 49 & 50]	Not all "public" projects are under the authority of the Permittee. State, federal, Special Districts are public but not regulated by the Permittee under this Draft Order. *CASQA Recommendation* *Modify language as follows:* ~~*(d) The Permittee shall apply the low impact development runoff standards to all applicable projects, both private development requiring municipal permits and public projects.*~~ *And on page. 50:* *(2)* ~~*Public*~~ *Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the* ~~*most current version of the low impact*~~ *development runoff standards to applicable public development projects.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
78	Ministerial and Discretionary Project Applicability – Delete	E.12.d.(1)(d) [pages 49 & 50]	The draft language proposed is unnecessary as planning laws set the requirements for when project's development rights become "vested" or "grandfathered." Excerpting portions of planning law can place this Draft Order in conflict with future planning law as it changes over time. The trigger for when standards are applied to development projects is well established in Subdivision Map Act and State Planning Laws, rendering the ministerial vs. discretionary discussion irrelevant. *CASQA Recommendation* *Delete the following:* *~~(d) The Permittee shall apply the low impact development runoff standards to all applicable projects, both private development requiring municipal permits and public projects.~~* *(1) ~~Private Development Projects~~* *(i) ~~Discretionary Projects - If a project receives a vesting tentative map or development agreement, the Permittee shall require the project to adhere to the version of the low impact development runoff standards that is most current at the time of vesting tentative map or development agreement approval. The Permittee shall require all applicable development projects, which require discretionary approvals that do not receive a vesting tentative map or development agreement or which have an expired vesting tentative map or development agreement, to adhere to the version of the low impact development runoff standards that is most current at the time of each discretionary approval. Discretionary approvals include, but are not limited to, the following: general plan amendment, tract or parcel map, subdivision map, zoning change or rezoning, tentative map, conditional use permit, or other development approval.~~*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
78,cont.			~~*(ii) Ministerial Projects - The Permittee shall require all applicable projects, which do not require discretionary approvals, to adhere to the version of the low impact development runoff standards that is most current at the time the project application for the ministerial approval is complete. Ministerial approvals include, but are not limited to, building permits, site engineering improvements, and grading permits. If the applicable project receives multiple ministerial approvals, the Permittee shall require that project to adhere to the version of the low impact development runoff standards that is most current at the time the project application for the first ministerial approval is complete.*~~ ~~*(2) Public Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects.*~~

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
79	Effective Date – Add Language	E.12.d.(1)(d) [page 49]	Provide language to clarify the effective date. *CASQA Recommendation* *Add the following language:* *(d) Effective Date for Applicability of Low Impact Development Runoff Standards to Private and Public Development Projects* *By Year 3 of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects. These include discretionary permit projects that have not been deemed complete for processing, and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the third year of the effective date of this permit are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
80	Regulated Project Categories – Roads	E.12.d.1.e.2.(i & ii) [page 50]	This section states that an entire roadway project needs to be treated if the proposed improvements affect 50% of the impervious surface of the existing roadway, but allows no minimum amount of new roadway. A limit of 5,000 sf is recommended so that it is in the same category as "regulated projects" (see above). It is impractical to segregate street "sheds" since they have constant cross slopes for driver safety. Requiring treatment for all of the roadway when < 50% impermeable surface is added is not practical. Suggest treating an equivalent volume generated from the additional "new" pavement, but that can come from another portion of the full section roadway. *CASQA Recommendation* *These sections should by clarified to read,* *(1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads <u>which create 5,000 square feet or more of impermeable surface.</u>* *(2) (i) "Where the addition of traffic lanes results in an alteration of more than 50% of the impervious surface <u>(5,000 square feet or more)</u> of an existing street…."* *(2) (ii) "Where the addition of traffic lanes results in an alteration of less 50 percent <u>(but 5,000 square feet or more)</u> of the impervious surface of an existing street of road, only the runoff <u>equivalent</u> from the new impervious surface of the project must be included in the treatment system design. ~~However, if the runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system must be designed and sized to treat run off from the entire street of road~~……."*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
81	Low Impact Development Standards – Reorganization	E.12.d.2 [page 51]	Move Source Control up to a higher level under E.12.d and make LID Design Standards E.12.e. Move the DMA discussion to E.12.e.(ii)(b). *CASQA Recommendation* *Make the following modifications:* *E.12.d.2 Low Impact Development (LID) Design Standards* *(i) Task Description – The Permittee shall require all Regulated Projects to implement low impact development (LID) standards to effectively reduce runoff, treat stormwater, and provide baseline hydromodification management ~~from Regulated Projects.~~* *(ii) Implementation Level - The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve LID Design Standards. ~~objectives for runoff reduction, storm water treatment, and baseline hydromodification management~~. ~~The Permittee shall require each Regulated Project to provide a map or diagram dividing the entire project site into discrete Drainage Management Areas (DMAs), and to account for the drainage from each DMA. The Permittees shall (1) implement source controls and site design measures to the extent technically feasible to reduce the amount of runoff and (2) any remaining runoff from impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat runoff.~~*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
82	Source Control Requirements–Modifications	E.12.d.2 (ii) (1) [page 51 &52]	Source Control requirements should be at least as rigorous and effective as Attachment 4. At a minimum, provide reference to standard design measures such as those found in the CASQA BMP Handbook (e.g. fueling stations). *CASQA Recommendation* ***E.12.d. Source Control Measures*** *Task Description - Pollutant Source Control Requirements - –Regulated Projects with the following pollutant-generating activities and sources shall be required to implement standard permanent and/or operational source control measures as applicable.* *Implementation Level -Measures for the following activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual and include ~~BMPs shall be adopted and implemented to address the following pollutant sources,~~:* *(a) Accidental spills or leaks ~~and illicit discharges to on-site storm drain inlets.~~* *(b) Interior floor drains ~~and elevator shaft sump pumps~~* *(c) ~~Interior parking garages~~ Parking/ Storage area maintenance* *(d) ~~Indoor and structural pest control~~ Building and grounds maintenance* *~~(e) Landscape/outdoor pesticide use~~* *(e) Pools, spas, ponds, decorative fountains, and other water features maintenance* *(f) Restaurants, grocery stores, and other food service operations* *(g) Storage and handling of solid waste ~~Refuse areas (i) Industrial processes~~* *(h) Outdoor storage of equipment or materials* *(i) Vehicle and equipment cleaning* *(j) Vehicle and equipment repair and maintenance* *(k)Fuel dispensing areas* *(l) Loading docks* *(m) Fire sprinkler test water* *(n) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources* *(o)Unauthorized non-stormwater discharges*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
83	Site Assessment – New Language	E.12.d.2 (ii) [page 51]	*CASQA Recommendation:* *Provide guidance on conducting a site assessment to reflect the goals of LID. Add the following:* *(a) Site Assessment – At the earliest planning stages, the Permittee shall require Regulated Projects to assess and evaluate how site conditions, such as soils, vegetation, and flow paths, will influence the placement of buildings and paved surfaces. The evaluation will be used to meet the goals of capturing and treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing LID site assessment methodology such as the Low Impact Development Manual for Southern California (CASQA). Permittees shall require Regulated Projects to consider optimizing the site layout through the following methods:* • *Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.* • *Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.* • *Limit overall impervious coverage of the site with paving and roofs.* • *Set back development from creeks, wetlands, and riparian habitats.* • *Preserve significant trees.* • *Conform the site layout along natural landforms.* • *Avoid excessive grading and disturbance of vegetation and soils.* • *Replicate the site's natural drainage patterns.* • *Detain and retain runoff throughout the site.*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
84	Drainage Management Areas – Modification	E.12.d.2.(ii) [page 51]	For ease of use, modify the formatting such that the Drainage Management Area language becomes its own subheader under Site Assessment. *CASQA Recommendation* *Recommended language modifications:* *(b) Drainage Management Areas – The Permittee shall require each Regulated Project to provide a map or diagram dividing the entire developed portions of the project site into discrete Drainage Management Areas (DMAs), and to account for the drainage from each DMA using Site Design Measures, Source controls and/or Stormwater Treatment and Baseline Hydromodification Measures.*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
85	Site Design Measures – References	E.12.d.2(ii) [page 52]	Site design measures for projects > 5,000 sf should be designed with a higher level of site assessment and with design criteria for infiltrating the 85th percentile volume criteria, per treatment/baseline hydromod requirements. CASQA recommends deletion of this section with reference to the Site Design measures described earlier in the provision (E.12.b). *CASQA Recommendation* *Modify language as follows:* *(c) Site Design Measures - as defined in E.12.b. Implementation of Site Design Measures shall be based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event.* *(d) Source Controls - as defined in E.12.d* ~~*(2) Site Design Measures - The following site design measures shall be used to reduce the amount of runoff to the extent technically feasible, for which retention and treatment is required. The methods are based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event.*~~ ~~*(a) Stream Setbacks and Buffers*~~ ~~*(b) Soil Quality Improvement and Maintenance*~~ ~~*(c) Tree planting and preservation*~~ ~~*(d) Rooftop and Impervious Area Disconnection*~~ ~~*(e) Porous Pavement*~~ ~~*(f) Green Roofs*~~ ~~*(g) Vegetated Swales*~~ ~~*(h) Rain Barrels and Cisterns*~~

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
86	Alternative Design – Modification	E.12.d.2.(ii)(3)a. [page 53] & F.5.g.2.(ii)(3)a) [page 97]	As currently written, the demonstration of equivalent effectiveness for Alternative Designs is overly restrictive and will eliminate the use of all infiltration facilities, underground facilities, harvest and use, and green roofs. *CASQA Recommendation* *Require that alternative designs must only demonstrate an equal of greater amount of runoff infiltrated or evapotranspirated. Remove the remaining criteria. Revise language as follows:* *a. Alternative Designs — Facilities, or combination of facilities, of a different design than in (e) may be permitted if ~~the following measures of equivalent effectiveness are demonstrated(a)~~ ~~E~~ an equal or greater amount of runoff infiltrated or evapotranspired is demonstrated.* *~~(b) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment~~* *~~(c) Equal or greater protection against shock loadings and spills~~* *~~(d) Equal or greater accessibility and ease of inspection and maintenance~~*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
87	Allowed Variations for Special Site Conditions – Modification	E.12.d.2.(ii)(3)b. [page 53] & F.5.g.2.(ii)(3)b) [page 97]	*CASQA Recommendation* *Modify language as follows:* *Allowed Adjustments ~~Variations~~ for Special Site Conditions - The bioretention system design parameters in (~~2~~e) may be adjusted for the following special site conditions ~~as follows~~:* *(1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impermeable cutoff wall between the bioretention facility and the structure or other geotechnical hazard.* *(2) Facilities in areas with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impermeable liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a "flow-through planter").* *(3) Facilities located in areas of highly infiltrative soils ~~groundwater~~, or where connection of an underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.* *(4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high-risk areas are isolated from stormwater runoff or bioretention areas with little chance of spill migration.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
88	Exceptions to Requirements for LID Facilities – Modification	E.12.d.2.(ii)(3)c. [page 53] & F.5.g.2.(ii)(3)c) [page 98]	Modifications for clarity and addition of historic sites as a possible exemption. *CASQA Recommendation* *Modify language as follows:* *Exceptions to Requirements for ~~LID~~ Bioretention Facilities - Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, ~~tree-box-type biofilters~~ other types of biotreatment or ~~in-vault~~ media filters (such as tree-box biofilters and in-vault media filters) may be used for the following categories of Regulated Projects:* *(1) Projects creating or replacing an acre or less of impervious area, ~~and~~ located in a designated pedestrian-oriented commercial district, and having at least 85% of the entire project site covered by permanent structures;* *(2) Facilities receiving runoff solely from existing (pre-project) impervious areas;* *(3) Smart growth ~~credits~~ projects; and* *(4) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.* *~~Tree-box-type biofilters and in-vault media filters shall meet the requirements of above storm water treatment measures requirements. By May 15, 2014, each permittee shall adopt or reference appropriate performance criteria for tree-box-type biofilters and in-vault media filters.~~ By Year 3, each permittee shall adopt or reference appropriate design criteria for such biotreatment and media filters.*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
89	Reopener for LID Requirements	E.12.d.2(ii)(3) c. [page 54]	The reopener language is unnecessary and will create uncertainty about the standards in this provision. During this permit term, Permittees will have to go through significant effort to revise ordinances and policies at least once for LID standards and possibly twice if modified hydromodification management criteria are adopted, and should not have to make additional changes to address a reopener. They should be allowed to implement the LID requirements for this permit term without changes. *CASQA Recommendation* *Delete*
90	Reporting – Timeline	E.12.d.2.(iii) [page 54]	*CASQA Recommendation* *Revise schedule to Year 3. Information should be collected and retained by Permittee. Revise language as follows:* *(iii) Reporting – For each Regulated Project approved, the following information shall be completed and be available <u>starting in Year 3</u> ~~annually~~ ~~in the Annual Report~~:*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
91	Hydromodification Management -- Standards	E.12.e [page 55] and F.5.g.3 [page 100]	The interim hydromodification management (HM) standard requiring peak matching for discrete storm events is inconsistent with HM studies and approaches to date and is not as protective of stream channels as a flow duration control approach. In fact, studies by MacCrae (1996) and others have shown that implementation of a peak matching standard could be more damaging to stream channels than doing nothing (beyond the baseline measures). All Regulated Projects that create or replace 5,000 square feet or more of impervious surface will be implementing baseline HM measures, which will have a positive effect towards protecting watershed processes. CASQA recommends that Phase II Permittees wait until more work is done by the State and Regional Water Boards on developing appropriate HM criteria instead of implementing an ineffective approach with possibly negative consequences. *CASQA Recommendations* ***E.12.f. Hydromodification Management*** *(i) Task Description – Within the third year of the effective date of the permit, the Permittee shall develop and implement Hydromodification Management procedures if modified hydromodification criteria are developed per Section E.12.g below. Hydromodification management projects are Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre-project condition is not a hydromodification management project.* *(ii) Implementation Level –* ***[Delete entire section and add the following; see Attachment C]*** *The Storm Water Treatment and Baseline Hydromodification Management Measures are considered adequate for hydromodification control until the State and Regional Water Boards have determined whether the requirements in E.12.b through E.12.e. are protective of the watershed processes identified in E.12.g below or if modified criteria should apply.*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
92	Hydromodification Management – Exemptions	E.12.e.(ii) [page 56] & F.5.g.3.(ii) [page 100]	*Exemptions should be provided for hydromodification criteria.* *CASQA Recommendation* *Include exemption language as follows (modified from San Diego Regional Admin Draft R9-2012-0011):* *(c) Exemptions* *Permittees have the discretion to exempt a Regulated Project from the hydromodification management requirements where the project:* *(1) Discharges storm water runoff into underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, area under tidal influence, or the Pacific Ocean;* *(2) Discharges storm water runoff into conveyance channels that are hardened all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, area under tidal influence, or the Pacific Ocean;* *(3) Projects that are replacement, maintenance or repair of a Permittee's existing flood control network;* *(4) Projects that discharge directly or via a storm drain to waterway that has a 100-year peak flow (Q100) of 25,000 cfs or more, or other receiving water that is not susceptible to hydromodification impacts; or* *(5) Discharges storm water runoff into other areas as identified by the State and/or Regional Water Board)*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
93	Implementation Strategy for Watershed Process-Based Storm Water Management – Regional Board Authority	E.12.f [page 58] & F.5.g.2. 3.c [page 98]	*CASQA Recommendation* *Include general statement that Regional Board-approved HMPs or other LID/Hydromod control plans could override the state permit's requirements for LID/Hydromod. The Regional Board would have to determine which portions of their provisions supersede this Order since it would vary considerably based upon the region and the content of the plans. Revise language as follows:* *~~Permittees~~ Implementation Level – Within the second year of the effective date of the permit, the State and Regional Water Boards will determine whether the requirements in E.12.b through E.12.e. are protective of the watershed processes identified above or if modified criteria should apply. If by the end of the second year it is determined by the State and Regional Boards that the requirements in E.12.b through E.12.e are not protective of watershed processes, Regional Boards shall work collaboratively with the appropriate ~~Regional Water Board~~ Permittees to ~~incorporate~~ develop modified watershed process-based numeric criteria for new and redevelopment projects. Upon approval of a Regional Water Board's modified watershed process-based criteria, those rules shall supersede this Order as directed by the Regional Water Board. Otherwise, the requirements in E.12.b through E.12.e are presumed to sufficiently protect the watershed processes. If a permittee is located within a Phase I MS4 permit boundary with a Regional Water Board-approved Hydromodification Plan (or equivalent), the Regional Water Board shall work with Permittee to develop a strategy by the end of the second year to implement some or all of the existing Hydromodification Plan (or equivalent).*

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Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
94	Implementation Strategy for Watershed Process-Based Storm Water Management – Permittee Initiated In-Lieu Program	E.12.f.ii [page 58]	Clearly allow permittees to develop and implement in-lieu programs that allow program applicants to participate in projects that protect or enhance watershed processes as an alternative to on-site compliance. In the interest of timing, this should not be incumbent on the Regional Boards to initiate. *CASQA Recommendation* *E.12.g.(ii)(b) - Permittees may develop and implement an in-lieu program that allows program applicants to participate in a project that protects or enhances watershed processes as an alternative to on-site compliance.*
95	Implementation Level for Watershed Process-Based Storm Water Management – Reorganization	E.12.f(ii) [page 58]	Enforceable Mechanisms do not address Watershed Processes and should be raised to a higher organizational level. Implementation schedule also needs to be consistent with other provisions. See below for recommended revisions to E.12.j (now E.12.h). *CASQA Recommendation* *E.12.~~f~~h. Enforceable Mechanisms – By Year 3 of the effective date of the permit, the Permittee shall ~~Within the third year of the effective of the permit,~~ develop and/or modify enforceable mechanisms that will effectively implement the requirements in E.12.~~d~~b though E.12.e ~~and e (if necessary)~~.*
96	Operation and Maintenance of Post-Construction Storm Water Management Measures – Applicability	E.12.g. [page 58]	O&M only addresses Regulated Projects, not those less than 5,000 sf. *CASQA Recommendation* *Revise title as follows:* *E.12.g. Operation and Maintenance (O&M) ~~of Post-Construction Storm Water Management Measures~~ Requirements for Regulated Projects*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
97	Operation and Maintenance of Post-Construction Storm Water Management Measures – Timeline	E.12.g. [page 58]	*CASQA Recommendation* *Revise schedule and place under Implementation. Revise language as follows:* *(i) Task Description ~~– Within the second year of the effective date of the permit,~~ The Permittee shall implement an O&M Verification Program for new development Regulated Projects regulated under this Order* *(ii) Implementation Level – By Year 3, a~~At~~ a minimum the O&M Verification Program shall include the following elements:*
98	Operation and Maintenance of Post-Construction Storm Water Management Measures – Modification	E.12.g(iii) [page 60]	In the Reporting section the "fiscal year" is called out. This is not done in any other section of the permit. *CASQA Recommendation* *Delete "(fiscal year)" and revise that in the 2nd year an annually thereafter, to report the required information.*
99	Post-Construction BMP Condition Assessment – Timeline	E.12.h [page 62]	Progress cannot be measured until data is developed. *CASQA Recommendation* *Revise schedule such that effectiveness is measured after one year of implementation of post-construction requirements. Revise language as follows:* *(i) Task Description – ~~Within the third year of the effective date of the permit, the~~ The Permittee shall inventory and assess the maintenance condition of structural post-construction BMPs (including BMPs used for flood control) within the Permittee's jurisdiction.* *(ii) Implementation Level – By Year 4 of the effective date of the permit, ~~T~~the Permittee shall develop and implement a plan to inventory, map, and determine the relative maintenance condition of structural post-construction BMPs. Maintenance condition shall be determined through a self-certification program where Permittees require annual reports from authorized parties demonstrating proper maintenance and operations. The plan shall include:*

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100	Central Coast Region Requirements – Delete	E.12.i [page 62 & 63]	Statement is redundant with other provisions of Draft Order. Any Regional Board can implement their own watershed-based criteria as discussed above. Establishing this as a Provision of the permit with separate Reporting requirements is confusing, unnecessary, and not reflective of State Water Board's effort to develop consistency statewide. Details of implementation schedule should be left to the individual Regional Boards. *CASQA Recommendation* *Delete this Provision and footnote.*

Post Construction			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
101	Planning and Building Document Update – Modification	E.12.j [pages 63 – 65]	Requiring Permittees, by Year 1, to "modify codes, regulations, standards, and/or specifications", and by Year 4 to "revise general plans, specific plans, and zoning" is not feasible. Reviewing, identifying gaps and impediments, finding an appropriate correction, and possible approval required at Council/ Commission level cannot be achieved in one year. General Plans are long-term planning documents for growth and resource protection that are updated infrequently due to the overall work updates require. Permittees have Land Use and Conservation Elements that address protection of water resources from development. Further, communities in Coastal Zone would need Coastal Commission Approval of any changes. *CASQA Recommendation* *A less prescriptive process for implementing the intent of this provision is recommended. Delete this section and replace with the following language:* *E.12.j Planning and Development Review Process* *(i) Task Description – The permittee shall review their planning and permitting process to assess any gaps or impediments impacting effective implementation of these post-construction requirements, and where these are found to exist, seek solutions to promote protection of watershed processes within the context of public safety and community goals for land use.* *(ii) Implementation Level – During Years 1-3, Permittee shall conduct the review using an existing guide or template already developed for MS4s (such the Municipal Regulatory Update Assistance Program (MRUAP) conducted by AHBL for the Low Impact Development Initiative (LIDI) on the Central Coast). By the end of Year 4, any changes to the planning and permitting process will be completed to effectively administer these provisions.* *(iii) Reporting. A summary of this review process, and any proposed or completed changes to the Permittee's permit program will be provided in each Annual Report.*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
102	General	Throughout	CASQA would like to emphasize the importance of having monitoring options available to Phase IIs. A one-size-fits-all approach is not appropriate given that the Phase II permit is a statewide permit that applies to municipalities of varying sizes, geographies and MS4 implementation experience. Having options also has the benefit in allowing Permittees to select the an option that will help them to obtain information useful to answering questions about their own stormwater program(s). *CASQA Recommendation* *Retain the variety of monitoring options available to Phase IIs.*
103	General – Consistency	Attachments A & G	*CASQA Recommendation* *Review, compare, and revise Attachment A and Attachment G for accuracy and consistency, as needed.*
104	General – Implementation Due Dates	E.13 & E.15 & F.5.i	*CASQA Recommendation* *Where E.13 or E.15 (Attachment G) monitoring requirements require Permittees to obtain Regional Board approval before proceeding with monitoring, ensure that the implementation due dates are tied to the date of Regional Board approval instead of the effective date of the permit. For example, E.13.c.ii should be modified as follows:* *"The Permittee shall develop and implement a special study plan and shall submit to an applicable Regional Board for review and approval. ~~Within the second year of the effective date of the permit,~~ T~~t~~he Permittee shall begin implementation of the special study plan within six months of Regional Board approval.*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
105	303d List-Related Monitoring – Clarification	E.13 & Monitoring Flow Chart [page 65]	The permit should clearly state that consultations with Regional Board for 303(d) list – related monitoring only need occur when "urban runoff" is listed as a source. *CASQA Recommendation* *Modify E.13.iii as follows:* *(iii) All Permittees with a population greater than 2,500 that discharge to waterbodies listed as impaired on the 303(d) list where urban runoff is listed as a source, shall consult with the Regional Water Board within six months of the effective date of the permit to assess whether monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement 303(d) monitoring as specified by the Regional Water Board Executive Officer.*
106	Water Quality Monitoring Requirements – Clarification	Monitoring Flow Chart & E.13.vi [page 66]	*CASQA Recommendation* *Further clarify in section E.13 and on the monitoring flow chart, that any Permittee performing ASBS, TMDL or 303d monitoring is not required to perform any additional monitoring from E.13.a, E.13.b, or E.13.c. Recommend adding the following language to E.13.iv:* *(iv). Traditional Small MS4 Permittees with a population greater than 50,000 listed in Attachment A that are not already conducting ASBS, TMDL or 303(d) monitoring efforts shall participate in one of the following monitoring programs, subject to Regional Water Board Executive Officer approval:* *a) E.14.a. Regional Monitoring* *b) E.14.b. Receiving Water Monitoring* *c) E.14.c. Special Studies* *Traditional Small MS4 Permittees that are already conducting ASBS, TMDL, 303(d) monitoring efforts are not required to perform additional monitoring as specified in E.13.a, E.13.b, and E.13.c.*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
107	Water Quality Monitoring Options – Clarification	E.13.(iv) [page 66]	*The Tentative Order specifies that Permittees may choose from several monitoring options. Option (b) includes two components that are not necessarily coordinated or dependent on each other. Either component alone would provide baseline pre-development information or general characterization.* *CASQA Recommendation* *Change E.13.iv monitoring options to read:* *a) E.13.a. Regional Monitoring;* *b) E.13.b. <u>Inland</u> Receiving Water Monitoring:* *<u>E.13.b.1 Urban/Rural Interface or</u>* *<u>E.13.b.2. Urban Area</u>* *c) E.13.c. Special Studies*
108	Monitoring Flow – Correction	Monitoring Flow Chart	*CASQA Recommendation* *Correct flow chart to refer to section E.13 of the permit instead of E.12.*
109	Non-Traditional ASBS Requirements – Clarification	Provision F.	*CASQA Recommendation* *Under Section F. Non-Traditionals, please clarify requirements for Permittees covered by the General Exception to the California Ocean Plan for ASBS discharges.*
110	HUC 12 Watershed – Definition	E.13.b.1(ii).a & E.13.b.2(ii)a [pages 67 & 69]	*CASQA Recommendation* *Define HUC 12 watershed in the permit and in the glossary. Change language in the permit to address that Permittee jurisdictional boundaries do not correspond to HUC 12 watershed boundaries. Some municipalities, for example, may be located in the top 2/3 of a few HUC 12 watersheds and therefore cannot place a monitoring station at the bottom of the watershed.*
111	Permanent Monitoring Station – Modification	E.13.b.1(ii)b [page 67]	*CASQA Recommendation* *Change language to "permanent monitoring <u>location.</u>"*
112	Receiving Water Monitoring Flow Records – Clarification	E.13.b.1.(ii)c [page 67]	*CASQA Recommendation* *Please describe the intent of "correlations to flow records". It is not clear from the Permit if the intent is to develop flow volume estimates based on stage and rainfall information or to develop relationships between flow measured and constituent concentrations.*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
113	Urban/ Rural Interface – Definition	E.13.b.1 [page 67]	Many communities do not have distinct interface boundaries. A more general definition may be more inclusive. More specific guidance would exclude some communities. Additionally, Permittees subject to E.13 monitoring may be located in an urbanized area that is built out. In this case, the assumption is that Permittees subject to E.13 monitoring would choose E.13.a, E.13.b.2 or E.13.c instead of E.13.b.1. In addition, not all "rural" areas are located upstream from an "urban" area and in such cases where the rural area is downstream of the urban area; it doesn't seem to make sense to monitor at the urban/rural interface regardless of whether development is planned or not in the rural area. *CASQA Recommendation* *Clearly define "urban/rural interface" and how this relates to doing either E.13.b.1 or E.13.b.2 monitoring. Clearly define what is meant by a watershed that is "planned for development" and acknowledge that some Permittees will not have a HUC 12 watershed area that is planned for development according to the definition with their jurisdiction.*
114	Receiving Water Monitoring – Definition	E.13.b. [page 67]	*CASQA Recommendation* *Clarify that "Receiving Water" in this case must be inland fresh water (non-tidally influenced).*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
115	Monitoring Parameters and Procedures Urban/Rural Interface – Modification	E.13.b.1. Table 3 [page 68]	The stated monitoring question for this section is: "are new development LID BMPs effective at minimizing degradation in waterways?" This question cannot be answered by analyzing a single bacteria grab sample during three storms/year. A single grab sample analyzed for fecal coliform will not measure program effectiveness or provide comparable results. In addition, hold times should be considered when developing the monitoring requirements. Bacteria monitoring results are highly variable, background levels of bacteria due to wildlife can confound results, and it will be difficult to link changes in bacteria counts to the effectiveness of LID BMPs that are implemented on a project-by-project basis per the requirements of Section E.12 of the draft permit. For inland waters, it is not helpful to assess the protection of recreational beneficial uses with fecal coliform sampling during storm events in receiving waters that are primarily storm runoff as 1) these receiving waters are unsafe during high runoff periods, and 2) IDDE dry weather monitoring is used to monitor illicit connections during dry weather. *CASQA Recommendation* *Remove bacteria from the list of constituents in Tables 3.*
116	Receiving Water Monitoring – Clarification	E.13.b.(1-2) [pages 67 & 69]	We assume that channel cross sections and pebble counts listed in Table 3 and PHAB assessment listed in Table 4 would be conducted during the fall index period, at the same time the bioassessments would be conducted. Also, sediment samples to be analyzed for pyrethroids should not be collected during storms. *CASQA Recommendation* *Clarify when the different types of monitoring are required and consider that PHAB assessments, Bioassessments, pebble counts, bacteria monitoring, pyrethroids in sediment and DO and temperature monitoring should not be conducted during storms.*

Monitoring			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
117	Receiving Water Monitoring in Urban Area – Timeline	E.13.b.2.(i)c [page 68]	*CASQA Recommendation* *Change language as follows:* *c) ~~Within the~~ By the end of the second year of the effective date of the permit, the Permittee shall fully develop an inland fresh water receiving water monitoring program. Monitoring shall be initiated at the beginning of year 3…* *"By the end of the second year of the effective date of the permit,*
118	Monitoring Fund – Remove Requirement	E.13.b.1(ii)(d) [page 68]	The permit requires Permittees to establish a monitoring fund into which all new development contributes on a proportional basis. *CASQA Recommendation* *Remove this requirement. Individual Permittees may consider establishing a monitoring fund; however, this should not be a permit requirement and may be infeasible for some Permittees.*
119	Receiving Water Monitoring in Urbanized Area – Modification	E.13.b.2. Table 4 [page 69]	DO and temperature may be more appropriate parameters to observe during summer months (dry season). *CASQA Recommendation* *Remove requirement to monitor for DO and temperature during storm events. If the requirement is not removed entirely, please describe why these parameters were chosen and what monitoring questions will be answered.*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
120	General Comment – Prioritized BMPs	E.14.	There are several locations throughout the provision that explicitly require or infer that the Permittee conduct an assessment for "each BMP." It is not feasible, realistic or a good use of resources for Permittees to conduct an assessment of each BMP. *CASQA Recommendation* *Language should be edited to encourage Permittees utilize the development of their Program Effectiveness Assessment and Improvement Plan to identify pollutants of concern and the key, critical aspects of their program and associated BMPs that program effectiveness will focus on. This is in keeping with the purpose and intent of program effectiveness assessments which is to develop and give critical feedback on prioritized BMPs and the program as a whole.* *At a minimum, terminology and inferences to "each BMP" should be replaced with "prioritized BMPs." Define BMPs to be programmatic elements rather than individual structural or operational BMPs implemented by the MS4 in the course of enacting the permit.*
121	General Comment – Survey Frequencies	E.14. & F.5.h.1.	*CASQA Recommendation* *The annual assessment including such requirements as surveys and inspection should be aligned with the requirement for twice per permit cycle surveys found in the Education and Outreach Section E.7 to leverage the resources that must be used for the surveys to inform this assessment.*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
122	Task Description – Modification	E.14.a.(i) [page 71] & F.5.h.1.(i) [page 104]	*CASQA Recommendation* *The Task Description should be modified as follows:* *The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to document compliance with permit conditions and to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness at reducing ~~pollutant loads~~ pollutants of concern, achieving the MEP standard, and protecting water quality. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of ~~each~~ prioritized BMPs and program implementation as a whole. The annual effectiveness assessments will help identify potential modifications to the program to ensure long-term effectiveness.*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
123	Program Effectiveness Assessment Improvement Plan – Modification	E.14.a(ii)(a) [page 71]	The Program Effectiveness Assessment Improvement Plan, depending on program goals and prioritized BMPs may not be able to effectively address all of the required elements. Language should be changed to "as applicable" and also identify the establishment of program goals and prioritized BMPs. Determining the pollutant reductions of individual BMPs is not a effective use of resources – delete "individual." The text "(including expected pollutant removal efficiency and BMP Condition" appears to be redundant with the next element which states "Assessment of pollutant source reductions achieved by individual BMPs" – clarify the difference between the two or delete one. Additionally, since many Permittees will just be starting up their water quality monitoring programs, most will not be able to determine if BMPs enhanced or changed urban runoff, or receiving water quality. These are long-term assessments that cannot be answered within this permit term. However, Permittees can, within their Program Effectiveness Assessment Improvement Plan, identify how they are going to answer these questions beyond this permit term. *CASQA Recommendation* *Modify Program Effectiveness Assessment and Improvement Plan elements as follows:* *(a) The Program Effectiveness Assessment and Improvement Plan shall include the following elements, ~~at a minimum~~ as applicable:* *(1) Identification of overall program goals including pollutants of concern and prioritized BMPs* *(2) Documentation of the level of implementation of storm water program elements* *(3) Identification and targeting of Target Audience(s)* *(4) Assessment of BMP performance at achieving Outcome Levels ~~(including expected pollutant removal efficiency and BMP Condition~~* *(5) Assessment of pollutant source reductions achieved by ~~individual~~ BMPs*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
123, cont.			*(6) Quantification of pollutant loads and pollutant load reductions achieved by the program as a whole* *(7) MS4 discharge quality, where available, including analysis of the data* *(8) Receiving water quality data, including analysis of the data* *(9) Identification of long-term effectiveness assessment, to be implemented beyond permit term*
124	Outcome Levels – Modification	E.14.(ii)(b) [page 71]	*CASQA Recommendation* *(b) The Program Effectiveness Assessment and Improvement Plan shall assess BMP and program effectiveness in terms of the following Outcome Levels, as applicable:* *(1) Storm Water Program Activities* *(2) Awareness* *(3) Behavior* *(4) Pollutant Load Reductions* *(5) MS4 Discharge Quality (where assessment is supported by MS4 discharge quality data)* *(6) Receiving Water Conditions*
125	Pollutant Load Reductions – Clarification	E.14.(ii)(b)(3) [page 71]	It is very difficult to assess (quantify) pollutant load reductions from a stormwater program other than perhaps tracking the amount of pollutants removed by street sweeping and/or catch basin cleaning. *CASQA Recommendation* *List the specific BMPs that may be assessed using the Pollutant Load Quantification such as street sweeping and catch basin cleaning.*
126	Identify Assessment Methods – Formatting	E.14 (ii)(d) [page 72]	(d) is intended so it appears that it is a subset of (c) which applies to privately owned BMPs. *CASQA Recommendation* *Fix indentation so that (d) lines up with (c).*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
127	Management Questions – Modification	E.14.(ii)(e) [page 72]	*CASQA Recommendation* *Modify language as follows:* *e) The Program Effectiveness Assessment and Improvement Plan shall ask and answer the following Management Questions for prioritized ~~each~~ BMPs or group of BMPs for which answers to Management Questions can be based on quantitative data appropriate to the question being answered.* *(1) ~~Was the~~ Were prioritized BMPs or group of BMPs implemented in accordance with the permit requirements? The Permittee shall develop quantitative data using the following or equivalent methods:* *(i) Confirmation – Documenting whether an activity or task has been completed, expressed as positive or negative outcome (i.e., yes or no)* *(ii) Tabulation – Simple accounting expressed in absolute (e.g., number of people participating), or relative terms (e.g. percent increase in recycled household hazardous waste)* *(2) To what extent did ~~the~~ prioritized BMPs or group of BMPs change the target audience's behavior?~~.~~ The Permittee shall develop quantitative data using the following or equivalent methods:* *(i) Surveys - Surveys or interviews to discern knowledge, attitudes, awareness, behavior of specific population, etc.* *(ii) Interviews – Interviews of site personnel to discern awareness and behavior* *(ii) Inspections - Inspections or site visits to directly observe or assess a practice.* *(3) To what extent did ~~the~~ prioritized BMPs or group of BMPs reduce pollutant loads from their sources to the storm drain system?*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
128	Water Quality Monitoring Data Management Questions – Modification	E.14.a(ii)(f) [page 72]	As previously indicated the permit should recognize that determining the impact of BMPs on urban runoff and receiving water are long-term questions that cannot be answered by Phase IIs who will just be starting to identify pollutants of concern and obtain water quality monitoring data. It is realistic to require that Permittees plan out how they are going to answer these long-term questions beyond this permit term. *CASQA Recommendation* *Modify language as follows:* *(f) The Program Effectiveness Assessment and Improvement Plan shall identify how ~~include Water Quality Monitoring Data, where available, to answer~~ the following long-term Management Questions, ~~and assess the~~ effectiveness of BMPs and the overall storm water program will be assessed in future permit terms*:
129	Municipal Watershed Pollutant Load Quantification – Delete Requirement	E.14.b(i) [page 73]	This section requires the Permittee to quantify annual subwatershed pollutant loads. Furthermore, it is required that the permittee shall use the Center for Watershed Protection's Watershed Treatment Model (WTM) or equivalent. There are several concerns associated with this requirement including: • The WTM is based on nationally available data and has not been calibrated to reflect local or statewide conditions. • A desktop quantification of pollutant loads would be based on estimates upon estimates. The value and accuracy of this data will be questionable and unproven. • It is not clear what the usefulness of this data will be given the amount of uncertainty associated with it. Additionally, this appears to be a very time consuming task with little benefit to the Permittee *CASQA Recommendation* *Strongly recommend deleting this requirement given the number of concerns associated with it.* [The comments below are provided to address issues with permit language if the provision is not deleted]

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
130	Municipal Watershed Pollutant Load Quantification – Modification	E.14.b(i) and (ii) [pages 73 & 74]	As previous mentioned, the WTM, or equivalent, is not a small undertaking for Permittees. It could result in a large amount of work with very little value to stormwater programs. As such, the scope of this task should be limited to 1 pilot watershed for this permit term. This will allow Permittees to test and calibrate the WTM, or equivalent and determine, in conjunction with Regional Board and State Water Board staff whether there is value in continuing to pursue this type of quantification in future permit terms. Permittees should be given the option of piloting 1 watershed either individually or in collaboration with other permittees. *CASQA Recommendation* *Modify language to indicate that this provision applies to 1 pilot watershed either per Permittees or via a collaborative group of permittees. Modify language as follows:* *E.14.b. Municipal Pilot Watershed Pollutant Load Quantification* *(i) Task Description – The Permittee shall quantify annual ~~subwatershed~~ pollutant loads for a pilot subwatershed…* *(ii) Implementation Level – The Permittee shall use the Center for Watershed Protection's Watershed Treatment Model or other equivalent simplified spreadsheet method to calculate annual runoff, pollutant loads, and BMP removal efficiency for a pilot subwatershed. Permittees may conduct a pilot subwatershed pollutant load quantification either individually or collaboratively with other Permittees…* *(iii) Reporting – By the fifth year Annual Report, complete and have available quantification report of annual ~~subwatershed~~ pollutant loads for a pilot subwatershed,…*

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
131	Municipal Watershed Pollutant Load Quantification – Modification of Constituent List	E.14.b(i) [page 73-74]	The WTM does not have parameters in place for cadmium, chromium, copper, lead, nickel, zinc or trash. This means that each permittee will have to create these modules for their own use. This will be expensive and extremely time consuming for the Permittee and potentially beyond their capabilities. Phase IIs should not be required to calibrate and add parameters to a model from scratch. The constituents should be limited to those readily available through the WTM. *CASQA Recommendation* *Clarify that the Municipal Watershed Pollutant Load Quantification does not have to be calculated annually. The new information produced from year-to-year will not equate to the level of effort needed to keep the model up-to-date. Once per permit term is adequate. During this first permit term of this requirement, limit the suite of constituents to those already supported by the WTM. Additional pollutants of concern can be added in future permit terms as Permittees become more familiar with the WTM. Modify as follows:* *At a minimum, annual loads for the following constituents shall be quantified:* *(a) sediment* *(b) fecal coliform bacteria* *(c) total phosphorus* *(d) total nitrogen* ~~*(e) cadmium*~~ ~~*(f) chromium*~~ ~~*(g) copper*~~ ~~*(h) lead*~~ ~~*(i) nickel*~~ ~~*(j) zinc*~~ ~~*(k) trash*~~

Program Effectiveness			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
132	Storm Water Program Modifications – Prioritization of Resources	E.14.c [pages 74 & 75]	Given the prescriptiveness and specificity of the draft permit, Permittees will not have much ability to shift or prioritize resources unless they are provided with the flexibility to ramp up implementation in one area and decrease it in another (e.g., increase corp yard inspections but decrease storm drain cleanouts). Additionally, this section introduces the term "priority program areas." This is not previously defined or discussed. CASQA recommended the use of "priority BMPs" for inclusion in the Program Effectiveness Assessment Improvement Plan. It would make sense to utilize consistent terminology throughout E.14. *CASQA Recommendation* • *Clarify to what extent can a Permittee truly shift resources?* • *Provide language that Permittees have the ability to shift resources by ramping up implementation in one or more areas while decreasing it in another and still remain in compliance with the permit.* • *Replace "priority program areas" with "priority BMPs."*
133	Storm Water Program Modification – Edit	E.14.c(i) [page 74]	*CASQA Recommendation* *Delete reference to "BMP Condition Assessment" as this is a relic from the previous iteration of the draft permit.*

TMDLs			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
134	TMDL Requirements –Clarification	E.15.a. [page 75] & F.5.i. [page 105]	*CASQA Recommendation: Revise E.15.a as follows: The Permittee shall comply with all applicable TMDLs approved pursuant to 40 Code of Federal Regulations section 130.7 for which the Permittee has been assigned a Waste Load Allocation ~~or that has been identified in Attachment G~~.*
135	TMDL Requirements –Clarification	E.15.b. [page 75] & F.5.i. [page 105]	*CASQA Recommendation: Revise E.15.b as follows: Waste Load Allocations (WLA), Load Allocations (LA), effluent limitations, implementation requirements, and monitoring requirements are specified in the adopted and approved Regional Water Board Basin Plans and authorizing resolutions which are incorporated herein by reference as enforceable parts of this General Permit. Applicable Basin Plan amendments and resolutions are identified in Attachment G. Attachment G additionally contains a list of TMDL-specific permit requirements developed by the Regional Boards that clarify, but do not expand upon the requirements in relevant BPAs ~~for compliance with the implementation requirements of the relevant TMDLs. The requirements are an enforceable component of this Order.~~*

TMDLs			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
136	Compliance Dates – Modification	E.15.b. [page 75] & F.5.i. [page 105]	This section states "In some cases, dates are given that fall outside the term of this General Permit. Compliance dates that have already passed are enforceable on the effective date of this General Permit….." However, how can a jurisdiction retroactively comply or be enforced against? This requirement is of significant concern. Permittees must comply with their NPDES permits. The Federal Clean Water Act does not require implementation plans and due dates, so requiring immediate compliance with a Regional Board implementation plan is not necessary under the federal NPDES program. *CASQA Recommendation: Modify the permit language as follows:* *Compliance dates that have already passed may be enforceable on the effective date of this General Permit; however, this will be determined on a TMDL-by-TMDL basis.* *In many cases, the effective date of the TMDL is interpreted as the effective date of this General Permit. For example, requirements due two years after the effective date of the TMDL will be enforceable two years after the effective date of this General Permit.*
137	TMDL Implementation Status Report –Clarification	E.15.d.(iii) [page 76] & F.5.i. [page 105]	*CASQA Recommendation: Provide a description of what will be expected for a statistical analysis of the data to assess progress towards attainment of WLAs within the TMDLs specified timeframes.*
138	TMDL Implementation Status Report –Modification	E.15.d. [page 76] & F.5.i. [page 105]	*CASQA Recommendation: Strike language from E.15.d: TMDLs will have their own individual sets of required analyses, BMP implementation and reporting, follow-up requirements, etc.*

TMDLs			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
139	Category 4b – Clarification	E.15.e. [page 76] & F.5.i. [page 105]	*CASQA Recommendation: Provide some additional language that will help to interpret and clarify level of effort required in section E.15.e.*

Reporting			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
140	Annual Report Program – Reporting Requirements	E.16 [page 77] & F.5.j. [page 106]	*CASQA Recommendation* *Please provide a chart of the reporting requirements that indicates specifically which items need to be submitted with the Annual Report and which need to be "made available" for Regional Board review.*
141	Annual Report Program – Clarification	E.16.c [page 77] & F.5.j. [page 107]	What does "full reporting" mean for regional reports? Do all the reporting requirements need to be met by each individual Permittee that participate in a regional effort? Can individual Permittees in a regional group submit its own report and thus only be required to certify compliance? Requiring regional group reports (vs. individual) can be time consuming and may act as a deterrent to the formation of regional groups. *CASQA Recommendation* *Modify language to allow Permittees to report as Permittees see fit – either as a group or individually.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
142	Recognition that Order Affects Historic Places	Finding 8 [page 6]	*CASQA Recommendation* *Clarify that the State Water Board recognizes that the Order will affect Historic places (as defined hereinafter by the State and Federal Antiquities Acts) and other sites that may have unique requirements, and in those areas, the Regional Boards may provide allowances for Permit compliance*.
143	Redevelopment Projects – Historic Places	Finding 9 [page 6]	Historic places are often "restored" from a rundown condition. During such restoration or reconstruction the work may be governed by the Historic Building Code and any planning may require approval of the State Historic Preservation Officer (SHPO). *CASQA Recommendation* *Add sentence stating that requirements for stormwater system improvements in historic places must only be included to the extent they are practicable and can be concealed so as to minimize the impacts on the historic fabric of the site.*
144	Highly Variable Conditions – Historic Places	Finding 27 [page 9]	This finding already recognizes that Phase IIs cannot be regulated by one size fits all approaches. *CASQA Recommendation* *This finding should note that variances from prescriptive requirements should be allowed for areas such as historic places.*
145	Storm Water Program Compliance Document – Historic Places	Finding 33 [page 10]	*CASQA Recommendation* *The stormwater program compliance document for historic places shall also include the estimated time frame for compliance and indicate the additional constraints necessary to implement stormwater measures within historic settings.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
146	Waiver Certification Option 2 – Historic Places	A.3.b.(2) [page 15]	*CASQA Recommendation* *Under Option 2, add language (e) as follows:* *(e) The Regional Water Board has determined that future discharges from the Regulated Small MS4 are solely from a designated historic place and that the required retrofits needed to minimize potential discharges will take longer to implement than non-historic places. The Regional Water Board shall allow additional time for full compliance as long as incremental progress is being made, and the storm water compliance document is kept current and indicates overall compliance objectives, timelines, methods and means.* *Note: This option should apply to places such as Old Town Monterey, and the like. Basically any Historic Park inside, or adjacent to, a Permittee.*
147	Waiver Certification Option 3 – Historic Places	A.3.b.(3) [page 15]	*CASQA Recommendation* *Under Option 3, add language as follows:* *This option would also apply to historic places intended primarily for education and interpretation and conservation or preservation that do not house a population over 1,000 made up primarily of in-holdings and resident operational staff.*
148	Program Management – Edit	F.5.a.1.(ii)(a) [page 78]	Typo. This Section refers to "B.3. of the draft Order,…". *CASQA Recommendation* *The word "draft" should be deleted.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
149	Outfall Mapping – Modification	F.5.d.(ii)(b) [page 84]	This provision requires photographs be taken of outfalls to provide baseline information and track operation and maintenance over time. UC Santa Cruz (UCSC) has hundreds of outfalls throughout its 2,000 acres. It is not feasible to inspect and photograph all outfalls. As USCS has discussed with the State Water Board staff, Grounds staff are assigned to all areas on Campus making it highly unlikely an illicit discharge could happen. Because USCS owns and maintains all areas on Campus, we are in control of every activity that happens. Grounds staff are provided maps showing all outfalls, associated catch basins, and drainage areas flowing to those catch basins. Providing a photo of the outfall will not likely provide additional useful information for the staff that maintains the area. In addition, some outfalls are normally submerged. Photographs of submerged outfalls will be of no value in determining if illicit discharges are occurring. *CASQA Recommendation* *Limit outfall inventory to outfalls >18" diameter. Do not require photographs of submerged outfalls.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
150	Field Sampling to Detect Illicit Discharges	F.5.d.1. [page 85]	• This section refers to outfall inventory under Section B.4.a. This appears to be an incorrect reference. Is the correct reference Section F.5.d.? • It might be easier to understand and therefore comply if this section does not refer to another section of the permit. • The Permit should clearly state the intent of this requirement and what is required. • Most non-traditionals have never collected samples from storm drainage facilities before. The State Water Board staff should provide clear guidance regarding the procedures and methods that are to be used for sample collection (e.g.is use of water quality test strips acceptable for determining pH?). *CASQA Recommendations* • *Correct Section B.4.a reference and/or pull requirements directly into section (versus a reference).* • *Clarify intent of requirement.* • *Provide clear guidance on storm drainage facility sampling. Clarify that the intent is to use field test kits.* • *Provide a sampling waiver for outfalls that are normally submerged.*
151	Illicit Discharge Elimination Reporting – Timeline Clarification	F.5.d.2. [page 86]	*CASQA Recommendation* *Clarify what year the reporting has to begin.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
152	Inventory of Permittee Owned or Operated Facilities – Modification	F.5.f.1.(i) [page 88]	This Section requires an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality. *CASQA Recommendation* *For small municipal agencies that already have permits covering industrial facilities and construction sites, suggest wording be revised to state:* *Prepare an inventory of Permittee-owned or operated facilities that are within their jurisdiction and pose a threat to water quality and are not covered by another storm water General Permit.*
153	Map Permittee Owned or Operated Facilities	F.5.f.2.(ii) [page 88]	*CASQA Recommendation* *Under Implementation, add the following language:* *Historic storm water collection facilities, conveyances and drainages located at historic places that are being operated for public interpretation and education shall be noted on this map so that the Regional Water Board can differentiate between modern and historic during site reviews or audits.*
154	Inspections of Permittee Owned or Operated Facilities – Modification	F.5.f.5.(i) [page 90]	Section requires regular inspections of Permittee-owned and operated facilities. *CASQA Recommendation* *For small municipal agencies that already have permits covering industrial facilities and construction sites, suggest wording be revised to state:* *Inspect Permittee-owned or operated facilities not covered by another storm water General Permit.* *Combine the quarterly visual, comprehensive and non-stormwater discharge inspections into one inspection (rather than require three different inspections).*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
155	Storm Drain System Facility Assessment and Prioritization – Definitions	F.5.f.6.(ii) and F.5.f.7 (i) [page 91]	• For example: The UCSC Campus has approximately 2,000 catch basins and 26 miles of storm sewer pipe. Assessing/prioritizing all catch basins and storm sewer piping will be extremely resource intensive. *CASQA Recommendation* *If the concern is over high priority facilities, require only the assessment of high priority basins which in turn would be connected to high priority storm sewer pipelines.*
156	Post-Construction Provision – In-Lieu Program	F.5.g. [page 94]	*CASQA Recommendation* *Clearly allow permittees to develop and implement an in-lieu programs that allows program applicants to participate in project that protect or enhance watershed processes as an alternative to on-site compliance.* *See edits in Attachment C.*
157	Site Design Measures – Modification	F.5.g.1. [page 95]	*CASQA Recommendation* *Remove reference to detached single-family homes as it does not apply.*
158	Exceptions to Requirements for LID Facilities – Historic Places	F.5.g.2.(ii)(3) c) [Page 98]	*CASQA Recommendation* *Under Exceptions to Requirements for LID Facilities, add paragraph 4. that reads as follows:* *4. Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.*
159	LID Requirements – Exemptions	F.5.g.2.(ii)(3) c) [page 98]	*CASQA Recommendation* *Allow for exceptions from LID requirements in areas where plants will not grow. For example, at UCSC has many areas that are built under redwood trees and vegetation growth is not feasible even for tree-box type biofilter.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
160	Low Impact Development Runoff Standards – Specific Exclusions	F.5.g.2.(ii) [page 99]	*CASQA Recommendation* *Specific exclusions provided on page 51 of the tentative order should also be allowed for Non-Traditionals. Add the following Specific Exclusion section Traditional Small MS4s in E.12.d.1.(ii) with addition of paragraph (e:* *Specific exclusions are:* *(a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.* *(b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.* *(c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.* *(d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces* *(e) Historic places that are either on national or state registries of historic places or are eligible for inclusion on such registries.*
161	Phase I MS4 Hydromodification Requirements – Modification	F.5 g.3(ii) [page 100]	*CASQA Recommendation* *Allow Phase II Non-Traditional Permittees that are subject to the hydromodification requirements to negotiate the requirements with the surrounding Phase Is during Year 1 (rather than comply with the existing approved Phase I Hydromodification Plan).* *Add exemptions to hydromodification. When runoff is discharged directly into receiving waters with no risk of erosion or damage to the environment, hydromodification should not be necessary. Example: most Port of Oakland outfalls discharge directly into San Francisco Bay. In the past, Regional Water Board 2 has allowed exemptions from hydromodification requirements in this case.*

Provision F: Non-Traditional Small MS4 Permittee Provisions			
Comment #	**Permit Element/Issue/Concern**	**Location in Draft Permit**	**Comment/Recommendation**
162	Signed Statement Accepting O&M Responsibility – Delete	F.5.g.4.(ii)(a) [page 102]	Because most small municipal agencies serve as the developer and final owner of their projects, there is no need for a signed statement accepting responsibility. *CASQA Recommendation* *Delete requirement.*
163	Program Effectiveness Assessment and Improvement Plan – Reporting	F.5.h.1. [page 104]	*CASQA Recommendation* *No reporting subsection or milestone has been included for this task. Add a milestone for the development of the PEAIP.*

Attachment A: Traditional Permittees			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
164	Urbanized Areas – Modification	A.1.b.3.A [page 13]	For renewal counties it should be clear that the activities established in this permit are only for the urbanized areas. Current permit boundaries as established by the regional boards can be much larger areas then as defined by this permit (Placer County, for example, permit area only includes 15% urban with the remainder of the 272,000+ acres of permit area being rural). Having to complete permit tasks in the entire permit area will be overly burdensome and does not meet the intent of the MS4 permit. *CASQA Recommendation* *"For new designated Counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. ~~The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board.~~ For renewal Counties, permit implementation will be in urbanized area only regardless of permit boundary.*

Attachment E: CBSM Requirements			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
165	Construction Education and Outreach Program	A.2.b [page 4]	This section is titled "Construction Education and Outreach Program" and resides under the higher level heading of "A.2 Public Education and Outreach." Section A.3.b on page 7 is titled "Construction Outreach and Education" and resides under the higher level heading of "Staff and Site Operator Training and Education." If Site Operator education is set forth in A.3.b, it is not clear who is this section (A.2.b) trying to reach. *CASQA Recommendation* *Clarify the target audience is in A.2.b.*
166	Construction Education and Outreach Program	A.2.b [page 4]	The Task Description states "…the Permittee shall develop and implement a construction outreach and education program *for construction sites smaller than one acre*." *CASQA Recommendation* *Move this requirement to Section A.3 which is focused on staff and operator training and education as opposed to public education (A.2).*
167	Construction Education and Outreach Program	A.2.b (ii) (c) [page 5]	This element does not seem to fit under the construction education and outreach program. *CASQA Recommendation* *Please clarify the intent of this provision.*

Attachment G: TMDLs			
Comment #	**Identify Permit Element/ Issue/ Concern**	**Location in Draft**	**Comment/Recommendation**
168	Scope of Attachment G – Modification/Clarification	Attachment G	Attachment G should not expand the TMDL implementation actions beyond their referenced Basin Plans. Requirements in Attachment G, in some cases, go beyond what has been adopted in the Basin Plan Amendments (BPA). When the State Board includes effluent limitations in an NPDES permit based upon a TMDL, it must do so in a manner that is "consistent with the assumptions and requirements of any available wasteload allocation for the discharge…" (40 CFR section 122.44(d)(1)(vii)(B)). Although there is variability in the level of detail and specificity in adopted TMDLs, Attachment G should only be used to clarify requirements, not to expand them. *CASQA Recommendation* *Attachment G should only incorporate by reference into the permit those TMDLs that have been adopted and are effective as of the effective date of the permit. For those TMDLs there should be a reference to the corresponding Basin Plan and implementation plans, however the detail of the implementation plan or of the technical portion of the TMDL should only be reiterated where corresponding Basin Plan implementation requirements require clarification.*
169	TMDL Implementing Parties – Clarification	Attachment G	Not all Permittees named in the draft Phase II permit are municipalities and not all implementing parties named in TMDLs are municipalities. Regional Boards should revise contents of Attachment G to include all intended implementing parties. *CASQA Recommendation* *The second column heading of Attachment G should be changed to "Permittee". It now reads "Municipality".*

Attachment I: Glossary			
Comment #	**Permit Element/ Issue/ Concern**	**Location in Draft Permit**	**Comment/Recommendation**
170	Outfalls – Definition	page 6	We would like to see a definition for "outfalls" in the glossary. *CASQA Recommendation* *This term should be defined to clarify the mapping sand inventory requirements for all Small MS4s.*
171	Pollutant Hotspots – Definition	page 6	Would like to see a definition for "pollutant hotspots" in the glossary. *CASQA Recommendation* *Stormwater "hotspots" should be defined as commercial, industrial, institutional, municipal, or transport-related operations that produce higher levels of storm water pollutants, and/or present a higher potential risk for spills, leaks or illicit discharges. For guidance on potential pollutants and operations see tables 16 and 17 from Chapter 4 of the "Subwatershed & Site Reconnaissance User Manual" from the Center for Watershed Protection.*

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

February 21, 2012

Mr. Charles Hoppin, Chair
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Subject: Receiving Water Limitation Provision to Stormwater NPDES Permits

Dear Mr. Hoppin:

As a follow up to our December 16, 2011 letter to you and a subsequent January 25, 2012 conference call with Vice-Chair Ms. Spivy-Weber and Chief Deputy Director Jonathan Bishop, the California Stormwater Quality Association (CASQA) has developed draft language for the receiving water limitation provision found in stormwater municipal NPDES permits issued in California. This provision, poses significant challenges to our members given the recent 9th Circuit Court of Appeals decision that calls into question the relevance of the iterative process as the basis for addressing the water quality issues presented by wet weather urban runoff. As we have expressed to you and other Board Members on various occasions, CASQA believes that the existing receiving water limitations provisions found in most municipal permits needs to be modified to create a basis for compliance that provides sufficient rigor in the iterative process to ensure diligent progress in complying with water quality standards but also allows the municipality to operate in good faith with the iterative process without fear of unwarranted third party action. To that end, we have drafted the attached language in an effort to capture that intent. We ask that the Board give careful consideration to this language, and adopt it as 'model' language for use statewide.

Thank you for your consideration and we look forward to working with you and your staff on this important matter.

Yours Truly,

Richard Boon

Richard Boon, Chair
California Stormwater Quality Association

cc: Frances Spivy-Weber, Vice-Chair – State Water Board
Tam Doduc, Board Member – State Water Board
Tom Howard, Executive Director – State Water Board
Jonathan Bishop, Chief Deputy Director – State Water Board
Alexis Strauss, Director – Water Division, EPA Region IX

CASQA Proposal for Receiving Water Limitation Provision

D. RECEIVING WATER LIMITATIONS

1. Except as provided in Parts D.3, D.4, and D.5 below, discharges from the MS4 for which a Permittee is responsible shall not cause or contribute to an exceedance of any applicable water quality standard.

2. Except as provided in Parts D.3, D.4 and D.5, discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible, shall not cause a condition of nuisance.

3. In instances where discharges from the MS4 for which the permittee is responsible (1) causes or contributes to an exceedance of any applicable water quality standard or causes a condition of nuisance in the receiving water; (2) the receiving water is not subject to an approved TMDL that is in effect for the constituent(s) involved; and (3) the constituent(s) associated with the discharge is otherwise not specifically addressed by a provision of this Order, the Permittee shall comply with the following iterative procedure:

    a. Submit a report to the State or Regional Water Board (as applicable) that:

        i. Summarizes and evaluates water quality data associated with the pollutant of concern in the context of applicable water quality objectives including the magnitude and frequency of the exceedances.

        ii. Includes a work plan to identify the sources of the constituents of concern (including those not associated with the MS4to help inform Regional or State Water Board efforts to address such sources).

        iii. Describes the strategy and schedule for implementing best management practices (BMPs) and other controls (including those that are currently being implemented) that will address the Permittee's sources of constituents that are causing or contributing to the exceedances of an applicable water quality standard or causing a condition of nuisance, and are reflective of the severity of the exceedances. The strategy shall demonstrate that the selection of BMPs will address the Permittee's sources of constituents and include a mechanism for tracking BMP implementation. The strategy shall provide for future refinement pending the results of the source identification work plan noted in D.3. ii above.

        iv. Outlines, if necessary, additional monitoring to evaluate improvement in water quality and, if appropriate, special studies that will be undertaken to support future management decisions.

        v. Includes a methodology (ies) that will assess the effectiveness of the BMPs to address the exceedances.

        vi. This report may be submitted in conjunction with the Annual Report unless the State or Regional Water Board directs an earlier submittal.

b. Submit any modifications to the report required by the State of Regional Water Board within 60 days of notification. The report is deemed approved within 60 days of its submission if no response is received from the State or Regional Water Board.

c. Implement the actions specified in the report in accordance with the acceptance or approval, including the implementation schedule and any modifications to this Order.

d. As long as the Permittee has complied with the procedure set forth above and is implementing the actions, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board or the Regional Water Board to develop additional BMPs.

4. For Receiving Water Limitations associated with waterbody-pollutant combinations addressed in an adopted TMDL that is in effect and that has been incorporated in this Order, the Permittees shall achieve compliance as outlined in Part XX (Total Maximum Daily Load Provisions) of this Order. For Receiving Water Limitations associated with waterbody-pollutant combinations on the CWA 303(d) list, which are not otherwise addressed by Part XX or other applicable pollutant-specific provision of this Order, the Permittees shall achieve compliance as outlined in Part D.3 of this Order.

5. If a Permittee is found to have discharges from its MS4 causing or contributing to an exceedance of an applicable water quality standard or causing a condition of nuisance in the receiving water, the Permittee shall be deemed in compliance with Parts D.1 and D.2 above, unless it fails to implement the requirements provided in Parts D.3 and D.4 or as otherwise covered by a provision of this order specifically addressing the constituent in question, as applicable.

E.12. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

E.12.a. Post-Construction ~~Treatment~~ Measures

All Permittees shall ~~implement post-construction treatment measures for new and redevelopment projects and~~regulate development to ~~-~~comply with the following Sections:

- E.12.~~c~~b Site Design Measures
- E.12.c Regulated Projects
- E.12.d ~~Low Impact Development Runoff Standards~~ Source Control Measures
- E.12.e Low Impact Development (LID) Design Standards
- E.12.f Hydromodification Management
- E.12.~~g~~f Implementation Strategy for Watershed Process Management
- E.12.h. Enforceable Mechanisms
- E.12.~~i~~g Operation and Maintenance of ~~Post Construction~~ Storm Water Control ~~Management~~ Measures
- E.12.~~j~~h Post-Construction Storm Water Management Measure Condition Assessment
- E.12.k~~j~~ Planning and Building Document Updates

~~**Reporting –** By the third year Annual Report, all Permittees shall complete and have available an inventory of projects subject to post-construction treatment measures for new and redevelopment projects.~~

~~**E.12.b. Hydromodification Measures**~~

~~All Permittees shall implement post-construction hydromodification measures and comply with the following Sections:~~

- ~~E.12.e Hydromodification Management~~ [14]
- ~~E.12.f Implementation Strategy for Watershed Process-Based Storm Water Management~~
- ~~E.12.g Operation and Maintenance of Post Construction Storm Water Management Measures~~
- ~~E.12.h Post-Construction Storm Water Management Measure Condition Assessment~~

~~**Reporting -**~~

1. ~~Permittees located within a Phase I MS4 permit boundary with a Regional Water Board approved Hydromodification Plan shall complete and have available a summary report in the year one Annual Report describing the strategies to implement and coordinate with the surrounding Phase I MS4 Permittee Hydromodification Plan. In subsequent Annual Reports, the Permittee shall complete and have available an inventory of projects subject to the surrounding Phase I MS4 Hydromodification Plan requirements.~~
2. ~~By the third year Annual Report, Permittees located within a Phase I MS4 permit boundary without a Regional Water Board approved Hydromodification Plan or where a plan does not exist shall have available an inventory of the projects subject to Section E.12.e.~~
3. ~~By the third year Annual Report, Permittees not located within a Phase I MS4 permit boundary area shall have available an inventory of the projects subject to Section E.12.e.~~

E.12.~~c~~b. Site Design Measures

(i) **Task Description –** ~~Within the first year of the effective of the permit~~~~By~~By Year 3, the Permittee shall ~~implement~~ require implementation of site design measures on~~for~~ all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet~~or more~~ of impervious surface, ~~including~~ and detached single family homes that are 2,500 square feet or more and not part of a larger plan of development.

(ii) **Implementation Level -** ~~The Permittee shall implement the following site design measures for all projects that create and/or replace 2,500 square feet or more of impervious surface, including detached single family homes that are not part of a larger plan of development.~~ Regulated Projects ~~The Permittee~~ may implement one or a combination of the following site design measures to reduce project site runoff ~~to the maximum extent technically feasible~~:

(a) Follow development~~Stream~~ ~~S~~setbacks and ~~B~~buffers
(b) Amend ~~S~~soil~~s~~ ~~Quality Improvement and Maintenance~~
(c) ~~T~~Protect and replace trees and native vegetation ~~ree planting and preservation~~
(d) ~~R~~Direct rooftop runoff onto vegetated areas ~~and Impervious Area Disconnection~~
(e) Direct runoff from walkways, driveways, patios, and uncovered parking areas onto vegetated areas
(~~f~~e) Construct walkways, driveways, patios, and uncovered parking areas with permeable paving surfaces ~~Porous Pavement~~
(~~g~~f) Direct roof runoff into rain barrels and cisterns~~Green Roofs~~
(h) Other design measures that are approved as effective means of reducing site runoff.
~~(g) Vegetated Swales~~
~~(h) Rain Barrels and Cisterns~~

E.12.~~d~~c. ~~Low Impact~~Regulated Projects ~~Development Runoff Standards~~

~~E.12.d.1. Regulated Projects~~

(i) **Task Description –** The Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from development projects as defined below.~~Within the second year of the effective of the permit, the Permittee shall regulate projects that create and/or replace (no net increase in impervious surface) 5,000 square feet or more of impervious surface for low impact development runoff standards.~~

(ii) **Implementation Level** ~~–~~ By Year 3, t~~T~~he Permittee shall regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface. The permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

(a) Regulated Projects do not include:~~Regulated projects as they are defined below do not include the following specific exclusions:~~

(~~a~~1) Detached single family home projects that are not part of a larger plan of development;
(~~b~~2) Interior remodels;
(~~c~~3) Routine maintenance or repair such as: exterior wall surface replacement, pavement resurfacing within the existing footprint.

~~**Regulated Project Categories** include the following:~~

~~(a) New Development or redevelopment projects that fall into one of the categories listed below and that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site). This category~~Development includes new and redevelopment projects ~~of the following types~~ on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. ~~This category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.~~

~~(i) Restaurants (SIC 5812);~~
~~(ii) Automotive Repair Shops (SIC 5013,5014, 5541, 7532 – 7534,7536-7539);~~
~~(iii) Retail Gasoline Outlets;~~
~~(iv) Uncovered parking that is stand-alone or part of any other development project. This category includes the top uncovered portion of parking structures unless drainage from the uncovered portion is connected to the sanitary sewer along with the covered portions of the parking structure;~~
~~(v) Industrial projects;~~
~~(vi) Residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments);~~
~~(vii) Mixed-use projects, or~~
~~(viii) Public projects.~~

(b) Where a redevelopment project ~~in the categories specified above~~ results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included ~~in the treatment system design~~to the Maximum Extent Practicable.

(c) Where a redevelopment project ~~in the categories specified above~~ results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included ~~in the treatment system design~~.

~~(d) The Permittee shall apply the low impact development runoff standards to all applicable projects, both private development requiring municipal permits and public projects.~~

~~(1) Private Development Projects~~ (d) —Effective Date for Applicability of Low Impact Development Runoff Standards to Private and Public Development Projects

By Year 3 of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects. These include discretionary permit projects that have not been deemed complete for processing and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the third year of the effective date of this permit are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

~~(i) Discretionary Projects – If a project receives a vesting tentative map or development agreement, the Permittee shall require the project to adhere to the version of the low impact development runoff standards that is most current at the time of vesting tentative map or development agreement approval. The Permittee shall require all applicable development projects, which require discretionary approvals that do not receive a vesting tentative map or development agreement or which have an expired vesting tentative map or development agreement, to adhere to the version of the low impact~~

~~development runoff standards that is most current at the time of each discretionary approval. Discretionary approvals include, but are not limited to, the following: general plan amendment, tract or parcel map, subdivision map, zoning change or rezoning, tentative map, conditional use permit, or other development approval.~~

~~(ii) Ministerial Projects - The Permittee shall require all applicable projects, which do not require discretionary approvals, to adhere to the version of the low impact development runoff standards that is most current at the time the project application for the ministerial approval is complete. Ministerial approvals include, but are not limited to, building permits, site engineering improvements, and grading permits. If the applicable project receives multiple ministerial approvals, the Permittee shall require that project to adhere to the version of the low impact development runoff standards that is most current at the time the project application for the first ministerial approval is complete.~~

~~(2) Public~~ Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects.

(e) Road Projects - Any of the following types of road projects that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Low Impact Development Standards except that treatment of runoff of the 85th percentile that cannot be infiltrated onsite shall follow USEPA guidance regarding green infrastructure to the maximum extent practicable. Types of projects include:

(1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads which create 5,000 square feet or more of impermeable surface.

(2) Widening of existing streets or roads with additional traffic lanes.

(i) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface (5,000 square feet or more) of an existing street or road, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.

(ii) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff equivalent from new and/or replaced impervious surface of the project must be included in the treatment system design. ~~However, if the runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system must be designed and sized to treat runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid, the offsite treatment system or in-lieu fees shall address only the runoff from the added traffic lanes.~~

(3) Specific exclusions are:

(~~a~~i) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.

(~~b~~ii) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.

(~~c~~iii) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.

(~~d~~iv) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

E.12.d. Source Control Measures

(~~1~~i) **Task Description -** Pollutant Source Control Requirements.~~—~~ Regulated Projects with ~~T~~the following pollutant-generating activities and sources shall be required to implement standard permanent and/or operational source control ~~BMPs~~ measures as applicable.

(ii) **Implementation Level ~~—~~** Measures for the following activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include: ~~shall be adopted and implemented to address the following pollutant sources, as applicable:~~

(a) Accidental ~~and illicit discharges to on-site storm drain inlets~~spills or leaks.
(b) Interior floor drains ~~and elevator shaft sump pumps~~
(c) ~~Interior parking garages~~Parking/Storage area maintenance
(d) ~~Indoor and structural pest control~~Building and grounds maintenance
~~(e) Landscape/outdoor pesticide use~~
(e~~f~~) Pools, spas, ponds, decorative fountains, and other water features maintenance
(f~~g~~) Restaurants, grocery stores, and other food service operations
(g~~h~~) ~~Refuse areas~~Storage and handling of solid waste ~~(i) Industrial processes~~
(~~i~~h) Outdoor storage of equipment or materials
(~~k~~i) Vehicle and equipment cleaning
(~~l~~j) Vehicle and equipment repair and maintenance
(~~m~~k)Fuel dispensing areas
(~~n~~l) Loading docks
(~~o~~m) Fire sprinkler test water
(~~p~~n) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(o) Unauthorized non-stormwater discharges

~~E.12.dc.2 Low Impact Development (LID) Design Standards~~

E.12.e Low Impact Development (LID) Design Standards

(i) **Task Description –** The Permittee shall require all Regulated Projects to implement low impact development (LID) standards to effectively reduce runoff, treat stormwater, and provide baseline hydromodification management ~~from Regulated Projects~~.

(ii) **Implementation Level –** The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve the following LID Design Standards. ~~objectives for runoff reduction, storm water treatment, and baseline hydromodification management~~[1][2].

(a) **Site Assessment –** At the earliest planning stages, the Permittee shall require Regulated Projects to assess and evaluate how site conditions, such as soils, vegetation, and flow paths, will influence the placement of buildings and paved surfaces. The evaluation will be used to meet the goals of capturing and treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing LID site assessment methodology such as the Low Impact Development Manual for Southern California (CASQA). Permittees shall require Regulated Projects to consider optimizing the site layout through the following methods:

- Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.
- Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
- Limit overall impervious coverage of the site with paving and roofs.
- Set back development from creeks, wetlands, and riparian habitats.
- Preserve significant trees.
- Conform the site layout along natural landforms.
- Avoid excessive grading and disturbance of vegetation and soils.
- Replicate the site's natural drainage patterns.
- Detain and retain runoff throughout the site.

~~(a)~~(b) **Drainage Management Areas –** The Permittee shall require each Regulated Project to provide a map or diagram dividing the ~~entire~~ developed portions of the project site into discrete Drainage Management Areas (DMAs), and to account for the drainage from each DMA using Site Design Measures, Source Controls and/or Stormwater Treatment and Baseline Hydromodification Measures.

(c) **Site Design Measures –** as defined in E.12.b. Implementation of Site Design Measures shall be based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event.

(d) **Source Controls –** as defined in E.12.d.

(e) **Storm Water Treatment and Baseline Hydromodification Management Measures –** After implementation of Site Design Measures, remaining runoff from ~~Runoff from remaining~~ impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or ~~bioretain~~ biotreat the amount of runoff specified ~~below~~in E.12.j. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

(1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.
(2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.
(3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.
(4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.
(5) Underdrain with discharge elevation at the top of the gravel layer.
(6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.
(7) No liners or other barriers interfering with infiltration.
(8) Appropriate plant palette for the specified soil mix and maximum available water use.

(f) **Alternative Designs —** Facilities, or combination of facilities, of a different design than in ~~(2)~~(~~d~~e) may be permitted if an ~~the following measures of equivalent effectiveness are demonstrated:~~

~~(1) E~~equal or greater amount of runoff ~~infiltrated~~ infiltration or ~~evapotranspired~~ evapotranspiration is demonstrated.
~~(2) Equal or lower pollutant concentrations in runoff that is discharged after bioretention~~
~~(3) Equal or greater protection against shock loadings and spills~~
~~(4) Equal or greater accessibility and ease of inspection and maintenance~~

(g~~e~~) **Allowed Adjustments~~Variations~~ for Special Site Conditions -** The bioretention system design parameters in ~~(2)~~ (e) may be adjusted for the following special site conditions ~~as follows~~:

(1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impermeable cutoff wall between the bioretention facility and the structure or other geotechnical hazard.
(2) Facilities in areas with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impermeable liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a "flow-through planter").
(3) Facilities located in areas of ~~high~~highly infiltrative soils ~~groundwater~~, or where connection of an underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.
(4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high-risk areas are isolated from stormwater runoff or bioretention areas with little chance of spill migration.

(h~~f~~) **Exceptions to Requirements for Bioretention~~LID~~ Facilities -** Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, ~~tree-box type biofilters~~ other types of biotreatment or ~~in-vault~~ media filters (such as tree-box biofilters and in-vault media filters) may be used for the following categories of Regulated Projects:

(1) Projects creating or replacing an acre or less of impervious area, ~~and~~ located in a designated pedestrian-oriented commercial district, and having at least 85% of the entire project site covered by permanent structures;
(2) Facilities receiving runoff solely from existing (pre-project) impervious areas;~~,~~
(3) Smart growth ~~credits~~projects; and
(4) Historic sites, structures, or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

~~Tree-box-type biofilters and in-vault media filters shall meet the requirements of above storm water treatment measures requirements. By May 15, 2014, each permittee shall adopt or reference appropriate performance criteria for tree-box-type biofilters and in-vault media filters.~~ By Year 3, each permittee shall adopt or reference appropriate design criteria for such biotreatment and media filters.

~~**Reopener for LID requirements** - The Executive Director of the State Water Board may evaluate newly available technical data and other information regarding the effectiveness of source control, runoff reduction, stormwater treatment, and baseline hydrograph modification management measures and may propose to the State Water Board revisions to these criteria as needed to ensure the measures and facilities installed under this Permit minimize pollutant loadings and hydromodification impacts.~~

E.12.d.3(j) ~~**d.**~~ **Numeric Sizing Criteria for Storm Water Retention and Treatment** -

~~**(i) Task Description –** The following numeric sizing criteria shall be established.~~

(ii) ~~**Implementation Level -**~~ The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

(~~1~~a) Volumetric Criteria

~~a.~~(1) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

~~b.~~(2) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

(~~2~~b) Flow-based Criteria

~~a.~~(1) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

~~b.~~(2) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

(iii) Reporting – For each Regulated Project approved, the following information shall be completed and be available starting in Year 3 ~~annually in the Annual Report~~:

(a) Project Name, Number, Location (cross streets), and Street Address;
(b) Name of Developer, Phase No. (if project is being constructed in phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;
(c) Project watershed(s);
(d) Total project site area and total area of land disturbed;
(e) Total new impervious surface area and/or total replaced impervious surface area;
(f) If a redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;
(g) Status of project (e.g., application date, application deemed complete date, project approval date);
(h) Source control measures;
(i) Site design measures;
(j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location;
(k) O&M responsibility mechanism for the life of the project.

(l) Water quality treatment calculations used;
(m) Off-site compliance measures for Regulated Project (if applicable)
(n) Additional (watershed-specific) hydromodification standards used

E.12.~~e~~f. Hydromodification Management

(i) Task Description – Within the third year of the effective date of the permit, the Permittee shall develop and implement Hydromodification Management procedures if modified hydromodification criteria are developed per Section E.12.g below. Hydromodification management projects are Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre-project condition is not a hydromodification management project.

(ii) Implementation Level - ~~The Permittee shall implement the following Hydromodification Standard:~~

~~Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year, 24-hour storm in the following geomorphic provinces (Figure 1):~~

~~Coast Ranges~~
~~Klamath Mountains~~
~~Cascade Range~~
~~Modoc Plateau~~
~~Basin and Range~~
~~Sierra Nevada~~
~~Great Valley~~

~~Post-project runoff shall not exceed estimated pre-project flow rate for the 5-year, 24-hour storm in the following geomorphic provinces (Figure 1):~~

~~Transverse Ranges~~
~~Peninsular Ranges~~
~~Mojave Desert~~
~~Colorado Desert~~ The Storm Water Treatment and Baseline Hydromodification Management Measures are considered adequate for hydromodification control until the State and Regional Water Boards have determined whether the requirements in E.12.b through E.12.e. are protective of the watershed processes identified in E.12.g below or if modified criteria should apply.

(a) Exemptions
Permittees have the discretion to exempt a ~~Priority Development~~ Regulated Project from the hydromodification management requirements where the project:
(1) Discharges storm water runoff into underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, area under tidal influence, or the Pacific Ocean;
(2) Discharges storm water runoff into conveyance channels ~~whose bed and bank are concrete lined~~that are hardened all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, area under tidal influence, or the Pacific Ocean; ~~or~~
(3) Projects that are replacement, maintenance or repair of a Permittee's existing flood control network;

(4) Projects that discharge directly or via a storm drain to waterway that has a 100-year peak flow (Q100) of 25,000 cfs or more, or other receiving water that is not susceptible to hydromodification impacts; or

(~~3~~5) ~~Additional~~ Discharges storm water runoff into other areas as identified by the State and/or Regional Water Board)

(iii) Reporting – By the third year annual report, complete and have available verification that the Hydromodification Management procedures are being implemented, if applicable.

E.12.~~f~~g. Implementation Strategy for Watershed Process – Based Storm Water Management

(i) Task Description – Watershed Management Zones (WMZs)[16] established and delineated by the State Water Board will include the following watershed processes.

(a) Overland flow – precipitation reaching the ground surface that does not immediately soak in and runs over the land surface;

(b) Infiltration and Groundwater Recharge– infiltration to support baseflow to wetlands and surface waters, and deep vertical infiltration to groundwater;

(c) Interflow – shallow subsurface flow (usually within 3 to 6 feet of the surface) that provides a transition between the rapid response from surface runoff and much slower stream discharge from deeper groundwater;

(d) Evapotranspiration – returning water to the atmosphere by direct evaporation from soil and vegetation and by the active transpiration by vegetation;

(e) Delivery of Sediment to Waterbodies – sediment delivery into the channel network critical to the maintenance of habitat features in fluvial systems (excessive sediment loading from watershed disturbance can also be a significant source of degradation);

(f) Delivery of Organic Matter to Waterbodies – introduction of allochthonous organic material into the stream network, either as fine organic material suitable for food or as coarse organic material that can provide physical structure and hydraulic resistance in the channel, critical for maintaining aquatic life;

(g) Chemical/Biological Transformations – the suite of watershed processes that alter the chemical composition of water as it passes through the soil column on its path to (and after entry into) a receiving water

~~Within the second year of the effective of the permit, The State and Regional Water Boards will determine whether the requirements in E.12.d and E.12.e. are protective of the watershed processes identified below or if modified criteria should apply. The Regional Boards may also, following evaluation of watershed processes, approve in-lieu programs allowing applicants to financially participate in projects that protect or enhance watershed processes as an alternative to on-site compliance. Permittees shall work collaboratively with the appropriate Regional Water Board to incorporate watershed process-based numeric criteria for new and redevelopment projects~~.

(ii) Implementation Level –

(a) Within the second year of the effective date of the permit, ~~T~~the State and Regional Water Boards will determine whether the requirements in E.12.d~~b and~~through E.12.e. are protective of the watershed processes identified ~~below~~above or if modified criteria should apply. ~~The Regional Boards may also, following evaluation of watershed processes, approve in-lieu programs allowing applicants to financially participate in projects that protect or enhance watershed processes as an alternative to on-site compliance.~~ ~~Permittees~~ If by the end of the second year it is determined by the State and Regional Boards that the requirements in E.12.b through E.12.e.~~E.12.x – x~~ are not protective of watershed processes, Regional Boards shall work collaboratively with the

appropriate ~~Regional Water Board~~Permittees to ~~incorporate~~develop modified watershed process-based numeric criteria for new and redevelopment projects. Upon approval of a Regional Water Board's modified watershed process-based ~~plan and associated implementation~~ criteria, those rules shall supersede this Order as directed by the Regional Water Board. Otherwise, the requirements in E.12.b through E.12.e.~~E.13.x and E.13.x~~ are presumed to sufficiently protect the watershed processes. If a permittee is located within a Phase I MS4 permit boundary with a Regional Water Board-approved Hydromodification Plan (or equivalent), the Regional Water Board shall work with the Permittee to develop a strategy by the end of the second year to implement some or all of the existing Hydromodification Plan (or equivalent). ~~by the end of the second year~~.

~~(a)~~(b) Permittees may develop and implement an in-lieu program that allows ~~program applicants~~Regulated Projects to participate in a project that protects or enhances watershed processes as an alternative to on-site compliance.

E.12.~~f~~h. Enforceable Mechanisms – By Year 3 of the effective date of the permit, the Permittee shall ~~Within the third year of the effective of the permit,~~ develop and/or modify enforceable mechanisms that will effectively implement the requirements in E.12.~~d~~b though E.12.e ~~and e (if necessary)~~. Enforceable mechanisms may include municipal codes, regulations, standards, and specifications. The Permittee shall:

(1) Conduct an analysis of all applicable codes, regulations, standards, and/or specifications to identify modifications and/or additions necessary to fill gaps and remove impediments to effective implementation of parcel-scale development requirements.

(2) Approve new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement the requirements in E.12.b though E.12e~~E.12.d and e~~ (if necessary) for protecting watershed processes affected by storm water in new and redevelopment projects.

(3) Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects.

(b) The Permittee shall develop and make available specific guidance for LID BMP design and compliance with Watershed Process Management requirements (if applicable).

(c) The Permittee shall complete a Tracking Report indicating the Permittee's accomplishments in education and outreach supporting implementation of LID and Watershed Process Management requirements for new and redevelopment projects.