



## California Stormwater Quality Association™

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

September 1, 2006

Song Her, Clerk to the Board  
Executive Office  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-0100

**Subject: Comment Letter – Stormwater Blue Ribbon Panel Report**

Dear Chair Doduc and Board Members:

Thank you for this opportunity to provide comments on the recommendations of the Stormwater Blue Ribbon Panel (BRP) Report entitled *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Stormwater Associated with Municipal, Industrial and Construction Activities, June 19, 2006* (Panel Report). As requested, we have focused our comments on whether and how the State Water Resources Control Board (State Water Board) should implement the Panel Report recommendations to improve the National Pollutant Discharge Elimination System (NPDES) Stormwater Program.

The California Stormwater Quality Association (CASQA) was formed in 1989 to develop and recommend approaches to the State Water Board for stormwater quality management in California. CASQA is composed of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout the state. Our membership provides stormwater management services to over 21 million people in California and includes almost every Phase 1 municipal program in the State. A significant part of our mission is to assist the State Water Board with the development and implementation of the stormwater permitting process.

Another significant part of CASQA's mission is to assist its members with the development and implementation of stormwater programs. To fulfill this objective, CASQA supports stormwater programs that:

- Are technically and economically feasible
- Provide significant environmental benefits and protect designated beneficial uses of water
- Promote the advancement of stormwater management, science, and technology
- Comply with federal and state stormwater laws and regulations.

The comments submitted in this letter as well as our presentations at the two workshops are provided to further these objectives and the stormwater programs in California. The use of the Panel Report findings and recommendations is of great interest to the CASQA membership. The Panel Report and the resulting actions by the State Water Board will ultimately affect our members and potentially have significant economic, personnel, and technical impacts on their programs.



Our comments on the Panel report elaborate upon previous comments submitted to the State Water Board including:

- *Presentation to Blue Ribbon Panel/State Water Board*, September 14, 2005 (and accompanying Board package)
- *State Water Board Process for the Development of Quantitative Measures for Stormwater Program Compliance*, August 15, 2005
- *CASQA White Paper: An Introduction to Stormwater Program Effectiveness Assessment*, August 2005
- *Development of a Statewide Stormwater Policy*, January 28, 2005
- *Recommendations for the Revision of the Industrial General Permit, Water Quality Order No. 97-03-DWQ*, February 18, 2005 (including Attachments 1 and 2)

Please refer to these previously submitted comment letters (available at <http://www.casqa.org/resources/product.php>) as you consider the following recommendations.

### **Need for Statewide Stormwater Policy and Context for Blue Ribbon Panel Report**

We believe the Panel Report recommendations will be most useful if the recommendations are considered within a comprehensive approach or context for stormwater management in California. Although the BRP was not specifically directed to address the overall stormwater context, the appropriateness of any recommendation depends in part on compatibility with the existing system. If thoughtfully implemented, the Panel Report recommendations create a significant opportunity to kick-start the development of a comprehensive and cogent policy for stormwater management in California.

As State Water Board management and stormwater staff are aware<sup>1</sup> CASQA has been actively working on the development of a *Progressive Approach for Regulating Stormwater* and permit strategies for the upcoming general industrial and general construction stormwater permits as well as future municipal permits (see attachments) (herein collectively referred to as the *CASQA Progressive Approach*).

We strongly believe that the *CASQA Progressive Approach* provides the required context in which to implement the Panel's recommendations to best serve the State. Therefore, our comments that follow are directed at the application of the Panel Report to permit and policies and the *CASQA Progressive Approach*. We provide near-term and long-term implementation strategies for the Panel's recommendations for each of the three permit types (i.e., industrial, construction, and municipal). The near-term section identifies those items/issues that should be incorporated into or considered prior to the next round of permits. The long-term strategies are provided in the context of future monitoring efforts, data needs, and policy development.

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<sup>1</sup> A presentation and panel discussion on the *Progressive Approach* was a major item at our Annual Federal and State Stormwater and Water Quality Regulatory Programs Update meeting, January 13, 2006 in San Diego, attended by stormwater quality managers and regulators from around the state.

## Key Recommendations from the Blue Ribbon Panel Report

We derived the key recommendations after careful review and consideration of the Panel Report sections, although some aspects of the report were somewhat unclear. In the following paragraphs we summarize our understanding of the Panel recommendations and how we believe they should be best implemented.

### *Industrial*

1. **BRP Recommendation:** Current Industrial stormwater database is inadequate to establish numeric limits. State Water Board needs to re-examine and collect new data before establishing numeric limits.

**CASQA Position:** CASQA concurs with this recommendation.

**Near-term strategies:** The State Water Board needs to initiate a collaborative effort to develop a strategy to establish and implement TBELs, WQBELs or TMDLs based limits. The strategy should follow USEPA methodology for establishing industrial categorical limits. In the meantime, the State Water Board in the next industrial permit cycle should develop an inventory of industrial activities and BMPs. Furthermore, the State should examine options for more accurately cataloging industries and water quality issues.

**Research, Data Collection and Policy implications:** The State Water Board should implement a research program to obtain scientifically based monitoring data (consistent with USEPA methodology for developing industrial categorical limits) for subsequent development of technology based effluent limits. This program should be developed in a cost effective manner and not cause undue hardships on California industries. This may include looking at discharger categories in lieu of individual dischargers.

2. **BRP Recommendation:** Where sufficient data are available, establish action levels.

**CASQA Position:** CASQA concurs with this recommendation.

**Near-term strategies:** The State Water Board should closely examine the existing industrial monitoring database to determine if it can be used as a starting point for establishing action levels. If adequate data are available then action levels should be established and used as a trigger for follow up BMP review and implementation. Compliance would be based on the discharger efforts to provide follow-up action and not on exceedance of the action level. Such an approach is currently being used in the State of Washington and also reflected in CASQA *Progressive Approach*, Industrial Stage 2 (see attachments).

**Research, Data Collection and Policy implications:** To further refine the action levels the State Water Board should develop a cost effective monitoring program to augment the database and provide a more robust and scientifically defensible dataset. With better data the State Water Board should refine the tiered BMP response to action level exceedances.

### ***Construction***

1. ***BRP Recommendation:*** Action levels for erosion and sediment control BMPs are more commonly feasible.

***CASQA Position:*** CASQA concurs with this recommendation.

***Near-term strategies:*** The State Water Board should establish a collaborative data gathering strategy to develop action levels. Consistent with the Panel observation, the action levels should be based on some statistically validated increase of turbidity or pH in comparison with background levels. In the next permit term the State Water Board should look to establish an inventory of erosion and sediment control BMPs correlated to varying site conditions.

***Research, Data Collection and Policy implications:*** To support the strategy and action level development, the State Water Board should conduct and oversee a cost effective construction BMP monitoring program. The establishment of action levels must be based on a scientifically defensible approach.

2. ***BRP Recommendation:*** Numeric limits are feasible for advance treatment systems (ATS) at some construction sites with reservations.

***CASQA Position:*** CASQA concurs with the reservations noted by the BRP on the establishment of technology based effluent limits for ATS.

***Near-term strategies:*** The State Water Board should initiate a collaborative effort to develop a strategy to develop and implement technology based effluent limits for large construction sites (i.e., >5 acres). As with the Industrial program, the strategy should reflect USEPA protocol for development of categorical limits and include a comprehensive data gathering effort. In the next permit term the State Water Board should establish an inventory of ATS correlated to various site conditions. Elements of the revised permit could be used in combination with a state funded research effort to initiate some of this data gathering, in setting monitoring requirements for projects that choose to use ATS, and inventorying site characteristics at these projects to begin to assess performance of ATS in the California climate and soil types.

***Research, Data Collection and Policy implications:*** To support the TBEL strategy the State Water Board should conduct a scientifically based monitoring program. The monitoring program must also consider among other things the impact of treatment chemicals on water quality and environmental conditions. Using this information the State Water Board should establish conditions for application of ATS and corresponding technology based effluent limits.

## ***Municipal***

1. ***BRP Recommendation:*** Numeric effluent criteria for municipal BMPs and urban discharges are not feasible:
  - Numeric effluent limits for catchments without treatment controls are not possible
  - For catchments without treatment controls action levels (ALs) may be used as interim approach

***CASQA Position:*** CASQA concurs with the first bullet of the recommendation, that being the development of numeric effluent limits for catchments without treatment controls is not feasible. This position is further supported in a recent USEPA guidance on TMDLs (Robert H. Wayland, USEPA Office of Wastewater Management, 11/22/02).

However, regarding the second bullet, we partially agree with the recommendation that action levels for catchments without treatment controls may be used as an interim approach. Part of our hesitation regarding our position and the BRP recommendation is because it is unclear to us what is meant by action levels as an “interim approach” in terms of implementation and permit requirements. We support in concept using action levels (or other quantifiable measurements) for identifying the “bad actors”. An example of where this might be applied is with the Illicit Discharge/Illegal Connection (ID/IC) program. But the use of action levels otherwise poses significant concern to our membership.

***Near-term strategies:*** The State Water Board should continue to use the BMP iterative approach for municipal permits (see *CASQA Progressive Approach*, Municipal Stage 2). Based on the Panel recommendation noted above in the first bullet CASQA recommends that the State Water Board also adopt a policy directing staff and Regional Water Boards to refrain from attempting to reference or utilize numeric water quality based (WQBELs) or technology based effluent limits (TBELs) until further research, policies and the necessary data are developed to support their development and application. We believe that State Water Board direction and coordination on a statewide basis is very important in this area.

At the same time the State Water Board should consider the use or development of action levels (or other quantifiable measurements) aimed at identifying “bad actors,” including but certainly not limited to, dry weather action levels for the Illicit Discharge/Illegal Connection program element as part of the field screening or inspection program. Field screening action levels could be conceived as a means for triggering follow-up action but not as compliance limits or as a basis for enforcement actions. Furthermore the field screening action levels should primarily be limited to parameters measured in the field (e.g., pH, etc). The State Water Board should also work with CASQA in developing the criteria to be used to establish action levels.

***Research, Data Collection and Policy implications:*** The State Water Board should identify a strategy and monitoring program to develop local action levels (that may be applied at a program level and/or task activity level). This approach should be scientifically based and provide protocols for data collection consistent with USEPA procedures.

**2. *BRP Recommendation:*** Review/Revise Treatment BMP Selection, Design and Maintenance Requirements and Protocols.

- Select, design and maintain treatment BMPs more rigorously
- Establish performance standards
- Presume performance standard is met if designed and maintained appropriately

***CASQA Position:*** CASQA concurs with this recommendation, but notes that the recommendation only applies to the new and redevelopment components of MS4 programs.

***Near-term strategies:*** The State Water Board should require a BMP selection process similar to one contained in the CASQA BMP Handbooks. Municipalities should require submittal of detailed maintenance plans with design plan submittal prior to municipal approval. The State Water Board should look at options for ensuring proper design, selection and installation of the treatment control BMPs.

***Research, Data Collection and Policy implications:*** The State Water Board should either look to establish a research project or support ongoing efforts by the Office of Water Programs, Caltrans and others to collect the data from treatment control BMPs to support the development of performance standards. The research project must be set up to ensure proper design, selection and maintenance to support a scientifically based performance standard. As with action levels development discussed above, the research project must identify the protocols for data collection to ensure the integrity, consistency and local applicability of the data.

### **Other Observations/Recommendations by the Blue Ribbon Panel**

In this section we provide comments on a variety of observations and recommendations identified in the Panel Report. As an overriding matter, the State Water Board specifically directed the Panel to address: (1) the ability of the State Water Board to set appropriate limits; (2) how compliance determinations should be made; (3) the monitoring ability of dischargers and inspectors; and (4) the technical and financial ability of dischargers to comply. While the Panel discussed many of these issues, it did not consistently consider all of them for each type of discharger. As one example, the Panel provided little mention or analysis of financial issues, yet it is imperative that the State Water Board understand the potential financial implications associated with setting numeric limits. Also, during our review of the Panel Report it was sometimes difficult to determine whether the Panel was making a recommendation or providing an observation. In order not to presuppose what the Panel intended we have combined these points and provide our comments accordingly.

#### ***Industrial***

1. The State Water Board should consider the total economic impact of the stormwater program and not unduly penalize California industries with respect to industries outside of California (page 21). CASQA concurs with this position and recommends that the State Water Board

consider options for minimizing cost (e.g., incentives for moving activities indoor, cost effective monitoring programs) (see our earlier comment regarding item #1, page 3).

2. The Panel recommends in the construction section that the State Water Board establish a design storm (water quality volume) where numeric limits and/or action levels would not apply (page 18). Although not specifically noted in the industrial section CASQA strongly recommends that this concept be incorporated into the industrial and municipal programs. A design storm is necessary for BMP design and to address the situations where the industrial facility can no longer contain/treat/manage the excess runoff.
3. The Panel provided limited discussion regarding the implementation of an approach that includes numeric limits or action levels. CASQA recommends that the State Water Board in a collaborative effort with stormwater quality programs and environmental communities establish the criteria for monitoring to address the how, when, and where questions and the enforcement procedures associated with action levels or numeric limits. (see our previous comment #2, page 4)

### ***Construction***

1. The Panel recommends that incentives or relief from numeric limits for projects that can complete the construction in a single dry season or for projects that can phase and stabilize disturbed areas (page 17). CASQA supports the concept of providing economic incentives for projects that manage construction operations in a manner that reduce mass loadings. Wet vs. dry season action limits, along with reductions in monitoring requirements, fees, and implementation of the USEPA “R-factor” waiver are possible methods to provide some incentives and allow Regional Water Board staff to focus on larger projects with greater water quality risks due to winter work. Consideration should also be given to the undesirable effect of conducting an unacceptable amount of roadwork into the “dry” season that would seriously impair traffic flow and roadway drivability.
2. The State Water Board should consider establishing action levels for pollutants other than turbidity (page 17). CASQA recommends that the State Water Board consider using pH as companion to turbidity for establishing action levels. Monitoring for the breadth of potential pollutants in construction runoff does not provide timely information back to construction site operators to correct problems. Turn around times for certified analytical reports are at least several days and in some cases thirty or more days. Additionally, this monitoring component is costly to implement. pH on the other hand is inexpensive, expedient, and can be used to identify obvious problems associated with potential construction activities.
3. The State Water Board should provide relief from permit conditions for storms of unusual size (page 18). As noted in the industrial review above (item #2) CASQA strongly supports this concept and offers to work with the State Water Board to address this critical issue.
4. The Panel recommends that a numeric limit or action level should be compared to the average discharge concentration (page 17). CASQA believes that using a statistical approach

for effluent data to assess compliance with an action limit is a better approach than using a single sample to characterize compliance.

5. The Panel notes its concern about the cost of discharge monitoring to meet numeric limits or action levels (page 18). Discharge monitoring costs can be significant. CASQA appreciates the fact the Panel recognized the cost impacts that such monitoring would have on the construction industry. CASQA supports the Panel's finding that the State Water Board must consider the total cost of discharge monitoring to meet either effluent limits or action levels. This position also holds true for the industrial program. Monitoring focused on field techniques, as proposed in *CASQA Progressive Approach* is one way to keep analytical costs reasonable.

### ***Municipal***

1. There was no discussion in the Panel Report of the BMP iterative process and the use of source control BMPs to support water quality protection. We found the Report remiss in not acknowledging the progress made to date with the BMP iterative process and by not acknowledging that there are other quantifiable measures for assessing the effectiveness of a stormwater management program (This was part of the original question posed to the Panel). Instead, the Panel only focused on treatment control BMPs and development of numeric limits. This oversight limits the usefulness of the Report. The use of source control pollution prevention BMPs is a critical element of an effective program and the Report is severely deficient without this consideration.
2. Revise the CASQA BMP Handbooks to become a criteria manual rather than a guidance manual (page 11). CASQA supports this idea and would welcome the opportunity to work with the State Water Board to revise the Handbooks to include more physiobiochemically based design criteria to address problematic pollutants/stressors and to establish design and maintenance criteria.
3. Expand the water quality objectives used to protect beneficial use to include stressors such as increased flow, sediment contamination, temperature, and aesthetic (page 5). CASQA agrees that a more holistic approach is warranted for urban creeks, but notes that not all stressors are subject to NPDES permit requirements under the Clean Water Act, and hence, may require state funding to address them. Current Basin Plans have to some extent started to consider these issues. More work is warranted especially in identifying critical stressors relative to receiving water protection. To the extent that the stressors involve more than just water quality, the State Water Board should consider working with its sister agencies, such as CalEPA and other resources agencies that have regulatory purview and significant experience with these other stressor types. In a similar vein, the State Water Board should recognize restoration of natural stream functions as a BMP that improves water quality. The State Water Board should encourage municipalities to identify watersheds in which new development resources would be better spent restoring the natural functions of the creek with in-stream enhancements instead of implementing flow-duration control. The State Water

Board should also adopt a policy directing staff and Regional Boards to recognize and support stream restoration.

4. An effective stormwater control strategy should encourage low impact development concepts (page 14). CASQA concurs with this position, notes that many stormwater permits include LID-type controls, and would recommend that the State Water Board consider using the CASQA BMP Handbooks (as modified in item #1 above) to provide design criteria for the implementation of these concepts.
5. There needs to be a technically sound and pragmatically enforceable BMP selection, design, and permit process (page 11). CASQA agrees in concept that the State Water Board needs to establish a better process to support the decision regarding BMP selection and implementation. However, the figure on page 11 of the Report shows a very simplified and incorrect view of the stormwater permitting program. The compliance standard for the municipal program is (Maximum Extent Practicable) MEP. The use of Best Professional Judgment (BPJ) and Best Available Technology Economically Achievable (BAT) are relevant to the industrial/construction program, not the municipal. Also it is fair to say the State Water Board has already defined MEP for new development through the Los Angeles Standard Urban Runoff Mitigation Measures.

Thank you for this opportunity to submit our comments. As we noted in our workshop presentation, we applaud the State Water Board for taking on the difficult issues of numeric limits and accountability. We welcome the opportunity to work with the Board and its staff to constructively use the Panel recommendations and observations to improve the stormwater program in California.

Yours truly,

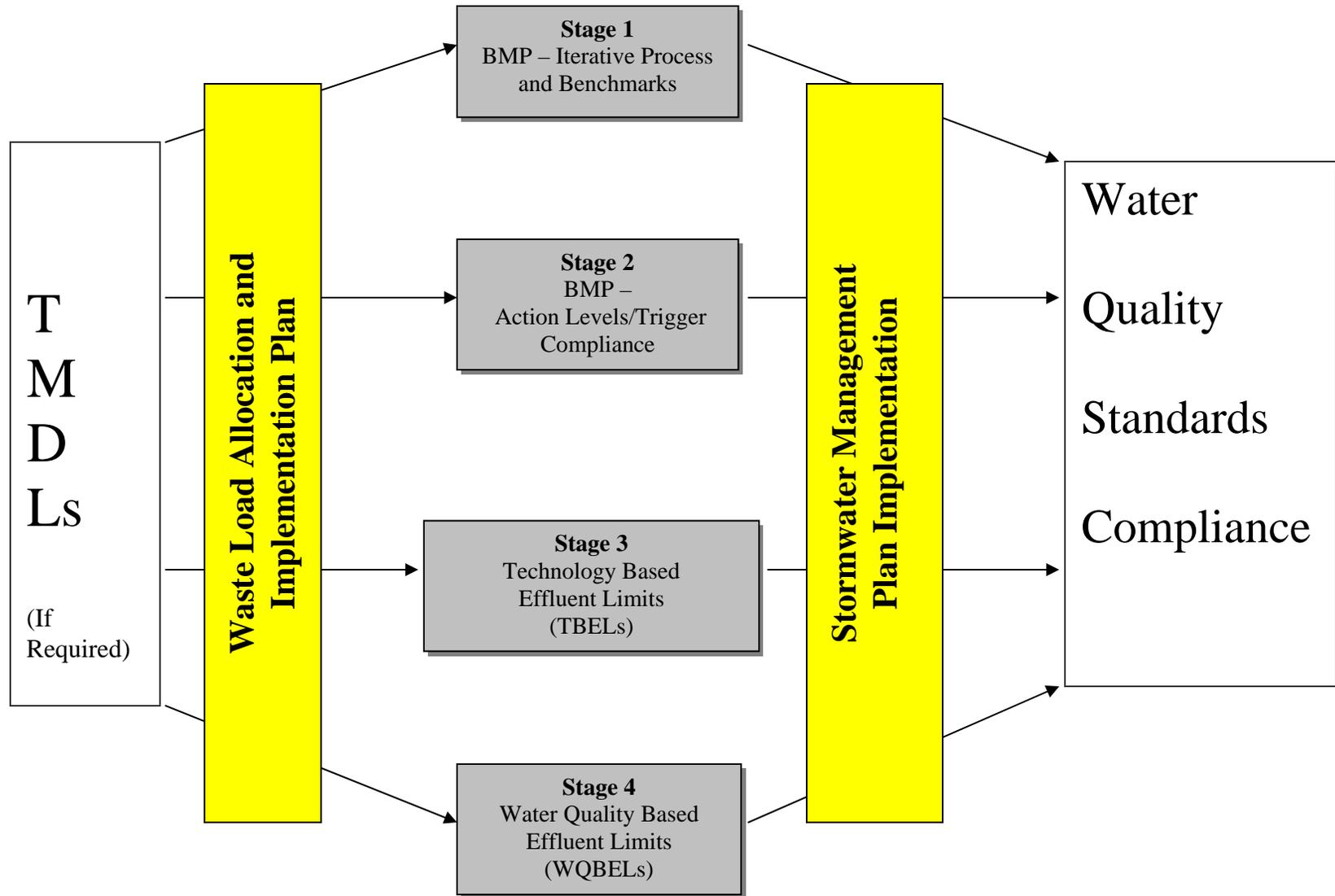


Bill Busath, Chair  
California Stormwater Quality Association

Attachments - CASQA *Progressive Approach*

cc: CASQA Board of Directors and Executive Program Committee

# Regulatory Options



**California Stormwater Quality Association's Proposed  
Progressive Approach<sup>a</sup> for Regulating Stormwater (Draft 9-01-06)  
Applicable to all three permit types<sup>b</sup>**

**Regulatory Options<sup>c</sup>**

**Stage 1**  
BMP – Iterative Process  
and Benchmarks

**Stage 2**  
BMP –  
Action Levels/Trigger  
Compliance

**Stage 3**  
Technology Based  
Effluent Limits  
(TBELs)

**Stage 4**  
Water Quality Based  
Effluent Limits  
(WQBELs)

**Stage 1**

- Status – Currently used in USEPA multi-sector general permit (industrial) and in California stormwater permits.
- Compliance Strategy – 1) Stormwater Management or Pollution Prevention Plan developed and implemented; 2) Effectiveness assessments conducted; 3) Analytical monitoring results compared to water quality standards and/or benchmarks; 4) Iterative process used to focus BMPs on problematic pollutants. Compliance based on implementing iterative process (municipal) and annual compliance assessment (industrial/construction).

**Stage 2**

- Status – Not currently used for municipal and construction stormwater permits; however, State of WA model exists for industrial.
- Compliance Strategy – 1) Stormwater Management or Pollution Prevention Plan developed and implemented; 2) Effectiveness assessments conducted (e.g., inspections, analytical) – comparison to adaptive management indicators dictates compliance response; 3) Iterative process used to focus BMPs, potentially problematic dischargers are required to establish and implement corrective action plans; 4) Compliance based on auditable review of BMPs implemented, monitoring, and for potentially problematic dischargers, compliance with corrective action plans.

**Stage 3**

- Status – Currently is being used by USEPA in limited cases (e.g., meat and poultry industry). USEPA has established procedures to develop TBELs (primarily for wastewater discharges). Development of effluent limitations based on treatment controls available to treat the pollutants and considers site conditions, activities, return period, constituents, treatment effectiveness, and costs.
- Compliance Strategy – Discharger required to implement treatment controls to meet numeric effluent limitations. Monitoring required to confirm performance and assess compliance.

**Stage 4**

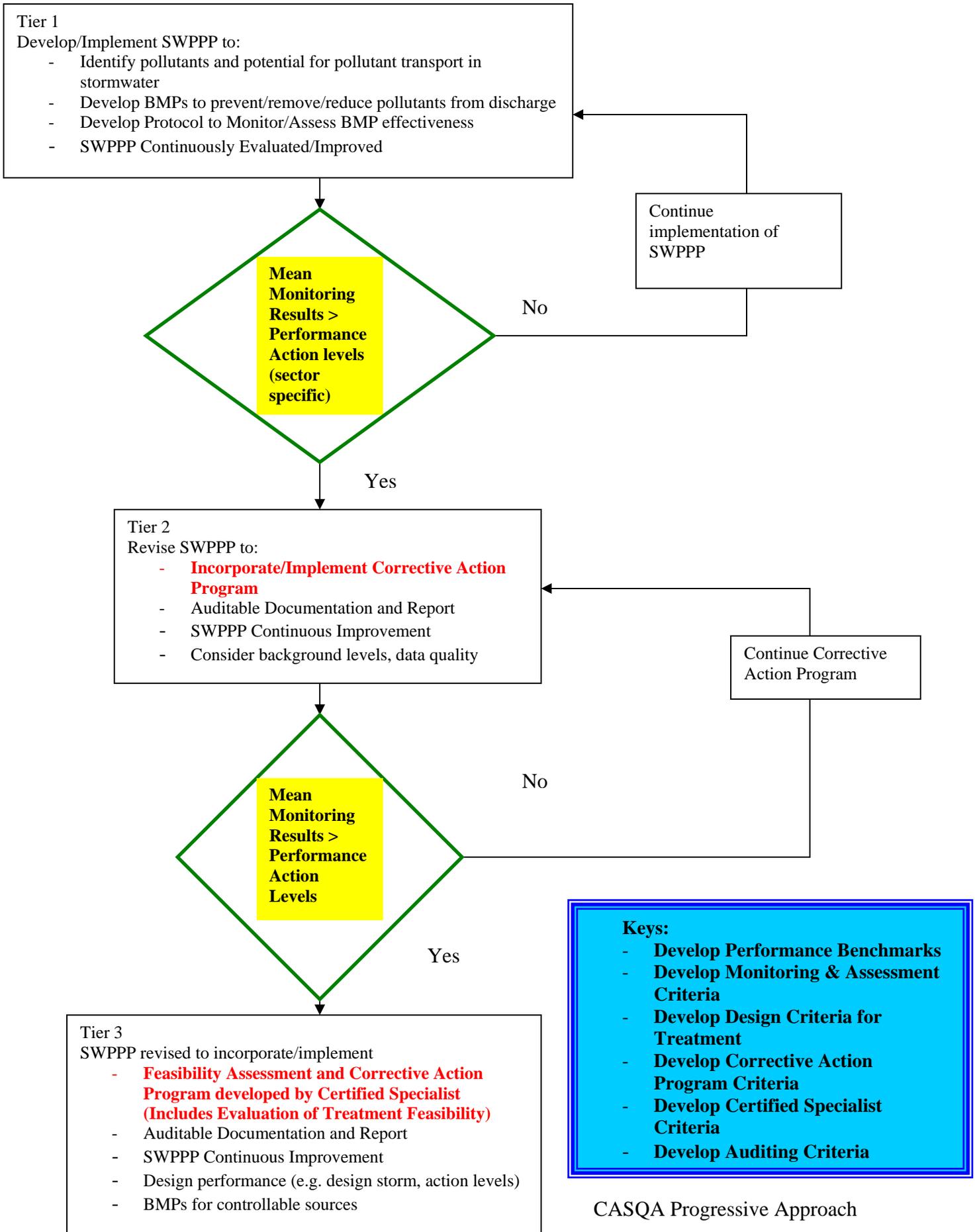
- Status – WQBELs have not been used to date as a compliance tool. Used in some situations inappropriately. WQBEL based on protection of beneficial uses of the receiving water. Currently USEPA does not have a procedure in place for developing WQBELs for stormwater. TMDL based effluent limitations based on waste load allocation required to protect beneficial uses.
- Compliance Strategy – Discharge required to comply with numeric effluent limitations (either WQBEL or TMDL based). Monitoring is required to confirm compliance.
- Note: Additional policy directives (e.g., mixing zones, averaging period, wet weather uses, etc.) needed for implementation.

<sup>a</sup> Goal of the approach is to comply with water quality standards.

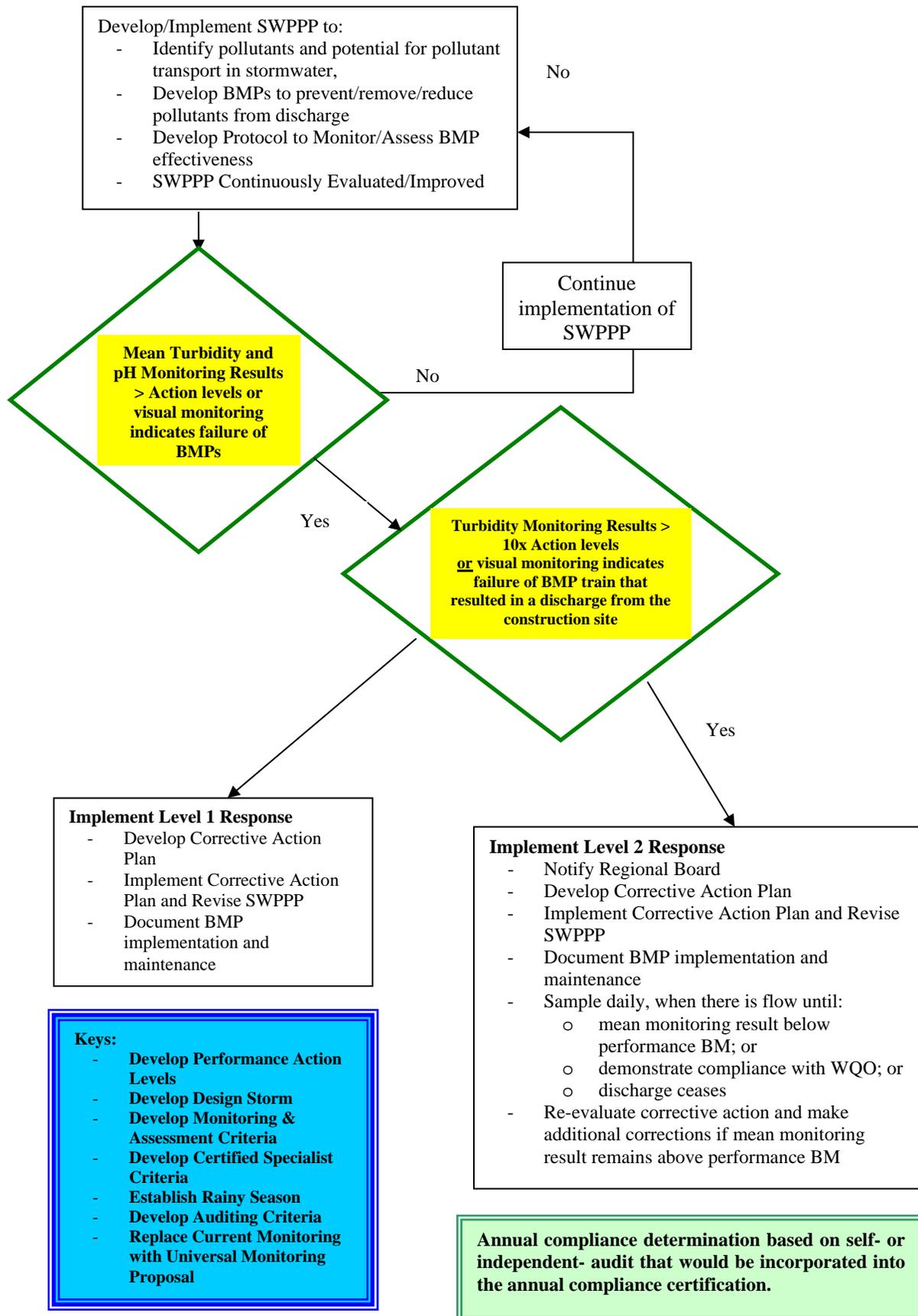
<sup>b</sup> Because numeric effluent limits for municipal discharges are currently technically infeasible, the development of effluent limits in stages 3 and 4 for municipal permits are manifested as additional best management practices (BMPs).

<sup>c</sup> Implementation of a TMDL may be incorporated into any stage and may be pollutant and water body specific.

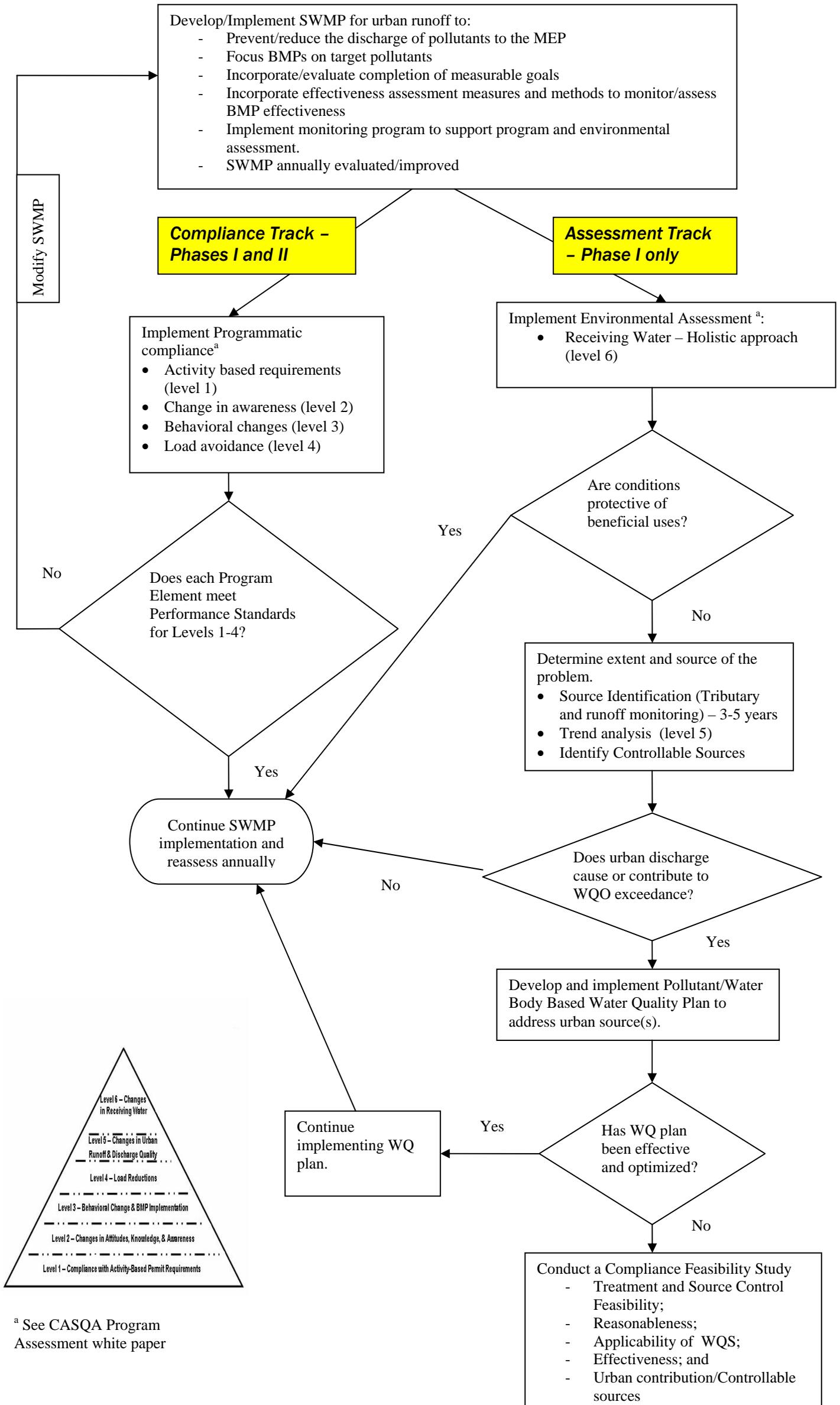
## Industrial Stormwater Permit Strategy: Stage 2 Roadmap (9/01/06 Draft)



# Construction Stormwater Permit Strategy: Stage 2 Roadmap (9/01/06 Draft)



# Municipal Stormwater Permit Strategy: Stage 2 Roadmap (9-01-06 Draft)



<sup>a</sup> See CASQA Program Assessment white paper