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TAB 24

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March 14, 2011

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
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Sacramento, CA 95814
commentletters@waterboards.ca.gov

Subject: Comment Letter – Caltrans MS4 Permit

Dear Ms. Townsend,

The California Department of Transportation (Caltrans) appreciates the opportunity to provide comments on the Tentative Order (TO) and related attachments that will constitute the reissued Caltrans Statewide NPDES Permit (CAS000003). We appreciate the efforts by the State Water Resources Control Board (State Board) staff to help ensure statewide consistency across the state's nine Regional Water Quality Control Boards (Regional Boards). A uniform program facilitates a more effective and efficient implementation and compliance.

As you know, our current Permit was issued in 1999. The TO does not provide an effective, coherent statewide administration mechanism, but it increases distribution of compliance/enforcement responsibility to the nine Regional Boards. The TO requirements are two generations advanced from our current Permit and will likely be interpreted in various ways by the State Board, Regional Boards, Caltrans staff and other external stakeholders. This fails to provide Caltrans with the opportunity to implement a consistent statewide program. We have assessed our ability to effectively implement the TO provisions using the following criteria:

- Compliance with TO requirements to maintain or improve water quality within the state's transportation infrastructure;
- Reasonable expenditure of public funds, in conformance with Department's mission of improving mobility, and the goal of environmental stewardship;
- Unambiguous and clear statements of TO requirements; and
- Statewide consistency in TO implementation.

Based on our review, we feel that roadway runoff will not comply with the receiving water limitations as currently drafted in the TO. The method of compliance assessment in the TO is unique to traditional MS4 systems and subjects the State to additional measures with commensurate fiscal implications. The new requirements in this TO will require substantial transportation infrastructure expenditures, with minimum or no environmental benefits.

The states and the U.S. EPA have regulated the state transportation systems within the traditional MS4 general Permit framework, although state Departments of Transportation (DOTs) do not fit well within this model. For example, municipalities generally have broad authority over a wide range of land uses throughout a geographically contiguous and relatively compact jurisdictional area. By contrast, DOTs primarily operate one type of land use, transportation (highways and supporting facilities), with no ordinance authority, and no administrative civil enforcement power. DOT infrastructure is passive and uniform, diffuse rather than compact and contiguous, and the stormwater discharges are tied to preserving infrastructure and safety.

Our major comments are listed below. Additional comments and requests for clarifications are also included as Attachments to this letter.

Major Comments

1. Resource Impacts

Caltrans will incur an immediate significant fiscal demand on the State Highway Account, which is already constrained. The Cost of Compliance as presented in the Fact Sheet is based on traditional MS4 programs, unlike Caltrans' unique program.

The resource impacts were estimated based on the TO as written, and thus required numerous assumptions, including but not limited to:

- $100,000 per Person Year (PY);
- TMDL implementation over a ten-year period and is a standalone capital approach, the outcome of which will not be known until an implementation plan is developed;
- ASBS implementation over a five-year period with standalone capital solutions;

Although the TMDL and ASBS requirements are currently in the Basin and Ocean Plans respectively, this TO implements these water quality objectives, making them enforceable and part of the program's total costs.

Owner Operator Cost Estimate

These estimated costs include a new Level 1 Stream Stability Analysis program and enhanced program administration, water quality compliance monitoring, and maintenance activities. The staff personnel resources to implement these activities are estimated at $50 million annually. However, depending on how the permit language is interpreted and enforced, this cost could reach $1 billion annually. The capital cost includes retrofitting BMPs at monitoring locations exceeding water quality standards and TMDL and ASBS locations. These are estimated at $134 million to $526 million annually.

Project Development Cost Estimate

These estimated costs include a significantly expanded set of treatment triggers (i.e., capturing most all projects), and new hydromodification mitigation, Level 1 Stream Stability Analysis, and BMP sizing. The staff personnel resources to implement these activities are estimated at $6 million annually for the first three years and $5 million annually thereafter. The capital costs are estimated to be $630 million for the first three years and $600 million annually thereafter.

The total estimated personnel costs to the Department is $55 million to $1.1 billion annually and the total estimated capital costs could range from $735 million to $1.1 billion annually.

We request that the TO focus on cost-effective programs that ensure commensurate water quality benefits.

2. Impact to Project Delivery

The TO includes new development requirement, which include BMP implementation, hydromodification assessments, and other mitigation measures that may affect project right-of-way.

We request that the TO include a provision to implement new development requirements limited to projects that have not initiated the public environmental review phase.

3. Inconsistent classification of exceedances of numeric water quality objectives

Section D of the TO, contains the proposed receiving water limitations (page 20). The first key requirement is presented in D.2 and is the subject of this comment:

> *2. The discharge of storm water from a facility or activity shall not cause or contribute to an exceedance of any applicable water quality standard.*

The TO changes the basis for identifying exceedances from pollution concentrations in the receiving water to exceedances of a WQO identified by effluent analytical results. This change may not be intentional and appears to be inconsistent with other parts of the TO and with other statewide Phase I Permits.

The current Caltrans Statewide Permit (and most MS4 Permits) includes the "iterative procedure," whereby identified exceedances of water quality standards (WQS) trigger Regional Board notification, a reevaluation of BMPs, and revision to the Caltrans Statewide Stormwater Management Plan (SWMP) to incorporate the improved or new BMPs. In addition, the determination of whether discharges are causing or contributing to an exceedance of WQS is based on monitoring in the receiving (ambient) water. The TO changes this approach by assessing compliance with WQS by using effluent analytical results taken from samples at some locations prior to discharge rather than samples taken from the receiving waters. This new requirement of effluent compliance is stated on page 27 of the TO [section E.2.c.2) b)].

The Department shall conduct receiving water monitoring and shall follow the iterative procedure specified in Provision E.2.c.3)c) of this Order when effluent analytical results indicate:

i) Three or more exceedances of a WQO in a single season for any constituent in Attachment II, or... [followed by other exceedance frequencies]

Note that this provision refers to *effluent* analysis. This is a significant concern, because pollutant concentrations measured in urban and roadway stormwater effluent, sometimes prior to discharge, generally exceed the numeric water quality objectives.[1] As the TO indicates in Finding 14, lead, copper, zinc, aluminum, diazinon, chlorpyrifos, and iron frequently exceeded standards or related criteria as measured in the runoff. Standards for indicator bacteria are also frequently exceeded in the effluent, as well as toxicity. Therefore, the iterative process will potentially be triggered at each monitoring site, possibly multiple times per year.[2]

We request that monitoring and corrective measures (e.g., BMP implementation) be conducted only if there is reasonable potential to impact beneficial uses of the receiving water.

The new procedure for basing the iterative process on effluent concentrations effectively creates effluent limits based directly on the numeric water quality objectives with no dilution factor or mixing zone. [3] This appears contrary to the discussion of effluent limits in the Fact Sheet (pages 4 and 5) which describes the Board policy of not requiring "strict compliance through effluent limitations," but by timely improvement of BMPs through the iterative approach.

We request that the TO reflect the policy stated in the Fact Sheet and current practice by basing compliance on the results of receiving water monitoring rather than effluent monitoring.

4. Unavoidable exceedances of narrative water quality standards

The preceding comment addressed exceedances of pollutants with numeric water quality objectives based on Receiving Water Limitation D.2 of the TO. Limitation D.3 is also a concern (TO page 20):

3. Storm water discharges shall not create a condition of nuisance, adversely affect beneficial uses of waters of the United States, or cause any of the following conditions:

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[1] Multi-year highway and other facility runoff effluent concentrations are presented in the *Discharge Characterization Study Report.* CTSW-RT-03-065.51.42 (posted). These results are similar to other MS4 monitoring and to the early USEPA runoff monitoring summarized in *Results of the Nationwide Urban Runoff Program* (posted). For example, copper in highway runoff averages about 40 ug/L compared with the CTR criterion of 4.8 ug/L (CMC, saltwater).

[2] The TO requires a minimum of three wet weather samples per year at sites discharging only stormwater, including first flush measurements plus two additional samples at sites with dry weather discharges. The iterative process must be repeated until revised BMPs are included in a revised SWMP, which is a lengthy process.

[3] Water quality standards apply in the receiving water. In some permits—generally non-stormwater permits—the standards may be used to derive water quality-based effluent limits that apply directly to the discharge but that often take into account dilution and other factors. This TO appears to convert the standards directly into effluent limits.

> *a. Floating or suspended solids, deposited macroscopic particulate matter, or foam; ...*
>
> *c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;*
>
> *d. Visible, floating, suspended, or deposited oil or other products of petroleum origin, and/or; ...* [emphasis added]

Based on the new wording in this TO, stormwater, as well as many other discharges, would consistently violate the requirements of D.3. For example, runoff median concentrations of suspended solids typically exceed 100 mg/l. The presence of *any* suspended solids appears to violate this provision. All runoff without a 100% efficient capture system will contain floating materials (e.g., trash or organic material), also a violation. The provision prohibits any change in temperature beyond background levels. Stormwater runoff often has temperatures differing from the receiving water, and can cause an alteration within the mixing zone. Similarly, all roadway runoff contains detectable products of petroleum origin, a violation of this provision.

Caltrans' current Permit also contains requirements to comply with these narrative standards; however, the requirement is stated differently:

> *The discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:*
>
> *a. Floating, suspended solids, or deposited macroscopic particulate matter, or foam...;[etc.]*

Thus, in our current Permit, the presence of suspended solids, temperature changes, etc. was required to *cause* a nuisance or affect beneficial uses before it would be classed as a violation. The mere *presence* of suspended solids or these other materials or temperature changes was not a violation. In the TO, the existence of the condition by itself is a violation regardless of impact on beneficial uses. This new approach is a fundamental shift from the current Permit and will likely cause universal non-compliance independently of the challenges of complying with numeric water quality objectives as measured in the effluent (comment #1).

We request that the receiving water limitations for implementing the narrative standards remain the same as in the current Permit.

5. Requirement for statewide structural treatment retrofits for existing roadways

The TO appears to mandate a statewide program for retrofitting structural treatment facilities of existing roadways. Currently, Caltrans is required to retrofit control facilities on existing roadways only when necessary to achieve waste load allocations specified in total maximum daily loads (TMDLs) and for projects described in Section F.4 of our current Permit. State Board staff has indicated that a statewide retrofit is not the intent of the TO. However, such a program appears to be required by the imposition of the following requirements:

1) *Number of sites being monitored* – A minimum of 100 sites will receive comprehensive sampling each year for a minimum of 46 parameters identified in Attachment II,

including toxicity. Sites showing exceedances must be monitored until no exceedances occur (see Fact Sheet p 8). An additional 50 sites are added each subsequent year.

2) *Compliance requirements* – As currently worded in the TO, all or nearly all runoff will exceed the numeric water quality objectives or violate the narrative standards listed in D3.

3) *Needed corrective measures* – Finding #20 in the TO [page 11] states:

> "*If discharges are found to be causing or contributing to an exceedance of an applicable Water Quality Standard, the Department is required to revise its BMPs (including use of additional and more effective BMPs).*"

The iterative procedures specified in Provision E.2.c.3)c) [p 30] of the TO require a 5-day notification of the exceedance and submittal of a report describing:

> *…BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance.*

Therefore, Caltrans will need to identify and submit a proposal to implement BMPs that will address the pollutants causing the exceedances.

4) *Constraint on iterative measures* – The iterative procedure can be terminated for continuing exceedances. Receiving Water Limitation D.5. states (page 20)

> *So long as the Department has complied with the procedure set forth in Provision E.2.c.3)c) of this Order and is implementing the revised SWMP, the Department 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's Executive Director or Regional Water Board Executive Officer to develop additional BMPs.*[4]

Therefore, Caltrans will need to identify additional BMPs suitable for the highway environment. Many and perhaps most of the pollutants of concern, as defined in the Glossary of the TO, cannot be addressed solely by source control BMPs. However, other non-structural source controls are already being implemented. For example, Caltrans has supported the Brake Pad Partnership (addressing copper) and provides an extensive public education campaign to address trash, as well our Adopt-a-Highway program.

The pollutants of concern are difficult to address without implementing structural controls as retrofits on existing roadways. Addressing bacteria, for example, which generally comes from natural sources (e.g., birds), will require diversion of the runoff or treatment by disinfection. Copper can be partially addressed by filtration; however, about 50% of the copper is dissolved, and it would require chemical addition, flocculation and settling, and adsorption. Lead, zinc, aluminum, and iron would likewise require similar controls. Sweeping could help in some situations, however, is difficult to safely implement on state highways beyond current levels.

[4] This limitation is similar to the Limitation C-1-4 in the 1999 Permit

The only remaining BMPs to address pollutants of concern and comply with this TO are structural controls that 1) capture the runoff and divert it to publicly owned treatment works (POTWs), or 2) provide treatment. Infiltration may be possible but is often limited by groundwater elevations and soil permeability. Consequently, the TO creates a situation where most of the monitoring sites will need to install structural controls. Fifty new monitoring sites are added each year, and we believe most will require retrofits.

We note that while lead, copper, and zinc have vehicle sources, aluminum, iron, and bacteria are generally present due to natural sources. Recent legislation or regulatory efforts will eventually help reduce concentrations of copper and lead and possibly the pesticides; however, the other pollutants will continue to be a compliance problem for Caltrans as a unique MS4 discharger.

Caltrans requests that the TO state that exceedances trigger a re-examination of opportunities to reduce pollutant loading, and that a structural retrofit is limited to addressing water quality as identified in TMDLs.

6. Liability for agricultural and other run-on

Because of the linear nature of the state highway system, the Caltrans right-of-way and its MS4 receive many different types of upgradient flows. Some of these flows are stormwater, and some are non-stormwater. California drainage law generally prohibits Caltrans from blocking stormwater discharges into natural watercourses often altered by the highway and other development. Additionally, blocking the stormwater flows makes Caltrans susceptible to claims for damages in inverse condemnation actions. Previous State Board counsel was provided with a copy of the Caltrans Legal Division's opinion on this issue, and case law.

Discharges of stormwater and return flows from irrigated agriculture constitute, in certain areas of the state, a substantial portion of stormwater and non-stormwater discharges into the Caltrans MS4. In other areas, discharges of storm and non-stormwater from urban and non-urban nonpoint sources are also common.

The TO states that agricultural irrigation water (non-stormwater) discharges into the Caltrans MS4 are conditionally exempt (i.e., not prohibited as a non-stormwater flow) only if they are regulated by a separate WDR or a conditional waiver of WDRs (Finding #6, page 7):

> *One category of conditionally exempt non-storm water discharges is irrigation water. Irrigation water from agricultural sources periodically discharges to the Department's MS4. If those discharges are regulated by WDRs or conditional waivers of WDRs and if the Department cooperates with organizations conducting monitoring of such discharges, the discharges are not expected to be a source of pollutants and need not be prohibited by the Department.* [emphasis added]

The following related issues concern Caltrans:

1) *Agricultural run-on not covered by WDRs or conditional waivers of WDRs* – Although some Regional Boards have issued conditional waivers to agricultural nonpoint source dischargers, many discharges are not covered by either WDRs or waivers and will not be covered for some time. For example, the Klamath basin-wide

conditional waiver for grazing and irrigated agriculture is not scheduled to be adopted until the end of 2012. Only four of the Regions have adopted comprehensive waivers. This means that the Caltrans MS4 will receive agricultural non-stormwater runoff that does not qualify as a conditionally exempt discharge under Section B.2.n of the TO and unless it is entering the Caltrans MS4 through an engineered conveyance subject to a Caltrans encroachment permit, Caltrans does not have a direct legal mechanism to control these discharges. Caltrans will therefore be in non-compliance with the TO.

2) *Expectation that agricultural discharges are not a source of pollutants* – The TO states that agricultural discharges covered by a WDR or a waiver are not expected to be a source of pollutants. Because the 303(d) list of impaired waters includes many listings attributed to agricultural return flows, we feel this expectation is unrealistic.

3) *Department cooperation with organization conducting monitoring* – Caltrans is willing to cooperate with agricultural monitoring programs from the standpoint of providing access in a safe place and manner. However, this provision is unclear and could be interpreted as meaning that Caltrans is expected to either implement monitoring or participate financially in the monitoring. The responsibility for this monitoring should belong to the agricultural dischargers, not Caltrans.

We appreciate the effort of Board staff in attempting to address this very difficult issue of run-on. As currently structured, however, the TO places a financial burden on the State of California and creates potential enforcement exposure that cannot be mitigated.

7. Prohibition on discharge to ASBS

Discharge Prohibition A.2, p 17, states

> *Discharge to Areas of Special Biological Significance (ASBS) is prohibited unless an exception has been granted by the State Water Board.*

The State Board has not granted an exception to Caltrans or to any other MS4. The State Board draft program PEIR for granting a General Exception to MS4s was issued January 19, 2011. The ASBS program has been controversial and it is not clear when the General Exception will be approved by the Board. Because Caltrans does not have an exception, it will be at risk for agency or third party enforcement until the General Exception is granted. For most of these discharges, alternative discharge locations are not available (i.e., diversion around the ASBS to address the accurate discharge prohibition). Caltrans has communicated its challenges and need for clarifications to the State Board of meeting the discharge prohibition. We also participated along with the State Board in presentations to the California Transportation Commission in December 2006.

We request that this Prohibition A.2 is contingent on the State Board's granting of the General Exception (Special Protections).

8. Basin Plan Clarifications

These prohibitions are often overlooked; however, they may become an issue similar to the way the ASBS discharge prohibition was activated after not being addressed for 17 years. It is Caltrans' policy to be in clear and unambiguous compliance with its Permit. Attachment A provides a list of examples of Basin Plan requirements that may need clarifications.

Some Basin Plans allow exceptions. The incorporation of these local prohibitions, at a minimum, should allow Caltrans to seek exceptions before these take effect.

We request that a comprehensive review be conducted to identify these prohibitions and assess how they potentially will impact Caltrans and other MS4 dischargers.

See Attachment A.

9. Excessive monitoring

Over the life of its current Permit, Caltrans has made significant progress in characterizing runoff from its state highway system and has provided this information to the Water Boards in various reports, including the multi-year *Discharge Characterization Study Report*.[5] The pollutants present in highway runoff and related facilities, and the range in concentrations of these pollutants is relatively well known, based on Caltrans vast monitoring efforts and monitoring from other MS4s. We believe that continued monitoring is necessary on a periodic basis to assess whether these pollutant concentrations are increasing or decreasing and to refocus pollutant control efforts. However, the TO proposes a massive statewide monitoring effort for 46 or more pollutants, sampled multiple times per year in both the effluent and receiving water. This new and extensive effort is not an effective and efficient water quality tool. Sampling on a three-year basis to identify trends is appropriate and will determine the success of source control efforts, such as the lead and copper substitution initiatives. However, immediate and substantial changes in pollutant concentrations are unlikely in runoff from existing roadways. Consequently, the proposed statewide sampling effort, while having huge cost, adds little to our knowledge bank of runoff constituents and their concentrations. The TO and Fact Sheet do not provide justification for this increased monitoring effort.

Some of the pollutants identified in Appendix II are of minor interest, and others are unlikely to have environmental consequences. Some of these pollutants could be monitored as part of a research study, but including them in a standardized statewide program will provide no benefits that we are aware of. For example, monitoring for both TDS and conductivity is redundant since they are significantly correlated. Monitoring for platinum could perhaps be accomplished as a special study, but it is not needed as part of statewide program. *Enterococcus* should be monitored for marine discharges and rather than total coliform as recommended by U.S. EPA.[6] Nutrients, for example, may be an issue in some locations but not for ocean discharges. The monitoring should be targeted to the waterway being monitored and should have a identified purpose.

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[5] *Discharge Characterization Study Report*. CTSW-RT-03-065.51.42 (posted)

[6] USEPA. *Bacteriological ambient water quality criteria for marine and fresh recreational waters.* EPA 440/5-84-002. 1986, U.S. EPA, Office of Research and Development, Cincinnati, OH., (posted)

10. **Fish Passage and Stream Stability Analysis Program** – The TO, Section E.2.d.1.c), (vi) requires that Caltrans conduct a Level 1 stream stability analysis at all stream crossings, including culverts, every two years. This is a comprehensive program that does not provide for exceptions, and assumes that Caltrans facilities are the cause of hydromodification or poor hydraulic design. Caltrans' impervious area tributary to stream crossings is typically a small fraction of the total watershed area (usually about 2% or less) and is therefore a de minimis contributor to hydromodification in most instances. The hydraulic design of creek crossings is based on federal guidance proven and refined through years of research an application. It is also unclear why every stream crossing must be inspected every two years, even if it is clear from previous inspections that no problem exists. There is insufficient data regarding the issues at Caltrans' stream crossings to require such an extensive inspection program. If a nexus to the NPDES is defined, we request that this program be conducted on a pilot basis or limit to regions where beneficial use of COLD, SPAWN, and MIGR exists and not be required for all stream crossings statewide.

We request that the State Board delete the requirement to conduct a fish passage and stream stability analysis program from the TO. Alternatively, be limited to a stream stability analysis program as a pilot program, to determine the extent of the problem.

11. Construction General Permit Compliance and fees

The TO requires Caltrans to comply with the Statewide Construction Storm Water General Permit (CGP) since construction activities are not covered under the Caltrans MS4 Permit. Caltrans has begun to implement requirements consistent with the CGP. The CGP coverage process requires registration fees for each construction project. Caltrans has several hundred construction projects per year.

We request a fixed single annual payment be made to cover fees associated with project registration for all CGP-related costs for Caltrans construction projects and that the TO clarify that project coverage under the CGP begin after adoption.

12. Drain Inlet Cleaning

The requirement of annual inspections and tracking weight and volume of waste and debris from rain inlets and catch basins does not result in an improved water quality benefit. There has been extensive study regarding the cost and efficacy of the removal of material from Caltrans' drain inlets. Studies show that the material in the inlets tends to occupy "dead" or low-energy portions of the inlet, and that once collected in the inlet, tends to persist (i.e., is not washed out with each storm event). Further, much of the drain inlet cleaning program data was collected prior to the implementation of the Los Angeles River trash TMDL. Therefore, cleaning drain inlets is not an effective use of our maintenance forces and presents a significant safety risk to both Caltrans personnel and the traveling public to implement. The very small amount of material that can collect in our inlets (standard size, 2 by 3 feet) is not a meaningful portion of the entire loading to receiving waters, and represents an uneconomical removal method.

We also are concerned with the requirements for toxicity testing. The toxicity testing should utilize tests that reflect the short-term nature of stormwater discharges. We note that this is one of the issues raised during review of the proposed *Policy for Toxicity Assessment and Control*. The Caltrans report entitled " Toxicity of Storm Water from Caltrans Facilities (CTSW-RT-05-073-10.1) concludes that Mitoscan test appears to be a good indicator for the presence of toxicity. We recommend allowing use of this test.

The TO requires an initial study to select 100 candidate sites from an initial pool of 1000 potential sites. This is an ambitious monitoring program beyond the requirements placed on any other Phase I program in the state, or any other DOT nationwide. Caltrans maintains about 15,300 centerline miles of roadway, translating to about 74,200 impervious acres (assuming an average of 40 feet of pavement). By comparison, the City of Los Angeles occupies an area of 498.3 square miles, or an impervious area of over 127,000 acres assuming an average of 40% impervious. Further, urban areas have a wide diversity of pollution sources, whereas roadways are single use (passive and uniform), and have demonstrated consistent runoff water quality or time. List of analytes should be selected based on consultation with each Regional Board instead of defaulting to Attachment II.

The final monitoring plan can be developed during discussions between our staff and the Board staff during development of the SWMP.

We request that monitoring have an identified goal of addressing trends and filling information gaps and that the discharge monitoring program be reduced to a maximum of 25 locations throughout the state selected from a pool of candidate sites that Caltrans has previously documented.

We request that the State Board revise the TO to require further study of this issue via a pilot program, to ascertain more economical methods of removing a similar volume of material from Caltrans storm drain systems.

Additional detailed comments are provided as Attachment B to this letter.

We hope our comments are helpful and we look forward to your response. If you have any questions, please do not hesitate to contact me at (916) 653-4446.

Sincerely,

SCOTT McGOWEN, P.E.
Chief Environmental Engineer

cc: KJones, JBrenner, Caltrans; Bruce Fujimoto, Vicky Whitney, SWRCB

ATTACHMENT A

Prohibitions in Basin Plans

This list is tentative and needs further investigation in order to determine which prohibited locations receive runoff from the state highway system

North Coast Region Basin Plan – Klamath River Basin and coastal streams year-round discharge prohibition and Mad, Eel and Russian Rivers dry weather prohibition and prohibition on increasing flow >10% of receiving water during wet weather (10% is a problem in ephemeral or low-flow waterways). In addition, discharges need to meet water quality standards at point of discharge (see proposed low-threat program).

Central Coast Region Basin Plan – Monterey Bay Waste Discharge Prohibition Zones – Southern Monterey Bay (Point Piños to Salinas River); also similar zone on the northern end. See Basin Plan Chapter V, Section IV.C. Need to verify that highway runoff is directed to these areas.

San Francisco Bay Region Basin Plan – Prohibition against wastewater discharges into non-tidal water, dead-end sloughs or at any point that wastewater does not receive dilution of at least 10:1. Basin Plan Chapter 4, Table 4-1, No. 1. (Exceptions considered: 4.2; some dischargers have requested and received exceptions with special conditions including compensatory projects).

Central Valley Region Basin Plan – "*Water bodies for which the Regional Water Board has held that the direct discharge of wastes is inappropriate as a permanent disposal method include sloughs and streams with intermittent flow or limited dilution capacity.*" page IV-23.00 This was almost certainly not intended for stormwater; however, stormwater is now considered a "waste" and inevitably would be discharged to some of these locations.

San Diego Region Basin Plan – Prohibition (5): "*The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board.*" In stormwater Permits, this prohibition is mitigated by the "iterative approach." Here, it appears absolute.

Lahontan Region Basin Plan – Prohibits discharges that cause violation of narrative or numeric objectives (section 4.1); this is absolute without the iterative compliance option. Similar prohibitions in section 5.2 for the Lake Tahoe H.U. Will this requirement be revised to be consistent with the Tahoe TMDL load reduction program?

ATTACHMENT B

Detailed comments and requests for clarification on the draft Tentative Order (TO) and related documents for NPDES Permit No. CAS000003

These comments are grouped into sections based on the TO, Fact Sheet, and Attachments. These comments are in addition to the major comments included in the letter.

Tentative Order

1. Page 5 – **Finding 1 – Operable SWMP** – "*The Department submitted a revised SWMP in June 2007, which is incorporated by reference into this Order.*" Does this mean that the 2007 SWMP replaces the 2003 SWMP when the Permit is adopted? It is not clear which SWMP is to be implemented when the Permit is approved. Page 6 of the Fact Sheet appears to be referring to the 2003 SWMP as an "integral and enforceable component of this Order." Finding #28 on page 12 also appears to reference the 2003 SWMP. These Fact Sheet and TO should indicate clearly which SWMP takes effect upon adoption of the Permit by the Board.
2. Pages 5 and 6 – **Finding 2 – *Background* – Coverage of administrative buildings** – "*This Order also regulates discharges associated with design and maintenance of properties and facilities and discharges of storm water associated with ongoing highway operation.*" This description should clearly exclude offices, etc., that are more appropriately regulated by the local MS4 Permit. In addition, the term "construction" should replace "design."
3. Page 6 – **Finding 4 – *State Authority*** – "*For this Permit, the State term "WDRs" is equivalent to the federal term "NPDES Permits" as used in the Clean Water Act [CWA]).*" This WDR/NPDES Permit appears to include requirements only required by State Water Code (e.g., references to waters of the state, which include ground waters – see Prohibitions 7 and 8). We understand that CWA enforcement mechanisms cannot be used to enforce requirements that are contained only in the State Water Code. The provisions in the TO that are not based on the CWA should be clearly identified. This may also apply to Finding 11, which appears to include non-CWA waters.
4. Page 7 – **Finding 6 – *Non-Storm Water Discharge* – Conditionally exempt** – "*Prohibited non-storm water discharges include conditionally exempt discharges that are a source of pollutants to waters of the United States.*" This finding includes a confusing use of the term "pollutants." The State Board currently defines the term "pollutants" very broadly, such that any non-water constituent at any concentration is a pollutant. This conforms to the Permit Glossary that defines pollutant as "waste." Consequently, the term as used in this finding means that virtually all conditionally exempt discharges would be prohibited. This finding (and similar references in the Fact Sheet and TO) should clarify that the conditionally exempt discharges are only prohibited if they have pollutant concentrations *identified as causing adverse impacts on beneficial uses* (for example).
5. Page 7 – **Finding 6 – *Non-Storm Water Discharge* – Agricultural discharges** – "*One category of conditionally exempt non-storm water discharges is irrigation water....If those discharges are regulated by WDRs or conditional waivers of WDRs and if the Department cooperates with organizations conducting monitoring of such discharges, the discharges are not expected to be a source of pollutants and need not be prohibited by the Department.*"

This wording indicates that agricultural run-on from areas without conditional waivers and other types of run-on (e.g., urban non-point discharges) are the responsibility of Caltrans to prohibit or otherwise regulate. The expectation regarding cooperation with other organizations should be clarified and limited to providing right-of-way (ROW) access to the regulated discharger.

6. Page 7 – **Finding 8 – *Performance Standard for Discharges from MS4s* – MEP –** a) "*MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants*" Therefore, if the discharge contains a pollutant that exceeds a WQS, then treatment may be needed. All runoff contains "pollutants." The presence of pollutants below levels of concern does not trigger treatment. This statement should be clarified to indicate that pollutants above a certain threshold require treatment.

7. As currently used in Water Board documents, any non-water concentration of a constituent is considered a pollutant. Thus, treatment could always be required based on this wording, which would lead to non-compliance and expose Caltrans.

   b) "This process of implementing, evaluating, revising, or adding new BMPs is commonly referred to as the "iterative approach." It may be useful for purposes of clarification to indicate that the "iterative approach" also applies to the attainment of WQS.

8. Page 7 – **Finding 9 – *Discharges Regulated* – Department Facilities** – "*Storm water discharges from the Department's vehicle maintenance, equipment cleaning operations facilities and any other non-industrial facilities with activities that have the potential of generating significant quantities of pollutants...* " As noted before, this description should clearly exclude offices and similar facilities that may be more appropriately regulated by the local MS4 Permit.

9. Page 8 – **Finding 9 – *Discharges Regulated* – Dewatering** – "*The Department will consult with the appropriate Regional Water Board and comply with the applicable dewatering requirements in each region.*" Currently, the Regional Boards have very divergent Permit requirements that complicate training and the development of procedures. Compliance would be streamlined if the State Board identified a uniform and consistent approach for addressing dewatering as part of this Permit.

10. Page 8 – **Finding 11 – *Department's Discharges* – Coverage of non-CWA waters** – "*These surface waters include creeks, rivers, reservoirs, wetlands, saline sinks, lagoons, estuaries, bays, and the Pacific Ocean and tributaries thereto. These surface waters are waters of the United States as defined in 40 CFR 122.2.*" This statement is incorrect and does not conform to the definition at 122.2.

11. Page 8 – **Finding 11 – *Department's Discharges* – Discharges covered by the Permit –** "*As specified, this Order regulates the Department's municipal storm water and non-storm water discharges.*" This definition of the Permit scope would be clarified if the phrase "*from the Departments MS4 system.*" In addition, please clarify if this includes airspace leases.

12. Page 9 – **Finding 12 – *Potential Pollutants*** – Since "*construction site runoff*" is regulated by the CGP it should not be included on this list (2nd paragraph).

13. Pages 9 and 10 – **Finding 14 – *Characterization Studies* – High priority constituents** – "*Lead, copper, zinc, aluminum, diazinon, chlorpyrifos, and iron were found to be high priority constituents in the Department's runoff.*" While aluminum and iron frequently

exceeded standards, they are not high priority constituents, because they are in runoff for the most part and are naturally present in soils (aluminum at 7% and iron at 3%). The objectives exceeded are those based on drinking water MCLs; however, these two constituents present no risk to the beneficial use—drinking water—because they are present as particulates and are removed in drinking water treatment plants. Ironically, treatment plants typically use both iron and aluminum compounds as flocculants. Diazinon and chlorpyrifos are not on the Caltrans-approved Integrated Vegetation Management chemical list.

14. Page 10 – **Finding 15 – *Department Discharges that are Subject to MS4 Permit Regulations*** – **Streets** – "*An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins,…*" It is our understanding that a street, in the absence of a stormwater conveyance, is not an MS4. Please clarify.

15. Page 10 – **Finding 15 – *Department Discharges that are Subject to MS4 Permit Regulations*** – **Jurisdiction** – "*All MS4s under the Department's jurisdiction are considered one system, and are regulated by this Order.*" Clarify if this means that state highways administered by local municipalities are not covered by this TO.

16. Page 10 – **Finding 16 *Maintenance and Construction Activities not subject to the Construction General Permit.*** The last sentence should include the words "to MEP." The Finding also references use of the California Stormwater Association (CASQA) BMP Handbooks. Caltrans develops its own guidance and manuals appropriate for highway applications.

17. Page 10 – **Finding 18 – *Runoff from the Department's facilities*** – "*Past monitoring data show that storm water runoff from the Department's facilities contains pollutants that may adversely affect the beneficial uses of receiving waters. Facilities not subject to the Industrial General Permit are required to implement BMPs to reduce the discharge of pollutants from these facilities to the MEP.*" Does this statement refer to discharges from facilities covered by this TO? Why is the Industrial General Permit (IGP) mentioned here? Please clarify.

18. Page 10 – **Finding 19 – Numeric effluent limits** – "*…the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water Permits.*" Although this is the standard approach, the TO uses effluent concentrations greater than objectives to trigger the iterative approach and corrective measures that, in effect, establish effluent limits. Please clarify.

19. Page 12 – **Finding 27 – *Self-Monitoring Program* – Chronic Toxicity Monitoring** – "*Toxicity levels found in the Department's discharges indicate a need to monitor acute and chronic toxicity according to USEPA protocol.*" Because stormwater discharges are relatively short-term, the test interval should correspond to the typical discharge duration. Chronic tests (4-day) are not appropriate due to the intermittent nature of stormwater discharges. This Finding (and subsequent TO provision) should require only acute toxicity monitoring. Alternatively, the TO could require chronic monitoring for non-stormwater discharges and acute monitoring for stormwater discharges.

20. Page 12 – **Finding 28 – *Stormwater Management Plan (SWMP)*** – It is not clear which SWMP is to be implemented when the Permit is approved. This section appears to reference the 2003 SWMP. However, in 2007, the State Board solicited comments on the revised SWMP, and Finding 1 references the 2007 SWMP. Please clarify.

21. Page 34 – **Finding 34 – TMDLs/WLAs**. We recommend inserting, "prepared by the State and approved by USEPA" prior to the WLA (in the first sentence).

22. Page 14 – **Finding 36 – TMDL Compliance Plans**. a) This finding states that Caltrans is required to submit compliance plans to be approved by the Regional Water Board Executive Officer. For efficiency, this process could be streamlined by having a single consolidated plan submitted to each Regional Board, especially for TMDLs where Caltrans is the major source.

    b) "For specified TMDLs under the jurisdiction of the San Francisco Bay Regional Water Board, implementation requirements are given in Attachment IV as supported by the Fact Sheet."

    As noted in the comment on Finding 32, this high degree of specificity for the San Francisco TMDLs in this TO reduces the ability of Caltrans to respond to changes based on adaptive management. We request that this TO have a general requirement to comply with TMDLs.

    Thus, non-compliance can be anticipated at most discharges, which we presume is not the Board's intent. Caltrans' goal is to attain clear and unambiguous compliance with Permit. We request that the TO clearly explain which discharge situations constitute reportable non-compliance in conformance with this Finding and the Incident Reporting provision [TO page 24]).

23. Page 14 – **Finding 39 – Basin Plan Prohibitions** – "*The Department is subject to the prohibitions and requirements of each Basin Plan.*" As discussed in the major comments, the Basin Plans contain numerous prohibitions that are typically overlooked. Many of these were developed when stormwater was not subject to them, because stormwater was not regulated as a point source. Some of these prohibitions cannot be complied with without a massive relocation of facilities (e.g., ban on discharges not receiving 10:1 dilution or discharges to dead-end sloughs or discharges to non-tidal waters[7]). Similarly, some Basin Plans contain provisions that appear out of date, but nevertheless remain in the Plan and would be enforceable based on this TO. For example, see Los Angeles Region Basin Plan, Chapter IV, pages 4–42, 4–43, which requires a *Highway Runoff Control Program* that is now outdated.

    We request that this provision of the TO not be implemented until Caltrans has had the opportunity to review the Basin Plan prohibitions and related requirements and either request exceptions, where allowed, or implement plans for coming into compliance. In some cases, Caltrans may need to request modifications to the Basin Plans.

24. Page 15 – **Finding 40 – *Region Specific Requirements*** – As with Finding 39, some of the Region-specific requirements cannot be complied with, and we request that they not be added to this Permit until Caltrans has been able to complete the assessment requested for Finding 39.

Prohibitions

25. Page 17 – **Prohibition A.2 – Prohibition on discharge to ASBS** – "*Discharge to Areas of Special Biological Significance (ASBS) is prohibited unless an exception has been granted by the State Water Board.*" As noted in the major comments, the exception is still in development, and Caltrans will be exposed to agency enforcement, third-party lawsuits, and

[7] See San Francisco Basin Plan Table 4-1. posted.

the need to make non-compliance notifications for each ASBS location until the exception is granted. This prohibition should be contingent on the State Board issuing the General Exception.

26. Page 17 – **Prohibition A.3 – Requirement to discharge only stormwater or NPDES Permitted flows, or conditionally exempted flows per Section B** – This issue will also be addressed in later comments; we have concerns that on-flow may not comply with the conditional exemptions and would therefore have to be prohibited (e.g., agricultural run-off not part of an WDR waiver program). However, Caltrans has limited ability to prohibit upgradient flows. We request that this prohibition be modified so that the Department is not placed in a position of unavoidable non-compliance.

27. Page 17 – **Prohibition A.4 – Prohibition for discharges that cause or contribute to exceedances of standards** – We have several concerns regarding this prohibition:

    a) This prohibition is absolute, unlike the description of the same requirement in Section D. Receiving Water Limitations. In Section D, the discharger is given the opportunity to implement the iterative approach to compliance with WQS: "*…through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this Order including any modifications.*" Prohibition A.4 should be modified accordingly, or this prohibition may not be needed, since this requirement is addressed more comprehensively in Section D.

    b) This Prohibition also refers to Basin Plan prohibitions: "*The Department shall comply with all discharge prohibitions contained in Regional Water Board Basin Plans.*" Our comments on this prohibition are the same as for Finding 39. Stormwater does not comply with many of the Basin Plan prohibitions that were developed when stormwater was a non-point source and not subject to them. These prohibitions are generally overlooked (except for the ASBS discharge prohibition); however, they could be a problem at some future time. This blanket inclusion of all Basin Plan prohibitions should be contingent on a compliance assessment and an opportunity for Caltrans to request exceptions or to come into compliance.

    c) As before, we request clarification on the meaning of *compliance* in the context of these requirements. For example, copper in urban runoff averages about 40 ug/L in the effluent compared with the CTR criterion of 4.8 ug/L (CMC – marine). The prohibition should clarify that the samples used for comparison with the objectives/criteria are taken from the receiving water.

    We request that this prohibition be held in abeyance until a viable means of compliance can be identified.

    Page 17 – **Prohibition A.5 – Prohibition on discharge causing exceedances (Ocean Plan, etc.)** – This prohibition appears at least partially duplicative of A-4, except A.5 specifically names the documents containing the standards (CTR, Basin Plans, etc.), and does not refer to Basin Plan prohibitions. As with A.4, the iterative approach is not included.

    As with A.4, we also request that this prohibition be held in abeyance until the compliance assessment procedures are specified and until a viable means of compliance can be identified.

Non-Storm Water Prohibitions

28. Page 18 – **B.2 – *Non-storm Water Discharge Prohibitions*** – "*The following non-storm water discharges are conditionally exempt from Prohibition B.1 unless the Department, State Water Board Executive Director, or the appropriate Regional Water Board Executive Officer identifies them as sources of pollutants to receiving waters.*" See Comment noted under Stormwater Prohibitions.

29. Page 18 – **B.2 – *Non-storm Water Discharge Prohibitions*** – **Discharges from potable water** – Drinking water generally contains trihalomethanes exceeding CTR criteria but lower than drinking water standards. How are these exceedances being addressed? These discharges cannot realistically be prohibited, if they are essential for the operation and maintenance of potable water supply.

    Page 18 – **B.2 – *Non-storm Water Discharge Prohibitions*** – **Additional exempt discharges** – It would be helpful to include a procedure for proposing additional discharges for this list.

30. Page 18 – **B.3 – *Non-storm Water Discharge Prohibitions*** – **Dewatering and/or "de minimis" NPDES –** Would it be possible for the State Board to identify a uniform and consistent approach for addressing dewatering as part of this Permit? This would facilitate compliance.

31. Page 19 – **B.5 – *Comprehensive Non-storm Water Report*** – a) This requirement includes a comparison with Basin Plan criteria but should also mention CTR and Ocean Plan criteria. The specific criteria within those standards should be defined. For example, the chronic criteria should be applied to permanent discharges, and the acute criteria should apply to short-term or intermittent discharges. Also unclear is the point of comparison.

    b) This section refers to pollutants by themselves being a problem. "*If the State Water Board Executive Director ...determines that any category of conditionally exempt non-storm water discharge is a source of pollutants, ...*" We presume the intent is to address the source of pollutants causing problems, but this should be clarified.

    c) Where exceedances are noted, BMPs are to be implemented, and monitoring is to be conducted, all following a time schedule. Is Caltrans expected to monitor for all categories of non-stormwater?

    d) When the discharge is identified as being a source of pollutants (presumably above standards), "*the Department shall propose: a. Appropriate BMP control measures to effectively prohibit the non-storm water pollutant discharges and minimize the adverse impacts of such sources*;" This statement is not clear. Effectively prohibiting the discharge would eliminate all impacts, not just minimize them. In addition, some discharges cannot be prohibited—they can be treated, or BMPs can be applied—but full elimination is unattainable.

    e) This Permit section states on Page 19: "*For each category of (non stormwater) discharge, the Department shall examine and evaluate its MS4 non-storm water monitoring results for the presence of elevated levels of pollutants by comparing the results with the receiving water criteria..*" We request that non-stormwater monitoring be combined with discharge monitoring under E.2.c.2)a). Therefore, monitoring results of non-stormwater should be compared to receiving water criteria only in cases of direct discharge or potential impact.

Effluent Limitations

32. Page 19 – **Lake Tahoe Effluent Limitations**. Roadway runoff cannot comply with these effluent limitations, due to natural constituents in the runoff. See the discussion for Finding 19. Caltrans has received a letter from the Lahontan Regional Water Board staff stating that it is no longer subject to the numeric effluent limits because of the TMDL and crediting program.[8] Please remove this effluent limitation.

Receiving Water Limitations

33. Page 20 – **Receiving Water Limitations** – The TO states that the receiving water quality objectives…are applicable to discharges from Caltrans' facilities and properties. Please clarify that the discharges from the facilities and properties should not cause or contribute to an exceedance – and not that the receiving water quality objective applies end-of-pipe.

34. Page 21 – **Iterative cycle upgrades must be public noticed** – E.1.f (page 21): "*Upon receipt of a proposed SWMP revision requiring approval of the State Water Board's Executive Director, including revisions required by the iterative procedure described in Provision E.2.c.3)c) of this Order, the proposed revision will be publicly noticed...*" [emphasis added] A public notice and possible Board hearing with each BMP review and upgrade is very cumbersome and simply not feasible. We would like to point out that the current SWMP is from 2003, and several years of effort went into developing the 2007 SWMP, but it was not approved. We request a more efficient procedure that is more viable and promotes revisions that are more doable.

35. Page 22 – **Provision E.2 – Coordination with Municipalities** – This provision appears to indicate that Caltrans will need to comply with local requirements. Does this mean all BMP standards, low-impact development (LID) requirements, etc.? What is the benefit in having a statewide Permit if local requirements take precedence? We request better clarification regarding Department exposure here, and that this Permit and Department SWMP take precedence. (For example, Caltrans does not address local municipal road specifications when it builds a road through the municipality.) This may also add confusion, since it may imply that the Department would have to meet TMDL requirements in the local MS4 Permit, even if Caltrans is not named in that TMDL. This is also key for a consistent program to be implemented.

36. Page 23 – **E.2 – Legal Authority** – The term "ordinance" should be deleted. Caltrans' authority is derived from the State Legislature, and it does not enact ordinances.

37. Page 23 – **E.2.b.3) a) – Fiscal Resources** – "*a) The Department shall maintain adequate fiscal resources to comply with this NPDES Permit. This includes but is not limited to:…*" This is a concern, since Caltrans is fully dependent on appropriations by the legislature to the State Highway Account; this process should not be mandated by an outside agency.

38. Page 23 – **E.2.b.3)b) – Fiscal Analysis and Budget Analysis** – a) These two provisions are not well-defined (especially the Budget Analysis). The purpose of these two analyses is unclear. We recommend that the purpose of each analysis be clearly stated and the fundamental contents described. b) We have an overall concern regarding the appropriateness of these fiscal and budget analyses and of whether they are appropriately included in the Permit.

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[8] Doug Smith, Lahontan Regional Board, letter to Caltrans

39. Page 24 (and Attachment I) – **Provision E.2.b.6) – Incident Reporting/Permit Violation** – This section states: "*Submission of an Incident Report Form [Non-Compliance and Potential/Threatened Non-Compliance] is not an admission by the Department of a violation of this Order.*" However, the Standard Conditions state: "*Any Permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act.*" This appears to be a fundamental contradiction, in that submittal of the form is the same as providing notice of a Permit violation. Please clarify.

40. Page 24 (and Attachment I) – **Provision E.2.b.6) – Incident Reporting** – a) The first paragraph states: "*The Department shall submit a completed INCIDENT REPORT FORM.*" The second paragraph states: "*An Incident Report Form is not required.*" Please clarify these requirements and the apparent contradiction.

    Spill reporting is fulfilled with current Cal-EMA reporting procedures. This information is provided on the Cal-EMA website. This reporting requirement is duplicative. We request that this requirement be deleted from the TO.

41. Pages 24 to 30 – **Provision E.2.c – Monitoring Requirements (general)** – This provision does not identify the purpose of the monitoring, but rather provides only the details of what goes into the monitoring program. It is important that the objective of each monitoring element be identified, or that the program is negotiated during SWMP development. We request that the monitoring requirements be revised to clearly state the purpose of each monitoring effort and then provide the minimum requirements of the monitoring. The TO should include provisions for future revisions based on discussions between the Board staff and Caltrans.

42. Pages 24 to 30 – **Provision E.2.c – Monitoring Requirements (specific)** – We have several questions and issues:

    1) What is the justification for 100 locations? What new information is going to be gained? (page 26)
    2) Monitoring specifies acute toxicity; which is the correct analysis? (page 27)
    3) To perform the water quality exceedance analysis correctly, one should have paired monitoring sites: an outfall monitoring site into a receiving water monitoring site. Otherwise, the analysis is flawed. (page 27)
    4) Too much discretion is given to the Regional Board to add more sites and monitoring. (page 28)
    5) We are unclear about the relationship between the Long Term Monitoring Program (page 28) and the specifics found on pages 25–27.
    6) Page 25 E.2.c.2)a): Please clarify whether the discharge monitoring and non-stormwater monitoring sites required under B.5, page 19, could be at the same location, since each discharge monitoring site will sample two non-storm events and three storm events.
    7) Page 25 E.2.c.2)a): Please clarify whether non-stormwater sampling at discharge monitoring sites may occur during winter dry periods.
    8) Page 25, E.2.c.1): The Definition of Pollutants should be clarified to mean constituents that exceed a relevant standard. Caltrans requests the option to work with each Regional Board to narrow down the list of target constituents to monitor.

9) Page 25, E.2.c.1): As clarified by the State Board on February 25, 2011, the intent of discharge characterization is to repair discharge locations where problems were identified previously (e.g., fix sites that have illicit connections/illegal discharges [IC/ID]). We request that problem locations be identified as those where the constituent concentration exceeds WQO of 303(d)-listed water bodies.

10) Page 25, E.2.c.1) Slope Lateral Drains monitoring sites – We request that (a) the Department will attempt to select sites where there is a likelihood of intercepting water from pollutant sources upstream of the Department ROW; b) primarily the downslope of the ROW would be monitored; and c) the constituent list be site-specific.

11) Page 25, E.2.c.1): The Permit states: "The Characterization Study identifies major points of discharge…" We request that the wording be changed to: "The Characterization Study identified discharges from Caltrans facilities…"

12) Page 25, E.2.c.2)a)ii): The Permit states: "*All samples shall be analyzed by a certified or accredited laboratory as required by Water Code section 13176.*" One of the pesticides on Attachment II, Clopyralid, is to be tested by a USGS method for which the California Environmental Laboratory Accreditation Program does not certify. If this constituent is analyzed by the stated method, then it will not be in strict compliance with the language of this section. We request that this language be changed to: "All samples shall be analyzed by a certified or accredited laboratory as required by Water Code section 13176. Clopyralid will be an exception to this condition, since California laboratories are not certified/accredited for this specified USGS method."

13) Page 25, E.2.c.2)a)iii): Attachment II is a very extensive effluent monitoring list that may not apply at every site. We request that constituents to be monitored be selected in consultation with a Regional Board for all sites.

14) Page 25, E.2.c.2)a)iv: The Permit states that both chronic and acute toxicity will be performed using three species, one vertebrate, one invertebrate, and one plant. Acute toxicity is not performed on plant species. This is generally a two-species test. We request this be revised/clarified.

15) Page 25, E.2.c.2)a)iv: The Permit states *"Acute and Chronic toxicity analyses shall be conducted with a minimum of three test species…"* We request that toxicity testing be required only at sites that are expected to cause or contribute to receiving water. Toxicity of discharges is unlikely to be a good indicator of receiving water toxicity due to changes between edge-of-ROW, receiving water, and dilution. Toxicity testing is already required for receiving water monitoring.

16) Page 25, E.2.c.2)a)v: The Permit states that Caltrans must collect samples twice during the non-storm season at points that discharge both stormwater and non-stormwater. Caltrans does not have any authorized dry-weather flows. Any dry-weather discharge is unanticipated, which could make it difficult or impossible to monitor. We request an exception for dry-weather flow monitoring.

17) Page 26, E.2.c.2)a)viii): The Permit states *"The Department shall identify, in consultation with the Regional Water Boards, a minimum of 100 locations out of the pool which will be sampled in the coming year."* If a discharge exceeds a WQO, the discharge is not necessarily causing or contributing to an exceedance if the water body is not listed. We request the Board consider targeting a maximum of 25 sites

that clearly cause or contribute to receiving water or that are discharging to 303(d)-listed water bodies.

18) Page 26, E.2.c.2)a)viii): The Permit states: *"The Department shall submit, separate from the Annual Report, by October 1 of each year, a MONITORING SITE SELECTION REPORT (SSR)."* We request that the initial SSR be submitted in Year 2 to allow for the initial siting process and the approval process by both the Department and Board to be completed.

19) Page 26, E.2.c.2)a.ix The Permit states *"For every location where criteria are not met, monitoring may be discontinued and the Department is not required to include the location in the next year's SSR. Instead a new location may be chosen from the candidate pool."* We request that, for every location where criteria are not met, monitoring shall be discontinued, and the Department shall not be required to include the site in next year's SSR.

20) Page 26, E.2.c.2)a.ix: The Permit requires continued monitoring, even if a site does not meet the criteria shown. Is there any value to continuing to monitor until a BMP is implemented? The monitoring results are likely to be similar from year to year. We request that monitoring be limited to one to two years, and that sites not meeting the criteria be put on a priority list for receiving BMPs, rather than receiving continued monitoring.

21) Page 26, E.2.c.2)a)ix) 1) and b.2); and Page 27, E.2.c.2)b) i) and ii): The exceedance criterion for three or more exceedances of WQO is undefined. We request that 1) For two or more exceedances, the WQO must be exceeded by 50% for continued monitoring of a site. A similar limit could apply for 3 or more exceedances. Otherwise, item 1) could be triggered, even if sample results exceed the WQO slightly. The Quality Control (QC) criteria should allow ±20% tolerance for duplicate samples. 2) Continued monitoring should be only be required for constituents that exceed the WQO.

22) Page 27, E.2.c.2)a)ix)(4): The Permit states: *"The Regional Water Board orders continued monitoring (e.g., to determine long term trends)."* Long-term monitoring is already part of another Permit section, and long-term monitoring sites are to be selected as part of this effort. Adding discharge monitoring sites to this list is duplicative and may not add any value to a long-term study. We request that this duplicative Permit provision be deleted.

23) Page 26-27, E.2.c.2)a)xi) and ix): The Permit states: *"The Department may propose changes to the sampling and analytical requirements for locations needing continued monitoring to focus on problem constituents. With the approval of the Regional Board, constituents not meeting the criteria in Section ix) need not be included in subsequent monitoring."* It is not clear why Regional Board approval is required here. The Department should be able to focus only on problem constituents at all sites, without the need for Regional Board approval. This approach is reasonable when constituents have already been found not to be problem constituents. We request deleting this requirement that the Regional Board approve changes to sampling and that analytical lists be justified on prior results.

24) Page 27, E.2.c.2)a)ix)(3): *"Analytical results show acute toxicity (TUa>1) in three or more samples."* This criterion, as written, appears to apply to three samples anytime

during the Permit cycle. We request that the criterion should apply to analytical results for a single season.

25) Page 27, E.2.c.2)b): The Department shall implement a receiving water monitoring program. A cost-effective approach may be to pay into the SWAMP instead of conducting the receiving water monitoring. The State Board could target priority water bodies. We request that the Department should have an option to pay a yearly amount into the SWAMP in lieu of conducting receiving water monitoring for sites outside the Department's ROW.

26) Page 27, E.2.c.2)b):General comment: Since receiving water monitoring is insufficient to conclude whether the "cause or contribute" condition is violated (unless Caltrans' discharge is a direct discharge), the goal of this element seems to be more suited to understanding receiving waters that are not well-studied. We request that Caltrans and regulators should have the option to pay into the SWAMP program to better understand receiving waters where impacts from stormwater are possible. Other alternatives could be identified, such as regional research institutions (SCCWRP, SFEI, TNC, Southern California SMC, etc.). The entities would then use best science to monitor the most important sections within a receiving water – which still may coincide with Caltrans discharges.

27) Page 29, E.2.c.2)g): The Permit requires submittal of an MRR by October 1 each year. Please clarify if the period covered by the MRR will be May 1 through April 30 of the previous year.

28) Page 29, E.2.c.2) g) iii, Page 29-30, E.2.c.3), Page 50, E.3.h.: In these sections of the Permit, the word "compliance" is used. This term should be reserved to the explicit situation where Caltrans would be in violation of the Permit. As used, it appears to practically institute a numeric action level (NAL) when applied to Caltrans discharges, and when receiving waters exceed standards, it appears to practically institute a numeric effluent limit (NEL). Neither NALs nor NELs are intended (per the Fact Sheets, pages 4 and 5, and the Findings of the TO, #19, page 10).
We request that Phrases such as "compliance monitoring" and "achieve compliance" should be removed throughout the Permit. Alternative language should be used to implement the intended function of MS4 monitoring programs: identifying important sources, prioritized BMP programs, and a quantification of progress. If the intent is "compliance" monitoring, then Caltrans should be considered in compliance with the Permit, so long as they actively seek and implement BMP solutions to bring discharges below standards.

29) Page 30, E.2.c.4) The Permit requires the Department to report on trash and litter removal activities. There is no tangible benefit from this requirement, since Trash TMDLs already have a reporting procedure. We request that the Department document gross solids removal at select BMPs in areas where Trash TMDLs have been adopted. Gross solids are defined as litter plus vegetative material. The assessment of gross solids removal shall follow protocols established by the Department and may include quantitative measurements of the volume and/or weight of the gross solids removed.

30) Page 41, E.2.e.5)a): The Permit states: "For each Department District, the Department shall identify at least four locations associated with existing roadways and/or facilities…" This site selection approach is neither scientific nor cost effective.

We request that the Department conduct Pilot LID Retrofit Projects using a two-phased approach. Phase I would assess the technical feasibility of biostrips and bioswales at 24 sites (12 in dry regions and 12 in wet regions), with different land uses and soil types. This will focus efforts on LID that are likely to succeed. Phase II would test the feasibility of soil amendments at any Phase I sites that did not demonstrate substantial runoff volume reduction using existing soils.

31) Attachment II: (a) Barium and Platinum are not a Clean Water Act Priority Pollutants. We request that it be removed from water chemistry analytes list. (b) Chronic toxicity: No TUc objective is specified. We request that (a) barium and platinum be removed from the water chemistry list; and (c) it be clarified whether TUc > 1 is the applicable objective.

32) Attachment II: One pesticide, Clopyralid, is required by a USGS method. Several laboratories were contacted, and only one laboratory tests for this constituent using an approved EPA method. We request that samples for Clopyralid be analyzed, either by the USGS method or by the EPA test method.

33) Attachment II: Reporting Limits may for Diuron and Selenium (Se) will be difficult or even impossible to achieve. They may not be reported down to the stated reporting limits, and the RL for Clopyralid is not given. We request that the RL for Se = 2 □g/L; and that the RL for Diuron = 0.5 □g/L.

34) Both acute and chronic toxicity have associated reporting limits. It is unclear how reporting limits apply to toxicity testing. In addition, the table states an RL for TUc as 0, which does not look accurate.

35) Please clarify the reporting limits for toxicity. The reporting limit for acute toxicity is given as 1 TUa. TUa can be obtained by using either the calculation in the analytical method or the calculation defined in the California Ocean Plan. Please specify which method is preferred by the Board. If the Ocean Plan calculation is preferred, then the Reporting Limit specified in Appendix II may need to be revised. The reporting limit for chronic toxicity is 0 TUc. It is not clear how the calculation of chronic toxicity reported as TUc could yield a value of 0. We request changing this reporting limit to a value of 1.0 or higher. We further request that (a) acute toxicity should be calculated using the formula specified in the analytical method instead of the California Ocean Plan; and (b) the reporting limit for chronic toxicity should be changed from 0 to 1 in Attachment II.

36) Attachment III and Page 29, E.2.c.2)g): Monitoring Results Report: The Referred Permit Section should be corrected as E.2.c.2)g) instead of E.2.c.2)h). Permit section E.2.c.2)g) states that MMR needs to be separate from the Annual Report, but Attachment III states that it will be part of the Annual Report. Please clarify.

37) Attachment V, Page 3, Section 1. c. ii.: For the San Francisco Bay Region, there is a requirement to plan and report on findings related to "technical uncertainties regarding copper effects in the Bay." This requirement is not restricted to the impact of Caltrans discharges, as are the other Region-specific requirements. While the requirement is not specifically to perform the studies unilaterally (without partners), the requirement to report these results seems to place sole responsibility on Caltrans. We request that the language should be revised to clarify the role of Caltrans within the larger roles of the MS4 Permittees and stakeholders. Specifically, an allowance for planning, executing, and reporting via an overarching watershed group should be

allowed. Caltrans could financially participate in the study proportional to its estimated load or footprint in the watershed. Alternatively, the Department could provide water quality data to others who may have the expertise to perform this type of study.

38) Attachment V, Part 1: North Coast Region 1(a) and 1(d): (ii) Monitoring protocols for identifying and quantifying sediment are not specified. We request that the Department be able to use/develop its own protocols.

43. Page 25 – **Regional Board discretion** – The Regional Boards can greatly expand the scope (e.g., Toxicity Identification Evaluations [TIEs] shall be conducted when required by a Regional Water Board [pages 25 and 30]). This discretion should be removed to provide a consistent statewide approach for efficiency.

    Page 25: The Permit reads: *"...eliminate any illegal connections/illicit discharges..."* The Department can eliminate discharges of its own but has no authority to stop others. The Department will address these by developing an IC/ID program through the SWMP.

44. Page 26 – **Monitoring** – The monitoring section remains excessive; requiring a pool of 1,000 sites has no precedent that we are aware of. Other Departments of Transportation nationwide have less than five monitoring sites. Can this be more of a manageable number (<50 sites)? Monitoring is extensive and includes both effluent and, when triggered, receiving water for an extensive list of pollutants including acute and chronic toxicity. Effluent results are compared directly with water quality objectives for an extensive list of regulated constituents. The monitoring for some constituents can be reduced where Caltrans is not a significant contributor (e.g., nutrients). Some constituents appear missing, such as *Enterococci* for marine discharges. We request that the TO provide the Department the flexibility to target the monitoring to the specific receiving water.

45. Page 26 – Provision E.2.c.2)viii)(8) – **Treatment control sites** – The term "Treatment Control Sites" needs to be defined. Does this refer to only structural Post-Construction Storm Water Treatment Controls? If this means all structural stormwater treatment devices, the terms should be changed for consistency and clarity.

46. Page 27 – **Section E.2.c.2)b) – Effluent trigger for iterative procedure**, page 27 – As noted in the major comments, effluent concentrations, rather than receiving water, should trigger the iterative procedure. Exceedances in the effluent will potentially occur very frequently for lead, copper, zinc, bacteria, and also for additional constituents (e.g., iron, aluminum) where the Boards have used the drinking water standards for surface waters designated MUN (municipal supply). The trigger should apply in the receiving water.

47. Page 29 – **Triggers for Receiving Water Monitoring –** The receiving water monitoring program provision must be revised to be implemented only if Caltrans has a direct discharge to the receiving water. Otherwise, the results will not be interpretable and will lack benefits.

48. Page 29 – **Monitoring Results Report** – The TO requires that Caltrans submit results from the TMDL monitoring as a part of the Annual Report. We request that the reporting for the TMDLs be coordinated with the other stakeholders for the TMDL and the results submitted to the local Regional Board as a part of the TMDL Implementation Plan.

49. Pages 29 and 30 – **Provision E.e.c.3)c – Receiving Water Limitations Compliance** – The 5-day notification period for reporting "cause or contribute ...exceedances" and the 10-day timeline for submitting a report is unworkable. It is highly likely that, given the breath of

monitoring sites (100), the extent of Caltrans coverage (statewide), and the range of storms, there will be exceedances for every storm for multiple pollutants for potentially all sites.

Furthermore, it is likely that some pollutants will routinely be the cause of the exceedance and other pollutants will be one-time occurrences. Thus, Caltrans will be in a significant and ongoing administrative exercise to report the exceedance and prepare the corrective report. Five days is too short a reporting deadline, and very difficult to comply with, since analysis plus quality assurance/quality control (QA/QC) for some pollutants requires days.

Revise the Permit to require 30-day notification of the exceedances once they are determined and to report in the Annual Report the corrective actions being taken by Caltrans to address the exceedances. This is the approach taken with the Central Valley Regional Board and the RMP.

50. Page 30 – **Provision E.c.3)e)i) – Maintenance Facility Compliance Monitoring** – "*District NPDES coordinators and their staff shall inspect…*" It is not appropriate for the Permit to specify who within Caltrans conducts inspections. The Permit can mandate that inspections be completed, but implementation details should addressed in the SWMP or guidance and training documents. Eliminate the reference to the specific job classification of the person conducting the inspection of Maintenance Facilities.

51. Pages 30 and 31 – **Provision E.c.4) – Reporting requirements for Trash and Litter** – "*...and shall include quantitative measurements of the volume or weight of the trash and litter removed.*" Quantification of mixed loads, such as storm drain maintenance and road sweeping, will be a very rough estimate at best, whether by weight or volume. The numbers will not be accurate enough for comparisons from year to year or for trend analysis. We request that it be limited to areas where it is required for TMDLs.

52. Page 30 – **Receiving Water Limitations Compliance** – the TO states: "*this provision does not apply where a pollutant is causing the exceedance...is in violation of that waste load allocation.*" Please delete the last portion of this sentence, "is in violation of that waste load allocation."

53. Page 31– **Projects Subject to Post Construction Treatment Requirements**

    1. a) Treatment BMP triggers of 5,000 square feet (sf) of impervious area and 10,000 sf of disturbed soil are not appropriate for linear highway projects. We request the criteria be changed to trigger treatment BMPs for projects that include 1 acre or more of new impervious area for highway facilities and 10,000 sf or more of new impervious area for non-highway facilities that are in an urban MS4.

    1. b), c), d) – These additional triggers should be deleted. Treatment BMPs will already be provided for all projects meeting the criteria noted on 1a), regardless of whether the project discharges to an ESA, TMDLs, or 303(d)-listed water body. The Caltrans BMP type selection process already considers pollutants discharging to impaired water bodies.

54. Page 32 – **Treatment BMP types appropriate for highways.** The Permit language references or implies the use of proprietary devices. The Caltrans BMP toolbox is limited to BMP types that have been approved, are appropriate for highway use, and consider the safety of the traveling public and our maintenance and contractor staff. Approved treatment BMPs have to show a water quality benefit in a highway environment. In most cases, the use of proprietary devices would not be appropriate for highway use. It is up to Caltrans to

determine which BMP is appropriate to be in compliance. Please delete any reference to proprietary devices.

55. Page 33 – **Provision E.2.d.1)a)iv. – Alternative Compliance with Treatment Sizing Criteria** – The TO states that alternative compliance achieved by equivalent offsite treatment must be achieved before the completion of the new development. This is unrealistic, as offsite mitigation programs will typically include multiple jurisdictions and will require significant time for CEQA compliance, funding and other development.

56. Page 33 – **E. 2. d.1.a.iii)** – Scope of design criteria applicability for redevelopment projects, Footnote 4. As written, this would require all projects that cannot separate flows to try to treat the exiting impervious and the added impervious. For most highway projects, separating flows in infeasible. This will cause confusion when working with Regional Boards to prove compliance with the impacts of the added impervious of the actual project. In addition, the footnote adds the term "reconstructed area" to determine the offsite equivalent treatment requirement. This will also cause confusion when working with Regional Board staff. This footnote should be deleted as it is not appropriate for highways and the language for treatment sizing and alternative compliance has already been described in the TO language.

57. Page 33 – E. 2. d .1.a.iv). 1) Alternative Compliance footnote 5, 6, and 7 should be deleted. These are not administratively feasible for Caltrans, especially in regions of the state where there is no regional alternative program available. Clarify how this would work administratively for Caltrans in urban, as well as rural, watersheds. This also requires Caltrans to complete the offsite treatment project within three years from project initiation. The alternative compliance and requirement to complete an offsite alternative compliance project in three years is not administratively feasible and should be deleted.

58. Page 36 – **Hydromodification – Exemption** – This section should include additional Hydromodification Exemption. The hydromodification criteria need to include an exemption for large streams (i.e., the Ventura Permit uses greater than 25,000 cfs). For example, it is not appropriate for Caltrans to address hydromodification when adding a lane over the Sacramento River. Oregon and Washington DOTs use a 1 square mile threshold. We request that the Permit include alternatives, including the thresholds similar to State Transportation agencies in Oregon and Washington. In addition, it is unclear why stream stability is to be evaluated for a project if the pre- and post-water balance is achieved. It is unclear if the hydromodification requirements imply extensive watershed modeling. If that is not the intent, the TO needs to clarify the expectation of compliance. The Fact Sheet may have incorrectly noted the intent of requiring extensive watershed modeling

59. Page 37 – **Provision E.2.d.1)c – Stream Crossing Design Guidelines** –

    a) The TO requires a Level 1 stream stability analysis every two years for a number of streams. We recommend that this be conducted on a pilot basis or be limited to regions where the beneficial uses of COLD, SPAWN, and MIGR exist and not be required for all stream crossings statewide. This is excessive, and once an initial analysis is done, then a subsequent analysis should be on a 5- or 10-year (and not a 2-year) schedule. The initial Level 1 analysis could be completed in the first Permit term and another one as part of the ROWD submittal.

    b) The stream crossing requirements are excessive. The guidelines require that designs be developed to allow the "passage of woody material and other debris." This can be a huge

safety liability. Debris control upstream of some culverts is a safety issue that must take precedence. This requirement should be reworded to address safety.

c) What methods are required to conduct the stream assessment? We request that the Permit reference the specific method in the Permit language, so there is no confusion. It is unclear if this task is intended to be a brief rapid assessment or requires extensive modeling.

d) What is the basis in the CWA or State Water Code for these requirements, which are not related to water quality? If there is no basis, they should be deleted. Caltrans is currently working with the Department of Fish and Game—which is the appropriate agency—to address these issues.

60. Page 38 – **Provision E.2.d.1)d) – Low Impact Development** – The TO states a goal of LID and encourages its use, but with no metric to assess LID implementation. We request Caltrans develop and trial test a metric for assessing LID implementation within 18 months. For example, the metric could prioritize the design criteria for infiltrating 90% of the design storm over the treatment criteria (page 32).

61. Page 41 – **Conduct Pilot LID Retrofit Projects** – The TO requires Caltrans to conduct at least 48 pilot studies. The TO is unclear as to the purpose of these studies. We request that the goal of the studies be articulated better and suggest assessing maintenance requirements and long-term performance as two critical objectives. We request that the TO reduce the number of studies per District and for Caltrans as a whole. This requirement should clearly state the goal and objectives of these studies.

62. Page 41 – **4) Biodegradable Materials** – This provision includes a reference to waters of the state, rather than limiting the requirement to waters of the US.

63. Page 43 – **Provision E.2.h – Facility Pollution Prevention Plan (FPPP) –** The TO requires that the Department prepare FPPPs for maintenance facilities by the end of the first year. It is unclear as to what constitutes the "end of the first year." Please modify the language to require that FPPPs be prepared within 365 days of the effective date of the Permit (ideally, this would be two years, because the program is front-loaded with many requirements to be completed within the first year).

64. Page 43 – **Provision E.h.2) – Maintenance Program Activities** – a) "*If Regional Water Board staff determines that a non-maintenance facility may discharge pollutants to the storm water drainage system or directly to surface waters, the Department shall prepare an FPPP for that facility.*" As noted previously, all discharges contain pollutants (or wastes) at some concentration. This provision needs to define the threshold for determining whether the discharge presents a potential risk to water quality.

    b) See comments regarding the Glossary: *Maintenance Facility* and *Non-Maintenance Facilities*. The definitions are not clear for waste storage or disposal facilities, which are applied to both of these categories. To eliminate confusion, it may be necessary, as part of the SWMP, to develop a list of all facilities (maintenance or non-maintenance) and agree on the facilities that need FPPPs. This lack of clarity on which facilities need FPPPs has caused confusion in the past.

65. Page 44 – **Provision E.h.3)iii) – Slope inspection** – "*iii) Identify road segments with slopes that are prone to erosion and sediment discharge and stabilize these slopes to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments shall be*

maintained in the District Work Plans. Stabilization activities shall be reported in the Annual Report."

a) What is the water quality benefit of this effort? Maintenance staff currently is looking for slides for all sloped locations. Does the Board have evidence that this effort will be beneficial or if it is performed elsewhere?

b) The TO should clarify "vulnerable road segments." Slopes in locations that do not discharge to waters of the US should not be included. Virtually every slope has the potential to have a slide; so a listing of criteria is needed. In addition, are slopes that cannot be stabilized (slides) to be included on the list? Please add a definition of vulnerable road segments.

66. 44 – **Provision E.2. h.3)b) iii) – Vegetation control – Rain event** – "*Do not spray within 48 hours of a forecast rain event having a 30 percent probability as predicted by the National Weather Service.*" Caltrans applies pre-emergent herbicides prior to rain events in accordance with label requirements. We are required to follow label instructions that would put Caltrans in violation of the TO. Please eliminate the reference to *no spray* if rain is forecast, and require that label instructions be followed.

67. Page 44 – **Provision E.2.h.3)b) iv) – Vegetation Control** – "*Prior to chemical applications, assess site-specific conditions to prevent discharge. The assessment shall include the following variables:* [*followed by 7 variables*]. The TO has extensive requirements for assessing site-specific conditions prior to applying chemicals. It is unclear whether this is required just once per site or for or every application. Please clarify the language to require assessment on either an annual basis or one time for each type of chemical used and for generic sites.

68. Page 45 – **Provision E.h.3)c)i) – Storm Water Drainage System Facilities Maintenance** – a) "*The Department shall inspect all drainage inlets and catch basins a minimum of once per year and shall remove all waste and debris from drainage inlets and catch basins when they have reached 25 percent capacity. Total weight or volume of waste and debris removed from drainage inlets shall be reported by District in the Annual Report.*"

a) The inlet-cleaning threshold (25%) is excessive and/or inappropriate**.** It is impractical to require the removal of debris from inlets when they are 25% full. This would greatly reduce the capacity of the transportation system due to more frequent traffic disruptions, possibly causing more pollution than what is removed. Would the environmental impact outweigh the benefits? The requirement of cleaning will vary with the facility and depends on flow volume, capacity, ease of access, etc. Please clarify how capacity is defined.

Maintenance inspects drainages for hydraulic capacity mainly by inspecting the culvert capacity. Many culverts normally operate with 25% bed load and do not need to be cleaned; the material will be back in the next storm to re-establish the normal bed load, which is based on facility hydraulics.

The cleaning frequency should be determined at the discretion of the Maintenance staff, who are best able to make site-specific evaluations based on need.

b) Reporting the "*Total weight or volume of waste and debris removed from drainage inlets*" is unnecessarily burdensome, and we do not see a basis for this requirement in the Clean Water Act or its regulations.

c) Definitions: Please define catch basins and clarify whether "drainage inlets" means drop inlets or open culvert pipes.

69. Page 47 – **Provision E.2.h.4c Department Activities Outside of the ROW** – The Department does not possess the legal authority to inspect facilities outside of the Caltrans ROW for compliance. Clarify what is meant by "for the primary purpose of accommodating Departmental activities." This could be construed to mean any major construction contractor used by Caltrans, even if the contractor was situated in another MS4 and subject to a local Permit and its requirements, or situated on federal lands. The use of general and vague terms is going to result in non-compliance with this Permit. Caltrans has contractual authority over its prime contractors, and could reasonably oversee those activities if they were operating adjacent to the ROW on a particular project, but Caltrans has no legal authority, no statutory authority, and no contractual authority over a subcontractor unless the subcontractor is in the ROW, and then the contact has to be made through the prime contractor. Caltrans does not possess regulatory authority. The Water Boards and local governments possess enforcement authority. Unless the enterprise has an encroachment permit, or a contract directly with Caltrans, this section is not legally feasible.

70. Page 48 – **Provision E.2.l – Public Education and Outreach** – The TO appears to be requiring research that has already been completed by Caltrans during earlier Permit terms. Please clarify the intent of the research that differs from current research efforts. The Board should identify which portions of the previous research were not adequate, rather than repeating the same research.

71. E.2.d.1)d)i)(6) – **Water Efficient Landscape Ordinance.** This Landscape Ordinance addresses water conservation, and does not necessarily provide a water quality benefit. The Department's policies require Districts to comply with any local water conservation ordinances for newly designed highway planting projects. Water auditing and analysis requirements for existing landscapes would be extremely cost prohibitive. We request to delete this paragraph and remove this requirement.

72. E.2.h.3)b)ii) – **Highway Maintenance Activities**. Reference to "symbiotic foliage" is not clear or typical industry language. Suggest reference to application of chemicals and vegetation management be referred to as "Integrated Pest Management" and "Integrated Vegetation Management," respectively.

73. Page 51 – **TMDL Compliance Requirements** – The TO requires Caltrans to submit a TMDL Status Review Report with each Annual Report. While some of the requirements may be fine – we request revising this section to limit it to summary information. The specifics should be left to the specific TMDL documents required as a part of the implementation plan.

Fact Sheet

74. FS 3 (also TO 11) – **Discharges to ASBS** – The Fact Sheet states that the TO prohibits the discharge of waste to ASBS unless the State Board has granted an exception – The TO (page 53) recognizes that Caltrans does not yet have an exception and should not prohibit in the absence of the exception. Since this is not yet adopted, it is suggested that qualifying language be incorporated into the Permit, so that Caltrans is not required to obtain a General Exception that is not yet available.

75. FS 3 – (Also Findings, page 7, and TO, page 18 – **Non-Storm Water** – support for agricultural return flows and the implication that agricultural return flows are potentially illicit discharges. The Fact Sheet states that agricultural return flows are conditionally exempt if they are regulated and "if the Department provides reasonable support to the monitoring activities of the regulated discharger." We are unsure what "reasonable monitoring support is." Suggest striking the language or modifying to limit what the support would include.

76. FS 9 – **Exceedances** – Now exceedances will be shown for the first 100 sites based on effluent monitoring. Caltrans will have to report on how these will be mitigated. The standard non-structural measures will not make much impact on copper and lead at 10X standards or fecal coliform at 3X standards. This will be particularly evident when the follow-up monitoring shows exceedances. Is the goal to require an ongoing retrofit program?

77. FS 8 (and TO 25) – **SWMP Implementation (Monitoring Program.** The monitoring program requires Caltrans to have a pool of 1,000 monitoring locations and a minimum of 50 new sites each year – dropping only those that meet objectives. The monitoring program needs to be revised, since it will result in an unwieldy amount of locations to monitor within a few years and cost a significant amount. We request that a rotating monitoring program with specific management questions and triggers be proposed.

PERMIT ATTACHMENTS

ATTACHMENT I: Incident Report Form

78. **Constituent or incident-based reporting** – Is this reporting to be completed by constituent or per discharge? Is there a programmatic process? Please clarify.

79. **Non-Compliance Reporting schedule** – A response to the Regional Board is required verbally within 24 hours and in writing within five working days. Caltrans requests that written responses be provided within 10 working days.

80. **Emergency Incident – Structural bank** – Please clarify whether a cut or fill is a *structural bank* and define the term either here or in the Glossary.

81. **Emergency Incident – Spill** – Maintenance already does spill reports and notifies agencies when a spill has potential to enter water (based on current OES and U.S. EPA regulations). It is unnecessary and burdensome to complete the Incident Report Forms for incidents that are already addressed by other regulations. Before including this requirement, the Board should review current reporting procedures and determine whether there is an appropriate basis for requiring another form with the same information.

ATTACHMENT II: Monitoring Constituent List

82. **Monitoring** – Monitoring is extensive and includes both effluent and, when triggered, receiving water for an extensive list of pollutants, including acute and chronic toxicity. Effluent results are compared directly with water quality objectives for an extensive list of regulated constituents. The Monitoring List is excessive and includes monitoring for many constituents for which routine monitoring does not provide additional helpful information for either Caltrans or the Water Boards; they could be monitored in special projects, however. Examples: TDS or conductivity (not both), organic carbon, glycols, TPHs (three types), Fe

and Al (natural sources), As, Ba, and platinum. Monitoring for some constituents can be reduced where CT is not a significant contributor (nutrients). Some appear missing, such as *Enterococci* for marine discharges. Ideally, the monitoring should be targeted. Nutrients may be an issue in some locations but not for ocean discharges.

83. **Toxicity monitoring** – Some toxicity testing may not be appropriate for stormwater—the 96-hour acute toxicity test, for example. EPA-approved methods include many shorter-term methods.

ATTACHMENT III: Reporting Requirements

84. **General comment** – An additional clarification is needed with respect to the relevant water quality standards to be used to assess compliance. The California Toxics Rule includes acute and chronic criterion maximum concentration (CMC), which is a short-term concentration limit, and a criterion continuous concentration (CCC) a 4-day average concentration limit. The California Ocean Plan includes a 6-month median, daily maximum, instantaneous maximum, and 30-day average. The Basin Plans also have criteria applicable to different exposure scenarios. We presume that the shorter duration criteria should be applied to stormwater (CMC, instantaneous maximum, etc.); however, this should be clarified in the Permit.

85. **General comment** – The required reports are numerous and complex. Caltrans would appreciate the opportunity to discuss consolidation and simplification of the reporting requirements. We request that the TO include a provision allowing for discussions during SWMP development to create a more efficient and useful reporting system, i.e., structure the TO so that Caltrans is not constrained to this system for the entirety of the next Permit cycle.

ATTACHMENT IV: TMDL Implementation Requirements

86. Please clarify the Caltrans compliance requirements and purpose of listing the TMDLs in Attachment IV.

87. **General Comment Re: Table Header – Compliance Due Date** – It appears that the State Board has indicated which Annual Report requires that certain elements of the TMDL be completed. Need to verify this.

88. **General Comment Re: modifications**. We are concerned that these specifications reduce the flexibility inherent in the TMDLs. If the TMDLs are adjusted during implementation (adaptive management), Caltrans may not be able to make the corresponding adjustments, because the original requirements are fixed within this TO and cannot be changed without taking the Permit to the Board.

89. **General Comment Re: Pending TMDLs**. The Permit language includes several pending TMDLs. TMDLs that are not in effect should not be included in the Permit.

90. **General Comment Re: EPA-only TMDLs** – These should not be included, since they have no implementation plan.

91. **San Francisco Bay PCBs and Mercury TMDL Requirements**. The requirements for the PCBs and Mercury TMDLs seem excessive and do not allow Caltrans the flexibility to choose their own pilot projects or to coordinate with other TMDL stakeholders to implement a pilot BMP program. For example, the current Permit language requires Caltrans to evaluate

dry weather diversion to POTWs; diversion from Caltrans roadways is much more likely as a coordinated action with other stakeholders.

92. **Compliance for Ballona Creek and Los Angeles River Trash TMDLs**. We request including a statement that compliance with the WLAs is determined as a three-year rolling average.

93. **Malibu Creek Watershed Trash TMDL**. The deadline for the Trash Monitoring and Reporting Plan (and subsequent TMDL requirements) should be April 30, 2010, according to a letter released by the Regional Board on October 30, 2009, signed by the Executive Officer.

94. **Harbor Beaches of Ventura County**. The 30-day Rolling Geometric Mean Exceedances listed are for summer weather. There are additional exceedances allowed for winter weather conditions.

95. **Coachella Valley Storm Water Channel Bacterial Indicators TMDL**. Monitoring for the TMDL should begin after approval of the monitoring plan, not on the deadline of submission of the plan.

96. **San Diego Creek Organochlorine TMDL**. The WLAs for Caltrans are incorrect according to the WLAs listed in the Attachment to Resolution No. R8-2007-0024.

97. **Project 1 – Revised Twenty Beaches and Creeks in the San Diego Region Indicator Bacteria TMDL**. The WLA for fecal coliform during wet weather at the San Luis Rey H.U. is incorrect. Please revise to 1,537 billion MPN/year.

98. **Calleguas Creek Metals and Selenium TMDL**. Please clarify the fifth and sixth requirements under the "other" category. These appear to be the same requirement with different deadlines.

99. **Mad River Sediment and Turbidity TMDL**. The WLAs listed in the Permit are for management roads. Are these appropriate for the Caltrans highway system?

ATTACHMENT V: Regional Board Specific Requirements

100. **General comments** – It is unclear how the region-specific requirements were derived – what were the criteria used? San Francisco appears to diverge significantly from the others. What was the rationale used?

101. **Part 2 – San Francisco Bay Region** – These requirements are wholly out of proportion to the location-specific requirements of the other Regions. What are the justification and unique circumstances of the San Francisco Bay Region that justify what is essentially a separate Permit? What are the incremental costs of these Region 2 requirements beyond those required by the rest of the Permit?

102. Following are provisions that we believe have no basis in the State Water Code or the Clean Water Act:

    1. Mandate to participate with a private organization in the development of legislation.
    2. Initiate detailed technical studies in subjects that are more appropriately addressed by regulatory agencies or scientific organizations for pollutants for which Caltrans is a very minor contributor.

3. Implement on a fixed schedule the complete elimination of trash by 100% in the absence of a TMDL and in the absence of information regarding compliance costs and feasibility. We note that the premature installation of trash capture facilities may conflict with facilities needed to address later TMDLs implemented to address other pollutants (bacteria, dioxin, etc.).
4. Unique sediment control program is not sufficiently explained.
5. A unique pump station program to address low Dissolved Oxygen (DO) and trash appears to be based on a single occurrence and there is no widespread evidence of a low DO problem due to Caltrans discharges.

Please provide legal justification for these requirements.

103. **Part 4 – Central Valley Region** – "*1. Enhance the Department's BMPs for Discharges to the Delta. The Department shall implement additional BMPs for activities associated with discharges to the Delta. The additional BMPs shall be described in the District Work Plans.*" – This requirement is too vague for the Department to interpret and understand how it should comply. Please clarify the basis for this requirement. We request these conditions be deleted.

"*2. Methyl Mercury Program for Treatment Measures that Pond Water and Discharge to the Delta. The Department shall coordinate with Central Valley Regional Water Board staff to develop and implement a plan for monitoring methyl mercury in the influent and effluent of treatment measures that discharge to the Delta. The plan must also include monitoring of the receiving water for methyl mercury. The plan shall be submitted for Regional Water Board Executive Officer approval by the end of Year 1.*" This requirement is too broadly defined. Many treatment units "pond" water for relatively short periods and are unlikely to generate methyl mercury. This appears to refer to all discharges entering the Delta, which would constitute a large and costly program. It is unclear what the goals and the basis for these requirements are. We request that these conditions be deleted.

104. **Part 6 – San Diego Region** – In connection with a Consent Decree entered to resolve litigation in United States v. California Department of Transportation (No. 97-0037-EIG). This Region-specific requirement should be deleted. Caltrans has resolved this legal action and should not be referenced in this Permit. This is also noted in the Findings.

ATTACHMENT VI: Standard Provisions

105. **13. Reporting Requirements. b. Anticipated noncompliance.** "*The Department shall give advance notice to the appropriate Regional Water Board of any planned changes at the Permitted facility or activity which may result in noncompliance with Permit requirements; [40 CFR 122.41(l)(2)]*" This differs from the Incident Reporting provision on page 24 of the TO: "*The Department shall report all potential or threatened non compliance to the State Water Board and appropriate Regional Water Board as soon as it is known to the Department,*" which is not tied to changes at the facility and appears too broad to be useful. We request that the Standard Provisions requirement—with its link to facility changes—be used for incident reporting.

ATTACHMENT VII: Acronyms and Abbreviations

106. No comments

ATTACHMENT VIII: Glossary

107. **Acute toxicity** – In the context of stormwater, a 96-hour test is excessive. Can the TO identify a shorter duration test appropriate for stormwater?

108. **Administrative Noncompliance** – The Glossary should include examples of the other types of noncompliance.

109. **Catch basin** – ***definition needed*** – Add definition of catch basin and drain inlet as used in this Permit.

110. **Caltrans** – Permit, Fact Sheet, and Attachments should be consistent and reference Caltrans instead of "the Department."

111. **Discharge of a Pollutant** – It would be helpful if, in addition to the current definition, examples were given that are more specific to roadways. For example, it should be clear that discharge to "natural" shoulder areas is not a discharge of a pollutant as defined under the CWA. It would also be helpful to clarify that sheet runoff from a roadway is not a regulated discharge, unless it becomes confined to a discrete channel (conveyed) and enters a water of the US.

112. **Waste** – definition in the Glossary is same as pollutant. This appears to ban any discharge that contains pollutants regardless of concentration or effect. Page 17 – Prohibition A.7 – Prohibition on discharge of wastes – "The dumping, deposition, or discharge of waste by the Department directly into waters of the State or adjacent to such waters in any manner that may allow its being transported into the waters is prohibited unless authorized by the Regional Water Board." The definition needs to clarify this.

113. **Department Facilities** – a) "*Waste or disposal facilities*" are included in both maintenance and non-maintenance facilities and should be one or the other. Examples would be helpful, because these definitions have been a problem in the past and use the term *facility* in the definitions. b) Specifically define "temporary working stock locations." Are they facilities?

114. **Environmentally sensitive area** – Expand the definition to clarify what is meant by "include but not limited to" to avoid confusion.

115. **Effluent** – "Any discharge from the MS4" This should note that the term applies to discharges other than those from MS4s and that an *effluent* may or may not be a discharge of a pollutant, depending on how it is disposed of.

116. **Emergency non-compliance – *definition needed*** – This term should be defined in conjunction with Standard Provisions #1. "*Any Permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act*"

117. **Environmentally Sensitive Area** – This definition needs clarification of what type of ESA area. This definition as it stands would be infeasible for all types of ESA areas. Many ESA designations may not be of concern to water quality, i.e., cultural, plant or animal resource ESAs.

118. **Field non-compliance – *definition needed*** – this is a key part of the TO and should be defined.

119. **Illicit Discharge – *definition clarified*** – The definition of "illicit discharge" quoted verbatim from 40 CFR Section 122.26(b)(2) is different from the Glossary definition.

120. **Illegal Dumping – *definition clarified*** – Does this apply to Caltrans' activities or to the activities of others? If it is the latter, please confine it to dumping in the Caltrans ROW or MS4. Otherwise, Caltrans could be held responsible for dumping by third parties in areas not within Caltrans' control.

121. **Maintenance and non-maintenance – *Definition needed*.**

122. **MEP** – "*MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. ... This process of implementing, evaluating, revising, or adding new BMPs is commonly referred to as the "iterative approach.*" We assume this means that runoff containing pollutants that present a risk to the environment or that exceed WQS needs to be addressed. All runoff contains "pollutants." A better explanation is needed. See discussion under *Pollutant* below. We also request that the definition of MEP be expanded to include the reference to a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," by Elizabeth Jennings, Senior Staff Counsel, State Board, who addressed the achievement of the MEP standard. See TO No. R8-2010-0033 (NPDES No. CAS 618033) for reference for an expanded definition of MEP.

123. **Pollutant – "Waste."** The definition needs to be consistent with 40 CFR 122.2. The Permit appears to use this term in two ways: a) pollutant equivalent to waste as in the current definition, and b) pollutant at a level presenting a risk to water quality. This latter use is incorporated, for example, in the requirements for addressing conditionally exempt discharges. Such discharges containing *pollutants* must be prohibited; however, the intent is likely to address *pollutants at significant concentrations*, not extremely minor concentrations much lower than objectives. An alternative term should be used or "pollutant" qualified when used in the TO in order to prevent confusion.

124. **Pollutants of concern** – The list includes "*pathogens (e.g., bacteria, viruses, protozoa).*" While bacteria indicators may be present above objectives due to natural sources (mainly avian), they are not present at levels that constitute a significant threat to water quality. Compared with untreated POTW discharge or the sanitary sewer overflow, the bacteria in highway runoff are normally inconsequential.

125. **Pollution** – This contains an inappropriate reference to waters of the state; it should refer to waters of the US, because it is used in the context of an NPDES Permit.

126. **Change "Redevelopment" to "Reconstruction"** – "*Any land-disturbing activity that results in the creation, addition, replacement of 1 acre or more of impervious surface area on an already built roadway/facility. Reconstruction includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; resurfacing or replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or the original purpose of a facility*"

127. **Right-of-Way (ROW)** – "Real property that is either owned or controlled by Caltrans or subject to a property right of Caltrans. Right-of-way that is in current use is referred to as operating ROW."

128. **Sediment** – The definition of sediment needs to be refined. Sediment only becomes sediment when it settles. It does not include materials that remain in the water column.

129. **Slope Lateral Drainage** – "*Horizontal drains placed in hillside embankments to intercept groundwater and direct it away from slopes to provide stability.*" It also includes seepage that may be present in the absence of discrete drains.

130. **Soil Disturbing Activities** – The areas of soil disturbing activities and the area of disturbed land adds confusion. The terms used in the Permit must be changed to provide a consistent interpretation of CWA, 40 CFR 122.26, CGP, and other EPA guidance. Routine road maintenance in 40 CFR 122.26 (b)(14)(x) clearly states that activities to maintain line grade and hydraulic capacity are not subject to the CGP; this includes grading gravel roads, shoulder backing, and replacing existing road surfaces.

131. **Storm Water Runoff** – What is *interflow* as used in the definition?

132. **Structural bank – *definition needed*** – Structural bank is referred to in the TO but needs to be defined.

133. **Threatened non-compliance – *definition needed*** – This term should be tied to facility changes [see 40 CFR 122.41(l)(2)].

134. **TDS and TSS** – These should be defined in relationship to each other and *Total Solids*.

135. **Wastewater – *definition needed*** – Does it include stormwater?

136. **WQO/WQS** – It should be clarified that the objectives are part of the WQS.

137. **Change reference from "New Development/Re-development" to "New Construction/Major Re-construction"** as this is more appropriate for highway infrastructure projects. Definition: The types of projects that are considered to be a New Facility or Major Reconstruction include, but are not limited to: new highways and freeways, highway related facilities, adding one or more lanes, new or reconstructed interchanges, new or reconstructed bridges, etc. Activities that are not considered to be new construction or major reconstructions are the following: routine maintenance necessary to preserve original line and grade, hydraulic capacity, or original purpose of the facility; projects disturbing less than 3 acres of soil disturbance; and emergency construction activities.

138. **Clarify definition of "Facilities."** Definition should be: Facilities under Caltrans' ownership or control that contain such areas as fueling areas, waste storage or disposal facilities, wash racks, equipment or vehicle storage, and materials storage areas.

139. **Definition of Low Impact Development** – This definition is not consistent with EPA's language and intent. EPA states that LID "is an approach to land development (or re-development) that works with nature to manage stormwater"… and "promotes the natural movement of water"…The draft NPDES Permit definition does not emphasize this natural based approach. Suggest rewriting the definition of LID to be more consistent with EPA and apply it consistently throughout the Permit. Prefabricated treatment systems referred to in Section E.2.d.1)d)iii) do not meet the intent of LID.

ATTACHMENT IX: References

140. The references appear to be missing the 2007 draft SWMP, which is referenced in the TO and which was posted by the Board. To the extent feasible, links would be useful.