# **Water Board Responses to California Public Comments**

November 2, 2010

7. Placer County



# PLACER COUNTY DEPARTMENT OF PUBLIC WORKS

Ken Grehm, Director Robert Blaser, Assistant Director Peter Kraatz, Deputy Director

September 9, 2010

California Regional Water Quality Control Board Lahontan Region Douglas F. Smith, Senior Engineering Geologist 2501 Lake Tahoe Boulevard South Lake Tahoe, California 96150

#### Re: Proposed Tahoe TMDL and Basin Plan Amendment

Thank you for the opportunity to review and comment on the proposed amendments to the Water Quality Control Plan for the Lahontan Region (Basin Plan) provided with your notice dated July 9, 2010. Placer County generally supports the Total Maximum Daily Load (TMDL) approach to addressing the Lake Tahoe transparency impairment. We believe that this is a far better approach than establishment of numeric discharge standards which are difficult to implement, and equally difficult to enforce.

With regard to the proposed Basin Plan amendment, we have a number of questions and comments to be presented below. Some of these questions and comments relate more specifically to the TMDL report and implementation plan. However, recognizing that adoption of the Basin Plan Amendment (BPA) and TMDL will be followed by revisions to the municipal NPDES permits, we feel that it is important to fully understand the proposed context and basis of the BPA. Your consideration of our comments and questions, and your meaningful responses, are greatly appreciated, and will be very helpful in focusing our discussion on the BPA and TMDL adoption with your Board.

#### July 9, 2010 Basin Plan Amendment Notice

**Page 1.** Within the list of proposed changes to the Basin Plan, there is no item #3; is this a numbering error, or has something been omitted?

Page 3. Item #7, Describe Stormwater Treatment Requirements, last section paragraph, states: "For new development, redevelopment, and parcel-scale Best Management Practice projects, the proposed amendment requires project proponents to implement every opportunity to infiltrate stormwater." (emphasis added). This appears to conflict with the stormwater treatment requirements described on page 24 of the Basin Plan Amendment (BPA), which reference infiltration to the "maximum extent practicable" (MEP).



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Tahoe (Cabin Creek) 870 Cabin Creek Rd. - Truckee, CA 96161 / P.O. Box 1909 - Tahoe City, CA 96164-1909 [150-550-1212 / Fax 530-550-0266
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## Response

**PC-1:** This was a numbering error; the text has been corrected in the proposed Basin Plan amendment (BPA).

**PC-2:** This language has been removed from the discussion of stormwater treatment requirements and relocated under the heading of "Sustainable Development Practices." Given the effectiveness of infiltration practices at reducing stormwater volumes and associated pollutant loads, infiltration remains the preferred method for urban stormwater treatment. Reference to treatment to "the maximum extent practicable" has been eliminated from the proposed Basin Plan Amendment.

The next sentence of this paragraph reads: "Stormwater treatment facilities must be designed and constructed to infiltrate runoff generated by the 20 year, 1-hour design storm when site conditions permit". Again, this appears to conflict with the "every opportunity" infiltration requirement, as well as the MEP requirement. Also, why are these private property BMPs only designed to meet the 20 year, 1-hour volumes, when municipalities must consider a range of storm events in the planning and design of BMPs?

The third sentence of this paragraph reads: "Amendment language <u>encourages</u> infiltration and treatment of volumes in excess of the 20 year, 1-hour storm volume." (emphasis added). This creates even more confusion as, based on the preceding observations, there appears to be a mandate to infiltrate to a higher standard.

The last sentence in the paragraph essentially states that, where one can't meet these (confusing) infiltration requirements, that the 20 year, 1-hour design storm (volume) must be treated to meet defined effluent limits for turbidity, nitrogen, and phosphorus. However, there are exceptions noted in the amendment language on page 25 of the BPA, to be discussed below.

This confusing language repeats a recurring theme from past permit language in terms of failing to be absolutely clear on how private properties are regulated for stormwater. To limit confusion, it is suggested that at a minimum, "encouraging" language for "treating beyond the minimum" be removed. With TRPA's upcoming Regional Plan Update document, they can be the agency to provide language and direction on incentives for treating beyond the minimum standard.

## <u>July, 2010 Proposed Water Quality Control Plan Amendments, Total Maximum Daily Load for</u> Sediment and Nutrients in Lake Tahoe

**Page 4.** *Source Assessment, Upland Runoff,* third sentence, indicates that 38% of the annual average phosphorus load is generated within the urban landscape. However, Table 5.18-4 shows this number as 47%. Which is correct?

Similarly, the nitrogen load is described as 18% from the urban landscape; Table 5.18-3 shows this as 18%. Which is correct?

There are similar discrepancies relating to information in the fourth sentence of this paragraph, relating to undeveloped areas.

Page 4. Source Assessment, Atmospheric Deposition, last sentence, indicates that 15% of the basin-wide fine sediment load comes from atmospheric deposition; Table 5.18-2 shows 16%. Which is correct? Similarly, the nitrogen load is described as 55% from atmospheric deposition; Table 5.18-3 shows this as 63%. Which is correct? Do any of these numeric discrepancies have any bearing on the proposed TMDL load allocations or implementation requirements?

Page 6, Loading Capacity; TMDL and Allocations. For the modeled TMDL loading capacity and TMDL allocation values and associated timescales, will there be a periodic re-calibration effort to verify/refine these amounts? Monitoring data collected over time should be used to calibrate the load, capacity, and trend conditions so that the refinements to jurisdictional commitments can be made as necessary.

Proposed Tahoe TMDL and Basin Plan Amendment Page 2

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#### Response

**PC-3:** The stormwater treatment requirements have been re-organized to identify which requirements apply to various entities.

**PC-4:** Municipalities and state highway departments must reduce loads as required by the Lake Tahoe TMDL. These agencies need flexibility to evaluate loading and load reduction on a larger scale than most private property owners. As such, the requirements for private property owners are simple (20 year, 1-hour storm volume) while requirements for municipalities and highway departments have greater nuance. As mentioned above, the proposed language has been changed to more clearly describe these requirements. Municipalities may chose to impose stricter stormwater treatment requirements on private development to assist in achieving required pollutant load reductions for their jurisdiction.

**PC-5:** The referenced language is guidance, not a requirement. If site conditions permit, larger infiltration systems are encouraged. Again, local government may chose to require greater stormwater retention. The proposed Basin Plan amendment does not require infiltration of volumes in excess of the 20 year, 1-hour design storm.

**PC-6:** See Response PC-3, with this: Municipalities are responsible for runoff from private property within their jurisdiction. Consequently, the proposed Basin Plan language provides the municipalities flexibility to consider shared stormwater treatment solutions where appropriate. As described above, municipalities may chose to impose more stringent private property BMP requirements to help achieve the municipality's load reduction requirements.

PC-7: See Response PC-6.

**PC-8**, **9**, **10**, **and 11**: The values in the allocation tables are correct and the noted paragraph texts have been corrected.

PC-12: The complexity and cost of evaluating basin-wide pollutant loads and assessing the Lake's assimilative capacity make such "periodic recalibration" efforts difficult. In the near-term, research and monitoring efforts are expected to focus on refining and validating TMDL implementation tools such as the Pollutant Load Reduction Model and Rapid Assessment Methodologies. However, the adaptive management process may provide for opportunities to perform the suggested recalibration in the future.

Page 7. Load Allocation Tables. Standard attainment is shown at 65 years, with five-year incremental load reduction milestones. In nearly all instances, over 50% of the "standard attainment" load reductions are required within the first 20 years. Have factors such as technological and fiscal feasibility been considered in establishing these schedules? Have the studies conducted in support of this TMDL, and its implementation, demonstrated that these pollutant reduction levels are realistic, practical, and feasible? Where has this been demonstrated and documented?

According to Table 5.18-3, the Forest Upland is the source of 18% of the basin-wide nitrogen; this is the same as the Urban Upland contribution. Atmospheric sources account for 63% of the total nitrogen load. Why is the standard attainment for the Urban Uplands a 50% reduction, when the Forest Uplands is 0% reduction, and Atmospheric only a 2% reduction? Similar, disproportionate, ratios of sources-to-reductions are shown for fine sediment and phosphorus within the tables on this page.

Page 8. Margin of Safety and Future Growth Potential, second paragraph, states: "...the two counties within the Lake Tahoe watershed...". Shouldn't this refer to the five counties in the Tahoe Basin?

Page 8. Implementation Plan, second section paragraph, states: "...found that the most cost effective and efficient load reduction options for the forested upland, stream channel erosion, and atmospheric deposition sources are consistent with existing programs." This is a very subjective statement, which doesn't appear to be supported by proper analysis, nor are those existing programs clearly described. Has it been demonstrated that the "business as usual" approach for those agencies tasked with meeting load reduction requirements from these sources will achieve the load reduction milestones shown in the tables on page 7? The statement also implies that permitted municipalities, responsible for urban uplands runoff, have the capacity and capability of greatly expanding efforts to meet TMDL implementation requirements. While there may be greater opportunities for load reductions in urban uplands settings, that doesn't mean that the resources will be available to pursue such opportunities. Is it possible to achieve the TMDL reductions through current practices, only? Where has that question been answered?

Page 9. Implementation Plan, Urban Runoff. The TMDL implementation focuses on urban uplands sources and establishing enforceable NPDES permit requirements. This section notes that the Regional Board will specify load allocations and track compliance with load reduction milestones, through new NPDES permit requirements. Since these permittees will be the only stormwater dischargers with enforceable TMDL requirements, the full burden of compliance falls to these agencies. Why aren't the many other stormwater dischargers within the Tahoe Basin being held to a similar standard, with similar enforceable requirements?

The last paragraph in this section mentions the Lake Clarity Crediting Program as another required element of the TMDL implementation. Will only the NPDES permitted agencies be applying this program to track TMDL implementation progress? What about the other dischargers that will not be required to implement the TMDL through enforceable permit requirements, i.e., the "business as usual" agencies discussed in the comments above?

Proposed Tahoe TMDL and Basin Plan Amendment Page 3

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#### Response

**PC-13:** The Pollutant Reduction Opportunity Report and the Integrated Water Quality Management Strategy Report describe the analysis conducted regarding load reduction feasibility. These reports demonstrate that the proposed load reductions are realistic and feasible.

**PC-14:** The Lake Tahoe TMDL implementation plan and associated load allocations were developed by a collaborative stakeholder process that is documented in the Pollutant Reduction Opportunity Report and the Integrated Water Quality Management Strategy Report. The allocations were largely based on the potential for load reductions within a source rather than solely based on the amount of load being generated by that source.

Because fine sediment particles are the primary driver of Lake Tahoe's deep water transparency, the implementation plan focuses on measures to reduce fine sediment particles. The total nitrogen and total phosphorus reductions reflect the relative effectiveness of various measures to reduce fine sediment particles and associated nutrients. Urban upland management actions to meet needed fine sediment particle load reductions will accomplish the described total nitrogen reductions.

**PC-15:** As a California state agency, the Water Board can only establish policy for the California side of the Lake Tahoe basin. In California, there are only two counties within the Lake Tahoe watershed.

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## **Response**

**PC-16:** The statement is not subjective and is supported by a detailed analysis of load reduction opportunities described in the Pollutant Reduction Opportunity Report.

The pollutant source analysis contained in the Lake Tahoe TMDL Final Report and in the Lake Tahoe TMDL Technical Report describes the relative loading from the major pollutant sources. The analysis indicates the vast majority of the fine sediment particle load (more than 70%) reaching Lake Tahoe comes from the developed urban landscape.

The Pollutant Reduction Opportunity Report and the Integrated Water Quality Management Strategy Report describe the development of the proposed implementation plan. Actions to reduce loads from the undeveloped uplands, stream channel erosion, and atmospheric deposition are consistent with existing programs and policies. Agencies responsible for forest management, stream channel restoration, and air quality have established programs that are consistent with needed implementation actions.

The Integrated Water Quality Management Strategy Report describes the analysis of whether it is possible to achieve needed load reductions through aggressive implementation of "current practices". Please refer to the report for details.

**PC-17:** See response to PC-16, with this addition: Urban stormwater dischargers in the Lake Tahoe basin are all expected to meet needed load reduction requirements. All dischargers will be held accountable for load reductions through enforceable permits, waste discharge requirements, or other regulatory tools (see PC-19).

**PC-18:** The load reduction burden and associated accounting and tracking needs are proportionate to the relative magnitude of the pollutant source. However, the Water Board will require the larger forested land owners to annual report on load reduction efforts. See response to PC-17 and PC-19 regarding enforceable load reduction requirements.

Page 10. Implementation Plan, Forest Uplands, last section paragraph, states: "The Regional Board <u>may require</u> forest management agencies to track and report load reduction activities to assess whether expected activities are occurring." (emphasis added). Why would the Regional Board <u>not</u> require this tracking and reporting? It is intended that tracking and reporting be required of the NPDES permittees, based on the need to insure progress toward meeting TMDL goals; why would this be optional for forest management agencies (and others)? If it is not required, how will progress be measured? How will this tracking occur, in what form, and will it be made available for public review/access?

Atmospheric Deposition, first sentence, second section paragraph, states: "The majority of fine sediment particle load from the atmospheric source is generated by the urban roadways." Do the TMDL studies support this conclusion? When compared to other possible sources, such as construction related activities and land (private property) management activities, the use of traction abrasives and unpaved roads in urban landscapes seem to be minor contributors. Will municipalities be required to evaluate and report load reductions associated with atmospheric deposition?

**Atmospheric Deposition**, last sentence, second section paragraph, states: "Similarly, actions taken to control runoff from unpaved roadways within the forested uplands will also reduce dust from these areas." What "actions" does this refer to? Are these <u>required</u> actions, or voluntary? What portion of the atmospheric deposition of sediment (the 15 or 16%) is attributable to the forested uplands? How does that compare to the portion generated in the urban uplands?

**Atmospheric Deposition**, last sentence, third section paragraph, indicates that TRPA's implementation of transportation and air quality plans is expected to meet the required TMDL nitrogen reduction within 65 years. Does this mean that the five-year interim TMDL targets will not have to be met? Will there be any tracking and reporting to demonstrate progress?

Pages 10-11, Future Needs. Placer County applauds this effort and recommends a coordinated effort for the information to be developed and reported out, such as through the Regional Stormwater Monitoring Program (RSWMP). In addition, it is recommended that more effort be placed on assessing the benefits and TMDL reductions attained from stream environment zone (SEZ) restoration. Current scientific understanding is lacking with respect to quantifying load reductions associated with SEZs. Placer County has two major SEZ restoration projects underway, Lake Forest and Snow Creek, and current modeling techniques do not specifically account for SEZ load reduction.

An additional future need is quantifying TMDL load reduction credits for traction material type and operations associated with application and removal. The scientific and regulatory communities generally agree that traction sand is likely one of the more significant sources of fine sediment and phosphorous in the Urban Upland component, but incentives for attaining TMDL load reduction credits is non-existent. There should be a greater incentive for utilizing alternative traction materials, minimizing its use and maximizing recovery of applied materials.

Proposed Tahoe TMDL and Basin Plan Amendment Page 4

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## **Response**

**PC-19:** Proposed language has changed "may" to "will". Since most Water Board files and reports are public documents, interested members of the public or other agencies will have the opportunity to review load reduction activity reports from various implementation agencies. Also, the Water Board plans to post annual load reduction reports on its TMDL implementation web page.

**PC-20:** This sentence has been removed from the proposed Basin Plan amendment. Page 36 of the Pollutant Reduction Opportunity Report describes paved and unpaved roadways, as well as other disturbed surfaces as the primary source of dust in the atmosphere. Municipalities will not be required to evaluate and report atmospheric load reduction measures as part of its municipal NPDES stormwater permit requirements.

**PC-21:** The Lake Tahoe TMDL Report fully describes the implementation plan to address atmospheric deposition of fine sediment particles. Measures taken to control pollutants in upland runoff are expected to have the ancillary benefit of reducing sources of dust. These actions may be either required or voluntary, depending on whether a regulatory action has occurred. See PC-45 for additional information regarding the relative magnitude of differing atmospheric dust sources.

**PC-22:** The tools to estimate the benefit of the Regional Transportation Plan and other atmospheric pollutant control measures have not been developed. If available research and monitoring information becomes available to support detailed atmospheric pollutant load reductions, the Water Board will include that information in the Lake Tahoe TMDL Accounting and Tracking database.

Page 10. Implementation Plan, Forest Uplands, last section paragraph, states: "The Regional Board <u>may require</u> forest management agencies to track and report load reduction activities to assess whether expected activities are occurring." (emphasis added). Why would the Regional Board <u>not</u> require this tracking and reporting? It is intended that tracking and reporting be required of the NPDES permittees, based on the need to insure progress toward meeting TMDL goals; why would this be optional for forest management agencies (and others)? If it is not required, how will progress be measured? How will this tracking occur, in what form, and will it be made available for public review/access?

Atmospheric Deposition, first sentence, second section paragraph, states: "The majority of fine sediment particle load from the atmospheric source is generated by the urban roadways." Do the TMDL studies support this conclusion? When compared to other possible sources, such as construction related activities and land (private property) management activities, the use of traction abrasives and unpaved roads in urban landscapes seem to be minor contributors. Will municipalities be required to evaluate and report load reductions associated with atmospheric deposition?

**Atmospheric Deposition**, last sentence, second section paragraph, states: "Similarly, actions taken to control runoff from unpaved roadways within the forested uplands will also reduce dust from these areas." What "actions" does this refer to? Are these <u>required</u> actions, or voluntary? What portion of the atmospheric deposition of sediment (the 15 or 16%) is attributable to the forested uplands? How does that compare to the portion generated in the urban uplands?

**Atmospheric Deposition**, last sentence, third section paragraph, indicates that TRPA's implementation of transportation and air quality plans is expected to meet the required TMDL nitrogen reduction within 65 years. Does this mean that the five-year interim TMDL targets will not have to be met? Will there be any tracking and reporting to demonstrate progress?

Pages 10-11, Future Needs. Placer County applauds this effort and recommends a coordinated effort for the information to be developed and reported out, such as through the Regional Stormwater Monitoring Program (RSWMP). In addition, it is recommended that more effort be placed on assessing the benefits and TMDL reductions attained from stream environment zone (SEZ) restoration. Current scientific understanding is lacking with respect to quantifying load reductions associated with SEZs. Placer County has two major SEZ restoration projects underway, Lake Forest and Snow Creek, and current modeling techniques do not specifically account for SEZ load reduction.

An additional future need is quantifying TMDL load reduction credits for traction material type and operations associated with application and removal. The scientific and regulatory communities generally agree that traction sand is likely one of the more significant sources of fine sediment and phosphorous in the Urban Upland component, but incentives for attaining TMDL load reduction credits is non-existent. There should be a greater incentive for utilizing alternative traction materials, minimizing its use and maximizing recovery of applied materials.

Proposed Tahoe TMDL and Basin Plan Amendment Page 4

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## **Response**

**PC-23:** The Regional Storm Water Monitoring Program is the appropriate framework for monitoring urban stormwater.

**PC-24:** As with Atmospheric Deposition, the available research and monitoring information does not currently support a robust assessment of the water quality benefits associated with stream restoration efforts. When the science advances to a point where such benefits can be effectively estimated, the Water Board will consider measures to track and credit these load reductions. If it can be shown that stream restoration efforts are effectively reducing average annual loads from the urban upland source, than such projects will be eligible for Lake Clarity Credits.

**PC-25:** The Lake Clarity Crediting Program protocols offer "credit" for any action that can reduce fine sediment particle loading from urban stormwater discharges. Changes in traction abrasive application and recovery practices are explicitly addressed through the draft Road Rapid Assessment Methodology.

Page 11. Schedule of TMDL Attainment, Data Review, and Revision, Table 5.18-5. The first action listed requires NPDES permittees to submit to the Regional Board a Storm Water Management Plan (SWMP) "describing how 5-year load reduction requirements will be met" (emphasis added). While the SWMP describes actions to be implemented by the permittee, the plan cannot insure compliance with the TMDL. If the SWMP must include such assurances in order to be acceptable to the Regional Board; would that not be considered an unfunded mandate?

The schedule requires that "future plans (SWMPs) must be submitted no less than six months <u>prior</u> to expiration of the applicable municipal NPDES stormwater permit." (emphasis added). Shouldn't the permit precede the SWMP? Don't the permit requirements have to be known in order to prepare a SWMP? There are other elements of the SWMP besides the TMDL activities that need to be considered.

Pages 11-12. Schedule of TMDL Attainment, Data Review, and Revision. This section discusses calculation of baseline load estimate using a continuous hydrologic simulation process. Some jurisdictions have already invested in and developed assessment programs that should be recognized for use in tracking load estimates. Placer County recognizes the desire for consistency in monitoring and reporting Basin-wide, but as long as jurisdictions can scientifically prove their method is reliable, accurate and comparable to the one stated model, PLRM, then it should be accepted.

Pages 12. Schedule of TMDL Attainment, Data Review, and Revision, last section paragraph, states: "The Regional Board will annually track actions taken...". Tracking and reporting will be required of the NPDES permittees; how will actions by others be reported and tracked?

**Adaptive Management, first section paragraph**, begins with: "With appropriate funding...". What are the plans for securing this funding? Where is it expected to originate? How will adaptive management be applied to the TMDL implementation if this funding is not available?

Adaptive Management, second section paragraph, first sentence states"...the Regional Board will <u>annually assess</u> relevant research and monitoring findings and <u>may adjust</u> annual load reduction targets and/or the TMDL implementation approach as needed." (emphasis added). If adjustments are made more frequently than the 5-year NPDES permit renewal cycle, how will that impact these permits and associated SWMPs? Interim adjustments would be very difficult to implement, as these could have substantial programmatic, fiscal, and practical implications to the permittees' water quality program efforts.

Monitoring Plan, first sentence, indicates that the "monitoring plan components" will be fully developed and implemented within three years of USEPA approval of the TMDL. As this is yet to be defined, the impact to the NPDES permittees is unknown. Does the Regional Board anticipate including a monitoring requirement in the renewal of the NPDES permits next year? Will permittee monitoring requirements include more than the TMDL tracking and reporting that are part of the Lake Clarity Crediting Program? If monitoring requirements are currently undefined, then the full impact of the TMDL implementation is unknown. Should this not be considered in adopting and implementing a TMDL program?

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#### **Response**

**PC-26:** This text has been edited to replace "Storm Water Management Plan" with "Pollutant Load Reduction Plan." The intent is for municipal jurisdictions and state highway departments to conduct a planning-scale analysis to describe, in general, how required load reduction targets will be met. The Water Board's requirement to submit such a plan is consistent with the intent of the California Water Code and the Clean Water Act.

**PC-27:** See Response PC-26, with this addition: The intent is to begin the planning process to evaluate options for meeting the TMDL load reduction requirements. Also, the submittal of a revised Storm Water Management Plan is a common part of a municipal NPDES permit renewal application.

**PC-28:** The Lake Tahoe TMDL established annual average load reduction targets. Project and jurisdiction scale baseline and load reduction estimates, consequently, need to provide consistent annual average load results to allow the Water Board to assess compliance with load reduction requirements.

Continuous simulation tools provide the ability to address the variability in runoff patterns with season, wet and dry years, differences in storm patterns, and other hydrologic variables. The Pollutant Load Reduction Model was developed with the input of stormwater managers to provide a continuous simulation tool to evaluate pollutant load and load reduction opportunities in the Lake Tahoe basin. Placer County has already used this tool to conduct jurisdiction-scale baseline load analysis, and we anticipate others will similarly use this tool or an equivalent method. The proposed Basin Plan amendment has been changed to state that the Water Board may accept alternative load estimation tools provided such tools "demonstrably produce similar results" to the Pollutant Load Reduction Model or other continuous hydraulic simulation methods.

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#### <u>Response</u>

**PC-29:** Because of the relative magnitude of the urban pollutant source and the relative size of the load reduction opportunity, the Water Board has focused on load and load reduction accounting and tracking tools for the urban pollutant source category. If/when similar tools are developed to better track other pollutant sources, the Lake Tahoe TMDL Accounting and Tracking Tool can accommodate the relevant data. Text has been added to the proposed BPA in the TMDL Monitoring Plan section describing the specific requirements in each of the four source categories.

**PC-30:** Future funding will likely be awarded based on demonstrated need. The Lake Tahoe TMDL will help establish and define the need for ongoing federal and state funding assistance. Local government and private funding will also be needed. The Water Board may consider amending the Lake Tahoe TMDL implementation schedule if financial constraint or other factors affect a jurisdiction's ability to meet the proposed load reduction requirements.

**PC-31:** The Basin Plan amendment highlights a commitment to adaptive management through the implementation of the TMDL. The process for making adjustments based on science or research findings will be done collaboratively, and will not impact municipal NPDES stormwater permits or associated SWMPs. Basin Plan amendments are typically implemented by the adoption or renewal of permits and/or waste discharge requirements.

PC-32: The updated Municipal NPDES permit is expected to include two different types of monitoring. The first type of required monitoring will be condition assessment monitoring to confirm the condition of treatment BMPs and roadways is consistent with stated load reduction estimation assumptions. The second monitoring requirement will likely require each jurisdiction support the Regional Storm Water Monitoring Program either with in-kind monitoring or with financial support or a combination of both. The permit may also include a requirement for separate, equivalent monitoring. The level of specificity in this comment is not relevant to the Basin Plan amendment. This issue will be addressed during the coming year as part of the municipal NPDES permit update process.

Adaptive Management and Monitoring Plan. These elements should be coordinated and performed through the Regional Stormwater Monitoring Program (RSWMP) by which all regulated jurisdictions will, hopefully, be participants in order for RSWMP to be fully functional (current annual estimate for RSWMP effort at \$1.2M). As stated in the above comments, ongoing funding of RSWMP activities will be a challenge and Placer County proposes that all sources of funding be considered even if they are short-term sources, including but not limited to, violation fines/penalties. The potential for a stormwater assessment in the Basin has been evaluated and may, at some point, be proposed. But it will not cover all the stormwater implementation and management needs of the Basin. Placer County encourages Lahontan to improve coordination with TRPA and NDEP to develop stricter regulations on private properties that will result in greater enforcement efforts and incentives for BMP implementation such as point of sale BMP retrofit requirements.

#### **Proposed Changes to Existing Basin Plan Language**

Page 15. Reference to BP page 4.8-4, column 2, paragraph 3. The proposed revision reads: "Existing facilities must be retrofitted to treat stormwater runoff and to re-stabilize all eroding slopes in a manner consistent with the guidelines for pollutant load reduction requirements described in the Lake Tahoe TMDL." In our understanding of the TMDL implementation, there will be local discretion regarding the exact method of TMDL compliance. As such, retrofit of existing roads may be partially implemented as a component of an overall pollutant load reduction strategy. The proposed language appears to require a 100% retrofit of roads and complete slope re-stabilization. Additionally, the embedded phrase "consistent with the guidelines" is very subjective, and open to interpretation.

Page 18. Reference to BP page 5-2, column 2, paragraph 3. Based on a USACOE-funded effort for Placer County, a three-tiered program is the likely solution to reducing fine sediment and nutrients from Urban Upland including: 1) the indicated bullet (large-scale capital projects), 2) private property BMPs, and 3) road sweeping with high technology equipment. It should be recognized that there are a combination of actions to reduce the primary pollutants; the BPA language should reflect that and allow flexibility in meeting TMDL allocations.

Page 18. Reference to BP page 5-4, column 1, paragraph 1. It's not enough to just indicate here that "All landowners are expected to implement BMPs." This issue has lacked the attention it deserves and is protected by too much politicking in the Basin. A fully coordinated approach is needed to institute real incentives and stricter enforcement authority to increase the level of compliance. All agencies and interested stakeholders need to be a part of the solution, including Lahontan, NDEP, TRPA, local jurisdictions and grant funding organizations.

Page 23. Reference to BP page 5.6-1, Stormwater Management and the Lake Tahoe TMDL. The proposed language for this section discusses the "enforceable" TMDL implementation requirements to be placed into the four California NPDES permittees in the Tahoe Basin. This section does not include any reference to other agencies/entities/individuals with obligations to meet TMDL objectives. It's understood that this is a California jurisdictional document, however, the problem (reduce fine sediment load by 72%) is discussed as a basin-wide issue. Within that context, it appears that these four NPDES permittees will bear sole responsibility for resolving the transparency problem.

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Adaptive Management and Monitoring Plan. These elements should be coordinated and performed through the Regional Stormwater Monitoring Program (RSWMP) by which all regulated jurisdictions will, hopefully, be participants in order for RSWMP to be fully functional (current annual estimate for RSWMP effort at \$1.2M). As stated in the above comments, ongoing funding of RSWMP activities will be a challenge and Placer County proposes that all sources of funding be considered even if they are short-term sources, including but not limited to, violation fines/penalties. The potential for a stormwater assessment in the Basin has been evaluated and may, at some point, be proposed. But it will not cover all the stormwater implementation and management needs of the Basin. Placer County encourages Lahontan to improve coordination with TRPA and NDEP to develop stricter regulations on private properties that will result in greater enforcement efforts and incentives for BMP implementation such as point of sale BMP retrofit requirements.

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#### Response

**PC-33:** The administrative and funding structure to support the Regional Storm Water Monitoring Program is currently in development. The Water Board supports all funding ideas that are consistent with statewide policy.

**PC-34:** Municipalities on the California side of the Lake Tahoe basin are responsible for runoff from all private property within their jurisdiction. While TRPA's private property BMP retrofit program may assist municipalities in addressing private property runoff issues, ultimately the onus is on the municipal permittees to address stormwater discharges within jurisdictional boundaries regardless of property ownership to meet its load reduction requirements. Local municipalities may consider establishing penalties for failure to implement and/or maintain BMPs on private properties to help meet load reduction requirements.

**PC-35:** Municipal jurisdictions will have flexibility to target actions to achieve needed load reductions. The referenced language is not intended to specify any particular implementation approach, but rather to acknowledge roadways and associated slopes as a potential source and load reduction opportunity. The word "must" has been replaced with "should" to clarify this intent.

**PC-36:** Existing Basin Plan language includes a list of pollutant control measures, including controlling runoff from development and addressing other non-point source pollution sources. The amendment was included to remove the outdated "Capital Improvement Program" reference.

**PC-37:** See Response PC-34, with this addition: The Water Board supports a coordinated approach to implementing private property BMPs. Regardless of other programmatic efforts, however, runoff from private properties is the primary responsibility of Municipal NPDES stormwater permittees.

PC-38: As a California agency, the Water Board does not have the authority to regulate stormwater discharges on the Nevada side of the Lake Tahoe Basin. The proposed section 5.18 describes the Lake Tahoe TMDL implementation approach and acknowledges the contributions and needed implementation actions from pollutant sources other than urban stormwater. The "burden" of TMDL implementation is not born by California Municipal NPDES permittees alone.

It is not reasonable to place the entire burden upon the four California permittees; it is reasonable to apportion the obligations equitably to all who contribute to the transparency problem.

Page 24. Reference to BP page 5.6-1, Stormwater Treatment Requirements, first section paragraph. The proposed language indicates that all new, retrofit, and roadway runoff treatment projects must consider infiltration to the "maximum extent practicable" (MEP). Who (which agency) makes the final determination as to whether that subjective standard has been achieved? What does this really mean? Will infiltration be required beyond the 20 year, 1-hour volume, if the site has additional infiltration capacity? Will that requirement be imposed through permit approvals?

Stormwater Treatment Requirements, second section paragraph, last sentence, reads: "Private property owners share the responsibility for private property runoff with the local municipalities." What does this mean? While all owners, public and private, are required to comply with anti-pollution laws, why are these owners singled out, and how do they "share" in the TMDL solution? The three municipal NPDES permittees and Caltrans are the only entities currently facing enforceable permit requirements to meet the TMDL. Other than through regulatory means established within each permittee's jurisdiction, how will these other land owners participate?

Stormwater Treatment Requirements, third section paragraph. This section discusses the NPDES permittees' pending legal obligation to meet the TMDL load reductions, and further states that "these agencies must ...maximize average annual load reductions...". Once again, this raises the question of equity; are these permittees being held responsible for solving the entire load problem, or just the portion attributable to each jurisdictional area? What about the others, i.e., private property owners, forest management agencies, etc.? What is intended with the use of the subjective word "maximize"? Who will make that determination, and how will it be enforced?

Stormwater Treatment Requirements, fifth section paragraph. There is some text missing between pages 24 and 25. This section discusses treatment requirements for new and re-development projects. Though some text is missing, it seems to say that infiltration of the 20 year, 1-hour storm volume is required. However, the last sentence states: "Where conditions permit, project proponents should consider designing infiltration facilities to accommodate runoff volumes in excess...".(emphasis added). Why would a project proponent consider doing anything more than meeting the minimum requirements? What incentive/disincentive exists, or is proposed, to encourage additional treatment, at a likely higher expense? How does this relate to the MEP standard discussed in the first paragraph of this section (see comments above)?

Page 25. Stormwater Treatment Requirements, last section paragraph. This proposed language discusses application of numeric discharge limits where the minimum infiltration requirements cannot be met. The last sentence in the paragraph reads: "These limits only apply to stormwater discharges that cannot be infiltrated and are not tributary to stormwater management facilities that are part of a municipality's plan to meet average annual fine sediment and nutrient load reduction requirements." (emphasis added). Does this mean if it is tributary to such stormwater management facilities, that no additional on-site treatment is required? This could be interpreted another way, as well: that there is yet another, undefined, treatment solution that must be considered.

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Page 24. Reference to BP page 5.6-1, Stormwater Treatment Requirements, first section paragraph. The proposed language indicates that all new, retrofit, and roadway runoff treatment projects must consider infiltration to the "maximum extent practicable" (MEP). Who (which agency) makes the final determination as to whether that subjective standard has been achieved? What does this really mean? Will infiltration be required beyond the 20 year, 1-hour volume, if the site has additional infiltration capacity? Will that requirement be imposed through permit approvals?

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Stormwater Treatment Requirements, third section paragraph. This section discusses the NPDES permittees' pending legal obligation to meet the TMDL load reductions, and further states that "these agencies must ...maximize average annual load reductions...". Once again, this raises the question of equity; are these permittees being held responsible for solving the entire load problem, or just the portion attributable to each jurisdictional area? What about the others, i.e., private property owners, forest management agencies, etc.? What is intended with the use of the subjective word "maximize"? Who will make that determination, and how will it be enforced?

Stormwater Treatment Requirements, fifth section paragraph. There is some text missing between pages 24 and 25. This section discusses treatment requirements for new and re-development projects. Though some text is missing, it seems to say that infiltration of the 20 year, 1-hour storm volume is required. However, the last sentence states: "Where conditions permit, project proponents should consider designing infiltration facilities to accommodate runoff volumes in excess...".(emphasis added). Why would a project proponent consider doing anything more than meeting the minimum requirements? What incentive/disincentive exists, or is proposed, to encourage additional treatment, at a likely higher expense? How does this relate to the MEP standard discussed in the first paragraph of this section (see comments above)?

Page 25. Stormwater Treatment Requirements, last section paragraph. This proposed language discusses application of numeric discharge limits where the minimum infiltration requirements cannot be met. The last sentence in the paragraph reads: "These limits only apply to stormwater discharges that cannot be infiltrated and are not tributary to stormwater management facilities that are part of a municipality's plan to meet average annual fine sediment and nutrient load reduction requirements." (emphasis added). Does this mean if it is tributary to such stormwater management facilities, that no additional on-site treatment is required? This could be interpreted another way, as well: that there is yet another, undefined, treatment solution that must be considered.

## Response

**PC-39:** The referenced language has been removed from the proposed amendment. At a minimum, new development and redevelopment projects will be required to infiltrate runoff generated by the 20 year, 1-hour design storm. Placer County and other municipalities may chose to impose more stringent requirements as a means to meet load reduction requirements.

**PC-40:** The referenced language has been changed in the updated proposed amendment. As mentioned in other responses, regardless of other agency requirements or programs, the Municipal NPDES program holds municipalities responsible for all runoff within jurisdictional boundaries, regardless of property ownership.

**PC-41:** The referenced language has been changed in the proposed BPA. As described in the Lake Tahoe TMDL Report and the proposed BPA, municipalities will be responsible for reducing pollutant loads from urban stormwater runoff discharges within their jurisdictional boundaries in a manner consistent with the TMDL implementation plan and the load allocation schedule.

**PC-42:** The referenced language is intended to encourage project proponents to take advantage of additional treatment opportunities when possible. It is not a requirement or a standard that must be met, but a reference to a desired action. Also, see Responses PC-34 through PC 41 above.

**PC-43:** The referenced language has been edited to clarify the intent. Should a private property owner choose to pursue a shared stormwater runoff solution, municipal jurisdictions will have the ability to impose a range of pre-treatment requirements or other measures.

**Page 28.** *Reference to page 5.16-3, column 1, paragraph 1.* The proposed text includes references to percentages that differ from those shown on Tables 5.18-2,-3, and -4 (page 7).

Page 29. Reference to page 5.16-3, column 1, paragraph 1. The last sentence in this section reads: "The primary in-basin sources of fine sediment particles are road dust and wood smoke." Does this refer to all sources within the basin, or just urban landscape? What about construction activities and other exposed ground surfaces? These are mentioned as significant sources on page 16, in reference to proposed language on page 4.9-32 of the Basin Plan. There is definitely inconsistency between these two sections of the BPA which should be reconciled.

#### **General Comments**

- 1. The TMDL Final Report, page 11-2, states that "TRPA will play a crucial role in TMDL implementation because the TRPA has the ability to incentivize TMDL implementation." Such external influences to the TMDL implementation are not fully described in the implementation plan but, clearly, will influence required actions by the implementing agencies. These "incentives" should be included in the implementation plan, and their economic impact considered as part of the TMDL adoption process.
- 2. Has an economic analysis been prepared for the TMDL implementation that demonstrates the reasonableness of the implementation plan and feasibility of accomplishing the objectives? What level of capital funding support through State and Federal grant programs is reasonable to consider? What if those sources cannot sustain the funding demand and local governments are unable to replace those funds with local sources? Is the implementation timeframe reasonable and achievable? What evidence is available to support those conclusions?
- 3. Are the TMDL targets reasonable and achievable? What are the penalties and implications for failing to achieve the designated target load reductions? Shouldn't the TMDL implementation plan be more specific with regard to these implications and penalties? Also, the TMDL final report indicates that the Water Board and NDEP will work within the adaptive management framework to evaluate the appropriateness of the milestones. However, the Basin Plan Amendment suggests that the adaptive management system is dependent on funding availability. If that funding is not available, how will adaptive management be part of the TMDL implementation? Currently, Placer County, and other local jurisdictions, struggle to maintain adequate budgets and resources to meet requirements of the current Tahoe NPDES permits. The proposed BPA and future permits will further stress the jurisdictions with additional activities to maintain stormwater quality compliance. The adaptive management system should take current and future economic conditions into account and emphasize a jurisdiction's progress towards improving clarity as opposed to disciplining it when a projected goal is not fully achieved under a regulated timeframe.

Proposed Tahoe TMDL and Basin Plan Amendment Page 8

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## Response

**PC-44:** The referenced percentages have been corrected for consistency with the Lake Tahoe TMDL allocation tables.

**PC-45:** According to the *SCIC Draft Load Reduction Matrix Analysis Report for Atmospheric Deposition of Pollutants into Lake Tahoe* (produced for the TMDL program and dated May 2, 2007), the major sources of fugitive dust are resuspended road dust from vehicles traveling on paved and unpaved roads and dust generated by construction and demolition activities.

The estimates contained in that report for the annual fugitive dust emission inventory for the Basin are as follows: unpaved roads 47.6 percent, paved roads 44.1 percent, building construction 5.3 percent, paved road construction 2.5 percent and other 0.5 percent. There was insufficient data to estimate background dust generation from forested land not associated with unpaved roads.

As part of the emission inventory, the values above reflect what is entrained into the air, but does not account for transported load which is affected by location of the source and material lost through settling and/or capture. This was considered in the SCIC report. For example approximately 70 percent of the highway surface is located within a distance of 2 km from the lake. 60 percent of the local paved roads, 45 percent of the secondary paved roads, 20 percent of the unpaved roads and 70 percent of the new building construction is located within 2 km of the lake. Given that the SCIC report calculates that the transportable fraction of fugitive dust decline by nearly 50 percent at a distance of 2 km from the lake, the actual contribution from paved roads is likely to be greater than from unpaved roads.

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## **Response**

**PC-46:** The Tahoe Regional Planning Agency is currently working to update its Regional Plan. Because the specific details of the updated Regional Plan have not yet been developed, the Water Board is unable to reference them in the Basin Plan at this time. Furthermore, it is not within the Water Board's authority to dictate or establish such incentives.

**PC-47:** The implementation cost analysis is described in the Pollutant Reduction Opportunity Analysis Report and the Integrated Water Quality Management Strategy Report. The analyses contained in these two reports indicate the implementation timeframe is achievable. If pollutant load reductions are not achieved due to lack of funding, the Water Board has the discretion to amend the implementation schedule.

**PC-48:** The TMDL implementation approach and the updated Municipal NPDES permits are intended to provide opportunities for efficient, effective stormwater management efforts. As referenced, the targets are achievable, but if required load reductions are not met Water Board has discretion to consider a variety of enforcement options in accordance with the California Water Code. It would be too speculative to address all the various factors and situations at this time.

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4. Existing TRPA requirements do not fully align with the proposed revisions to the BPA and the TMDL program, though it has been stated that it is that agency's intent to fully embrace this program and its implementation. Unless, and until, TRPA modifies its requirements, conflicts will exist that will make

the TMDL implementation difficult.

5. Examples include BMP retrofit requirements, BMP sizing, SEZ treatment, and infiltration separation to

groundwater. The Regional Board should include in the BPA strong supporting language for needed

consistency, or even delay TMDL adoption until TRPA has completed revisions to their requirements.

6. To what extent will RSWMP be included or required in the future Tahoe Municipal permit?

7. New and re-development private property BMP work will help reduce TMDL pollutant loads. Will the

municipalities (NPDES permittees) be able to take credit for these activities in meeting TMDL

milestones? How will such activities be tracked and reported? Will municipalities be able to get credit

for activities outside of the Urban Uplands category, i.e., for stream channel stabilization/restoration,

or air quality improvement projects? How will that be accounted for, if the LCCP is set up for urban

uplands activities?

8. Tables 5.18-2, -3, and -4 on Page 7 of the proposed Basin Plan Amendment summarize the various

source categories for fine sediment, nitrogen, and phosphorus and show the targeted reductions for

each. Generally, the proposed target reductions are not proportionate to the relative contributions

from each source. While we understand the concept of urban source reduction "opportunities", the proposed TMDL implementation approach forces a hugely disproportionate burden for compliance on

the NPDES permittees, leaving other entities with minimal, non-regulated, pollutant reduction

objectives.

Once again, thank you for considering these comments and questions; we look forward to your response.

Should you have any questions of us, please call me at (530) 745-7524.

Sincerely,

Robert Costa

**Public Works Manager** 

Proposed Tahoe TMDL and Basin Plan Amendment Page 9

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Once again, thank you for considering these comments and questions; we look forward to your response. Should you have any questions of us, please call me at (530) 745-7524.

Sincerely,

Robert Costa Public Works Manager

#### **Response**

**PC-49:** Please see Response PC-46, with the following addition: It is expected that TRPA will modify its requirements to support the TMDL implementation program. Water Board staff are working with TRPA staff to ensure regulatory and reporting consistency. For example, TRPA may be able to modify its reporting requirements to be consistent with anticipated municipal NPDES stormwater permit reporting requirements.

Delaying TMDL adoption until the TRPA acts would only reverse the concern expressed in the comment. Furthermore, the TRPA is required to adopt standards that are at least as stringent as state requirements which can only be established through this *adopted* (emphasis added) Basin Plan amendment.

PC-50: Please see Response PC-32.

**PC-51:** The Lake Clarity Crediting Program and the Pollutant Load Reduction Model both explicitly include private property BMP efforts as a load reduction opportunity. As long as the benefit can be tracked as a pollutant load reduction from the baseline condition, these actions are eligible for Lake Clarity Credits.

**PC-52:** Because of the magnitude of the urban pollutant load source and the need to reduce urban stormwater loads to meet TMDL targets, the Lake Clarity Crediting Program only awards Credit to actions taken to reduce fine sediment particle loading from urban stormwater discharges. Other actions, while important for reducing loading from other sources, are not eligible for Lake Clarity Credits at this time.

The Water Board is committed to assisting in developing methodologies to quantify pollutant load reductions from the actions listed. If it can be demonstrated that these actions reduce loading from the *urban upland source* (emphasis added), than these actions will be eligible for Lake Clarity Credits.

**PC-53:** See Response PC-14, with this addition: Text has been added to the proposed BPA to reflect specific requirements for non-urban jurisdiction entities in the Implementation Plan section and in the Monitoring section.