SAN BERNARDINO COUNTY STORMWATER PROGRAM
A CONSORTIUM OF LOCAL AGENCIES

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SAN BERNARDINO COUNTY STORMWATER PROGRAM
WHERE WATER MEETS COMMUNITY

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CRWQCB
Santa Ana Region

David Woelfel
Santa Ana Regional Water Quality Control Board
3737 Market St., Ste. 500
Riverside, CA 92501

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RE: COMMENTS ON THE 2019 TRIENNIAL REVIEW - BIG BEAR LAKE

Dear Mr. Woelfel:

Thank you for the opportunity to provide comments regarding the 2019 Triennial Review. The following comments are submitted on behalf of the County of San Bernardino, San Bernardino County Flood Control District (District), and the sixteen (16) city-permittees represented by the San Bernardino Stormwater Program (Program). The Program funds the TMDL activities carried out by the County, District, City of Big Bear Lake, Big Bear Mountain Resorts, and Big Bear Municipal Water District (collectively referred to as TMDL Stakeholders in this letter).

The protection of water contact recreational uses has always been among the Regional Water Quality Control Board's (RWQCB) highest priorities. In 1998, the State Water Resources Control Board (SWRCB) added Big Bear Lake to the Clean Water Act Section 303(d) list of impaired water bodies due to excessive algae, invasive aquatic weeds, and low Dissolved Oxygen – conditions caused by elevated nutrient concentrations in the lake. Subsequently, the Santa Ana Regional Water Quality Control Board (SARWQCB) adopted the Big Bear Lake Nutrient TMDL for Dry Hydrologic Conditions on April 21, 2006. The USEPA finalized the TMDL, becoming effective on September 25, 2007.

Currently, the numeric targets are:

Table 1-1. Big Bear Lake Nutrient TMDL Numeric Targets

Indicator	Target Value
Total Phosphorus (P) Concentration	Annual average no greater than 35 µg/L; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other conditions)
Macrophyte Coverage	30-40% on a total lake area basis; to be attained by 2015 (dry hydrological conditions), 2020 (all other conditions)
Percentage of Nuisance Aquatic Vascular Plant Species	95% eradication on a total area basis of Eurasian Water milfoil and any other invasive aquatic plant species; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other conditions)
Chlorophyll *a* Concentration	Growing season average no greater than 14 µg/L; to be attained no later than 2015 (dry hydrological conditions), 2020 (all other conditions)

Source: Santa Ana Regional Board Order R8-2006-0023 Table 5-9a-c.

As stated in the Big Bear Lake Nutrient TMDL 2018 Annual Water Quality Monitoring Report, phosphorus is deemed to be the primary limiting nutrient in Big Bear Lake; therefore, the causal target is the concentration of total phosphorus in the Lake. The annual average of the total phosphorous concentration is determined by the following methodology:

- Nutrient data from both the photic composite and discrete bottom samples are averaged by station number and month;
- Calendar year average is obtained for each sampling location by averaging monthly averages; and finally,
- Separate annual averages for each location are averaged to determine the lake-wide average.

The response target is the chlorophyll *a* concentration in the lake. Response targets are more direct indicators of impairment and are specified to assess and track water quality improvements in Big Bear Lake. The growing season average of the total chlorophyll *a* concentration is calculated over the period May 1st through October 31st each year. The chlorophyll annual average is calculated according to the annual average methodology as described in the Annual Report.

As is documented in past several Annual Reports, **Big Bear Lake has met the TMDL requirements through various Best Management Practices.** Big Bear Lake (Lake) is very healthy at this time. In 2019, secchi depths have been recorded to depths not seen in decades. The 2019 winter season precipitation/snow accumulations will increase the lake water volume, enhancing Lake water quality. Based on the known data and on-going Lake water quality analyses, the TMDL Stakeholders were concerned to find the following list in the 2019 Triennial Review:

Item 7: Review and revise the Big Bear Lake water quality standards. May include:
- Revision of the total inorganic nitrogen (TIN) and total phosphorus numeric water quality objectives for Big Bear Lake;
- Development of objectives for other indicators of impairment;
- Development of bio-criteria for Big Bear Lake;
- Investigate Sawmill Creek drainage, and possibly add to the TMDL

The Program is commenting on each of these possible actions as follows:

- TIN/Phosphorus – There is no evidence supporting the need to revise the TIN or phosphorus numeric objectives. As is presented in the TMDL Annual Reports, the Lake is currently meeting thresholds. There is no data known to the TMDL Stakeholders that identify the need to modify the numeric objectives.

- Other Indicators – The TMDL Stakeholders request a discussion outlining why additional objectives would be required. It is our understanding that neither the municipal stakeholders nor the Big Bear Municipal Water District have been contacted concerning other impairments. If the SARWQCB has been contacted concerning additional Big Bear Lake impairments, the TMDL Stakeholders request to be presented this information PRIOR to the approval of the Triennial Review List.

- Bio-criteria – The Program understands that bio-criteria will be mandated throughout California and requests the integral involvement of the Big Bear Lake management team

in future bio-criteria decision making. There are Stakeholder members with strong biological understanding and knowledge of the Lake's processes; their involvement are imperative to the future management of the Lake.

- Sawmill Creek – There is no evidence presented that Sawmill Creek is a source for pollutants into Big Bear Lake. Sawmill Creek does not discharge to the Lake; it terminates at Big Bear Airport. It is highly probable that the terminus of this creek flows toward Baldwin Lake, not Big Bear Lake.

The TMDL Stakeholders request that future focus for Big Bear Lake be determined through collaborative meetings with the SARWQCB and ALL stakeholders, including Caltrans and the U.S. Forest Service. This informed Task Force could then evaluate current conditions, analyze needs, and consider any necessary actions for Big Bear Lake.

The TMDL Stakeholders recognize that amending the Basin Plan will take considerable time and resources. We are committed to work closely with SARWQB staff and provide the technical support needed to complete this effort successfully. In the meantime, and throughout the process, the TMDL Stakeholders will continue to diligently implement the current TMDL efforts and monitoring program. Protecting public health and safety is always our highest priority.

The Program appreciates the opportunity to provide comments on the Triennial Review List regarding Big Bear Lake TMDL. If you have any questions regarding this submittal, please contact Arlene Chun at (909) 387-8109.

Sincerely,

KEVIN BLAKESLEE, P.E.
Chief Flood Control Engineer

ABC:sr

ec: James Bellis, Big Bear Municipal Water District
John Harris, Director - Public Works, City of Big Bear Lake
David R. Doublet, Deputy Director – Flood Control
Darren J. Meeka, DPW – Chief, EMD