

Summary of State Board Staff comments on Regional Board 6 Data Assessment:

1. Inland saline water is not assessed for toxic pollutants: Staff states the data are not applicable objectives. There are water quality criteria, including the CTR that can be used to assess this data.

2. Temperature data not being assessed: Sixty numbers of data or water bodies are not assessed. Regional Board staff indicated that there is no objective. The Basin Plan objective is "The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such an alteration in temperature does not adversely affect the water for beneficial uses," and "For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit above or below the natural temperature. For waters designated COLD, the temperature shall not be altered"

Staff states that there is insufficient data to determine baseline conditions and trend analysis cannot be conducted. However, there are several years of data and should be sufficient to determine temperature trends.

Staff also states there are no applicable evaluation guideline to interpret their Basin Plan's narrative objective. Other regions are using evaluation guidelines that are appropriate to protect the aquatic life beneficial uses.

3. Turbidity and Total Dissolved Solids data are not being assessed: There are the Basin Plan objectives, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent." and site specific objectives and other water quality criteria, including MCL that can be used to assess this data.

Staff states that there is insufficient data to determine baseline conditions and trend analysis cannot be conducted. However, there are several years of data and are sufficient to determine Turbidity and Total Dissolved Solids trends.

4. Pollutants with site-specific objectives expressed as annual means are not being assessed: Staff states that data collected quarterly or less frequently are not sufficient for assessment. However, there are no minimum sampling frequency requirements written as part of the objective.

***Lahontan Water Board staff's responses to each of the following issues are in bold italic font. Also see the responses to State Water Board staff's May 20, 2009 comments on these issues.***

Summary of State Board Staff comments on Regional Board 6 Data Assessment:

**Comment:**

1. Inland saline water is not assessed for toxic pollutants: Staff states the data are no applicable objectives. There are water quality criteria, including the CTR that can be used to assess this data.

**Response:**

***The statements in this and other comments that pollutants were not "assessed" are inaccurate. Lines of Evidence (LOEs) were entered into the CalWQA database for all pollutants in the relevant datasets, including toxic pollutants, and database "Decisions" were created, resulting in water body fact sheets. More than 300 LOEs were created for the Amargosa River. The fact sheets are available online as Appendix I to the Water Board's staff report. See***

***[http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/tmdl/303d305b/index.shtml](http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/303d305b/index.shtml)***

***Lahontan Water Board staff's interpretation of the State Water Board staff comments is that they disagree with the ways in which waters were assessed, rather than contending that assessments were not done.***

***For the Amargosa River, California Toxics Rule (CTR) saltwater aquatic life standards were used to evaluate toxic pollutants that have CTR standards. Some of the Amargosa River samples were for sediment rather than water, and these were evaluated using saltwater sediment criteria if these were available. There are no available CTR standards or state or federal criteria for many of the constituents analyzed in the water and sediment samples from the Amargosa River. Violations of CTR standards in the Amargosa River are recorded in the fact sheets and summarized in Appendix C of the staff report. The inappropriateness of the CTR's marine/estuarine aquatic life standards for inland saline waters is noted in Appendix C and in the fact sheets. However, the primary reason that listing is not recommended for these water body-pollutant combinations is poor temporal representation.***

***Appendix C lists only the water body pollutant combinations that satisfy the Listing Policy binomial model's requirements for minimum sample numbers (2 samples for toxic pollutants and 5 samples for other***

***pollutants). Many of the toxic pollutants measured in the Amargosa River SWAMP study were sampled only once. Fact sheets were prepared for all of these water body-pollutant combinations.***

**Comment:**

2. Temperature data not being assessed: Sixty numbers of data or water bodies are not assessed. Regional Board staff indicated that there is no objective.

***Response: Water Board staff assessed (prepared fact sheets for) all temperature data, and unless there has been a massive failure in the CalWQA database that erased data entries, all temperature fact sheets use the water quality objective quoted below.***

**Comment:**

The Basin Plan objective is "The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such an alteration in temperature does not adversely affect the water for beneficial uses," and "For waters designated WARM, water temperature shall not be altered by more than five degrees Fahrenheit above or below the natural temperature. For waters designated COLD, the temperature shall not be altered"

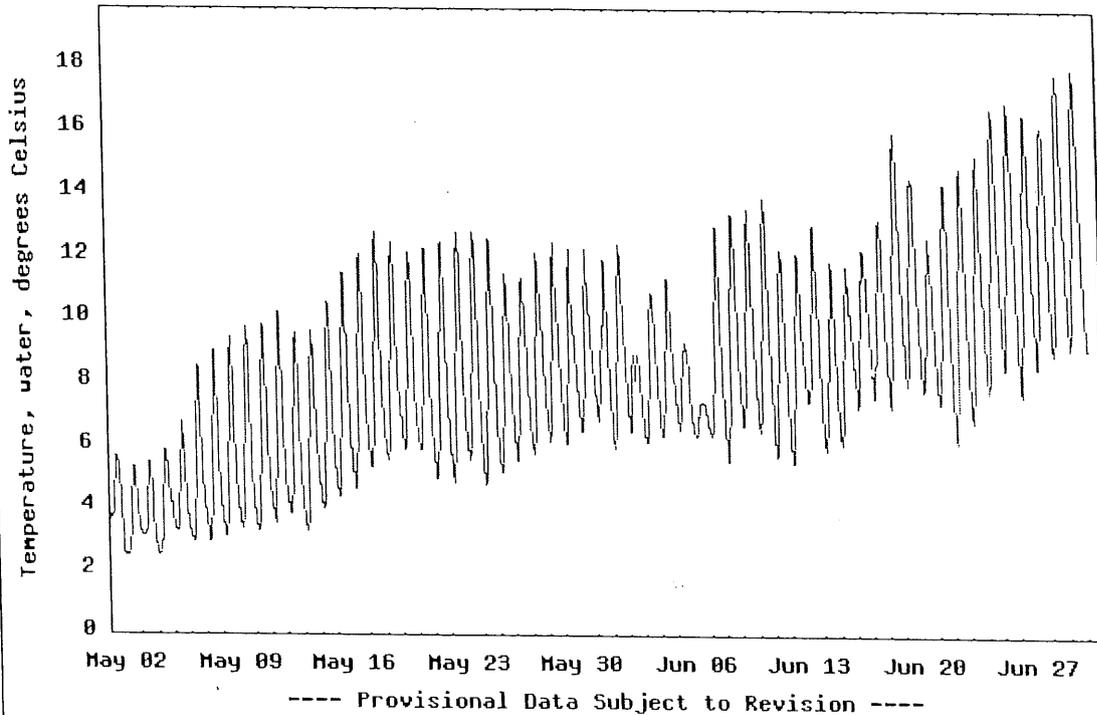
Staff states that there is insufficient data to determine baseline conditions and trend analysis cannot be conducted. However, there are several years of data and should be sufficient to determine temperature trends.

**Response:**

***The "several years of data" consist of four or fewer samples per year, collected with three months or longer intervals between samples. Water temperature changes with time of day, from day to day, and from season to season. This is illustrated in the following graph of water temperatures for a 60- day period in May and June 2009, and in the graphs of mean daily temperature over several years included in the response to State Water Board comments. Under a quarterly sampling program, only one sample would be collected during the 60 day interval in the following graph. It would not adequately characterize the variation in temperature during that period. Four single samples per year are not adequate to document baseline/trend conditions given the hydrologic and climatic variability of the Lahontan Region.***



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**Comment:**

Staff also states there are no applicable evaluation guideline to interpret their Basin Plan's narrative objective. Other regions are using evaluation guidelines that are appropriate to protect the aquatic life beneficial uses.

**Response:**

***See Regional Water Board staff's response to the May 20, 2009 comments. This response noted that guidelines developed for coastal and anadromous fish species are not necessarily appropriate for the Lahontan Region and gave the example of the native Lahontan cutthroat trout which is adapted to temperatures higher than the suggested 21 degrees Centigrade maximum value guideline.***

**Comment:**

3. Turbidity and Total Dissolved Solids data are not being assessed: There are the Basin Plan objectives, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent." and site specific

objectives and other water quality criteria, including MCL that can be used to assess this data.

Staff states that there is insufficient data to determine baseline conditions and trend analysis cannot be conducted. However, there are several years of data and are sufficient to determine Turbidity and Total Dissolved Solids trends.

**Response:**

***Turbidity data were assessed in that fact sheets were prepared for all datasets. The antidegradation-based narrative objective was used to assess aquatic life uses, and MCLs were used to assess the Municipal and Domestic Supply (MUN) use for most waters with a designated MUN use. Due to time constraints, the MUN use may not have been assessed for all waters designated for this use. According to earlier direction from State Water Board staff, only one line of evidence is needed for assessment of each water body-pollutant combination. The MUN use does not apply to the Amargosa River; it was removed through Basin Plan amendments adopted in 2000.***

***There are daily, seasonal and annual variations in turbidity, and we disagree that four or fewer samples per year are adequate to characterize baseline- trend conditions.***

***Fact sheets were prepared for all Total Dissolved Solids (TDS) data. The Listing Policy's provisions regarding baseline-trend conditions were not used to assess TDS. Many Lahontan Region waters have site-specific objectives (SSOs) for TDS and these were used in LOEs for aquatic life uses. Some of the water bodies assessed (particularly the Lassen-Modoc County waters in the U.S. Bureau of Land Management dataset) do not have SSOs, and this was noted in the LOEs for aquatic life uses. We are not aware of any aquatic life criteria for TDS that are more stringent than the drinking water MCL. MCLs were used to assess TDS in relation to the MUN use for these waters.***

***In some cases data for specific conductance, but not for TDS, were available for waters that had SSOs for TDS. Although conversion factors from specific conductance to TDS are available in the literature, State Water Board staff advised against using them because the resultant values would be estimates. For these waters, LOEs were prepared for specific conductance using the MUN use and the 900 microsiemens per centimeter MCL.***

Comment:

4. Pollutants with site-specific objectives expressed as annual means are not being assessed: Staff states that data collected quarterly or less frequently are not sufficient for assessment. However, there are no minimum sampling frequency requirements written as part of the objective.

**Response:**

***Lahontan Water Board staff assessed (prepared fact sheets for) all data for constituents with objectives expressed as annual means, and violations of standards are noted in the fact sheets and summarized in Appendix C to the staff report. Section 6.1.5.3 of the Listing Policy, on temporal representation, does not require sampling intervals to be included in the objectives in order for data to be assessed using this section. The responses to State Board staff's May 20, 2009 comments on temporal representation summarize Lahontan Water Board staff's argument that quarterly samples are not temporally representative under the highly variable environmental conditions characteristic of the Lahontan Region.***