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**APPENDIX D  
NEW MEXICO ENVIRONMENT DEPARTMENT  
WATER QUALITY STANDARDS**

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**NEW MEXICO WATER QUALITY STANDARDS FOR THE ELEPHANT BUTTE TO ALAMEDA BRIDGE REACH (NMAC 20.6.4.105):**

- A. Designated Uses: irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat, and secondary contact.
- B. Criteria:
  - (1) In any single sample: pH within the range of 6.6 to 9.0 and temperature 32.2°C (90°F) or less. The use-specific numeric standards set forth in NMAC 20.6.4.900 are applicable to the designated uses listed above in Subsection A of this section.
  - (2) The monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less; single sample 410 cfu/100mL or less (see Subsection B of 20.6.4.14 NMAC)
  - (3) At mean monthly flows above 100 cfs, the mean monthly average concentration for: TDS 1,500 mg/L or less, sulfate 500 mg/L or less, and chloride 250 mg/L or less.

**NEW MEXICO WATER QUALITY STANDARDS FOR THE ALAMEDA TO ANGOSTURA REACH (NMAC 20.6.4.106):**

- A. Designated Uses: irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat, and secondary contact.
- B. Criteria:
  - (1) In any single sample: dissolved oxygen greater than 5.0 mg/L, pH within the range of 6.6 to 9.0 and temperature less than 32.2°C (90°F). The use-specific numeric standards set forth in 20.6.4.900 NMAC are applicable to the designated uses listed above in Subsection A of this section.
  - (2) The monthly geometric mean of E. coli bacteria 126 cfu/100 mL or less; single sample 410 cfu/100mL or less (see Subsection B of 20.6.4.14 NMAC)
  - (3) At mean monthly flows above 100 cfs, the mean monthly average concentration for: TDS 1,500 mg/L or less, sulfate 500 mg/L or less, and chloride 250 mg/L or less.

**GENERAL CRITERIA FOR WATERS OF THE STATE OF NEW MEXICO (NMAC 20.6.4.13):**

- A. Bottom Deposits and Suspended or Settleable Solids:
  - (1) Surface waters of the state shall be free of water contaminants including fine sediment particles (less than two millimeters in diameter), precipitates or organic or inorganic solids from other than natural causes that have settled to form layers on or fill the interstices of the natural or dominant substrate in quantities that damage or impair the normal growth, function or reproduction of aquatic life or significantly alter the physical or chemical properties of the bottom.
  - (2) Suspended or settleable solids from other than natural causes shall not be present in surface waters of the state in quantities that damage or impair the normal growth, function or reproduction of aquatic life or adversely affect other designated uses.
- B. Floating Solids, Oil and Grease: Surface waters of the state shall be free of oils, scum, grease and other floating materials resulting from other than natural causes that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

- C. Color: Color-producing materials resulting from other than natural causes shall not create an aesthetically undesirable condition nor shall color impair the use of the water by desirable aquatic life presently common in surface waters of the state.
- D. Organoleptic Quality:
  - (1) Flavor of Fish: Water contaminants from other than natural causes shall be limited to concentrations that will not impart unpalatable flavor to fish.
  - (2) Odor and Taste of Water: Water contaminants from other than natural causes shall be limited to concentrations that will not result in offensive odor or taste arising in a surface water of the state or otherwise interfere with the reasonable use of the water.
- E. Plant Nutrients: Plant nutrients from other than natural causes shall not be present in concentrations that will produce undesirable aquatic life or result in a dominance of nuisance species in surface waters of the state.
- F. Toxic Pollutants:
  - (1) Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms.
  - (2) Pursuant to this section, the human health criteria shall be as set out in 20.6.4.900 NMAC. For a toxic pollutant for human health not listed in 20.6.4.900 NMAC, the following provisions shall be applied in accordance with 20.6.4.11, 20.6.4.12 and 20.6.4.14 NMAC.
    - (a) The human health criterion shall be the recommended human health criterion for “consumption of organisms only” published by the U.S. Environmental Protection Agency pursuant to Section 304(a) of the federal Clean Water Act. In determining such criterion for a cancer-causing toxic pollutant, a cancer risk of 10<sup>-5</sup> (one cancer per 100,000 exposed persons) shall be used.
    - (b) When a numeric criterion for the protection of human health has not been published by the U.S. Environmental Protection Agency, a quantifiable criterion may be derived from data available in the U.S. Environmental Protection Agency's Integrated Risk Information System (IRIS) using the appropriate formula specified in *methodology for deriving ambient water quality criteria for the protection of human health (2000)*, EPA-822-B-00-004.
  - (3) Pursuant to this section, the chronic aquatic life standard shall be as set out in 20.6.4.900 NMAC. For a toxic pollutant for aquatic life with no chronic standard listed in 20.6.4.900 NMAC, the following provisions shall be applied in sequential order in accordance with 20.6.4.11, 20.6.4.12 and 20.6.4.14 NMAC.
    - (a) The chronic aquatic life criterion shall be the “freshwater criterion continuous concentration” published by the U.S. environmental protection agency pursuant to Section 304(a) of the federal Clean Water Act; 20.6.4 NMAC 11
    - (b) If the U.S. environmental protection agency has not published a chronic aquatic life criterion, a geometric mean LC-50 value shall be calculated for

the particular species, genus or group that is representative of the form of life to be preserved, using the results of toxicological studies published in scientific journals.

- (i) The chronic aquatic life criterion for a toxic pollutant that does not bioaccumulate shall be 10 percent of the calculated geometric mean LC-50 value; and
  - (ii) The chronic aquatic life criterion for a toxic pollutant that does bioaccumulate shall be: the calculated geometric mean LC-50 adjusted by a bioaccumulation factor for the particular species, genus or group representative of the form of life to be preserved, but when such bioaccumulation factor has not been published, the criterion shall be one percent of the calculated geometric mean LC-50 value.
- (4) Pursuant to this section, the acute aquatic life criteria shall be as set out in 20.6.4.900 NMAC. For a toxic pollutant for aquatic life with no acute criterion listed in 20.6.4.900 NMAC, the acute aquatic life criterion shall be the “freshwater criterion maximum concentration” published by the U.S. environmental protection agency pursuant to Section 304(a) of the federal Clean Water Act.
- (5) Within 90 days of the issuance of a final NPDES [National Pollutant Discharge Elimination System] permit containing a numeric criterion selected or calculated pursuant to Paragraph 2, Paragraph 3 or Paragraph 4 of Subsection F of this section, the department shall petition the commission to adopt such criterion into these standards.
- G. Radioactivity:** The radioactivity of surface waters of the state shall be maintained at the lowest practical level and shall in no case exceed the criteria set forth in the New Mexico Radiation Protection Regulations, 20.3.1 and 20.3.4 NMAC.
- H. Pathogens:** Surface waters of the state shall be free of pathogens from other than natural sources in sufficient quantity to impair public health or the designated, existing or attainable uses of a surface water of the state.
- I. Temperature:** Maximum temperatures for each classified water of the state have been specified in 20.6.4.101 through 20.6.4.899 NMAC. However, the introduction of heat by other than natural causes shall not increase the temperature, as measured from above the point of introduction, by more than 2.7°C (5°F) in a stream, or more than 1.7°C (3°F) in a lake or reservoir. In no case will the introduction of heat be permitted when the maximum temperature specified for the reach would thereby be exceeded. These temperature criteria shall not apply to impoundments constructed offstream for the purpose of heat disposal. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.
- J. Turbidity:** Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water. Turbidity shall not exceed 10 NTU [nephelometric turbidity units] over background turbidity when the background turbidity is 50 NTU or less, or increase more than 20 percent when the background turbidity is more than 50 NTU. Background turbidity shall be measured at a point immediately upstream of the turbidity-causing activity. However, limited-duration activities necessary to accommodate dredging, construction or other similar activities and that cause the criterion to be exceeded may be

authorized provided all practicable turbidity control techniques have been applied and all appropriate permits and approvals have been obtained.

- K. Total Dissolved Solids (TDS):** TDS attributable to other than natural causes shall not damage or impair the normal growth, function or reproduction of animal, plant or aquatic life. TDS shall be measured by either the “calculation method” (sum of constituents) or the filterable residue method. Approved test procedures for these determinations are set forth in 20.6.4.14 NMAC.
- L. Dissolved Gases:** Surface waters of the state shall be free of nitrogen and other dissolved gases at levels above 110 percent saturation when this supersaturation is attributable to municipal, industrial or other discharges.