Revised Draft Environmental Impact Statement/
Environmental Impact Report

# Truckee River Operating Agreement

## Water Quality Appendix

**California and Nevada**

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**United States Department of the Interior**
**Bureau of Reclamation**
**Fish and Wildlife Service**
**Bureau of Indian Affairs**

**State of California**
**Department of Water Resources**

Water Quality **Appendix**

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# WATER QUALITY APPENDIX

## I. OVERVIEW

Recent model results reflect more accurate boundary conditions for the Dynamic Stream Simulation and Assessment Model with temperature (DSSAMt) riverine water quality model which were derived from Truckee River Watershed Analysis Risk Management Framework (WARMF) model results. Model results incorporate future land use changes and therefore nonpoint source loadings to the riverine model. Model results also incorporate more accurate point source loadings to the riverine model. Recent DSSAMt model results are more reliable and tend to coincide with environmental observations due to model improvements as well as better inputs.

Water quality was analyzed in detail using historical data and the DSSAMt water quality model. Historical data is summarized by Bender (1995). Documentation for the water quality model is provided by Brock and Caupp (RCR04-1.0, 2004). The water quality model was calibrated to wet, median, and dry hydrologic conditions (Brock and Caupp, RCR04-2.0, 2004) and verified to dry hydrologic conditions (Brock and Caupp, RCR04-2.0, 2004). A sensitivity analysis was done to identify major variables and model coefficients (Brock and Caupp, RCR04-2.0, 2004). Current condition, No Action Alternative, Local Water Supply Alternative (LWSA), and TROA Alternative were simulated. For support of the fishery analysis, a temperature analysis for extremely wet, median, and extremely dry water years was done for various fish species and life stages of each species for the current condition and each alternative (Brock and Caupp, RCR04-3.0, 2004, RCR04-5.0, 2004, RCR04-7.0, 2004, and RCR04-9.0, 2004). A water quality analysis was done for wet, median, and dry calendar years for the current condition and each alternative (Brock and Caupp, RCR04-4.0, 2004, RCR04-6.0, 2004, RCR04-8.0, 2004, and RCR04-10.0, 2004).

Flow is the most important variable affecting Truckee River water quality. Typically, wet hydrologic conditions provide the best water quality and dry hydrologic conditions the worst. Selection of representative hydrologic years was critical to analyzing water quality.

Flow data were statistically analyzed for use as a water quality indicator and for use in selecting representative hydrologic years. Analyses were based on water years where possible. A water year begins October of the previous year and extends through September. However, calendar year hydrology was required for the water quality assessment to accommodate state standards that are based on the calendar year that extends from January through December.

## II. HYDROLOGY FOR WATER QUALITY ASSESSMENT

Water quality was analyzed using both a single variable analysis and a multiple variable analysis. Probability of flow exceedence based on 95 water years of monthly flow from 1901 to 1995 was used for single variable analysis. Probability of flow exceedence indicates the percent of time the annual flow was exceeded historically. Single variable analysis provided

information on the frequency of occurrence of flows. However, to adequately address hourly, daily, weekly, and often seasonal variations, representative flow years within this 95 year period were used for multiple variable analysis of water quality. This dual approach takes into account the effects of flow and also other major variables such as initial conditions, meteorology, and nutrient and organic loadings.

Data availability and both flows reflecting natural local runoff and flows reflecting the effects of storage operations were considered in selecting wet, median, and dry years for multiple variable water quality analysis. Supporting documents may use the term average instead of median. Average does not imply the statistical mean, but rather is a general term to denote central tendency of flows or near median. Supporting documents may also use the term violated instead of exceeded. An exceedence does not imply a violation which is an enforcement term, but rather to denote going outside the range of a desired criteria.

Annual averages of natural local runoff just upstream of Farad, California, without the effects of storage operations were ranked for both calendar and water years 1901 through 1992. Table 1 compares the probability of exceedences for annual averages for wet, median, and dry years for calendar and water year periods. For years 1986 (wet), 1989 (median), and 1992 (dry), flow exceedence statistics based on calendar years are nearly identical to those for water years. This indicates these years represent the intended flow condition.

Table 1.—Probability of flow exceedences

| Probability of flow exceedences for natural flow above Farad based on calendar years 1901 through 1992 | | |
|---|---|---|
| Condition | Calendar year | Probability of flow exceedence (%) |
| Wet | 1986 | 11.8 |
| Median | 1989 | 50.5 |
| Dry | 1992 | 93.5 |
| **Probability of flow exceedences for natural flow above Farad based on water years 1901 through 1992** | | |
| Condition | Water year | Probability of flow exceedence (%) |
| Wet | 1986 | 12.9 |
| Median | 1989 | 49.5 |
| Dry | 1992 | 94.6 |

Analysis of flows including the effects of storage operations indicated similar wet, median, and dry patterns. Table 2 shows flow ranking just downstream from Reno, Nevada, at Vista, Nevada, for the 21 water year periods from 1973 through 1993 which includes the effects of storage operations. This 21-year period includes the flow conditions for the modeled wet, median, and dry years (1986, 1989, and 1992). A ranking of water year 7-day low flows at Farad, California; Vista, Nevada; and Nixon, Nevada (table 2) shows that 1992, the baseline

year, was an extremely dry condition that followed fairly dry conditions and represents near worst case low flow conditions in the Truckee River downstream from Derby Diversion Dam.

Table 2.—7-day low flow and rank for three Truckee River stations

| Water year ending September 30 | Downstream from reservoirs and upstream of CA/NV State line at Farad, CA | | Downstream from Reno, NV, at Vista, NV | | Downstream from Derby Diversion Dam at Nixon, NV | |
|---|---|---|---|---|---|---|
| | 7-day low flow | | 7-day low flow | | 7-day low flow | |
| | (cfs) | (rank) | (cfs) | (rank) | (cfs) | (rank) |
| 1973 | 352 | 14 | 381 | 17 | 44 | 14 |
| 1974 | 385 | 19 | 412 | 18 | 123 | 18 |
| 1975 | 439 | 20 | 457 | 20 | 130 | 19 |
| 1976 | 383 | 18 | 427 | 19 | 145 | 20 |
| 1977 | 71 | 6 | 77 | 7 | 23 | 7 |
| 1978 | 47 | 2 | 62 | 5 | 20 | 6 |
| 1979 | 174 | 9 | 212 | 10 | 29 | 12 |
| 1980 | 300 | 12 | 290 | 14 | 33 | 13 |
| 1981 | 230 | 10 | 189 | 9 | 24 | 9 |
| 1982 | 284 | 11 | 292 | 15 | 52 | 16 |
| 1983 | 460 | 21 | 609 | 21 | 464 | 21 |
| 1984 | 363 | 15 | 333 | 16 | 64 | 17 |
| 1985 | 366 | 16 | 283 | 13 | 27 | 11 |
| 1986 | 327 | 13 | 278 | 12 | 44 | 15 |
| 1987 | 380 | 17 | 261 | 11 | 25 | 10 |
| 1988 | 81 | 7 | 82 | 8 | 20 | 5 |
| 1989 | 67 | 5 | 70 | 6 | 23 | 8 |
| 1990 | 101 | 8 | 56 | 4 | 11 | 3 |
| 1991 | 51 | 3 | 46 | 2 | 8.1 | 2 |
| 1992 | 57 | 4 | 47 | 3 | 6.2 | 1 |
| 1993 | 44 | 1 | 44 | 1 | 16 | 4 |

Note: 7-day low flow is the lowest mean discharge for 7 consecutive days for a water year.

# III. HYDROLOGY FOR BIOLOGICAL ASSESSMENT

For biological environmental assessment of current conditions and alternatives, temperature analysis was done for extremely wet, median, and extremely dry 5-year water-year periods to accommodate storage effects on biology.

Meteorology and flow data for temperature modeling was available from October 1961 through December 1992 and this period was used in selecting 5-year periods of water years from the 92-year record. Table 3 lists the ending water years used for fishery temperature analysis.

Table 3.—Probability of flow exceedences for natural flow upstream of Farad based on 5-year periods for water years 1901 through 1992

| Condition | Ending year of 5-year period | Probability of flow exceedence for 5-year period (%)[1] |
|---|---|---|
| Extremely wet | 1986 | 1 |
| Median | 1966 | 47 |
| Extremely dry | 1992 | 99 |

[1] Based on monthly medians of the five water years.

# IV. WATER QUALITY MODEL INPUTS

A complete description of flow and water quality model inputs and outputs has been documented by Brock and Caupp of Rapid Creek Research, Inc. (RCR04-1.0, 2004 through RCR04-10.0, 2004 ). Table 4 provides a list of water quality supporting documents for the revised DEIS/EIR:

Table 4.—Water quality supporting documents for revised DEIS/EIR

| RCR Report No.[1] | Document topic | Approximate number of pages |
|---|---|---|
| 04-1.0 | DSSAMt Program Documentation | 110 |
| 04-2.0 | Calibration to 1986, 1989, 1991, 1992, and 1993 | 200 |
| 04-3.0 | Temperature—Current Condition | 379 |
| 04-4.0 | Water quality—Current Condition | 709 |
| 04-5.0 | Temperature—No Action | 296 |
| 04-6.0 | Water quality—No Action | 800 |
| 04-7.0 | Temperature—TROA | 296 |
| 04-8.0 | Water quality—TROA | 800 |
| 04-9.0s | Temperature-LWSA | 296 |
| 04-10.0 | Water Quality-LWSA | 800 |

[1] Report number indicates year draft was assembled (2004).

Data sources; river and irrigation flow summaries; meteorological data; water temperature boundary conditions; water chemistry boundary conditions; and water quality standards, based on beneficial uses as well as desired fishery criteria, are presented in the above documents as statistics, tables, and graphs.

Hydraulic geometry, flows, meteorology, and water quality constituents are the primary inputs to the water quality model. For the calibration years, initial boundary conditions and timestep boundary conditions were derived from measured data. For simulation of current conditions and alternatives, flow boundary conditions were provided from the monthly Truckee River operations model (operations model). It was assumed that relative percentages of the lumped diversions attributable to each of the active diversions would be the same under current conditions and the alternatives. Water quality boundary conditions were derived from measured data, from statistical correlations, or from the Truckee River Watershed Analysis Risk Management Framework (WARMF) model (Chen and Weintraub, 2002). The WARMF model, a daily watershed loading model, accounts for future land use changes and is a better tool to predict water quality boundary conditions for the hourly DSSAMt riverine water quality model than estimates of future conditions. The 1999 historical land use coverage was used for current conditions. Estimated future land use coverage for the year 2020 was used for future alternatives. Both coverages used the same eleven land use categories. Actual meteorology was used for all years simulated.

Water temperature inputs at the upstream model boundary for current conditions and the alternatives were generated from multiple linear regression equations. Historical air temperatures and flows were used to develop the coefficients for the multiple linear regression equations. Bivariate statistical analysis indicated that a majority of the variation in mean daily water temperature is due to variation in mean daily air temperature (Brock and Caupp, RCR04-3.0, Chapter 11). Flow also accounted for a portion of the variability and was accounted for in the estimation procedure for water temperature at the upstream boundary. Actual meteorology and simulated flows from the operations model were used as inputs to predict water temperature inputs for the model

# V. WATER QUALITY MODEL CALIBRATION

The following is a summary of the water quality model calibration. A more detailed description is provided by Brock and Caupp (RCR04-2.0, 2004).

Four calendar years were used for the water quality model calibration (1986-wet, 1989-median, 1992-dry, and 1993-median). The two near median years, 1989 and 1993, differ greatly since only 1993 was operated for cui-ui spawning. Large amounts of water for cui-ui spawning were released from Derby Diversion Dam to Pyramid Lake during 1993. Modeled nutrient and total dissolved solids loadings to Pyramid Lake were also larger during 1993 as shown in table 5.

Calendar year 1993 had the most complete measured data sets, has large flow fluctuations, and has extreme 7-day low flows. Therefore, 1993 covers a range of conditions. Modeled data was compared to measured data with closeness-of-fit statistics and data plots.

Residual error and average error were the primary closeness-of-fit statistics used for comparison. Residual error indicates the average difference between simulated and observed values. Average error is calculated as the absolute value of the residual error summed over a specified period and divided by the number of days. Average error is always higher than

Table 5.—Comparison of calibration simulated annual loadings to Pyramid Lake

| Condition | Calendar year | Loadings (kg/yr x 1,000) | | |
|---|---|---|---|---|
| | | Phosphorus | Nitrogen | TDS |
| Dry | 1992 | 1 | 11 | 13,724 |
| Median | 1989 | 2 | 24 | 18,316 |
| Median (cui-ui) | 1993 | 8 | 94 | 33,297 |
| Wet | 1986 | 28 | 236 | 101,228 |

residual error since average error uses the absolute value of both positive and negative differences between modeled and observed values. Residual error is a better indication of calibration adequacy or closeness of fit because positive and negative values can cancel each other.

For temperature during the April to September period, residual error of less than 1 °C is excellent and less than 2 °C is good. Calculated temperature residual error was less than or equal to 2.0 °C, and typically less than 1 °C for all calibration years. For dissolved oxygen, less than 1 mg/L is excellent and less than 2 mg/L is good. Calculated minimum dissolved oxygen residual error was as high as 2.9 mg/L. For 1993, the year with the most complete and accurate data, minimum dissolved oxygen residual error was less than or equal to 0.8 mg/L. The statistics indicate a good dissolved oxygen calibration in most years; however, marginally adequate during extremely low flow conditions. However, only limited dissolved oxygen field data were available for comparison for years 1986, 1989, and 1992. Brock and Caupp summarize average error and residual error by river reach for the calibration years (RCR04-2.0, 2004, Chapter 8). Tables with closeness of fit statistics as well as plots of modeled versus observed data are provided.

Statistical error will reflect inadequacies in data measurement accuracy as well as deficiencies in the modeling calibration. Temperature measurement precision is limited to about 0.2 °C and dissolved oxygen measurement precision to about 0.2 mg/L.

The model calibration was adequate for comparing alternatives to No Action, the baseline condition. The temperature calibration is excellent to good in almost all years and locations. The dissolved oxygen calibration was fair with minimum dissolved oxygen concentrations matching observed data more closely than concentrations of maximum dissolved oxygen. Conservative substances such as total dissolved solids adequately matched observed data. Total nitrogen and total phosphorus concentrations followed expected trends.

Generally, the water quality calibration is better at upstream stations than at downstream stations. Uncertainties in input data sets and "round off" error accumulate in a downstream direction.

Low summer dissolved oxygen sags occur downstream from Reno primarily due to low flows and excessive nutrients, which result in an oxygen demand associated with accumulations of organic material.

# VI. WATER QUALITY MODEL VERIFICATION

*Please note that due to limited time, the water quality model verification has not been peer reviewed. The contractor worked toward a calibration that matched or was better than the calibration used for the 1998 draft TROA EIS/EIR. Therefore, the following section is not complete and values or statistics reflect the 1998 draft. Prior to the public draft, this section will be updated to reflect the 2004 verification.*

*The following paragraphs of this section are from the 1998 draft and needs to be updated. After calibration, the water quality model was verified with the independent data set for calendar year 1991, a dry year, and 1995, which was on the moderately wet side. The model temperature verification was good to excellent. Calculated temperature residual error was less than or equal to 1.1 °C. The model dissolved oxygen calibration appeared marginal but was difficult to verify due to minimal measured dissolved oxygen data. Calculated minimum dissolved oxygen residual error was as high as -2.7 mg/L. Brock and Caupp (RCR04-3.0, 2004) provide a detailed analysis of model verification inputs and results.*

*Nine years of hydraulic and temperature data have been modeled when including calibration water quality years, verification water quality years, and fish temperature years, thereby greatly improving the reliability, robustness, and credibility of the DSSAMt model over a wide range of hydrologic and dynamic water quality conditions.*

# VII. OVERVIEW OF WATER QUALITY SIMULATIONS

Tables and plots summarizing water quality inputs and outputs for river reaches downstream from Reno were prepared for the current condition simulation (Brock and Caupp, RCR04-4.0, 2004) and for the alternatives (Brock and Caupp, RCR04-6.0, 2004, RCR04-8.0, 2004, and RCR04-10.0). This included information on river and irrigation flows, weather, water temperature boundary conditions, water chemistry boundary conditions, annual plots of daily water temperature and dissolved oxygen, monthly water chemistry versus distance, statistical summaries of simulated water quality, water quality standards, seasonal constituent versus distance, and simulated constituent loads. Simulated constituents such as river temperature, dissolved oxygen, and nutrients provided information on the suitability for aquatic life.
In general, temperature, high pH (an indicator of algae), DO, chloride, TDS, and total nitrogen violations occur downstream from Reno in mostly dry hydrologic conditions for all current and future conditions. During dry current and future conditions, dissolved oxygen concentrations are too low for adequate growth and maintenance of aquatic life. However, large non-scouring nutrient-rich flows followed by sudden drops in flow also results in more algal biomass and consequently lower DO. Lower flow results in larger minimum to maximum DO swings.

Truckee River watershed water quality was summarized in the Truckee River Water Quality Settlement Agreement - Federal Water Rights Acquisition Program, Final Environmental Impact Statement (Bureau of Indian Affairs, October 2002.)

Summary tables of the water quality books are shown as Water Quality Appendix DSSAMt tables 1 – 12.

# VIII. CURRENT CONDITION TEMPERATURE AND WATER QUALITY SIMULATIONS

The modeled current temperature (Brock and Caupp, RCR04-3.0, 2004) and water quality (Brock and Caupp, RCR04-4.0, 2004) conditions reflect simulated flows from the operations model and should not be compared to historical flows. Current conditions reflect current reservoir operations and current demands on the system

The current conditions simulation indicated that warm temperatures for fish and water quality problems exist minimally in wet, and mostly in median and dry hydrologic conditions. The most severe conditions occur during dry hydrologic conditions. Current system operations do not adequately accommodate water quality.

Temperature and DO were chosen as water quality indicators. Total phosphorus, ortho-phosphorus, total nitrogen, nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, pH, total dissolved solids, and chloride were also modeled as supporting information for the water quality analysis.

Modeling and data indicated that water quality tends to be worse during the warm summer and early fall months. However, dissolved oxygen downstream from Derby Diversion Dam is low during the end of April 1989 for current conditions. Low flow and warm air temperatures caused the low DO. This indicates that water quality is highly variable making qualification of water quality conditions by season difficult.

Annual summaries of major model water quality parameters under current conditions are shown in tables DSSAMt 1 through 12 for each modeled reach downstream from Reno for wet (1986), median (1989), and dry (1992) calendar year conditions.

Based on summaries from the draft TROA EIS/EIR (1998), under dry year current conditions, annual summaries indicated that standards for TDS and chloride concentrations to Pyramid Lake, a terminal saline desert lake, are exceeded most of the year. Under dry year current conditions, annual summaries indicated that total nitrogen standards in the reach from Lockwood to Derby Diversion Dam are exceeded about one-third of the year.

# IX. NO ACTION ALTERNATIVE TEMPERATURE AND WATER QUALITY SIMULATIONS

No Action represents projected future conditions in the year 2033 without a Truckee River operating agreement or changes in system operation. The major change under No Action is

Table DSSAMt 1. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **Current Condition**

Year: **1986 CY**
Run: 1986 (wet) - RT86C1: Current Cond.
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 0 | 0 | 29 | 66 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 0 | 0 | 5 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 0 | 5 |
| Chloride | no. of days > STD# | 93 | 0 | 0 | 0 | 0 | 0 |
| Total Phosphorus | annual average | 0.012 | 0.028 | 0.039 | 0.036 | 0.036 | 0.036 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.177 | 0.260 | 0.315 | 0.287 | 0.290 | 0.298 |
| | no. of days > STD | 1 | 1 | 1 | 1 | 2 | 4 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 2 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 1 | 2 |
| Total Dissolved Solids | annual average# | 70 | 92 | 108 | 100 | 113 | 121 |
| | no. of days > STD# | 1 | 0 | 0 | 0 | 0 | 0 |
| Temperature | no. of days > STD fish flow not adequate | 153 | 30 | 32 | 22 | 27 | 37 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 36 | 37 | 37 |
| | no. of days > DESIRED fish flow not adequate | 164 | 54 | 58 | 65 | 66 | 71 |
| | no. of days > DESIRED fish flow adequate | 164 | 54 | 58 | 101 | 103 | 104 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 2. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **Current Condition**

Year: **1989 CY**
Run: 1989 (median) - RT89C1: Current Cond.
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 34 | 65 | 125 | 127 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 9 | 10 | 25 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 6 | 10 | 28 |
| Chloride | no. of days > STD# | 123 | 0 | 0 | 0 | 8 | 11 |
| Total Phosphorus | annual average | 0.015 | 0.036 | 0.052 | 0.050 | 0.047 | 0.046 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.234 | 0.355 | 0.425 | 0.408 | 0.407 | 0.409 |
| | no. of days > STD | 1 | 1 | 1 | 2 | 3 | 1 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 95 | 121 | 139 | 143 | 204 | 233 |
| | no. of days > STD# | 60 | 0 | 0 | 0 | 9 | 11 |
| Temperature | no. of days > STD fish flow not adequate | 155 | 10 | 28 | 25 | 53 | 62 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 77 | 80 | 82 |
| | no. of days > DESIRED fish flow not adequate | 162 | 48 | 66 | 89 | 99 | 107 |
| | no. of days > DESIRED fish flow adequate | 162 | 48 | 66 | 149 | 156 | 160 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 3. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **Current Condition**

Year: **1992 CY**
Run: 1992 (dry) - RT92C1: Current Cond
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 16 | 160 | 94 | 244 | 3 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 107 | 109 | 149 | 296 | 172 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 107 | 109 | 104 | 253 | 156 |
| Chloride | no. of days > STD# | 366 | 95 | 97 | 363 | 364 | 365 |
| Total Phosphorus | annual average | 0.023 | 0.101 | 0.157 | 0.147 | 0.085 | 0.072 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.302 | 0.640 | 0.818 | 0.715 | 0.569 | 0.527 |
| | no. of days > STD | 34 | 125 | 122 | 64 | 14 | 17 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 141 | 184 | 211 | 229 | 534 | 667 |
| | no. of days > STD# | 307 | 2 | 0 | 64 | 366 | 366 |
| Temperature | no. of days > STD fish flow not adequate | 199 | 96 | 85 | 64 | 88 | 82 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 91 | 106 | 101 |
| | no. of days > DESIRED fish flow not adequate | 211 | 128 | 123 | 135 | 154 | 147 |
| | no. of days > DESIRED fish flow adequate | 211 | 128 | 123 | 171 | 189 | 183 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 4. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **No Action**

Year: **1986 CY**
Run: 1986 (wet) - RT86N1: No Action
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 0 | 15 | 31 | 97 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 0 | 0 | 4 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 0 | 4 |
| Chloride | no. of days > STD# | 63 | 0 | 0 | 0 | 0 | 0 |
| Total Phosphorus | annual average | 0.013 | 0.030 | 0.042 | 0.039 | 0.039 | 0.039 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.181 | 0.275 | 0.336 | 0.321 | 0.325 | 0.331 |
| | no. of days > STD | 1 | 1 | 1 | 1 | 3 | 4 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 1 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Dissolved Solids | annual average# | 69 | 92 | 108 | 106 | 119 | 126 |
| | no. of days > STD# | 2 | 0 | 0 | 0 | 0 | 0 |
| Temperature | no. of days > STD fish flow not adequate | 146 | 25 | 32 | 20 | 27 | 37 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 36 | 37 | 39 |
| | no. of days > DESIRED fish flow not adequate | 156 | 53 | 58 | 64 | 66 | 72 |
| | no. of days > DESIRED fish flow adequate | 156 | 53 | 58 | 100 | 103 | 106 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 5. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **No Action**

Year: **1989 CY**
Run: 1989 (median) - RT89N1: No Action
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 29 | 91 | 147 | 138 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 4 | 10 | 26 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 9 | 29 |
| Chloride | no. of days > STD# | 91 | 0 | 0 | 1 | 0 | 10 |
| Total Phosphorus | annual average | 0.016 | 0.040 | 0.056 | 0.051 | 0.048 | 0.047 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.244 | 0.381 | 0.463 | 0.441 | 0.435 | 0.435 |
| | no. of days > STD | 1 | 1 | 1 | 2 | 3 | 1 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 96 | 123 | 143 | 146 | 196 | 227 |
| | no. of days > STD# | 60 | 0 | 0 | 0 | 0 | 8 |
| Temperature | no. of days > STD fish flow not adequate | 160 | 24 | 32 | 22 | 54 | 62 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 77 | 80 | 82 |
| | no. of days > DESIRED fish flow not adequate | 168 | 60 | 70 | 89 | 100 | 107 |
| | no. of days > DESIRED fish flow adequate | 168 | 60 | 70 | 149 | 157 | 160 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 6. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **No Action**

Year: **1992 CY**
Run: 1992 (dry) - RT92N1: No Action
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 128 | 63 | 181 | 0 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 51 | 42 | 95 | 180 | 147 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 51 | 40 | 59 | 147 | 127 |
| Chloride | no. of days > STD# | 366 | 124 | 124 | 267 | 271 | 340 |
| Total Phosphorus | annual average | 0.029 | 0.086 | 0.125 | 0.118 | 0.089 | 0.082 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.332 | 0.630 | 0.777 | 0.693 | 0.598 | 0.594 |
| | no. of days > STD | 123 | 63 | 72 | 43 | 29 | 31 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 5 | 7 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 142 | 195 | 228 | 235 | 433 | 594 |
| | no. of days > STD# | 337 | 124 | 121 | 62 | 300 | 355 |
| Temperature | no. of days > STD fish flow not adequate | 201 | 149 | 120 | 61 | 85 | 84 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 93 | 103 | 104 |
| | no. of days > DESIRED fish flow not adequate | 213 | 181 | 157 | 134 | 150 | 150 |
| | no. of days > DESIRED fish flow adequate | 213 | 181 | 157 | 172 | 186 | 186 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 7. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **LWSA**

Year: **1986 CY**
Run: 1986 (wet) - RT86L1: LWSA
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 0 | 15 | 28 | 97 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 0 | 0 | 4 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 0 | 4 |
| Chloride | no. of days > STD# | 63 | 0 | 0 | 0 | 0 | 0 |
| Total Phosphorus | annual average | 0.013 | 0.030 | 0.042 | 0.039 | 0.039 | 0.039 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.179 | 0.273 | 0.335 | 0.319 | 0.324 | 0.329 |
| | no. of days > STD | 1 | 1 | 1 | 1 | 3 | 3 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 1 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Dissolved Solids | annual average# | 69 | 92 | 108 | 106 | 119 | 126 |
| | no. of days > STD# | 2 | 0 | 0 | 0 | 0 | 0 |
| Temperature | no. of days > STD fish flow not adequate | 146 | 25 | 32 | 20 | 27 | 37 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 36 | 37 | 39 |
| | no. of days > DESIRED fish flow not adequate | 156 | 53 | 58 | 64 | 66 | 72 |
| | no. of days > DESIRED fish flow adequate | 156 | 53 | 58 | 100 | 103 | 106 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 8. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **LWSA**

Year: **1989 CY**
Run: 1989 (median) - RT89L1: LWSA
Date of Run: 29-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 26 | 86 | 147 | 136 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 4 | 10 | 26 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 9 | 30 |
| Chloride | no. of days > STD# | 91 | 0 | 0 | 1 | 0 | 10 |
| Total Phosphorus | annual average | 0.013 | 0.013 | 0.014 | 0.043 | 0.055 | 0.050 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.218 | 0.222 | 0.227 | 0.394 | 0.459 | 0.440 |
| | no. of days > STD | 1 | 1 | 1 | 2 | 3 | 1 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 98 | 98 | 97 | 126 | 143 | 153 |
| | no. of days > STD# | 60 | 0 | 0 | 0 | 0 | 8 |
| Temperature | no. of days > STD fish flow not adequate | 154 | 13 | 27 | 21 | 51 | 62 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 77 | 80 | 82 |
| | no. of days > DESIRED fish flow not adequate | 160 | 51 | 61 | 86 | 98 | 107 |
| | no. of days > DESIRED fish flow adequate | 160 | 51 | 61 | 146 | 155 | 160 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |

Table DSSAMt 9. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **LWSA**

Year: **1992 CY (dry)**
Run: 1992 (dry) - RT92L1: LWSA
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 103 | 54 | 182 | 0 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 46 | 39 | 97 | 177 | 149 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 46 | 39 | 57 | 140 | 125 |
| Chloride | no. of days > STD# | 366 | 184 | 185 | 293 | 272 | 341 |
| Total Phosphorus | annual average | 0.029 | 0.085 | 0.123 | 0.115 | 0.088 | 0.081 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.333 | 0.660 | 0.830 | 0.733 | 0.615 | 0.604 |
| | no. of days > STD | 123 | 93 | 93 | 65 | 30 | 32 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 5 | 7 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 142 | 204 | 245 | 251 | 441 | 598 |
| | no. of days > STD# | 337 | 185 | 186 | 94 | 310 | 366 |
| Temperature | no. of days > STD fish flow not adequate | 201 | 149 | 119 | 61 | 85 | 84 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 93 | 103 | 104 |
| | no. of days > DESIRED fish flow not adequate | 213 | 181 | 156 | 134 | 150 | 150 |
| | no. of days > DESIRED fish flow adequate | 213 | 181 | 156 | 172 | 185 | 186 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 10. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **TROA**

Year: **1986 CY**
Run: 1986 (wet) - RT86T1: TROA
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 0 | 13 | 17 | 102 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 0 | 0 |
| Chloride | no. of days > STD# | 93 | 31 | 31 | 30 | 0 | 0 |
| Total Phosphorus | annual average | 0.014 | 0.032 | 0.046 | 0.043 | 0.043 | 0.042 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.192 | 0.296 | 0.363 | 0.355 | 0.356 | 0.356 |
| | no. of days > STD | 1 | 1 | 1 | 1 | 3 | 4 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 1 |
| Total Dissolved Solids | annual average# | 70 | 95 | 113 | 114 | 126 | 134 |
| | no. of days > STD# | 1 | 0 | 0 | 0 | 0 | 0 |
| Temperature | no. of days > STD fish flow not adequate | 131 | 21 | 29 | 13 | 22 | 30 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 35 | 36 | 38 |
| | no. of days > DESIRED fish flow not adequate | 137 | 47 | 55 | 60 | 65 | 66 |
| | no. of days > DESIRED fish flow adequate | 137 | 47 | 55 | 95 | 101 | 104 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 11. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **TROA**

Year: **1989 CY**
Run: 1989 (median) - RT89T1: TROA
Date of Run: 26-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 19 | 81 | 140 | 141 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 0 | 0 | 4 | 10 | 15 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 0 | 9 | 19 |
| Chloride | no. of days > STD# | 91 | 0 | 0 | 1 | 0 | 10 |
| Total Phosphorus | annual average | 0.016 | 0.039 | 0.055 | 0.049 | 0.047 | 0.046 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.241 | 0.374 | 0.453 | 0.432 | 0.429 | 0.429 |
| | no. of days > STD | 1 | 1 | 1 | 2 | 3 | 1 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 96 | 121 | 140 | 143 | 193 | 223 |
| | no. of days > STD# | 60 | 0 | 0 | 0 | 0 | 8 |
| Temperature | no. of days > STD fish flow not adequate | 154 | 14 | 28 | 21 | 53 | 62 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 77 | 79 | 82 |
| | no. of days > DESIRED fish flow not adequate | 157 | 51 | 63 | 89 | 99 | 107 |
| | no. of days > DESIRED fish flow adequate | 157 | 51 | 63 | 149 | 155 | 160 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |



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Table DSSAMt 12. Annual summary of simulated Truckee River quality compared to State of Nevada standards

Alternative: **TROA**

Year: **1992 CY**
Run: 1992 (dry) - RT92T1: TROA
Date of Run: 24-Feb-2004

| Constituent | Statistic | Reach | | | | | |
|---|---|---|---|---|---|---|---|
| | | Glend-McCar | McCar-Lockw | Lockw-Derby | Derby-Wadsw | Wadsw-Numan | Numan-Pyramid |
| pH | no. of days > STD | 0 | 0 | 99 | 49 | 143 | 24 |
| pH | no. of days < STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen | no. of days < STD (5 or 6 mg/L) | 0 | 1 | 3 | 65 | 126 | 148 |
| Dissolved Oxygen | no. of days < 5 mg/L* | 0 | 0 | 0 | 34 | 75 | 114 |
| Chloride | no. of days > STD# | 366 | 93 | 93 | 157 | 163 | 265 |
| Total Phosphorus | annual average | 0.027 | 0.078 | 0.114 | 0.108 | 0.087 | 0.083 |
| Ortho Phosphorus | no. of days > STD | 0 | | | | | |
| Total Nitrogen | annual average | 0.313 | 0.592 | 0.736 | 0.662 | 0.583 | 0.573 |
| | no. of days > STD | 123 | 63 | 64 | 40 | 9 | 9 |
| Nitrate Nitrogen | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Nitrite Nitrogen | no. of days > STD | 0 | 1 | 1 | 0 | 0 | 0 |
| Ammonia Nitrogen (unionized) | no. of days > STD | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Dissolved Solids | annual average# | 136 | 183 | 213 | 220 | 371 | 462 |
| | no. of days > STD# | 337 | 93 | 93 | 56 | 194 | 275 |
| Temperature | no. of days > STD fish flow not adequate | 189 | 81 | 87 | 49 | 75 | 78 |
| | no. of days > STD fish flow adequate ^ | na | na | na | 90 | 98 | 100 |
| | no. of days > DESIRED fish flow not adequate | 191 | 139 | 133 | 125 | 145 | 146 |
| | no. of days > DESIRED fish flow adequate | 191 | 139 | 133 | 164 | 180 | 182 |

Notes:

| | |
|---|---|
| no. of days | = number of days of the year when the standard was exceeded within any hour of the day |
| ^ | = determined for period November through June = total of 273 days if flows are adequate for spawning |
| na | = not applicable |
| * | = not a State Standard, included for information purposes only |
| # | = RMHQ (Recommended to Maintain High Water Quality) used in place of beneficial use standard |
| DESIRED | = desired condition if flows are adequate to protect juvenile Lahontan cutthroat trout |
| STD | = Nevada State standard for Truckee River to protect beneficial uses |

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that population is expected to increase in the study area, which would increase municipal and industrial water demand. No Action serves as a baseline for comparison to the TROA Alternative.

Simulation of future conditions without TROA indicated warm temperatures for fish and water quality problems will exist minimally in wet and mostly in median and dry hydrologic conditions (Brock and Caupp, RCR04-5.0, 2004 and RCR04-6.0, 2004 ). Temperature, pH, DO, chloride, TDS, and total nitrogen violations will occur downstream from Reno. No Action is slightly worse than the current conditions due to larger future water demands, mostly due to population growth. The most severe conditions occur during dry hydrologic conditions. Without changes, current system operations will not adequately accommodate water quality in the future.

Annual summaries of major model water quality parameters under No Action are given in tables DSSAMt 4, 5, and 6 for each modeled reach downstream from Reno for wet (1986), median (1989), and dry (1992) calendar year conditions.

Annual summaries indicated that Truckee River TDS and chloride concentration standards downstream from Reno to Pyramid Lake, under dry year No Action conditions, are exceeded most of a dry year. Annual summaries indicated that total nitrogen in the reach from Lockwood to Derby Diversion Dam is exceeded about one quarter of the year.

# X. LOCAL WATER SUPPLY ALTERNATIVE TEMPERATURE AND WATER QUALITY SIMULATIONS

The Local Water Supply Alternative represents projected future conditions in the year 2033 without a Truckee River operating agreement; however, with some likely changes in system operation. Therefore, LWSA and No Action do not vary greatly. The primary differences between LWSA and No Action would be the source of water used for municipal and industrial purposes, extent of water conservation, implementation of a groundwater recharge program in Truckee Meadows, and assumptions regarding governmental decisions concerning approval of new water supply proposals.

Simulation of future conditions under LWSA indicated warm temperatures for fish and water quality problems will exist primarily in wet, average, and dry conditions (Brock and Caupp, RCR04-9.0, 2004 and RCR04-10.0, 2004). Temperature, pH, DO, chloride, TDS, and total nitrogen violations will occur downstream from Reno. LWSA is slightly worse than the current conditions due to larger future water demands mostly due to population growth. The most severe conditions occur during dry conditions.

Annual summaries of major model water quality parameters under the LWSA are given in tables 7, 8, and 9 for each modeled reach downstream from Reno for wet (1986), median (1989), and dry (1992) calendar year conditions.

Under dry year LWSA conditions, annual summaries indicated that TDS and chloride concentration standards downstream from Reno are exceeded more often than under

No Action. Under dry year LWSA conditions, annual summaries indicated that total nitrogen standards in the reach from Lockwood to Derby Diversion Dam are exceeded about one quarter of the year and again are exceeded more often than under No Action.

# XI. TROA ALTERNATIVE TEMPERATURE AND WATER QUALITY SIMULATIONS

The TROA Alternative represents a blended Truckee River operating agreement to accommodate the concerns of several negotiating parties. This alternative concentrates on implementing the requirements of the Preliminary Settlement Act (PSA). It provides drought relief for the Reno/Sparks area and enhances spawning flows for threatened and endangered fishes of Pyramid Lake. Under this alternative, current mandatory minimum instream flows would be met.

TROA provides a compromise of several resources and accommodates the needs of many users. Therefore, river temperatures and water quality would not be expected to be optimum for the nonhuman environment under TROA. However, from a water quality perspective, modeling indicated that TROA is better than No Action in most instances (Brock and Caupp, RCR04-7.0, 2004 and RCR04-8.0, 2004). The TROA Alternative appears to be the optimum alternative for the human environment.

Annual summaries of major model water quality parameters under TROA are given in tables DSSAMt 10, 11, and 12 for each modeled reach downstream from Reno for wet (1986), median (1989), and dry (1992) calendar year conditions.

Under dry year TROA conditions, annual summaries indicated that TDS and chloride concentration standards are exceeded less often than under No Action. Annual summaries indicated that total nitrogen standards in the reach from Lockwood to Derby Diversion Dam are exceeded less than one third of the year but less often than under No Action.

# XII. SIMULATED VERSUS PREFERRED WATER TEMPERATURES FOR FISH

Tables and plots summarizing fish temperature preferences for appropriate life stages of Truckee River fishes were prepared for the current condition simulation (Brock and Caupp, RCR04-3.0, 2004 ) and for the alternatives (Brock and Caupp, RCR04-5.0, 2004 , RCR04-7.0, 2004, and RCR04_9.0, 2004). These included temperature preference windows on plots of daily temperature for facilitating interpretation of the wealth of fish life stage information. Simulated daily instantaneous maximum temperatures indicated acute temperature effects on fish, whereas 7-day moving averages of maximum, mean, and minimum temperatures indicated chronic temperature effects. Life stages were separated into adult migration, spawning, incubation, larvae or rearing, juvenile maintenance, and adult maintenance. Fish species included rainbow trout, cui-ui, Lahontan cutthroat trout, mountain whitefish, and brown trout. Summary tables of the information for extremely wet, median,

and extremely dry ending years of a 5-year period for the current conditions and the alternatives (12 tables of five fishes and associated life stages from Chapter 6 of the Brock and Caupp fish temperature books) are included in the following WQ Appendix DSSAMt tables 13 through DSSAMt 24.

Simulated river temperatures were compared to preferred ranges. For each species and life stage of fish, the number of days that the simulated temperatures were within the recommended range was counted. The temperature was counted as having met the preferred criteria if the temperature was less than or equal to the maximum preferred temperature and greater than or equal to the minimum preferred temperature. These criteria are exceeded if the temperature curves pass through the bottom or top of the thermal box. The number of days that recommended temperatures were met during each fish life stage was given for the daily instantaneous maximum and maximum, mean, and minimum 7-day moving averages at six locations: East McCarron, Lockwood, Clark, Painted Rock, Dead Ox, and Marble Bluff Dam. These locations correspond to locations listed in the Nevada water temperature standards or critical locations determined by fishery biologists.

In general, during average and dry current and future conditions, recommended temperatures are exceeded for cold water and cool water fish. Recommended temperatures for warm water species such as cui-ui are exceeded, but much less frequently. During wet years in which cui-ui spawning runs occur, temperature requirements are often met during the high spring spawning flows. However, once flows are greatly reduced during summer and fall, preferred temperatures for cold water fish such as trout are exceeded frequently. Differences between alternatives were minimal in comparison to differences between wet, median, and dry years.

Summary tables of the water quality books are shown below as Water Quality Appendix DSSAMt tables 13 – 24.

Table DSSAMt 13. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1986wy (extremely wet) - Current Condition

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 39 | 41 | 41 | 33 | 35 | 38 | 44 | 37 | 31 | 36 | 46 | 39 | 31 | 36 | 43 | 40 | 29 | 30 | 38 | 41 | 25 | 28 | 36 | 40 |
| Spawning | 32 | 25 | 27 | 24 | 13 | 21 | 24 | 29 | 19 | 17 | 22 | 30 | 20 | 17 | 22 | 27 | 21 | 15 | 16 | 23 | 28 | 11 | 14 | 22 | 27 |
| Incubation | 62 | 32 | 36 | 40 | 39 | 24 | 27 | 44 | 37 | 20 | 22 | 40 | 37 | 20 | 22 | 36 | 38 | 15 | 16 | 23 | 38 | 11 | 14 | 22 | 37 |
| Rearing | 183 | 178 | 183 | 176 | 173 | 181 | 183 | 183 | 183 | 177 | 183 | 183 | 178 | 178 | 183 | 183 | 177 | 162 | 167 | 183 | 176 | 146 | 158 | 183 | 175 |
| Juvenile Maint. | 365 | 355 | 360 | 342 | 335 | 363 | 365 | 365 | 365 | 359 | 365 | 365 | 349 | 360 | 365 | 361 | 347 | 344 | 349 | 358 | 345 | 328 | 340 | 358 | 342 |
| Adult Maint. | 365 | 355 | 360 | 342 | 335 | 363 | 365 | 365 | 365 | 359 | 365 | 365 | 349 | 360 | 365 | 361 | 347 | 344 | 349 | 358 | 345 | 328 | 340 | 358 | 342 |

**Cui-ui**

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 78 | 83 | 46 | 35 | 83 | 85 | 54 | 38 | 74 | 79 | 58 | 44 | 70 | 78 | 59 | 45 | 63 | 63 | 58 | 47 | 58 | 59 | 51 | 46 |
| Spawning | 91 | 64 | 69 | 46 | 35 | 68 | 70 | 52 | 38 | 60 | 65 | 58 | 44 | 57 | 65 | 57 | 45 | 52 | 52 | 56 | 47 | 48 | 49 | 49 | 45 |
| Incubation | 91 | 71 | 71 | 46 | 35 | 76 | 76 | 52 | 38 | 77 | 77 | 56 | 44 | 77 | 77 | 57 | 45 | 74 | 76 | 62 | 47 | 74 | 75 | 65 | 47 |
| Larvae | 62 | 55 | 56 | 47 | 36 | 56 | 57 | 51 | 39 | 57 | 58 | 52 | 45 | 57 | 58 | 52 | 46 | 54 | 57 | 55 | 48 | 53 | 54 | 55 | 48 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 100 | 102 | 114 | 102 | 98 | 102 | 107 | 111 | 96 | 101 | 98 | 106 | 95 | 100 | 96 | 101 | 94 | 98 | 94 | 95 | 92 | 99 | 93 | 92 |
| Spawning | 91 | 59 | 60 | 59 | 44 | 56 | 57 | 60 | 48 | 53 | 57 | 51 | 50 | 55 | 58 | 50 | 50 | 53 | 56 | 48 | 41 | 52 | 57 | 49 | 41 |
| Incubation | 91 | 59 | 60 | 59 | 44 | 56 | 57 | 60 | 48 | 53 | 57 | 51 | 50 | 55 | 58 | 50 | 50 | 53 | 56 | 48 | 41 | 52 | 57 | 49 | 41 |
| Juvenile Maint. | 107 | 88 | 95 | 96 | 92 | 94 | 98 | 103 | 96 | 81 | 91 | 105 | 98 | 82 | 92 | 107 | 97 | 74 | 83 | 107 | 98 | 57 | 60 | 107 | 96 |
| Adult Maint. | 365 | 338 | 338 | 331 | 309 | 349 | 349 | 339 | 334 | 340 | 343 | 336 | 333 | 338 | 339 | 335 | 333 | 326 | 330 | 335 | 332 | 323 | 332 | 335 | 331 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 37 | 39 | 48 | 51 | 31 | 38 | 42 | 48 | 37 | 36 | 42 | 47 | 41 | 36 | 41 | 47 | 32 | 32 | 42 | 46 | 20 | 16 | 41 | 47 |
| Spawning | 47 | 24 | 23 | 36 | 33 | 28 | 26 | 30 | 39 | 32 | 28 | 27 | 37 | 27 | 24 | 27 | 35 | 27 | 21 | 29 | 35 | 26 | 22 | 28 | 34 |
| Incubation | 78 | 37 | 36 | 47 | 42 | 55 | 53 | 45 | 52 | 54 | 50 | 40 | 49 | 45 | 42 | 40 | 47 | 47 | 41 | 42 | 47 | 53 | 49 | 41 | 46 |
| Incubation | 74 | 74 | 74 | 74 | 70 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 135 | 136 | 154 | 154 | 135 | 136 | 154 | 154 | 130 | 131 | 151 | 154 | 130 | 131 | 151 | 154 | 126 | 125 | 149 | 154 | 122 | 123 | 148 | 154 |
| Juvenile Maint. | 365 | 309 | 307 | 342 | 335 | 316 | 314 | 360 | 365 | 307 | 302 | 342 | 349 | 308 | 302 | 335 | 347 | 301 | 295 | 330 | 345 | 295 | 293 | 327 | 342 |
| Adult Maint. | 365 | 309 | 307 | 342 | 335 | 316 | 314 | 360 | 365 | 307 | 302 | 342 | 349 | 308 | 302 | 335 | 347 | 301 | 295 | 330 | 345 | 295 | 293 | 327 | 342 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 37 | 39 | 48 | 51 | 31 | 38 | 42 | 48 | 37 | 36 | 42 | 47 | 41 | 36 | 41 | 47 | 32 | 32 | 42 | 46 | 20 | 16 | 41 | 47 |
| Spawning | 32 | 15 | 14 | 30 | 29 | 13 | 11 | 20 | 31 | 17 | 13 | 19 | 31 | 17 | 14 | 20 | 30 | 16 | 10 | 24 | 31 | 11 | 7 | 22 | 31 |
| Incubation | 78 | 37 | 36 | 47 | 42 | 55 | 53 | 45 | 52 | 54 | 50 | 40 | 49 | 45 | 42 | 40 | 47 | 47 | 41 | 42 | 47 | 53 | 49 | 41 | 46 |
| Incubation | 74 | 74 | 74 | 74 | 70 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 151 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 150 | 154 | 154 | 154 | 151 | 154 | 154 | 154 | 147 | 154 | 154 | 154 | 139 | 149 | 154 | 154 |
| Juvenile Maint. | 365 | 355 | 360 | 342 | 335 | 363 | 365 | 365 | 365 | 359 | 365 | 365 | 349 | 360 | 365 | 361 | 347 | 344 | 349 | 358 | 345 | 328 | 340 | 358 | 342 |
| Adult Maint. | 365 | 355 | 360 | 342 | 335 | 363 | 365 | 365 | 365 | 359 | 365 | 365 | 349 | 360 | 365 | 361 | 347 | 344 | 349 | 358 | 345 | 328 | 340 | 358 | 342 |
| **Number of Annual Degree Days (deg C)** | | **3,375** | | | | **3,677** | | | | **3,757** | | | | **3,772** | | | | **3,838** | | | | **3,884** | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04

Table DSSAMt 14. No. of days recommended temperatures are met for Truckee R. Fishes

**Truckee R. 1966wy (median) - Current Condition**

## Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 40 | 44 | 46 | 46 | 36 | 43 | 46 | 46 | 30 | 34 | 46 | 46 | 29 | 32 | 45 | 46 | 20 | 22 | 35 | 46 | 6 | 0 | 31 | 46 |
| Spawning | 32 | 26 | 30 | 32 | 11 | 22 | 29 | 32 | 21 | 17 | 20 | 32 | 32 | 17 | 18 | 31 | 32 | 11 | 11 | 21 | 32 | 3 | 0 | 17 | 32 |
| Incubation | 62 | 34 | 32 | 55 | 41 | 24 | 29 | 50 | 47 | 18 | 20 | 32 | 52 | 17 | 18 | 31 | 47 | 11 | 11 | 21 | 32 | 3 | 0 | 17 | 32 |
| Rearing | 183 | 182 | 183 | 183 | 183 | 183 | 183 | 183 | 183 | 182 | 183 | 183 | 183 | 181 | 183 | 183 | 183 | 162 | 163 | 183 | 183 | 141 | 143 | 183 | 183 |
| Juvenile Maint. | 365 | 364 | 365 | 365 | 354 | 365 | 365 | 365 | 365 | 364 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 344 | 345 | 365 | 365 | 323 | 326 | 365 | 361 |
| Adult Maint. | 365 | 364 | 365 | 365 | 354 | 365 | 365 | 365 | 365 | 364 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 344 | 345 | 365 | 365 | 323 | 325 | 365 | 361 |

## Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 89 | 90 | 88 | 52 | 87 | 91 | 91 | 75 | 79 | 85 | 83 | 86 | 77 | 84 | 80 | 88 | 70 | 75 | 79 | 83 | 55 | 58 | 73 | 83 |
| Spawning | 91 | 76 | 77 | 86 | 52 | 72 | 76 | 88 | 75 | 68 | 74 | 80 | 85 | 67 | 74 | 77 | 87 | 57 | 61 | 75 | 81 | 41 | 41 | 69 | 81 |
| Incubation | 91 | 86 | 89 | 88 | 52 | 86 | 88 | 91 | 75 | 84 | 88 | 91 | 87 | 82 | 88 | 90 | 89 | 74 | 75 | 89 | 91 | 69 | 74 | 84 | 91 |
| Larvae | 62 | 57 | 59 | 62 | 51 | 57 | 58 | 62 | 62 | 55 | 58 | 62 | 62 | 53 | 58 | 60 | 62 | 44 | 45 | 59 | 62 | 39 | 44 | 54 | 62 |

## Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 65 | 72 | 94 | 95 | 59 | 65 | 99 | 96 | 53 | 53 | 83 | 92 | 49 | 51 | 80 | 88 | 32 | 36 | 51 | 79 | 33 | 31 | 42 | 75 |
| Spawning | 91 | 48 | 57 | 77 | 74 | 41 | 44 | 75 | 85 | 36 | 31 | 64 | 76 | 35 | 30 | 63 | 75 | 15 | 17 | 48 | 65 | 10 | 5 | 32 | 63 |
| Incubation | 91 | 48 | 57 | 77 | 74 | 41 | 44 | 75 | 85 | 36 | 31 | 64 | 76 | 35 | 30 | 63 | 75 | 15 | 17 | 48 | 65 | 10 | 5 | 32 | 63 |
| Juvenile Maint. | 107 | 102 | 107 | 107 | 100 | 103 | 107 | 107 | 107 | 96 | 100 | 107 | 107 | 93 | 99 | 107 | 107 | 72 | 72 | 107 | 107 | 53 | 54 | 107 | 107 |
| Adult Maint. | 365 | 364 | 364 | 343 | 320 | 365 | 365 | 361 | 346 | 362 | 362 | 354 | 343 | 360 | 360 | 354 | 341 | 343 | 346 | 351 | 336 | 325 | 325 | 352 | 328 |

## Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 26 | 18 | 43 | 62 | 23 | 18 | 33 | 50 | 20 | 17 | 26 | 36 | 20 | 17 | 23 | 34 | 18 | 16 | 17 | 26 | 11 | 9 | 17 | 26 |
| Spawning | 47 | 32 | 28 | 47 | 47 | 29 | 26 | 45 | 47 | 33 | 28 | 44 | 46 | 33 | 29 | 42 | 45 | 33 | 25 | 36 | 44 | 29 | 24 | 35 | 44 |
| Incubation | 78 | 63 | 59 | 74 | 67 | 60 | 57 | 76 | 73 | 64 | 59 | 72 | 69 | 64 | 60 | 69 | 68 | 61 | 53 | 60 | 65 | 60 | 55 | 57 | 63 |
| Incubation | 74 | 71 | 74 | 64 | 52 | 68 | 71 | 74 | 69 | 71 | 74 | 74 | 68 | 72 | 74 | 74 | 68 | 71 | 74 | 74 | 68 | 71 | 74 | 74 | 66 |
| Rearing | 154 | 138 | 142 | 154 | 152 | 138 | 142 | 154 | 154 | 134 | 138 | 154 | 154 | 134 | 137 | 150 | 154 | 110 | 116 | 140 | 154 | 106 | 106 | 138 | 154 |
| Juvenile Maint. | 365 | 332 | 333 | 365 | 354 | 332 | 333 | 365 | 365 | 325 | 326 | 350 | 365 | 324 | 324 | 343 | 365 | 289 | 297 | 328 | 364 | 275 | 278 | 326 | 361 |
| Adult Maint. | 365 | 332 | 333 | 365 | 354 | 332 | 333 | 365 | 365 | 325 | 326 | 350 | 365 | 324 | 324 | 343 | 365 | 289 | 297 | 328 | 364 | 275 | 278 | 325 | 361 |

## Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 26 | 18 | 43 | 62 | 23 | 18 | 33 | 50 | 20 | 17 | 26 | 36 | 20 | 17 | 23 | 34 | 18 | 16 | 17 | 26 | 11 | 9 | 17 | 26 |
| Spawning | 32 | 17 | 13 | 32 | 32 | 14 | 11 | 30 | 32 | 18 | 13 | 29 | 31 | 18 | 14 | 27 | 30 | 18 | 10 | 21 | 29 | 14 | 9 | 20 | 29 |
| Incubation | 78 | 63 | 59 | 74 | 67 | 60 | 57 | 76 | 73 | 64 | 59 | 72 | 69 | 64 | 60 | 69 | 68 | 61 | 53 | 60 | 65 | 60 | 55 | 57 | 63 |
| Incubation | 74 | 71 | 74 | 64 | 52 | 68 | 71 | 74 | 69 | 71 | 74 | 74 | 68 | 72 | 74 | 74 | 68 | 71 | 74 | 74 | 68 | 71 | 74 | 74 | 66 |
| Rearing | 154 | 153 | 154 | 154 | 152 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 148 | 148 | 154 | 154 | 133 | 137 | 154 | 154 |
| Juvenile Maint. | 365 | 364 | 365 | 365 | 354 | 365 | 365 | 365 | 365 | 364 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 344 | 345 | 365 | 365 | 323 | 325 | 365 | 361 |
| Adult Maint. | 365 | 364 | 365 | 365 | 354 | 365 | 365 | 365 | 365 | 364 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 344 | 345 | 365 | 365 | 323 | 325 | 365 | 361 |
| **Number of Annual Degree Days (deg C)** | | 3,485 | | | | 3,812 | | | | 3,989 | | | | 4,031 | | | | 4,244 | | | | 4,323 | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04

RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 15. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1992wy (extremely dry) - Current Condition

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 3 | 0 | 14 | 34 | 1 | 0 | 5 | 26 | 1 | 0 | 3 | 17 | 0 | 0 | 3 | 17 | 1 | 0 | 3 | 13 | 0 | 0 | 3 | 25 |
| Spawning | 32 | 2 | 0 | 8 | 20 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 13 |
| Incubation | 62 | 2 | 0 | 13 | 44 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 16 | 1 | 0 | 0 | 12 | 0 | 0 | 0 | 27 |
| Rearing | 183 | 144 | 145 | 183 | 183 | 123 | 128 | 183 | 183 | 132 | 137 | 183 | 183 | 138 | 140 | 183 | 183 | 154 | 155 | 183 | 183 | 129 | 133 | 183 | 183 |
| Juvenile Maint. | 365 | 326 | 327 | 365 | 348 | 305 | 310 | 365 | 365 | 314 | 319 | 365 | 365 | 320 | 322 | 365 | 365 | 335 | 337 | 365 | 362 | 306 | 315 | 365 | 365 |
| Adult Maint. | 365 | 326 | 327 | 365 | 348 | 305 | 310 | 365 | 365 | 314 | 319 | 365 | 365 | 320 | 322 | 365 | 365 | 335 | 337 | 365 | 362 | 306 | 315 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 62 | 61 | 67 | 67 | 66 | 68 | 77 | 67 | 64 | 66 | 63 | 68 | 63 | 65 | 57 | 66 | 63 | 65 | 55 | 66 | 53 | 60 | 68 | 74 |
| Spawning | 91 | 30 | 29 | 64 | 67 | 27 | 29 | 48 | 64 | 29 | 31 | 42 | 65 | 28 | 30 | 39 | 64 | 29 | 31 | 39 | 61 | 19 | 24 | 42 | 69 |
| Incubation | 91 | 58 | 61 | 87 | 71 | 54 | 55 | 70 | 86 | 52 | 55 | 73 | 91 | 47 | 49 | 72 | 91 | 49 | 49 | 68 | 91 | 38 | 36 | 72 | 91 |
| Larvae | 62 | 29 | 31 | 58 | 62 | 24 | 25 | 40 | 57 | 22 | 25 | 44 | 62 | 18 | 19 | 43 | 62 | 20 | 19 | 39 | 62 | 9 | 6 | 43 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 54 | 67 | 67 | 87 | 52 | 59 | 72 | 77 | 58 | 60 | 70 | 67 | 49 | 52 | 66 | 68 | 50 | 54 | 65 | 67 | 37 | 35 | 68 | 71 |
| Spawning | 91 | 17 | 24 | 31 | 65 | 17 | 24 | 28 | 36 | 19 | 23 | 28 | 34 | 14 | 11 | 28 | 35 | 14 | 14 | 29 | 34 | 8 | 7 | 28 | 42 |
| Incubation | 91 | 17 | 24 | 31 | 65 | 17 | 24 | 28 | 36 | 19 | 23 | 28 | 34 | 14 | 11 | 28 | 35 | 14 | 14 | 29 | 34 | 8 | 7 | 28 | 42 |
| Juvenile Maint. | 107 | 64 | 63 | 107 | 107 | 32 | 36 | 90 | 107 | 56 | 59 | 97 | 107 | 57 | 60 | 96 | 107 | 67 | 68 | 105 | 107 | 52 | 54 | 107 | 107 |
| Adult Maint. | 365 | 328 | 337 | 324 | 309 | 311 | 317 | 365 | 365 | 323 | 323 | 365 | 357 | 329 | 328 | 351 | 329 | 341 | 343 | 342 | 315 | 311 | 318 | 361 | 337 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 43 | 3 | 0 | 4 | 6 | 9 | 6 | 8 | 9 | 9 | 6 | 8 | 10 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 47 | 31 | 27 | 35 | 39 | 18 | 15 | 16 | 24 | 27 | 23 | 28 | 32 | 28 | 24 | 30 | 36 | 30 | 28 | 35 | 36 | 25 | 21 | 31 | 36 |
| Incubation | 78 | 62 | 58 | 58 | 45 | 49 | 46 | 47 | 55 | 58 | 54 | 59 | 63 | 59 | 55 | 61 | 61 | 61 | 59 | 64 | 58 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 64 | 63 | 52 | 55 | 60 | 73 | 74 | 60 | 62 | 74 | 74 | 58 | 58 | 73 | 64 | 61 | 63 | 64 | 55 | 54 | 55 | 71 | 64 |
| Rearing | 154 | 101 | 101 | 151 | 154 | 92 | 94 | 115 | 151 | 98 | 96 | 124 | 152 | 94 | 93 | 124 | 151 | 95 | 97 | 127 | 152 | 80 | 78 | 132 | 154 |
| Juvenile Maint. | 365 | 288 | 286 | 359 | 348 | 229 | 226 | 299 | 348 | 251 | 242 | 312 | 355 | 253 | 248 | 312 | 351 | 275 | 279 | 316 | 351 | 231 | 221 | 321 | 365 |
| Adult Maint. | 365 | 288 | 286 | 359 | 348 | 229 | 226 | 299 | 348 | 251 | 242 | 312 | 355 | 253 | 248 | 312 | 351 | 275 | 279 | 316 | 351 | 231 | 221 | 321 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 43 | 3 | 0 | 4 | 6 | 9 | 6 | 8 | 9 | 9 | 6 | 8 | 10 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 32 | 16 | 12 | 20 | 24 | 3 | 0 | 1 | 9 | 12 | 8 | 13 | 17 | 13 | 9 | 15 | 21 | 15 | 13 | 20 | 21 | 10 | 7 | 16 | 21 |
| Incubation | 78 | 62 | 58 | 58 | 45 | 49 | 46 | 47 | 55 | 58 | 54 | 59 | 63 | 59 | 55 | 61 | 61 | 61 | 59 | 64 | 58 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 64 | 63 | 52 | 55 | 60 | 73 | 74 | 60 | 62 | 74 | 74 | 58 | 58 | 73 | 64 | 61 | 63 | 64 | 55 | 54 | 55 | 71 | 64 |
| Rearing | 154 | 128 | 134 | 154 | 154 | 117 | 122 | 154 | 154 | 121 | 130 | 154 | 154 | 125 | 133 | 154 | 154 | 137 | 143 | 154 | 154 | 114 | 126 | 154 | 154 |
| Juvenile Maint. | 365 | 326 | 327 | 365 | 348 | 305 | 310 | 365 | 365 | 314 | 319 | 365 | 365 | 320 | 322 | 365 | 365 | 335 | 337 | 365 | 362 | 306 | 315 | 365 | 365 |
| Adult Maint. | 365 | 326 | 327 | 365 | 348 | 305 | 310 | 365 | 365 | 314 | 319 | 365 | 365 | 320 | 322 | 365 | 365 | 335 | 337 | 365 | 362 | 306 | 315 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | **4,127** | | | | **5,197** | | | | **4,812** | | | | **4,722** | | | | **4,616** | | | | **4,715** | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04



RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 16. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1986wy (extremely wet) - No Action

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 39 | 41 | 41 | 33 | 32 | 38 | 46 | 38 | 31 | 36 | 45 | 40 | 31 | 35 | 43 | 40 | 28 | 30 | 38 | 41 | 25 | 28 | 36 | 39 |
| Spawning | 32 | 25 | 27 | 24 | 13 | 18 | 24 | 29 | 19 | 17 | 22 | 29 | 20 | 17 | 21 | 27 | 23 | 14 | 16 | 24 | 28 | 11 | 14 | 22 | 27 |
| Incubation | 62 | 32 | 36 | 40 | 39 | 21 | 27 | 44 | 37 | 19 | 22 | 39 | 37 | 20 | 21 | 36 | 40 | 14 | 16 | 24 | 38 | 11 | 14 | 22 | 37 |
| Rearing | 183 | 178 | 183 | 176 | 173 | 181 | 183 | 183 | 183 | 174 | 177 | 183 | 183 | 175 | 180 | 183 | 183 | 162 | 167 | 183 | 182 | 146 | 158 | 183 | 178 |
| Juvenile Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 351 |
| Adult Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 351 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 78 | 83 | 46 | 35 | 86 | 88 | 56 | 41 | 73 | 78 | 62 | 45 | 72 | 77 | 62 | 45 | 64 | 64 | 58 | 49 | 61 | 62 | 52 | 46 |
| Spawning | 91 | 64 | 69 | 46 | 35 | 70 | 72 | 54 | 41 | 59 | 64 | 60 | 45 | 58 | 63 | 60 | 45 | 53 | 53 | 56 | 49 | 50 | 51 | 48 | 46 |
| Incubation | 91 | 71 | 71 | 46 | 35 | 78 | 78 | 54 | 41 | 78 | 78 | 60 | 45 | 78 | 78 | 61 | 45 | 75 | 77 | 64 | 49 | 76 | 77 | 65 | 48 |
| Larvae | 62 | 55 | 56 | 47 | 36 | 57 | 58 | 52 | 42 | 57 | 58 | 54 | 46 | 57 | 58 | 54 | 46 | 55 | 58 | 55 | 49 | 54 | 55 | 55 | 48 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 100 | 102 | 114 | 102 | 98 | 102 | 109 | 113 | 96 | 102 | 98 | 107 | 96 | 101 | 96 | 103 | 94 | 100 | 94 | 98 | 91 | 99 | 94 | 94 |
| Spawning | 91 | 59 | 60 | 59 | 44 | 56 | 57 | 61 | 48 | 53 | 57 | 51 | 51 | 54 | 57 | 51 | 50 | 55 | 57 | 49 | 44 | 51 | 57 | 52 | 43 |
| Incubation | 91 | 59 | 60 | 59 | 44 | 56 | 57 | 61 | 48 | 53 | 57 | 51 | 51 | 54 | 57 | 51 | 50 | 55 | 57 | 49 | 44 | 51 | 57 | 52 | 43 |
| Juvenile Maint. | 107 | 89 | 95 | 96 | 92 | 92 | 98 | 104 | 96 | 78 | 90 | 107 | 97 | 81 | 91 | 107 | 97 | 75 | 83 | 107 | 98 | 57 | 60 | 107 | 96 |
| Adult Maint. | 365 | 339 | 339 | 332 | 315 | 365 | 365 | 362 | 343 | 358 | 362 | 345 | 336 | 354 | 356 | 342 | 336 | 336 | 339 | 338 | 334 | 330 | 340 | 337 | 333 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 38 | 39 | 48 | 51 | 30 | 36 | 41 | 48 | 33 | 36 | 41 | 47 | 40 | 36 | 41 | 46 | 29 | 32 | 41 | 46 | 21 | 18 | 43 | 47 |
| Spawning | 47 | 24 | 22 | 36 | 33 | 25 | 22 | 33 | 47 | 26 | 23 | 33 | 39 | 29 | 27 | 30 | 37 | 29 | 24 | 30 | 36 | 25 | 22 | 31 | 36 |
| Incubation | 78 | 37 | 35 | 47 | 42 | 56 | 53 | 64 | 78 | 57 | 54 | 59 | 55 | 58 | 56 | 53 | 50 | 56 | 51 | 49 | 49 | 55 | 52 | 50 | 48 |
| Incubation | 74 | 74 | 74 | 74 | 72 | 68 | 74 | 74 | 74 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 135 | 136 | 154 | 154 | 135 | 136 | 154 | 154 | 130 | 129 | 151 | 154 | 130 | 130 | 151 | 154 | 126 | 125 | 149 | 154 | 122 | 123 | 148 | 154 |
| Juvenile Maint. | 365 | 310 | 308 | 342 | 335 | 315 | 314 | 355 | 365 | 306 | 300 | 340 | 365 | 307 | 301 | 339 | 365 | 301 | 295 | 336 | 359 | 295 | 293 | 334 | 351 |
| Adult Maint. | 365 | 310 | 308 | 342 | 335 | 315 | 314 | 355 | 365 | 306 | 300 | 340 | 365 | 307 | 301 | 339 | 365 | 301 | 295 | 336 | 359 | 295 | 293 | 334 | 351 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 38 | 39 | 48 | 51 | 30 | 36 | 41 | 48 | 33 | 36 | 41 | 47 | 40 | 36 | 41 | 46 | 29 | 32 | 41 | 46 | 21 | 18 | 43 | 47 |
| Spawning | 32 | 15 | 13 | 30 | 29 | 10 | 7 | 18 | 32 | 11 | 8 | 18 | 31 | 14 | 12 | 18 | 30 | 14 | 9 | 22 | 31 | 10 | 7 | 22 | 32 |
| Incubation | 78 | 37 | 35 | 47 | 42 | 56 | 53 | 64 | 78 | 57 | 54 | 59 | 55 | 58 | 56 | 53 | 50 | 56 | 51 | 49 | 49 | 55 | 52 | 50 | 48 |
| Incubation | 74 | 74 | 74 | 74 | 72 | 68 | 74 | 74 | 74 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 151 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 149 | 154 | 154 | 154 | 149 | 154 | 154 | 154 | 147 | 154 | 154 | 154 | 139 | 149 | 154 | 154 |
| Juvenile Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 351 |
| Adult Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 351 |
| **Number of Annual Degree Days (deg C)** | | 3383 | | | | 3388 | | | | 3364 | | | | 3373 | | | | 3313 | | | | 3342 | | | |

RCR: p:\TROA_03\Fish\Fishsum\FishTempSum4.wb3 rev. 18-Feb-2004

Date of Truckee River Operating Model Analysis: 10-Feb-04

RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 17. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1966wy (median) - No Action

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 36 | 41 | 46 | 46 | 30 | 35 | 46 | 46 | 21 | 28 | 45 | 46 | 21 | 28 | 40 | 46 | 7 | 1 | 31 | 43 | 2 | 0 | 27 | 42 |
| Spawning | 32 | 22 | 27 | 32 | 16 | 18 | 21 | 32 | 28 | 12 | 14 | 31 | 32 | 12 | 14 | 26 | 32 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Incubation | 62 | 24 | 27 | 55 | 46 | 19 | 21 | 44 | 54 | 12 | 14 | 31 | 47 | 12 | 14 | 26 | 37 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Rearing | 183 | 182 | 183 | 183 | 183 | 183 | 183 | 183 | 183 | 181 | 183 | 183 | 183 | 180 | 183 | 183 | 183 | 161 | 162 | 183 | 183 | 139 | 141 | 183 | 183 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 87 | 90 | 87 | 57 | 89 | 95 | 95 | 88 | 77 | 82 | 84 | 90 | 76 | 79 | 82 | 89 | 59 | 70 | 71 | 79 | 43 | 41 | 68 | 82 |
| Spawning | 91 | 73 | 76 | 85 | 57 | 70 | 75 | 87 | 85 | 62 | 66 | 77 | 88 | 61 | 64 | 76 | 87 | 46 | 55 | 67 | 77 | 29 | 23 | 63 | 80 |
| Incubation | 91 | 86 | 88 | 88 | 57 | 85 | 88 | 91 | 85 | 82 | 87 | 90 | 90 | 82 | 86 | 90 | 91 | 71 | 75 | 87 | 91 | 62 | 65 | 82 | 91 |
| Larvae | 62 | 57 | 58 | 62 | 55 | 56 | 58 | 62 | 62 | 53 | 57 | 60 | 62 | 52 | 56 | 60 | 62 | 41 | 45 | 57 | 62 | 32 | 35 | 52 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 58 | 63 | 94 | 96 | 59 | 60 | 97 | 102 | 44 | 50 | 73 | 90 | 42 | 48 | 65 | 84 | 37 | 35 | 42 | 70 | 35 | 34 | 41 | 67 |
| Spawning | 91 | 40 | 46 | 76 | 74 | 32 | 31 | 70 | 82 | 24 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 11 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Incubation | 91 | 40 | 46 | 76 | 74 | 32 | 31 | 70 | 82 | 24 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 11 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Juvenile Maint. | 107 | 102 | 107 | 107 | 101 | 103 | 107 | 107 | 107 | 94 | 100 | 107 | 107 | 94 | 97 | 107 | 107 | 71 | 71 | 107 | 107 | 47 | 50 | 107 | 107 |
| Adult Maint. | 365 | 356 | 356 | 327 | 301 | 365 | 365 | 364 | 352 | 365 | 365 | 356 | 342 | 364 | 364 | 352 | 339 | 346 | 349 | 347 | 332 | 324 | 328 | 344 | 324 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 20 | 9 | 7 | 16 | 22 |
| Spawning | 47 | 29 | 31 | 46 | 47 | 24 | 18 | 45 | 46 | 31 | 27 | 39 | 45 | 31 | 28 | 38 | 45 | 31 | 24 | 34 | 44 | 28 | 22 | 33 | 44 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 49 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 62 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 73 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 70 | 58 |
| Rearing | 154 | 137 | 141 | 154 | 153 | 135 | 139 | 154 | 154 | 132 | 135 | 149 | 154 | 132 | 135 | 145 | 154 | 110 | 107 | 140 | 154 | 102 | 104 | 137 | 154 |
| Juvenile Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |
| Adult Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 20 | 9 | 7 | 16 | 22 |
| Spawning | 32 | 14 | 16 | 31 | 32 | 9 | 5 | 30 | 31 | 16 | 12 | 24 | 30 | 16 | 13 | 23 | 30 | 16 | 9 | 19 | 29 | 13 | 7 | 18 | 29 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 49 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 62 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 73 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 70 | 58 |
| Rearing | 154 | 153 | 154 | 154 | 153 | 154 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 147 | 147 | 154 | 154 | 131 | 135 | 154 | 154 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | **3,466** | | | | **3,963** | | | | **4,18** | | | | **4,173** | | | | **4,84** | | | | **4,413** | | | |

RCR j:\TROA_03\Fish\Fishsum\FishTempSum4.wb3 rev 18-Feb 2004

Date of Truckee River Operating Model Analysis: 10-Feb-04

RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 18. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1992wy (extremely dry) - No Action

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 3 | 0 | 12 | 33 | 1 | 0 | 1 | 19 | 0 | 0 | 2 | 11 | 0 | 0 | 2 | 11 | 1 | 0 | 3 | 12 | 0 | 0 | 3 | 25 |
| Spawning | 32 | 2 | 0 | 6 | 19 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 13 |
| Incubation | 62 | 2 | 0 | 11 | 42 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 11 | 0 | 0 | 0 | 28 |
| Rearing | 183 | 143 | 148 | 183 | 183 | 126 | 129 | 183 | 183 | 133 | 136 | 183 | 183 | 142 | 141 | 183 | 183 | 153 | 154 | 183 | 183 | 129 | 131 | 183 | 183 |
| Juvenile Maint. | 365 | 325 | 330 | 365 | 350 | 308 | 311 | 365 | 365 | 315 | 318 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 313 | 365 | 365 |
| Adult Maint. | 365 | 325 | 330 | 365 | 350 | 308 | 311 | 365 | 365 | 315 | 318 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 313 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 61 | 60 | 66 | 69 | 82 | 84 | 83 | 95 | 65 | 66 | 71 | 78 | 63 | 65 | 67 | 66 | 63 | 65 | 59 | 67 | 53 | 60 | 68 | 73 |
| Spawning | 91 | 29 | 28 | 63 | 69 | 26 | 28 | 39 | 62 | 29 | 30 | 37 | 61 | 28 | 30 | 37 | 58 | 29 | 31 | 40 | 61 | 19 | 24 | 41 | 68 |
| Incubation | 91 | 57 | 61 | 87 | 74 | 49 | 50 | 69 | 81 | 48 | 51 | 71 | 91 | 50 | 52 | 69 | 88 | 50 | 51 | 69 | 91 | 38 | 36 | 71 | 91 |
| Larvae | 62 | 28 | 31 | 58 | 62 | 19 | 20 | 39 | 52 | 18 | 21 | 42 | 62 | 21 | 22 | 40 | 59 | 21 | 21 | 40 | 62 | 9 | 6 | 42 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 52 | 60 | 66 | 85 | 44 | 42 | 70 | 73 | 48 | 53 | 71 | 74 | 46 | 51 | 72 | 67 | 50 | 53 | 65 | 67 | 37 | 35 | 68 | 72 |
| Spawning | 91 | 14 | 24 | 31 | 65 | 9 | 12 | 26 | 32 | 15 | 15 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 41 |
| Incubation | 91 | 14 | 24 | 31 | 65 | 9 | 12 | 26 | 32 | 15 | 15 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 41 |
| Juvenile Maint. | 107 | 65 | 65 | 107 | 107 | 32 | 32 | 90 | 107 | 55 | 59 | 96 | 107 | 59 | 61 | 95 | 107 | 66 | 68 | 107 | 107 | 53 | 54 | 107 | 107 |
| Adult Maint. | 365 | 331 | 335 | 325 | 309 | 313 | 318 | 365 | 365 | 323 | 323 | 365 | 365 | 333 | 331 | 365 | 365 | 342 | 345 | 345 | 326 | 311 | 318 | 364 | 338 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 42 | 1 | 0 | 3 | 5 | 9 | 6 | 7 | 9 | 9 | 6 | 7 | 9 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 47 | 30 | 27 | 34 | 39 | 3 | 0 | 2 | 13 | 25 | 19 | 25 | 29 | 26 | 22 | 27 | 30 | 30 | 28 | 35 | 35 | 25 | 21 | 31 | 36 |
| Incubation | 78 | 61 | 58 | 58 | 45 | 15 | 12 | 33 | 44 | 56 | 50 | 56 | 60 | 57 | 53 | 58 | 61 | 61 | 59 | 66 | 60 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 26 | 24 | 48 | 65 | 55 | 55 | 65 | 74 | 56 | 56 | 70 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 102 | 102 | 150 | 154 | 90 | 91 | 115 | 152 | 94 | 95 | 123 | 152 | 96 | 98 | 123 | 149 | 94 | 98 | 127 | 152 | 80 | 78 | 132 | 154 |
| Juvenile Maint. | 365 | 288 | 286 | 354 | 350 | 226 | 223 | 290 | 348 | 244 | 239 | 311 | 354 | 256 | 254 | 311 | 348 | 273 | 280 | 316 | 354 | 231 | 221 | 323 | 365 |
| Adult Maint. | 365 | 288 | 286 | 354 | 350 | 226 | 223 | 290 | 348 | 244 | 239 | 311 | 354 | 256 | 254 | 311 | 348 | 273 | 280 | 316 | 354 | 231 | 221 | 323 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 42 | 1 | 0 | 3 | 5 | 9 | 6 | 7 | 9 | 9 | 6 | 7 | 9 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 32 | 15 | 12 | 19 | 24 | 0 | 0 | 0 | 0 | 10 | 6 | 10 | 14 | 11 | 8 | 12 | 15 | 15 | 13 | 20 | 20 | 10 | 7 | 16 | 21 |
| Incubation | 78 | 61 | 58 | 58 | 45 | 15 | 12 | 33 | 44 | 56 | 50 | 56 | 60 | 57 | 53 | 58 | 61 | 61 | 59 | 66 | 60 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 26 | 24 | 48 | 65 | 55 | 55 | 65 | 74 | 56 | 56 | 70 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 128 | 140 | 154 | 154 | 119 | 123 | 154 | 154 | 122 | 129 | 154 | 154 | 129 | 134 | 154 | 154 | 137 | 143 | 154 | 154 | 114 | 124 | 154 | 154 |
| Juvenile Maint. | 365 | 325 | 330 | 365 | 350 | 308 | 311 | 365 | 365 | 315 | 318 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 313 | 365 | 365 |
| Adult Maint. | 365 | 325 | 330 | 365 | 350 | 308 | 311 | 365 | 365 | 315 | 318 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 313 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | **4,151** | | | | **5,670** | | | | **5,[illegible]0** | | | | **4,926** | | | | **4,643** | | | | **4,712** | | | |

RCR: j:\TROA_03\Fish\Fishsum\FishTempSum4.wb3 rev. 18-Feb-2004

Date of Truckee River Operating Model Analysis: 10-Feb-04



RCR: 1 "Provisional Data" 17-Feb-2004

Table DSSAMt 19. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1986wy (extremely wet) - LWSA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 39 | 41 | 41 | 33 | 32 | 38 | 46 | 38 | 31 | 36 | 45 | 40 | 31 | 35 | 43 | 40 | 28 | 30 | 38 | 41 | 25 | 28 | 36 | 39 |
| Spawning | 32 | 25 | 27 | 24 | 13 | 18 | 24 | 29 | 19 | 17 | 22 | 29 | 20 | 17 | 21 | 27 | 23 | 14 | 16 | 24 | 28 | 11 | 14 | 22 | 27 |
| Incubation | 62 | 32 | 36 | 40 | 39 | 21 | 27 | 44 | 37 | 19 | 22 | 39 | 37 | 20 | 21 | 36 | 40 | 14 | 16 | 24 | 38 | 11 | 14 | 22 | 37 |
| Rearing | 183 | 178 | 183 | 176 | 173 | 181 | 183 | 183 | 183 | 174 | 177 | 183 | 183 | 175 | 180 | 183 | 183 | 162 | 167 | 183 | 182 | 146 | 158 | 183 | 178 |
| Juvenile Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 350 |
| Adult Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 350 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 78 | 83 | 46 | 35 | 86 | 88 | 56 | 41 | 73 | 78 | 62 | 45 | 72 | 77 | 62 | 45 | 64 | 64 | 58 | 49 | 61 | 62 | 52 | 46 |
| Spawning | 91 | 64 | 69 | 46 | 35 | 70 | 72 | 54 | 41 | 59 | 64 | 60 | 45 | 58 | 63 | 60 | 45 | 53 | 53 | 56 | 49 | 50 | 51 | 48 | 46 |
| Incubation | 91 | 71 | 71 | 46 | 35 | 78 | 78 | 54 | 41 | 78 | 78 | 60 | 45 | 78 | 78 | 61 | 45 | 75 | 77 | 64 | 49 | 76 | 77 | 65 | 48 |
| Larvae | 62 | 55 | 56 | 47 | 36 | 57 | 58 | 52 | 42 | 57 | 58 | 54 | 46 | 57 | 58 | 54 | 46 | 55 | 58 | 55 | 49 | 54 | 55 | 55 | 48 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 100 | 102 | 114 | 102 | 98 | 102 | 109 | 113 | 96 | 102 | 98 | 107 | 96 | 101 | 96 | 103 | 94 | 100 | 94 | 96 | 92 | 100 | 94 | 94 |
| Spawning | 91 | 59 | 60 | 59 | 44 | 10-Feb-04 | | | | 53 | 57 | 51 | 51 | 54 | 57 | 51 | 50 | 55 | 57 | 49 | 44 | 51 | 57 | 52 | 43 |
| Incubation | 91 | 59 | 60 | 59 | 44 | 56 | 57 | 61 | 48 | 53 | 57 | 51 | 51 | 54 | 57 | 51 | 50 | 55 | 57 | 49 | 44 | 51 | 57 | 52 | 43 |
| Juvenile Maint. | 107 | 89 | 95 | 96 | 92 | 92 | 98 | 104 | 96 | 78 | 90 | 107 | 97 | 81 | 91 | 107 | 97 | 75 | 83 | 107 | 98 | 57 | 60 | 107 | 96 |
| Adult Maint. | 365 | 339 | 339 | 332 | 315 | 365 | 365 | 364 | 343 | 358 | 362 | 346 | 336 | 354 | 356 | 343 | 336 | 336 | 339 | 338 | 334 | 330 | 340 | 337 | 333 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 38 | 39 | 48 | 51 | 30 | 36 | 41 | 48 | 33 | 36 | 41 | 47 | 40 | 36 | 41 | 46 | 29 | 32 | 41 | 46 | 17 | 14 | 41 | 47 |
| Spawning | 47 | 24 | 22 | 36 | 33 | 25 | 22 | 33 | 47 | 26 | 23 | 33 | 39 | 29 | 27 | 30 | 37 | 29 | 24 | 30 | 36 | 25 | 22 | 29 | 36 |
| Incubation | 78 | 37 | 35 | 47 | 42 | 56 | 53 | 64 | 78 | 57 | 54 | 59 | 55 | 58 | 56 | 53 | 51 | 56 | 51 | 49 | 49 | 55 | 52 | 48 | 48 |
| Incubation | 74 | 74 | 74 | 74 | 72 | 68 | 74 | 74 | 74 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 135 | 136 | 154 | 154 | 135 | 136 | 154 | 154 | 130 | 129 | 151 | 154 | 130 | 130 | 151 | 154 | 126 | 125 | 149 | 154 | 122 | 123 | 148 | 154 |
| Juvenile Maint. | 365 | 310 | 308 | 342 | 335 | 315 | 314 | 355 | 365 | 306 | 300 | 340 | 365 | 307 | 301 | 339 | 365 | 301 | 295 | 336 | 359 | 295 | 293 | 334 | 350 |
| Adult Maint. | 365 | 310 | 308 | 342 | 335 | 315 | 314 | 355 | 365 | 306 | 300 | 340 | 365 | 307 | 301 | 339 | 365 | 301 | 295 | 336 | 359 | 295 | 293 | 334 | 350 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 38 | 39 | 48 | 51 | 30 | 36 | 41 | 48 | 33 | 36 | 41 | 47 | 40 | 36 | 41 | 46 | 29 | 32 | 41 | 46 | 17 | 14 | 41 | 47 |
| Spawning | 32 | 15 | 13 | 30 | 29 | 10 | 7 | 18 | 32 | 11 | 8 | 18 | 31 | 14 | 12 | 18 | 30 | 14 | 9 | 22 | 31 | 10 | 7 | 21 | 32 |
| Incubation | 78 | 37 | 35 | 47 | 42 | 56 | 53 | 64 | 78 | 57 | 54 | 59 | 55 | 58 | 56 | 53 | 51 | 56 | 51 | 49 | 49 | 55 | 52 | 48 | 48 |
| Incubation | 74 | 74 | 74 | 74 | 72 | 68 | 74 | 74 | 74 | 71 | 74 | 74 | 74 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Rearing | 154 | 151 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 149 | 154 | 154 | 154 | 149 | 154 | 154 | 154 | 147 | 154 | 154 | 154 | 139 | 149 | 154 | 154 |
| Juvenile Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 350 |
| Adult Maint. | 365 | 356 | 361 | 342 | 335 | 363 | 365 | 365 | 365 | 356 | 359 | 365 | 365 | 357 | 362 | 365 | 365 | 344 | 349 | 365 | 359 | 328 | 340 | 365 | 350 |
| **Number of Annual Degree Days (deg C)** | | 3,383 | | | | 3,806 | | | | 3,865 | | | | 3,874 | | | | 3,913 | | | | 3,948 | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04

Table DSSAMt 20. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1966wy (median) - LWSA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 36 | 41 | 46 | 46 | 30 | 35 | 46 | 46 | 21 | 28 | 45 | 46 | 21 | 28 | 40 | 46 | 7 | 1 | 31 | 43 | 2 | 0 | 27 | 42 |
| Spawning | 32 | 22 | 27 | 32 | 16 | 18 | 21 | 32 | 28 | 12 | 14 | 31 | 32 | 12 | 14 | 26 | 32 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Incubation | 62 | 24 | 27 | 55 | 46 | 19 | 21 | 44 | 54 | 12 | 14 | 31 | 47 | 12 | 14 | 26 | 37 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Rearing | 183 | 182 | 183 | 183 | 183 | 183 | 183 | 183 | 183 | 181 | 183 | 183 | 183 | 180 | 183 | 183 | 183 | 161 | 162 | 183 | 183 | 139 | 141 | 183 | 183 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 87 | 90 | 87 | 57 | 89 | 95 | 95 | 86 | 77 | 82 | 84 | 90 | 76 | 79 | 82 | 89 | 59 | 70 | 71 | 79 | 42 | 41 | 68 | 82 |
| Spawning | 91 | 73 | 76 | 85 | 57 | 70 | 75 | 87 | 85 | 62 | 66 | 77 | 88 | 61 | 64 | 76 | 87 | 46 | 55 | 67 | 77 | 28 | 23 | 63 | 80 |
| Incubation | 91 | 86 | 88 | 88 | 57 | 85 | 88 | 91 | 85 | 82 | 87 | 90 | 90 | 82 | 86 | 90 | 91 | 71 | 75 | 87 | 91 | 62 | 65 | 82 | 91 |
| Larvae | 62 | 57 | 58 | 62 | 55 | 56 | 58 | 62 | 62 | 53 | 57 | 60 | 62 | 52 | 56 | 60 | 62 | 41 | 45 | 57 | 62 | 32 | 35 | 52 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 57 | 63 | 94 | 96 | 57 | 59 | 97 | 103 | 44 | 50 | 73 | 90 | 42 | 48 | 64 | 84 | 37 | 32 | 41 | 70 | 35 | 34 | 40 | 67 |
| Spawning | 91 | 40 | 44 | 76 | 75 | 29 | 30 | 70 | 82 | 23 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 10 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Incubation | 91 | 40 | 44 | 76 | 75 | 29 | 30 | 70 | 82 | 23 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 10 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Juvenile Maint. | 107 | 102 | 107 | 107 | 101 | 103 | 107 | 107 | 107 | 94 | 99 | 107 | 107 | 94 | 97 | 107 | 107 | 70 | 71 | 107 | 107 | 47 | 50 | 107 | 107 |
| Adult Maint. | 365 | 356 | 356 | 327 | 302 | 365 | 365 | 364 | 352 | 365 | 365 | 355 | 342 | 364 | 364 | 352 | 339 | 346 | 349 | 347 | 332 | 325 | 329 | 346 | 324 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 19 | 9 | 7 | 16 | 22 |
| Spawning | 47 | 29 | 31 | 46 | 47 | 24 | 17 | 45 | 46 | 31 | 27 | 39 | 45 | 31 | 28 | 38 | 45 | 30 | 24 | 34 | 44 | 28 | 22 | 33 | 44 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 48 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 61 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 74 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 71 | 58 |
| Rearing | 154 | 137 | 141 | 154 | 153 | 135 | 139 | 154 | 154 | 132 | 135 | 149 | 154 | 132 | 135 | 145 | 154 | 110 | 107 | 140 | 154 | 102 | 104 | 137 | 154 |
| Juvenile Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |
| Adult Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 19 | 9 | 7 | 16 | 22 |
| Spawning | 32 | 14 | 16 | 31 | 32 | 9 | 5 | 30 | 31 | 16 | 12 | 24 | 30 | 16 | 13 | 23 | 30 | 15 | 9 | 19 | 29 | 13 | 7 | 18 | 29 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 48 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 61 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 74 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 71 | 58 |
| Rearing | 154 | 153 | 154 | 154 | 153 | 154 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 147 | 147 | 154 | 154 | 131 | 135 | 154 | 154 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | 3,469 | | | | 3,969 | | | | 4,140 | | | | 4,177 | | | | 4,347 | | | | 4,416 | | | |

RCR: j:\TROA_03\Fish\Fishsum\FishTempSum4.wb3 rev. 18-Feb-2004

Date of Truckee River Operating Model Analysis: 10-Feb-04



RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 21. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1992wy (extremely dry) - LWSA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 3 | 0 | 12 | 33 | 1 | 0 | 1 | 19 | 0 | 0 | 2 | 11 | 0 | 0 | 2 | 11 | 1 | 0 | 3 | 12 | 0 | 0 | 3 | 25 |
| Spawning | 32 | 2 | 0 | 6 | 19 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 13 |
| Incubation | 62 | 2 | 0 | 11 | 42 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 11 | 0 | 0 | 0 | 28 |
| Rearing | 183 | 143 | 149 | 183 | 183 | 127 | 129 | 183 | 183 | 133 | 137 | 183 | 183 | 142 | 141 | 183 | 183 | 153 | 154 | 183 | 183 | 129 | 132 | 183 | 183 |
| Juvenile Maint. | 365 | 325 | 331 | 365 | 352 | 309 | 311 | 365 | 365 | 315 | 319 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 314 | 365 | 365 |
| Adult Maint. | 365 | 325 | 331 | 365 | 352 | 309 | 311 | 365 | 365 | 315 | 319 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 314 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 61 | 60 | 66 | 68 | 83 | 85 | 83 | 95 | 65 | 66 | 71 | 78 | 63 | 65 | 67 | 66 | 63 | 65 | 59 | 67 | 53 | 60 | 68 | 73 |
| Spawning | 91 | 29 | 28 | 63 | 68 | 26 | 28 | 39 | 62 | 29 | 30 | 37 | 61 | 28 | 30 | 37 | 58 | 29 | 31 | 40 | 61 | 19 | 24 | 41 | 68 |
| Incubation | 91 | 57 | 61 | 87 | 74 | 49 | 50 | 69 | 81 | 48 | 51 | 71 | 91 | 50 | 52 | 69 | 88 | 50 | 51 | 69 | 91 | 38 | 36 | 71 | 91 |
| Larvae | 62 | 28 | 31 | 58 | 62 | 19 | 20 | 39 | 52 | 18 | 21 | 42 | 62 | 21 | 22 | 40 | 59 | 21 | 21 | 40 | 62 | 9 | 6 | 42 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 52 | 59 | 66 | 85 | 43 | 42 | 70 | 73 | 47 | 53 | 71 | 74 | 46 | 51 | 72 | 67 | 50 | 53 | 65 | 67 | 37 | 35 | 68 | 72 |
| Spawning | 91 | 14 | 24 | 31 | 65 | 9 | 11 | 26 | 32 | 15 | 15 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 41 |
| Incubation | 91 | 14 | 24 | 31 | 65 | 9 | 11 | 26 | 32 | 15 | 15 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 41 |
| Juvenile Maint. | 107 | 65 | 66 | 107 | 107 | 32 | 34 | 92 | 107 | 55 | 59 | 96 | 107 | 59 | 61 | 95 | 107 | 66 | 68 | 107 | 107 | 53 | 54 | 107 | 107 |
| Adult Maint. | 365 | 331 | 335 | 325 | 309 | 314 | 319 | 365 | 365 | 323 | 324 | 365 | 365 | 333 | 331 | 365 | 365 | 342 | 345 | 345 | 326 | 311 | 318 | 364 | 338 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 42 | 1 | 0 | 3 | 5 | 9 | 6 | 7 | 9 | 9 | 6 | 7 | 9 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 47 | 30 | 27 | 35 | 39 | 2 | 0 | 1 | 13 | 25 | 19 | 25 | 29 | 26 | 22 | 27 | 30 | 30 | 28 | 35 | 35 | 25 | 21 | 31 | 36 |
| Incubation | 78 | 61 | 58 | 59 | 44 | 12 | 10 | 30 | 44 | 56 | 50 | 56 | 60 | 57 | 53 | 58 | 61 | 61 | 59 | 66 | 60 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 25 | 24 | 47 | 65 | 55 | 55 | 65 | 74 | 56 | 56 | 69 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 102 | 102 | 150 | 154 | 90 | 92 | 115 | 152 | 94 | 95 | 123 | 152 | 96 | 98 | 123 | 149 | 94 | 98 | 127 | 152 | 80 | 78 | 132 | 154 |
| Juvenile Maint. | 365 | 288 | 286 | 353 | 352 | 226 | 224 | 291 | 349 | 244 | 239 | 311 | 354 | 256 | 254 | 311 | 347 | 273 | 280 | 316 | 354 | 231 | 221 | 323 | 365 |
| Adult Maint. | 365 | 288 | 286 | 353 | 352 | 226 | 224 | 291 | 349 | 244 | 239 | 311 | 354 | 256 | 254 | 311 | 347 | 273 | 280 | 316 | 354 | 231 | 221 | 323 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 11 | 8 | 11 | 42 | 1 | 0 | 3 | 5 | 9 | 6 | 7 | 9 | 9 | 6 | 7 | 9 | 10 | 7 | 8 | 10 | 9 | 6 | 8 | 11 |
| Spawning | 32 | 15 | 12 | 20 | 24 | 0 | 0 | 0 | 0 | 10 | 6 | 10 | 14 | 11 | 8 | 12 | 15 | 15 | 13 | 20 | 20 | 10 | 7 | 16 | 21 |
| Incubation | 78 | 61 | 58 | 59 | 44 | 12 | 10 | 30 | 44 | 56 | 50 | 56 | 60 | 57 | 53 | 58 | 61 | 61 | 59 | 66 | 60 | 56 | 52 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 25 | 24 | 47 | 65 | 55 | 55 | 65 | 74 | 56 | 56 | 69 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 128 | 141 | 154 | 154 | 120 | 123 | 154 | 154 | 122 | 130 | 154 | 154 | 129 | 134 | 154 | 154 | 137 | 143 | 154 | 154 | 114 | 125 | 154 | 154 |
| Juvenile Maint. | 365 | 325 | 331 | 365 | 352 | 309 | 311 | 365 | 365 | 315 | 319 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 314 | 365 | 365 |
| Adult Maint. | 365 | 325 | 331 | 365 | 352 | 309 | 311 | 365 | 365 | 315 | 319 | 365 | 365 | 324 | 323 | 365 | 365 | 334 | 336 | 365 | 365 | 306 | 314 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | 4,155 | | | | 5,675 | | | | 5,076 | | | | 4,930 | | | | 4,643 | | | | 4,712 | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04



RCR: 1 **Provisional Data** 17-Feb-2004

Table DSSAMt 22. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1986wy (extremely wet) - TROA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 36 | 41 | 46 | 46 | 30 | 35 | 46 | 46 | 21 | 28 | 45 | 46 | 21 | 28 | 40 | 48 | 7 | 1 | 31 | 43 | 2 | 0 | 27 | 42 |
| Spawning | 32 | 22 | 27 | 32 | 16 | 18 | 21 | 32 | 28 | 12 | 14 | 31 | 32 | 12 | 14 | 26 | 32 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Incubation | 62 | 24 | 27 | 55 | 46 | 19 | 21 | 44 | 54 | 12 | 14 | 31 | 47 | 12 | 14 | 26 | 37 | 4 | 1 | 17 | 29 | 1 | 0 | 13 | 28 |
| Rearing | 183 | 182 | 183 | 183 | 183 | 183 | 183 | 183 | 183 | 181 | 183 | 183 | 183 | 180 | 183 | 183 | 183 | 161 | 162 | 183 | 183 | 139 | 141 | 183 | 183 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 87 | 90 | 87 | 57 | 89 | 95 | 95 | 86 | 77 | 82 | 84 | 90 | 76 | 79 | 82 | 89 | 59 | 70 | 71 | 79 | 43 | 41 | 68 | 82 |
| Spawning | 91 | 73 | 76 | 65 | 57 | 70 | 75 | 87 | 85 | 62 | 66 | 77 | 88 | 61 | 64 | 76 | 87 | 46 | 55 | 67 | 77 | 29 | 23 | 63 | 80 |
| Incubation | 91 | 86 | 88 | 88 | 57 | 85 | 88 | 91 | 85 | 82 | 87 | 90 | 90 | 82 | 86 | 90 | 91 | 71 | 75 | 87 | 91 | 62 | 65 | 82 | 91 |
| Larvae | 62 | 57 | 58 | 62 | 55 | 56 | 58 | 62 | 62 | 53 | 57 | 60 | 62 | 52 | 56 | 60 | 62 | 41 | 45 | 57 | 62 | 32 | 35 | 52 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 58 | 63 | 94 | 96 | 59 | 60 | 97 | 102 | 44 | 50 | 73 | 90 | 42 | 48 | 65 | 84 | 37 | 35 | 42 | 70 | 35 | 34 | 41 | 67 |
| Spawning | 91 | 40 | 46 | 76 | 74 | 32 | 31 | 70 | 82 | 24 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 11 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Incubation | 91 | 40 | 46 | 76 | 74 | 32 | 31 | 70 | 82 | 24 | 23 | 58 | 75 | 22 | 23 | 54 | 69 | 11 | 12 | 29 | 61 | 6 | 0 | 23 | 60 |
| Juvenile Maint. | 107 | 102 | 107 | 107 | 101 | 103 | 107 | 107 | 107 | 94 | 100 | 107 | 107 | 94 | 97 | 107 | 107 | 71 | 71 | 107 | 107 | 47 | 50 | 107 | 107 |
| Adult Maint. | 365 | 356 | 356 | 327 | 301 | 365 | 365 | 364 | 352 | 365 | 365 | 355 | 342 | 364 | 364 | 352 | 339 | 346 | 349 | 347 | 332 | 324 | 328 | 344 | 324 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 20 | 9 | 7 | 16 | 22 |
| Spawning | 47 | 29 | 31 | 46 | 47 | 24 | 18 | 45 | 46 | 31 | 27 | 39 | 45 | 31 | 28 | 38 | 45 | 31 | 24 | 34 | 44 | 28 | 22 | 33 | 44 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 49 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 62 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 73 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 70 | 58 |
| Rearing | 154 | 137 | 141 | 154 | 153 | 135 | 139 | 154 | 154 | 132 | 135 | 149 | 154 | 132 | 135 | 145 | 154 | 110 | 107 | 140 | 154 | 102 | 104 | 137 | 154 |
| Juvenile Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |
| Adult Maint. | 365 | 331 | 332 | 360 | 341 | 330 | 330 | 365 | 365 | 323 | 323 | 346 | 365 | 322 | 323 | 338 | 365 | 290 | 288 | 328 | 365 | 271 | 276 | 325 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 22 | 17 | 42 | 62 | 20 | 17 | 19 | 45 | 18 | 16 | 18 | 31 | 18 | 16 | 17 | 30 | 15 | 15 | 16 | 20 | 9 | 7 | 16 | 22 |
| Spawning | 32 | 14 | 16 | 31 | 32 | 9 | 5 | 30 | 31 | 16 | 12 | 24 | 30 | 16 | 13 | 23 | 30 | 16 | 9 | 19 | 29 | 13 | 7 | 18 | 29 |
| Incubation | 78 | 60 | 62 | 75 | 68 | 55 | 49 | 76 | 77 | 62 | 58 | 70 | 73 | 62 | 59 | 69 | 73 | 62 | 55 | 62 | 67 | 59 | 53 | 59 | 65 |
| Incubation | 74 | 64 | 68 | 53 | 28 | 65 | 70 | 74 | 74 | 71 | 73 | 74 | 67 | 71 | 74 | 73 | 66 | 71 | 74 | 71 | 63 | 71 | 73 | 70 | 58 |
| Rearing | 154 | 153 | 154 | 154 | 153 | 154 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 147 | 147 | 154 | 154 | 131 | 135 | 154 | 154 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 363 | 365 | 365 | 365 | 362 | 365 | 365 | 365 | 343 | 344 | 365 | 365 | 321 | 323 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | 3,466 | | | | 3,963 | | | | 4,136 | | | | 4,173 | | | | 4,344 | | | | 4,413 | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04

Table DSSAMt 23. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1966wy (median) - TROA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 25 | 28 | 44 | 46 | 16 | 20 | 42 | 46 | 9 | 0 | 31 | 44 | 8 | 0 | 29 | 44 | 0 | 0 | 13 | 34 | 0 | 0 | 3 | 34 |
| Spawning | 32 | 13 | 14 | 30 | 21 | 8 | 10 | 28 | 32 | 5 | 0 | 17 | 30 | 5 | 0 | 15 | 30 | 0 | 0 | 7 | 20 | 0 | 0 | 1 | 20 |
| Incubation | 62 | 13 | 14 | 32 | 48 | 8 | 10 | 28 | 45 | 5 | 0 | 17 | 30 | 5 | 0 | 15 | 30 | 0 | 0 | 7 | 20 | 0 | 0 | 1 | 20 |
| Rearing | 183 | 182 | 183 | 183 | 182 | 183 | 183 | 183 | 183 | 179 | 183 | 183 | 183 | 177 | 183 | 183 | 183 | 157 | 161 | 183 | 183 | 125 | 128 | 183 | 183 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 361 | 365 | 365 | 365 | 359 | 365 | 365 | 365 | 339 | 343 | 365 | 365 | 307 | 310 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 361 | 365 | 365 | 365 | 359 | 365 | 365 | 365 | 339 | 343 | 365 | 365 | 307 | 310 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 79 | 85 | 78 | 63 | 82 | 86 | 87 | 81 | 66 | 74 | 81 | 80 | 65 | 72 | 77 | 78 | 40 | 42 | 64 | 76 | 36 | 38 | 61 | 73 |
| Spawning | 91 | 64 | 70 | 76 | 63 | 61 | 64 | 74 | 79 | 49 | 56 | 72 | 77 | 49 | 55 | 68 | 75 | 27 | 26 | 59 | 73 | 22 | 21 | 56 | 70 |
| Incubation | 91 | 77 | 79 | 88 | 63 | 76 | 78 | 91 | 85 | 73 | 74 | 84 | 91 | 73 | 74 | 82 | 91 | 62 | 64 | 80 | 89 | 53 | 58 | 78 | 91 |
| Larvae | 62 | 48 | 49 | 62 | 59 | 47 | 48 | 62 | 62 | 43 | 44 | 54 | 62 | 43 | 44 | 52 | 62 | 32 | 34 | 50 | 60 | 23 | 28 | 48 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 48 | 49 | 84 | 85 | 51 | 54 | 82 | 98 | 43 | 49 | 55 | 80 | 41 | 47 | 52 | 70 | 34 | 34 | 40 | 53 | 36 | 36 | 39 | 54 |
| Spawning | 91 | 26 | 24 | 70 | 67 | 19 | 19 | 58 | 73 | 16 | 19 | 35 | 60 | 16 | 19 | 28 | 58 | 10 | 11 | 22 | 45 | 5 | 0 | 22 | 45 |
| Incubation | 91 | 26 | 24 | 70 | 67 | 19 | 19 | 58 | 73 | 16 | 19 | 35 | 60 | 16 | 19 | 28 | 58 | 10 | 11 | 22 | 45 | 5 | 0 | 22 | 45 |
| Juvenile Maint. | 107 | 100 | 107 | 107 | 101 | 100 | 107 | 107 | 107 | 85 | 90 | 107 | 107 | 81 | 88 | 107 | 107 | 67 | 66 | 107 | 107 | 43 | 39 | 107 | 107 |
| Adult Maint. | 365 | 356 | 356 | 325 | 292 | 365 | 365 | 365 | 357 | 362 | 365 | 360 | 346 | 362 | 365 | 356 | 345 | 345 | 351 | 350 | 331 | 319 | 320 | 347 | 320 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 28 | 23 | 39 | 62 | 25 | 19 | 28 | 45 | 23 | 18 | 26 | 34 | 23 | 18 | 26 | 32 | 20 | 17 | 20 | 26 | 16 | 16 | 18 | 26 |
| Spawning | 47 | 33 | 31 | 45 | 42 | 26 | 26 | 46 | 47 | 33 | 29 | 45 | 47 | 33 | 31 | 45 | 46 | 32 | 27 | 44 | 45 | 29 | 22 | 39 | 45 |
| Incubation | 78 | 64 | 62 | 75 | 61 | 57 | 57 | 77 | 78 | 64 | 60 | 76 | 78 | 64 | 62 | 76 | 77 | 63 | 58 | 73 | 69 | 60 | 53 | 66 | 65 |
| Incubation | 74 | 63 | 66 | 54 | 30 | 64 | 69 | 71 | 74 | 70 | 72 | 74 | 68 | 71 | 72 | 74 | 67 | 71 | 74 | 72 | 64 | 71 | 73 | 71 | 59 |
| Rearing | 154 | 130 | 133 | 154 | 154 | 128 | 131 | 154 | 154 | 114 | 117 | 146 | 154 | 113 | 116 | 141 | 154 | 104 | 102 | 132 | 154 | 94 | 93 | 130 | 154 |
| Juvenile Maint. | 365 | 324 | 324 | 360 | 341 | 322 | 321 | 365 | 365 | 303 | 304 | 338 | 365 | 302 | 303 | 332 | 365 | 283 | 282 | 320 | 362 | 263 | 264 | 317 | 365 |
| Adult Maint. | 365 | 324 | 324 | 360 | 341 | 322 | 321 | 365 | 365 | 303 | 304 | 338 | 365 | 302 | 303 | 332 | 365 | 283 | 282 | 320 | 362 | 263 | 264 | 317 | 365 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 28 | 23 | 39 | 62 | 25 | 19 | 28 | 45 | 23 | 18 | 26 | 34 | 23 | 18 | 26 | 32 | 20 | 17 | 20 | 26 | 16 | 16 | 18 | 26 |
| Spawning | 32 | 18 | 16 | 32 | 32 | 11 | 11 | 31 | 32 | 18 | 14 | 30 | 32 | 18 | 16 | 30 | 31 | 17 | 12 | 29 | 30 | 14 | 7 | 24 | 30 |
| Incubation | 78 | 64 | 62 | 75 | 61 | 57 | 57 | 77 | 78 | 64 | 60 | 76 | 78 | 64 | 62 | 76 | 77 | 63 | 58 | 73 | 69 | 60 | 53 | 66 | 65 |
| Incubation | 74 | 63 | 66 | 54 | 30 | 64 | 69 | 71 | 74 | 70 | 72 | 74 | 68 | 71 | 72 | 74 | 67 | 71 | 74 | 72 | 64 | 71 | 73 | 71 | 59 |
| Rearing | 154 | 153 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 153 | 154 | 154 | 154 | 152 | 154 | 154 | 154 | 143 | 146 | 154 | 154 | 118 | 123 | 154 | 154 |
| Juvenile Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 361 | 365 | 365 | 365 | 359 | 365 | 365 | 365 | 339 | 343 | 365 | 365 | 307 | 310 | 365 | 365 |
| Adult Maint. | 365 | 364 | 365 | 360 | 341 | 365 | 365 | 365 | 365 | 361 | 365 | 365 | 365 | 359 | 365 | 365 | 365 | 339 | 343 | 365 | 365 | 307 | 310 | 365 | 365 |
| **Number of Annual Degree Days (deg C)** | | 3,549 | | | | 4,088 | | | | 4,246 | | | | 4,281 | | | | 4,405 | | | | 4,455 | | | |

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Date of Truckee River Operating Model Analysis: 10-Feb-04



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Table DSSAMt 24. No. of days recommended temperatures are met for Truckee R. Fishes

## Truckee R. 1992wy (extremely dry) - TROA

### Rainbow Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 46 | 3 | 0 | 12 | 33 | 1 | 0 | 1 | 19 | 0 | 0 | 2 | 11 | 0 | 0 | 2 | 11 | 1 | 0 | 3 | 13 | 0 | 0 | 3 | 24 |
| Spawning | 32 | 2 | 0 | 6 | 19 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 12 |
| Incubation | 62 | 2 | 0 | 11 | 40 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 12 | 0 | 0 | 0 | 24 |
| Rearing | 183 | 156 | 163 | 183 | 183 | 147 | 154 | 183 | 183 | 141 | 141 | 183 | 183 | 147 | 153 | 183 | 183 | 153 | 156 | 183 | 183 | 130 | 133 | 183 | 183 |
| Juvenile Maint. | 365 | 338 | 345 | 365 | 351 | 329 | 336 | 365 | 365 | 323 | 323 | 365 | 365 | 329 | 335 | 365 | 365 | 334 | 338 | 365 | 365 | 307 | 315 | 365 | 365 |
| Adult Maint. | 365 | 338 | 345 | 365 | 351 | 329 | 336 | 365 | 365 | 323 | 323 | 365 | 365 | 329 | 335 | 365 | 365 | 334 | 338 | 365 | 365 | 307 | 315 | 365 | 365 |

### Cui-ui

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 150 | 61 | 60 | 66 | 66 | 85 | 87 | 87 | 98 | 65 | 66 | 71 | 78 | 63 | 65 | 68 | 69 | 63 | 65 | 59 | 67 | 53 | 60 | 69 | 74 |
| Spawning | 91 | 29 | 28 | 63 | 66 | 26 | 28 | 40 | 64 | 29 | 30 | 37 | 61 | 28 | 30 | 37 | 59 | 29 | 31 | 40 | 61 | 19 | 24 | 42 | 69 |
| Incubation | 91 | 59 | 62 | 86 | 74 | 51 | 54 | 71 | 87 | 49 | 51 | 71 | 91 | 51 | 52 | 69 | 87 | 50 | 51 | 69 | 91 | 39 | 36 | 71 | 91 |
| Larvae | 62 | 30 | 32 | 57 | 62 | 22 | 24 | 42 | 58 | 20 | 21 | 42 | 62 | 22 | 22 | 40 | 58 | 21 | 21 | 40 | 62 | 9 | 6 | 42 | 62 |

### Lahontan Cutthroat Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 136 | 52 | 59 | 68 | 85 | 43 | 42 | 70 | 73 | 47 | 53 | 71 | 74 | 46 | 51 | 72 | 68 | 50 | 54 | 65 | 68 | 37 | 35 | 67 | 71 |
| Spawning | 91 | 16 | 24 | 32 | 65 | 10 | 10 | 27 | 32 | 15 | 16 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 40 |
| Incubation | 91 | 16 | 24 | 32 | 65 | 10 | 10 | 27 | 32 | 15 | 16 | 28 | 31 | 14 | 14 | 28 | 32 | 14 | 13 | 29 | 34 | 8 | 7 | 28 | 40 |
| Juvenile Maint. | 107 | 72 | 76 | 107 | 107 | 68 | 68 | 107 | 107 | 60 | 61 | 98 | 107 | 64 | 65 | 97 | 107 | 66 | 68 | 106 | 107 | 53 | 55 | 105 | 107 |
| Adult Maint. | 365 | 340 | 346 | 325 | 309 | 341 | 349 | 365 | 365 | 329 | 336 | 365 | 365 | 338 | 343 | 365 | 365 | 345 | 347 | 345 | 324 | 314 | 318 | 364 | 339 |

### Mountain Whitefish

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 10 | 8 | 10 | 16 | 7 | 4 | 6 | 7 | 9 | 6 | 7 | 9 | 10 | 6 | 7 | 9 | 10 | 7 | 8 | 9 | 9 | 6 | 8 | 10 |
| Spawning | 47 | 30 | 26 | 36 | 38 | 2 | 0 | 1 | 8 | 26 | 20 | 26 | 29 | 28 | 23 | 27 | 31 | 30 | 27 | 34 | 35 | 27 | 22 | 31 | 36 |
| Incubation | 78 | 61 | 57 | 60 | 43 | 13 | 9 | 32 | 39 | 57 | 51 | 57 | 60 | 59 | 54 | 58 | 62 | 61 | 58 | 65 | 60 | 58 | 53 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 23 | 24 | 47 | 64 | 55 | 55 | 65 | 74 | 56 | 56 | 68 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 104 | 105 | 151 | 154 | 98 | 99 | 128 | 154 | 95 | 97 | 124 | 152 | 97 | 97 | 124 | 149 | 96 | 97 | 128 | 152 | 81 | 79 | 130 | 154 |
| Juvenile Maint. | 365 | 289 | 290 | 349 | 351 | 253 | 245 | 317 | 360 | 251 | 248 | 312 | 351 | 263 | 264 | 312 | 347 | 277 | 276 | 317 | 354 | 232 | 224 | 319 | 363 |
| Adult Maint. | 365 | 289 | 290 | 349 | 351 | 253 | 245 | 317 | 360 | 251 | 248 | 312 | 351 | 263 | 264 | 312 | 347 | 277 | 276 | 317 | 354 | 232 | 224 | 319 | 363 |

### Brown Trout

| Life Stage | Total # Days | East McCarran 96.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Lockwood 106.5 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Clark 124.9 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Painted Rock 131.6 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Dead Ox 171.7 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN | Marble Bluff 187.0 km Inst. MAX | 7-day moving avg MAX | 7-day moving avg MEAN | 7-day moving avg MIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adult Migration | 62 | 10 | 8 | 10 | 16 | 7 | 4 | 6 | 7 | 9 | 6 | 7 | 9 | 10 | 6 | 7 | 9 | 10 | 7 | 8 | 9 | 9 | 6 | 8 | 10 |
| Spawning | 32 | 15 | 11 | 21 | 23 | 0 | 0 | 1 | 6 | 11 | 7 | 11 | 14 | 13 | 9 | 12 | 16 | 15 | 12 | 19 | 20 | 12 | 8 | 16 | 21 |
| Incubation | 78 | 61 | 57 | 60 | 43 | 13 | 9 | 32 | 39 | 57 | 51 | 57 | 60 | 59 | 54 | 58 | 62 | 61 | 58 | 65 | 60 | 58 | 53 | 62 | 64 |
| Incubation | 74 | 59 | 63 | 63 | 52 | 23 | 24 | 47 | 64 | 55 | 55 | 65 | 74 | 56 | 56 | 68 | 74 | 60 | 63 | 66 | 57 | 54 | 55 | 71 | 66 |
| Rearing | 154 | 138 | 150 | 154 | 154 | 132 | 143 | 154 | 154 | 128 | 134 | 154 | 154 | 134 | 143 | 154 | 154 | 137 | 144 | 154 | 154 | 115 | 126 | 154 | 154 |
| Juvenile Maint. | 365 | 338 | 345 | 365 | 351 | 329 | 336 | 365 | 365 | 323 | 323 | 365 | 365 | 329 | 335 | 365 | 365 | 334 | 338 | 365 | 365 | 307 | 315 | 365 | 365 |
| Adult Maint. | 365 | 338 | 345 | 365 | 351 | 329 | 336 | 365 | 365 | 323 | 323 | 365 | 365 | 329 | 335 | 365 | 365 | 334 | 338 | 365 | 365 | 307 | 315 | 365 | 365 |

| | East McCarran 96.7 km | Lockwood 106.5 km | Clark 124.9 km | Painted Rock 131.6 km | Dead Ox 171.7 km | Marble Bluff 187.0 km |
|---|---|---|---|---|---|---|
| **Number of Annual Degree Days (deg C)** | 4,208 | 5,485 | 5,060 | 4,925 | 4,653 | 4,748 |

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Date of Truckee River Operating Model Analysis: 10-Feb-04



RCR: 1 **Provisional Data** 17-Feb-2004

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# Attachment to Water Quality Appendix

## Beneficial Uses of Surface Waters

Beneficial uses of surface waters of the Lahontan Region are listed at: http://www.swrcb.ca.gov/rwqcb6/BasinPlan/Index.htm and are attached.

A summary of beneficial uses for water bodies identified in the Nevada Administrative Code are listed at: http://ndep.nv.gov/bwqp/file/uses and are attached.

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC | PWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | WILD | RARE | MIGR | SPWN | WQE | FLD | | |
| 642.00 | **COWHEAD LAKE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | COWHEAD LAKE WETLANDS | | X | X | | | X | | | | X | X | | | X | X | | X | | | | X | X | |
| | COWHEAD LAKE | SEASONAL LAKE/EMERGENT MEADOW | X | X | | | X | | | | X | X | X | | X | X | | X | | | | X | | INTERNALLY DRAINED LAKE |
| | COWHEAD SLOUGH | FRESHWATER SLOUGH/EMERGENT MDW | X | X | | | X | X | | | X | X | | | X | X | | | X | | X | X | X | COWHEAD LAKE |
| | NORTH TWIN LAKE | SEASONAL LAKE/PLAYA | X | X | | | X | | | | X | X | X | | X | X | X | X | | | | | | INTERNALLY DRAINED LAKES |
| | SOUTH TWIN LAKE | SEASONAL LAKE/PLAYA | X | X | | | X | | | | X | X | X | | X | X | X | X | | | | | | INTERNALLY DRAINED LAKES |
| | TWELVE MILE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | | | | X | | X | | | | X | | |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | SPRINGS/SEEPS/EMERGENT MEADOWS | X | X | | | X | X | | | X | X | | | | X | | X | | X | | X | X | GORDON V NEVADA |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | | X | | | X | | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | X | | X | X | COWHEAD LAKE/GW |
| 641.00 | **SURPRISE VALLEY HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| 641.10 | **BARE CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BARE CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | LOWER ALKALI LAKE |
| | LOWER ALKALI LAKE | SALINE LAKE | | | | | | | | | X | X | X | | | | X | X | | X | | X | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | X | X | X | | | X | X | X | | X | X | | X | | | | X | | LOWER ALKALI LAKE |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | COLD & HOT SPRINGS/EMERGENT MDW | X | X | | | X | X | | | X | X | | | | X | | X | | X | | X | X | LOWER ALKALI LAKE |
| | EAGLE CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | LOWER ALKALI LAKE |
| | EMERSON CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | LOWER ALKALI LAKE |
| | SILVER CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | BARE CREEK |
| | SNAKE LAKE | SEASONAL LAKE/EMERGENT MEADOW | X | X | | | X | X | | | X | X | | | | X | | X | | | | X | X | X | BARE CREEK |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | SPRINGS/SEEPS/EMERGENT MEADOWS | X | X | | | X | X | | | X | X | | | | X | | X | | | | X | X | X | SNAKE LAKE |
| | NORTHERN RESERVOIR | RESERVOIR | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | SILVER CREEK |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | SPRINGS/SEEPS/EMERGENT MEADOWS | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | X | SILVER CREEK |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | X | LOWER ALKALI LAKE / HA GW |
| 641.20 | **CEDARVILLE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BOGGS RESERVOIR | RESERVOIR | X | X | | | X | X | | | X | X | | | | X | | X | X | X | | X | X | X | SAND CREEK |
| | CEDAR CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | MIDDLE ALKALI LAKE |
| | OWL CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | MIDDLE ALKALI LAKE |
| | OWL CREEK WETLANDS | WETLANDS | X | X | | | X | X | | | X | X | | | | X | | X | | | | X | X | X | |
| | SALTER CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | MIDDLE ALKALI LAKE |
| | SAND CREEK | SEASONAL STREAM | X | X | | | X | X | | | X | X | | | | X | | X | X | X | | X | | MIDDLE ALKALI LAKE |
| | MIDDLE ALKALI LAKE | SALINE LAKE | | | | | | | | | X | X | X | | | | X | X | X | X | | X | | INTERNALLY DRAINED LAKE |
| | MIDDLE ALKALI LAKE EMERGENT SHORELINE WETLANDS | ALKALI FLAT/EMERGENT SHORELINE | X | X | | | | | | | X | X | | | | | X | X | X | X | | X | X | X | MIDDLE ALKALI LAKE |
| 641.20 | **CEDARVILLE HYDROLOGIC AREA (continued)** | | | | | | | | | | | | | | | | | | | | | | | |
| | MIDDLE ALKALI LK SPRINGS/EMERGENT WETLANDS | SPRINGS/EMERGENT MEADOWS | X | X | | | X | X | | | X | X | | | X | X | | X | X | X | | X | X | X | MIDDLE ALKALI LAKE |
| | NORTHEAST VALLEY MINERAL WELLS/HOT SPRINGS | COLD & HOT SPRINGS/EMERGENT MDW | X | X | | | X | X | | X | X | X | | | X | X | | X | X | X | | X | X | | MIDDLE ALKALI LAKE |
| | LEONARDS HOT SPRINGS | HOT SPRINGS/EMERGENT MEADOWS | X | X | | | X | X | | X | X | X | | | X | | | X | X | X | | X | X | | MIDDLE ALKALI LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | X | X | | X | X | X | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | X | X | | X | X | X | MIDDLE ALKALI LAKE / HA GW |
| 641.30 | **FORT BIDWELL HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BIG MUD LAKE | SEASONAL LAKE/PLAYA | X | X | | | X | | | | X | X | | | X | X | X | X | | | | | | INTERNALLY DRAINED LAKE |
| | DISMAL CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | DEEP CREEK (OREGON) |
| | DISMAL SWAMP WETLANDS | FLOODPLAIN, EMERGENT MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | X | DEEP CREEK (OREGON) |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | SPRINGS/EMERGENT MEADOWS | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | X | DEEP CREEK (OREGON) |
| | CRANE LAKE | SEASONAL LAKE/EMERGENT MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | UPPER ALKALI LAKE |
| | BIDWELL CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | UPPER ALKALI LAKE |
| | MILL CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | UPPER ALKALI LAKE |
| | ALKALI LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | | X | X | X | | X | | | X | X | |
| | UPPER ALKALI LAKE | SALINE LAKE | | | | | | | | | X | X | X | | | | X | X | | X | | X | | | INTERNALLY DRAINED LAKE |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | COLD & HOT SPRINGS/EMERGENT MDWS | X | X | | | X | X | | | X | X | | | | X | | X | | X | | X | X | X | UPPER ALKALI LAKE |
| | MUD LAKE | SEASONAL LAKE/EMERGENT MEADOW | X | X | | | X | X | | | X | X | | | | X | | X | | | | | X | X | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | X | X | UPPER ALKALI LAKE / HA GW |
| 640.00 | **DUCK FLAT HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | | X | | X | | | | | X | X | DUCK FLAT GW |
| 639.00 | **SMOKE CREEK HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | SMOKE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | SMOKE CREEK RESERVOIR |
| | SMOKE CREEK RESERVOIR | RESERVOIR | X | X | | X | X | | | | X | X | X | | | X | | X | | | | | | SMOKE CREEK GROUNDWATER |
| | HIGH CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | SMOKE CREEK GROUNDWATER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | X | | X | X | X | SMOKE CREEK GROUNDWATER |
| 638.00 | **MADELINE PLAINS HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | GRASSHOPPER VALLEY WETLANDS | WET MEADOW/EMERGENT/SPRINGS | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | GRASSHOPPER VALLEY GW |
| | HOOT LAKE | EPHEMERAL POND | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | RED ROCK CREEK |
| 638.00 | **MADELINE PLAINS HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | |
| | RED ROCK LAKE | SEASONAL LAKE/EMERGENT MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | RED ROCK CREEK |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | RED ROCK CREEK |
| | RED ROCK CREEK WETLANDS | WETLANDS | X | X | | | X | X | | | X | X | | | | X | | X | | | | X | X | |
| | DOODE RESERVOIR | RESERVOIR | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | RED ROCK CREEK |
| | CONN RESERVOIR | RESERVOIR | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | RED ROCK CREEK |
| | RED ROCK CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | MADELINE PLAINS GW |
| | VALLE RESERVOIR | RESERVOIR | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | MADELINE PLAINS GW |
| | COLD SPRING CREEK | EPHEMERAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | MADELINE PLAINS GW |
| | SPRINGS/SEEPS/EMERGENT WETLANDS | SPRINGS/SEEPS/EMERGENT | X | X | | | X | X | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | COLD SPRINGS MTN 1 WETLANDS | WET MEADOW | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | X | |
| | COLD SPRINGS MTN 5 MEADOW RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | MOON LAKE |
| | MADELINE 7 WETLANDS | SEASONAL SPRING/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | COLD SPRINGS MTN 3 RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BOX SPRINGS |
| | COLD SPRINGS MTN 6 OVAL RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BOX SPRINGS |
| | COLD SPRINGS MTN 4 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK (COLD SPRINGS) |
| | COLD SPRINGS MTN 2 RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 1 RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 2 PINTO RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BOX SPRINGS |
| | COLD SPRINGS MTN 5 RES. | SEASONAL SPRING/RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 6A RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 4 CONN RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RESERVOIR |
| | COLD SPRINGS MTN 5 SPRING | SPRING/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RESERVOIR |
| | COLD SPRINGS MTN 3 LGMBY RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RESERVOIR |
| | COLD SPRINGS MTN 4A WETLANDS | SPRING/EMERGENT MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 8 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 3 BRADLEY WETLANDS | RIPARIAN/EMERGENT MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 2 NAME TAG RES. | RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 2A RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 2AN RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC1 | REC2 | PROC | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | EST | WILD | RARE | MIGR | SPWN | POW | WLD | |
| | COLD SPRINGS MTN 026 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 042 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 046 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 065 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 008 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | COLD SPRINGS MTN 010 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | COLD SPRINGS MTN 029 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| 638.00 | **MADELINE PLAINS HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | COLD SPRINGS MTN 007 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | RAVENDALE 1 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | RAVENDALE STADDING RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | RAVENDALE MARSH RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | DODGE RESERVOIR COLD SPR DAM | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | RAVENDALE SHORTCUT RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | RAVENDALE LONG SPR. 1 RES. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | RAVENDALE LONG SPR. 2 RES. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | RAVENDALE TURKEY RES | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | COLD SPRINGS MTN DRY COW 2 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RES |
| | COLD SPRINGS MTN DRY COW 3 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RES |
| | COLD SPRINGS MTN DRY COW 1 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | BIG MEADOWS RES |
| | MADELINE 006 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN CREEK |
| | MENDIBOURE RESERVOIR RES. | RESERVOIR/EMERGENT | X | X | | | | X | | X | | X | X | X | | | X | | X | | | | X | X | VAN LOAN CREEK |
| | MADELINE 045 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MENDIBOURE RESERVOIR |
| | JUNIPER RIDGE POALSON SPR. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MENDIBOURE RESERVOIR |
| | JUNIPER RIDGE 370 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | JUNIPER RIDGE 371 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 369 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 369 RICHARDSON SPR. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 061 RES. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MENDIBOURE RESERVOIR |
| | JUNIPER RIDGE 374 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 372 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 373 RES. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 375 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 378 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 376 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 379 RES. | SPRING/RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 380 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 377 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 061 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MENDIBOURE RESERVOIR |
| | JUNIPER RIDGE 381 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 382 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 045 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN RESERVOIR |
| | MC DONALD PEAK 053 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN RESERVOIR |
| | MC DONALD PEAK 052 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN RESERVOIR |
| 638.00 | **MADELINE PLAINS HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MC DONALD PEAK 047 13 MILE RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN CREEK |
| | MC DONALD PEAK 044 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | 3 MILE CREEK |
| | MC DONALD PEAK 045 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | 3-MILE CREEK |
| | MC DONALD PEAK 046 RES. | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 049 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | 3 MILE CREEK |
| | MC DONALD PEAK 041 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | 3 MILE CREEK |
| | MC DONALD PEAK 051 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 102 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 096 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 093 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 101 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 103 RES. | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | DRY CREEK SPRINGS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | X | X | | X | | X | | X | X | DRY CREEK |
| | MC DONALD PEAK 086 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 087 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | BIG SPRINGS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN CREEK |
| | JUNIPER RIDGE 804 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 803 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 809 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 810 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 811 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | COLD SPRINGS MTN LOWER DRY COW SPR. | SPRING/EMERGENT/RIPARIAN | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | MC DONALD PEAK DEER SPRING | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | VAN LOAN CREEK |
| | JUNIPER RIDGE JUGG SPRING | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | JUNIPER RIDGE 812 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 813 WETLANDS | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | JUNIPER RIDGE NOWT SPRING | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY CREEK |
| | JUNIPER RIDGE EROSION RES. | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | DODGE RESERVOIR MADELINE SPRING | SPRING/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | COLD SPRINGS CREEK |
| | WHITINGER MTN C47 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY VALLEY GW |
| | WHITINGER MTN C46 WETLANDS | EMERGENT MEADOW | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY VALLEY GW |
| | WHITINGER MTN C49 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | DRY VALLEY GW |
| | NAID VALLEY A571 RES | RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | NAID VALLEY RESERVOIR |
| | MC DONALD PEAK 095 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 098 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 386 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| 638.00 | **MADELINE PLAINS HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | JUNIPER RIDGE 389 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 388 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 390 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 090 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 091 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MC DONALD PEAK 092 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 384 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 385 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | JUNIPER RIDGE 387 RES | SEASONAL RESERVOIR/EMERGENT | X | X | | | | X | | | | X | X | | | | X | | X | | | | X | X | MADELINE PLAINS GW |
| | MINOR SURFACE WATER | | X | X | | | | X | X | | | X | X | X | | X | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/CREEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | MADELINE PLAINS GW |
| 637.00 | **SUSANVILLE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| 637.10 | **HORLONG HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | PURDY CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | LONG VALLEY CREEK |
| | EVANS CANYON CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | LONG VALLEY CREEK |
| | MILLS CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | LONG VALLEY CREEK |
| | WILLOW CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | LONG VALLEY CREEK |
| | LONG VALLEY CREEK WETLANDS | WETLANDS | X | X | | | | X | X | | | X | X | | | X | X | | X | | | X | X | X | |
| | LONG VALLEY CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | X | X | | X | | | X | | | HORSE LAKE |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC | PROC | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | EST | WILD | BIOL | RARE | MIGR | SPWN | NAV | FLD | | |
| | LONG VALLEY CREEK SPRINGS/SEEPS/EMERGENT | WETLANDS | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | X | | LONG VALLEY CREEK |
| | DEADADDLE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | UNDERLYING GROUNDWATER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | X | | X | X | X | | |
| 637.20 | **SUSAN RIVER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SILVER LAKE | LAKE | X | | | | | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | MCCOY FLAT RESERVOIR | EPHEMERAL RESERVOIR | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | SUSAN RIVER |
| | SANBOIS LAKE | LAKE | X | | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | INLAND AT HONEY LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | X | X | X | | | | | X | X | | |
| | SUSAN RIVER DELTA WETLANDS | WETLANDS | X | X | | | X | X | | | X | X | | | X | X | | | | | | | X | X | | |
| | NORVELL FLAT WETLANDS | WET MEADOWS, FLOODPLAINS | X | X | | | X | | | | X | X | | | | X | | X | X | X | | | X | X | | SUSAN RIVER |
| | HOG FLAT RESERVOIR | EPHEMERAL RESERVOIR | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | X | X | | SUSAN RIVER |
| | EMERGENT/TRIBUTARY WET MEADOWS/WETLANDS | WET MEADOW | X | X | | | X | | | | X | X | X | | | X | | X | | | | | X | X | | HOG FLAT RESERVOIR |
| | WILLARD CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | X | X | | | | SUSAN RIVER |
| 637.20 | **SUSAN RIVER HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CHENEY CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | CAVE SPRINGS | SPRING | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | PETER CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | X | X | | | | SUSAN RIVER |
| | BARRY CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | GOLD RUN CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | CANYON CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | X | | | | SUSAN RIVER |
| | SUSAN RIVER | PERENNIAL RIVER | X | X | | X | X | X | X | | X | X | X | | X | X | | X | | | X | X | | | | HONEY LAKE |
| | LAKE LEAVITT | RESERVOIR | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | | | | SUSAN RIVER |
| | HAGGSON LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | X | | X | | | | | X | X | | |
| | HAGGSON LAKE | RESERVOIR | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | | | | HONEY LAKE |
| | HONEY LAKE WETLANDS | WETLANDS | X | X | | | | | | | X | X | | | X | X | X | X | | X | | X | X | X | | |
| | HONEY LAKE | SALINE LAKE | | X | | | X | X | | | X | X | X | | X | X | X | X | | | | | | X | | INTERNALLY DRAINING LAKE |
| | WENDEL HOT SPRINGS | HOT SPRINGS | X | X | | | X | X | | X | X | X | | | | | | X | | | | | X | | | HONEY LAKE |
| | WILLOW CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | | | | SUSAN RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | X | X | X | | | X | X | X | | X | X | | X | | X | | X | X | X | | |
| 637.30 | **EAGLE DRAINAGE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 637.31 | **ANTELOPE MOUNTAIN HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | | X | | X | | | | | | | | |
| | DEER CAMP MEADOWS WETLANDS | WET MEADOW | X | X | | | X | | | | X | X | | | | X | | X | X | | | | X | X | | SUSAN RIVER |
| | MINOR SURFACE WATERS | EPHEMERAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | | | | | SNOWSTORM CREEK |
| | PITTVILLE ROAD SPRING | SPRING AND WET MEADOW | X | X | | | X | | | | X | X | | | | X | | X | X | | | | X | X | | SUSAN RIVER |
| | LONG LAKE | WET MEADOW, SEASONAL LAKE | X | X | | | X | | | | X | X | | | | X | | X | | | | | | X | | GROUNDWATER |
| | PINE CREEK DOWNSTREAM OF HWY. 395 | PERENNIAL STREAM | X | X | | | X | X | | | X | X | | | | X | | X | X | X | | X | X | X | | EAGLE LAKE |
| | PINE CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | X | X | | | | EAGLE LAKE |
| | WIANNIE MEADOWS WETLANDS | WET MEADOW | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | | X | X | X | | EAGLE LAKE |
| | PATOOSE CREEK | EPHEMERAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | | | | EAGLE LAKE |
| | MORRILL CREEK | EPHEMERAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | X | | | | EAGLE LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | X | X | X | X | | |
| 637.32 | **EAGLE LAKE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | EAGLE LAKE | LAKE | X | X | | | X | | X | | X | X | X | | | X | | X | X | X | X | X | | | | INTERNALLY DRAINING LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | | X | | X | | | | | | | | |
| 637.32 | **EAGLE LAKE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | X | X | | | | X | | X | | | | | X | X | | |
| 637.40 | **SNOWSTORM MOUNTAIN HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DEEP CREEK | EPHEMERAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | SNOWSTORM CREEK |
| | SECRET CREEK | EPHEMERAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | SNOWSTORM CREEK |
| | SNOWSTORM CREEK | EPHEMERAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | | | | | | | | PETES CREEK |
| | SNOWSTORM CREEK WETLANDS | WETLANDS | X | X | X | | X | X | | | X | X | | | | X | | X | | | | | X | X | | |
| | PETES CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | | | | WILLOW CREEK |
| | WILLOW CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | | | | SUSAN RIVER |
| | HORSE LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | |
| | ISOLATED WETLAND BOUNDED BY RR TRACKS ON WEST | VERNAL POOL | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | CLOSED DEPRESSION |
| | HORSE LAKE | EPHEMERAL LAKE | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | DEEP CREEK |
| | PINE CREEK WETLAND AND MEADOWS | WETLANDS | X | X | | | X | X | | | X | X | | | | X | | X | | X | X | X | X | X | | |
| | PINE CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | X | X | | X | X | | | X | | | | HORSE LAKE |
| | ROUND VALLEY RESERVOIR | RESERVOIR | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | | WILLOW CREEK |
| | LITTLE MID FLAT LAKE | EPHEMERAL LAKE | X | X | | | X | | | | X | X | | | | X | X | X | | X | | | X | | | INTERNALLY DRAINING LAKE |
| | MID FLAT LAKE | DRY SEASONAL LAKE | X | X | | | X | | | | X | X | | | | X | | X | | X | | | X | X | | INTERNALLY DRAINING LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | X | X | X | X | X | X | | |
| 636.00 | **LITTLE TRUCKEE RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LITTLE TRUCKEE RIVER | PERENNIAL RIVER | X | X | | | X | X | | X | X | X | X | | | X | | X | | X | X | X | | | | TRUCKEE RIVER |
| | WEBBER LAKE | LAKE | X | X | | | X | | X | | X | X | X | | | X | | X | | X | | X | | | | LITTLE TRUCKEE RIVER |
| | COLD STREAM CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | X | X | | | | LITTLE TRUCKEE RIVER |
| | INDEPENDENCE LAKE | LAKE | X | X | | | X | | X | | X | X | X | | | X | | X | | X | | X | | | | INDEPENDENCE CREEK |
| | INDEPENDENCE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | | | LITTLE TRUCKEE RIVER |
| | STAMPEDE RESERVOIR | RESERVOIR | X | X | | | X | | X | | X | X | X | | | X | | X | | X | | X | | | | LITTLE TRUCKEE RIVER |
| | SAGEHEN CREEK WETLANDS | WETLANDS | X | X | | | X | | | | X | X | X | | | X | | X | X | X | | X | X | X | | |
| | SAGEHEN CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | X | X | | X | | | | STAMPEDE RESERVOIR |
| | DAVIES CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | | | STAMPEDE RESERVOIR |
| | BOCA RESERVOIR | RESERVOIR | X | X | | | X | | X | | X | X | X | | | X | | X | | X | | X | | | | LITTLE TRUCKEE RIVER |
| | GARDINE MEADOWS WETLANDS | WET MEADOW | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | X | X | | STAMPEDE RESERVOIR |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | X | X | X | X | | |
| 635.00 | **TRUCKEE RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 635.10 | **DOG VALLEY HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DOG VALLEY WETLANDS | WET MDW, FLOODPLAIN, MINOR STREAMS | X | X | | | X | | | | X | X | X | | | X | | X | | X | X | X | X | X | | TRUCKEE RIVER |
| | DOG VALLEY CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | | | TRUCKEE RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | X | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | X | X | X | X | | |
| 635.20 | **TRUCKEE RIVER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TRUCKEE RIVER | PERENNIAL RIVER | X | X | | X | X | X | | X | X | X | X | | | X | | X | | X | X | X | | | | PYRAMID LAKE, NEV. |
| | BEAR CREEK | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | | | X | | X | | X | X | X | | | | TRUCKEE RIVER |
| | SQUAW CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | X | X | | | | TRUCKEE RIVER |
| | SQUAW VALLEY MEADOW WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | | X | | X | | | | X | X | X | | |
| | POLE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | X | X | | | | TRUCKEE RIVER |
| | COLD STREAM CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | | | DONNER CREEK |
| | DONNER LAKE | LAKE | X | X | | | | X | X | | X | X | X | | | X | | X | | X | | X | | | | DONNER CREEK |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC1 | REC2 | WARM | COLD | WILD | RARE | MIGR | SPWN | EST | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | BIOL | WQ | FLD | |
| | DONNER CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | X | | | | | TRUCKEE RIVER |
| | BRONSON CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | X | | | | | TRUCKEE RIVER |
| | TROUBER RESERVOIR | RESERVOIR | X | X | | | | X | | | X | | | X | X | X | | | X | X | | | | | | TROUBER CREEK |
| | MARTIN CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | X | X | X | | | TRUCKEE RIVER |
| | MARTIN CREEK RESERVOIR | RESERVOIR | X | X | | | | X | | | X | | | X | X | X | | | X | X | | X | | | | MARTIN CREEK |
| | CROWE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | | X | | | | TRUCKEE RIVER |
| | ALDER CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | | X | X | X | | TRUCKEE RIVER |
| | GOLDFISH CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | | X | | | | TRUCKEE RIVER |
| | GRAY CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | | X | | | | TRUCKEE RIVER |
| | BRONCO CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | X | | X | | | | TRUCKEE RIVER |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | | | X | X | X | | | X | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | X | X | X | X | X | X | |
| 634.00 | **LAKE TAHOE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 634.10 | **SOUTH TAHOE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TAHOE MEADOWS WETLANDS | WETLANDS | X | | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | |
| | HEAVENLY VALLEY CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | X | X | X | | TROUT CREEK |
| | COLD CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | TROUT CREEK |
| | TROUT CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | UPPER TRUCKEE RIVER |
| | SAXON CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | TROUT CREEK |
| | GRASS LAKE WETLANDS | WETLANDS | X | X | | | | X | | | | | | X | X | X | | | X | | X | X | | X | X | X | |
| 634.10 | **SOUTH TAHOE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | GRASS LAKE | LAKE | X | X | | | | X | | | | | | X | X | X | | | X | X | X | | | X | | | GRASS LAKE CREEK |
| | GRASS LAKE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | | | UPPER TRUCKEE RIVER |
| | MEEKS MEADOWS/WETLANDS | WETLANDS | X | X | | | | X | | | | | | X | X | | | | X | | X | | X | X | X | |
| | MEYERS LAKE | LAKE | X | X | | | | X | | | | | | X | X | X | | | X | | X | | X | X | | | UPPER TRUCKEE RIVER |
| | UPPER TRUCKEE RIVER | PERENNIAL STREAM | X | X | | | | X | | | X | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | ECHO LAKES | LAKES | X | | | | | X | | | X | | | X | X | X | | | X | | X | | | | X | | ECHO CREEK/UP. TRUCKEE RIVER |
| | UPPER ANDORA LAKE | LAKE | X | X | | | | X | | | X | | | X | X | X | | | X | | X | | | | X | | LOWER ANDORA LAKE |
| | LOWER ANDORA LAKE | LAKE | X | X | | | | X | | | X | | | X | X | X | | | X | | X | | | | X | | ANDORA CREEK |
| | MEADOW MULLINE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | FALLEN LEAF LAKE |
| | FALLEN LEAF LAKE | LAKE | X | | | | | | | | X | | | X | X | X | | | X | | X | | | | X | | TAYLOR CREEK |
| | TAYLOR CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | TAYLOR CREEK MEADOW MARSH | WETLANDS | X | X | | | | X | | | | | | X | X | | | | X | | X | | X | X | X | X | |
| | TALLAC CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | CASCADE LAKE | LAKE | X | | | | | | | | X | | | X | X | X | | | X | | X | | X | | X | | CASCADE CREEK |
| | CASCADE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | MEEKS CREEK MEADOW/WETLANDS | WETLANDS | X | X | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | |
| | HOPE VALLEY/WETLANDS | WETLANDS | X | | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | |
| | DAGGETT SWAMP | WETLANDS | X | | | | | X | | | | | | X | X | | | | X | X | X | | | | X | X | |
| | TAHOE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | | X | X | X | X | X | X | |
| 634.20 | **NORTH TAHOE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TONEY GULCH CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | MEEKS CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | GENERAL CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | MCKINNEY CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | MADDEN CREEK | PERENNIAL STREAM | X | | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | BLACKWOOD CREEK | PERENNIAL STREAM | X | | | | | | | | | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | WARD CREEK | PERENNIAL STREAM | X | | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | LAKE TAHOE |
| | BURTON CREEK | PERENNIAL STREAM | X | | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | DOLLAR CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | WATSON CREEK | PERENNIAL STREAM | X | | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | SNOW CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | CARNELIAN CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | GRIFFY CREEK | PERENNIAL STREAM | X | | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| 634.20 | **NORTH TAHOE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | | | X | X | X | | | X | | X | | | | X | | LAKE TAHOE |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | | X | | X | X | X | X | |
| 634.30 | **TAHOE LAKE BODY HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LAKE TAHOE | LAKE | X | X | | | | X | | | X | | | X | X | X | | | X | X | X | | X | X | | | TRUCKEE RIVER |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | | | X | X | X | | | X | X | X | | X | X | | | |
| | MINOR WETLANDS | EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | X | X | | X | X | X | | |
| 633.00 | **WEST FORK CARSON RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 633.10 | **WOODFORDS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | W. FORK CARSON MEADOW WETLANDS NEAR WOODFORDS | WETLANDS | X | X | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | |
| | SHERMAN/SHERIDAN CANYON CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | WEST FORK CARSON RIVER |
| | WEST FORK CARSON RIVER | PERENNIAL RIVER | X | X | | | X | X | X | X | X | X | X | X | X | X | | | X | | X | | X | | X | | CARSON SINK |
| | DIAMOND, DUTCH AND WADE VALLEYS WETLANDS | WETLANDS/WET MEADOWS | X | X | | | | X | | | | | | X | X | | | | X | | X | | X | | | X | X | INDIAN CREEK/W. CARSON R. |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | | | X | X | X | | | X | | X | | | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | | X | | X | | X | X | |
| 633.20 | **UPPER WEST FORK CARSON RIVER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FAITH VALLEY WETLANDS | WET MEADOW, FLOODPLAIN | X | X | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | WEST FORK CARSON RIVER |
| | UPPER WEST FORK CARSON RIVER | PERENNIAL RIVER | X | X | | X | | X | | | | | | X | X | X | | | X | | X | | | X | | | CARSON SINK |
| | RED LAKE | LAKE | X | X | | | | X | | | X | | | X | X | X | | | X | | X | | | | | | RED LAKE CREEK |
| | WETLANDS ON ADJACENT BENCHES TO VALLEY | WETLANDS/WET MEADOWS | X | X | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | HOPE VALLEY |
| | RED LAKE CREEK VALLEY WETLANDS | WET MEADOW, FLOOD PLAIN | X | X | | | | X | | | | | | X | X | | | | X | | X | | | X | X | X | WEST FORK CARSON RIVER |
| | HOPE VALLEY WETLANDS | EMERGENT MEADOW/FLOODPLAIN | X | X | | | | X | | | | | | X | X | | | | X | | X | | | | X | X | WEST FORK CARSON RIVER |
| | VALLEY SLOPES WETLANDS | SPRINGS/SEEPS/EMERGENT | X | X | | | | X | | | | | | X | X | | | | | | X | | | | X | X | HOPE VALLEY |
| | RED LAKE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | UPPER WF CARSON RIVER |
| | MILLER CREEK | PERENNIAL RIVER | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | UPPER WF CARSON RIVER |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | | | X | X | X | | | X | | X | | | X | X | X | |
| 632.00 | **EAST FORK CARSON RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 632.10 | **MARKLEEVILLE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WETLANDS, N. BASSHEN FLAT TO HERMAN LAKE | WET MEADOW, CREK FLOODPLAIN | X | X | | | | X | | | | | | X | X | X | | | X | | X | X | X | | X | X | EAST FORK CARSON RIVER |
| | HERMAN RESERVOIR | RESERVOIR | X | X | | | | X | | | | | | X | X | X | X | | X | | X | | X | | X | | MONITOR CREEK |
| 632.10 | **MARKLEEVILLE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WETLANDS/BIG SPRINGS TO HWY. 89 | WET MEADOW, SPRINGS | X | X | X | | | X | | | | | | X | X | X | | | X | | X | | | X | X | X | EAST FORK CARSON RIVER |
| | WETLANDS, POND W. OF MONITOR PASS @ HWY 89 | VERNAL POND | X | X | | | | X | | | | | | X | X | X | | X | X | | X | | | | X | X | EAST FORK CARSON RIVER |
| | EAST FORK CARSON RIVER | PERENNIAL RIVER | X | X | | | | X | X | X | | | | X | X | X | | | X | | X | | X | | X | | CARSON SINK |
| | KINNEY RESERVOIR | RESERVOIR | X | X | | | | X | | | X | | | X | X | X | | | X | | X | | | | X | | ELLIOTT CREEK |
| | KINNEY LAKES | LAKES | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | X | X | | ELLIOTT CREEK |
| | BEAVER CREEK | PERENNIAL STREAM | X | X | | | | X | | | | | | X | X | X | | | X | | X | | | | X | | EAST FORK CARSON RIVER |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC | PROC | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | WILD | RARE | MIGR | SPWN | EST | FLD | |
| | WOLF CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | | | EAST FORK CARSON RIVER |
| | WOLF CREEK MEADOW WETLANDS | WETLANDS/WET MEADOW/FLOODPLAIN | X | X | | | X | | | | | X | X | | | X | X | | X | X | X | X | X | EAST FORK CARSON RIVER |
| | SILVER KING CREEK | EPHEMERAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | | | EAST FORK CARSON RIVER |
| | CHARITY VALLEY WETLANDS | WET MEADOW, FLOODPLAIN | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | X | EAST FORK CARSON RIVER |
| | MONITOR CREEK | PERENNIAL STREAM | X | X | | X | X | | | | | X | X | X | | | X | | X | | X | | | EAST FORK CARSON RIVER |
| | HERMENT VALLEY CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | MARKLEEVILLE CREEK |
| | HERMENT VALLEY WETLANDS | WETLANDS | X | X | | | X | | | | | X | X | | | | X | | X | | | X | X | |
| | MILLERSBY CREEK | EPHEMERAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | MARKLEEVILLE CREEK |
| | MARKLEEVILLE CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | EAST FORK CARSON RIVER |
| | LEVIATHAN CREEK (ABOVE LEVIATHAN MINE) | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | BRYANT CREEK |
| | LEVIATHAN CREEK (BELOW LEVIATHAN MINE) | PERENNIAL STREAM | X | X | | | X | | | | | X | X | | | | X | | X | | | | | BRYANT CREEK |
| | ASPEN CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | EAST FORK CARSON RIVER |
| | BRYANT CREEK (BELOW LEVIATHAN CREEK) | PERENNIAL STREAM | X | X | | | X | | | | | X | X | | | | X | | X | | | | | EAST FORK CARSON RIVER |
| | MINOR SURFACE WATERS | | X | X | | X | X | X | | | | X | X | X | | | X | | X | | | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 632.20 | **INDIAN CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | STEVENS LAKE | LAKE | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | INDIAN CREEK |
| | INDIAN CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | EAST FORK CARSON RIVER |
| | INDIAN CREEK RESERVOIR | RESERVOIR | X | X | | | X | X | X | | | X | X | X | | | X | | X | | | | | EAST FORK CARSON RIVER |
| | WETLANDS, MEADOWS NW OF SUMMIT LAKE | WETLANDS/WET MEADOW | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | X | EAST FORK CARSON RIVER |
| | DIAMOND, DITCH AND WASP VALLEYS WETLANDS | WETLANDS/WET MEADOW | X | X | | | X | | | | | X | X | | | | | | X | | | X | X | INDIAN CREEK/WEST CARSON R. |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 631.00 | **WEST WALKER RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| 631.10 | **ANTELOPE VALLEY HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | W. FORK WALKER R. WELNDS (ABOVE TOPAZ LK MEADOW) | | X | X | | | X | | | | | X | X | | | | X | | X | | | X | X | |
| | HORSESHOE CREEK | EPHEMERAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | WEST WALKER RIVER |
| 631.10 | **ANTELOPE VALLEY HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | |
| | MILL CREEK | PERENNIAL STREAM | X | | | | X | | | | | X | X | X | | | X | | X | | X | X | | WEST WALKER RIVER |
| | WEST WALKER RIVER (BELOW WALPOLE) | PERENNIAL RIVER | X | X | X | | X | | | X | | X | X | X | | | X | | X | | | X | | WEST WALKER RIVER |
| | LOST CARSON CREEK | PERENNIAL STREAM | X | | | | X | | | | | X | X | X | | | X | | X | | X | X | | MILL CREEK |
| | TOPAZ LAKE | RESERVOIR | X | X | | | X | | | X | | X | X | X | | | X | | X | | | X | | TOPAZ LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 631.20 | **SLINKARD CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | SLINKARD CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | WEST WALKER RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | X | |
| 631.30 | **DESERT CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | DESERT CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | |
| | TOPAZ LAKE | RESERVOIR | X | X | | | X | | | | | X | X | X | | | X | | X | X | | X | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | X | |
| 631.40 | **UPPER WEST WALKER RIVER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | WEST WALKER RIVER (ABOVE WALKER) | PERENNIAL RIVER | X | X | | | X | X | X | | | X | X | X | | | X | | X | | X | X | | WALKER LAKE |
| | SILVER CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | WEST WALKER RIVER |
| | HOT CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | X | X | | X | | | | | LITTLE WALKER RIVER |
| | WALKER HOT SPRINGS | SPRINGS | X | X | | | X | | | | | X | X | X | | X | | | X | | | | | HOT CREEK |
| | LITTLE WALKER RIVER | PERENNIAL RIVER | X | X | | | X | X | X | | | X | X | X | | | X | | X | | X | X | | WEST WALKER RIVER |
| | GRIZZLY MEADOW WETLANDS | WETLANDS | X | | | | X | | | | | X | X | | | | X | | X | | | | X | X |
| | PICNIC MEADOWS WETLANDS | WETLANDS | X | X | | | X | | | | | X | X | | | | X | | X | | | | X | X |
| | LEAVITT MEADOWS WETLANDS | WETLANDS | X | X | | | X | | | | | X | X | | | | X | | X | | | | X | X |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | X | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | X | X | | X | | X | X | X | |
| 630.00 | **EAST WALKER RIVER HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| 630.10 | **MASONIC HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | EAST WALKER RIVER (BELOW BRIDGEPORT RESERVOIR) | PERENNIAL RIVER | X | X | | X | X | X | X | | | X | X | X | | | X | | X | | X | X | | WALKER LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 630.20 | **BODIE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BODIE CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | EAST WALKER RIVER |
| | BODIE CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | X | X | | EAST WALKER RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 630.30 | **BRIDGEPORT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | EAST WALKER RIVER (ABOVE BRIDGEPORT RESERVOIR) | PERENNIAL RIVER | X | X | | | X | X | X | | | X | X | X | | | X | | X | | X | | | BRIDGEPORT RESERVOIR |
| | BRIDGEPORT RESERVOIR | RESERVOIR | X | X | | | X | | X | | | X | X | X | | | X | | X | | | X | | EAST WALKER RIVER |
| | BRIDGEPORT VALLEY WETLANDS | WETLANDS | X | X | | | X | | | | | X | X | | | | X | | X | | | | X | X | E WALKER RIVER/BRIDGEPORT CN |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | X | X | X | |
| 630.40 | **EAST WALKER TRIBUTARIES HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | CLEARWATER CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | | | VIRGINIA CREEK |
| | VIRGINIA CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | EAST WALKER RIVER |
| | GREEN CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | EAST WALKER RIVER |
| | LONG VALLEY CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | SWAUGER CREEK |
| | SWAUGER CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | BRIDGEPORT RESERVOIR |
| | ROBINSON CREEK | PERENNIAL STREAM | X | X | | | X | | | | | X | X | X | | | X | | X | | | X | | EAST WALKER RIVER |
| | TWIN LAKES | LAKES | X | X | | | X | | | X | | X | X | X | | | X | | X | | | X | X | ROBINSON CREEK |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | | X | X | X | | | X | | X | | | X | X | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | | X | X | X | | | X | | X | | | X | X | |
| 601.00 | **MONO HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | RUSH CREEK (ABOVE GRANT LAKE) | PERENNIAL STREAM | X | | | | | | X | | | X | X | X | | | X | | X | | | X | | GRANT LAKE |
| | RUSH CREEK (BELOW GRANT LAKE) | PERENNIAL STREAM | X | X | | | X | X | | | | X | X | X | | | X | | X | | | X | | MONO LAKE |
| | GRANT LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | OWENS RIVER AQUEDUCT/MONO LK |
| | SILVER LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | RUSH CREEK |
| | GULL LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | REVERSED CREEK |
| | ALPINE LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | REVERSED CREEK |
| | FERN LAKE | LAKE | X | X | | | | | | X | | X | X | X | | | X | | X | | | X | | REVERSED CREEK |
| | RIVERSIDE CREEK | PERENNIAL STREAM | X | | | | | | | | | X | X | X | | | X | | X | | | X | | RUSH CREEK |
| | ROCKY LAKE | LAKE | X | | | | | | | | X | X | X | X | | | X | | X | | | X | | RUSH CREEK |
| | SEM LAKES | LAKE | X | | | | | | | | X | X | X | X | | | X | | X | | | X | | RUSH CREEK |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | MUN | AGR | IND | REC1 | REC2 | PROC | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | EST | WILD | BIOL | RARE | MIGR | SPWN | SPGR | WILD | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AGER LAKES | LAKES | X | | | | | | | | X | X | X | | | X | | X | | | | X | | | RIVER LAKE |
| 601.00 | **MONO HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MILL CREEK | PERENNIAL STREAM | X | X | | | | X | X | | X | X | X | X | | | X | | X | | | X | | | MONO LAKE |
| | SUNDY LAKE | LAKE | X | | | | | | | X | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO MILL CREEK |
| | ROME LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO MILL CREEK |
| | CRYSTAL LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO MILL CREEK |
| | GRETTA LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO MILL CREEK |
| | LEE VINING CREEK (ABOVE DIVERSION) | PERENNIAL STREAM | X | X | | | | X | X | | X | X | X | X | | | X | | X | | | X | | | GRANT LAKE/VIA AQUEDUCT |
| | LEE VINING CREEK (BELOW DIVERSION) | PERENNIAL STREAM | X | | | | | X | X | | X | X | X | X | | | X | | X | | | X | | | MONO LAKE |
| | HADLEYBURG LAKE | LAKE | X | | | | | | | | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO LEE VINING CREEK |
| | TOM LAKE | LAKE | X | | | | | | | X | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO LEE VINING CREEK |
| | ELLERY LAKE | LAKE | X | | | | | | | X | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO LEE VINING CREEK |
| | SODDY LAKE | LAKE | X | | | | | | | | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO LEE VINING CREEK |
| | GLORE LAKE | EPHEMERAL LAKE | X | | | | | | | | X | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO LEE VINING CREEK |
| | WALKER CREEK (INCLUDES WALKER LAKE) | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO OWENS |
| | PARKER CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | TRIBUTARY TO OWENS RIVER |
| | SAND LAKE WETLANDS/MARSHES | WETLANDS | | | | | | | | | | X | X | | | | | X | X | X | | X | X | X | VIA AQUEDUCT |
| | WOND LAKE | BALINE LAKE | X | X | | X | | | | X | | X | X | X | X | | | X | X | X | X | X | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | | | | | | | X | X | X | | | X | | X | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | |
| 602.00 | **ADORE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | ADORE CREEK | PERENNIAL STREAM | X | X | | | | X | | | | X | X | X | | | X | | X | | | | | | ADORE VALLEY GROUNDWATER |
| | NORTH CANYON CREEK | PERENNIAL STREAM | X | X | | | | X | | | | X | X | X | | | X | | X | | | | | | TRIBUTARY TO ADORE CREEK |
| | ADORE RESERVOIR | INTERMITTENT LAKE | X | X | | | | | | | | X | X | X | | | X | | X | | | | | | INTERNALLY DRAINED LAKE |
| | RIVER SPRING LAKE | INTERMITTENT LAKE | X | X | | | | X | | | | X | X | X | | | X | | X | | | | | | INTERNALLY DRAINED LAKE |
| | BLACK LAKE | INTERMITTENT LAKE | X | X | | | | X | | | | X | X | X | | | X | | X | | | | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | X | X | |
| 602.10 | **DEXTER CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | X | X | |
| 602.20 | **HUNTOON CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | | | X | X | |
| 603.00 | **OWENS HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| 603.10 | **LONG HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | LAKE CROWLEY | RESERVOIR | X | X | | | | | | X | X | X | X | X | | | X | | X | | | X | | | OWENS RIVER |
| | WILFRED CREEK | PERENNIAL STREAM | X | X | | | | X | | | | X | X | X | | | X | | X | | X | X | | | OWENS RIVER |
| | OWENS RIVER | PERENNIAL RIVER | X | X | | | | X | X | X | | X | X | X | | | X | | X | | X | X | | | CROWLEY LAKE |
| | BRADMAN CREEK | PERENNIAL STREAM | X | X | | X | X | X | | | | X | X | X | | | X | | X | | | X | | | OWENS RIVER |
| | GRAVE CREEK | PERENNIAL STREAM | X | | | | | | X | | | X | X | X | | X | X | | X | | | X | | | BRADMAN CREEK |
| | DRY CREEK | PERENNIAL IN UPPER REACHES | X | | | | | | X | | | X | X | X | | | X | | X | | | X | | | OWENS RIVER |
| | MAMMOTH CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | X | X | | | OWENS RIVER |
| | TWIN LAKES | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | LAKE MARIE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | LAKE MARY | LAKE | X | X | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | COLD WATER CREEK | PERENNIAL STREAM | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | LAKE MARY |
| | ARROWHEAD LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | SHELDON LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | MOTTS LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | RED LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | LAKE GEORGE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | HOT CREEK | PERENNIAL STREAM | X | X | | X | X | | | | | X | X | X | X | | X | | X | | X | X | | | OWENS RIVER |
| | HOT SPRINGS LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | MOTELAND LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | SHERMAN CREEK | PERENNIAL STREAM | X | | | | | X | | | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | SHERMAN LAKES | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | SHERMAN CREEK |
| | LAKE LANE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | SHERMAN CREEK |
| | VALENTINE LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | SHERMAN CREEK |
| | LAUREL CREEK | PERENNIAL STREAM | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | MAMMOTH CREEK |
| | CONVICT CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | CROWLEY LAKE |
| | CONVICT LAKE | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | CONVICT CREEK |
| | MOSES CREEK | PERENNIAL STREAM | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | CROWLEY LAKE |
| | HILTON CREEK | PERENNIAL STREAM | X | X | | X | X | X | | | | X | X | X | | | X | | X | | | X | | | CROWLEY LAKE |
| | HILTON LAKES | LAKES | X | | | | | | | X | | X | X | X | | | X | | X | | | X | | | HILTON CREEK |
| 603.10 | **LONG HYDROLOGIC AREA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | |
| 603.20 | **UPPER OWENS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | OWENS RIVER WETLANDS | WETLANDS | X | X | | | | X | | | | X | X | | | X | X | | X | | X | | X | X | |
| | OWENS RIVER (BELOW CROWLEY LAKE) | PERENNIAL STREAM | X | | | | | | X | | X | X | X | X | | | X | | X | | X | | X | | LA DWP POWER PLANT + PLEASANT VALLEY RESERVOIR |
| | OWENS RIVER (BELOW PLEASANT VALLEY RESERVOIR) | EPHEMERAL STREAM | X | | | | | | X | | X | X | X | X | | | X | | X | | X | | X | | LA DWP POWER PLANT + PLEASANT VALLEY RESERVOIR |
| | OWENS RIVER (BELOW PLEASANT VALLEY RESERVOIR) | PERENNIAL RIVER | X | X | | | | X | X | X | | X | X | X | | | X | | X | | X | | X | | TINEMAHA RESERVOIR |
| | ROCK CREEK | PERENNIAL STREAM | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | |
| | ROCK CREEK WETLANDS @ BOUNDARY ROAD | RIPARIAN/FLOODPLAIN/EMERGENT | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | ROCK CREEK |
| | ROCK CREEK LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | ROCK CREEK |
| | EASTERN BROOK LAKES | LAKES | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | ROCK CREEK |
| | PINE CREEK | PERENNIAL STREAM | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | PLEASANT VALLEY RESERVOIR |
| | SCHERIM LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | X | | | | PINE CREEK |
| | PINE LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | X | | | PINE CREEK |
| | HONEYMOON LAKE | LAKE | X | | | | | | | | | X | X | X | | | X | | X | | | | | | PINE CREEK |
| | GABLE LAKES | LAKE | X | | | | | | | X | | X | X | X | | | X | | X | | | | | | GABLE CREEK |
| | PLEASANT VALLEY RESERVOIR | RESERVOIR | X | | | | | | | | | X | X | X | | | X | | X | | | | | | OWENS RIVER |
| | HORTON CREEK | PERENNIAL CREEK | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | | | OWENS RIVER |
| | HORTON CREEK WETLANDS 4 @ HWY 395 | WET MEADOW/EMERGENT | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | HORTON CREEK |
| | HORTON CREEK WETLANDS 5 | WETLANDS | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | HORTON CREEK |
| | BROCKMAN RD. WETLAND @HWY 395 AND HORTON CREEK | WET MEADOW | X | X | | | | X | | | | X | X | X | | | X | | X | | | | X | X | OWENS RIVER |
| | FAMILY FM MARSH @ HWY 395 | RIPARIAN/EMERGENT/MARSH | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | HORTON CREEK |
| | PINE CREEK WETLANDS @ N. ROUND VALLEY ROAD | RIPARIAN/EMERGENT | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | PINE CREEK |
| | PINE CR DISTRIBUTARY CHANNEL | RIPARIAN | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | PINE CREEK/ROCK CREEK |
| | WELLS MEADOW SPRING CREEK WETLANDS | WETLANDS | X | X | | | | X | X | | | X | X | X | | | X | | X | | | X | X | X | ROCK CREEK |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | | X | X | | | X | X | X | | | X | | X | | X | | X | X | |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | WILD | RARE | MIGR | SPWN | EST | FOR | FRZ | | | |
| | **OWENS RIVER WATERSHED** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SAWMILL POND | POND | X | X | | X | X | | | | X | X | X | | X | X | | X | | | | | | | | HORTON CREEK |
| | MOORE CREEK | PERENNIAL CREEK | X | X | | | X | X | | X | X | X | X | | | X | | X | X | | | X | | | | BISHOP CREEK & HORTON CREEK |
| | OWENS RIVER CANAL | EPHEMERAL CANAL | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | FISH SLOUGH WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | X | X | X | | |
| | FISH SLOUGH(HWY. MONO CO. LINE) | SLOUGH | X | X | | | X | X | | | X | X | | | X | X | | X | X | X | X | X | X | | | OWENS RIVER |
| 603.20 | **UPPER OWENS HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **OWENS RIVER WATERSHED (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FISH SLOUGH (AT FW DIVERSION) | SLOUGH | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | | X | | | OWENS RIVER |
| | WETLAND NEAR ELEGANT VALLEY CAMPGROUND | PERENNIAL WETLAND | X | X | | | X | | | | X | X | | | X | X | | X | X | | | | X | X | | OWENS RIVER |
| | FISH SLOUGH | SLOUGH | X | X | | | X | | | | X | X | X | | X | X | | X | X | X | | X | | | | OWENS RIVER |
| | MONALLY CANALS | EPHEMERAL CANAL | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | WETLANDS BETWEEN MONALLY CANALS | WETLANDS | X | X | | | X | | | | X | X | X | | X | | | X | | | | | X | X | | OWENS RIVER |
| | WETLANDS BETWEEN MONALLY CANALS | WETLANDS | X | X | | X | X | | | | X | X | X | | X | | | X | | | | | X | X | | OWENS RIVER |
| | UPPER MONALLY CANAL WETLANDS | WETLANDS | X | X | | X | X | X | | | X | X | X | | X | | | X | | | | | X | X | | OWENS RIVER |
| | BISHOP CREEK CANAL | PERENNIAL CANAL | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | HAMMON CANAL | EPHEMERAL CANAL | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | COLLINS CANAL | PERENNIAL CANAL | X | | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | BICKNEY PONDS | PONDS | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | | OWENS RIVER |
| | BISHOP CREEK (ABOVE INTAKES) | PERENNIAL STREAM | X | X | | | | | | X | X | X | X | | | X | | X | | | | X | | | | INTAKE 2 RESERVOIR |
| | INTAKE 2 RESERVOIR | RESERVOIR | X | | | | | | | X | X | X | X | | | X | | X | | | | | | | | SOUTHERN CALIFORNIA EDISON |
| | BISHOP CREEK (BELOW INTAKE 2) | EPHEMERAL STREAM | X | | | | | | | X | X | X | X | | | X | | X | | | | X | | | | POWER PLANT |
| | BISHOP CREEK (BELOW LAST P.H.) | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | | | X | | X | | | | X | | | | OWENS RIVER |
| | HILLSIDE RESERVOIR | RESERVOIR | X | | | | | | | | X | X | X | | | X | | X | | | | | | | | BISHOP CREEK |
| | NORTH LAKE | RESERVOIR | X | | | | | | X | | X | X | X | | | X | | X | | | | | | | | BISHOP CREEK |
| | LAKE SABRINA | RESERVOIR | X | | | | | | X | X | X | X | X | | | X | | X | | | | | | | | BISHOP CREEK |
| | SOUTH LAKE | RESERVOIR | X | | | | | | X | X | X | X | X | | X | X | | X | | | | | | | | BISHOP CREEK |
| | GREEN LAKE CREEK | PERENNIAL STREAM | X | | | | | | | | X | X | X | | | X | | X | | | | | | | | BISHOP CREEK |
| | COYOTE CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | | | BISHOP CREEK |
| | KEOUGH HOT SPRINGS | SPRINGS | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | | OWENS RIVER |
| | BIG PINE CANAL | EPHEMERAL CANAL | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | OWENS RIVER |
| | BIG PINE CANAL | WETLANDS, MAINTAINED IRRIG CANAL | X | X | | | X | X | | | X | X | | | X | | | X | | | | | X | X | | OWENS RIVER |
| | BAKER CREEK | PERENNIAL CREEK | X | X | | X | X | | | | X | X | X | | | X | | X | | | | X | | | | BIG PINE CANAL |
| | SIROC CREEK | PERENNIAL CREEK | X | X | | | X | X | | X | X | X | X | | | X | X | X | | | | X | | | | TINEMAHA CREEK |
| | RED MOUNTAIN CREEK | PERENNIAL CREEK | X | X | | | X | X | | | X | X | X | | | X | | | | | | X | | | | TINEMAHA CREEK |
| | FISH SPRINGS | SPRINGS | X | X | | X | X | | | | X | X | X | X | X | X | | X | X | X | | X | | | | TINEMAHA CREEK |
| | TINEMAHA CREEK | PERENNIAL CREEK | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | TINEMAHA RESERVOIR |
| | TINEMAHA RESERVOIR | RESERVOIR | X | X | | | X | | | | X | X | X | | | X | | X | | X | | | | | | OWENS RIVER |
| | MORRIS CREEK | PERENNIAL IN UPPER REACH | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | BENTON VALLEY GROUNDWATER |
| | **CHALFANT VALLEY WATERSHED** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | BARTLETT RANCH SPRINGS | SPRINGS | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | BENTON VALLEY GROUNDWATER |
| | MONTGOMERY CREEK | PERENNIAL IN UPPER REACH | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | BENTON VALLEY GROUNDWATER |
| 603.20 | **UPPER OWENS HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **CHALFANT VALLEY WATERSHED (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MARBLE CREEK | PERENNIAL IN UPPER REACH | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | ROCK CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | DALLY CANYON CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | PEASLEIGH CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | WILDCAT CANYON CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | BUCKS CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | WILLOW CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | HAMIL VALLEY GROUNDWATER |
| | COTTONWOOD CANYON CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | HAMIL VALLEY GROUNDWATER |
| | LONE TREE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | HAMIL VALLEY GROUNDWATER |
| | MINOR STREAMS | | X | X | | | X | | | | X | X | | | | X | | X | | | | | | | | |
| | WILLOW/JACKRT CANYON CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | BENTON HOT SPRINGS | SPRINGS | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | | HAMIL VALLEY GROUNDWATER |
| | WILKER CREEK | INTERMITTENT STREAM | X | X | | | X | | | X | X | X | X | | | X | | X | | | | | | | | CHALFANT VALLEY GW |
| | SLIVER CANYON CREEK | PERENNIAL IN UPPER REACH | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | CHALFANT VALLEY GW |
| | WARM SPRINGS | SPRINGS | X | X | | | X | | | | X | X | X | | X | X | | X | X | X | | | X | | | |
| | WETLANDS/HOUSE S. OF HESTING CYN. | WETLANDS | X | X | | | X | | | | X | X | | | X | | | X | | | | | X | X | | OWENS VALLEY GW |
| | WARM SPRINGS | SPRING | X | X | | | X | X | | | X | X | | | X | | | X | X | X | | | X | | | OWENS RIVER |
| | WETLANDS/1.5 CYN. E. OF WILKER CREEK | WETLANDS/SPRINGS | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | OWENS VALLEY GW |
| | WETLANDS/MEADOW LEFT OF FORK CREEK RD. | WET MEADOW | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | CHALFANT VALLEY RESERVOIR |
| | PINE CREEK AT ROYANA | WETLANDS, RIPARIAN | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | OWENS R./ ELEGANT VAL. RES. |
| | WETLANDS/FORKS CAMPGROUND | WETLANDS | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | BISHOP CREEK |
| | DITCH JOHNS MEADOW WETLANDS | WET MEADOW | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | BISHOP CREEK |
| | WETLANDS/POWER STATION 3 (ELEV. 5500') | RIPARIAN | X | X | | X | X | | | | X | X | | | | X | | X | | | | | X | X | | |
| | WETLANDS/LOWER MOREE CREEK(HWY 168, ELEV 5700') | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | |
| | WETLANDS/LOWER MOREE CREEK(ELEV 5700') | RIPARIAN, WETLANDS | X | X | | X | X | | | | X | X | | | X | | | X | | | | | X | X | | BISHOP CREEK |
| | SHARPS MEADOW(UPPER MOORE CREEK) WETLANDS | WETLANDS/SPRINGS | X | X | | | X | | | | X | X | | | X | X | | X | | | | | X | X | | MOORE CREEK, BISHOP CREEK |
| | WILLIS UPPER MEADOW WETLANDS | WET MEADOW WETLANDS | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | |
| | BUTTERMILK CANYON(ELEV 7400') CREEK | WETLANDS | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | |
| | UPPER BIRCH CREEK | | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | PLEASANT VALLEY RES |
| | WETLANDS ABOVE BISHOP CREEK(ELEV.9000') WETLANDS | WET MEADOW, RIPARIAN | X | | | | X | | | | X | X | | | | X | | X | | | | | X | X | | BISHOP CREEK |
| | SOUTH FORK BISHOP CREEK WETLANDS | WET MEADOW, RIPARIAN | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | BISHOP CREEK |
| | WARREN DRY LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | | | X | | | | | X | X | | OWENS RIVER |
| | WETLANDS/HALF Km. NW OF WARREN LAKE | WETLANDS, WET MEADOW | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | OWENS VALLEY GW |
| | WETLANDS/HALF Km. WEST OF WARREN LAKE | WETLANDS, WET MEADOW | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | OWENS VALLEY GW |
| | WETLANDS/WELL NORTH OF KLONDIKE LAKE | WETLANDS, WET MEADOW | X | X | | | X | X | | | X | X | | | | | | X | X | | | | X | X | | OWENS RIVER |
| 603.20 | **UPPER OWENS HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **CHALFANT VALLEY WATERSHED (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WETLANDS/CHANNEL N OF KLONDIKE LAKE | WETLANDS, RIPARIAN | X | X | | | X | | | | X | X | | | X | | | X | X | | | | X | X | | OWENS RIVER, KLONDIKE LAKE |
| | WETLANDS/OWENS RIVER CHANNEL N. OF KLONDIKE LK | WETLANDS, RIPARIAN | X | X | | | X | | | | X | X | | | X | | | X | X | | | | X | X | | OWENS LAKE |
| | WETLANDS/PART NORTH OF OWENS VALLEY, 0.5 Km E OF FOV 3 | WETLANDS | X | X | | | X | X | | | X | X | | | | | | X | | | | | X | X | | OWENS RIVER |
| | WETLANDS/E. SIDE OF OWENS VALLEY | WETLANDS | X | X | | | X | X | | | X | X | | | | | | X | | | | | X | X | | OWENS RIVER |
| | BAKER CREEK, ABOVE BIG PINE | WETLANDS | X | X | | | X | | | | X | X | X | | | X | | X | X | | | | X | X | | OWENS RIVER |
| | HOLMEVIER SPRINGS | SPRING | X | X | | | X | | | | X | X | | | | | | | X | | | | | | | OWENS VALLEY GROUNDWATER |
| | WINGR BURROWS WATERS | | X | X | | X | X | | | | X | X | X | | | X | | X | | X | | | X | | | |
| | WINGR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | | |
| 603.30 | **LOWER OWENS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OWENS RIVER WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | X | | X | | | X | | X | X | | |
| | OWENS LAKE WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | X | | X | | | | | X | X | | |
| | OWENS RIVER (BELOW TINEMAHA RESERVOIR) | CONTROLLED RIVER | X | X | | | X | | | | X | X | X | | | X | | X | | X | | X | | | | HAINES RES. TO LA. AQUEDUCT |
| | OWENS RIVER (BELOW INTAKE DAM) | EPHEMERAL STREAM | X | X | | | X | X | | | X | X | X | | X | X | | X | X | X | | X | | | | OWENS LAKE |
| | WETLANDS/ALKALI FLAT EAST OF OWENS RIVER, DOLOMITE | WETLANDS | X | X | | | X | X | | | X | X | | | | | | X | | | | | X | X | | LA AQUEDUCT |
| | WETLANDS/DOLOMITE | WETLANDS | X | X | | | X | X | | | X | X | | | | | | X | | | | | X | X | | LA AQUEDUCT |
| | LOWER OWENS RIVER CHANNEL WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | | | X | X | X | | | X | X | | LA AQUEDUCT |
| | CARBONATE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | GOODWIN CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | X | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | DIVISION CREEK | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | X | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | SAWMILL CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | HILLSIDE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | WILD | RARE | MIGR | SPWN | SHEL | EST | FLD | | | |
| | OAK CREEK CAMPGROUND WETLANDS | WETLANDS | X | X | | X | X | | | | X | X | | | | X | | X | | | | X | X | | | OAK CREEK |
| | OAK CREEK | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | X | X | X | | X | | X | | X | | | | L.A. AQUEDUCT |
| | NORTH FORK OAK CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | OAK CREEK |
| | SOUTH FORK OAK CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | OAK CREEK |
| | INDEPENDENCE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | PINYON CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | CROW TO INDEPENDENCE |
| | SYCAMORE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | SPRING N OF SHEPHERD CREEK | SPRINGS | X | X | | | X | | | | X | X | X | | | | | X | X | X | | | | | | L.A. AQUEDUCT |
| | SHEPHERD CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | BAILEY CREEK | PERENNIAL STREAM | X | | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | SPONGE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | BORRACK CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | | X | X | X | | X | X | | | L.A. AQUEDUCT |
| | WETLANDS/EAST OF MOSTE FLAT | | X | | | X | X | | | | X | X | | | | | | X | | | | | X | X | | OWENS VALLEY GW |
| 603.30 | **LOWER OWENS HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WETLANDS/HWY 395 | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | X | | | | X | X | | L.A. AQUEDUCT |
| | WETLANDS/FAULT SCARP W OF MT WHITE OVERTOP LONE PINE | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | OWENS RIVER |
| | LOWER LONE PINE CREEK WETLANDS | WETLANDS | X | X | | | X | | X | | X | X | | | | X | | X | | | | | X | X | | OWENS RIVER |
| | SPRING SOUTH OF LONE PINE CREEK | SPRING | X | X | | | X | | | | X | X | | | X | | | X | | | | | X | | | LONE PINE CREEK |
| | SPRP WEST OF HOSKENPOE MEADOW ROAD | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | | | | | X | X | | LONE PINE CREEK |
| | WETLANDS/PR-SASAND CLUB EAST OF TUTTLE CREEK RD | SPRINGS | X | X | | X | X | | | | X | X | | | | | | X | X | | | | X | X | | N FORK LUBKIN CREEK |
| | INDIAN SPRING | SPRINGS | X | X | | X | X | | | | X | X | | | X | | | X | | | | | X | | | TUBBEN CREEK |
| | POND ON INDIAN SPRINGS ROAD | SPRINGS | X | X | | | X | | | | X | X | | | X | | | X | | | | | X | | | DIAZ LAKE |
| | TUTTLE CREEK | PERENNIAL | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | | | OWENS RIVER |
| | SPRP NORTH OF MOSTE FLAT | SPRINGS | X | X | | | X | | | | X | X | | | | | | X | | | | | | | | |
| | WETLANDS/LONE PINE NARROW GAUGE ROAD | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | X | X | | | X | X | | LA AQUEDUCT |
| | LONE PINE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | TUTTLE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | DIAZ CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | DIAZ LAKE | LAKE | X | X | | | X | | X | | X | X | X | | X | X | | X | | | | X | | | | OWENS VALLEY GROUNDWATER |
| | NORTH FORK LUBKIN CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | OWENS VALLEY GROUNDWATER |
| | SOUTH FORK LUBKIN CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | OWENS VALLEY GROUNDWATER |
| | CARROLL CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | OWENS VALLEY GROUNDWATER |
| | COTTONWOOD CREEK | PERENNIAL STREAM | X | X | | | X | | | X | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | COTTONWOOD LAKES (NO. 1,2,3,4,5,6) | LAKES | X | | | | X | | | | X | X | X | | | X | | X | | | | X | | | | COTTONWOOD CREEK |
| | AGUA CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | X | | | X | | | | HAINES RESERVOIR |
| | SANTANA CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | HAINES RESERVOIR |
| | GLANCHA CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | HAINES RESERVOIR |
| | HAINES RESERVOIR WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | | X | | X | | | | | X | X | | |
| | HAINES RESERVOIR | RESERVOIR | X | X | | X | X | | | | X | X | X | | | X | | X | | X | | X | | | | L.A. AQUEDUCT |
| | SUMMIT CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | X | | | | L.A. AQUEDUCT |
| | BORRACK CREEK | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | | | X | | X | | | | X | | | | HAINES RESERVOIR |
| | WETLANDS EAST OF STEVENS CANAL | WETLANDS | X | X | | | X | X | | | X | X | | | | | | X | X | X | | | X | X | | L.A. AQUEDUCT |
| | WETLANDS/FORT INDIAN RANCH RD. AT HWY 395 | WET MEADOW | X | X | | | X | X | | | X | X | | | | X | | X | X | X | | | X | X | | L.A. AQUEDUCT |
| | FORT INDEPENDENCE INDIAN RESERVATION | WETLANDS | X | X | | | X | | | | X | X | | | | | | X | X | X | | | X | X | | OAK CREEK/ LA AQUEDUCT |
| | WETLANDS/SPR E OF SHABBEL LN, N OF INDEPENDENCE | SPRING | X | X | | | X | | | | X | X | | | | | | X | X | X | | | X | | | LA AQUEDUCT |
| | SPRINGS S. OF KESLER | SPRINGS | X | X | X | X | X | | | | X | X | | | | | | X | | | | | | | | OWENS LAKE |
| | CONGO POND SPRING | SPRINGS | X | X | X | X | X | | | | X | X | | | | | | X | | | | | | | | OWENS LAKE |
| | LUCKY DUCKS HOT SPRING | SPRINGS | X | X | | | X | | | | X | X | | | | | | X | | | | | | | | OWENS LAKE |
| | SPRING SW OF GLANCHA | SPRINGS | X | X | | | X | | | | X | X | | | | | | X | | | | | | | | OWENS LAKE |
| | KESLER SPRINGS | SPRINGS | X | X | | X | X | X | | | X | X | | | X | X | X | X | | | X | | | | | OWENS LAKE |
| 603.30 | **LOWER OWENS HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OWENS LAKE | INTERMITTENT LAKE | X | | | | | | | | X | X | X | | X | X | X | X | | | | | | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | X | X | | | | X | X | X | | X | X | | X | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | | |
| 603.40 | **CENTENNIAL HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | | |
| 604.00 | **FISH LAKE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OAK CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | | | | | FISH LAKE VALLEY GW |
| | CHALFANT CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | INDIAN CREEK | STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | HICKS CREEK | PERENNIAL STREAM | X | X | | | X | | | X | X | X | X | | | X | | X | | X | | | | | | FISH LAKE VALLEY GW |
| | BERRY CANYON CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | MCAFEE CREEK | PERENNIAL STREAM | X | X | | X | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | TOLER CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | LAKE CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | WILDHORSE CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | PINSAPO CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | INDIAN GARDEN CREEK | INTERMITTENT STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | FISH LAKE VALLEY GW |
| | COTTONWOOD CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | | X | | X | | X | | | | | | FISH LAKE VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | | X | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | | X | | X | | | | | X | X | | |
| 605.00 | **DEEP SPRINGS HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | WYMAN CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | | DEEP SPRINGS VALL. GW |
| | CROCKER CREEK | PERENNIAL STREAM | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | | TRIBUTARY TO WYMAN CREEK |
| | DEEP SPRINGS LAKE WETLANDS AND MARSH | | X | | | | | | | | X | X | | | X | | X | X | X | X | | | X | X | | |
| | DEEP SPRINGS LAKE | INTERMITTENT LAKE | X | | | | X | | | | X | X | X | | X | | X | X | X | X | | | | | | DEEP SPRINGS VALL. GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | | |
| 606.00 | **EUREKA HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | | |
| 606.10 | **MARBLE BATH HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | | |
| 606.20 | **MARBLE CANYON HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | | |
| 607.60 | **SALINE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | X | X | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | | |
| 607.10 | **SALT LAKE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | | | |
| | MINOR WETLANDS | SPRINGS/DEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | | |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | MAR | WILD | RARE | MIGR | SPWN | EST | FLD | |
| 607.20 | CAMEO HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | X | X | |
| 608.00 | RACE TRACK HYDROLOGIC UNIT | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | X | X | X | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 608.10 | TRAVERTINE JUNCTION HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | X | X | |
| 608.20 | HIDDEN VALLEY HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | X | X | |
| 608.30 | ULIDA HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | X | X | |
| 608.40 | SAND FLAT HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | | | X | X | |
| 609.00 | AMARGOSA HYDROLOGIC UNIT | | | | | | | | | | | | | | | | | | | | | | | |
| | TECOPA WETLANDS | WETLANDS | X | | | | | | | | X | X | | | X | | | X | X | X | X | X | X | |
| | COTTONBALL MARSH | WETLANDS | X | | | | | | | | X | X | | | X | | | X | X | X | | X | X | |
| | AMARGOSA RIVER WETLANDS | WETLANDS | X | X | | | X | | | | X | X | | | X | | | X | X | X | X | X | X | |
| | AMARGOSA RIVER | INTERMITTENT STREAM | X | X | | | X | | | | X | X | | | X | | X | X | X | X | X | | | AMARGOSA SUBAREA GW |
| | SALT CREEK | PERENNIAL STREAM | X | | | | X | | | | X | X | | | X | | X | X | X | X | X | | | DEATH VALLEY GROUNDWATER |
| | SARATOGA SPRINGS | SPRINGS | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | | | DEATH VALLEY GW |
| | SCOTTY'S RANCH SPRINGS | SPRINGS | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | | | DEATH VALLEY GW |
| | SCOTTY'S CASTLE SPRINGS | SPRINGS | X | X | | | X | | | | X | X | | | X | | X | X | X | X | | | | DEATH VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | X | | X | | X | X | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | X | X | | X | X | |
| 609.10 | DEATH VALLEY HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.11 | STOVEPIPE WELLS HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | SHIRLEY SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA RIVER |
| | AMARGOSA SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | DEATH VALLEY GW |
| | SCOTTYS SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA R./DEATH VALLEY GW |
| | TIMPAHAE SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA R./DEATH VALLEY GW |
| | OWL HOLE SPRINGS | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA RIVER |
| | SARATOGA SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA RIVER |
| | WANLY PEAK SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | BITTER VL. GRAPEVILL SPG. CYN. WS |
| | LITTLE, SQUAW, & WILLOW SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | ANVIL SPG. CYN SS/ DEATH VL. GW |
| | CANEL, HOTCHKISS, AND ARRASTRE SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | AMARGOSA RIVER/ DEATH VAL. GW |
| | METCALFE, CANYON SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | ANVIL SPG. CYN. AMARGOSA R. |
| | MOUNTAIN SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | WARM SPG. CYN. AMARGOSA R. |
| | WARM SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | | | X | | X | | | X | WARM SPG.CYN. AMARGOSA R. |
| | HOODOO SPRINGS | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | HOODOO WASH, DEATH VAL. GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.12 | HARRISBURGH HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.13 | WINGATE WASH HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.20 | SILURIAN HILLS HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.21 | AVAWATZ HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.22 | RED PASS HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | RED PASS LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | X | | X | X | | X | | | X | INTERMT. DRN LK/RED PASS LK Gw |
| | NO NAME LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | X | | X | X | | X | | | X | INTERMT. DRN LK/RED PASS LK Gw |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.23 | VALJEAN HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | SILURIAN LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | X | | X | X | | X | | | | SILURIAN LK/SILURIAN VAL Gw |
| | KINGSTON SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | SILURIAN LK/SILURIAN VAL Gw |
| | COYOTE HOLES SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | KINGSTON W./BALT C./SILURIAN L. |
| | SARATOC HOLES SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | SILURIAN LAKE/SILURIAN VAL Gw |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.24 | SHADOW HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | SHADOW SPRINGS | MEADOW MIX/SEEPS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | SHADOW VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.30 | RYAN HYDROLOGIC AREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.31 | FURNACE CREEK HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |
| 609.32 | GREENWATER HYDROLOGIC SUBAREA | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | X | X | |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | NAVA | WARM | COLD | EST | WILD | BIOL | RARE | MIGR | SPWN | SHEL | EST | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 609.40 | **AMARGOSA DESERT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | |
| 609.41 | **CALICO HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | SALISBURY SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | AMARGOSA RIVER |
| | MONTGOMERY SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | AMARGOSA RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | |
| 609.42 | **SHOSHONE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | WILLOW SPRING | SPRING/RIPARIAN/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | AMARGOSA RIVER |
| | TECOPA HOT SPRINGS | SPRINGS | X | X | | | X | | | | X | X | | | X | | | X | X | X | | | | | DEATH VALLEY GW |
| | TECOPA MARSHES | MARSHES/EMERGENT | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | | X | X | DEATH VALLEY GW |
| | GRAYGIAN LAKE | LAKE/EMERGENT MARSHES | X | X | | | X | | | | X | X | | | X | X | | X | X | X | | | X | X | DEATH VALLEY GW |
| | SHOSHONE SPRING | SPRING/EMERGENT MARSHES/RIPARIAN | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | AMARGOSA RIVER |
| | CRAPPS SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | AMARGOSA RIVER |
| | AMARGOSA RIVER/TECOPA RIPARIAN WETLANDS | RIPARIAN/EMERGENT/FLOODPLAIN | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | AMARGOSA RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | |
| | RESTING SPRING/SHANDIN TRAIL RIPARIAN WETLANDS | SPRING/RIPARIAN/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | AMARGOSA RIVER |
| | SHEEPHEAD SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | AMARGOSA RIVER |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | |
| 609.43 | **CHICAGO HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | | | X | | | X | | X | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | X | |
| 609.44 | **CALIFORNIA VALLEY HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | BEVIS SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | CALIFORNIA VALLEY GW |
| | CRYSTAL SPRING | SPRING/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | CALIFORNIA VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | | X | X | | | X | X | | | X | | | X | | X | | | | | |
| | MINOR SPRINGS/SEEPS/WETLANDS | SPRINGS/SEEPS/EMERGENT | X | X | | | X | X | | | X | X | | | X | | | X | | X | | | X | X | CALIFORNIA VALLEY GW |
| 610.00 | **PAHRUMP HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | X | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | X | | | X | X | |
| 611.00 | **MESQUITE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MESQUITE LAKE | ALKALI LAKE | X | X | | | X | | | | X | X | X | | X | | X | X | | | | | X | | INTERNAL DRN LAKE/MESQUITE |
| | HORSE THIEF SPRINGS | SPRINGS/EMERGENT | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | X | | MESQUITE VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 612.00 | **IVANPAH HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | IVANPAH LAKE | ALKALI LAKE | X | X | | | X | | | | X | X | | | X | X | X | X | | | | | X | X | INTERNAL DRN LK/IVANPAH VAL GW |
| | IVANPAH SPRINGS | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | WILLOW SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | MICHAEL SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | WHEATON SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | WHEATON WASH |
| | CLIFF CANYON SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | STRAIGHTEMPOSE SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | NACATON SPRINGS | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | SIGNAL SPRINGS | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | WHEATON WASH |
| | HARDROCK QUEEN SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | WHEATON WASH |
| | GRANNER SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | WHEATON WASH |
| | DUNTEEN SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | IVANPAH LAKE |
| | WILLOW SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | IVANPAH LAKE |
| | COAL SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | X | | | X | | IVANPAH LAKE |
| | COTTONWOOD SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | LIVE OAK SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| 612.00 | **IVANPAH HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | CABIN SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | | IVANPAH LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | X | X | |
| 613.00 | **ONLSHEAD HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 613.10 | **LOST LAKE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | LOST LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | | | X | X | | | | | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 613.20 | **OWL LAKE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | OWL LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | | | X | X | | | | | | | INTERNALLY DRAINED LAKE |
| | OWL SPRING | SPRING | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | | | OWL LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 614.00 | **LEACH HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | X | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 615.00 | **GRANITE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 615.10 | **MELAN HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MELAN LAKE | ALKALI LAKE | X | | | | X | | | | X | X | X | | X | | X | X | | | | | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 615.20 | **NELSON HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | NELSON LAKE | ALKALI LAKE | X | | | | X | | | | X | X | X | | X | | X | X | | | | | | | INTERNALLY DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | | X | X | |
| 616.00 | **BICYCLE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | | |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | EST | WILD | RARE | MIGR | SPWN | EWM | WET | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 617.00 | **GOLDSTONE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | GOLDSTONE LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | X | | X | X | | | | | | INTERNALLY DRAINED LAKE |
| | PIONEER LAKE | ALKALI LAKE | X | | | | X | | | | X | X | | | X | | X | X | | | | | | INTERNALLY DRAINED LAKE |
| | GOLDSTONE LAKE | LAKE | X | | | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 618.00 | **COYOTE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | PARADISE SPRINGS | SPRINGS/HOT SPRINGS | X | X | | | X | X | | | X | X | | | X | | | X | | | | X | | COYOTE LAKE GW |
| | JACK SPRING | SPRINGS | X | X | | | X | X | | | X | X | | | X | X | | X | | | | | | COYOTE LAKE GW |
| | COYOTE LAKE | | X | | | | X | X | | | X | X | X | | X | | | X | | | | | | COYOTE LAKE |
| | JACK RABBIT SPRINGS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | COYOTE LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 619.00 | **SUPERIOR HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | SUPERIOR LAKE | LAKE | X | | | | | | | | X | X | | | X | | | X | | | | | | SUPERIOR LAKE |
| | INDIAN SPRINGS | SPRINGS | X | X | | | | | | | X | X | | | X | | | X | | | | | | SUPERIOR LAKE |
| | UNNAMED LAKES | LAKE | X | | | | | | | | X | X | | | X | | | X | | | | | | SUPERIOR LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.00 | **BALLARAT HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | X | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.10 | **WINGATE PASS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | X | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.20 | **WILDROSE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | X | X | X | X | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.21 | **WHITE SAGE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.22 | **WILD ROSE PEAK HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.30 | **LEE FLAT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.40 | **SANTA ROSA FLAT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.41 | **MALPAIS MESA HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.42 | **RAINBOW HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.43 | **SILVER DOLLAR HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.50 | **DARWIN HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | X | | | | X | X | X | | X | X | X | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | X | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.60 | **PANAMINT VALLEY HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BRIGANDS SPRING, DOWN THE FALL | SPRING, CREEK | X | | | | X | | | | X | X | | | X | X | | X | | | | | | PANAMINT VALLEY GW |
| | SOURDOUGH SPRINGS | SPRINGS | X | | | | X | | | | X | X | | | X | X | | X | | | | | | PANAMINT VALLEY GW |
| | SOLDIER CAN SPRINGS (UNNAMED) | SPRINGS | X | | | | X | | | | X | X | | | X | X | | X | | | | | | PANAMINT VALLEY GW |
| | MINOR SURFACE WATERS | | X | | | X | X | | | | X | X | X | | X | X | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | X | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.70 | **BROWN HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | SPRINGS/SEEPS/EMERGENT/MARSHES | X | X | | | X | X | | | X | X | X | | X | X | | X | | | | X | X | |
| 620.80 | **ROBBERS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | LEAD PIPE SPRINGS | SPRINGS | | | | | X | | | | X | X | | | X | | | X | | | | | | PILOT KNOB VAL. PANAMINT VAL. |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | | | | | | X | X | | | X | X | | | X | | | X | | | | X | X | |
| 621.00 | **TRONA HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | SEASSEN DRY LAKE BED | SALINE LAKE | | X | | X | | | | | X | X | | | | | X | X | | | | | | TERMINAL DRAINED LAKE |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | X | | | | | |
| | MINOR WETLANDS | | X | | | X | X | X | | | X | X | | | X | | | X | | | | X | X | |
| 621.10 | **SEARLES VALLEY HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | PEACH SPRINGS | SPRINGS | X | | | | X | | | | X | X | | | X | | | X | | | | | | SEARLES VALLEY GROUNDWATER |
| | TRAMPS SPRINGS IN THE NE CORNER OF TRONA W. QUAD | SPRINGS | X | | | | X | | | | X | X | | | X | | | X | | | | | | SEARLES VALLEY GW |
| | SPRINGS ON THE HOMEWOOD CAN QUAD | SPRINGS | X | | | | X | | | | X | X | | | X | | | X | | | | | | SEARLES VALLEY GW |
| | MINOR SURFACE WATERS | | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | | | | X | X | | | X | X | | | X | | | X | | | | X | X | |
| 621.20 | **SALT WELLS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | | X | | | | X | X | | | X | X | | | X | | | X | | | | X | X | |
| 621.30 | **PILOT KNOB HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | SEEP SPRINGS | SPRINGS | X | | | | X | | | | X | X | | | X | | | X | | | | | | |
| | GRANITE WELLS SPRINGS | SPRINGS | X | | | | X | | | | X | X | | | X | | | X | | | | | | GRANITE WELLS |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | REC1 | REC2 | FRSH | SAL | NAV | POW | REC-1 | REC-2 | COMM | NAVIG | BENEF | GWQ | RARE | WILD | BIOL | MIGR | SPWN | WQE | FLD | |
| | MINOR SURFACE WATERS | | X | | | X | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 622.00 | **COSO HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 622.10 | **WILD HORSE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | X | |
| 622.20 | **AIRPORT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | AIRPORT LAKE | ALKALI LAKE | X | | | X | | | | | | X | X | | | X | | X | X | | | | | | INTERNALLY DRAINED LAKE |
| | MOUNTAIN SPRINGS & UPSTREAM | SPRINGS | X | | | X | | | | | | X | X | | | X | | | X | | | | | | MT SPR CYN WSH/INDIAN WELL GW |
| 622.20 | **AIRPORT HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | | | X | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 623.00 | **UPPER CACTUS HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | X | |
| 624.00 | **INDIAN WELLS HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | INDIAN WELLS "INDIAN WELLS" | | X | X | | X | X | | | | | X | X | | | X | | | X | | | | | | INDIAN WELLS VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 624.10 | **ROSE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | LITTLE LAKE | LAKE | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | LITTLE LAKE |
| | LITTLE LAKE CANYON CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | LITTLE LAKE |
| | INTERMITTENT TRIBUTARY | | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | | LITTLE LAKE |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | X | | X | X | | X | | | | X | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 624.20 | **CHINA LAKE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | KING MILE CANYON CREEK | INTERMITTENT STREAM | X | X | | X | | | | | | X | X | X | | X | X | | X | | | | | | INDIAN WELLS SUBUNIT GW |
| | LAKE DEEP LAGOON | LAKE | X | X | | X | | | | | | X | X | | | X | | | X | X | X | | X | X | INDIAN WELLS SUBUNIT GW |
| | C-1 SPRIP | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | X | | X | | LAKE DEEP |
| 624.20 | **CHINA LAKE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | SPRING IN FREEMAN CANYON | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | FREEMAN CREEK |
| | BIG SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | FREEMAN CREEK |
| | DRY LAKE SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | DRY LAKE* | PLAYA LAKE | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | LAKE RED |
| | MEADOW SPRINGS (3) | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | BRESSMER WSH, INDIAN WLS GW |
| | BIG SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | INDIAN WELLS CANYON SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | SHADEVILLE CYN SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | SHORT CYN SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | CHINA LAKE | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CHINA LAKE |
| | SPRING SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | X | | X | | | | | | INDIAN WELLS VALLEY GW |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | X | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | X | | X | | | | X | X | |
| 625.00 | **FREMONT HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | | |
| | TUCKER ROAD WETLANDS | WETLANDS, PERENNIAL | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | X | TEACHAPI V S GW |
| | WETLANDS ABOVE NEW DAM | EPHEMERAL STREAM | X | | | X | | | | | | X | X | | | X | | | X | | | | X | X | TEACHAPI V S GW |
| | E WEST SPRING IN "TUCKER ROAD" TRANSECT | SPRING | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | TEACHAPI V S GW |
| | OAK CREEK PASS SPRINGS | SPRINGS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | | | TEACHAPI V S GW |
| | WILSON/OAK CR. PASS, 0.1 MI DOWNSTREAM FROM SPRGS | WETLANDS | X | | | X | X | | | | | X | X | | | X | | | X | | | | X | X | TEACHAPI V S GW |
| | OAK CREEK CANYON WETLANDS | WETLANDS | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | X | OAK CREEK |
| | GREEN SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | KELSO VALLEY GROUNDWATER |
| | QUAIL SPRING | SPRINGS | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | | COTTONWOOD CR/TEHACHAPI VAL GW |
| | UPPER COTTONWOOD CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | X | | COTTONWOOD CREEK |
| | UPPER CACHE CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| | LOWER CACHE CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | |
| | UPPER CACHE CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| | CACHE CREEK | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | FREMONT VALLEY |
| | CACHE CREEK 2 | | X | | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK/ FREMONT VALLEY |
| | PROCTOR DRY LAKE, 0 OF HWY 58 | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | PROCTOR LAKE |
| | SPRINGS SOUTH OF PROCTOR LAKE | SPRINGS | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | PROCTOR LAKE |
| | WETLANDS/CAMERON CANYON RD (OFFRAMP W BOUND) | | X | | | X | | | | | | X | X | | | X | | | X | | | | X | X | CACHE CREEK |
| | LOWER LINCOLN CREEK | | X | | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| | SPRG SOUTH OF CAMERON CANYON | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| | SPRG ON BLOWE D. OF CAMERON CYN RD. | | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| | SPRING W OF CAMERON CANYON RD | SPRING | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | CACHE CREEK |
| 625.00 | **FREMONT HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | | |
| | TEHACHAPI WILLOW SPRINGS RD WETLANDS | | X | | | X | | | | | | X | X | | | X | | | X | | | | X | X | |
| | KOHRN DRY LAKE | | X | X | X | X | X | | | | | X | X | | | X | | X | X | | | | | | GROUNDWATER |
| | MESQUITE SPRINGS | SPRINGS | X | X | | X | | | | | | X | X | | | X | | | X | | | | | | FREMONT VALLEY GW |
| | RED ROCK CANYON CREEK | | X | | | X | | | | | | X | X | | | X | | | X | | | | | | FREMONT VALLEY/ KOHRN LAKE |
| | MINOR SURFACE WATERS | | X | X | | X | | | | | | X | X | X | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 625.10 | **DOVE SPRINGS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 625.20 | **NELSON LANDIS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 625.30 | **EAST TEHACHAPI HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | X | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |
| 625.40 | **KOHRN HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | | |
| | DUCK PONDS | | X | | | X | | X | | | | X | X | | | X | | | X | | | | | | KOHRN LAKE |
| | KOHRN LAKE | | X | | | X | | X | | | | X | X | | | X | | | X | | | | | | KOHRN LAKE |
| | MUDA SPRINGS, POTOSI SPRINGS | SPRINGS | X | X | | X | | X | | | | X | X | | | X | | | X | | | | | | KOHRN LAKE |
| | MINOR SURFACE WATERS | | X | X | | X | | X | | | | X | X | | | X | | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | X | X | | | | | X | X | | | X | | | X | | | | X | X | |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | MAR | WILD | RARE | MIGR | SPWN | SHEL | EST | |
| 626.00 | **ANTELOPE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | MOJAVE LAKE WETLANDS | WETLANDS | X | | | | | | | | X | X | | | X | | X | X | | | | X | X | |
| | OAK CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | X | | X | | | | | | | ANTELOPE VALLEY GW |
| | SCUTTLE ROCK CREEK | INTERMITTENT STREAM | X | | | | | X | | | X | X | X | | | X | X | | | | | | | ANTELOPE VALLEY GW |
| | BIG ROCK CREEK | PERENNIAL STREAM | X | X | | | X | X | | | X | X | X | | | X | X | | | | X | | | ANTELOPE VALLEY GW |
| | MESCAL CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | | X | X | | | | X | | | L.A. AQUEDUCT |
| | FAIRMONT RESERVOIR | RESERVOIR | X | X | | | X | X | | | X | X | X | | X | | X | | | | | | | L.A. AQUEDUCT |
| | HAWKINS RESERVOIR | RESERVOIR | X | X | | | X | X | | | X | X | X | | X | | X | | | | | | | ANTELOPE VALLEY GW |
| | LITTLE ROCK RESERVOIR | RESERVOIR | X | X | | | X | X | | | X | X | X | | | X | X | | | | | | | ANTELOPE VALLEY GW |
| | LAKE PALMDALE | RESERVOIR | X | X | | | | X | | | X | X | X | | | X | X | | | | | | | L.A. AQUEDUCT |
| 626.00 | **ANTELOPE HU (continued)** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | X | | X | X | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.10 | **CHAFEE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.20 | **GLOSTER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.30 | **WILLOW SPRINGS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.40 | **HERBACK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.50 | **LANCASTER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.60 | **NORTH MUROC HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.70 | **BUTTES HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 626.80 | **ROCK CREEK HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | X | | | | | X | X | |
| 627.00 | **CUDDEBACK HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | X | | X | | X | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | | | | | X | X | | X | X | | | X | | X | | | | | | | |
| 628.00 | **MOJAVE HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | LOWER NARROWS OF MOJAVE R. WETLANDS | WETLANDS | X | X | | | | X | | | X | X | | | X | X | | X | | X | X | | X | |
| | MOJAVE RIVER | | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | UPPER MOJAVE GW BASIN |
| | WEST FORK MOJAVE RIVER | INTERMITTENT STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | MOJAVE RIVER GW BASIN |
| | EAST FORK OF WEST FORK OF MOJAVE RIVER | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | X | | WEST FORK MOJAVE RIVER |
| | LAKE GREGORY | LAKE | X | X | | | | X | | X | X | X | X | | | X | | X | | | | X | | ROBERT BELL CANYON |
| | DEELEY CANYON CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | EAST FORK/WEST FORK |
| | ZZYZX SPRING | SPRINGS | X | X | | | | X | | | X | X | X | | X | X | | X | X | X | | | | MOJAVE HYDROLOGIC UNIT GW |
| | SUGARLOAF SPRING | SPRINGS | X | | | | | X | | | X | X | | | X | | | X | | | | | | MOJAVE RIVER BASIN GW |
| | DUNNIGAN SPRINGS | SPRINGS | X | X | | | | X | | | X | X | | | X | | | X | | | | | X | X MOJAVE RIVER |
| | MINOR SURFACE WATERS | | X | X | | | | X | | | X | X | X | | X | X | | X | | X | | | | |
| | MINOR WETLANDS | WETLANDS | X | | | | | X | X | | X | X | | | X | X | | X | | X | | | X | X |
| 628.10 | **EL MIRAGE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | DEATH CANYON CREEK (TRIBUTARY TO SHEEP CREEK) | | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | MINOR SURFACE WATERS | | X | X | | | | X | X | | X | X | | | X | | | X | | X | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | | | X | | X | | | X | X |
| 628.20 | **UPPER MOJAVE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | HOUSTON CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | EAST FORK/WEST FORK |
| | OAKZ CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | HOUSTON CREEK |
| | DEEP CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | | X | | X | | | | | | EAST FORK/WEST FORK |
| | HAMPIT CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | WEST FORK MOJAVE |
| | WILLOW CREEK | INTERMITTENT STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | DEEP CREEK |
| | TROY CREEK | INTERMITTENT STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | TROY POND | INTERMITTENT POND | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | HOLCOMB CREEK | INTERMITTENT STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | DEEP CREEK |
| | LITTLE BEAR CREEK | INTERMITTENT STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | DEEP CREEK |
| | LAKE ARROWHEAD | LAKE | X | X | | | | X | | X | X | X | X | | | X | | X | | | | | | DEEP CREEK |
| | ARROWHEAD LAKE | LAKE | X | X | X | | | X | | X | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | HOOKS CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | | | DEEP CREEK |
| | SWIM BEARS CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | |
| | SHALE CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | X | | DEEP CREEK |
| 628.20 | **UPPER MOJAVE HA (continued)** | | | | | | | | | | | | | | | | | | | | | | | |
| | SHEEP CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | CRAB CREEK | PERENNIAL STREAM | X | X | | | | | | | X | X | X | | | X | | X | | | | X | | DEEP CREEK |
| | ORROW VALLEY LAKE | LAKE | X | X | | | | X | | | X | X | X | | | X | | X | | | | | | GREEN VALLEY LAKE CREEK |
| | GREEN VALLEY LAKE STREAM | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | DEEP CREEK |
| | SILVERWOOD RESERVOIR | RESERVOIR | X | X | | | | X | | | X | X | X | | | X | | X | | | | | | UPPER MOJAVE SUBUNIT GW |
| | GRASS VALLEY LAKE | LAKE | X | X | | | | X | | | X | X | X | | | X | | X | | | | | | GRASS VALLEY LAKE |
| | GRASS VALLEY LAKE CREEK | PERENNIAL STREAM | X | X | | | | X | | | X | X | X | | X | X | | X | | | | | | WEST FORK MOJAVE RIVER |
| | UPPER MOJAVE RIVER, LOWER SLOUGH | WETLANDS | X | X | | | | X | | | X | X | | | X | | | X | | | | | X | X MOJAVE RIVER |
| | MINOR SURFACE WATERS | | X | X | | | | X | | X | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | X | | X | | X | | | X | X |
| 628.30 | **MIDDLE MOJAVE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | X | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | X | | X | | X | | | X | X |
| 628.40 | **LOCKHART HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | | X | | X | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | | X | X | | X | X | | | X | X | | X | | X | | | X | X |

# TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

| HU No. | HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | RECEIVING WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PRO | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | MAR | WILD | RARE | MIGR | SPWN | EST | WIM | |
| 628.41 | **GRASS VALLEY HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | X | X | X | | | X | X | | X | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | X | X | |
| 628.42 | **HARPER VALLEY HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BIRD SPRINGS | SPRINGS | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | X | HARPER VALLEY GROUNDWATER |
| | HARPER LAKE | ALKALI LAKE | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | INTERNALLY DRAINED LAKE |
| | OPAL MTN. SPRINGS | SPRINGS | | | | | | | | | | | | | | | | | | | | | | X | |
| | HARPER LAKE WETLANDS | WETLANDS | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | X | X | HARPER LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.50 | **LOWER MOJAVE HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.60 | **NEWBERRY SPRINGS HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.61 | **FANE WASH HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.62 | **TROY VALLEY HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.70 | **AFTON HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.71 | **CAVES HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MOJAVE RIVER | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | MOJAVE R. FORKS RESERVOIR |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.72 | **CRONESE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | BITTER SPRINGS | WETLANDS | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | X | X | CRONESE VALLEY GW |
| | CRONESE LAKES (EAST AND WEST) | WETLANDS | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | X | X | CRONESE LAKES |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.73 | **LANGFORD HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.80 | **BAKER HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.81 | **SILVER LAKE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | SILVER LAKE | ALKALI LAKE | X | X | | | X | | | | | X | X | | | X | X | X | X | | | | | | INTERN. DRN EX-SILVER LK. HDA 628 |
| | HALLIGAN SPRING | SPRING/EMERGENT | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | SILVER LAKE |
| | INDIAN SPRING | SPRING | X | X | | | X | X | | | | X | X | | | X | X | | X | | | | | | SILVER LAKE |
| | CANE SPRING | SPRING | X | X | | | X | X | | | | X | X | | | X | X | | X | | | | | | SILVER LAKE |
| | CHANDLER SPRING | SPRING | X | X | | | X | X | | | | X | X | | | X | X | | X | | | | | | SILVER LAKE |
| | CHERRY SPRING | SPRING | X | X | | | X | X | | | | X | X | | | X | X | | X | | | | | | SILVER LAKE |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.82 | **SODA LAKE HYDROLOGIC SUBAREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | SODA LAKE | ALKALI LAKE | X | X | | | X | | | | | X | X | X | | X | X | | X | | | | | X | INTERNALLY DRAINED LAKE |
| | PALUTE SPRING | SPRING/EMERGENT | X | X | | | X | X | | | | X | X | X | | X | X | | X | X | X | | X | X | PALUTE WASH/PALUTE VALLEY GW |
| | MOJAVE RIVER | | X | X | | | | | | | | X | X | | | X | X | | X | | | | | | MOJAVE RIVER |
| | MESQUITE SPRINGS | SPRINGS | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | X | MOJAVE RIVER SINK |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 628.90 | **KELSO HYDROLOGIC AREA** | | | | | | | | | | | | | | | | | | | | | | | |
| | COLD BOY SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | | X | X | X | | X | X | | X | | | | | X | CEDAR WASH |
| | MARL SPRING | SPRINGS/EMERGENT | X | X | | | X | X | | | | X | X | X | | X | X | | X | | | | | X | KELSO WASH |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | | | X | X | | X | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | X | | | X | X | |
| 629.00 | **BROADWELL HYDROLOGIC UNIT** | | | | | | | | | | | | | | | | | | | | | | | |
| | MINOR WETLANDS | WETLANDS | X | X | | | X | X | | | | X | X | | | X | X | | X | | | | | X | X | |
| | MINOR SURFACE WATERS | | X | X | | | X | | | | | X | X | X | | X | X | | X | | | | | | |

**Changes to Table 2-1 of the Lahontan Basin Plan made in plan amendments adopted in July 2000 and finally approved in April 2002.** The table below shows the beneficial uses remaining for these water after removal of the potential Municipal and Domestic Supply (MUN) use designation. Rows for individual water bodies in the Table below will be revised in or added to Table 2-1 of the Basin Plan when the plan is reprinted; fonts will be revised to match the rest of the table. See Chapter 2 of the Basin Plan for the meaning of abbreviations in the "Beneficial Use" columns.

| HU No. | HYDRO-LOGIC UNIT/ SUBUNIT DRAINAGE FEATURE | WATERBODY CLASS MODIFIER | BENEFICIAL USES | | | | | | | | | | | | | | | | | | | | | | Receiving Water |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | PRO | IND | GWR | FRSH | NAV | POW | REC-1 | REC-2 | COMM | AQUA | WARM | COLD | SAL | WILD | BIOL | RARE | MIGR | SPWN | WQE | FLD | |
| 637.20 | Wendel Hot Springs | Hot Springs | | x | | | x | x | | x | x | x | | | | | | x | | | | | x | | Honey Lake |
| 637.20 | Amedee Hot Springs | Hot Springs | | x | | | x | x | | | x | x | x | | x | x | | x | | | | | | | Honey Lake |
| 631.40 | Hot Creek | Perennial Stream | | x | | | x | | | | x | x | x | | x | x | | x | | | | | | | Little Walker River |
| 631.40 | Fales Hot Springs | Springs | | x | | | x | | | | x | x | x | | x | | | x | | | | | | | Hot Creek |
| 603.10 | Little Hot Creek | Perennial Stream | | x | | | x | x | | | x | x | x | | | x | | x | | | | x | | | Hot Creek or Owens River |
| 603.10 | Little Alkali Lake | Alkali Lake | | x | | | x | x | | | x | x | x | | | x | | x | | | | x | | | Crowley Lake |
| 603.20 | Keough Hot Springs | Springs | | x | | | x | | | | x | x | x | | x | x | | x | | | | | | | Owens River |
| 605.00 | Deep Springs Lake | Intermittent Lake | | | | | x | | | | x | x | x | | x | | x | x | x | x | | | | | Deep Springs Val. GW |
| 609.00 | Amargosa River | Intermittent Stream | | x | | | x | | | | x | x | | | x | | x | x | x | x | | x | | | Amargosa Subarea GW |

*Summary of Beneficial Uses for Waterbodies Identified in the Nevada Administrative Code*

| NAC | Name | Description | Beneficial Uses | | | | | | | | | | | Aquatic species of concern |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IRR | STOCK | REC-1 | REC-2 | IND | MUN | WILD | AQUATIC | AESTHETIC | ENHANCE | MARSH | |
| ***CLASS A WATERS*** | | | | | | | | | | | | | | |
| 445A.124 | Various waterbodies | | X | X | X | X | | A | X | X | | | | |
| ***CLASS B WATERS*** | | | | | | | | | | | | | | |
| 445A.125 | Various waterbodies | | X | X | X | X | X | B | X | X | | | | |
| ***CLASS C WATERS*** | | | | | | | | | | | | | | |
| 445A.126 | Various waterbodies | | X | X | X | X | X | C | X | X | | | | |
| ***CLASS D WATERS*** | | | | | | | | | | | | | | |
| 445A.127 | Various waterbodies | | X | X | | X | X | | X | X | | | | |
| ***CARSON RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.147 | West Fork Carson River | At stateline | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.148 | Bryant Creek | At stateline | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.149 | East Fork Carson River | At stateline | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.150 | East Fork Carson River | Stateline to Highway 395 | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.151 | East Fork Carson River | Highway 395 to Muller Lane | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.152 | EF/WF & Carson River | EF at Muller to Genoa Lane & WF at stateline to Genoa Lane | X | X | X | X | X | X | X | X | | | | catfish, rainbow trout, brown trout |
| 445A.153 | Carson River | Genoa Lane to Cradlebaugh Bridge | X | X | X | X | X | X | X | X | | | | catfish, rainbow trout, brown trout |
| 445A.154 | Carson River | Cradlebaugh Bridge to Mexican Ditch Gage | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.155 | Carson River | Mexican Ditch Gage to New Empire | X | X | X | X | X | X | X | X | | | | smallmouth bass, rainbow trout, brown trout |
| 445A.156 | Carson River | New Empire to Dayton Bridge | X | X | X | X | X | X | X | X | | | | walleye, channel catfish, white bass |
| 445A.157 | Carson River | Dayton Bridge to Weeks Bridge | X | X | X | X | X | X | X | X | | | | walleye, channel catfish, white bass |
| 445A.158 | Carson River | Weeks Bridge to Lahontan Dam | X | X | X | X | X | X | X | X | | | | walleye, channel catfish, white bass |
| ***WALKER RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.160 | West Walker River | At stateline | X | X | X | X | X | X | X | X | | | | mountain whitefish, rainbow trout, brown trout |
| 445A.161 | Topaz Lake | Various points in Topaz Lake | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout, cutthroat trout, kokone salmon, silver salmon |
| 445A.162 | West Walker River | CA stateline to Wellington | X | X | X | X | X | X | X | X | | | | mountain whitefish, rainbow trout, brown trout |
| 445A.163 | West Walker River | Wellington to confluence with East Walker River | X | X | X | X | X | X | X | X | | | | rainbow trout, brown trout |
| 445A.164 | Sweetwater Creek | CA stateline to the East Walker River | X | X | X | X | X | X | X | X | | | | mountain whitefish, brown trout, brook trout, rainbow trout |
| 445A.165 | East Walker River | At stateline | X | X | X | X | X | X | X | X | | | | mountain white fish, rainbow trout, brown trout |
| 445A.1655 | East Walker River | Stateline to Bridge B-1475 | X | X | X | X | X | X | X | X | | | | mountain white fish, rainbow trout, brown trout |
| 445A.166 | East Walker River | Bridge B-1475 to East/West Walker confluence | X | X | X | X | X | X | X | X | | | | brown trout, rainbow trout |
| 445A.167 | Walker River | East/West Walker confluence to Weber Reservoir Inlet | X | X | X | X | X | X | X | X | | | | channel catfish, largemouth bass |
| 445A.168 | Walker River | Weber Reservoir to Walker Lake | State standards do not apply on tribal lands | | | | | | | | | | | |
| 445A.169 | Desert Creek | CA stateline to the West Walker River | X | X | X | X | X | X | X | X | | | | brown trout, brook trout, rainbow trout |

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| NAC | Name | Description | Beneficial Uses | | | | | | | | | | | Aquatic species of concern |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IRR | STOCK | REC-1 | REC-2 | IND | MUN | WILD | AQUATIC | AESTHETIC | ENHANCE | MARSH | |
| 445A.1696 | Walker Lake | Walker Lake | | | X | X | | | X | X | | | | tui chub, Tahoe sucker, and adult and juvenile Lahontan cutthroat trout |
| ***CENTRAL REGION*** | | | | | | | | | | | | | | |
| 445A.171 | Chiatovich Creek | Above highway maintenance station | X | X | X | X | X | X | X | X | | | | |
| 445A.172 | Indian Creek | Above center of Section 9, T2S, R34E | X | X | X | X | X | X | X | X | | | | |
| 445A.173 | Leidy Creek | Above hydroelectric plant | X | X | X | X | X | X | X | X | | | | |
| ***COLORADO RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.175 | Virgin River | AZ stateline to Mesquite | X | X | | X | X | | X | X | | | | |
| 445A.176 | Virgin River | At stateline | X | X | | X | X | | X | X | | | | |
| 445A.177 | Virgin River | Mesquite to river mouth at Lake Mead | X | X | | X | X | | X | X | | | | |
| 445A.178 | Beaver Dam Wash | Above Schroeder Reservoir | X | X | X | X | X | X | X | X | | | | |
| 445A.192 | Colorado River | Lake Mohave Inlet to CA stateline | X | X | X | X | X | X | X | X | | | | |
| 445A.193 | Colorado River | Hoover Dam to Lake Mohave Inlet | X | X | X | X | X | X | X | X | | | | |
| 445A.195 | Lake Mead | Excluding area covered by NAC 445A.197 | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.197 | Lake Mead | West boundary of Las Vegas Bay campground to confluence of Las Vegas Wash | X | X | | X | X | | X | X | | | | warmwater fishery |
| 445A.199 | Las Vegas Wash | Confluence of discharges from City of Las Vegas and Clark County wastewater treatment plants to Telephone Road | X | X | | X | | | X | X | | | X | excluding fish |
| 445A.201 | Las Vegas Wash | Telephone Road to Lake Mead | X | X | | X | | | X | X | | | X | excluding fish |
| 445A.210 | Muddy River | River source to Glendale | X | X | | X | X | X | X | X | | | | |
| 445A.211 | Muddy River | Glendale to Lake Mead | X | X | | X | X | | X | X | | | | |
| 445A.212 | Meadow Valley Wash | Bridge above Rox to Muddy River | X | X | | X | X | | X | X | | | | |
| ***GREAT SALT LAKE BASIN*** | | | | | | | | | | | | | | |
| 445A.179 | Snake Creek | Above fish hatchery | X | X | X | X | X | X | X | X | | | | |
| ***WESTERN REGION*** | | | | | | | | | | | | | | |
| 445A.180 | Smoke Creek | No description given | No beneficial uses defined | | | | | | | | | | | |
| ***TRUCKEE RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.181 | Bronco Creek | No description given | No beneficial uses defined | | | | | | | | | | | |
| 445A.182 | Gray Creek | No description given | No beneficial uses defined | | | | | | | | | | | |
| 445A.184 | Truckee River | At stateline | X | X | X | X | X | X | X | X | | | | all life stages of mountain whitefish, rainbow trout, brown trout |
| 445A.185 | Truckee River | CA stateline to Idlewild | X | X | X | X | X | X | X | X | | | | all life stages of mountain whitefish, rainbow trout, brown trout |
| 445A.186 | Truckee River | Idlewild to East McCarran Blvd | X | X | X | X | X | X | X | X | | | | all life stages of mountain whitefish, rainbow trout, brown trout |
| 445A.187 | Truckee River | East McCarran Blvd to Lockwood | X | X | X | X | X | X | X | X | | | | juvenile and adult rainbow trout, juvenile and adult brown trout |
| 445A.188 | Truckee River | Lockwood to Derby Dam | X | X | X | X | X | X | X | X | | | | juvenile and adult rainbow trout, juvenile and adult brown trout |
| 445A.189 | Truckee River | Derby Dam to Wadsworth | X | X | X | X | X | X | X | X | | | | early spawning Lahontan cutthroat trout and their incubation, larvae, juveniles and migration |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IRR | STOCK | REC-1 | REC-2 | IND | MUN | WILD | AQUATIC | AESTHETIC | ENHANCE | MARSH | |
| 445A.190 | Truckee River | Wadsworth to Pyramid Lake | State standards do not apply on tribal lands | | | | | | | | | | | |
| 445A.191 | Lake Tahoe | Lake Tahoe | X | X | X | X | X | X | X | X | X | | | coldwater fishery |
| 445A.1915 | Tributaries to Lake Tahoe | All tributaries | X | X | X | X | X | X | X | X | | X | | coldwater fishery |
| ***HUMBOLDT RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.203 | Humboldt River | Source to Osino | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.204 | Humboldt River | Osino to Palisade | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.205 | Humboldt River | Palisade to Battle Mountain | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.206 | Humboldt River | Battle Mountain to State Highway 789 | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.207 | Humboldt River | Comus to Imlay | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| 445A.208 | Humboldt River | Imlay to Woosley | X | X | X | X | X | X | X | X | | | | warmwater fishery |
| ***SNAKE RIVER BASIN*** | | | | | | | | | | | | | | |
| 445A.215 | Big Goose Creek | Entire reach | X | X | X | X | X | X | X | X | | | | |
| 445A.216 | Salmon Falls Creek | Entire reach | X | X | X | X | X | X | X | X | | | | |
| 445A.217 | Shoshone Creek | Entire reach | X | X | X | X | X | X | X | X | | | | |
| 445A.218 | EF Jarbidge River | Entire reach | X | X | X | X | X | X | X | X | | | | |
| 445A.219 | Jarbidge River | Upstream from Jarbidge | X | X | X | X | X | X | X | X | | | | |
| 445A.220 | Jarbidge River | Jarbidge to stateline | X | X | X | X | X | X | X | X | | | | |
| 445A.221 | West Fork Bruneau River | Entire reach | X | X | X | X | X | X | X | X | | | | |
| 445A.222 | East Fork Owyhee River | Wildhorse Reservoir to Mill Creek | X | X | X | X | X | X | X | X | | | | |
| 445A.223 | East Fork Owyhee River | Mill Creek to New China Dam | X | X | X | X | X | X | X | X | | | | |
| 445A.224 | East Fork Owyhee River | New China Dam to stateline | State standards do not apply on tribal lands | | | | | | | | | | | |
| 445A.225 | South Fork Owyhee River | Entire reach | X | X | X | X | X | X | X | X | | | | |

**IRR** Irrigation
**STOCK** Watering of livestock
**REC-1** Recreation involving contact with the water
**REC-2** Recreation notinvolving contact with the water
**IND** Industrial supply
**MUN** Municipal or domestic supply, or both

**WILD** Propagation of wildlife
**AQUATIC** Propagation of aquatic life
**AESTHETIC** Waters of extraordinary ecological or aesthetic value
**ENHANCE** Enhancement of water quality
**MARSH** Maintenance of a freshwater marsh

**A** With treatment by disinfection only
**B** With treatment by disinfection and filtration only
**C** With complete treatment