

**STATE OF NEVADA**  
**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES**  
**DIVISION OF WATER RESOURCES**

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**PLEASANT VALLEY**  
**HYDROGRAPHIC BASIN 6-088**

**GROUNDWATER PUMPAGE INVENTORY**

**WATER YEAR 2018**

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## ABSTRACT

This inventory presents the status and usage of all permitted, certificated, claims of vested groundwater rights, and exempt domestic wells located within Pleasant Valley, Hydrographic Basin 6-088, for the water year 2018 (October 1, 2017 through September 30, 2018). Also included are graphs, tables, and data associated with this use.

The data presented are valid for the period of this report and may vary from previously published figures as water rights within the basin are subject to administrative action, such as certification, cancellation, forfeiture or withdrawal on a continual basis.

For water year 2018, the committed groundwater resource totaled 7,357 acre-feet, with estimated pumpage of **2,230 acre-feet**. This amount includes an estimated 716 acre-feet pumped from exempt domestic wells.

Quasi-municipal was the largest manner of use within the basin. For water year 2018, pumpage for quasi-municipal water use totaled 782 acre-feet, with appropriations totaling 1,972 acre-feet. The second largest category of use was pumping by exempt domestic wells, estimated at 716 acre-feet.

## HYDROGRAPHIC BASIN SUMMARY

|                                                               |                           |
|---------------------------------------------------------------|---------------------------|
| HYDROGRAPHIC BASIN NUMBER                                     | 088, REGION 6             |
| HYDROGRAPHIC BASIN NAME                                       | PLEASANT VALLEY           |
| COUNTIES                                                      | WASHOE                    |
| MAJOR COMMUNITIES                                             | PLEASANT VALLEY           |
| DESIGNATED                                                    | YES                       |
| DENIALS BASED UPON WATER AVAILABILITY                         | ALL USES                  |
| GROUNDWATER LEVEL MEASUREMENTS                                | NDWR, USGS                |
| PUMPAGE INVENTORY, ACRE-FEET IN 2018                          | 2,230 <sup>1</sup>        |
|                                                               |                           |
| STATE ENGINEER'S ORDERS                                       |                           |
| <a href="#"><u>NO. 709 – DESIGNATION</u></a>                  | DATE: MARCH 1, 1978       |
| <a href="#"><u>NO. 1155 – DOMESTIC WELL CREDIT</u></a>        | DATE: SEPTEMBER 23, 1999  |
|                                                               |                           |
| COMMITTED GROUNDWATER RESOURCE <sup>2</sup> : 7,357 ACRE-FEET | DATE: SEPTEMBER 2018      |
| COMMERCIAL ..... 351                                          | DOMESTIC ..... 1,432      |
| MUNICIPAL ..... 2,891                                         | OTHER ..... 78            |
| STOCKWATER ..... 3                                            | IRRIGATION ..... 630      |
|                                                               | QUASI-MUNICIPAL ... 1,972 |

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<sup>1</sup> Includes pumpage by exempt domestic wells, as defined by NRS 534.013.

<sup>2</sup> Committed groundwater resource data are accurate for September 2018, excluding 7,964 acre-feet of permitted geothermal rights. Manner of use category totals vary over time, as rights are not static. Rights may be subject to change applications, certification, withdrawals, forfeiture and cancellations; each of these circumstances could affect the duty, diversion rate and acreage associated with a given right. The value associated with each manner of use category does not include the amount relinquished in support of domestic wells. A query of the NDWR Well Log Database indicates that 716 domestic wells existed in the basin during water year 2018. This query is assumed to represent both appropriations and exempt domestic wells. The committed domestic water resource is considered to be 2 acre-feet per domestic well, or 1,432 acre-feet annually.

## **PURPOSE AND SCOPE**

The purpose of this report is to inventory all of the groundwater resources allocated and described by the Office of the State Engineer, Nevada Division of Water Resources (NDWR), and to estimate the amount of groundwater pumped within Pleasant Valley during water year 2018. This report estimates the amount of groundwater pumped under the permits and certificates issued by the State Engineer, claims of vested right, as well as the amount pumped by exempt domestic wells within the basin.

## **DESCRIPTION OF THE STUDY AREA**

Pleasant Valley is located in northwest Nevada, occupying approximately 39 square miles within Washoe County (Figure 1). Pleasant Valley is bounded on the north by the Steamboat Hills, on the east by the Virginia Range, and on the west by the Carson Range of the Sierra Nevada. The adjacent hydrographic basins are Truckee Meadows (6-087) to the north and east, Truckee Canyon Segment (6-091) to the west, and Washoe Valley (6-089) to the south. The Pleasant Valley boundary is as described by Designation Order 709, issued by the Nevada State Engineer on March 1, 1978.

The dominant hydrologic feature in Pleasant Valley is Steamboat Creek. The stream originates from Washoe Lake, flows north to Little Washoe Lake and continues north through Pleasant Valley, eventually discharging to the Truckee River. Jones and Galena Creeks originate in the Carson Range and flow into Steamboat Creek within the valley. The U.S. Geological Survey (USGS) operates a streamflow gaging station on Steamboat Creek (USGS site #10349300). Data for this and other gaging stations are available from the USGS website at <http://nevada.usgs.gov>.

Geothermal resources are found within the northwestern portion of the Pleasant Valley basin. The total permitted acre-feet for geothermal water is 7,964 acre-feet. A portion of the geothermal water that is produced within the basin is reinjected.

## **GROUNDWATER LEVELS**

Depths to groundwater in Pleasant Valley are measured by NDWR, and also reported by other entities. Data for active monitoring well sites (Figure 2) can be found on NDWR's website at <http://water.nv.gov/WaterLevelData.aspx>, or via the Nevada Hydrology Data Mapping Application, accessible at <http://water.nv.gov/mapping.aspx>. Groundwater level data are also collected by the USGS and may be accessed through their website at <https://waterdata.usgs.gov/nv/nwis/gw>.

## METHODS TO ESTIMATE PUMPAGE

One of the purposes of this report is to estimate the amount of groundwater pumped under vested claims, permits and certificates issued by the State Engineer, as well as the amount pumped by exempt domestic wells in the valley. Table 1 and Figure 3 show historical pumpage by manner of use; Figure 4 shows the percentage of water pumped by manner of use; and Figure 5 compares groundwater commitments and estimated pumpage by manner of use. The following methods were used to arrive at the estimated use:

- Where totalizing meters were in place, meter readings were taken and compared with previous data (if available).
- Where meters were not in place and the use was irrigation, pumpage was estimated by multiplying the number of hours the well was operated during the past year (determined from an hour meter reading or asking the water user) by the certificated diversion rate.
- Where there were no flow meters or other reliable options for estimating pumpage and the use was irrigation, pumpage was estimated by dividing the Net Irrigation Water Requirement (NIWR) for the crop grown by the efficiency of the irrigation method used, then multiplying by the number of acres irrigated. Irrigation efficiencies associated with three types of irrigation methods are pivot at 85%, wheel line or other hand moved sprinklers at 75%, and flood at 60%. The pumpage amount estimated by this method was limited by the duty of the permit. For places where the groundwater rights were supplemental to surface water, groundwater use was estimated using the NIWR method above, but adjusted based on available surface water for the year. Evapotranspiration and NIWR data by basin can be found on the NDWR website at: <http://water.nv.gov/Evapotranspiration.aspx>.
- Where meters were not present, previous data were not available, and the manner of use was not irrigation, pumpage was estimated by applying the annual duty associated with the certificate (if the water right was perfected), permit or claim, if the use was as described in the certificate, permit or claim. If the use was not as described in the certificate, permit or claim, a value was estimated based upon the circumstances of use for the subject year.
- Exempt domestic wells may be drilled and utilized where water service from a purveyor is not available. These types of wells do not require a permit from the State Engineer if they do not pump more than 2 acre-feet per year as provided by Nevada Revised Statutes (NRS) [534.180](#). [NRS 534.013](#) defines this category of domestic use as follows: *“Domestic use or domestic purposes extends to culinary and household purposes directly related to a single family dwelling, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets.”* The number of exempt domestic wells in the basin was determined by a query of the NDWR Well Log Database. The amount of water pumped by exempt domestic wells is estimated to be 1 acre-foot per well in Pleasant Valley, or 716 acre-feet.

## TABLES

Table 1. Pleasant Valley historical pumpage (acre-feet) by water year.

| YEAR | COM | DOM | IRR | MUN   | OTH | QM  | REC | STK | TOTAL |
|------|-----|-----|-----|-------|-----|-----|-----|-----|-------|
| 2014 | 15  | 722 | 183 | 2,067 | 72  | *   | -   | 0   | 3,059 |
| 2015 | 13  | 722 | 215 | 1,639 | 72  | *   | -   | 0   | 2,662 |
| 2016 | 16  | 720 | 142 | 515   | 74  | 678 | -   | 0   | 2,144 |
| 2017 | 15  | 720 | 44  | 331   | 73  | 454 | 26  | 0   | 1,663 |
| 2018 | 19  | 716 | 54  | 587   | 73  | 782 | -   | 0   | 2,230 |

\*Prior to 2016, municipal and quasi-municipal manners of use were commingled.

## FIGURES

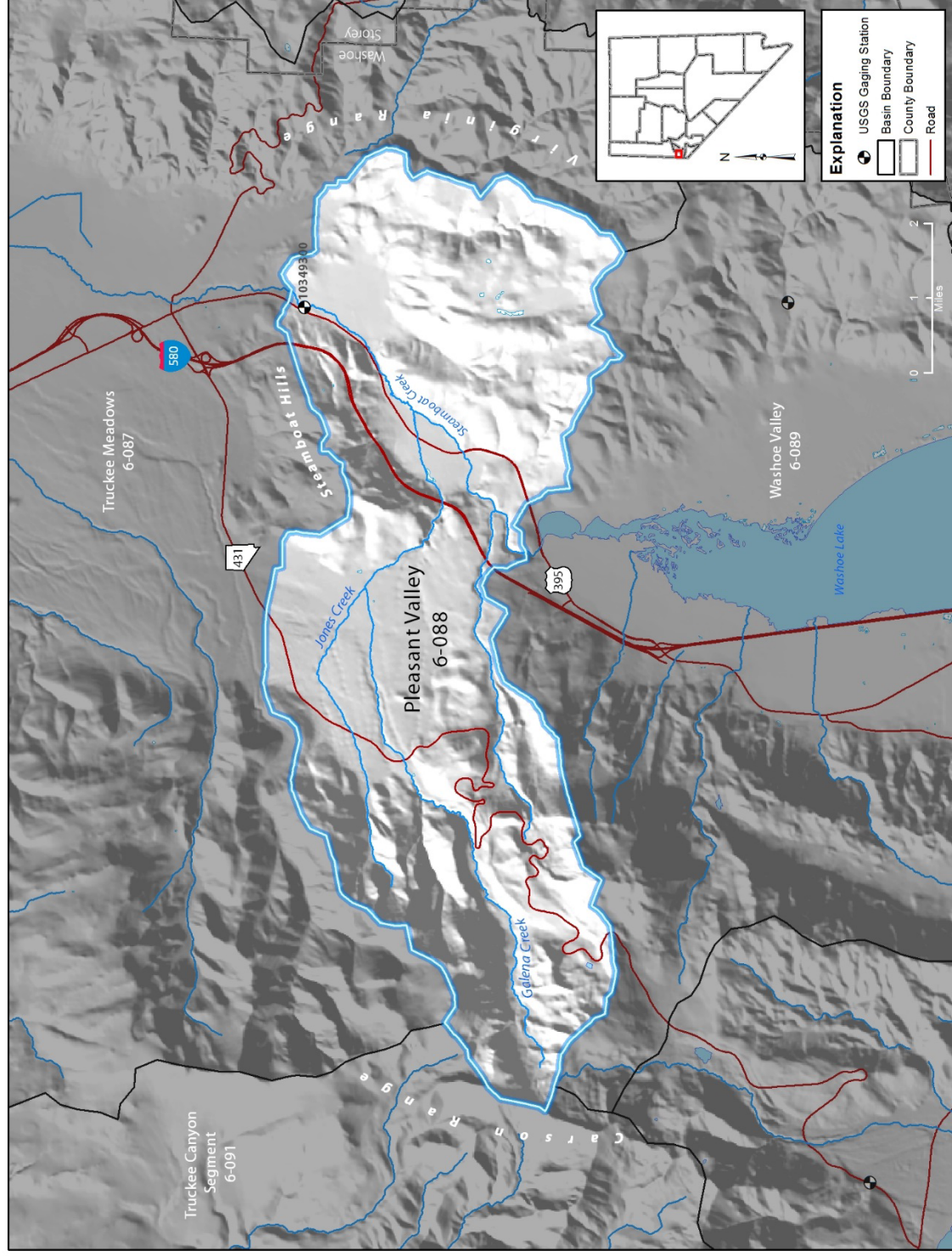


Figure 1. Physiographic map of Pleasant Valley (Hydrographic Basin 6-088).



Figure 2. Pleasant Valley water level measurement sites.

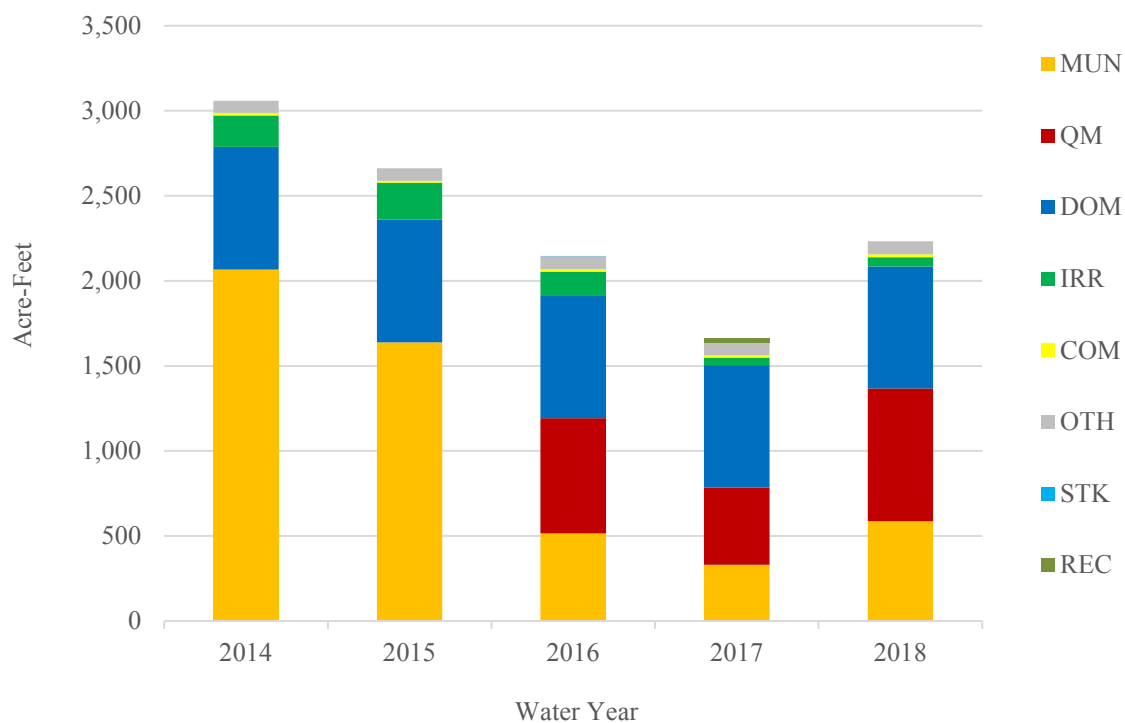


Figure 3. Pleasant Valley historical pumpage by manner of use.  
Note: Prior to 2016 municipal and quasi-municipal manners of use were commingled.

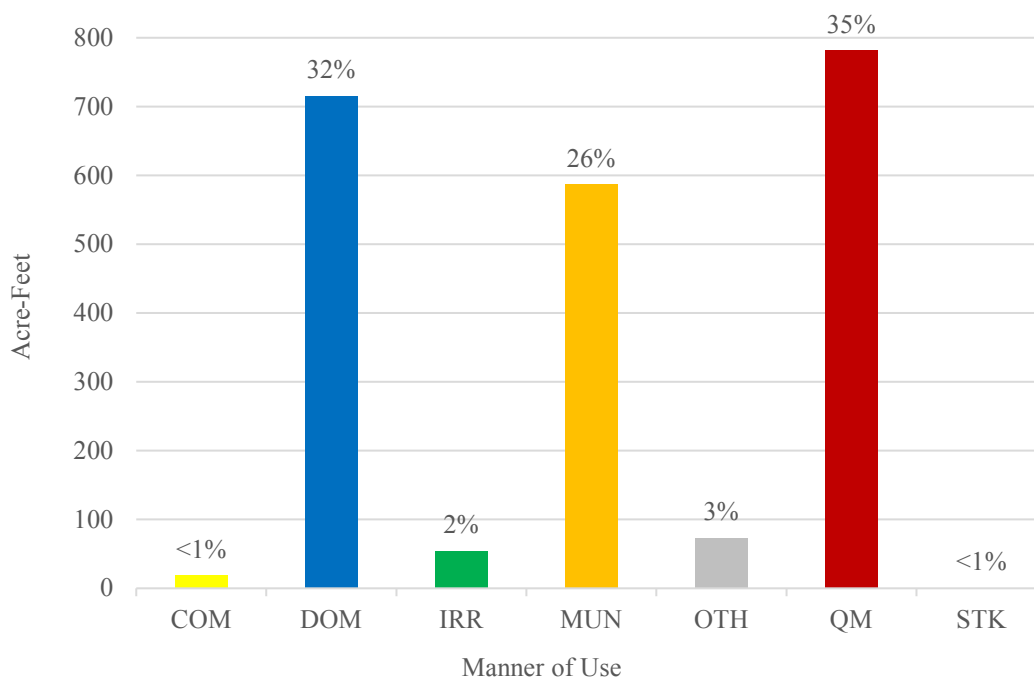


Figure 4. Percentage of 2018 groundwater pumpage by manner of use.

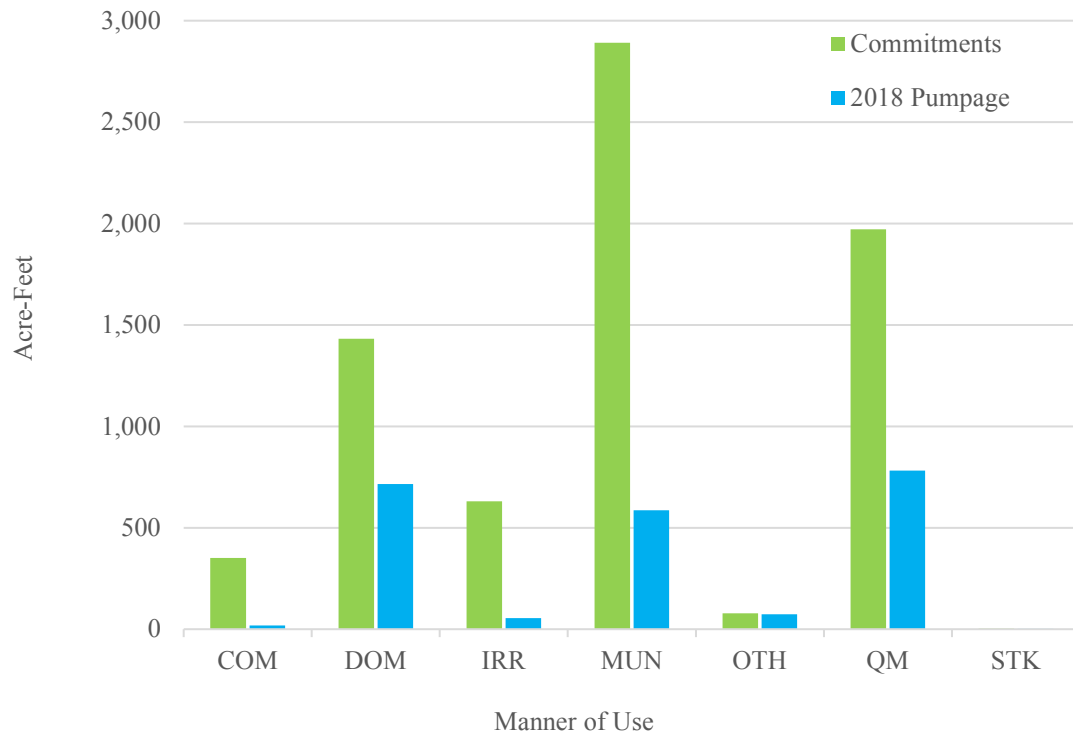


Figure 5. Comparison between 2018 groundwater commitments and pumpage.

**APPENDIX A. PLEASANT VALLEY 2018 GROUNDWATER PUMPAGE BY  
APPLICATION NUMBER**

## EXPLANATION OF COLUMN HEADINGS FOR GROUNDWATER PUMPAGE INVENTORY

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| APP NO.         | The file number of the Application to Appropriate/Change Water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |
| SITE NAME       | An ID assigned to each well based on its geographic location.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| STATUS          | Indicates if the application is a Permit (PER) or if it has been certificated. If an application has been certificated, the certificate number will be listed in the column.                                                                                                                                                                                                                                                                                                                                                             |  |  |
| MOU             | The manner of use of the appropriated water.<br>COM - Commercial                      CON - Construction                      DOM - Domestic<br>ENV - Environmental                      IND - Industrial                      IRR - Irrigation<br>MM - Mining & Milling                      MUN - Municipal                      OTH - Other<br>PWR - Power                      QM - Quasi-Municipal                      REC - Recreation<br>STK - Stockwater                      STO - Storage                      WLD - Wildlife |  |  |
| OWNER OF RECORD | The owner of the water right as recorded in the files of the State Engineer. A water right may have more than one owner of record.                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |
| PLACE OF USE    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |
| QQ              | The quarter quarter of the section in which the point of diversion is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| QTR             | The quarter of the section in which the point of diversion is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| SEC             | The section in which the point of diversion is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| T               | The township in which the point of diversion is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| R               | The range in which the point of diversion is located.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| PER. ACRES      | The number of acres that are permitted to be irrigated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| DUTY (AF)       | The number of acre-feet of water that the permittee may pump. One acre-foot equals 325,851 gallons.                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |
| SUPP ADJ        | Where more than one permit is appurtenant to the same place of use, the permits are considered supplemental. Permits may be either completely or partially supplemental. In these cases, a total combined duty for the subject permits is employed.                                                                                                                                                                                                                                                                                      |  |  |
| DUTY USED       | The amount of water used during the water year, in acre-feet, as determined by review of records and/or field investigation. A “-“ in this field indicates that pumpage was attributed to a senior supplemental permit or certificated water right.                                                                                                                                                                                                                                                                                      |  |  |
| UNIT            | Acre-feet annually (AFA) and acre-feet seasonally (AFS). AFS limits water usage to certain months of the year.                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| SUPP SRC        | Where more than one source is appurtenant to the same place of use, the sources are considered supplemental.                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
| SUPP GW APP NO. | The file number(s) of any supplemental groundwater appropriations. Supplemental application groups are listed at the end of Appendix A.                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |

METHOD      The method used to estimate pumpage, or duty used.  
D - Duty  
E - The observed use during field investigation  
M - Meter reading on a totalizing meter  
N - Acreage multiplied by the Net Irrigation Water Requirement (NIWR) for the crop grown in the basin divided by the efficiency of the irrigation method  
R - Reported pumpage

| APP NO. | SITE NAME            | STATUS | MOU | OWNER OF RECORD                               | QO | QTR | SEC | T   | R   | PER. ACRES | DUTY (AF) | SUPP ADJ | DUTY USED | UNIT | SUP SRC | SUPP GW APP NO. | METHOD |
|---------|----------------------|--------|-----|-----------------------------------------------|----|-----|-----|-----|-----|------------|-----------|----------|-----------|------|---------|-----------------|--------|
| 11533   | 088 N17 E20 07CADD1  | 3069   | IRR | GAMBONI CON CO INC. ; D & J KITTS             | NE | SW  | 7   | 17N | 20E | 6.87       | 49.67     | 49.67    | 1.80      | AFA  |         |                 | N      |
| 19098   | 088 N17 E19 19DBBB1  | 6630   | QM  | MT. ROSE DEVELOPMENT COMPANY                  | NW | SE  | 19  | 17N | 19E |            | 4.82      | 4.82     | 3.21      | AFA  |         |                 | R      |
| 20857   | 088 N17 E19 09CBCC1  | 5838   | OTH | TMWA                                          | NW | SW  | 9   | 17N | 19E |            | 72.40     | 72.40    | 72.40     | AFA  |         |                 | D      |
| 22002   | 088 N17 E20 07CADA1  | 6270   | QM  | WASHOE COUNTY SCHOOL DISTRICT                 | NE | SW  | 7   | 17N | 20E |            | 723.92    | 723.92   | 15.00     | AFA  |         |                 | E      |
| 22087   | 088 N17 E19 11ACCC1  | 6376   | DOM | CLARK, HAROLD B.                              | SW | NE  | 11  | 17N | 19E |            | 1.60      | 1.60     | 1.60      | AFA  |         |                 | D      |
| 22474   | 088 N17 E20 07AABB1  | 6801   | IRR | HERMAN W. EATON FAMILY TRUST, TRUST A         | NE | NE  | 7   | 17N | 20E | 2.67       | 8.66      | 8.66     | 0.00      | AFA  |         |                 | N      |
| 28895   | 088 N17 E20 09BBAC1  | 9644   | QM  | STEAMBOAT COURT WATER USERS ASSOC.            | NW | NW  | 9   | 17N | 20E |            | 2.03      | 2.03     | 0.87      | AFA  |         |                 | R      |
| 28896   | 088 N17 E20 09BBAC2  | 9645   | QM  | STEAMBOAT COURT WATER USERS ASSOC.            | NW | NW  | 9   | 17N | 20E |            | 2.55      | 2.55     | 0.00      | AFA  |         |                 | R      |
| 29419   | 088 N18 E19 34DCCB1  | 9713   | IRR | KUTNOCK, ROBERT & BARBARA                     | SW | SE  | 34  | 18N | 19E | 0.40       | 1.60      | 1.60     | 0.15      | AFA  |         |                 | N      |
| 30434   | 088 N17 E19 17DCCA1  | 10706  | QM  | MT. ROSE BOWL PROPERTY OWNERS                 | SW | SE  | 17  | 17N | 19E |            | 8.04      | 8.04     | 7.42      | AFA  | Y       | 57008           | R      |
| 31125   | 088 N17 E19 11ADDA1  | 10004  | QM  | MC MILLAN, D.                                 | SE | NE  | 11  | 17N | 19E |            | 1.14      | 1.14     | 1.14      | AFA  |         |                 | D      |
| 31167   | 088 N17 E19 03BCCB1  | 10629  | STK | WALKER, ALEXANDER S.                          | SW | NW  | 3   | 17N | 19E |            | 2.24      | 2.24     | 0.16      | AFA  |         |                 | M      |
| 33371   | 088 N17 E19 03BB CD1 | 11086  | QM  | TMWA                                          | NW | NW  | 3   | 17N | 19E |            | 1.60      | 1.60     | 1.60      | AFA  |         |                 | D      |
| 35147   | 088 N17 E19 02DAAC1  | PER    | QM  | CALLAHAN, ROBERT AND TINA                     | NE | SE  | 2   | 17N | 19E |            | 1828.51   |          | 0.00      | AFA  | Y       | Footnote 1      | R      |
| 35149   | 088 N17 E19 02DADB1  | PER    | QM  | CALLAHAN, ROBERT V. AND/OR TINA               | NE | SE  | 2   | 17N | 19E |            | 1828.51   |          | 0.00      | AFA  | Y       | Footnote 1      | R      |
| 35226   | 088 N17 E20 07CCCD1  | 15161  | QM  | TMWA                                          | SW | SW  | 7   | 17N | 20E |            | 1.00      |          | 0.00      | AFA  | Y       | Footnote 2      | R      |
| 35656   | 088 N18 E19 34DBDD1  | 10325  | OTH | GALENA CREEK VFD                              | NW | SE  | 34  | 18N | 19E |            | 2.24      | 2.24     | 0.73      | AFA  |         |                 | M      |
| 36089   | 088 N17 E19 03BCCB1  | 11293  | IRR | WALKER, ALEXANDER S.                          | SW | NW  | 3   | 17N | 19E | 5.76       | 23.04     | 27.57    | 1.00      | AFA  | Y       | Footnote 8      | M      |
| 41986   | 088 N17 E19 03BBBD1  | 12941  | COM | WEISS, INGEBORG                               | NW | NW  | 3   | 17N | 19E |            | 0.89      | 0.89     | 0.12      | AFA  |         |                 | M      |
| 45133   | 088 N17 E20 04BCDC1  | 11003  | COM | TOGLIATTI, ROBERT                             | SW | NW  | 4   | 17N | 20E |            | 0.03      | 0.03     | 0.03      | AFA  |         |                 | D      |
| 46958   | 088 N18 E19 34CDC C1 | PER    | QM  | THE NELL J. REDFIELD TRUST                    | SE | SW  | 34  | 18N | 19E |            | 25.96     | 25.96    | 3.52      | AFA  |         |                 | R      |
| 48958   | 088 N17 E20 05DCAB1  | 13846  | COM | WOOD, ANGELA & DAVID L.                       | SW | SE  | 5   | 17N | 20E |            | 2.03      | 2.03     | 0.17      | AFA  |         |                 | M      |
| 50380   | 088 N18 E20 33DCDD1  | 16132  | QM  | MONROE, R. LARRY & NANCY J.                   | SW | SE  | 33  | 18N | 20E |            | 3.36      | 3.36     | 0.00      | AFA  |         |                 | R      |
| 50540   | 088 N17 E19 02DCCB1  | 14122  | OTH | OLD GALENA LTD.                               | SW | SE  | 2   | 17N | 19E |            | 3.62      | 3.62     | 0.00      | AFA  |         |                 | E      |
| 52127   | 088 N17 E19 03BB CD1 | PER    | QM  | MONTGOMERY STREET PROPERTIES, LLC             | NW | NW  | 3   | 17N | 19E |            | 10.00     | 10.00    | 0.83      | AFA  |         |                 | M      |
| 52420   | 088 N17 E20 04DCDD1  | 14541  | IRR | TMWA                                          | SW | SE  | 4   | 17N | 20E | 0.04       | 0.19      | 323.08   | 0.00      | AFA  | Y       | Footnote 3, 9   | E      |
| 55665   | 088 N17 E19 02DADB1  | PER    | QM  | TMWA                                          | NE | SE  | 2   | 17N | 19E |            | 13.72     | 13.72    | 1.59      | AFA  |         |                 | R      |
| 57008   | 088 N17 E19 17DBC B1 | 15275  | QM  | MT. ROSE BOWL PROPERTY OWNERS WATER           | NW | SE  | 17  | 17N | 19E |            | 20.35     |          | 0.00      | AFA  | Y       | 30434           | R      |
| 57173   | 088 N17 E19 03DCDC1  | 17115  | QM  | NESLER, RONALD L.                             | SW | SE  | 3   | 17N | 19E |            | 2.21      | 2.21     | 2.21      | AFA  |         |                 | R      |
| 57429   | 088 N17 E20 18ABBC1  | PER    | MUN | TMWA                                          | NW | NE  | 18  | 17N | 20E |            | 60.24     | 61.24    | 32.34     | AFA  | Y       | Footnote 2      | R      |
| 57749   | 088 N17 E20 18BAAB1  | PER    | QM  | TMWA                                          | NE | NW  | 18  | 17N | 20E |            | 100.60    | 720.00   | 0.00      | AFA  | Y       | Footnote 4      | R      |
| 57750   | 088 N17 E20 18ABBC1  | PER    | QM  | TMWA                                          | NW | NE  | 18  | 17N | 20E |            | 157.60    |          | 0.00      | AFA  | Y       | Footnote 4      | R      |
| 58346   | 088 N17 E19 03BCCB1  | 15818  | IRR | WALKER, ALEXANDER S.                          | SW | NW  | 3   | 17N | 19E | 5.22       | 4.53      |          | 0.00      | AFA  | Y       | Footnote 8      | M      |
| 58496   | 088 N18 E20 33DCDC1  | PER    | QM  | STEAMBOAT SPRINGS WATER WORKS, INC.           | SW | SE  | 33  | 18N | 20E |            | 115.70    | 235.23   | 115.70    | AFA  | Y       | Footnote 5      | M      |
| 58497   | 088 N18 E20 33DCDD1  | PER    | QM  | STEAMBOAT SPRINGS WATER WORKS INC.            | SW | SE  | 33  | 18N | 20E |            | 41.06     |          | 0.00      | AFA  | Y       | Footnote 5      | M      |
| 58498   | 088 N18 E20 33DCDC2  | PER    | QM  | STEAMBOAT SPRINGS WATER WORKS INC.            | SW | SE  | 33  | 18N | 20E |            | 235.23    |          | 23.64     | AFA  | Y       | Footnote 5      | M      |
| 58806   | 088 N18 E19 34DC C1  | PER    | QM  | TMWA                                          | SE | SW  | 34  | 18N | 19E |            | 19.25     |          | 19.25     | AFA  | Y       | Footnote 17     | R      |
| 58870   | 088 N17 E19 03DABC1  | PER    | QM  | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 107.40    |          | 107.40    | AFA  | Y       | Footnote 4      | R      |
| 58926   | 088 N17 E19 03DABC1  | PER    | QM  | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 1886.78   |          | 150.45    | AFA  | Y       | Footnote 1      | R      |
| 59042   | 088 N17 E20 04CBBB1  | 15826  | QM  | 1997 GENO O. & VELDA ROSASCHI REVOCABLE TRUST | NW | SW  | 4   | 17N | 20E |            | 1.64      | 1.64     | 3.35      | AFA  |         |                 | M      |
| 59330   | 088 N17 E19 10DCAD1  | PER    | QM  | TMWA                                          | SW | SE  | 10  | 17N | 19E |            | 88.60     |          | 151.04    | AFA  | Y       | Footnote 4      | R      |
| 59631   | 088 N17 E19 14BB CB1 | 18687  | QM  | TMWA                                          | NW | NW  | 14  | 17N | 19E |            | 88.60     |          | 124.02    | AFA  | Y       | Footnote 4      | R      |
| 59632   | 088 N17 E19 14AAAA1  | PER    | QM  | TMWA                                          | NE | NE  | 14  | 17N | 19E |            | 88.60     |          | 0.00      | AFA  | Y       | Footnote 4      | R      |
| 59633   | 088 N17 E19 14ABBA1  | PER    | QM  | TMWA                                          | NW | NE  | 14  | 17N | 19E |            | 88.60     |          | 0.00      | AFA  | Y       | Footnote 4      | R      |
| 60710   | 088 N17 E19 03DABC1  | PER    | MUN | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 19.25     | 19.25    | 0.00      | AFA  | Y       | Footnote 17     | R      |
| 61267   | 088 N18 E19 35CBCC1  | PER    | MUN | TMWA                                          | NW | SW  | 35  | 18N | 19E |            | 103.33    | 942.25   | 83.63     | AFA  | Y       | Footnote 6      | R      |
| 61268   | 088 N18 E19 35CBCC1  | PER    | MUN | TMWA                                          | NW | SW  | 35  | 18N | 19E |            | 130.01    |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 61269   | 088 N18 E19 35CADC1  | PER    | MUN | TMWA                                          | NE | SW  | 35  | 18N | 19E |            | 135.00    |          | 135.00    | AFA  | Y       | Footnote 6      | R      |
| 61270   | 088 N18 E19 35CADC1  | PER    | MUN | TMWA                                          | NE | SW  | 35  | 18N | 19E |            | 135.00    |          | 7.23      | AFA  | Y       | Footnote 6      | R      |
| 62269   | 088 N17 E19 03DABC1  | PER    | QM  | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 26.88     | 26.88    | 0.00      | AFA  |         |                 | R      |
| 62718   | 088 N18 E20 33DC C1  | 16475  | COM | STEAMBOAT STORAGE                             | SE | SW  | 33  | 18N | 20E |            | 2.38      | 2.38     | 6.79      | AFA  |         |                 | M      |
| 62875   | 088 N17 E20 09BB CD1 | 17799  | DOM | SADER, CANDICE K.                             | NW | NW  | 9   | 17N | 20E |            | 1.00      | 1.00     | 0.09      | AFA  |         |                 | M      |
| 63146   | 088 N18 E20 33DCDD1  | PER    | QM  | FRANK D. CAFFARATTI 1987 TRUST                | SW | SE  | 33  | 18N | 20E |            | 54.02     | 44.02    | 0.00      | AFA  | Y       | 63147           | M      |
| 63147   | 088 N18 E20 33DCDC1  | PER    | QM  | FRANK D. CAFFARATTI 1987 TRUST                | SW | SE  | 33  | 18N | 20E |            | 54.02     |          | 0.00      | AFA  | Y       | 63146           | M      |
| 63328   | 088 N17 E19 03DABC1  | 18736  | MUN | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 0.91      | 0.91     | 0.00      | AFA  |         |                 | R      |
| 63329   | 088 N17 E19 03DABC1  | PER    | MUN | TMWA                                          | NE | NW  | 3   | 17N | 19E |            | 46.03     | 46.03    | 0.00      | AFA  |         |                 | R      |
| 64461   | 088 N17 E19 03DABC1  | PER    | MUN | TMWA                                          | NE | SE  | 3   | 17N | 19E |            | 2.24      | 2.24     | 0.00      | AFA  |         |                 | R      |
| 65090   | 088 N17 E20 04BACB1  | 18936  | QM  | GLORY TEMPLE CHURCH                           | NE | NW  | 4   | 17N | 20E |            | 4.00      | 4.00     | 0.59      | AFA  |         |                 | M      |
| 65364   | 088 N17 E19 03DBDC1  | PER    | MUN | TMWA                                          | NW | SE  | 3   | 17N | 19E |            | 1830.53   | 1819.51  | 328.47    | AFA  | Y       | Footnote 1      | R      |
| 65507   | 088 N17 E19 13BBBB1  | PER    | COM | DGD DEVELOPMENT LIMITED PARTNERSHIP           | NW | NW  | 13  | 17N | 19E |            | 87.93     | 87.93    | 0.00      | AFA  |         |                 | E      |
| 65508   | 088 N17 E19 13BBBD1  | PER    | COM | DGD DEVELOPMENT LIMITED PARTNERSHIP           | NW | NW  | 13  | 17N | 19E |            | 248.87    | 248.87   | 0.00      | AFA  |         |                 | E      |
| 65958   | 088 N18 E19 35CBCC1  | PER    | MUN | TMWA                                          | NW | SW  | 35  | 18N | 19E |            | 31.67     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 65959   | 088 N18 E19 35CBCC1  | PER    | MUN | TMWA                                          | NW | SW  | 35  | 18N | 19E |            | 31.67     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 65960   | 088 N18 E19 35CADC1  | PER    | MUN | TMWA                                          | NE | SW  | 35  | 18N | 19E |            | 31.57     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 65961   | 088 N18 E19 35CADC1  | PER    | MUN | TMWA                                          | NE | SW  | 35  | 18N | 19E |            | 31.67     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 66450   | 088 N17 E20 03CCBA1  | 17800  | IRR | HOLLY CLAVELL-HEAD LAND TRUST                 | SW | SW  | 3   | 17N | 20E | 0.83       | 3.32      | 3.32     | 3.32      | AFA  |         |                 | M      |
| 66451   | 088 N17 E20 03CCBA1  | 17801  | COM | HOLLY CLAVELL-HEAD LAND TRUST                 | SW | SW  | 3   | 17N | 20E |            | 1.57      | 1.57     | 3.03      | AFA  |         |                 | M      |
| 66452   | 088 N17 E20 04DABB1  | 18250  | IRR | BUCK, ANNE E.                                 | NE | SE  | 4   | 17N | 20E | 0.51       | 2.02      | 2.02     | 2.02      | AFA  | Y       | Footnote 10     | M      |
| 66453   | 088 N17 E20 04DABB1  | 18251  | COM | BUCK, ANNE E.                                 | NE | SE  | 4   | 17N | 20E |            | 0.80      | 0.80     | 4.37      | AFA  |         |                 | M      |
| 66654   | 088 N18 E19 35CBCC1  | PER    | QM  | TMWA                                          | NW | SW  | 35  | 18N | 19E |            | 63.00     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 66655   | 088 N18 E19 35CADC1  | PER    | QM  | TMWA                                          | NE | SW  | 35  | 18N | 19E |            | 11.00     |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 67368   | 088 N17 E19 11BABA1  | PER    | MUN | CHILTON CHILDRENS TRUST, 12/21/12             | NE | NW  | 11  | 17N | 19E |            | 464.76    |          | 0.00      | AFA  | Y       | Footnote 1      | R      |

| APP NO.  | SITE NAME           | STATUS | MOU | OWNER OF RECORD                           | QO | QTR | SEC | T   | R   | PER. ACRES | DUTY (AF) | SUPP ADJ | DUTY USED | UNIT | SUP SRC | SUPP GW APP NO. | METHOD |
|----------|---------------------|--------|-----|-------------------------------------------|----|-----|-----|-----|-----|------------|-----------|----------|-----------|------|---------|-----------------|--------|
| 67369    | 088 N17 E19 11CAAB1 | PER    | MUN | CHILTON CHILDRENS TRUST, DATED 12/21/2012 | NE | SW  | 11  | 17N | 19E | 464.76     |           |          | 0.00      | AFA  | Y       | Footnote 1      | R      |
| 67914    | 088 N17 E19 19CCCA1 | 17118  | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 31.67      | 131.67    |          | 36.42     | AFA  |         |                 | R      |
| 67915    | 088 N17 E19 19CCCA1 | 17119  | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 4.99       |           |          | 0.00      | AFA  | Y       | Footnote 7      | R      |
| 67916    | 088 N17 E19 19CCCA1 | 17120  | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 100.00     |           |          | 0.00      | AFA  | Y       | Footnote 7      | R      |
| 67917    | 088 N17 E19 19CCCA1 | 17121  | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 31.67      |           |          | 0.00      | AFA  | Y       | Footnote 7      | R      |
| 67918    | 088 N17 E19 19CCCA1 | 17122  | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 31.67      |           |          | 0.00      | AFA  | Y       | Footnote 7      | R      |
| 70261    | 088 N18 E19 35CBC1  | PER    | MUN | TMWA                                      | NW | SW  | 35  | 18N | 19E | 103.33     |           |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 70262    | 088 N18 E19 35CACD1 | PER    | MUN | TMWA                                      | NE | SW  | 35  | 18N | 19E | 103.33     |           |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 70496    | 088 N17 E20 04BACD1 | 17819  | COM | BORDIGIONI TRUST AGREEMENT 3/18/1997      | NE | NW  | 4   | 17N | 20E | 1.88       | 1.88      |          | 0.08      | AFA  |         |                 | M      |
| 70668    | 088 N17 E20 07DBAC1 | 18087  | COM | TMWA                                      | NW | SE  | 7   | 17N | 20E | 2.00       | 2.00      |          | 3.15      | AFA  |         |                 | M      |
| 73236    | 088 N17 E20 04DBAB1 | 17929  | STK | CHILTON CHILDRENS TRUST, DATED 12/21/2012 | NW | SE  | 4   | 17N | 20E | 0.67       | 0.67      |          | 0.03      | AFA  |         |                 | M      |
| 76316    | 088 N17 E20 04ACCB1 | 17791  | IRR | THE SADER NEVADA TRUST AGREEMENT          | SW | NE  | 4   | 17N | 20E | 8.26       | 33.02     | 33.02    | 9.07      | AFA  |         | Footnote 11     | M      |
| 76539    | 088 N17 E20 04DBAD1 | PER    | IRR | CHILTON CHILDRENS TRUST, DATED 12/21/12   | NW | SE  | 4   | 17N | 20E | 7.02       | 31.58     | 31.58    | 0.00      | AFA  |         | Footnote 12     | M      |
| 76651    | 088 N18 E19 35CBC1  | PER    | QM  | TMWA                                      | NW | SW  | 35  | 18N | 19E | 5.82       |           |          | 0.00      | AFA  |         | Footnote 6      | R      |
| 77677    | 088 N17 E20 04AAC1  | PER    | IRR | ANNE LOUISE BRITTON                       | NE | NE  | 4   | 17N | 20E | 2.50       | 10.00     | 10.00    | 1.06      | AFA  |         | Footnote 13     | M      |
| 77729    | 088 N18 E19 35CACD1 | PER    | MUN | TMWA                                      | NE | SW  | 35  | 18N | 19E | 31.67      |           |          | 0.00      | AFA  | Y       | Footnote 6      | R      |
| 79024    | 088 N17 E19 19CCCA1 | CER    | QM  | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 31.67      |           |          | 0.00      | AFA  |         |                 | R      |
| 79858    | 088 N17 E20 04AAD1  | PER    | IRR | COULTER, CURTIS B. AND JUDITH L.          | NE | NE  | 4   | 17N | 20E | 3.50       | 14.00     | 14.00    | 6.86      | AFA  |         | Footnote 14     | M      |
| 81356    | 088 N17 E20 03CBCA1 | PER    | COM | MARTIN & SUSAN JOHNSON FAMILY TRUST       | NW | SW  | 3   | 17N | 20E | 0.93       | 0.93      |          | 0.93      | AFA  |         |                 | M      |
| 81357    | 088 N17 E20 03CBCA1 | PER    | IRR | JOHNSON, MARTIN W AND SUSAN               | NW | SW  | 3   | 17N | 20E | 1.00       | 4.00      | 4.00     | 6.46      | AFA  |         | Footnote 15     | M      |
| 82835    | 088 N17 E20 07CCBB1 | PER    | MUN | TMWA                                      | SW | SW  | 7   | 17N | 20E | 65.62      |           |          | 0.00      | AFA  |         | Footnote 2      | R      |
| 83571    | 088 N17 E20 04DBAB1 | PER    | QM  | CHILTON CHILDRENS TRUST                   | NW | SE  | 4   | 17N | 20E | 2.00       | 2.00      |          | 0.00      | AFA  |         |                 | M      |
| 83594    | 088 N17 E20 04ADDC1 | PER    | IRR | SCHULER, MICHAEL AND ELIZABETH            | SE | NE  | 4   | 17N | 20E | 3.75       | 15.00     | 15.00    | 0.00      | AFA  |         | Footnote 16     | M      |
| 83682    | 088 N17 E20 03CCBD1 | PER    | QM  | WELCH, JOHN                               | SW | SW  | 3   | 17N | 20E | 0.28       | 0.28      |          | 0.28      | AFA  |         |                 | M      |
| 83683    | 088 N17 E20 03CCBD1 | PER    | QM  | WELCH, JOHN                               | SW | SW  | 3   | 17N | 20E | 3.72       | 3.72      |          | 4.97      | AFA  |         |                 | M      |
| 84316    | 088 N17 E19 10DADC1 | PER    | QM  | SCHULTZ INTERVIVOS TRUST                  | NE | SE  | 10  | 17N | 19E | 1.00       | 1.00      |          | 1.28      | AFA  |         |                 | M      |
| 84317    | 088 N17 E20 04ADDC1 | PER    | IRR | MICHAEL AND BETH SCHULER REV. FAM. TRUST  | SE | NE  | 4   | 17N | 20E | 35.00      | 35.00     |          | 0.00      | AFA  |         |                 | M      |
| 85097    | 088 N18 E19 34DCCB1 | PER    | QM  | MACLEAN LIVING TRUST                      | SW | SE  | 34  | 18N | 19E | 0.80       | 0.80      |          | 4.72      | AFA  |         |                 | E      |
| 85666    | 088 N17 E20 04AAD1  | PER    | IRR | MAHONEY, RICHARD & SUSAN CLAY             | NE | NE  | 4   | 17N | 19E | 12.00      | 12.00     |          | 1.15      | AFA  |         |                 | M      |
| 85945    | 088 N17 E19 19CCCA1 | PER    | REC | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 131.67     |           |          | 0.00      | AFA  |         | Footnote 7      | R      |
| 85946    | 088 N17 E19 19CCCA2 | PER    | REC | MT. ROSE DEVELOPMENT COMPANY              | SW | SW  | 19  | 17N | 19E | 131.67     |           |          | 0.00      | AFA  |         |                 | R      |
| 86544    | 088 N17 E20 04CDD1  | PER    | IRR | KEVIN AND DEBRA QUILICI FAMILY TRUST      | SE | SW  | 4   | 17N | 19E | 1.31       | 5.90      | 5.90     | 7.67      | AFA  |         |                 | M      |
| 86572    | 088 N17 E20 04DADA1 | PER    | IRR | WILLIAM AND MARGARET CANTLON FAMILY TRUST | NE | SE  | 4   | 17N | 19E | 2.22       | 10.00     | 10.00    | 0.00      | AFA  |         |                 | E      |
| 86630    | 088 N17 E20 04ABAD1 | PER    | IRR | WILLIAM AND MARGARET CANTLON FAMILY TRUST | NW | NE  | 4   | 17N | 19E | 1.11       | 5.00      | 5.00     | 0.00      | AFA  |         |                 | E      |
| 86631    | 088 N17 E20 03BBCC1 | PER    | IRR | WILLIAM AND MARGARET CANTLON FAMILY TRUST | NW | NW  | 3   | 17N | 20E | 2.22       | 10.00     | 10.00    | 0.00      | AFA  |         |                 | E      |
| 86632    | 088 N17 E20 04AABA1 | PER    | IRR | WILLIAM AND MARGARET CANTLON FAMILY TRUST | NE | NE  | 4   | 17N | 20E | 2.67       | 12.00     | 12.00    | 0.00      | AFA  |         |                 | E      |
| 87302    | 088 N17 E20 04DBDB1 | PER    | COM | SORENSEN, KIRSTEN                         | NW | SE  | 4   | 17N | 20E | 1.50       | 1.50      |          | 0.00      | AFA  |         |                 | E      |
| 87303    | 088 N17 E20 04DBDB1 | PER    | COM | SORENSEN, KIRSTEN                         | NW | SE  | 4   | 17N | 20E | 1.50       |           |          | 0.00      | AFA  |         |                 | E      |
| 30382A02 | 088 N17 E19 03BBBC1 | 14632  | QM  | SWAN, CHERYL K. & H. RANDALL              | NW | NW  | 3   | 17N | 19E | 1.14       | 1.14      |          | 1.17      | AFA  |         |                 | M      |
| 52421A02 | 088 N17 E20 04DABA1 | 14630  | IRR | AMSTERDAM HOLDINGS, LLC                   | NE | SE  | 4   | 17N | 20E | 33.41      | 133.67    | 0.00     | 0.00      | AFA  | Y       | Footnote 3, 9   | N      |
| 52422A01 | 088 N17 E20 04DCDD1 | 14543  | IRR | TMWA                                      | SW | SE  | 4   | 17N | 20E | 6.13       | 24.52     |          | 0.00      | AFA  | Y       | Footnote 3, 9   | E      |
| 52422A02 | 088 N17 E20 04DCDD1 | 14631  | IRR | WILLOMONTE LAND AND LIVESTOCK             | SW | SE  | 4   | 17N | 20E | 69.78      | 279.12    |          | 0.00      | AFA  | Y       | Footnote 3, 9   | N      |
| V04810   | 088 N18 E20 33DCCD1 | PER    | IRR | MONROE, LARRY R. & NANCY J.               | SE | 33  | 18N | 20E |     | 4.00       | 16.00     | 16.00    | 13.37     | AFA  |         |                 | N      |

Footnotes

- Permits 35147, 35149, 35150, 58926, 65364, 67368, and 67369 have a total combined duty of 1,828.51 AFA.
- Permits 35226, 57429 and 61703 have a total combined duty of 82.88 AFA.
- Permits 52420, 52421 and 52422 have a total combined duty of 491.432 AFA.
- Permits 57749, 57750, 58870, 59330, 59331, 59631, 59632, and 59633 have a total combined duty of 720 AFA.
- Permits 58496, 58497 and 58498 have a total combined duty of 235.23 AFA.
- Permits 61267, 61268, 61269, 61270, 65958, 65959, 65960, 65961, 66654, 66655, 70261, 70262, and 77729 have a total combined duty of 973.9 AFA.
- Permits 67914, 67915, 67916, 67917, 67918, 79024, 85945, and 84956 have a total combined duty of 131.669 AFA.
- Permits 36089 and 58346 have a total combined duty of 27.57 AFA, along with being supplemental to surface water under Permits 24829 and 61792.
- Permit 52421 and 52422 (A01 & A02 both) are supplemental to surface water under Orr Ditch Decree Claims 660, 665, 666, 690, 691, 692, 693 and 694.
- Permit 66452 is supplemental to surface water under Orr Ditch Decree Claims 660, 666, 692, 693 and 694.
- Permit 76316 is supplemental to surface water under Orr Ditch Decree Claims 660, 663 and 684.
- Permit 76539 is supplemental to surface water under Orr Ditch Decree Claims 660, 665 and 689.
- Permit 77677 is supplemental to surface water under Orr Ditch Decree 660, 667 and 696.
- Permit 79858 is supplemental to surface water under Orr Ditch Decree 660, 667, 696.5 and 697.
- Permit 81357 is supplemental to surface water under Orr Ditch Decree 660, 666, 692, 693 and 694.
- Permit 83594 is supplemental to surface water under Orr Ditch Decree 696.5 and 697.
- Permits 58806 and 60710 have a total combined duty of 19.25 AFA.

**APPENDIX B. PLEASANT VALLEY HISTORICAL PUMPAGE BY POINT OF  
DIVERSION**

| SITE NAME           | APP NO.                                         | MOU | OWNER OF RECORD                                 | DUTY (AF)<br>2018 | DUTY USED<br>2014 | DUTY USED<br>2015 | DUTY USED<br>2016 | DUTY USED<br>2017 | DUTY USED<br>2018 |
|---------------------|-------------------------------------------------|-----|-------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 088 N17 E19 02DAAC1 | 35147                                           | QM  | CALLAHAN, ROBERT AND TINA                       | 1828.51           | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 02DADBI | 35149                                           | QM  | CALLAHAN, ROBERT V. AND/OR TINA                 | 1893.64           | 86.45             | 88.60             | 101.06            | 18.56             | 1.59              |
| 088 N17 E19 02DADBI | 55665, 76549                                    | QM  | TMWA                                            |                   |                   |                   |                   |                   |                   |
| 088 N17 E19 02DCCBI | 50540                                           | OTH | OLD GALENA LTD.                                 | 3.62              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 03BBBC1 | 30382A02                                        | QM  | SWAN, CHERYL K. & H. RANDALL                    | 1.14              | 0.69              | 0.67              | 0.90              | 0.83              | 1.17              |
| 088 N17 E19 03BBCD1 | 33371                                           | QM  | WASHOE COUNTY                                   | 11.60             | 2.78              | 2.98              | 2.51              | 2.78              | 2.43              |
| 088 N17 E19 03BBCD1 | 52127                                           | QM  | MONTGOMERY STREET PROPERTIES, LLC               |                   |                   |                   |                   |                   |                   |
| 088 N17 E19 03BBDB1 | 41986                                           | COM | WEISS, JULIUS                                   | 0.89              | 0.89              | 0.89              | 0.89              | 0.35              | 0.12              |
| 088 N17 E19 03BCCB1 | 31167                                           | STK | WALKER, ALEXANDER S.                            | 2.24              | 0.00              | 0.00              | 0.00              | 0.00              | 0.16              |
| 088 N17 E19 03BCCB1 | 36089, 58346                                    | IRR | WALKER, ALEXANDER S.                            | 27.57             | 0.62              | 0.05              | 0.30              | 1.02              | 1.00              |
| 088 N17 E19 03BCCB1 | 58870, 58926, 60710, 62269, 63328               | QM  | WASHOE COUNTY                                   | 2089.49           | 440.23            | 271.32            | 6.35              | 152.43            | 257.85            |
| 088 N17 E19 03DABC1 | 64461                                           | MUN | TMWA                                            | 2.24              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 03DBDC1 | 65364                                           | MUN | TMWA                                            | 1830.53           | 372.26            | 424.09            | 344.51            | 0.00              | 328.47            |
| 088 N17 E19 03DCDC1 | 57173                                           | QM  | NESLER, RONALD L.                               | 2.21              | 2.21              | 2.21              | 2.21              | 2.21              | 2.21              |
| 088 N17 E19 09CBC1  | 20857                                           | OTH | WASHOE COUNTY                                   | 72.40             | 72.40             | 72.40             | 72.40             | 72.40             | 72.40             |
| 088 N17 E19 10DCAD1 | 59330                                           | QM  | TMWA                                            | 88.60             | 94.15             | 107.29            | 98.17             | 105.75            | 151.04            |
| 088 N17 E19 11ACCC1 | 22087                                           | DOM | CLARK, HAROLD B.                                | 1.60              | 1.60              | 1.60              | 1.60              | 1.60              | 1.60              |
| 088 N17 E19 11ADDA1 | 31125                                           | QM  | MCMILLAN, D.                                    | 1.14              | 1.14              | 1.14              | 1.14              | 1.14              | 1.14              |
| 088 N17 E19 11BABA1 | 67368                                           | MUN | CHILTON CHILDRENS TRUST                         | 464.76            | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 11CAAB1 | 67369                                           | MUN | CHILTON CHILDRENS TRUST                         | 464.76            | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 13BBBB1 | 65507                                           | COM | DGD DEVELOPMENT LIMITED PARTNERSHIP             | 87.93             | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 13BBBD1 | 65508                                           | COM | DGD DEVELOPMENT LIMITED PARTNERSHIP             | 248.87            | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 14AAAA1 | 59632                                           | QM  | TMWA                                            | 88.60             | 0.00              | 0.00              | CAN               | CAN               | CAN               |
| 088 N17 E19 14ABBA1 | 59633                                           | QM  | TMWA                                            | 88.60             | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E19 14BBCB1 | 59631                                           | QM  | TMWA                                            | 88.60             | 68.19             | 74.24             | 219.91            | 100.35            | 124.02            |
| 088 N17 E19 17DBCBI | 57008                                           | QM  | MT. ROSE BOWL PROPERTY OWNERS WATER             |                   |                   |                   |                   |                   |                   |
| 088 N17 E19 17DCCA1 | 30434                                           | QM  | MT. ROSE BOWL PROPERTY OWNERS                   | 28.39             | 7.47              | 7.99              | 9.81              | 11.00             | 7.42              |
| 088 N17 E19 19CCCA1 | 67914, 67915, 67916, 67917, 67918, 79024, 85945 | QM  | MT. ROSE DEVELOPMENT COMPANY                    | 131.67            | 139.36            | 73.52             | 44.76             | 29.56             | 36.42             |
| 088 N17 E19 19CCCA2 | 85946                                           | REC | MT. ROSE DEVELOPMENT COMPANY                    |                   | N/A               | N/A               | N/A               | 25.76             | 0.00              |
| 088 N17 E19 19DBBB1 | 19098                                           | QM  | MT. ROSE DEVELOPMENT COMPANY                    | 4.82              | 2.05              | 3.06              | 3.86              | 3.40              | 3.21              |
| 088 N17 E20 03BBCC1 | 86631                                           | IRR | THE SCOTT T. AND MARCY J JORDAN 1989 REV. TRUST | 10.00             | N/A               | N/A               | N/A               | 0.00              | 0.00              |
| 088 N17 E20 03CBCA1 | 81356                                           | COM | MSJ PROPERTIES, LLC                             | 0.93              | 0.93              | 0.93              | 0.93              | 0.93              | 0.93              |
| 088 N17 E20 03CBCA1 | 81357                                           | IRR | MSJ PROPERTIES, LLC                             | 4.00              | 6.29              | 5.52              | 5.32              | 4.55              | 6.46              |
| 088 N17 E20 03CCBA1 | 66450                                           | IRR | HOLLY CLAVELL-HEAD LAND TRUST                   | 3.32              | 3.32              | 3.32              | 3.32              | 3.32              | 3.32              |
| 088 N17 E20 03CCBA1 | 66451                                           | COM | HOLLY CLAVELL-HEAD LAND TRUST                   | 1.57              | 2.93              | 3.49              | 3.82              | 6.10              | 3.03              |
| 088 N17 E20 03CCBD1 | 83682, 83683                                    | QM  | WELCH, JAMES H.                                 | 4.00              | N/A               | 0.00              | 4.81              | 4.58              | 5.25              |

| SITE NAME            | APP NO.         | MOU      | OWNER OF RECORD                                                                    | DUTY (AF)<br>2018 | DUTY USED<br>2014 | DUTY USED<br>2015 | DUTY USED<br>2016 | DUTY USED<br>2017 | DUTY USED<br>2018 |
|----------------------|-----------------|----------|------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 088 N17 E20 04AAAD1  | 85666           | IRR      | CLAY TRUST                                                                         | 12.00             | N/A               | N/A               | 3.84              | 0.04              | 1.15              |
| 088 N17 E20 04AAAD1  | 84316           | QM       | SCHULZ INTERVIVOS TRUST                                                            | 1.00              | N/A               | 0.00              | 1.00              | 1.00              | 1.28              |
| 088 N17 E20 04AAB1   | 86632           | IRR      | THE JBR TRUST                                                                      | 12.00             | N/A               | N/A               | N/A               | 0.00              | 0.00              |
| 088 N17 E20 04AAC1   | 77677           | IRR      | FLOYD FAMILY TRUST DATED MARCH 13, 2014                                            | 10.00             | 0.00              | 0.00              | 4.94              | 0.88              | 1.06              |
| 088 N17 E20 04AAD1   | 79858           | IRR      | THE RED DOG TRUST DATED FEBRUARY 22, 2016                                          | 14.00             | 4.33              | 4.09              | 12.55             | 1.70              | 6.86              |
| 088 N17 E20 04ABAD1  | 86630           | IRR      | GRIMES LIVING TRUST                                                                | 5.00              | N/A               | N/A               | N/A               | 0.00              | 0.00              |
| 088 N17 E20 04ACCB1  | 76316           | IRR      | ROBERT M. SADER AND CANDICE K. SADER, TRUSTEES OF THE SADER NEVADA TRUST AGREEMENT | 33.02             | 14.26             | 13.15             | 13.09             | 6.32              | 9.07              |
| 088 N17 E20 04ADDC1  | 83594, 84317    | IRR      | SCHULER, MICHAEL AND ELIZABETH                                                     | 50.00             | 0.00              | 12.19             | 43.92             | 2.41              | 0.00              |
| 088 N17 E20 04BACB1  | 65090           | QM       | JLC REALTY, LLC                                                                    | 4.00              | 1.57              | 1.54              | 1.15              | 1.08              | 0.59              |
| 088 N17 E20 04BACD1  | 70496           | COM      | BORDIGIONI TRUST AGREEMENT 3/18/1997                                               | 1.88              | 0.34              | 0.62              | 0.77              | 0.43              | 0.08              |
| 088 N17 E20 04BCDC1  | 45133           | COM      | TOGLIATTI, ROBERT                                                                  | 0.03              | 0.03              | 0.03              | 0.03              | 0.03              | 0.03              |
| 088 N17 E20 04CBBB1  | 59042           | QM       | 1997 GENO O. & VELDA ROSASCHI REVOCABLE TRUST                                      | 1.65              | 1.01              | 1.02              | 1.14              | 1.15              | 3.35              |
| 088 N17 E20 04CDDDD1 | 86544           | IRR      | WILLIAM AND MARGARET CANTLON FAMILY TRUST                                          | 5.90              | N/A               | N/A               | N/A               | 0.00              | 7.67              |
| 088 N17 E20 04DABA1  | 52421A02        | IRR      | AMSTERDAM HOLDINGS, LLC                                                            | 133.67            | 0.24              | 0.21              | 0.00              | 0.00              | 0.00              |
| 088 N17 E20 04DABB1  | 66452           | IRR      | SPOHR, ERIN RANDALL AND DANIEL JOSEPH SERAFIN                                      | 2.02              | 2.02              | 2.02              | 2.02              | 2.02              | 2.02              |
| 088 N17 E20 04DABB1  | 66453           | COM      | BUCK, ANNE E.                                                                      | 0.80              | 2.60              | 1.78              | 5.10              | 3.34              | 4.37              |
| 088 N17 E20 04DADA1  | 86572           | IRR      | THE C & S ONEAL FAMILY TRUST                                                       | 10.00             | N/A               | N/A               | N/A               | N/A               | 0.00              |
| 088 N17 E20 04DBAB1  | 73236           | STK      | CHILTON CHILDRENS TRUST, DATED 12/21/2012                                          | 0.67              | 0.00              | 0.00              | 0.00              | 0.16              | 0.03              |
| 088 N17 E20 04DBAD1  | 76539           | IRR      | CHILTON CHILDRENS TRUST, DATED 12/21/12                                            | 31.58             | 20.57             | 11.37             | 36.34             | 1.39              | 0.00              |
| 088 N17 E20 04DBAD1  | 83571           | QM       | CHILTON CHILDRENS TRUST, DATED 12/21/12                                            | 2.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E20 04DBDD1  | 87302, 87303    | COM      | SORENSEN, KIRSTEN                                                                  | 1.50              | N/A               | N/A               | N/A               | N/A               | 0.00              |
| 088 N17 E20 04DCDD1  | 52420, 52422A01 | IRR      | TMWA                                                                               | 24.71             | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E20 04DCDD1  | 52422A02        | IRR      | WILLOMONTE LAND AND LIVESTOCK                                                      | 279.12            | 100.00            | 140.14            | 9.34              | 7.14              | 0.00              |
| 088 N17 E20 05DCAB1  | 48958           | COM      | WOOD, ANGELA & DAVID L.                                                            | 2.03              | 0.91              | 0.91              | 0.78              | 0.19              | 0.17              |
| 088 N17 E20 07AABB1  | 22474           | IRR      | HERMAN W. EATON FAMILY TRUST, TRUST A                                              | 8.66              | 0.02              | 0.35              | 0.35              | 0.45              | 0.00              |
| 088 N17 E20 07CADA1  | 22002           | QM       | WASHOE COUNTY SCHOOL DISTRICT                                                      | 723.92            | 15.00             | 15.00             | 15.00             | 15.00             | 15.00             |
| 088 N17 E20 07CADD1  | 11533           | IRR      | GAMBONI CON CO INC. ; D & J KITTS                                                  | 49.67             | 4.18              | 4.18              | 4.18              | 4.18              | 1.80              |
| 088 N17 E20 07CCBB1  | 82835           | MUN      | TMWA                                                                               | 65.62             | N/A               | N/A               | 0.00              | 0.00              | 0.00              |
| 088 N17 E20 07CCDD1  | 35226           | QM       | TMWA                                                                               | 1.00              | 0.00              | 0.00              | 0.00              | 0.00              | 0.00              |
| 088 N17 E20 07DBAC1  | 70668           | COM      | WASHOE COUNTY                                                                      | 2.00              | 3.33              | 3.09              | 2.85              | 3.00              | 3.15              |
| 088 N17 E20 09BBAC1  | 28895, 28896    | QM       | STEAMBOAT COURT WATER USERS ASSOC.                                                 | 4.58              | 1.44              | 1.06              | 1.38              | 2.00              | 0.87              |
| 088 N17 E20 09BBDD1  | 62875           | DOM      | SADER, CANDICE K.                                                                  | 1.00              | 0.00              | 0.00              | 0.39              | 0.29              | 0.09              |
| 088 N17 E20 18ABBC1  | 57429, 57750    | MUN      | TMWA                                                                               | 217.84            | 33.51             | 29.89             | 44.62             | 40.25             | 32.34             |
| 088 N17 E20 18BAAB1  | 57749           | QM       | TMWA                                                                               | 100.60            | N/A               | N/A               | N/A               | N/A               | N/A               |
| 088 N18 E19 34CDCC1  | 46958           | QM       | THE NELL J. REDFIELD TRUST                                                         | 25.96             | 27.41             | 41.89             | 28.57             | 12.41             | 22.77             |
| 088 N18 E19 34CDCC1  | 58806           | QM       | TMWA                                                                               | 19.25             |                   |                   |                   |                   |                   |
| 088 N18 E19 34DBDD1  | 35656           | OTH      | NEVADA-FORESTRY DIVISION                                                           | 2.24              | 0.04              | 0.04              | 1.66              | 0.73              | 0.73              |
| 088 N18 E19 34DCCB1  | 29419, 85097    | MUN, IRR | KUTNOCK, ROBERT & BARBARA                                                          | 2.40              | 3.00              | 3.00              | 2.36              | 0.97              | 4.87              |

| SITE NAME           | APP NO.                           | MOU     | OWNER OF RECORD                     | DUTY (AF)<br>2018 | DUTY USED<br>2014 | DUTY USED<br>2015 | DUTY USED<br>2016 | DUTY USED<br>2017 | DUTY USED<br>2018 |
|---------------------|-----------------------------------|---------|-------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 088 N18 E19 35CADC1 | 61269, 61270                      | MUN     | THE NELL J. REDFIELD TRUST          | 587.57            | 402.14            | 300.91            | 99.00             | 102.07            | 142.23            |
| 088 N18 E19 35CADC1 | 65960, 65961, 66655, 70262, 77729 | MUN     | TMWA                                |                   |                   |                   |                   |                   |                   |
| 088 N18 E19 35CBCC1 | 61267, 61268                      | MUN     | THE NELL J. REDFIELD TRUST          | 365.50            | 244.28            | 111.89            | 37.41             | 36.07             | 83.63             |
| 088 N18 E19 35CBCC1 | 65958, 65959, 66654, 70261, 76651 | MUN     | TMWA                                |                   |                   |                   |                   |                   |                   |
| 088 N18 E20 33DCDC1 | 62718                             | COM     | STEAMBOAT STORAGE                   | 2.38              | 4.36              | 1.63              | 0.53              | 0.53              | 6.79              |
| 088 N18 E20 33DCDC1 | V04810, 50380                     | IRR, QM | MONROE, R. LARRY & NANCY J.         | 19.36             | 0.00              | 15.26             | 14.01             | 10.84             | 13.37             |
| 088 N18 E20 33DCDC1 | 58496                             | QM      | STEAMBOAT SPRINGS WATER WORKS, INC. |                   |                   |                   |                   |                   |                   |
| 088 N18 E20 33DCDC1 | 63147                             | QM      | FRANK D. CAFFARATTI 1987 TRUST      |                   |                   |                   |                   |                   |                   |
| 088 N18 E20 33DCDC2 | 58498                             | QM      | STEAMBOAT SPRINGS WATER WORKS INC.  | 235.23            | 170.67            | 79.05             | 140.43            | 137.95            | 139.34            |
| 088 N18 E20 33DCDD1 | 58497                             | QM      | STEAMBOAT SPRINGS WATER WORKS INC.  |                   |                   |                   |                   |                   |                   |
| 088 N18 E20 33DCDD1 | 63146                             | QM      | FRANK D. CAFFARATTI 1987 TRUST      |                   |                   |                   |                   |                   |                   |

CAN - Cancelled

N/A - Not Applicable