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Water Resources Division

2010 Spring Valley Hydrologic Monitoring and Mitigation Plan Status and Data Report

March 2011

Prepared by
Southern Nevada Water Authority
Water Resources Division
P.O. Box 99956
Las Vegas, Nevada 89193-9956

Submitted to the
Nevada State Engineer and the
Spring Valley Stipulation
Executive Committee

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ACRONYMS

BLM	Bureau of Land Management
BWG	Biological Work Group
DOI	U.S. Department of the Interior
EC	Executive Committee
HA	hydrographic area
MOU	Memorandum of Understanding
NDWR	Nevada Division of Water Resources
NSE	Nevada State Engineer
NWIS	National Water Information System
SNPLMA	Southern Nevada Public Lands Management Act
SNWA	Southern Nevada Water Authority
SVMM	Spring Valley Monitoring and Mitigation
TRP	Technical Review Panel
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
WY	water year

ABBREVIATIONS

°C	degrees Celsius
afy	acre-feet per year
amsl	above mean sea level
bgs	below ground surface
cfs	cubic feet per second
ft	foot
gpm	gallons per minute
in.	inch
m	meter
mi	mile
mi^2	square mile

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1.0 INTRODUCTION

The Southern Nevada Water Authority (SNWA) prepared this report as part of the *Spring Valley Hydrologic Monitoring and Mitigation Plan* (SVMM Plan) (SNWA, 2009a). The location of Spring Valley is presented in Figure 1-1. The report provides the Nevada State Engineer (NSE) hydrologic data associated with the plan collected in 2010 and the current status of each element of the SVMM plan. The hydrologic data contained in this report were submitted to the NSE in electronic format.

This report also satisfies the hydrologic data reporting requirements of the U.S. Department of the Interior (DOI) and SNWA Stipulation Agreement. The SVMM Plan contains all the hydrologic monitoring elements of the Stipulation Agreement as well as monitoring related to existing non-federal water-right holders as was required by the NSE.

This is the fourth annual status and data report. The first data report contained hydrologic data collected in 2007 and historically from the monitoring network (SNWA, 2008). The second and third data reports contained hydrologic data collected in 2008 (SNWA, 2009b) and 2009 (SNWA, 2010), respectively.

1.1 Background

On September 8, 2006, prior to the NSE hearing for applications 54003 through 54020, a Stipulation for Withdrawal of Protests (Stipulation, 2006) was established between SNWA and DOI on behalf of the Bureau of Indian Affairs, the Bureau of Land Management (BLM), the National Park Service, and the U.S. Fish and Wildlife Service (USFWS) (collectively known as the DOI Bureaus). Exhibits A and B of the Stipulation require the development of biologic and hydrologic monitoring plans. As part of the Stipulation, an Executive Committee (EC) was established to oversee the implementation of the agreement. The hydrologic Technical Review Panel (TRP), composed of technical expert representatives of parties to the stipulation, was established to develop and oversee implementation of the monitoring and mitigation plan, review program data, and modify the monitoring plan, if necessary. A Biological Working Group (BWG) was also establish to oversee the development and implementation of the biological monitoring plan.

On April 16, 2007, SNWA was granted groundwater rights in Spring Valley hydrographic area (HA) 184 for municipal and domestic purposes under permits 54003 through 54015, inclusive, as well as 54019 and 54020. Ruling 5726 required the development of biologic and hydrologic monitoring plans. The hydrologic SVMM plan was approved by the NSE on February 9, 2009.

Since the issuance of Ruling 5726, an opinion by the Nevada Supreme Court concluded that the NSE must re-notice SNWA's original groundwater applications and reopen the protest period (Great Basin Water Network, et. al. v. NSE, et. al., June 17, 2010) (NSC, 2010). Even though NSE Ruling 5726 has

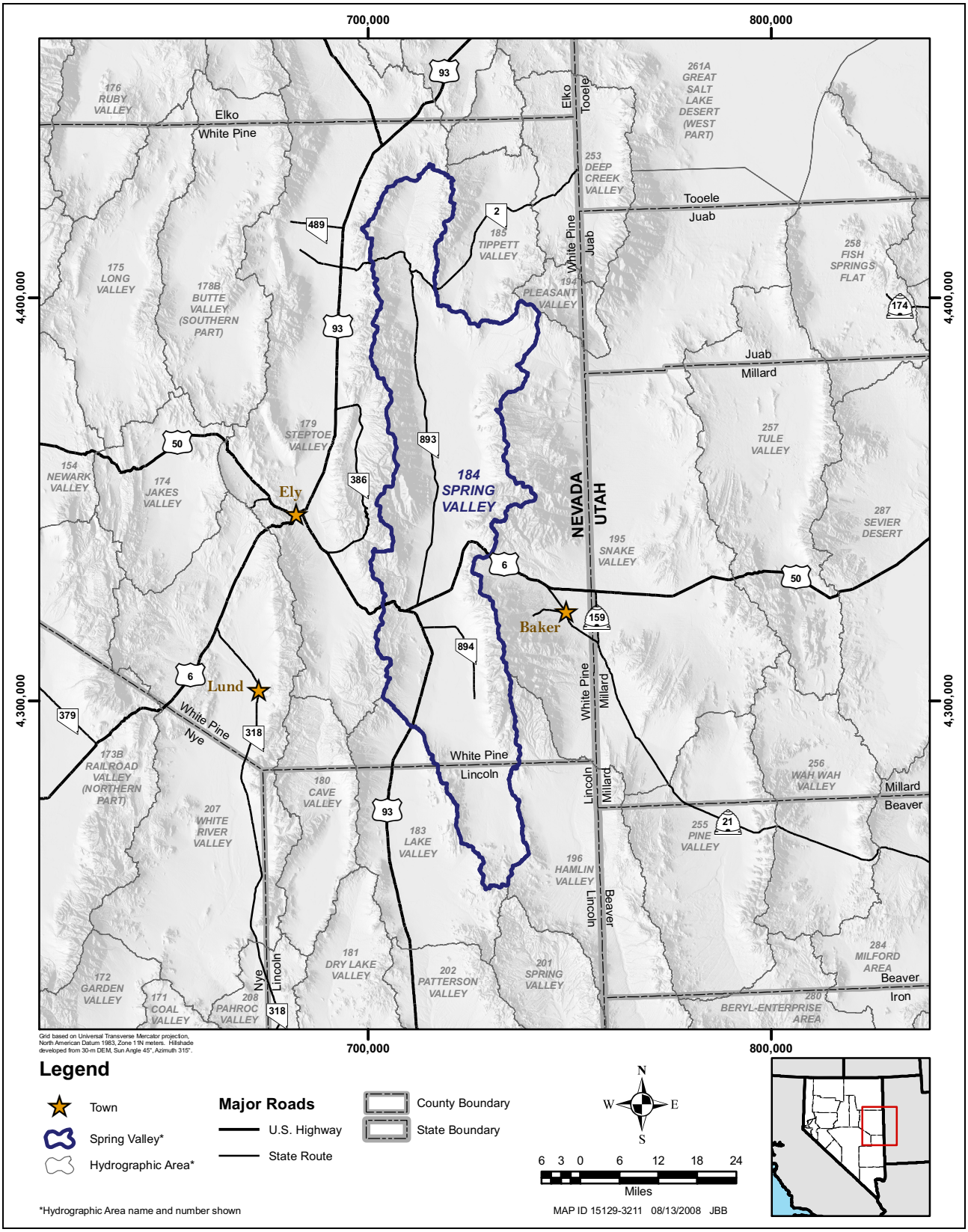


Figure 1-1
Spring Valley Hydrographic Area 184

been vacated, the Stipulation remains in full effect and requires SNWA to submit an annual report of its monitoring activities in Spring Valley. This report is submitted for the purpose of meeting the Stipulation's annual reporting requirements.

1.2 Major Activities Performed in 2010

Major activities associated with the SVMM Plan performed in 2010 were as follows:

- Continued the implemented of the SVMM Plan including data collection efforts and maintenance of the monitoring network.
- Installed 12 piezometers associated with the spring monitoring network.
- Obtained property access and completed installation of two flumes to measure spring discharge, two monitor wells, and one piezometer located on the Cleveland Ranch.
- Obtained BLM access for Shoshone Ponds monitor wells SPR7024M and SPR7024M2. Well installation is expected to be completed in April 2011.
- Planned installation and designed two monitor wells west of Cleveland Ranch. The wells will replace the existing Cleve well in the groundwater monitoring network.Wells are expected to be completed in April 2011.
- TRP revised the water chemistry program to collect one round of 35 samples and performed the other two rounds of 40 samples after completion of the Interbasin Monitoring Zone Wells in the future. The first round of water chemistry samples were collected in late 2010 and early 2011.
- Continued to perform spring discharge monitoring at Turnley Spring.
- Maintained a flume and continuous discharge monitoring instrumentation at Rock and Swallow Spring.
- Maintained continuous groundwater level monitoring instrumentation at all 15 required sites in the existing-well monitoring network, including seven MX wells. The installations included datalogger and pressure transducer instrumentation and instrumentation housings.
- Completed a professional survey of elevation and coordinates for wells within the monitoring network. All future wells will be professionally surveyed after completion.
- Performed physical water-level measurements on network monitor wells at the required frequency.
- Continued to participate in the Cooperative Funding Agreement with U.S. Geological Survey (USGS) and the Nevada Division of Water Resources (NDWR) to support the operation and

maintenance of three high-altitude precipitation stations near Spring Valley and discharge gaging stations on Cleve and Big Springs creeks.

- Maintained the SNWA data-exchange web site accessible by the NSE, EC, TRP, and BWG. The web site contains project reports, monitoring network attributes, and hydrologic data.

- Worked cooperatively with the TRP to obtain updates on the Southern Nevada Public Lands Management Act (SNPLMA) Round 8 hydrologic study in and around the Great Basin National Park. The study includes well installations and surface water groundwater interaction studies at the Great Basin National Park and near Big Springs.

- Provided technical assistance to the Biological Working Group (BWG) in preparation of the Biological Monitoring Plan.

- Obtained property access for the Big Springs Creek surface-water system synoptic-discharge study.

- Assembled and evaluated regional precipitation data at locations presented in the SVMM plan.

1.3 Report Scope

Section 2.0 presents the status and data collected for each major element of the SVMM Plan. Section 3.0 discusses the planned activities for 2011, and Section 4.0 provides a list of references. Lastly, Appendix A through Appendix F present tables and graphs of the various data discussed in the report.

2.0 SVMM PLAN STATUS AND DATA

The hydrologic data collected in 2010 and current status of each major element of the SVMM Plan are presented in this section. Each subsection follows the order of topic presentation in the SVMM Plan.

2.1 Exploratory- and Production-Well Monitoring

The exploratory- and production-well monitoring section of the SVMM Plan states that SNWA shall record discharge and water levels in all completed SNWA production wells on a continuous basis. SNWA does not currently have any production wells associated with this project; however, continuous measurements will be collected from all future production wells. Water-level measurements are required in all SNWA exploratory wells at least quarterly. SNWA exploratory and test wells located in Spring Valley are presented in Figure 2-1. Periodic water-level measurements and hydrographs for the exploratory and test wells not included in the existing-well network described below are presented in Appendix A. After the beginning of groundwater withdrawal, the TRP will identify a representative number of exploratory wells for continuous measurement.

2.2 Existing-Well Monitoring Network

The SVMM Plan states that SNWA shall monitor water levels quarterly in 10 representative existing monitor wells and continuously in 15 representative existing monitor wells in the Spring Valley and Hamlin Valley HAs as approved by the TRP and NSE.

In 2007, the TRP selected 25 wells to include in the existing-well monitoring network. Wells were selected based upon integrity of construction, spatial distribution, and completion information. Wells included in the network are completed in carbonate-rock, volcanic, and basin-fill aquifers. The locations of the wells and the aquifers monitored are presented in Figure 2-2. Simplified well-identification numbers relate to the list of wells presented in Table D.1-1 in SNWA (2006). Each well-identification number on the figure includes a Q or C designation for quarterly or continuous measurements.

An attribute table for wells included in this monitoring network, including well construction, location coordinates, and ground-surface elevation, is presented in Table 2-1. A professional-grade survey of location coordinates and ground-surface and top-of-casing measuring-point elevations was performed for each well in 2008. A field report documenting attributes of each well included in the network, including well photos and map locations, has been posted on the SNWA.com\exchange web site.

The network includes wells owned by SNWA, USGS, and BLM and two wells owned by the Eldridge Ranch. All continuously monitored wells are owned by SNWA or USGS. SNWA and USGS

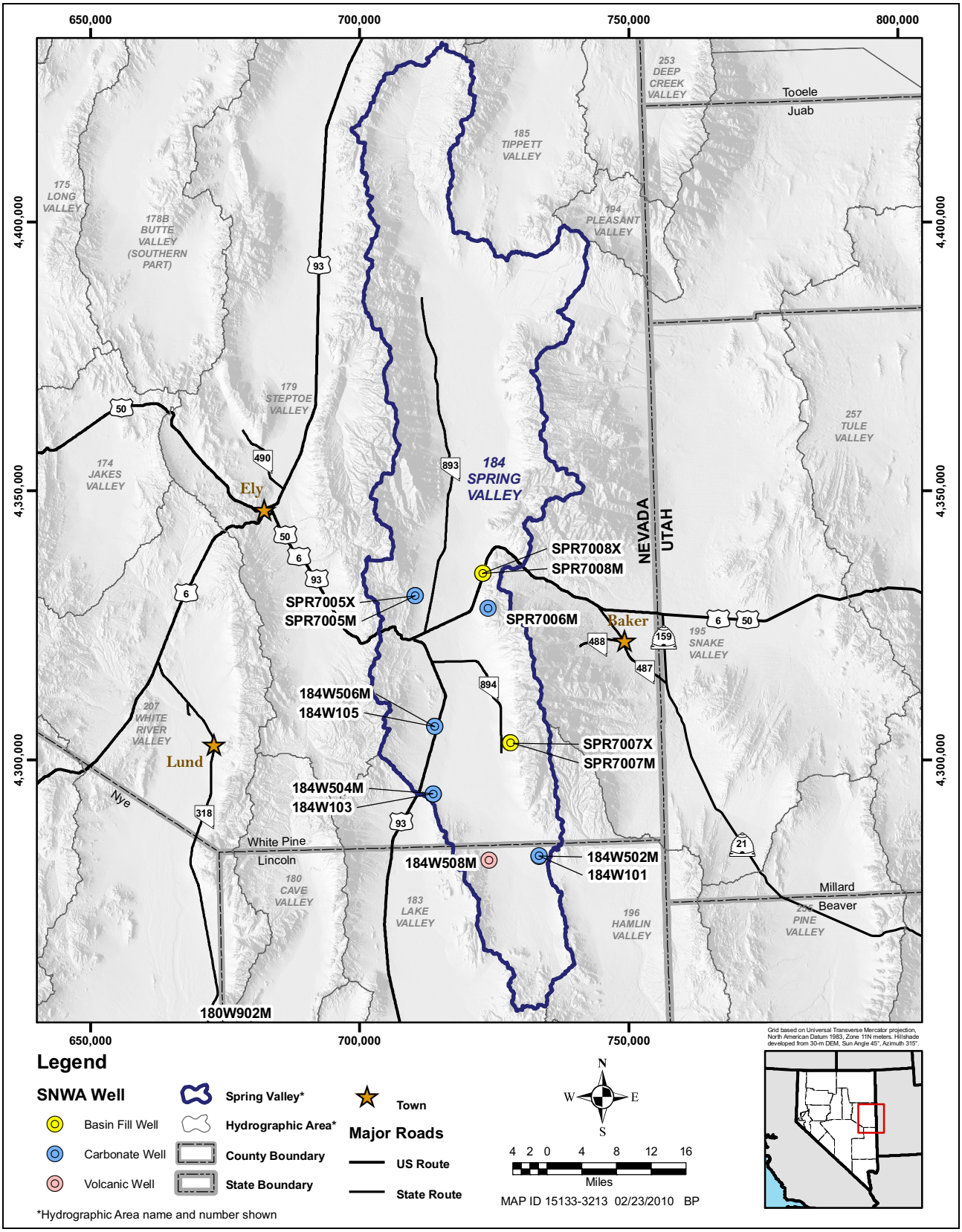


Figure 2-1
SNWA Exploratory and Test Wells in Spring Valley (as of March 2011)

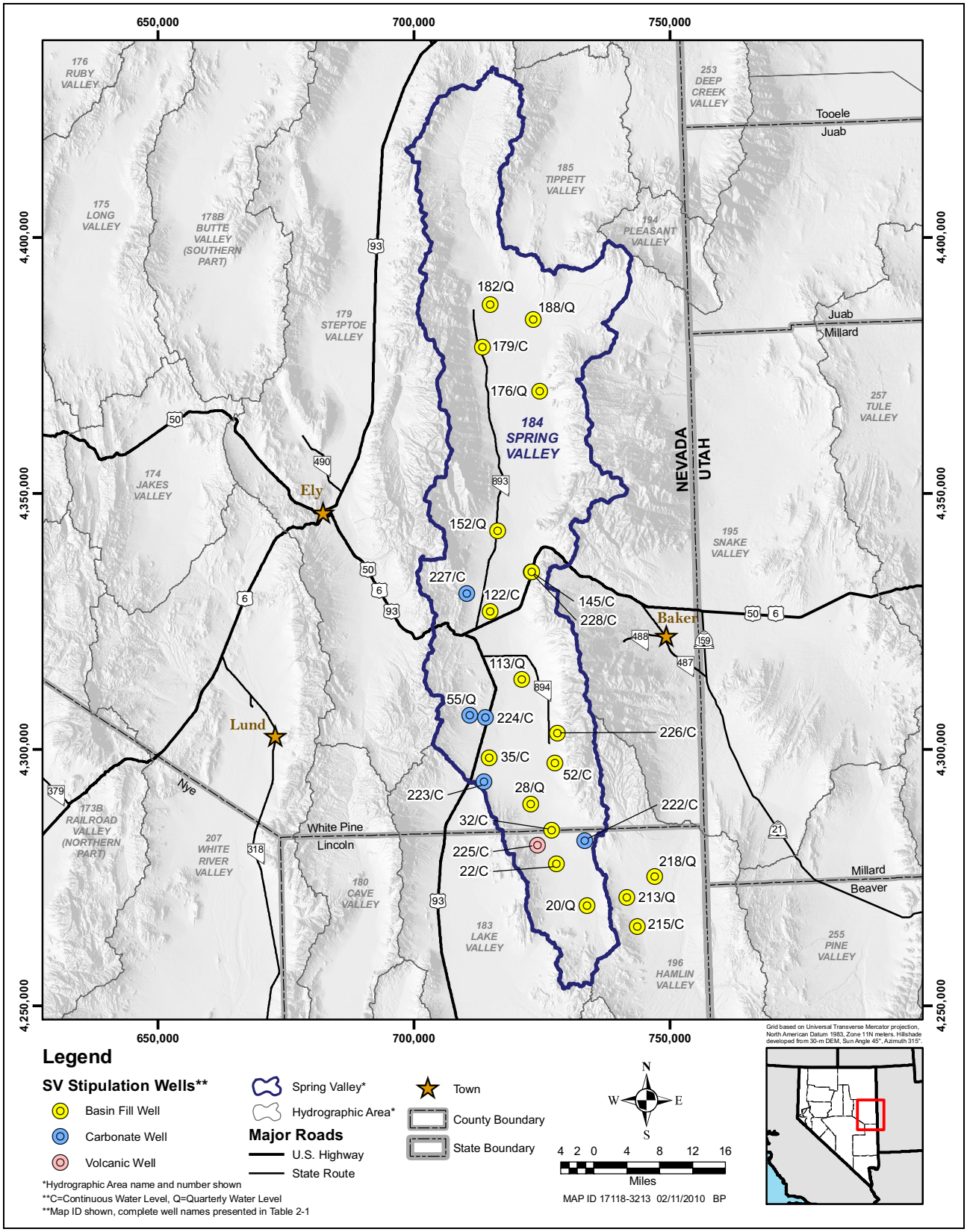


Figure 2-2
Spring Valley Existing-Well Monitoring Network

Table 2-1
Spring Valley Existing-Well Monitoring Network

Map ID	Site Number	Station Local Number	Location[a]		Surface Elevation (ft amsl)	Completion Date	Drill Depth (ft bgs)	Well Depth (ft bgs)	Well Casing Diameter (in.)	Screened Interval (ft bgs)	Open Interval (ft bgs)	Aquifer	Monitor Frequency
			UTM Northing (m)	UTM Easting (m)									
22	383704114225001	184 N09 E68 30AAAB 1 USGS-MX (Spring Valley S.)	4,277,594.57	727,759.99	6,002.52	8/7/1980	700	679	11	559 to 679	50 to 700	Basin Fill	Continuous
32	384039114232701	184 N10 E68 31CD 1 USGS-MX	4,284,275.68	726,871.51	5,896.49	---	---	150	2	---	50 to 150	Basin Fill	Continuous
35	384831114314301	184 N11 E66 23AB 1 USGS-MX	4,298,411.13	714,633.01	5,842.94	---	102	102	2	---	50 to 102	Basin Fill	Continuous
52	384745114224401	184 N11 E68 19DCDC 1 USGS-MX (Spring Valley)	4,297,304.22	727,554.19	5,900.18	---	200	200	2	---	50 to 200	Basin Fill	Continuous
122	390352114305401	184 N14 E66 24BDDD 1 USGS-MX (Spring Valley N.)	4,326,894.19	714,873.84	5,846.04	1980	---	160	2	---	50 to 160	Basin Fill	Continuous
145	390803114251001	184 N15 E67 26CA 1 USGS-MX	4,334,740.47	722,963.02	5,727.21	---	---	200	2	---	50 to 200	Basin Fill	Continuous
179	393211114320701	184 N19 E66 11B 1	4,378,627.03	713,381.69	5,698.43	4/22/1960	---	400	---	---	50 to 400	Basin Fill	Continuous
215	383023114115302	196 N08 E69 35DC 2 USGS-MX (Hamlin Valley S.)	4,265,403.02	743,597.36	5,837.67	8/7/1980	520	435	2	320 to 420	35 to 520	Basin Fill	Continuous
222	184W502M	184 N09 E68 11 BD 2	4,282,116.34	733,294.42	6,189.72	1/25/2007	1,828	1,799	8	495 to 1,779	58 to 1,828	Carbonate	Continuous
223	184W504M	184 N11 E66 34 DD 2	4,293,712.49	713,647.12	5,900.11	11/17/2006	1,040	1,020	8	309 to 999	61 to 1,040	Carbonate	Continuous
224	184W506M	184 N12 E66 26 BA 2	4,306,214.21	713,939.81	6,014.04	10/19/2006	1,160	1,140	8	430 to 1,120	80 to 1,160	Carbonate	Continuous
225	184W508M	184 N09 E67 11 DB 1	4,281,308.68	724,070.89	6,056.19	12/15/2006	1,180	1,160	8	376 to 1,140	241 to 1,180	Volcanic	Continuous
226	SPR7007M	184 N11 E68 05 BC 2	4,303,146.59	727,976.03	6,017.73	8/17/2007	1,040	1,020	8	300 to 1,000	101 to 1,040	Basin Fill	Continuous
227	SPR7005M	184 N14 E66 09 AB 2	4,330,471.51	710,372.44	6,395.68	7/10/2007	1,412	1,404	8	663 to 1,383	439 to 1,412	Carbonate	Continuous
228	SPR7008M	184 N15 E67 26 CD 2	4,334,702.61	722,865.27	5,704.86	7/25/2007	960	946	8	226 to 926	54 to 960	Basin Fill	Continuous
20	383351114180201	184 N08 E68 14A 1 USBLM	4,269,504.76	733,845.43	6,184.22	---	---	495	6	50 to 495	50 to 495	Basin Fill	Quarterly
28	384310114261401	184 N10 E67 22AA 1 USGS-MX (Spring V Central)	4,289,331.34	722,826.33	5,853.54	---	---	100	2	---	50 to 100	Basin Fill	Quarterly
55	184 N12 E66 21CD 1	184 N12 E66 21CD 1	4,306,700.53	710,871.15	6,370.31	9/13/1966	631	631	6	3 to 631	3 to 631	Carbonate	Quarterly
113	385636114265501	184 N13 E67 33DDA 1	4,313,590.54	721,086.82	5,769.73	---	---	--	36	---	---	Basin Fill	Quarterly
152[b]	391224114293601	184 N16 E66 36DBAD 1 USBLM - Cleve Creek Well	4,342,683.25	716,362.90	5,870.25	---	---	--	---	---	---	Basin Fill	Quarterly
176	392703114230501	184 N18 E67 01CCAA 1	4,369,956.56	724,523.82	5,587.78	---	---	42	38	---	---	Basin Fill	Quarterly
182	184 N20 E66 13AB 1	184 N20 E66 13AB 1	4,386,884.19	714,871.84	5,774.93	6/26/1966	907	296	16	135 to 296	---	Basin Fill	Quarterly
188	393442114231801	184 N20 E67 26ABBD 1 USBLM	4,383,955.15	723,240.35	5,708.77	---	130	130	6	---	50 to 130	Basin Fill	Quarterly
213	383325114134901	196 N08 E69 15B 1	4,271,103.41	741,539.28	5,729.98	---	---	110	6	---	50 to 110	Basin Fill	Quarterly
218	383533114102901	196 N08 E70 06B 1 USBLM - Monument Well	4,275,166.91	747,014.36	5,676.76	7/22/1947	---	164	6	111 to 115/ 152 to 164	---	Basin Fill	Quarterly

[a]All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11.
[b]The Cleve Creek well will be replaced by a new monitor well approximately 1 mi to the north.
Well-construction data are based upon best available information from well logs, MX Project Report, and direct field measurements.

developed a Memorandum of Understanding (MOU) to upgrade the well pads and install an equipment housing and pressure transducer and datalogger instrumentation at seven USGS well locations. The well-upgrade program began in 2008 and was completed in 2009.

The Cleve Creek Well (site number 391224114293601) will be dropped from the network in 2011 and replaced with new paired shallow and deeper monitor wells located approximately 1 mi to the north of the existing Cleve Creek Well. The construction details of the existing Cleve Creek well are not available. The new monitor wells will provide higher-quality data as well as more information on the lithologic and hydrogeologic characteristics of the surficial aquifer including vertical hydraulic gradient. The monitor wells are anticipated to be completed by April 2011.

The discrete water-level data collected in 2010 for each monitoring network well are presented in Appendix B. Historic data are presented on hydrographs for the wells monitored quarterly. Appendix C presents the 2010 daily mean values derived from continuous data collection, and hydrographs presenting both discrete and continuous data from monitoring network wells where continuous groundwater-level data collection is required. Historical hydrographs are also presented for the monitoring sites. Some of the early historical data collected prior to establishment of the SNWA monitoring program at certain well locations are approximate or are omitted. This is due to uncertainty associated with collection methods and procedures or variations in the reference point used for the measurement at the time of collection.

2.3 New Monitor Wells

The SVMM Plan requires the installation of new monitor wells at specific locations. New well locations and design were selected with the approval of the NSE and TRP. This section presents a description and the current status of the new wells. Status of the rights-of-way for each related element of the program are also presented.

2.3.1 Interbasin Monitoring Zone Network

The Stipulation Agreement established an Interbasin Monitoring Zone (Zone) and requires data collection intended to characterize the hydraulic gradient from Spring Valley to Snake Valley via Hamlin Valley. In the fall of 2007, the TRP selected six wells to include in the Zone monitoring program. The network includes carbonate monitor well 184W502M, which was installed in 2006, and five additional new well locations. The new locations include three carbonate and two basin-fill wells. The locations of the well sites and the Zone boundary are presented in Figure 2-3, and the location coordinates for the wells are listed in Table 2-2.

Right-of-way applications for the SNWA well sites in the Zone were submitted in 2007 and were approved by BLM in late 2009. Construction of the five new wells were delayed until the project is approved for implementation. Wells will be installed to meet monitoring timeframe requirements ahead of groundwater withdrawals as required by the Stipulation and SVMM Plan. No target date for Zone well installations has been set as of the date of this report. After completion of each well, a short-term aquifer test will be performed, and water-chemistry samples will be collected. The wells will then be equipped with datalogger and pressure transducer instrumentation to collect continuous

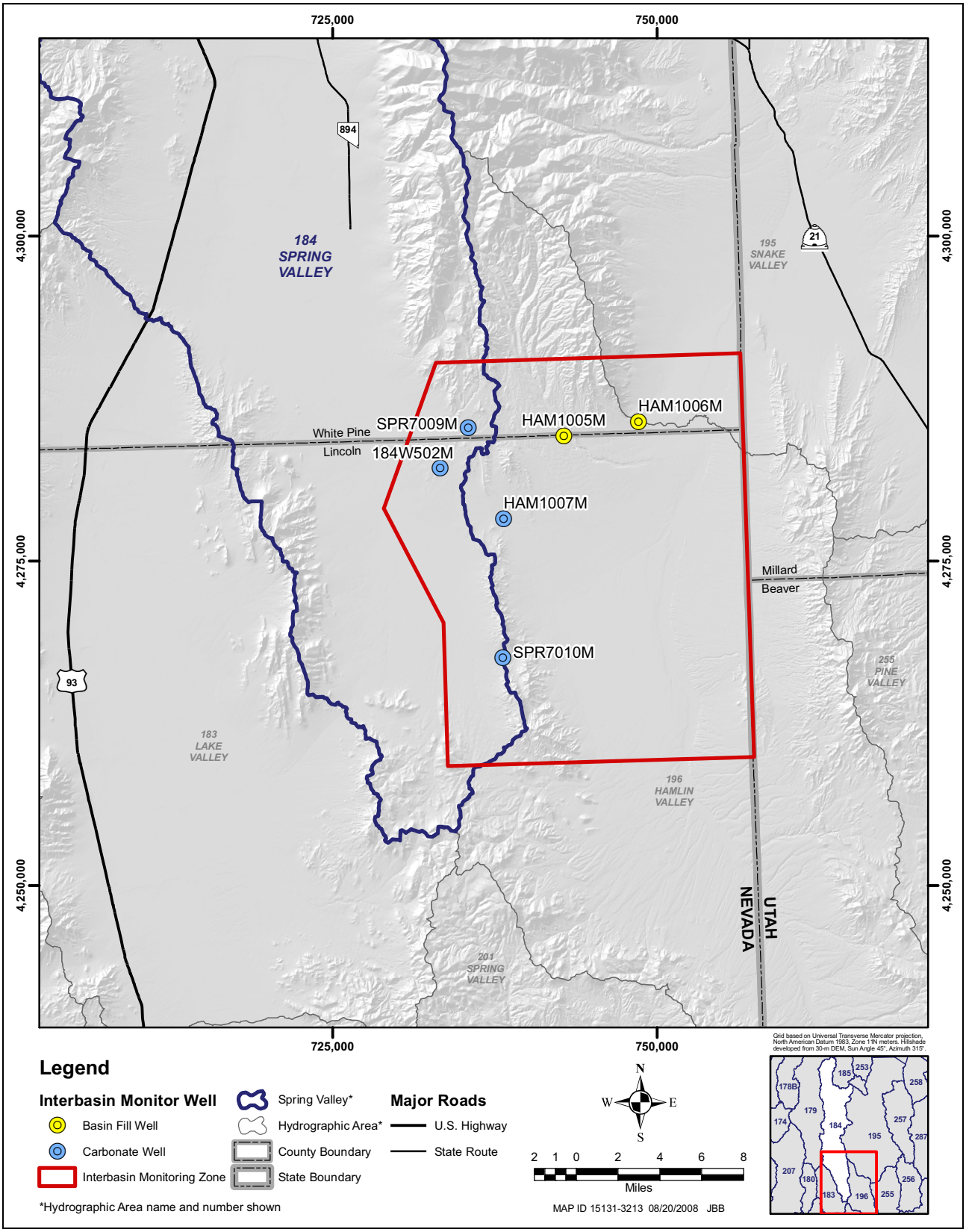


Figure 2-3
SNWA Interbasin Monitoring Zone Well Locations

Table 2-2
SNWA Interbasin Monitoring Zone Well Locations

Site Number	Station Local Number	Well Common Name	Location[a]		Estimated[a] Surface Elevation (ft amsl)
			UTM Northing (m)	UTM Easting (m)	
Basin Fill					
HAM1005M	196 N10 E69 02 BBA 1	Wash Alluvial Well	4,284,588	742,819	6,397
HAM1006M	196 N95 E70 32 AAD 1	Big Springs Well	4,285,699	748,554	5,797
Carbonate					
SPR7009M	184 N10 E68 36 ACC 1	North Carbonate Well	4,285,242	735,445	6,494
HAM1007M	196 N09 E69 20 BCB 1	Troughs Carbonate Well	4,279,203	737,774	6,025
SPR7010M	184 N08 E69 29 CBB 1	Limestone Hills Well	4,267,545	738,113	6,458
184W502M[b]	184 N09 E68 11 BD 2	184W502M	4,282,116.34	733,294.42	6,189.72

[a]Coordinates and elevations are approximate and will be updated based upon a professional survey of the well location. All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11.
[b]Existing well, professional survey complete.

water-level data. A professional survey of location coordinates, ground-surface elevation, and top-of-casing measuring-point elevations will also be performed after completion.

In addition to the new SNWA monitor wells, four existing basin-fill wells, which are included in the existing-well monitoring network, are located within the Zone. One of the existing wells, site number 383023114115302 USGS-MX well, was equipped in November 2008 with instrumentation to collect continuous water-level data. Furthermore, two additional new monitor wells, one carbonate and one basin-fill, were constructed within the Zone as part of the Round 8 SNPLMA Program. One additional carbonate well was planned to be installed but was not able to be constructed due to SNPLMA budget constraints. The SNPLMA program is not part of the SVMM Plan and is led by the DOI. A basin-fill monitor well constructed as part of this program, located northwest of Big Springs, was completed in fall 2009. The carbonate well was completed southwest of Big Springs in 2010. The planned well not completed in the program was planned to be located near the southern boundary of the Zone at the southern end of the Limestone Hills. After completion of the SNWA and SNPLMA drilling programs and establishment of the existing-well monitoring network, a total of 12 wells will be included in monitoring programs within the Zone.

2.3.2 Two Monitor Wells between the Zone and Closest Production Well

The SVMM Plan states that SNWA shall construct and equip two monitor wells in conjunction with the two SNWA production wells in Spring Valley that are proposed for construction closest to the Zone boundary, unless alternative sites are recommended by the TRP and approved by the EC and NSE.

The location of the two monitor wells will be determined after additional information is developed on the location of the two production wells closest to the Zone. After installation, the monitor wells will

be equipped with datalogger and pressure transducer instrumentation to collect continuous water-level data.

2.3.3 Two Monitor Wells between Shoshone Ponds and Closest Production Well

The SVMM Plan states that SNWA shall construct and equip two monitor wells in the vicinity of Shoshone Ponds. The new wells identified as SPR7024M and SPR7024M2 were located with consensus of the TRP and NSE. The well locations are presented in Figure 2-4. The 4-in.-diameter wells will be completed in the basin-fill aquifer at approximate depths of 300 and 700 ft bgs. The final completion depths will be dependent upon hydrogeologic conditions encountered during drilling.

The right-of-way applications for the well sites were submitted in 2008 and have been received. The wells are anticipated to be completed in March 2011. After well installation, a short-term pumping test will be performed, and water-chemistry samples collected. The wells will be equipped with datalogger and pressure transducer instrumentation to collect continuous water-level data. A professional survey of location coordinates, ground-surface elevation, and top-of-casing measuring-point elevations will be performed in 2011.

2.3.4 Cleveland Ranch Monitor Wells

The SVMM Plan includes three additional monitoring requirements requested by the NSE which are in addition to those specified in the Stipulation Agreement. These requirements include (1) groundwater and spring discharge monitoring in the vicinity of the Cleveland Ranch owned by The Church of Jesus Christ of Latter-Day Saints (LDS Church), (2) spring discharge monitoring of Turnley Spring located on Sacramento Pass, and (3) an additional deep basin-fill or carbonate monitor well located 1 mi north of the northernmost future production well on the east side of Spring Valley based upon the configuration of production wells at the commencement of water export from the basin. The locations of Cleveland Ranch and Turnley Spring are presented in Figure 2-5.

Monitoring locations in the vicinity of Cleveland Ranch are presented in Figure 2-6 and consist of the following elements:

- Elimination of the Cleve Creek well (site number 391224114293601), which has limited well construction documentation, from the current monitoring network. Approximately 1 mi north of the Cleve Creek well, on an SNWA-approved BLM right-of-way, advance a borehole and install one monitor well to a depth that intersects the surficial water table. Install a separate monitor well approximately 200 ft deeper than the adjacent shallow well. The goal of paired wells is to determine and monitor changes to the vertical hydraulic gradient. Replacing the Cleve Creek well with these new wells will improve the network by providing more reliable data in this area. Wells are anticipated to be completed in April 2011.

- SNWA advanced two boreholes and completed nested shallow and deep monitor wells near the springs in the southeast part of Section 29, T16N, R67E. The shallow well was completed in a shallow confined unit. The deeper well was screened in a deeper confined unit separated

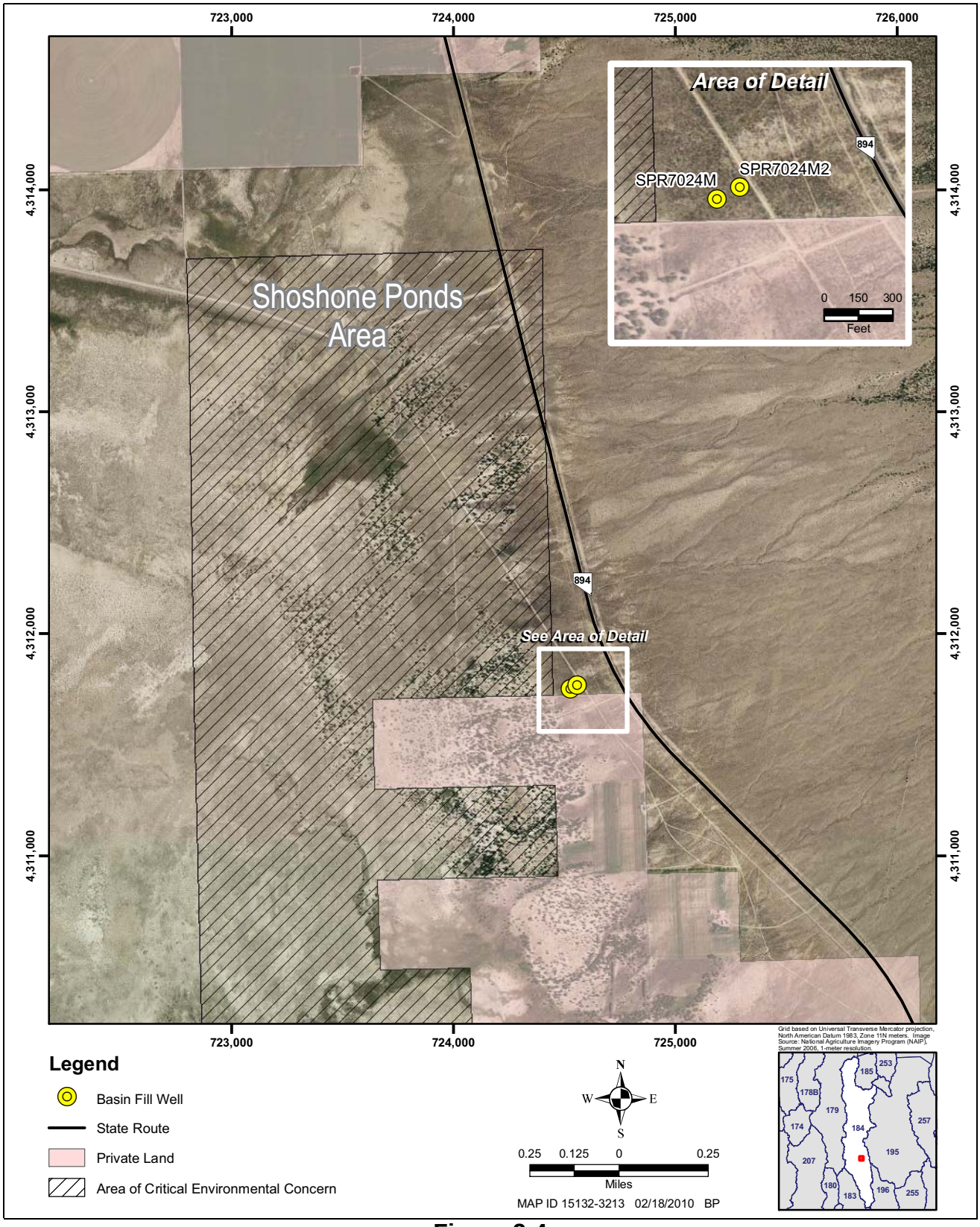


Figure 2-4
Location of Monitor Wells near Shoshone Ponds

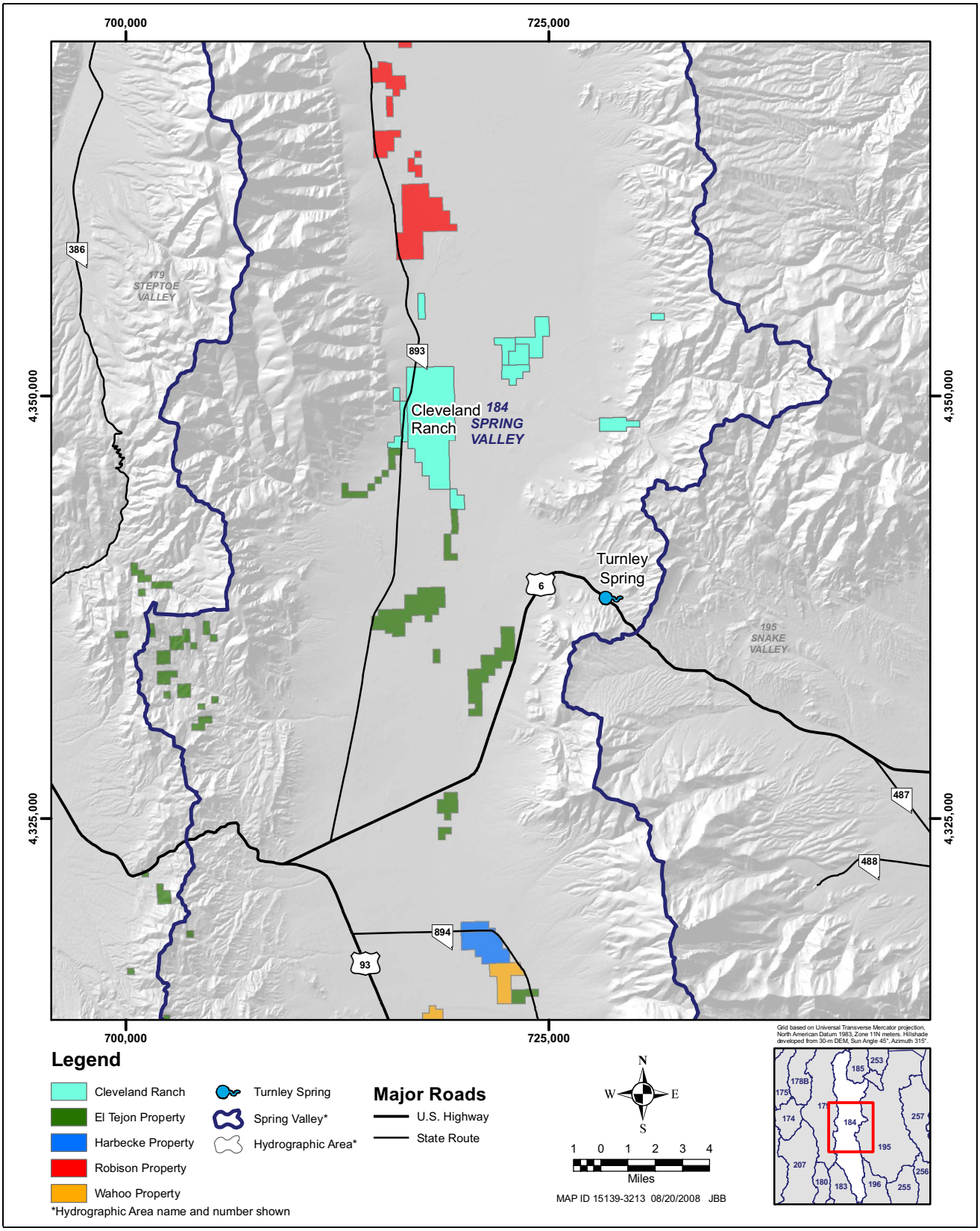
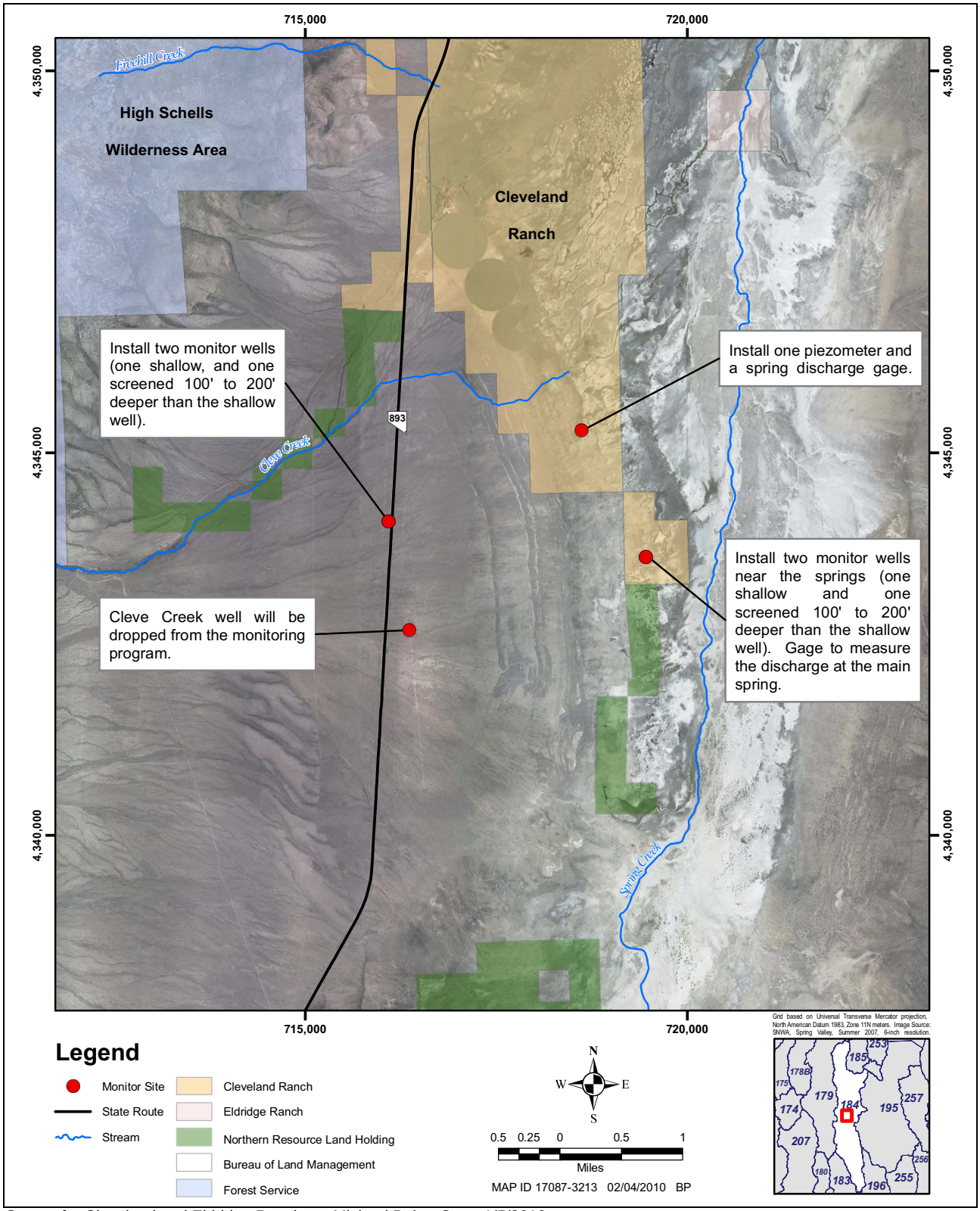


Figure 2-5
Location Map of Cleveland Ranch and Turnley Spring



Source for Cleveland and Eldridge Ranches: Michael Baker Corp. 1/5/2010.

Figure 2-6
Monitoring Locations Associated with Cleveland Ranch

by a clay unit. Wells were recently completed in March 2011. Both wells encountered flowing artesian conditions. Preliminary data indicated higher pressure in the upper zone. Well construction details and water level data will be reported as the data is finalized. A flume to gage the discharge of the main spring in this area was installed in late 2010.

- Installed a shallow piezometer and a flume to gage spring discharge at a significant spring located in the southwest part of Section 20, T16, R67E.

The gage and well locations were determined in consultation with the NSE and a representative from the LDS Church. An access agreement between the LDS Church and SNWA has being finalized.

2.3.5 Spring Monitoring Network

The SVMM Plan states that SNWA shall install, equip, and maintain at least one piezometer near 12 spring locations. In 2007, the TRP, in conjunction with the BWG and NSE, reviewed and conducted a field visit to potential spring monitoring locations. At that time, the group agreed to add an additional spring to the network for a total, at the time, of 13 spring locations. Later, the NSE required Turnley Spring and two springs located on Cleveland ranch to be added to the network for discharge monitoring. Currently, a total of 16 springs located in Spring Valley are in the monitoring network including the two additional springs associated with Cleveland Ranch.

The spring monitoring network is spatially distributed across Spring Valley and includes locations on the valley floor, mountain-block, and range-front areas. Spring monitoring locations are presented on Figure 2-7. Spring location coordinates and surface-elevation data are presented in Table 2-3. A field report documenting the attributes of these springs, including photos and maps, has been posted on the SNWA.com\exchange web site.

Right-of-way applications for seven of the piezometer sites which are located on land managed by the BLM were submitted in 2007 and approved in late 2009. Completion of those seven locations and four additional sites located on SNWA property occurred in 2010. One piezometer (SPR7007Z) located at Minerva Spring, on SNWA property, was installed in 2008. Location and construction attribute information of the 12 piezometers are presented in Table 2-4. Continuous groundwater level data from the Minerva piezometer is presented in Appendix D, Table D-2.

A professional survey of location coordinates, ground-surface, and top-of-casing measuring-point elevation will be performed for each piezometer. The piezometers will be equipped with datalogger and pressure transducer instrumentation in 2011 to collect continuous water-level data. One additional piezometer, located on Cleveland Ranch, was recently installed in March 2011. This location has not yet been surveyed.

Turnley, Rock and Swallow springs are monitored for discharge only due to site hydrogeologic conditions. A 3 in. modified parshall flume and continuous discharge monitoring station were installed at Rock Spring on November 18, 2009. The 2010 water year mean daily discharge values for Rock and Swallow are presented in Appendix D, Tables D-3 and D-4, respectively. The associated hydrograph is also presented in Appendix D. Discharge measurements are also being obtained at four other spring locations where measuring of flow is technically feasible. These springs are Layton,

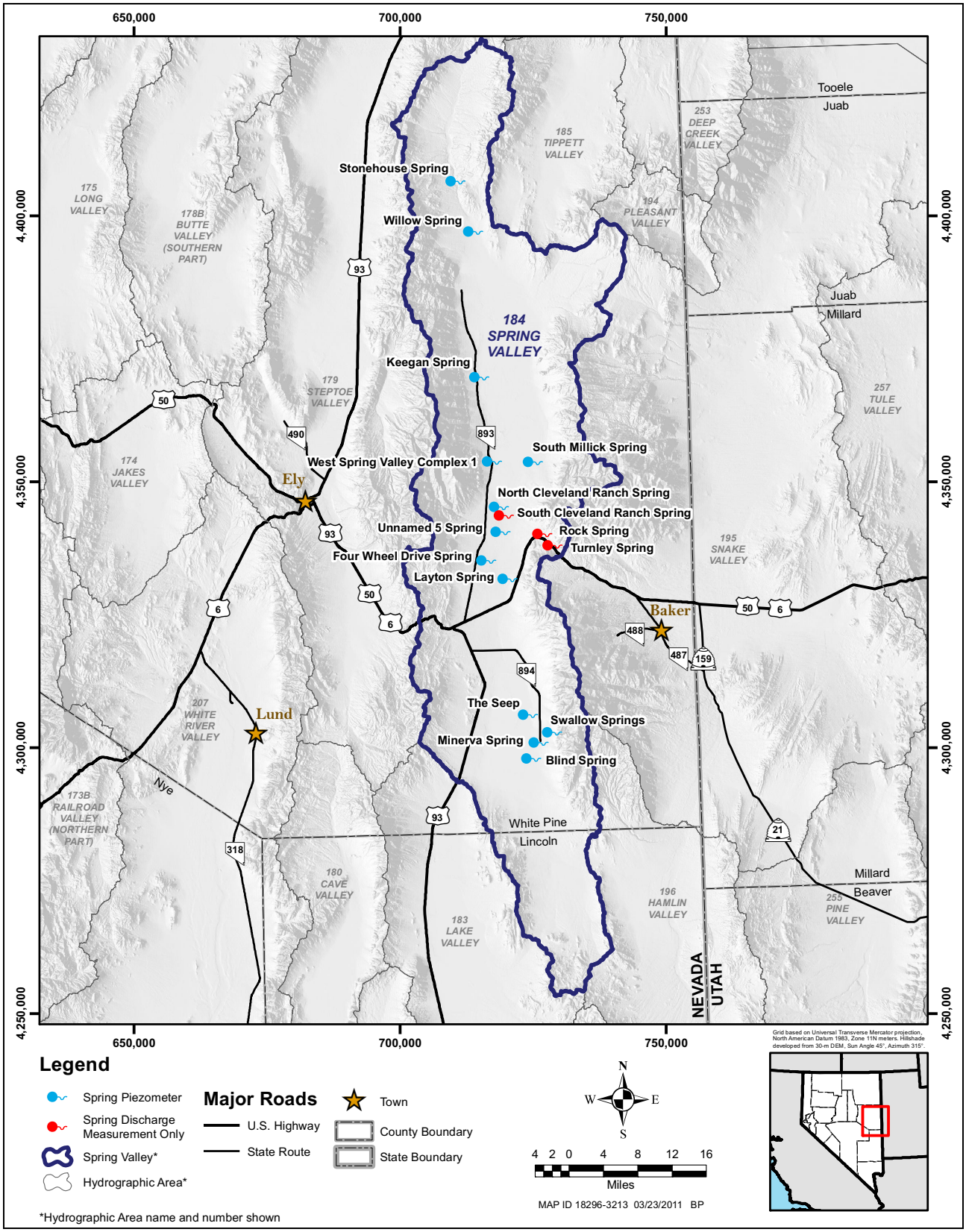


Figure 2-7
Spring Monitoring Locations

Table 2-3
Spring Discharge Monitoring Locations

Site Number	Spring Name	Location[a]		Geology
		UTM Northing (m)	UTM Easting (m)	
1848401	Cleveland Ranch Spring North	4,345,297	718,646	Basin Fill/Valley Floor
1848501	Cleveland Ranch Spring South	4,343,655	719,532	Basin Fill/Valley Floor
1845501	Willow Spring	4,397,069	713,756	Basin Fill/Valley Floor
1845702	South Millick Spring	4,353,754	725,031	Basin Fill/Valley Floor
1845901	Layton Spring	4,331,794	720,204	Basin Fill/Valley Floor
1846201	Swallow Springs	4,302,920	728,597	Basin Fill/Range Front
1847101	Keegan Spring	4,369,664	715,050	Basin Fill/Fan Margin
1847301	Rock Spring	4,340,204	726,798	Carbonate/Mountain Block
1848001	Turnley Spring	4,338,050	728,695	Carbonate/Mountain Block

[a]Coordinates are approximate. All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11.

South Millick, Keegan, and Willow. Discharge is measured downstream of the reservoir at Minerva Spring. However the discharge measurements are influenced by the operation of the reservoir. Hydrologic and field water-quality data collected at Swallow, Minerva, Layton, South Millick, Keegan, Willow, Rock, and Turnley springs are presented in Appendix D.

2.4 Aquifer Testing

The SVMM Plan requires that two constant-rate tests be performed in Spring Valley, at the closest production well completed in basin-fill and carbonate-rock aquifers nearest to the Zone. To date, seven nonrequired 72- to 120-hour constant-rate tests have been performed on SNWA test and irrigation wells in Spring Valley. Aquifer tests are planned for future carbonate and basin-fill production wells closest to the Zone once they are completed. A short term test is planned to be performed on the new Cleve monitor well upon completion.

2.5 Stream Discharge Measurements

This section presents the current status and data associated with the stream monitoring program at Cleve Creek, Big Springs, and the Big Springs Creek - Lake Creek Complex.

2.5.1 Discharge Sites at Big Springs Creek and Cleve Creek

The SVMM Plan states that SNWA shall directly, or indirectly through funding of a third party, operate and maintain a discharge monitoring site on Big Springs Creek and Cleve Creek. Continuous stream-flow-monitoring gaging stations, which are funded by SNWA through a Cooperative Agreement with USGS and NDWR, are identified as Cleve Creek near Ely, Nevada, in Spring Valley

Table 2-4
Spring Piezometer Location and Completion Information

Site Number	Associated Spring	Location[a]		Surface Elevation (ft amsl)	Completion Date	Drill Depth (ft bgs)	Well Depth (ft bgs)	Well Diameter (in.)	Open Interval (ft bgs)	Screened Interval (ft bgs)	Aquifer	DTW Date	DTW (ft bgs)
		UTM Northing (m)	UTM Easting (m)										
SPR7007Z	Minerva Spring	4,301,057.50	726,134.41	5,828.66	1/18/2008	35	31	4	12-31.3	16-31	Basin Fill	11/10/2010	10.91
SPR7011Z	Blind Spring	4,297,998.82	724,727.45	5,770.00	5/6/2010	31.3	31.3	2	13-31.3	16.1-31.1	Basin Fill	11/10/2010	6.68
SPR7012Z	4WD Spring	4,335,263.42	716,235.96	5,755.77	5/8/2010	25	25	2	4-25	9.8-24.8	Basin Fill	10/14/2010	2.36
SPR7013Z	Swallow Spring	4,302,865.79	728,700.19	6,133.19	5/6/2010	65	61.2	2	26-61.2	46-61	Basin Fill	11/10/2010	51.74
SPR7014Z	The Seep	4,306,272.49	724,093.38	5,778.93	5/7/2010	31	30.7	2	6-30.7	15.5-30.5	Basin Fill	11/10/2010	11.83
SPR7015Z	West Spring Valley Complex	4,353,816.24	717,284.40	5,602.99	5/8/2010	40	38.2	2	8-38.2	23-38	Basin Fill	10/14/2010	5.5
SPR7016Z	Unnamed Spring 5	4,340,637.22	718,885.71	5,644.97	5/4/2010	35	32	2	15-32.0	16.8-31.8	Basin Fill	10/12/2010	1.65
SPR7018Z	S. Millick Spring	4,353,624.13	725,156.83	5,587.20	5/4/2010	31	25.2	2	8-25.2	10-25	Basin Fill	11/8/2010	5.81
SPR7019Z	Layton Spring	4,331,753.28	720,064.23	5,688.45	5/7/2010	35.3	35.3	2	9-35.3	20.1-35.1	Basin Fill	11/10/2010	11.17
SPR7020Z	Stonehouse Spring	4,406,416.85	710,617.98	6,264.28	5/5/2010	9.3	9.3	2	2-9.3	4.1-9.1	Basin Fill	10/12/2010	2.92
SPR7021Z	Keegan Spring	4,369,692.97	714,899.20	5,612.85	5/8/2010	20.7	20.7	2	4-20.7	5.5-20.5	Basin Fill	10/13/2010	-2.01
SPR7022Z	Willow Spring	4,397,090.45	713,752.75	5,987.40	5/5/2010	35	33.5	2	7-33.5	18.3-33.3	Basin Fill	11/9/2010	13.59

[a]All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11.

and the north and south channels of Big Springs Creek near Baker, Nevada in Snake Valley. The gaging-station locations are presented in Table 2-5 and Figure 2-8. Throughout the year, SNWA also

Table 2-5
Cleve Creek and Big Springs Monitoring Locations

Station Number	Station Name	Basin Number	Stream Number	Location[a]		Watershed (mi^2)
				UTM Northing (m)	UTM Easting (m)	
1841611	Cleve Creek near Ely	184	18416	4,343,423	712,669	32.0
1951901	Big Springs at Gaging Station	195	19519	4,287,293	749,422	N/A

[a]All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11.
N/A = Not applicable

conducted miscellaneous stream discharge measurements at the sites. These data were provided to the USGS for inclusion into the records. Data collected in 2010 from these locations are presented in Appendix E.

Miscellaneous discharge measurements performed by SNWA and USGS are presented in Appendix E, Tables E-1 and E-2. All USGS data from 2010 presented are considered preliminary. The continuous stream flow data for 2010 are presented in hydrographs along with miscellaneous discharge-measurement data and mean daily-discharge data for the entire period of record. Discharge data are also available through the National Water Information System (USGS, 2011).

2.5.1.1 Cleve Creek

Cleve Creek is located on the eastern slope of the Schell Creek Range. Stream flow is measured by the Cleve Creek near the Ely, Nevada, gaging station. The drainage area encompasses approximately 32 mi^2, making it the largest drainage area in Spring Valley. The USGS has maintained the Cleve Creek near the Ely, Nevada, gaging station intermittently since 1914. The complete period of record of Cleve Creek follows: June 1914 to December 1916; October 1959 to September 1967; October 1976 to September 1981; December 1982 to September 1987; and March 1990 through the present year (2009). A crest-stage partial record exists for the station from October 1967 to September 1976. The mean annual discharge over the period of record of 10.2 cfs, and the minimum and maximum mean annual discharges were 5.15 cfs in 1960 and 22.2 cfs in 1984. In Water Year (WY) 2008 (October 1, 2007 to September 30, 2008), the mean annual discharge was 6.66 cfs. The WY 2009 mean annual discharge was 7.91 cfs. The provisional WY 2010 mean annual discharge was 9.30 cfs. Site attribute data are presented on the National Water Information System (NWIS) web site (USGS, 2011). In 2010, the provisional mean annual discharge at the Cleve Creek gaging station was 91% of the mean annual discharge over the period of record.

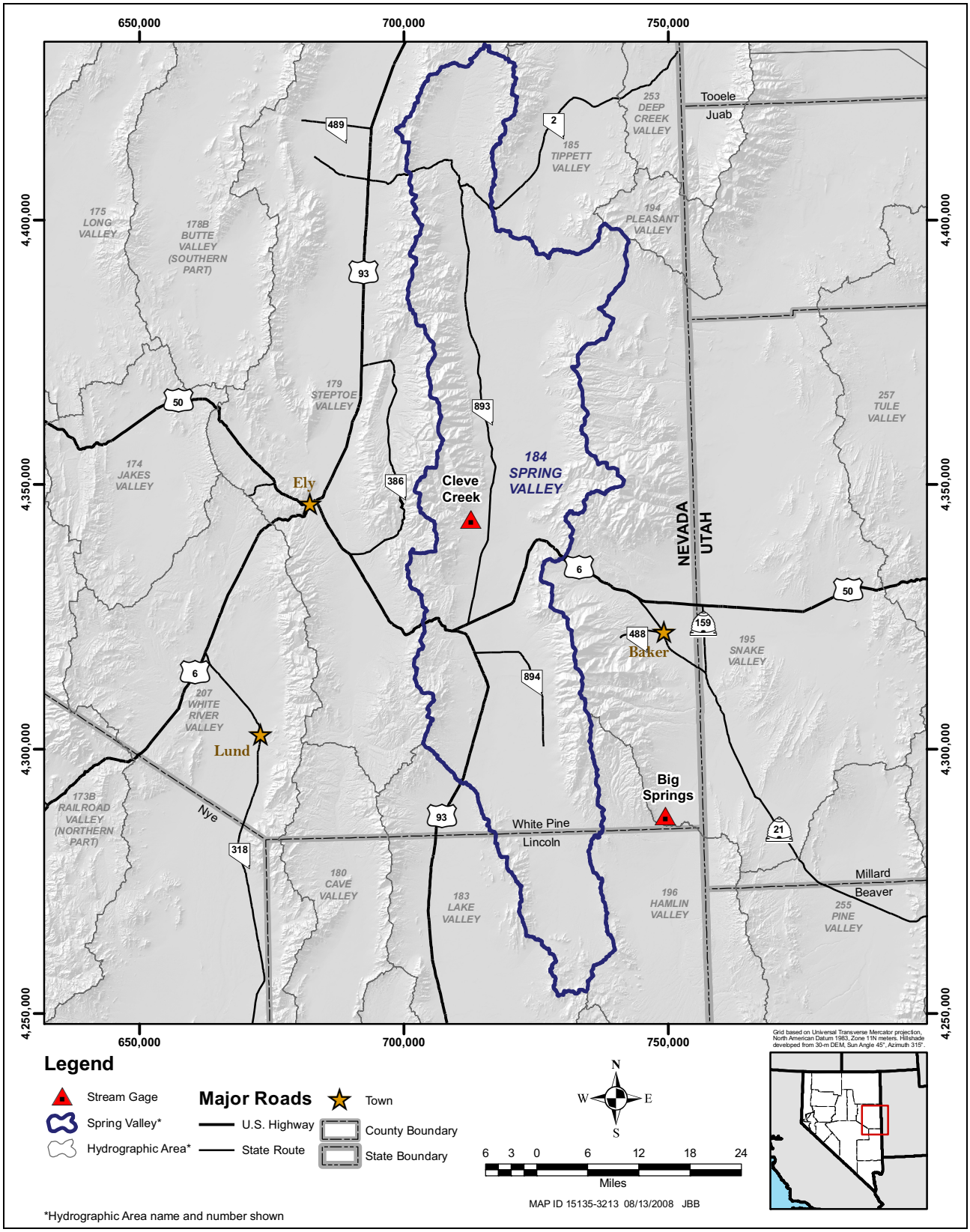


Figure 2-8
Cleve and Big Springs Creeks Gaging Stations

2.5.1.2 Big Springs Creek

Big Springs Creek is located at the base of the eastern slope of the southern Snake Range, approximately 17 mi south of Garrison, Utah. The spring discharge is measured by stream gaging stations located on the north and south channels near the spring orifice. Miscellaneous measurements have been collected since 1972. Although Meinzer (1911) describes the springs, a discharge estimate is not provided. In early 1972, Walker (1972) installed a series of graphic recorders and flumes to determine the discharge of these springs. These data collected by Walker also include the large spring located at Burbank, Utah.

In early 2005, the USGS, in cooperation with SNWA and NDWR, installed a gaging station at Big Springs. The record is published as Big Springs Creek South Channel near Baker, Nevada, and Big Springs Creek North Channel near Baker, Nevada. The USGS has maintained these gaging stations since 2005. Site attribute data are presented on the National Water Information System (NWIS) web site (USGS, 2011).

The complete period of record of Big Springs Creek, both north and south channels, is April 2005 to present. The mean annual discharge for WY 2006–2010 for Big Springs Creek South Channel is 6.06 cfs, and the minimum and maximum mean annual discharges, respectively, were 5.84 cfs in WY 2010 and 6.33 cfs in WY 2008. The provisional WY 2010 mean annual discharge was 6.06 cfs which is 96% of the mean annual discharge over the period of record.

For Big Springs Creek North Channel, the mean annual discharge over the period is 3.84 cfs, and the minimum and maximum mean annual discharges were 3.70 cfs in WY 2009 and WY 2010 and 4.00 cfs in WY 2006, respectively. The provisional WY 2010 mean annual discharge was 3.70 cfs which is 96% of the mean annual discharge over the period of record.

2.5.2 Synoptic-Discharge Study of Big Springs and Lake Creeks

The SVMM Plan states that SNWA shall collect, or fund the collection of, at least two sets of synoptic-discharge measurements for the Big Springs Creek surface-water system from the spring orifice to Preuss Lake. Data would be collected during irrigation and nonirrigation seasons at least one year prior to groundwater withdrawals by SNWA. The collection would be repeated every five years after withdrawals begin. No target date has been determined for this task. The Utah Geologic Survey currently operates gages on the complex near Stateline and Clay springs. The study area and current USGS and UGS gaging stations are presented in Figure 2-9.

2.5.3 Relationship Between Big Springs and Basin-Fill and Carbonate-Rock Aquifers

The SVMM Plan states that SNWA shall work with the TRP to collect data to investigate the relationship between discharge at Big Springs and hydraulic head in the basin-fill and regional carbonate-rock aquifers. This task will be accomplished using hydrologic and water-chemistry data collected from Big Spring, future SNWA monitor wells, and SNPLMA-funded study.

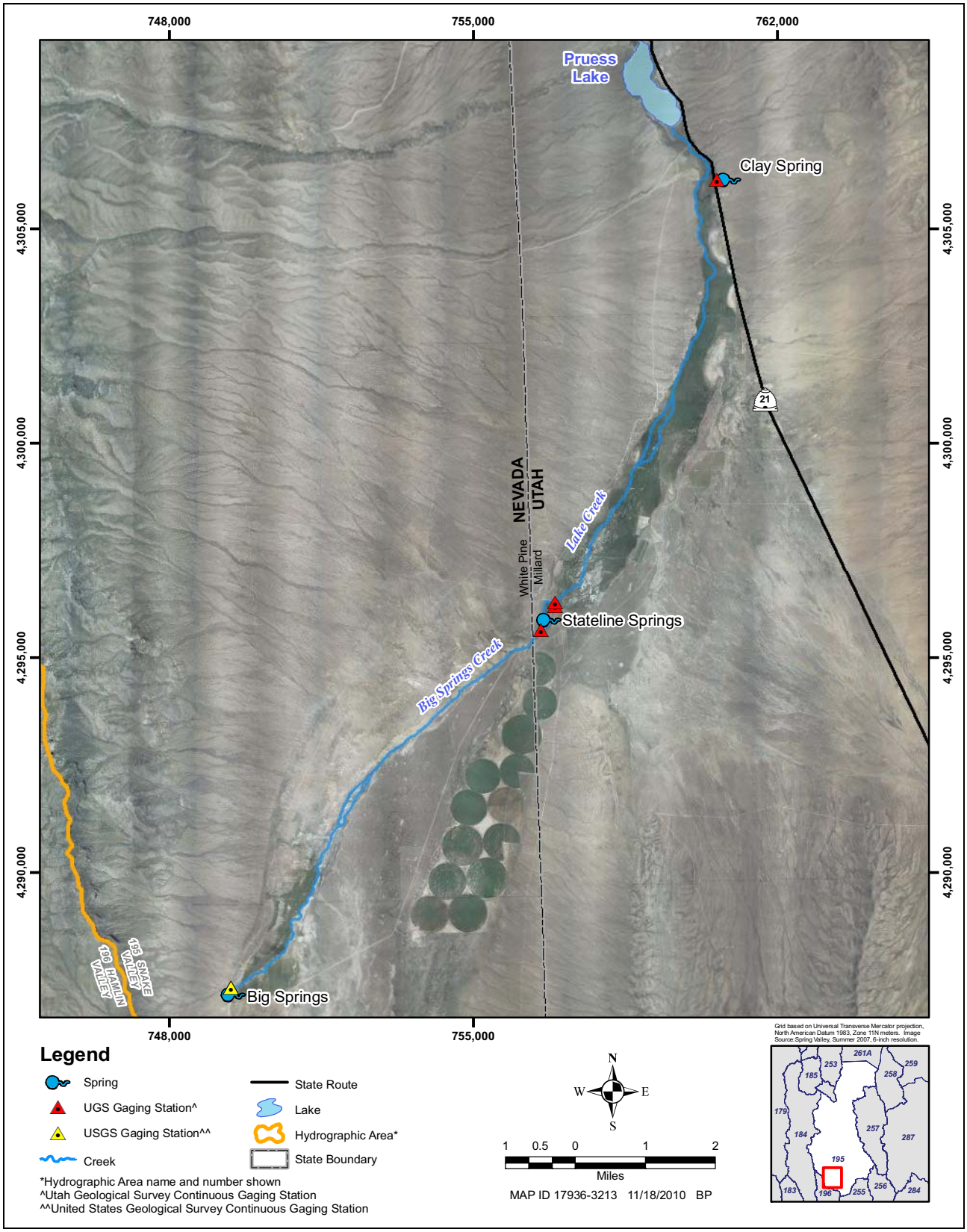


Figure 2-9
Big Springs Synoptic-Discharge Measurement Study Area, Snake Valley

2.6 Precipitation Station Network

The precipitation network includes three high-altitude precipitation stations located in the Snake and Schell Creek ranges; these stations are maintained and measured by USGS through a cooperative funding agreement with SNWA and NDWR. Four established precipitation stations located in Ely and McGill, Nevada, the Great Basin National Park, and Eskdale, Utah, which are national weather service cooperation sites, provide regional data. SNWA has also established additional valley-floor stations at Shoshone 5N, located on the east side of the valley at the Bransford Ranch and the Robison Ranch in northwest Spring Valley. The network precipitation stations are listed in Table 2-6 and presented on Figure 2-10.

Table 2-6
Precipitation Station Locations

Site Number	Station Name	Elevation (ft amsl)	Location[a]	
			UTM Northing (m)	UTM Easting (m)
391913114143101	Bulk Precipitation Station NW of Mt. Moriah	9,300	4,355,938	737,691
390946114364901	Bulk Precipitation Station on Cave Mountain	10,650	4,337,545	706,106
385409114185401	Mt. Washington Bulk Precipitation Station	10,440	4,309,376	732,764
267450	Shoshone 5N	5,930	4,310,746	725,419
---	Robison Ranch	5,695	4,378,103	713,347
263340	Great Basin National Park (GBNP)	6,830	4,320,462	741,031
264950	McGill	6,300	4,363,546	692,301
422607	Eskdale	4,980	4,334,157	763,696
262631	Ely WBO	6,260	4,350,419	685,436

[a]All coordinates are Universal Transverse Mercator, North American Datum, 1983, Zone 11

Reported data collected in 2010 from the four regional stations are presented in Appendix F. Data collected by USGS at the high-altitude stations between 2005 and 2009 are also presented in the appendix. Annual total precipitation in 2010 measured by SNWA at the Shoshone 5N and Robison Ranch stations are 10.76 and 11.31 in., respectively. This compares to 2009 annual total precipitation of 8.81 and 8.00 in. for the two locations.

Data sources for precipitation information presented in this report are as follows:

- USGS data is cited from USGS National Water Information System (USGS, 2010)
- SNOTEL data is cited from U.S. Department of Agriculture Natural Resources Conservation Service (USDA, 2011)
- National Weather Service data is cited from Western Regional Climate Center (WRCC, 2011)

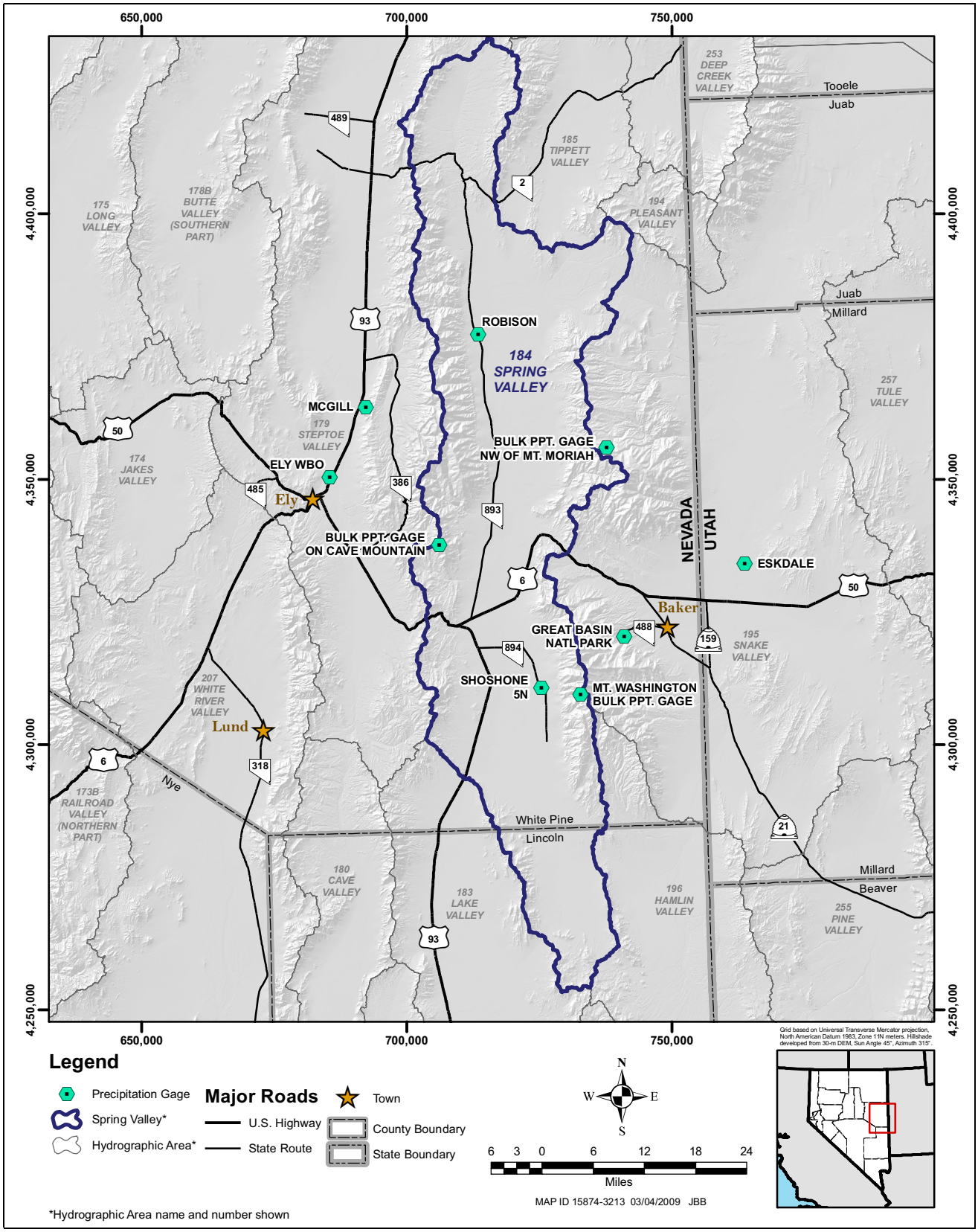


Figure 2-10
Precipitation Station Locations

2.7 Water-Chemistry-Sampling Program

The SVMM Plan states that SNWA shall collect and analyze water-chemistry samples for specific parameters at 40 locations selected from monitoring network wells, springs, and streams. Three rounds of samples will be collected at 6-month intervals for chemical analysis. Water-chemistry analysis results from SNWA exploratory and test wells were presented in the 2007 and 2008 data reports (SNWA, 2008, 2009b).

The Technical Review Panel (TRP) held a conference call on March 31, 2010 to discuss the water-chemistry sampling programs required by the Spring Valley Stipulation Hydrologic Monitoring, Management, and Mitigation Plans. The Stipulation Agreement for Spring Valley requires that three rounds of water-chemistry sampling at 40 locations be completed within five years from the approval date of the agreement (September 8, 2006). The Spring Valley hydrologic monitoring networks include new monitor wells which will not be installed in time to meet the water-chemistry sampling requirements set forth in the agreements. The TRP evaluated various implementation alternatives for the water-chemistry programs, including: (1) sampling in 2010 and 2011 from the existing network without the planned new monitor wells; (2) delaying the sampling until the monitor wells are installed, and then sampling from the complete monitoring network; or (3) some combination of these ideas. The TRP reached a consensus agreement as to the preferred course of action which is summarized below.

For Spring Valley, the TRP recommended that the water-chemistry sampling program be modified to proceed with the collection and analysis of water-chemistry samples at 35 locations which were selected by the TRP in 2010. The remainder of the water-chemistry program will be postponed until after the five new Interbasin Groundwater Monitoring Zone (Zone) monitor wells specified in the SVMM Plan have been installed. SNWA will complete the final two rounds of water chemistry sampling within two years after installing the five Zone wells. The program will consist of the collection of water-chemistry samples from the five new Zone wells, followed by two rounds of sample collection six months apart at the 35 locations sampled in the first round and the five Zone wells (a total of 40 sites per sampling event as originally specified in the SVMM Plan). The sample sites and parameters may be modified by the TRP based upon results of previous sampling rounds.

The spring, stream and well sampling locations are presented in Figure 2-11. All surface water and spring discharge locations have been sampled and nine existing wells have been completed. The six new wells and the flowing Shoshone Middle Well will be sampled after installation of the new wells near Shoshone Pond and Cleve Creek. The south Spring Valley MX well was unaccessible to sampling due to snow and road conditions. This site will also be sampled with the new monitor wells in early 2011.

2.8 Reporting

A data-exchange web site accessible by the NSE, EC, TRP, and BWG members was implemented in April 2008. The data-exchange web site is used to distribute SVMM Plan monitoring data to the TRP within 90 days of collection. Data will also be submitted directly to the NSE on a quarterly basis in electronic format.

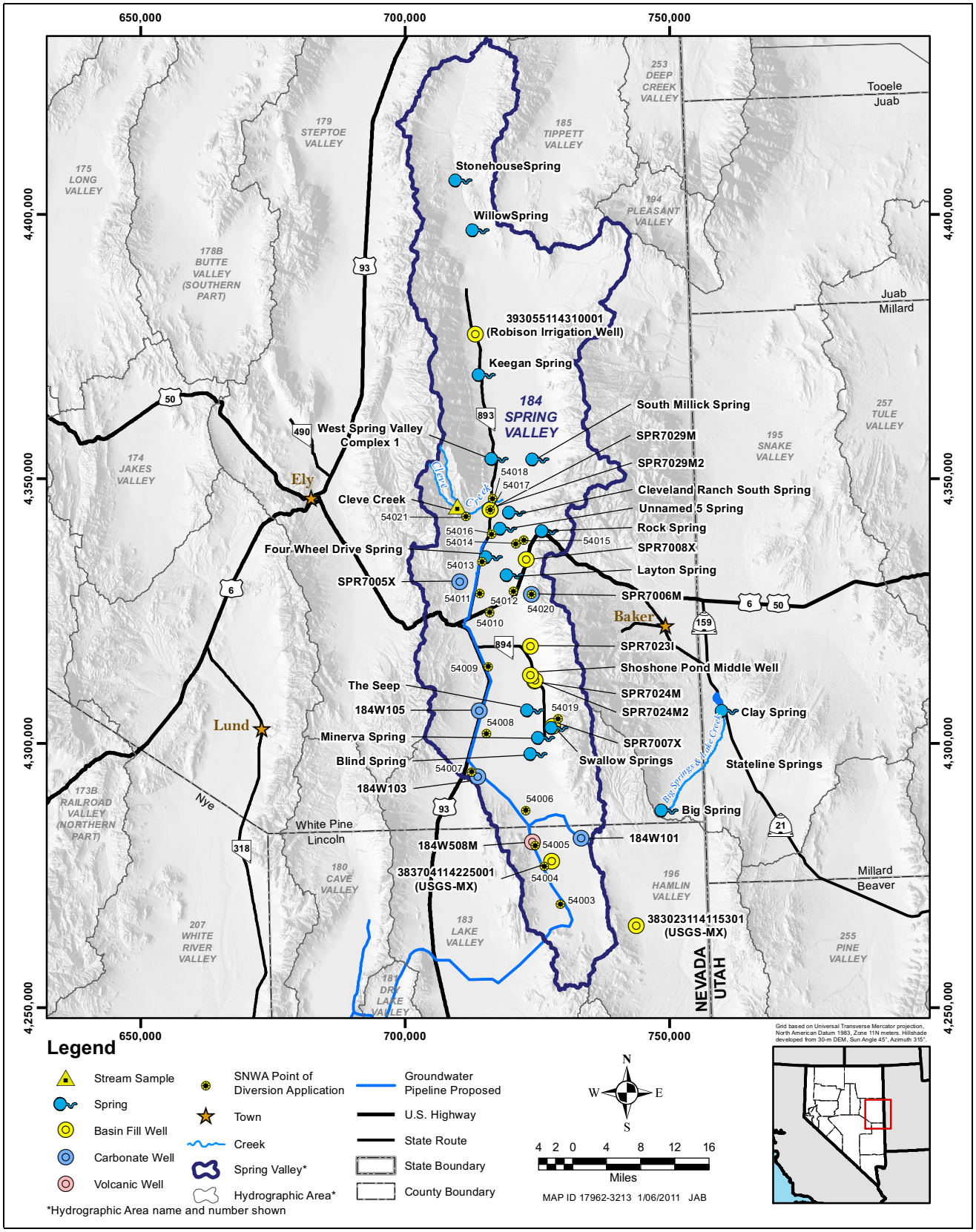


Figure 2-11
Spring Valley Monitoring Plan Water Chemistry Program Sample Locations

2.9 Proposed Schedule of Groundwater Withdrawals

No groundwater production is scheduled for the next two years with the exception of short-term well development and performance testing and aquifer testing of any new wells drilled during this time-frame. The duration of well-performance tests is usually one day. The duration of constant-rate aquifer testing is usually under one week.

3.0 ANTICIPATED 2011 SNWA SVMM PLAN ACTIVITIES

Anticipated SVMM Plan activities in 2011 are summarized below. Some activities are contingent upon property access or NSE and TRP approval.

- Continue to collect required quarterly and continuous water-level measurements at appropriate locations throughout 2011. Data will be reported quarterly to the TRP through the SNWA data-exchange web site. Data will be submitted to NSE in an approved electronic format and included in the annual data report to be submitted in March 2012.

- Complete the installation of integrated pressure transducer instrumentation to collect continuous water-level measurements at 11 new piezometers associated with the spring monitoring network. Minerva spring piezometer instrumentation has already been installed. The piezometer survey and instrumentation installation is anticipated to be completed in 2011.

- Equip the new monitoring wells near Shoshone Ponds, SPR7024M and SPR7024M2, with integrated pressure transducer instrumentation and dataloggers to collect continuous water-level measurements.

- Maintain and measure periodically two flumes, two monitor wells and one piezometer on LDS Church Cleveland Ranch property.

- Perform a professional-grade survey of location coordinates, ground-surface elevations, and top-of-casing measuring-point elevations at new monitoring network wells and piezometers.

- Spring discharge at Rock and Swallow springs will continue to be monitored with gaging stations. Turnley spring discharge will continue to be measured periodically.

- Ensure the operation and maintenance of discharge gaging stations on Cleve and Big Springs creeks are continued.

- Complete and report the results of the water-chemistry sampling program.

- Work with the TRP to coordinate activities and share data with the SNPLMA Round 8 study conducted in Spring, Hamlin, and Snake valleys.

- Coordinate activities and provide technical assistance to the BWG as requested.

SNWA will continue to work with NSE and TRP participants to implement the SVMM Plan.

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Appendix A

Periodic Water-Level Measurements Collected at SNWA Exploratory and Test Wells

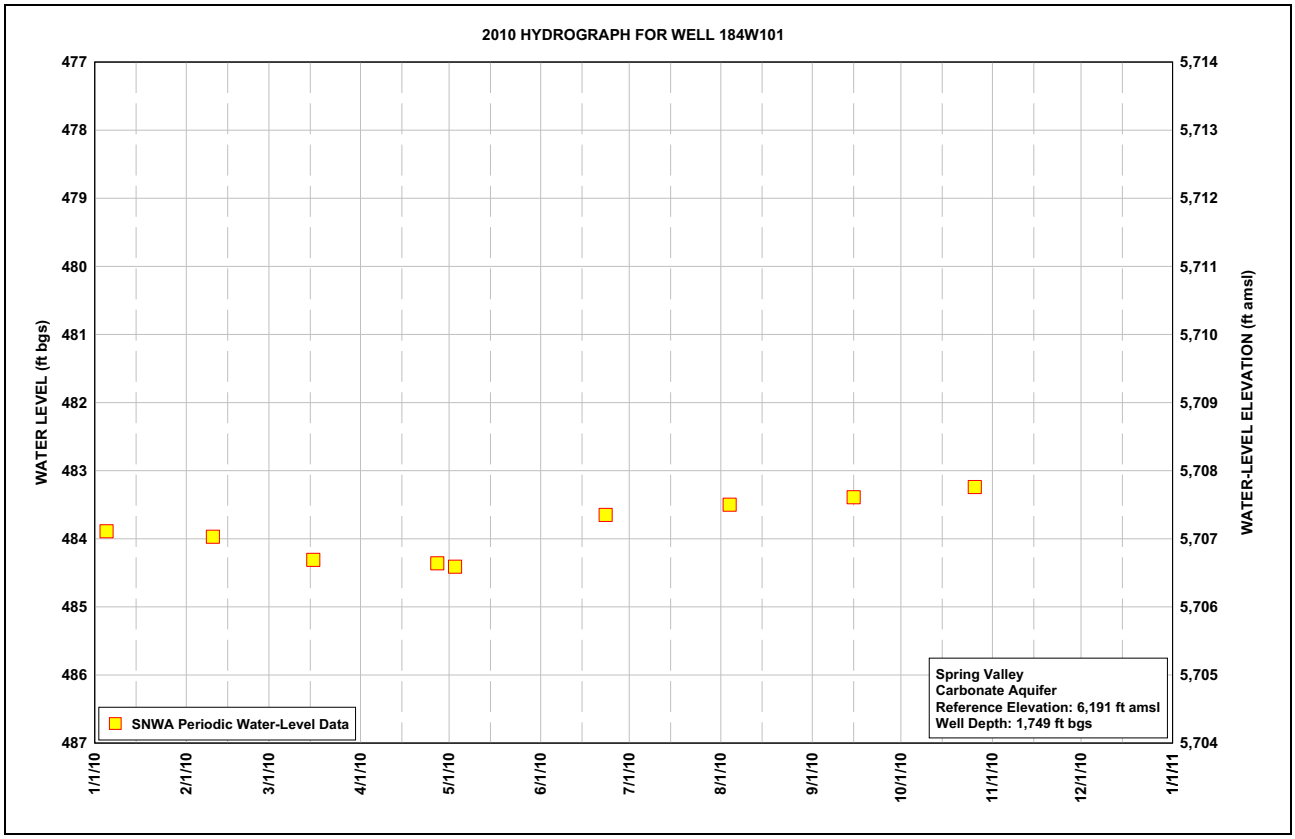
Table A-1
Periodic Water-Level Measurements Collected at SNWA Exploratory and Test Wells
(Page 1 of 2)

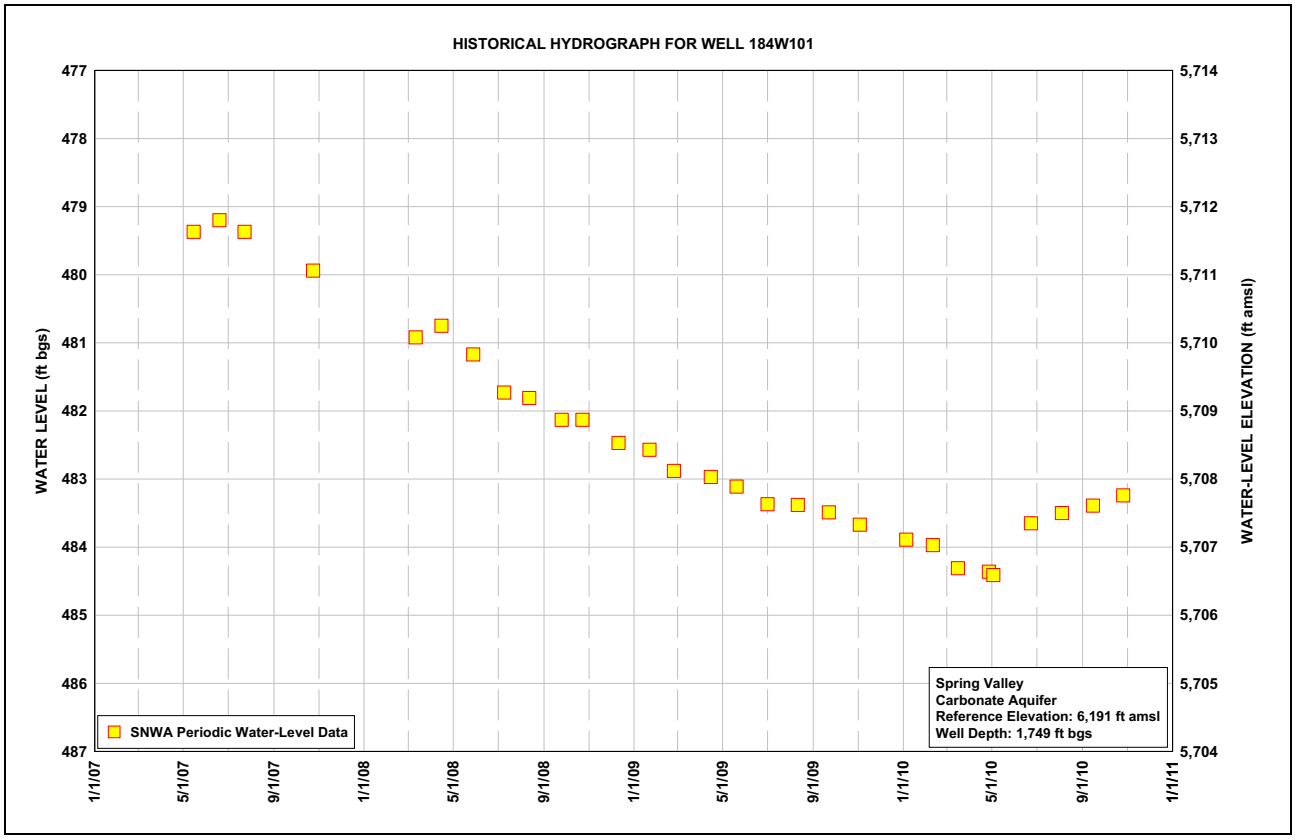
Site Number	Owner	Well Depth (ft bgs)	Surface Elevation (ft amsl)	Water Level			
				Date	Depth (ft bgs)	Site Status[a]	Measurement Method[b]
184W101	SNWA	1,749	6,190.90	1/5/2010	483.89	S	T
				2/10/2010	483.97	S	T
				3/16/2010	484.31	S	T
				4/27/2010	484.36	S	T
				5/3/2010	484.41	S	T
				6/23/2010	483.65	S	T
				8/4/2010	483.50	S	T
				9/15/2010	483.39	S	T
				10/26/2010	483.24	S	T
184W103	SNWA	1,017	5,899.06	1/5/2010	98.69	S	T
				2/11/2010	98.76	S	T
				3/17/2010	98.72	S	T
				4/26/2010	98.84	S	T
				5/3/2010	98.88	S	T
				6/23/2010	98.85	S	T
				8/3/2010	98.89	S	T
				9/16/2010	99.12	S	T
				10/27/2010	99.12	S	T
184W105	SNWA	1,135	6,007.30	1/5/2010	209.24	S	T
				2/11/2010	209.31	S	T
				3/17/2010	209.26	S	T
				4/21/2010	209.34	S	T
				4/27/2010	209.30	S	T
				5/5/2010	209.32	S	T
				6/22/2010	209.32	S	T
				8/3/2010	209.29	S	T
				9/14/2010	209.41	S	T
				10/27/2010	209.45	S	T
SPR7006M	SNWA	1,700	6,525.18	5/4/2010	770.22	S	T
				8/3/2010	769.01	S	T
				10/25/2010	770.36	S	T
SPR7008X	SNWA	960	5,702.99	1/5/2010	13.23	S	S
				2/10/2010	13.31	S	T
				3/16/2010	13.32	S	T
				5/4/2010	13.00	S	S
				6/23/2010	13.09	S	T
				8/3/2010	13.17	S	T
				9/15/2010	13.32	S	T
				10/25/2010	13.33	S	T

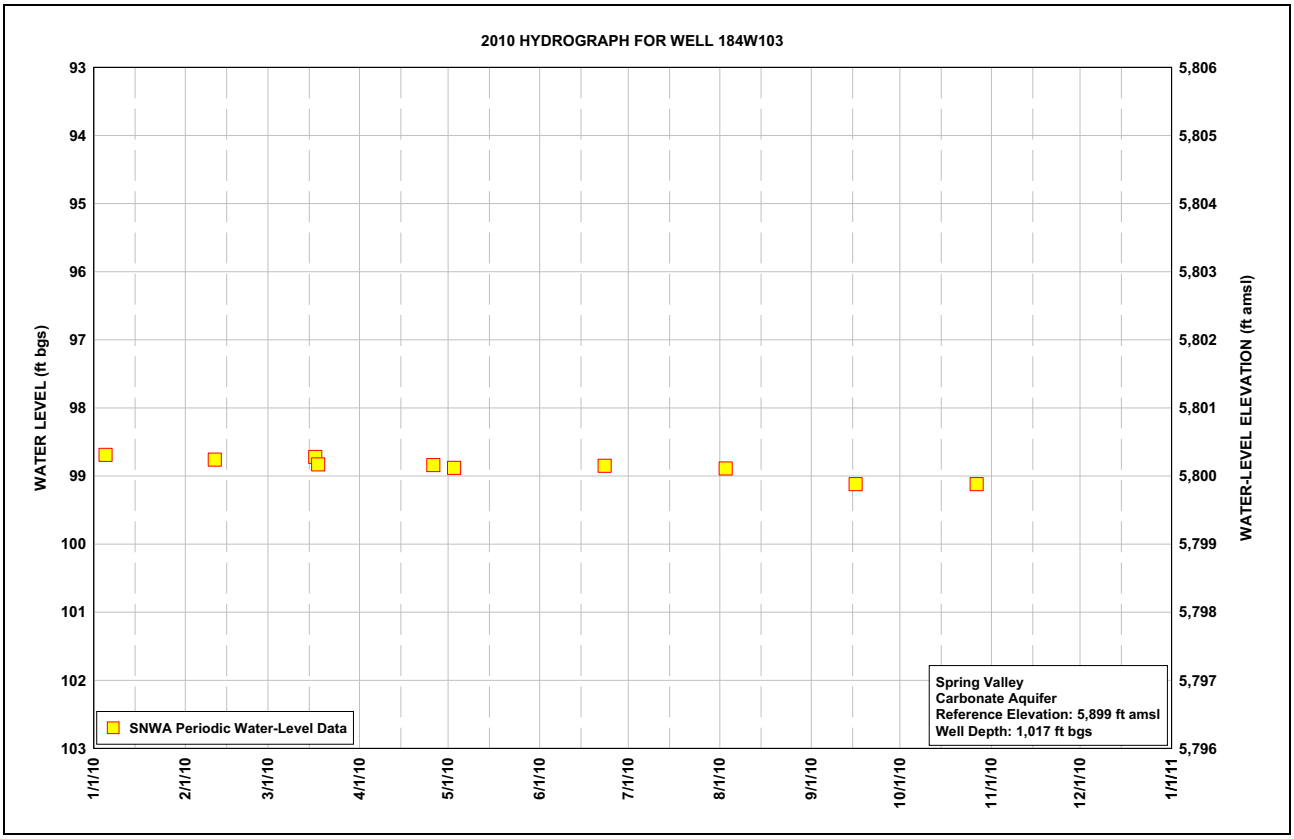
Table A-1
Periodic Water-Level Measurements Collected at SNWA Exploratory and Test Wells
(Page 2 of 2)

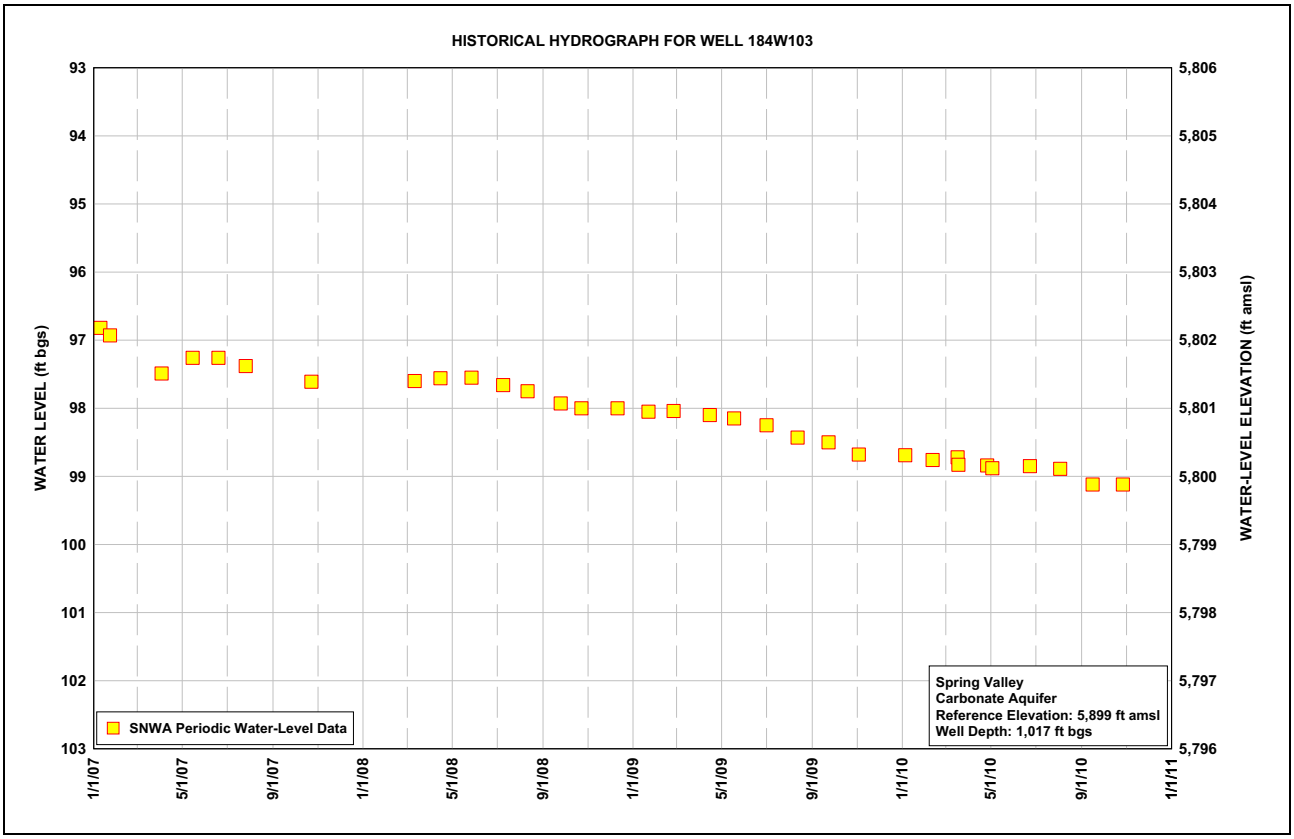
Site Number	Owner	Well Depth (ft bgs)	Surface Elevation (ft amsl)	Water Level			
				Date	Depth (ft bgs)	Site Status[a]	Measurement Method[b]
SPR7005X	SNWA	1,350	6,397.56	1/5/2010	496.40	S	T
				3/16/2010	497.30	S	T
				5/4/2010	497.20	S	T
				6/23/2010	496.85	S	T
				8/3/2010	496.14	S	T
				9/15/2010	496.13	S	T
				10/26/2010	496.16	S	T
SPR7007X	SNWA	1,020	6,017.53	1/5/2010	153.18	S	T
				2/8/2010	154.69	S	T
				3/16/2010	156.15	S	T
				5/5/2010	156.72	S	T
				6/23/2010	148.78	S	T
				8/4/2010	145.95	S	T
				9/15/2010	147.08	S	T
				10/26/2010	148.69	S	T

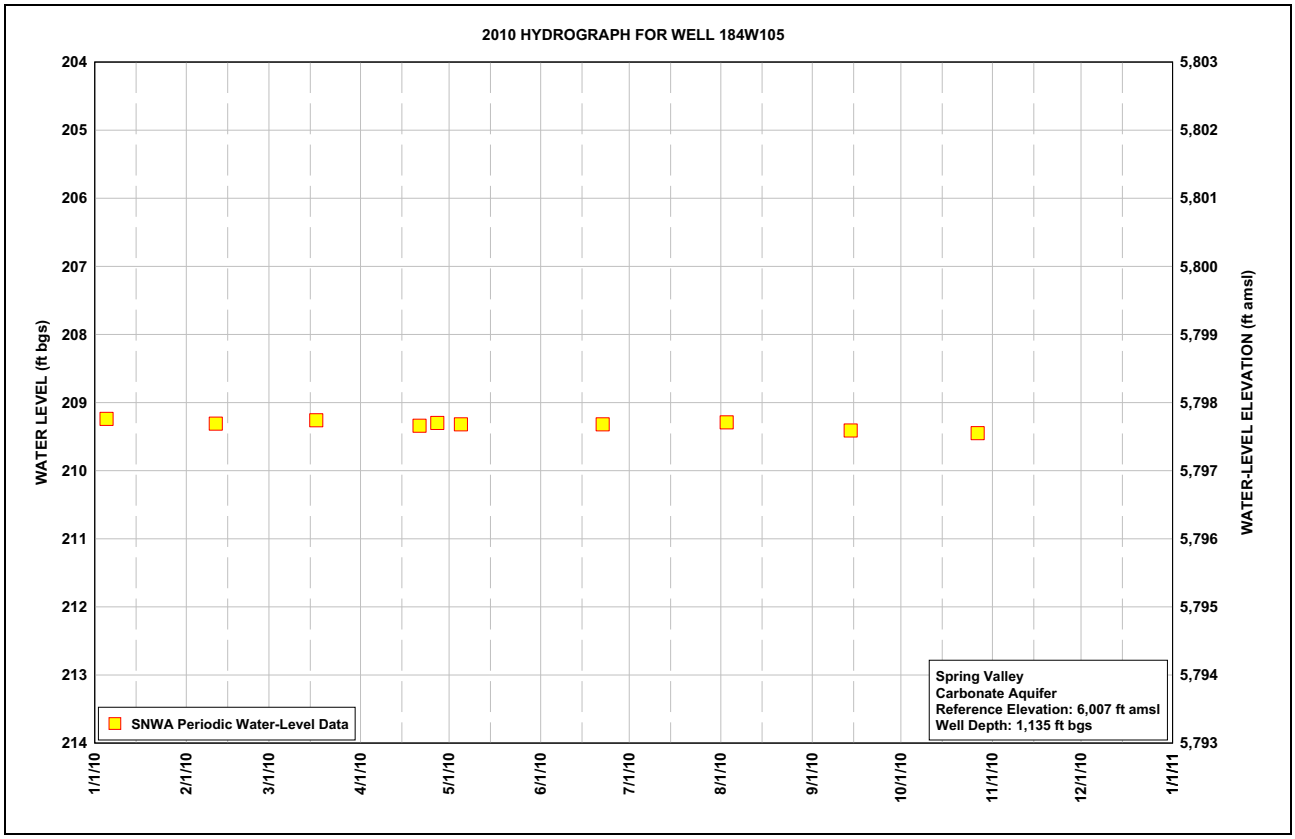
[a] S = Static conditions
[b] T = Electric tape measurement, S = Steel tape measurement.

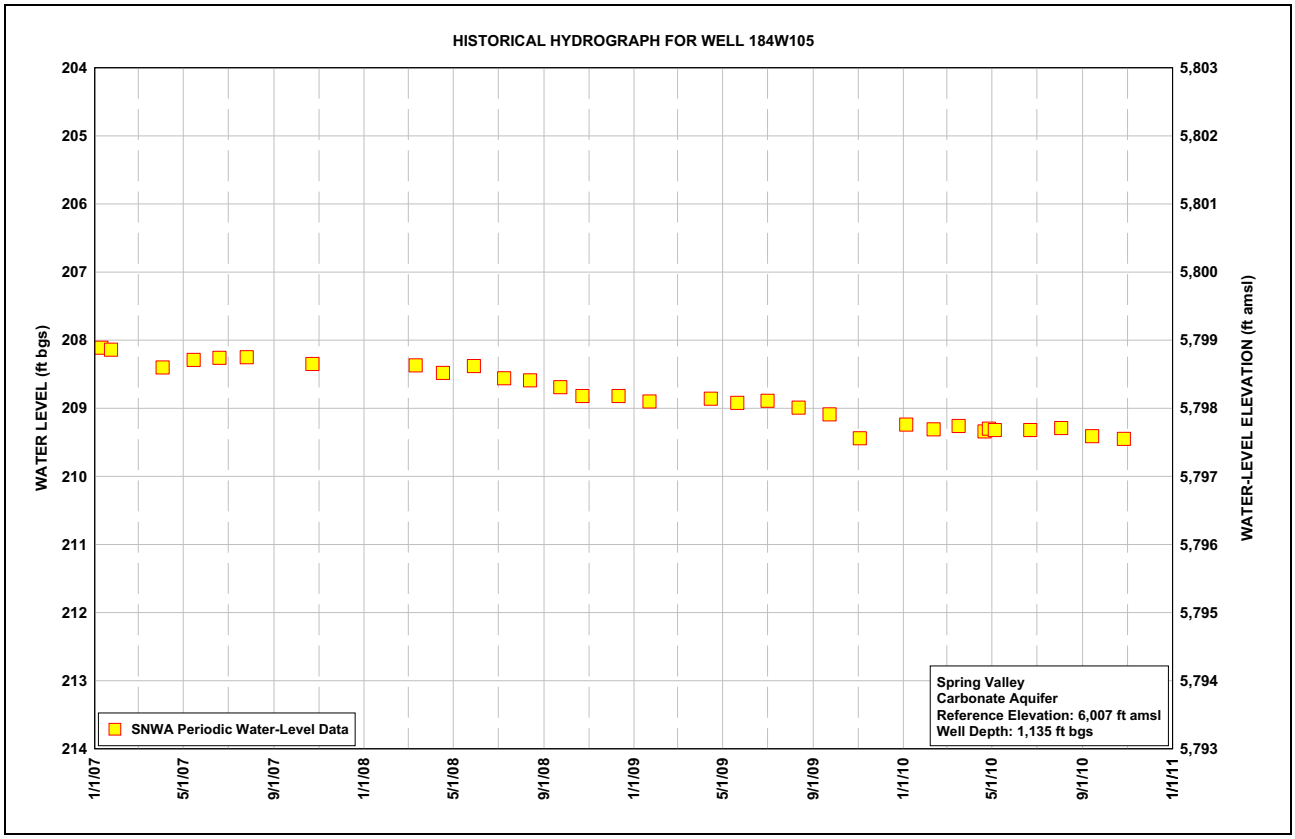

2010 HYDROGRAPH FOR WELL 184W101
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
477
478
479
480
481
482
483
484
485
486
487
5,714
5,713
5,712
5,711
5,710
5,709
5,708
5,707
5,706
5,705
5,704
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,191 ft amsl
Well Depth: 1,749 ft bgs

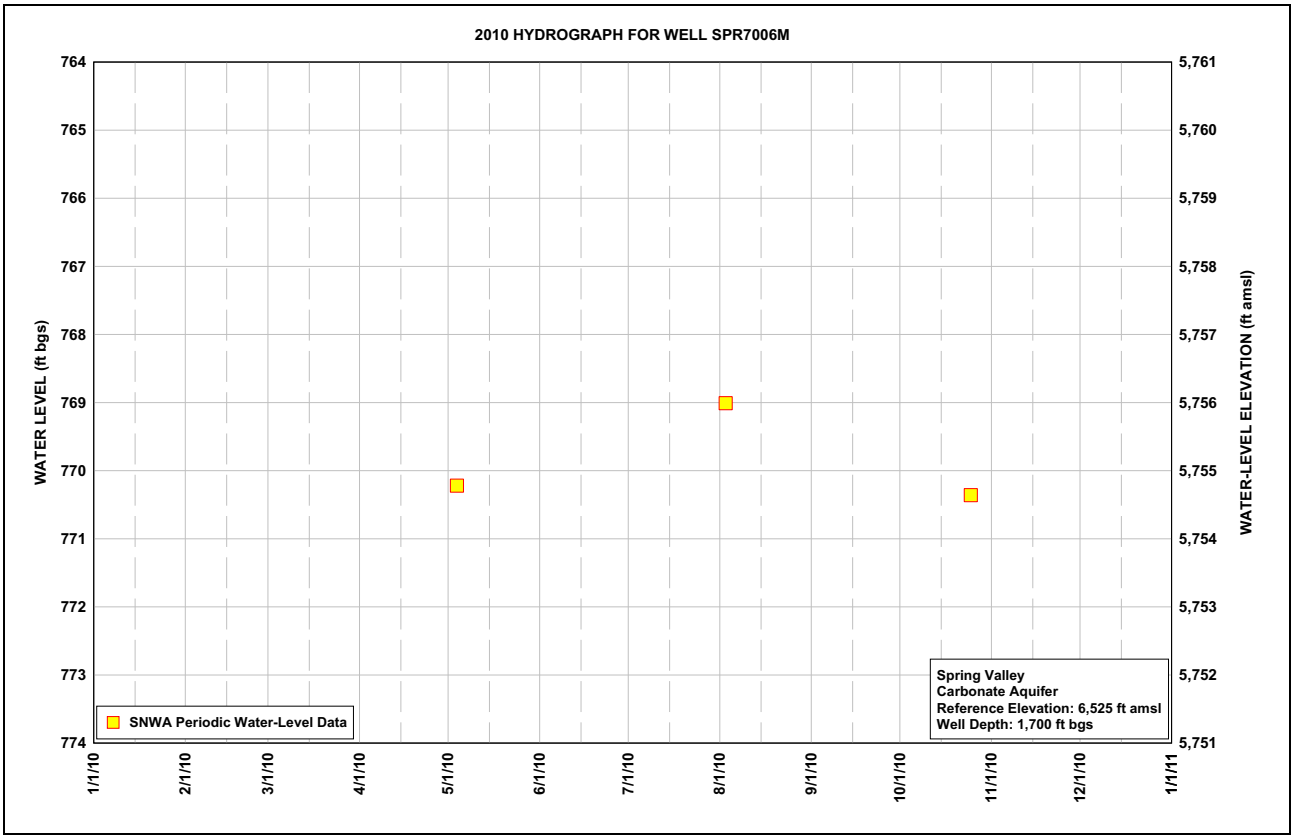

HISTORICAL HYDROGRAPH FOR WELL 184W101
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
477
478
479
480
481
482
483
484
485
486
487
5,714
5,713
5,712
5,711
5,710
5,709
5,708
5,707
5,706
5,705
5,704
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,191 ft amsl
Well Depth: 1,749 ft bgs

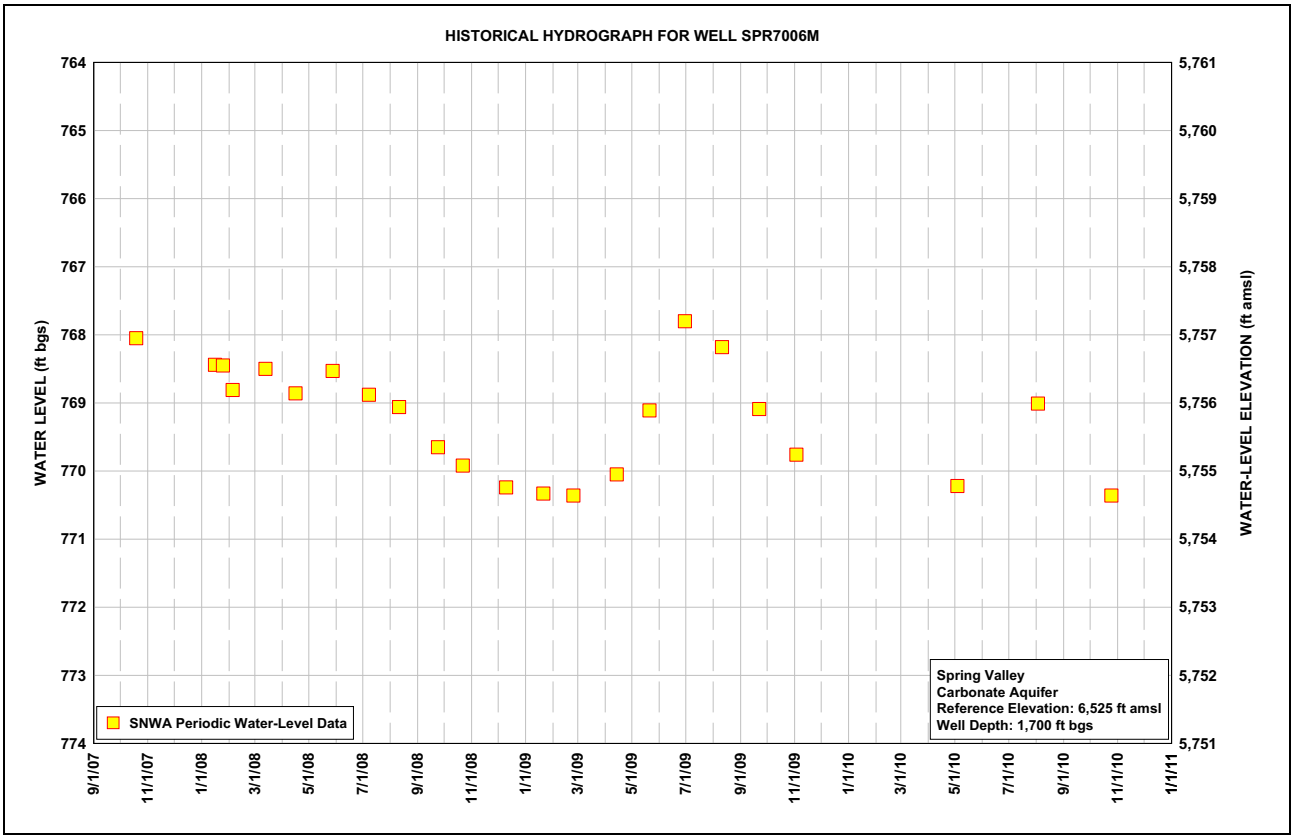

2010 HYDROGRAPH FOR WELL 184W103
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
93
94
95
96
97
98
99
100
101
102
103
5,806
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 5,899 ft amsl
Well Depth: 1,017 ft bgs

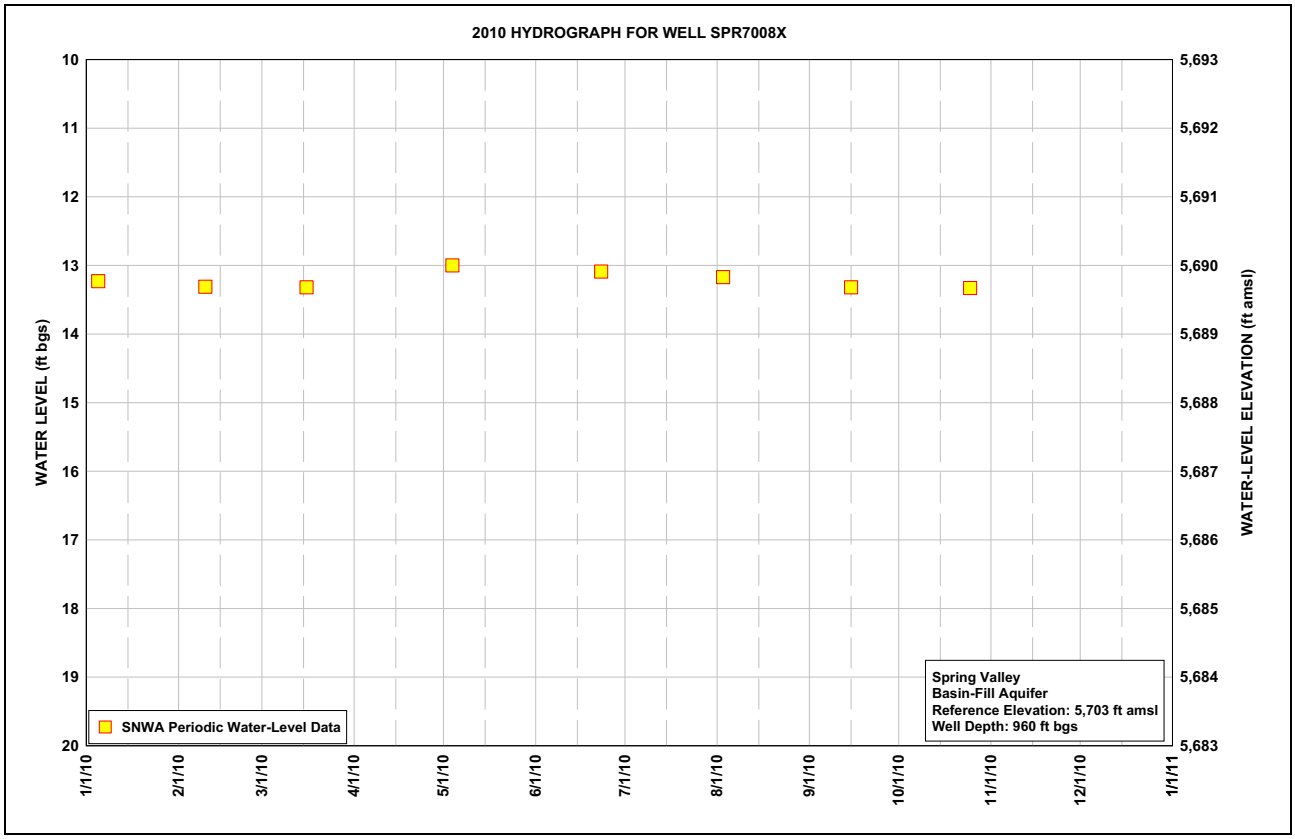

HISTORICAL HYDROGRAPH FOR WELL 184W103
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
93
94
95
96
97
98
99
100
101
102
103
5,806
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 5,899 ft amsl
Well Depth: 1,017 ft bgs

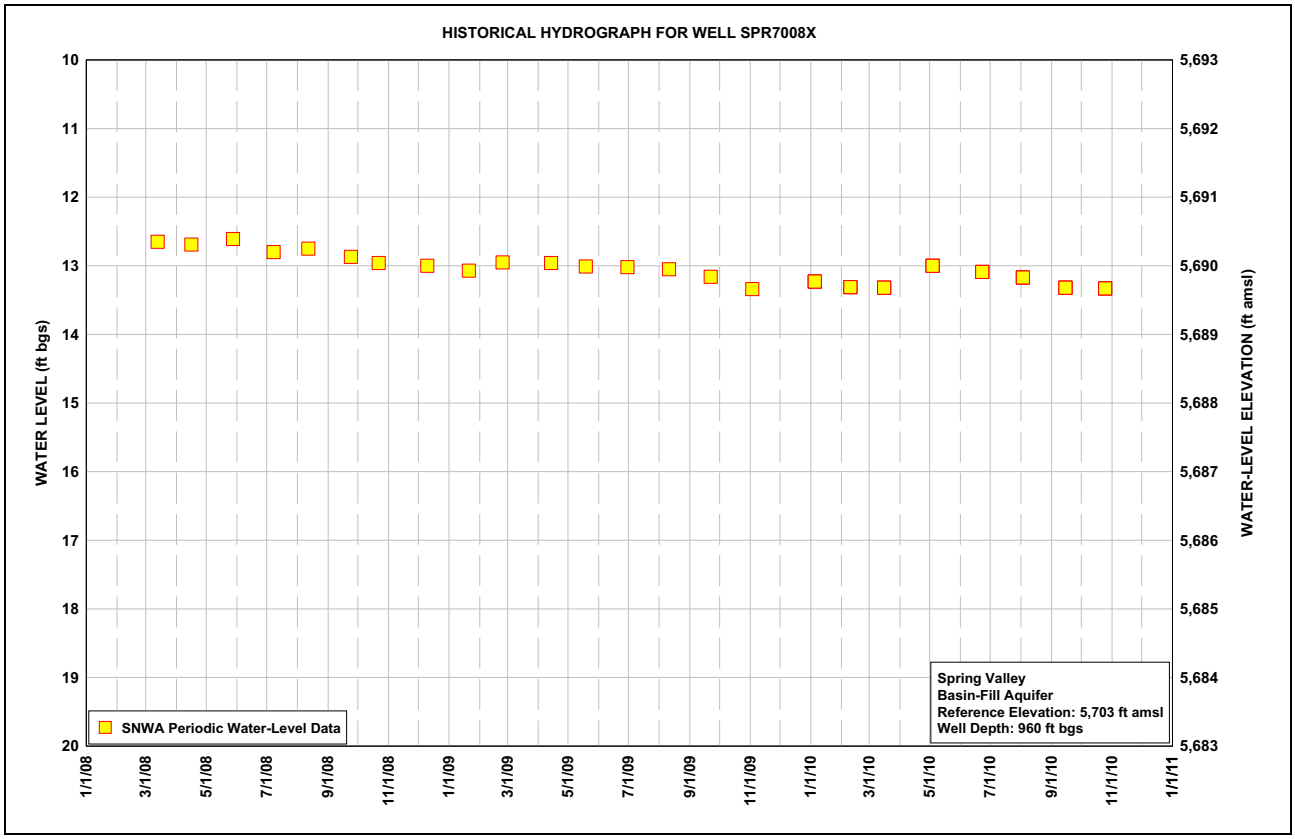

2010 HYDROGRAPH FOR WELL 184W105
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
204
205
206
207
208
209
210
211
212
213
214
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
5,793
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,007 ft amsl
Well Depth: 1,135 ft bgs

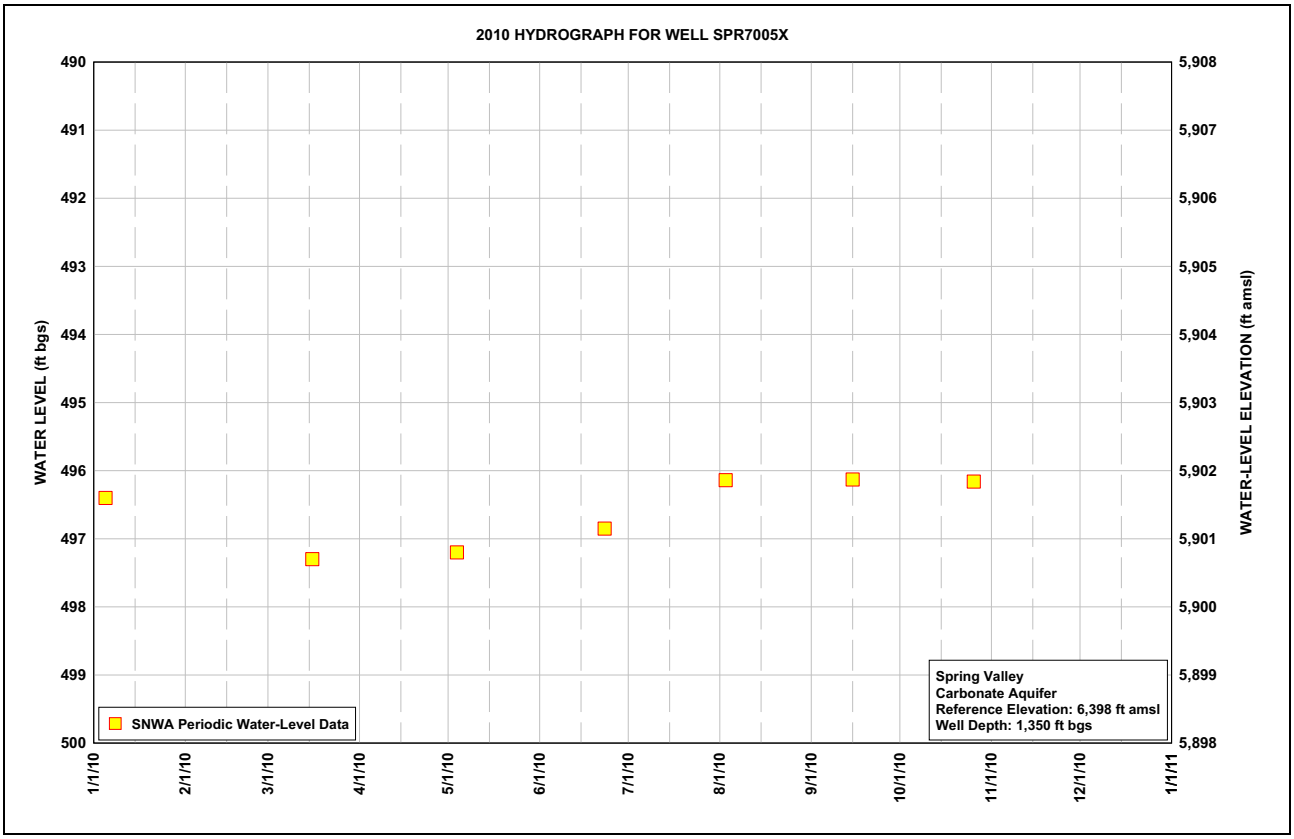

HISTORICAL HYDROGRAPH FOR WELL 184W105
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
204
205
206
207
208
209
210
211
212
213
214
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
5,793
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,007 ft amsl
Well Depth: 1,135 ft bgs

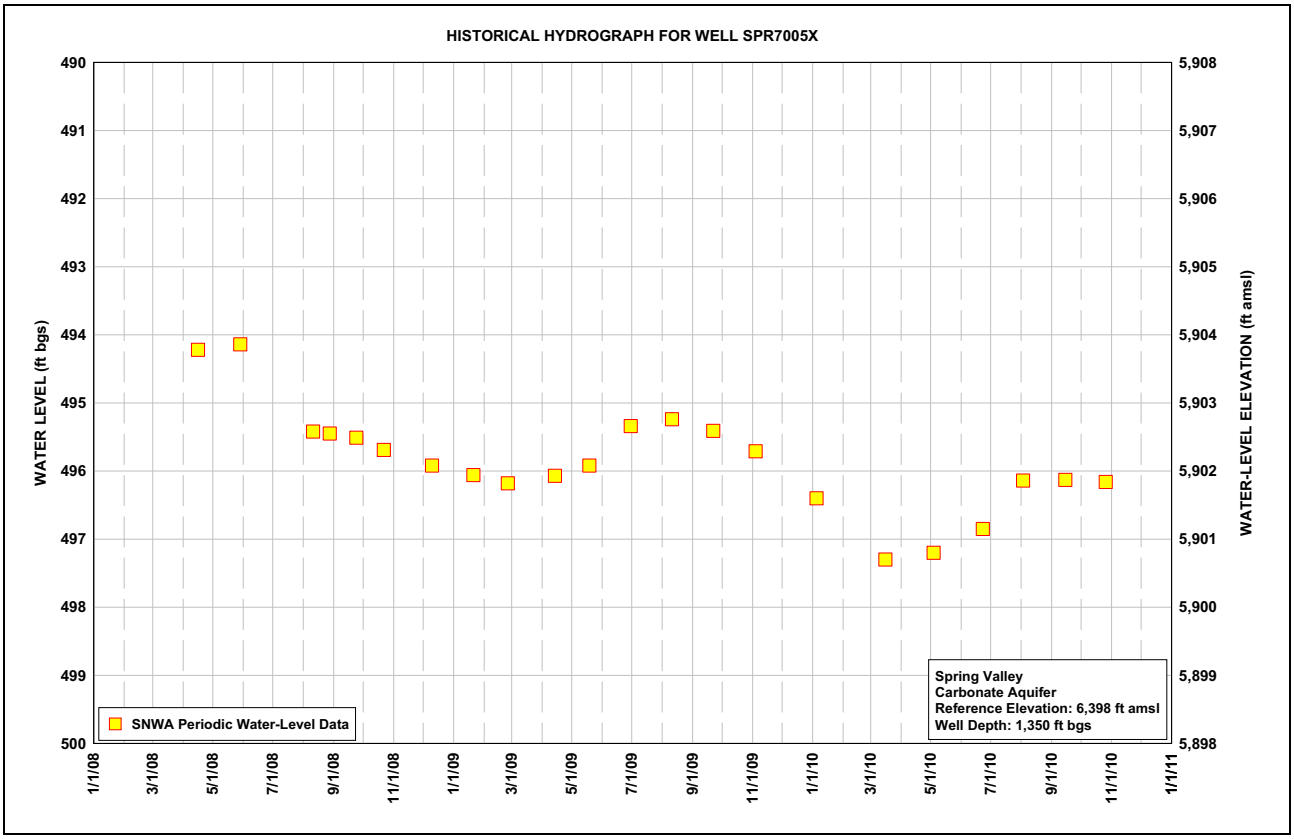

2010 HYDROGRAPH FOR WELL SPR7006M
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
764
765
766
767
768
769
770
771
772
773
774
5,761
5,760
5,759
5,758
5,757
5,756
5,755
5,754
5,753
5,752
5,751
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,525 ft amsl
Well Depth: 1,700 ft bgs

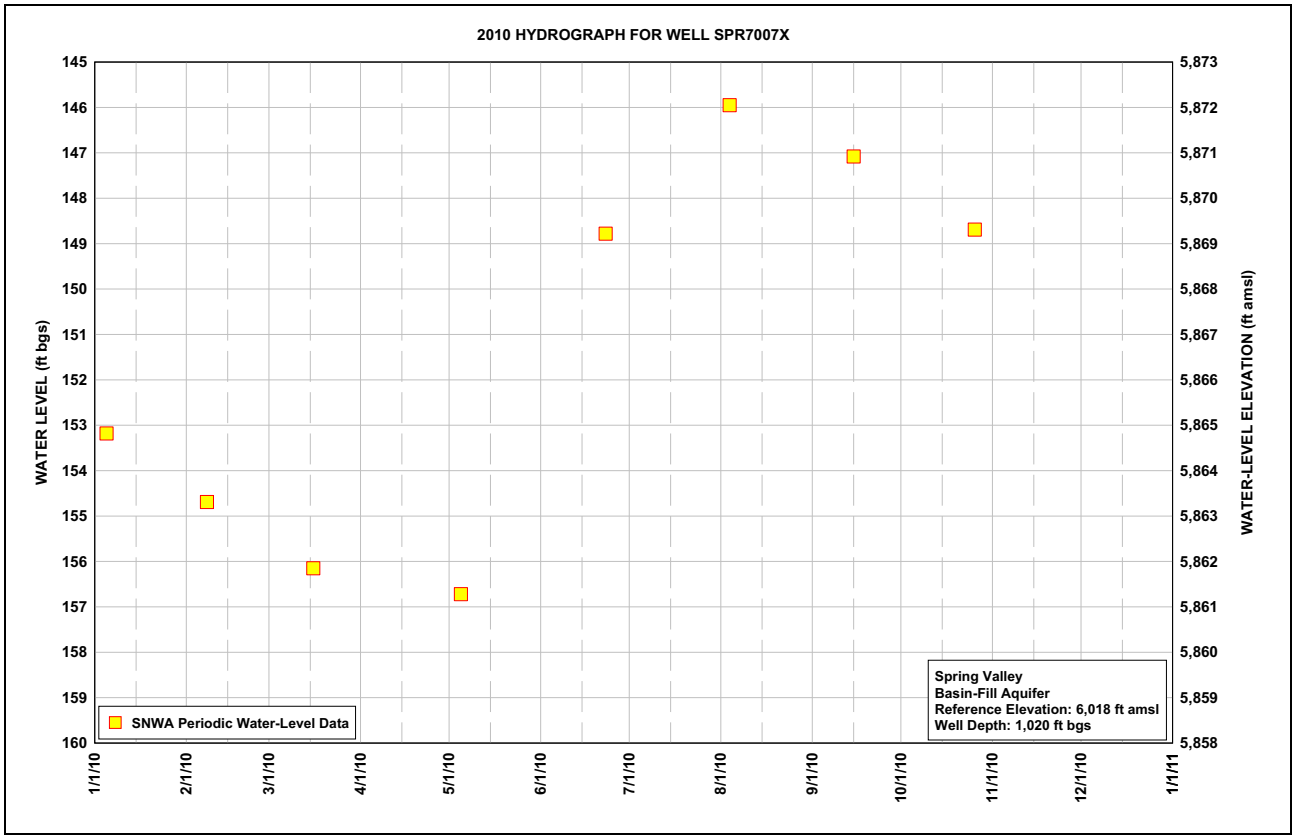

HISTORICAL HYDROGRAPH FOR WELL SPR7006M
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
764
765
766
767
768
769
770
771
772
773
774
5,761
5,760
5,759
5,758
5,757
5,756
5,755
5,754
5,753
5,752
5,751
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,525 ft amsl
Well Depth: 1,700 ft bgs

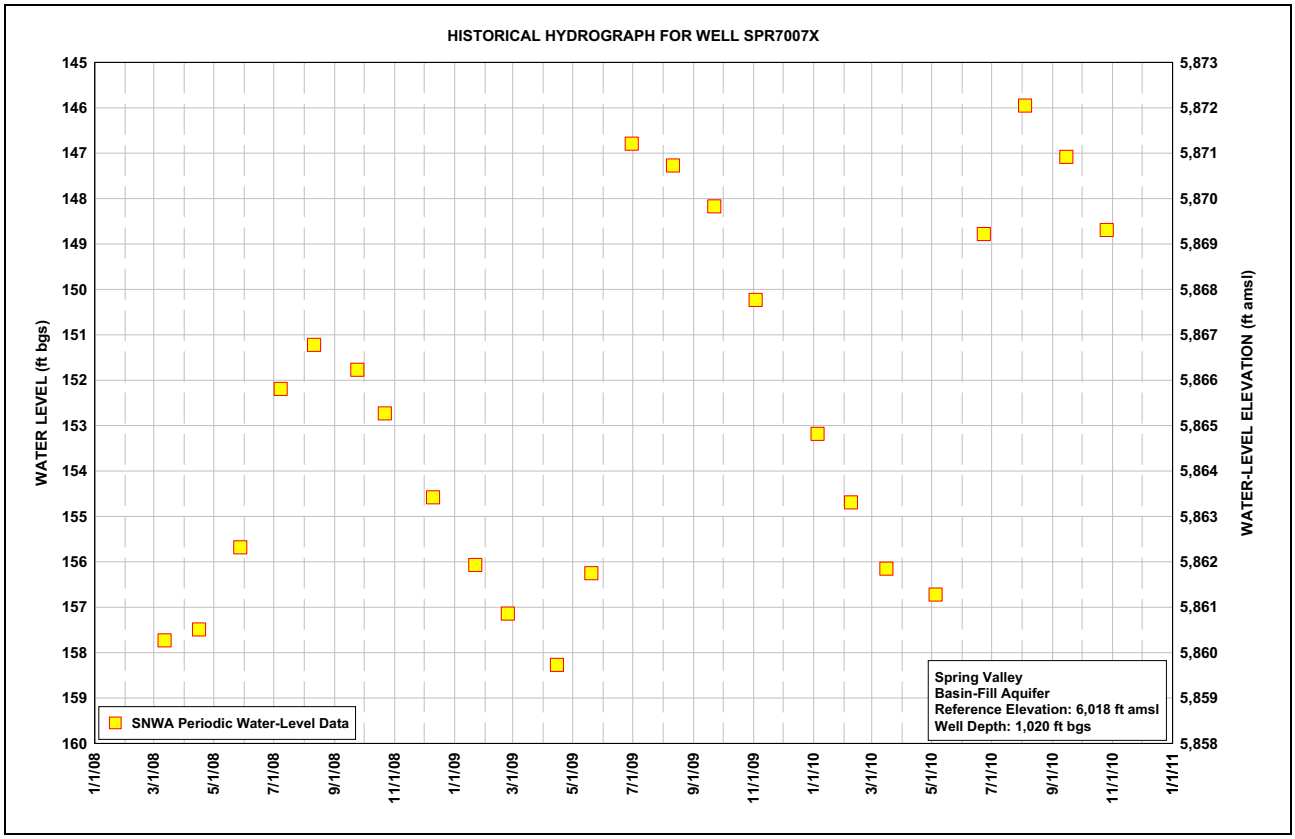

2010 HYDROGRAPH FOR WELL SPR7008X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
10
11
12
13
14
15
16
17
18
19
20
5,693
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
5,684
5,683
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,703 ft amsl
Well Depth: 960 ft bgs


HISTORICAL HYDROGRAPH FOR WELL SPR7008X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
10
11
12
13
14
15
16
17
18
19
20
5,693
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
5,684
5,683
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,703 ft amsl
Well Depth: 960 ft bgs


2010 HYDROGRAPH FOR WELL SPR7005X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
490
491
492
493
494
495
496
497
498
499
500
5,908
5,907
5,906
5,905
5,904
5,903
5,902
5,901
5,900
5,899
5,898
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,398 ft amsl
Well Depth: 1,350 ft bgs


HISTORICAL HYDROGRAPH FOR WELL SPR7005X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
490
491
492
493
494
495
496
497
498
499
500
5,908
5,907
5,906
5,905
5,904
5,903
5,902
5,901
5,900
5,899
5,898
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,398 ft amsl
Well Depth: 1,350 ft bgs


2010 HYDROGRAPH FOR WELL SPR7007X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
5,873
5,872
5,871
5,870
5,869
5,868
5,867
5,866
5,865
5,864
5,863
5,862
5,861
5,860
5,859
5,858
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,018 ft amsl
Well Depth: 1,020 ft bgs


HISTORICAL HYDROGRAPH FOR WELL SPR7007X
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
5,873
5,872
5,871
5,870
5,869
5,868
5,867
5,866
5,865
5,864
5,863
5,862
5,861
5,860
5,859
5,858
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,018 ft amsl
Well Depth: 1,020 ft bgs

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Appendix B

Periodic Water-Level Measurement Data from the Spring Valley Existing-Well Monitoring Network

Table B-1
Periodic Water-Level Measurement Data from the Spring Valley Existing-Well Monitoring Network
(Page 1 of 3)

Map ID	Site Number	Station Local Number	Well Depth (ft bgs)	Surface Elevation (ft amsl)	Water Level			
					Date	Depth-to-Water (ft bgs)	Well Status[a]	Measurement Method[b]
22	383704114225001[c]	184 N09 E68 30AAAB 1 USGS-MX (Spring Valley S.)	679	6,002.52	1/5/2010	224.97	S	T
					3/17/2010	224.99	S	T
					5/3/2010	225.00	S	T
					6/23/2010	224.88	S	T
					8/4/2010	224.92	S	T
					9/15/2010	224.90	S	T
					10/27/2010	225.18	S	T
32	384039114232701[c]	184 N10 E68 31CD 1 USGS-MX	150	5,896.49	1/5/2010	118.34	S	T
					3/16/2010	118.33	S	T
					5/5/2010	118.28	S	T
					6/23/2010	118.28	S	T
					8/4/2010	118.28	S	T
					9/15/2010	118.35	S	T
					10/26/2010	118.36	S	T
35	384831114314301[c]	184 N11 E66 23AB 1 USGS-MX	102	5,842.94	1/5/2010	47.33	S	T
					3/17/2010	47.43	S	T
					5/5/2010	47.38	S	T
					6/22/2010	47.38	S	T
					8/3/2010	47.43	S	T
					9/14/2010	47.52	S	T
					10/27/2010	47.63	S	T
52	384745114224401[c]	184 N11 E68 19DCDC 1 USGS-MX (Spring Valley)	200	5,900.18	1/5/2010	99.77	S	T
					2/8/2010	99.89	S	T
					3/16/2010	99.92	S	T
					5/5/2010	99.99	S	T
					6/23/2010	100.07	S	T
					8/4/2010	100.07	S	T
					9/15/2010	100.11	S	T
					10/26/2010	100.19	S	T
122	390352114305401[c]	184 N14 E66 24BDDD 1 USGS-MX (Spring Valley N.)	160	5,846.04	1/5/2010	38.72	S	T
					2/23/2010	38.71	S	T
					3/16/2010	38.70	S	T
					5/4/2010	38.65	S	T
					6/23/2010	38.64	S	T
					8/3/2010	38.70	S	T
					9/15/2010	38.76	S	T
					10/26/2010	38.81	S	T
145	390803114251001[c]	184 N15 E67 26CA 1 USGS-MX	200	5,727.21	1/5/2010	40.15	S	T
					2/10/2010	40.27	S	T
					3/16/2010	40.23	S	T
					5/4/2010	40.26	S	T
					6/23/2010	40.27	S	T
					8/3/2010	40.28	S	T
					9/15/2010	40.30	S	T
					10/25/2010	40.27	S	T
179	393211114320701[c]	184 N19 E66 11B 1	400	5,698.43	1/5/2010	44.11	S	T
					3/16/2010	44.40	S	T
					5/4/2010	43.63	S	T
					6/23/2010	42.70	S	T
					8/3/2010	42.45	S	T
					9/15/2010	43.12	S	T
					10/26/2010	43.72	S	T

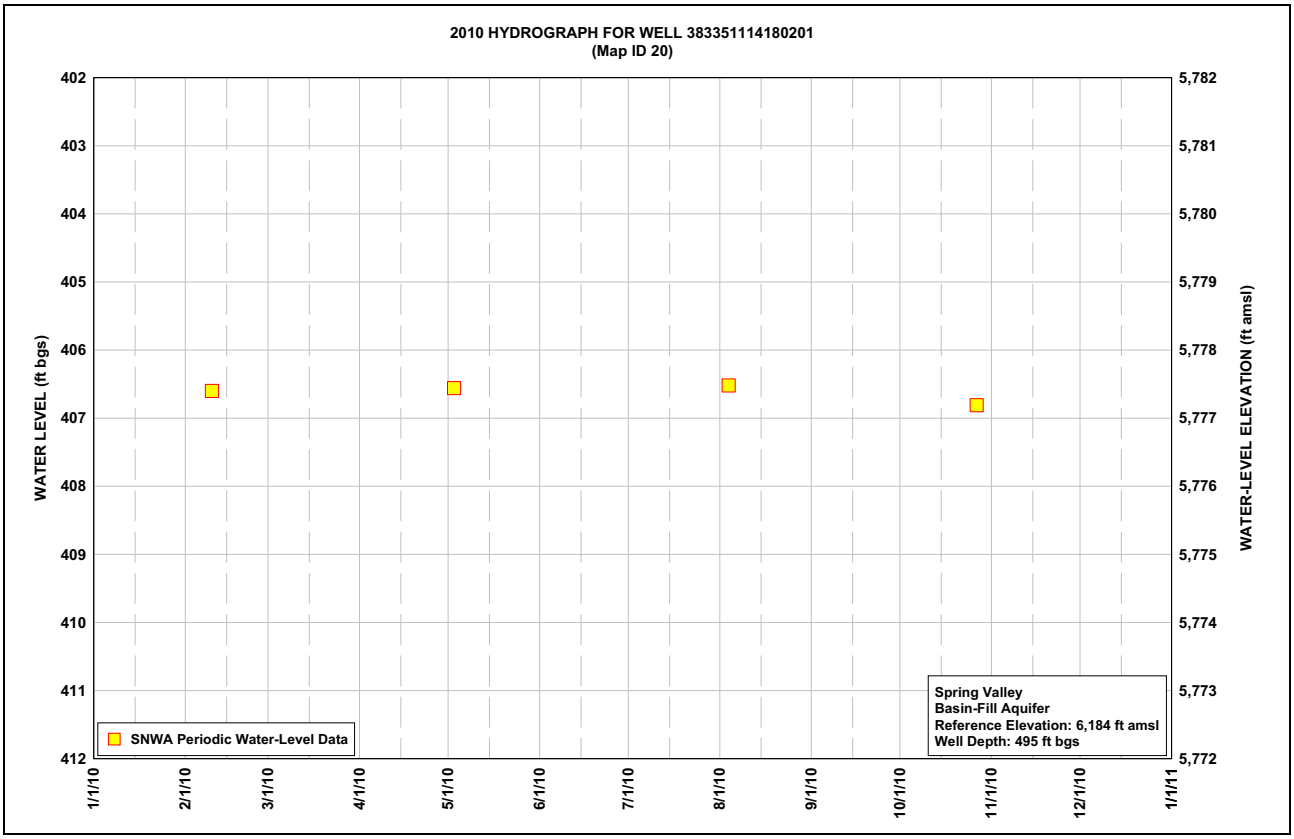
Table B-1
Periodic Water-Level Measurement Data from the Spring Valley Existing-Well Monitoring Network
(Page 2 of 3)

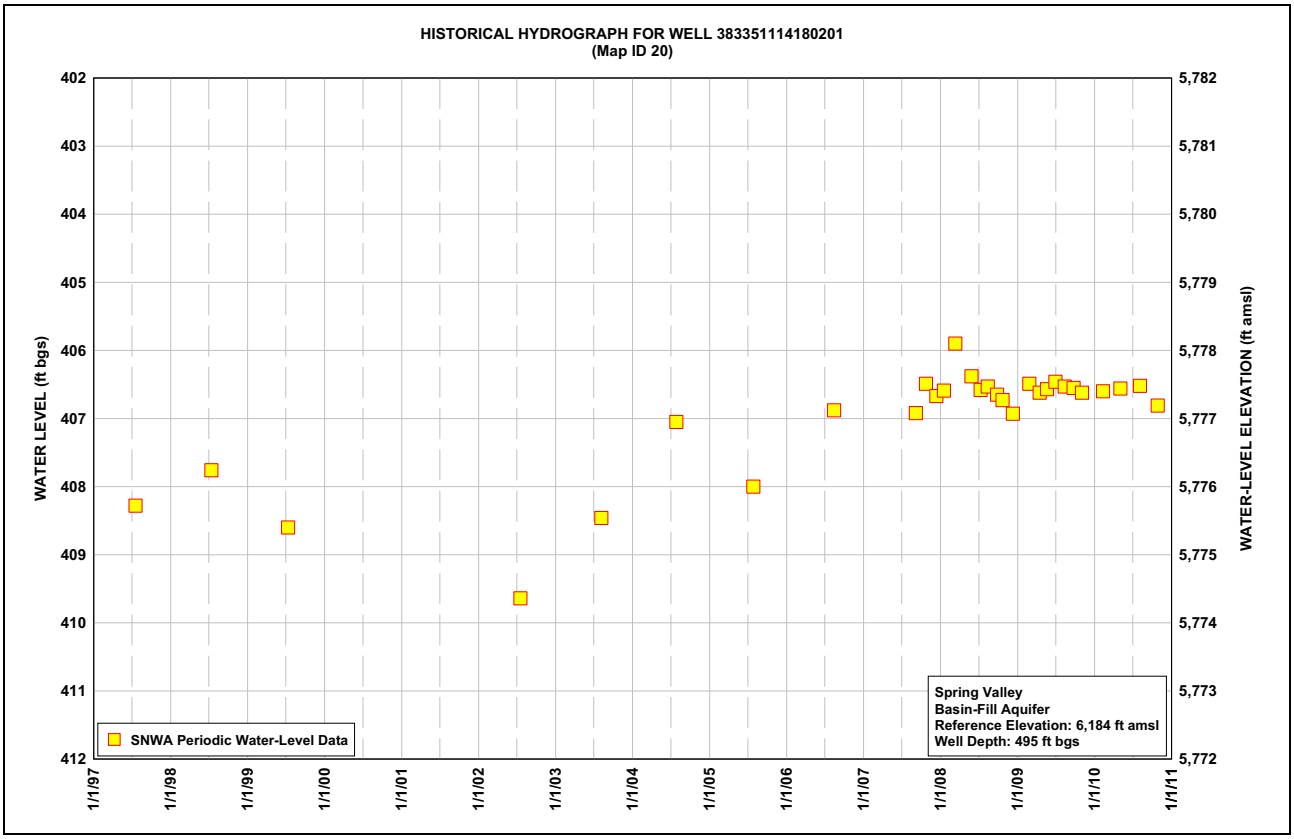
Map ID	Site Number	Station Local Number	Well Depth (ft bgs)	Surface Elevation (ft amsl)	Water Level			
					Date	Depth-to-Water (ft bgs)	Well Status[a]	Measurement Method[b]
215	383023114115302[c]	196 N08 E69 35DC 2 USGS-MX (Hamlin Valley S.)	435	5,837.67	1/5/2010	174.67	S	T
					2/10/2010	175.13	S	T
					3/16/2010	175.26	S	T
					5/3/2010	175.48	S	T
					5/24/2010	175.39	S	T
					6/23/2010	175.24	S	T
					8/4/2010	174.95	S	T
					9/15/2010	174.76	S	T
					10/25/2010	174.75	S	T
222	184W502M[c]	184 N09 E68 11 BD 2	1,799	6,189.72	1/5/2010	482.93	S	T
					2/10/2010	483.00	S	T
					3/16/2010	483.29	S	T
					5/3/2010	483.38	S	T
					6/23/2010	482.71	S	T
					8/4/2010	482.44	S	T
					9/15/2010	482.33	S	T
					10/26/2010	482.22	S	T
223	184W504M[c]	184 N11 E66 34 DD 2	1,020	5,900.11	1/5/2010	100.25	S	T
					2/11/2010	100.35	S	T
					3/17/2010	100.36	S	T
					5/3/2010	100.62	S	T
					6/23/2010	100.46	S	T
					8/3/2010	100.56	S	T
					9/16/2010	100.75	S	T
					10/27/2010	100.79	S	T
224	184W506M[c]	184 N12 E66 26 BA 2	1,140	6,014.04	1/5/2010	215.87	S	T
					2/11/2010	215.97	S	T
					3/17/2010	215.96	S	T
					5/5/2010	215.95	S	T
					6/22/2010	215.96	S	T
					8/3/2010	215.97	S	T
					9/14/2010	216.05	S	T
					10/27/2010	216.11	S	T
225	184W508M[c]	184 N09 E67 11 DB 1	1,160	6,056.19	1/5/2010	276.80	S	T
					2/11/2010	276.91	S	T
					3/17/2010	276.89	S	T
					5/3/2010	276.92	S	T
					6/23/2010	276.75	S	T
225	184W508M[c]	184 N09 E67 11 DB 1	1,160	6,056.19	8/4/2010	276.77	S	T
					9/15/2010	276.79	S	T
					10/27/2010	277.01	S	T
226	SPR7007M[c]	184 N11 E68 05 BC 2	1,020	6,017.73	1/5/2010	153.32	S	T
					2/8/2010	154.86	S	T
					3/16/2010	156.16	S	T
					5/5/2010	156.74	S	T
					6/23/2010	148.86	S	T
					8/4/2010	146.07	S	T
					9/15/2010	147.20	S	T
					10/26/2010	148.81	S	T
227	SPR7005M[c]	184 N14 E66 09 AB 2	1,404	6,395.68	1/5/2010	494.47	S	T
					1/7/2010	494.54	S	T
					3/16/2010	495.40	S	T
					5/4/2010	495.30	S	T
					6/23/2010	494.95	S	T

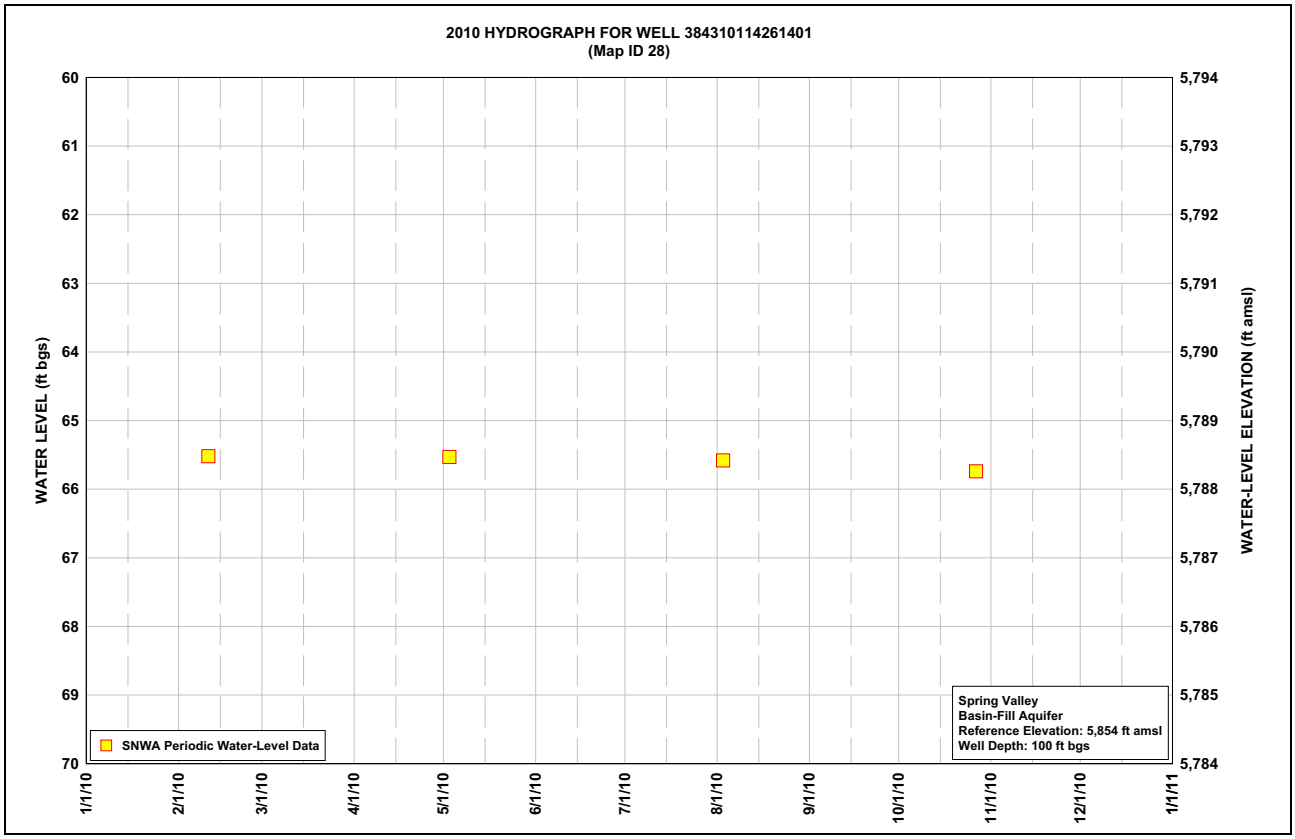
Table B-1
Periodic Water-Level Measurement Data from the Spring Valley Existing-Well Monitoring Network
(Page 3 of 3)

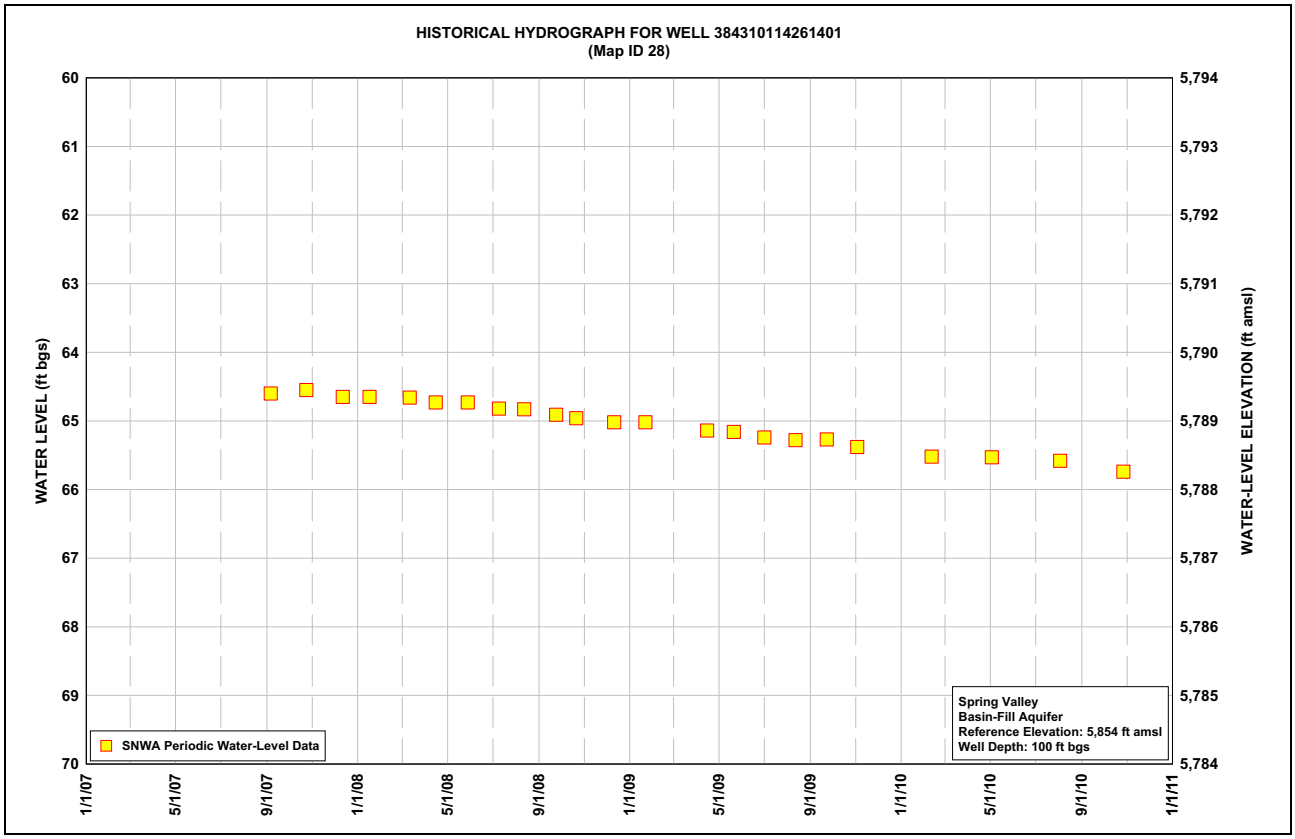
Map ID	Site Number	Station Local Number	Well Depth (ft bgs)	Surface Elevation (ft amsl)	Water Level			
					Date	Depth-to-Water (ft bgs)	Well Status[a]	Measurement Method[b]
227	SPR7005M[c]	184 N14 E66 09 AB 2	1,404	6,395.68	8/3/2010	494.24	S	T
					9/15/2010	494.24	S	T
					10/26/2010	494.27	S	T
228	SPR7008M[c]	184 N15 E67 26 CD 2	946	5,704.86	1/5/2010	14.46	S	T
					2/10/2010	14.52	S	T
					3/16/2010	14.61	S	T
					5/4/2010	14.23	S	T
					6/23/2010	14.29	S	T
					8/3/2010	14.33	S	T
					9/15/2010	14.47	S	T
					10/25/2010	14.52	S	T
20	383351114180201	184 N08 E68 14A 1 USBLM	495	6,184.22	2/10/2010	406.60	S	T
					5/3/2010	406.56	S	T
					8/4/2010	406.52	S	T
					10/27/2010	406.81	S	T
28	384310114261401	184 N10 E67 22AA 1 USGS-MX (Spring V Central)	100	5,853.54	2/11/2010	65.52	S	T
					5/3/2010	65.53	S	T
					8/3/2010	65.58	S	T
					10/27/2010	65.74	S	T
55	184 N12 E66 21CD 1	184 N12 E66 21CD 1	631	6,370.31	5/5/2010	570.56	S	T
					8/3/2010	570.20	S	T
					10/27/2010	570.54	S	T
113	385636114265501	184 N13 E67 33DDA 1	---	5,769.73	2/8/2010	---	D	---
					5/5/2010	7.47	S	T
					8/4/2010	---	D	---
					10/26/2010	---	D	---
152	391224114293601[d]	184 N16 E66 36DBAD 1 USBLM - Cleve Creek Well	---	5,870.25	2/9/2010	208.27	S	S
					5/4/2010	208.06	S	S
					8/3/2010	207.74	S	S
					10/26/2010	208.40	S	S
176	392703114230501	184 N18 E67 01CCAA 1	42	5,587.78	2/9/2010	39.91	P	T
					5/4/2010	38.20	P	T
					8/3/2010	35.13	S	T
					10/26/2010	36.03	S	T
182	184 N20 E66 13AB 1	184 N20 E66 13AB 1	296	5,774.93	5/4/2010	129.74	S	S
					8/3/2010	125.91	S	S
					10/26/2010	128.58	S	S
188	393442114231801	184 N20 E67 26ABBD 1 USBLM	130	5,708.77	2/9/2010	118.25	S	T
					5/4/2010	121.12	P	S
					8/3/2010	118.39	S	S
					10/26/2010	118.43	S	S
213	383325114134901	196 N08 E69 15B 1	110	5,729.98	2/10/2010	70.90	S	T
					5/3/2010	71.03	S	T
					8/4/2010	71.41	S	T
					10/25/2010	71.17	S	T
218	383533114102901	196 N08 E70 06B 1 USBLM - Monument Well	164	5,676.76	2/10/2010	89.71	S	S
					5/3/2010	89.73	S	S
					8/4/2010	89.67	S	S
					10/25/2010	89.67	S	S

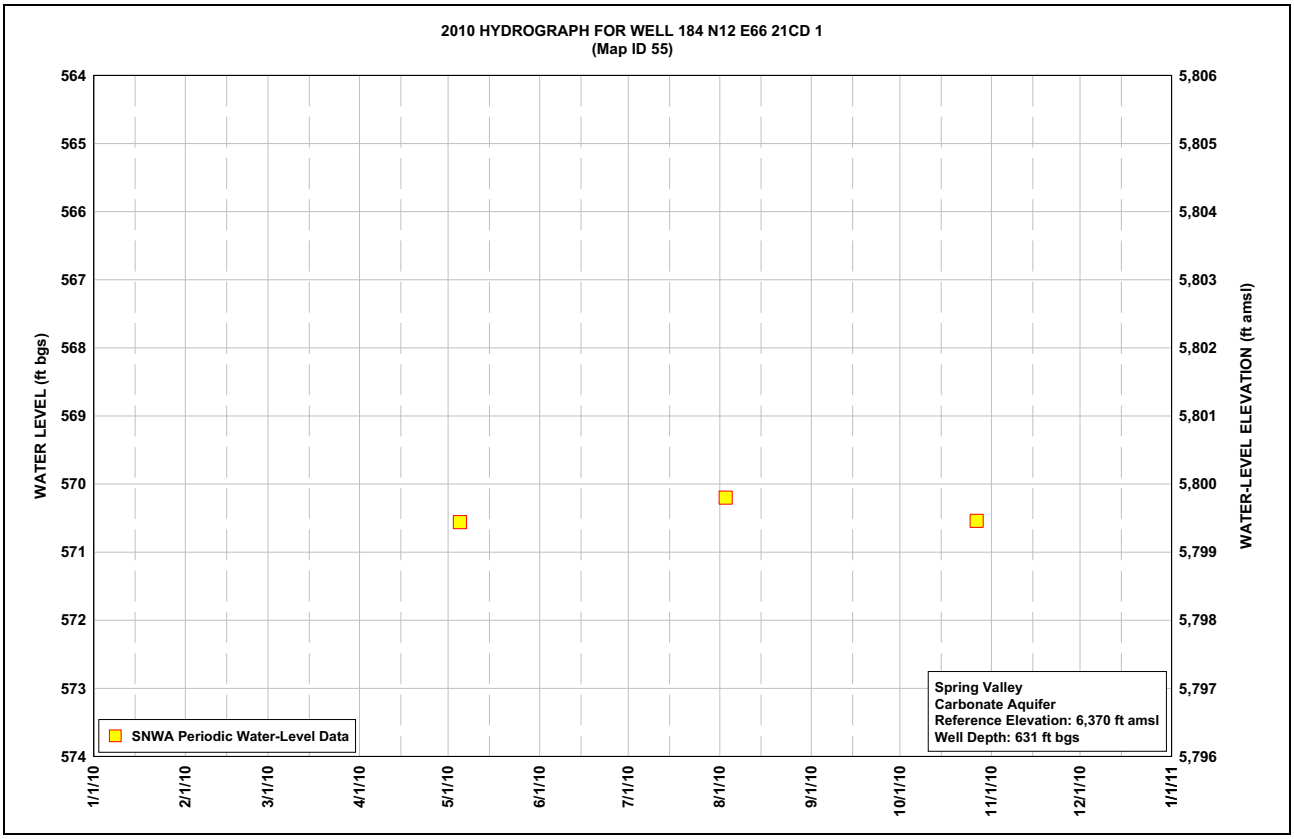
[a]S = Static conditions, P = Pumping or recently pumping conditions, D = Dry.
[b]T = Electric tape measurement, S = Steel tape measurement
[c]2010 and historical hydrographs with periodic and continuous data are presented in Appendix C.
[d]The Cleve Creek well will be replaced by a new monitor well approximately 1 mi to the north.
Note: SNWA tape calibration program started in August of 2008.

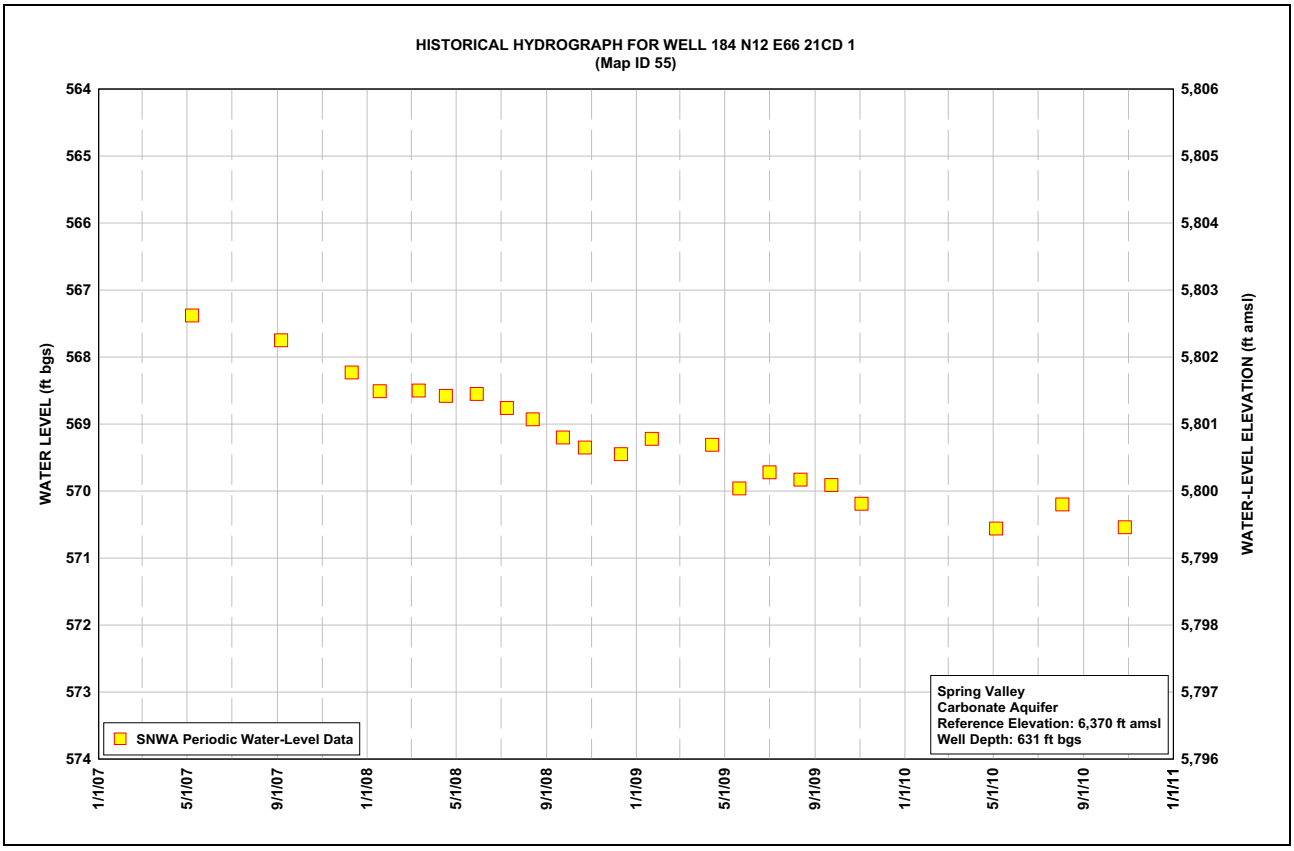

2010 HYDROGRAPH FOR WELL 383351114180201
(Map ID 20)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
402
403
404
405
406
407
408
409
410
411
412
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
5,774
5,773
5,772
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,184 ft amsl
Well Depth: 495 ft bgs

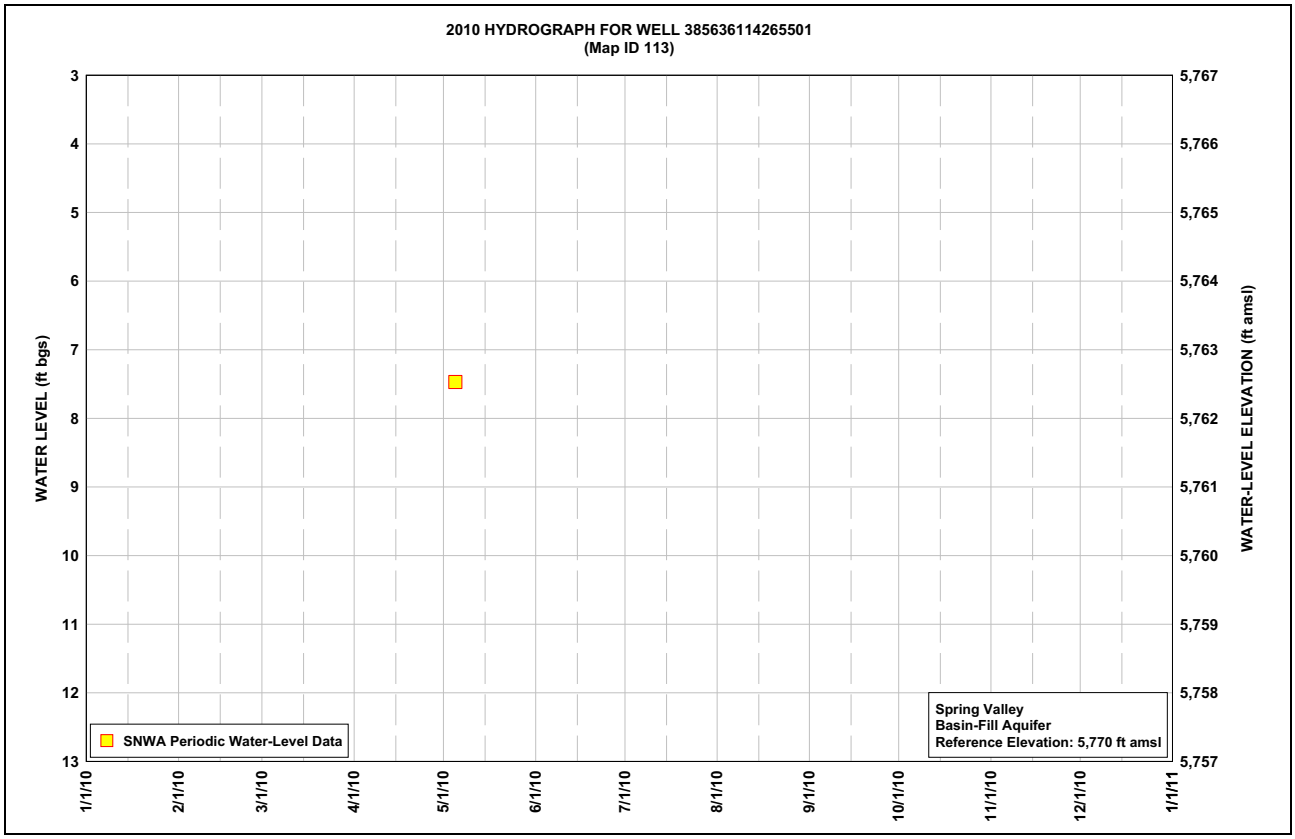

HISTORICAL HYDROGRAPH FOR WELL 383351114180201
(Map ID 20)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
402
403
404
405
406
407
408
409
410
411
412
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
5,774
5,773
5,772
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,184 ft amsl
Well Depth: 495 ft bgs

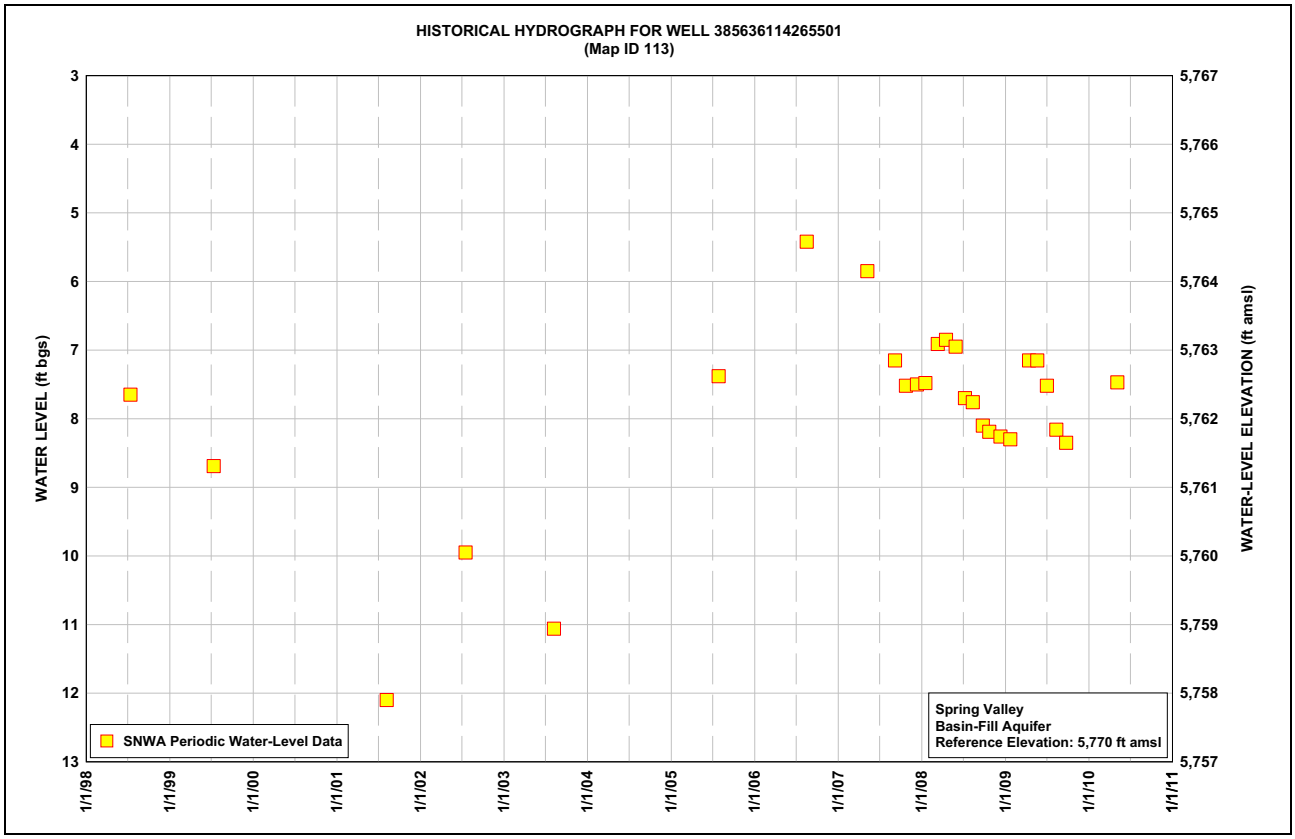

2010 HYDROGRAPH FOR WELL 384310114261401
(Map ID 28)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
60
61
62
63
64
65
66
67
68
69
70
5,794
5,793
5,792
5,791
5,790
5,789
5,788
5,787
5,786
5,785
5,784
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,854 ft amsl
Well Depth: 100 ft bgs

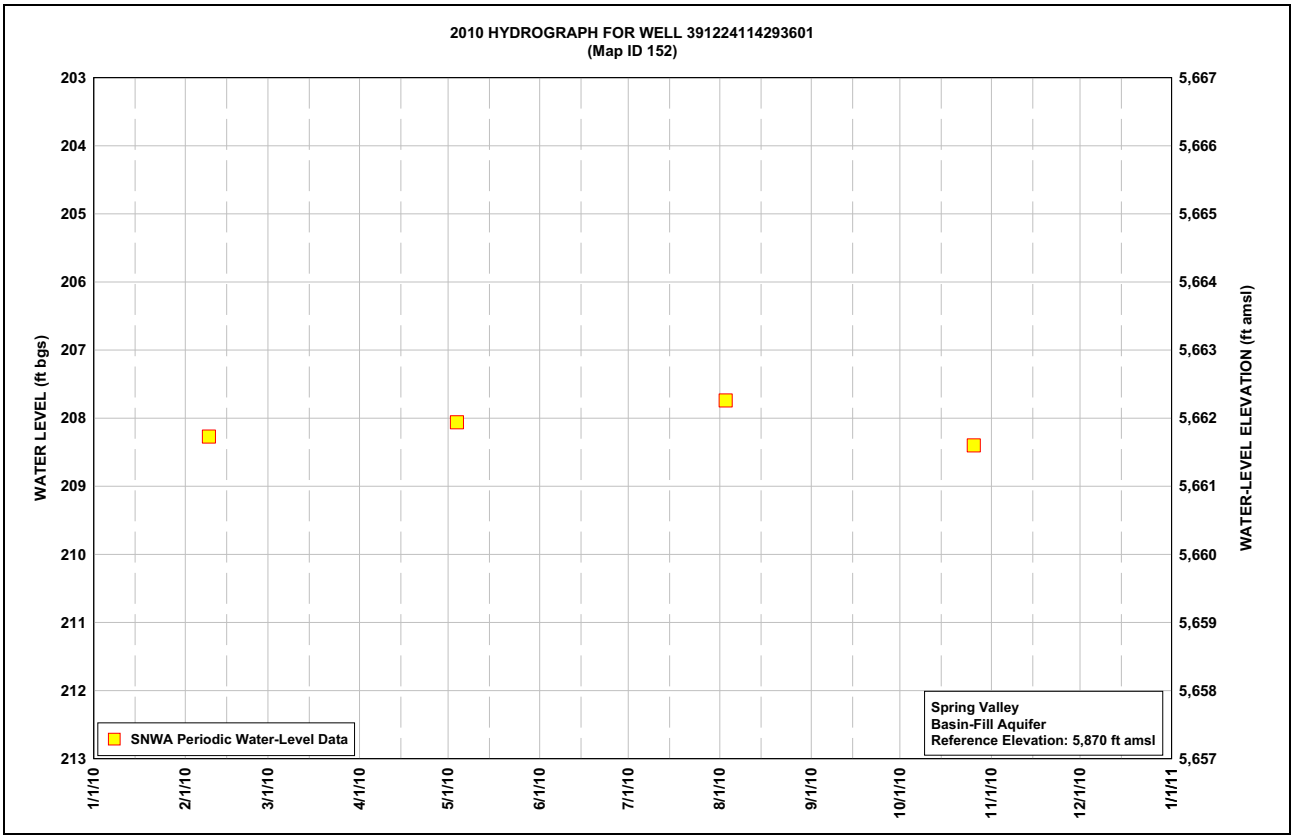

HISTORICAL HYDROGRAPH FOR WELL 384310114261401
(Map ID 28)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
60
61
62
63
64
65
66
67
68
69
70
5,794
5,793
5,792
5,791
5,790
5,789
5,788
5,787
5,786
5,785
5,784
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,854 ft amsl
Well Depth: 100 ft bgs

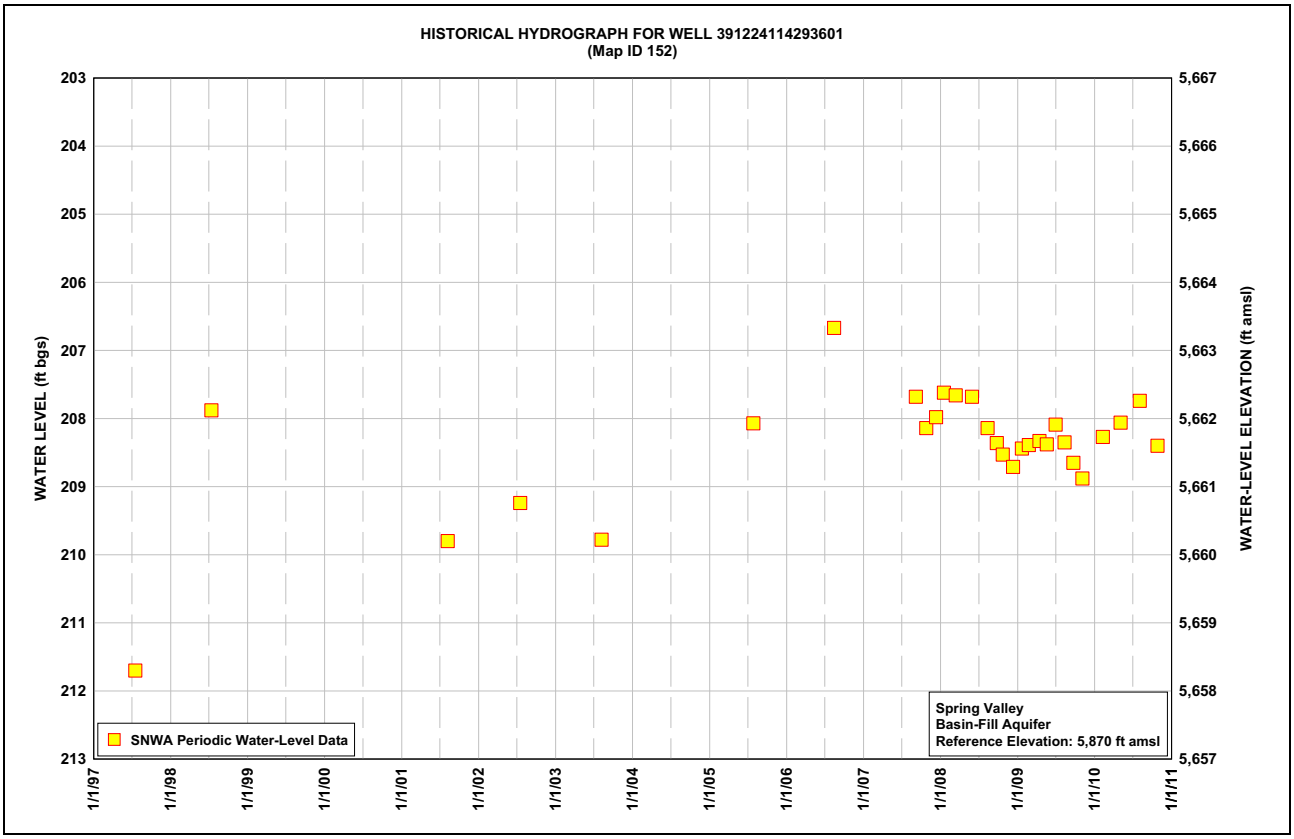

2010 HYDROGRAPH FOR WELL 184 N12 E66 21CD 1
(Map ID 55)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
564
565
566
567
568
569
570
571
572
573
574
5,806
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,370 ft amsl
Well Depth: 631 ft bgs

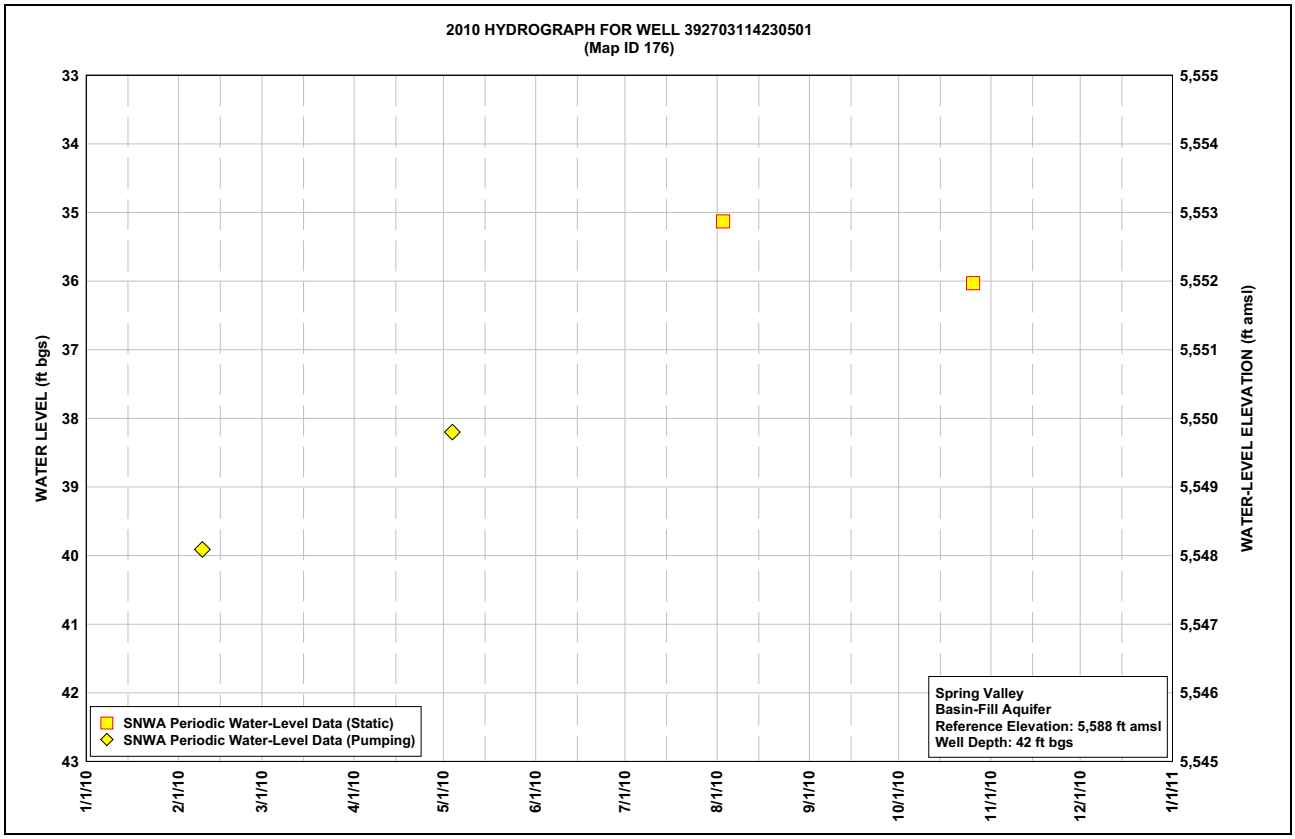

HISTORICAL HYDROGRAPH FOR WELL 184 N12 E66 21CD 1
(Map ID 55)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
564
565
566
567
568
569
570
571
572
573
574
5,806
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,370 ft amsl
Well Depth: 631 ft bgs

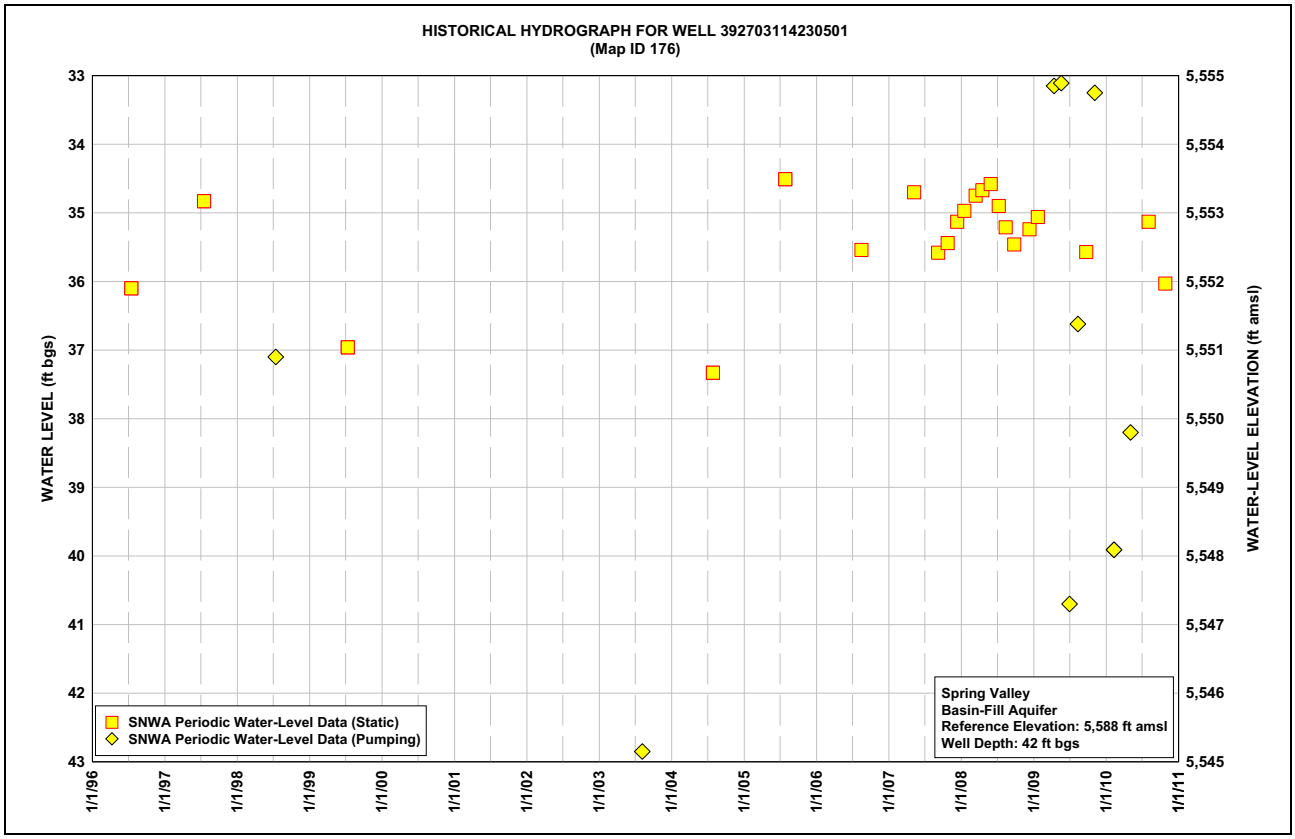

2010 HYDROGRAPH FOR WELL 385636114265501
(Map ID 113)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
3
4
5
6
7
8
9
10
11
12
13
5,767
5,766
5,765
5,764
5,763
5,762
5,761
5,760
5,759
5,758
5,757
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,770 ft amsl

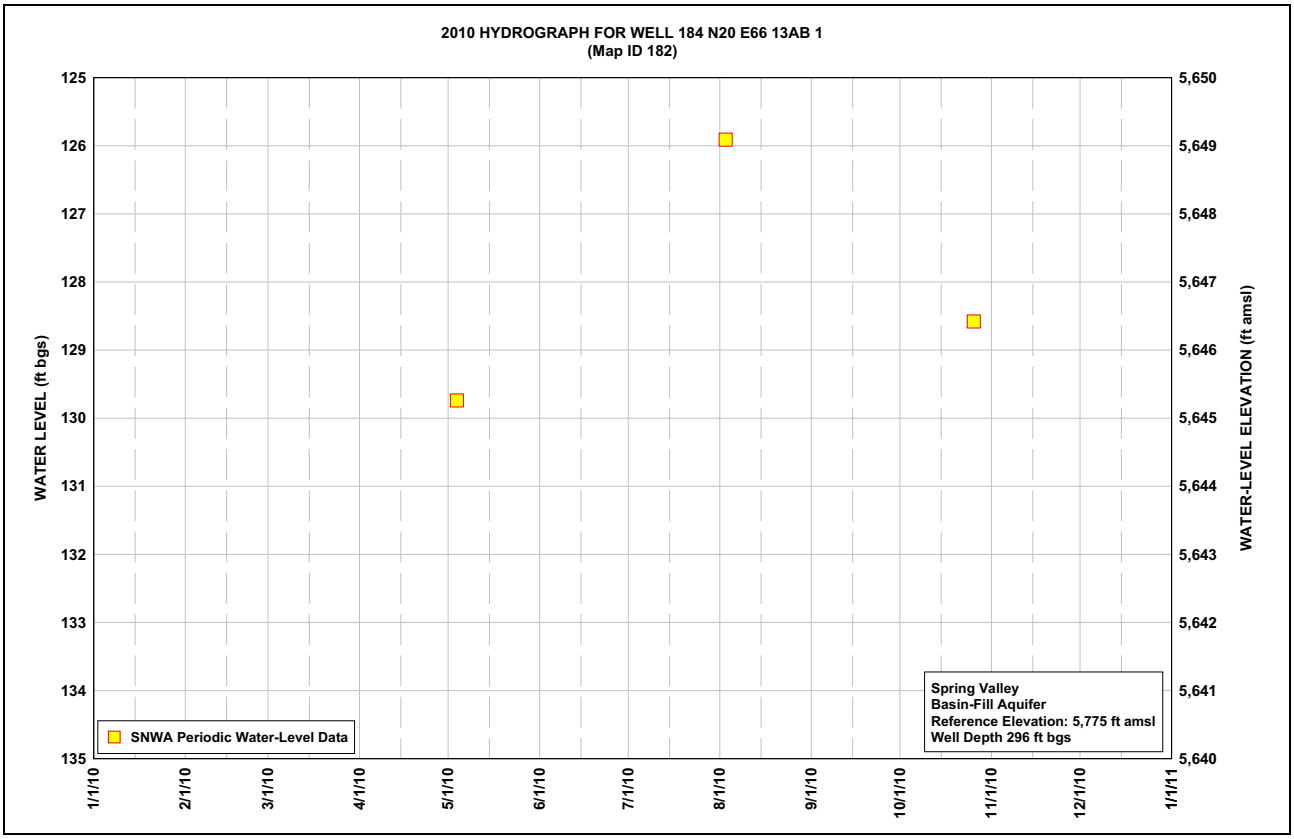

HISTORICAL HYDROGRAPH FOR WELL 385636114265501
(Map ID 113)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
3
4
5
6
7
8
9
10
11
12
13
5,767
5,766
5,765
5,764
5,763
5,762
5,761
5,760
5,759
5,758
5,757
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,770 ft amsl

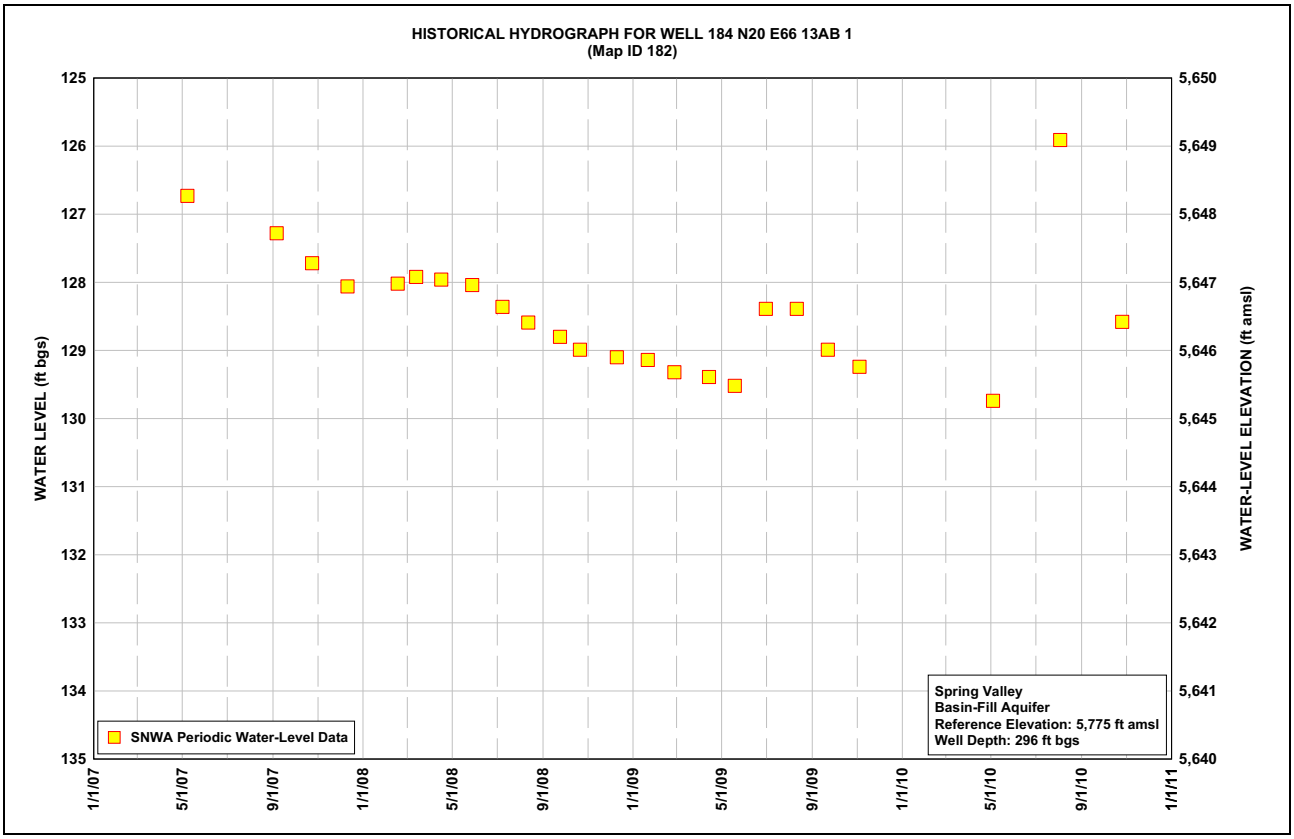

2010 HYDROGRAPH FOR WELL 391224114293601
(Map ID 152)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
203
204
205
206
207
208
209
210
211
212
213
5,667
5,666
5,665
5,664
5,663
5,662
5,661
5,660
5,659
5,658
5,657
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,870 ft amsl

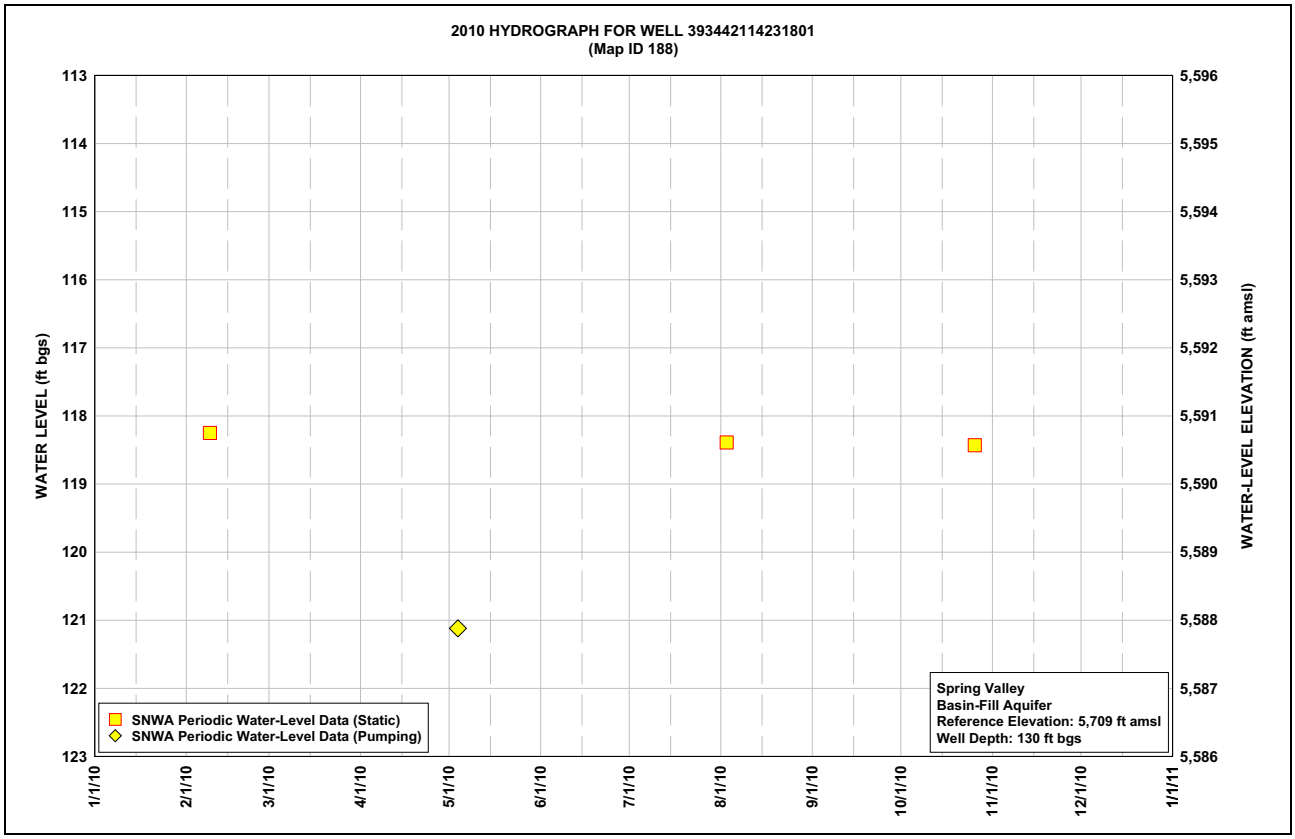

HISTORICAL HYDROGRAPH FOR WELL 391224114293601
(Map ID 152)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
203
204
205
206
207
208
209
210
211
212
213
5,667
5,666
5,665
5,664
5,663
5,662
5,661
5,660
5,659
5,658
5,657
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,870 ft amsl

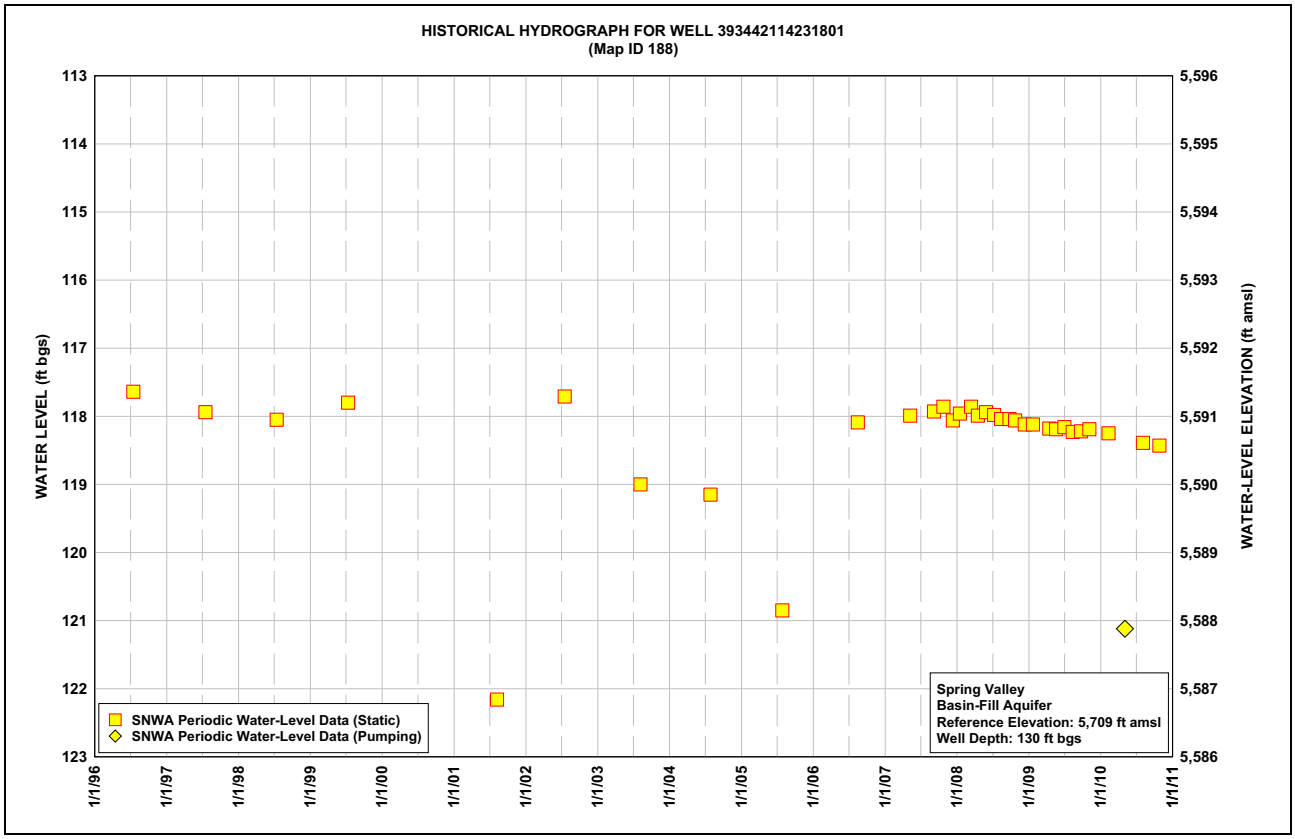

2010 HYDROGRAPH FOR WELL 392703114230501
(Map ID 176)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
33
34
35
36
37
38
39
40
41
42
43
5,555
5,554
5,553
5,552
5,551
5,550
5,549
5,548
5,547
5,546
5,545
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data (Static)
SNWA Periodic Water-Level Data (Pumping)
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,588 ft amsl
Well Depth: 42 ft bgs


HISTORICAL HYDROGRAPH FOR WELL 392703114230501
(Map ID 176)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
33
34
35
36
37
38
39
40
41
42
43
5,555
5,554
5,553
5,552
5,551
5,550
5,549
5,548
5,547
5,546
5,545
1/1/96
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
SNWA Periodic Water-Level Data (Static)
SNWA Periodic Water-Level Data (Pumping)
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,588 ft amsl
Well Depth: 42 ft bgs


2010 HYDROGRAPH FOR WELL 184 N20 E66 13AB 1
(Map ID 182)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
125
126
127
128
129
130
131
132
133
134
135
5,650
5,649
5,648
5,647
5,646
5,645
5,644
5,643
5,642
5,641
5,640
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,775 ft amsl
Well Depth 296 ft bgs


HISTORICAL HYDROGRAPH FOR WELL 184 N20 E66 13AB 1
(Map ID 182)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
125
126
127
128
129
130
131
132
133
134
135
5,650
5,649
5,648
5,647
5,646
5,645
5,644
5,643
5,642
5,641
5,640
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,775 ft amsl
Well Depth: 296 ft bgs


2010 HYDROGRAPH FOR WELL 393442114231801
(Map ID 188)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
113
114
115
116
117
118
119
120
121
122
123
5,596
5,595
5,594
5,593
5,592
5,591
5,590
5,589
5,588
5,587
5,586
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data (Static)
SNWA Periodic Water-Level Data (Pumping)
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,709 ft amsl
Well Depth: 130 ft bgs


HISTORICAL HYDROGRAPH FOR WELL 393442114231801
(Map ID 188)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
113
114
115
116
117
118
119
120
121
122
123
5,596
5,595
5,594
5,593
5,592
5,591
5,590
5,589
5,588
5,587
5,586
1/1/96
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
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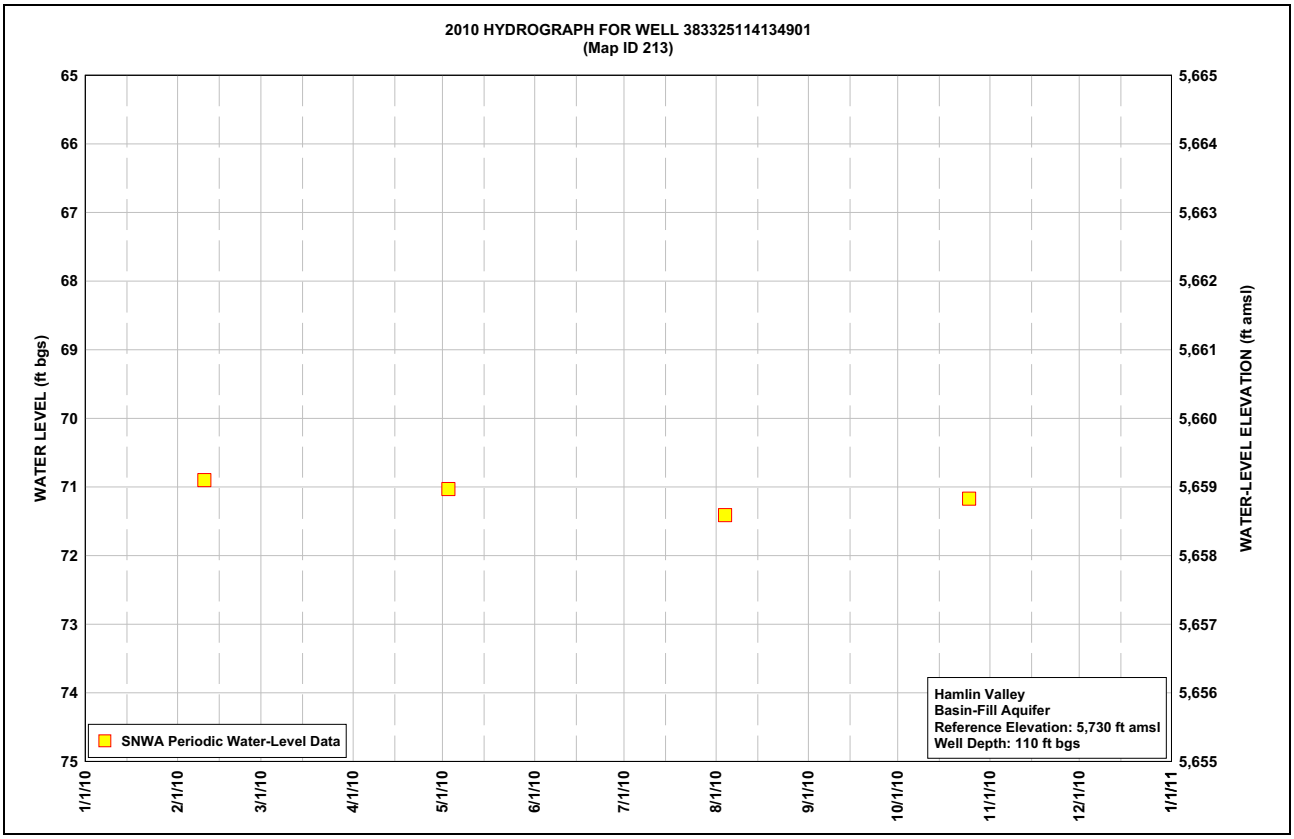
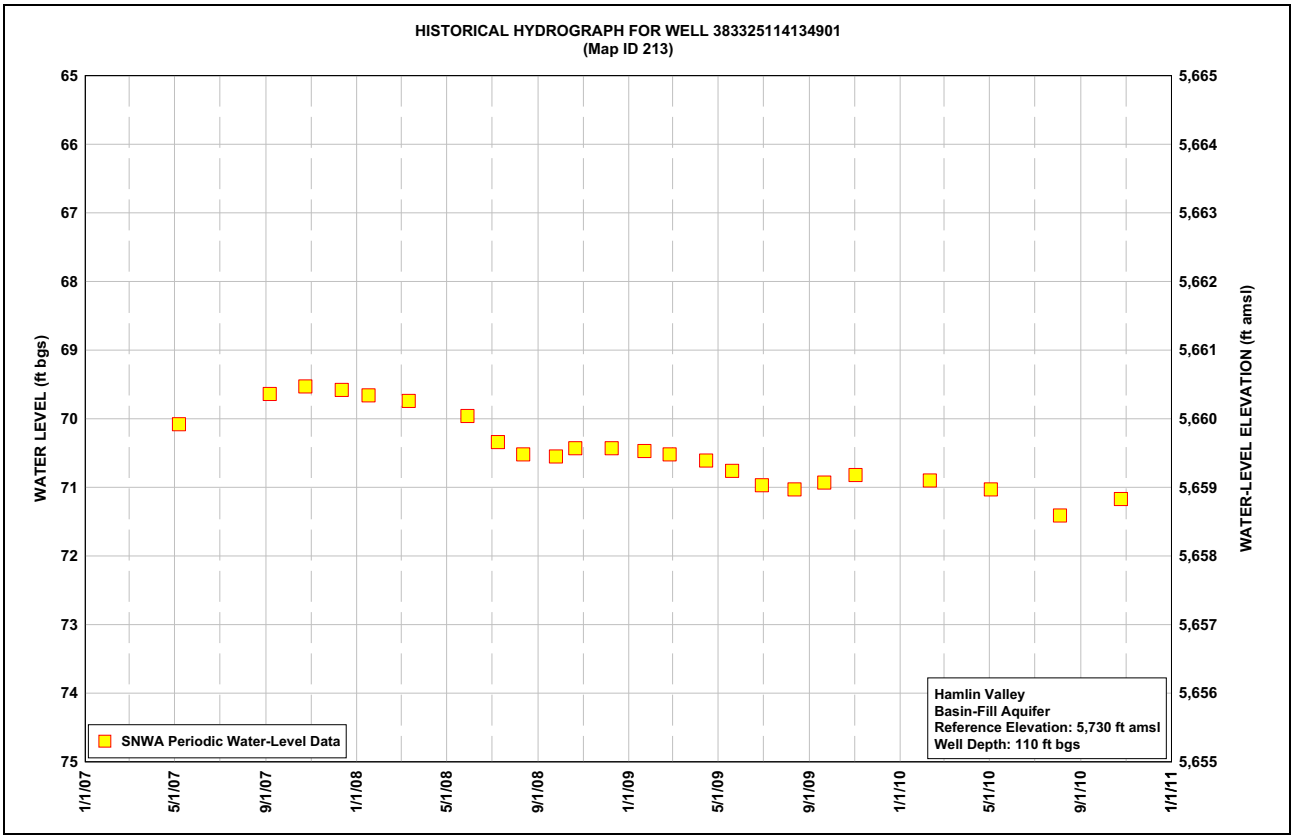
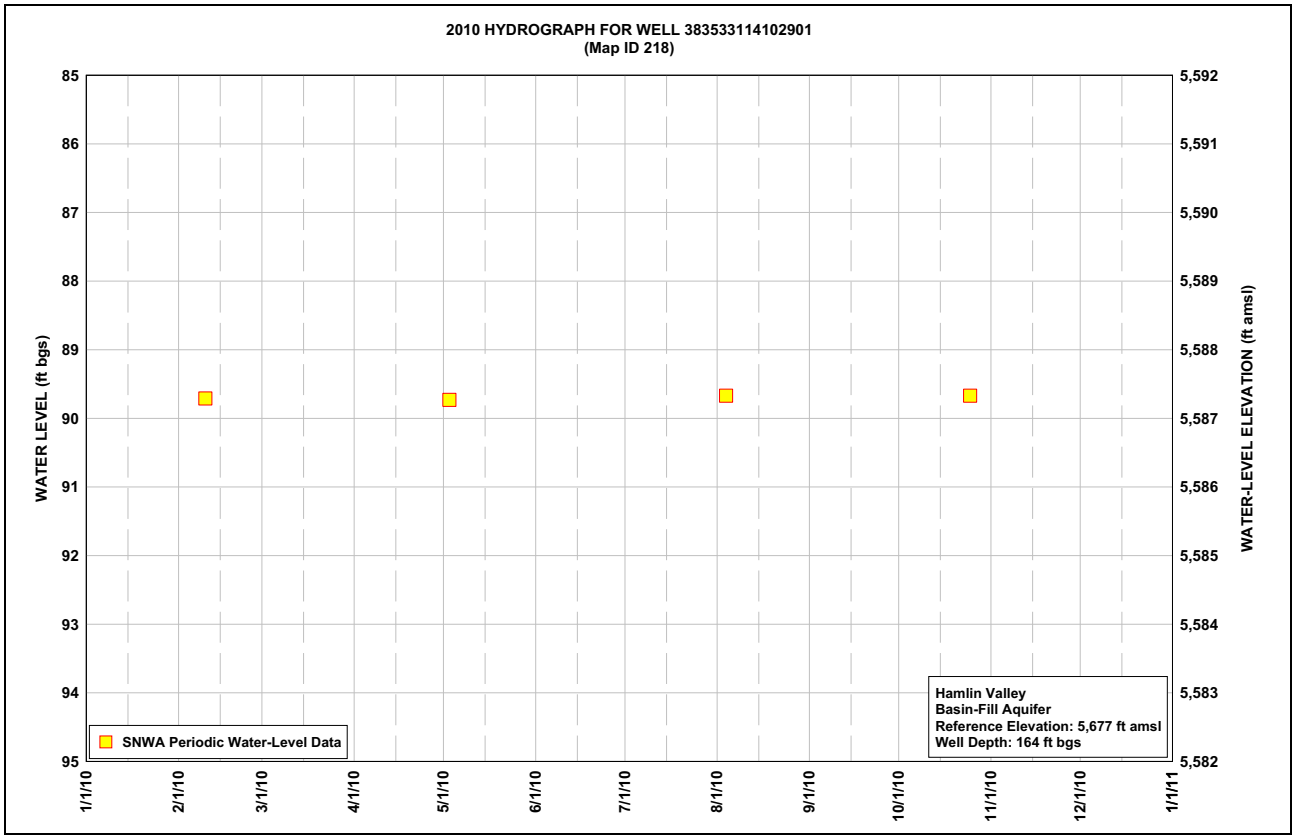
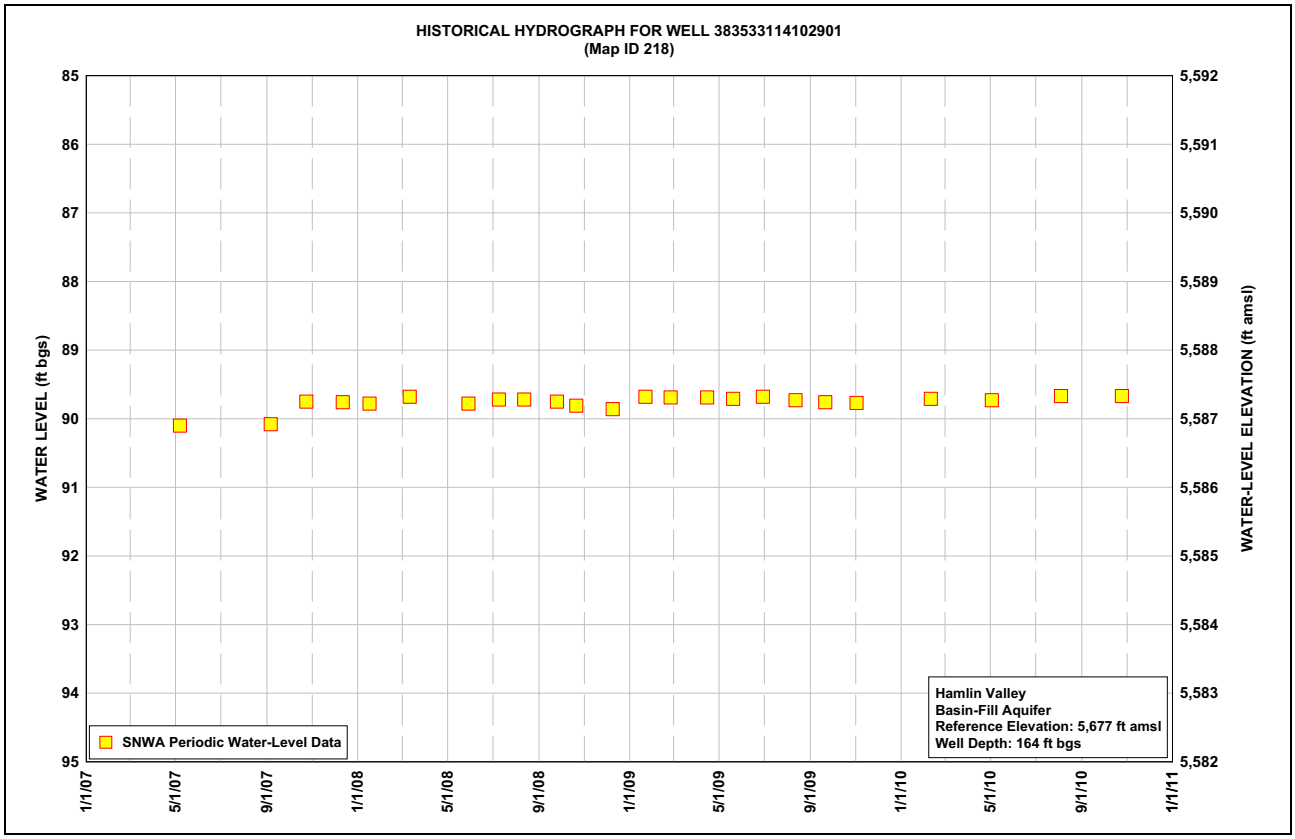
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
SNWA Periodic Water-Level Data (Static)
SNWA Periodic Water-Level Data (Pumping)
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,709 ft amsl
Well Depth: 130 ft bgs


2010 HYDROGRAPH FOR WELL 383325114134901
(Map ID 213)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
65
66
67
68
69
70
71
72
73
74
75
5,665
5,664
5,663
5,662
5,661
5,660
5,659
5,658
5,657
5,656
5,655
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,730 ft amsl
Well Depth: 110 ft bgs


HISTORICAL HYDROGRAPH FOR WELL 383325114134901
(Map ID 213)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
65
66
67
68
69
70
71
72
73
74
75
5,665
5,664
5,663
5,662
5,661
5,660
5,659
5,658
5,657
5,656
5,655
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,730 ft amsl
Well Depth: 110 ft bgs


2010 HYDROGRAPH FOR WELL 383533114102901
(Map ID 218)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
85
86
87
88
89
90
91
92
93
94
95
5,592
5,591
5,590
5,589
5,588
5,587
5,586
5,585
5,584
5,583
5,582
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,677 ft amsl
Well Depth: 164 ft bgs


HISTORICAL HYDROGRAPH FOR WELL 383533114102901
(Map ID 218)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
85
86
87
88
89
90
91
92
93
94
95
5,592
5,591
5,590
5,589
5,588
5,587
5,586
5,585
5,584
5,583
5,582
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,677 ft amsl
Well Depth: 164 ft bgs

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Appendix C

Continuous Water-Level Measurement Data from the Spring Valley Existing-Well Monitoring Network

C.1.0 MONITORING PROGRAM WELLS WITH CONTINUOUS TRANSDUCER DATA

Continuous data collection was performed in 2010 for the following monitor wells:

- 383704114225001
- 384039114232701
- 384831114314301
- 384745114224401
- 390352114305401
- 390803114251001
- 393211114320701
- 383023114115302
- 184W502M
- 184W504M
- 184W506M
- 184W508M
- SPR7007M
- SPR7005M
- SPR7008M

For these sites, the graphs are shown below and include historical data and data collected in 2010. Continuous data have been corrected for temperature and line stretch. Additional data processing, including barometric pressure corrections, may be applied in the future.

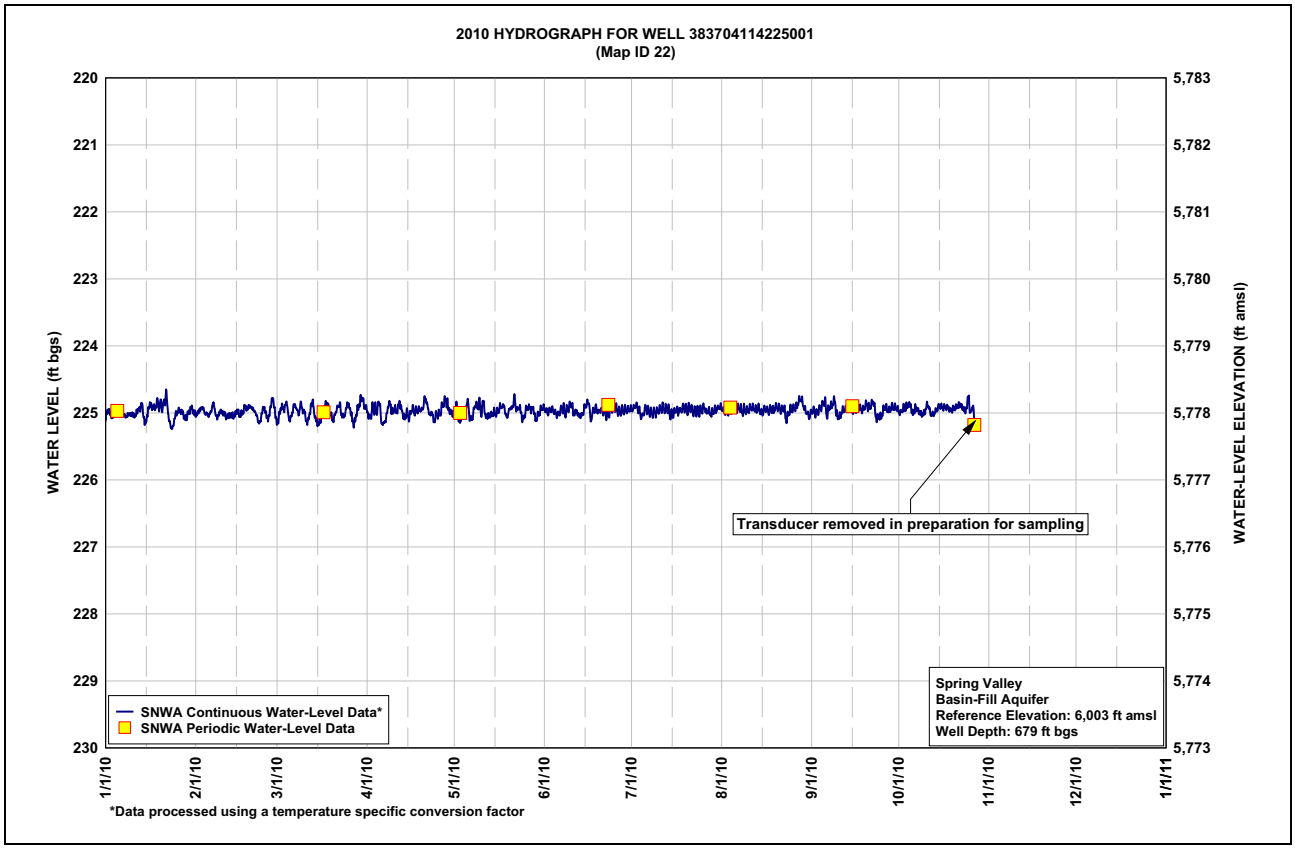
Table C-1
Well 383704114225001, Calendar Year 2010
Water-Level Data, Daily Mean Values

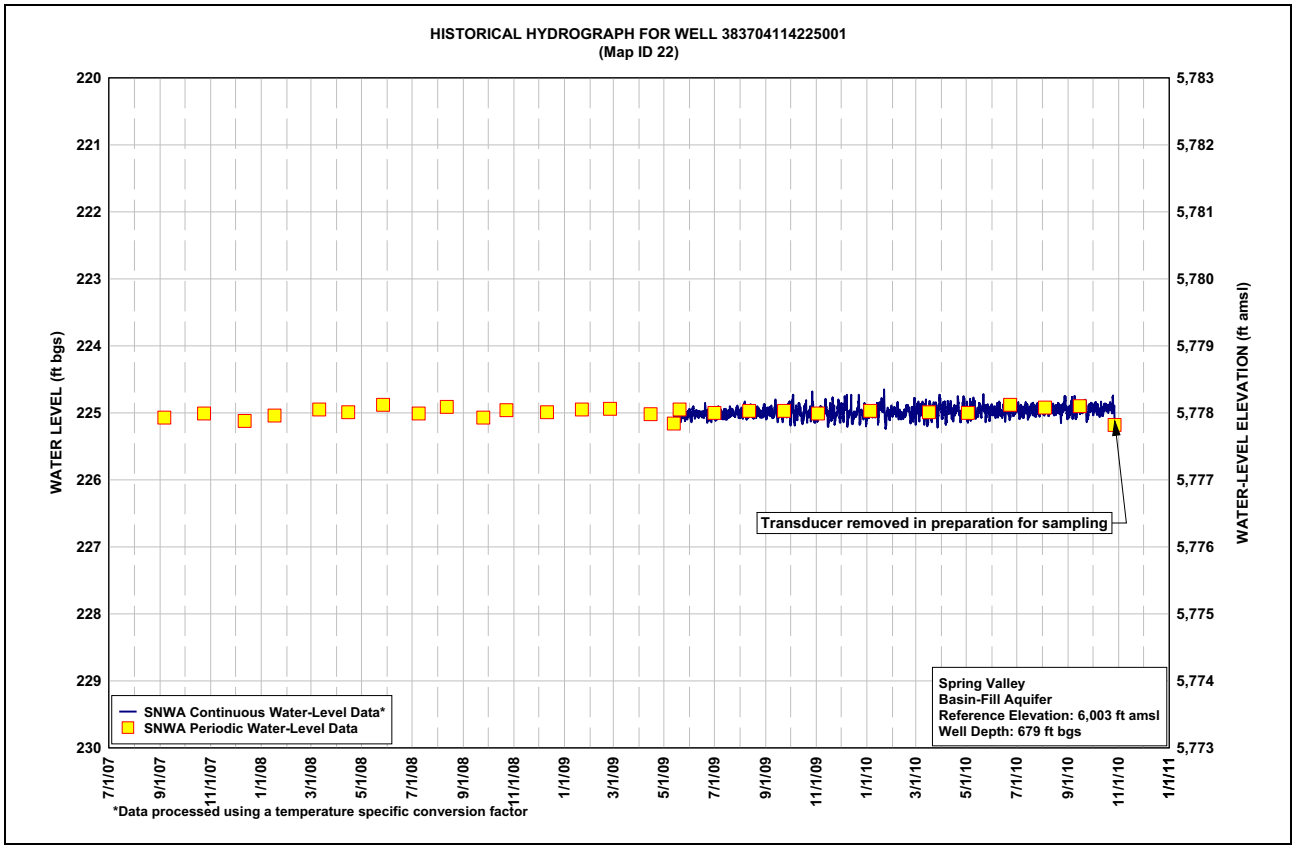
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	225.00	225.01	225.08	225.03	224.95	224.96	224.94	224.95	224.97	224.99	[d]---	[d]---
2	225.00	224.95	224.93	225.00	225.07	224.98	224.90	224.98	225.01	224.94	[d]---	[d]---
3	225.05	224.94	224.93	224.93	225.04	224.95	224.96	224.98	224.96	224.92	[d]---	[d]---
4	224.98	225.01	224.91	224.95	224.97	224.99	225.05	224.95	224.90	224.88	[d]---	[d]---
5	224.98	225.03	225.09	224.96	224.86	225.02	224.96	224.93	224.86	224.96	[d]---	[d]---
6	224.99	224.94	224.95	225.16	225.07	224.97	224.95	224.93	225.00	224.95	[d]---	[d]---
7	225.04	224.94	224.92	225.07	225.01	224.94	224.99	224.94	224.91	224.95	[d]---	[d]---
8	225.04	225.05	224.98	224.88	224.89	224.98	225.00	224.97	224.84	225.00	[d]---	[d]---
9	225.02	224.99	224.91	224.96	224.88	224.91	224.99	224.97	224.97	225.01	[d]---	[d]---
10	225.03	225.01	225.01	224.96	224.94	224.91	224.96	224.94	225.06	224.92	[d]---	[d]---
11	225.01	225.05	225.12	224.94	224.96	225.00	224.93	224.92	224.98	224.94	[d]---	[d]---
12	224.95	225.04	224.96	224.90	225.05	225.01	224.94	224.94	224.95	225.02	[d]---	[d]---
13	224.91	225.04	224.91	225.04	225.03	225.04	224.95	224.94	224.93	224.99	[d]---	[d]---
14	225.12	225.03	225.11	225.02	225.00	224.97	225.03	224.98	224.93	224.93	[d]---	[d]---
15	225.00	224.99	225.14	225.05	225.00	224.88	225.02	224.97	224.97	224.91	[d]---	[d]---
16	224.89	225.02	225.04	224.95	224.95	224.94	224.97	224.95	224.94	224.92	[d]---	[d]---
17	224.92	224.96	224.93	224.98	224.91	225.02	224.97	224.96	224.92	224.92	[d]---	[d]---
18	224.87	224.92	224.89	224.96	224.97	224.94	224.93	224.96	224.95	224.94	[d]---	[d]---
19	224.89	224.91	225.02	224.96	225.02	224.98	224.93	224.92	224.89	224.95	[d]---	[d]---
20	224.89	224.93	225.08	224.86	224.93	224.96	224.94	224.92	224.90	224.92	[d]---	[d]---
21	224.78	225.00	224.95	224.85	224.83	224.97	224.94	224.95	224.88	224.89	[d]---	[d]---
22	224.98	225.11	224.90	225.00	224.93	225.03	224.98	224.96	224.89	224.90	[d]---	[d]---
23	225.20	225.07	225.04	225.04	224.94	224.99	224.98	225.07	225.07	224.95	[d]---	[d]---
24	225.14	224.94	225.00	225.06	225.07	224.94	224.98	224.97	225.06	224.87	[d]---	[d]---
25	225.00	225.05	224.88	225.02	224.99	224.94	224.95	224.95	224.99	224.92	[d]---	[d]---
26	224.97	224.98	225.01	224.95	224.92	224.98	224.96	224.92	224.93	224.95	[d]---	[d]---
27	225.00	224.83	225.14	224.84	224.94	224.98	224.97	224.84	224.96	[a]---	[d]---	[d]---
28	225.07	225.04	224.99	224.87	225.00	224.97	225.00	224.81	224.93	[d]---	[d]---	[d]---
29	225.00	---	224.85	224.98	225.07	224.96	224.97	224.93	224.92	[d]---	[d]---	[d]---
30	224.93	---	224.81	225.01	224.98	224.95	224.95	225.01	224.95	[d]---	[d]---	[d]---
31	225.00	---	224.92	---	224.93	---	224.92	225.03	---	[d]---	---	[d]---
Max	225.20	225.11	225.14	225.16	225.07	225.04	225.05	225.07	225.07	225.02	---	---
Min	224.78	224.83	224.81	224.84	224.83	224.88	224.90	224.81	224.84	224.87	---	---

Year 2010 Statistics: **Year Max 225.20; Year Min 224.78**

Note: Depth in ft bgs

[a]Insufficient data points to report a daily average
[d]Transducer removed in preparation for sampling


2010 HYDROGRAPH FOR WELL 383704114225001
(Map ID 22)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
220
221
222
223
224
225
226
227
228
229
230
5,783
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
5,774
5,773
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
Transducer removed in preparation for sampling
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,003 ft amsl
Well Depth: 679 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL 383704114225001
(Map ID 22)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
220
221
222
223
224
225
226
227
228
229
230
5,783
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7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
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11/1/08
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3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
Transducer removed in preparation for sampling
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,003 ft amsl
Well Depth: 679 ft bgs
*Data processed using a temperature specific conversion factor

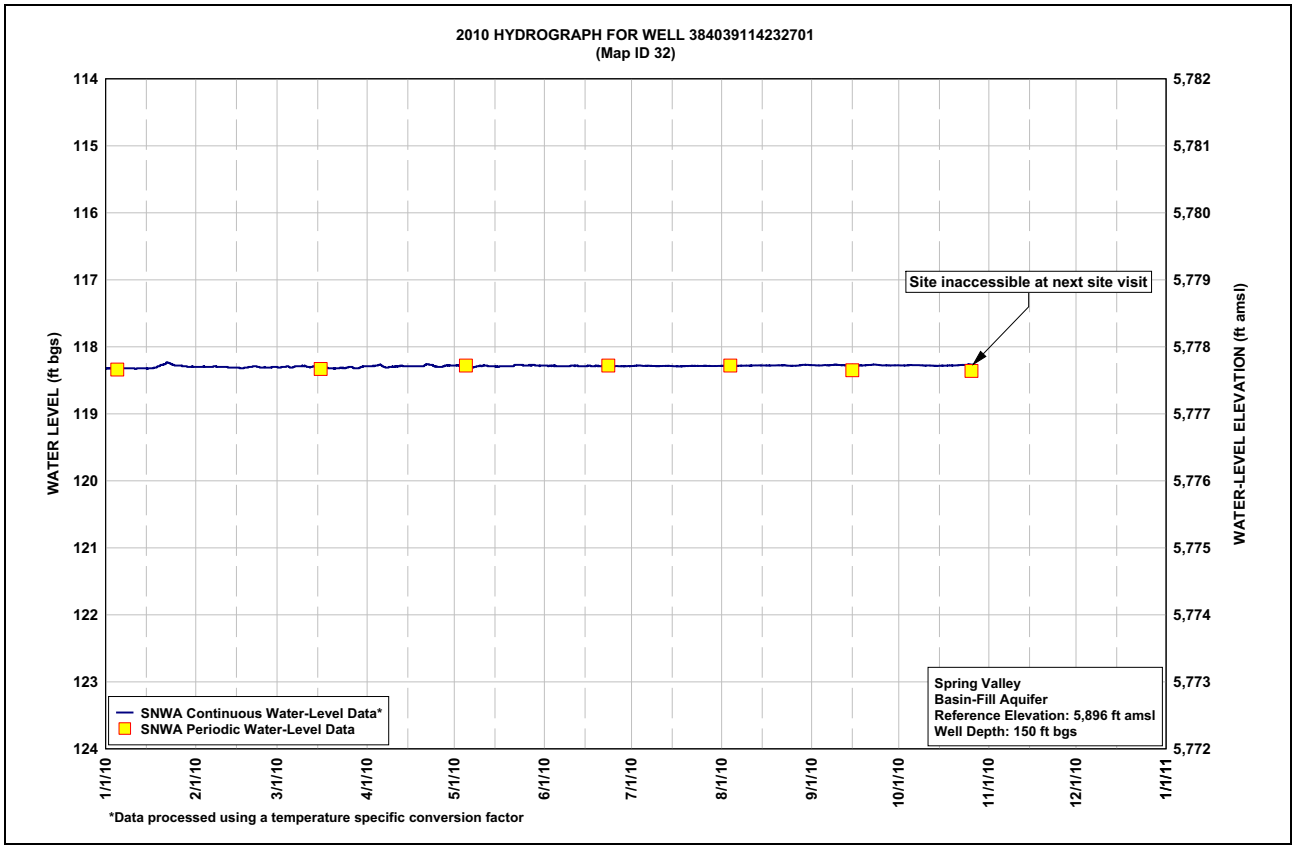
Table C-2
Well 384039114232701, Calendar Year 2010
Water-Level Data, Daily Mean Values

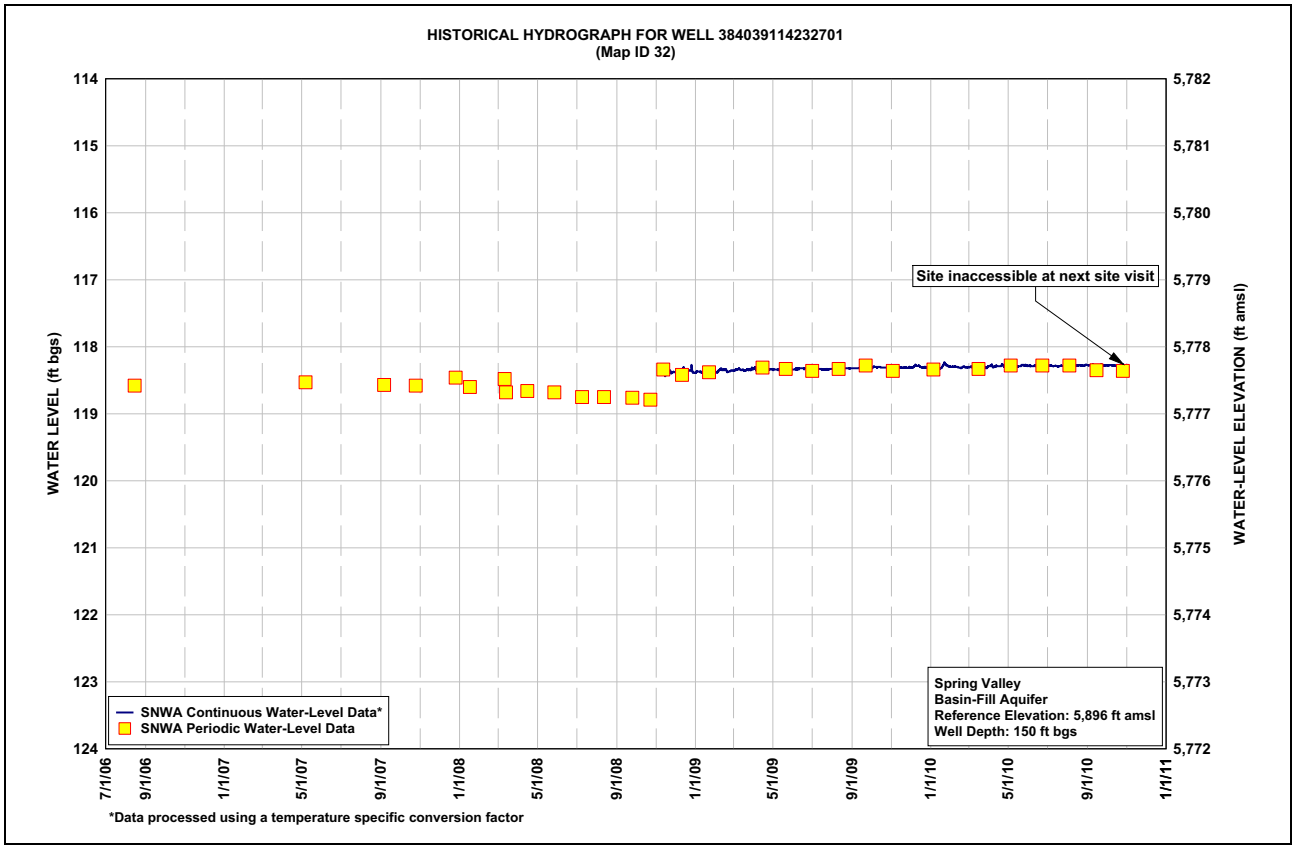
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	118.32	118.30	118.31	118.29	118.28	118.28	118.29	118.28	118.27	118.28	[c]---	[c]---
2	118.32	118.30	118.30	118.29	118.28	118.28	118.28	118.28	118.28	118.28	[c]---	[c]---
3	118.32	118.30	118.30	118.28	118.29	118.28	118.28	118.28	118.28	118.28	[c]---	[c]---
4	118.32	118.30	118.29	118.28	118.29	118.28	118.28	118.28	118.28	118.27	[c]---	[c]---
5	118.32	118.30	118.31	118.27	118.28	118.29	118.28	118.28	118.27	118.27	[c]---	[c]---
6	118.32	118.30	118.30	118.29	118.29	118.29	118.28	118.28	118.28	118.27	[c]---	[c]---
7	118.32	118.29	118.29	118.31	118.31	118.29	118.28	118.28	118.27	118.27	[c]---	[c]---
8	118.32	118.30	118.29	118.30	118.30	118.29	118.29	118.28	118.27	118.28	[c]---	[c]---
9	118.32	118.30	118.29	118.30	118.29	118.29	118.29	118.28	118.27	118.28	[c]---	[c]---
10	118.32	118.30	118.29	118.30	118.28	118.28	118.29	118.28	118.27	118.28	[c]---	[c]---
11	118.33	118.30	118.30	118.29	118.28	118.28	118.29	118.28	118.27	118.28	[c]---	[c]---
12	118.32	118.31	118.30	118.28	118.28	118.28	118.28	118.28	118.27	118.28	[c]---	[c]---
13	118.32	118.31	118.29	118.29	118.29	118.29	118.28	118.28	118.27	118.28	[c]---	[c]---
14	118.32	118.31	118.30	118.29	118.29	118.29	118.29	118.28	118.27	118.28	[c]---	[c]---
15	118.32	118.31	118.31	118.29	118.30	118.29	118.29	118.28	118.28	118.28	[c]---	[c]---
16	118.32	118.32	118.32	118.29	118.30	118.28	118.29	118.28	118.28	118.28	[c]---	[c]---
17	118.31	118.31	118.32	118.29	118.29	118.29	118.29	118.28	118.28	118.28	[c]---	[c]---
18	118.31	118.31	118.32	118.29	118.29	118.28	118.29	118.28	118.28	118.28	[c]---	[c]---
19	118.28	118.30	118.32	118.29	118.29	118.28	118.29	118.28	118.28	118.28	[c]---	[c]---
20	118.27	118.30	118.32	118.28	118.29	118.29	118.29	118.28	118.27	118.28	[c]---	[c]---
21	118.25	118.29	118.32	118.26	118.28	118.29	118.28	118.28	118.27	118.27	[c]---	[c]---
22	118.24	118.30	118.31	118.27	118.27	118.29	118.28	118.28	118.27	118.27	[c]---	[c]---
23	118.25	118.31	118.31	118.28	118.27	118.29	118.28	118.28	118.27	118.27	[c]---	[c]---
24	118.27	118.31	118.32	118.29	118.27	118.29	118.29	118.28	118.27	118.27	[c]---	[c]---
25	118.28	118.31	118.30	118.30	118.28	118.29	118.28	118.28	118.28	118.26	[c]---	[c]---
26	118.28	118.31	118.30	118.30	118.28	118.29	118.28	118.28	118.28	[c]---	[c]---	[c]---
27	118.29	118.30	118.32	118.29	118.27	118.29	118.29	118.28	118.28	[c]---	[c]---	[c]---
28	118.29	118.30	118.32	118.28	118.27	118.29	118.29	118.27	118.28	[c]---	[c]---	[c]---
29	118.30	---	118.31	118.28	118.28	118.29	118.29	118.27	118.28	[c]---	[c]---	[c]---
30	118.30	---	118.30	118.28	118.28	118.29	118.29	118.27	118.28	[c]---	[c]---	[c]---
31	118.30	---	118.29	---	118.28	---	118.28	118.27	---	[c]---	---	[c]---
Max	118.33	118.32	118.32	118.31	118.31	118.29	118.29	118.28	118.28	---	---	
Min	118.24	118.29	118.29	118.26	118.27	118.28	118.28	118.27	118.27	---	---	---

Year 2010 Statistics: **Year Max ---; Year Min ---**

Note: Depth in ft bgs

[c]Data currently unavailable due to inaccessible site conditions


2010 HYDROGRAPH FOR WELL 384039114232701
(Map ID 32)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
114
115
116
117
118
119
120
121
122
123
124
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
5,774
5,773
5,772
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
Site inaccessible at next site visit
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,896 ft amsl
Well Depth: 150 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL 384039114232701
(Map ID 32)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
114
115
116
117
118
119
120
121
122
123
124
5,782
5,781
5,780
5,779
5,778
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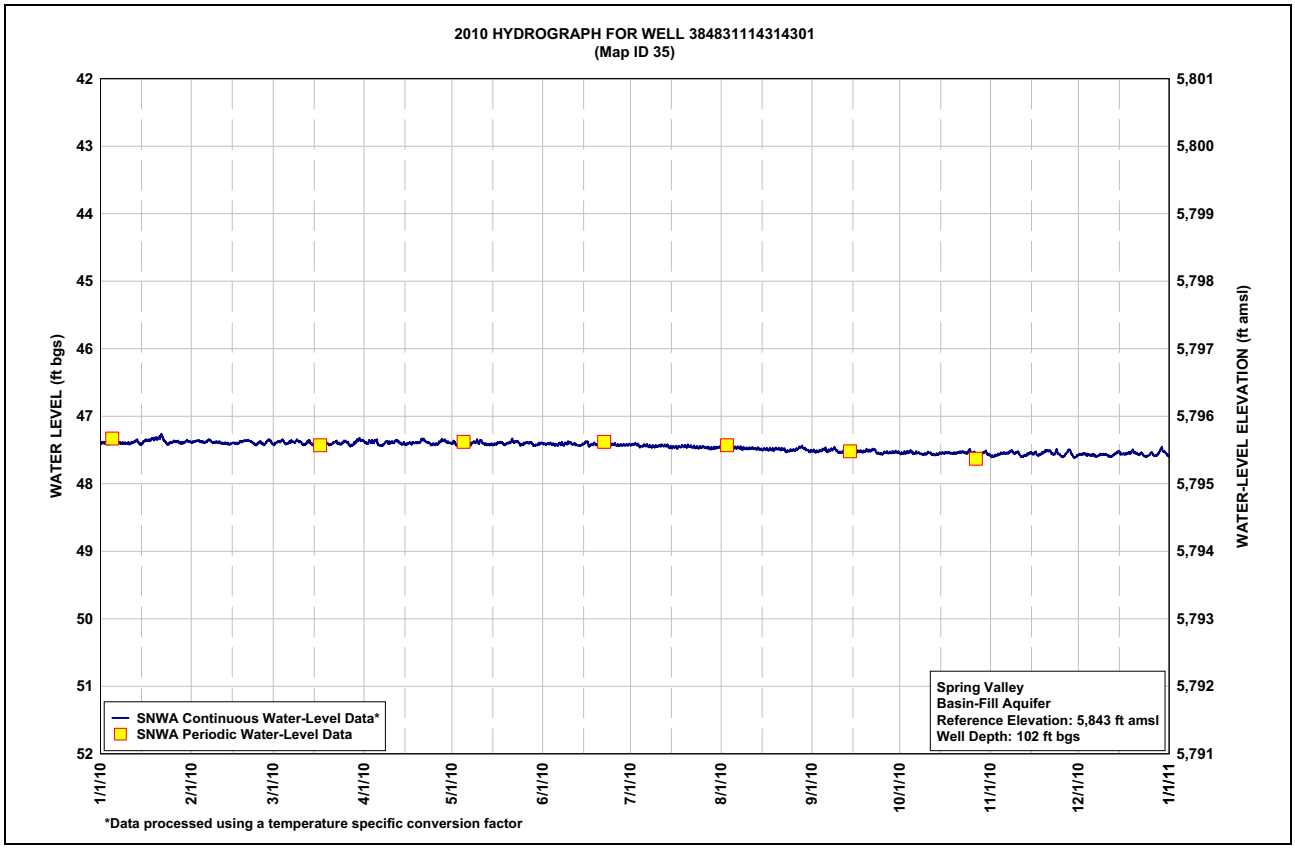
9/1/06
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
Site inaccessible at next site visit
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,896 ft amsl
Well Depth: 150 ft bgs
*Data processed using a temperature specific conversion factor

Table C-3
Well 384831114314301, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	47.39	47.38	47.41	47.39	47.39	47.41	47.42	47.47	47.51	47.55	47.59	47.57
2	47.39	47.37	47.38	47.39	47.42	47.41	47.41	47.47	47.52	47.54	47.58	47.56
3	47.41	47.36	47.37	47.38	47.42	47.40	47.42	47.48	47.52	47.54	47.57	47.56
4	47.39	47.38	47.37	47.37	47.41	47.41	47.45	47.47	47.50	47.52	47.55	47.57
5	47.39	47.39	47.41	47.38	47.38	47.43	47.43	47.47	47.49	47.54	47.55	47.57
6	47.38	47.37	47.38	47.43	47.42	47.42	47.43	47.47	47.51	47.54	47.55	47.58
7	47.40	47.36	47.37	47.43	47.42	47.41	47.44	47.47	47.50	47.55	47.53	47.59
8	47.40	47.39	47.38	47.38	47.39	47.41	47.45	47.48	47.48	47.56	47.52	47.57
9	47.40	47.38	47.37	47.39	47.38	47.40	47.45	47.48	47.51	47.56	47.54	47.57
10	47.40	47.39	47.39	47.39	47.38	47.39	47.44	47.48	47.54	47.55	47.54	47.57
11	47.40	47.40	47.42	47.38	47.39	47.41	47.43	47.47	47.53	47.55	47.59	47.59
12	47.38	47.40	47.39	47.37	47.41	47.42	47.44	47.48	47.52	47.57	47.59	47.59
13	47.36	47.41	47.38	47.40	47.42	47.43	47.44	47.48	47.52	47.57	47.57	47.56
14	47.41	47.41	47.42	47.40	47.42	47.42	47.46	47.49	47.52	47.55	47.55	47.53
15	47.39	47.40	47.44	47.42	47.42	47.39	47.46	47.49	47.53	47.54	47.56	47.55
16	47.36	47.40	47.43	47.40	47.40	47.41	47.46	47.49	47.52	47.54	47.55	47.56
17	47.36	47.39	47.40	47.40	47.39	47.42	47.46	47.49	47.52	47.54	47.57	47.55
18	47.34	47.37	47.38	47.40	47.40	47.41	47.45	47.49	47.52	47.55	47.55	47.54
19	47.33	47.36	47.40	47.39	47.41	47.42	47.44	47.48	47.51	47.55	47.52	47.52
20	47.33	47.36	47.42	47.36	47.40	47.42	47.45	47.48	47.51	47.54	47.51	47.54
21	47.30	47.38	47.40	47.35	47.37	47.42	47.44	47.49	47.50	47.53	47.53	47.56
22	47.34	47.41	47.38	47.38	47.38	47.44	47.46	47.49	47.50	47.53	47.56	47.55
23	47.40	47.41	47.41	47.40	47.38	47.43	47.46	47.52	47.55	47.54	47.52	47.59
24	47.41	47.39	47.40	47.42	47.42	47.42	47.46	47.51	47.56	47.52	47.56	47.59
25	47.38	47.41	47.37	47.42	47.41	47.42	47.46	47.50	47.55	47.54	47.60	47.56
26	47.37	47.39	47.40	47.40	47.39	47.43	47.46	47.50	47.53	47.55	47.57	47.57
27	47.38	47.35	47.43	47.36	47.39	47.43	47.47	47.47	47.54	47.58	47.51	47.58
28	47.40	47.39	47.41	47.36	47.41	47.43	47.47	47.45	47.53	47.56	47.54	47.54
29	47.39	---	47.37	47.38	47.43	47.43	47.47	47.48	47.53	47.54	47.60	47.49
30	47.37	---	47.34	47.40	47.42	47.42	47.47	47.50	47.54	47.54	47.59	47.53
31	47.38	---	47.36	---	47.40	---	47.46	47.52	---	47.57	---	47.58
Max	47.41	47.41	47.44	47.43	47.43	47.44	47.47	47.52	47.56	47.58	47.60	47.59
Min	47.30	47.35	47.34	47.35	47.37	47.39	47.41	47.45	47.48	47.52	47.51	47.49

Year 2010 Statistics: **Year Max 47.60; Year Min 47.30**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 384831114314301
(Map ID 35)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
42
43
44
45
46
47
48
49
50
51
52
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
5,793
5,792
5,791
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,843 ft amsl
Well Depth: 102 ft bgs
*Data processed using a temperature specific conversion factor

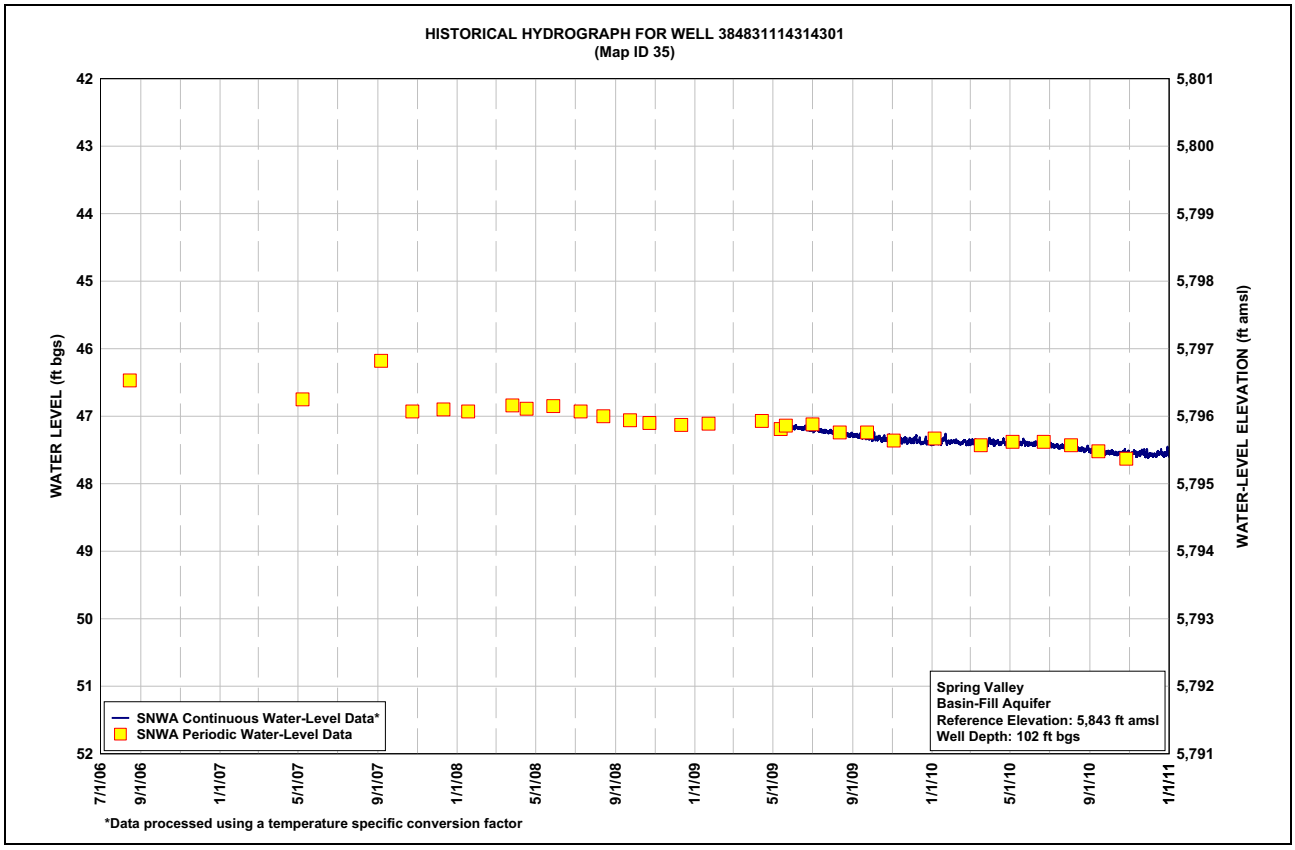

HISTORICAL HYDROGRAPH FOR WELL 384831114314301
(Map ID 35)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
42
43
44
45
46
47
48
49
50
51
52
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
5,793
5,792
5,791
7/1/06
9/1/06
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,843 ft amsl
Well Depth: 102 ft bgs
*Data processed using a temperature specific conversion factor

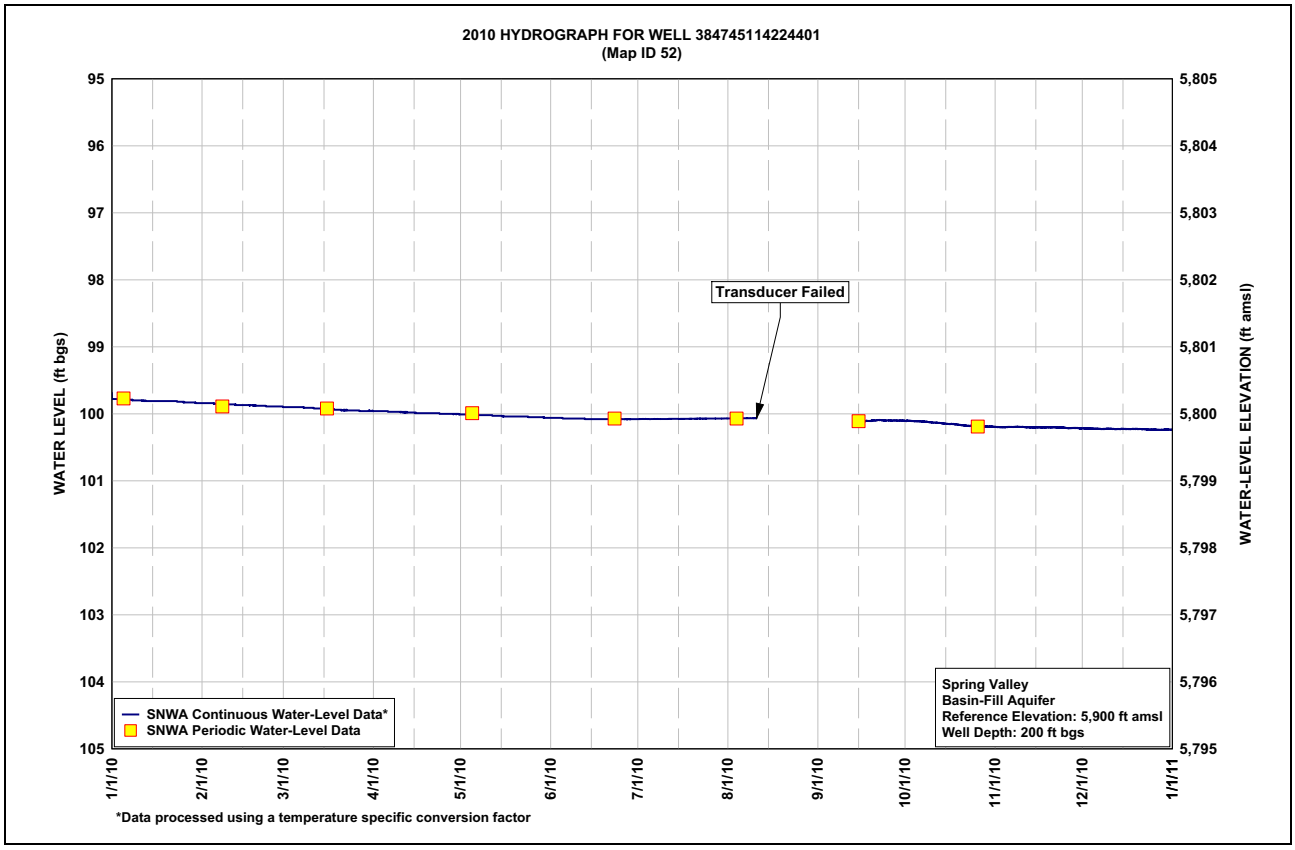
Table C-4
Well 384745114224401, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	99.78	99.84	99.90	99.96	100.01	100.06	100.08	100.07	[b]---	100.10	100.20	100.22
2	99.78	99.84	99.90	99.96	100.01	100.06	100.08	100.07	[b]---	100.10	100.20	100.22
3	99.78	99.84	99.90	99.96	100.01	100.06	100.08	100.07	[b]---	100.11	100.20	100.22
4	99.78	99.84	99.90	99.96	100.02	100.06	100.08	100.07	[b]---	100.11	100.20	100.22
5	99.79	99.85	99.90	99.96	100.02	100.07	100.08	100.07	[b]---	100.11	100.20	100.22
6	99.79	99.85	99.90	99.97	100.02	100.07	100.08	100.07	[b]---	100.11	100.20	100.22
7	99.79	99.85	99.90	99.97	100.02	100.07	100.08	100.07	[b]---	100.11	100.20	100.23
8	99.80	99.85	99.91	99.97	100.02	100.07	100.08	100.07	[b]---	100.12	100.19	100.23
9	99.80	99.86	99.91	99.97	100.02	100.07	100.08	100.07	[b]---	100.13	100.20	100.22
10	99.80	99.86	99.91	99.97	100.02	100.07	100.08	100.07	[b]---	100.13	100.20	100.22
11	99.80	99.86	99.91	99.98	100.02	100.07	100.08	[b]---	[b]---	100.13	100.20	100.23
12	99.81	99.86	99.92	99.98	100.03	100.07	100.08	[b]---	[b]---	100.14	100.20	100.23
13	99.81	99.87	99.92	99.98	100.03	100.08	100.08	[b]---	[b]---	100.14	100.20	100.23
14	99.81	99.87	99.92	99.98	100.03	100.08	100.08	[b]---	[b]---	100.14	100.20	100.23
15	99.81	99.87	99.93	99.98	100.04	100.08	100.08	[b]---	[a]---	100.15	100.20	100.23
16	99.81	99.87	99.93	99.99	100.04	100.08	100.08	[b]---	100.11	100.15	100.20	100.23
17	99.81	99.87	99.93	99.99	100.04	100.08	100.08	[b]---	100.11	100.15	100.20	100.23
18	99.81	99.88	99.93	99.99	100.04	100.08	100.07	[b]---	100.11	100.16	100.20	100.23
19	99.81	99.88	99.94	99.99	100.04	100.08	100.07	[b]---	100.10	100.16	100.20	100.23
20	99.81	99.88	99.94	99.99	100.04	100.08	100.07	[b]---	100.10	100.17	100.20	100.23
21	99.81	99.88	99.95	99.99	100.04	100.08	100.07	[b]---	100.09	100.17	100.20	100.23
22	99.81	99.88	99.95	99.99	100.04	100.08	100.07	[b]---	100.09	100.18	100.20	100.23
23	99.82	99.89	99.95	99.99	100.04	100.08	100.07	[b]---	100.10	100.18	100.20	100.23
24	99.82	99.89	99.95	100.00	100.05	100.08	100.07	[b]---	100.10	100.18	100.21	100.24
25	99.82	99.89	99.95	100.00	100.05	100.08	100.07	[b]---	100.10	100.19	100.21	100.24
26	99.83	99.89	99.95	100.00	100.05	100.08	100.07	[b]---	100.10	100.19	100.21	100.24
27	99.83	99.89	99.96	100.00	100.05	100.08	100.07	[b]---	100.10	100.19	100.21	100.24
28	99.83	99.89	99.96	100.00	100.05	100.08	100.07	[b]---	100.10	100.19	100.21	100.24
29	99.83	---	99.96	100.00	100.06	100.08	100.07	[b]---	100.10	100.19	100.21	100.23
30	99.84	---	99.96	100.01	100.06	100.08	100.07	[b]---	100.10	100.19	100.22	100.23
31	99.84	---	99.96	---	100.06	---	100.07	[b]---	---	100.19	---	100.24
Max	99.84	99.89	99.96	100.01	100.06	100.08	100.08	100.07	100.11	100.19	100.22	100.24
Min	99.78	99.84	99.90	99.96	100.01	100.06	100.07	100.07	100.09	100.10	100.19	100.22

Year 2010 Statistics: **Year Max 100.24; Year Min 99.78**

Note: Depth in ft bgs

[a]Insufficient data points to report a daily average
[b]No data available due to data logger malfunction


2010 HYDROGRAPH FOR WELL 384745114224401
(Map ID 52)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
95
96
97
98
99
100
101
102
103
104
105
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
Transducer Failed
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,900 ft amsl
Well Depth: 200 ft bgs
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
*Data processed using a temperature specific conversion factor

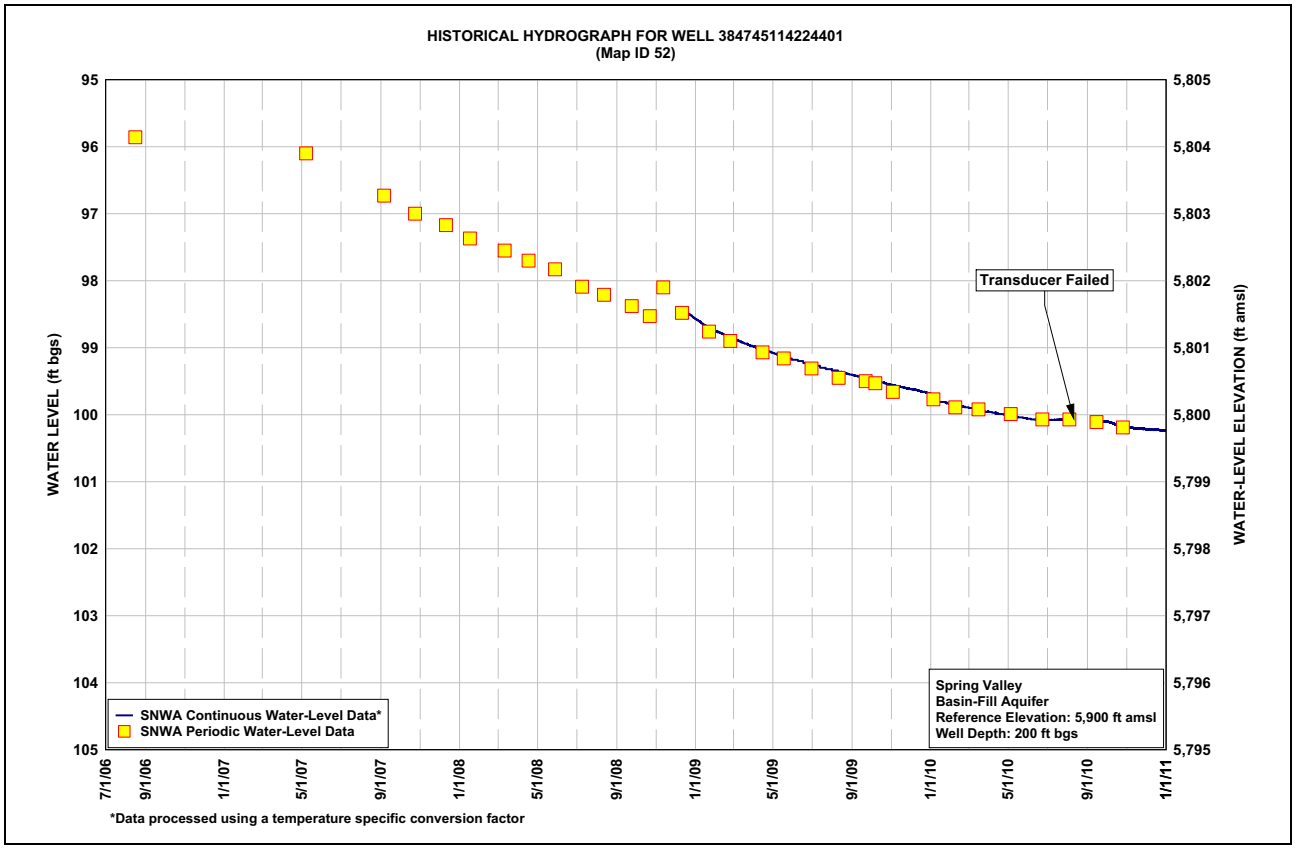
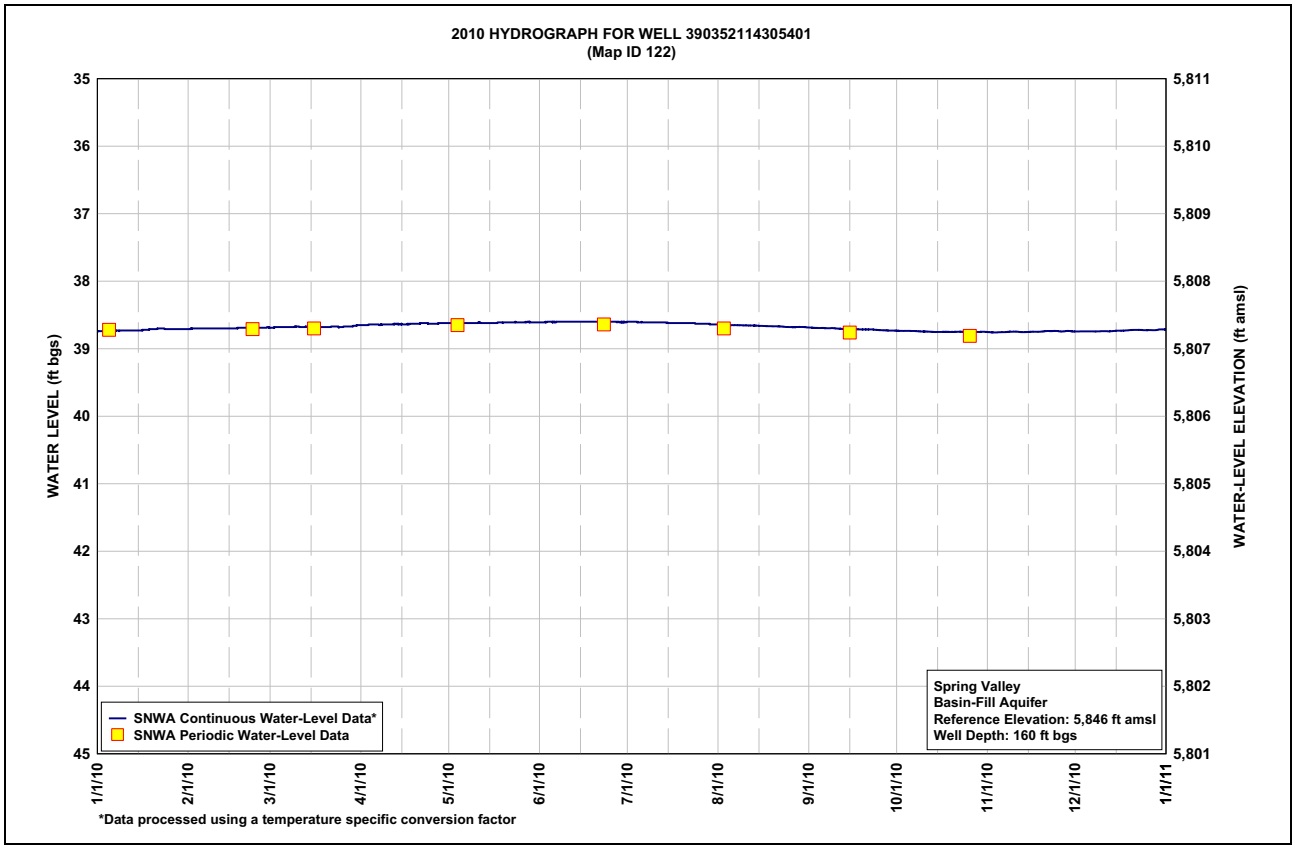

HISTORICAL HYDROGRAPH FOR WELL 384745114224401
(Map ID 52)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
95
96
97
98
99
100
101
102
103
104
105
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
Transducer Failed
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,900 ft amsl
Well Depth: 200 ft bgs
7/1/06
9/1/06
1/1/07
5/1/07
9/1/07
1/1/08
5/1/08
9/1/08
1/1/09
5/1/09
9/1/09
1/1/10
5/1/10
9/1/10
1/1/11
*Data processed using a temperature specific conversion factor

Table C-5
Well 390352114305401, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	38.74	38.71	38.69	38.65	38.62	38.61	38.60	38.64	38.69	38.73	38.75	38.74
2	38.74	38.70	38.69	38.65	38.62	38.61	38.60	38.64	38.69	38.74	38.76	38.74
3	38.74	38.70	38.68	38.64	38.62	38.60	38.60	38.65	38.69	38.74	38.76	38.74
4	38.74	38.70	38.68	38.64	38.62	38.60	38.61	38.65	38.69	38.74	38.76	38.74
5	38.74	38.70	38.68	38.64	38.62	38.60	38.61	38.65	38.69	38.74	38.76	38.74
6	38.74	38.70	38.68	38.64	38.62	38.60	38.61	38.65	38.70	38.74	38.75	38.74
7	38.73	38.70	38.68	38.64	38.62	38.60	38.61	38.65	38.70	38.74	38.75	38.74
8	38.73	38.70	38.68	38.64	38.62	38.60	38.61	38.65	38.70	38.74	38.75	38.74
9	38.73	38.70	38.67	38.64	38.62	38.60	38.61	38.65	38.70	38.74	38.75	38.74
10	38.73	38.70	38.67	38.64	38.62	38.60	38.61	38.65	38.70	38.75	38.75	38.74
11	38.73	38.70	38.68	38.64	38.61	38.60	38.61	38.66	38.70	38.75	38.75	38.74
12	38.73	38.70	38.68	38.63	38.62	38.60	38.61	38.66	38.71	38.75	38.75	38.74
13	38.73	38.70	38.67	38.63	38.62	38.60	38.61	38.66	38.71	38.75	38.75	38.74
14	38.73	38.70	38.67	38.64	38.62	38.60	38.61	38.66	38.71	38.75	38.75	38.74
15	38.73	38.70	38.68	38.64	38.62	38.60	38.62	38.66	38.71	38.75	38.75	38.73
16	38.72	38.70	38.68	38.64	38.62	38.60	38.62	38.66	38.71	38.75	38.75	38.73
17	38.72	38.70	38.68	38.63	38.61	38.60	38.62	38.67	38.71	38.75	38.75	38.73
18	38.72	38.69	38.68	38.63	38.61	38.60	38.62	38.67	38.71	38.75	38.75	38.73
19	38.71	38.69	38.68	38.63	38.61	38.60	38.62	38.67	38.71	38.75	38.75	38.73
20	38.71	38.69	38.68	38.63	38.61	38.60	38.62	38.67	38.71	38.75	38.74	38.72
21	38.70	38.69	38.67	38.63	38.61	38.60	38.62	38.67	38.72	38.75	38.74	38.72
22	38.70	38.69	38.67	38.62	38.61	38.60	38.62	38.67	38.71	38.75	38.74	38.72
23	38.70	38.69	38.67	38.62	38.61	38.60	38.62	38.67	38.72	38.75	38.74	38.72
24	38.71	38.69	38.68	38.63	38.61	38.60	38.63	38.68	38.72	38.75	38.74	38.73
25	38.71	38.69	38.68	38.63	38.61	38.60	38.63	38.68	38.73	38.75	38.74	38.73
26	38.71	38.69	38.67	38.63	38.61	38.60	38.63	38.68	38.73	38.75	38.74	38.72
27	38.71	38.69	38.67	38.63	38.61	38.60	38.63	38.68	38.73	38.75	38.74	38.73
28	38.71	38.69	38.67	38.62	38.60	38.61	38.63	38.68	38.73	38.75	38.74	38.72
29	38.71	---	38.66	38.62	38.61	38.61	38.64	38.68	38.73	38.75	38.74	38.72
30	38.71	---	38.66	38.62	38.61	38.61	38.64	38.68	38.73	38.75	38.74	38.71
31	38.71	---	38.65	---	38.61	---	38.64	38.68	---	38.75	---	38.72
Max	38.74	38.71	38.69	38.65	38.62	38.61	38.64	38.68	38.73	38.75	38.76	38.74
Min	38.70	38.69	38.65	38.62	38.60	38.60	38.60	38.64	38.69	38.73	38.74	38.71

Year 2010 Statistics: **Year Max 38.76; Year Min 38.60**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 390352114305401
(Map ID 122)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
35
36
37
38
39
40
41
42
43
44
45
5,811
5,810
5,809
5,808
5,807
5,806
5,805
5,804
5,803
5,802
5,801
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,846 ft amsl
Well Depth: 160 ft bgs
*Data processed using a temperature specific conversion factor

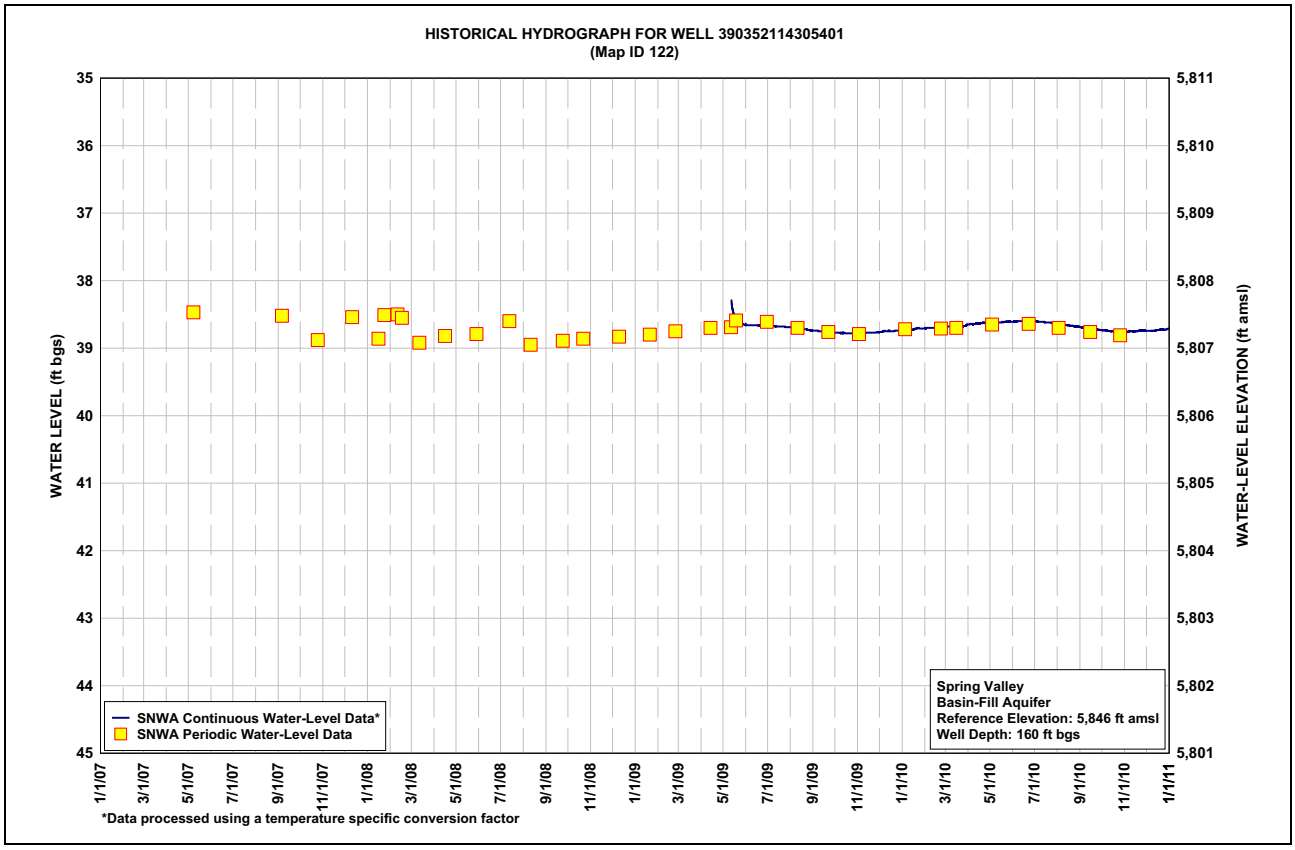
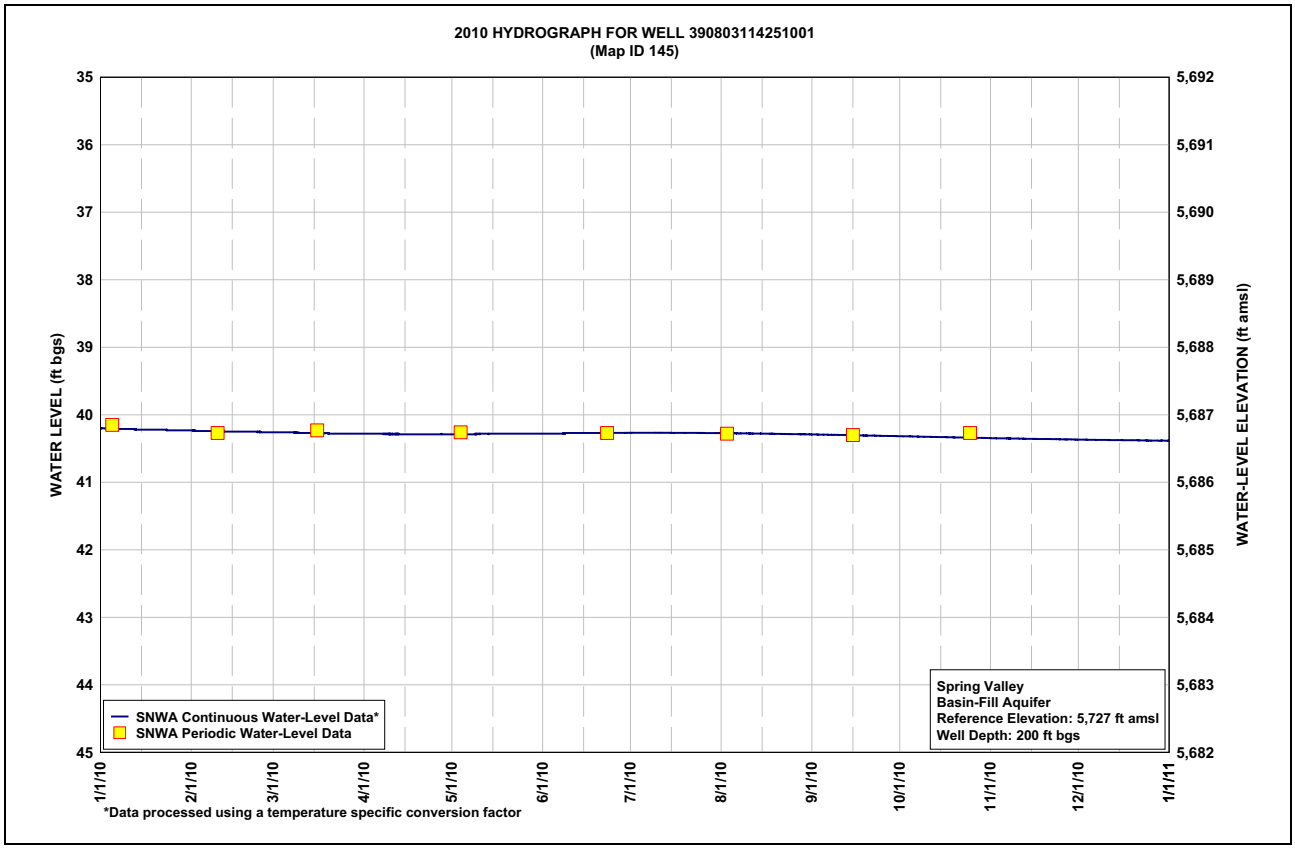

HISTORICAL HYDROGRAPH FOR WELL 390352114305401
(Map ID 122)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
35
36
37
38
39
40
41
42
43
44
45
5,811
5,810
5,809
5,808
5,807
5,806
5,805
5,804
5,803
5,802
5,801
1/1/07
3/1/07
5/1/07
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,846 ft amsl
Well Depth: 160 ft bgs
*Data processed using a temperature specific conversion factor

Table C-6
Well 390803114251001, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	40.20	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.35	40.37
2	40.20	40.24	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.35	40.37
3	40.21	40.24	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.35	40.37
4	40.21	40.24	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.35	40.37
5	40.21	40.24	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.35	40.37
6	40.21	40.24	40.26	40.28	40.29	40.28	40.27	40.27	40.30	40.32	40.35	40.37
7	40.21	40.24	40.26	40.28	40.29	40.28	40.27	40.28	40.30	40.32	40.35	40.37
8	40.21	40.24	40.27	40.29	40.29	40.27	40.27	40.28	40.30	40.32	40.35	40.37
9	40.21	40.24	40.27	40.29	40.29	40.27	40.27	40.28	40.30	40.33	40.35	40.37
10	40.21	40.24	40.27	40.29	40.29	40.27	40.27	40.28	40.30	40.33	40.35	40.37
11	40.21	40.24	40.27	40.29	40.28	40.27	40.27	40.28	40.30	40.33	40.35	40.37
12	40.21	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.30	40.33	40.36	40.37
13	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.30	40.33	40.36	40.37
14	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.30	40.33	40.36	40.37
15	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.30	40.33	40.36	40.38
16	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.31	40.33	40.36	40.38
17	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.31	40.33	40.36	40.38
18	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.31	40.33	40.36	40.38
19	40.22	40.25	40.27	40.29	40.28	40.27	40.27	40.28	40.31	40.33	40.36	40.38
20	40.22	40.25	40.28	40.29	40.28	40.27	40.27	40.28	40.31	40.34	40.36	40.38
21	40.22	40.25	40.28	40.29	40.28	40.27	40.27	40.28	40.31	40.34	40.36	40.38
22	40.22	40.25	40.28	40.29	40.28	40.27	40.27	40.28	40.31	40.34	40.36	40.38
23	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.28	40.31	40.34	40.36	40.38
24	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.31	40.34	40.36	40.38
25	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.31	40.34	40.36	40.38
26	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.31	40.34	40.36	40.38
27	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.31	40.34	40.36	40.38
28	40.23	40.26	40.28	40.29	40.28	40.27	40.27	40.29	40.31	40.34	40.36	40.38
29	40.23	---	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.34	40.37	40.38
30	40.23	---	40.28	40.29	40.28	40.27	40.27	40.29	40.32	40.34	40.37	40.38
31	40.23	---	40.28	---	40.28	---	40.27	40.29	---	40.34	---	40.38
Max	40.23	40.26	40.28	40.29	40.29	40.28	40.27	40.29	40.32	40.34	40.37	40.38
Min	40.20	40.23	40.26	40.28	40.28	40.27	40.27	40.27	40.29	40.32	40.35	40.37

Year 2010 Statistics: **Year Max 40.38; Year Min 40.20**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 390803114251001
(Map ID 145)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
35
36
37
38
39
40
41
42
43
44
45
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
5,684
5,683
5,682
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,727 ft amsl
Well Depth: 200 ft bgs
*Data processed using a temperature specific conversion factor

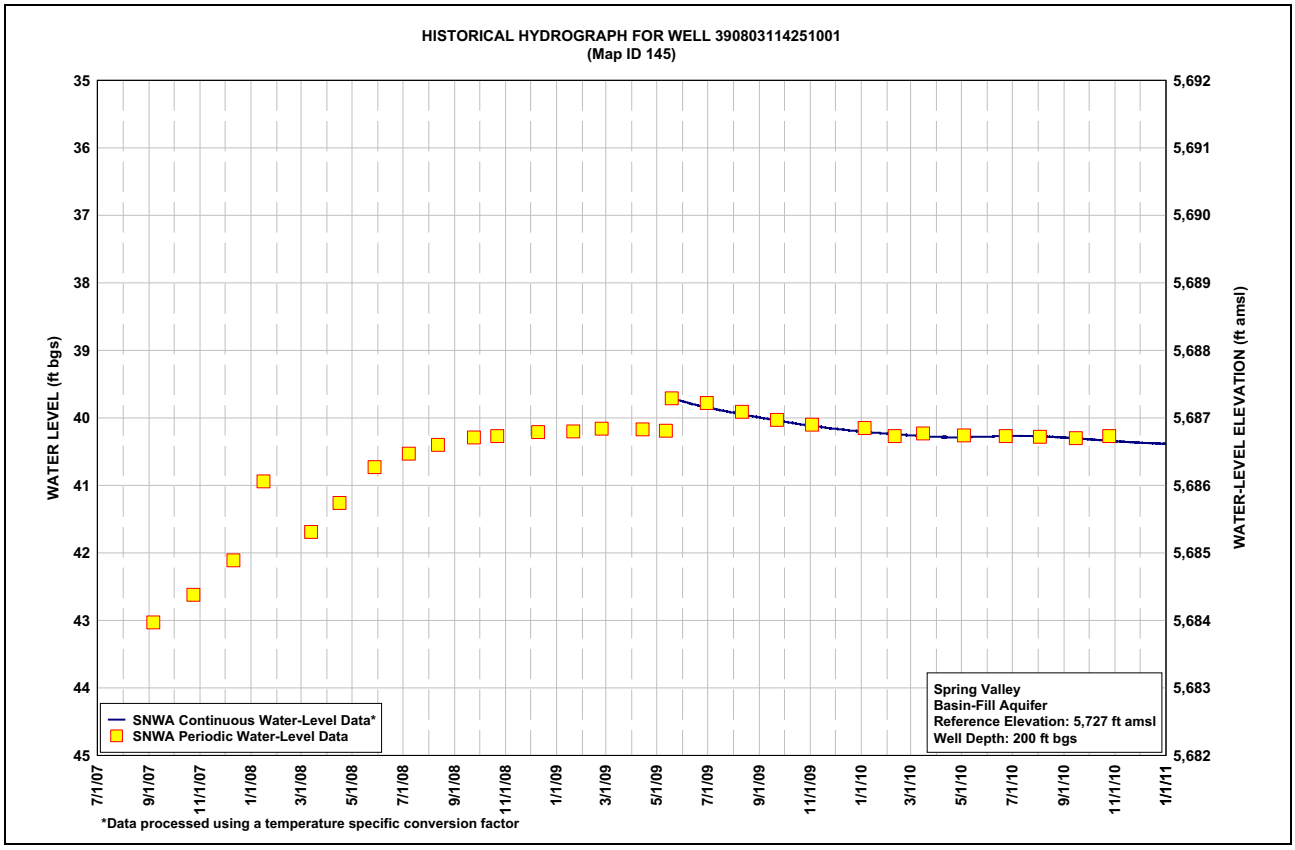
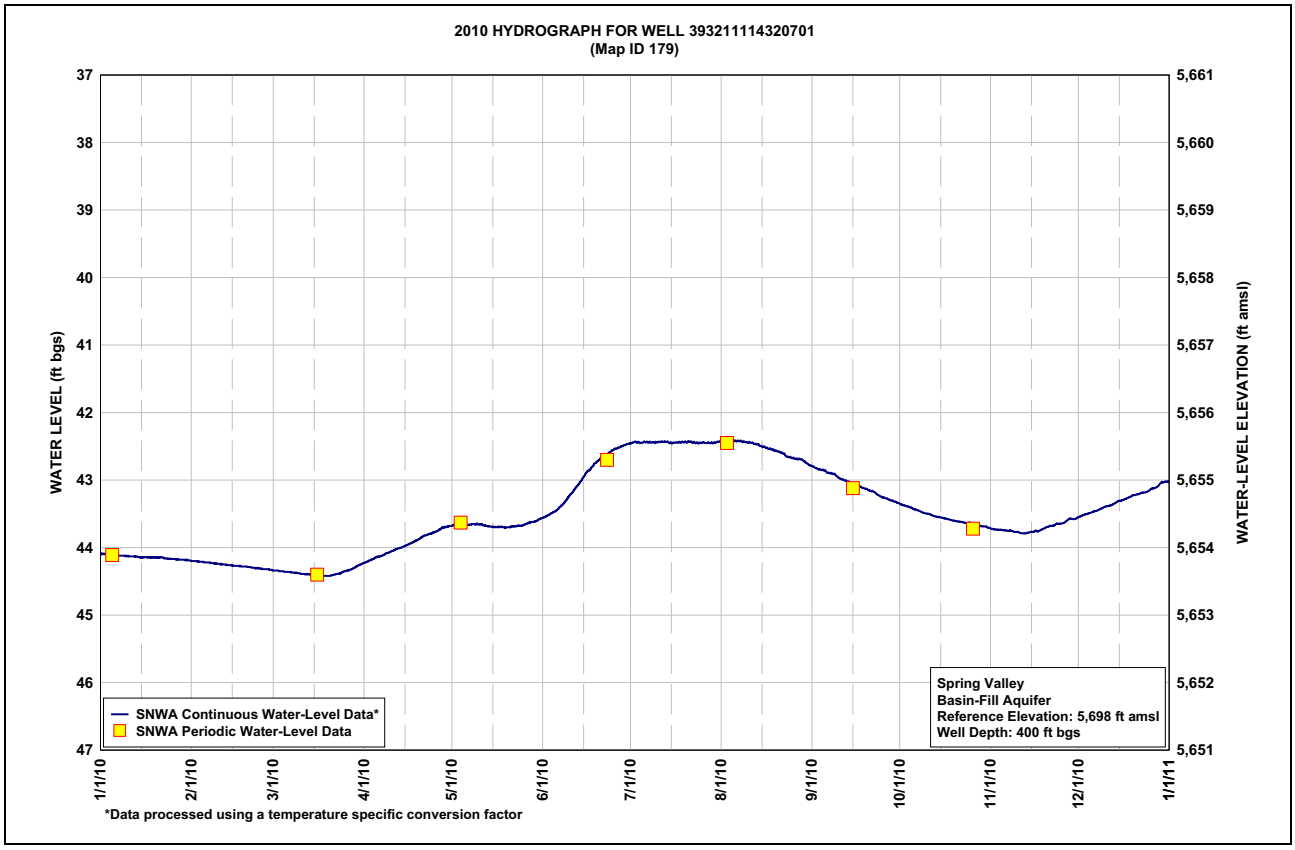

HISTORICAL HYDROGRAPH FOR WELL 390803114251001
(Map ID 145)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
35
36
37
38
39
40
41
42
43
44
45
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
5,684
5,683
5,682
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,727 ft amsl
Well Depth: 200 ft bgs
*Data processed using a temperature specific conversion factor

Table C-7
Well 393211114320701, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	44.09	44.20	44.34	44.22	43.67	43.55	42.45	42.43	42.80	43.36	43.72	43.54
2	44.10	44.20	44.34	44.20	43.67	43.53	42.44	42.43	42.83	43.38	43.73	43.52
3	44.10	44.21	44.35	44.18	43.66	43.51	42.44	42.43	42.84	43.39	43.73	43.51
4	44.10	44.21	44.35	44.16	43.66	43.48	42.45	42.42	42.85	43.40	43.74	43.49
5	44.11	44.22	44.36	44.14	43.65	43.46	42.44	42.42	42.86	43.42	43.74	43.48
6	44.11	44.22	44.36	44.13	43.66	43.42	42.44	42.42	42.89	43.44	43.75	43.46
7	44.12	44.23	44.37	44.11	43.66	43.38	42.44	42.42	42.90	43.45	43.75	43.45
8	44.12	44.23	44.37	44.09	43.65	43.33	42.44	42.43	42.91	43.47	43.76	43.43
9	44.12	44.24	44.38	44.07	43.65	43.27	42.44	42.44	42.94	43.49	43.77	43.41
10	44.13	44.24	44.39	44.05	43.66	43.22	42.44	42.44	42.97	43.50	43.77	43.39
11	44.13	44.25	44.39	44.03	43.66	43.16	42.43	42.45	42.99	43.51	43.79	43.38
12	44.13	44.25	44.39	44.02	43.68	43.11	42.43	42.46	43.01	43.53	43.79	43.37
13	44.13	44.26	44.40	44.00	43.68	43.05	42.43	42.47	43.02	43.54	43.78	43.34
14	44.14	44.26	44.41	43.98	43.69	42.99	42.45	42.50	43.04	43.55	43.77	43.32
15	44.14	44.27	44.41	43.97	43.69	42.92	42.45	42.51	43.06	43.56	43.77	43.30
16	44.14	44.27	44.42	43.95	43.70	42.87	42.44	42.52	43.08	43.57	43.76	43.29
17	44.14	44.27	44.42	43.93	43.69	42.83	42.44	42.54	43.10	43.58	43.75	43.27
18	44.14	44.28	44.42	43.90	43.70	42.77	42.44	42.55	43.12	43.59	43.73	43.25
19	44.14	44.28	44.42	43.88	43.70	42.73	42.44	42.56	43.13	43.60	43.71	43.23
20	44.15	44.29	44.42	43.85	43.70	42.69	42.44	42.58	43.15	43.61	43.69	43.22
21	44.14	44.29	44.41	43.83	43.69	42.66	42.43	42.59	43.16	43.62	43.68	43.21
22	44.15	44.30	44.39	43.81	43.69	42.63	42.44	42.61	43.18	43.62	43.67	43.19
23	44.16	44.31	44.39	43.80	43.68	42.60	42.45	42.65	43.22	43.64	43.65	43.18
24	44.17	44.31	44.37	43.78	43.68	42.57	42.45	42.66	43.24	43.63	43.65	43.17
25	44.17	44.32	44.35	43.76	43.67	42.54	42.45	42.67	43.26	43.65	43.64	43.14
26	44.17	44.32	44.34	43.74	43.65	42.53	42.45	42.69	43.27	43.66	43.62	43.12
27	44.17	44.32	44.32	43.71	43.63	42.51	42.45	42.69	43.29	43.68	43.59	43.11
28	44.18	44.33	44.30	43.70	43.62	42.49	42.45	42.70	43.31	43.68	43.57	43.08
29	44.18	---	44.28	43.69	43.61	42.47	42.45	42.73	43.32	43.69	43.58	43.04
30	44.19	---	44.26	43.68	43.59	42.46	42.44	42.76	43.34	43.69	43.56	43.03
31	44.19	---	44.24	---	43.57	---	42.43	42.78	---	43.71	---	43.02
Max	44.19	44.33	44.42	44.22	43.70	43.55	42.45	42.78	43.34	43.71	43.79	43.54
Min	44.09	44.20	44.24	43.68	43.57	42.46	42.43	42.42	42.80	43.36	43.56	43.02

Year 2010 Statistics: **Year Max 44.42; Year Min 42.42**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 393211114320701
(Map ID 179)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
37
38
39
40
41
42
43
44
45
46
47
5,661
5,660
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1/1/10
2/1/10
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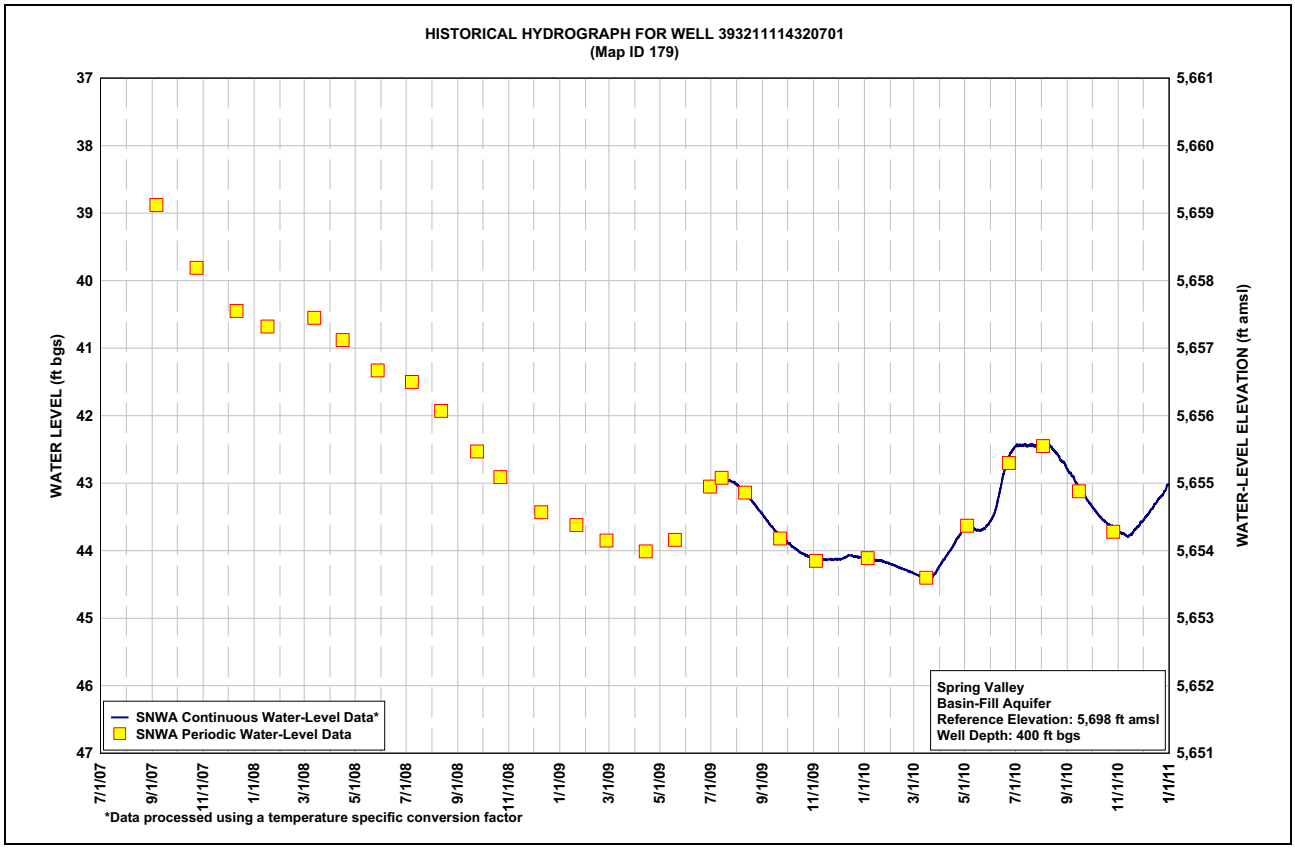
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,698 ft amsl
Well Depth: 400 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL 393211114320701
(Map ID 179)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
37
38
39
40
41
42
43
44
45
46
47
5,661
5,660
5,659
5,658
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7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
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5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,698 ft amsl
Well Depth: 400 ft bgs
*Data processed using a temperature specific conversion factor

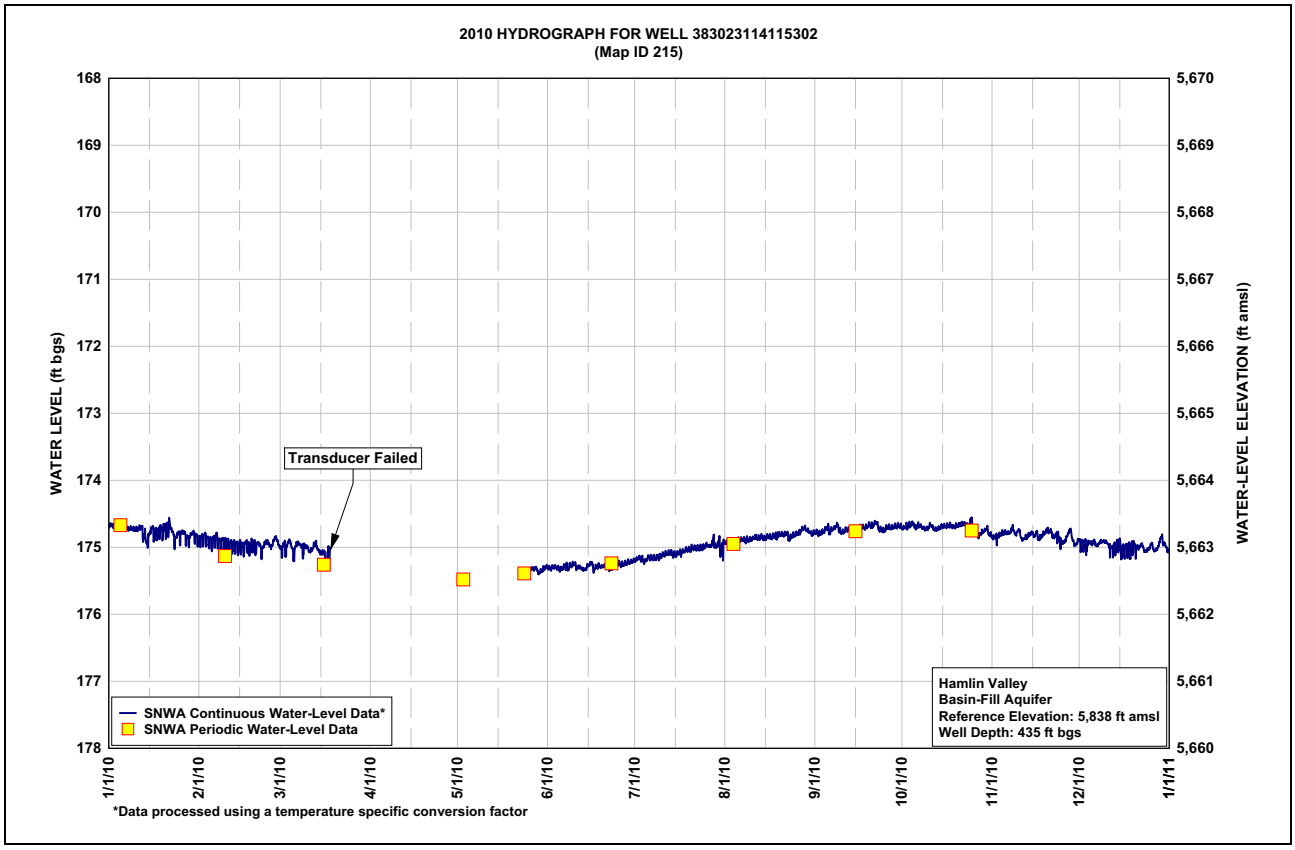
Table C-8
Well 383023114115302, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	174.67	174.87	175.04	[b]---	[b]---	175.49	175.19	174.93	174.78	174.71	174.84	174.90
2	174.68	174.85	175.00	[b]---	[b]---	175.48	175.16	174.93	174.80	174.69	174.84	174.89
3	174.70	174.86	174.97	[b]---	[b]---	175.46	175.18	174.93	174.77	174.68	174.81	174.92
4	174.68	174.89	174.94	[b]---	[b]---	175.47	175.20	174.91	174.74	174.65	174.78	174.88
5	174.68	174.92	175.10	[b]---	[b]---	175.48	175.16	174.90	174.72	174.69	174.77	174.88
6	174.69	174.87	174.97	[b]---	[b]---	175.44	175.16	174.89	174.76	174.68	174.77	174.89
7	174.72	174.88	174.95	[b]---	[b]---	175.42	175.16	174.89	174.72	174.69	174.74	174.91
8	174.72	174.93	175.03	[b]---	[b]---	175.42	175.16	174.89	174.68	174.71	174.74	174.86
9	174.73	174.90	175.00	[b]---	[b]---	175.38	175.15	174.89	174.74	174.72	174.76	174.86
10	174.73	174.92	175.01	[b]---	[b]---	175.37	175.12	174.87	174.78	174.68	174.76	174.87
11	174.72	174.95	175.05	[b]---	[b]---	175.40	175.10	174.86	174.75	174.70	174.86	174.94
12	174.76	174.95	174.98	[b]---	[b]---	175.40	175.09	174.86	174.74	174.73	174.84	174.95
13	174.85	174.97	174.97	[b]---	[b]---	175.41	175.09	174.85	174.73	174.72	174.80	174.92
14	174.89	174.98	175.07	[b]---	[b]---	175.38	175.11	174.86	174.72	174.70	174.77	174.87
15	174.75	174.97	175.08	[b]---	[b]---	175.32	175.11	174.85	174.73	174.68	174.80	174.96
16	174.79	174.99	175.17	[b]---	[b]---	175.34	175.08	174.84	174.71	174.68	174.78	174.97
17	174.78	174.99	175.13	[b]---	[b]---	175.35	175.07	174.84	174.70	174.68	174.83	174.94
18	174.74	175.03	[a]---	[b]---	[b]---	175.32	175.04	174.84	174.70	174.69	174.78	174.97
19	174.75	174.98	[b]---	[b]---	[b]---	175.32	175.03	174.81	174.67	174.69	174.74	174.92
20	174.72	174.99	[b]---	[b]---	[b]---	175.31	175.02	174.81	174.68	174.67	174.72	174.94
21	174.68	174.94	[b]---	[b]---	[b]---	175.30	175.01	174.81	174.65	174.65	174.76	174.93
22	174.72	175.01	[b]---	[b]---	[b]---	175.33	175.02	174.81	174.66	174.65	174.80	174.89
23	174.85	174.97	[b]---	[b]---	[b]---	175.30	175.01	174.86	174.74	174.68	174.80	174.97
24	174.82	174.92	[b]---	[b]---	[a]---	175.27	175.01	174.82	174.75	174.62	174.85	174.97
25	174.83	174.98	[b]---	[b]---	175.60	175.25	174.98	174.81	174.72	174.71	174.89	174.90
26	174.78	174.94	[b]---	[b]---	175.55	175.26	174.98	174.79	174.70	174.75	174.83	174.94
27	174.85	174.87	[b]---	[b]---	175.54	175.25	174.96	174.74	174.71	174.82	174.73	174.96
28	174.87	174.96	[b]---	[b]---	175.56	175.23	174.93	174.72	174.69	174.78	174.79	174.87
29	174.80	---	[b]---	[b]---	175.57	175.22	174.97	174.75	174.68	174.74	174.91	174.80
30	174.82	---	[b]---	[b]---	175.53	175.21	175.00	174.78	174.69	174.74	174.87	174.88
31	174.86	---	[b]---	---	175.49	---	174.97	174.79	---	174.80	---	174.96
Max	174.89	175.03	175.17	---	175.60	175.49	175.20	174.93	174.80	174.82	174.91	174.97
Min	174.67	174.85	174.94	---	175.49	175.21	174.93	174.72	174.65	174.62	174.72	174.80

Year 2010 Statistics: **Year Max** 175.60**; Year Min** 174.62

Note: Depth in ft bgs

[a]Insufficient data points to report a daily average
[b]No data available due to transducer malfunction


2010 HYDROGRAPH FOR WELL 383023114115302
(Map ID 215)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
168
169
170
171
172
173
174
175
176
177
178
5,670
5,669
5,668
5,667
5,666
5,665
5,664
5,663
5,662
5,661
5,660
Transducer Failed
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,838 ft amsl
Well Depth: 435 ft bgs
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
*Data processed using a temperature specific conversion factor

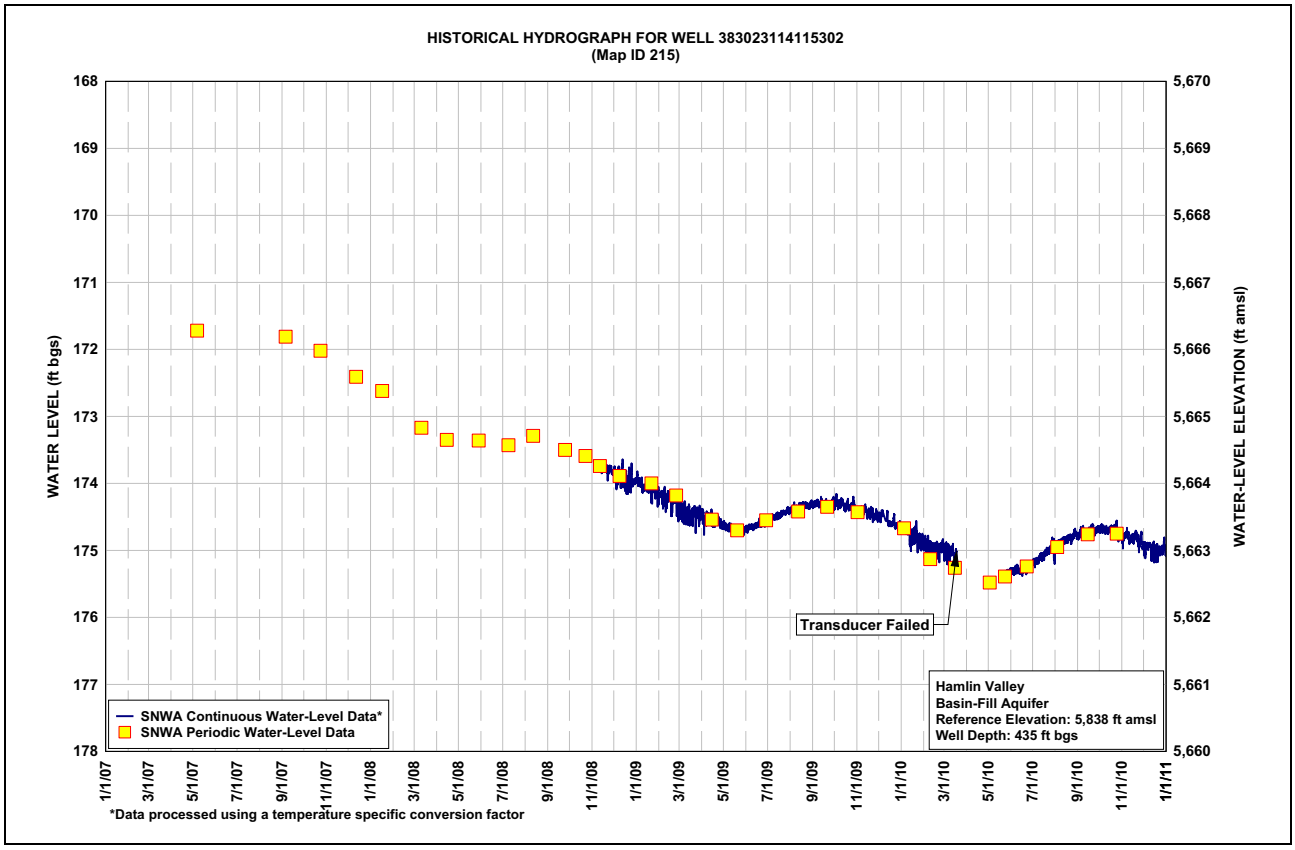
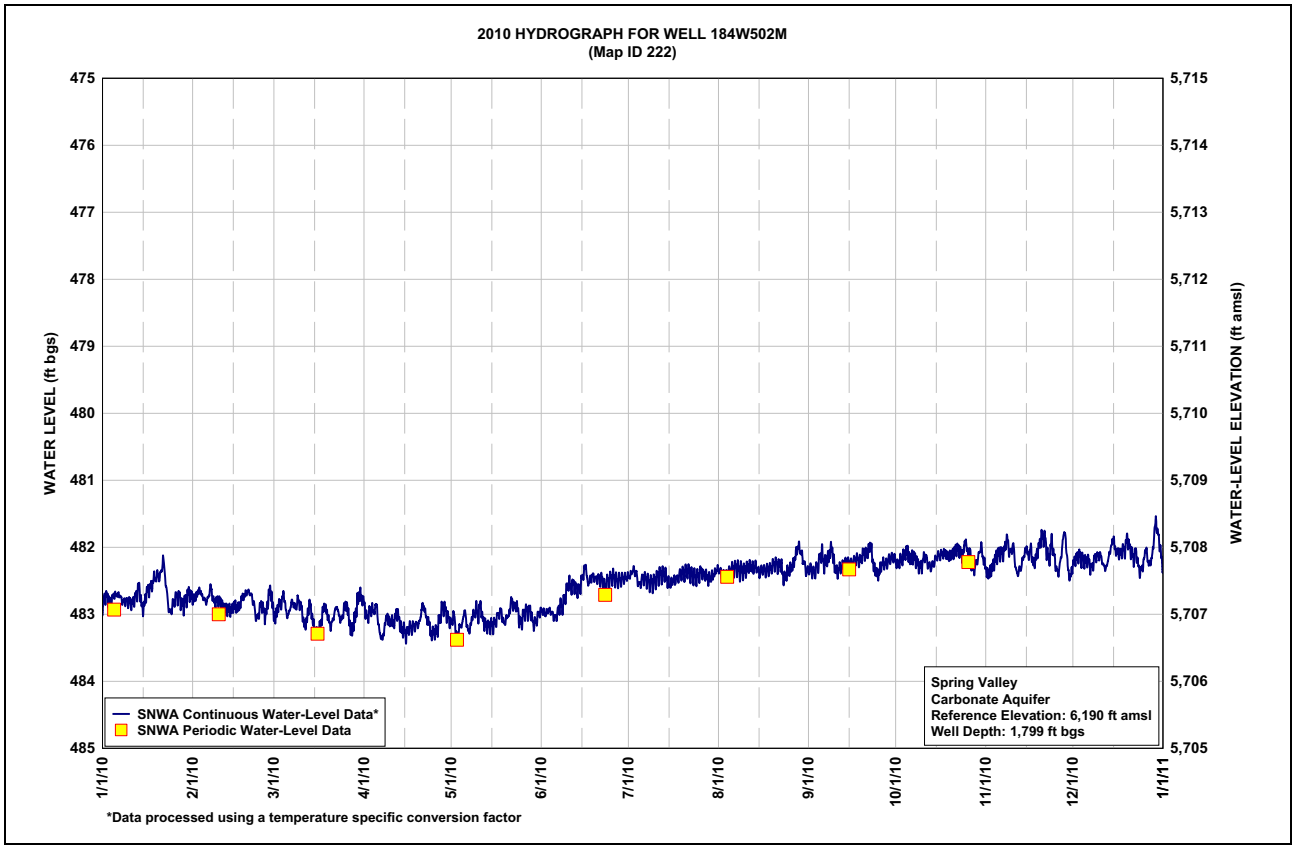

HISTORICAL HYDROGRAPH FOR WELL 383023114115302
(Map ID 215)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
168
169
170
171
172
173
174
175
176
177
178
5,670
5,669
5,668
5,667
5,666
5,665
5,664
5,663
5,662
5,661
5,660
Transducer Failed
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Hamlin Valley
Basin-Fill Aquifer
Reference Elevation: 5,838 ft amsl
Well Depth: 435 ft bgs
1/1/07
3/1/07
5/1/07
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
*Data processed using a temperature specific conversion factor

Table C-9
Well 184W502M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	482.79	482.76	483.03	482.94	483.07	482.96	482.42	482.35	482.32	482.24	482.38	482.21
2	482.74	482.71	482.89	483.02	483.18	482.99	482.35	482.40	482.36	482.21	482.37	482.15
3	482.80	482.66	482.83	482.93	483.26	482.95	482.39	482.41	482.34	482.16	482.28	482.14
4	482.75	482.74	482.76	482.95	483.17	482.97	482.53	482.38	482.24	482.08	482.16	482.18
5	482.71	482.81	482.99	482.96	482.99	483.03	482.50	482.33	482.11	482.12	482.09	482.20
6	482.71	482.73	482.93	483.27	483.17	482.99	482.45	482.32	482.24	482.16	482.08	482.22
7	482.77	482.65	482.84	483.33	483.20	482.88	482.49	482.31	482.17	482.16	482.02	482.29
8	482.82	482.81	482.89	483.10	483.02	482.85	482.53	482.35	482.06	482.23	481.92	482.17
9	482.81	482.79	482.81	483.09	482.94	482.69	482.52	482.36	482.14	482.28	482.06	482.12
10	482.82	482.81	482.92	483.11	482.97	482.55	482.48	482.33	482.34	482.19	482.03	482.13
11	482.82	482.88	483.13	483.09	482.97	482.58	482.42	482.29	482.33	482.16	482.33	482.26
12	482.72	482.91	483.03	483.00	483.13	482.58	482.41	482.30	482.28	482.27	482.35	482.29
13	482.62	482.92	482.88	483.16	483.17	482.63	482.41	482.30	482.23	482.28	482.24	482.12
14	482.85	482.93	483.11	483.23	483.17	482.57	482.51	482.34	482.21	482.21	482.08	481.94
15	482.83	482.87	483.27	483.29	483.16	482.40	482.55	482.36	482.24	482.13	482.09	482.00
16	482.65	482.90	483.23	483.21	483.09	482.36	482.50	482.34	482.22	482.11	482.06	482.08
17	482.60	482.83	483.06	483.20	482.99	482.51	482.48	482.35	482.18	482.09	482.22	482.08
18	482.49	482.74	482.90	483.17	483.01	482.45	482.42	482.33	482.20	482.11	482.12	482.04
19	482.45	482.68	483.02	483.15	483.11	482.46	482.38	482.28	482.13	482.13	481.96	481.91
20	482.43	482.68	483.16	483.03	483.02	482.46	482.37	482.25	482.09	482.10	481.85	482.00
21	482.29	482.76	483.05	482.89	482.86	482.47	482.36	482.27	482.06	482.05	481.91	482.12
22	482.41	482.95	482.91	483.05	482.87	482.55	482.41	482.28	482.02	482.03	482.12	482.10
23	482.80	483.03	483.03	483.16	482.89	482.55	482.43	482.45	482.28	482.09	481.98	482.26
24	482.95	482.88	483.04	483.28	483.07	482.48	482.45	482.40	482.38	482.03	482.12	482.34
25	482.83	482.95	482.88	483.26	483.07	482.44	482.40	482.34	482.35	482.01	482.34	482.17
26	482.74	482.93	482.97	483.18	482.97	482.47	482.39	482.28	482.24	482.09	482.26	482.12
27	482.75	482.69	483.21	482.99	482.95	482.49	482.41	482.13	482.25	482.33	481.94	482.23
28	482.84	482.84	483.13	482.90	482.99	482.48	482.46	482.01	482.20	482.27	481.92	482.03
29	482.80	---	482.90	483.00	483.13	482.46	482.45	482.09	482.16	482.14	482.35	481.68
30	482.70	---	482.72	483.10	483.07	482.45	482.40	482.24	482.17	482.04	482.37	481.86
31	482.73	---	482.78	---	482.98	---	482.34	482.35	---	482.23	---	482.16
Max	482.95	483.03	483.27	483.33	483.26	483.03	482.55	482.45	482.38	482.33	482.38	482.34
Min	482.29	482.65	482.72	482.89	482.86	482.36	482.34	482.01	482.02	482.01	481.85	481.68

Year 2010 Statistics: **Year Max 483.33; Year Min 481.68**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 184W502M
(Map ID 222)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
475
476
477
478
479
480
481
482
483
484
485
5,715
5,714
5,713
5,712
5,711
5,710
5,709
5,708
5,707
5,706
5,705
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,190 ft amsl
Well Depth: 1,799 ft bgs
*Data processed using a temperature specific conversion factor

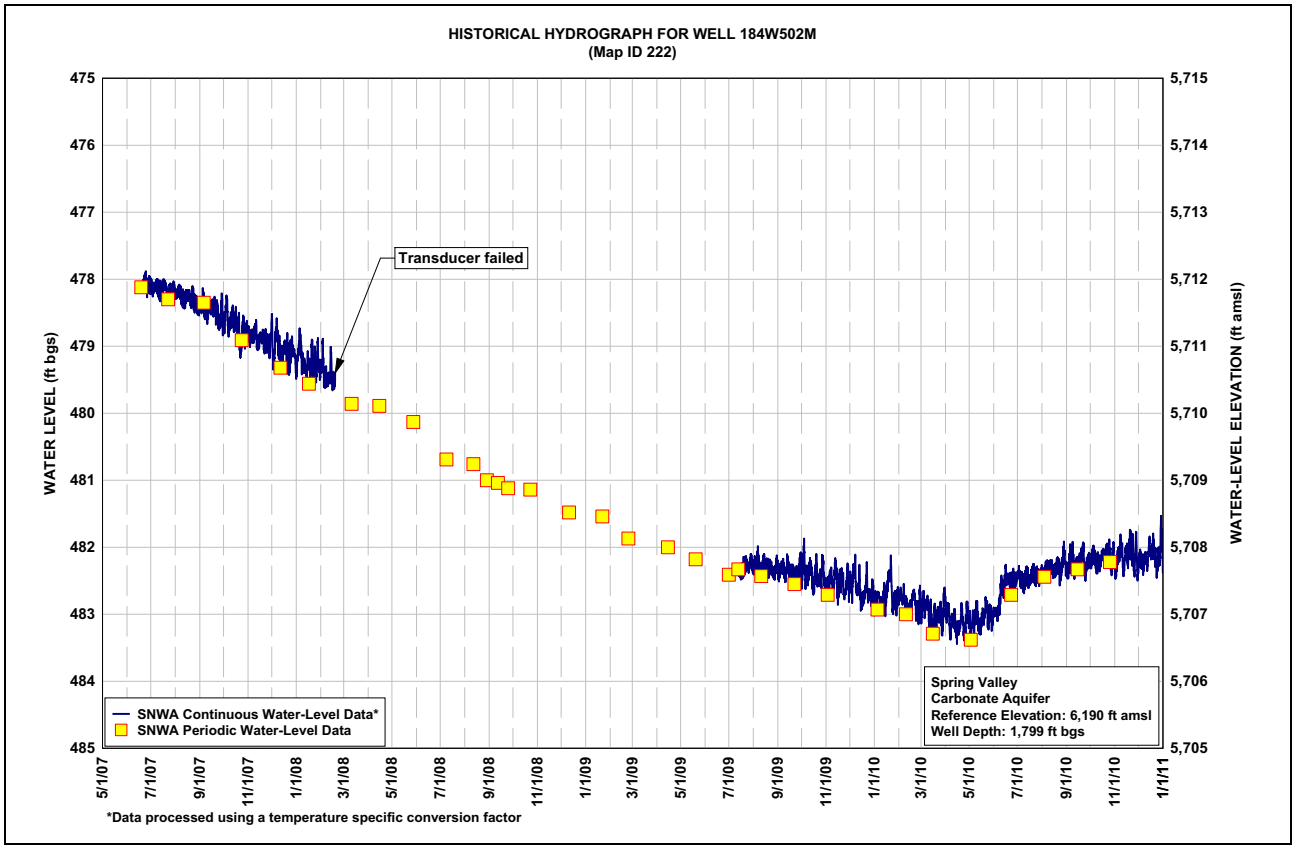
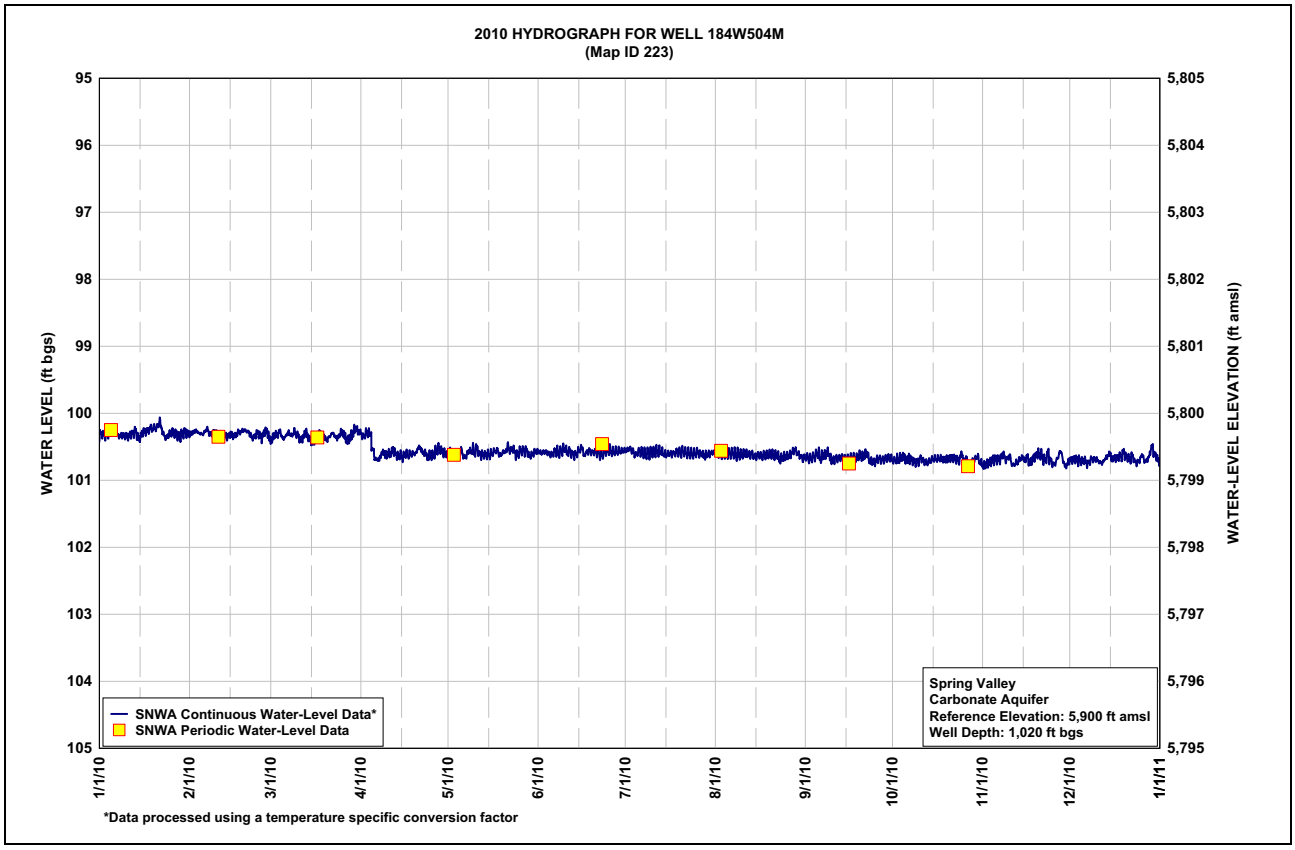

HISTORICAL HYDROGRAPH FOR WELL 184W502M
(Map ID 222)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
Transducer failed
475
476
477
478
479
480
481
482
483
484
485
5,715
5,714
5,713
5,712
5,711
5,710
5,709
5,708
5,707
5,706
5,705
5/1/07
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,190 ft amsl
Well Depth: 1,799 ft bgs
*Data processed using a temperature specific conversion factor

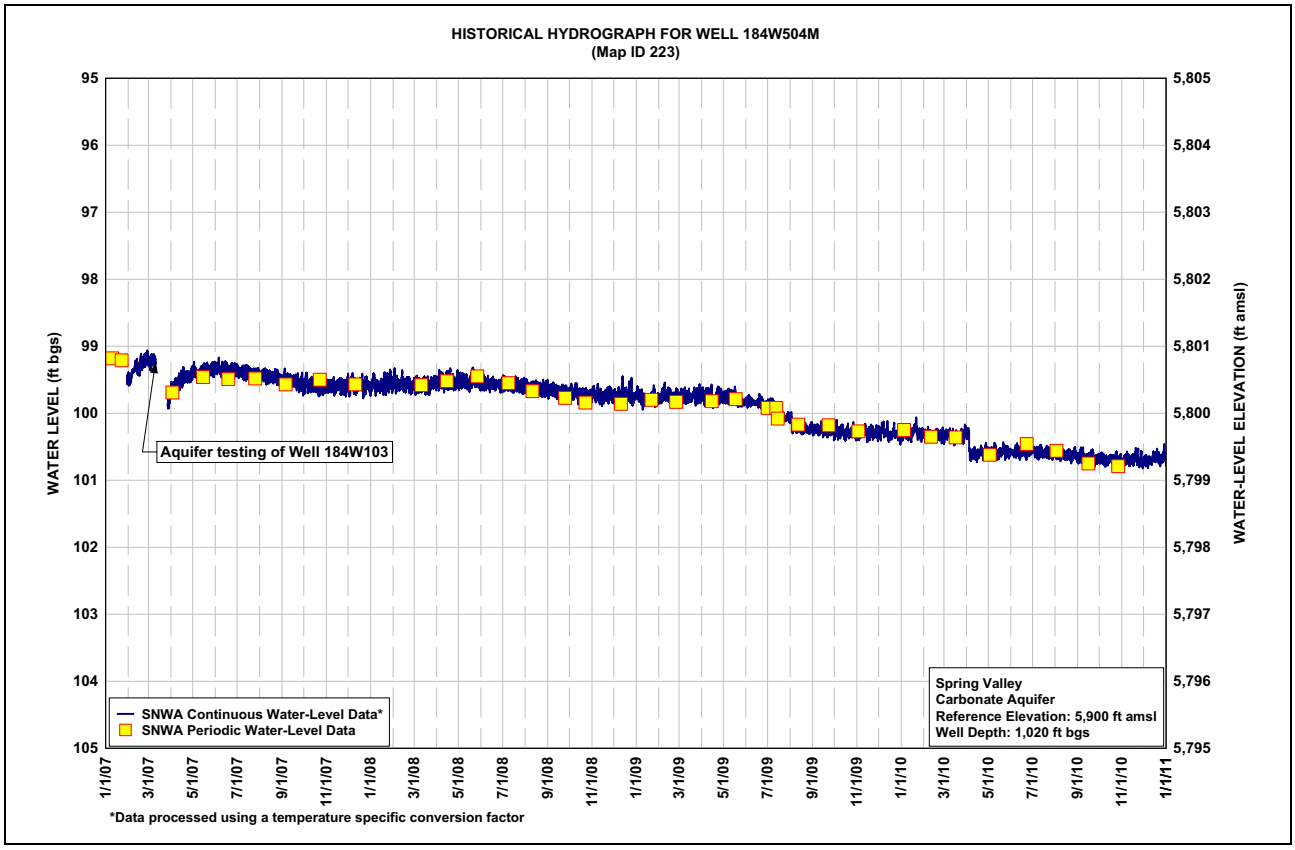
Table C-10
Well 184W504M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	100.31	100.30	100.38	100.33	100.57	100.59	100.57	100.60	100.65	100.71	100.78	100.70
2	100.32	100.28	100.32	100.31	100.65	100.59	100.54	100.62	100.68	100.69	100.76	100.69
3	100.34	100.27	100.31	100.30	100.63	100.58	100.58	100.62	100.66	100.68	100.73	100.70
4	100.31	100.30	100.30	100.40	100.61	100.59	100.62	100.61	100.63	100.65	100.70	100.70
5	100.31	100.31	100.37	100.60	100.55	100.61	100.59	100.60	100.61	100.69	100.68	100.71
6	100.31	100.27	100.32	100.69	100.65	100.59	100.59	100.60	100.66	100.68	100.68	100.72
7	100.33	100.27	100.30	100.67	100.62	100.57	100.61	100.61	100.63	100.69	100.65	100.73
8	100.34	100.31	100.32	100.59	100.57	100.58	100.61	100.62	100.59	100.72	100.64	100.69
9	100.34	100.29	100.30	100.61	100.55	100.55	100.61	100.62	100.65	100.72	100.68	100.69
10	100.34	100.30	100.34	100.60	100.56	100.55	100.60	100.61	100.70	100.68	100.67	100.69
11	100.33	100.33	100.39	100.58	100.58	100.58	100.58	100.60	100.68	100.70	100.77	100.73
12	100.30	100.33	100.33	100.57	100.62	100.60	100.59	100.62	100.67	100.73	100.74	100.73
13	100.28	100.34	100.32	100.63	100.62	100.62	100.59	100.61	100.66	100.72	100.71	100.67
14	100.37	100.33	100.39	100.63	100.62	100.59	100.63	100.64	100.66	100.70	100.67	100.62
15	100.32	100.32	100.42	100.65	100.62	100.54	100.63	100.63	100.67	100.68	100.69	100.67
16	100.27	100.33	100.39	100.61	100.59	100.57	100.61	100.63	100.66	100.68	100.68	100.67
17	100.26	100.30	100.33	100.62	100.56	100.59	100.62	100.64	100.66	100.68	100.73	100.66
18	100.22	100.28	100.31	100.61	100.59	100.57	100.59	100.64	100.67	100.69	100.68	100.64
19	100.22	100.26	100.36	100.60	100.60	100.58	100.59	100.61	100.64	100.69	100.63	100.59
20	100.22	100.26	100.39	100.55	100.57	100.58	100.59	100.62	100.65	100.68	100.61	100.65
21	100.15	100.29	100.33	100.53	100.51	100.58	100.59	100.63	100.62	100.67	100.64	100.68
22	100.24	100.35	100.31	100.59	100.55	100.61	100.61	100.64	100.63	100.67	100.69	100.64
23	100.35	100.35	100.36	100.62	100.55	100.60	100.62	100.69	100.71	100.69	100.62	100.72
24	100.34	100.30	100.34	100.63	100.61	100.58	100.62	100.66	100.72	100.64	100.70	100.72
25	100.30	100.35	100.29	100.63	100.58	100.57	100.61	100.65	100.70	100.68	100.76	100.66
26	100.29	100.31	100.35	100.60	100.56	100.59	100.62	100.63	100.68	100.70	100.70	100.68
27	100.30	100.27	100.40	100.54	100.56	100.59	100.62	100.58	100.69	100.77	100.60	100.70
28	100.33	100.36	100.35	100.54	100.60	100.58	100.64	100.56	100.68	100.72	100.66	100.62
29	100.31	---	100.28	100.58	100.63	100.58	100.63	100.61	100.67	100.69	100.78	100.53
30	100.28	---	100.24	100.60	100.60	100.58	100.62	100.65	100.68	100.68	100.74	100.63
31	100.30	---	100.28	---	100.57	---	100.60	100.67	---	100.74	---	100.70
Max	100.37	100.36	100.42	100.69	100.65	100.62	100.64	100.69	100.72	100.77	100.78	100.73
Min	100.15	100.26	100.24	100.30	100.51	100.54	100.54	100.56	100.59	100.64	100.60	100.53

Year 2010 Statistics: **Year Max 100.78; Year Min 100.15**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 184W504M
(Map ID 223)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
95
96
97
98
99
100
101
102
103
104
105
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 5,900 ft amsl
Well Depth: 1,020 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL 184W504M
(Map ID 223)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
95
96
97
98
99
100
101
102
103
104
105
5,805
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
1/1/07
3/1/07
5/1/07
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
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11/1/08
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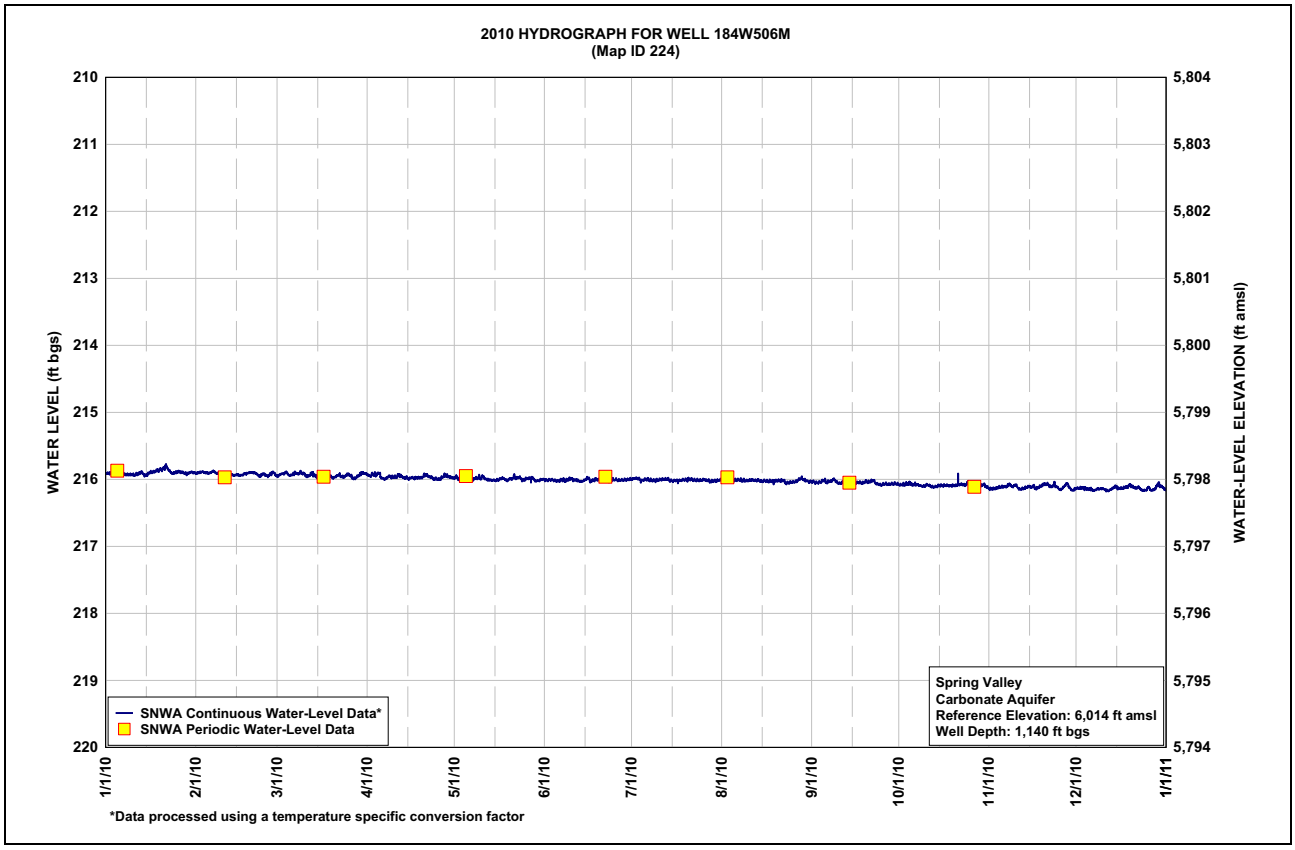
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
Aquifer testing of Well 184W103
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 5,900 ft amsl
Well Depth: 1,020 ft bgs
*Data processed using a temperature specific conversion factor

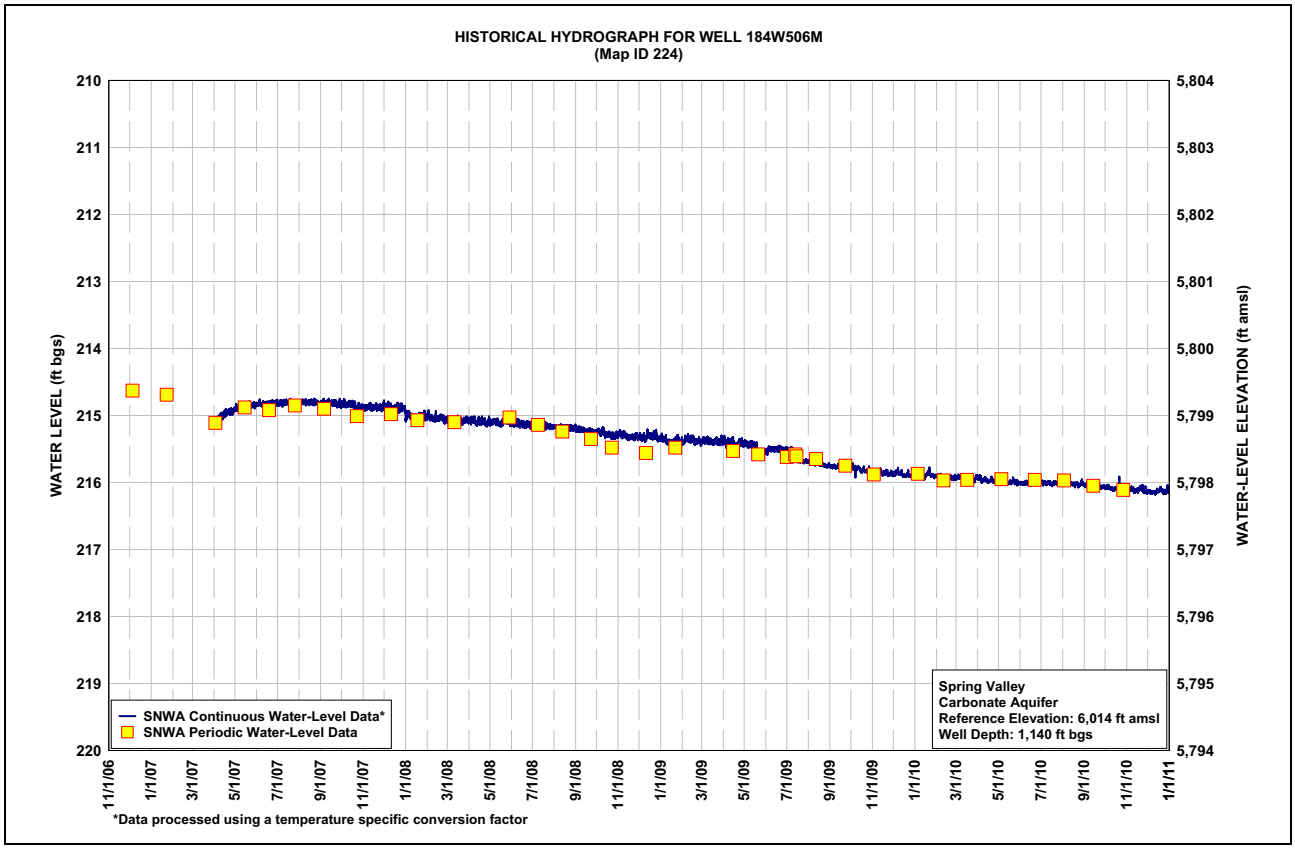
Table C-11
Well 184W506M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	215.91	215.91	215.94	215.94	215.97	216.01	216.00	216.01	216.04	216.08	216.14	216.13
2	215.91	215.89	215.92	215.93	216.00	216.01	215.98	216.02	216.05	216.08	216.14	216.13
3	215.92	215.89	215.91	215.93	216.00	216.00	215.99	216.02	216.04	216.07	216.13	216.13
4	215.91	215.90	215.91	215.92	215.99	216.01	216.01	216.02	216.03	216.06	216.12	216.14
5	215.91	215.91	215.94	215.94	215.97	216.02	216.00	216.01	216.02	216.08	216.11	216.14
6	215.91	215.89	215.92	215.99	216.01	216.01	216.00	216.01	216.04	216.08	216.11	216.15
7	215.92	215.89	215.91	215.99	216.00	216.01	216.01	216.01	216.03	216.08	216.09	216.16
8	215.93	215.91	215.91	215.95	215.98	216.01	216.01	216.02	216.00	216.10	216.09	216.14
9	215.93	215.91	215.90	215.97	215.97	216.00	216.01	216.02	216.03	216.10	216.10	216.14
10	215.93	215.91	215.92	215.96	215.97	216.00	216.01	216.02	216.06	216.09	216.09	216.14
11	215.93	215.92	215.95	215.95	215.98	216.01	216.00	216.01	216.05	216.09	216.14	216.16
12	215.91	215.93	215.93	215.94	216.00	216.02	216.00	216.01	216.05	216.11	216.14	216.16
13	215.90	215.93	215.92	215.97	216.01	216.03	216.00	216.01	216.05	216.11	216.13	216.14
14	215.94	215.94	215.96	215.98	216.01	216.02	216.02	216.02	216.05	216.10	216.11	216.11
15	215.92	215.93	215.98	215.99	216.01	215.99	216.02	216.02	216.05	216.09	216.12	216.13
16	215.90	215.94	215.97	215.98	216.00	216.00	216.02	216.02	216.05	216.09	216.11	216.13
17	215.89	215.93	215.95	215.98	215.99	216.02	216.02	216.03	216.05	216.09	216.13	216.13
18	215.87	215.91	215.94	215.98	216.00	216.00	216.01	216.03	216.05	216.09	216.11	216.12
19	215.86	215.90	215.96	215.97	216.01	216.01	216.01	216.02	216.04	216.09	216.09	216.09
20	215.85	215.90	215.97	215.95	215.99	216.01	216.00	216.02	216.04	216.09	216.07	216.11
21	215.81	215.91	215.95	215.94	215.96	216.01	216.00	216.02	216.03	216.07	216.08	216.13
22	215.84	215.94	215.94	215.96	215.98	216.02	216.01	216.03	216.03	216.08	216.11	216.12
23	215.90	215.94	215.96	215.98	215.98	216.02	216.01	216.05	216.07	216.09	216.08	216.15
24	215.91	215.92	215.95	215.99	216.01	216.01	216.02	216.05	216.08	216.06	216.11	216.16
25	215.90	215.94	215.93	216.00	216.00	216.00	216.01	216.04	216.07	216.08	216.15	216.14
26	215.89	215.93	215.95	215.98	215.98	216.01	216.01	216.03	216.07	216.09	216.13	216.14
27	215.90	215.90	215.98	215.95	215.98	216.01	216.02	216.01	216.07	216.12	216.08	216.16
28	215.92	215.93	215.96	215.95	216.00	216.01	216.03	215.99	216.07	216.11	216.10	216.12
29	215.91	---	215.93	215.97	216.02	216.00	216.02	216.01	216.07	216.09	216.16	216.07
30	215.89	---	215.90	215.98	216.01	216.00	216.02	216.03	216.07	216.09	216.15	216.11
31	215.90	---	215.92	---	216.00	---	216.01	216.04	---	216.12	---	216.14
Max	215.94	215.94	215.98	216.00	216.02	216.03	216.03	216.05	216.08	216.12	216.16	216.16
Min	215.81	215.89	215.90	215.92	215.96	215.99	215.98	215.99	216.00	216.06	216.07	216.07

Year 2010 Statistics: **Year Max 216.16; Year Min 215.81**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL 184W506M
(Map ID 224)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
210
211
212
213
214
215
216
217
218
219
220
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,014 ft amsl
Well Depth: 1,140 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL 184W506M
(Map ID 224)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
210
211
212
213
214
215
216
217
218
219
220
5,804
5,803
5,802
5,801
5,800
5,799
5,798
5,797
5,796
5,795
5,794
11/1/06
1/1/07
3/1/07
5/1/07
7/1/07
9/1/07
11/1/07
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5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,014 ft amsl
Well Depth: 1,140 ft bgs
*Data processed using a temperature specific conversion factor

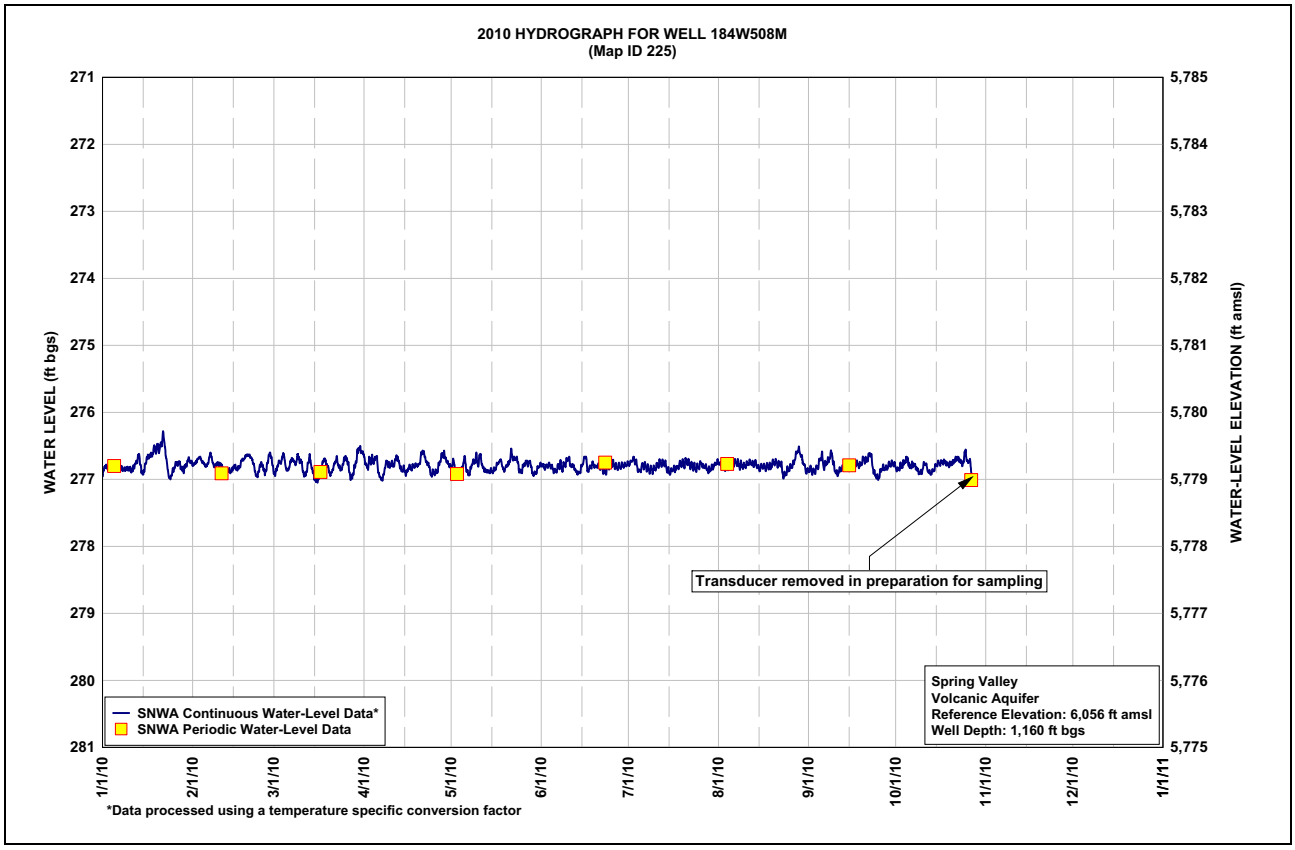
Table C-12
Well 184W508M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	276.85	276.77	276.89	276.74	276.77	276.79	276.76	276.77	276.85	276.85	[d]---	[d]---
2	276.81	276.72	276.78	276.78	276.88	276.82	276.70	276.81	276.88	276.82	[d]---	[d]---
3	276.86	276.68	276.73	276.71	276.92	276.79	276.74	276.83	276.86	276.78	[d]---	[d]---
4	276.81	276.74	276.68	276.72	276.85	276.82	276.86	276.80	276.77	276.71	[d]---	[d]---
5	276.77	276.80	276.85	276.74	276.72	276.87	276.83	276.76	276.68	276.76	[d]---	[d]---
6	276.77	276.72	276.78	276.96	276.87	276.84	276.79	276.76	276.79	276.79	[d]---	[d]---
7	276.82	276.67	276.71	276.97	276.88	276.79	276.83	276.76	276.74	276.79	[d]---	[d]---
8	276.85	276.79	276.75	276.78	276.75	276.82	276.86	276.79	276.65	276.86	[d]---	[d]---
9	276.84	276.77	276.68	276.78	276.70	276.75	276.85	276.80	276.73	276.90	[d]---	[d]---
10	276.85	276.79	276.77	276.77	276.73	276.71	276.82	276.79	276.89	276.82	[d]---	[d]---
11	276.84	276.84	276.92	276.75	276.74	276.80	276.77	276.75	276.88	276.79	[d]---	[d]---
12	276.76	276.86	276.83	276.69	276.85	276.84	276.76	276.76	276.84	276.89	[d]---	[d]---
13	276.68	276.87	276.72	276.81	276.88	276.90	276.77	276.77	276.80	276.89	[d]---	[d]---
14	276.86	276.86	276.90	276.85	276.88	276.86	276.86	276.81	276.78	276.83	[d]---	[d]---
15	276.84	276.81	277.01	276.90	276.87	276.74	276.89	276.83	276.81	276.77	[d]---	[d]---
16	276.68	276.84	276.97	276.83	276.81	276.73	276.85	276.81	276.80	276.75	[d]---	[d]---
17	276.64	276.78	276.83	276.82	276.74	276.84	276.84	276.82	276.76	276.74	[d]---	[d]---
18	276.58	276.70	276.72	276.80	276.77	276.79	276.79	276.81	276.79	276.76	[d]---	[d]---
19	276.55	276.65	276.81	276.79	276.84	276.80	276.76	276.77	276.73	276.78	[d]---	[d]---
20	276.54	276.65	276.91	276.69	276.78	276.80	276.76	276.75	276.71	276.75	[d]---	[d]---
21	276.42	276.71	276.82	276.61	276.65	276.80	276.75	276.77	276.68	276.71	[d]---	[d]---
22	276.52	276.87	276.71	276.74	276.69	276.87	276.79	276.78	276.66	276.69	[d]---	[d]---
23	276.85	276.92	276.81	276.83	276.70	276.86	276.82	276.93	276.88	276.74	[d]---	[d]---
24	276.96	276.78	276.82	276.91	276.85	276.80	276.83	276.89	276.96	276.69	[d]---	[d]---
25	276.85	276.85	276.69	276.90	276.84	276.77	276.80	276.84	276.93	276.68	[d]---	[d]---
26	276.77	276.82	276.77	276.83	276.77	276.80	276.79	276.79	276.83	276.75	[d]---	[d]---
27	276.77	276.64	276.95	276.69	276.76	276.82	276.81	276.67	276.84	[a]---	[d]---	[d]---
28	276.85	276.78	276.88	276.64	276.80	276.81	276.86	276.57	276.80	[d]---	[d]---	[d]---
29	276.81	---	276.68	276.73	276.92	276.79	276.84	276.65	276.77	[d]---	[d]---	[d]---
30	276.72	---	276.55	276.80	276.87	276.78	276.80	276.78	276.78	[d]---	[d]---	[d]---
31	276.75	---	276.61	---	276.79	---	276.75	276.88	---	[d]---	---	[d]---
Max	276.96	276.92	277.01	276.97	276.92	276.90	276.89	276.93	276.96	276.90		
Min	276.42	276.64	276.55	276.61	276.65	276.71	276.70	276.57	276.65	276.68		

Year 2010 Statistics: **Year Max 277.01; Year Min 276.42**

Note: Depth in ft bgs

[a]Insufficient data points to report a daily average
[d]Transducer removed in preparation for sampling


2010 HYDROGRAPH FOR WELL 184W508M
(Map ID 225)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
271
272
273
274
275
276
277
278
279
280
281
5,785
5,784
5,783
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
Transducer removed in preparation for sampling
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Volcanic Aquifer
Reference Elevation: 6,056 ft amsl
Well Depth: 1,160 ft bgs
*Data processed using a temperature specific conversion factor

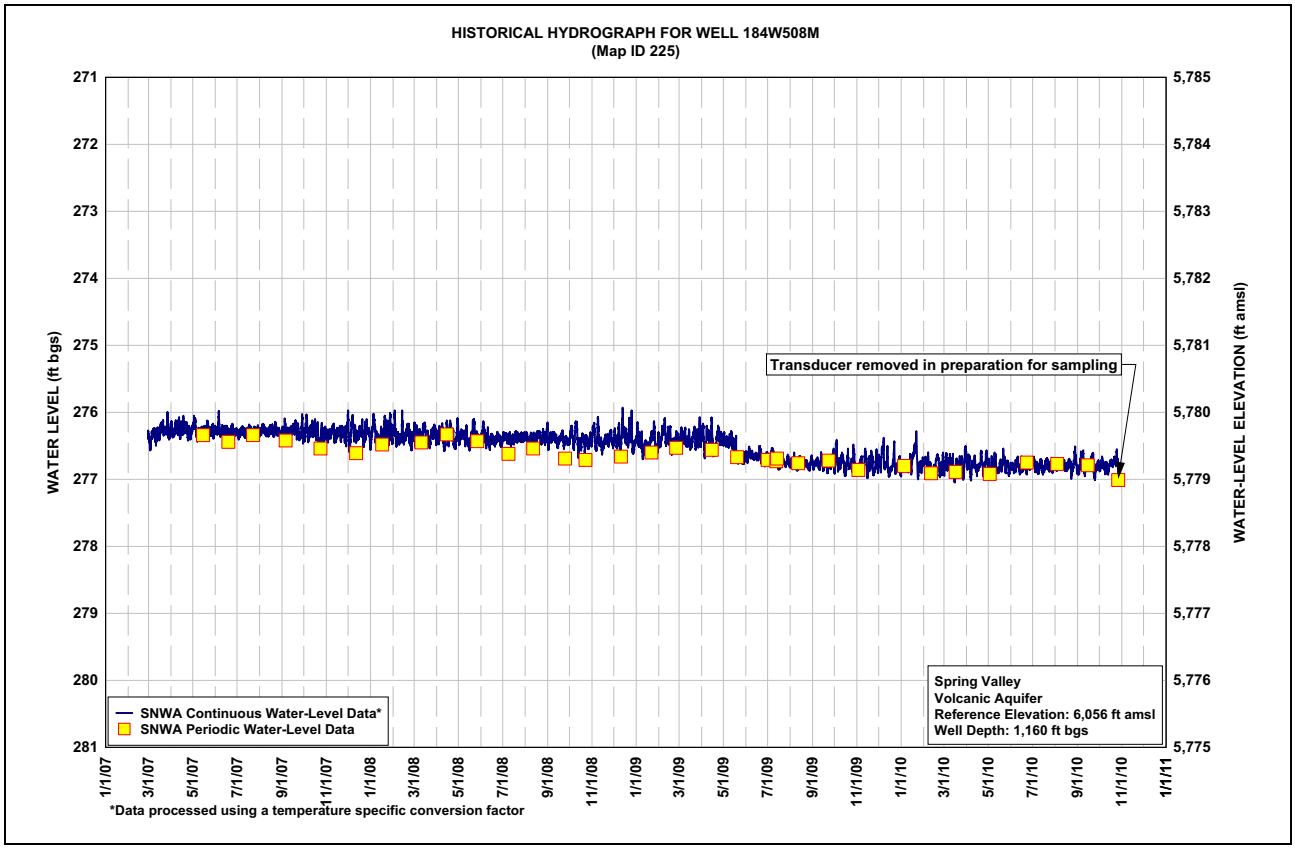
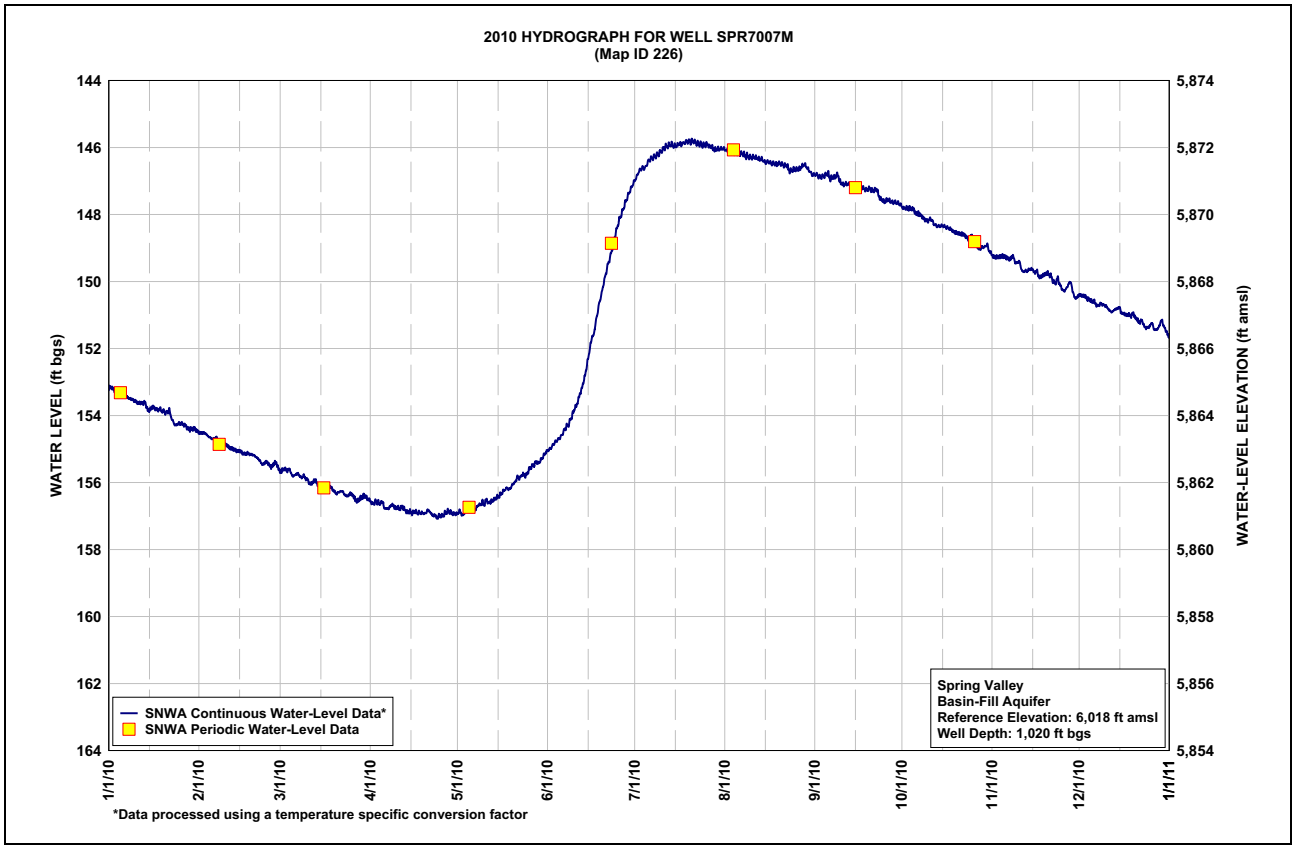

HISTORICAL HYDROGRAPH FOR WELL 184W508M
(Map ID 225)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
271
272
273
274
275
276
277
278
279
280
281
5,785
5,784
5,783
5,782
5,781
5,780
5,779
5,778
5,777
5,776
5,775
1/1/07
3/1/07
5/1/07
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
Transducer removed in preparation for sampling
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Volcanic Aquifer
Reference Elevation: 6,056 ft amsl
Well Depth: 1,160 ft bgs
*Data processed using a temperature specific conversion factor

Table C-13
Well SPR7007M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	153.16	154.52	155.65	156.60	156.88	155.02	146.91	146.08	146.81	147.80	149.25	150.41
2	153.20	154.52	155.60	156.60	156.95	154.93	146.72	146.13	146.87	147.81	149.27	150.43
3	153.28	154.55	155.63	156.59	156.90	154.81	146.63	146.17	146.87	147.83	149.27	150.48
4	153.29	154.64	155.67	156.62	156.84	154.73	146.60	146.17	146.83	147.83	149.24	150.54
5	153.33	154.69	155.80	156.66	156.76	154.64	146.45	146.16	146.79	147.93	149.26	150.59
6	153.38	154.67	155.76	156.78	156.84	154.49	146.34	146.18	146.92	147.98	149.31	150.64
7	153.46	154.72	155.78	156.75	156.77	154.34	146.29	146.21	146.89	148.03	149.31	150.71
8	153.51	154.82	155.84	156.67	156.67	154.22	146.24	146.26	146.84	148.12	149.31	150.67
9	153.54	154.83	155.84	156.74	156.62	154.00	146.17	146.29	146.96	148.18	149.44	150.71
10	153.59	154.88	155.93	156.76	156.60	153.77	146.08	146.29	147.09	148.15	149.45	150.76
11	153.63	154.95	156.03	156.76	156.58	153.56	145.99	146.30	147.09	148.20	149.68	150.86
12	153.63	154.99	155.97	156.77	156.57	153.28	145.95	146.33	147.10	148.32	149.69	150.90
13	153.64	155.03	155.99	156.87	156.52	152.96	145.92	146.35	147.10	148.35	149.67	150.83
14	153.82	155.06	156.13	156.87	156.45	152.54	145.95	146.41	147.12	148.34	149.63	150.79
15	153.79	155.08	156.19	156.91	156.39	152.05	145.95	146.44	147.18	148.35	149.71	150.90
16	153.76	155.14	156.17	156.87	156.30	151.66	145.90	146.45	147.19	148.39	149.72	150.97
17	153.81	155.13	156.13	156.90	156.21	151.29	145.88	146.48	147.20	148.43	149.86	150.99
18	153.81	155.15	156.15	156.91	156.18	150.81	145.84	146.50	147.26	148.49	149.82	151.01
19	153.87	155.18	156.26	156.92	156.13	150.41	145.82	146.48	147.24	148.54	149.78	150.97
20	153.91	155.22	156.32	156.87	156.02	150.00	145.83	146.49	147.27	148.57	149.78	151.09
21	153.87	155.30	156.28	156.88	155.87	149.61	145.82	146.53	147.27	148.58	149.88	151.19
22	154.04	155.41	156.28	156.97	155.85	149.29	145.88	146.56	147.30	148.61	150.03	151.18
23	154.24	155.43	156.38	157.00	155.77	148.93	145.90	146.69	147.51	148.70	149.95	151.33
24	154.27	155.40	156.38	157.01	155.78	148.56	145.93	146.67	147.59	148.68	150.11	151.38
25	154.24	155.50	156.35	156.99	155.65	148.23	145.92	146.66	147.59	148.75	150.26	151.31
26	154.26	155.48	156.46	156.95	155.53	147.98	145.95	146.65	147.58	148.83	150.22	151.35
27	154.31	155.43	156.54	156.88	155.45	147.73	145.99	146.57	147.63	149.01	150.07	151.44
28	154.40	155.59	156.48	156.88	155.41	147.49	146.05	146.53	147.64	148.99	150.17	151.34
29	154.40	---	156.42	156.93	155.36	147.28	146.05	146.62	147.66	148.96	150.46	151.20
30	154.40	---	156.43	156.93	155.23	147.09	146.05	146.73	147.72	148.97	150.45	151.40
31	154.47	---	156.51	---	155.10	---	146.04	146.81	---	149.14	---	151.57
Max	154.47	155.59	156.54	157.01	156.95	155.02	146.91	146.81	147.72	149.14	150.46	151.57
Min	153.16	154.52	155.60	156.59	155.10	147.09	145.82	146.08	146.79	147.80	149.24	150.41

Year 2010 Statistics: **Year Max 157.01; Year Min 145.82**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL SPR7007M
(Map ID 226)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
144
146
148
150
152
154
156
158
160
162
164
5,874
5,872
5,870
5,868
5,866
5,864
5,862
5,860
5,858
5,856
5,854
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,018 ft amsl
Well Depth: 1,020 ft bgs
*Data processed using a temperature specific conversion factor

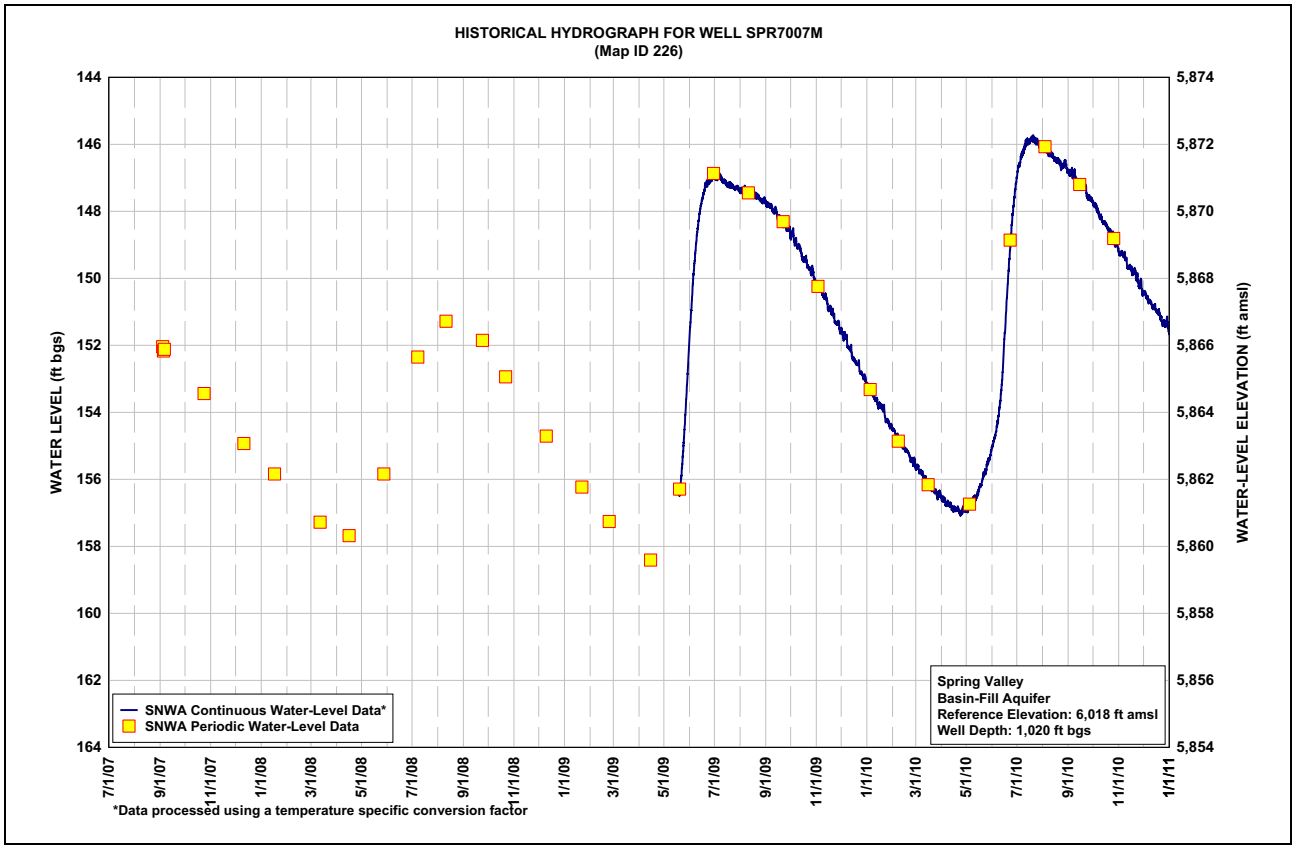

HISTORICAL HYDROGRAPH FOR WELL SPR7007M
(Map ID 226)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
144
146
148
150
152
154
156
158
160
162
164
5,874
5,872
5,870
5,868
5,866
5,864
5,862
5,860
5,858
5,856
5,854
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 6,018 ft amsl
Well Depth: 1,020 ft bgs
*Data processed using a temperature specific conversion factor

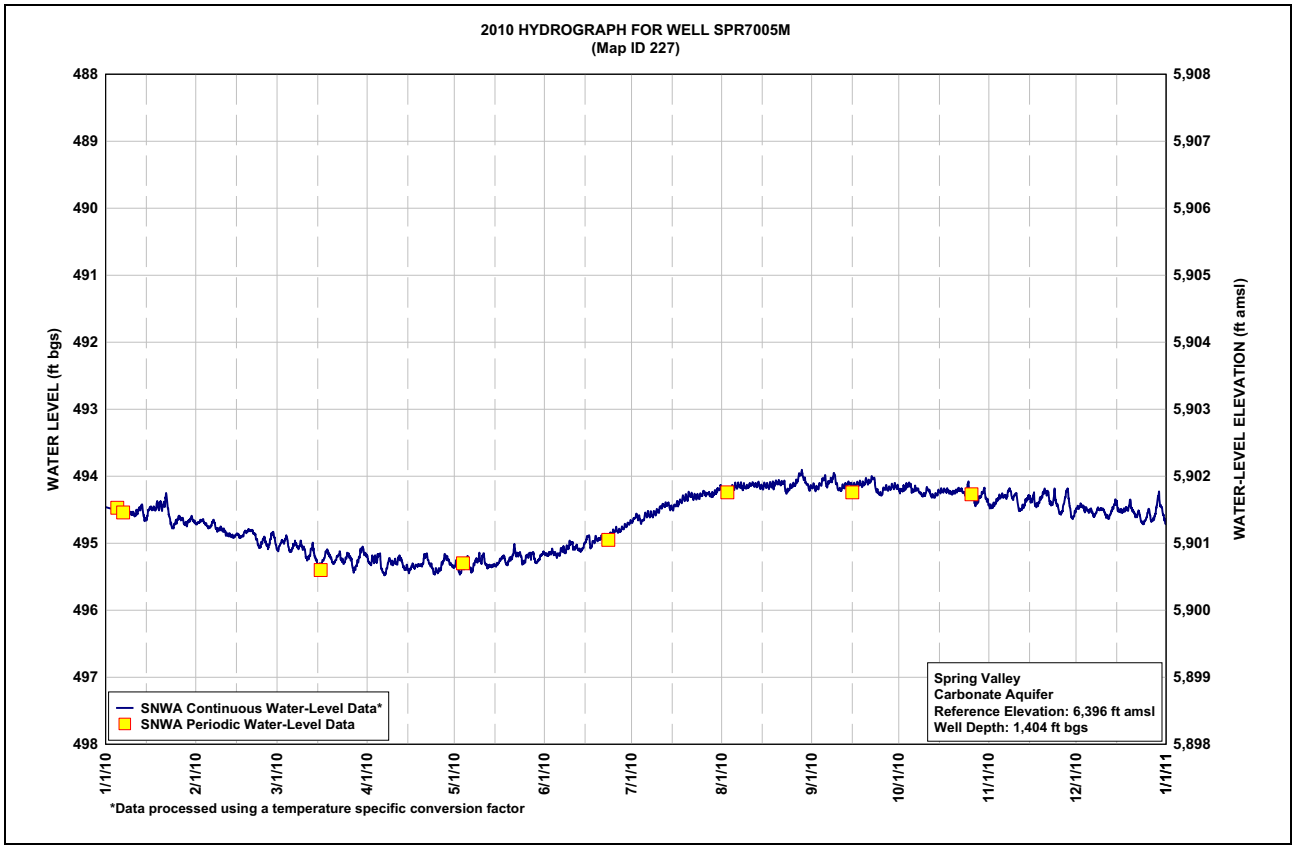
Table C-14
Well SPR7005M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	[b]---	494.70	495.08	495.26	495.31	495.16	494.66	494.20	494.15	494.21	494.45	494.47
2	[b]---	494.68	494.98	495.27	495.40	495.16	494.60	494.21	494.18	494.19	494.44	494.45
3	[b]---	494.66	494.97	495.24	495.40	495.13	494.62	494.22	494.15	494.16	494.38	494.47
4	[b]---	494.72	494.95	495.23	495.36	495.15	494.67	494.19	494.09	494.13	494.32	494.49
5	[b]---	494.76	495.11	495.24	495.25	495.18	494.61	494.16	494.04	494.19	494.29	494.51
6	[b]---	494.71	495.05	495.43	495.38	495.13	494.57	494.15	494.13	494.20	494.30	494.53
7	494.55	494.71	495.01	495.42	495.36	495.10	494.58	494.14	494.07	494.20	494.26	494.58
8	494.54	494.80	495.05	495.26	495.26	495.10	494.57	494.16	494.00	494.26	494.24	494.50
9	494.55	494.78	495.03	495.29	495.23	495.04	494.54	494.16	494.10	494.28	494.31	494.49
10	494.56	494.81	495.11	495.28	495.24	495.01	494.50	494.14	494.20	494.22	494.30	494.51
11	494.56	494.86	495.22	495.27	495.25	495.07	494.45	494.12	494.17	494.23	494.49	494.59
12	494.50	494.87	495.14	495.23	495.34	495.07	494.43	494.13	494.14	494.29	494.47	494.60
13	494.47	494.89	495.09	495.34	495.34	495.10	494.42	494.12	494.12	494.29	494.40	494.49
14	494.63	494.89	495.26	495.37	495.33	495.05	494.47	494.16	494.12	494.25	494.32	494.40
15	494.56	494.87	495.32	495.41	495.32	494.94	494.47	494.15	494.14	494.22	494.35	494.49
16	494.48	494.90	495.28	495.34	495.27	494.95	494.41	494.14	494.13	494.22	494.33	494.52
17	494.48	494.87	495.18	495.35	495.22	495.01	494.39	494.14	494.11	494.21	494.43	494.51
18	494.44	494.83	495.13	495.33	495.25	494.94	494.34	494.13	494.13	494.23	494.36	494.49
19	494.44	494.81	495.22	495.33	495.29	494.94	494.32	494.11	494.08	494.25	494.28	494.41
20	494.45	494.82	495.29	495.25	495.23	494.92	494.30	494.09	494.09	494.23	494.23	494.51
21	494.36	494.89	495.22	495.19	495.12	494.91	494.28	494.11	494.05	494.21	494.29	494.58
22	494.48	495.02	495.17	495.30	495.16	494.95	494.31	494.12	494.06	494.21	494.41	494.55
23	494.70	495.02	495.26	495.38	495.17	494.91	494.31	494.23	494.22	494.25	494.30	494.67
24	494.74	494.94	495.25	495.42	495.27	494.84	494.31	494.18	494.26	494.19	494.43	494.68
25	494.66	495.02	495.17	495.41	495.24	494.81	494.26	494.14	494.23	494.23	494.55	494.57
26	494.62	494.99	495.25	495.35	495.18	494.82	494.26	494.11	494.17	494.27	494.47	494.58
27	494.65	494.85	495.39	495.23	495.17	494.80	494.26	494.02	494.19	494.41	494.27	494.65
28	494.71	495.00	495.31	495.22	495.21	494.76	494.28	493.96	494.16	494.35	494.33	494.50
29	494.68	---	495.17	495.29	495.28	494.73	494.25	494.04	494.15	494.27	494.59	494.33
30	494.63	---	495.10	495.34	495.21	494.69	494.22	494.12	494.17	494.24	494.56	494.48
31	494.68	---	495.17	---	495.15	---	494.18	494.18	---	494.37	---	494.65
Max	494.74	495.02	495.39	495.43	495.40	495.18	494.67	494.23	494.26	494.41	494.59	494.68
Min	494.36	494.66	494.95	495.19	495.12	494.69	494.18	493.96	494.00	494.13	494.23	494.33

Year 2010 Statistics: **Year Max 495.43; Year Min 493.96**

Note: Depth in ft bgs

[b]No data available due to transducer malfunction


2010 HYDROGRAPH FOR WELL SPR7005M
(Map ID 227)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
488
489
490
491
492
493
494
495
496
497
498
5,908
5,907
5,906
5,905
5,904
5,903
5,902
5,901
5,900
5,899
5,898
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,396 ft amsl
Well Depth: 1,404 ft bgs
*Data processed using a temperature specific conversion factor

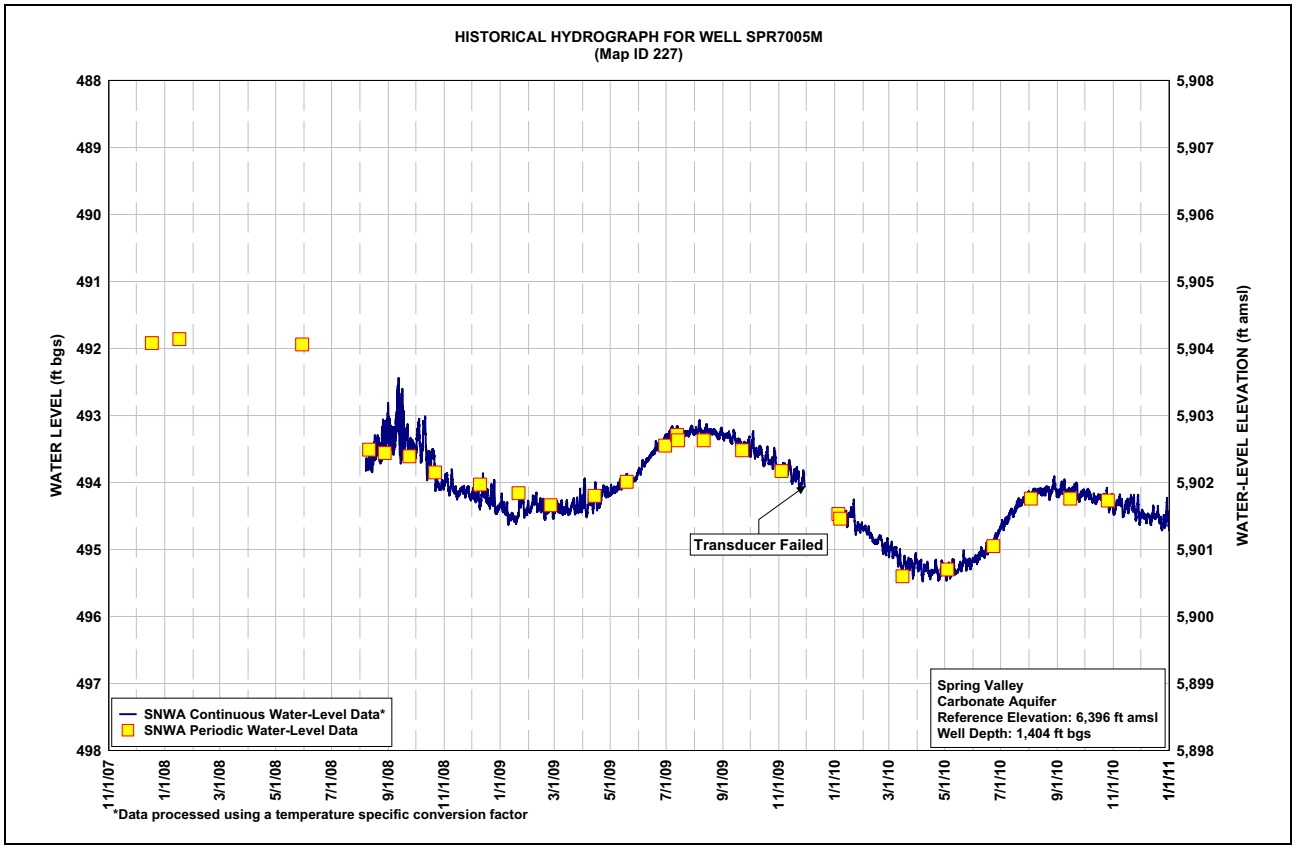
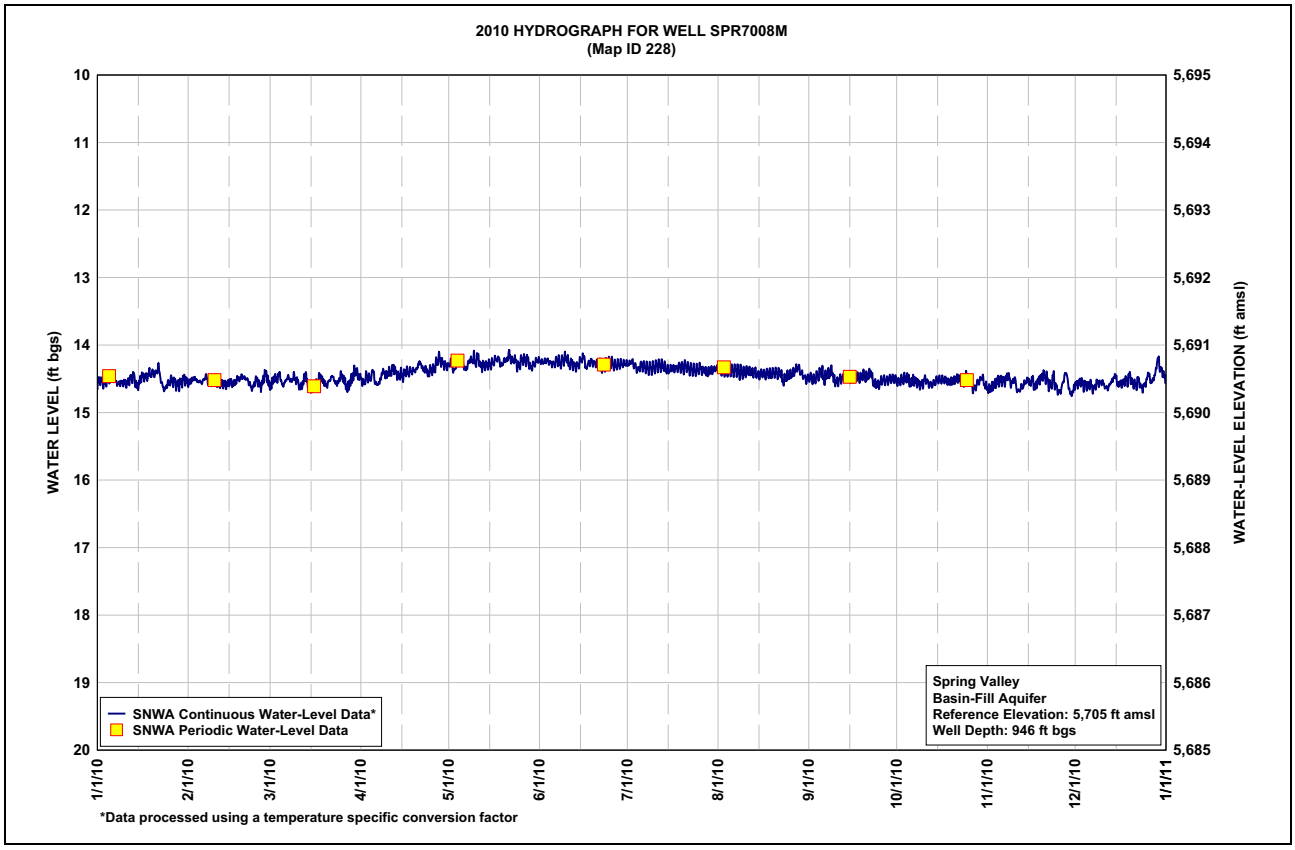

HISTORICAL HYDROGRAPH FOR WELL SPR7005M
(Map ID 227)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
488
489
490
491
492
493
494
495
496
497
498
5,908
5,907
5,906
5,905
5,904
5,903
5,902
5,901
5,900
5,899
5,898
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
Transducer Failed
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Carbonate Aquifer
Reference Elevation: 6,396 ft amsl
Well Depth: 1,404 ft bgs
*Data processed using a temperature specific conversion factor

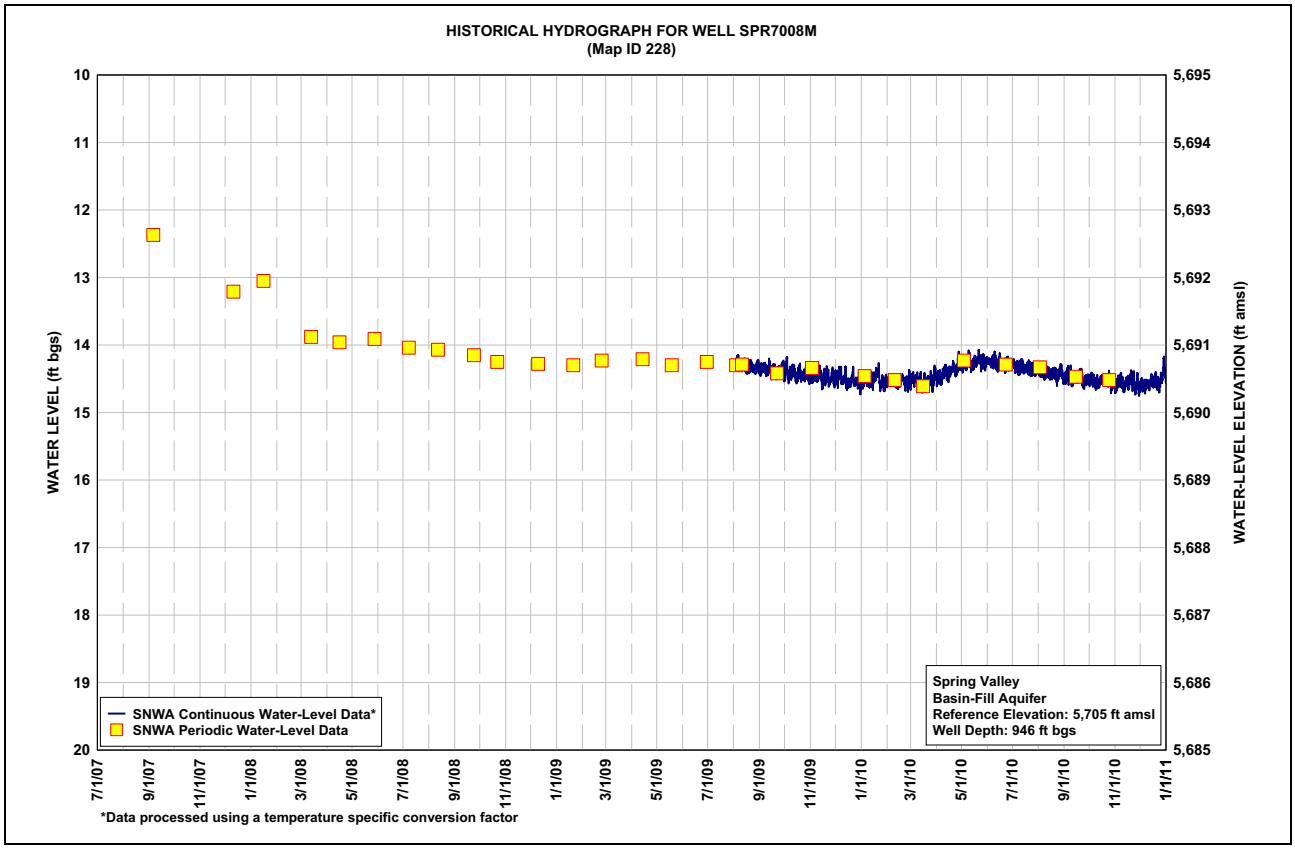
Table C-15
Well SPR7008M, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	14.53	14.55	14.58	14.53	14.27	14.25	14.28	14.37	14.48	14.55	14.65	14.58
2	14.53	14.51	14.50	14.51	14.35	14.25	14.25	14.39	14.51	14.52	14.62	14.56
3	14.57	14.51	14.49	14.49	14.31	14.23	14.30	14.40	14.48	14.51	14.58	14.57
4	14.54	14.54	14.48	14.47	14.29	14.25	14.35	14.39	14.44	14.49	14.54	14.59
5	14.53	14.55	14.59	14.46	14.21	14.28	14.31	14.38	14.41	14.54	14.52	14.60
6	14.53	14.51	14.52	14.57	14.34	14.25	14.31	14.38	14.49	14.53	14.53	14.60
7	14.56	14.51	14.49	14.53	14.30	14.24	14.33	14.38	14.43	14.54	14.49	14.63
8	14.57	14.57	14.52	14.40	14.22	14.25	14.34	14.41	14.40	14.57	14.49	14.56
9	14.56	14.55	14.49	14.44	14.21	14.21	14.34	14.41	14.49	14.58	14.55	14.56
10	14.56	14.55	14.55	14.41	14.23	14.22	14.32	14.40	14.54	14.52	14.54	14.57
11	14.55	14.58	14.61	14.38	14.25	14.28	14.30	14.39	14.51	14.54	14.67	14.63
12	14.49	14.57	14.52	14.36	14.30	14.29	14.31	14.41	14.49	14.59	14.64	14.62
13	14.48	14.58	14.51	14.44	14.30	14.31	14.32	14.40	14.48	14.57	14.58	14.54
14	14.60	14.57	14.61	14.43	14.29	14.27	14.37	14.44	14.48	14.54	14.53	14.47
15	14.54	14.55	14.64	14.45	14.28	14.20	14.37	14.43	14.50	14.52	14.56	14.56
16	14.46	14.57	14.59	14.39	14.24	14.25	14.35	14.43	14.49	14.52	14.53	14.57
17	14.47	14.53	14.52	14.40	14.21	14.29	14.35	14.43	14.47	14.52	14.61	14.55
18	14.43	14.50	14.49	14.39	14.25	14.25	14.32	14.43	14.49	14.54	14.53	14.53
19	14.43	14.48	14.55	14.38	14.27	14.27	14.32	14.42	14.45	14.54	14.48	14.47
20	14.43	14.49	14.59	14.31	14.23	14.27	14.33	14.41	14.47	14.53	14.47	14.55
21	14.36	14.54	14.51	14.29	14.15	14.28	14.32	14.42	14.44	14.50	14.51	14.58
22	14.47	14.62	14.48	14.36	14.22	14.32	14.36	14.44	14.46	14.50	14.59	14.53
23	14.62	14.59	14.56	14.38	14.22	14.30	14.37	14.52	14.57	14.53	14.50	14.62
24	14.62	14.52	14.53	14.39	14.29	14.27	14.37	14.47	14.58	14.47	14.62	14.61
25	14.56	14.59	14.47	14.37	14.26	14.26	14.35	14.45	14.55	14.54	14.69	14.50
26	14.53	14.54	14.54	14.31	14.22	14.30	14.37	14.42	14.51	14.55	14.61	14.49
27	14.55	14.44	14.62	14.21	14.22	14.29	14.38	14.37	14.53	14.65	14.45	14.52
28	14.58	14.55	14.54	14.24	14.27	14.29	14.40	14.34	14.51	14.58	14.54	14.38
29	14.55	---	14.44	14.29	14.32	14.28	14.39	14.42	14.50	14.52	14.71	14.25
30	14.50	---	14.41	14.31	14.27	14.28	14.37	14.47	14.51	14.51	14.65	14.38
31	14.53	---	14.47	---	14.23	---	14.35	14.50	---	14.61	---	14.47
Max	14.62	14.62	14.64	14.57	14.35	14.32	14.40	14.52	14.58	14.65	14.71	14.63
Min	14.36	14.44	14.41	14.21	14.15	14.20	14.25	14.34	14.40	14.47	14.45	14.25

Year 2010 Statistics: **Year Max 14.71; Year Min 14.15**

Note: Depth in ft bgs


2010 HYDROGRAPH FOR WELL SPR7008M
(Map ID 228)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
10
11
12
13
14
15
16
17
18
19
20
5,695
5,694
5,693
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,705 ft amsl
Well Depth: 946 ft bgs
*Data processed using a temperature specific conversion factor


HISTORICAL HYDROGRAPH FOR WELL SPR7008M
(Map ID 228)
WATER LEVEL (ft bgs)
WATER-LEVEL ELEVATION (ft amsl)
10
11
12
13
14
15
16
17
18
19
20
5,695
5,694
5,693
5,692
5,691
5,690
5,689
5,688
5,687
5,686
5,685
7/1/07
9/1/07
11/1/07
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
Spring Valley
Basin-Fill Aquifer
Reference Elevation: 5,705 ft amsl
Well Depth: 946 ft bgs
*Data processed using a temperature specific conversion factor

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Appendix D

Spring-Monitoring Program Hydrologic and Field Chemistry Data

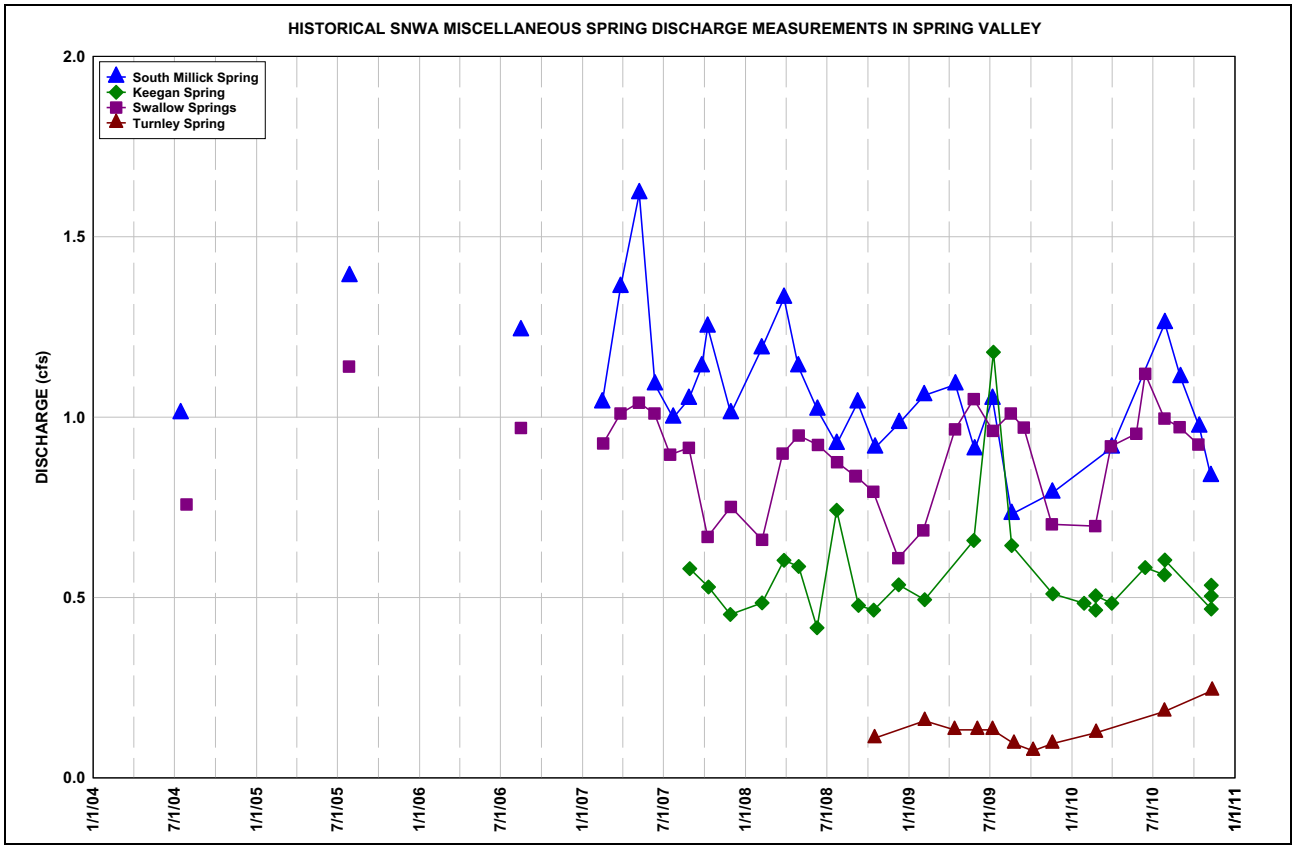
Table D-1
Spring Valley Miscellaneous Discharge Data
(Page 1 of 2)

Spring Number	Spring Name	Date	Time	Discharge[a] (gpm)	Discharge[a] (cfs)	Measurement Rated as: (E, G, F, P)[b]	Method[c]	Water Temp. (°C)	Electrical Conductivity	pH	Remarks	Data Source
1845501	Willow Spring	3/30/2010	10:15	4.9	0.011	E	F	9.8	459	7.60	---	SNWA
		6/14/2010	09:00	1.8	0.004	G	F	---	---	---	---	SNWA
		8/31/2010	17:30	1.8	0.004	G	F	---	---	---	---	SNWA
		10/12/2010	17:25	4.0	0.009	E	F	12.0	---	---	---	SNWA
		10/12/2010	17:40	4.0	0.009	E	F	12.0	---	---	---	SNWA
		11/9/2010	09:56	4.0	0.009	E	F	9.4	493	7.02	---	SNWA
1845702	South Millick Spring	3/31/2010	14:56	410.7	0.0915	P	C	7.1	359	7.49	---	SNWA
		7/28/2010	12:23	565.5	1.26	P	C	14.3	425	7.32	---	SNWA
		9/1/2010	09:20	498.2	1.11	P	C	11.0	394	6.75	---	SNWA
		10/13/2010	11:49	436.7	0.0973	P	C	13.6	386	7.55	---	SNWA
		11/8/2010	16:00	375.2	0.836	P	C	11.7	475	7.23	---	SNWA
1845901	Layton Spring	6/18/2010	13:20	0.0	0.000	G	---	---	---	---	Dry	SNWA
		7/27/2010	14:55	0.0	0.000	E	---	---	---	---	Dry	SNWA
		11/10/2010	16:45	0.0	0.000	E	---	---	---	---	Dry	SNWA
1846201	Swallow Springs	2/22/2010	16:10	313.3	0.698	P	M	9.9	390	8.09	Sum of all channels.	SNWA
		3/29/2010	15:55	412.5	0.0919	P	M	10.09	384	7.81	Sum of all channels.	SNWA
		5/25/2010	09:30	428.2	0.0954	F	M	8.5	348	7.74	Sum of all channels.	SNWA
		6/14/2010	11:50	502.7	1.12	E	F	---	---	---	Sum of all channels.	SNWA
		7/27/2010	17:07	447.0	0.0996	G	M	8.9	338	7.42	Sum of all channels.	SNWA
		8/30/2010	15:15	436.3	0.0972	F	M	---	---	---	Sum of all channels.	SNWA
		10/11/2010	16:50	414.7	0.0924	P	O	---	---	---	Sum of all channels.	SNWA
1847101	Keegan Spring	1/28/2010	12:15	217.2	0.484	E	F	---	---	---	---	SNWA
		2/23/2010	10:00	208.7	0.465	E	F	11.5	51	6.60	---	SNWA
		2/23/2010	16:00	226.7	0.505	P	C	10.7	88.4	7.28	---	SNWA
		3/31/2010	10:24	217.2	0.484	E	F	7.0	80.2	6.70	---	SNWA
		6/14/2010	19:40	261.7	0.583	G	F	---	---	---	---	SNWA
		7/27/2010	10:40	252.7	0.563	P	C	13.7	74	6.50	---	SNWA
		7/28/2010	10:15	271.1	0.604	E	F	---	---	---	---	SNWA
		11/9/2010	12:15	226.2	0.504	E	F	---	---	---	---	SNWA
		11/9/2010	12:30	210.1	0.468	P	C	---	---	---	---	SNWA
		11/9/2010	12:50	239.7	0.534	F	C	11.2	87.4	7.16	---	SNWA

Table D-1
Spring Valley Miscellaneous Discharge Data
(Page 2 of 2)

Spring Number	Spring Name	Date	Time	Discharge[a] (gpm)	Discharge[a] (cfs)	Measurement Rated as: (E, G, F, P)[b]	Method[c]	Water Temp. (°C)	Electrical Conductivity	pH	Remarks	Data Source
1847201	Minerva Spring	2/22/2010	15:02	373.9	0.833	P	C	9.7	379	8.11	Middle channel only. The north and south channels are dry.	SNWA
		3/29/2010	13:48	331.7	0.739	P	C	11.9	335	7.76	Middle channel only. The north and south channels are dry.	SNWA
		7/26/2010	16:28	1167.0	2.60	P	M	15.2	324	7.81	Sum of all channels.	SNWA
		9/1/2010	12:25	1180.4	2.63	F	M	13.9	267	7.34	Sum of all channels.	SNWA
		10/13/2010	10:30	1535.0	3.42	P	M	11.4	282	7.19	Sum of all channels.	SNWA
1847301	Rock Spring	1/6/2010	12:30	13.9	0.031	E	F	11.5	496	8.03	---	SNWA
		2/24/2010	08:24	13.9	0.031	E	F	7.2	469	7.81	---	SNWA
		3/30/2010	12:44	15.7	0.035	E	F	---	---	---	---	SNWA
		5/24/2010	17:30	20.6	0.046	E	F	12.0	600	7.74	---	SNWA
		7/27/2010	13:50	15.7	0.035	E	F	17.1	637	7.86	---	SNWA
		8/31/2010	12:18	15.7	0.035	E	F	18.7	545	7.77	---	SNWA
		10/11/2010	17:51	15.7	0.035	E	F	12.8	675	7.76	---	SNWA
		11/10/2010	16:10	15.7	0.035	E	F	9.6	679	7.63	---	SNWA
1848001	Turnley Spring	2/24/2010	09:50	56.1	0.125	E	F	11.8	358	7.11	---	SNWA
		7/27/2010	12:45	82.6	0.184	E	F	11.6	568	7.16	---	SNWA
		11/11/2010	09:15	108.6	0.242	G	F	11.7	578	---	---	SNWA
1848401	Cleveland Ranch Spring North	11/2/2010	09:37	18.0	0.040	E	F	---	---	---	Installed 3" Modified Parshall Flume with concrete wingwalls 11/1/2010	SNWA
		11/4/2010	09:41	20.6	0.046	E	F	---	---	---	---	SNWA
1848501	Cleveland Ranch Spring South	11/3/2010	---	56.1	0.125	E	F	---	---	---	Installed 3" Modified Parshall Flume with concrete wingwalls 11/2/2010	SNWA
		11/4/2010	10:34	52.5	0.117	E	F	---	---	---	---	SNWA

[a]Discharge is reported in cfs for values >0.01 and in gpm for values <0.01 cfs.
[b]Measurement Rating: E = Excellent; G= Good; F = Fair; P = Poor
[c]Measurement Method: C = Current meter; O = Other; F = Flume
Note: Minerva Spring Discharge is controlled by reservoir level and irrigation practices. Discharge is total of all channels. The Seep was observed to be dry in September 2009.


HISTORICAL SNWA MISCELLANEOUS SPRING DISCHARGE MEASUREMENTS IN SPRING VALLEY
South Millick Spring
Keegan Spring
Swallow Springs
Turnley Spring
DISCHARGE (cfs)
2.0
1.5
1.0
0.5
0.0
1/1/04
7/1/04
1/1/05
7/1/05
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11

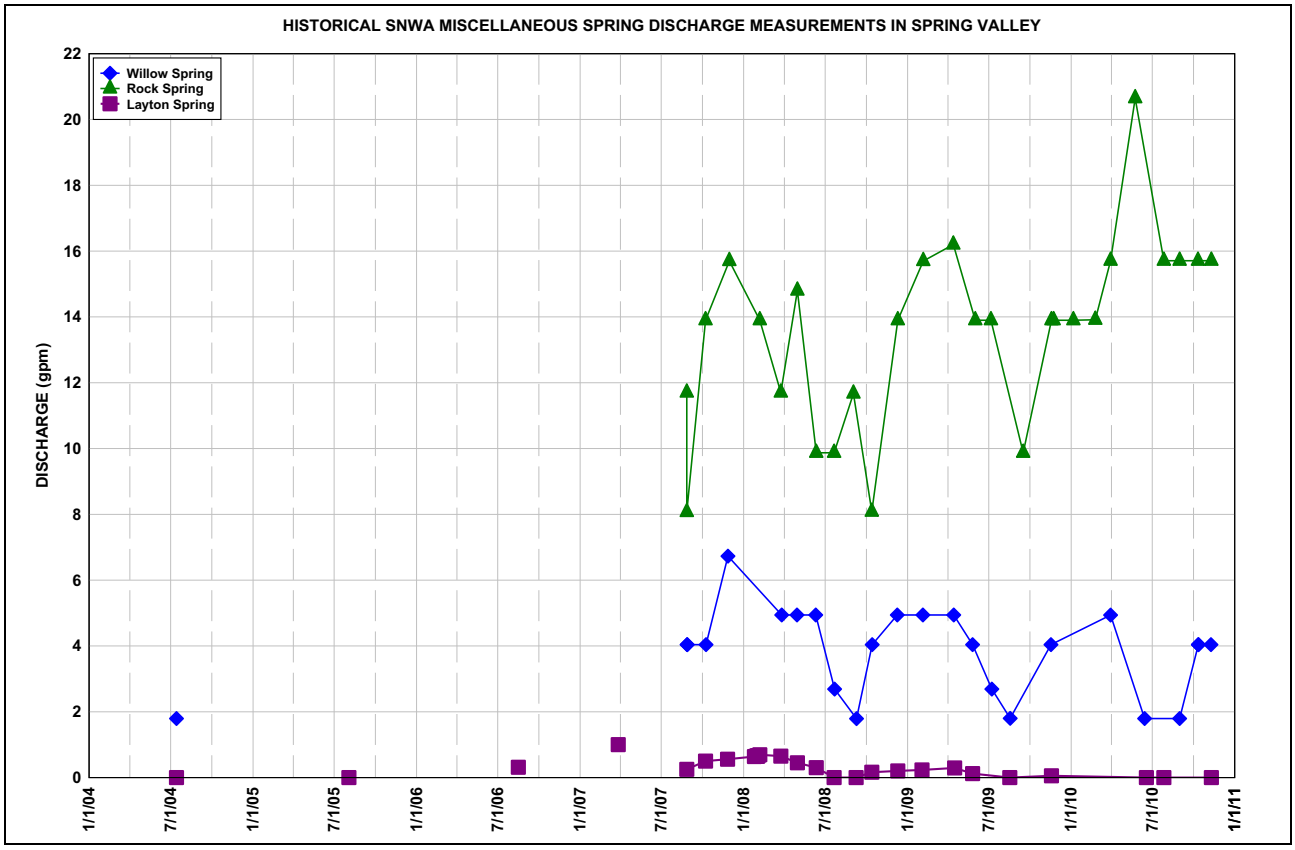

HISTORICAL SNWA MISCELLANEOUS SPRING DISCHARGE MEASUREMENTS IN SPRING VALLEY
Willow Spring
Rock Spring
Layton Spring
DISCHARGE (gpm)
22
20
18
16
14
12
10
8
6
4
2
0
1/1/04
7/1/04
1/1/05
7/1/05
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11

Table D-2
Well SPR7007Z at Minerva Spring, Calendar Year 2010
Water-Level Data, Daily Mean Values

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	12.10	12.57	12.91	13.07	12.48	9.89	9.08	8.79	9.51	10.38	10.78	11.33
2	12.12	12.58	12.91	13.07	12.37	9.97	9.02	8.72	9.55	10.40	10.79	11.31
3	12.14	12.60	12.91	13.08	12.26	9.96	8.95	8.69	9.59	10.42	10.81	11.29
4	12.16	12.61	12.91	13.07	12.15	9.80	8.89	8.69	9.62	10.43	10.82	11.30
5	12.18	12.62	12.92	13.07	12.04	9.94	8.81	8.68	9.65	10.44	10.83	11.36
6	12.19	12.64	12.93	13.08	11.94	9.96	8.74	8.67	9.70	10.45	10.84	11.40
7	12.20	12.65	12.93	13.08	11.78	9.74	8.69	8.66	9.76	10.48	10.86	11.37
8	12.22	12.67	12.94	13.08	11.59	9.47	8.68	8.66	9.79	10.51	10.88	11.34
9	12.24	12.68	12.94	13.09	11.32	9.23	8.69	8.67	9.83	10.52	10.090	11.35
10	12.25	12.69	12.94	13.09	10.81	8.92	8.71	8.67	9.87	10.52	10.091	11.36
11	12.27	12.71	12.95	13.09	10.51	8.53	8.73	8.68	9.89	10.52	10.093	11.39
12	12.28	12.72	12.96	13.10	10.48	8.22	8.76	8.70	9.92	10.53	10.095	11.41
13	12.29	12.74	12.96	13.11	10.38	7.94	8.77	8.72	9.95	10.54	10.097	11.43
14	12.31	12.75	12.97	13.11	10.20	7.99	8.77	8.75	9.98	10.55	10.098	11.44
15	12.33	12.76	12.97	13.11	9.95	8.36	8.72	8.79	10.01	10.57	11.01	11.46
16	12.34	12.77	12.98	13.09	9.71	8.57	8.62	8.83	10.04	10.58	11.04	11.44
17	12.35	12.78	12.98	13.05	9.48	8.75	8.42	8.88	10.07	10.59	11.08	11.44
18	12.36	12.79	12.99	13.02	9.31	8.89	8.15	8.93	10.09	10.60	11.10	11.45
19	12.37	12.80	12.99	13.01	9.37	9.01	8.01	8.95	10.12	10.61	11.11	11.45
20	12.39	12.81	12.99	12.99	9.35	9.11	8.25	8.99	10.14	10.62	11.13	11.47
21	12.40	12.82	12.99	12.96	9.27	9.18	8.38	9.04	10.16	10.64	11.15	11.49
22	12.41	12.84	12.99	12.93	9.21	9.23	8.49	9.09	10.18	10.64	11.17	11.49
23	12.43	12.85	13.00	12.88	9.15	9.26	8.56	9.14	10.22	10.66	11.18	11.51
24	12.45	12.85	13.01	12.82	9.18	9.27	8.62	9.19	10.24	10.66	11.20	11.52
25	12.46	12.87	13.01	12.77	9.26	9.27	8.65	9.23	10.26	10.68	11.23	11.53
26	12.48	12.88	13.02	12.72	9.36	9.27	8.68	9.27	10.28	10.69	11.25	11.53
27	12.49	12.88	13.03	12.66	9.46	9.25	8.70	9.30	10.30	10.71	11.26	11.54
28	12.51	12.90	13.04	12.59	9.58	9.23	8.72	9.34	10.32	10.72	11.28	11.55
29	12.53	---	13.05	12.51	9.68	9.19	8.72	9.39	10.34	10.73	11.30	11.55
30	12.54	---	13.05	12.42	9.75	9.14	8.72	9.43	10.36	10.74	11.32	11.56
31	12.55	---	13.06	---	9.82	---	8.72	9.47	---	10.76	---	11.58
Max	12.55	12.90	13.06	13.11	12.48	9.97	9.08	9.47	10.36	10.76	11.32	11.58
Min	12.10	12.57	12.91	12.42	9.15	7.94	8.01	8.66	9.51	10.38	10.78	11.29

Year 2010 Statistics: **Year Max 13.11; Year Min 7.94**

Note: Depth in ft bgs

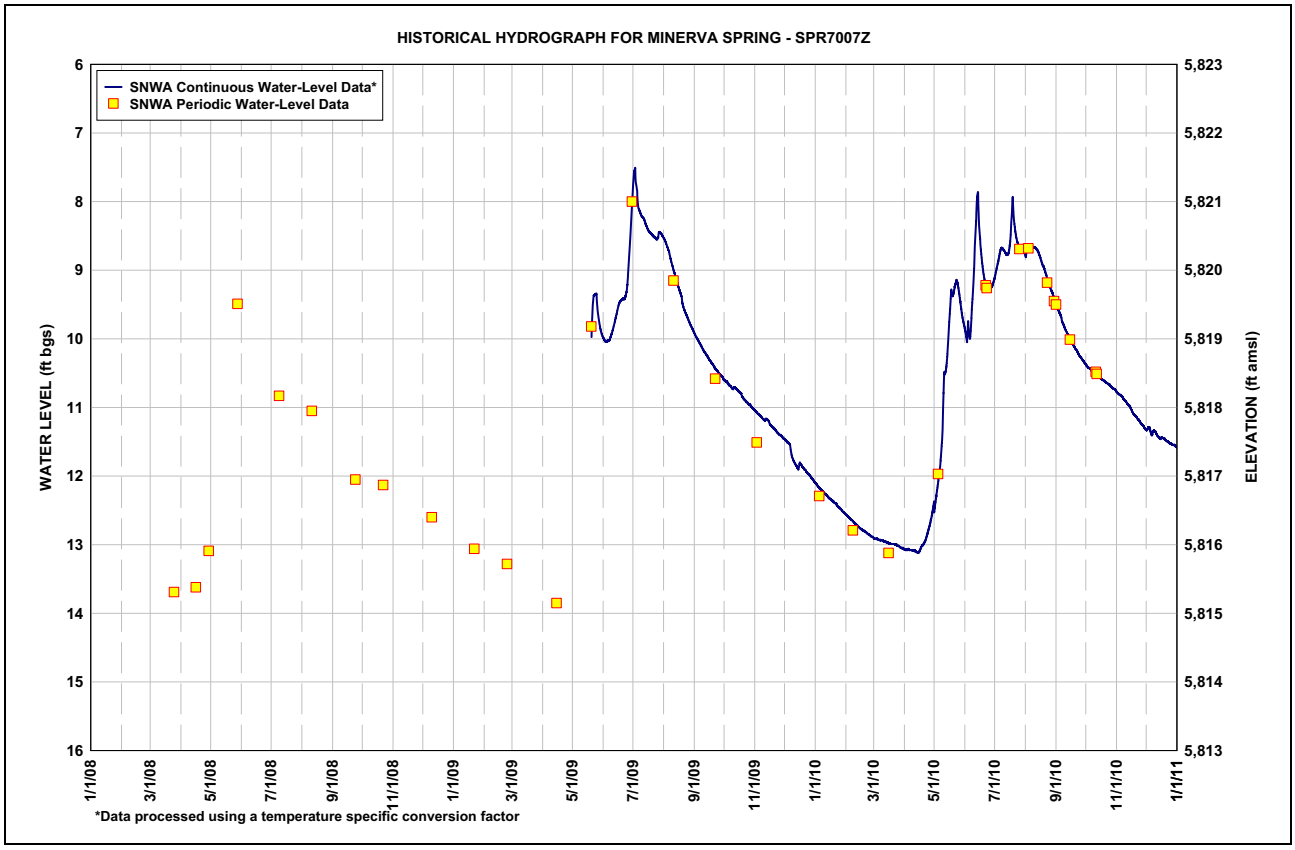

HISTORICAL HYDROGRAPH FOR MINERVA SPRING - SPR7007Z
SNWA Continuous Water-Level Data*
SNWA Periodic Water-Level Data
WATER LEVEL (ft bgs)
ELEVATION (ft amsl)
6
7
8
9
10
11
12
13
14
15
16
5,823
5,822
5,821
5,820
5,819
5,818
5,817
5,816
5,815
5,814
5,813
1/1/08
3/1/08
5/1/08
7/1/08
9/1/08
11/1/08
1/1/09
3/1/09
5/1/09
7/1/09
9/1/09
11/1/09
1/1/10
3/1/10
5/1/10
7/1/10
9/1/10
11/1/10
1/1/11
*Data processed using a temperature specific conversion factor

Table D-3
1847301 - Rock Spring, near Oceola, NV, Water Year 2010
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	--	--	0.03	0.03	0.03	0.03e	0.03	0.04	0.04	0.04	0.04	0.03
2	--	--	0.03	0.03	0.03	0.03e	0.03	0.04	0.04	0.04	0.04	0.03
3	--	--	0.03	0.03	0.03	0.03e	0.03	0.04	0.04	0.04	0.04	0.03
4	--	--	0.03	0.03	0.03	0.03e	0.03	0.04	0.04	0.04	0.04	0.03
5	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
6	--	--	0.03	0.03	0.03	0.03e	0.03	0.04	0.04	0.04	0.04	0.03
7	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
8	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
9	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
10	--	--	0.03	0.03	0.03	0.03e	0.04	0.03	0.04	0.04	0.04	0.03
11	--	--	0.03	0.03	0.03	0.03e	0.04	0.03	0.04	0.04	0.04	0.03
12	--	--	0.03	0.03	0.03	0.03e	0.04	0.03	0.04	0.04	0.04	0.03
13	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
14	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
15	--	--	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
16	--	--	0.03	0.03	0.03	0.03e	0.04	0.05	0.04	0.04	0.04	0.03
17	--	--	0.03	0.03	0.03	0.03e	0.04	0.06	0.04	0.04	0.04	0.03
18	--	0.03e	0.03	0.03	0.03	0.03e	0.04	0.06	0.04	0.04	0.04	0.04
19	--	0.03	0.03	0.03	0.03	0.03e	0.04	0.06	0.04	0.03	0.04	0.03
20	--	0.03	0.03	0.03	0.03	0.03e	0.04	0.05	0.04	0.04	0.04	0.04
21	--	0.03	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.04
22	--	0.03	0.03	0.03	0.03	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
23	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.05	0.04	0.04	0.04	0.03
24	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.05	0.04	0.04	0.04	0.03
25	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
26	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
27	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.04	0.04	0.04	0.04	0.04
28	--	0.03	0.03	0.03	0.03e	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
29	--	0.03	0.03	0.03	--	0.03e	0.04	0.04	0.04	0.04	0.04	0.03
30	--	0.03	0.03	0.03	--	0.04e	0.04	0.04	0.04	0.04	0.04	0.03
31	--	--	0.03	0.03	--	0.04	--	0.03	--	0.04	0.04	--
Total	--	--	0.93	0.93	0.84	0.95	1.15	1.3	1.2	1.23	1.24	0.94
Min	--	--	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.04	0.03
Max	--	--	0.03	0.03	0.03	0.04	0.04	0.06	0.04	0.04	0.04	0.04
Total (AF)	--	--	1.8	1.8	1.7	1.9	2.3	2.6	2.4	2.4	2.5	1.9

Note: Values are in cfs unless noted otherwise.
e = Estimated day.

LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,340,204 m, Easting 726,798 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: November 2009 to current year.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,364 ft amsl NAVD88.
REMARKS: Records are rated as poor.

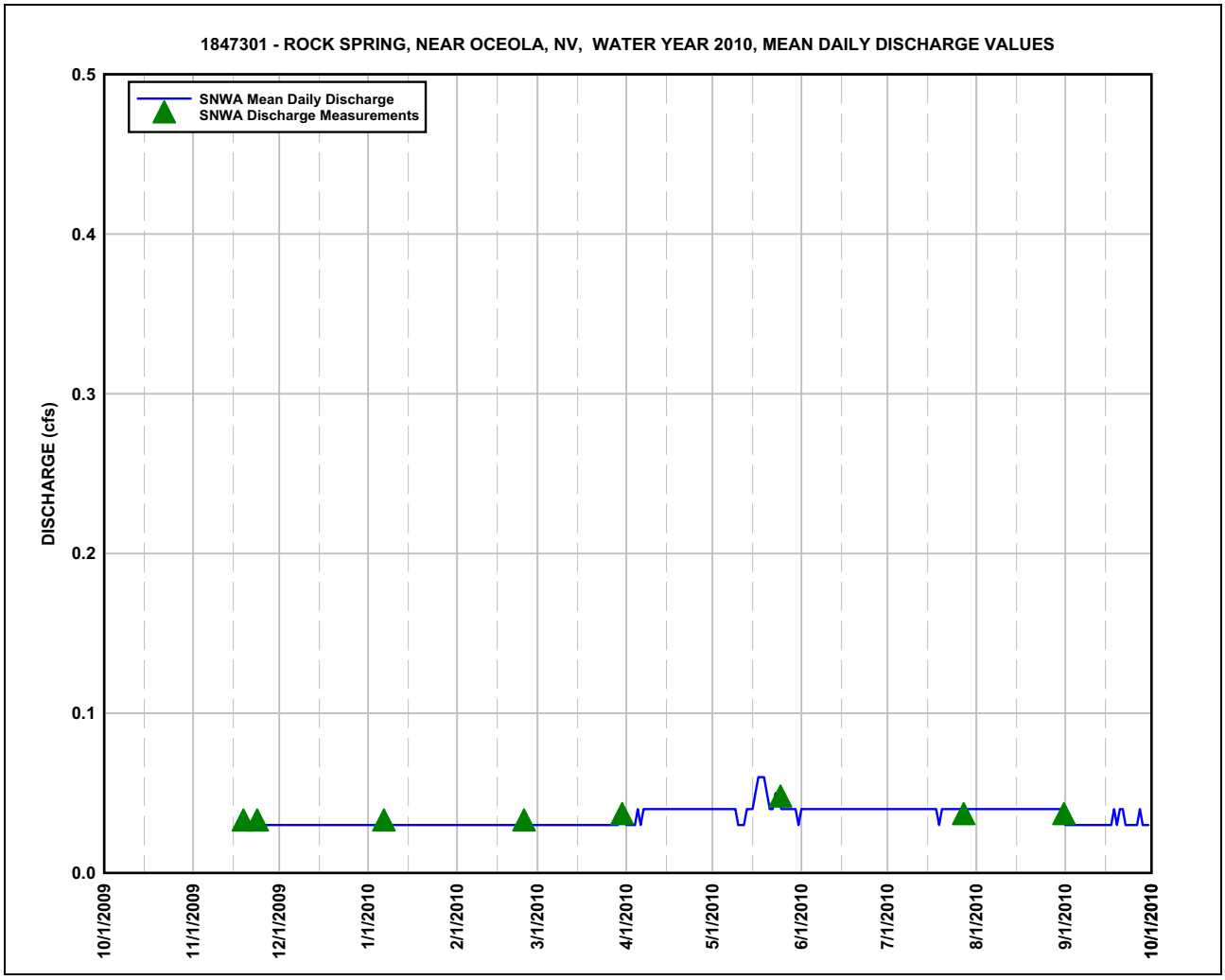

1847301 - ROCK SPRING, NEAR OCEOLA, NV, WATER YEAR 2010, MEAN DAILY DISCHARGE VALUES
SNWA Mean Daily Discharge
SNWA Discharge Measurements
DISCHARGE (cfs)
0.5
0.4
0.3
0.2
0.1
0.0
10/1/2009
11/1/2009
12/1/2009
1/1/2010
2/1/2010
3/1/2010
4/1/2010
5/1/2010
6/1/2010
7/1/2010
8/1/2010
9/1/2010
10/1/2010

Table D-4
1846202 - Swallow Springs North near Minerva, NV, Water Year 2009
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.09	0.10	0.10	0.09	0.11	0.14	0.11	0.13	0.10	--	--
2	0.10	0.09	0.10	0.10	0.09	0.11	0.14	0.11	0.14	0.10	--	--
3	0.10	0.09	0.10	0.10	0.09	0.12	0.14	0.12	0.15	0.11	--	--
4	0.10	0.09	0.10	0.10	0.09	0.12	0.13	0.12	0.14	0.11	--	--
5	0.10	0.09	0.10	0.10	0.09	0.11	0.13	0.12	0.14	0.11	--	--
6	0.10	0.09	0.09	0.10	0.10	0.10	0.13	0.12	0.14	0.11	--	--
7	0.10	0.09	0.10	0.10	0.10	0.10	0.13	0.12	0.15	0.11	--	--
8	0.10	0.09	0.10	0.10	0.11	0.10	0.13	0.12	0.16	0.12	--	--
9	0.10	0.09	0.09	0.10	0.10	0.10	0.12	0.12	0.17	0.10	--	--
10	0.10	0.09	0.09	0.10	0.09	0.09	0.12	0.12	0.18	0.10	--	--
11	0.09	0.09	0.09	0.10	0.09	0.09	0.11	0.12	0.20	0.10	--	--
12	0.09	0.10	0.09	0.10	0.09	0.09	0.11	0.12	0.22	0.10	--	--
13	0.09	0.10	0.10	0.10	0.09	0.09	0.12	0.11	0.19	0.10	--	--
14	0.10	0.10	0.09	0.09	0.09	0.09	0.10	0.11	0.18	0.10	--	--
15	0.10	0.10	0.09	0.09	0.09	0.09	0.08	0.11	0.19	0.11	--	--
16	0.10	0.10	0.09	0.08	0.09	0.10	0.08	0.11	0.19	0.11	--	--
17	0.10	0.10	0.09	0.08	0.09	0.10	0.09	0.12	0.19	0.11	--	--
18	0.10	0.10	0.09	0.08	0.09	0.12	0.10	0.13	0.19	0.11	--	--
19	0.10	0.10	0.09	0.08	0.09	0.13	0.11	0.14	0.18	0.11	--	--
20	0.10	0.10	0.09	0.08	0.09	0.13	0.11	0.13	0.16	0.11	--	--
21	0.10	0.10	0.09	0.08	0.09	0.13	0.11	0.13	0.16	0.10	--	--
22	0.09	0.10	0.09	0.09	0.09	0.13	0.11	0.13	0.15	0.10	--	--
23	0.09	0.10	0.09	0.09	0.09	0.13	0.11	0.13	0.16	0.10	--	--
24	0.09	0.10	0.09	0.09	0.09	0.13	0.11	0.13	0.16	0.10	--	--
25	0.09	0.10	0.09	0.09	0.10	0.13	0.11	0.13	0.16	0.11	--	--
26	0.09	0.10	0.09	0.09	0.11	0.13	0.10	0.14	0.15	0.11	--	--
27	0.09	0.10	0.09	0.09	0.11	0.12	0.11	0.13	0.15	0.11	--	--
28	0.09	0.10	0.09	0.09	0.11	0.13	0.11	0.13	0.15	0.12	--	--
29	0.09	0.10	0.09	0.09	--	0.13	0.11	0.13	0.15	0.12	--	--
30	0.10	0.10	0.10	0.09	--	0.13	0.11	0.12	0.11	0.12e	--	--
31	0.09	--	0.10	0.09	--	0.13	--	0.12	--	0.12e	--	--
Total	3.0	2.8	2.9	2.8	2.6	3.5	3.4	3.8	4.9	3.3	--	--
Min	0.09	0.09	0.09	0.08	0.09	0.09	0.08	0.11	0.11	0.10	--	--
Mean	0.10	0.09	0.09	0.09	0.09	0.11	0.11	0.12	0.16	0.11		--
Max	0.10	0.10	0.10	0.10	0.11	0.13	0.14	0.14	0.22	0.12	--	--
Total (AF)	5.9	5.6	5.7	5.6	5.2	6.9	6.8	7.5	9.7	6.6	--	--

Note: Values are in cfs unless noted otherwise.
e = Estimated day.

LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,302,920 m, Easting 728,597 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: September 2007 to July 2009.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,080 ft amsl NAVD88.
REMARKS: Records are rated as poor.

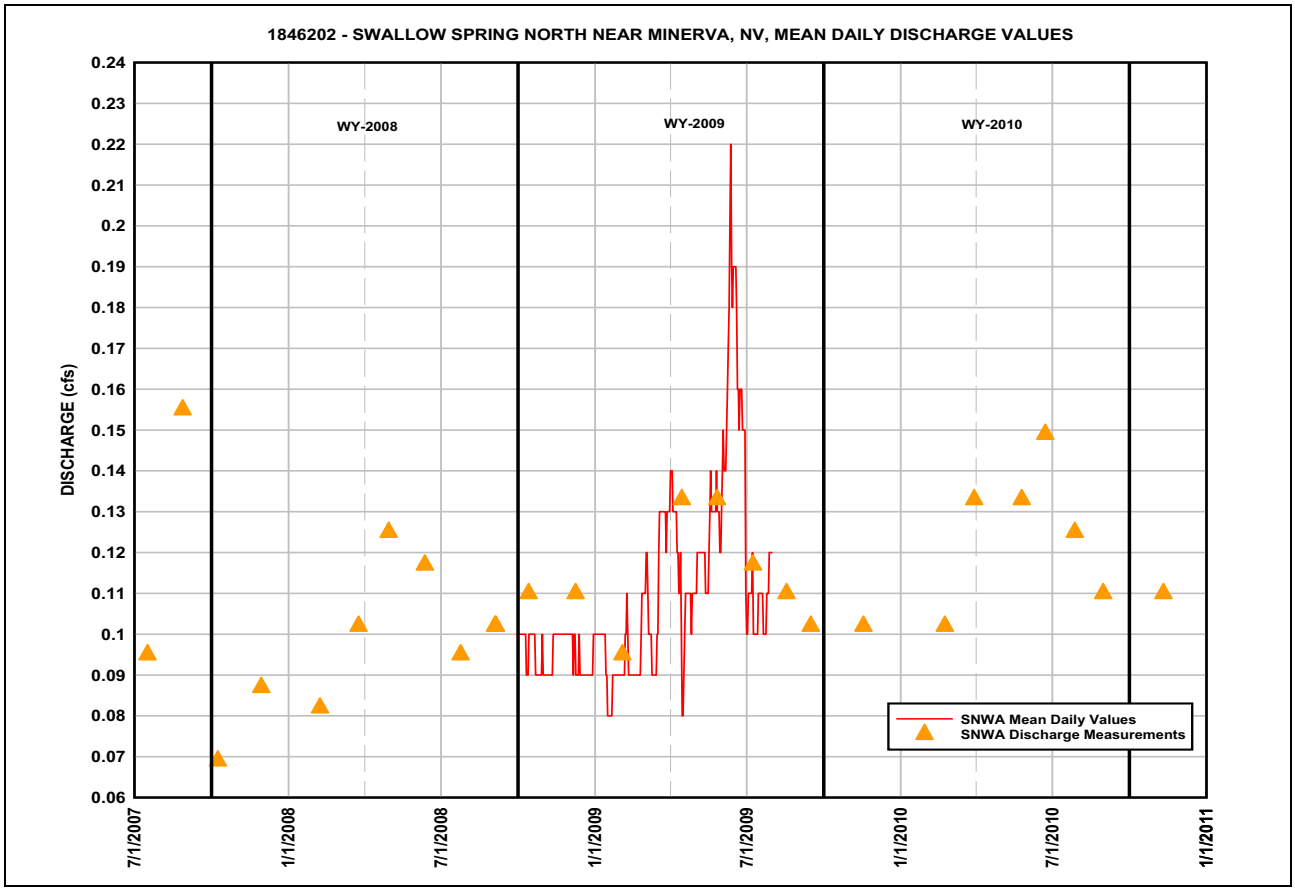

1846202 - SWALLOW SPRING NORTH NEAR MINERVA, NV, MEAN DAILY DISCHARGE VALUES
DISCHARGE (cfs)
0.24
0.23
0.22
0.21
0.2
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
WY-2008
WY-2009
WY-2010
SNWA Mean Daily Values
SNWA Discharge Measurements
7/1/2007
1/1/2008
7/1/2008
1/1/2009
7/1/2009
1/1/2010
7/1/2010
1/1/2011

Table D-5
1846203 - Swallow Springs South, near Minerva, NV, Water Year 2007
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	0.59
8	--	--	--	--	--	--	--	--	--	--	--	0.52
9	--	--	--	--	--	--	--	--	--	--	--	0.50
10	--	--	--	--	--	--	--	--	--	--	--	0.53
11	--	--	--	--	--	--	--	--	--	--	--	0.55
12	--	--	--	--	--	--	--	--	--	--	--	0.59e
13	--	--	--	--	--	--	--	--	--	--	--	0.62e
14	--	--	--	--	--	--	--	--	--	--	--	0.62e
15	--	--	--	--	--	--	--	--	--	--	--	0.62e
16	--	--	--	--	--	--	--	--	--	--	--	0.62e
17	--	--	--	--	--	--	--	--	--	--	--	0.62e
18	--	--	--	--	--	--	--	--	--	--	--	0.62e
19	--	--	--	--	--	--	--	--	--	--	--	0.62e
20	--	--	--	--	--	--	--	--	--	--	--	0.62e
21	--	--	--	--	--	--	--	--	--	--	--	0.62e
22	--	--	--	--	--	--	--	--	--	--	--	0.62e
23	--	--	--	--	--	--	--	--	--	--	--	0.62e
24	--	--	--	--	--	--	--	--	--	--	--	0.62e
25	--	--	--	--	--	--	--	--	--	--	--	0.62e
26	--	--	--	--	--	--	--	--	--	--	--	0.62e
27	--	--	--	--	--	--	--	--	--	--	--	0.62e
28	--	--	--	--	--	--	--	--	--	--	--	0.62e
29	--	--	--	--	--	--	--	--	--	--	--	0.62e
30	--	--	--	--	--	--	--	--	--	--	--	0.62e
31	--	--	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	--	--	--	--	--	--	--	14
Min	--	--	--	--	--	--	--	--	--	--	--	0.50
Max	--	--	--	--	--	--	--	--	--	--	--	0.62
Mean	--	--	--	--	--	--	--	--	--	--	--	0.60
Total (AF)	--	--	--	--	--	--	--	--	--	--	--	29

Note: Values are in cfs unless noted otherwise.
e = Estimated day.

LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,302,920 m, Easting 728,597 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: September 2007 to Present.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,080 ft amsl NAVD88.
REMARKS: Records are rated as good, except where estimated, which are rated as poor.

Table D-6
1846203 - Swallow Springs South, near Minerva, NV, Water Year 2008
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62e	0.61e	0.66	0.65	0.60	0.72	0.81	0.80	0.83	0.81	0.74	0.75
2	0.62e	0.61e	0.66	0.64	0.60	0.77	0.81	0.80	0.81	0.80	0.74	0.74
3	0.62e	0.61e	0.66	0.63	0.60	0.75	0.81	0.80	0.80	0.81	0.75	0.73
4	0.62e	0.61e	0.67	0.63	0.60	0.72	0.80	0.80	0.80	0.81	0.75	0.74
5	0.62e	0.61e	0.68	0.63	0.60	0.72	0.80	0.80	0.80	0.81	0.75	0.74
6	0.62e	0.61e	0.68	0.63	0.60	0.72	0.80	0.80	0.80	0.80	0.75	0.74
7	0.62e	0.61e	0.68	0.63	0.60	0.72	0.80	0.80	0.80	0.80	0.75	0.73
8	0.62e	0.61e	0.68	0.63	0.60	0.72	0.80	0.80	0.80	0.80	0.75	0.73
9	0.62e	0.61e	0.68	0.63	0.60	0.74	0.80	0.80	0.80	0.80	0.75	0.72
10	0.62e	0.61e	0.68	0.62	0.60	0.73	0.80	0.80	0.80	0.80	0.75	0.72
11	0.62e	0.61e	0.67	0.62	0.59	0.75	0.80	0.81	0.82	0.80	0.75	0.72
12	0.62e	0.61e	0.67	0.62	0.59	0.80	0.80	0.80	0.83	0.80	0.75	0.70
13	0.62e	0.61e	0.67	0.62	0.61	0.80	0.79	0.80	0.81	0.80	0.75	0.69
14	0.62e	0.61e	0.67	0.62	0.62	0.80	0.81	0.80	0.80	0.80	0.75	0.68
15	0.62e	0.61e	0.67	0.62	0.62	0.80	0.82	0.81	0.80	0.80	0.76	0.69
16	0.61e	0.61e	0.67	0.62	0.62	0.79	0.81	0.82	0.80	0.80	0.76	0.69
17	0.61e	0.61e	0.67	0.62	0.62	0.77	0.81e	0.82	0.80	0.80	0.76	0.69
18	0.61e	0.60e	0.67	0.62	0.63	0.75	0.81e	0.83	0.81	0.80	0.76	0.69
19	0.61e	0.60e	0.67	0.62	0.63	0.74	0.81e	0.85	0.81	0.80	0.76	0.69
20	0.61e	0.60e	0.67	0.62	0.64	0.79	0.81e	0.87e	0.80	0.80	0.76	0.69
21	0.61e	0.60e	0.66	0.62	0.65	0.81	0.81e	0.87e	0.80	0.80	0.76	0.69
22	0.61e	0.61	0.66	0.62	0.65	0.82	0.81	0.87e	0.80	0.80	0.76	0.70
23	0.61e	0.61	0.66	0.61	0.65	0.82	0.81	0.87	0.80	0.80	0.76	0.70
24	0.61e	0.60	0.66	0.61	0.64	0.82	0.81	0.86	0.80	0.78	0.75	0.70
25	0.61e	0.60	0.66	0.61	0.64	0.81	0.81	0.84	0.80	0.75	0.75	0.70
26	0.61e	0.60	0.66	0.61	0.64	0.81	0.80	0.83	0.80	0.74	0.75	0.70
27	0.61e	0.60	0.66	0.61	0.64	0.81	0.80	0.83	0.80	0.74	0.75	0.69
28	0.61e	0.60	0.66	0.61	0.64	0.81	0.80	0.83	0.80	0.74	0.75	0.69
29	0.61e	0.64	0.66	0.61	0.64	0.81	0.80	0.83	0.80	0.74	0.75	0.68
30	0.61e	0.66	0.65	0.61	--	0.81	0.80	0.83	0.80	0.74	0.75	0.69
31	0.61e	--	0.65	0.61	--	0.81	--	0.83	--	0.74	0.75	--
Total	19	18	21	19	18	24	24	26	24	24	23	21
Min	0.61	0.60	0.65	0.61	0.59	0.72	0.79	0.80	0.80	0.74	0.74	0.68
Max	0.62	0.66	0.68	0.65	0.65	0.82	0.82	0.87	0.83	0.81	0.76	0.75
Mean	0.61	0.61	0.67	0.62	0.62	0.78	0.81	0.82	0.80	0.79	0.75	0.71
Total (AF)	38	36	41	38	36	48	48	51	48	48	46	42

Note: Values are in cfs unless noted otherwise.
e = Estimated day.

LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,302,920 m, Easting 728,597 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: September 2007 to Present.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,080 ft amsl NAVD88.
REMARKS: Records are rated as good, except where estimated, which are rated as poor.

Table D-7
1846203 - Swallow Springs South, near Minerva, NV, Water Year 2009
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT
1	0.69	0.60	0.50	0.53	0.60	0.71	0.84	0.94	0.93	0.87	0.88	--
2	0.69	0.59	0.50	0.55	0.60	0.72	0.84	0.96	0.92	0.87	0.88	--
3	0.69	0.58	0.51	0.54	0.60	0.73	0.84	0.99	0.92	0.87	0.88	--
4	0.69	0.58	0.51	0.53	0.60	0.75	0.84	0.99	0.93	0.86	0.88	--
5	0.69	0.58	0.51	0.53	0.61	0.75	0.82	1.00	0.94	0.86	0.89	--
6	0.69	0.58	0.50	0.54	0.62	0.73	0.82	1.02	0.93	0.85	0.90	--
7	0.70	0.57	0.50	0.54	0.62	0.73	0.85	1.02	0.91	0.85	0.89	--
8	0.70	0.57	0.50	0.54	0.62	0.71	0.89	1.02	0.90	0.85	0.89	--
9	0.70	0.57	0.50	0.54	0.61	0.71	0.89	1.02	0.90	0.86	0.89	--
10	0.70	0.57	0.50	0.54	0.60	0.69	0.90	1.02	0.89	0.86	0.90	--
11	0.68	0.56	0.50	0.55	0.60	0.69	0.90	1.02	0.89	0.86	0.90	--
12	0.68	0.56	0.51	0.55	0.61	0.69	0.89	1.02	0.89	0.86	0.90	--
13	0.68	0.56	0.51	0.55	0.61	0.69	0.91	1.02	0.89	0.87	0.91	--
14	0.68	0.56	0.51	0.56	0.61	0.69	0.91	1.02	0.89	0.88	0.91	--
15	0.68	0.55	0.51	0.57	0.61	0.69	0.89	1.02	0.89	0.88	0.91	--
16	0.67	0.55	0.51	0.58	0.61	0.70	0.89	1.03	0.88	0.88	--	--
17	0.67	0.55	0.51	0.58	0.61	0.75	0.89	1.03	0.87	0.88	--	--
18	0.67	0.55	0.52	0.58	0.61	0.83	0.90	1.04	0.87	0.88	--	--
19	0.67	0.54	0.51	0.58	0.61	0.86	0.92	1.04	0.87	0.88	--	--
20	0.66	0.54	0.51	0.58	0.61	0.87	0.92	0.99	0.87	0.88	--	--
21	0.66	0.54	0.52	0.59	0.61	0.88	0.93	0.96	0.87	0.88	--	--
22	0.66	0.54	0.52	0.59	0.61	0.88	0.94	0.95	0.87	0.88	--	--
23	0.66	0.53	0.51	0.59	0.63	0.88	0.94	0.94	0.87	0.88	--	--
24	0.65	0.53	0.51	0.58	0.63	0.88	0.94	0.94	0.87	0.88	--	--
25	0.65	0.53	0.52	0.58	0.65	0.86	0.92	0.94	0.87	0.89	--	--
26	0.65	0.53	0.52	0.58	0.70	0.86	0.92	0.94	0.86	0.89	--	--
27	0.65	0.52	0.53	0.59	0.70	0.85	0.92	0.94	0.85	0.88	--	--
28	0.64	0.52	0.53	0.59	0.71	0.84	0.92	0.93	0.86	0.89	--	--
29	0.64	0.51	0.53	0.59	--	0.85	0.93	0.93	0.86	0.89	--	--
30	0.64	0.50	0.53	0.59	--	0.84	0.94	0.93	0.87	0.88	--	--
31	0.63	--	0.53	0.59	--	0.83	--	0.93	--	0.88	--	--
Total	21	17	16	18	17	24	27	31	27	27	13	
Min	0.63	0.50	0.50	0.53	0.60	0.69	0.82	0.93	0.85	0.85	0.88	
Max	0.70	0.60	0.53	0.59	0.71	0.88	0.94	1.04	0.94	0.89	0.91	
Mean	0.67	0.55	0.51	0.57	0.62	0.78	0.90	0.99	0.89	0.87	0.89	
Total (AF)	41	33	31	35	35	48	53	61	53	54	27	

Note: Values are in cfs unless noted otherwise.

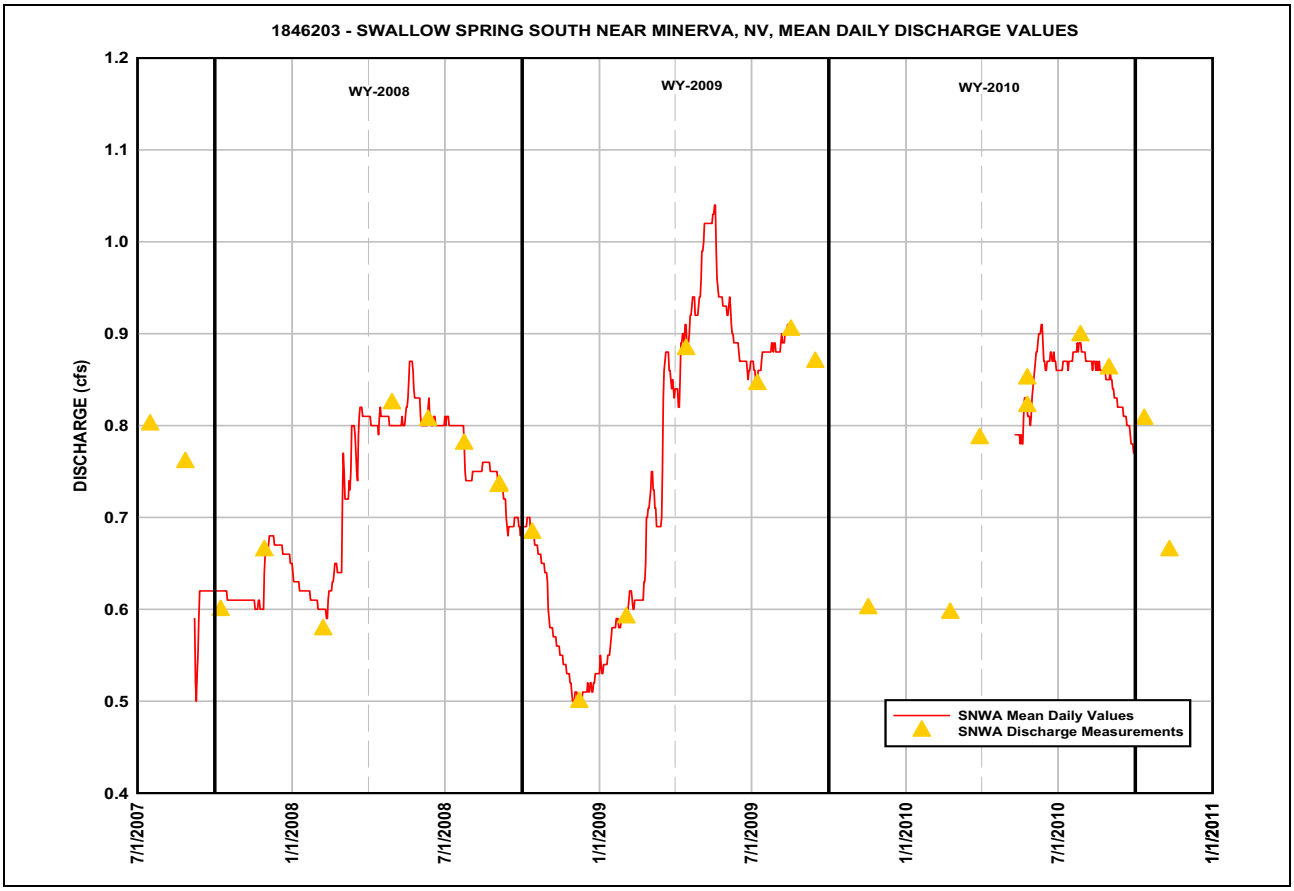
LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,302,920 m, Easting 728,597 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: September 2007 to Present.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,080 ft amsl NAVD88.
REMARKS: Records are rated as good, except where estimated, which are rated as poor.

Table D-8
1846203 - Swallow Springs South, near Minerva, NV, Water Year 2010
Mean Daily Discharge Values

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	--	--	--	--	--	--	--	--	0.84	0.86	0.88	0.86
2	--	--	--	--	--	--	--	--	0.85	0.86	0.88	0.85
3	--	--	--	--	--	--	--	--	0.86	0.86	0.87	0.85
4	--	--	--	--	--	--	--	--	0.87	0.86	0.87	0.84
5	--	--	--	--	--	--	--	--	0.88	0.86	0.87	0.84
6	--	--	--	--	--	--	--	--	0.88	0.86	0.87	0.83
7	--	--	--	--	--	--	--	--	0.89	0.87	0.87	0.83
8	--	--	--	--	--	--	--	--	0.9	0.87	0.87	0.83
9	--	--	--	--	--	--	--	--	0.9	0.87	0.87	0.83
10	--	--	--	--	--	--	--	--	0.9	0.87	0.87	0.82
11	--	--	--	--	--	--	--	0.79e	0.91	0.87	0.86	0.82
12	--	--	--	--	--	--	--	0.79	0.91	0.87	0.87	0.82
13	--	--	--	--	--	--	--	0.79	0.89	0.86	0.87	0.82
14	--	--	--	--	--	--	--	0.79	0.87	0.87	0.87	0.82
15	--	--	--	--	--	--	--	0.79	0.87	0.87	0.86	0.82
16	--	--	--	--	--	--	--	0.79	0.86	0.87	0.87	0.82
17	--	--	--	--	--	--	--	0.78	0.86	0.87	0.86	0.81
18	--	--	--	--	--	--	--	0.79	0.87	0.87	0.86	0.81
19	--	--	--	--	--	--	--	0.78	0.87	0.88	0.87	0.81
20	--	--	--	--	--	--	--	0.78	0.87	0.88	0.86	0.81
21	--	--	--	--	--	--	--	0.81	0.87	0.88	0.86	0.8
22	--	--	--	--	--	--	--	0.83	0.88	0.88	0.86	0.8
23	--	--	--	--	--	--	--	0.83	0.88	0.88	0.86	0.8
24	--	--	--	--	--	--	--	0.83	0.87	0.89	0.86	0.8
25	--	--	--	--	--	--	--	0.82	0.87	0.88	0.86	0.79
26	--	--	--	--	--	--	--	0.81	0.88	0.89	0.86	0.78
27	--	--	--	--	--	--	--	0.81	0.87	0.89	0.85	0.78
28	--	--	--	--	--	--	--	0.81	0.87	0.89	0.85	0.78
29	--	--	--	--	--	--	--	0.8	0.86	0.88	0.85	0.77
30	--	--	--	--	--	--	--	0.81	0.86	0.88	0.85	0.77
31	--	--	--	--	--	--	--	0.83	--	0.88	0.85	--
Total	--	--	--	--	--	--	--	--	26.3	27.1	26.8	24.4
Min	--	--	--	--	--	--	--	--	0.84	0.86	0.85	0.77
Max	--	--	--	--	--	--	--	--	0.91	0.89	0.88	0.86
Mean	--	--	--	--	--	--	--	--	0.88	0.87	0.86	0.81
Total (AF)	--	--	--	--	--	--	--	--	52.1	53.7	53.1	48.4

Note: Values are in cfs unless noted otherwise.
e = Estimated day.

LOCATION: UTM, NAD 1983, Zone 11N meters, Northing 4,302,920 m, Easting 728,597 m.
DRAINAGE AREA: Indeterminate
PERIOD OF RECORD: September 2007 to Present.
GAGE: Bubbler/Pressure sensor. Elevation of the gage is estimated at 6,080 ft amsl NAVD88.
REMARKS: Records are rated as good, except where estimated, which are rated as poor.


1846203 - SWALLOW SPRING SOUTH NEAR MINERVA, NV, MEAN DAILY DISCHARGE VALUES
DISCHARGE (cfs)
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
WY-2008
WY-2009
WY-2010
7/1/2007
1/1/2008
7/1/2008
1/1/2009
7/1/2009
1/1/2010
7/1/2010
1/1/2011
SNWA Mean Daily Values
SNWA Discharge Measurements

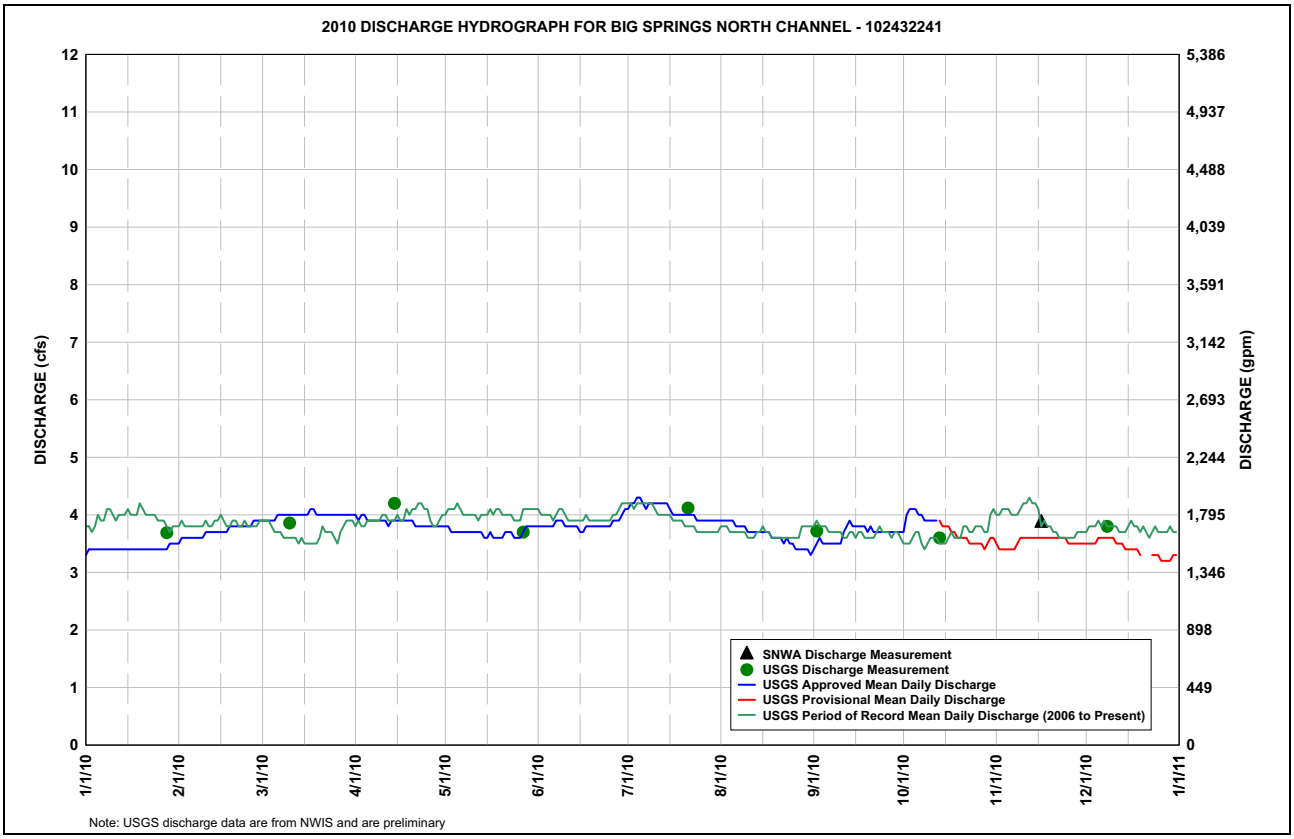
Appendix E

SNWA and USGS Discharge Measurements and Hydrographs for Cleve Creek and Big Springs Creek

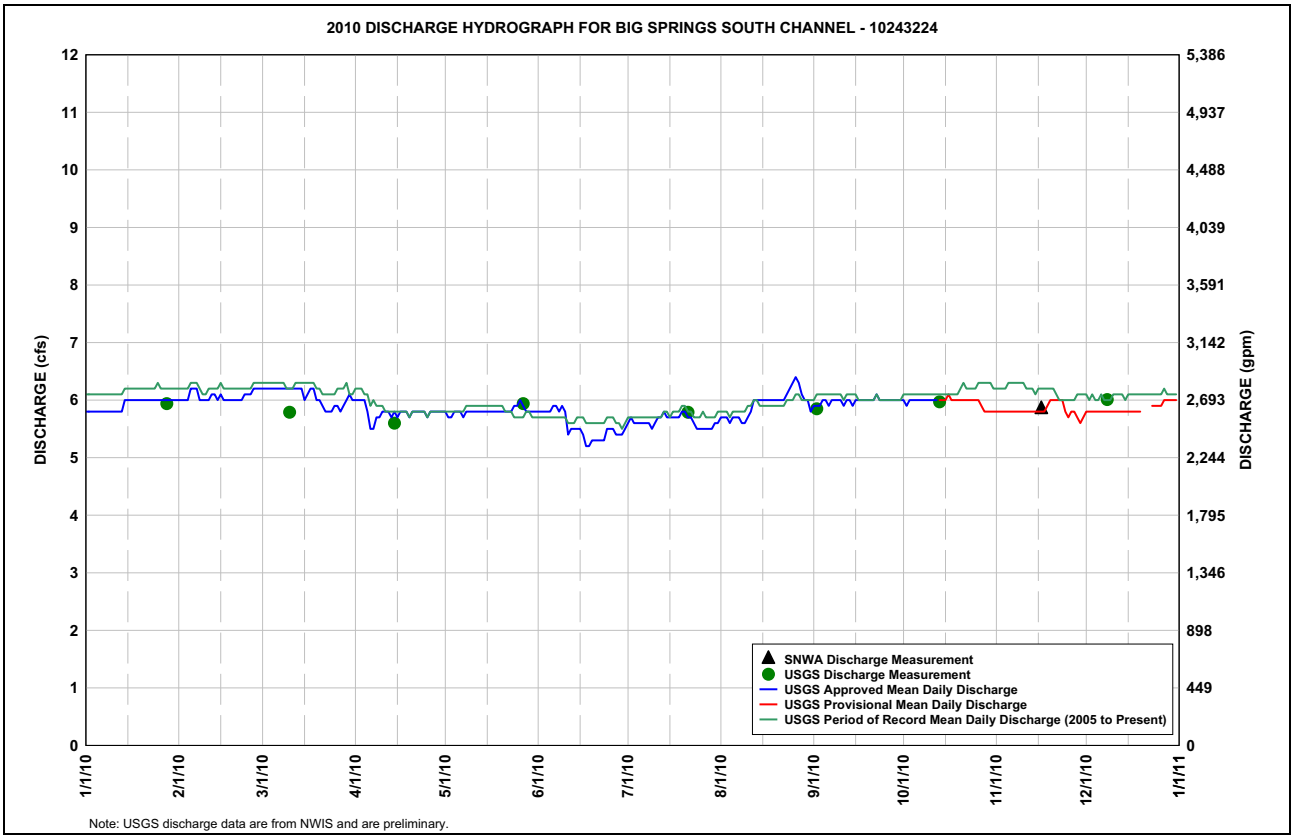
Table E-1
Big Springs Creek near Baker, Nevada (Combined Discharge)

SNWA Station Number	USGS Station Number	Station Name	Date	Time	Discharge (cfs)	Measurement Rated as: (E, G, F, P)[a]	Method[b]	Remarks	Data Source[c]
USGS Discharge Measurements at Big Springs Creek North Channel									
1951904	102432241	Big Springs Creek North Channel	1/28/2010	13:15	3.69	F	R		USGS-NWIS
			3/10/2010	10:31	3.86	F	R		USGS-NWIS
			4/14/2010	12:35	4.20	F	R		USGS-NWIS
			5/27/2010	10:47	3.70	F	R		USGS-NWIS
			7/21/2010	11:50	4.12	P	R		USGS-NWIS
			9/2/2010	10:30	3.72	P	R		USGS-NWIS
			10/13/2010	12:03	3.60	F	R		USGS-NWIS
			12/8/2010	11:43	3.80	F	R		USGS-NWIS
USGS Discharge Measurements at Big Springs Creek South Channel									
1951903	10243224	Big Springs Creek South Channel	1/28/2010	12:23	5.94	G	R		USGS-NWIS
			3/10/2010	9:47	5.79	G	R		USGS-NWIS
			4/14/2010	11:49	5.60	F	R		USGS-NWIS
			5/27/2010	10:02	5.94	F	R		USGS-NWIS
			7/21/2010	10:58	5.79	F	R		USGS-NWIS
			9/2/2010	9:44	5.85	F	R		USGS-NWIS
			10/13/2010	11:23	5.97	F	R		USGS-NWIS
			12/8/2010	10:54	6.01	G	R		USGS-NWIS
SNWA Discharge Measurements at Big Springs Creek (Combined Discharge of North and South Channels)									
1951901	---	Big Springs Creek near Baker, NV (Combined Discharge)	11/16/2010	14:43	9.70	F	C	South channel discharge = 5.84 cfs North channel discharge = 3.86 cfs	SNWA

[a]Measurement Rating: E = Excellent; G = Good; F = Fair; P = Poor
[b]Measurement Method: R = Reported; C = Current meter
[c]USGS-NWIS data are provisional.



Note: USGS discharge data are from NWIS and are preliminary

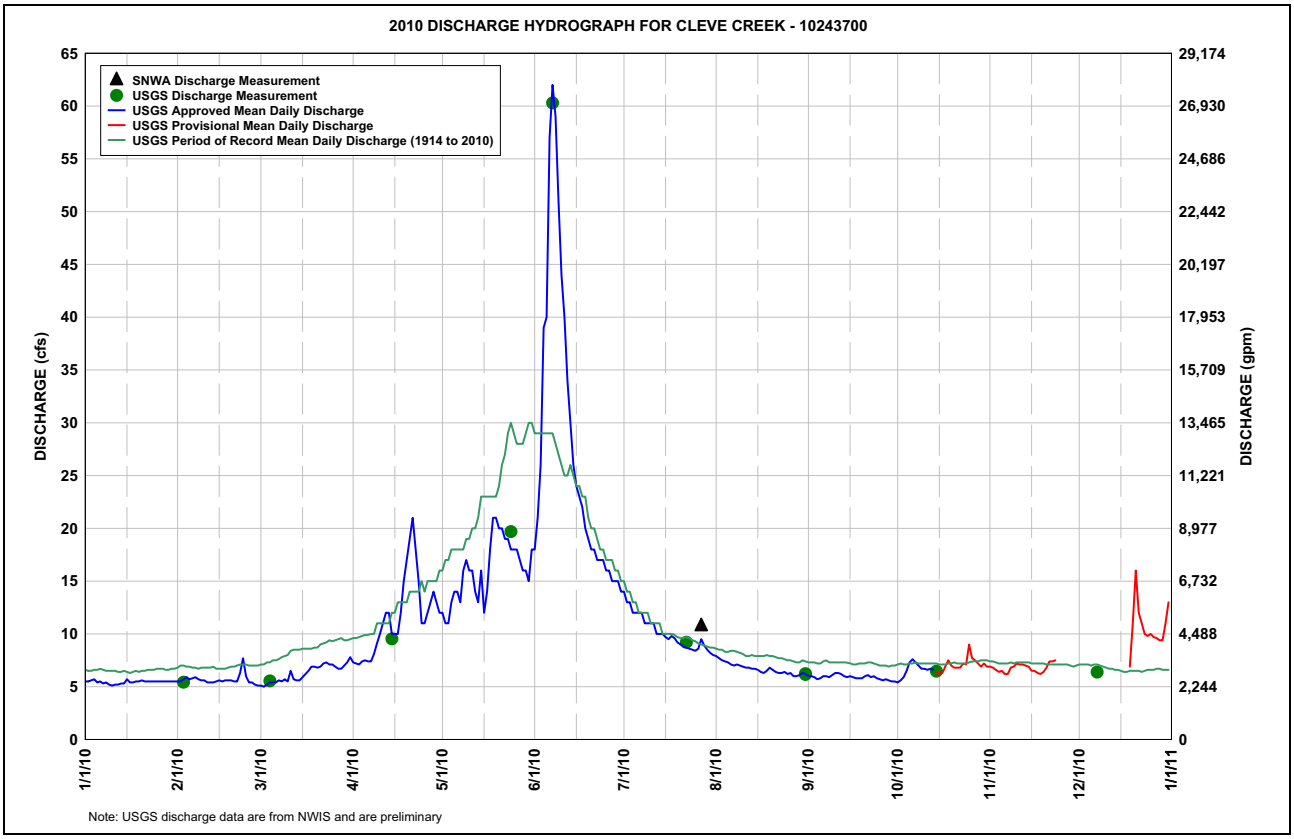


Note: USGS discharge data are from NWIS and are preliminary.

Table E-2
10243700 - Cleve Creek near Ely, Nevada (Discharge Measurements)

SNWA Station Number	USGS Station Number	Station Name	Date	Time	Discharge (cfs)	Measurement Rated as: (E, G, F, P)[a]	Method[b]	Remarks	Data Source[c]
1841611	10243700	Cleve Creek near Ely, NV	2/3/2010	13:42	5.43	F	R	---	USGS-NWIS
			3/4/2010	9:07	5.55	F	R	---	USGS-NWIS
			4/14/2010	15:17	9.54	F	R	---	USGS-NWIS
			5/24/2010	14:27	19.7	F	R	---	USGS-NWIS
			6/7/2010	14:38	60.3	F	R	---	USGS-NWIS
			7/22/2010	9:06	9.22	F	R	---	USGS-NWIS
			7/27/2010	17:24	10.7	F	C	---	SNWA
			8/31/2010	11:54	6.16	F	R	---	USGS-NWIS
			8/31/2010	12:45	6.24	F	R	---	USGS-NWIS
			10/14/2010	8:59	6.47	F	R	---	USGS-NWIS
			12/7/2010	11:24	6.39	F	R	---	USGS-NWIS

[a]Measurement Rating: E = Excellent; G = Good; F = Fair; P = Poor
[b]Measurement Method: C = Current meter; R = Reported
[c]USGS-NWIS data are provisional (USGS, 2010)


2010 DISCHARGE HYDROGRAPH FOR CLEVE CREEK - 10243700
SNWA Discharge Measurement
USGS Discharge Measurement
USGS Approved Mean Daily Discharge
USGS Provisional Mean Daily Discharge
USGS Period of Record Mean Daily Discharge (1914 to 2010)
DISCHARGE (cfs)
DISCHARGE (gpm)
65
60
55
50
45
40
35
30
25
20
15
10
5
0
29,174
26,930
24,686
22,442
20,197
17,953
15,709
13,465
11,221
8,977
6,732
4,488
2,244
0
1/1/10
2/1/10
3/1/10
4/1/10
5/1/10
6/1/10
7/1/10
8/1/10
9/1/10
10/1/10
11/1/10
12/1/10
1/1/11
Note: USGS discharge data are from NWIS and are preliminary

Appendix F

Regional and High-Altitude Precipitation Data

Table F-1
2010 Regional Precipitation Data

Data Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Ely WBO, NV													
2010 Data	0.81	0.20	0.73	0.72	1.37	0.15	0.69	0.13	0.01	1.36	1.65	3.36[a]	11.18
Period of Record Statistics (1893 to Present)													
Mean	0.78	0.77	1.01	1.01	1.09	0.66	0.62	0.80	0.74	0.82	0.69	0.69	9.57
S.D.	0.55	0.64	0.74	0.82	0.90	0.74	0.54	0.73	0.83	0.66	0.54	0.63	2.85
Skew	0.96	1.78	1.39	2.29	1.03	1.73	1.02	1.10	2.36	1.45	0.89	1.89	0.31
Max	2.50	3.75	4.30	5.52	3.55	3.53	2.30	3.00	4.99	3.67	2.40	3.36	16.16
Min	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.22
No. Yrs	88	88	88	88	88	86	87	89	88	87	86	86	79
McGill, NV													
2010 Data	1.07	0.40	0.86	1.98	1.75	0.13[g]	0.53	0.10	0.00	1.39[a]	6.64	3.05	17.77
Period of Record Statistics (1892 to Present)													
Mean	0.64	0.64	0.75	0.95	1.02	0.77	0.69	0.76	0.66	0.80	0.61	0.60	8.86
S.D.	0.62	0.50	0.54	0.64	0.83	0.88	0.63	0.66	0.78	0.64	0.76	0.55	2.54
Skew	3.07	1.22	1.18	0.78	1.03	1.71	1.17	1.25	2.88	0.94	5.16	1.58	0.51
Max	4.58	2.38	2.54	3.19	3.33	4.30	3.03	3.25	5.57	3.38	6.64	3.05	16.21
Min	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
No. Yrs	101	102	103	104	102	102	102	101	101	99	102	103	89
Great Basin National Park, NV													
2010 Data	2.36[b]	1.61	0.77[a]	2.94[b]	0.67	0.48[c]	0.81[c]	0.46[c]	0.23[d]	2.61	2.34	4.23[a]	19.51
Period of Record Statistics (1948 to Present)													
Mean	1.07	1.16	1.38	1.21	1.23	0.90	0.95	1.19	1.07	1.25	0.99	0.97	13.32
S.D.	0.91	0.83	0.99	0.87	0.98	0.89	0.77	0.91	1.02	0.98	0.86	0.90	3.19
Skew	1.12	0.83	1.19	0.60	1.21	1.43	1.17	1.56	2.21	1.41	0.84	1.65	0.11
Max	3.78	3.59	4.96	3.02	4.74	3.73	3.90	5.10	6.02	5.22	3.40	4.23	21.20
Min	0.03	0.09	0.00	0.03	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	7.37
No. Yrs	59	59	59	61	61	59	61	61	62	62	61	60	54
Eskdale, UT													
2010 Data	0.00[z]	0.00[z]	0.12[u]	0.51	0.56[c]	0.36[b]	0.76	0.39	0.01	0.98[e]	0.85	1.80[b]	6.22
Period of Record Statistics (1966 to Present)													
Mean	0.27	0.42	0.63	0.66	0.64	0.63	0.52	0.54	0.63	0.65	0.38	0.33	6.34
S.D.	0.32	0.47	0.53	0.60	0.69	0.67	0.63	0.52	0.65	0.61	0.35	0.48	2.32
Skew	2.87	2.30	0.88	1.01	2.12	1.07	2.24	1.78	2.31	1.01	0.90	3.16	0.62
Max	1.77	2.38	2.03	2.21	3.35	2.32	3.26	2.40	3.57	2.24	1.40	2.57	12.57
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.18
No. Yrs	41	42	40	44	44	45	44	44	43	44	42	41	29

Precipitation data in inches.
Notes: Provisional Data: [a] = 1 day missing, [b] = 2 days missing, [c] = 3 days missing...etc...[z] = 26 or more days missing.
Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.
Individual Months not used for annual or monthly statistics if more than 5 days are missing.
Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

Table F-2
Recent (2005-2009) High-Altitude Precipitation Data

Station Name	USGS Site ID	Date	Precipitation (in.)	Comments
Mt. Washington	385409114000000	7/12/2005	46.00	Took samples from gage and bucket.
		11/2/2005	6.00	Replaced isotope collection bucket.
		7/5/2006	17.50	---
		7/6/2006	0.00	Sampled tube, added 2 gal antifreeze to precip., drained and filled bucket & tube
		10/19/2006	7.00	Drained and added 1 gal of antifreeze
		6/5/2007	9.75	Drained, no antifreeze added
		10/24/2007	2.75	Added 1 gal of antifreeze & 3/4 gal oil.
		6/5/2008	12.50	Drained and added 1 gal of antifreeze
		10/15/2008	0.00	2 samples taken.
		5/27/2009	18.75	---
		10/23/2009	18.50	---
Cave Mountain	390946114000000	7/20/2005	15.25	---
		11/7/2005	3.25	Drained and added 1 gal of antifreeze
		6/23/2006	18.75	---
		10/19/2006	4.25	Raised wind baffle to just above top of collector, tightened guide wires. Drained, added antifreeze.
		6/13/2007	12.00	Drained and added 1 gal of antifreeze
		10/23/2007	3.75	Did not drain. Added 1 gal antifreeze.
		6/5/2008	8.50	Drained and added 1 gal of antifreeze
		10/14/2008	4.25	Added 1 gal antifreeze
		5/29/2009	17.25	---
		10/22/2009	7.75	---
Unnamed Peak Northwest of Mt. Moriah	391913114000000	7/20/2005	22.00	---
		11/7/2005	6.50	Drained and added 1 gal of antifreeze
		6/23/2006	11.75	---
		10/19/2006	3.50	Drained added antifreeze
		6/13/2007	10.75	Drained and added 1 gal of antifreeze
		10/23/2007	1.25	Did not drain. Added 1 gal antifreeze
		6/5/2008	9.50	Drained and added 1 gal of antifreeze
		10/14/2008	3.50	Added 1 gal antifreeze
		5/29/2009	15.25	---
		10/22/2009	13.50	---