

2014-2015

Engineering Investigation of the Bunker Hill Basin



Prepared By:



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All figures, tables, and appendices are available separately on San Bernardino Valley Water Conservation District's Website: <http://www.sbvxcd.org> and incorporated by reference.



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All figures, tables, and appendices are available separately on San Bernardino Valley Water Conservation District's Website: <http://www.sbvxcd.org> and incorporated by reference.



1.0 Executive Summary

Article 1, Section 75560 of the California Water Code requires that a Water Conservation District that proposes to levy a groundwater charge “... shall annually cause to be made an engineering investigation and report upon groundwater conditions of the District”. In accordance with these requirements, the San Bernardino Valley Water Conservation District (District) must make the following findings and determinations as they relate to the ground and surface water conditions of the Bunker Hill Basin and those areas within the District boundary. Refer to **Figure 1 and 3** for locations.

- Task 1.** Annual change in storage for the Bunker Hill Basin for the preceding water year (Fall 2013 to Fall 2014);
- Task 2.** Accumulated change in storage of the Bunker Hill Basin as of the last day of the preceding water year (June 30, 2014);
- Task 3.** Total groundwater production from the Bunker Hill Basin for the preceding water year (July 1, 2013 - June 30, 2014);
- Task 4.** Estimate of the annual change in the Bunker Hill Basin storage for the current water year (July 1, 2014 - June 30, 2015);
- Task 5.** Estimate of the annual change in the Bunker Hill Basin storage for the ensuing water year (July 1, 2015 - June 30, 2016);
- Task 6.** Average annual change in Bunker Hill Basin storage for the immediate past ten water years (2004 - 2014);
- Task 7.** Estimated amount of agricultural water and other than agricultural water to be withdrawn from the groundwater supplies of the District for the ensuing water year (July 1, 2015 - June 30, 2016);
- Task 8.** Estimated amount of water necessary for surface distribution for the ensuing water year for the Bunker Hill Basin and the District (July 1, 2015 - June 30, 2016); and



Task 9. The amount of water that is necessary for the replenishment of the groundwater supplies of the Bunker Hill Basin and the District for the ensuing water year (July 1, 2015 - June 30, 2016).

To make the findings and determinations listed above, District staff researched available hydro-geologic and engineering data for the Bunker Hill Basin. These data were compiled and analyzed and a predictive relationship between precipitation, production, and change in basin storage. This relationship was based on empirical data since 1993 and enables the prediction of change in storage, given certain annual production and precipitation levels. In addition, annual and accumulated change in storage values were calculated based on current and historic water level changes throughout the Bunker Hill Basin.

Based on 20 measuring stations, precipitation throughout the contributing watershed was 51% of normal for the period October 1, 2013 to September 31, 2014. The report uses production and water level data from more than 200 wells in the basin.

The required findings for the 2015 Engineering Investigation are provided below. Each of the tasks is further explained in the main body of the report. Throughout this document a positive sign (+) denotes an increase in groundwater storage or groundwater level elevation while a negative sign (-) denotes a decrease in groundwater storage or groundwater level elevation.

Section 75574 of the California Water Code requires that the District Board indicate the amount of water the District is obligated by contract to purchase. The San Bernardino Valley Water Conservation District is not required by contract to purchase any water.



Summary of Findings for the 2015 Engineering Investigation

Task 1. Annual change in storage for the Bunker Hill Basin for the preceding water year (July 1, 2013 to June 30, 2014 groundwater levels)

Change in storage between Fall 2013 and Fall 2014

-85,368 acre-ft (decrease)

The amount of water stored in the Basin decreased by 85,368 acre-ft between 2013 and 2014.

Task 2. Accumulated change in storage of the Bunker Hill Basin as of the last day of the preceding water year (2014)

Accumulated change in storage between July 1993 and June 2014.¹

- 529,690 acre-ft (decrease)

The amount in storage in the summer of 2014 is 529,690 acre-ft less than in the summer of 1993.

Task 3. Total groundwater production from the Bunker Hill Basin for the preceding water year (July 1, 2013 - June 30, 2014)

165,799 acre-ft

¹ In the District's Engineering Investigation (EI) prior to 1993-94, the accumulated change in storage was based on the basin storage in 1984 as considered full. A concern arose regarding high groundwater levels in the Pressure Zone of the Bunker Hill Basin. Therefore, in response to the City of San Bernardino's comments on accumulated change in storage, all EI's since that time are based on 1993 basin storage levels considered as full. The BTAC makes annual recharge recommendations to optimize recharge.



Task 4. Estimate of the annual change in the Bunker Hill Basin storage for the current water year (July 1, 2014 - June 30, 2015)

-94,727 acre-ft (decrease)

The amount of water in the Basin is estimated to decrease by 94,727 acre-ft during the current water year.

Task 5. Estimate of the annual change in the Bunker Hill Basin storage for the ensuing water year (July 1, 2015 - June 30, 2016)

1,351 acre-ft increase (100% average)

88,779 acre-ft decrease (50% average)

91,480 acre-ft increase (150% average)

The amount of water in the Basin is estimated to increase by 1,351 acre-ft during the ensuing water year presuming average precipitation.

*** The amount of water in the Basin is estimated to decrease by 88,779 acre-ft during the ensuing water year presuming 50% of average precipitation.**

**** The amount of water in the Basin is estimated to increase by 91,480 acre-ft during the ensuing water year presuming 150% of average precipitation.**

Task 6. Average annual change in Bunker Hill Basin storage for the immediate past 10 water years (2004-2014) shows a decrease.

-9,141 acre-ft (decrease)



Task 7. Estimated amount of agricultural water and other than agricultural water to be withdrawn from the groundwater supplies of the District for the ensuing water year (July 1, 2015 - June 30, 2016)

Estimated amount of agricultural water withdrawn from the groundwater supplies within the District boundary for the ensuing water year (July 1, 2015 - June 30, 2016)

16,925 acre-ft

Estimated amount of other than agricultural water withdrawn from the groundwater supplies of the District for the ensuing water year (July 1, 2015 - June 30, 2016)

85,358 acre-ft

Task 8. Estimated amount of water necessary for surface distribution for the ensuing water year for the Bunker Hill Basin and the District (July 1, 2015 - June 30, 2016)

Estimated amount of water necessary for surface distribution for the ensuing water year (July 1, 2015 - June 30, 2016) for the Bunker Hill Basin

69,424 acre-ft

Estimated amount of water necessary for surface distribution for the ensuing water year (July 1, 2015 - June 30, 2016) within the District boundary

56,419 acre-ft

Task 9. The amount of water which is necessary for the replenishment of the groundwater supplies of the Bunker Hill Basin and the District for the ensuing water year (July 1, 2015 - June 30, 2016)



The amount of water which is necessary for the replenishment of the groundwater supplies of the Bunker Hill Basin for the ensuing water year (July 1, 2015 - June 30, 2016)

144,158 acre-ft

The amount of water which is necessary for the replenishment of the groundwater supplies within the District boundary for the ensuing water year (July 1, 2015- June 30, 2016)

100,933 acre-ft

In addition to the above findings, Section 75505 of the California Water Code requires that a finding be made as to the amount of water necessary to be replaced in the intake areas of the groundwater basins within the District to prevent the landward movement of salt water into the fresh groundwater body, or to prevent subsidence of the land within the District. Because of its location and the elevations of its water table, the Bunker Hill Basin is not subject to salt-water intrusion and the current groundwater levels do not indicate any significant land subsidence.

Section 75540 of the California Water Code requires that the District Board establish a zone or zones where a groundwater charge is to be implemented. The Code specifically states that a single zone may include the entire District and in May 1993 the Board established the entire District as one zone. This determination may be amended in the future, but lacking any evidence to the contrary, in the 2014-2015 year the entire District will remain as a single zone in regard to any groundwater charge.

Section 75561 of the California Water Code further requires the Engineering Investigation to include a finding related to the amount of water the District is obligated by contract to purchase. At this time the District has no contractual obligation to purchase water for the replenishment of the groundwater supplies. However, instead we recharge local surface water and cooperate with local and regional agencies to recharge the aquifer. The District works with San Bernardino Valley Municipal Water District



(Valley) to spread excess allocation State Project Water in the District's spreading basins. In the past the District has also utilized reserves to offset the cost of water purchases which have spread in its basins. Due to the significant reduction in District reserves it has not purchased water this year.

Based on the results of the 2015 Engineering Investigation, the San Bernardino Valley Water Conservation District finds that:

- Due to the imbalance between groundwater recharge and production since 1993, the Bunker Hill Basin's storage is 529,690 acre-feet below the levee which is considered full for purposes of this investigation. This value is significantly more than 2014 report due to lower local rainfall rates.
- During the ensuing water year (July 1, 2015 - June 30, 2016), the Bunker Hill Basin could be recharged, with up to 624,417 acre-feet of water. This recharge quantity would be needed to attain the 1993 storage level that is considered full. The Basin Technical Advisory Committee (BTAC) recommends a maximum of 145,000 acre-ft safely manage and recharge the basin. This amount includes 196,800 acre-ft in Mill Creek and Santa Ana River Basins.
- The District must continue to take all necessary steps to maintain and enhance its capability to conduct recharge operations. These steps may include maintenance and repair of existing, diversion facilities, canals, dikes, basins, roads, and other water recharge facilities. Additionally in December 2011 the District entered into a cooperative agreement with SBVMWD to enhance the recharge of the basin. This project will add significant new recharge facilities in the District's Santa Ana River Recharge Facilities. These facilities will be operated and maintained by the District. These improvements are required to ensure that the groundwater demands on the Basin, especially during drought periods, can be met.
- The District should continue to work cooperatively in the collaborative planning for the Enhanced Recharge Program to plan, design, build and maintain facilities to expand the capabilities for recharge of waters that are developed as a result of water conservation due to the construction of Seven Oaks Dam (SOD).



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- The District has begun collaborative construction efforts with Valley to improve the capacities and delivery capabilities of the District's Upper Santa Ana River diverted water conveyance canals and spreading basins. The District should review the single zone of influence/benefit in 2015-2016 and revise if needed.



2.0 Introduction

The 2014-2015 Engineering Investigation (EI) process was very similar to the previous 2013-2014 EI Report. The report uses the same basis of calculation, however updates the document as proposed in the work plan prepared and approved in December 2014. This approach also includes close coordination with other groups particularly San Bernardino Valley Municipal Water District (SBVMWD) who do their own calculations for work similar to the EI Report. We believe this approach makes the best use of the resources of all water entities within the basin. This year's report provides additional research, source documentation, and summary illustration of surface and groundwater activities within the Bunker Hill Basin and specifically within the Water Conservation District's boundaries.

2.1 Purpose and Scope

The San Bernardino Valley Water Conservation District (District) was created by a vote of the people in 1931 for the purpose of managing the recharge activities that were previously conducted by the Water Conservation Association. The Water Conservation Association was incorporated in 1909 and had been diverting flows from the Santa Ana River for groundwater recharge since 1911. Currently the District has ownership, as well as easements and/or use of properties owned by the Bureau of Land Management (BLM), on a total of 3,735 acres within the Santa Ana River and Mill Creek Wash areas. The District boundary covers an area of approximately 50,000 acres, which represents about 60% of the Bunker Hill Basin. **Figure 1** displays the project area map for the Engineering Investigation. The figure shows the District boundary along with its location relative to the County and State boundaries. **Figure 2** shows the District Boundaries relative to the water agencies served by the District.

Article 1, Section 75560 of the California Water Code requires that a Water Conservation District that proposes to levy a groundwater charge "... shall annually cause to be made an engineering investigation and report upon groundwater conditions of the District". In accordance with these requirements, the San Bernardino Valley Water Conservation



District (District) must make the following findings and determinations as they relate to the ground and surface water conditions of the Bunker Hill Basin and those areas within the District boundary. Sub-Basins of the Bunker Hill Basin are shown in **Figure 3**.

- Task 1.** Annual change in storage for the Bunker Hill Basin for the preceding water year (Fall 2013 to Fall 2014);
- Task 2.** Accumulated change in storage of the Bunker Hill Basin as of the last day of the preceding water year (June 30, 2014);
- Task 3.** Total groundwater production from the Bunker Hill Basin for the preceding water year (July 1, 2013 - June 30, 2014);
- Task 4.** Estimate of the annual change in the Bunker Hill Basin storage for the current water year (July 1, 2014 - June 30, 2015);
- Task 5.** Estimate of the annual change in the Bunker Hill Basin storage for the ensuing water year (July 1, 2015 - June 30, 2016);
- Task 6.** Average annual change in Bunker Hill Basin storage for the immediate past 10 water years (2004-2014);
- Task 7.** Estimated amount of agricultural water and other than agricultural water to be withdrawn from the groundwater supplies of the District for the ensuing water year (July 1, 2015 - June 30, 2016);
- Task 8.** Estimated amount of water necessary for surface distribution for the ensuing water year for the Bunker Hill Basin and the District (July 1, 2015 - June 30, 2016); and
- Task 9.** The amount of water that is necessary for the replenishment of the groundwater supplies of the Bunker Hill Basin and the District for the ensuing water year (July 1, 2015 - June 30, 2016).

To make the findings and determinations listed above, District staff researched available hydrogeologic, precipitation, and engineering data for the Bunker Hill Basin and surrounding areas. These data were compiled and analyzed and a predictive relationship between precipitation, production, and change in basin storage was adapted from similar relationships developed by Geoscience Support Services in the preparation



of previous Engineering Investigations. This relationship was based on empirical data enables the prediction of change in storage, given certain annual production and precipitation levels. Precipitation trends and stations are shown in **Figure 4**. In addition, annual and accumulated change in storage was calculated based on historic water level changes throughout the Bunker Hill Basin.

2.2 Location, Topography and Climate

The Bunker Hill Basin is located at the top of the Santa Ana River Watershed and receives all the surface water runoff from the headwaters of the Santa Ana River, Mill Creek, and a portion of that from the Lytle Creek area as well as smaller periodic flows from Plunge, City, Devil Canyon, Cajon and Elder Creeks. It is part of the inland valley called the San Bernardino Valley located in San Bernardino County, California and encompasses approximately 89,600 acres. Once past the Bunker Hill Basin, the Santa Ana River continues to flow southwesterly for approximately 60 miles until it reaches the Pacific Ocean.

The Bunker Hill Basin is bounded on the northwest by the San Gabriel Mountains, on the northeast by the San Bernardino Mountains, on the south by the Crafton Hills and the Badlands, and on the southwest by a low east-facing escarpment produced by the San Jacinto fault. These geologic features are easily identified on **Figure 5** and **Figure 6**.

The major streams providing inflows and outflows for the Bunker Hill Basin are provided on **Figure 1**. The United States Geological Survey (USGS) administers stream flow gauging stations on all of these waterways except Mill Creek. Mill Creek flow is assumed to be 56% of the Santa Ana River flow in this location based on historic data. Total diversions for direct use and recharge on the Santa Ana River may exceed the stream flows due to measurements by different agencies.

The Bunker Hill Basin is also utilized by a large group of City and Water Agencies that are working to collaborate for improved transparency. **Figure 2** presents an overview of the Water Agency Jurisdictions with an overlay of City boundaries.



The climate in the region is a semi-arid Mediterranean-type characterized by long dry summers and relatively short mild winters. The annual average temperature in the valley is 62° F, with extremes ranging from as low as 18° F to as high as 116° F (Burnham and Dutcher, 1960). Precipitation in the region is highly variable depending on location and elevation. Historical annual averages range from 10.9 inches near Loma Linda Fire Department located at the southwest end of the basin to over 40.1 inches at the Lake Arrowhead located at the upper end of the mountain watershed contributing flow to the basin. Precipitation data provided by the Water Resources Division for 20 stations are summarized in **Table 1** and displayed on **Figure 4**.

2.3 Definition of Terms

For the purposes of this report, the following terms are defined:

- ◆ **Bunker Hill Basin** - The Bunker Hill Basin is the groundwater basin that underlies the San Bernardino Valley. By strict definition according to (Dutcher and Garrett, 1963), the Bunker Hill Basin is separate from the Lytle Groundwater Basin, but receives groundwater underflow from the Lytle Basin. However, for completeness, the definition of the Bunker Hill Basin is extended to include the Lytle Basin for the purposes of this report.
- ◆ **Production** - The term production includes extraction of water by groundwater pumping from wells and surface diversions from the Santa Ana River, Mill Creek, City Creek, Devil Canyon Creek, Cajon Creek, Plunge Creek, and Lytle Creek.
- ◆ **Preceding Water Year** - As per the California Water Code, the preceding water year is the period July 1, 2013 through June 30, 2014.
- ◆ **Current Water Year** - As per the California Water Code, the current water year is the period July 1, 2014 through June 30, 2015.



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- ◆ Ensuing Water Year - As per the California Water Code, the ensuing water year is the period July 1, 2015 through June 30, 2016.

2.4 Sources of Data

Data used in the development of this engineering investigation were obtained from a variety of sources including public and private agencies. The data analysis tasks involved tabulating and summarizing information from documented and undocumented reports, public and private files, and personal communication with local, State, and Federal agencies. Some of the more important data sources are listed below.

Data for Fall 2013 and Fall 2014 groundwater elevations and preceding water year (July 2013 to June 2014) production were obtained from the primary water purveyors in the Bunker Hill Basin including:

- City of Colton
- City of Loma Linda
- City of Redlands
- City of Riverside
- City of San Bernardino
- Devore Water Company
- East Valley Water District
- Elsinore Valley Municipal Water District/Meeks and Daley Water Company
- Gage Canal Company
- Riverside – Highland Water Company
- Southern California Edison
- San Bernardino Valley Municipal Water District
- West Valley Water District
- United States Geological Survey, Santee, CA Office



Data for Fall 2013 and Fall 2014 groundwater elevations and preceding water year (July 2013 to June 2014) production was not obtained from:

- City of Rialto
- Fontana Water Company

Historic precipitation data were obtained from the San Bernardino County Department of Transportation and Flood Control:

http://www.sbcounty.gov/dpw/floodcontrol/water_resources.asp

Currently precipitation data is downloaded from USGS stations.

http://www.sbcounty.gov/trnsprtn/pwg/Online_Data/Online_Data_Intro.htm



3.0 Fall 2013 and Fall 2014 Groundwater Elevation Contours

The District, the Western Municipal Water District, and the primary water purveyors in the Bunker Hill Basin provided Fall 2013 and 2014 water level data. Static groundwater elevations for wells throughout the Bunker Hill Basin are compiled in **Appendix A**. These elevations were plotted for 186 wells using a Geographic Information System (GIS) are plotted in **Figures 5 & 6** for Fall 2013 and Fall 2014. The water elevation values were used to derive an interpolated surface for the extent of the Bunker Hill Basin. For purposes of comparison, Fall 2013 and Fall 2014 static groundwater elevation surface contours are provided in **Figures 5 & 6** respectively.



4.0 **Task 1 - Annual Change in Storage (Fall 2013 to Fall 2014)**

4.1 **Hydrologic Sub-areas**

Using a Geographic Information System, the average groundwater elevation changes were determined for each of the nine hydrologic sub-areas shown in **Figure 3** and listed below.

- Bunker Hill I - Southwest of Interstate 215
- Bunker Hill I - Northeast of Interstate 215
- Bunker Hill II - West of Mentone Fault
- Bunker Hill II - East of Mentone Fault
- Lytle Basin - Southeast of Barrier J
- Lytle Basin - Northwest of Barrier J
- Pressure Zone - North of Santa Ana Wash
- Pressure Zone - Santa Ana Wash

Due to variations of changes in groundwater level elevation, the Bunker Hill II - East of Mentone Fault was further subdivided into Storage Units North of Redlands Fault and Southeast of Redlands Fault. These Storage Units are also shown in **Figure 3**.

4.2 **Area and Storativity**

Digitizing each polygon made estimates of the area extent of the sub-areas and storage. Average storativity for each sub-area was determined based on data from Hardt and Hutchinson, 1980. Both of these values are shown in **Table 3**. Storativity values ranged from 0.02 for the Pressure Zone - North of the Santa Ana Wash to 0.13 for the Lytle Basin - Northwest of Barrier J and Bunker Hill II - East of the Mentone Fault.

4.3 **Groundwater Level Elevation Changes**

In order to determine the annual change in storage for the Bunker Hill Basin, Fall 2014 groundwater level elevation data were compared with the same from Fall 2013.

Measurements for 181 wells were available for both periods and the differences are provided in **Appendix A**. **Figure 7** shows key wells for the Bunker Hill basins. These wells have long hydrologic histories.



Average changes in groundwater were determined by averaging the changes for all wells in each of the eight sub-areas and storage units as shown in **Table 3**.

4.4 Change in Groundwater Storage

The total annual change in storage for the Bunker Hill Basin was determined by summing the changes from each sub-area. Changes in groundwater storage for the period Fall 2013 to Fall 2014 for the Bunker Hill Basin were calculated using the following formula:

$$Q_{\text{change in storage}} = \sum A_i \times S_i \times \Delta h_i$$

where:

$Q_{\text{change in storage}}$ = Annual change in storage for the Bunker Hill Basin, (acre-feet)

A_i = Area of sub-area and storage unit i , (acres)

S_i = Storativity of sub-area and storage unit i

Δh_i = Average water level change of sub-area and storage unit i , (feet)

As shown in **Table 3**, the change in groundwater storage for the Bunker Hill Basin between Fall 2013 and Fall 2014 decreased a change of -85,368 acre-ft.



5.0 **Task 2 - Accumulated Change in Storage from Fall 1993 to Fall 2014**

For purposes of this report, the accumulated change in storage as of the last day of the preceding water year (July 30, 2014) was based on the changes in water levels between Fall 1993, when the accumulated basin change in storage was considered “zero”, and the Fall of 2014.² The accumulated change in storage as of June 30, 2014 was determined by subtracting the change in storage for the preceding water year (July 1, 2013 to June 30, 2014 of -85,368 determined in Section 4.4, from the accumulated change in storage as of June 30, 2012 (-314,377). The result of this calculation is an accumulated change in storage for the Bunker Hill Basin of -529,690 acre-ft.

Table 4 summarizes the accumulated change in storage of the Bunker Hill Basin for the period 1989 to 2014 based on 1993 as the “zero accumulated storage year”. As would be expected, storage generally increases with above average rainfall and decreases with normal and below average rainfall.

² In the District’s Engineering Investigation (EI) prior to 1993-94, the accumulated change in storage was based on the basin storage in 1984 as considered full. A concern arose regarding high groundwater levels in the Pressure Zone of the Bunker Hill Basin. Therefore, in response to the City of San Bernardino’s comments on accumulated change in storage, all EI’s since that time are based on 1993 basin storage levels considered as full. The BTAC makes annual recharge recommendations to optimize recharge.



6.0 ***Task 3*** - Total Groundwater Production for the Preceding Water Year (July 1, 2013 to June 30, 2014)

Production data for the preceding water year (July 1, 2013 to June 30, 2014) for the Bunker Hill Basin were obtained from the primary water purveyors as listed in Section 2.4. Production data for wells owned by some smaller water agencies were included if data was available from the Western-San Bernardino Watermaster, Western Municipal Water District and semiannual billing statements issued by the District.

Appendix C shows the production for each groundwater well in the Bunker Hill Basin for the period July 2013 through June 2014. As summarized on the last page of the Appendix, groundwater production from the Bunker Hill Basin for the preceding water year was approximately 165,799 acre-ft. **Table 5** summarizes the Bunker Hill Basin groundwater production for each of the sub-areas defined in Section 4.1.

Groundwater production within the Bunker Hill Basin during the period July 2013 through June 2014 is shown on **Figure 8**. The Pressure Zone has the greatest density of higher producing facilities with pockets of substantial production scattered throughout the rest of the basin.



7.0 **Task 4** - Estimate of the Annual Change in Storage for the Current Water Year (July 1, 2014 to June 30, 2015)

To estimate annual change in storage for the current water year, a multiple regression analysis was performed for the period between 1991-2013 three parameters.

- Annual Change in Storage
- Precipitation
- Production

This analysis is shown in **Figure 9**.

In Engineering Investigations (EI) prior to 1998, data for the period 1982 calendar year through 1991 calendar year were also utilized in the regression analysis. The only production data available for this time frame was based on a calendar year period instead of the June to July period required in the EI. Since the 1991-92 period, more accurate and more complete production data for the July to June period has become available, as the District has compiled detailed information for its EI. Since 1998, the regression analysis has not included pre-1991 data to more accurately represent June through July production.

Annual change in storage for the current water year is estimated using the following relationship between change in storage, precipitation, production, and the calculated regression coefficients. The accumulated change in storage is shown in **Figure 10**.

$$Q_{\text{Annual } \Delta \text{ storage}} = -142,365 + 7,948 * Q_{\text{prec}} - 0.171 * Q_{\text{prod}}$$

where:

$Q_{\text{Annual } \Delta \text{ storage}}$	= Annual change in storage, (acre-feet)
Q_{prec}	= Annual Precipitation, inches
Q_{prod}	= Annual Production, acre-feet



A nomograph, constructed using the above equation, is shown on **Figure 9**. Through the use of this chart or the equation above, annual change in storage can be estimated for a given set of annual precipitation and production values. The precipitation used in the nomograph is based on the average of the representative Bunker Hill Basin drainage area stations listed in **Table 6**. The historic annual precipitation information is shown in **Table 1**.

The historic annual average annual precipitation for nine of the ten stations with recent data is shown in **Table 6** approximately 20.1 inches. Historic annual precipitation values are plotted in **Appendix D** for these nine stations and twelve other local stations.

Table 6 shows that for the period between July 1, 2013 and December 31, 2013, precipitation was 63.7 percent of normal for the nine stations with data. Remainder of the water year, January 1 to June 30, 2014, the rainfall averaged 39.2 percent of the long term average. Annually, precipitation for the 2013-2014 water year averaged 46.7 percent. For purposes of this report, it was assumed that precipitation for the current water year (July 1, 2014 to June 30, 2015) would be 10.96 inches, 46.7 percent of the 22.68 inch average for the 2013 to 2014 season. The precipitation for the ensuing water year (July 1, 2015 to June 30, 2016) was estimated, as 100 percent of normal, or 22.68 inches of rainfall.

Based on these assumptions, the estimated production for the current water year will be approximately 215,852 acre-ft as shown in **Figure 10**. Using this result in **Figure 9** an estimated change in storage for the current water year (July 2014 to June 2015) of -94,679 acre-ft was determined.

8.0 Task 5 - Estimate of the Annual Change in Storage for the Ensuing Water Year (July 1, 2015 to June 30, 2016)

The annual change in storage for the ensuing water year (July 1, 2015 to June 30, 2016) was estimated using the same method as described in Section 7.0. It was assumed that precipitation for the ensuing water year would be 100% of normal or 22.68 inches.



Based on this assumption, the estimated production for the ensuing water year will be approximately 214,933 acre-ft as shown in **Figure 11**. Again, using this result in the nomograph shown in **Figure 9**, the estimated annual change in storage for the ensuing water year (July 1, 2015 to June 30, 2016) is 1,351 acre-ft.

If it is assumed that precipitation for the ensuing water year would be 50% of normal or 11.34 inches, the estimated production for the ensuing water year will be approximately 215,542 acre-ft. This is an approximation of the historical low-precipitation year.

If it is assumed that precipitation for the ensuing water year would be 150% of normal or 34.02 inches, the estimated production for the ensuing water year will be approximately 214,325 acre-ft. This is an approximation of the historical high-precipitation year.

9.0 Task 6 - Average Annual Change in Storage for the Immediate Past 10 Water Years

Table 7 shows the average annual change in storage for the immediate past ten water years (July 2004 to June 2014) using the same method as described in Section 4.0. By summing the average annual change in storage for each sub-area, a total average annual change in storage for the Bunker Hill Basin for the immediate past ten water years was determined to be -9,141 acre-feet/year.

10.0 Task 7 - Estimated Amount of Agricultural Water and Other Than Agricultural Water to be Withdrawn for the Ensuing Water Year (July 1, 2014 to June 30, 2015)

The estimated amount of agricultural water and other than agricultural water to be withdrawn within the District for the ensuing water year (July 1, 2015 to June 30, 2016) was based on the following equations:



$$Q_{agr(12-13)} = Q_{agr(12-13)} \times \left[\frac{(Q_{total(14-15)} - Q_{surf(14-15)})}{(Q_{total(12-13)} - Q_{surf(12-13)})} \right]$$

and

$$Q_{non-agr(12-13)} = Q_{non-agr(12-13)} \times \left[\frac{(Q_{total(14-15)} - Q_{surf(14-15)})}{(Q_{total(12-13)} - Q_{surf(12-13)})} \right]$$

where:

- $Q_{agr(14-15)}$ = Agricultural use within the District for the ensuing water year, acre-ft
- $Q_{agr(12-13)}$ = Agricultural use within the District for the preceding water year, acre-ft (Appendix C)
- $Q_{total(14-15)}$ = Production (including surface diversion) from the Bunker Hill Basin for the ensuing water year, acre-ft (Figure 14)
- $Q_{total(12-13)}$ = Production (including surface diversion) from the Bunker Hill Basin for the preceding water year, acre-ft (Appendix C)
- $Q_{non-agr(14-15)}$ = All other uses within the District for the ensuing water year, acre-ft
- $Q_{non-agr(12-13)}$ = All other uses within the District for the preceding water year, acre-ft (Appendix C)
- $Q_{surf(14-15)}$ = Surface diversions from the Bunker Hill Basin for the ensuing water year, acre-ft (Table 8)
- $Q_{surf(12-13)}$ = Surface diversions from the Bunker Hill Basin for the preceding water year, acre-ft (Appendix C)

Data on agricultural use and other uses within the District for the preceding water year (July 1, 2013 to June 30, 2014) are provided in **Appendix C**. For the period July 1, 2013 through June 30, 2014 approximately 16,925 acre-ft of groundwater was produced for agricultural applications within the District boundary. For the same period, approximately 85,358 acre-ft of groundwater was produced for all other uses within the District boundary. Using the equations presented above with the following values inserted:



$$Q_{agr(13-14)} = 15,014 \text{ acre-ft (Appendix C)}$$

$$Q_{total(14-15)} = 284,358 \text{ acre-ft (Figure 13)}$$

$$Q_{total(13-14)} = 193,087 \text{ acre-ft (Appendix C)}$$

$$Q_{non-agr(13-14)} = 75,719 \text{ acre-ft (Appendix C)}$$

$$Q_{surf(14-15)} = 69,424 \text{ acre-ft (Task 8)}$$

$$Q_{surf(13-14)} = 2,426 \text{ acre-ft (Table 8)}$$

The estimated production within the District for the ensuing water year for agricultural uses and other than agricultural uses is:

$$Q_{total(14-15)} = 18,864 + 87,309 = 102,283 \text{ acre-ft}$$

$$Q_{agr(14-15)} = 15,014 \times [(284,358 - 69,424) / (193,087 - 2,426)] \\ = 18,864 \text{ acre-ft}$$

$$Q_{non-agr(14-15)} = 75,719 \times [(284,358 - 69,424) / (193,087 - 2,426)] \\ = 87,309 \text{ acre-ft}$$

$$Q_{agr(14-15)} = 16,925 \text{ acre-ft}$$

$$Q_{non-agr(14-15)} = 85,358 \text{ acre-ft}$$

$$Q_{Dist(14-15)} = 102,283 \text{ acre-ft}$$

By summing these two results, it is estimated that 88,166 acre-feet of groundwater will be withdrawn within the District for the ensuing water year (July 1, 2014 to June 30, 2015). **Appendix C** shows the Agriculture and Non-Agriculture trends for the District by sub-basin using approximately 207 wells within the District Boundary reporting type of use.



11.0 Task 8 - Estimated Amount of Water for Surface Distribution for the Ensuing Water Year (July 1, 2015 to June 30, 2016)

The amount of water for surface distribution for the ensuing water year (July 1, 2015 to June 30, 2016) was estimated based on the average surface diversions for the Santa Ana River, Mill Creek, and Lytle Creek for the period 1986 to 2014.

As shown in **Table 8**, average surface diversions for the Santa Ana River, Mill Creek, Lytle Creek and smaller tributary creeks collectively called “Bunker Hill Creeks,” between 1986 and 2014 were 40,259; 1,195; 21,315; and 11,950 acre-feet, respectively. Therefore, the total estimated amount of water for surface distribution from the Bunker Hill Basin for the ensuing water year (July 1, 2015 to June 30, 2016) is found by summing the diversions as follows:

$$\begin{aligned} \text{Bunker Hill Surface Distribution} &= 11,827 + 19,441 + 1,178 + 36,978 = \\ &69,424 \text{ acre-ft} \end{aligned}$$

As Lytle Creek and Bunker Hill Creeks are not within the District, the estimated amount of surface distribution from the District for the ensuing water year (July 1, 2015 to June 30, 2016) is the sum of the Santa Ana River and Mill Creek distributions.

$$\text{District Surface Distribution} = 36,977 + 19,441 = 56,419 \text{ acre-ft}$$

12.0 Task 9 - Estimated Amount of Water for Replenishment of the Groundwater Supplies for the Ensuing Water Year (July 1, 2015 to June 30, 2016)

The amount of water necessary for replenishment of the groundwater supplies of the Bunker Hill Basin for the ensuing water year (July 1, 2015 to June 30, 2016) was estimated based on:

$$\text{Replenishment} = \text{Total Production} - \text{Surface Diversions} - \text{Change in Storage}$$



The estimated production and surface diversions from the Bunker Hill Basin for the ensuing water year (July 1, 2015 to June 30, 2016) were estimated at approximately 215,200 acre-feet (from **Figure 13**) and 71,861 acre-feet (from **Table 8**), respectively. The estimated change in storage determined in Section 8.0 and shown on **Figure 9** is an increase of 2,253 acre-feet. Therefore, the amount of water necessary for replenishment of the groundwater supplies of the Bunker Hill Basin is estimated as follows:

$$\text{Replenishment} = 214,933 - 69,424 - 1,351 = 145,128 \text{ acre-ft}$$

The amount of water necessary for replenishment of the District's groundwater supplies for the ensuing water year (July 1, 2015 to June 30, 2016) was estimated using the same equation as shown above and substituting values for the District area. The estimated production within the District for the ensuing water year was estimated at approximately 106,964 acre-ft (from Section 10.0) and 56,419 acre-ft (from Section 11.0), respectively. The change in storage for the ensuing water year for the District was estimated as an increase of 2,253 acre-ft. Therefore, the amount of water necessary for replenishment of the District's groundwater supplies for the ensuing water year (July 1, 2015 to June 30, 2016) is:

$$\begin{aligned} \text{Replenishment} &= \text{Total Production} - \text{Surface Diversions} - \text{Change in Storage} \\ \text{Replenishment} &= (214,933) - 102,283 - 1,351 = 100,933 \text{ acre-ft} \end{aligned}$$

13.0 Quality Assurance and Quality Control

Quality Assurance and Quality Control (QA/QC) efforts for the Engineering Investigation Report are distributed. Virtually all information is provided by other programs and agencies that have their own QA/QC processes and this report relies on them for providing accurate data. Additionally, most of the data is used in other reports and would be flagged if in error; examples include Watermaster reports, other basin models, etc. This section will briefly discuss the QA/QC process and standards.



Process and Method: The EI process produces results that are obtained by inputting the data we receive from the cooperating agencies into a series of linked spreadsheets in an MS Excel workbook. Many different calculations are then performed on the data entered. The results from these calculations are reported in the EI. Like all reports, the EI can contain error. SBVWCD makes a great effort to identify and eliminate the sources of possible errors.

The EI has established standards for precision and representativeness in the development of the report since the process initiation in 1993. The report uses a set of key wells, which can change over time to represent the groundwater basins. If changes to the wells are made, they are reviewed to see they are consistent with prior years. The level of precision in the data supplied varies, because the District must rely on the data quality produced by others for their work. We do not have specific requirements for precision of well level or production data, because other programs use the data and because the report averages the levels over entire groundwater basins; the precision of the other programs is adequate for our change in storage calculations.

In order for accurate conclusions to be drawn from the EI, the following must happen:

- 1) High quality data must be input into the Daily Flow Report (DFR) by field staff
- 2) DFR and data from other agencies must be accurately transferred to EI spreadsheets;
- 3) Correct calculations must be made using this data

Data Accuracy: The EI uses a large amount of production, water level, and flow measurements in calculating the change in storage and related tasks. The data received for the study is reviewed for completeness so that all wells and flows are reported. SBVWCD verifies that DFR data is accurate by cross checking with other data and verifying the data is in the historical range. The District implements several methods to maintain the accuracy of the Engineering Investigation Report. These methods are discussed in the following sections.

The input data for the EI comes from many agencies, in many different formats, over a range of several months. The data is checked when entered to ensure that the correct



data is being provided in the correct units. To ensure this check occurs, all data entered into the EI spreadsheets is highlighted. Once all data entry has occurred, a second staff person checks the highlighted input data to make sure it is the correct value and in the correct units.

Generally, data is transferred (copied and pasted) into the EI spreadsheets rather than retyped to reduce entry errors. When data is provided in a format that cannot be transferred, hand entered data is double checked upon entry. Once all the data has been entered, it is checked again to make sure there is not any data out of historical range. Any data that is out of range is rechecked at the source, and if necessary confirmed by the providing agency.

A final check of the data is done by the reporting agencies. SBVWCD sends out a draft EI to all data providers. Any error reported by the data providers is addressed and corrected before the Final EI is approved.

Calculation Accuracy: To ensure the calculations used to obtain the results for the EI are correct, the District uses a copy of the prior year spreadsheets for the ensuing year. The spreadsheets are directly recreated from the copies, only the data is stripped out of the spreadsheet so that all cell references are maintained. This maintains the consistency of the calculations. As an additional check, the cell references and formulas are reconfirmed each year. In addition to rechecking of the structure of the spreadsheets, the methodology and logic is also rechecked in this process.

Comparability: After all the data and calculations are checked, the final results are obtained. The District compares the results from the EI to SBVMWD's groundwater modeling program change in storage calculation. The programs cover nearly the same area with very similar input data. However, the basin boundaries and methods of calculations are different. If District results and SBVMWD's results are significantly different, more than 10%, the District and SBVMWD both review data and calculations, identify any errors, and verify the new EI results are comparable and accurate.



Approval: Once the results are confirmed through the previous steps, the District Management reviews the report and recommends it to the SBVWCD's Board of Director for reviews and approval.

14.0 General Findings

In addition to the above findings, Section 75505 of the California Water Code requires that a finding be made as to the amount of water necessary to be replaced in the intake areas of the groundwater basins within the District to prevent the landward movement of salt water into the fresh groundwater body, or to prevent subsidence of the land within the District. Because of its location and the elevations of its water table, the Bunker Hill Basin is not subject to salt-water intrusion and the current groundwater levels will not (lowest=593 msl) result in any significant land subsidence.

Section 75540 of the California Water Code requires that the District Board establish a zone or zones where a groundwater charge is to be implemented. The Code specifically states that a single zone may include the entire District and in May 1993 the Board established the entire District as one zone. This determination may be amended in the future, but lacking any evidence to the contrary, in the 2014-2015 year the entire District will remain as a single zone in regard to any groundwater charge.

Section 75561 of the California Water Code further requires the Engineering Investigation to include a finding related to the amount of water the District is obligated by contract to purchase. At this time the District has no contractual obligation to purchase water for the replenishment of the groundwater supplies.

15.0 Conclusions

Based on the results of the 2014 Engineering Investigation, the San Bernardino Valley Water Conservation District finds that:

- Due to the imbalance between recharge and production since 1993, the Bunker Hill Basin's storage is 530,346 acre-feet below that which is considered full for purposes of this Investigation.



-
- During the ensuing water year (July 1, 2015 to June 30, 2016), the Bunker Hill Basin can be recharged, from all sources, with 650,694 acre-feet of water. This recharge quantity is derived by algebraically adding together the accumulated deficit as of the end of the preceding water year with the estimated quantity needed to maintain the 1993 storage level considered full. The BTAC recommends a maximum basin recharge of 190,000 acre-ft.
 - The District should continue to take the necessary steps to work with its partners to enhance its capability to conduct recharge operations, which includes construction of new, or maintenance and repair of existing, diversion facilities, canals, dikes, basins, roads, and other water recharge facilities. These improvements are required to ensure that the increasing demands on the Basin, especially during drought periods, can be met.

16.0 Financial Data

The San Bernardino Valley Water Conservation District, in response to questions previously provided information about the groundwater charge in this section. The District provides a complete budget and report of operations as a companion document to this report.

Any changes to the groundwater charge will not be reflected on the District's financial reports as income until the fiscal year 2015 – 2016, as the first increment of the new charge is not due until that time.



Engineering Investigation of the Bunker Hill Basin 2013-2014

Figures



Figure 1. Project Area. Figure in Development.

Figure 2. Conservation and Water Agency Boundaries. Figure in Development.

Figure 3. Bunker Hill Subbasins. Figure in Development.

Figure 4. Precipitation Trends and Station Locations October 2013 – September 2014. Figure in Development.

Figure 5. Water Elevation Contour Surface Fall 2013. Figure in Development.

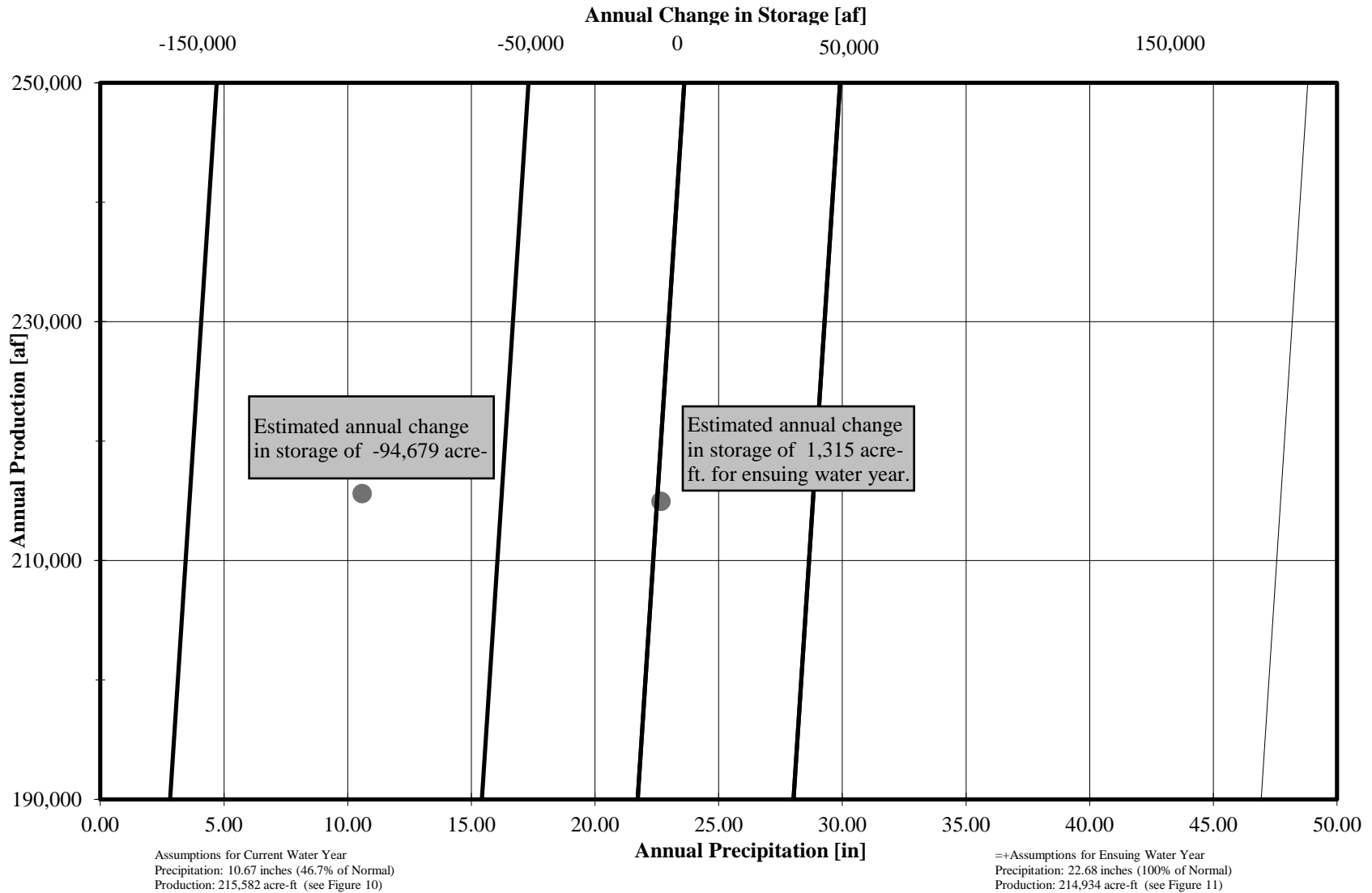
Figure 6. Water Elevation Contour Surface Fall 2014. Figure in Development.

Figure 7. Key Wells (Appendix B Hydrographs). Figure in Development.

Figure 8. Groundwater Production – Bunker Hill Basin Subbasins. Total Well Production for July 2013 – June 2014 (Water Year). Figure in Development.



Prediction Chart for Annual Change in Storage (Figure 9)

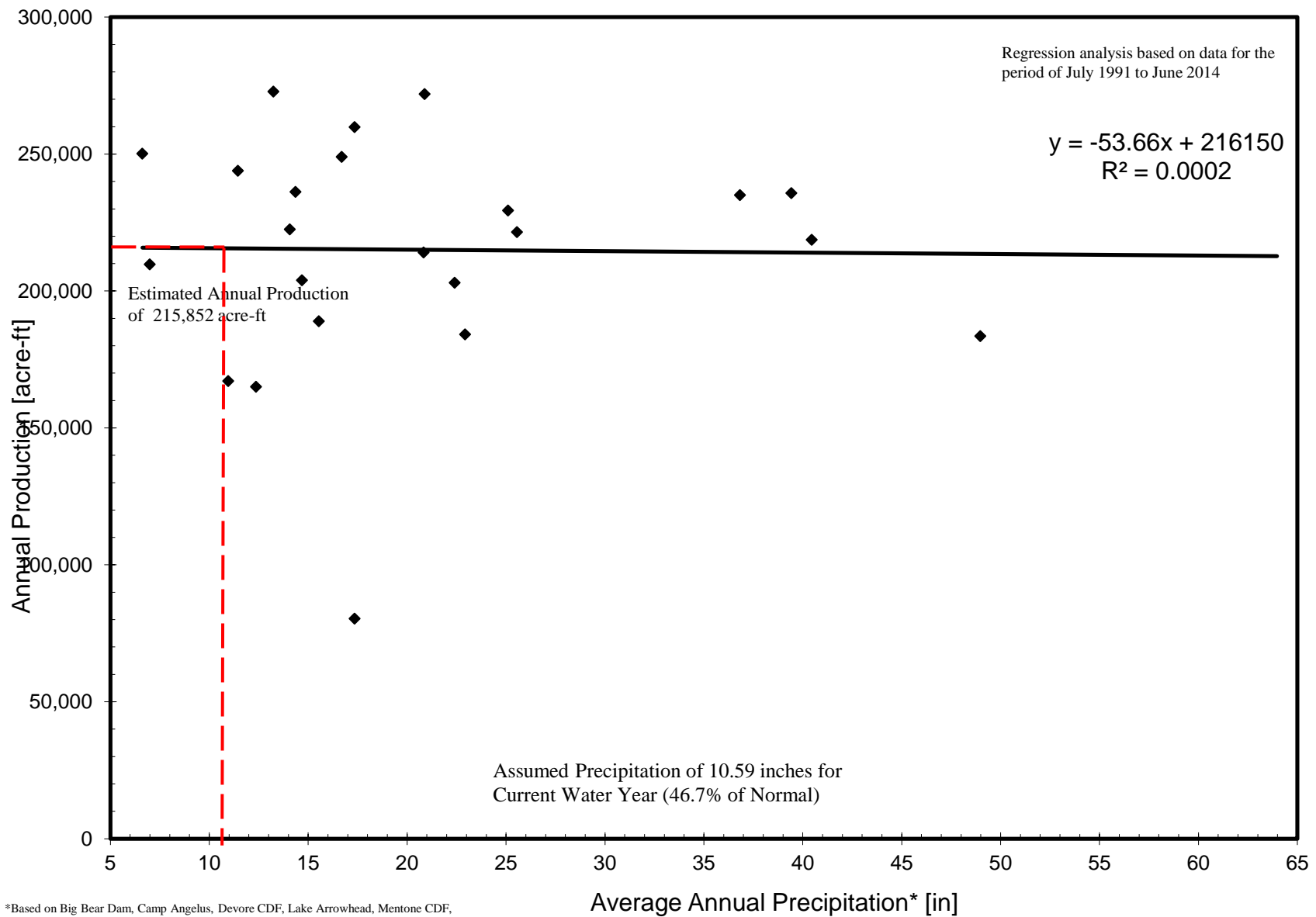


* Based on Big Bear Dam, Camp Angelus, Devore CDF, Lake Arrowhead, Mentone CDF, Redlands Country Club, San Bernardino County Hospital, Santa Ana Powerhouse #3, and Yucaipa CDF.

$$\text{Change in Storage} = -125,073 + 7,935 * \text{Precipitation} - 0.249 * \text{Production} \quad (R^2 = 0.80)$$



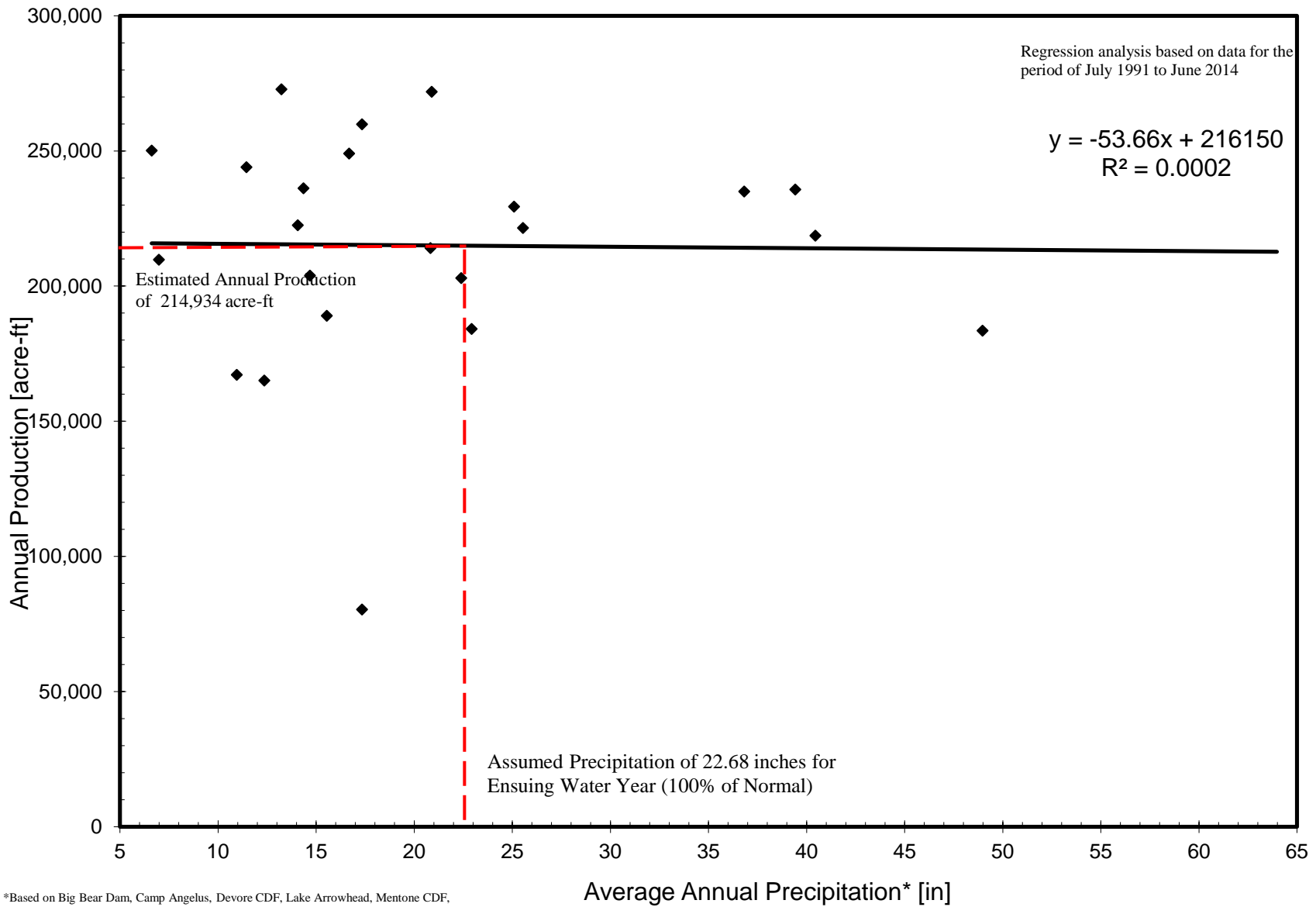
Estimate of Production for Current Water Year (Figure 10)



*Based on Big Bear Dam, Camp Angelus, Devore CDF, Lake Arrowhead, Mentone CDF, Redlands Country Club, San Bernardino County Hospital, Santa Ana Powerhouse #3, and Yucaipa CDF.



Estimate of Production for Ensuing Water Year (Figure 11)



*Based on Big Bear Dam, Camp Angelus, Devore CDF, Lake Arrowhead, Mentone CDF, Redlands Country Club, San Bernardino County Hospital, Santa Ana Powerhouse #3, and Yucaipa CDF.



Engineering Investigation of the Bunker Hill Basin 2013-2014

Tables



Summary of Percentage of Normal Precipitation

Station	Historic Annual Avg. [in]	1986 -1987 [in]	1987 -1988 [in]	1988 -1989 [in]	1989 -1990 [in]	1990 -1991 [in]	1991 -1992 [in]	1992 -1993 [in]	1993 -1994 [in]	1994 -1995 [in]	1995 -1996 [in]	1996 -1997 [in]	1997 -1998 [in]	1998 -1999 [in]	1999 -2000 [in]	2000 -2001 [in]	2001 -2002 [in]	2002 -2003 [in]	2003 -2004 [in]	2004 -2005 [in]	2005 -2006 [in]	2006 -2007 [in]	2007 -2008 [in]	2008 -2009 [in]	2009 -2010 [in]	2010 -2011 [in]	2011 -2012 [in]	2012 -2013 [in]	2013 -2014 [in]	Each Station 28-Yr. Avg. [in.]
Big Bear City	13.75	10.18	10.59	9.37	10.23	17.81	13.96	22.92	11.53	18.59	11.17	12.06	16.83	6.53	4.75	20.14	3.33	12.62	7.55	23.25	14.36	3.67	8.53	3.51	16.24	24.55	16.27	10.46	9.2	12.51
Big Bear Dam	35.53	19.17	28.89	20.84	17.60	34.79	38.90	81.92	28.67	52.65	24.40	29.97	51.70	14.20	20.60	21.40	9.20	38.10	19.60	59.10	26.40	10.30	23.00	19.70	26.00	20.24	11.83	18.73	13.34	27.90
Camp Angelus	28.41	20.50	4.95	17.20	17.90	26.44	28.16	61.14	17.20	46.70	26.00	29.00	49.52	16.10	21.10	21.50	7.70	35.40	13.20	35.20	41.90	0.00	2.70	18.00	18.80	1.60	17.49	13.89	9.93	22.12
Crafton Hills	12.47	9.00	12.11	10.00	6.30	12.27	10.69	22.99	5.45	27.10	7.84	16.67	25.55	7.29	6.40	10.49	2.46	17.57	9.47	31.39	11.45	3.34	13.34	8.82	17.80	24.52	9.57	9.16	6.55	12.70
Del Rosa Ranger Station	18.20	9.48	18.92	13.16	12.85	8.79	24.24	41.39	12.30	27.69	14.21	17.31	37.26	8.30	12.73	16.60	6.09	19.69	13.02	38.55	17.40	8.77	17.77	13.57	22.01	30.84	13.57	2.22	4.54	17.26
Devore CDF	27.34	12.39	17.90	10.75	15.00	20.41	31.32	63.98	15.40	45.44	20.58	33.10	45.13	13.61	8.04	15.52	10.90	35.35	16.44	60.36	24.80	8.86	25.21	16.51	34.12	43.20	17.47	14.04	13.81	24.63
Fallsvale	31.67	23.00	20.30	3.50	51.00	22.50	36.00	71.90	52.00	54.90	22.10	33.80	53.00	16.30	21.20	15.30	6.50	37.50	25.20	61.40	26.90	11.10	29.30	24.70	2.85	29.52	22.9	14.1	26.3	29.11
Lake Arrowhead	40.09	23.74	40.39	28.51	26.62	23.68	45.24	85.00	28.20	74.51	30.84	36.50	72.80	18.10	25.80	28.60	10.70	36.50	22.70	69.70	46.20	18.50	41.91	30.28	26.00	37.76	25.1	32.6	26.7	36.19
Loma Linda FD	10.92	7.41	10.45	8.84	7.69	7.16	13.44	25.56	10.99	19.02	7.15	9.78	22.74	5.12	7.74	6.38	2.45	14.48	8.06	22.59	11.06	3.51	9.63	8.95	13.10	18.24	6.79	7.32	9.06	10.88
Lytle Creek at Foothill	13.40	7.00	12.96	3.90	8.50	15.51	14.91	31.61	9.16	25.51	12.23	13.83	25.84	6.25	9.81	12.12	4.00	13.60	7.16	27.23	11.22	3.84	11.89	9.03	13.03	0.23	6.9	4.51	8.34	11.79
Lytle Creek Fire Station	23.56	11.20	22.40	12.83	17.90	32.07	49.09	87.71	20.50	47.57	24.49	23.10	52.18	11.81	20.40	18.34	4.47	16.96	12.09	44.11	18.92	4.22	21.89	3.32	0.00	28.46	8.18	7.32	8.03	22.48
Mentone CDF	12.54	9.23	8.85	8.64	6.13	12.55	15.93	23.85	8.35	17.10	9.42	15.73	27.09	4.28	9.08	10.16	4.06	15.00	10.38	24.94	11.01	5.41	10.75	9.38	14.96	17.77	7.9	7.33	3.11	11.73
Oak Glen	26.80	19.29	21.46	17.82	17.71	26.92	30.78	57.96	18.76	57.92	20.04	30.39	49.46	11.32	17.12	12.28	6.72	14.28	18.39	34.14	22.58	9.71	27.60	19.92	29.72	36.82	15.13	15.65	14.07	24.07
Redlands - Roth	12.13	7.79	11.18	8.08	7.21	13.34	14.96	25.57	10.06	20.49	8.08	10.77	22.29	6.46	7.41	10.38	3.35	12.18	9.16	24.43	9.52	3.31	9.46	8.82	15.12	17.38	4.34	1.54	2.08	10.88
Redlands Country Club	13.71	8.80	14.18	10.68	8.58	14.48	16.11	29.44	12.55	19.76	8.52	9.03	17.22	6.30	5.68	9.96	3.97	16.45	11.58	29.37	10.30	4.13	11.93	11.35	17.25	22.33	7.74	8.71	6.92	12.62
San Bernardino CDF	17.34	9.27	18.26	12.85	10.55	15.49	21.89	37.35	4.46	20.29	15.77	16.17	34.32	9.30	13.62	16.61	5.29	13.14	11.52	37.28	16.39	6.33	18.91	9.85	20.45	27.94	10.63	7.69	11.3	16.18
San Bernardino Co. Hospital	15.88	8.08	13.53	12.63	8.12	15.48	16.54	30.78	11.65	24.10	11.92	17.80	32.67	8.02	11.09	2.33	3.60	17.06	10.49	29.89	13.20	4.68	12.81	10.05	17.03	21.76	9.58	9.31	10.97	14.11
Santa Ana Pumphouse #3	16.94	12.28	14.67	9.38	10.32	15.84	18.38	22.98	15.92	24.85	11.05	16.60	27.95	7.01	6.78	8.63	3.23	18.24	9.40	27.65	11.78	6.13	10.73	9.73	14.58	20.18	8.62	9.05	7.42	13.55
Yucaipa CDF	15.82	11.02	11.33	9.74	7.25	11.16	17.85	34.20	11.40	30.24	10.52	15.62	24.70	7.63	11.10	9.92	5.66	19.47	11.84	32.70	13.14	6.56	14.67	12.11	18.79	25.09	11.8	11.1	6.87	14.77
Yucaipa Valley Water District	15.85	10.55	14.36	10.55	10.84	16.98	18.68	18.08	12.51	25.20	10.88	16.93	28.60	9.87	9.63	9.65	5.27	19.50	11.10	32.73	12.52	5.53	14.79	12.11	17.68	22.74	10.8	9.37	7.58	14.47

Percent of Normal	100%	62%	81%	59%	69%	90%	119%	218%	79%	169%	76%	100%	178%	48%	62%	69%	27%	105%	64%	185%	92%	32%	84%	65%	88%	117%	60%	53%	51%	89%
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Total Station Average	20.12
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Change in Groundwater Levels in Key Wells

Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	2013	2014	Difference Fall 2013 to Fall 2014
				Depth To Water (ft)	Depth To Water (ft)	
3601675	1N4W25A01S	27	East Valley Water District	191.6		
3602113	1N3W30N01S	41	East Valley Water District	290	290.2	-0.2
3601308	1S2W19K01S	Agate #1	Redlands, City of	102	148	-46
3601287	1S2W21B02S	E. Lugonia #3	Redlands, City of	26	31	-5
3601290	1S2W21D01S	E. Lugonia #6	Redlands, City of	42	36	6
3602065	1S3W32J02S	Lee Well	Redlands, City of	209	206	3
3601281	1S2W36F01S	Maguet #1	Redlands, City of	21	23	-2
3601284	1S2W21E01S	Maguet #2	Redlands, City of	42	57	-15
3601586	1S3W15F01S	Orange Street	Redlands, City of	118	139	-21
3600918	2S3W01E01S	Redlands Heights	Redlands, City of	167	169	-2
3601294	1S3W35G09S	Well #13	Redlands, City of	56	60	-4
3601296	1S3W35H03S	Well #16	Redlands, City of	38	42	-4
3601298	1S3W21H01S	Well #32	Redlands, City of	172	188	-16
3601299	1S4W24K01S	Well #34	Redlands, City of	180	193	-13
3602032	1S3W22A02S	Well #35	Redlands, City of	196	216	-20
3601263	1N5W23Q01S	City 1	Rialto, City of	206	225	-19
3601225	01S/04W-02P002S	Cooley D	Riverside, City of	137.98	176	-38.02
3601218	1S4W14P02S	Raub 1	Riverside, City of	128.41	164.8	-36.39
3601234	1S4W27A19S	Stewart 19	Riverside, City of	121.16		
3601431	1S4W27H01S	Stewart 20	Riverside, City of	115.36	150	-34.64
3600787	1S4W23A02S	26-1	Riverside, City Of-Gage Canal	167	181	-14
229101	1S2W07B01S	SBVWCD #1	San Bernardino Valley WCD	205.54	247.13	-41.59
229001	1S2W07K01S	SBVWCD #2	San Bernardino Valley WCD	166.92	222.49	-55.57
228601	1S3W12J01S	SBVWCD #3	San Bernardino Valley WCD	157.47	227.15	-69.68
228801	1S3W11H01S	SBVWCD #4	San Bernardino Valley WCD	133.09	175.61	-42.52
3600717	1N4W32D03S	19th Street No. 1	San Bernardino, City of	308.3	315	-6.7
3600720	1N4W27M02S	27th Street Well	San Bernardino, City of	270.4	273.2	-2.8
3600719	1N4W27G01S	30th & Mtn. View	San Bernardino, City of	305.7	305.3	0.4
3602081	1N4W27B01S	31st & Mtn. View	San Bernardino, City of	301.3	310.6	-9.3
3602422	1S4W02K08S	Antil Well #6	San Bernardino, City of	161.4	169.7	-8.3
3602400	1N4W32N01S	Baseline Well	San Bernardino, City of	290	312	-22
3600710	2N5W19K02S	Cajon Canyon Well	San Bernardino, City of	69.9	111.2	-41.3
3601844	1N5W03H02S	Cajon Well #2	San Bernardino, City of	167.2	212.6	-45.4
3602821	1N5W03A02S	Cajon Well #3	San Bernardino, City of	170.4	218	-47.6
3602206	1N4W06H02S	Devil Canyon #3	San Bernardino, City of	23.3	27.5	-4.2
3602205	1N4W06H01S	Devil Canyon #4	San Bernardino, City of	29.7	33.4	-3.7
G363790	01N/04W-32P--S	EPA EXTRAC WELL 112	San Bernardino, City of		474.9	
3600737	1S4W10N06S	Mill & D	San Bernardino, City of	96.3	99.5	-3.2
3600319	1N4W31A01S	Mt. Vernon	San Bernardino, City of	331.7	338.9	-7.2
3600714	1N4W16E01S	Newmark #1	San Bernardino, City of	158	162.7	-4.7
3600716	1N4W16E03S	Newmark #3	San Bernardino, City of		159.8	
3601115	1N4W26P03S	Perris Hill #5	San Bernardino, City of	253.2	249.1	4.1
3601944	1N5W23Q01S	2/Lower 7	West Valley Water District	200	287	-87
3600305	1N5W25E01S	5A/Lower 5	West Valley Water District	206	265	-59



Annual Change in Storage for Bunker Hill Basin

Sub-area	[1] Annual Change in Water Level 2014 [ft]	[2] Area [acres]	[3] Storativity (S)	[4] Annual Change in Storage** [acre-ft]
Bunker Hill I - Northeast of 215 Freeway	-9.2	7,795	0.11	-7,915
Bunker Hill I - Southwest of 215 Freeway	1.5	11,714	0.09	1,622
Bunker Hill II - West of Mentone Fault	-20.1	35,206	0.06	-42,486
Bunker Hill II - East of Mentone Fault, North	-21.7	8,584	0.13	-24,263
Bunker Hill II - East of Mentone Fault, South	-4.4	2,507	0.13	-1,426
Lytle Basin - Northwest of Barrier J	0.0	1,924	0.13	0
Lytle Basin - Southeast of Barrier J	-25.3	5,237	0.07	-9,275
Pressure Zone - North of Santa Ana Wash	-1.5	11,920	0.02	-358
Pressure Zone - Santa Ana Wash	-9.5	6,686	0.02	-1,267

Total = -85,368

[1] Based on average changes in water level within each Sub-area

[2] Estimated using GIS

[3] Based on data from Hardt and Hutchinson (1980).

S, storativity: The amount of water stored or released per unit area of aquifer given unit head change.

[4] = [1] x [2] x [3]

*A positive sign denotes an increase in water level and a negative sign represents a decline in water level.



Accumulated Change in Storage for Bunker Hill Basin

Year	Accumulated Storage [acre-ft]
1989	-58,000
1990	-170,700
1991	-196,000
1992	-191,000
1993	0
1994	-50,000
1995	41,100
1996	-43,100
1997	-75,500
1998	40,400
1999	-85,700
2000	-131,100
2001	-212,200
2002	-301,500
2003	-338,800
2004	-406,900
2005	-183,100
2006	-245,500
2007	-359,400
2008	-362,000
2009	-397,600
2010	-340,623
2011	-224,603
2012	-314,377
2013	-444,322
2014	-529,690

Note: A negative sign indicates a decline in storage and a positive sign represents an increase in storage.



Production of Sub-basins of Bunker Hill Basin

Sub-area	Production July 2013 to June 2014 [acre-ft] ²
Bunker Hill I - Northeast of Interstate 215	3,432
Bunker Hill I - Southwest of Interstate 215	731
Bunker Hill II - West of Mentone Fault	36,816
Bunker Hill II - East of Mentone Fault, North	9,288
Bunker Hill II - East of Mentone Fault, South	8,369
Lytle Basin - Northwest of Barrier J	838
Lytle Basin - Southeast of Barrier J	12,297
Pressure Zone - North of Santa Ana Wash	37,229
Pressure Zone - Santa Ana Wash	35,871
Total	165,799

Notes: 207 Wells Used in these Calculations

1 - Refer to Appendix C for Well Values Compiled for Estimate.

2 - Estimated for Water Year July 2013-June 2014 production.

Data Sources: 25 Primary Water Purveyors (excluding Fontana Union),

as well as San Bernardino Watermaster, and SBVMWD.



Estimates of Percentage of Normal Precipitation for Previous Water Year

	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
	July to June	July to June	Season - July to December			Season - January to June			Jul. 2013 to Jun. 2014
Station	Historic Average Annual	2013-2014	Historic Average	Sum Jul 2013 to Dec 2013	% of Normal	Historic Average	Sum Jan 2014 to Jun 2014	% of Normal	Water Year % of Normal
	[inches]	[inches]	[inches]	[inches]	[%]	[inches]	[inches]	[%]	[%]
Big Bear Dam	35.01	14.86	11.61	2.53	22%	23.40	12.33	53%	42%
Devore CDF	27.33	13.05	8.47	5.07	60%	18.86	7.98	42%	48%
Camp Angelus	27.89	11.61	9.60	3.90	41%	18.29	7.71	42%	42%
Lake Arrowhead	40.15	24.50	13.04	9.90	76%	27.10	14.60	54%	61%
Mentone CDF	12.51	3.50	3.86	2.13	55%	8.65	1.37	16%	28%
Redlands Country Club	13.98	7.40	4.25	3.90	92%	9.73	3.50	36%	53%
San Bernardino County Hospital	15.85	8.90	4.95	4.81	97%	10.89	4.09	38%	56%
Santa Ana Pumphouse #3	16.84	6.88	5.43	2.93	54%	11.41	3.95	35%	41%
Yucaipa CDF	15.86	7.91	4.94	3.79	77%	10.93	4.12	38%	50%

Avg (in) = 22.83 10.96

Average = 63.7%

Average = 39.2%



Average Annual Change in Storage for Bunker Hill Basin

Sub-area	[1] Average Change in 10 Years in Water Level* [ft]	[2] Area [acres]	[3] Storativity (S)	[4] Average Annual Change in Storage** [acre-ft]
Bunker Hill I - Southwest of 215 Freeway	-0.31	11,714	0.09	-318
Bunker Hill I - Northeast of 215 Freeway	-3.56	7,795	0.11	-3,051
Bunker Hill II - West of Mentone Fault	-6.61	35,206	0.06	-13,729
Bunker Hill II - East of Mentone Fault	-3.36	11,091	0.13	-4,501
Lytle Basin - Southeast of Barrier J	25.13	5,237	0.07	9,275
Lytle Basin - Northwest of Barrier J	-1.03	1,924	0.13	-258
Pressure Zone - North of Santa Ana Wash	17.70	11,920	0.02	4,226
Pressure Zone - Santa Ana Wash	-5.85	6,686	0.02	-785

Total = -9,141

[1] Based on average annual changes in water level within each Sub-area over last 10 years.

[2] Estimated using GIS.

[3] Based on data from Hardt and Hutchinson (1980).

S storativity: The amount of water stored or released per unit area of aquifer given unit head change.

[4] = [1] x [2] x [3]

*A positive sign denotes an increase in water level and a negative sign represents a decline in water level.



Summary of Surface Distribution Water for Bunker Hill Basin

Streamflow Diversions	1987 [acre-ft]	1988 [acre-ft]	1989 [acre-ft]	1990 [acre-ft]	1991 [acre-ft]	1992 [acre-ft]	1993 [acre-ft]	1994 [acre-ft]	1995 [acre-ft]	1996 [acre-ft]	1997 [acre-ft]	1998 [acre-ft]	1999 [acre-ft]	2000 [acre-ft]	2001 [acre-ft]
Lytle Creek															
Fontana Union WC	2,725	2,991	2,245	204	1,633	12,980	7,860	12,270	10,000	10,100					
Mount Vernon WC	724	724	724	724	724	724	1,143	102	0	0	0	0	312	786	778
Rialto, City of	539	1,111	1,005	792	1,014	743	193	843	44	1,070	393	896	1,461	NA	1,305
San Bernardino, City of	1,448	1,448	1,448	1,448	1,448	1,448	520		2,400	2,400	0	0	0	0	0
West Valley Water District	3,686	3,696	3,696	2,554	3,701	3,696	3,696	3,697	3,696	3,686	4,079	3,696	3,408	3,047	3,175
Subtotal	9,122	9,970	9,118	5,722	8,520	19,591	13,412	16,912	16,140	17,256	4,472	4,592	5,181	3,833	5,258
Mill Creek															
Redlands, City of	11,178	7,731	8,285	6,794	11,109	14,559	19,086	14,505	9,786	12,250	10,250	11,224	11,951	8,852	9,496
SBVWCD Mill Creek Spreading															
SBVWCD-MC-DWR															
Subtotal	11,178	7,731	8,285	6,794	11,109	14,559	19,086	14,505	9,786	12,250	10,250	11,224	11,951	8,852	9,496
Bunker Hill Creeks															
Arrowhead Water & Power West Twin Crk															
Arrowhead Water & Power East Twin Crk															
Devore Water Company Kimbark Lower Cajon															
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Ana River															
Bear Valley Mutual WC	16,373	14,170	14,785	11,244	20,651	26,014	42,079	23,812	30,794	38,252	31,479	36,632	30,245	29,498	26,301
Redlands Water Co	961	963	890	577							760				
SBVWCD SAR Spreading															
SBVWCD-DWR-SAR															
Subtotal	17,334	15,133	15,675	11,821	20,651	26,014	42,079	23,812	30,794	38,252	32,239	36,632	30,245	29,498	26,301

Streamflow Diversions	2002 [acre-ft]	2003 [acre-ft]	2004 [acre-ft]	2005 [acre-ft]	2006 [acre-ft]	2007 [acre-ft]	2008 [acre-ft]	2009 [acre-ft]	2010 [acre-ft]	2011 [acre-ft]	2012 [acre-ft]	2013 [acre-ft]	2014 [acre-ft]	Avg. [acre-ft]
Lytle Creek														
Fontana Union WC						8,209	7,336	5,050	5,000	6,027	6,027	5,424.3		6,240
Mount Vernon WC	975	1,442	754	70	250	437	927	1,132	167	685	578	520		570
Rialto, City of	1,143	726	1,707	1,209	1,448	1,160	1165.00	1,135	1,000	1,148	1,319	1,070		986
San Bernardino, City of	0	0	580	5	254	483	498	450	450	757	757	681.3		728
West Valley Water District	2,573	2,380	4,710	2,079	3,081	NA	3,369	2,435	3,322	3,382	2,954	2,369		3,302
Subtotal	4,691	4,548	7,751	3,363	5,033	10,289	13,295	10,202	9,939	11,999	11,635	10,065	0	11,827
Mill Creek														
Redlands, City of	5,867	12,541	10,168	12,574	15,409	9,607	12,332	7,785	10,076	13,492	10,353	9,317.7		10,984
SBVWCD MC				29,138	9,510	1,531	3,810	4,450	8,891	16,185	4,666	1,734	888	8,080
SBVWCD-MC-DWR				0	0	0	431	555	831	1,434	0	515	0	377
Subtotal	5,867	12,541	10,168	41,712	24,919	11,138	16,573	12,790	19,798	31,111	15,019	11,567	888	19,441
Bunker Hill Creeks														
Arrowhead Water & Power West Twin Crk			50	50	50	50	40	40	40	46	46	41.4		45
Arrowhead Water & Power East Twin Crk			2,500	1,750	1,700	1,725	3	0	0	1,097	1,097	987.3		1,086
Devore Water Company Kimbark			29	97	80	62	68	68	68	0	0	0		47
Subtotal	0	0	2,579	1,897	1,830	1,837	111	108	108	1,143	1,143	1,029	0	1,178
Santa Ana River														
Bear Valley Mutual WC	23,458	12,633	11,227	12,516	17,689	11,560	13,519	7,303	7,000	15,445	17,218	5,923		20,290
Redlands Water Co			588	981	1,044	884	625	654	629	739	816	734		790
SBVWCD SAR Spreading				27,841	14,476	4,002	17,550	8,456	21,662	36,801	9,073	5,519	1,537	14,692
SBVWCD-DWR-SAR				0	5,855	1,993	0	981	1,115	1,511	441	169	0	1,207
Subtotal	23,458	12,633	11,815	41,338	39,064	18,439	31,694	17,394	30,406	54,496	27,548	12,345	1,537	36,978

Assumed as average and are provisional data.

Total = 69,424

Source: Calendar year totals from Western Municipal Water District

2014 Total = 2,426



Engineering Investigation of the Bunker Hill Basin 2013-2014

Appendices

Water Level Elevations For Bunker Hill Basin

Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	Measuring Point Elevation	2013			2014			Difference Fall 2012 to Fall 2013	Sub_Basin_WCD
					Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured	Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured		
3601257	01S04W08F007S	13	Colton, City of	1095.11	277	818.11	12/13/2013	286	809.11	12/14/2014	-9.0	Bunker Hill I Southwest of 215 Freeway
3601260	1S4W08F01S	16	Colton, City of	1096.22	294	802.22	12/1/2013	286	810.22	12/14/2014	8.0	Bunker Hill I Southwest of 215 Freeway
3602405	1S4W08F	19	Colton, City of	1104.10	271	833.1	12/1/2013	280	824.1	12/14/2014	-9.0	Bunker Hill I Southwest of 215 Freeway
3602793	1S4W08F15S	21	Colton, City of	1093.68	281	812.68	12/1/2013	278	815.68	12/14/2014	3.0	Bunker Hill I Southwest of 215 Freeway
3603704	1S4W08J02S	26	Colton, City of	1025.00				233	792	12/14/2014		Bunker Hill I Southwest of 215 Freeway
3604006	01S/04W-08R	27	Colton, City of	1078.50								Bunker Hill I Southwest of 215 Freeway
3604007	01S/04W-08F	28	Colton, City of	1091.50	296	795.5	12/1/2013	276	815.5	12/14/2014	20.0	Bunker Hill I Southwest of 215 Freeway
3604008	01S04W08Q	29	Colton, City of	0.00	187	-187	12/1/2013	189	-189	8/14/2014	-2.0	Bunker Hill I Southwest of 215 Freeway
3602428	02N/05W-34E001S	4	Devore Water Company	2020.00								Bunker Hill I Southwest of 215 Freeway
3602383	02N/05W-28C002S	2A	Devore Water Company	2475.00								Bunker Hill I Northeast of 215 Freeway
3602384	02N/05W-28C003S	3 (3a)	Devore Water Company	2466.00								Bunker Hill I Northeast of 215 Freeway
3601675	1N4W25A01S	27	East Valley Water District	1295.60								Bunker Hill II West of Mentone Fault
3602274	1N3W30J05S	39	East Valley Water District	1350.29	362	988.29	12/1/2013	398	952.29	12/14/2014	-36.0	Bunker Hill II West of Mentone Fault
3602113	1N3W30N01S	41	East Valley Water District	1232.29								Bunker Hill II West of Mentone Fault
3602370	1N4W25F04S	107	East Valley Water District	1217.29	277	940.29	12/1/2013	290	927.29	12/14/2014	-13.0	Bunker Hill II West of Mentone Fault
3602799	1S2W07F01S	125	East Valley Water District	1600.00	266	1334	12/1/2013	335	1265	12/14/2014	-69.0	Bunker Hill II East of Mentone Fault North
3603734	01S/03W-02P006S	147	East Valley Water District	1362.00	146	1216	12/1/2013	266	1096	12/14/2014	-120.0	Bunker Hill II West of Mentone Fault
3602563	1S4W02Q09S	11A	East Valley Water District	1056.89	157.4	899.49	12/1/2013	257.5	799.39	12/14/2014	-100.1	Pressure Zone North of Santa Ana Wash
3600680	1S3W02J02S	120 Cram Well	East Valley Water District	1410.00	150	1260	12/1/2013	194	1216	12/14/2014	-44.0	Bunker Hill II West of Mentone Fault
3602034	1S4W02Q08S	12A	East Valley Water District	1057.00	180	877	12/1/2013	183	874	12/14/2014	-3.0	Pressure Zone North of Santa Ana Wash
3603247	1S3W06P18S	141, McDaniel	East Valley Water District	1120.00	241	879	12/1/2013	205	915	12/14/2014	36.0	Pressure Zone North of Santa Ana Wash
3600220	1S3W01H01S	142 Mt. Harrison	East Valley Water District	1520.00	250.4	1269.6	12/1/2013	196	1324	12/14/2014	54.4	Bunker Hill II West of Mentone Fault
3603583	1S3W02N02S	143 Abbey Way	East Valley Water District	1339.00	170	1169	12/1/2013	200	1139	12/14/2014	-30.0	Bunker Hill II West of Mentone Fault
3601639	1S3W03R01S	146 EHR Well	East Valley Water District	1327.26	266	1061.26	12/1/2013	312	1015.26	12/14/2014	-46.0	Bunker Hill II West of Mentone Fault
3603774	01S/03W-03R004S	146A (Church Street)	East Valley Water District	1320.00	266	1054	12/1/2013	315	1005	12/14/2014	-49.0	Bunker Hill II West of Mentone Fault
3601671	1N4W26A02S	24A	East Valley Water District	1242.99	297	945.99	12/1/2013	338	904.99	12/14/2014	-41.0	Bunker Hill II West of Mentone Fault
3602337	1N4W26A03S	24B	East Valley Water District	1244.58	277	967.58	12/1/2013	274.9	969.68	12/14/2014	2.1	Bunker Hill II West of Mentone Fault
3601673	1N4W25C02S	25A	East Valley Water District	1246.39	304	942.39	12/1/2013	346	900.39	12/14/2014	-42.0	Bunker Hill II West of Mentone Fault
3602564	1S4W12B06S	28A	East Valley Water District	1090.10	186.5	903.6	12/1/2013	199	891.1	12/14/2014	-12.5	Pressure Zone North of Santa Ana Wash
3602338	1S3W04N03S	40-A	East Valley Water District	1198.64	221	977.64	12/1/2013	236	962.64	12/14/2014	-15.0	Bunker Hill II West of Mentone Fault
3601660	1S3W06H04S	9A	East Valley Water District	1151.54	213.7	937.84	12/1/2013	223	928.54	12/14/2014	-9.3	Pressure Zone North of Santa Ana Wash
3602417	1S3W05D03S	Cull #2 / 132-2	East Valley Water District	1155.00	219.3	935.7	12/1/2013					Pressure Zone North of Santa Ana Wash
3602781	1S4W25D06S	Anderson II	Loma Linda University	1075.00								Pressure Zone Santa Ana Wash
3602855	01S/04W-25D007S	Anderson III	Loma Linda University	1070.00								Pressure Zone Santa Ana Wash
3603719	01S/04W-24A005S	Mt. View Well 3	Loma Linda, City of	1095.00	184.5	910.5	12/23/2013	198.5	896.5	12/14/2014	-14.0	Pressure Zone Santa Ana Wash
3603721	01S04W24R008S	Mt. View Well 4	Loma Linda, City of	1106.00	193.8	912.2	12/30/2013	203.4	902.6	12/14/2014	-9.6	Pressure Zone Santa Ana Wash
3603776	01S/04W-24B003S	Mt. View Well 5	Loma Linda, City of	1085.00	172.8	912.2	12/30/2013	187.6	897.4	12/14/2014	-14.8	Pressure Zone Santa Ana Wash
3603776	01S/04W-24B004S	Mt. View Well 6	Loma Linda, City of	1090.00	187	903	12/30/2013	190	900	12/30/2014	-3.0	Bunker Hill II West of Mentone Fault
3603057	01S04W24C001S	Richardson 1	Loma Linda, City of	1077.00	178.5	898.5	12/30/2013	186.6	41451.4	12/14/2014	40552.9	Pressure Zone Santa Ana Wash
3603523	1S4W24C04S	Richardson 3	Loma Linda, City of	1079.00	186	893	12/30/2013	196.2	41441.8	12/30/2014	40548.8	Bunker Hill II West of Mentone Fault
3603720	01S/04W-24F011S	Richardson 4	Loma Linda, City of	1070.00	174.8	895.2	12/30/2013	182.4	41455.6	12/14/2014	40560.4	Pressure Zone Santa Ana Wash
3603955	01S/04W-24B005S	Richardson 5	Loma Linda, City of	1080.00	184	896	12/23/2013	185.8	41445.2	12/30/2014	40549.2	Bunker Hill II West of Mentone Fault
3603927	01S/04W24L007S	Richardson 6	Loma Linda, City of	1095.00	185	910	12/30/2013	192.2	41445.8	12/30/2014	40535.8	Bunker Hill II West of Mentone Fault
3601308	1S2W19K01S	Agate #1	Redlands, City of	1723.00	148	1575	12/1/2013	150	1573	12/14/2014	-2.0	Bunker Hill II East of Mentone Fault North
3602792	1S2W19A01S	Agate #2	Redlands, City of	1720.00	204	1516	12/1/2013	241	1479	12/14/2014	-37.0	Bunker Hill II East of Mentone Fault North
3602895	1S3W13H02S	Airport #1	Redlands, City of	1530.00	249	1281	12/1/2013	301	1229	12/1/2014	-52.0	Bunker Hill II West of Mentone Fault
		Airport #2	Redlands, City of	0.00	245	1224	12/1/2013	280	1189	12/1/2014	-35.0	Bunker Hill II West of Mentone Fault
3600053	1S3W29Q01S	Bryn Mawr #1	Redlands, City of	1215.00								Bunker Hill II West of Mentone Fault

Water Level Elevations For Bunker Hill Basin

Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	Measuring Point Elevation	2013			2014			Difference Fall 2012 to Fall 2013	Sub_Basin_WCD
					Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured	Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured		
3602109	1S3W31B	Bryn Mawr #4	Redlands, City of	1190.00								Bunker Hill II West of Mentone Fault
		Calif St Irr	Redlands, City of	0.00	218	938	12/1/2013	226	930	12/1/2014	-8.0	Bunker Hill II West of Mentone Fault
		Chicken Hill	Redlands, City of	0.00	121	2079	12/1/2013	140	2060	12/14/2014	-19.0	Bunker Hill II East of Mentone Fault South
3604001	1S3W14E01S	Church Street	Redlands, City of	1340.00	171	1169	12/1/2013	191	1149	12/1/2014	-20.0	Bunker Hill II West of Mentone Fault
3602654	1S2W19J02S	Crafton	Redlands, City of	1780.00	163	1617	11/1/2013	172	1608	12/14/2014	-9.0	Bunker Hill II East of Mentone Fault North
3601287	1S2W21B02S	E. Lugonia #3	Redlands, City of	2091.00	31	2060	12/1/2013	30	2061	12/14/2014	1.0	Bunker Hill II East of Mentone Fault North
3602791	1S2W20B01S	E. Lugonia #4	Redlands, City of	1831.58	145	1686.58	12/1/2013	163	1668.58	12/14/2014	-18.0	Bunker Hill II East of Mentone Fault North
3601290	1S2W21D01S	E. Lugonia #6	Redlands, City of	1970.00	36	1934	12/1/2013	68	1902	12/14/2014	-32.0	Bunker Hill II East of Mentone Fault North
		Hog Canyon #2	Redlands, City of	0.00	165	2085	12/1/2013	172	2078	12/14/2014	-7.0	Bunker Hill II East of Mentone Fault South
3602065	1S3W32J02S	Lee Well	Redlands, City of	1357.00	206	1151	12/1/2013	223	1134	12/1/2014	-17.0	Bunker Hill II West of Mentone Fault
3602896	1S2W20D01S	Madeira	Redlands, City of	1770.00	162	1608	12/1/2013	255	1515	12/14/2014	-93.0	Bunker Hill II East of Mentone Fault North
3601281	1S2W36F01S	Maguet #1	Redlands, City of	1955.00	23	1932	12/1/2013					Bunker Hill II East of Mentone Fault North
3601284	1S2W21E01S	Maguet #2	Redlands, City of	2016.90	57	1959.9	12/1/2013	58	1958.9	12/14/2014	-1.0	Bunker Hill II East of Mentone Fault North
3600748		Mentone Acres #1	Redlands, City of	0.00	268	1316	11/1/2013					Bunker Hill II West of Mentone Fault
3600749	1S3W13P01S	Mentone Acres #2	Redlands, City of	1520.00	230	1290	12/1/2013	260	1260	12/1/2014	-30.0	Bunker Hill II West of Mentone Fault
3601285	1S1W10L01S	Mill Creek #2	Redlands, City of	4140.00	0	4140	12/1/2013					Bunker Hill II East of Mentone Fault North
3603045	1S1W09J01S	Mill Creek #2A	Redlands, City of	3950.00	68	3882	12/1/2013					Bunker Hill II East of Mentone Fault North
3601288	1S1W11Q01S	Mill Creek #4	Redlands, City of	4575.00	125	4450	11/1/2013					Bunker Hill II East of Mentone Fault North
3600756	1S3W19L01S	Mission #1	Redlands, City of	1130.00	187	943	12/1/2013	196	934	12/14/2014	-9.0	Pressure Zone Santa Ana Wash
3602346	1S3W28J02S	New York Street	Redlands, City of	1310.00	188	1122	12/1/2013	173	1137	12/1/2014	15.0	Bunker Hill II West of Mentone Fault
3603766		No.Orange #1	Redlands, City of	0.00	139	1155.5	12/1/2013	156	1138.5	12/1/2014	-17.0	Bunker Hill II West of Mentone Fault
3603767		No.Orange #2	Redlands, City of	0.00	144	1148	12/1/2013	144	1148	12/1/2014	0.0	Bunker Hill II West of Mentone Fault
3601586	1S3W15F01S	Orange Street	Redlands, City of	1290.00	139	1151	12/1/2013	161	1129	12/1/2014	-22.0	Bunker Hill II West of Mentone Fault
3600918	2S3W01E01S	Redlands Heights	Redlands, City of	1790.00	169	1621	12/1/2013	171	1619	12/14/2014	-2.0	Bunker Hill II East of Mentone Fault South
3601291	1S3W35G08S	Well #10	Redlands, City of	1565.80	36	1529.8	12/1/2013	37	1528.8	12/14/2014	-1.0	Bunker Hill II East of Mentone Fault South
3601292	1S3W35G07S	Well #11	Redlands, City of	1565.50	36	1529.5	12/1/2013	37	1528.5	12/14/2014	-1.0	Bunker Hill II East of Mentone Fault South
3601293	1S3W35H02S	Well #12	Redlands, City of	1568.00	35	1533	12/1/2013					Bunker Hill II East of Mentone Fault South
3601294	1S3W35G09S	Well #13	Redlands, City of	1577.20	60	1517.2	12/1/2013	60	1517.2	12/14/2014	0.0	Bunker Hill II East of Mentone Fault South
3601295	1S3W35H04S	Well #14	Redlands, City of	1585.30	50	1535.3	12/1/2013	51	1534.3	12/14/2014	-1.0	Bunker Hill II East of Mentone Fault South
3601296	1S3W35H03S	Well #16	Redlands, City of	1572.20	42	1530.2	12/1/2013	46	1526.2	12/14/2014	-4.0	Bunker Hill II East of Mentone Fault South
3602031	1S3W21H06S	Well #30A	Redlands, City of	1314.80	189	1125.8	12/1/2013	208	1106.8	12/1/2014	-19.0	Bunker Hill II West of Mentone Fault
3602036	1S3W21H07S	Well #31A	Redlands, City of	1319.00	194	1125	12/1/2013	208	1111	12/1/2014	-14.0	Bunker Hill II West of Mentone Fault
3601298	1S3W21H01S	Well #32	Redlands, City of	1318.10	188	1130.1	12/1/2013	209	1109.1	12/1/2014	-21.0	Bunker Hill II West of Mentone Fault
3601299	1S4W24K01S	Well #34	Redlands, City of	1090.00	193	897	12/1/2013	200	890	12/14/2014	-7.0	Pressure Zone Santa Ana Wash
3602032	1S3W22A02S	Well #35	Redlands, City of	1395.00	216	1179	12/1/2013	225	1170	12/1/2014	-9.0	Bunker Hill II West of Mentone Fault
3602082	2S3W03K01S	Well #36	Redlands, City of	1675.20				161	1514.2	12/14/2014		Bunker Hill II East of Mentone Fault South
3602211	1S3W26C01S	Well #37	Redlands, City of	1435.00	205	1230	12/1/2013	220	1215	12/1/2014	-15.0	Bunker Hill II West of Mentone Fault
3604002	1S3W29Q01S	Well #38	Redlands, City of	1215.00	112	1103	12/1/2013	128	1087	12/1/2014	-16.0	Bunker Hill II West of Mentone Fault
3603760		Well #39	Redlands, City of	0.00	147	1078	12/1/2013	155	1070	12/1/2014	-8.0	Bunker Hill II West of Mentone Fault
3603537	1S5W14B01S	Chino #2	Rialto, City of	1137.00								
3601263	1N5W23Q01S	City 1	Rialto, City of	1430.00								Lytle Basin Southeast of Barrier J
3602080	1N5W23Q02S	City 2	Rialto, City of	1430.00								Lytle Basin Southeast of Barrier J
3602848	1N5W36B01S	City 3	Rialto, City of	1300.00								Lytle Basin Southeast of Barrier J
3603538	1S4W06H03S	City 4	Rialto, City of	1158.00								Bunker Hill I Southwest of 215 Freeway
3603030	1S4W06B01S	City 5	Rialto, City of	1211.00								Bunker Hill I Southwest of 215 Freeway
3601929	1S4W06C04S	City 6	Rialto, City of	1211.00								Bunker Hill I Southwest of 215 Freeway
3602253	1N5W27D01S	Rialto 1 (Cedar)	Rialto, City of	1137.00								
3601993	1N5W34B01S	Rialto 2 (Highland)	Rialto, City of	1430.00								

Water Level Elevations For Bunker Hill Basin

Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	Measuring Point Elevation	2013			2014			Difference Fall 2012 to Fall 2013	Sub_Basin_WCD
					Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured	Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured		
3602558	1N5W34M01S	Rialto 3 (Airport)	Rialto, City of	1417.00								
3602182	1S4W28K02S	CR #4A	Riverside Highland Water Company	948.00	84	864	12/1/2013	77	871	12/1/2014	7.0	
3601530	1S4W22L08S	FW #12	Riverside Highland Water Company	985.44								Pressure Zone Santa Ana Wash
3603514	01S/04W-22L17S	FW #5	Riverside Highland Water Company	989.00	110	879	12/1/2013	115	874	12/14/2014	-5.0	Pressure Zone Santa Ana Wash
3601535	01N/04W-31D02S	LC#1	Riverside Highland Water Company	1264.00	393	871	12/1/2013	403	861	12/14/2014	-10.0	Lytle Basin Southeast of Barrier J
3603470	01N/04W-31E03S	LC#10	Riverside Highland Water Company	1264.00	391	873	12/1/2013	402	862	12/14/2014	-11.0	Lytle Basin Southeast of Barrier J
3603139	01S/04W-32M04S	LV #3	Riverside Highland Water Company	924.00	127	797	12/1/2013	129	796	10/14/2014	-1.0	
3601531	1S4W33B05S	RN #16	Riverside Highland Water Company	945.45	92	853.45	12/1/2013	94	851.45	12/1/2014	-2.0	
3601532	01S/04W-28N05S	RN #17	Riverside Highland Water Company	931.00	113	818	12/1/2013	114	817	12/1/2014	-1.0	
3601534	01S/04W-28L02S	RN #20	Riverside Highland Water Company	939.00	107	832	12/1/2013	108	831	12/1/2014	-1.0	
3301655	02S/04W-08M01S	RN #21	Riverside Highland Water Company	1000.00	209	791	12/1/2013	206	794	12/1/2014	3.0	
3301656	02S/04W-08M02S	RN #22	Riverside Highland Water Company	983.00	192	791	12/1/2013	195	788	12/1/2014	-3.0	
3603738	02S04W05F03S	RN #6	Riverside Highland Water Company	988.00	197	791	12/1/2013	204	784	12/1/2014	-7.0	Bunker Hill II West of Mentone Fault
3601526	02S/04W-06R01S	RN #7	Riverside Highland Water Company	948.00	158	790	12/1/2013	160	788	12/1/2014	-2.0	
3601225	01S/04W-02P002S	Cooley D	Riverside, City of	1037.60								Pressure Zone North of Santa Ana Wash
3601218	1S4W14P02S	Raub 1	Riverside, City of	1026.80	164.8	862	11/18/2013	176.63	850.17	10/20/2014	-11.8	Pressure Zone Santa Ana Wash
3601234	1S4W27A19S	Stewart 19	Riverside, City of	1020.00	143.01	876.99	12/18/2013	131.33	888.67	12/29/2013	11.7	Bunker Hill II West of Mentone Fault
3601431	1S4W27H01S	Stewart 20	Riverside, City of	1020.00	150	870	11/15/2013	130.32	889.68	12/30/2014	19.7	Bunker Hill II West of Mentone Fault
3601463	01S/04W-02A003S	Stiles	Riverside, City of	1072.00	198.4	873.6	10/31/2013	95.9	976.1	11/17/2014	102.5	Pressure Zone North of Santa Ana Wash
3601471	1S4W22G14S	Thorne 3	Riverside, City of	994.90	110	884.9	12/18/2013	110.64	884.26	12/30/2014	-0.6	Pressure Zone Santa Ana Wash
3601477	1S4W22B01S	Thorne 9	Riverside, City of	1002.90	119.7	883.2	11/18/2013	114.26	888.64	12/29/2014	5.4	Pressure Zone Santa Ana Wash
3603555	1S4W14N	Raub 8	Riverside, City of	1016.44	126.2	890.24	12/4/2013	151.7	864.74	11/30/2014	-25.5	Pressure Zone Santa Ana Wash
3600787	1S4W23A02S	26-1	Riverside, City Of-Gage Canal	1045.33	181	864.33	12/17/2013	162	883.33	11/16/2014	19.0	Pressure Zone Santa Ana Wash
3600788	1S4W23H01S	27-1	Riverside, City Of-Gage Canal	1044.64	159	885.64	12/17/2013	160	884.64	11/16/2014	-1.0	Pressure Zone Santa Ana Wash
3600789	1S4W23K01S	27-2	Riverside, City Of-Gage Canal	1044.64	152	892.64	12/17/2013	170	874.64	10/5/2014	-18.0	Pressure Zone Santa Ana Wash
3600790	1S4W23K02S	29-1	Riverside, City Of-Gage Canal	1044.43	153	891.43	12/17/2013	159	885.43	11/16/2014	-6.0	Pressure Zone Santa Ana Wash
3600791	1S4W13N01S	29-2	Riverside, City Of-Gage Canal	1046.31	172	874.31	12/17/2013	178	868.31	11/16/2014	-6.0	Pressure Zone Santa Ana Wash
3600792	1S4W13N02S	29-3	Riverside, City Of-Gage Canal	1048.75	207	841.75	12/17/2013	163	885.75	11/16/2014	44.0	Pressure Zone Santa Ana Wash
3600793	1S4W13M02S	30-1	Riverside, City Of-Gage Canal	1054.17								Pressure Zone Santa Ana Wash
3600794	1S4W13F02S	31-1	Riverside, City Of-Gage Canal	1054.64	163	891.64	12/15/2013	209	845.64	11/16/2014	-46.0	Pressure Zone Santa Ana Wash
3600795	1S4W13G02S	46-1	Riverside, City Of-Gage Canal	1065.50								Pressure Zone Santa Ana Wash
3600796	1S4W23A05S	51-1	Riverside, City Of-Gage Canal	1044.64	175	869.64	11/18/2013	227	817.64	11/16/2014	-52.0	Pressure Zone Santa Ana Wash
3600797	1S4W13G03S	56-1	Riverside, City Of-Gage Canal	1065.50	208	857.5	11/17/2013	202	863.5	11/16/2014	6.0	Pressure Zone Santa Ana Wash
	01S/04W-23A006S	98-1	Riverside, City Of-Gage Canal	1046.70	235	811.7	11/17/2013	238	808.7	11/16/2014	-3.0	
228701	1S2W17L01S	Mill Ck Monitoring #1	San Bernardino Valley Water Cons. Dist.	1800.00	151.55	1648.45	12/17/2013	155.49	1644.51	12/16/2014	-3.9	Bunker Hill II East of Mentone Fault North
241801	1S2W17L02S	Mill Ck Monitoring #2	San Bernardino Valley Water Cons. Dist.	1800.00	183.24	1616.76	12/17/2013	182.25	1617.75	12/16/2014	1.0	Bunker Hill II East of Mentone Fault North
228901	1S2W17E01S	Mill Ck Monitoring #4	San Bernardino Valley Water Cons. Dist.	1760.00	206.9	1553.1	12/17/2013	215.35	1544.65	8/5/2014	-8.4	Bunker Hill II East of Mentone Fault North
453201	1S2W17E02S	Mill Ck Monitoring #5	San Bernardino Valley Water Cons. Dist.	1760.00	243.57	1516.43	12/17/2013	270.42	1489.58	12/16/2014	-26.9	Bunker Hill II East of Mentone Fault North
459301	01S03W07C	SAR #1	San Bernardino Valley Water Cons. Dist.	1624.00	269.82	1354.18	12/17/2013	316.5	1307.5	12/16/2014	-46.7	Bunker Hill II West of Mentone Fault
459401	01S03W12N	SAR #2	San Bernardino Valley Water Cons. Dist.	1442.00	204.96	1237.04	12/17/2013	245.17	1196.83	12/16/2014	-40.2	Bunker Hill II West of Mentone Fault
229101	1S2W07B01S	SBVWCD #1	San Bernardino Valley Water Cons. Dist.	1650.50	247.13	1403.37	10/15/2013					Bunker Hill II East of Mentone Fault North
229001	1S2W07K01S	SBVWCD #2	San Bernardino Valley Water Cons. Dist.	1646.40	222.49	1423.91	12/16/2013	228.64	1417.76	12/16/2014	-6.1	Bunker Hill II East of Mentone Fault North
228601	1S3W12J01S	SBVWCD #3	San Bernardino Valley Water Cons. Dist.	1541.70	227.15	1314.55	12/16/2013	271.33	1270.37	12/16/2014	-44.2	Bunker Hill II West of Mentone Fault
228801	1S3W11H01S	SBVWCD #4	San Bernardino Valley Water Cons. Dist.	1411.20	175.61	1235.59	12/17/2013	208.75	1202.45	11/18/2014	-33.1	Bunker Hill II West of Mentone Fault
3600723	1S4W10F	#40, Handford #1, SCE	San Bernardino, City of	1030.40	122.3	908.1	12/18/2013	127.6	902.8	12/17/2014	-5.3	Pressure Zone Santa Ana Wash
3603207	1S4W04B04S	10th & "J" Street	San Bernardino, City of	1113.82	223	890.82	12/17/2013	228	885.82	12/15/2014	-5.0	Pressure Zone North of Santa Ana Wash
3600726	1N4W34G03S	16th & Sierra Way	San Bernardino, City of	1135.13	248.9	886.23	12/18/2013	241.9	893.23	12/17/2014	7.0	Pressure Zone North of Santa Ana Wash
3600718	1N4W32D04	19th St. No. 2	San Bernardino, City of	1236.34	334.3	902.04	12/18/2013	332.2	904.14	12/17/2014	2.1	Bunker Hill I Southwest of 215 Freeway

Water Level Elevations For Bunker Hill Basin

Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	Measuring Point Elevation	2013			2014			Difference Fall 2012 to Fall 2013	Sub_Basin_WCD
					Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured	Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured		
3600717	1N4W32D03S	19th Street No. 1	San Bernardino, City of	1231.03	315	916.03	12/18/2013	325.5	905.53	12/17/2014	-10.5	Bunker Hill I Southwest of 215 Freeway
3600721	01N/04W-27M001S	25TH & NORTH E ST WELL	San Bernardino, City of	1192.10	273.2	918.9	12/18/2013	275.2	916.9	12/17/2014	-2.0	Bunker Hill II West of Mentone Fault
3600720	1N4W27M02S	27th Street Well	San Bernardino, City of	1184.07	273.2	910.87	12/18/2013	290.4	893.67	12/17/2014	-17.2	Bunker Hill II West of Mentone Fault
3600719	1N4W27G01S	30th & Mtn. View	San Bernardino, City of	1227.38	305.3	922.08	12/18/2013	336.1	891.28	12/17/2014	-30.8	Bunker Hill II West of Mentone Fault
3602081	1N4W27B01S	31st & Mtn. View	San Bernardino, City of	1233.01	310.6	922.41	12/18/2013	326.4	906.61	12/17/2014	-15.8	Bunker Hill II West of Mentone Fault
3603472	1N04W14P01	40TH & VALENCIA	San Bernardino, City of	1355.10	272.5	1082.6	12/18/2013	298.4	1056.7	12/17/2014	-25.9	Bunker Hill II West of Mentone Fault
3602265	1S4W03J05S	7th Street Well	San Bernardino, City of	1057.39	171.8	885.59	12/18/2013	179.2	878.19	12/17/2014	-7.4	Pressure Zone North of Santa Ana Wash
	01S/04W-15R03S	ANDERSON	San Bernardino, City of	1013.00	123.2	889.8	12/18/2013	123.5	889.5	12/17/2014	-0.3	Bunker Hill II West of Mentone Fault
3602422	1S4W02K08S	Antil Well #6	San Bernardino, City of	1053.84	169.7	884.14	12/18/2013	185.3	868.54	12/17/2014	-15.6	Pressure Zone North of Santa Ana Wash
3602400	1N4W32N01S	Baseline Well	San Bernardino, City of	1185.56	312	873.56	12/16/2013	324	861.56	12/15/2014	-12.0	Bunker Hill I Southwest of 215 Freeway
3603792	01N/05W-03A	CAJON 4	San Bernardino, City of	1923.00	215	1708	12/16/2013	231.2	1691.8	12/15/2014	-16.2	Bunker Hill I Northeast of 215 Freeway
3600710	2N5W19K02S	Cajon Canyon Well	San Bernardino, City of	2331.92	111.2	2220.72	12/16/2013	94.6	2237.32	12/15/2014	16.6	Bunker Hill I Northeast of 215 Freeway
3601844	1N5W03H02S	Cajon Well #2	San Bernardino, City of	1897.17	212.6	1684.57	12/16/2013	268	1629.17	12/15/2014	-55.4	Bunker Hill I Southwest of 215 Freeway
3602821	1N5W03A02S	Cajon Well #3	San Bernardino, City of	1894.00	218	1676	12/16/2013	225	1669	12/15/2014	-7.0	Bunker Hill I Southwest of 215 Freeway
3600712	1N4W08M01S	Devil Canyon #1	San Bernardino, City of	1530.00	170.2	1359.8	12/16/2013	188.2	1341.8	12/15/2014	-18.0	Bunker Hill I Northeast of 215 Freeway
3600711	1N4W07F01S	Devil Canyon #2	San Bernardino, City of	1621.96	154.1	1467.86	12/16/2013	165.9	1456.06	12/15/2014	-11.8	Bunker Hill I Northeast of 215 Freeway
3602206	1N4W06H02S	Devil Canyon #3	San Bernardino, City of	1888.46	27.5	1860.96	12/16/2013	27.4	1861.06	12/15/2014	0.1	Bunker Hill I Northeast of 215 Freeway
3602205	1N4W06H01S	Devil Canyon #4	San Bernardino, City of	1903.44	33.4	1870.04	12/16/2013	41	1862.44	12/15/2014	-7.6	Bunker Hill I Northeast of 215 Freeway
3602844	2N4W08M01S	Devil Canyon #5	San Bernardino, City of	1549.00	168.6	1380.4	12/16/2013	180	1369	12/15/2014	-11.4	Bunker Hill I Northeast of 215 Freeway
3603580	01N/04W-06A001S	DEVIL CANYON 6	San Bernardino, City of	2042.00	21	2021	12/16/2013	28.3	2013.7	12/15/2014	-7.3	Bunker Hill I Northeast of 215 Freeway
3603579	01N/04W-06A02 S	DEVIL CANYON 7	San Bernardino, City of	2037.00	23.3	2013.7	12/16/2013	19.4	2017.6	12/15/2014	3.9	Bunker Hill I Northeast of 215 Freeway
3602712	1N4W08P01S	Ellena Bros.	San Bernardino, City of	1477.96	147	1330.96	12/16/2013	201.8	1276.16	12/15/2014	-54.8	Bunker Hill I Northeast of 215 Freeway
3603688	01S/04W-03D004S	EPA EXTRAC WELL 001	San Bernardino, City of	1093.90	239.2	854.7	12/17/2013	239.2	854.7	12/16/2014	0.0	Pressure Zone North of Santa Ana Wash
3603689	01S/04W-03C003S	EPA EXTRAC WELL 002	San Bernardino, City of	1091.70	224.2	867.5	12/17/2013	226.3	865.4	12/16/2014	-2.1	Pressure Zone North of Santa Ana Wash
3603690	01S/04W-03C004S	EPA EXTRAC WELL 003	San Bernardino, City of	1090.20	235	855.2	12/17/2013	238	852.2	12/16/2014	-3.0	Pressure Zone North of Santa Ana Wash
3603691	01S/04W-03B003S	EPA EXTRAC WELL 004	San Bernardino, City of	1086.30	216.4	869.9	12/17/2013	217.6	868.7	12/16/2014	-1.2	Pressure Zone North of Santa Ana Wash
3603692	01S/04W-03A004S	EPA EXTRAC WELL 005	San Bernardino, City of	1083.30	197.1	886.2	12/17/2013	200.3	883	12/16/2014	-3.2	Pressure Zone North of Santa Ana Wash
3603693	01N/04W-16M003S	EPA EXTRAC WELL 006	San Bernardino, City of	1396.60	161.7	1234.9	12/17/2013	195.2	1201.4	12/16/2014	-33.5	Bunker Hill II West of Mentone Fault
3603694	01N/04W-16M004S	EPA EXTRAC WELL 007	San Bernardino, City of	1404.50	167.5	1237	12/17/2013	200.6	1203.9	12/16/2014	-33.1	Bunker Hill II West of Mentone Fault
3603786	01N/04W-33R	EPA EXTRAC WELL 108	San Bernardino, City of	1119.30	283	836.3	12/17/2013	282.4	836.9	12/16/2014	0.6	Pressure Zone North of Santa Ana Wash
3603786	01N/04W-33R003S	EPA EXTRAC WELL 108-S	San Bernardino, City of	1119.30	260.1	859.2	12/17/2013	263.6	855.7	12/16/2014	-3.5	Bunker Hill II West of Mentone Fault
3603787	01N/04W-33P	EPA EXTRAC WELL 109	San Bernardino, City of	1137.10	312.1	825	12/16/2013	324.5	812.6	12/17/2014	-12.4	Bunker Hill II West of Mentone Fault
3603788	01N/04W-33N--S	EPA EXTRAC WELL 110	San Bernardino, City of	1146.20	318.8	827.4	12/16/2013	378.3	767.9	12/17/2014	-59.5	Bunker Hill II West of Mentone Fault
3603789	01N/04W-32R	EPA EXTRAC WELL 111	San Bernardino, City of	1165.70	343	822.7	12/16/2013	395.7	770	12/17/2014	-52.7	Bunker Hill II West of Mentone Fault
G363790	01N/04W-32P--S	EPA EXTRAC WELL 112	San Bernardino, City of	1181.80	474.9	706.9	12/16/2013	475.4	706.4	12/17/2014	-0.5	Bunker Hill I Southwest of 215 Freeway
3600729	1N4W35M03S	Gilbert Street Well	San Bernardino, City of	1123.54	252.9	870.64	12/18/2013	257	866.54	12/17/2014	-4.1	Pressure Zone North of Santa Ana Wash
3601316	01S/04W-23N	INTER CITY MUTUAL 08	San Bernardino, City of	1028.00	138.8	889.2	12/18/2013	138.9	889.1	12/17/2014	-0.1	Bunker Hill II West of Mentone Fault
Find Lat long		IVDA WELL 11	San Bernardino, City of	1140.00	172.5	967.5	12/18/2013	196.7	943.3	12/17/2014	-24.2	Bunker Hill II West of Mentone Fault
3603471	02N/05W-19R01S	KENWOOD 1	San Bernardino, City of	2350.80	169.5	2181.3	12/16/2013	205	2145.8	12/15/2014	-35.5	Bunker Hill I Northeast of 215 Freeway
3603791	02N/05W-19R05S	KENWOOD 2	San Bernardino, City of	2289.00	174.2	2114.8	12/16/2013	154.2	2134.8	12/15/2014	20.0	Bunker Hill I Northeast of 215 Freeway
3602401	1N4W27A02S	Leroy Street Well	San Bernardino, City of	1239.67	304	935.67	12/18/2013	316.8	922.87	12/17/2014	-12.8	Bunker Hill II West of Mentone Fault
3600727	1N4W26E02S	Lynwood Well	San Bernardino, City of	1236.23	292.9	943.33	12/18/2013	320	916.23	12/17/2014	-27.1	Bunker Hill II West of Mentone Fault
3603027	1N5W36J04S	Lytle Creek #2	San Bernardino, City of	1252.25	382	870.25	12/16/2013					Lytle Basin Southeast of Barrier J
3600713	1N5W36R01S	Lytle Creek #3	San Bernardino, City of	1247.82	376.4	871.42	12/16/2013	382.1	865.72	12/15/2014	-5.7	Lytle Basin Southeast of Barrier J
3601845	1N4W30M01S	Mallory Well	San Bernardino, City of	1319.84	348	971.84	12/17/2013	364	955.84	12/16/2014	-16.0	Lytle Basin Southeast of Barrier J
111701	01N/04W-35L001S	Meecham	San Bernardino, City of	1129.94	228.6	901.34	12/18/2013	241.3	888.64	12/17/2014	-12.7	Pressure Zone North of Santa Ana Wash
3600737	1S4W10N06S	Mill & D	San Bernardino, City of	1001.00	99.5	901.5	12/18/2013	157.3	843.7	12/17/2014	-57.8	Pressure Zone Santa Ana Wash
3600319	1N4W31A01S	Mt. Vernon	San Bernardino, City of	1258.75	338.9	919.85	12/16/2013	348.9	909.85	12/15/2014	-10.0	Bunker Hill I Southwest of 215 Freeway

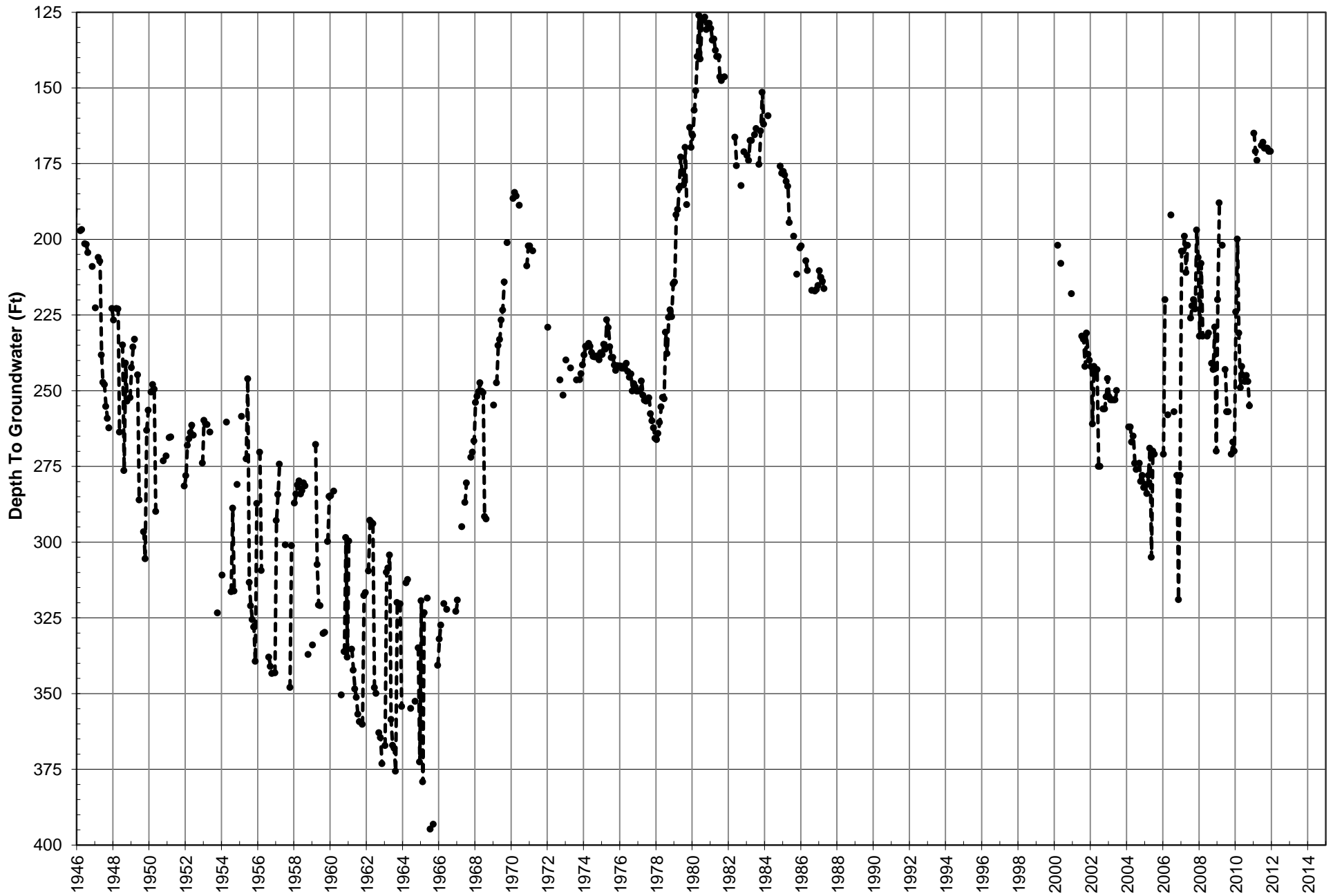
Water Level Elevations For Bunker Hill Basin

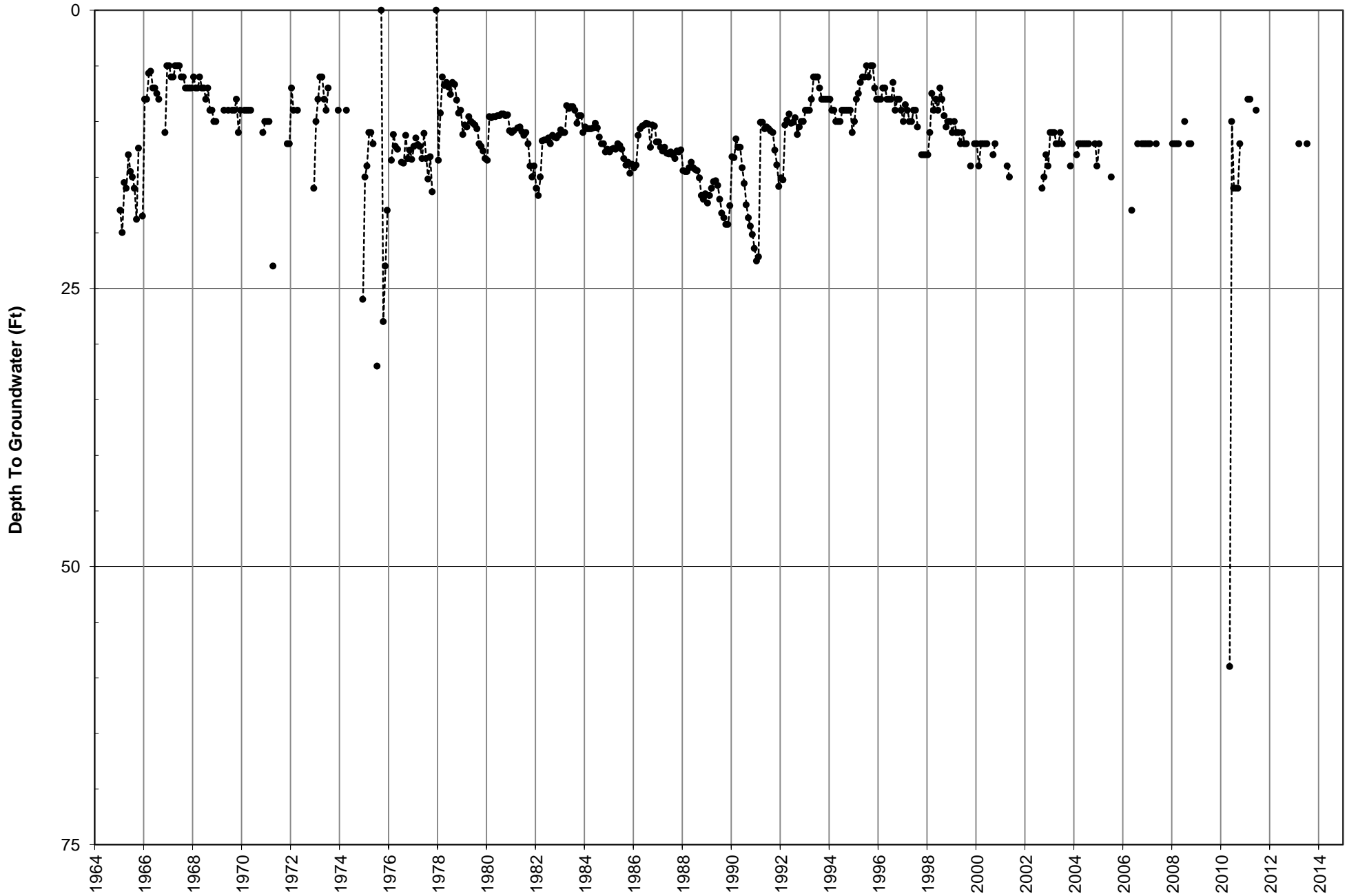
Recordation Number	State Well Number	Well Name	Owner Or Measuring Agency	Measuring Point Elevation	2013			2014			Difference Fall 2012 to Fall 2013	Sub_Basin_WCD
					Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured	Depth To Water (ft)	Groundwater Elevation (ft, AMSL)	Date Measured		
3600714	1N4W16E01S	Newmark #1	San Bernardino, City of	1412.99	162.7	1250.29	12/16/2013	198.4	1214.59	12/15/2014	-35.7	Bunker Hill II West of Mentone Fault
3600715	1N4W16E02S	Newmark #2	San Bernardino, City of	1405.26	158.8	1246.46	12/16/2013	194	1211.26	12/15/2014	-35.2	Bunker Hill II West of Mentone Fault
3600716	1N4W16E03S	Newmark #3	San Bernardino, City of	1407.92	159.8	1248.12	12/17/2013	201	1206.92	12/16/2014	-41.2	Bunker Hill II West of Mentone Fault
3602399	1N4W16E04S	Newmark #4	San Bernardino, City of	1413.57	159.6	1253.97	12/16/2013	195.3	1218.27	12/15/2014	-35.7	Bunker Hill II West of Mentone Fault
3603206	1S4W04D02S	Olive & Garner	San Bernardino, City of	1132.52	270	862.52	12/18/2013	247	885.52	12/15/2014	23.0	Pressure Zone North of Santa Ana Wash
3601117	1N4W35C03S	Perris Hill #4	San Bernardino, City of	1168.25	244.3	923.95	12/18/2013	260.6	907.65	12/17/2014	-16.3	Pressure Zone North of Santa Ana Wash
3601115	1N4W26P03S	Perris Hill #5	San Bernardino, City of	1173.46	249.1	924.36	12/18/2013	260.1	913.36	12/17/2014	-11.0	Bunker Hill II West of Mentone Fault
3602426	2N5W19Q01	Vincent Well	San Bernardino, City of	2314.32	110.4	2203.92	12/16/2013	108.4	2205.92	12/15/2014	2.0	Bunker Hill I Northeast of 215 Freeway
3600728	1N4W26E02S	Waterman Well	San Bernardino, City of	1244.77	294.8	949.97	12/18/2013	313.2	931.57	12/17/2014	-18.4	Bunker Hill II West of Mentone Fault
9900026	1N4W20M	#50, Paperboard	San Bernardino, City of / shallow wells	1365.00	346.3	1018.7	10/14/2013					
9900046	1S4W23L	#53 Brier/Carnegie #2	San Bernardino, City of / shallow wells	1035.00	33.5	1001.5	5/16/2013					
9900043	1S4W22J	#55 Airport/Commercenter E	San Bernardino, City of / shallow wells	1005.00	24.9	980.1	12/18/2013	24.3	980.7	12/17/2014	0.6	Pressure Zone Santa Ana Wash
9900041	1S4W23Q	#58 Hospitality/Harriman	San Bernardino, City of / shallow wells	1027.80	22.3	1005.5	11/19/2013	24.7	1003.1	12/17/2014	-2.4	Pressure Zone Santa Ana Wash
9900048	1S4W23N	#59 Hospitality/E Carnegie	San Bernardino, City of / shallow wells	1020.00	50.4	969.6	11/19/2013	50.7	969.3	12/17/2014	-0.3	Pressure Zone Santa Ana Wash
244701	01S/04W-23G	#60, Brier & Gifford	San Bernardino, City of / shallow wells	1040.00	35.1	1004.9	11/19/2013	35.9	1004.1	9/17/2014	-0.8	Pressure Zone Santa Ana Wash
3601015	1S3W18N02S	Deep Well Pump 1	Southern California Edison	0.00	196.19	-196.19	12/1/2013	207.5	-207.5	12/14/2014	-11.3	Bunker Hill II West of Mentone Fault
3601014	1S3W18N03S	Deep Well Pump 2	Southern California Edison	0.00	232.98	-232.98	11/1/2013	209.8	-209.8	12/14/2014	23.2	Bunker Hill II West of Mentone Fault
3603795	01S03W18N06S	Mid Aquifer Pump A	Southern California Edison	0.00	201.66	-201.66	12/1/2013	197.1	-197.1	8/14/2014	4.6	Bunker Hill II West of Mentone Fault
3603796	01S03W18N01S	MidAquifer Pump B	Southern California Edison	0.00	190.79	-190.79	12/1/2013	199	-199	12/14/2014	-8.2	Bunker Hill II West of Mentone Fault
9900138	1S3W15K01S	Church St.(Riverview)	U.S. Geological Survey/SBVMWD	1378.78	193.31	1185.47	12/31/2013	221.6	1157.18	12/31/2014	-28.3	Bunker Hill II West of Mentone Fault
9900110	1S4W20H05S	Colton Plunge Park	U.S. Geological Survey/SBVMWD	990.00								
9900136	1S4W22J04S	Commerce Center	U.S. Geological Survey/SBVMWD	997.70								Pressure Zone Santa Ana Wash
9900076	1N5W29Q03S	County Landfill	U.S. Geological Survey/SBVMWD	1540.00								
9900075	1N5W29Q02S	County Landfill	U.S. Geological Survey/SBVMWD	1540.00								
9900074	1N5W29Q01S	County Landfill	U.S. Geological Survey/SBVMWD	1540.00								
9900097	1S4W04E06S	Garner Park	U.S. Geological Survey/SBVMWD	1121.28	226.11	895.17	12/31/2013	231.32	889.96	12/31/2014	-5.2	Pressure Zone North of Santa Ana Wash
9900119	1S5W11F04S	Lilac Park	U.S. Geological Survey/SBVMWD	1244.00								
9900067	1N5W22N06S	Lower Linden Ponds	U.S. Geological Survey/SBVMWD	1580.00								
9900115	1S4W22D07S	Orangeshow & "E" St.	U.S. Geological Survey/SBVMWD	977.47								Pressure Zone Santa Ana Wash
9900101	1S4W08E04S	Rialto Avenue	U.S. Geological Survey/SBVMWD	1110.00								
9900104	1S4W10B04S	San Bernardino/Multi	U.S. Geological Survey/SBVMWD	1017.70	63.69	954.01	12/31/2013	61.3	956.4	12/30/2014	2.4	Pressure Zone Santa Ana Wash
9900094	1S4W02D08S	Sierra High School	U.S. Geological Survey/SBVMWD	1078.88	163.76	915.12	12/31/2013	166.7	912.18	12/31/2014	-2.9	Pressure Zone North of Santa Ana Wash
9900060	1N5W21K03S	Upper Linden Ponds	U.S. Geological Survey/SBVMWD	1645.00								
9900061	1N5W21K04S	Upper Linden Ponds	U.S. Geological Survey/SBVMWD	1645.00								
9900058	1N5W21K01S	Upper Linden Ponds	U.S. Geological Survey/SBVMWD	1645.00								
9900059	1N5W21K02S	Upper Linden Ponds	U.S. Geological Survey/SBVMWD	1645.00								
3600303	01N/05W-26A006S	#04A	West Valley Water District	1400.00	280	1120	12/1/2013	315	1085	12/14/2014	-35.0	Bunker Hill II West of Mentone Fault



B.V. Judson Index Well Hydrograph

Bear Valley Mutual Water Co.

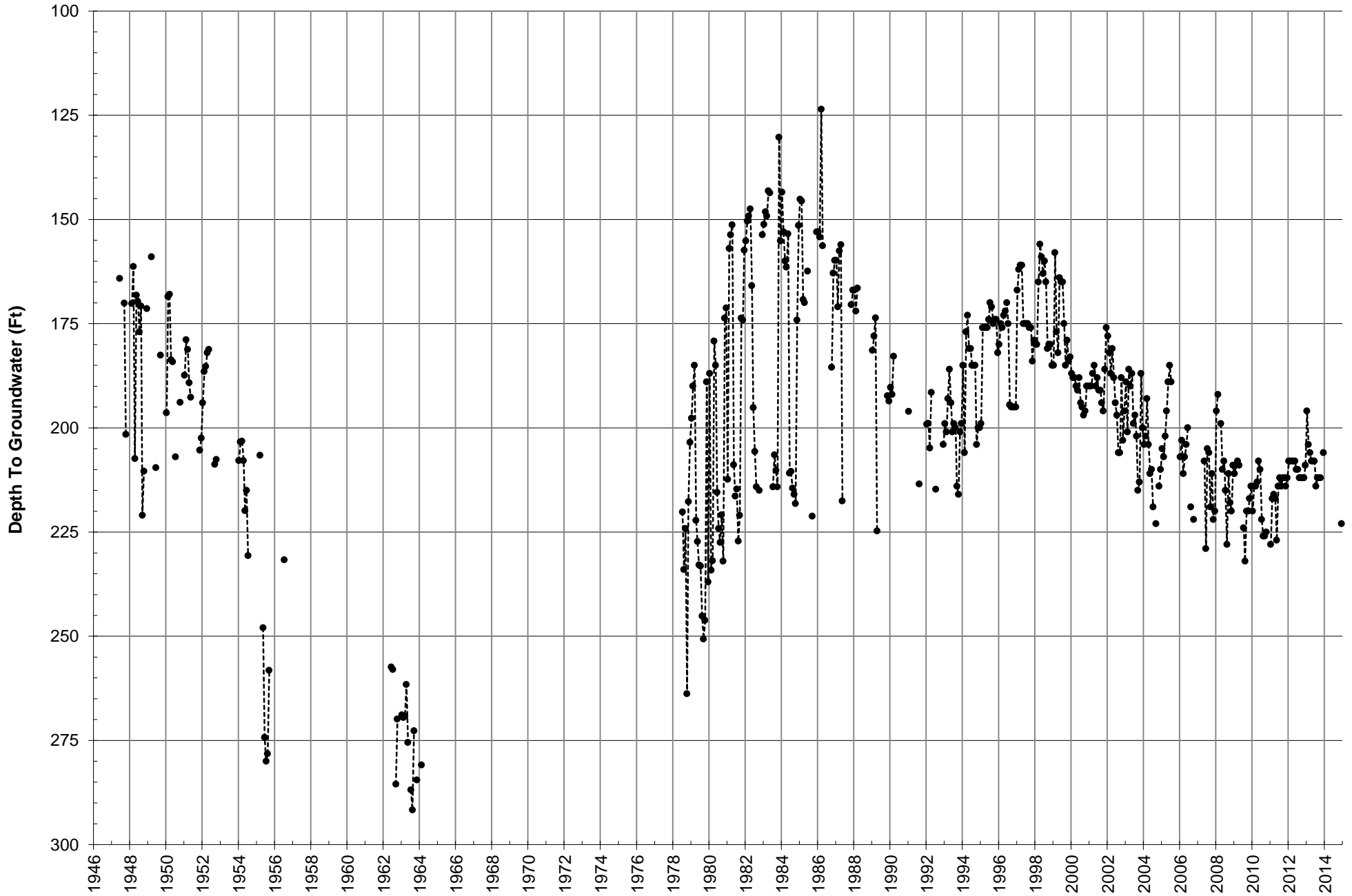






Lee Well Index Well Hydrograph

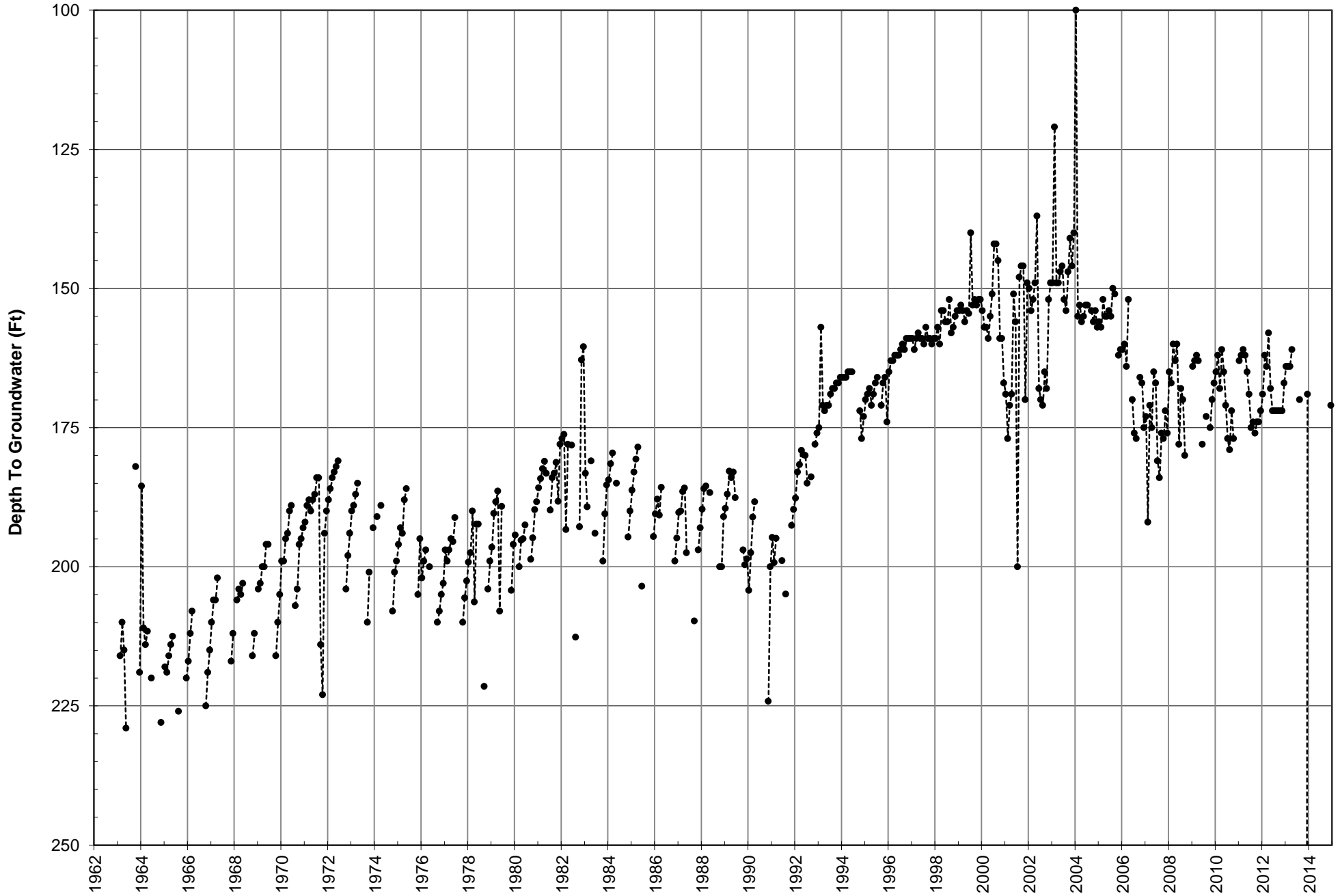
City of Redlands

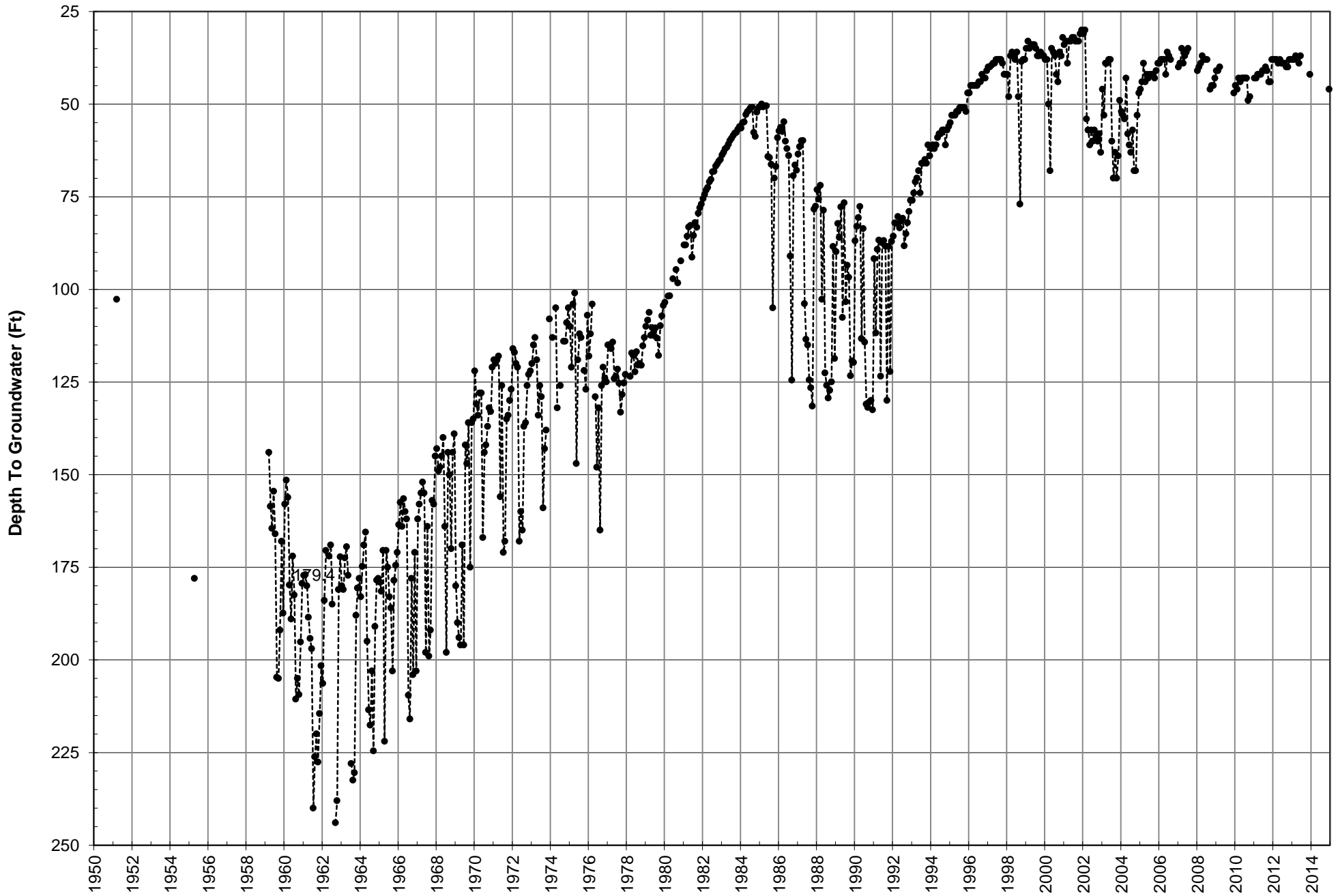




Redlands Heights Index Well Hydrograph

City of Redlands

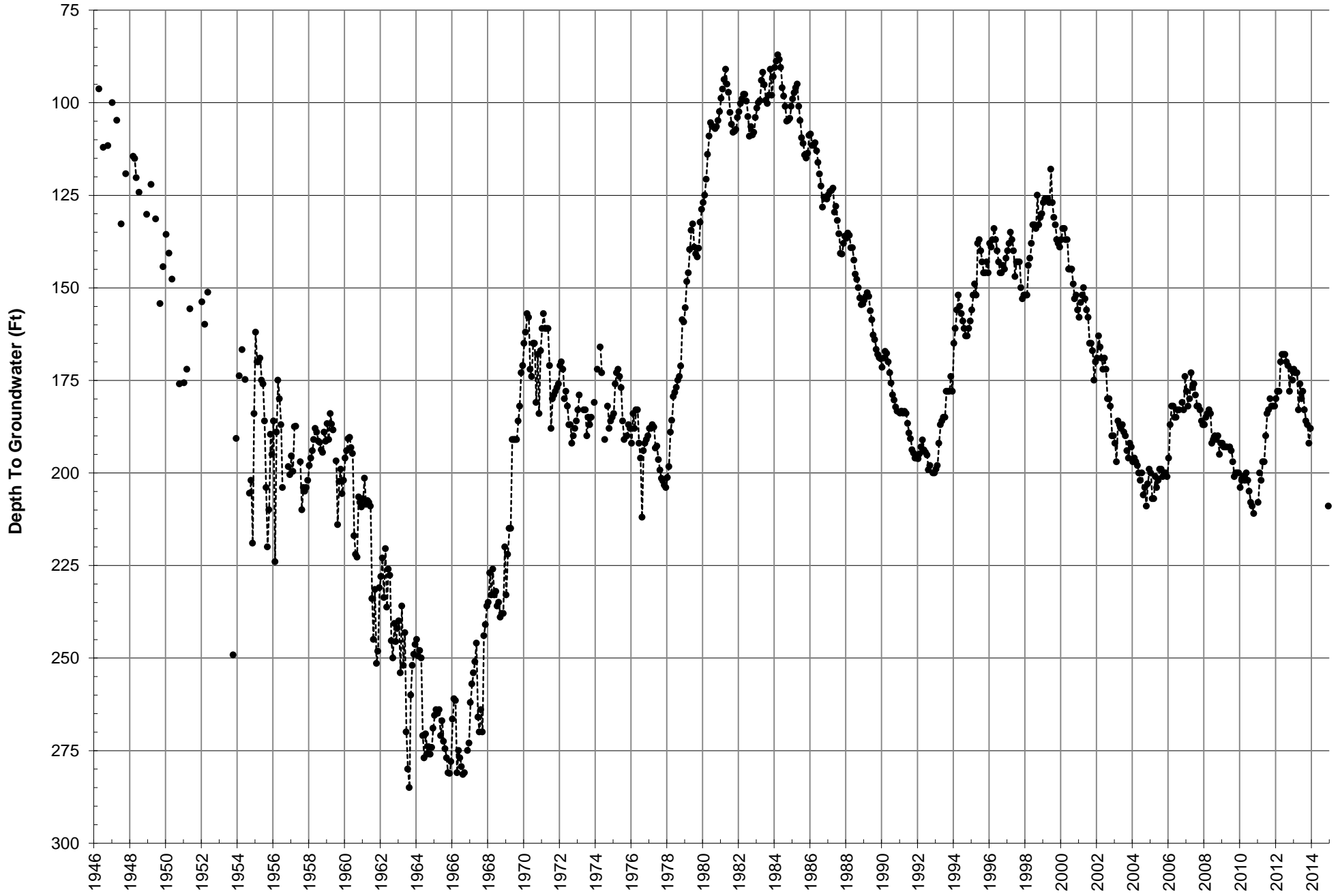


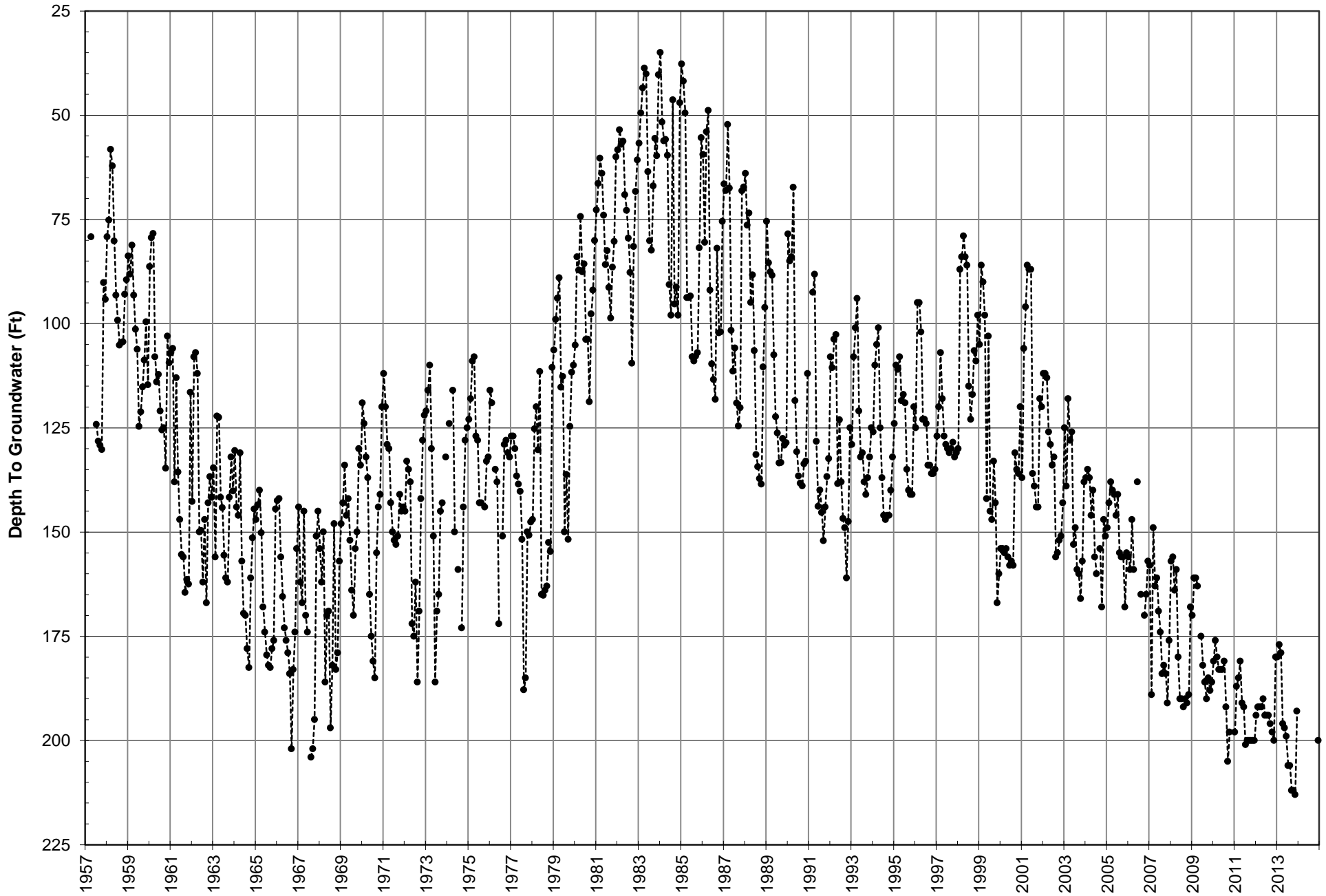




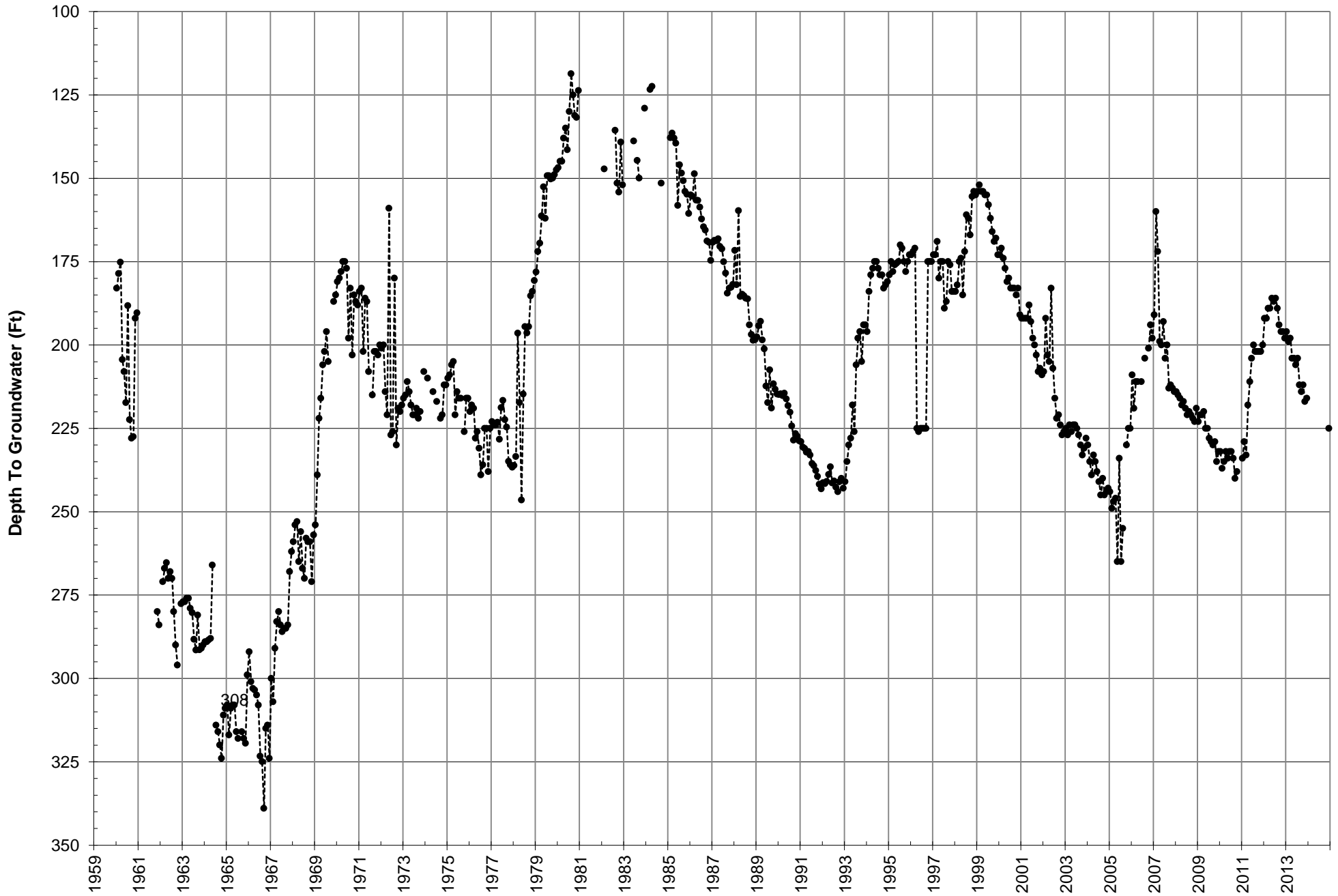
Well #32 Index Well Hydrograph

City of Redlands

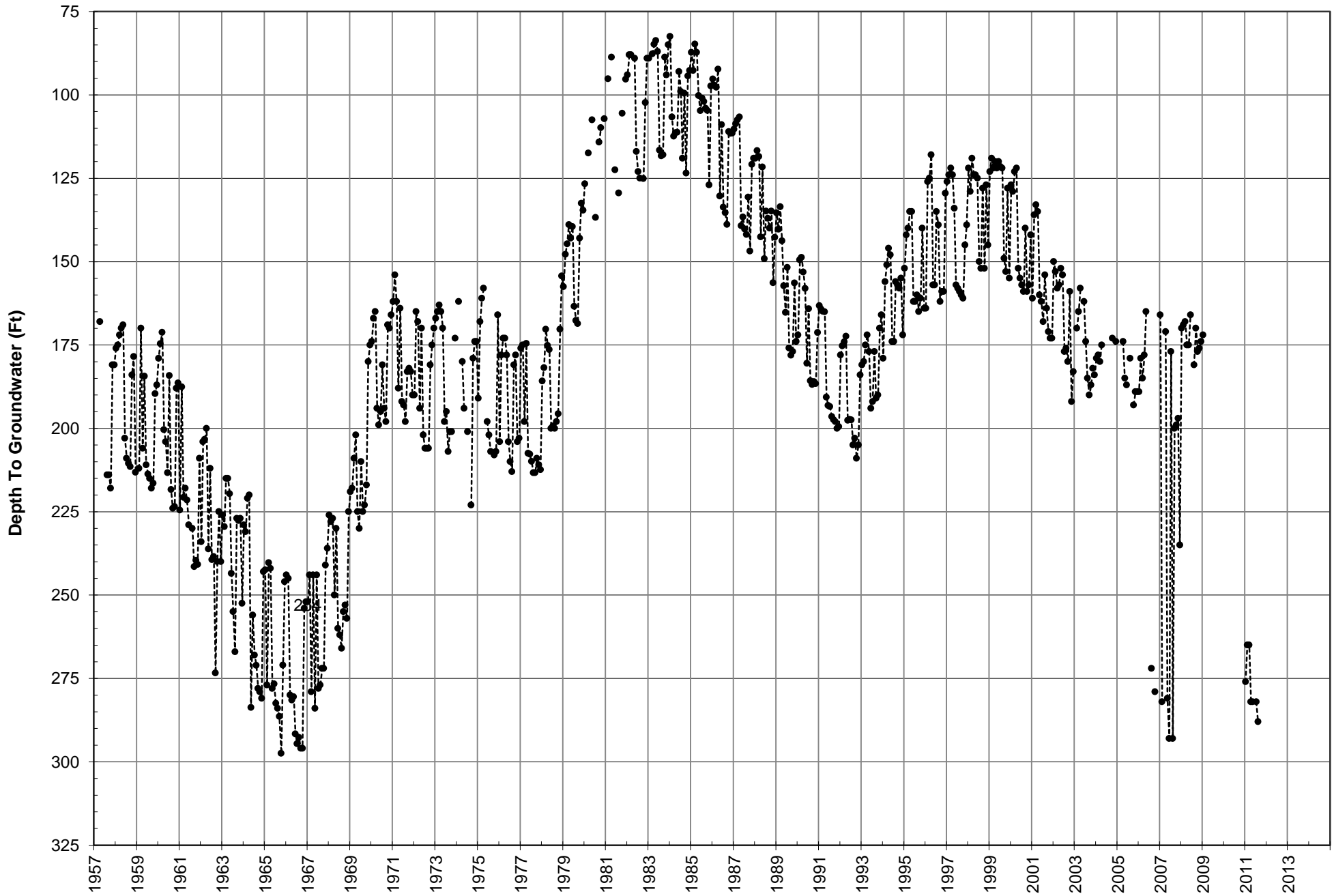




Well #35 Index Well Hydrograph



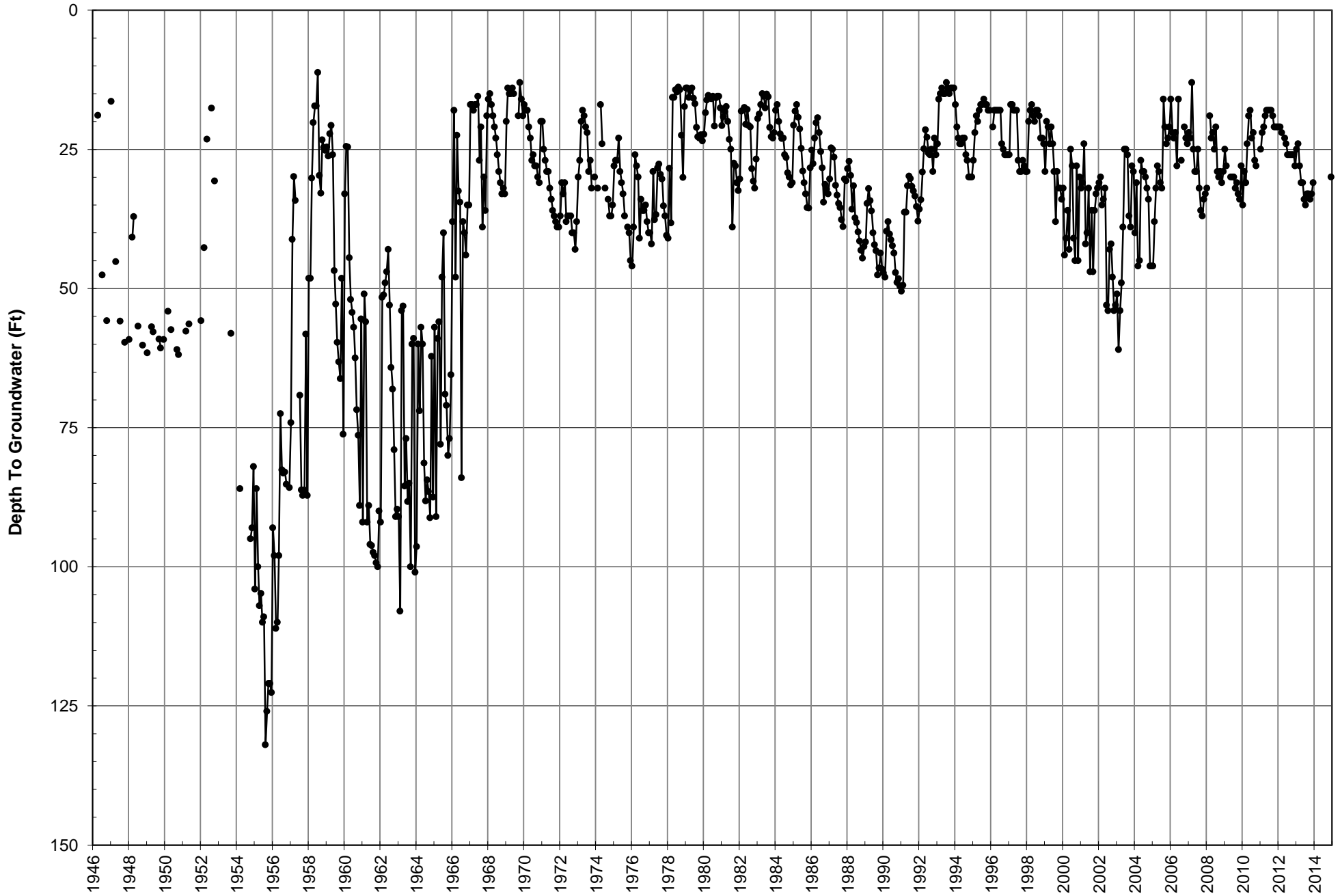
Well #41 Index Well Hydrograph





East Lugonia #3 Index Well Hydrograph

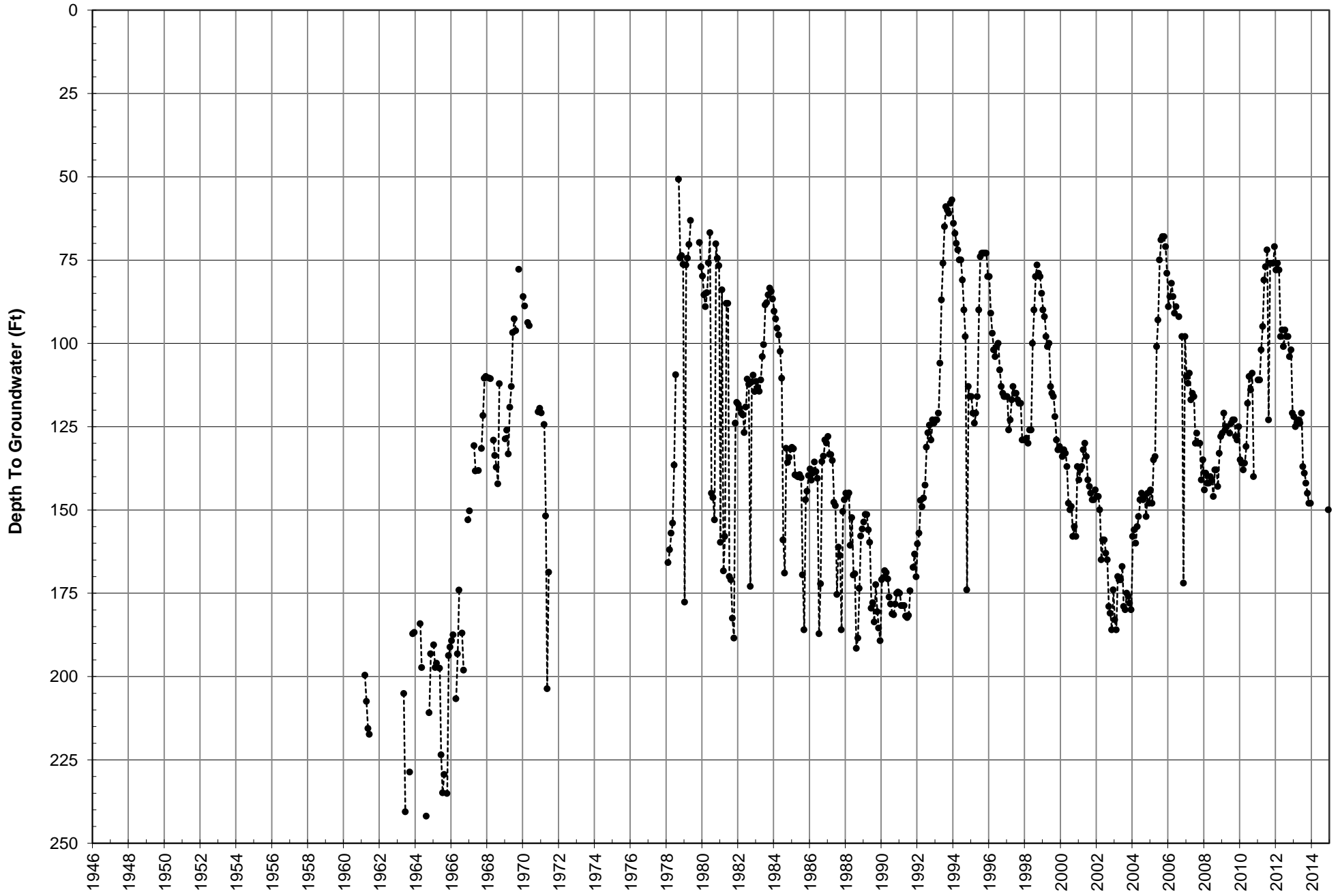
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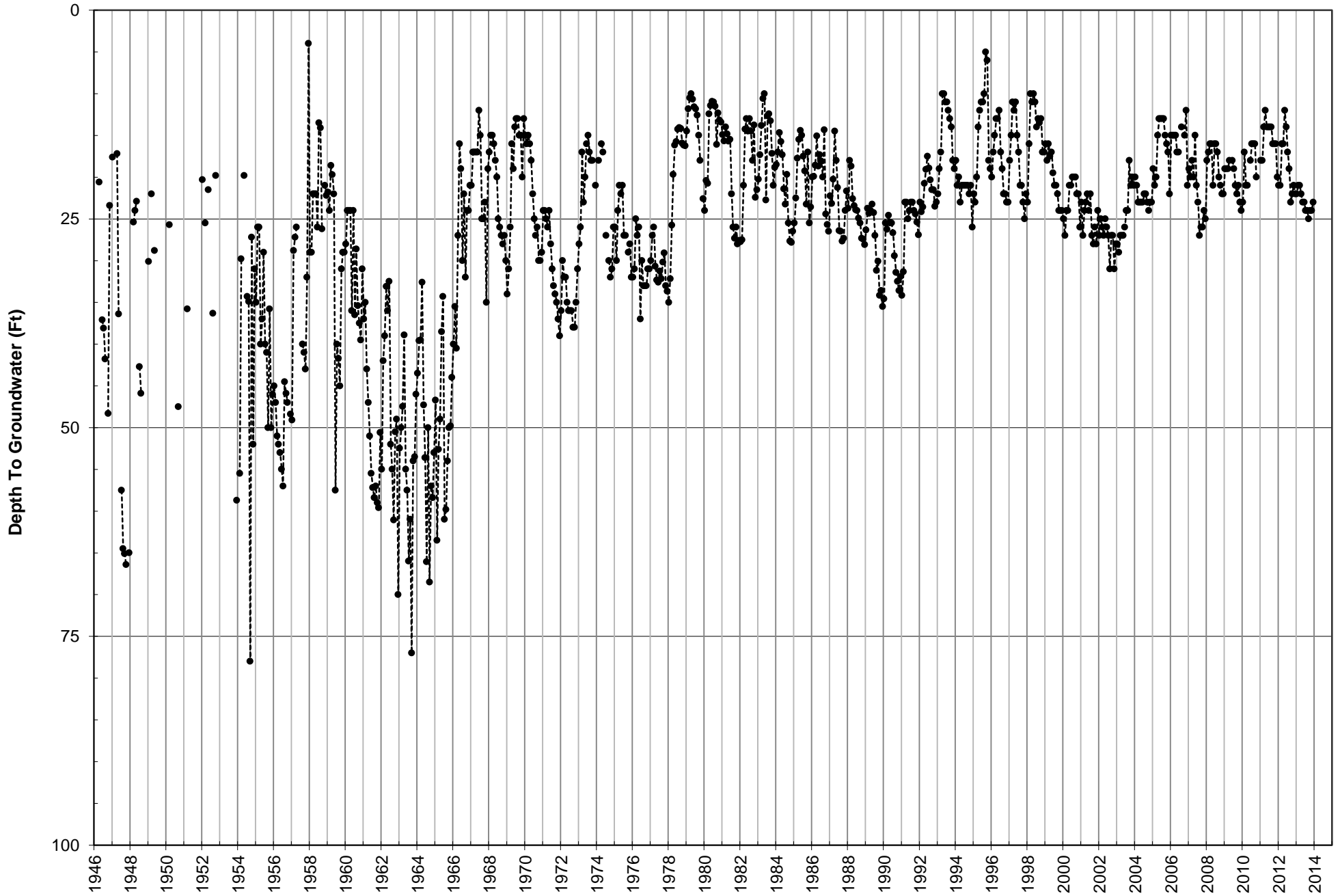


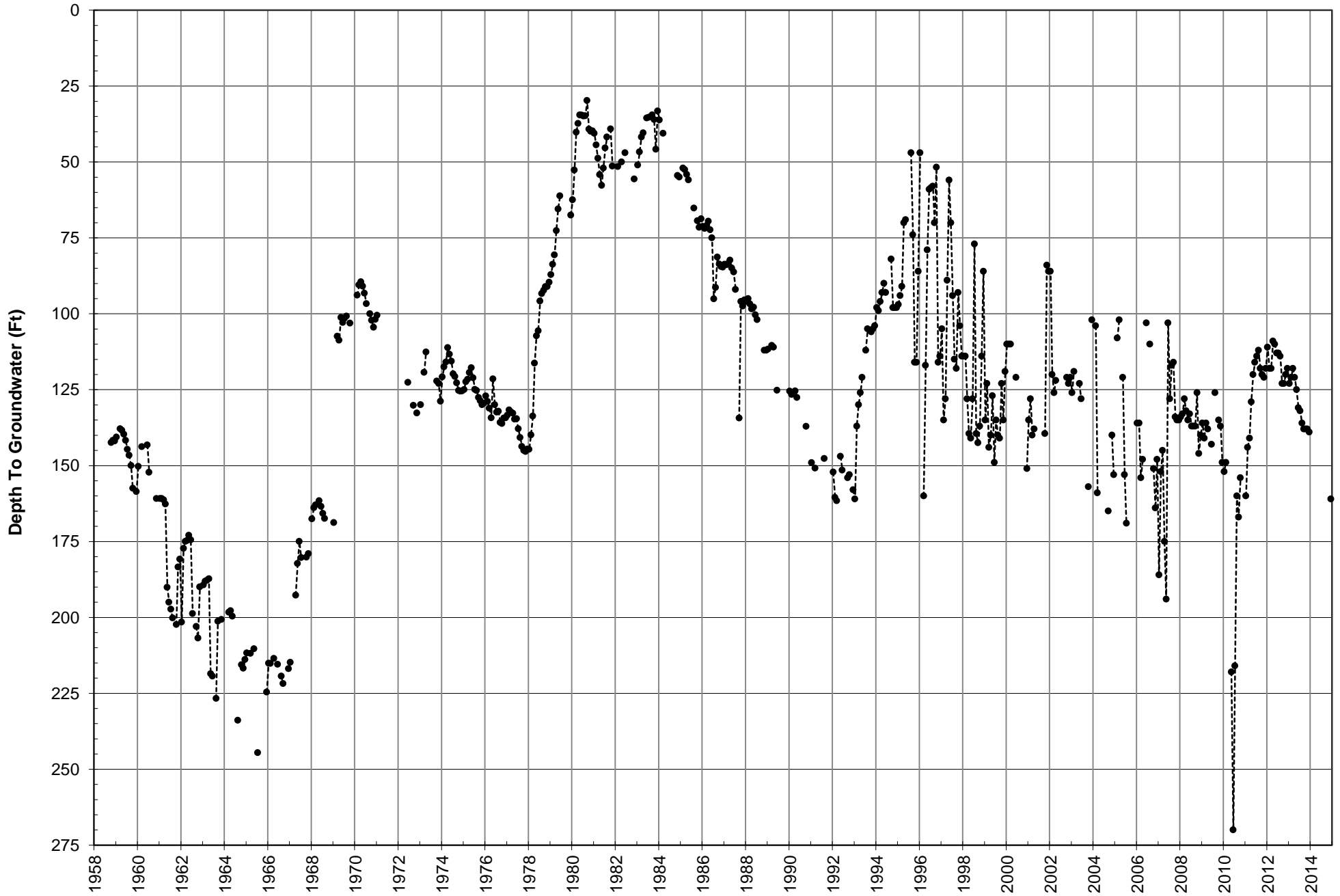
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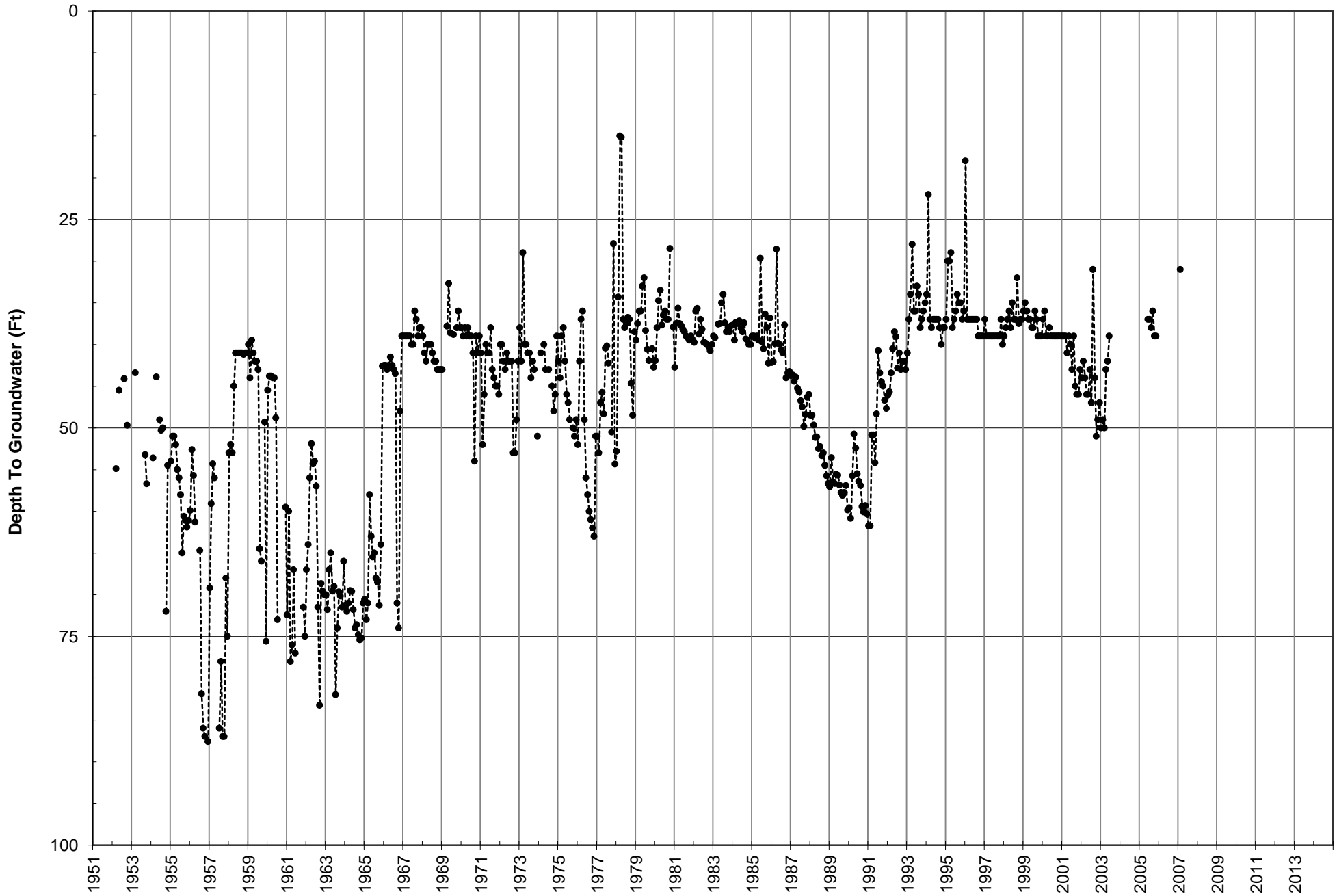
City of Redlands

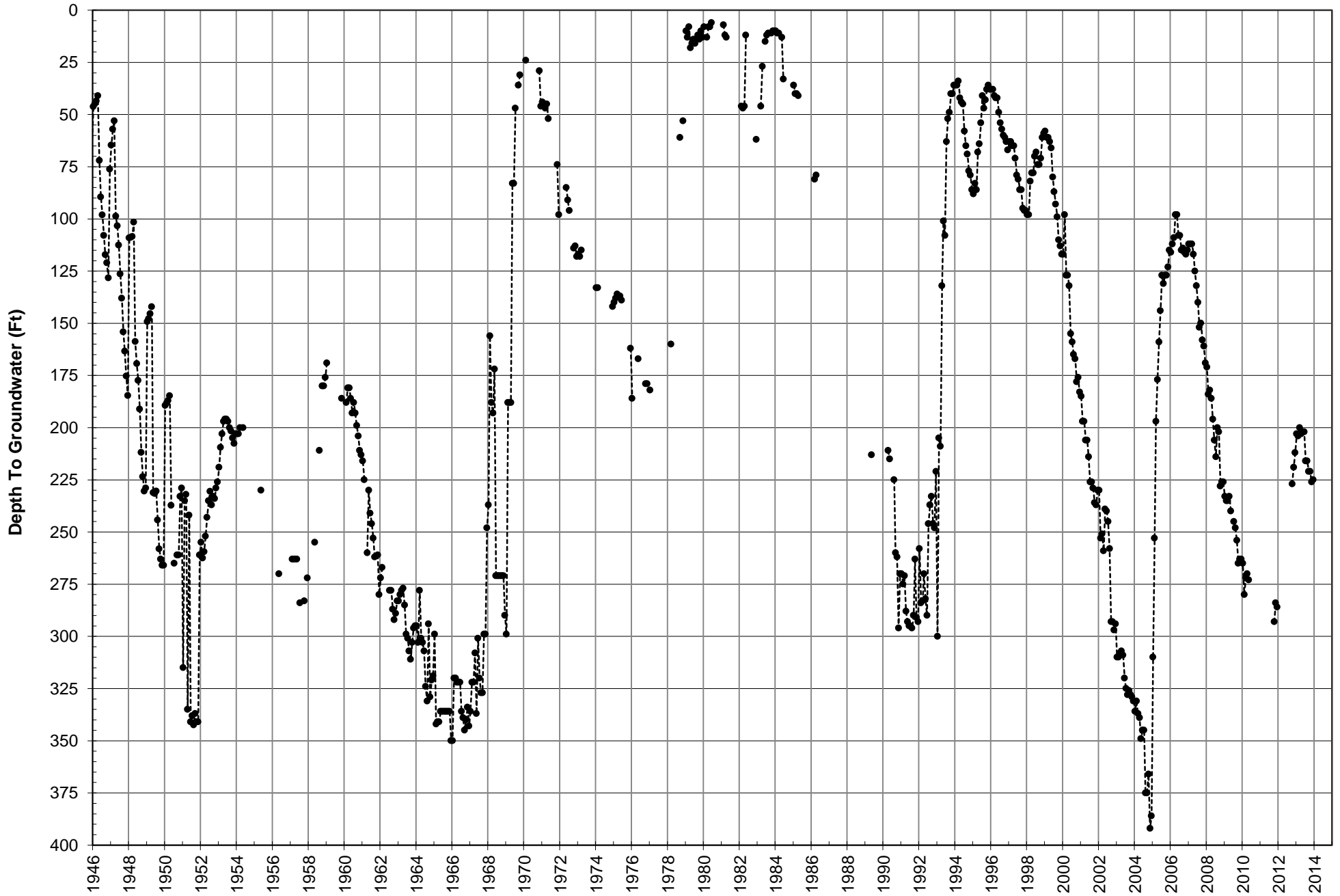


Maguet #1 Index Well Hydrograph

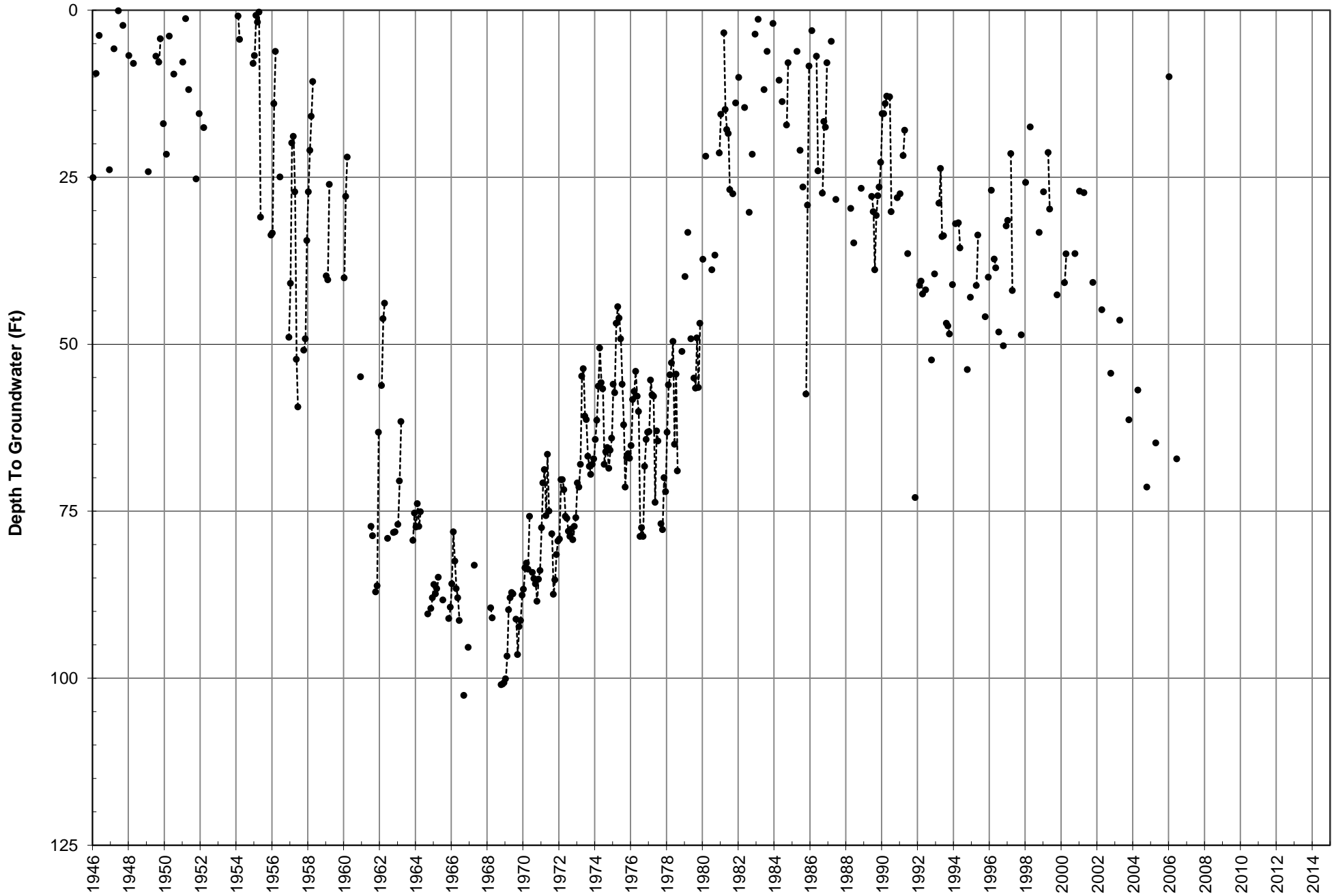








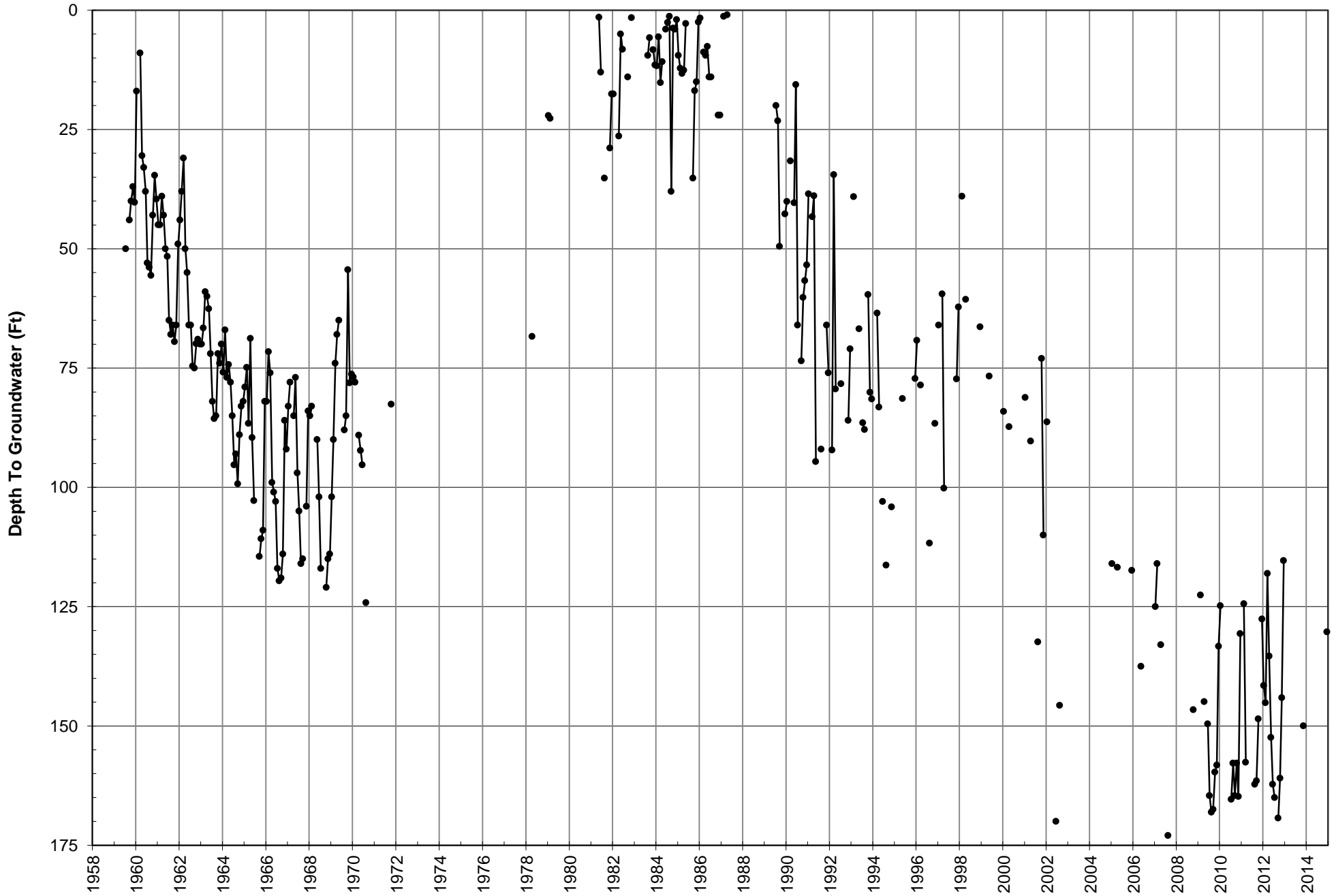
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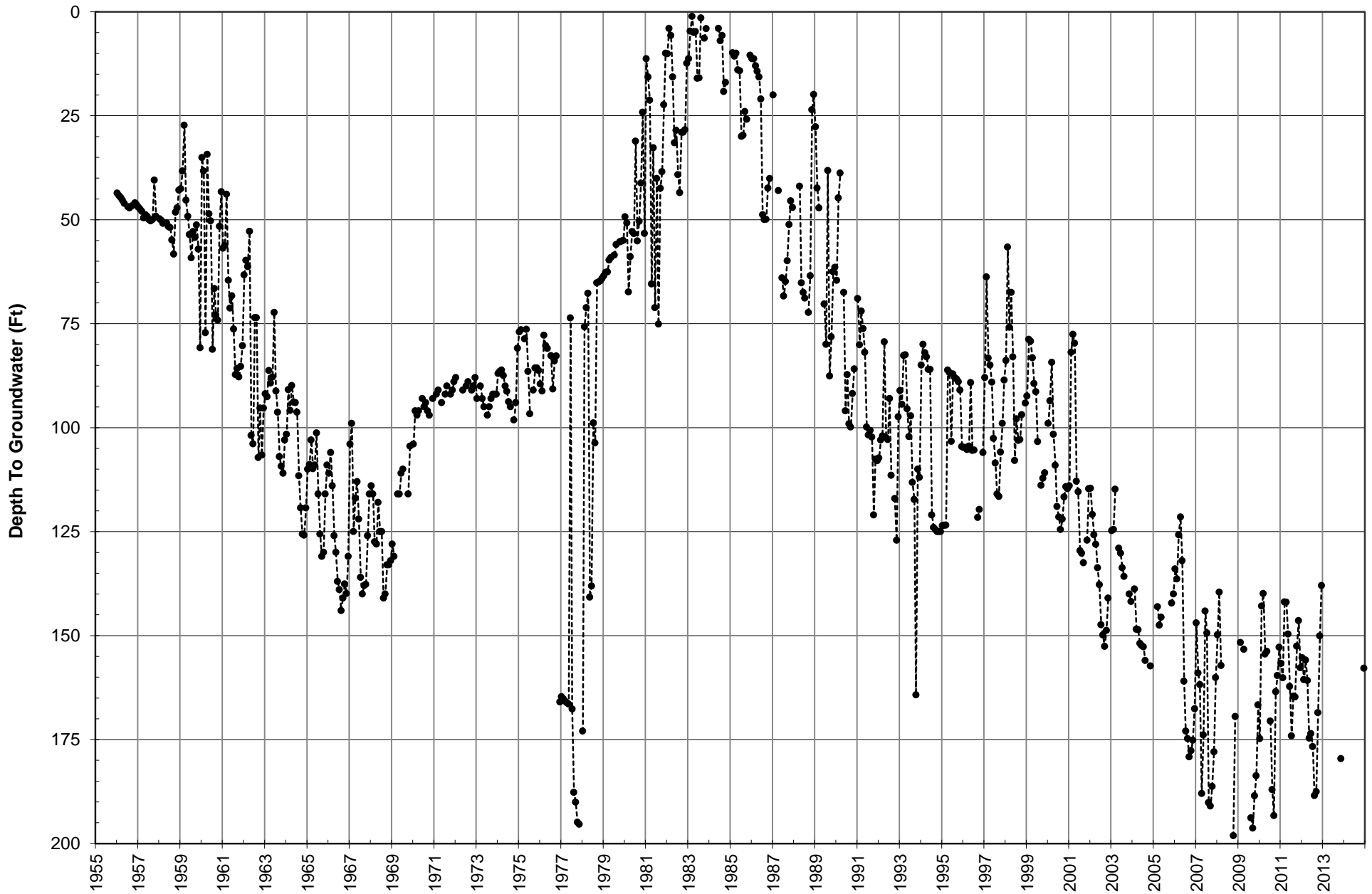


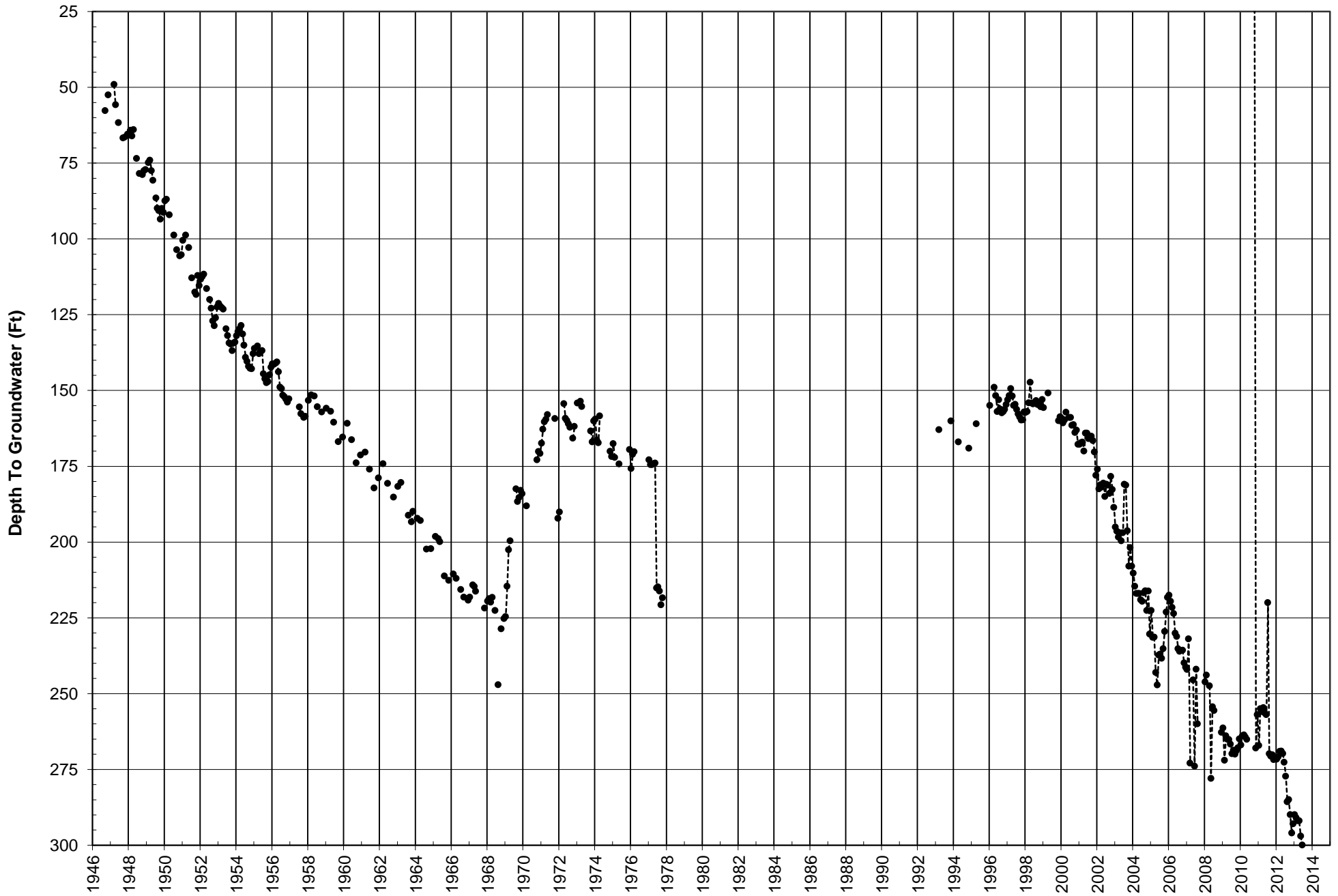
Stewart No. 20 Index Well Hydrograph

City of Riverside



Cooley D Index Well Hydrograph

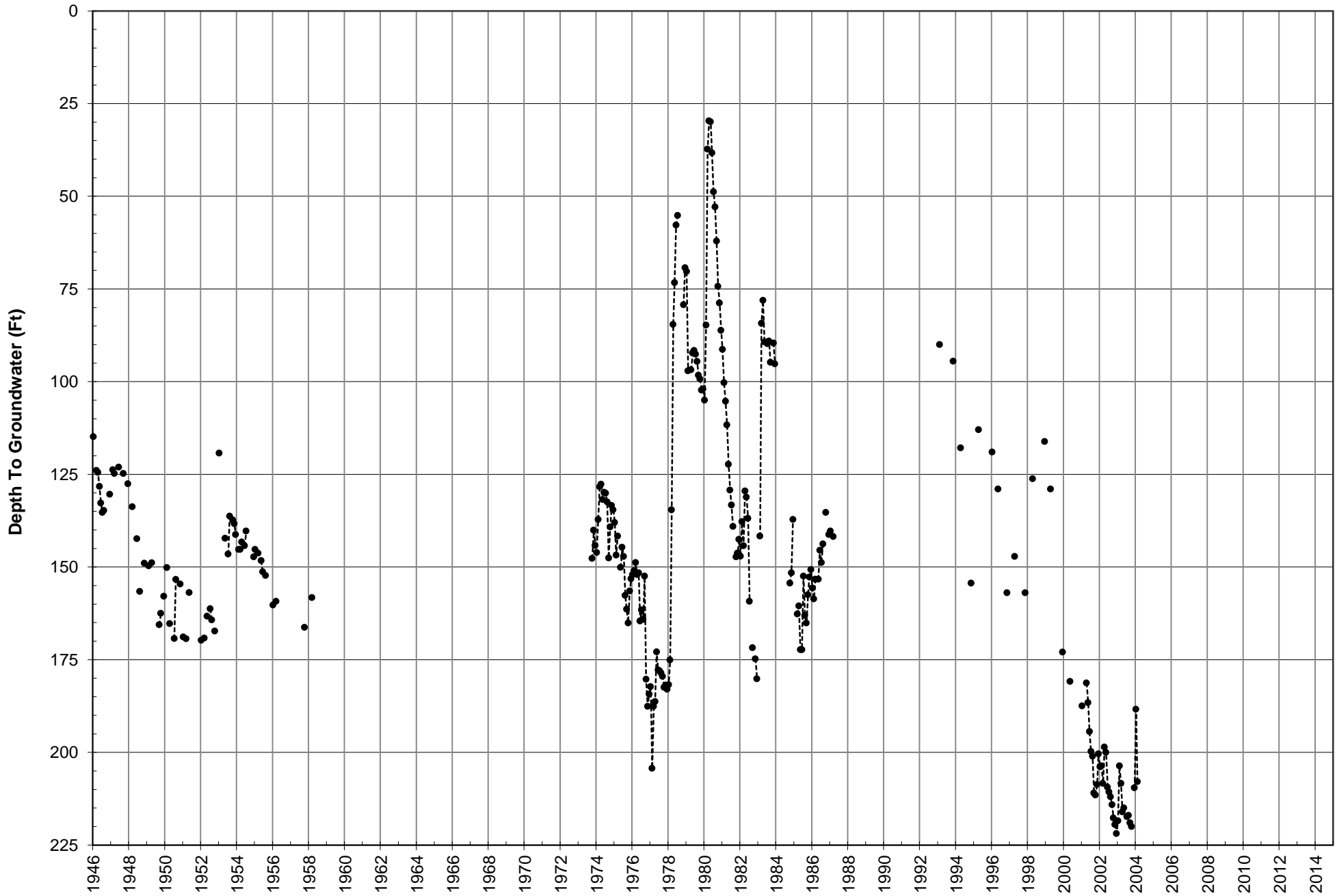






Cajon Well No. 1 Index Well Hydrograph

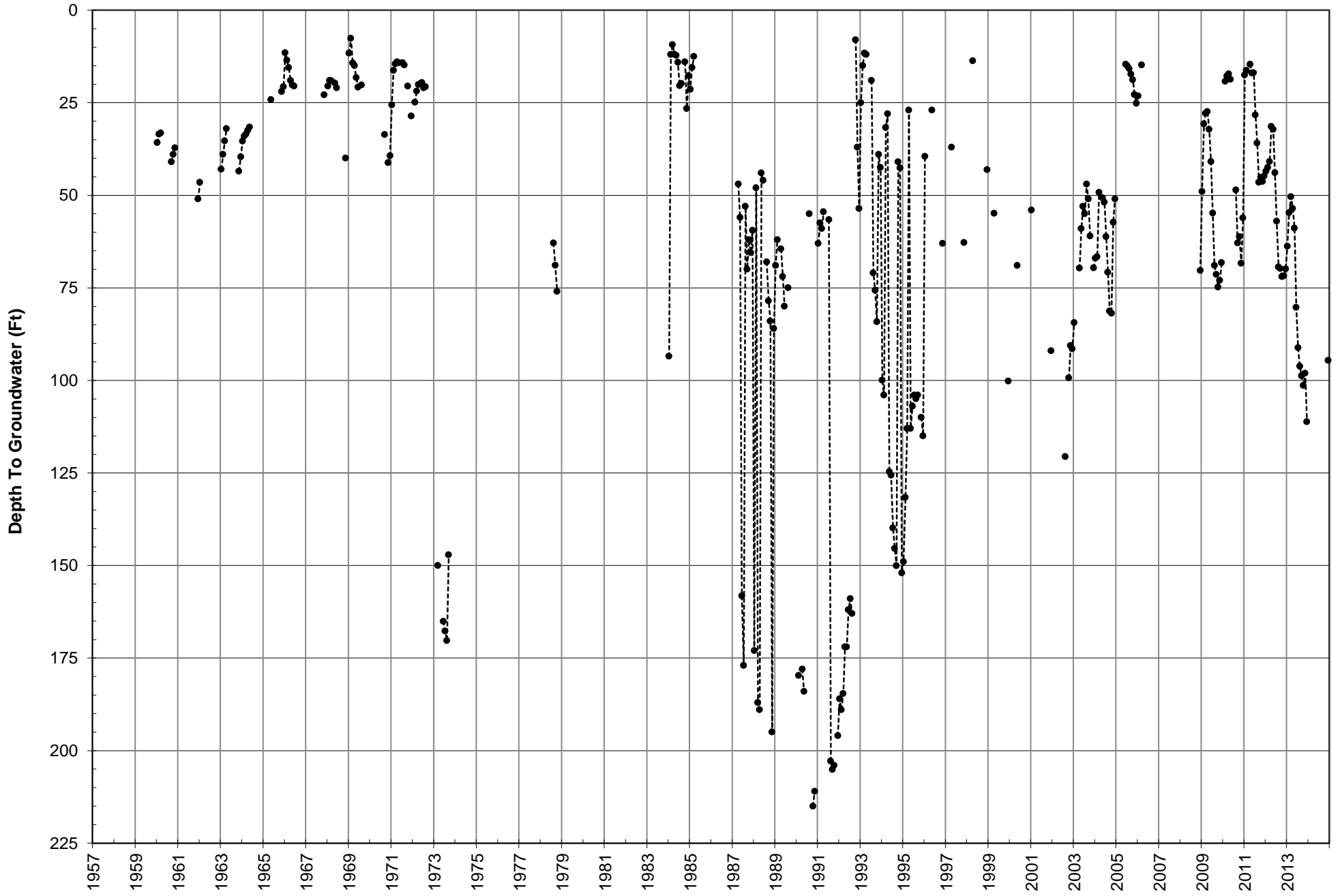
City of San Bernardino





Cajon Canyon Index Well Hydrograph

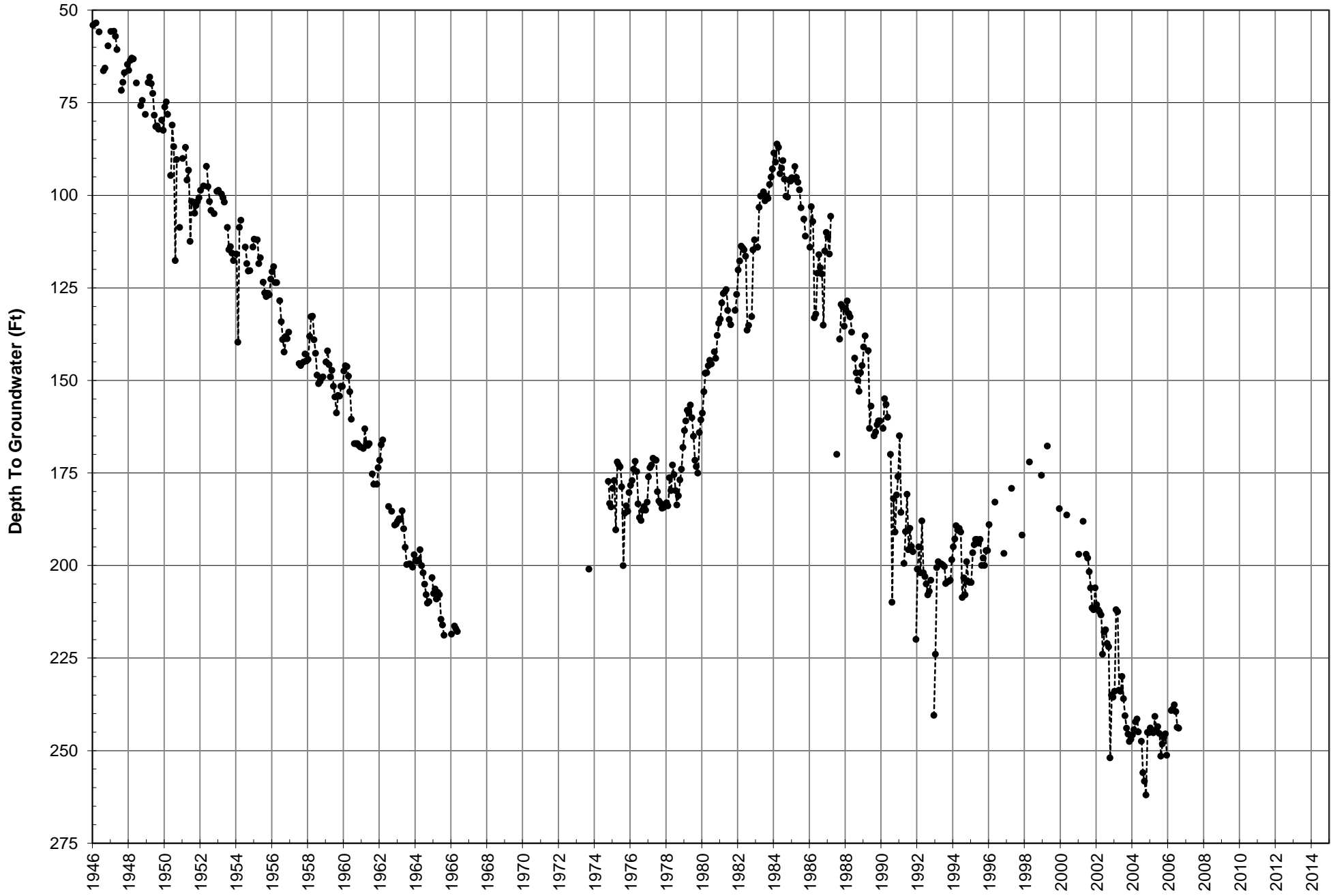
City of San Bernardino





Perris Hill No. 3 Index Well Hydrograph

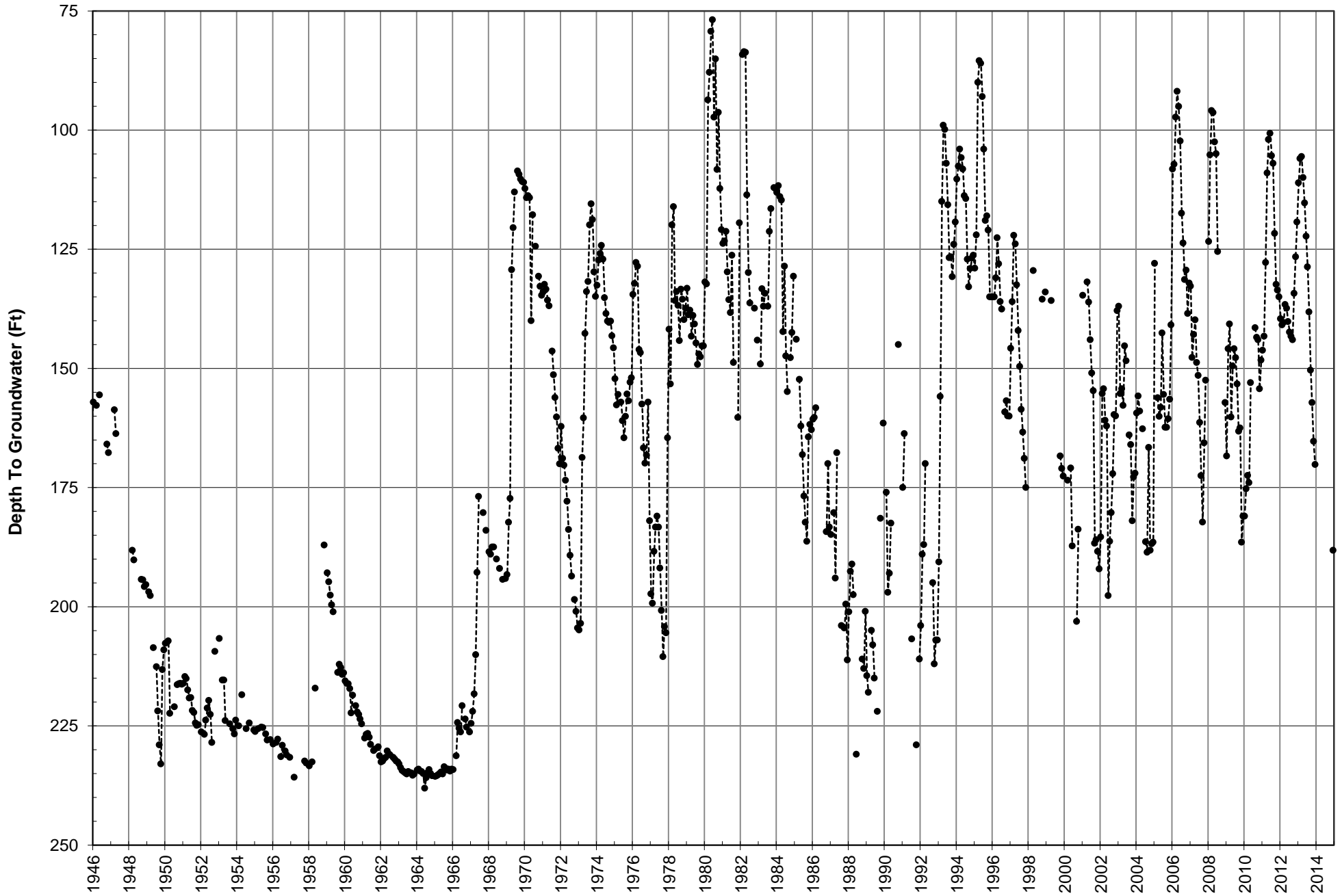
City of San Bernardino





Devil Canyon No. 1 Index Well Hydrograph

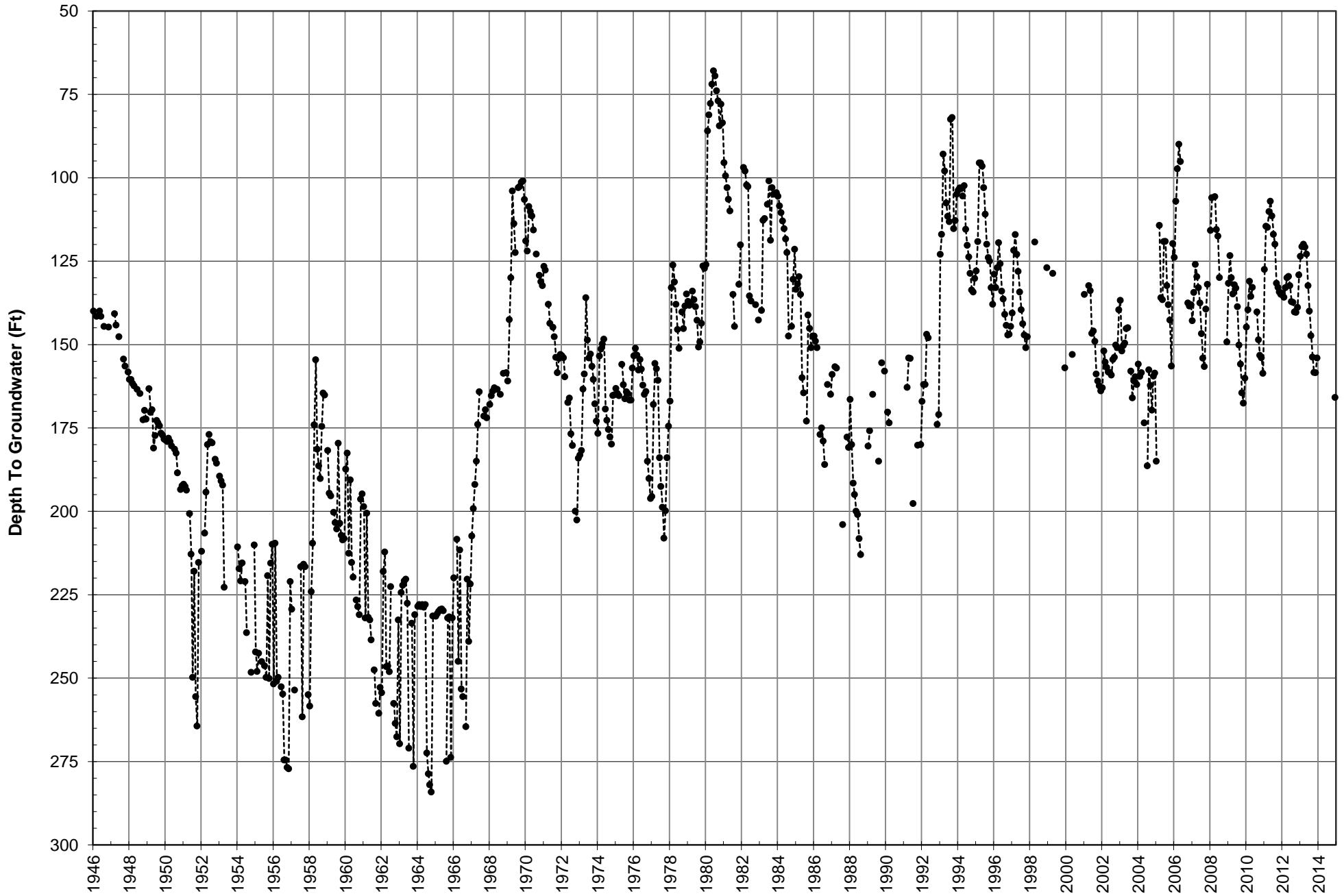
City of San Bernardino





Devil Canyon No. 2 Index Well Hydrograph

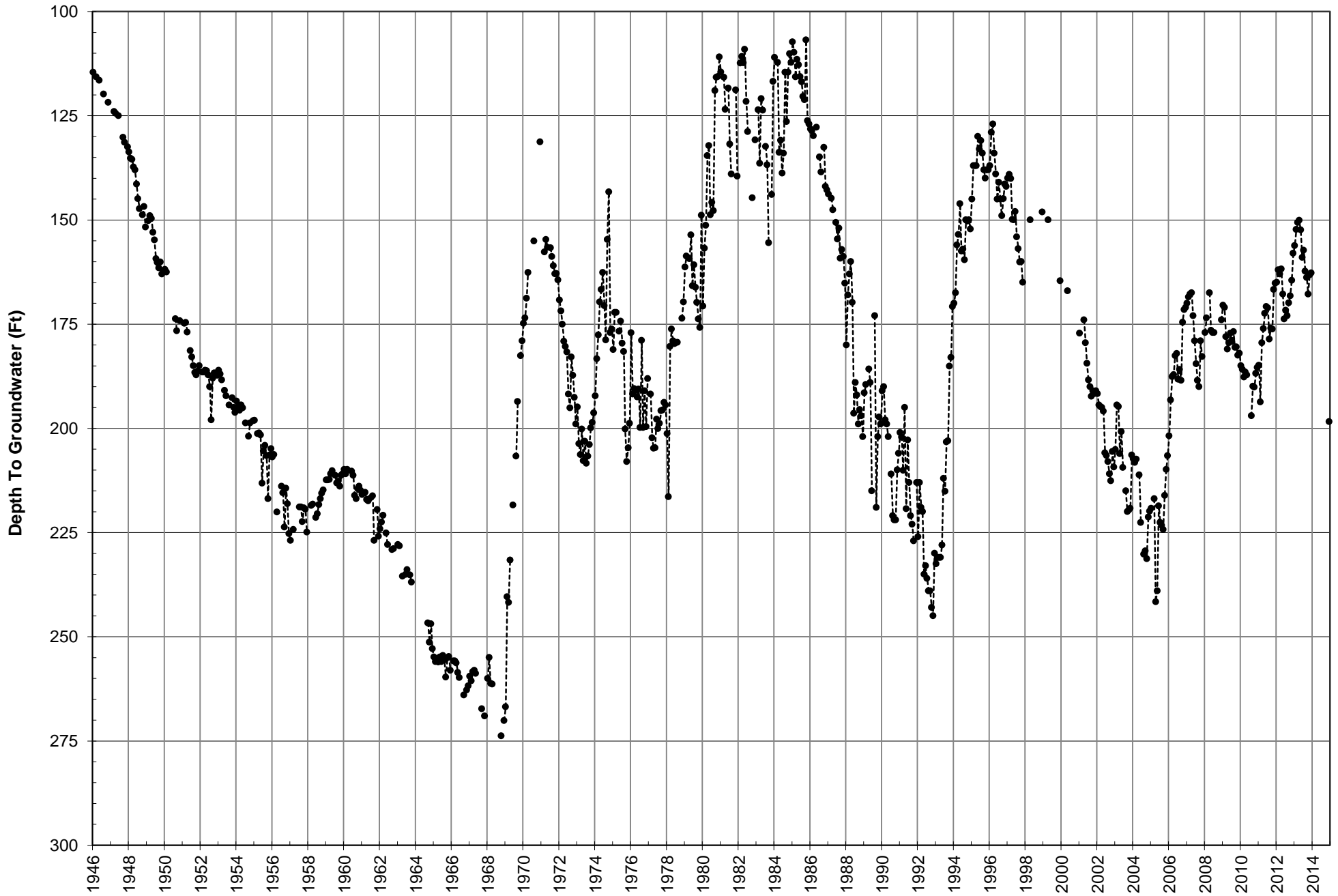
City of San Bernardino

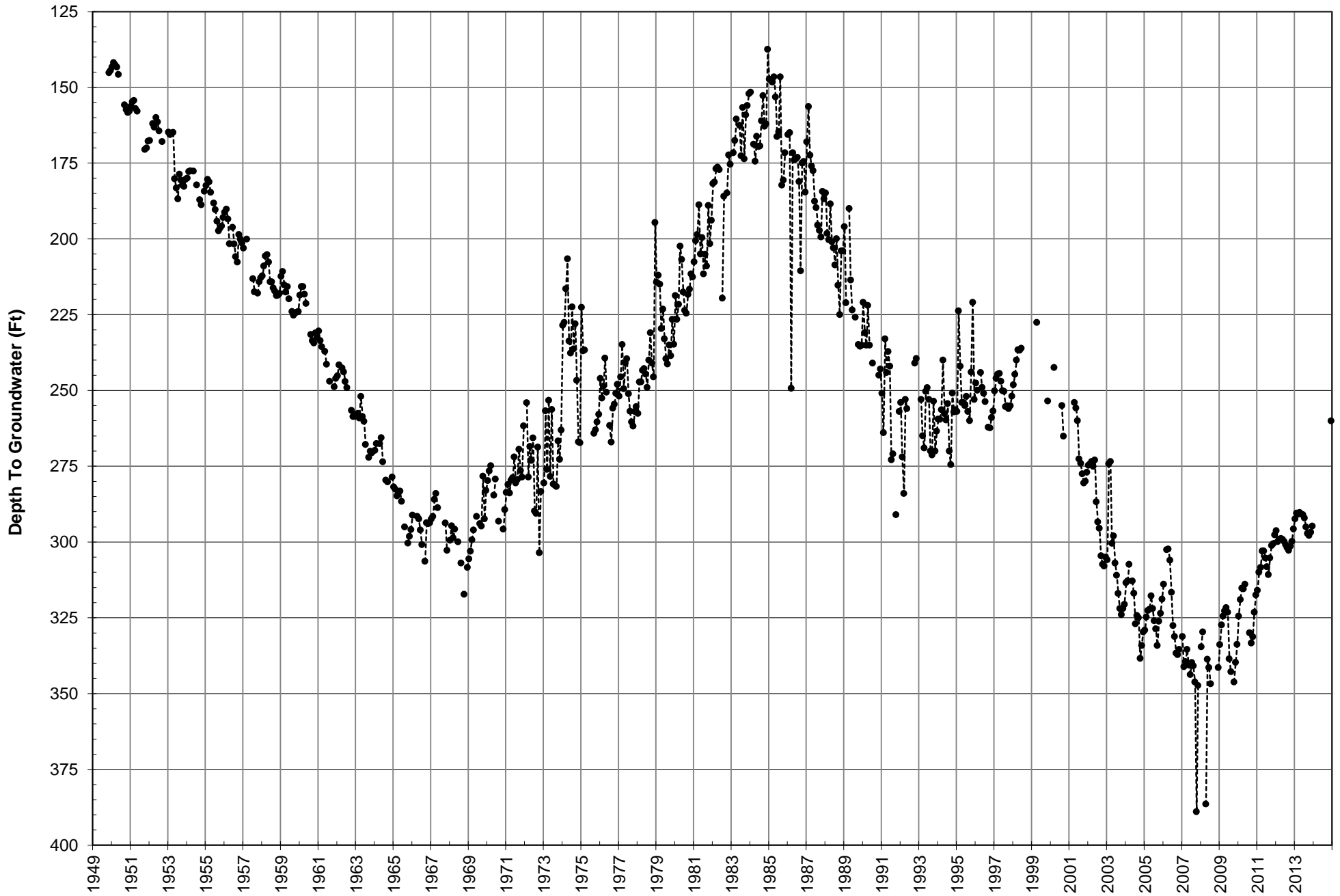




Newmark No. 1 Index Well Hydrograph

City of San Bernardino







PaperBoard Index Well Hydrograph

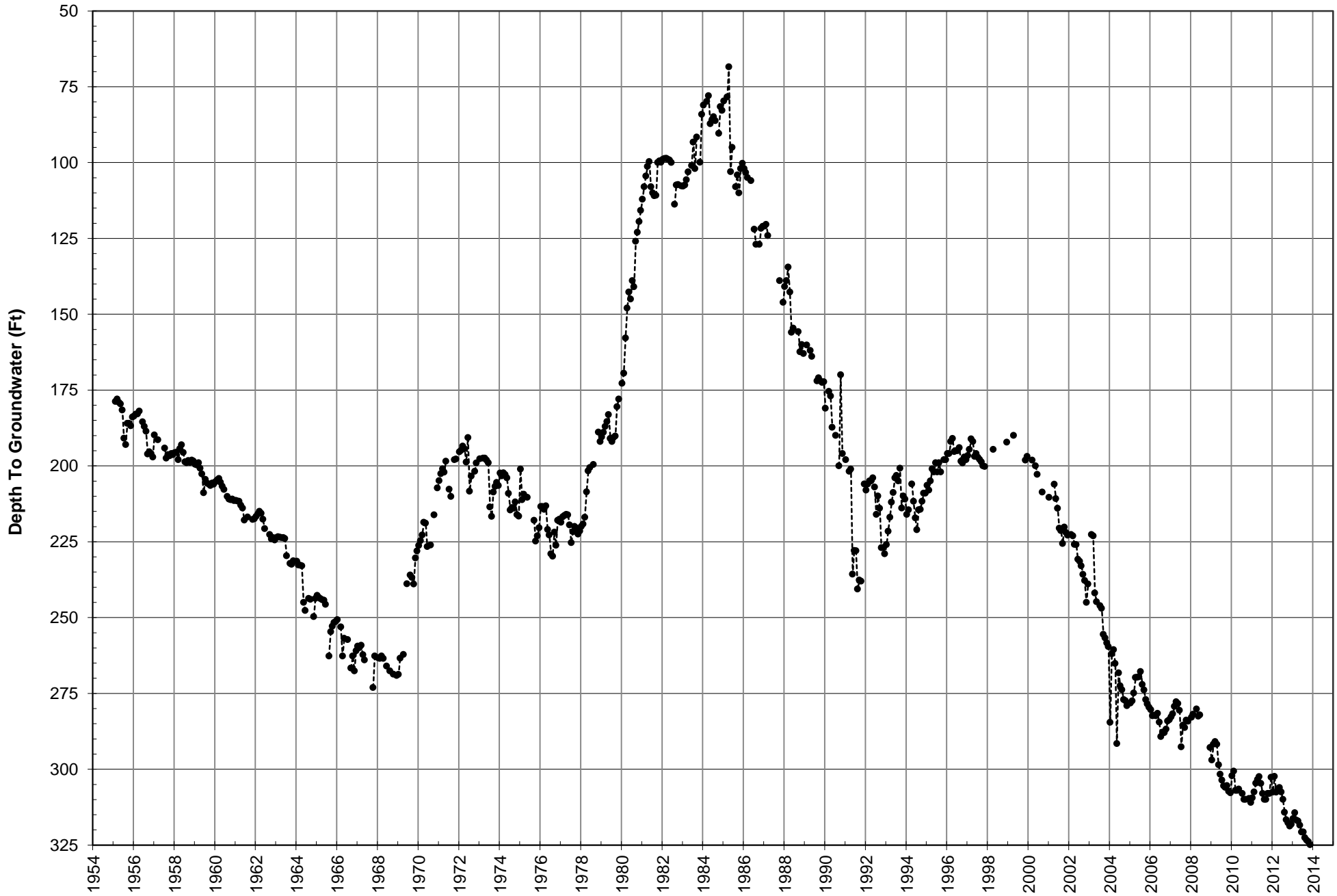
City of San Bernardino





19th St. No. 2 Index Well Hydrograph

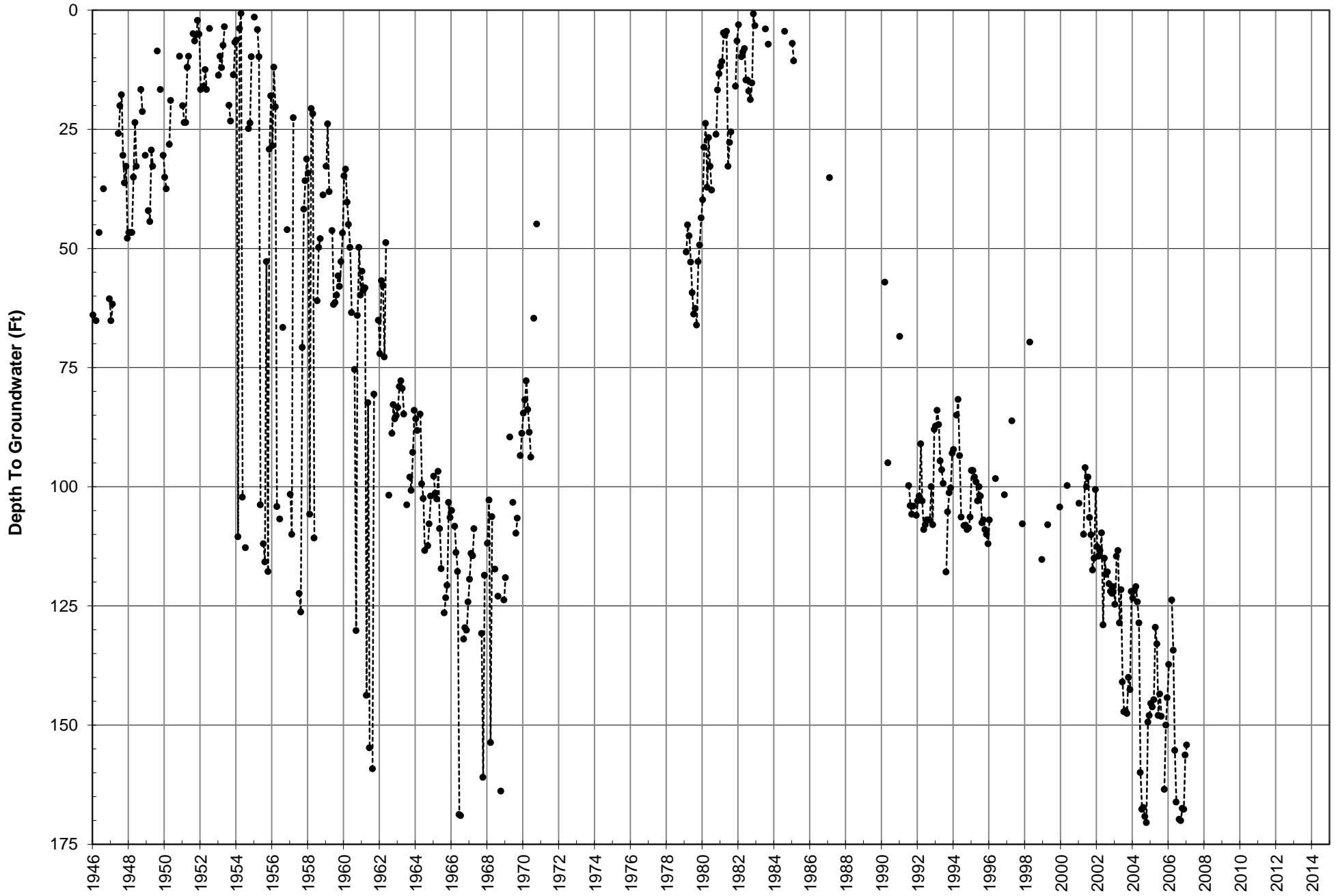
City of San Bernardino





Antil No. 5 Index Well Hydrograph

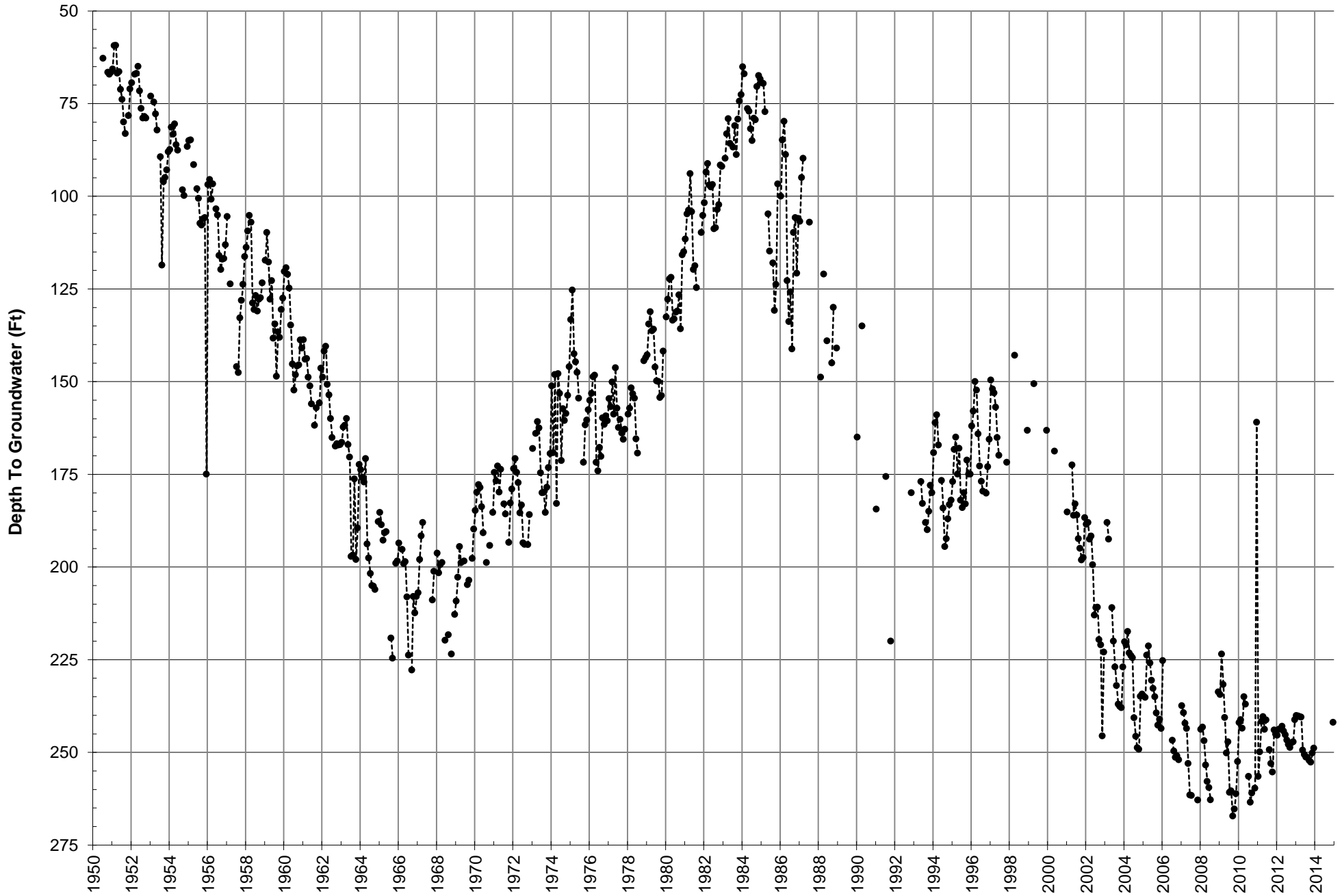
City of San Bernardino

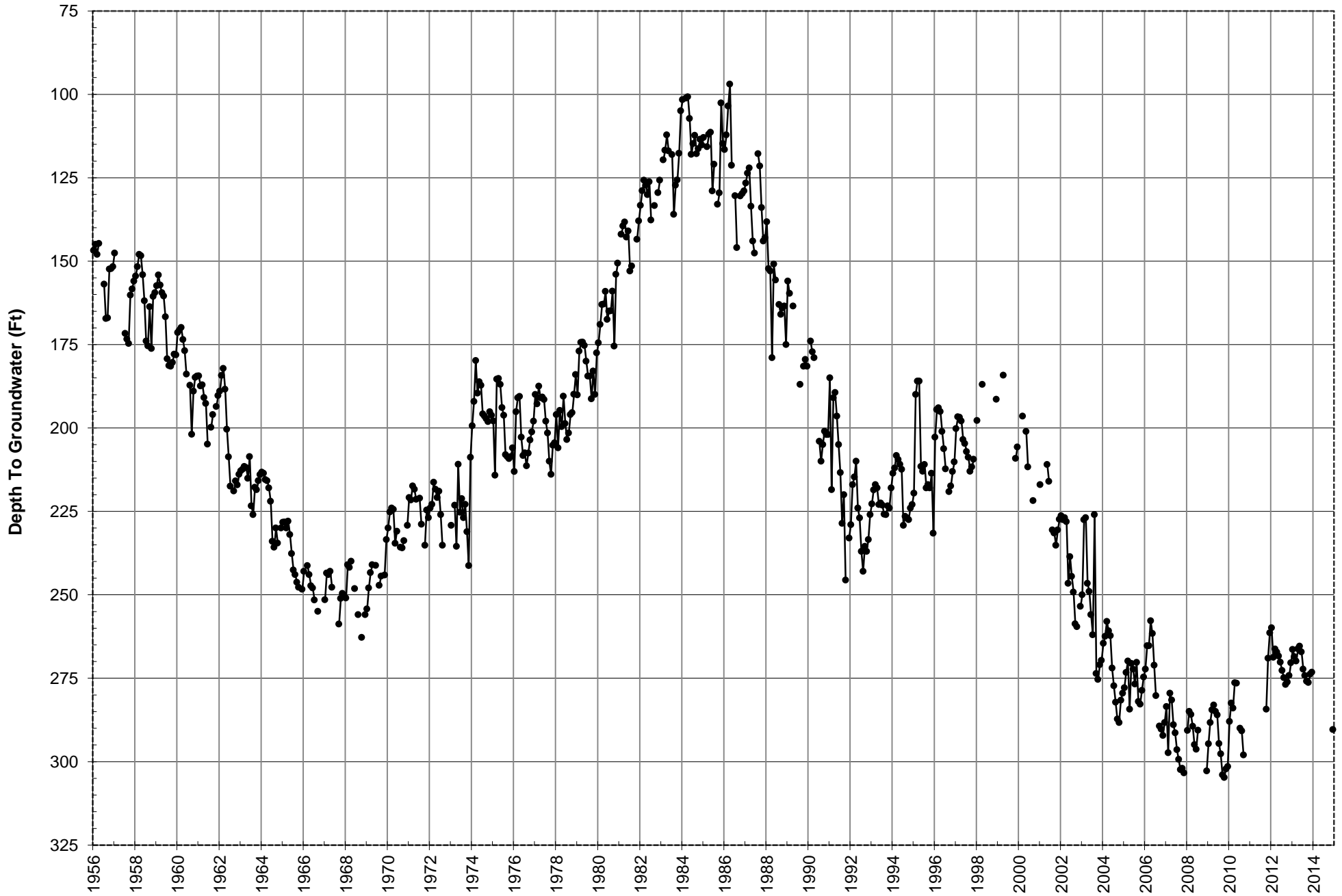




16th St. Index Well Hydrograph

City of San Bernardino

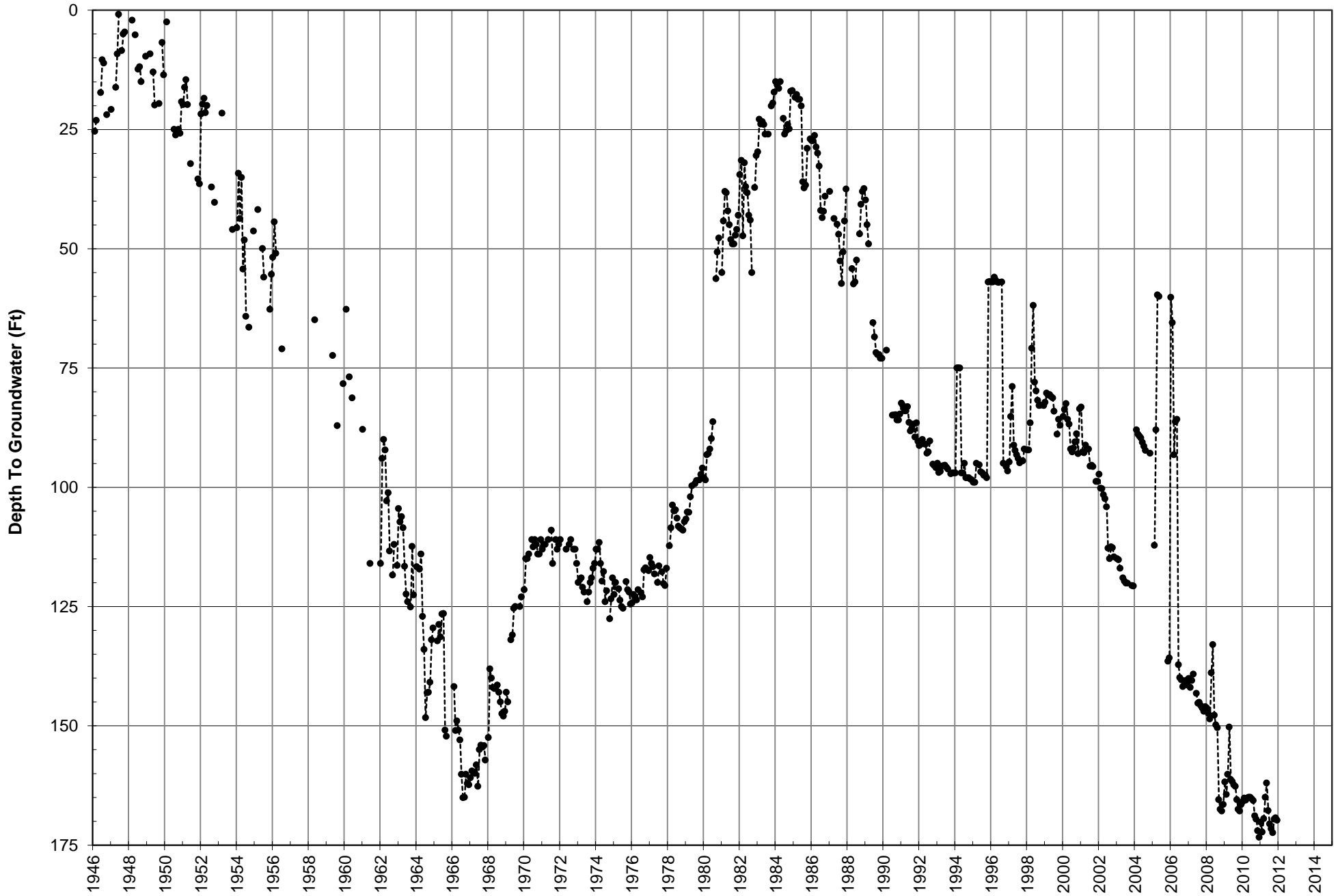






Plant No. 6 Index Well Hydrograph

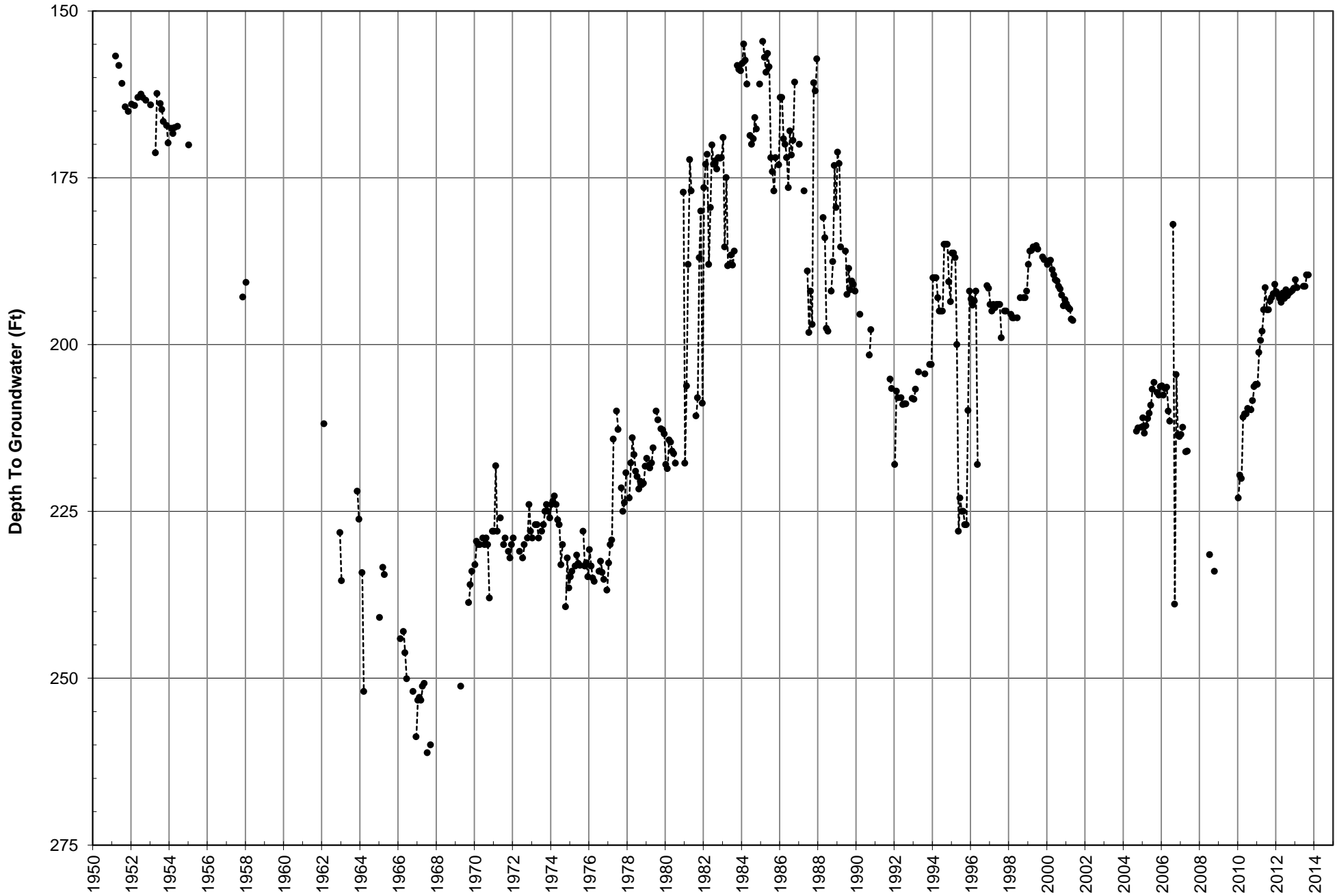
East Valley Water District

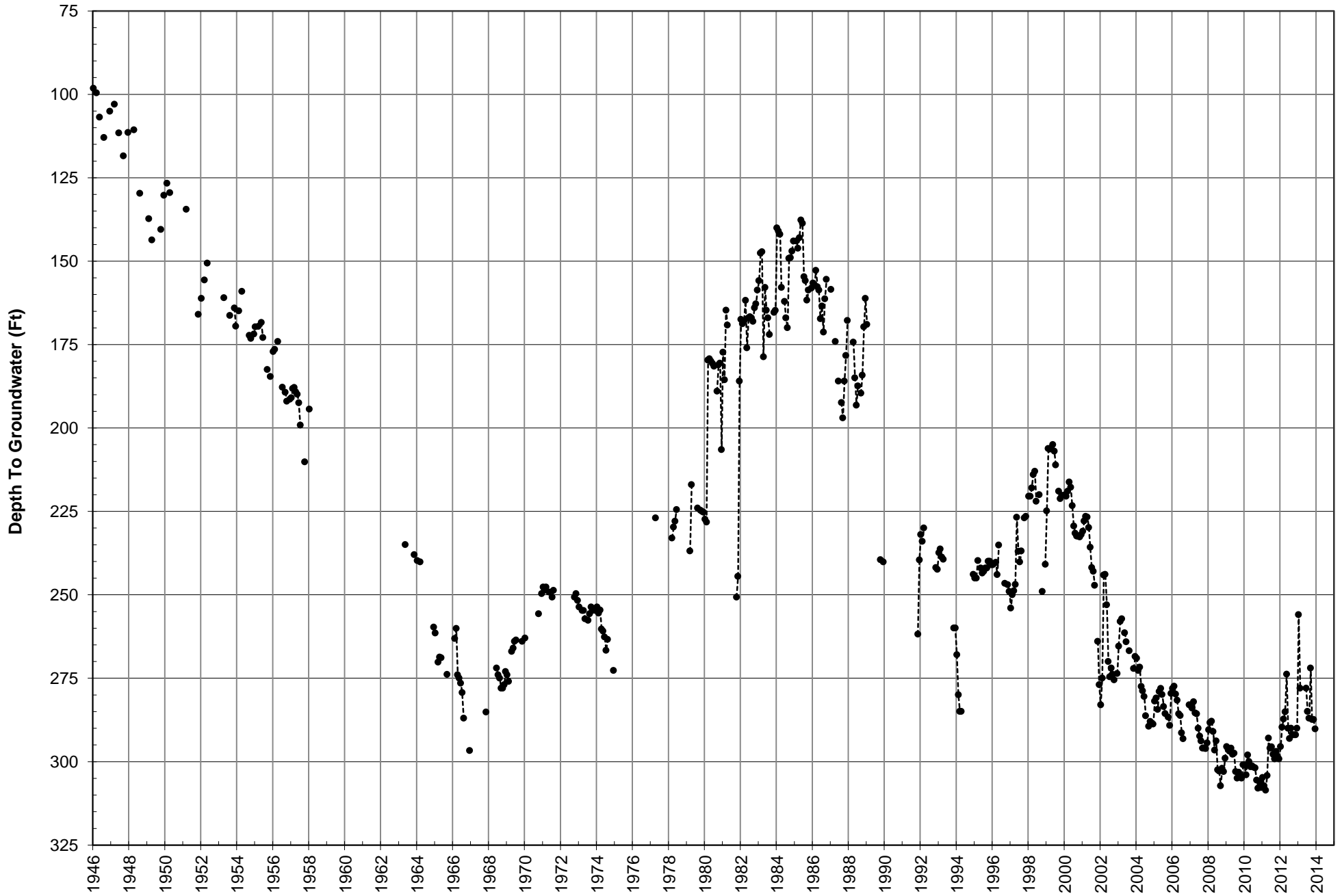




Plant No. 27 Index Well Hydrograph

East Valley Water District

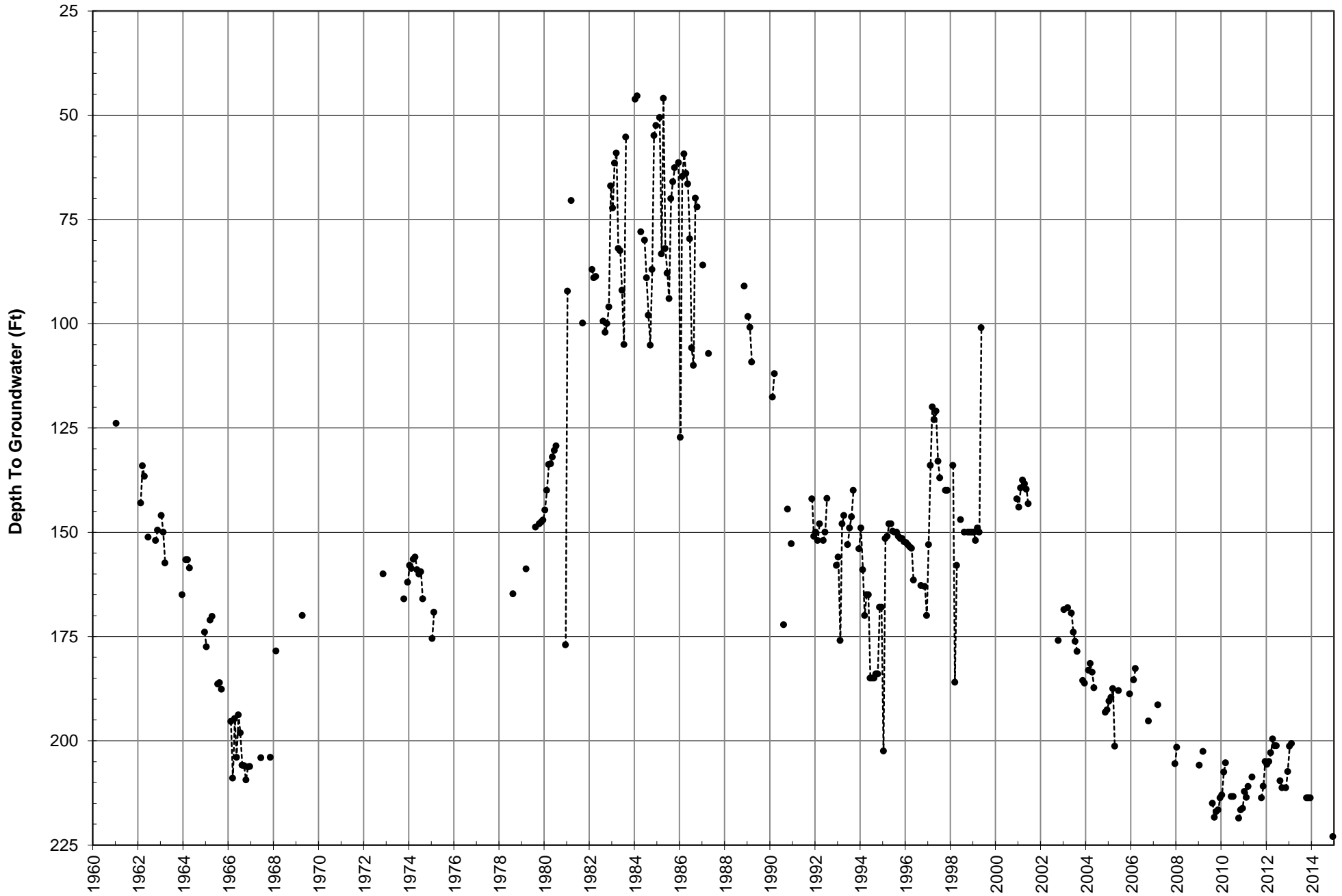




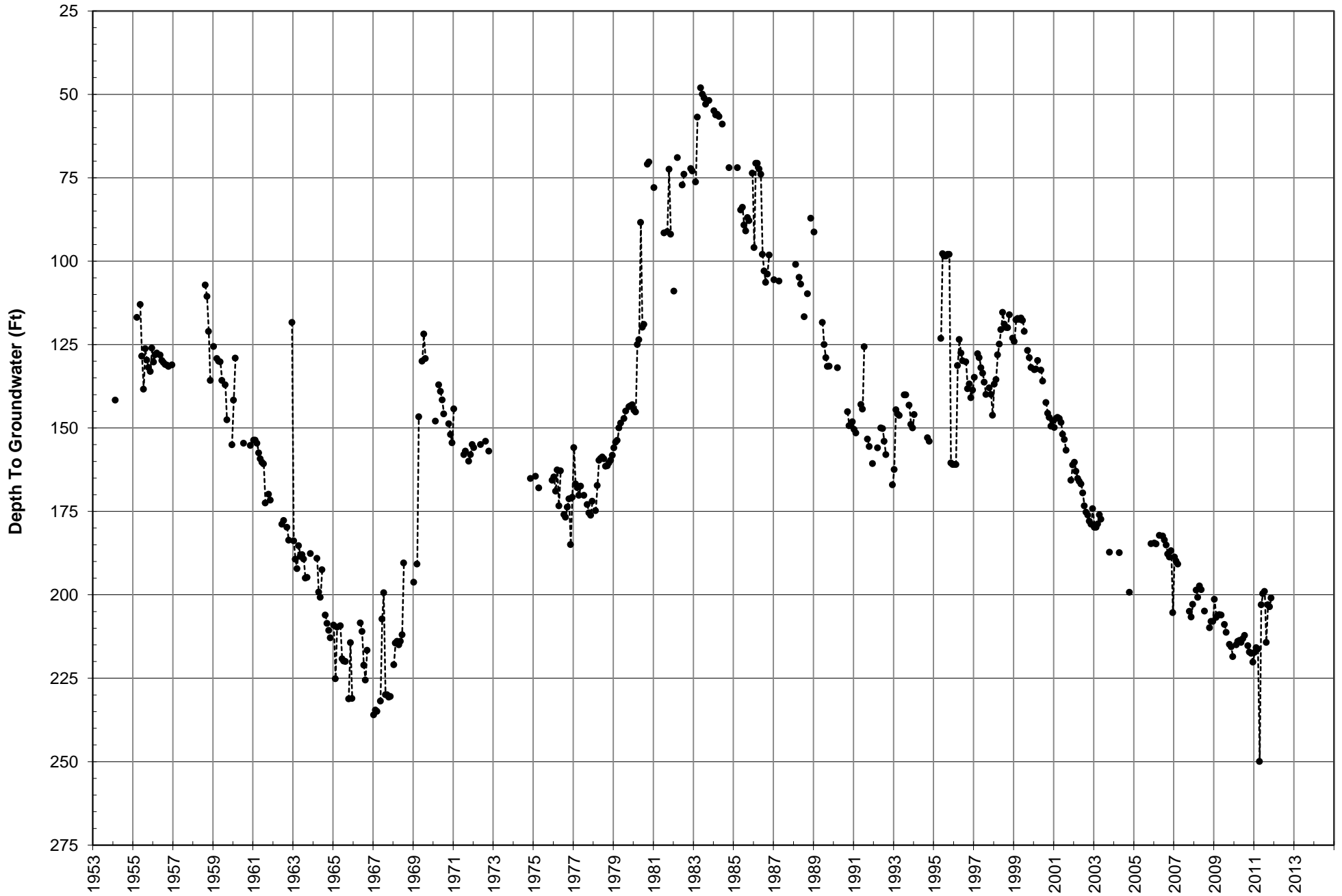


Plant No. 9A Index Well Hydrograph

East Valley Water District



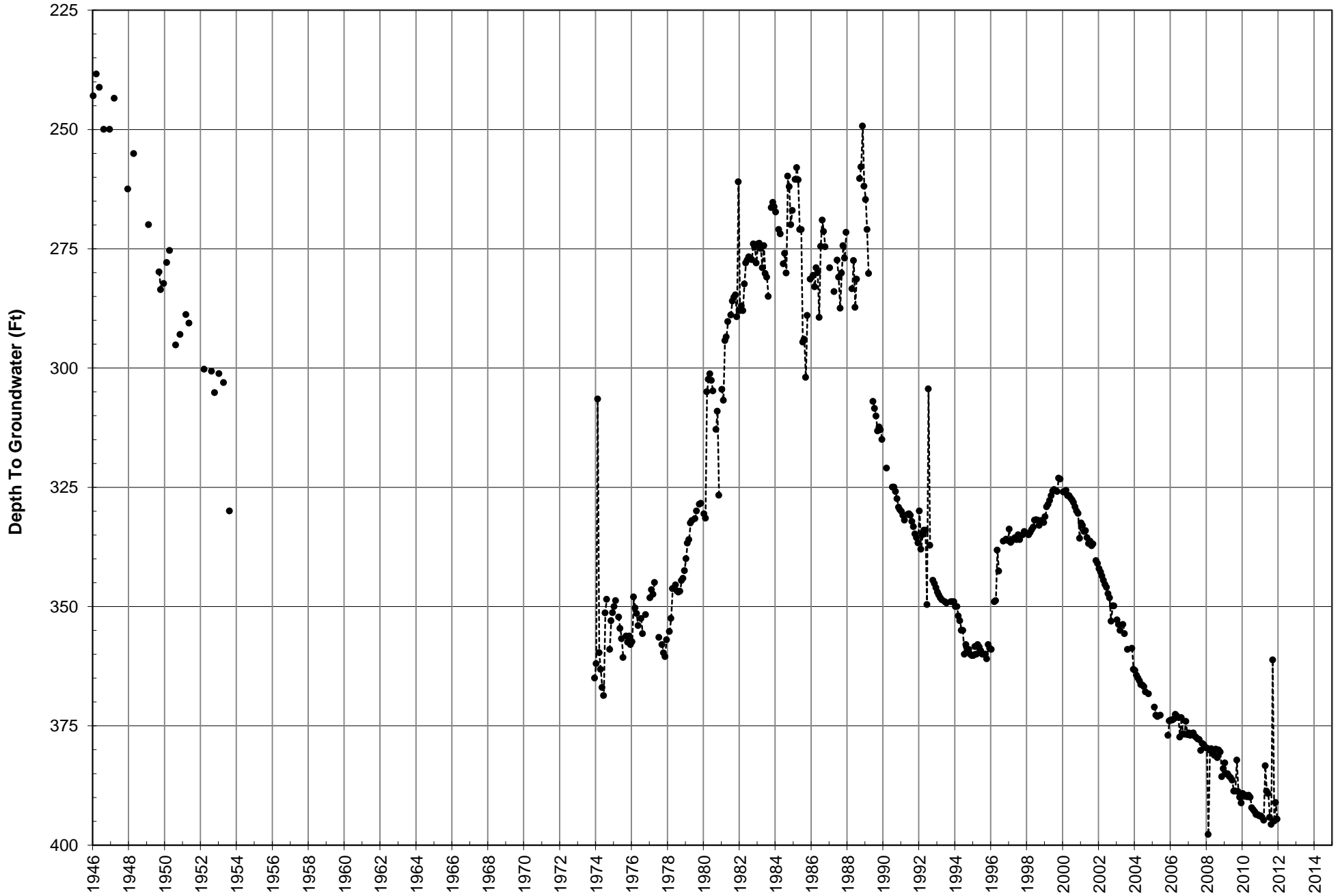
Tri City Index Well Hydrograph





Plant No. 94 Index Well Hydrograph

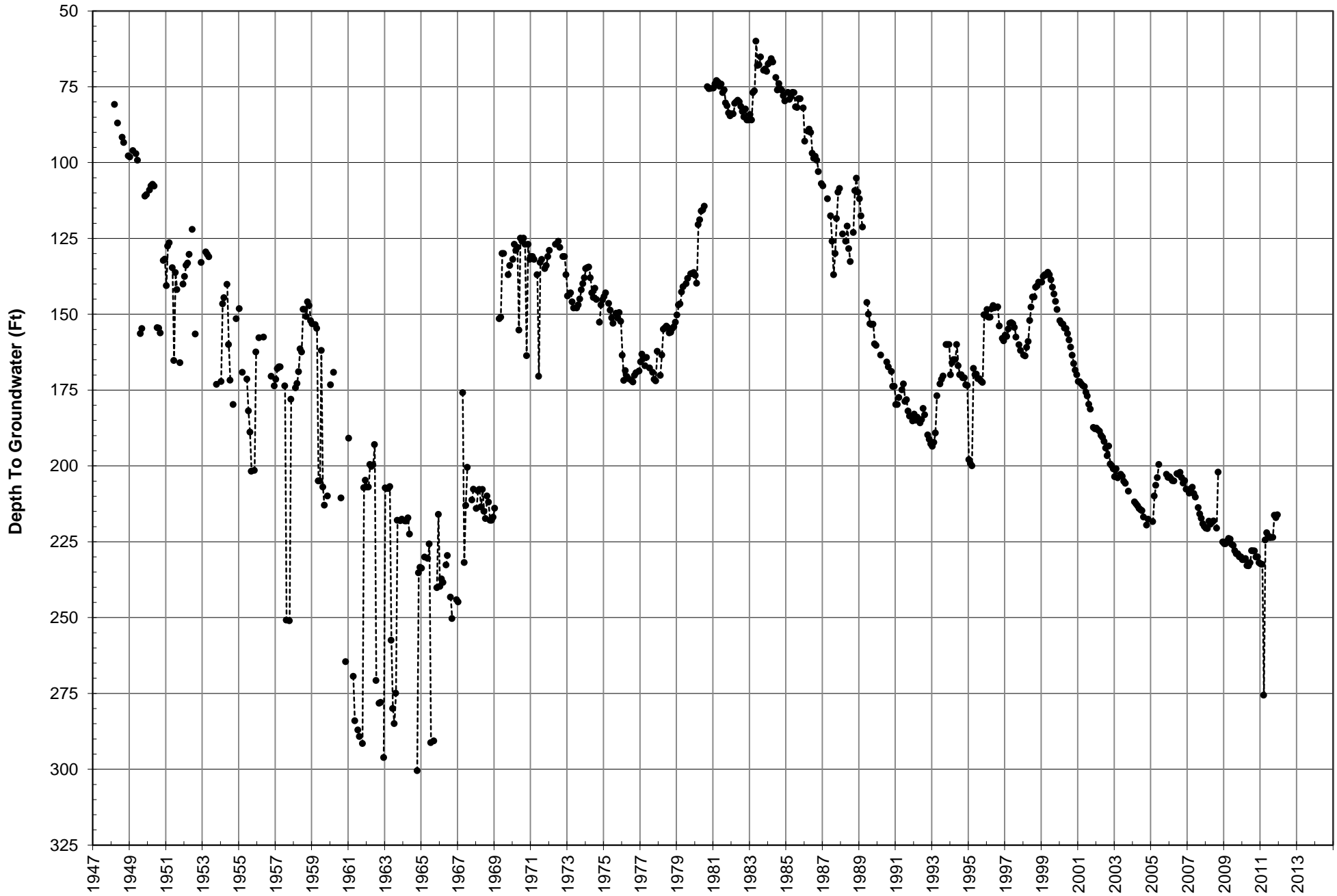
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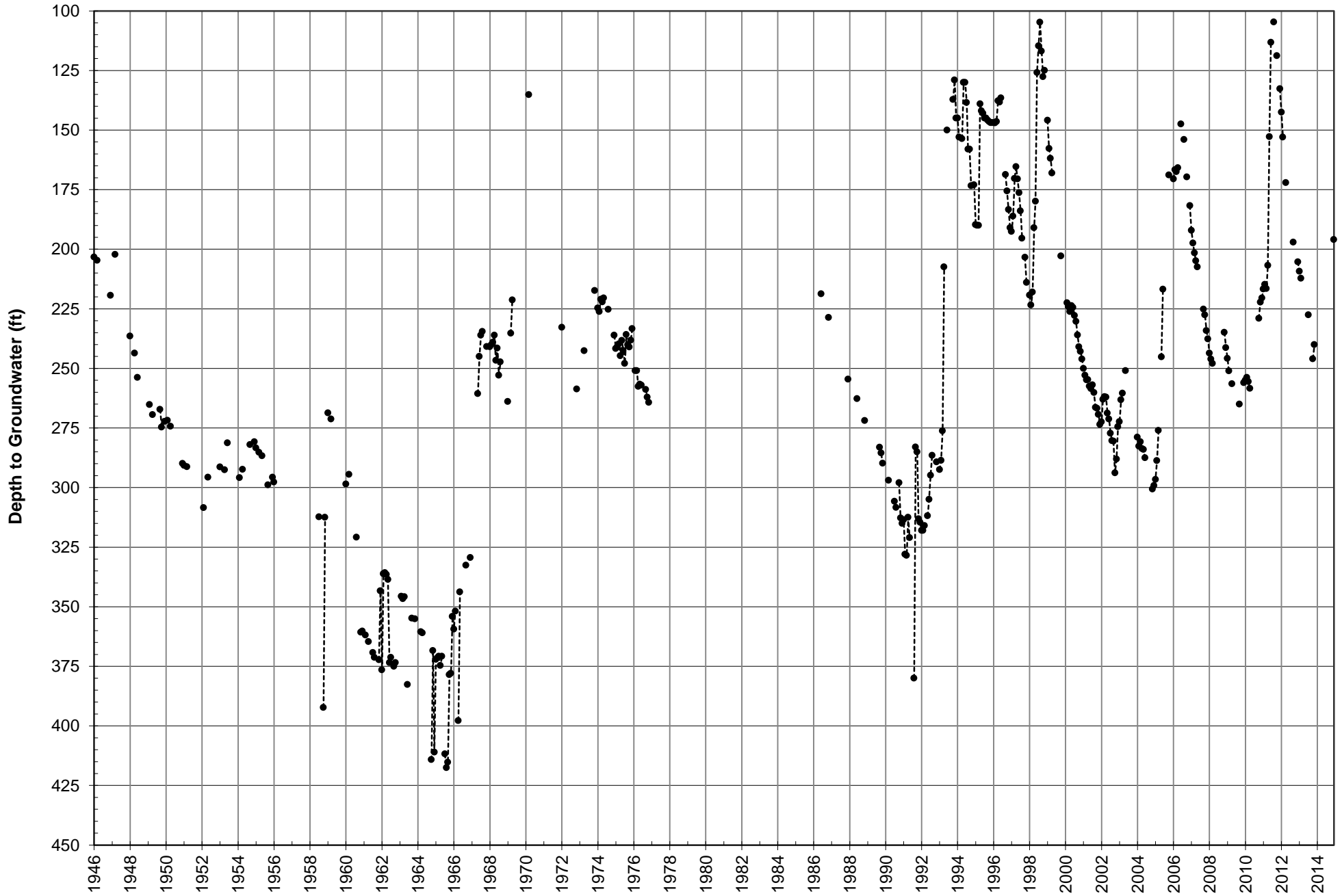


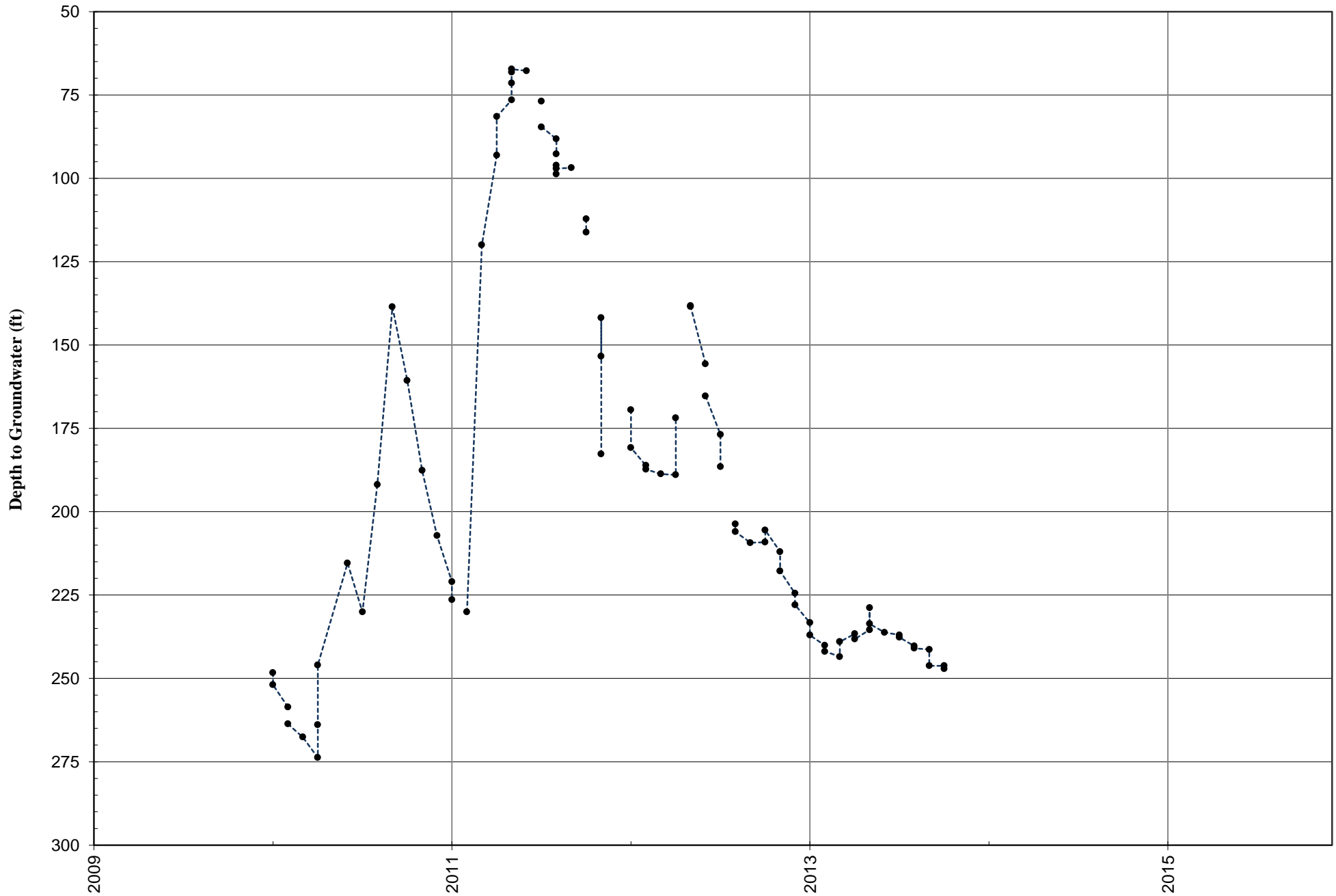


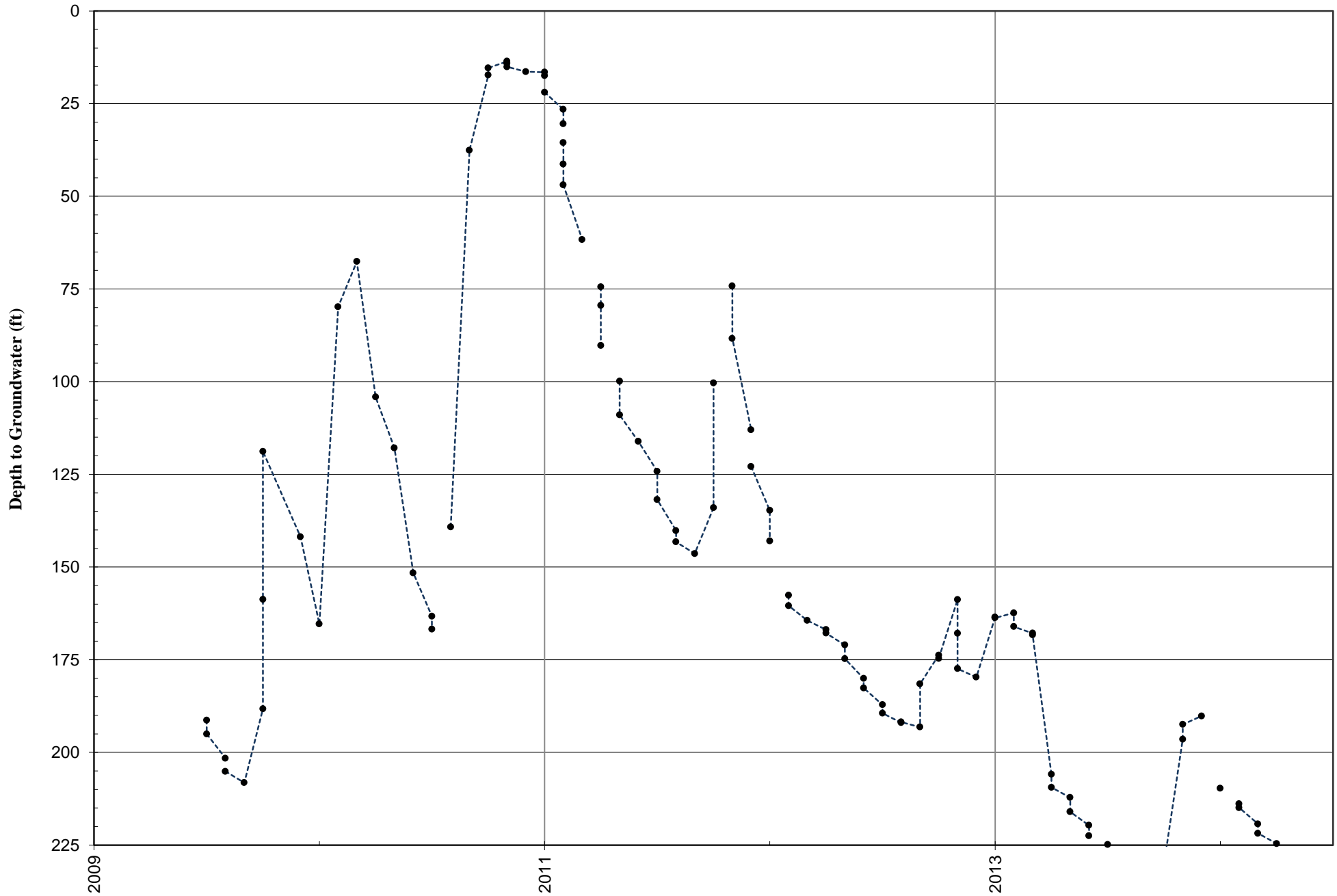
Plant No. 102 Index Well Hydrograph

East Valley Water District





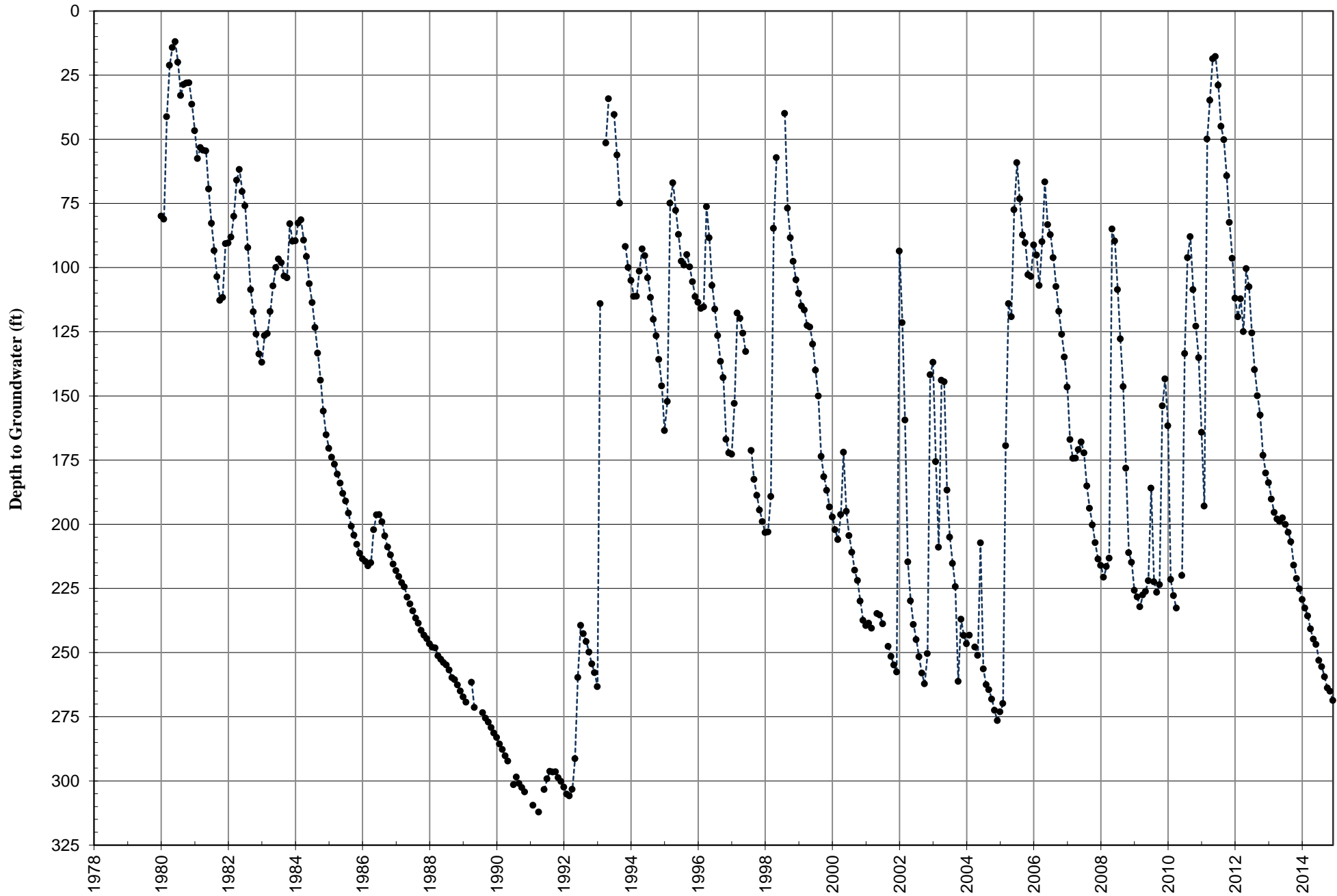


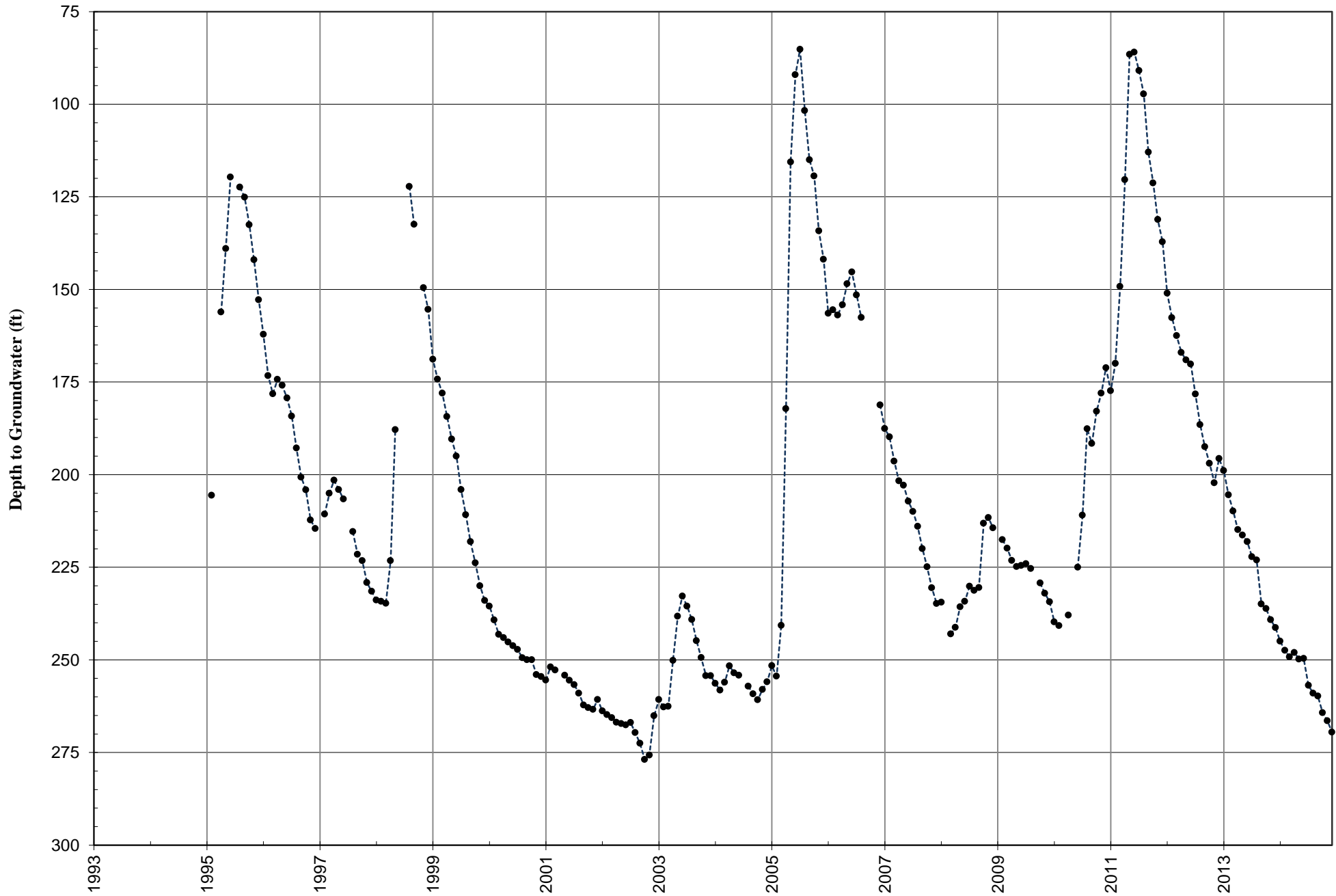


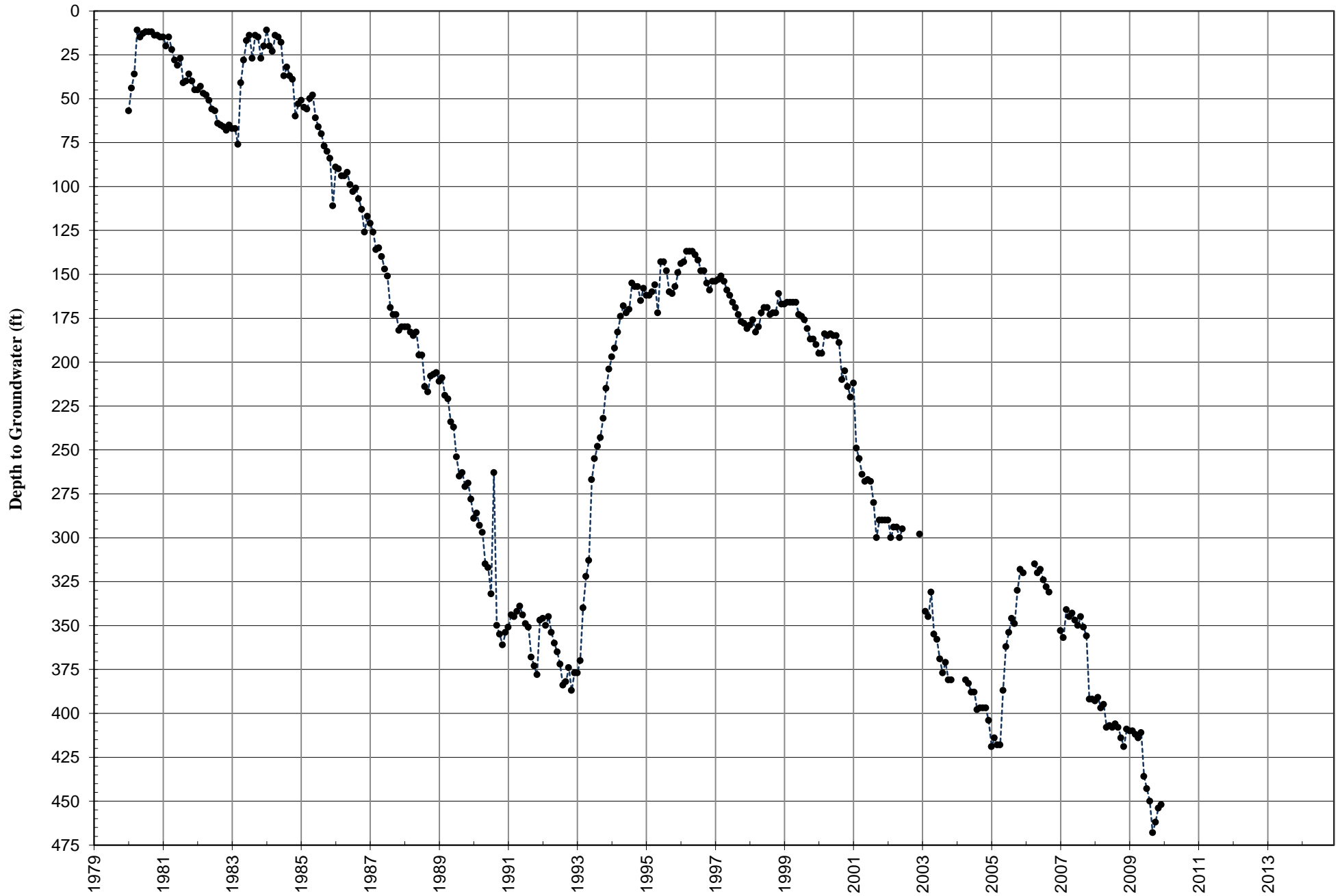


SBVWCD # 3 Index Well Hydrograph

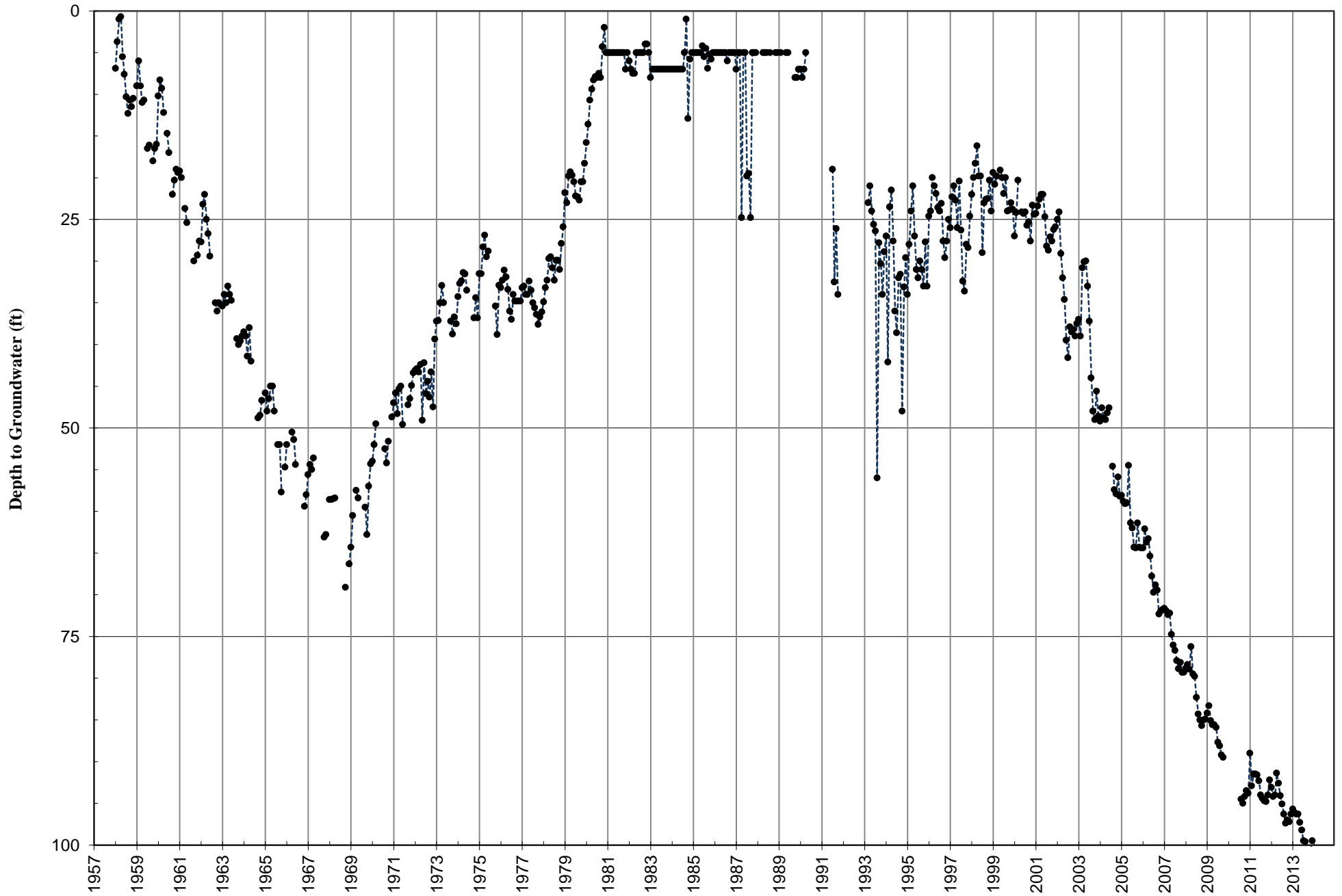
SBVWCD







Mill & D Index Well Hydrograph



Production Values
(Acre-Feet)

WELL NAME	Agency	Recordation Number	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	SBVWCD Wells	Subbasin Name	AGG or Non AGG
Clock Canyon/Marcum Well	AHD Limited	3601632													Yes	Bunker Hill II West of Mentone Fault	
1	Arrowhead Country Club	3601925													Yes	Bunker Hill II West of Mentone Fault	Agricultural
#3 - 7251 Barton Street	Baseline Gardens Mutual Water	3602528													Yes	Bunker Hill I Northeast of 215 Freeway	
PS & B2	Baseline Gardens Mutual Water	3600458													Yes	Bunker Hill I Northeast of 215 Freeway	
Well 5	Baseline Gardens Mutual Water	3610007													Yes	Bunker Hill I Northeast of 215 Freeway	
Judson 1	Bear Valley Mutual Water Com	3600023													Yes	Bunker Hill II West of Mentone Fault	
San Bernardino Ave. 1	Bear Valley Mutual Water Com	3601585													Yes	Bunker Hill II West of Mentone Fault	
Bell Well	Calvary Chapel Packinghouse	3600449													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Bell Well	Calvary Chapel Packinghouse	3600449													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Calvary Well	Calvary Chapel Packinghouse	3603919													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Calvary Well	Calvary Chapel Packinghouse	3603919													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 13	Colton, City of	3601257	112.00	107.40	99.60	100.30	95.60	103.60	103.10	94.80	104.80	97.80	92.20	74.40		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 16	Colton, City of	3601260	52.20	46.90	46.50	47.90	46.80	48.10	47.90	45.40	67.30	62.50	56.50	42.70		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 19	Colton, City of	3602405	93.50	86.90	82.30	86.00	51.60	14.80	103.20	34.20	1.50	1.40	64.10	82.30		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 21	Colton, City of	3602793	128.00	131.40	119.90	109.80	100.70	72.10	33.60	22.30	6.80	56.50	143.60	128.80		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 26	Colton, City of	3603704	40.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 27	Colton, City of	3604006	174.00	170.70	162.80	167.20	165.00	165.80	170.90	155.50	175.60	166.80	167.10	156.60		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 28	Colton, City of	3604007	0.00	0.00	72.40	24.20	0.00	0.00	0.00	0.00	0.10	0.00	2.40	27.60		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 29	Colton, City of	3604008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 8	Colton, City of	3601254	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Fifth Ave. 1	Crafton Water Company	3600272													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Garnet/2 Zanja Well	Crafton Water Company	3602186													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Well 107	East Valley Water District	3602370	4.61	3.65	3.17	3.17	0.00	2.53	0.28	1.67	0.02	2.14	0.36	0.10	Yes	Bunker Hill II West of Mentone Fault	Agricultural
Well 107	East Valley Water District	3602370	18.76	14.84	13.30	12.90	0.00	10.14	3.67	4.43	0.13	9.16	1.56	0.38	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 11A	East Valley Water District	3602563	28.13	17.11	3.45	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 120	East Valley Water District	3600680	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 125	East Valley Water District	3602799	206.36	175.24	233.79	123.39	0.00	31.99	79.33	0.00	0.12	34.64	65.42	130.43	Yes	Bunker Hill II East of Mentone Fault North	Non-Agricultural
Well 12A	East Valley Water District	3602034	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.09	0.00	0.00	0.00	0.00	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 132-5	East Valley Water District	3603904	161.00	180.23	148.85	168.38	0.00	73.35	96.59	99.79	125.28	145.55	184.57	179.09	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 141	East Valley Water District	3603247	441.87	261.47	290.49	172.90	0.00	80.11	86.77	103.01	137.21	183.21	193.14	207.47	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 142	East Valley Water District	3600220	53.39	42.94	35.94	25.72	0.00	7.50	18.22	38.93	89.74	91.51	39.06	32.74	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 143	East Valley Water District	3603583	12.97	2.15	1.97	18.48	0.00	80.02	76.08	81.91	73.96	112.96	87.07	132.78	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 146	East Valley Water District	3601639	9.06	6.88	2.20	1.83	0.00	0.00	0.00	0.00	3.53	2.52	3.86	6.80	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 146A	East Valley Water District	3603774	111.64	111.53	106.90	108.84	0.00	0.00	0.00	0.00	85.68	106.26	116.74	105.21	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 147	East Valley Water District	3603734	225.94	216.99	198.62	163.15	0.00	43.25	114.66	118.43	30.92	35.06	223.12	206.35	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 151	East Valley Water District	3603926	325.91	405.59	346.73	241.39	0.00	136.09	171.72	194.85	171.30	217.64	342.72	365.85	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 24A	East Valley Water District	3601671	90.93	88.12	75.17	27.38	0.00	49.38	66.57	36.80	47.92	33.17	31.72	23.08	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 24B	East Valley Water District	3602337	265.17	228.09	248.06	218.84	29.84	150.10	200.19	112.82	143.57	101.77	120.60	53.07	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 25A	East Valley Water District	3601673	34.89	29.01	26.85	24.39	162.48	16.83	18.37	19.24	20.53	59.33	53.06	89.01	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 27	East Valley Water District	3601675	0.00	0.00	0.00	0.00	17.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 28A	East Valley Water District	3602564	26.97	35.36	41.05	41.34	0.00	21.26	29.70	24.39	44.39	50.37	124.84	197.26	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Well 39	East Valley Water District	3602274	103.00	119.95	106.24	84.73	26.84	14.20	15.18	41.40	55.30	92.36	148.27	148.62	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 40A	East Valley Water District	3602338													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 41	East Valley Water District	3602113	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II West of Mentone Fault	Non-Agricultural
Well 9A	East Valley Water District	3601660	147.60	154.93	83.33	70.10	17.60	83.49	63.93	47.06	95.48	146.56	160.65	155.58	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Fairview 1	Fairview Water Company (B M)	3600554													Yes	Bunker Hill II East of Mentone Fault South	Agricultural
Langford	General American Life Insurance	3601352													Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Everett Well	George & Diane Everett	WP0003608													Yes	Bunker Hill II East of Mentone Fault North	
Meadows Well	George Meadows	WP0002552													Yes	Bunker Hill II East of Mentone Fault North	Non-Agricultural
	Gladysta Well & Water Company	3600182													Yes	Bunker Hill II East of Mentone Fault South	Agricultural
PL 102	Greenspot Village & Market Pla	3600026													Yes	Bunker Hill II West of Mentone Fault	
1	Happe Mutual Well Company	3600238													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Gauge 46-1R	Happe Mutual Well Company	3600795													Yes	Bunker Hill II West of Mentone Fault	
Local 2A	Inland Valley Development	86													Yes	Pressure Zone North of Santa Ana Wash	
Local 3	Inland Valley Development	87													Yes	Pressure Zone North of Santa Ana Wash	
Local 5	Inland Valley Development	89													Yes	Pressure Zone North of Santa Ana Wash	

Production Values
(Acre-Feet)

WELL NAME	Agency	Recordation Number	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	SBVWCD Wells	Subbasin Name	AGG or Non AGG
Palm Meadows	Inland Valley Development	91													Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Thorne 10 & 11	J. G. Golfing Enterprises, Inc.	3601478													Yes	Pressure Zone Santa Ana Wash	Agricultural
Paine	J. G. Golfing Enterprises, Inc.	3602499													Yes	Pressure Zone Santa Ana Wash	Agricultural
Rancho Ladera Roladera	Jack Dangermond	3602188													Yes	Bunker Hill II West of Mentone Fault	
FAR	Larry Jacinto Construction	3602020													Yes	Bunker Hill II East of Mentone Fault North	
Anderson 2	Loma Linda University Power P	3602781													Yes	Pressure Zone Santa Ana Wash	Agricultural
Anderson 2	Loma Linda University Power P	3602781													Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Anderson 3	Loma Linda University Power P	3602855													Yes	Pressure Zone Santa Ana Wash	Agricultural
Anderson 3	Loma Linda University Power P	3602855													Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Mt View 5	Loma Linda, City of	3603776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Mt View 6	Loma Linda, City of		244.80	243.07	227.33	152.30	43.71	85.07	102.12	85.80	41.87	86.29	100.05	132.42	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Mt View 3	Loma Linda, City of	3603719	109.73	108.72	104.86	100.35	85.01	59.54	61.44	43.71	57.62	60.28	83.48	88.45	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Mt View 4	Loma Linda, City of	3603721	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Richardson 1	Loma Linda, City of	3603057	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Richardson 3	Loma Linda, City of	3603523	63.91	71.28	55.54	24.41	41.65	42.78	54.65	53.73	83.35	17.19	2.20	50.49	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Richardson 4	Loma Linda, City of	3603720	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Station 59	Meeks & Dailey	3601887	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
Station 91	Meeks & Dailey	3603215	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
Highland Harvest Barn	Mission Development Compan	129													Yes	Bunker Hill II West of Mentone Fault	
New Well	Monte LLC (Dangermond)	3600494													Yes	Bunker Hill II West of Mentone Fault	Agricultural
1	Montecito Memorial Park and	3600119													Yes	Bunker Hill II West of Mentone Fault	Agricultural
2	Montecito Memorial Park and	3603949													Yes	Bunker Hill II West of Mentone Fault	Agricultural
1	Mountain View Mortuary & Ce	3600743													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
2	Mountain View Mortuary & Ce	3600742													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
	National Orange Show	3601924													Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
	New England Water Co. (B Mar	3602320													Yes	Bunker Hill II East of Mentone Fault South	Agricultural
14	Patton State Hospital	3602381													Yes	Bunker Hill II West of Mentone Fault	
Patton 10	Patton State Hospital	3600931													Yes	Bunker Hill II West of Mentone Fault	
	Pharaoh's Splash Kingdom	3600415													Yes	Bunker Hill II West of Mentone Fault	Agricultural
	Pharaoh's Splash Kingdom	3600415													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
San Bernardino 1	Pioneer Mutual Water Compar	3600642													Yes	Bunker Hill II West of Mentone Fault	Agricultural
1 Stowe	Ramirez, J.J. Citrus Mgmt	3601046													Yes	Bunker Hill II West of Mentone Fault	
Buckeye 2	Ramirez, J.J. Citrus Mgmt	3600484													Yes	Bunker Hill II West of Mentone Fault	
Frink 1	Ramirez, J.J. Citrus Mgmt	3601728													Yes	Bunker Hill II West of Mentone Fault	
Midas	Ramirez, J.J. Citrus Mgmt	3600527													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Raught	Raught Mutual Well Company	3602193													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Opal St.	Redlands Unified School Distric	3601641													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Agate #2	Redlands, City of	3602792	190.30	74.40	30.30	11.60	43.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault North	Non-Agricultural
Airport #1	Redlands, City of	3602895	167.50	53.00	123.90	27.80	123.70	124.40	78.21	126.56	149.52	103.82	175.91	193.48	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Airport #2	Redlands, City of	3603762	24.10	11.30	32.90	20.00	0.00	0.00	0.00	0.00	0.00	5.30	26.04	103.26	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
California St Irr	Redlands, City of	3602549	47.40	45.20	21.10	3.00	0.00	0.00	45.54	41.02	35.30	45.77	48.09	54.59	Yes	Bunker Hill II West of Mentone Fault	Agricultural
Chicken Hill	Redlands, City of		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II East of Mentone Fault South	Non-Agricultural
Church St.	Redlands, City of	3603656	121.20	60.40	126.40	27.80	0.00	0.00	0.00	0.00	0.00	0.00	54.36	274.17	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Crafton	Redlands, City of	3602654	34.00	71.80	77.10	90.30	22.60	96.30	6.19	0.00	26.05	58.95	109.88	98.52	Yes	Bunker Hill II East of Mentone Fault South	Agricultural
E. Lugonia #3	Redlands, City of	3601287	0.00	0.00	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	16.05	Yes	Bunker Hill II East of Mentone Fault North	Non-Agricultural
E. Lugonia #4	Redlands, City of	3602791	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II East of Mentone Fault North	Non-Agricultural
E. Lugonia #6	Redlands, City of	3601290	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault North	Non-Agricultural
Hog Canyon #2	Redlands, City of		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II East of Mentone Fault South	Non-Agricultural
Lee Well	Redlands, City of	3602065	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Madeira	Redlands, City of	3602896	105.40	91.30	88.80	31.00	31.00	100.00	69.04	77.62	73.59	5.38	97.47	103.46	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Maguet #2	Redlands, City of	3601284	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Mentone Acres #2	Redlands, City of	3600749	170.80	151.70	71.20	4.60	76.50	16.70	0.00	128.35	129.81	134.12	213.43	219.96	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Mill Creek # 1	Redlands, City of	3601282	0.00	0.00	0.00	0.00	0.00	0.00								Bunker Hill II East of Mentone Fault North	Non-Agricultural
Mill Creek # 2	Redlands, City of	3601285	163.80	143.90	172.40	138.00	88.20	0.00								Bunker Hill II East of Mentone Fault North	Non-Agricultural
Mill Creek # 4	Redlands, City of	3601288	93.90	82.80	82.60	65.50	32.10	73.10								Bunker Hill II East of Mentone Fault North	Non-Agricultural

Production Values
(Acre-Feet)

WELL NAME	Agency	Recordation Number	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	SBVWCD Wells	Subbasin Name	AGG or Non AGG
Mill Creek # OA	Redlands, City of	3602351	0.00	0.00	0.00	0.00	0.00	0.00								Bunker Hill II East of Mentone Fault North	Non-Agricultural
Mill Creek 2A	Redlands, City of	3603045	0.00	0.00	0.00	0.00	0.00	0.00								Bunker Hill II East of Mentone Fault North	Non-Agricultural
Mission	Redlands, City of	3600756	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
New York St Well	Redlands, City of	3602346	116.90	116.10	124.30	74.00	71.60	7.60	75.01	66.50	25.75	102.72	118.31	96.49	Yes	Bunker Hill II West of Mentone Fault	Agricultural
No.Orange #1	Redlands, City of	3603766	160.50	145.50	119.40	154.90	57.10	31.60	116.27	83.82	143.81	190.68	173.42	338.65	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
No.Orange #2	Redlands, City of	3603767	362.50	267.00	151.30	77.50	159.40	200.40	50.42	223.55	193.71	96.77	380.54	212.58	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Orange St.	Redlands, City of	3601586	148.00	157.00	155.00	146.50	44.20	110.30	116.40	141.07	193.20	33.58	183.72	211.70	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Redlands Hgts.	Redlands, City of	3600918	27.30	48.40	34.40	41.20	2.70	4.70	16.15	12.13	16.20	33.18	50.51	58.42	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Rees Well	Redlands, City of	3600019	158.00	157.90	153.20	157.00	132.40	149.30	151.98	137.91	143.31	143.52	151.94	146.24	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
SB Muni Well	Redlands, City of		204.80	184.90	143.20	0.00	0.00	0.00	0.00	6.47	0.00	0.00	0.00	224.78		Pressure Zone Santa Ana Wash	Non-Agricultural
Well #10	Redlands, City of	3601291	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32	39.45	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Well #11	Redlands, City of	3601292	3.30	10.70	3.40	5.90	0.40	0.30	3.97	3.27	5.06	6.06	8.68	12.77	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Well #13	Redlands, City of	3601294	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32	73.22	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Well #14	Redlands, City of	3601295	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Well #16	Redlands, City of	3601296	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault South	Agricultural
Well #30A	Redlands, City of	3602031	0.00	71.10	31.30	0.10	0.00	0.00	0.00	0.66	3.34	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well #31A	Redlands, City of	3602036	47.30	4.80	0.00	6.10	4.50	5.50	15.05	11.63	0.03	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well #32	Redlands, City of	3601298	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.28	10.76	36.24	46.50	Yes	Bunker Hill II West of Mentone Fault	Agricultural
Well #34	Redlands, City of	3601299	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Well #35	Redlands, City of	3602032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well #36	Redlands, City of	3602082	27.30	27.20	20.70	18.00	3.20	6.50	8.77	18.49	5.88	16.74	21.12	27.13	Yes	Bunker Hill II East of Mentone Fault South	Non-Agricultural
Well #37	Redlands, City of	3602211	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well #38	Redlands, City of	3603655	203.10	203.00	196.90	207.10	21.40	0.00	126.00	92.01	58.16	175.06	190.71	198.52	Yes	Bunker Hill II West of Mentone Fault	Agricultural
Well #39	Redlands, City of	3603760	103.00	119.95	106.24	84.73	26.84	14.20	15.18	41.40	55.30	92.36	148.27	148.62	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Well #41	Redlands, City of	3601301	41.60	27.20	15.70	23.20	17.00	0.00	0.53	4.72	0.00	13.17	14.41	11.79	Yes	Bunker Hill II West of Mentone Fault	Agricultural
Agate #1	Redlands, City of	3601308	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II East of Mentone Fault North	Agricultural
City 1	Rialto, City of	3601263														Lytle Basin Southeast of Barrier J	Non-Agricultural
City 2	Rialto, City of	3602080														Lytle Basin Southeast of Barrier J	Non-Agricultural
City 3	Rialto, City of	3602848														Lytle Basin Southeast of Barrier J	Non-Agricultural
City 4	Rialto, City of	3603538														Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
City 5	Rialto, City of	3603030														Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
City 6	Rialto, City of	3601929														Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
FW #18	Riverside Highland	3601533	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Pressure Zone North of Santa Ana Wash	Non-Agricultural
FW #2	Riverside Highland	3601523	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10		Pressure Zone Santa Ana Wash	Non-Agricultural
FW #5	Riverside Highland	3603514	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II West of Mentone Fault	Non-Agricultural
LC #1	Riverside Highland	3601535	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Pressure Zone North of Santa Ana Wash	Non-Agricultural
LC #10	Riverside Highland	3603470	138.10	138.30	134.10	165.90	161.20	155.70	171.60	133.10	164.40	160.60	126.40	90.20		Bunker Hill II West of Mentone Fault	Non-Agricultural
LC #8	Riverside Highland	3602840	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II West of Mentone Fault	Non-Agricultural
RN #17	Riverside Highland	3601532	24.50	1.40	3.40	0.50	0.40	0.50	0.10	0.30	1.00	0.20	1.80	39.40		Pressure Zone North of Santa Ana Wash	Non-Agricultural
RN #21	Riverside Highland	3301655	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Lytle Basin Southeast of Barrier J	Agricultural
RN #22	Riverside Highland	3301656	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill II West of Mentone Fault	Agricultural
RN #6	Riverside Highland	3603738	124.20	112.10	87.90	32.10	20.60	0.60	0.80	5.60	38.90	114.60	170.10	140.00		Pressure Zone Santa Ana Wash	Non-Agricultural
RN #7	Riverside Highland	3601526	129.70	177.80	168.50	136.60	79.50	56.10	94.20	76.90	25.70	13.00	63.10	123.00		Bunker Hill II West of Mentone Fault	Non-Agricultural
COOLEY H WELL	Riverside, City of	3603911	99.03	105.42	86.59	35.37	14.84	119.70	38.38	50.38	66.39	111.58	89.16	135.53	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
COOLEY I WELL	Riverside, City of	3603912	146.85	168.55	122.59	58.37	76.37	146.91	42.45	101.30	102.56	149.01	131.20	158.80	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
COOLEY J WELL	Riverside, City of	3603913	206.45	243.61	98.67	32.21	24.97	36.14	105.84	53.19	156.79	100.19	185.87	170.53	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
GARNER NO.1 WELL	Riverside, City of	3601464	0.13	0.08	0.00	0.21	0.02	0.54	0.00	0.00	0.03	0.00	5.77	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
GARNER NO.2 WELL	Riverside, City of	3601465	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
GARNER NO.5 WELL	Riverside, City of	3601468	154.79	121.28	201.34	192.25	172.88	197.07	217.65	153.75	145.72	210.10	138.01	184.88	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
GARNER 7 WELL	Riverside, City of	3302794	249.55	297.17	292.89	262.14	242.60	277.67	215.19	290.92	342.76	243.80	205.21	301.13	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
GARNER NO.4 WELL	Riverside, City of	3601467	0.23	0.00	0.00	0.03	0.28	0.13	0.12	0.06	0.16	0.00	5.46	0.00	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
GARNER NO.6 WELL	Riverside, City of	3603254	226.86	170.76	202.19	246.30	178.31	119.44	303.28	249.80	241.67	242.84	194.21	254.57	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Hunt 10	Riverside, City of	3602772	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.40	111.53	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Hunt 6	Riverside, City of	3602771	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
RAUB NO.4 WELL	Riverside, City of	3601238	157.77	149.75	141.04	154.46	136.06	166.11	164.58	142.82	165.53	152.24	132.15	135.76	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural

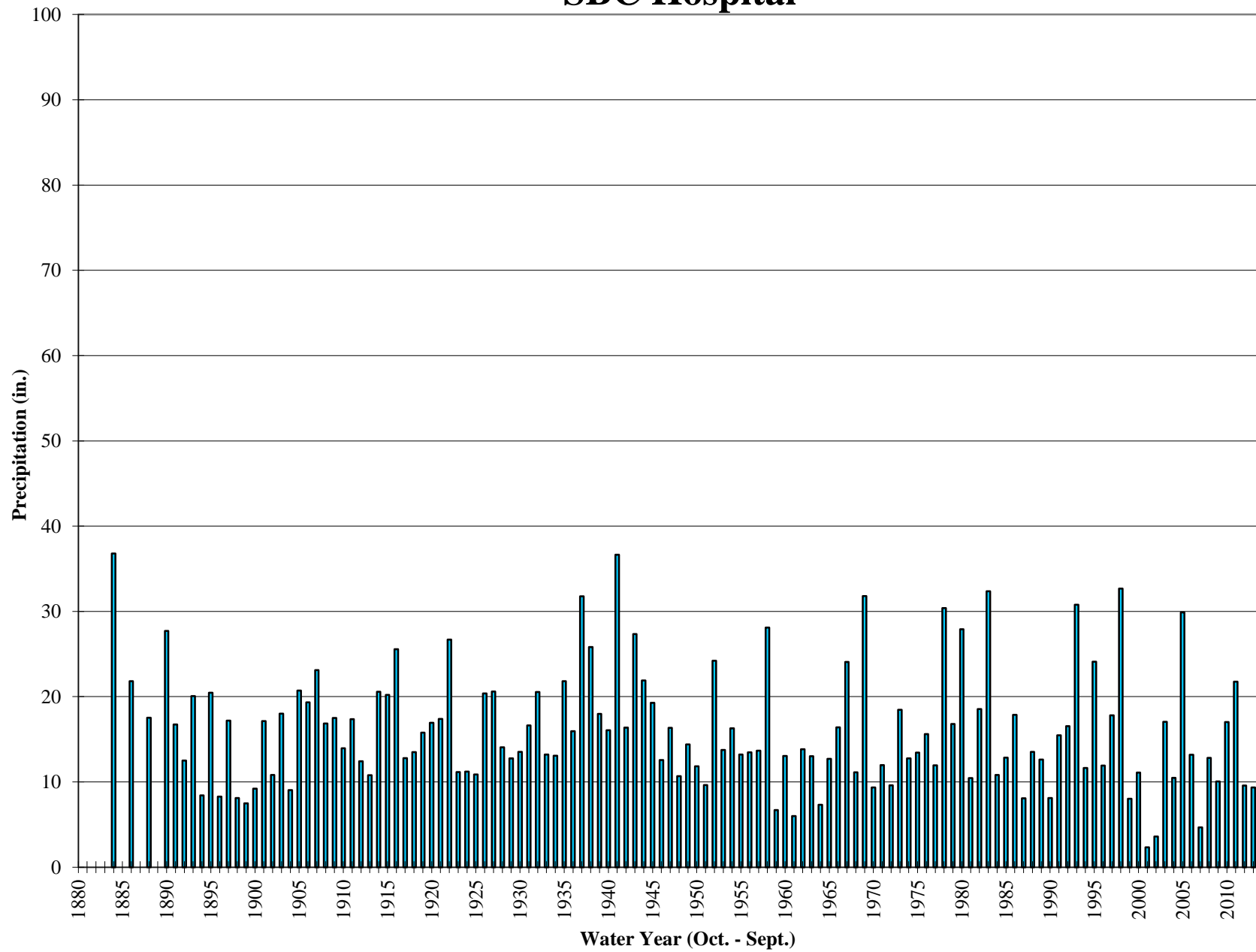
Production Values
(Acre-Feet)

WELL NAME	Agency	Recordation Number	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	SBVWCD Wells	Subbasin Name	AGG or Non AGG
RAUB NO.5 WELL	Riverside, City of	3602484	120.49	109.64	106.78	130.44	117.49	149.80	142.65	128.58	133.51	121.25	88.17	60.11	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
RAUB NO.6 WELL	Riverside, City of	3602778	183.15	174.16	157.62	121.59	153.09	182.35	160.07	206.77	182.22	199.58	215.26	145.65	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
RAUB NO.8 WELL	Riverside, City of	3603555	137.10	37.67	165.35	95.66	92.50	189.23	153.10	110.95	141.38	143.57	163.07	132.60	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
SCHEUER WELL	Riverside, City of	3601489	419.34	385.19	29.69	0.00	0.00	0.00	0.00	0.00	47.65	181.31	114.89	198.08	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
STILES WELL	Riverside, City of	3601463	88.96	90.56	89.19	94.97	92.58	66.09	95.95	85.62	93.17	87.57	53.34	81.34	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
THORNE NO.12	Riverside, City of	3601470	64.40	13.45	12.60	4.01	0.00	12.16	16.06	8.63	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
WARREN NO.1 WELL	Riverside, City of	3601240	189.40	188.10	151.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.31	184.01		Pressure Zone Santa Ana Wash	Non-Agricultural
WARREN NO.3 WELL	Riverside, City of	3601230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
WARREN NO.4 WELL	Riverside, City of	3601243	198.35	186.92	143.61	0.00	0.00	0.00	0.00	0.00	58.98	0.00	91.73	172.84	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 26-1 WELL	Riverside-Gage	3600787	329.92	325.82	208.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	163.63	138.01	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
GAGE 26-1 WELL	Riverside-Gage	3600787	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone North of Santa Ana Wash	Agricultural
GAGE 27-1 WELL	Riverside-Gage	3600788	293.80	9.31	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	144.57	65.03	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 27-1 WELL	Riverside-Gage	3600788	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
GAGE 27-2 WELL	Riverside-Gage	3600789	0.00	1.03	0.00	0.00	0.00	0.00	0.00	11.41	63.08	0.00	235.42	258.80	Yes	Pressure Zone Santa Ana Wash	Agricultural
GAGE 27-2 WELL	Riverside-Gage	3600789	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 29-1 WELL	Riverside-Gage	3600790	183.07	161.95	160.09	154.92	3.86	0.20	0.00	0.28	0.00	0.00	158.42	95.69	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 29-1 WELL	Riverside-Gage	3600790	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
GAGE 29-2 WELL	Riverside-Gage	3600791	300.60	297.26	285.61	301.60	206.94	159.05	309.15	269.90	319.22	297.18	295.35	283.86		Pressure Zone Santa Ana Wash	Agricultural
GAGE 29-3 WELL	Riverside-Gage	3600792	260.51	249.81	221.69	234.26	225.39	58.98	0.84	1.19	0.00	0.00	105.95	0.00		Pressure Zone Santa Ana Wash	Agricultural
GAGE 30-1 WELL	Riverside-Gage	3600793	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Pressure Zone Santa Ana Wash	Agricultural
GAGE 31-1 WELL	Riverside-Gage	3600794	0.00	90.45	312.18	339.06	334.35	0.00	0.00	0.00	0.00	0.00	329.36	309.26		Pressure Zone Santa Ana Wash	Agricultural
GAGE 46-1R WELL	Riverside-Gage	3600795	283.26	271.53	260.19	251.01	251.64	263.69	263.46	223.96	213.06	250.25	240.74	116.34		Pressure Zone Santa Ana Wash	Agricultural
GAGE 51-1 WELL	Riverside-Gage	3600796	142.98	177.47	196.08	200.06	173.81	183.47	165.93	149.23	22.71	109.10	197.59	185.06	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 51-1 WELL	Riverside-Gage	3600796	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
GAGE 56-1 WELL	Riverside-Gage	3600797	126.64	162.31	145.93	158.34	118.76	0.00	0.00	0.00	0.00	0.00	127.91	137.89		Pressure Zone Santa Ana Wash	Agricultural
GAGE 66-1 WELL	Riverside-Gage	3602331	306.01	306.57	292.57	301.88	156.31	0.00	0.00	0.80	272.92	142.63	269.14	259.99	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
GAGE 66-1 WELL	Riverside-Gage	3602331	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone Santa Ana Wash	Agricultural
GAGE 92-1 WELL	Riverside-Gage	3603558	281.63	279.28	264.25	287.48	291.30	314.05	298.06	275.67	301.60	282.63	273.52	250.45		Pressure Zone Santa Ana Wash	Agricultural
GAGE 92-2 WELL	Riverside-Gage	3603557	314.05	298.10	291.22	308.92	215.89	134.91	330.43	161.32	224.72	313.01	307.60	288.79		Pressure Zone Santa Ana Wash	Agricultural
GAGE 92-3 WELL	Riverside-Gage	3603556	260.59	249.30	232.23	256.97	185.90	162.31	297.06	229.45	203.52	275.74	253.23	230.84		Pressure Zone Santa Ana Wash	Agricultural
GAGE 98-1 WELL	Riverside-Gage	3603728	375.32	395.03	379.97	106.44	0.00	25.61	414.77	14.00	144.74	391.59	395.78	374.75		Pressure Zone Santa Ana Wash	Agricultural
TIPPECANOE WELL	Riverside-Gage	3603920														Pressure Zone North of Santa Ana Wash	Agricultural
TIPPECANOE WELL	Riverside-Gage	3603920	352.61	350.71	325.28	340.04	338.23	355.70								Pressure Zone North of Santa Ana Wash	Non-Agricultural
SB Ave.1/Big Bear	San Bernardino Valley MWD	3603116													Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
10th & J STREET WELL	San Bernardino, City of	3603207	279.78	276.56	270.90	223.76	1.04	0.91	21.37	0.27	3.88	141.63	243.09	255.94		Pressure Zone North of Santa Ana Wash	Non-Agricultural
16TH & SIERRA WAY WELL	San Bernardino, City of	3600726	195.30	201.23	229.93	242.55	156.91	150.65	201.45	154.53	129.37	177.80	216.70	211.37		Pressure Zone North of Santa Ana Wash	Non-Agricultural
17TH & SIERRA WAY 2 WELL	San Bernardino, City of	3600725	0.22	3.95	0.20	0.27	0.23	0.26	0.24	0.22	0.22	0.28	5.95	15.48		Pressure Zone North of Santa Ana Wash	Non-Agricultural
19TH ST WELL 1	San Bernardino, City of	3600717	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
19TH ST WELL 2	San Bernardino, City of	3600718	86.47	82.21	74.58	73.48	67.12	66.42	60.12	55.07	58.55	54.97	54.12	49.51		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
27TH & ACACIA WELL	San Bernardino, City of	3600720	45.04	55.13	26.64	4.35	8.26	13.37	2.48	1.97	5.88	1.88	3.27	8.27		Bunker Hill II West of Mentone Fault	Non-Agricultural
30TH ST WELL	San Bernardino, City of	3600719	236.01	258.94	182.91	1.10	0.59	4.07	24.08	0.82	0.80	69.61	50.14	98.36		Bunker Hill II West of Mentone Fault	Non-Agricultural
31ST ST & MT. VIEW WELL	San Bernardino, City of	3602081	15.76	19.30	4.09	0.25	0.28	0.89	0.40	0.33	0.41	0.41	1.16	56.98		Bunker Hill II West of Mentone Fault	Non-Agricultural
40TH & VALENCIA WELL	San Bernardino, City of	3603472	0.00	3.00	4.83	4.58	6.04	6.57	5.71	4.63	4.71	4.87	4.57	4.47		Bunker Hill II West of Mentone Fault	Non-Agricultural
7TH STREET WELL	San Bernardino, City of	3602265	6.23	7.81	5.01	3.81	0.41	0.29	3.00	0.33	2.05	3.79	8.35	6.74		Pressure Zone North of Santa Ana Wash	Non-Agricultural
ANTIL 6 WELL	San Bernardino, City of	3602422	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
BASELINE & CALIFORNIA WELL	San Bernardino, City of	3602400	49.48	13.05	3.74	2.40	0.41	0.34	0.44	0.16	0.00	1.76	0.30	0.29		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
CAJON 2 WELL	San Bernardino, City of	3601844	93.82	87.25	78.70	73.93	61.68	34.92	64.55	43.84	46.26	50.49	48.34	42.66		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
CAJON 3 WELL	San Bernardino, City of	3602821	110.41	106.35	99.72	100.49	62.36	1.00	80.32	64.68	62.06	77.57	81.04	74.27		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
CAJON 4 WELL	San Bernardino, City of	3603792	168.55	160.09	149.32	129.82	146.03	157.70	152.27	108.82	132.75	128.62	131.86	121.80		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
CAJON CANYON WELL	San Bernardino, City of	3600710	92.05	75.35	63.00	59.30	37.46	21.32	6.45	0.30	0.48	1.33	51.20	93.58		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
Century	San Bernardino, City of	3603581	59.25	59.25	59.25	59.25	59.25	59.25							Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
Chandler	San Bernardino, City of	3603582	57.90	57.90	57.90	57.90	57.90	57.90							Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
DEVIL CANYON 1 WELL	San Bernardino, City of	3600712	193.49	178.76	164.15	120.73	23.61	83.46	127.09	79.44	65.98	82.41	97.85	84.56		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
DEVIL CANYON 2 WELL	San Bernardino, City of	3600711	150.72	148.59	136.26	111.34	54.57	24.95	87.90	77.52	103.36	107.55	119.89	112.95		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
DEVIL CANYON 3 WELL	San Bernardino, City of	3602206	0.50	0.00	0.58	2.46	3.61	3.66	3.53	2.87	3.80	3.34	2.98	1.97		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural

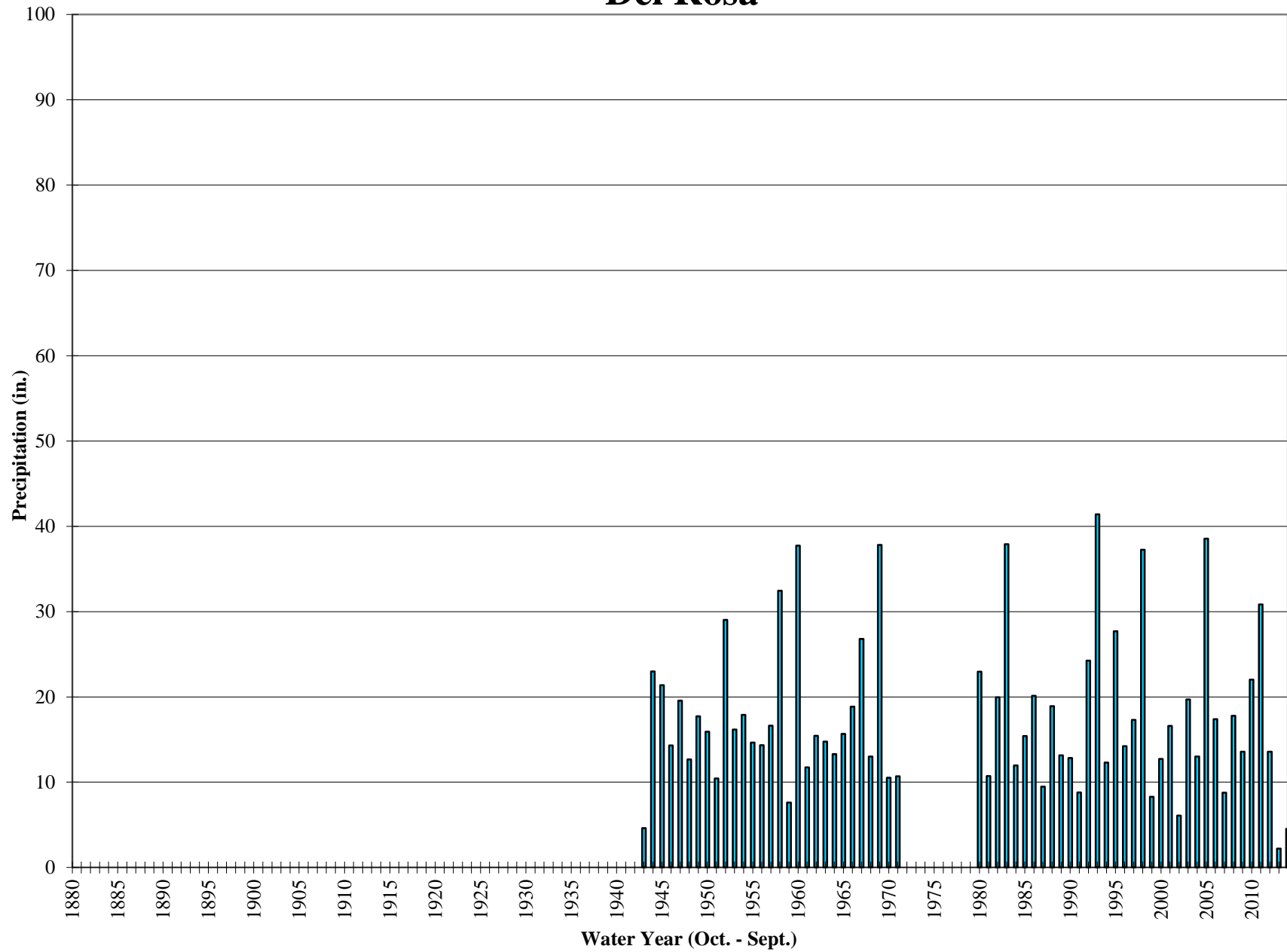
Production Values
(Acre-Feet)

WELL NAME	Agency	Recordation Number	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	SBVWCD Wells	Subbasin Name	AGG or Non AGG
DEVIL CANYON 4 WELL	San Bernardino, City of	3602205	3.85	3.79	0.37	1.78	0.00	0.00	0.00	0.00	0.06	1.69	0.37	0.28		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
DEVIL CANYON 5 WELL	San Bernardino, City of	3602844	57.88	55.19	51.99	39.78	31.11	1.65	0.04	2.02	0.84	3.45	11.49	41.81		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
DEVIL CANYON 6 WELL	San Bernardino, City of	3603580	15.22	15.65	15.42	16.76	11.42	16.08	17.25	13.59	13.92	15.94	16.42	15.19		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
DEVIL CANYON 7 WELL	San Bernardino, City of	3603579	4.92	3.63	3.54	3.88	2.34	4.03	4.16	3.39	3.71	3.99	3.99	3.62		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
EPA EXTRAC WELL 001	San Bernardino, City of	3603688	195.14	188.64	185.86	191.93	186.90	193.22	187.65	172.82	177.53	172.89	172.49	169.07		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 002	San Bernardino, City of	3603689	184.27	180.45	176.85	183.95	184.30	202.82	197.45	180.80	196.51	189.14	194.74	183.02		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 003	San Bernardino, City of	3603690	190.884	185.436	212.339	214.197	211.157	249.144	241.591	222.188	244.777	234.417	226.251	196.807		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 004	San Bernardino, City of	3603691	195.055	191.219	187.091	194.564	211.391	205.044	213.173	195.659	213.662	205.59	200.393	196.171		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 005	San Bernardino, City of	3603692	215.073	210.636	205.574	198.411	134.05	10.3558	1.524	0.84252	0.92975	1.09734	28.2691	50.4408		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 006	San Bernardino, City of	3603693	53.5514	51.6988	50.45	48.3632	49.1713	52.6194	52.424	49.6166	52.9522	47.3416	47.0822	43.7649		Bunker Hill II West of Mentone Fault	Non-Agricultural
EPA EXTRAC WELL 007	San Bernardino, City of	3603694	174.94	169.334	165.471	172.546	164.185	170.351	171.598	160.631	169.713	152.665	154.77	145.861		Bunker Hill II West of Mentone Fault	Non-Agricultural
EPA EXTRAC WELL 108	San Bernardino, City of	3603786	202.195	198.852	194.77	200.684	196.072	203.496	199.557	184.382	200.643	193.829	198.641	191.093		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 108-S	San Bernardino, City of	3603917	86.6139	84.6832	83.037	84.5569	74.1299	74.9334	74.13	60.955	69.41	70.714	72.0684	70.1286		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 109	San Bernardino, City of	3603787	0	0	0	0	21.2718	109.302	114.017	105.216	113.77	109.55	112.073	107.02		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 110	San Bernardino, City of	3603788	0	0	0	34.2264	93.8659	97.5964	94.245	40.3512	94.5455	91.3361	92.1097	88.1313		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 111	San Bernardino, City of	3603789	1.80211	147.665	144.752	144.284	139.66	143.646	139.066	91.593	138.242	133.085	134.633	128.14		Pressure Zone North of Santa Ana Wash	Non-Agricultural
EPA EXTRAC WELL 112	San Bernardino, City of	3603790	126.839	122.461	114.555	115.266	112.399	114.619	112.293	105.08	111.786	105.865	105.452	99.775		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
GILBERT ST WELL.	San Bernardino, City of	3600729	0	0	0	0	0	0	0	48.1635	2.38981	72.0317	224.479	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural	
IVDA WELL 11	San Bernardino, City of	3603649	0.1584	0.3719	0.129	0.04591	0.06198	0.07117	0.131	0.0551	0.10331	0.07805	0.03444	0.02755		Pressure Zone Santa Ana Wash	Non-Agricultural
KENWOOD 1 WELL	San Bernardino, City of	3603471	32.0455	7.92241	0	0	1.10193	20.9412	0	0.59752	4.53168	0	0	19.1047		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
KENWOOD 2 WELL	San Bernardino, City of	3603791	133.551	104.164	96.006	89.8829	85.8517	104.667	115.875	110.902	129.897	131.635	135.955	107.459		Bunker Hill I Northeast of 215 Freeway	Non-Agricultural
LEROY WELL	San Bernardino, City of	3602401	53.8039	60.8471	11.83	0.94123	0.99633	3.16804	1.203	1.26492	1.13407	1.17539	3.26676	148.903		Bunker Hill II West of Mentone Fault	Non-Agricultural
LYNWOOD WELL	San Bernardino, City of	3600727	177.842	134.5	134.451	19.1873	0.83104	1.07438	10.999	2.58724	1.85262	1.96051	124.047	158.848	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
LYTLE CREEK 2 WELL	San Bernardino, City of	3603027	73.3724	72.4334	70.411	72.4265	48.0234	62.438	71.853	56.6368	67.0937	67.2911	67.8444	66.8343		Lytle Basin Southeast of Barrier J	Non-Agricultural
MALLORY NO.3 WELL	San Bernardino, City of	3601845	72.8053	63.7098	66.166	69.2952	48.7511	31.6047	69.405	64.0427	70.8196	67.8053	68.82	67.3118		Lytle Basin Southeast of Barrier J	Non-Agricultural
MILL & D WELL	San Bernardino, City of	3600737	43.067	42.5298	40.838	42.5482	41.2466	42.7502	42.245	38.2369	42.6515	26.1387	43.9463	42.0753		Pressure Zone Santa Ana Wash	Non-Agricultural
NEWMARK 1 WELL	San Bernardino, City of	3600714	47.6354	47.3852	44.752	18.3219	18.742	0.18136	1.361	11.9995	5.99862	18.2208	30.893	27.7296		Bunker Hill II West of Mentone Fault	Non-Agricultural
NEWMARK 2 WELL	San Bernardino, City of	3600715	114.079	193.122	180.393	36.7034	17.9706	0.63131	5.822	27.275	20.1997	45.8333	153.85	147.348		Bunker Hill II West of Mentone Fault	Non-Agricultural
NEWMARK 3 EXTRAC WELL	San Bernardino, City of	3600716	123.919	113.767	106.439	108.531	93.0464	45.7874	0	0	66.7952	111.348	101.047		Bunker Hill II West of Mentone Fault	Non-Agricultural	
NEWMARK 4 WELL	San Bernardino, City of	3602399	293.57	297.289	294.16	143.255	122.824	0.87925	8.85	80.9619	41.8825	138.607	264.424	261.221		Bunker Hill II West of Mentone Fault	Non-Agricultural
OLIVE & GARNER WELL	San Bernardino, City of	3603206	224.031	218.124	208.136	161.995	106.547	7.80073	67.656	0.23875	4.31589	22.624	153.613	212.404		Pressure Zone North of Santa Ana Wash	Non-Agricultural
PERRIS HILL 4 WELL	San Bernardino, City of	3601117	0	0	0	0	0	0	0	0	0	0	0	0	Yes	Pressure Zone North of Santa Ana Wash	Non-Agricultural
PERRIS HILL 5 WELL	San Bernardino, City of	3601115	0	0	0	0	0	0	0	0	0	0	0	0	Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
VINCENT WELL	San Bernardino, City of	3602426	123.717	103.629	83.115	98.2002	50.3512	14.3434	10.45	0.3742	0.59688	0.50735	73.5698	110.083		Bunker Hill II West of Mentone Fault	Non-Agricultural
WATERMAN AVE. WELL	San Bernardino, City of	3600728	257.709	286.295	202.704	1.9146	1.36823	4.21717	26.618	3.17723	1.26033	79.4559	55.7484	109.107		Bunker Hill II West of Mentone Fault	Non-Agricultural
Deep Well Pump 1	Southern California Edison	3601015	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.7	0.3	0.5	0.4	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Deep Well Pump 2	Southern California Edison	3601014	42.8	44.9	42.5	22.4	24	34.5	14.2	18.8	24.9	26.2	43	55.8	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Mid Aquifer Pump A	Southern California Edison	3603795	258.8	272.6	269.9	86.3	117.1	183.7	134.6	144.3	176.6	186.7	150.4	150	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
MidAquifer Pump B	Southern California Edison	3603796	13.8	0.1	0	13.3	4.1	1.5	0.6	14	0.5	0	0	3.8	Yes	Pressure Zone Santa Ana Wash	Non-Agricultural
Stater Well	Stater Bros.	3602917													Yes	Bunker Hill II West of Mentone Fault	Agricultural
Stater Well	Stater Bros.	3602917													Yes	Bunker Hill II West of Mentone Fault	Non-Agricultural
Pioneer 1	Tennessee Mutual Well Compa	3601161													Yes	Bunker Hill II East of Mentone Fault South	Agricultural
Upper 2	West Valley Water District	3600306	226.62	232.26	211.12	202.14	133.56	202.45	213.26	108.62	17.85	3.29	4.11	150.27		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well 05A	West Valley Water District	3605001	26.31	13.43	40.44	0.3	20.37	11.17	21.44	11.23	18.38	8.42	41.86	30.18		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well 24	West Valley Water District	3601931	37.28	34.81	34.47	33.09	30.27	32.02	31.37	27.23	18.19	0	5.34	52.88		Lytle Basin Northwest of Barrier J	Non-Agricultural
Well 4A	West Valley Water District	WVWD4A	139.6	135.88	159.56	36.57	179.35	122.17	230.01	156.79	127.25	47	174.55	121.98		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well 54	West Valley Water District	3604014	91.91	92.7	91.46	115.66	110.47	113.24	111.61	99.31	105.65	97.35	95.53	66.37		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well No 1	West Valley Water District	3600307	0.5	0.23	0.18	0.2	0.17	0.2	5.09	0.16	0.35	0.3	0.174	0.3		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well No 15	West Valley Water District	3601848	158.66	169.44	138.49	62.76	155.97	97.48	155.22	143.93	63.39	39.34	74.58	50.6		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well No 30	West Valley Water District	3602766	59.85	78.82	71.63	84.28	155.66	56.75	101.09	1.67	0	0	0	0		Bunker Hill I Southwest of 215 Freeway	Non-Agricultural
Well No 36	West Valley Water District	3603055	0	0	0	0	0	0	0	0	0	0	0	0		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well No 7	West Valley Water District	3600997	0.5	5.69	0	0.38	0.21	0.21	3.21	1.47	0	0	0	0		Lytle Basin Southeast of Barrier J	Non-Agricultural
Well No 8A	West Valley Water District	3603778	0.7	0	2.13	0.77	0.39	0.4	1.87	0.83	0.41	0	1.86	0.53		Lytle Basin Southeast of Barrier J	Non-Agricultural
	Williams Well Corporation, LTD	3600828													Yes	Bunker Hill II East of Mentone Fault South	Agricultural

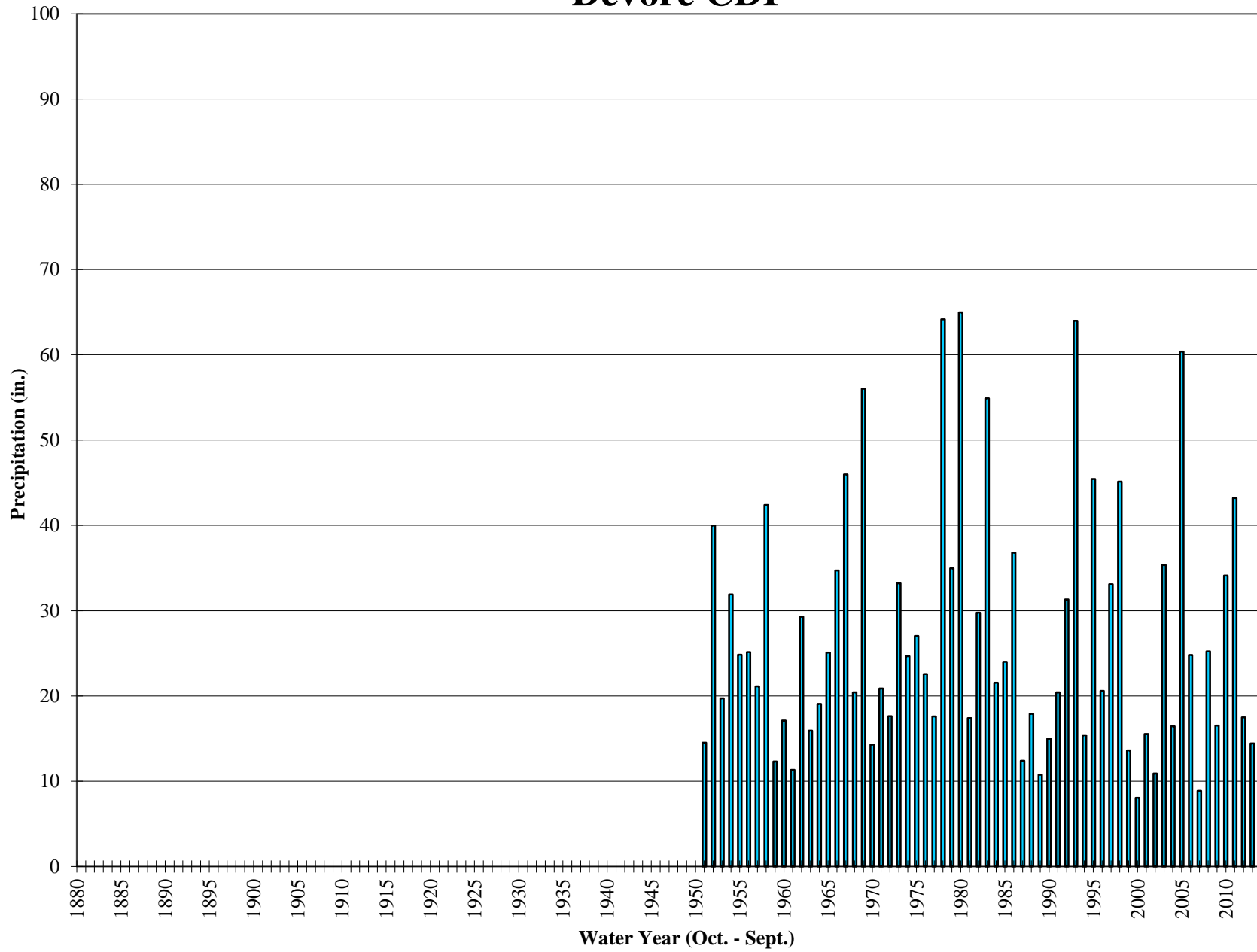
Historic Annual Precipitation SBC Hospital



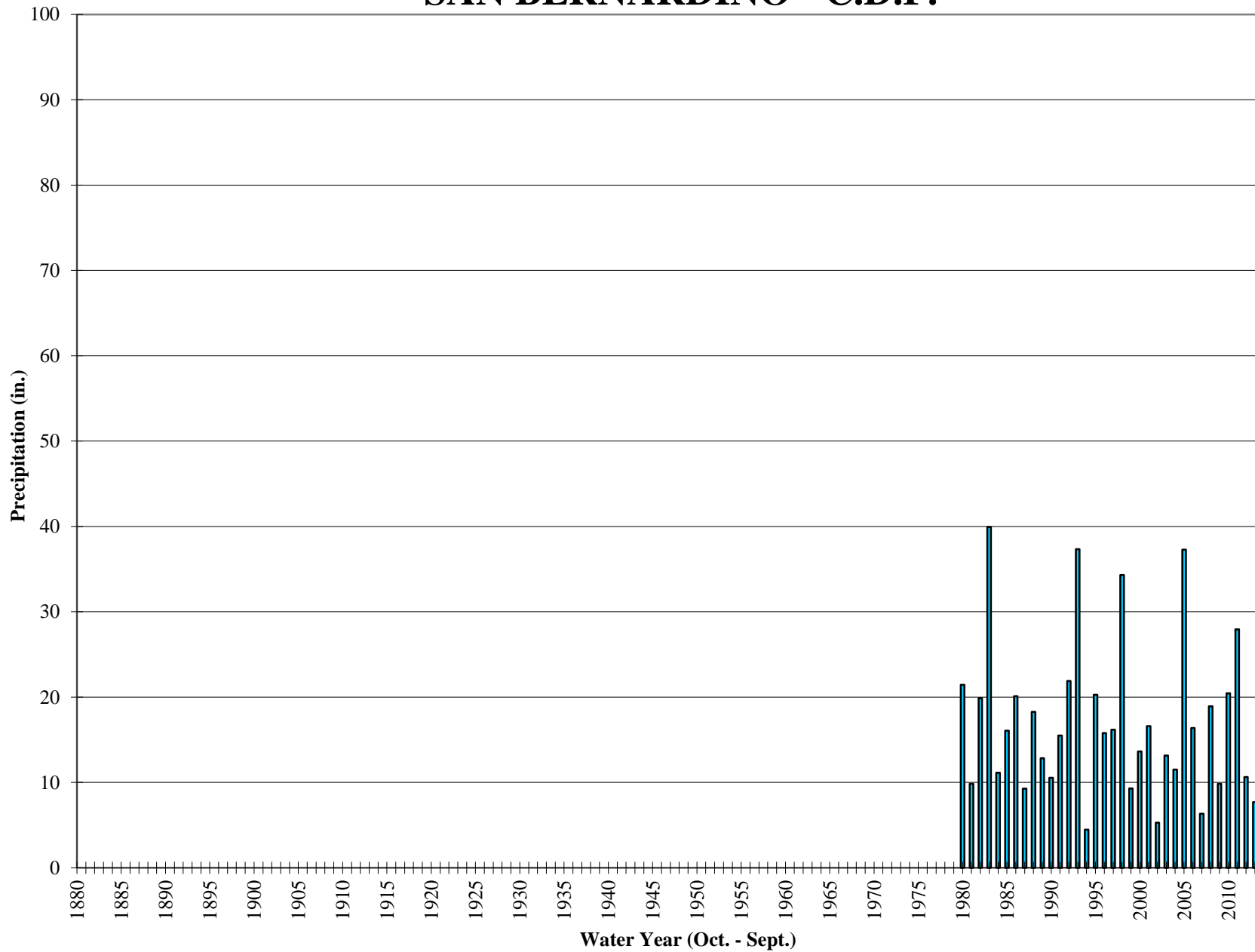
Historic Annual Precipitation Del Rosa



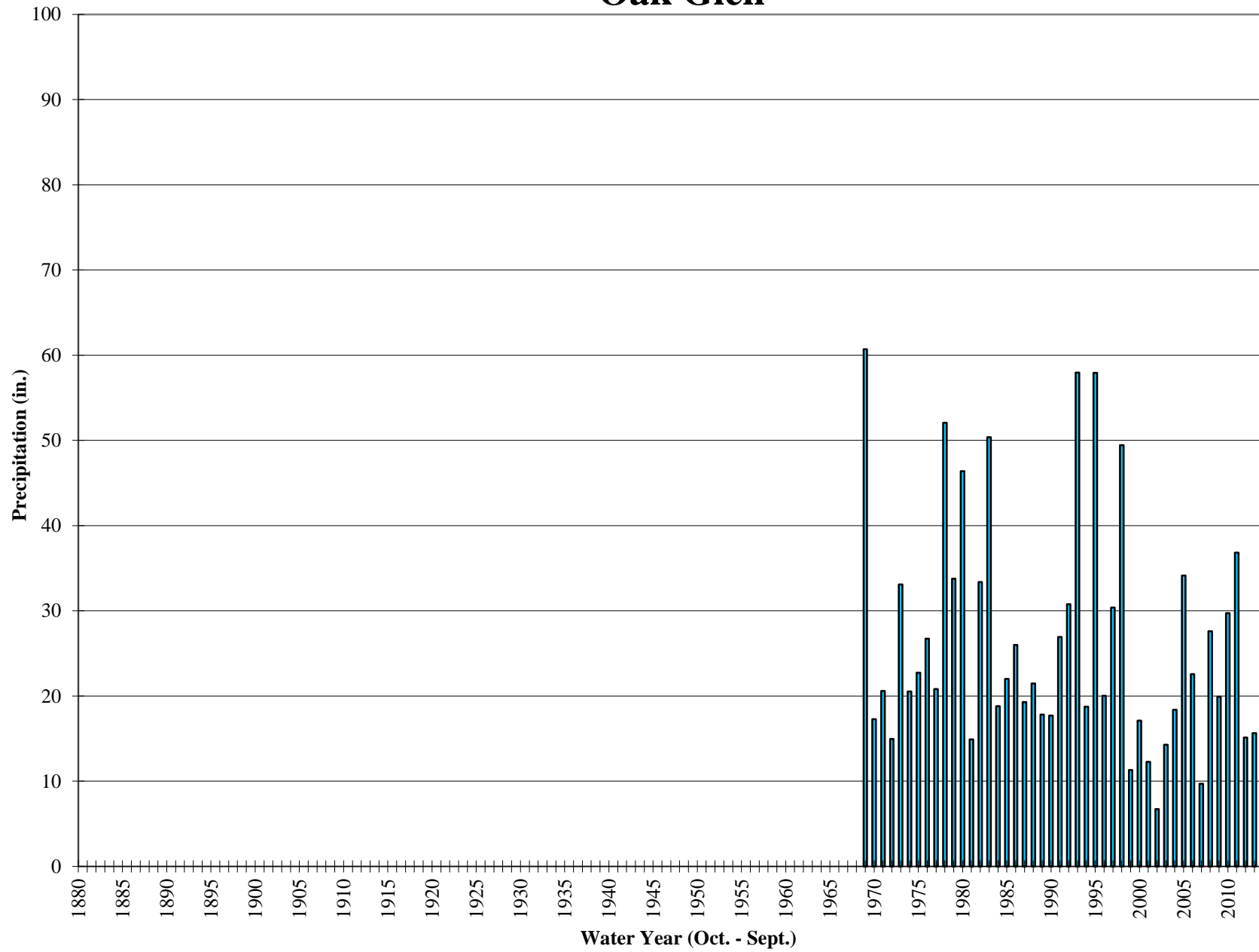
Historic Annual Precipitation Devore CDF



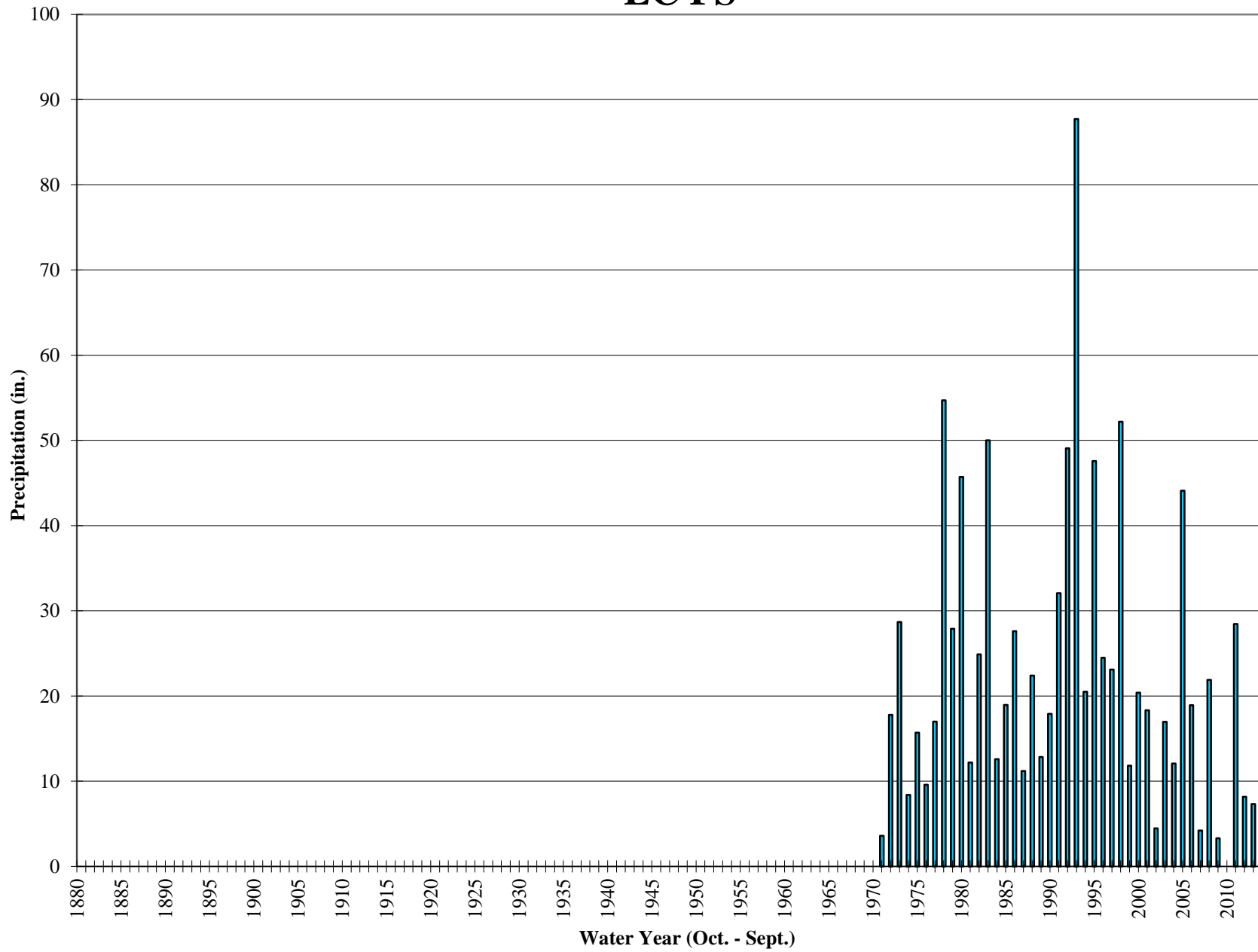
Historic Annual Precipitation SAN BERNARDINO - C.D.F.



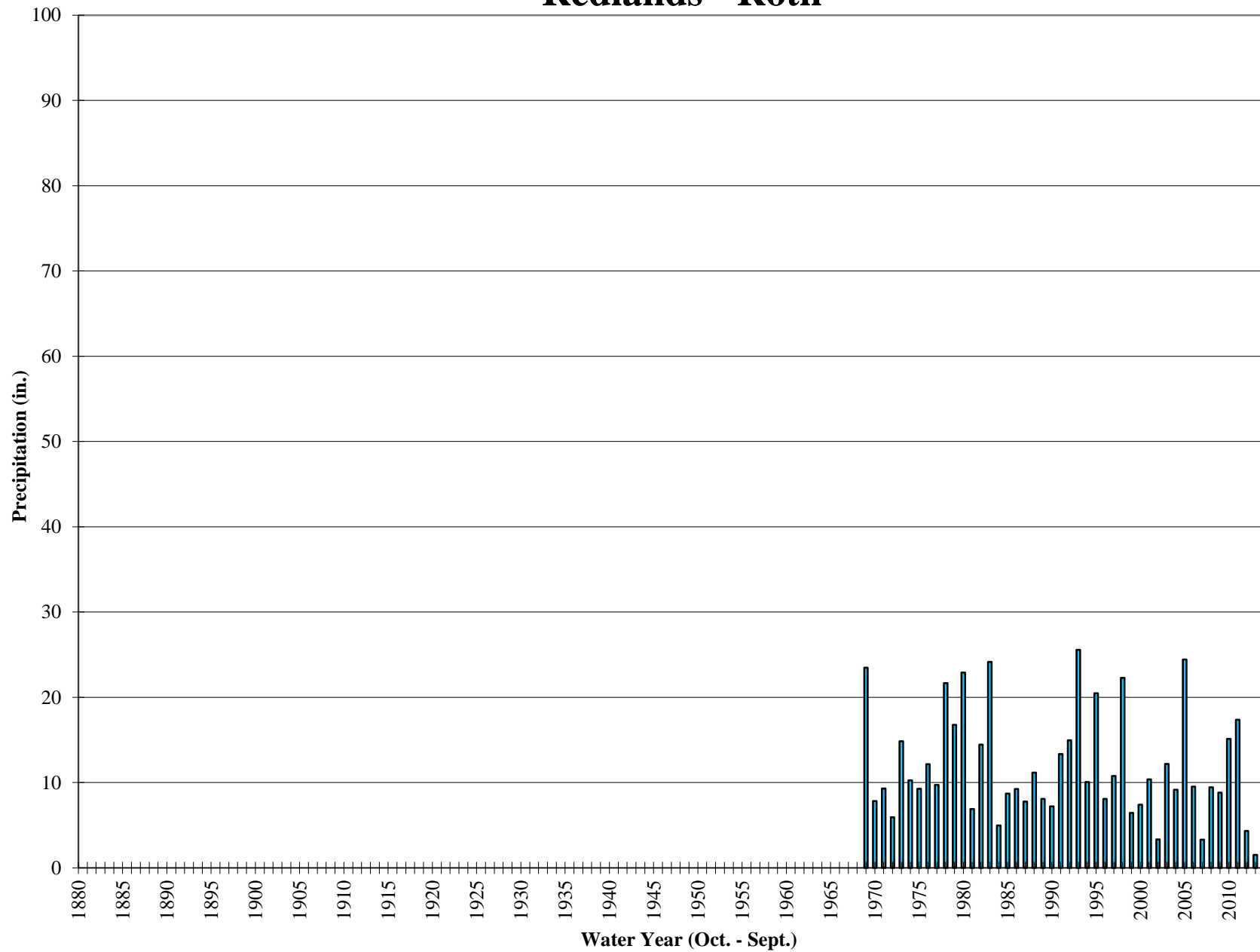
Historic Annual Precipitation Oak Glen



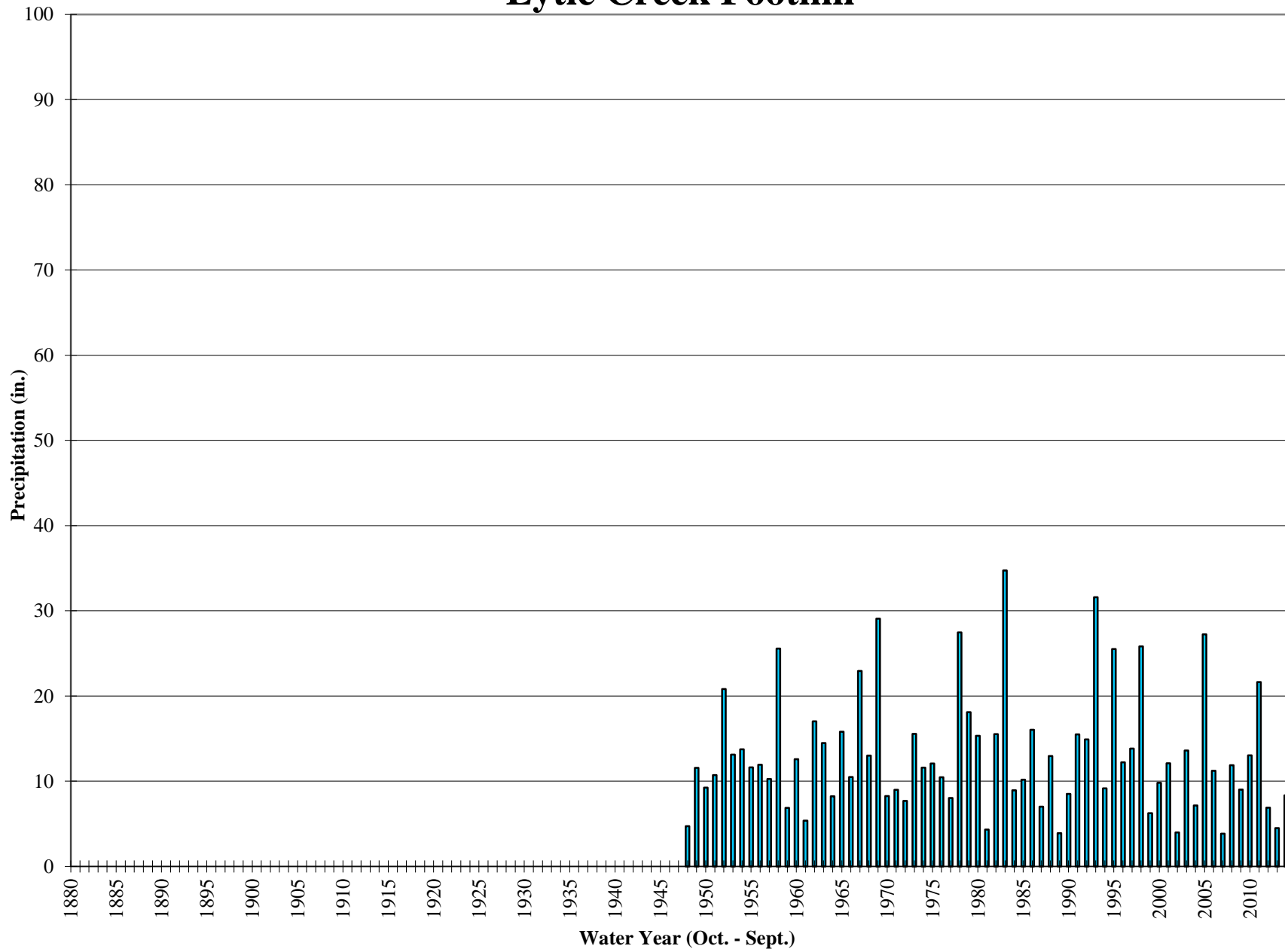
Historic Annual Precipitation LC FS



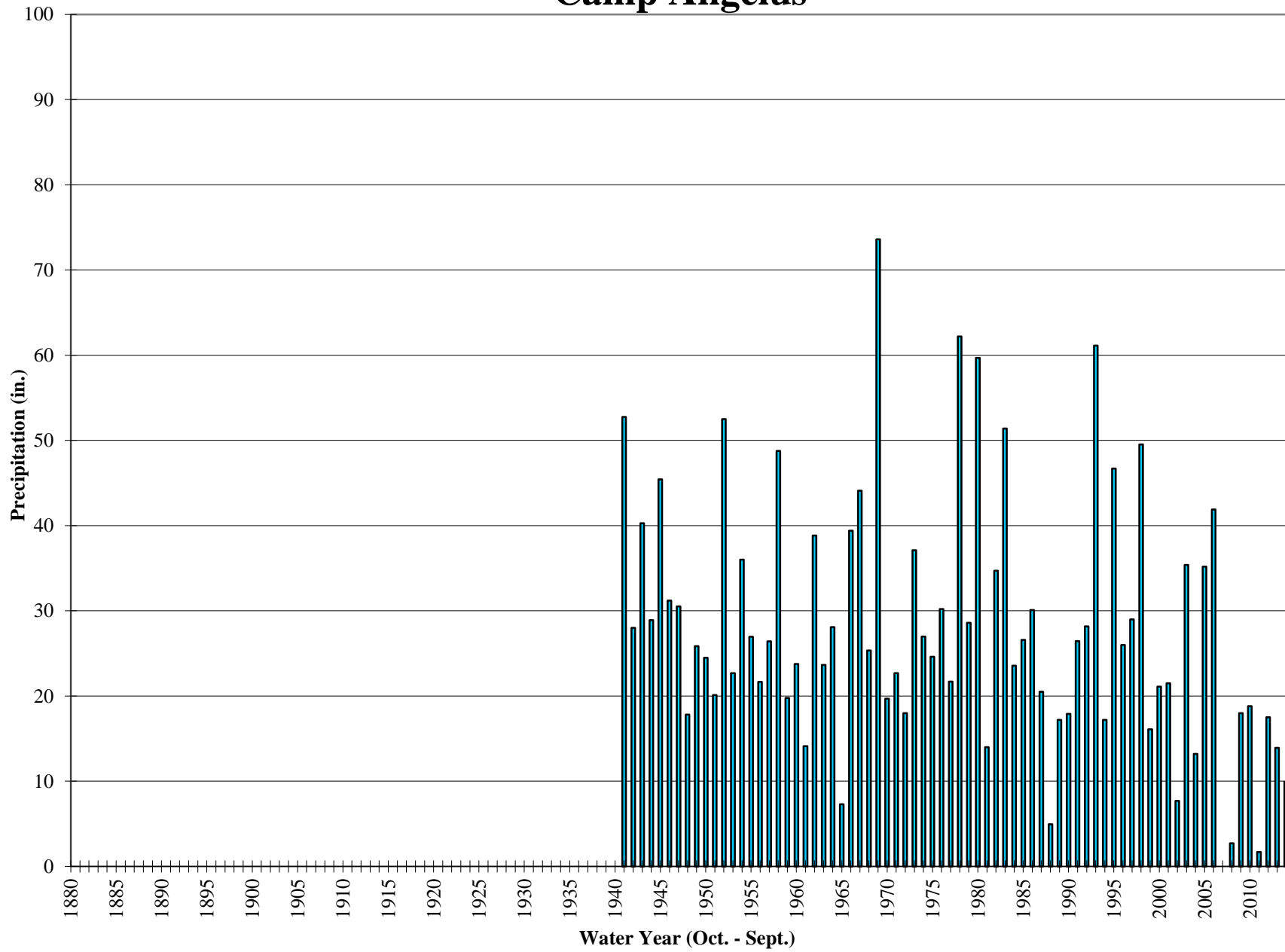
Historic Annual Precipitation Redlands - Roth



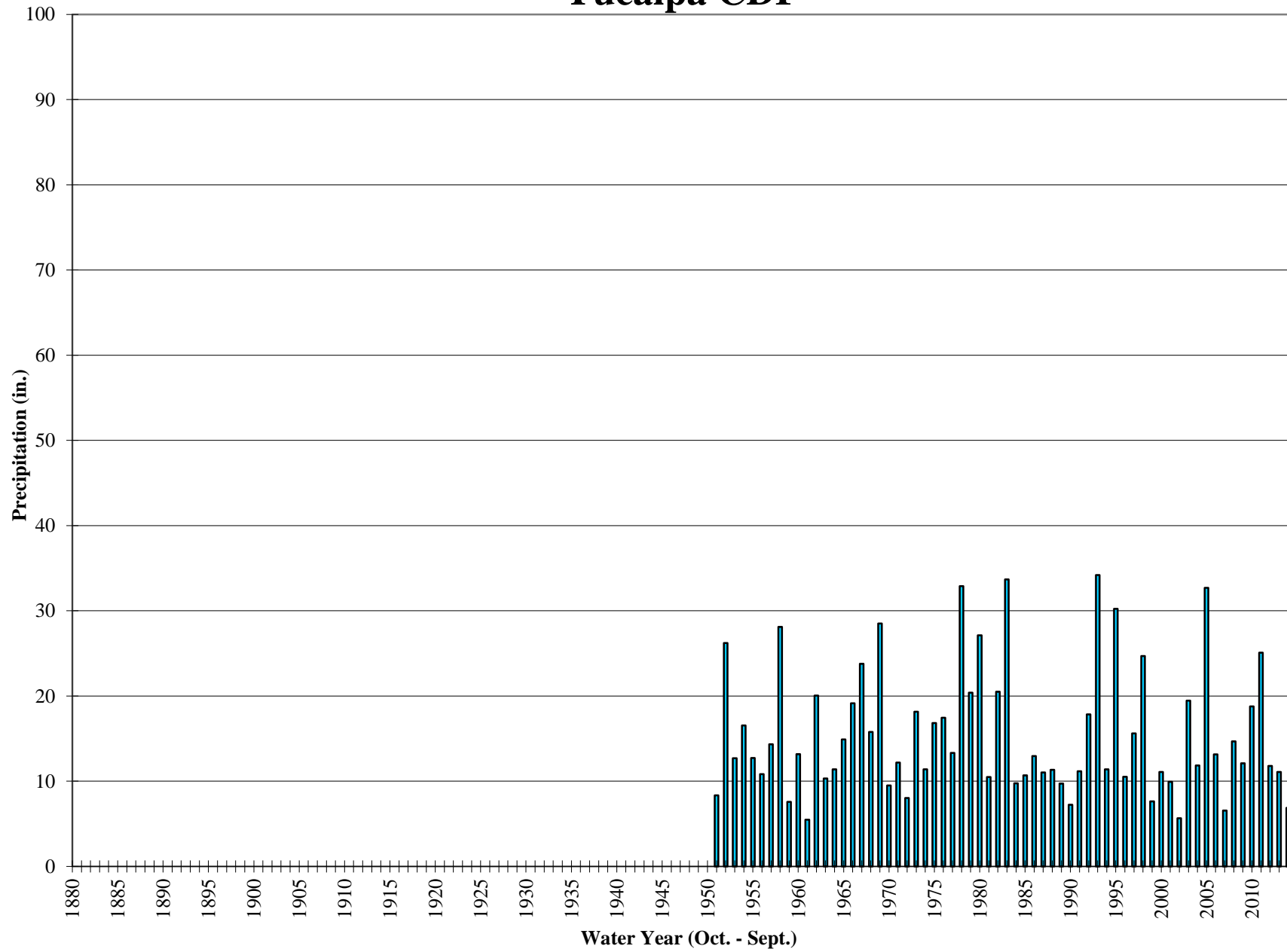
Historic Annual Precipitation Lytle Creek Foothill



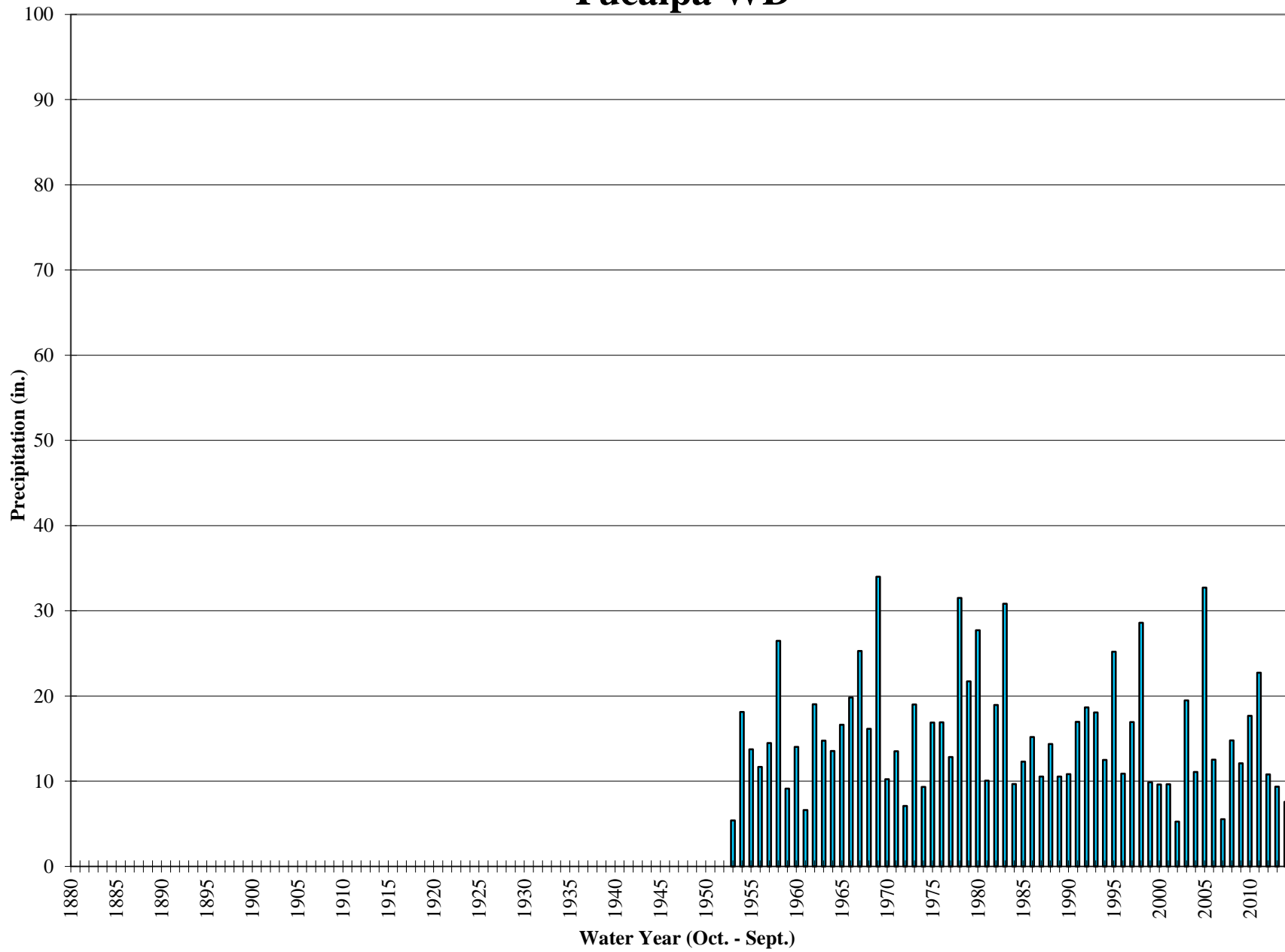
Historic Annual Precipitation Camp Angelus



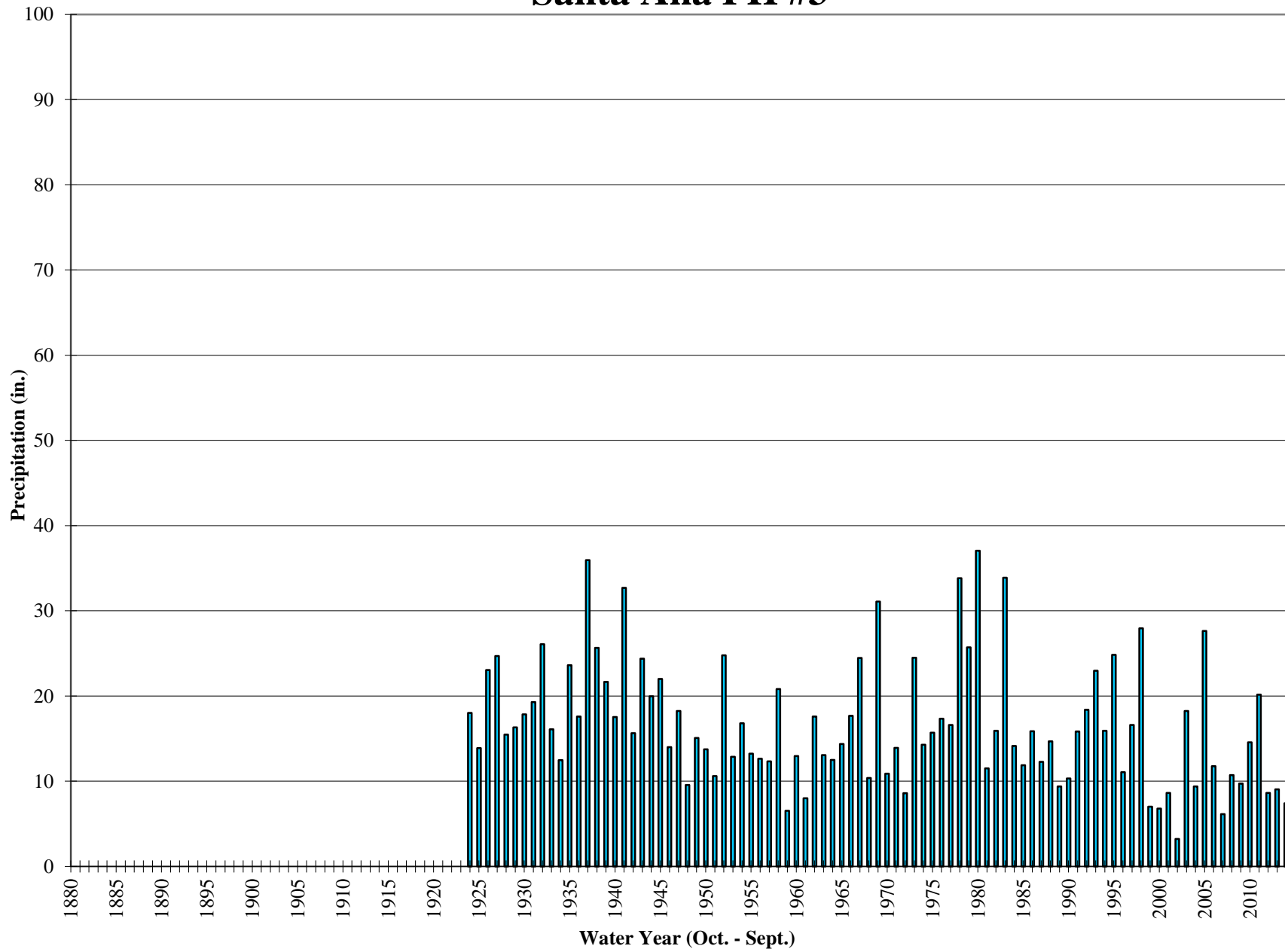
Historic Annual Precipitation Yucaipa CDF



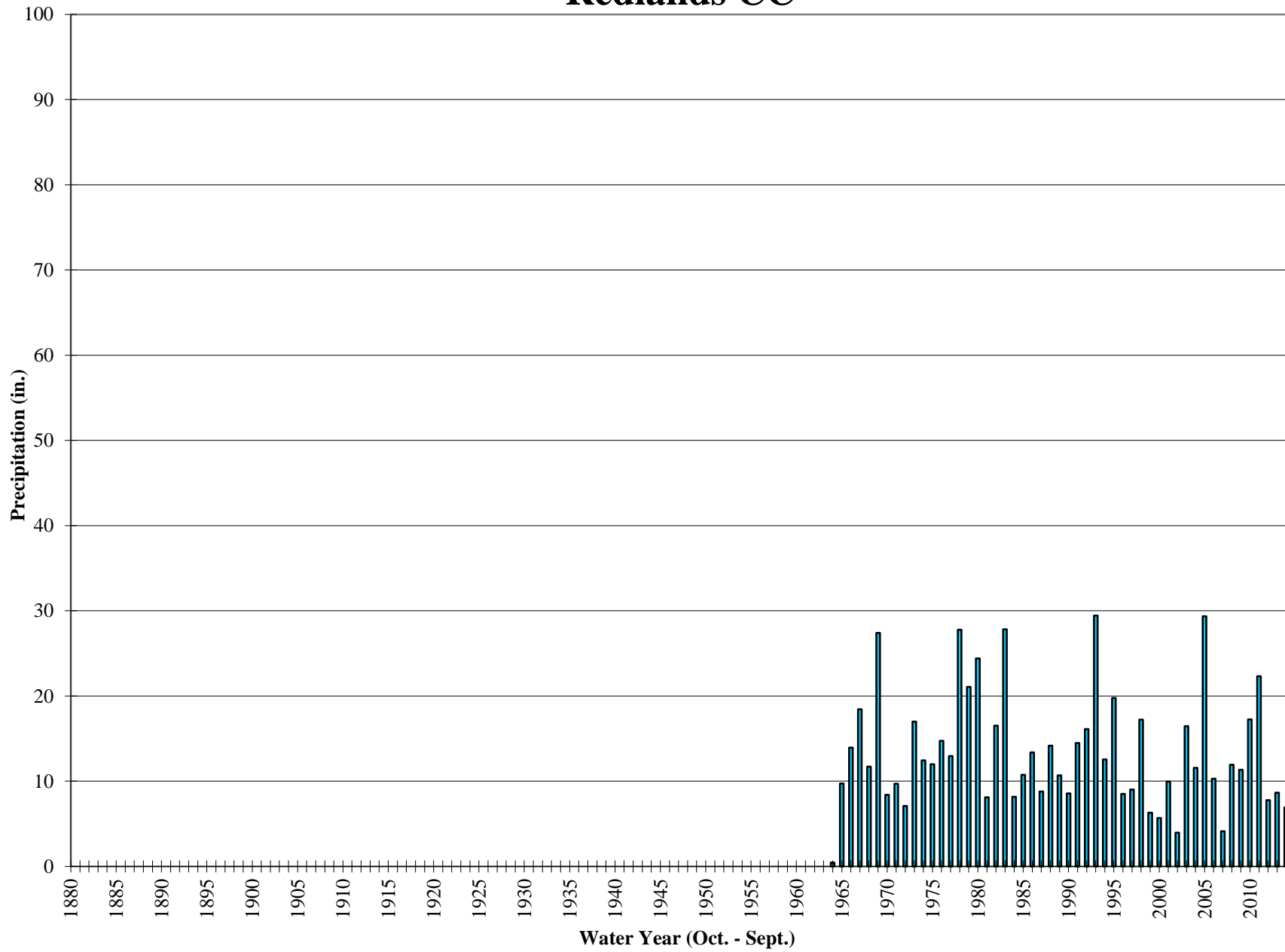
Historic Annual Precipitation Yucaipa WD



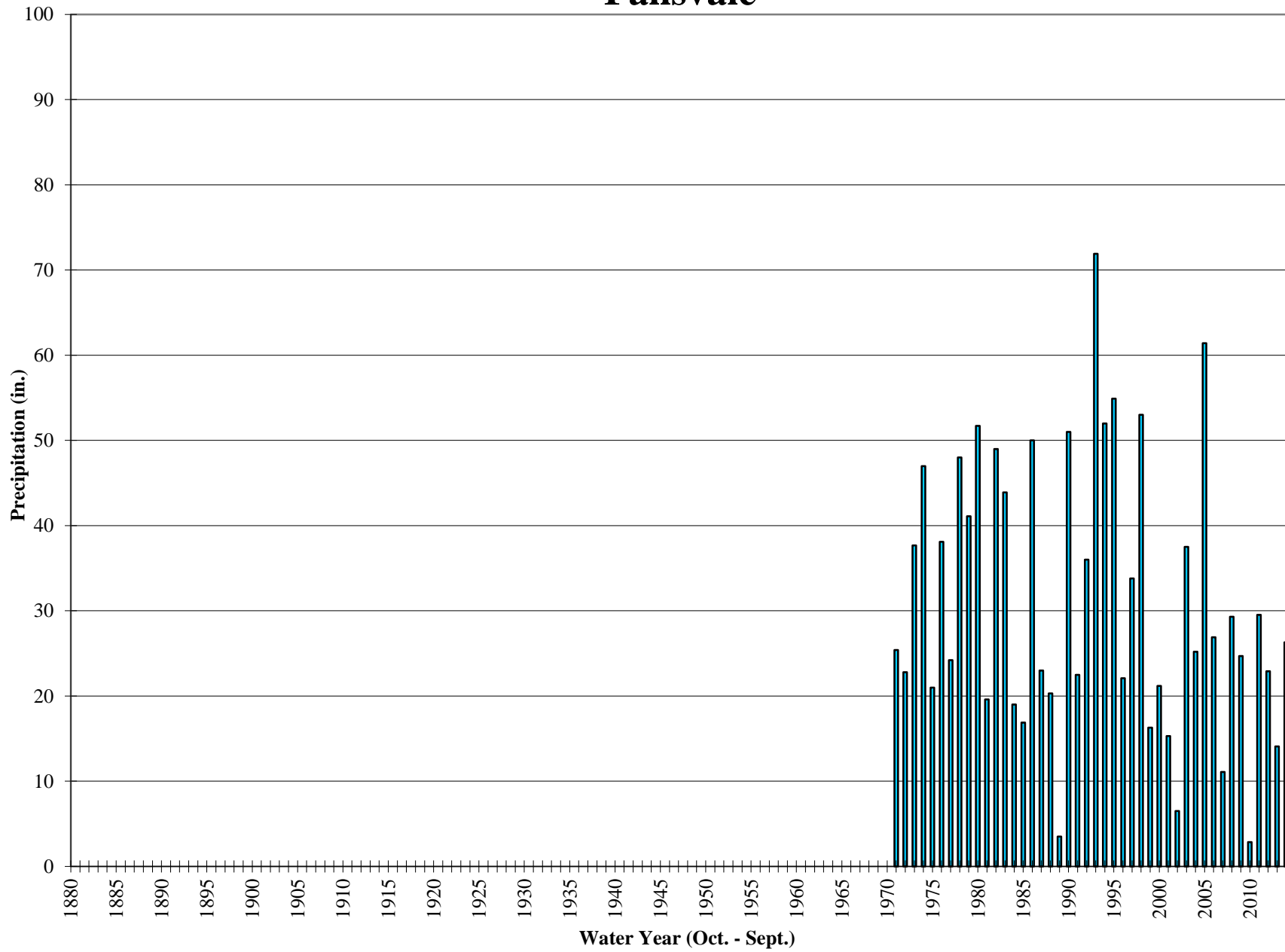
Historic Annual Precipitation Santa Ana PH #3



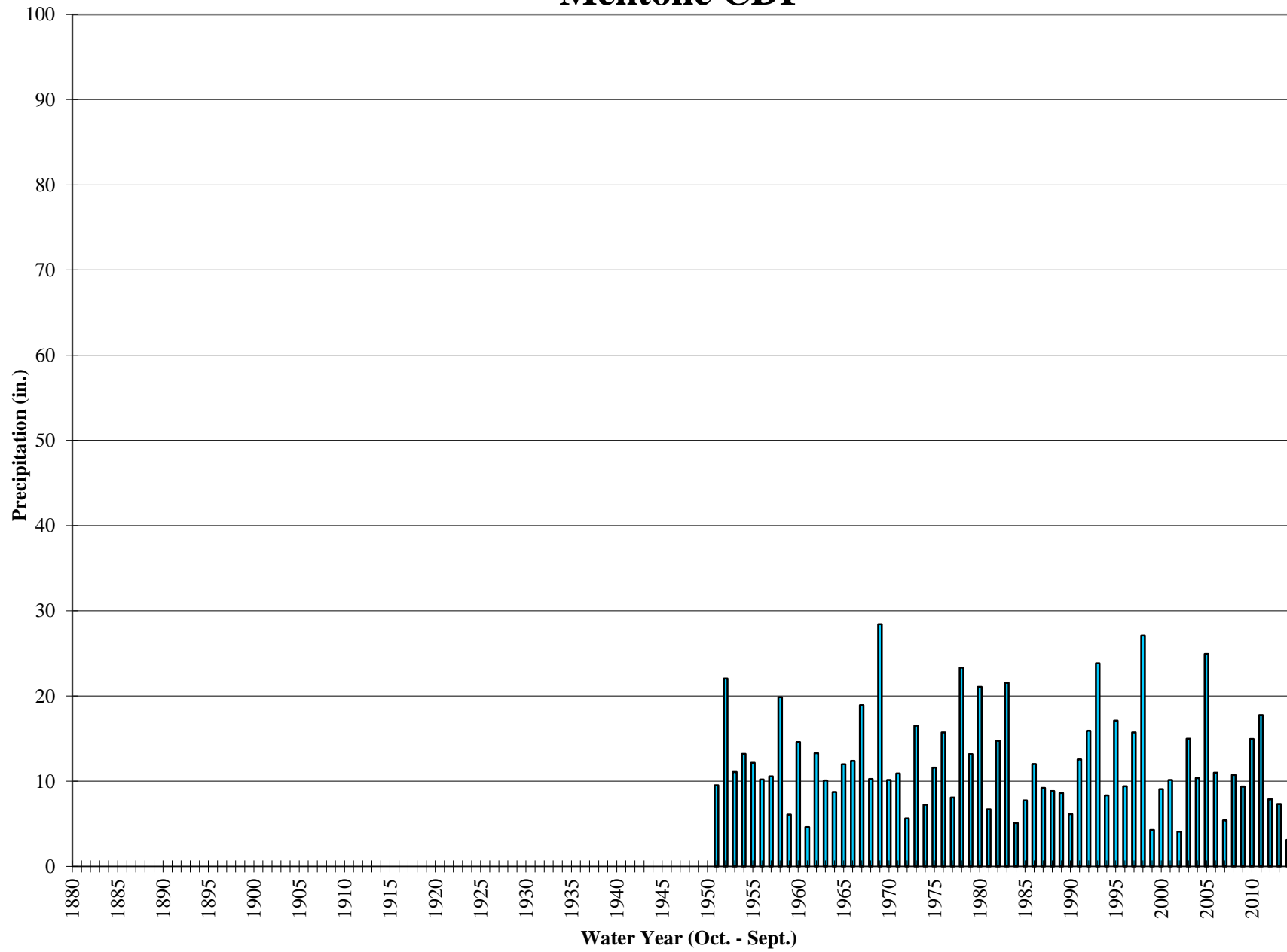
Historic Annual Precipitation Redlands CC



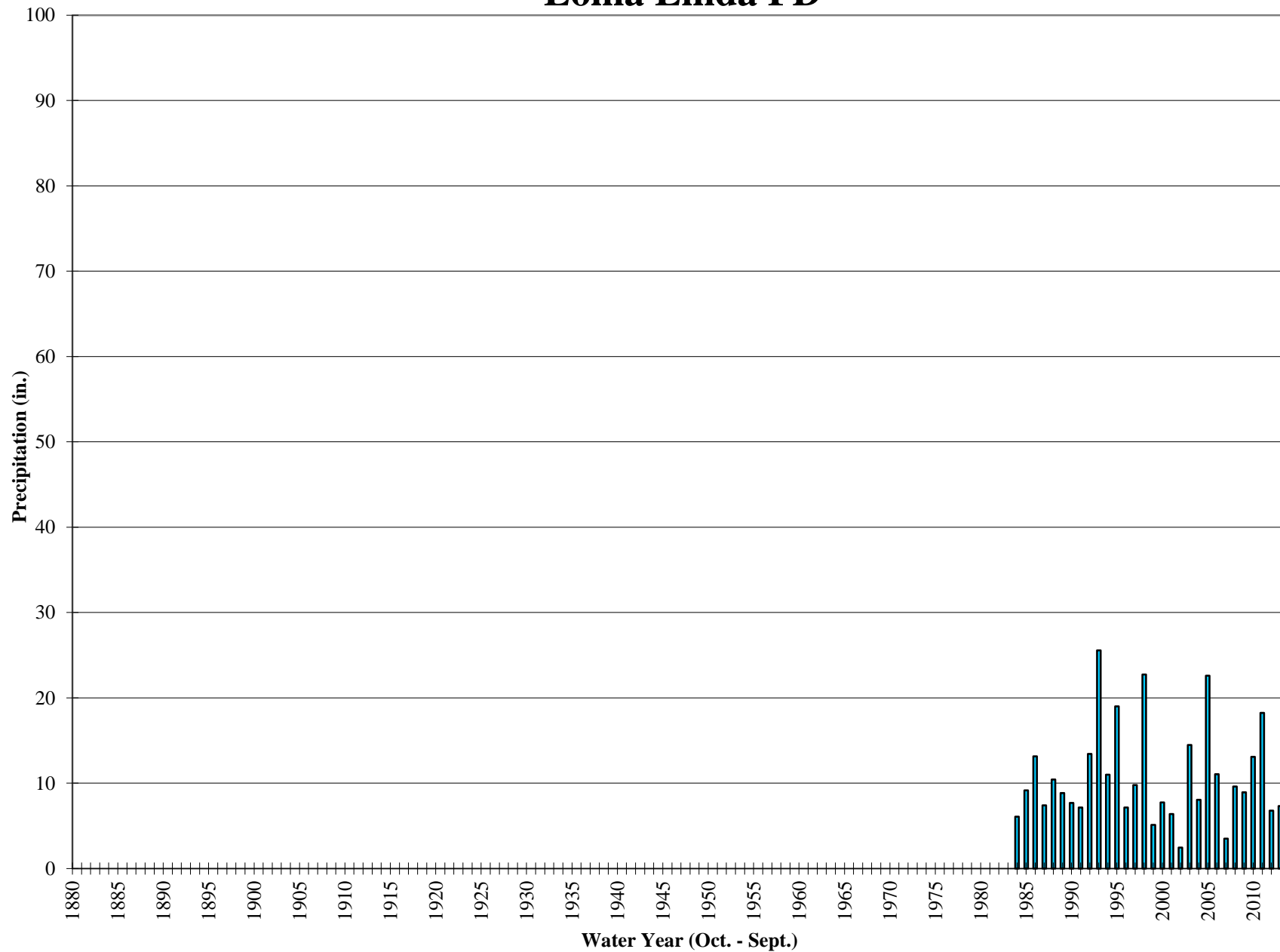
Historic Annual Precipitation Fallsvale



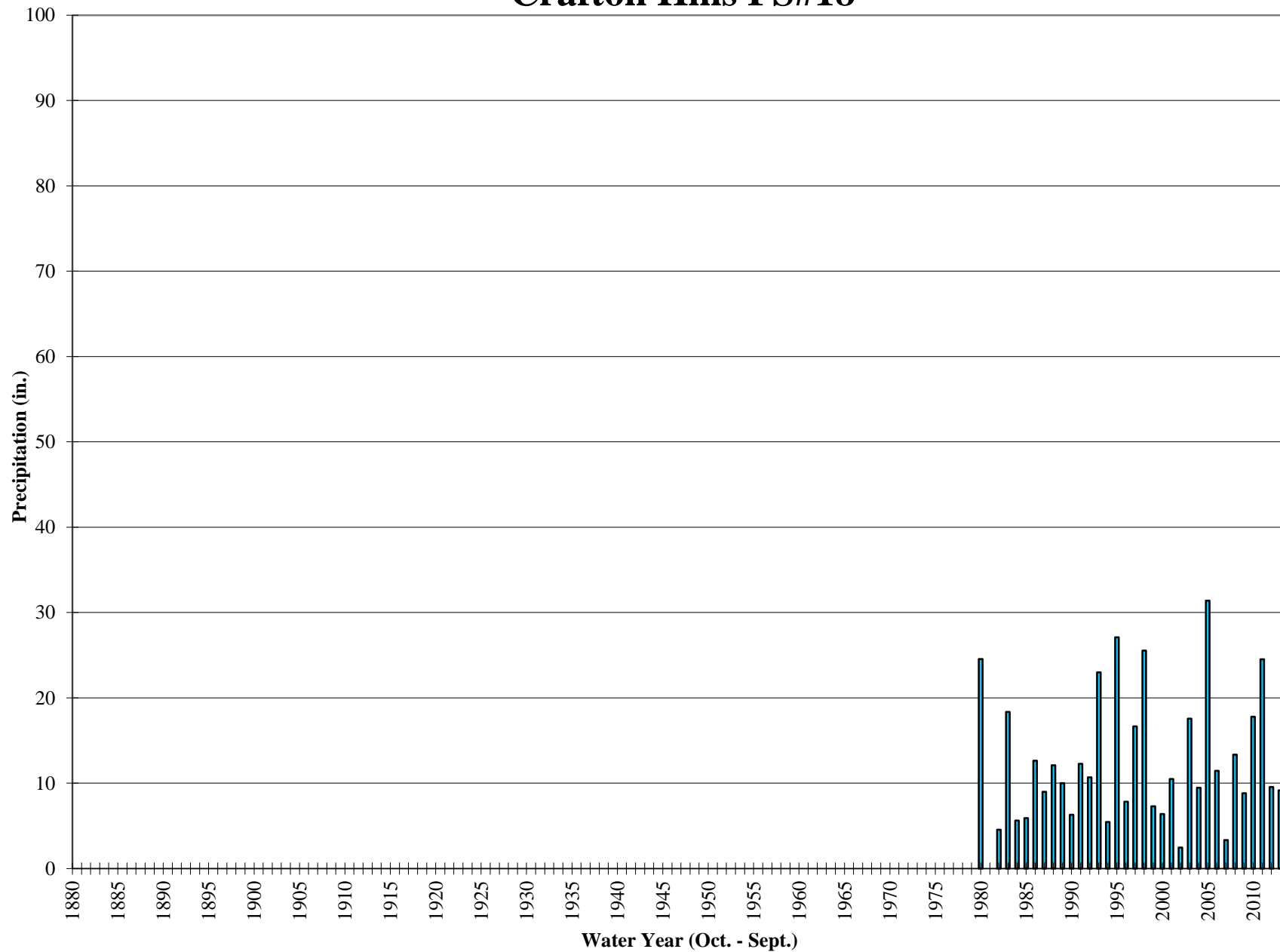
Historic Annual Precipitation Mentone CDF



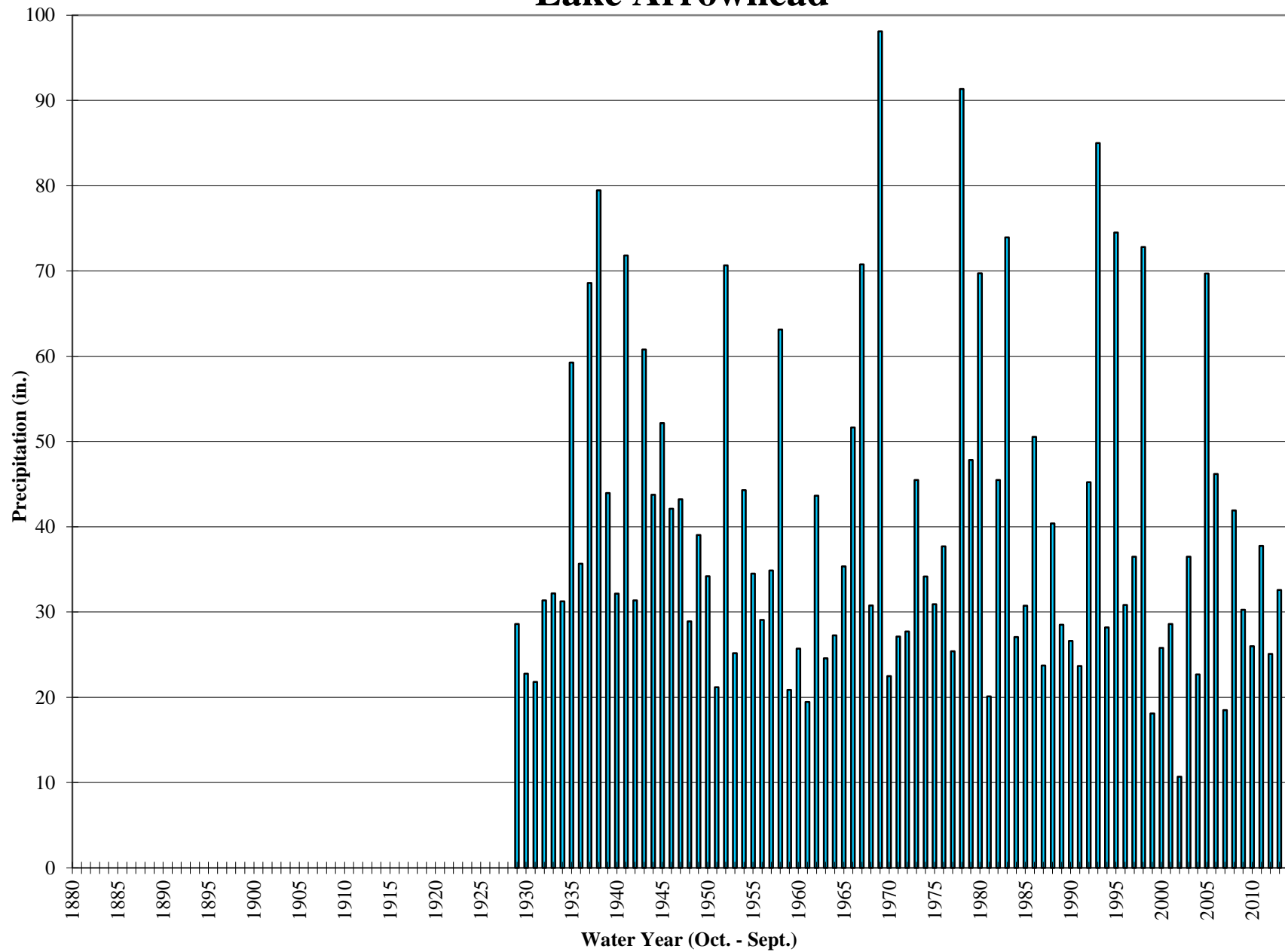
Historic Annual Precipitation Loma Linda FD



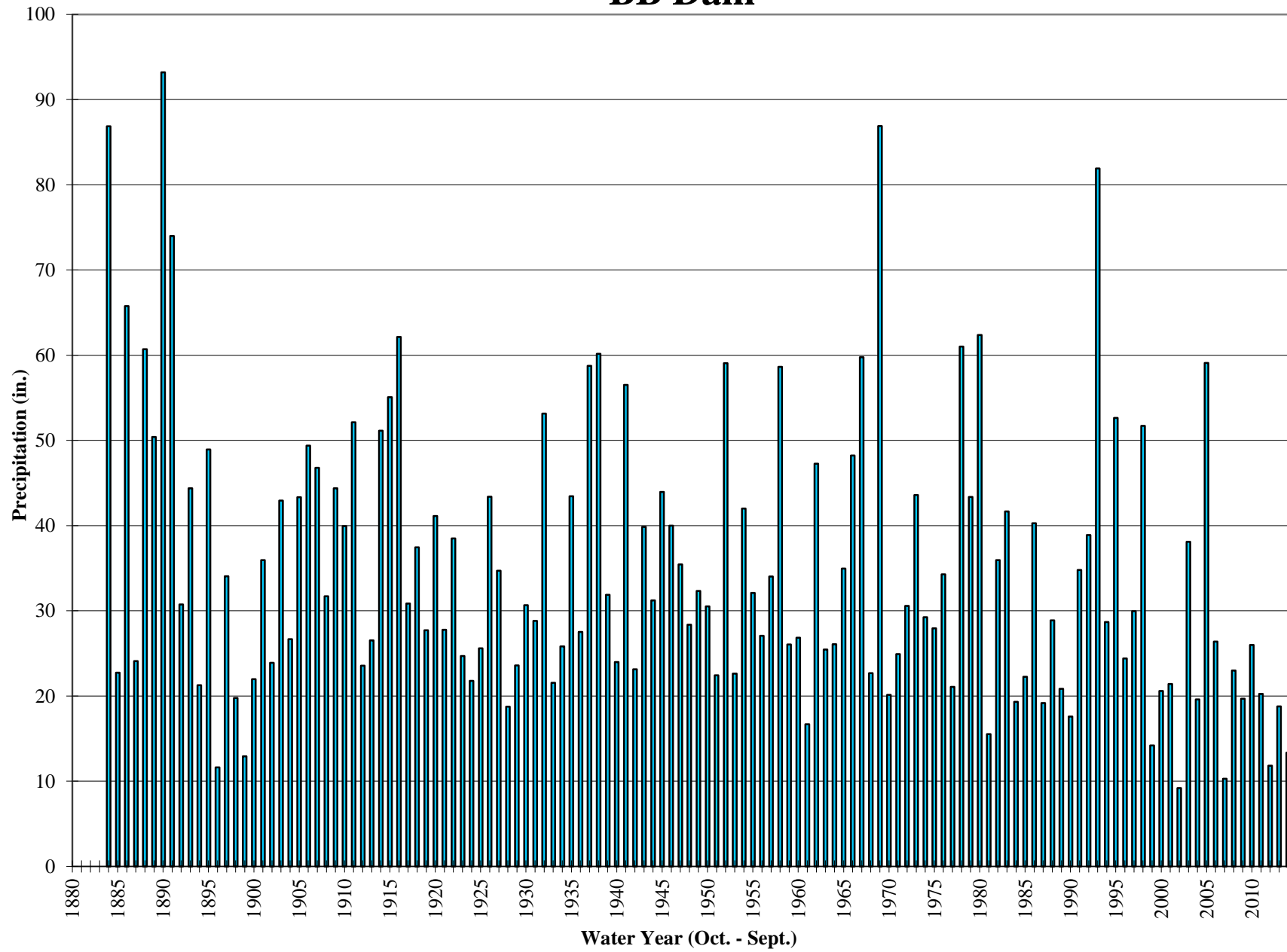
Historic Annual Precipitation Crafton Hills FS#18



Historic Annual Precipitation Lake Arrowhead



Historic Annual Precipitation BB Dam



Historic Annual Precipitation Big Bear City-BBCSD

