Groundwater Monitoring Report
Diablo Water District
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Acronyms

BMP	Best Management Practices
CCWD	Contra Costa Water District
CDPH	California Department of Public Health
CORS	Continuously Operating Reference Station
CVP	Central Valley Project
District	Diablo Water District
DWR	California Department of Water Resources
DWSAP	Drinking Water Source Assessment Protection Program
EC	Electrical Conductivity
ECWMA	East County Water Management Association
EIR	Environmental Impact Report
GAMA	Groundwater Ambient Monitoring and Assessment Program
GPS	Global Positioning System
GWMP	Groundwater Management Plan
IRWMP	Integrated Regional Water Management Plan
ISC	Iron House Sanitation District
LSCE	Luhdorff and Scalmanini Consulting Engineers
MCL	Maximum Contaminant Level
NSF	National Science Foundation
PBO	Plate Boundary Observatory
RBWTP	Randall-Bold Water Treatment Plant
SOI	Sphere of Influence
SWQCB	State Water Quality Control Board
TDS	Total Dissolved Solids
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WWTP	Waste Water Treatment Plant

1.0 Introduction

1.1 Purpose and Scope of Report

This report provides an update of groundwater monitoring data compiled by Diablo Water District (District) in accordance with its Groundwater Management Plan (GWMP), which was adopted in 2007. Specifically, this report presents and discusses the following:

- District groundwater and surface water use,
- Precipitation,
- Hydrographs for monitoring and production wells,
- Contours of seasonal groundwater elevations,
- Land subsidence, and
- Groundwater and surface water quality.

In addition, this report also discusses other activities undertaken by the District in accordance with objectives in the 2007 GWMP.

1.2 Background – AB 3030 Plan Elements and Tasks

The stated purpose of Diablo Water District's 2007 Groundwater Management Plan is:

> *"…to provide a management framework for maintaining a high quality, reliable, and sustainable supply of groundwater within the District's sphere of influence."*

This purpose is accomplished in part by ongoing monitoring and assessment of groundwater conditions. The GWMP identifies the Department of Water Resources groundwater basin that is the source of groundwater supply for the District's system and it includes the following elements:

- Monitoring of groundwater levels and storage;
- Protection of groundwater quality;
- Well construction and destruction policies;
- Management and mitigation of contaminated groundwater;
- Facilitating conjunctive use operations;
- Identification and management of recharge areas and wellhead protection areas;
- Coordination with federal, state and local agencies;
- Public outreach and education; and
- Implementation of the GWMP.

The District's GWMP includes several completed and ongoing tasks intended to facilitate the accomplishment of the stated purpose, including:

- Implementation of a groundwater monitoring program (quantity/quality);
- Identification of groundwater quality trends and actions needed to sustain good quality groundwater;
- Reporting of monitoring results;
- Promotion of conservation efforts within the District's service area;
- Continue to develop groundwater source capacity and identify possible conjunctive management strategies to optimize resource protection (requiring coordination with other local agencies);
- Complying with established County and State well construction/destruction policies;
- Employ Best Management Practices (BMPs) to limit potential sources of contamination in the environment;
- In coordination with the County Environmental Health Services Division, and other land use/regulatory agencies, develop a method for identifying and mitigating public water supply contamination;
- Promote recharge area protection to mitigate impacts of urban infrastructure and sources of groundwater contamination that could reduce recharge potential;
- Pursue grant opportunities in cooperation with East County Water Management Association (ECWMA) to fund basin management activities and regional water projects; and
- Continue public outreach, involvement in water process and Plan updates, and water awareness education programs.

1.3 District Description

Diablo Water District was formed in 1953 as the Oakley County Water District and is located south of the San Joaquin River Delta in eastern Contra Costa County (**Figure 1**). Figure 1 also shows the area of the Tracy Groundwater Subbasin, which is the source of groundwater supply for the District.

The District's service area encompasses approximately 17 square miles including the City of Oakley (incorporated on July 1, 1999) and other unincorporated areas, and provides service to over 28,000 people and approximately 8,500 water connections (CDM, 2005). The District's primary objective is to provide a safe and reliable supply of water to the citizens and businesses of Oakley and the unincorporated portions of its service area.

The District's water system consists of transmission and distribution pipelines; three water storage reservoirs (2.5, 5, and 5 million gallons) built in 1986, 1990, and 2009, respectively; two supply wells (Glen Park and Stonecreek); pumping facilities; and a water treatment facility. The Randall-Bold Water Treatment Plant (RBWTP), owned jointly by the District (37.5 percent) and Contra Costa Water District (62.5 percent), began service in 1992. Diablo Water District has an initial maximum treatment plant capacity allocation from the RBWTP of 15 million gallons per day (mgd) with a future maximum allocation of 30 mgd.

The District receives untreated CCWD water through an agreement with CCWD. While the District does not have a written quantity guarantee of supply from CCWD, it does have the right to draw up to 30 mgd from the RBWTP during normal years to meet maximum day water demands within its system. CCWD has a full commitment from the Central Valley Project of 195,000 acre-feet per year and provides water to central and eastern Contra Costa County via the Contra Costa Canal.

In addition to surface water from CCWD, the District's system also utilizes groundwater from the Glen Park Well that began production in August 2006 and added production from the Stonecreek Well in June 2011. The percentage of water used from each source may vary as a function of the District's primary objective to provide a safe and reliable supply to its customers. The District also operates and/or owns several wells that serve small community water systems as regulated by Contra Costa County Environmental Health Division.

The District's Sphere of Influence (SOI) is shown on **Figure 2**, along with the boundaries of other public water agencies in eastern Contra Costa County. **Figure 3** shows the District's service area and locations of wells discussed in this report.

The District's Urban Water Management Plan (UWMP) contains projections of population growth and water demand and supply from 2005 to 2040 (CDM, 2005). Water demand within the District's SOI is expected to increase significantly as the population increases from about 28,000 in 2005 to 75,000 in 2040. This includes about 50,000 residents within the existing City of Oakley limits, 18,000 within the City's expansion areas, and 7,000 in areas outside the City such as Knightsen and Bethel Island, portions of which are served by the District (CDM, 2005). The projected population growth corresponds to an annual growth rate of 4.8 percent.

1.4 Well Utilization Project

In 2004, the District initiated the first phase of the Well Utilization Project (CDM, 2004) consisting of planning, construction, and testing of the a new supply well at the Glen Park site, design of a blending facility at RBWTP, and a pipeline from the well to the blending facility. The purpose of the Well Utilization Project is to construct wells to supplement the District's surface water supply with groundwater and thereby reduce its dependence on imported surface supply and improve water supply reliability through alternative supply sources. The groundwater supply replaces a portion of the treated surface water and provides an emergency supply in the event of drought reductions of surface supplies or an outage of the RBWTP.

The first phase of the Well Utilization Project was completed in 2006 with the commissioning of the Glen Park Well. An Environmental Impact Report was prepared by the District to evaluate subsequent project phases consisting of additional wells and supply pipelines to the extent that groundwater quality is found to be favorable at prospective sites and increased pumping does not adversely affect local and regional groundwater resources. EIR milestones for second and third phase well projects (i.e., a second well at the Stonecreek site and a possible third well at another location) included:

- Notice of Preparation of a Draft Environmental Impact Report, December 3, 2007.
- Notice of Preparation and Public Scoping Meeting, January 3, 2008.
- Notice of Determination, December 17, 2008.

The Stonecreek Well was constructed and tested in 2010 and the well station was brought on line in June 2011.

1.5 Database Update

A database of groundwater level and water quality data was compiled as part of the District's 2007 GWMP. That database is updated in this report to include water levels and water quality samples collected through May 2010. Monthly water levels and water quality data was provided by the District. Water quality data for the Diablo Water District, City of Brentwood, Town of Discovery Bay, and Town of Knightsen were obtained from the State Water Quality Control Board Geotracker Groundwater Ambient Monitoring and Assessment Program (GAMA) website and added to the database. Data evaluated in this report are compiled in the following appendices:

Appendix	Title
A	Well Construction Information Diablo Water District and Vicinity
B	Water Level Hydrographs
C	Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

1.6 Monitoring at Stonecreek Well

In 2007, a nested monitoring well was constructed at the Stonecreek site to assess site conditions and suitability for a production well (see location map, **Figure 3**). The monitoring wells were completed at depths of 160, 300, and 360 feet. Water levels have been monitored in these wells at least quarterly since 2007. The Stonecreek production well was completed in May 2010 and is 305 feet deep with perforations between 220 and 295 feet below ground surface (bgs). Groundwater levels and quality for this well are included in this report. The monitoring well and production well facilities at the Stonecreek site are the only new groundwater monitoring locations in the District's program added since the 2007 GWMP.

1.7 Report Organization

The contents of this report are presented in four sections:

1.0 District water supplies and precipitation,
2.0 Groundwater conditions,
3.0 Summary of groundwater monitoring, and
4.0 Other District activities related to groundwater resources.

2.0 District Water Supplies and Precipitation

2.1 Groundwater Utilization

Groundwater utilization within the Diablo Water District is as follows:

2.1.1 Groundwater Pumping

Prior to 2001, the District pumped from Well No. 1 located at its Corporation Yard. However, due to poor groundwater quality, the facility is a standby source for emergency service (CDM, 2005). The Glen Park Well (see location map, **Figure 3**) came on line in 2006 and is equipped to pump at capacities up to 2 million gallons per day (mgd). The water is blended with surface water in the District's water system. **Figure 4** shows surface water and groundwater distribution since 2000.

Additional municipal wells are planned under the District's Well Utilization Project assuming feasibility criteria are met and the projects comply with requirements from environmental studies such as the EIR for a Phase 2 well (Stonecreek) and future Phase 3 well. Ultimately, groundwater may provide up to 20 percent of the District's supply with a well source capacity of 6 to 7 mgd (CDM, 2005).

The Oakley General Plan (2002) states that over 30 small water companies or service districts serving less than 5,000 people are located in the eastern portion of the District's Sphere of Influence. The District owns or operates a number of these wells. In the future, if any area is brought into the District's system, some of these wells may be de-commissioned and destroyed in accordance with management objectives stated in the 2007 GWMP.

Also within the District's SOI are residences with individual domestic wells (wells serving one home). These are small capacity wells that are generally shallower than 200 feet and many are less than 100 feet. By contrast, the Glen Park and Stonecreek wells are completed in deeper aquifer units (230 to 300 feet below ground surface); in part to mitigate potential impacts to the existing wells and in part to satisfy source water protection requirements under the state Drinking Water Source Assessment and Protection Program (DWSAP).

Additional groundwater pumping may occur in the future by new subdivisions in Oakley to irrigate parks, other green areas, or to fill lake features. The District owns and operates a back-up emergency well within the Summer Lake subdivision off Cypress Road and Bethel Island Road (see **Figure 3**) that serves as a municipal back-up well. Besides serving as a standby source, this well is used to fill the lake feature in the subdivision and provide irrigation for large turf areas.

Pumpage by industrial and domestic wells in the unincorporated portions of the District is un-metered, but the pumpage is assumed to be small. Future irrigation pumping within new subdivision areas may represent a more significant component of groundwater pumpage in the District's SOI.

2.1.2 Groundwater Quality

Throughout the District, groundwater quality is variable. While the primary supply wells employed by the District for its water system (Glen Park and Stonecreek) meet primary and secondary drinking water standards, other wells exceed state drinking water Maximum Contaminant Limits (MCL) for some constituents. Examples include the Corporation Yard supply well, which exceeds the MCL for total dissolved solids content, and the Summer Lake back-up well, which exceeds the MCL for manganese. For water supply purposes, the District screens sites to meet drinking water standards as required by the California Department of Public Health (CDPH), which regulates the District's water system operations. It should be noted that individual domestic wells and small water systems are permitted through Contra Costa Environmental Health; while a small water system must comply with state drinking water MCLs, individual domestic wells are only screened for microbiological quality.

For municipal supply purposes, groundwater in the District has higher dissolved mineral content and hardness compared to the surface water supply. Under the Well Utilization Project, groundwater pumped from supply wells is blended with the treated surface water prior to delivery to customers. The blending ratio of groundwater to surface water is controlled automatically to maintain a consistent water quality with a delivered water hardness goal of less than 140 milligrams per liter (mg/L). Under this blending strategy, the proportion of groundwater to surface water is typically about 1 part groundwater to 4 parts surface water; that is, the blended supply consists of about 20 percent groundwater and 80 percent surface water.

While hardness is managed through a blending strategy, the Well Utilization Phase 2 and 3 EIR process revealed a potential concern over increased salinity in the overall water supply. That is, the incremental dissolved mineral content contributed by groundwater would indirectly increase the salt load to the San Joaquin River via discharges through the

Ironhouse Sanitary District (ISD). As a result, ISD expressed concerns over meeting more stringent salinity limits under its National Pollutant Discharge Elimination Systems (NPDES) permit and under state Waste Water Discharge Requirements. The District worked collaboratively with ISD in response to comments on the project EIR and incorporated mitigation measures in the Final EIR to address the salinity issue, including the following:

- Except during times of water shortage, District will operate its project so as not to exceed a hardness level of 140 parts per million whenever it is blending well water with surface water.
- District will cooperate with ISD to identify operating strategies for its project that assist ISD in complying with effluent discharge requirements.
- District and ISD will jointly work to reduce salt loading from water softeners, which was identified as a significant source of salt in ISD's effluent.
- District will consider opportunities to participate with ISD in pursuing grant to address salinity issues within their overlapping service areas.
- District will cooperate with ISD to investigate opportunities to develop and implement new technologies that are designed to improve water quality.

2.2 Surface Water Supply

2.2.1 Surface Water Supply

The Diablo Water District surface water supply is treated surface water from the Central Valley Project (CVP) purchased from Contra Costa Water District (CCWD). CCWD contracts with the U.S. Bureau of Reclamation for CVP water. The CVP water is conveyed through the Contra Costa Canal and treated at the Randall-Bold Water Treatment Plant in Oakley (see **Figure 3**).

2.2.2 Surface Water Quality

Historically, the quality of the District's surface water supply was affected by seasonal and climatic factors. During periods of water shortage, there would be insufficient flow through the Delta to repel high salinity water from the San Francisco Bay. As a result, salt water flow into the Delta mixed with freshwater, reducing the quality of the water at CCWD's water supply intakes. In 2010, CCWD dedicated its Alternate Intake Project designed to mitigate variable salinity in the water supply that is received by the Diablo Water District. This project is designed to significantly reduce salinity of the District's source water, especially for periods when Delta water quality is degraded and salinity levels are highest. The project will reduce total chloride concentration peaks of as high as 175 to 200 mg/L to a delivery goal of approximately 65 mg/L. This reduction in source water salinity is expected to occur at the time that the second phase of the District's proposed Well Utilization Project groundwater project is implemented.

2.3 Precipitation

Precipitation is considered a significant source of recharge to shallow groundwater and to the deeper aquifer units that are targeted in the District's supply wells. Precipitation data from various area and regional stations were reviewed. A station at the Antioch Pumping Plant was found to be closest in proximity to the study area, but it had intermittent data over the past 10 years. **Figure 5** shows annual precipitation and a cumulative departure curve for the Concord WWTP station (USGS, 2011) that was found to be representative of trends for the region. Consistent with the state-wide drought between 2007 through 2009, the departure curve shows a steep decline in the period since the District's Glen Park well started operations and for which much of the monitoring data has been compiled to date. This drought represents a potentially significant factor in the interpretation of the relatively short period of record for ground water levels and water quality that are discussed in this report. Subsequent reporting will aid in interpretations of groundwater conditions as the monitoring baseline extends through normal and wet years.

3.0 Groundwater Conditions

3.1 Introduction

Diablo Water District overlies a portion of the San Joaquin Valley Groundwater Basin as designated by the California Department of Water Resources (DWR) Bulletin 118. The District is located in the northwestern portion of the Tracy Subbasin, which is one of sixteen subbasins in the San Joaquin Valley Groundwater Basin. The District's existing and prospective new wells under the Well Utilization Project are located in the Tracy Subbasin. Available information on the Tracy Subbasin summarized below is partly based on the information contained in DWR Bulletin 118, Update 2003 (DWR, 2003b) and a more detailed basin description on the DWR web site (DWR, 2004).

> Tracy Subbasin DWR Basin No. 5-22.15
>
> The Tracy Subbasin includes the northwestern most portion of the San Joaquin Valley Groundwater Basin around the Sacramento-San Joaquin Delta and extending south into the central portion of the San Joaquin Valley. Overall, population density within the subbasin is relatively sparse, with the major cities being Tracy, Brentwood, and Oakley. Subbasin boundaries are defined by the Mokelumne and San Joaquin Rivers on the north; the San Joaquin River on the east; and the San Joaquin-Stanislaus County line on the south. The western subbasin boundary is defined by the contact between the unconsolidated sedimentary deposits and the rocks of the Diablo Range.

3.2 Hydrogeology

Hydrogeology is concerned with the occurrence and characteristics of groundwater and related geologic factors. Geologic factors may include depositional patterns of aquifer materials and limits to those materials such as through faults. Hydrogeology is also concerned with the interrelationships between surface water and groundwater.

A hydrogeologic description of the District was developed in a 1999 study by Luhdorff and Scalmanini Consulting Engineers (LSCE) in which hundreds of well logs were reviewed and interpreted to delineate hydrogeologic features in the east Contra Costa County area. In general, water resources in the region and within the District area are limited to alluvium materials to 400 to 500 feet. Below these depths, brackish to saline water has been encountered. The characteristics of alluvium vary in the region according to depositional environment (e.g., stream versus delta environments). The model of the alluvium in the District area encompasses all four types identified in the 1999 regional study:

Fluvial Plain
Representative of the eastern portions of Diablo Water District and southward to Discovery Bay. The setting probably similar to that which occurs in the present day area with northward flowing river channels, distributaries, and sloughs across floodplains of overbank areas. Deposits extend to depths of about 350 feet, below which occur largely fine-grained silts and clays.

Delta Islands
Representative of the northeastern portion of Diablo Water District and encompasses Bethel Island and vicinity. Sand and gravel beds may correlate to the Fluvial Plain, but net sand thicknesses and the number of beds appears to increase northward. Depositional environment interpreted as multiple stream channels meandering between islands. Channels would be active with through-flowing waters, then abandoned as new channels developed. Possibly slower stream flow and tidal fluctuations allowed thicker, fine-grained sand deposits to form.

Marginal Delta Dunes
Representative of the central to western portion of Diablo Water District and defined by numerous thin to thick sand beds. Depositional environment a mixture of delta fluvial distributary channels and possibly aeolian dune fields. Between Oakley and northern Brentwood, a surface deposit of rolling gentle hills of relic sand dunes occur. These sand dunes are believed to have been generated by strong winds blowing sand off the delta margins. Some deeper sand beds across the Marginal Delta Dunes area may be older dune fields.

Alluvial Plain
Representative of greater Brentwood south of the Marginal Delta Dune and City of Oakley, and west of the Fluvial Plain. Depositional environment is small streams draining eastward from the Coast Range foothills to the west. Flood flows of these streams spread out from the

hills depositing fine-grained materials, possibly as mudflows with high sediment content. Stream flows deposited thicker sand and gravel beds that tended to stack upon each other causing the thicker bands of sand beds. The thicker stream deposited sand and gravel bands extend eastward until the sands either pinch out or have not been reached by wells. In the north, the stream deposits appear to reach into the Marginal Delta Dunes area, blending into the sand units that are present there.

Geologic cross sections through the District area are presented in the 2007 GWMP and depict the occurrence and depositional features of aquifer units summarized above. The occurrence and limits of aquifer materials are considered in the interpretation of groundwater conditions below.

3.3 Groundwater Levels

3.3.1 Groundwater Level Monitoring Program

A primary focus of the District's groundwater monitoring program is on monitoring groundwater levels in the vicinity of its production wells at the Glen Park and Stonecreek sites. Manual water level measurements are made monthly in monitoring network wells that include dedicated monitoring wells constructed by the District and private domestic wells. The District wells include monitoring wells at the Glen Park, Stonecreek, and Creekside sites, and the Glen Park, South Park, and Knightsen production wells.

In addition to the wells monitored by the District for groundwater levels, the District also has integrated groundwater level data collected by other entities in the region. The wells in the groundwater level monitoring network are shown in **Figures 3** and **6**. These include shallow groundwater piezometers monitored by ECCID since the 1950s. Although most of the ECCID wells are located south of the District's boundaries, three ECCID wells are located favorably with respect to ongoing shallow groundwater monitoring objectives of the District. The City of Brentwood's Wells 6, 7, 8, 9, 10A, 11, 12, 13, and 14 are of interest for monitoring in aquifer units targeted in the District's Well Utilization Project, which are typically deeper than domestic wells in the area.

3.3.2 Evaluation of Groundwater Levels in Vicinity of Diablo Water District

For the purposes of evaluating groundwater conditions, it has been recognized that groundwater occurs in the District area within a shallow unconfined aquifer and within a deeper confined system. Domestic wells are typically completed in the shallower zone, though monitoring indicates that some extend to deeper units completed in the larger municipal wells in the region operated by the District and the City of Brentwood. Select hydrographs are discussed below to illustrate trends in each of these systems. Hydrographs for all of the monitored wells are presented in **Appendix B**.

3.3.2.1 Shallow Aquifer

Locally, wells less than 200 feet, and often less than 100 feet deep, are considered to be completed in the shallow unconfined aquifer system (LSCE, 2007). A subset of domestic wells in the vicinity of the Glen Park production well, completed within the upper 60 feet of the shallow aquifer, were monitored to evaluate the impact of the first phase of Well Utilization Project (i.e., the Glen Park Well) on nearby domestic wells. These wells include 3340 Doyle, 3060 Doyle, 3071 Doyle, 3080 Doyle, 3200 Doyle, and 3199 Crismore. The hydrographs for wells at 3071 Doyle 3199 Crismore (**Figures 7** and **8**) are representative of this group, displaying very shallow water levels (10 to 15 ft bgs) with only minor seasonal fluctuations. From 2007 through April 2011 water levels were slightly lower, on the order of 1-2 feet, due to lower precipitation received during these years. These wells do not appear to show any response to pumping in the Glen Park Production Well.

An additional group of domestic wells in the vicinity of the Glen Park site are completed in a deeper interval of the shallow aquifer (roughly 120-200 ft bgs). These wells include 3239 Doyle, 21 Lozoya, 185 Lozoya, and 6155 Vitale. A single monitoring well at the Stonecreek site is also competed in this interval (160 ft bgs) and exhibits similar behavior to these domestic wells (see **Appendix B**). The hydrograph for well 3239 Doyle is representative of this group (**Figure 9**), exhibiting seasonal fluctuations of 10 to 12 feet with a slight decline in peak water levels since 2004. Water level trends in this group of wells are similar to those of the Knightsen Town well which is completed between 265 and 305 feet bgs and is in the deeper aquifer system. Trends in these wells appear to represent characteristics that are intermediate between the shallow unconfined aquifer above and the confined deep aquifer as discussed below.

3.3.2.2 Deep Aquifer

Based on the hydrogeologic model of the area as delineated in the 1999 regional study by LSCE, the deeper aquifer units are targeted in regional large capacity supply wells that are 200 feet or more in depth (LSCE, 2007). Seasonal water level fluctuations from 15-20 feet bgs are typical of these wells with some variation in peak water levels according to climatic trends.

Since Diablo Water District began pumping the Glen Park production well in August 2006, water levels in the Glen Park monitoring well have remained consistent with seasonal fluctuations observed prior to 2006. The hydrograph for the Glen Park monitoring well (**Figure 10**) shows increased drawdown during the summer months (10-15 additional feet) when use of the Glen Park production well is greatest. This is followed by a full recovery of water levels during seasonally wet months (November to April). Groundwater levels in the period between 2007 and 2010 appear to be affected by the state-wide drought (see **Figure 4**). While there is no evidence that pumping at Glen Park has induced any trend in groundwater levels, a longer baseline through normal to wet years will be needed to fully interpret any influences by District pumping.

Groundwater levels in the Creekside monitoring well (**Figure 11**), located approximately one-half mile northwest of the Glen Park production well, have increased roughly 5 feet since 2007. Observed water levels in the early part of 2008 and 2009 closely match measurements taken in the early part of 2004. The greatest drawdown observed in this well (68 ft. bgs) occurred in September of 2007, corresponding to similar levels in the Glen Park monitoring well. In 2008, the peak observed drawdown in the Creekside monitoring well was 10 feet less than 2007, despite increased pumping from the Glen Park production well.

Groundwater levels in the Knightsen Town well (**Figure 12**), have remained relatively stable since 2004, with peak water levels generally fluctuating less than 5 feet from 2004 through 2010. Water levels fluctuate seasonally 15 to 20 feet. Water levels declined generally from 2004 through 2007 before rising 2-3 feet from 2008 through 2010. In February of 2006, the maximum water level in the Knightsen Town well rose nearly 15 feet higher than other years of record due apparently to high precipitation.

Two monitoring wells at the Stonecreek site, MW-300 and MW-360, are completed in the deep aquifer system approximately one-half mile northeast of the Glen Park production well. Water levels in these wells are nearly identical to one another. Water levels have increased 5-10 feet since 2007, with seasonal fluctuations from 15-20 feet (**Figures 13A** and **13B**).
Groundwater levels in the South Park Production Well, located along the eastern boundary of the Water District, declined roughly 5 feet from 2008 through the beginning of 2011 (**Figure 14**).

3.3.3 Groundwater Elevation Contours

A combination of well construction information (**Appendix A**) and observed trends in groundwater elevations for monitored wells was used to classify wells within the District's sphere of influence as either shallow or deep. With these classifications, measured groundwater levels in domestic wells for the spring and fall 2009 and 2010 were used to contour groundwater elevation in the shallow aquifer in the vicinity of the Well Utilization Project well at Glen Park. Attempts to contour data from wells completed in deeper aquifer units were limited by well control and did not produce realistic results. Shallow aquifer contours for spring and fall 2009 are shown on **Figures 15A** and **15B**. Similar contour maps for spring and fall 2010 are presented in **Figures 16A** and **16B**.

Shallow groundwater elevations in **Figures 15** and **16** are relatively flat with slight slopes from southwest to northeast. The relatively flat water table and lack of seasonal fluctuations suggests that this aquifer system is not influenced by pumping from deeper wells such as those operated by the District and City of Brentwood.

Despite a lack of well control for the deep and intermediate aquifers, it appears that groundwater elevations for each of these aquifers are also relatively flat. Water levels measured in wells that exhibit intermediate characteristics (Creekside, the Knightsen School wells, 185 Lozoya, 21 Lozoya, and 3229 Doyle) may be semi-confined with similar seasonal fluctuations as observed in the deep aquifer, but with higher water level elevations that reflect the overlying unconfined shallow aquifer.

As part of its ongoing efforts to monitor and interpret trends in groundwater levels, the District should continue to collect data for the shallow and deep aquifer. Where possible, opportunities to expand well control in the deeper aquifer should be sought. It is likely that greater understanding of the system will result when the Stonecreek well is commissioned and in operation.

3.3.4 Land Subsidence

Land subsidence is the lowering of the ground surface due to compaction of compressible, fine-grained strata. Compaction is most often attributed to fluid extraction; that is, groundwater pumping and oil and gas production. Compaction can be fully reversible (elastic) or permanent (inelastic). Elastic compaction and expansion occur in response to seasonal groundwater level fluctuations. Elastic compaction occurs during periods of seasonal groundwater level declines (typically in the summer and fall), and expansion occurs during periods of water level increases in the winter and spring. The difference between the elastic compaction and expansion at the time of maximum recovery represents the annual inelastic compaction, or subsidence. Inelastic compaction is most likely to occur when groundwater levels reach new historical lows during the irrigation season or do not recover fully during the following winter. Subsidence avoidance is generally accomplished through management of groundwater pumping so that water levels do not decline on a long-term or permanent basis below either historic levels, or those levels that would cause dewatering of aquitards.

Subsidence due to groundwater extraction is the primary cause of subsidence in California, but most subsidence reported in the Sacramento-San Joaquin Delta, including eastern Contra Costa County, has been caused by construction of levees around the Delta islands and the dewatering of soils for agricultural production increased the exposure of organic (peat) soils to oxygen. This caused subsidence due to microbial oxidation of the peat soils. Another factor is that the natural delivery of sediments from the upper watershed to the Delta has been interrupted by the construction of upstream dams and island levees, so there is less sediment available to counteract the effect of peat soil dewatering. The rate of subsidence in the Delta has typically been 0.4 to 0.6 inches per year, and ground surface elevations in the central Delta islands are currently 10 to 25 feet below sea level (DWR, 2006).

Historically, land subsidence was monitored along transects using periodic spirit level surveys conducted by the USGS and the National Geodetic Survey. In the mid-1980s, a transition was made from spirit level surveys to global positioning system (GPS) surveys. Like spirit level transects, GPS subsidence-monitoring surveys rely on periodic resurveying of a network of monuments. The accuracy of GPS surveys has gradually improved and is currently on the order of plus or minus one centimeter.

A non-instrumented GPS monitoring network was installed in the Delta in the mid-1990s, and surveys were conducted in 1997 and 2002. The Delta network currently consists of about 120 stations. The 2002 resurvey of the Delta network showed no subsidence because the GPS monuments have deep foundations (typically 25 feet), which means that any additional subsidence due to compaction of peat soils would not be observed in the data.

Instrumented GPS monitoring stations are generally referred to as Continuously Operating Reference Station (CORS). Each CORS site includes a high-resolution GPS receiver and antenna and most have a solar collector and battery for power supply. The GPS receivers are attached to steel or concrete structures that are anchored deep into the soil. GPS positions are recorded at intervals of five to 30 seconds, and a daily average is calculated from all of the data to achieve maximum accuracy. CORS sites use some form of telemetry (typically a radio transceiver) to upload the data.

At present, there are three CORS sites in Contra Costa County operated by the Plate Boundary Observatory (PBO), which is the geodetic component of the EarthScope project administered by the University NAVSTAR Consortium and funded by the National Science Foundation (NSF). EarthScope is designed to study the three-dimensional strain field along the boundary between the North American and Pacific tectonic plates. PBO began installing GPS receivers in the western U.S. in 2003, and there are 1,235 stations in the PBO network at present. Although the focus of PBO is on tectonic movement, its GPS stations monitor vertical as well as horizontal displacement and can be used to monitor land subsidence.

Diablo Water District's 2007 Groundwater Management Plan has a stated objective of subsidence avoidance. Although groundwater monitoring to date does not indicate that groundwater pumping within the District would induce land subsidence (i.e., since water level trends are essentially flat), a review of relevant CORS was performed in accordance with the GWMP. The three CORS sites in Contra Costa County are shown on **Figure 17**. The closest PBO station to the District, labeled P256, is located south of the Veale Tract and east of Brentwood and began collecting data on March 16, 2005. The other two stations in Contra Costa County are P230, located west of Los Vaqueros Reservoir, and P248, located south of Pittsburg. Data collection at station P230 began on February 26, 2005, and data collection at station P248 began on September 20, 2007. The vertical displacement measured at each of these stations is shown on **Figures 18** to **20**.

The daily vertical displacement at PBO Station P256 is plotted on **Figure 18**. A 60-day moving average is also plotted because there is a considerable amount of noise in the raw data. Such noise is typical of vertical GPS data and is caused by various factors, including satellite geometry (the noise level increases when there are fewer satellites available or the satellites are closer to the horizon), moisture in the atmosphere, and multipath interference from nearby buildings or trees. The moving average of the vertical data plotted on **Figure 18** shows seasonal fluctuations typical of those caused by groundwater pumping (elastic compaction during the summer and fall and expansion during the winter and spring). From March 2005 through March 2008 there was approximately 10 mm of inelastic compaction, followed by about 2 mm of expansion through February 2009. The total subsidence during the four-year period from March 2005 through February 2009 is about 8 mm or 1/3 of an inch. While there is a trend indicated in the limited historical record, it is independent of District operations due to the lack of any decreased groundwater levels. Nevertheless, future reports on groundwater conditions will seek to update this information as part of the District's overall groundwater management activities.

3.4 Groundwater Quality

Groundwater quality data is compiled in **Appendix C.** A location map of wells discussed in this section is shown on **Figure 21** and plots of geochemical properties are shown on **Figures 22** to **24**.

3.4.1 District Wells

Groundwater quality data for Diablo Water District wells was collected from the State Water Resources Control Board Geotracker Gama Project, California Department of Public Health records, and Diablo Water District. Water quality data for District wells at the Glen Park site, Well No. 1 (Corporation Yard), Stonecreek, and the South Park well are described below.

Glen Park Well

Due to its short period of record, water quality trends cannot not be interpreted for this well. Testing in May 2004 of samples from the Glen Park monitoring well had a chloride concentration of 72 mg/L while the latest production well concentration is 108 mg/L (July of 2011). Nitrate (as NO_3) is low in the production well at approximately 4 mg/L. Electrical conductivity (EC) has varied from 930 to 1100 µmhos/cm in samples from 2004 in the monitoring well and 2011 from the production well. Total dissolved solids (TDS) were measured at 661 mg/L (July of 2011) in the production well.

Corporation Yard Well

The District's Well No. 1 at the Corporation Yard was regularly sampled from January 1992 through August 2000. Water quality samples were again analyzed in June 2008 and nitrate was measured in June 2010. Results from the 2008 sampling indicate an increase in EC (1680 to 2400 µmhos/cm), calcium (119 to 190 mg/L), magnesium (58 to 83 mg/L), and manganese (62 to 400 µg/L) concentrations between 2000 and 2008. The June 2010 sample shows an increase in nitrate (as NO_3) from 0 to 26 mg/L. Although this well is located in an area outside of that targeted for the Well Utilization Project, the apparent changes in water quality between 2000 and 2008-10 should be investigated to distinguish between something occurring in the groundwater system and that due to well construction (i.e., some cross-flow between connected aquifer units). If the latter is the cause, the well should be remediated or destroyed.

Stonecreek Well

Water quality samples for the Stonecreek Well in May of 2010 indicate that it has similar characteristics as the Glen Park Well, although manganese and boron are lower. Similarity in water quality was a basis for selection of this site for Phase 2 of the Well Utilization Project with the monitoring well at the site used to verify water quality before project construction.

South Park Standby Well

The South Park standby well was last sampled in June of 2006. Results indicate elevated boron (1,800 µg/L), iron (210 µg/L), and manganese (140 µg/L). Other characteristics are similar to those at the Glen Park and Stonecreek wells.

3.4.2 GeoTracker Data

Groundwater quality data for wells surrounding the Diablo Water District were obtained from the State Water Resources Control Board (SWRCB) Geotracker Gama database and the California Department of Public Health (CDPH). Information for wells that could be identified (well name and owner) and spatially located are included in **Appendix C** and the locations shown on **Figure 21**.

Data from three wells in the Town of Knightsen, Town Well 1 (community production well), Elementary School Well 1, and Elementary School Well 2 (irrigation well) were reviewed. Chloride (180 mg/L), arsenic (4.1 µg/L in Well 1) and manganese (650 µg/L) concentrations from June 2004 were reported for the Elementary School wells. Nitrate (as NO_3) concentrations in the Elementary School irrigation well fluctuate significantly, occasionally approaching the MCL of 45 mg/L. A single sample event for Town Well 1 suggests that the water produced by that well is significantly better than the Elementary School wells and is consistent with that in the Glen Park Well.

The City of Brentwood has six production wells located south of the District's Glen Park Well. Based on the hydrogeologic setting described previously, the groundwater system is believed to have continuity between these areas. Of the six wells, City of Brentwood Wells 6, 7, 8, and 14 have water quality information dating as far back as 1990. In general, water quality in these wells has seen increased chloride and total dissolved solids; approximately 100 to 200 mg/L for chloride and 600 to 1,000 mg/L for TDS since the earliest reported testing. However, recent test results indicate a drop in chloride possibly as a result of adding surface water as a regular-use in the last two years. With the exception of Well 14, nitrate (as NO_3) has remained relatively stable since 2000, ranging from 4 to 20 mg/L in the wells. Nitrate (as NO_3) concentrations in Well 14 have increased from 5.3 mg/L in November 2000, to 19 mg/L in February 2010. None of these wells have exceeded primary or secondary drinking water MCLs. Arsenic in Well 14 typically is between 3 and 4 µg/L. Boron concentrations fall between 1 and 1.5 mg/L in this group of wells. Iron and manganese were not regularly reported and are below the drinking water MCL.

Further south, the City of Brentwood has three additional production wells (11, 12, and 13) and one irrigation well (Well 10A). Wells 12 and 13 exhibit similar water quality trends and results. TDS and nitrate (as NO_3) in both wells are relatively low: 440 mg/L to 550 mg/L for TDS and 4.1-9.0 mg/L for nitrate (as NO_3). Chloride concentrations have remained relatively stable in both wells with concentrations in Well 12 at 88 to 100 mg/L, and 68 to 85 mg/L in Well 13. Wells 10A and 11 have much higher TDS at 645 to 1,289 mg/L, chloride at 110 to 245 mg/L, and nitrate (as NO_3) at 8.82 to 49 mg/L. Nitrate (as NO3) in Well 11 is approaching the MCL of 45 mg/L. Arsenic in Well 10A ranges from 6 to 8 µg/L. Boron in these wells ranges from 1.3 to 1.9 mg/L. Iron and manganese were not regularly reported.

Four production wells in the Town of Discovery Bay (Wells 1B, 2, 4A, and 5A) have water quality records. TDS, chloride, and nitrate (as NO_3) trends in all of the wells are roughly the same. TDS is generally stable around 600 mg/L, chloride has remained stable around 100 mg/L (with a small spike in 1997), and nitrate (as NO_3) has remained below the detection limit. Manganese concentrations in these wells are generally high, ranging from 50 to 150 µg/L, with typical concentrations between 120 and 150 µg/L. Iron concentrations typically hover around 100 µg/L, although occasionally concentrations as high as 400 µg/L are detected. Boron concentrations are also high, ranging from 2 to 3.4 mg/L. Arsenic concentrations in Well 5A range from 2 to 4 µg/L. The Town of Discovery Bay employs treatment for manganese removal and the delivered supply meets all drinking water primary and secondary MCLs.

4.0 Summary of Groundwater Monitoring

As part of the 2007 Diablo Water District Groundwater Management Plan, an ongoing monitoring program was established to meet the objective of "maintaining a high quality, reliable, and sustainable supply of groundwater within the District's sphere of influence." This is accomplished by monitoring groundwater conditions, both quantity and quality, and assessing trends. Through 2010, the primary focus of the District's monitoring program has been to assess the influence of the Glen Park Well on local water levels and to determine regional trends in water quality as baselines for evaluating possible future influences of the Well Utilization Project. A summary of results is provided below.

4.1 Groundwater Levels

Monitored wells in the District's area exhibit distinguishing characteristics that are attributed to their depths of completion and can be categorized in terms of shallow, deep, and other wells that have characteristics that are intermediate to the shallow and deep wells. In hydrogeologic terms, the shallow wells are completed in the shallow groundwater that is unconfined; the deep wells, such as used for municipal supply, are confined by overlying clay formations; and intermediate wells are likely connected to both. Conclusions regarding each category are as follows:

Shallow Wells
Shallow domestic wells, most likely completed in aquifer units less than 100 feet in depth, exhibit stable conditions with little seasonal fluctuation throughout the period of record. There are no apparent pumping influences of pumping by District or other wells.

Deep Wells
Deep monitoring and supply wells, completed in aquifer units greater than 200 feet in depth, exhibit stable conditions with seasonal fluctuations throughout the period of record. There are no adverse trends in groundwater levels for any of these wells.

Intermediate Wells
Some supply wells, likely completed with hydraulic connection to both shallow and deep aquifer units, exhibit stable conditions. The seasonal fluctuations are greater than the shallow domestic wells described above. There are no adverse trends in groundwater levels for any of these wells.

4.2 Subsidence

There are no apparent mechanisms, such as permanent decline in water levels, which would trigger subsidence due to the District's Well Utilization Project. Subsidence monitoring as discussed in this report may provide a useful baseline for future reporting and analysis.

4.3 Groundwater Quality

In general, the period of record for water quality does not permit interpretation of trends in the District area. The lack of trends in groundwater elevations described for all types of wells categories described above indicates a lack of any mechanism for groundwater degradation due to the District's activities. The District's Corporation Yard well exhibited an increase in selected constituents, which was revealed in test results that are 8 and 10 years apart. Though this well is located outside the area targeted in the District's Well Utilization Project, it is recommended that the cause of the apparent change in water quality be investigated.

5.0 Other District Activities

5.1 Salinity Mitigation

As indicated in the EIR for the District's Well Utilization Project Phase 2 and Future Phase 3, the District plans to undertake measures and update its AB3030 Groundwater Management Plan to address concerns with incremental salinity in its water supply. The timing of specific actions is to coincide with the commissioning of the Stonecreek Well by summer 2011. District will implement monitoring and accounting to quantify salt reduction resulting from the various mitigation actions cited previously in this report and which are detailed in the project Final EIR. It is expected that the combination of the CCWD's Alternative Intake Project and salinity offsets the District will target through a Groundwater Management salinity component will translate to an overall reduction in salt from the District's service area.

5.2 CASGEM

In 2009, the state legislature amended the Water Code with Senate Bill SBx7-6, mandating a groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's alluvial groundwater basins. The bill requires collaboration between local monitoring entities and Department of Water Resources in collecting the data.

In accordance with SBx7-6, the California Statewide Groundwater Elevation Monitoring (CASGEM) program seeks to establish a permanent, locally-managed program of regular and systematic monitoring in all of California's alluvial groundwater basins. The CASGEM program will rely and build on established groundwater monitoring and management programs. DWR will coordinate the CASGEM program, work cooperatively with local entities, and maintain the groundwater elevation data in a public database as a measure toward improving management of California's groundwater resources.

The District is participating in CASGEM to meet multiple objectives in the 2007 GWMP including ongoing groundwater elevation monitoring, providing public access to data, and collaborating where possible to improve resource management. To date, the District has applied through the CASGEM program to be a monitoring/reporting entity and is currently responding to DWR requests for details of monitoring locations.

5.3 Prop 84 Grant

In 2010, the District participated in a successful Prop 84 grant application with other regional entities in the East County Water Management Association. The grant application was prepared to revise the region's Integrated Regional Water Management Plan (IRWMP) by updating an existing 2005 Functionally Equivalent IRWMP. The revised plan seeks to bring the existing plan to current standards and respond to current needs and conditions. Specifically, a task is included to update the 1999 hydrogeologic study by LSCE and provide a basis for future estimates of the yield of local groundwater resources on which the participating entities rely. Participation in this project is consistent with stated objectives in the District's GWMP of estimating safe yield in the basin and participating in collaborative efforts related to groundwater resources and management. The work is expected to be conducted in the second half of 2011.

6.0 References

Atwater, B.F. 1982. *Geologic Maps of Sacramento - San Joaquin Delta, California*. USGS MF-1401.

California Department of Water Resources. Undated report (printed 2006). *Subsidence in the Sacramento-San Joaquin Delta*. Available: http://baydeltaoffice.water.ca.gov/ndelta/levees/subsidence.html. Sacramento, CA.

CDM. 2004. *Diablo Water District Well Utilization Project Preliminary Design Report.*

CDM. 2005. *Diablo Water District Urban Water Management Plan.* Walnut Creek, CA.

Luhdorff and Scalmanini, Consulting Engineers. 1999. *Investigation of Ground-Water Resources in the East Contra Costa Area.* Woodland, CA.

Luhdorff and Scalmanini, Consulting Engineers. 2007. *Diablo Water District Groundwater Management Plan for AB3030.* Woodland, CA.

Pacific Municipal Consultants. 2002. *Oakley 2020 General Plan.*

Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and Bertugno, E.J.; Compilers. 1981. *Geologic Map of the Sacramento Quadrangle*. California Division Mines and Geology, Regional Geologic Map Series, Map No. 1A; Scale 1:250,000.

Wagner, D.L., Bertugno, E.J., and McJunkin, R.D.; Compilers. 1990. *Geologic Map of the San Francisco-San Jose Quadrangle*. California Division Mines and Geology, Regional Geologic Map Series, Map No. 5A; Scale 1:250,000.

Welch, L.E. 1977. *Soil Survey of Contra Costa County, California*. USDA, Soil Conservation Service.

Figures

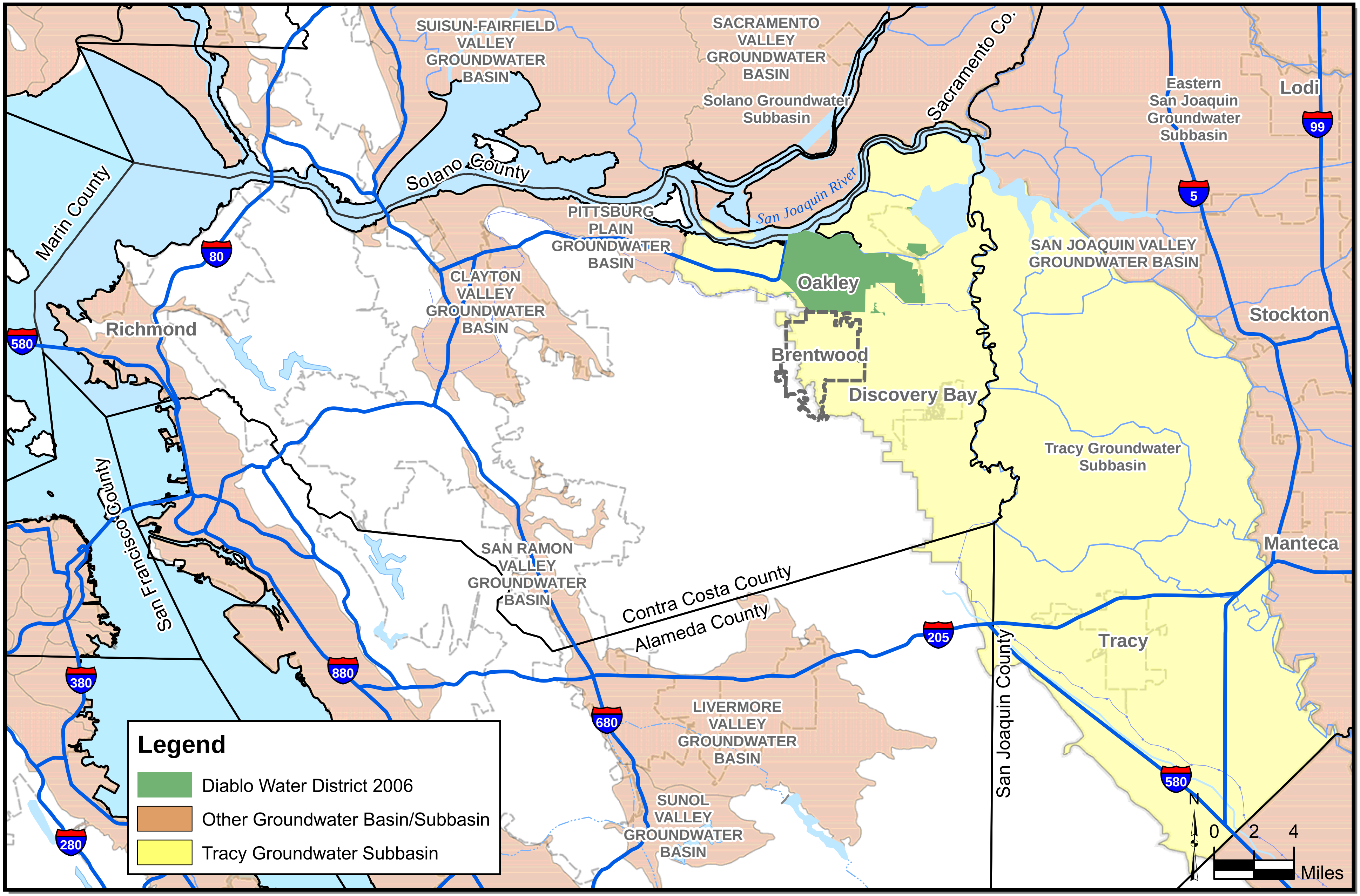

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Figure 1
Diablo Water District Location Map

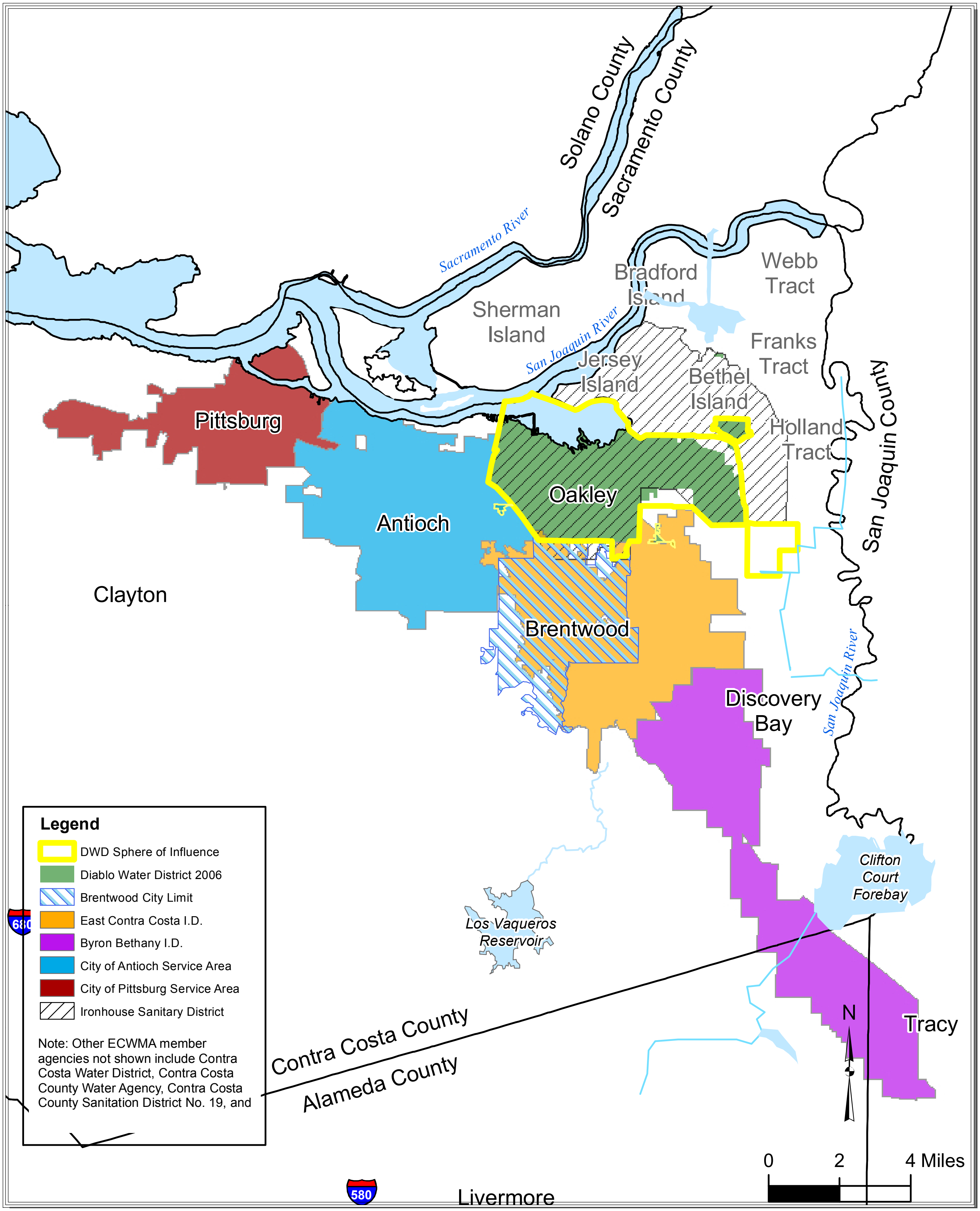

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Figure 2
Diablo Water District Sphere of Influence

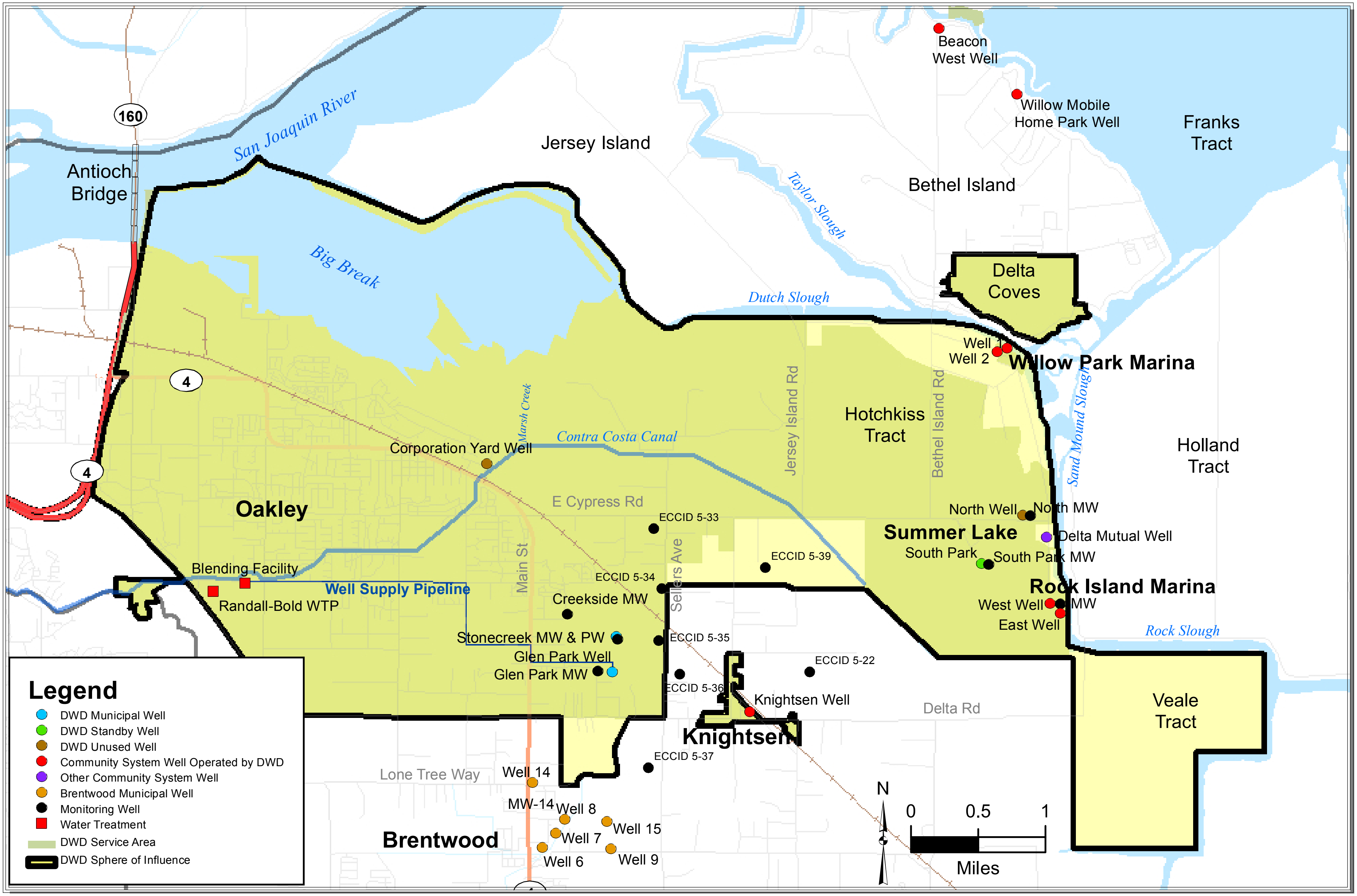

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Figure 3
Diablo Water District Service Area and Well Locations

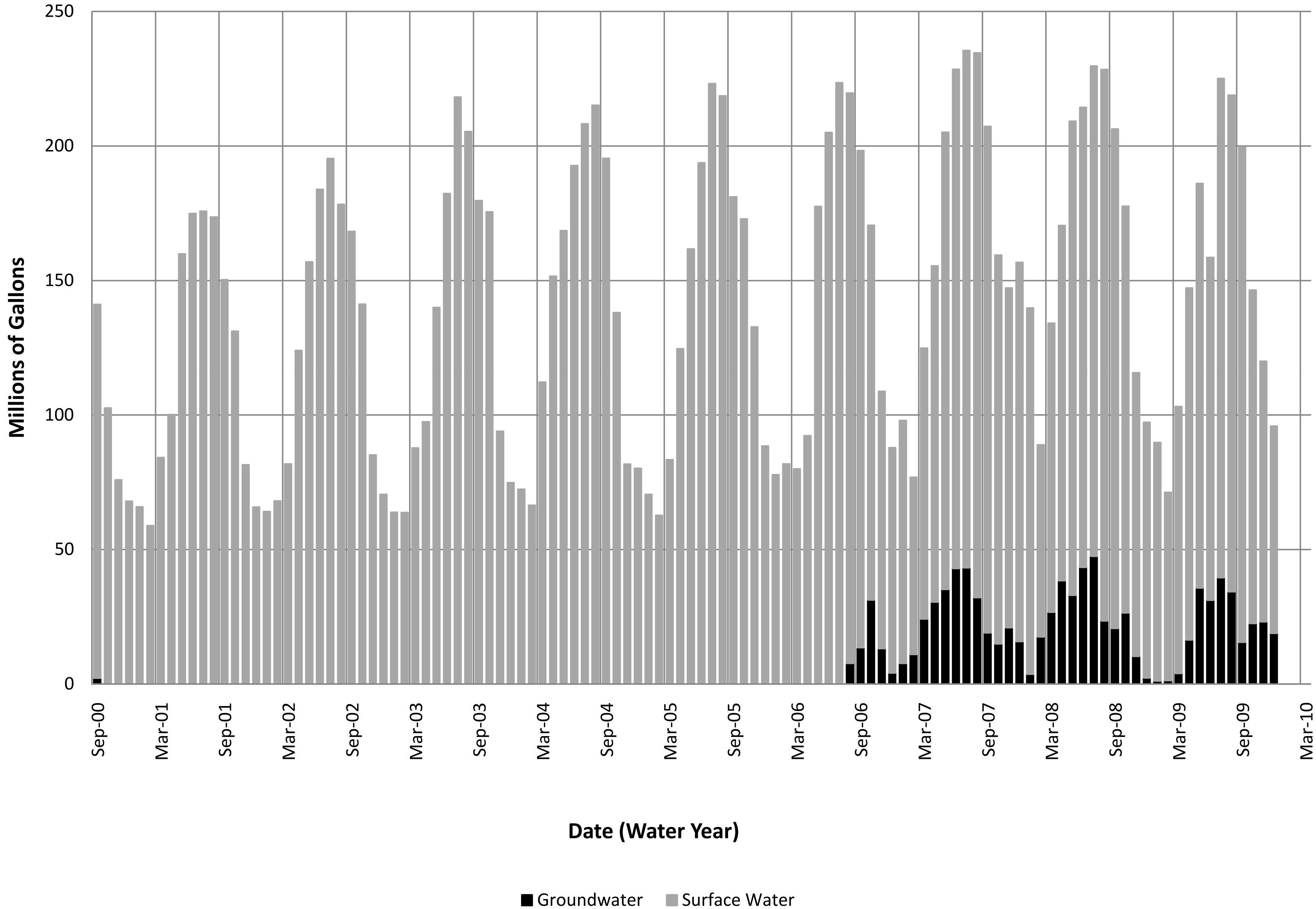

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Figure 4
Diablo Water District Distribution By Source

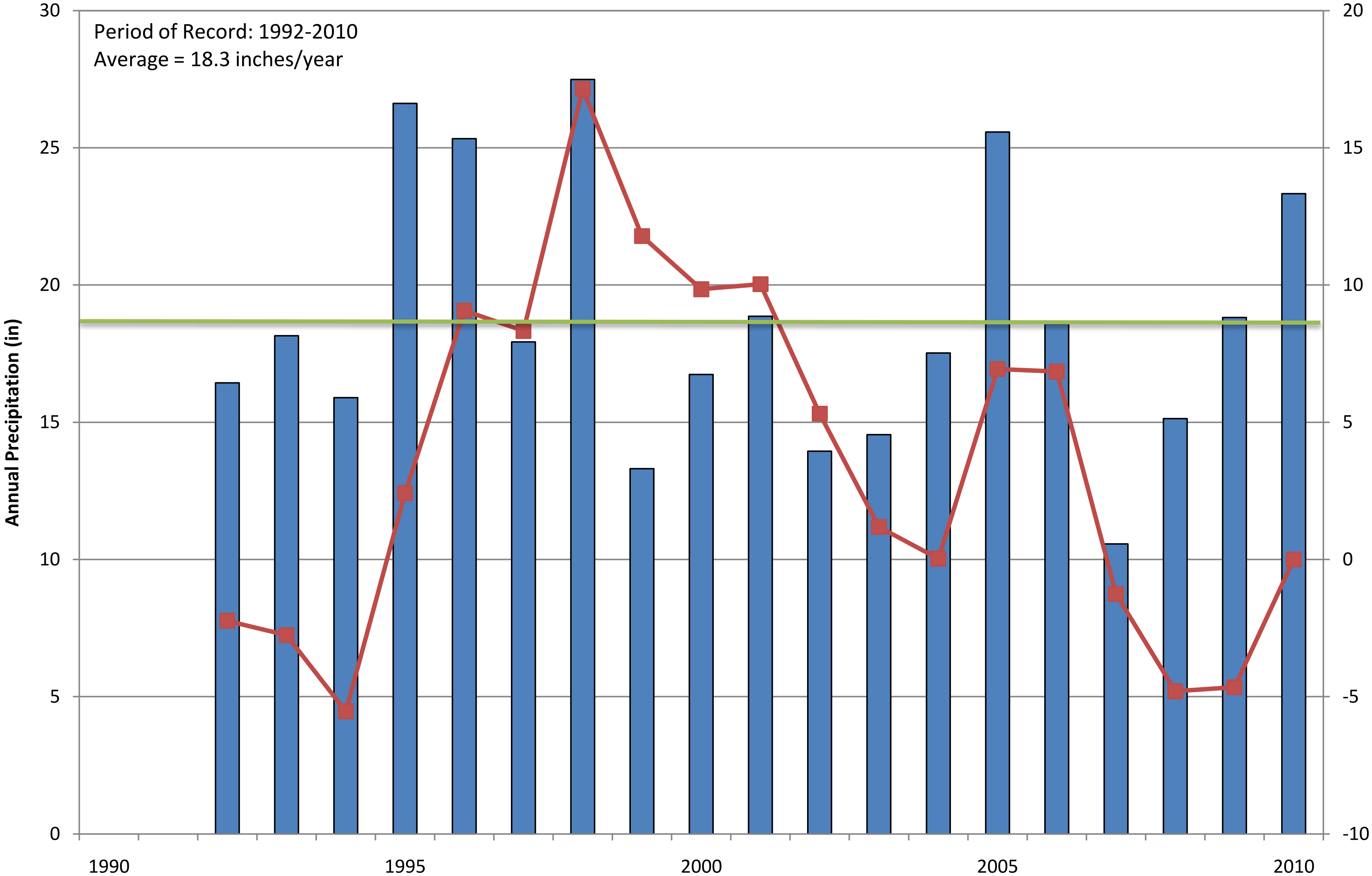

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Figure 5
Annual Precipitation and Departure Curve
Concord WWTP

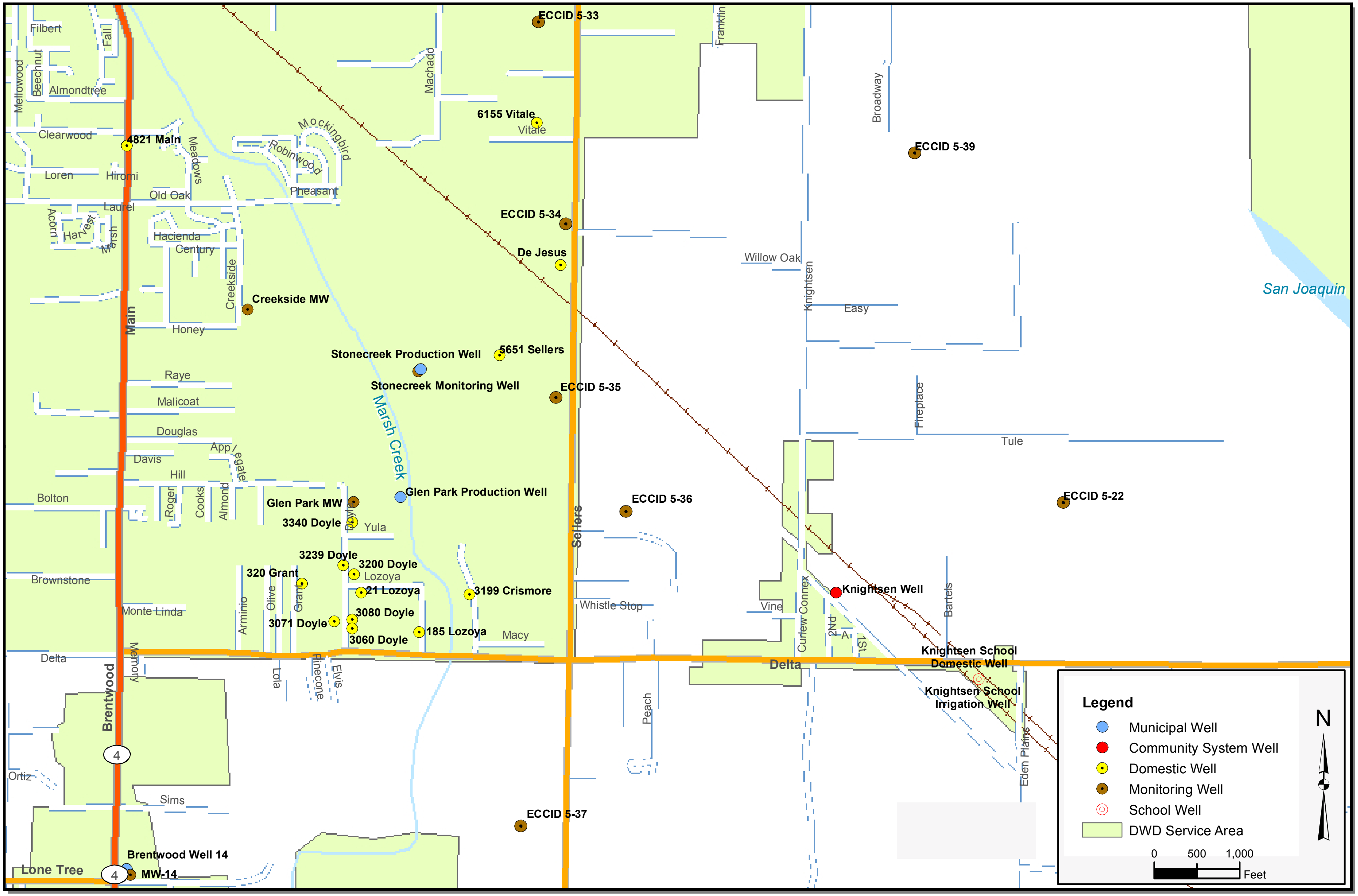

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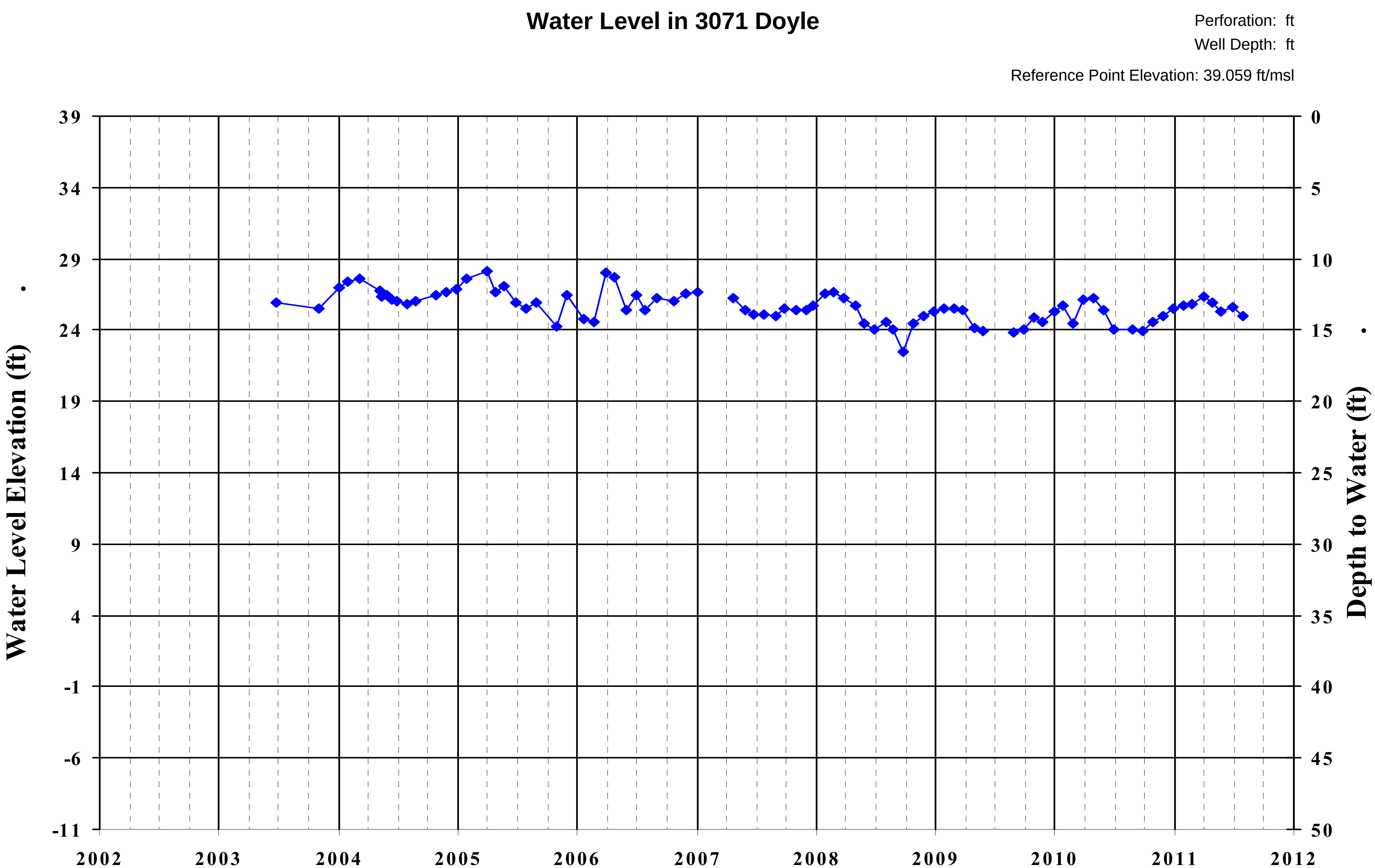
Figure 6
Groundwater Monitoring Locations in Vicinity of Glen Park Well



Note: Water Level are Static (Pump off)

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Figure 7

Water Level in 3199 Crismore

Perforation: ft
Well Depth: ft
Reference Point Elevation: 37.342 ft/msl

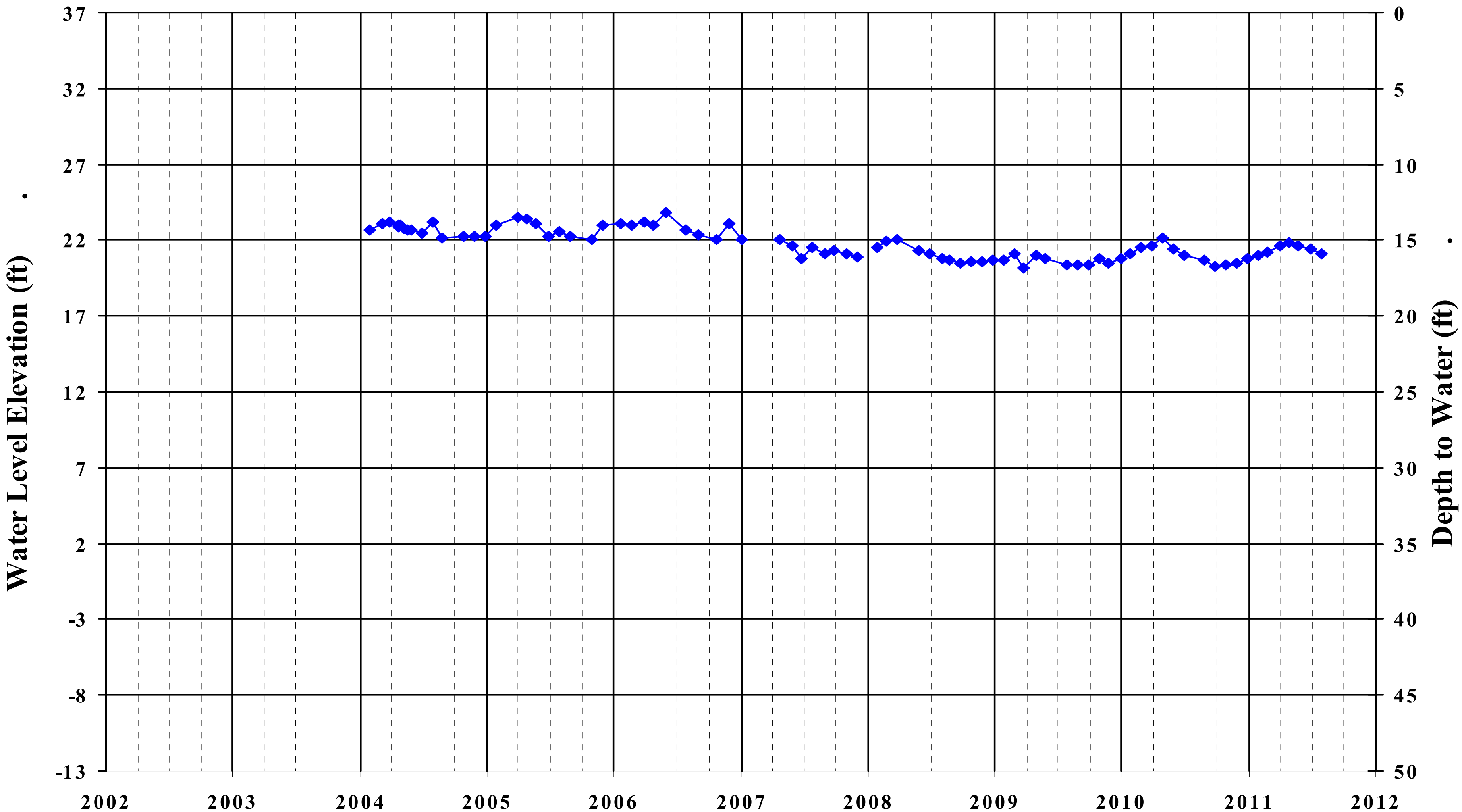

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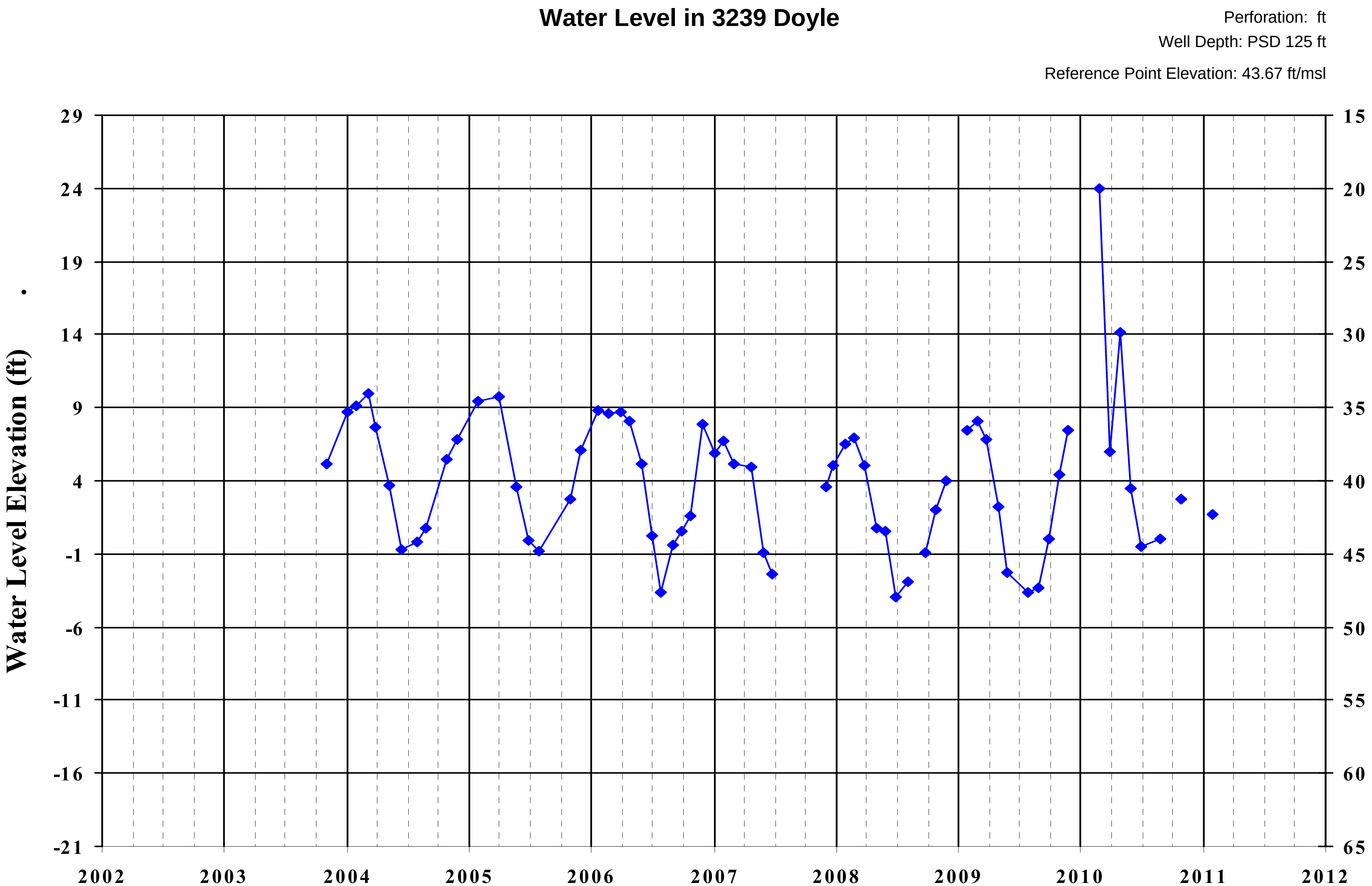
Figure 8



Note: Water Level are Static (Pump off)

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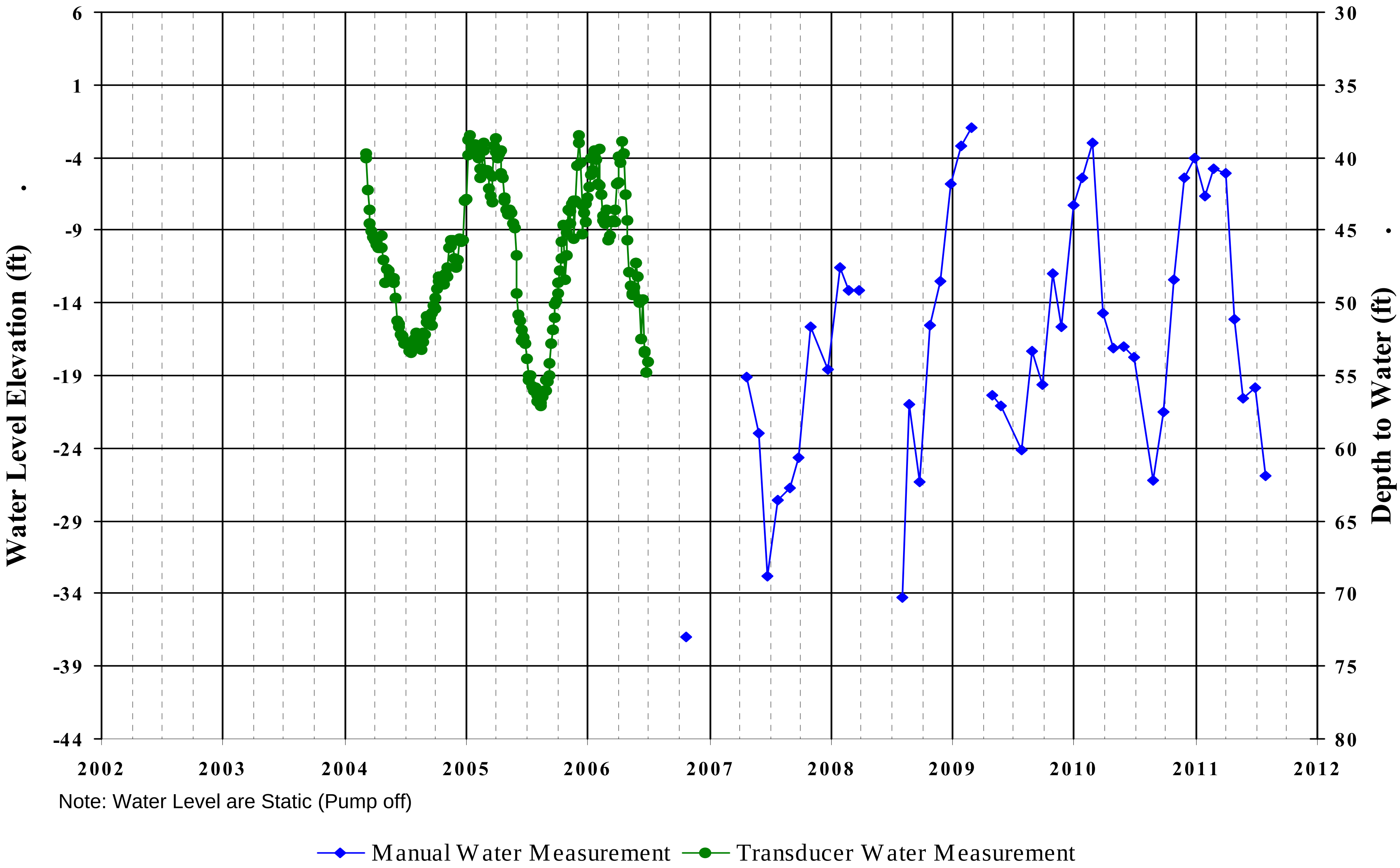
Figure 9

Water Level in DWD Glen Park MW

Perforation: 220-230, 260-290 ft
Well Depth: 300 ft
Reference Point Elevation: 35.536 ft/msl



Note: Water Level are Static (Pump off)

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Figure 10

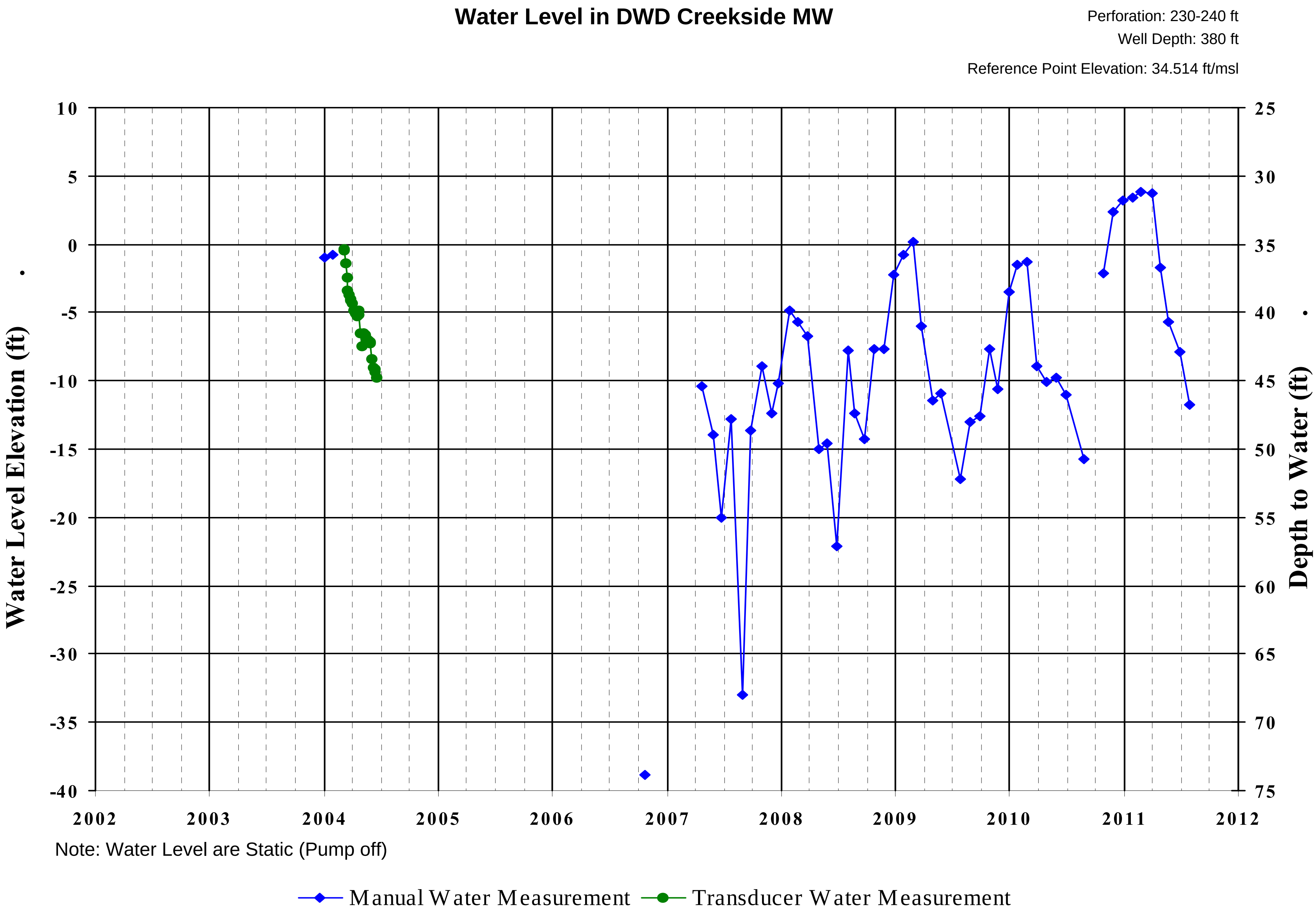

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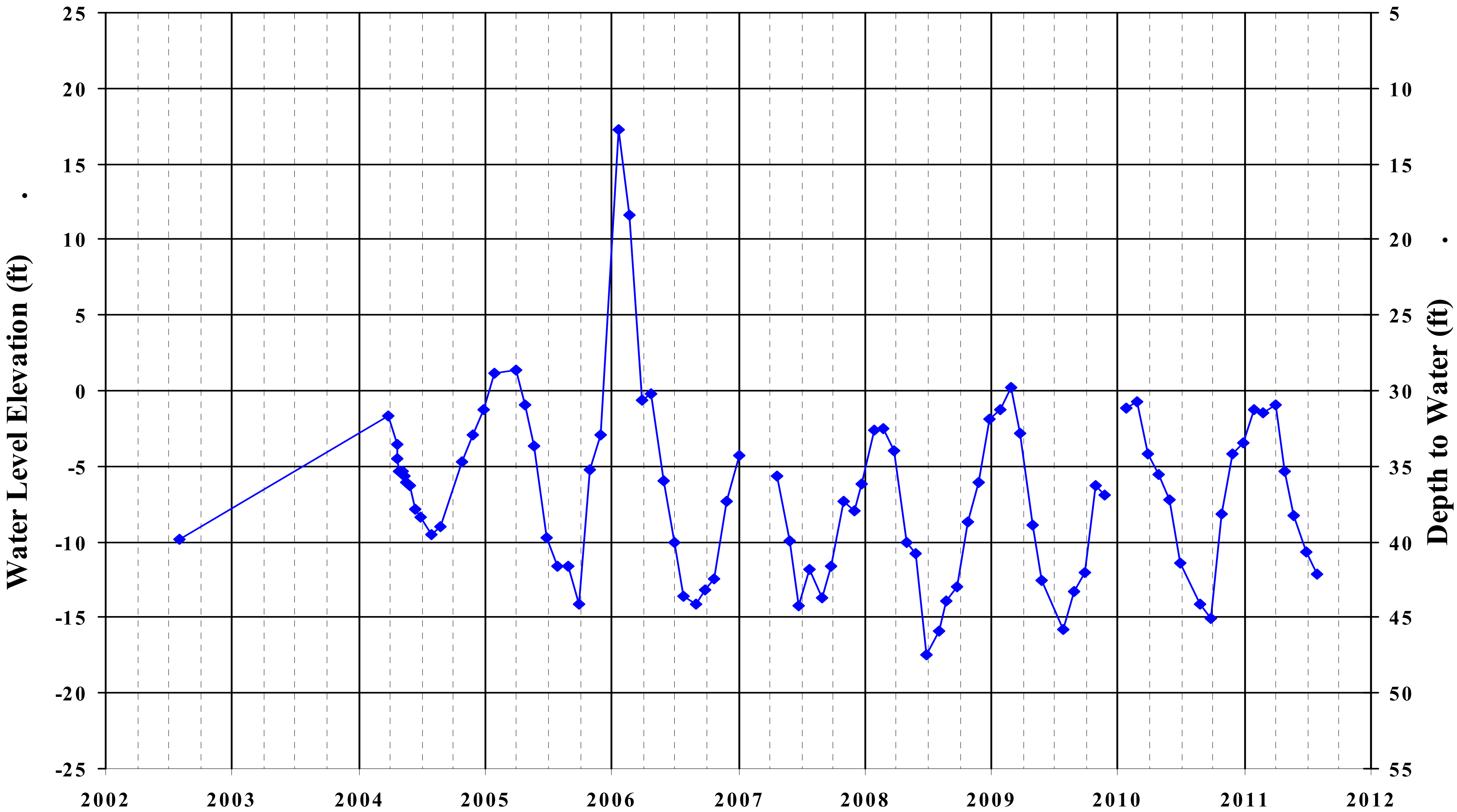
Figure 11

Water Level in DWD Knightsen Town Well

Perforation: 235-275 ft
Well Depth: 305 ft

Reference Point Elevation: 29.911 ft/msl



Note: Water Level are Static (Pump off)

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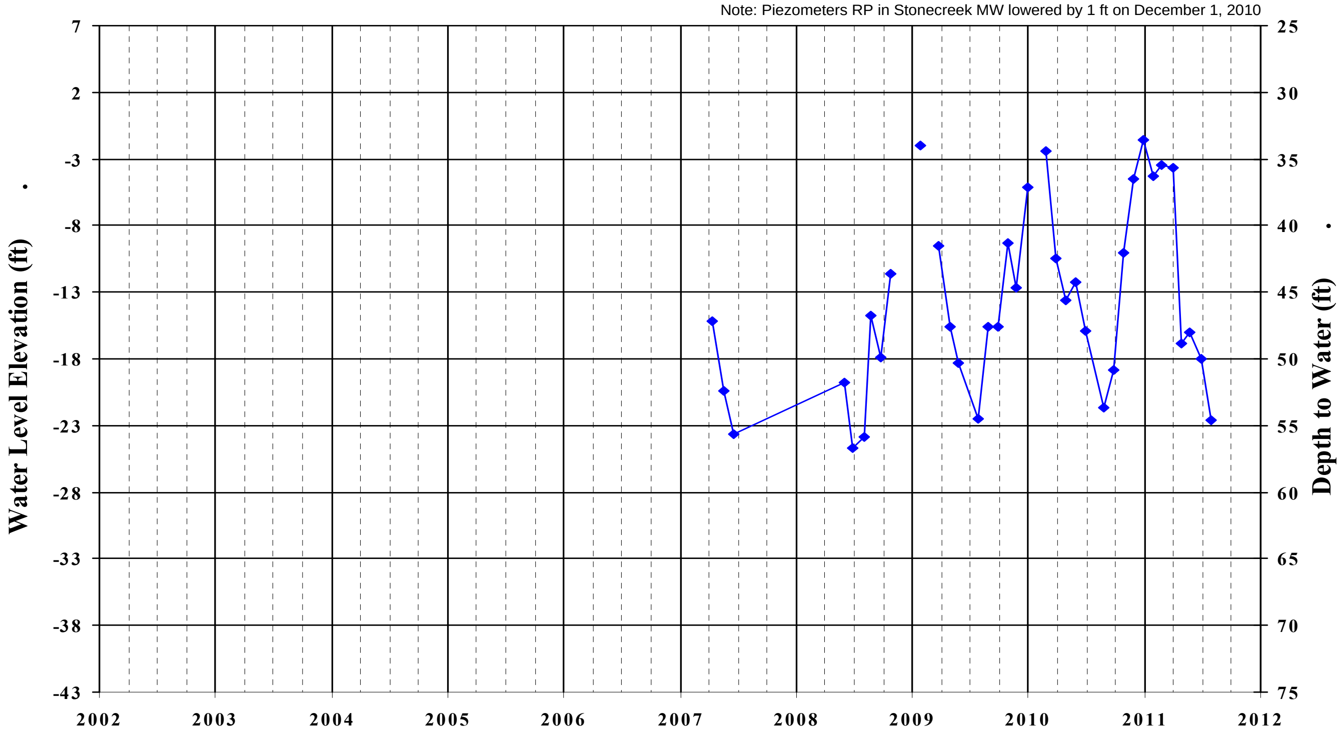
Figure 12

Water Level in Stonecreek Site 300

Perforation: ft
Well Depth: ft

Reference Point Elevation: 31.572 ft/msl
Note: Piezometers RP in Stonecreek MW lowered by 1 ft on December 1, 2010



Note: Water Level are Static (Pump off)

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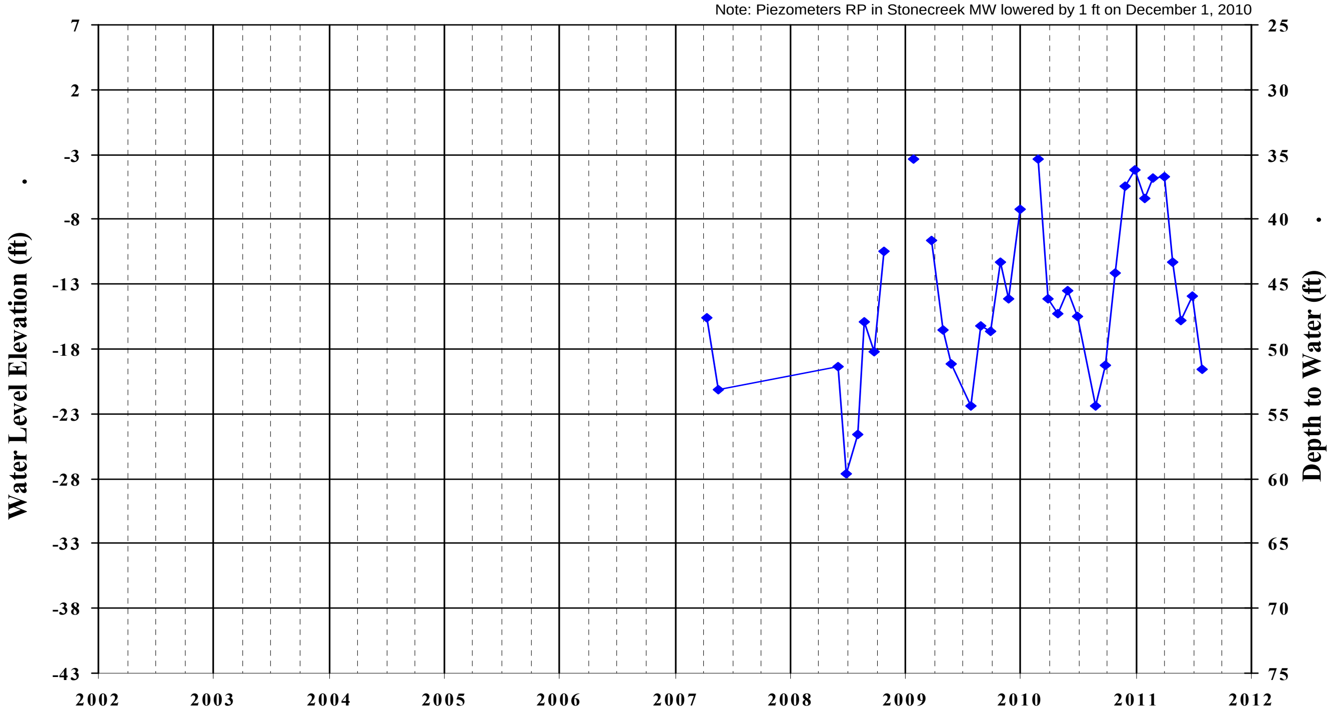
Figure 13A

Water Level in Stonecreek Site 360

Perforation: ft
Well Depth: ft

Reference Point Elevation: 31.597 ft/msl
Note: Piezometers RP in Stonecreek MW lowered by 1 ft on December 1, 2010



Note: Water Level are Static (Pump off)

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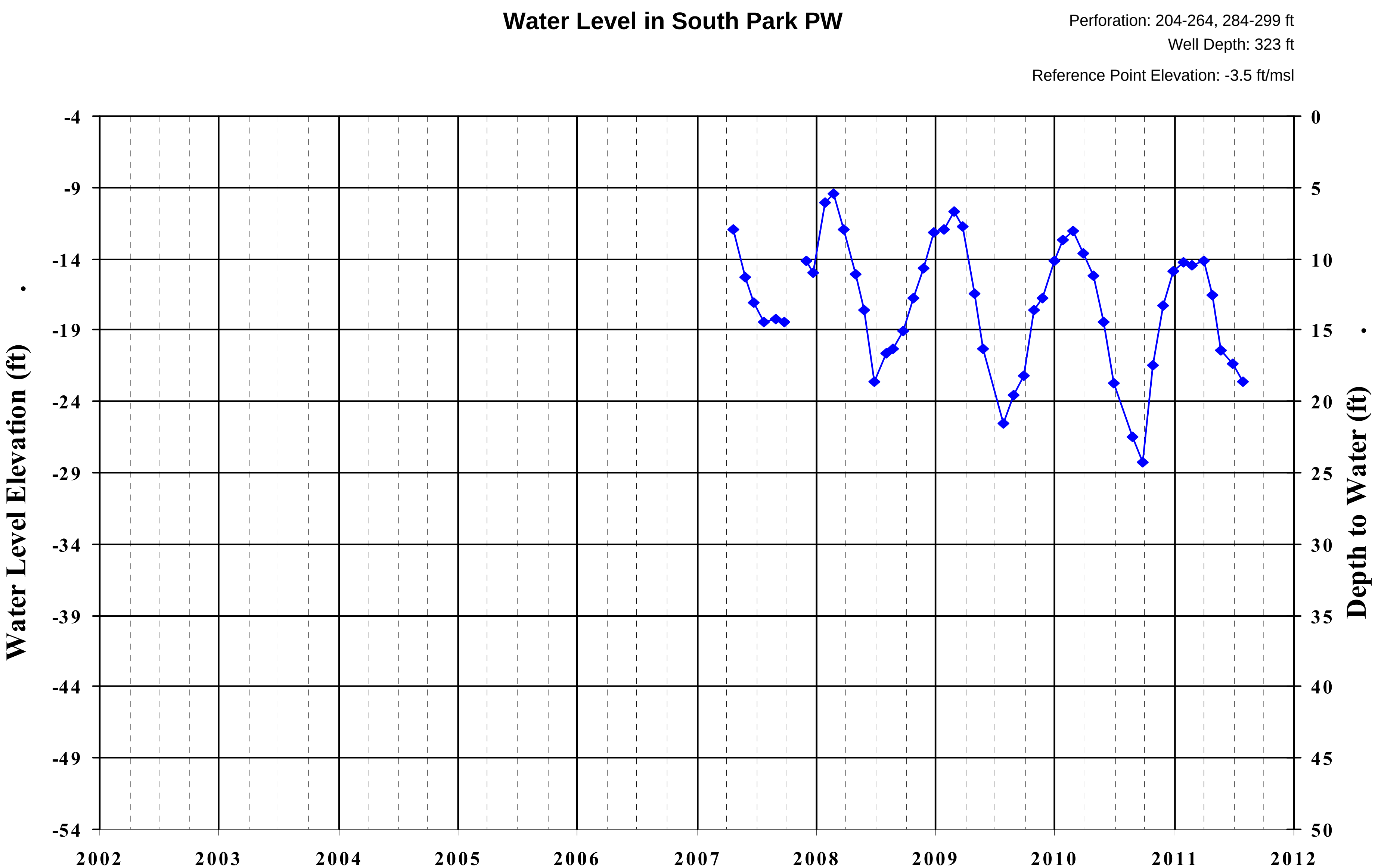
Figure 13B



Note: Water Level are Static (Pump off)

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Figure 14

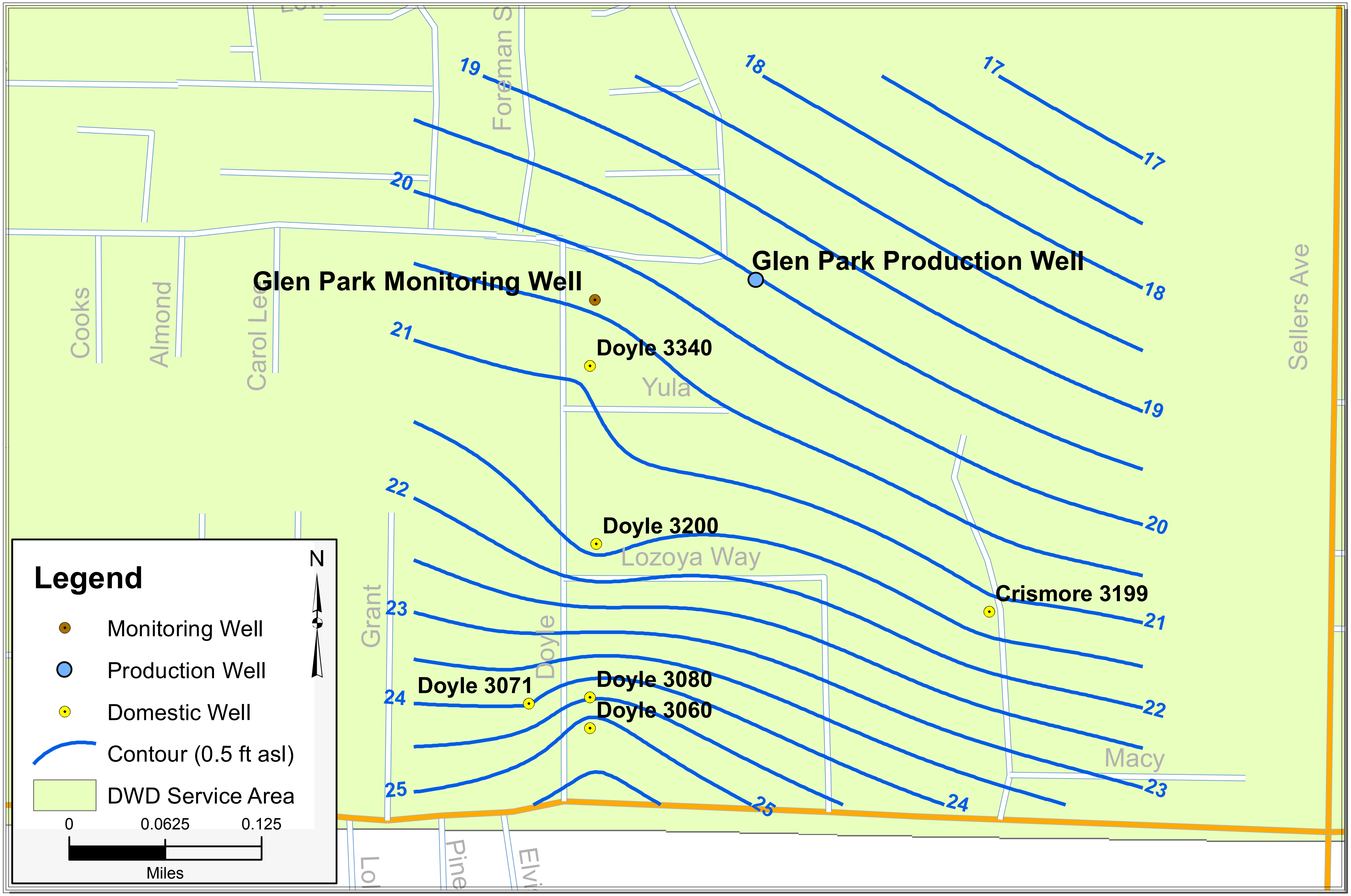

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Figure 15A
Shallow Groundwater Elevation Contours, Spring 2009
Vicinity of Glen Park Production Well

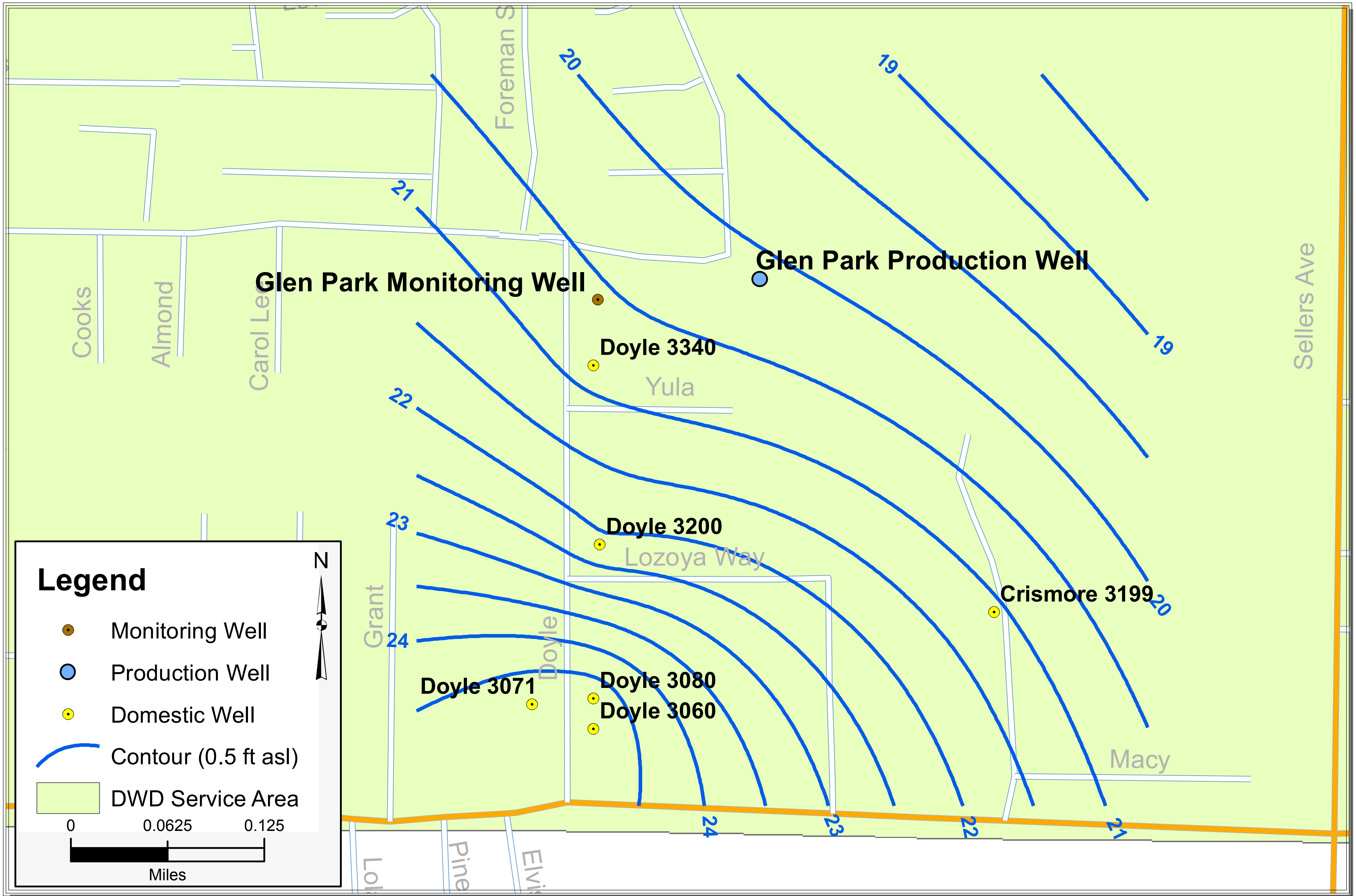

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Figure 15B
Shallow Groundwater Elevation Contours, Fall 2009
Vicinity of Glen Park Production Well

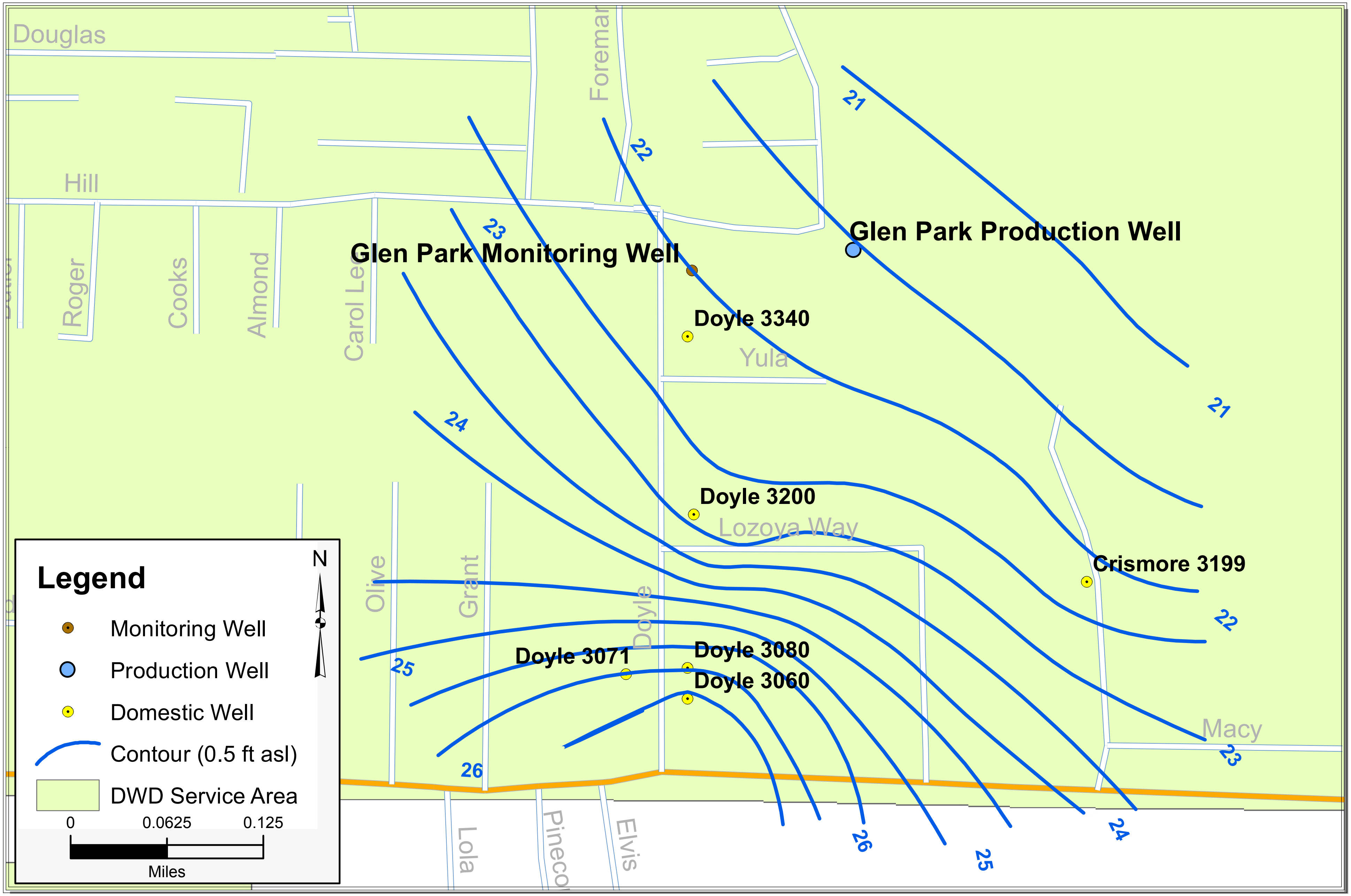

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Figure 16A
Shallow Groundwater Elevation Contours, Spring 2010
Vicinity of Glen Park Production Well

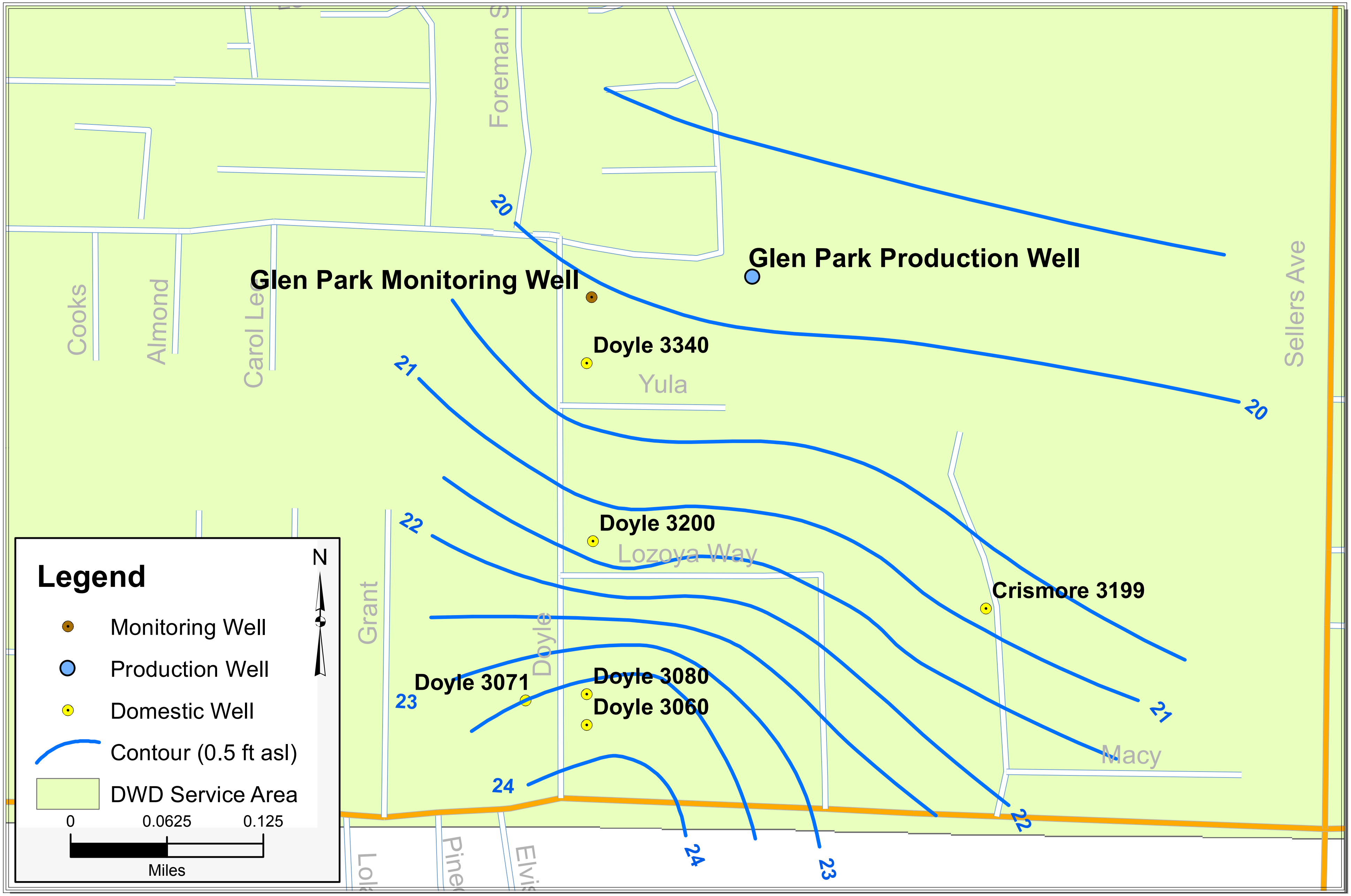

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Figure 16B
Shallow Groundwater Elevation Contours, Fall 2010
Vicinity of Glen Park Production Well

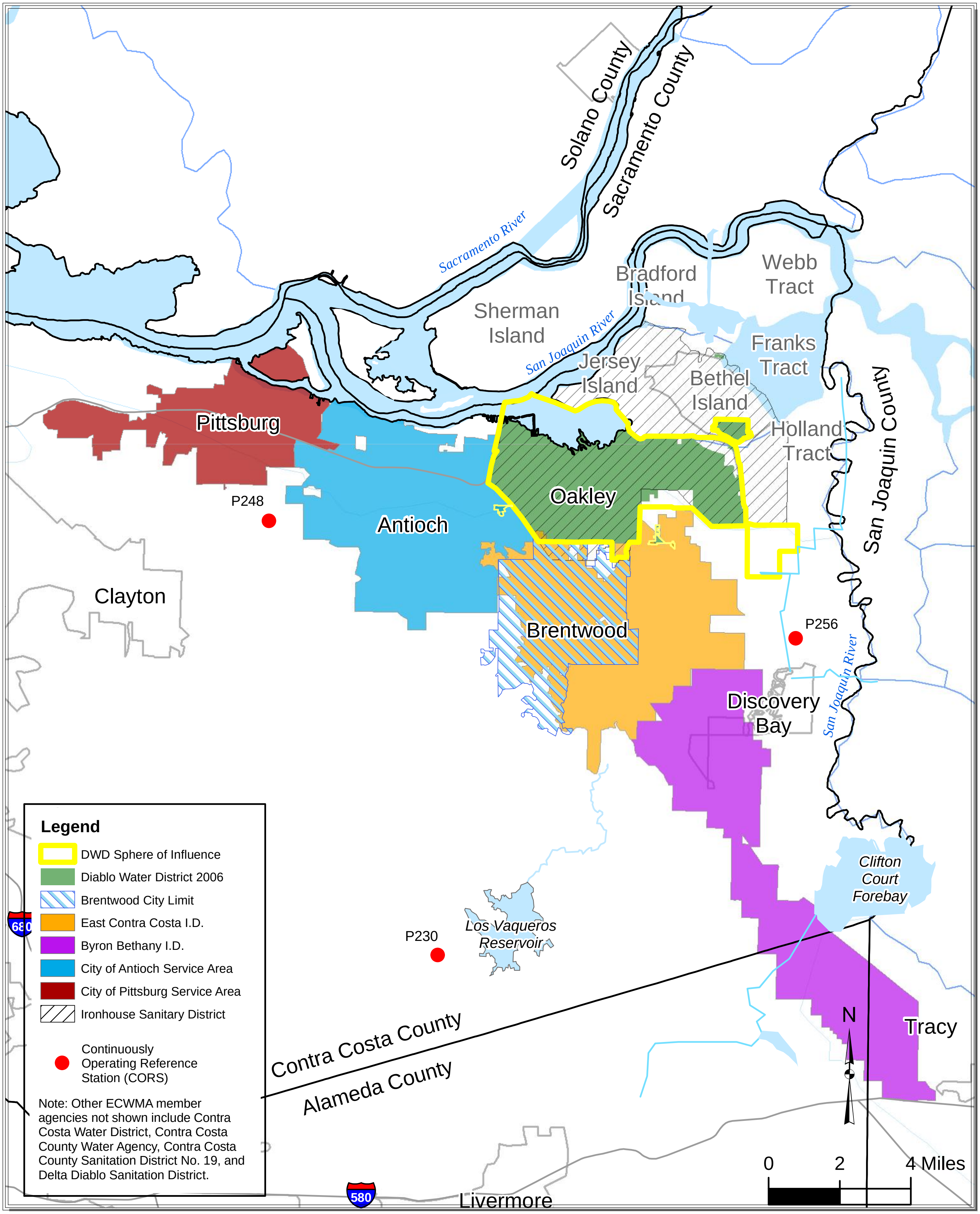

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Figure 17
Land Subsidence Monitoring Locations

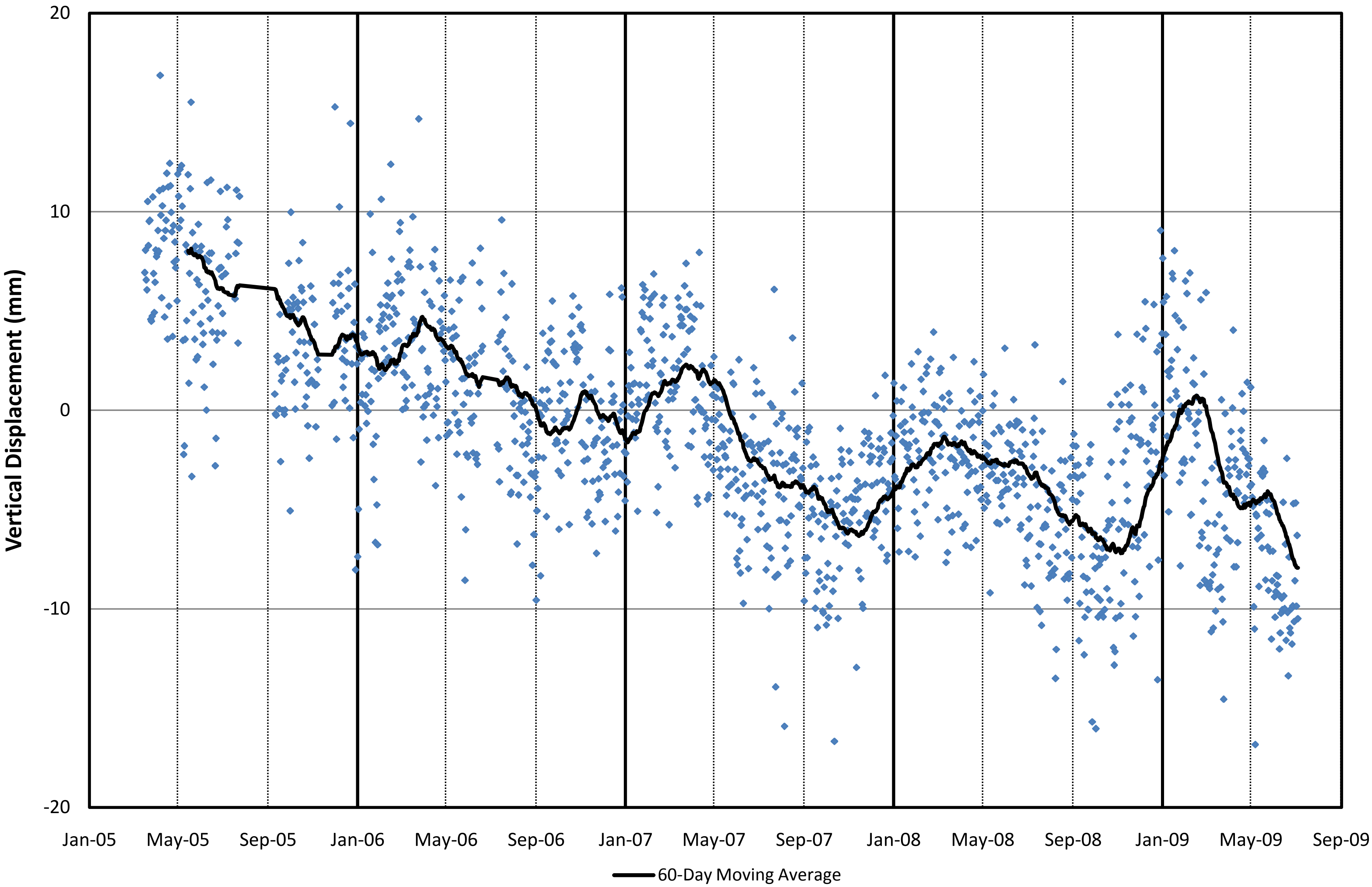

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Figure 18
Vertical Displacement at PBO Station P256

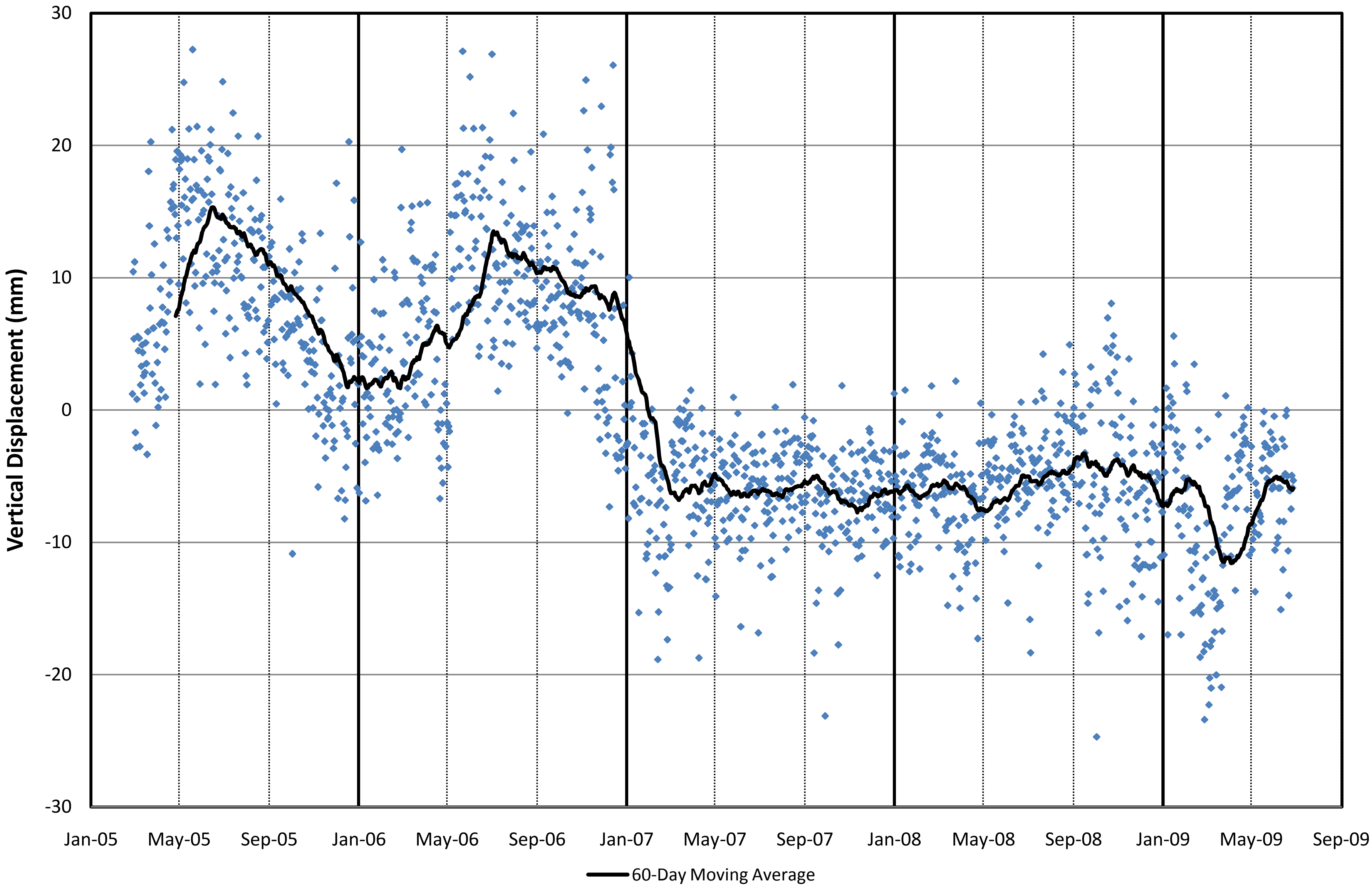

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Figure 19
Vertical Displacement at PBO Station P230

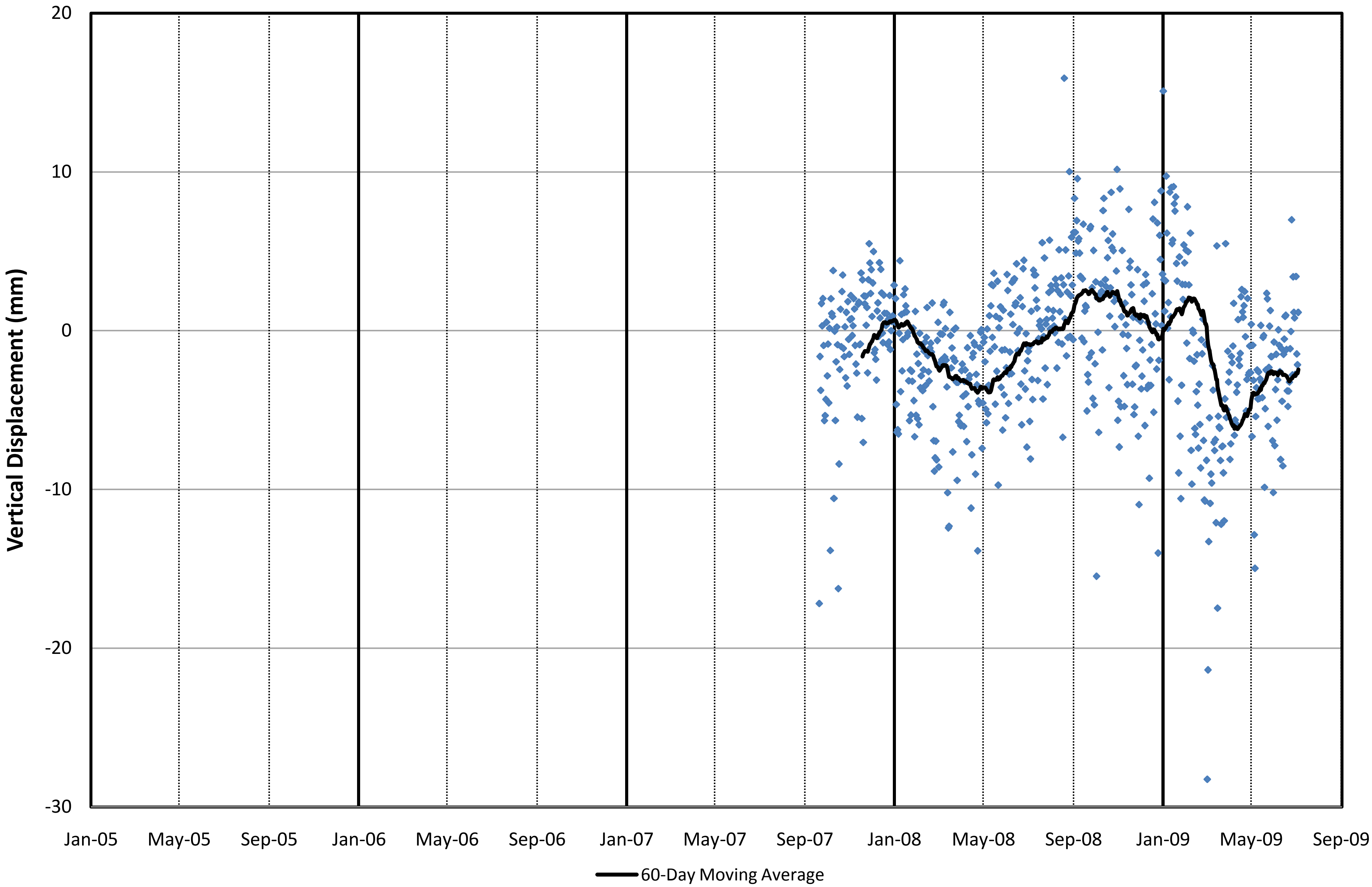

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Figure 20
Vertical Displacement at PBO Station P248

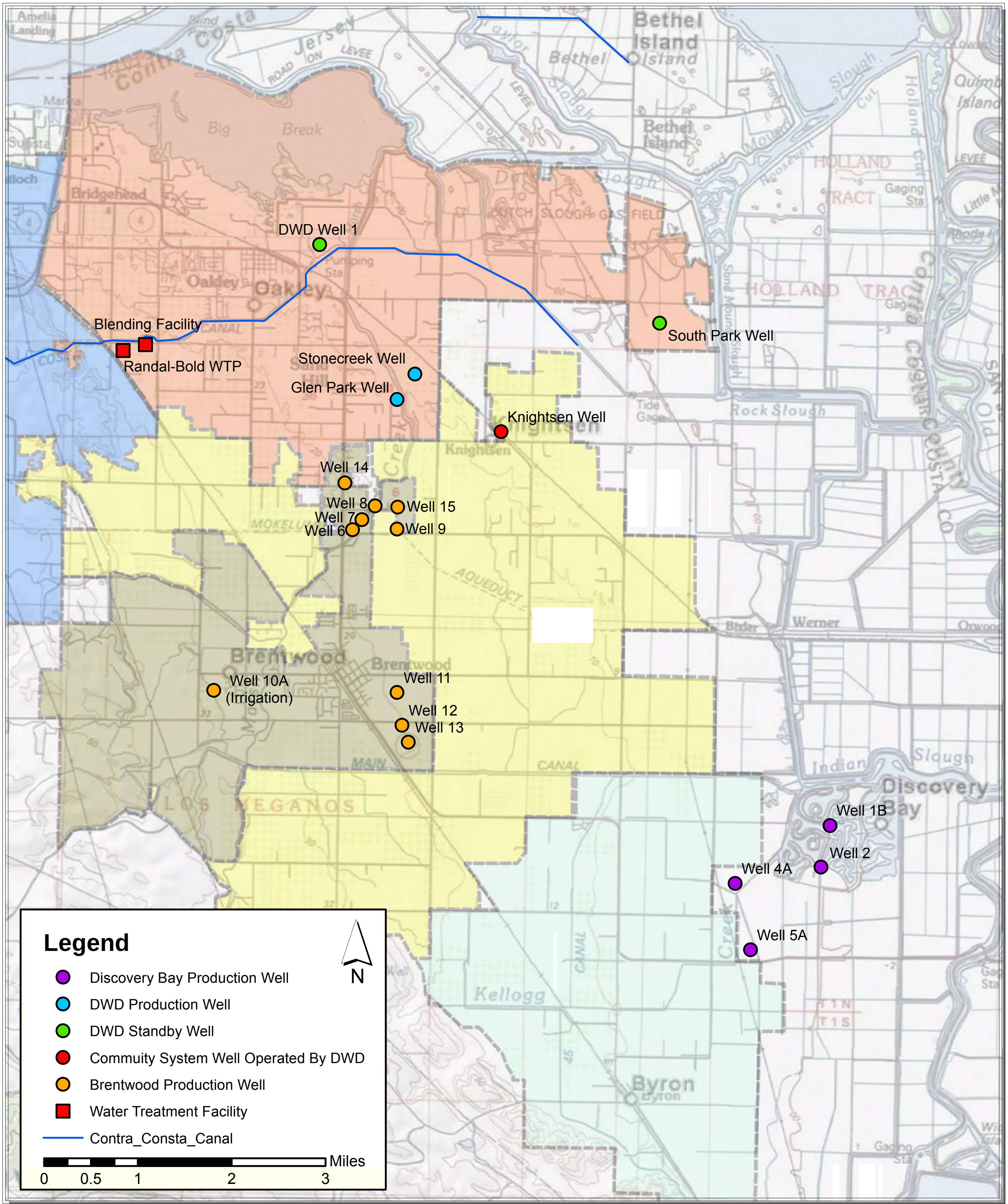

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Figure 21
Water Quality Well Locations

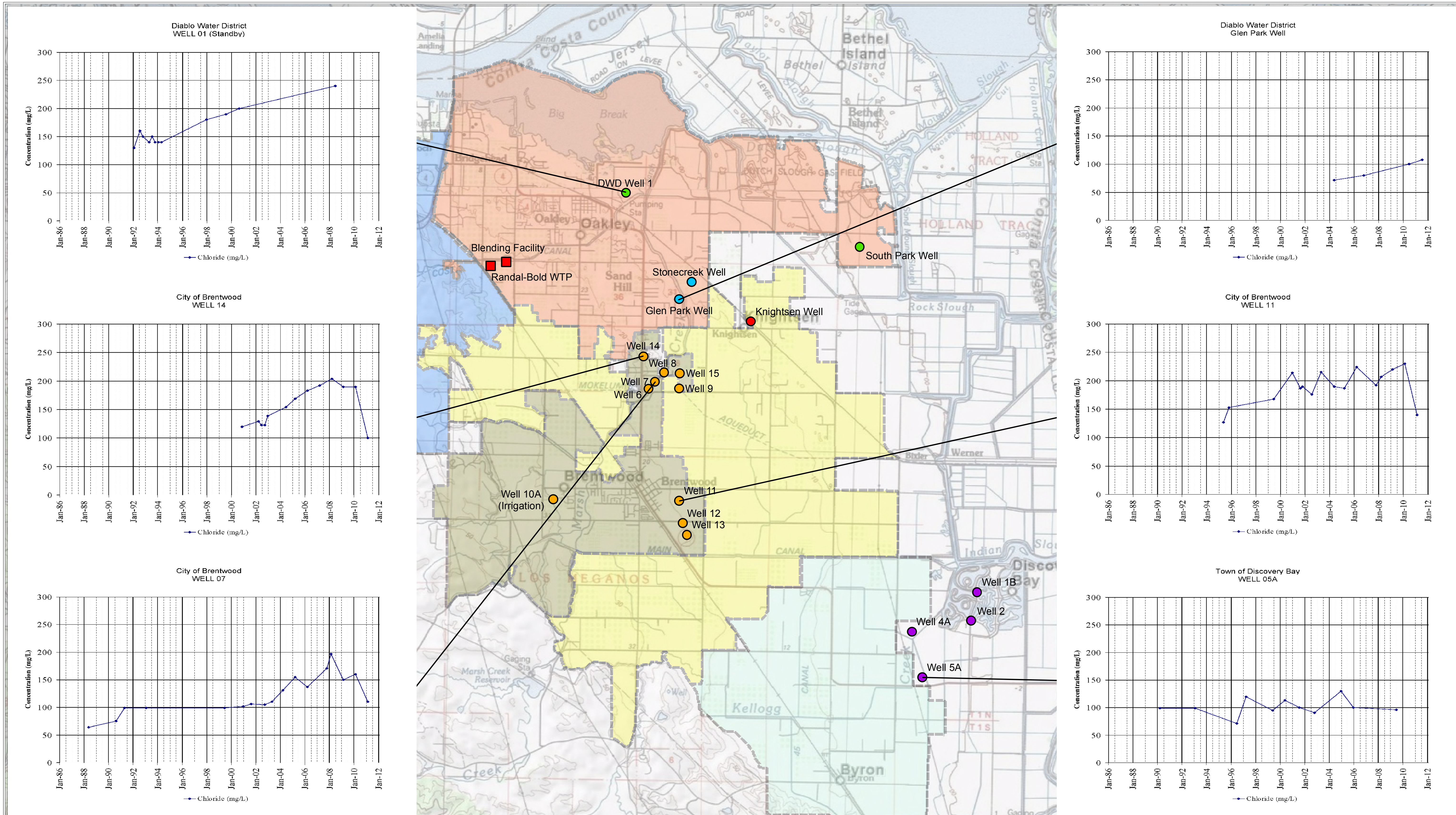

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Figure 22
Chloride Concentration Plots for Select Wells

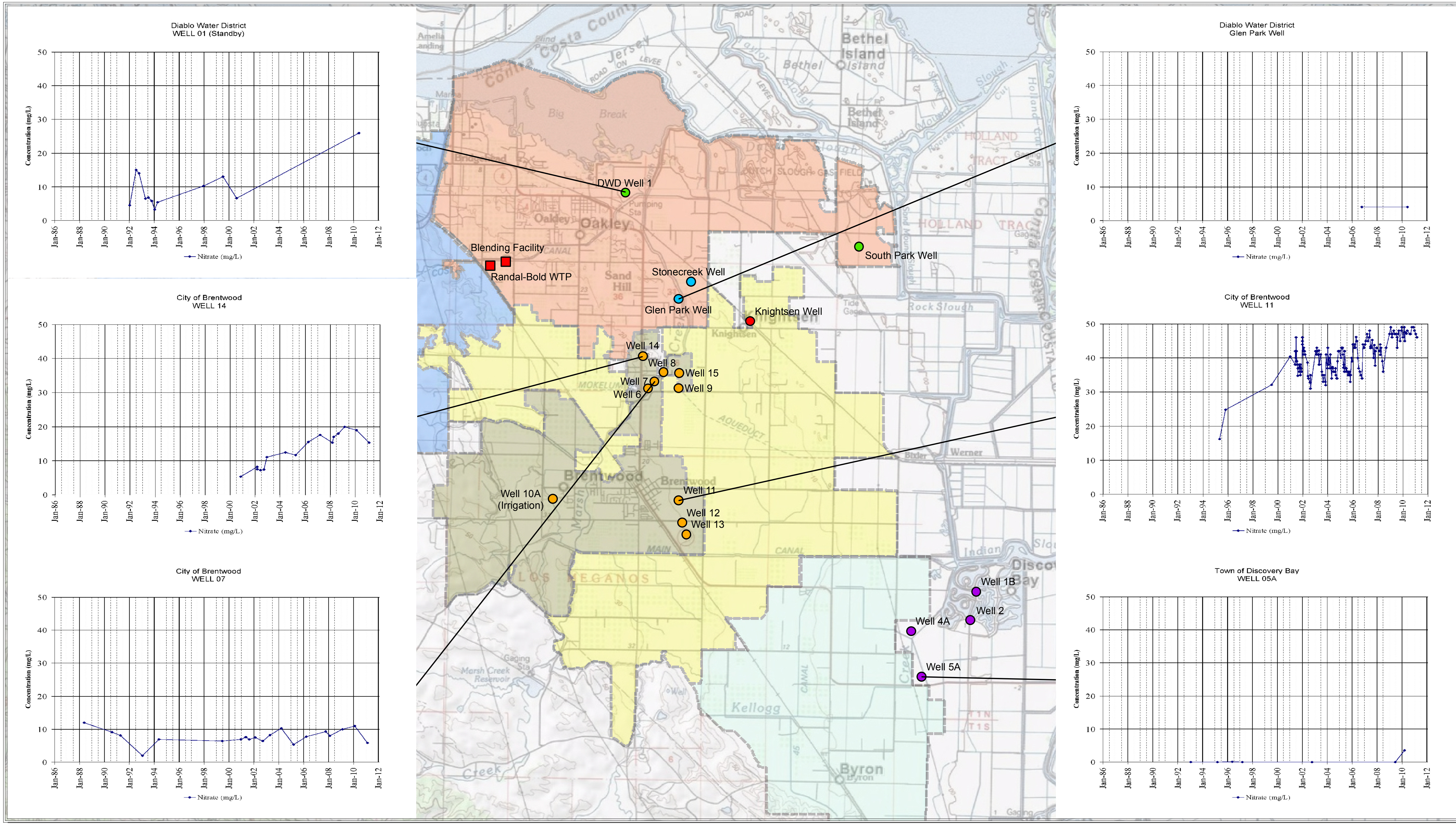

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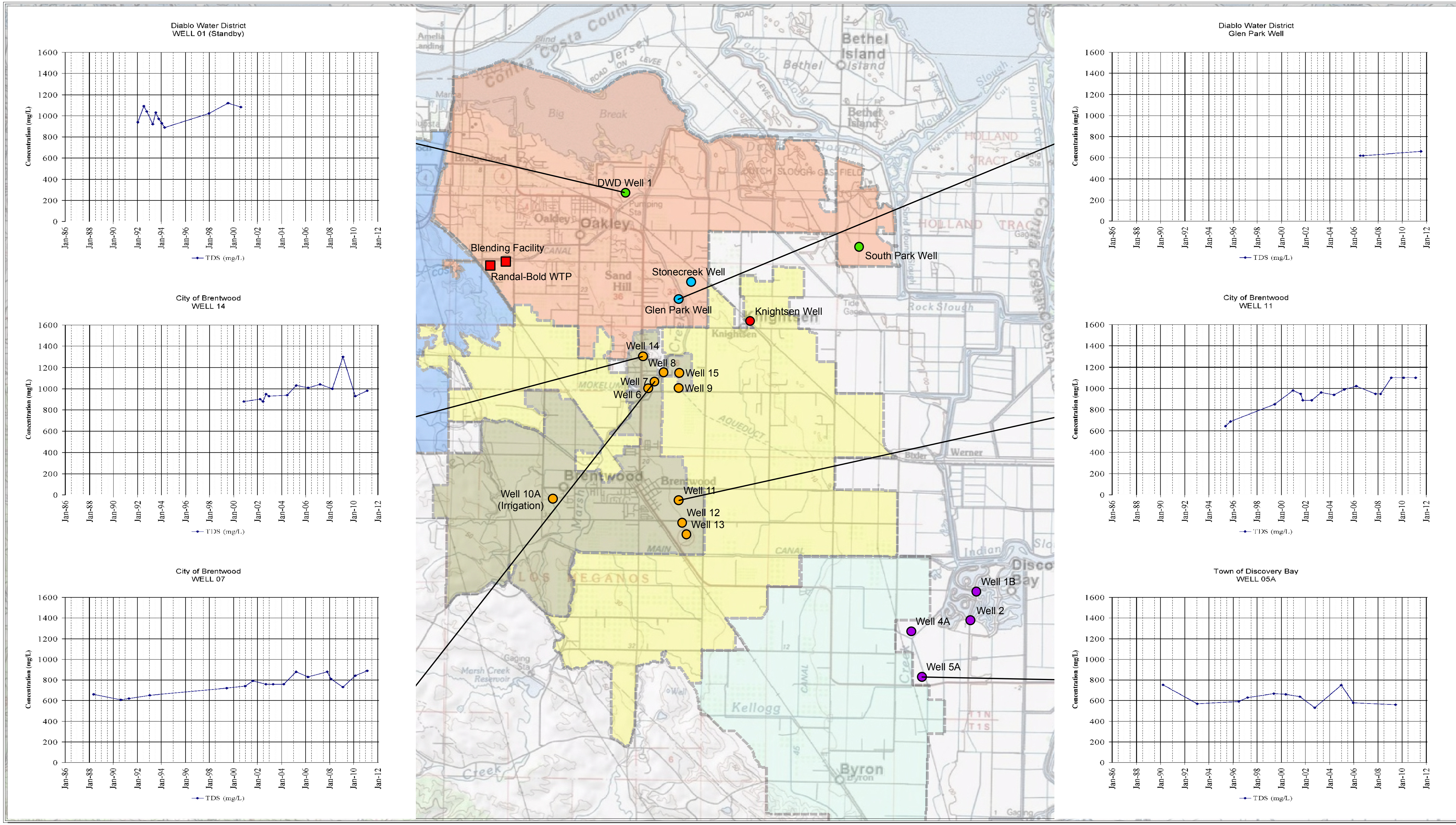
Figure 23
Nitrate Concentration Plots for Select Wells



Path: Y:\Casey_Meirovitz\07-1-079 Diablo WD\GIS\BasemapPlots_TDS.mxd

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Figure 24
TDS Concentration Plots for Select Wells

Appendix A
Well Construction Information Diablo Water District and Vicinity

Appendix A
Well Construction Information
Diablo Water District and Vicinity

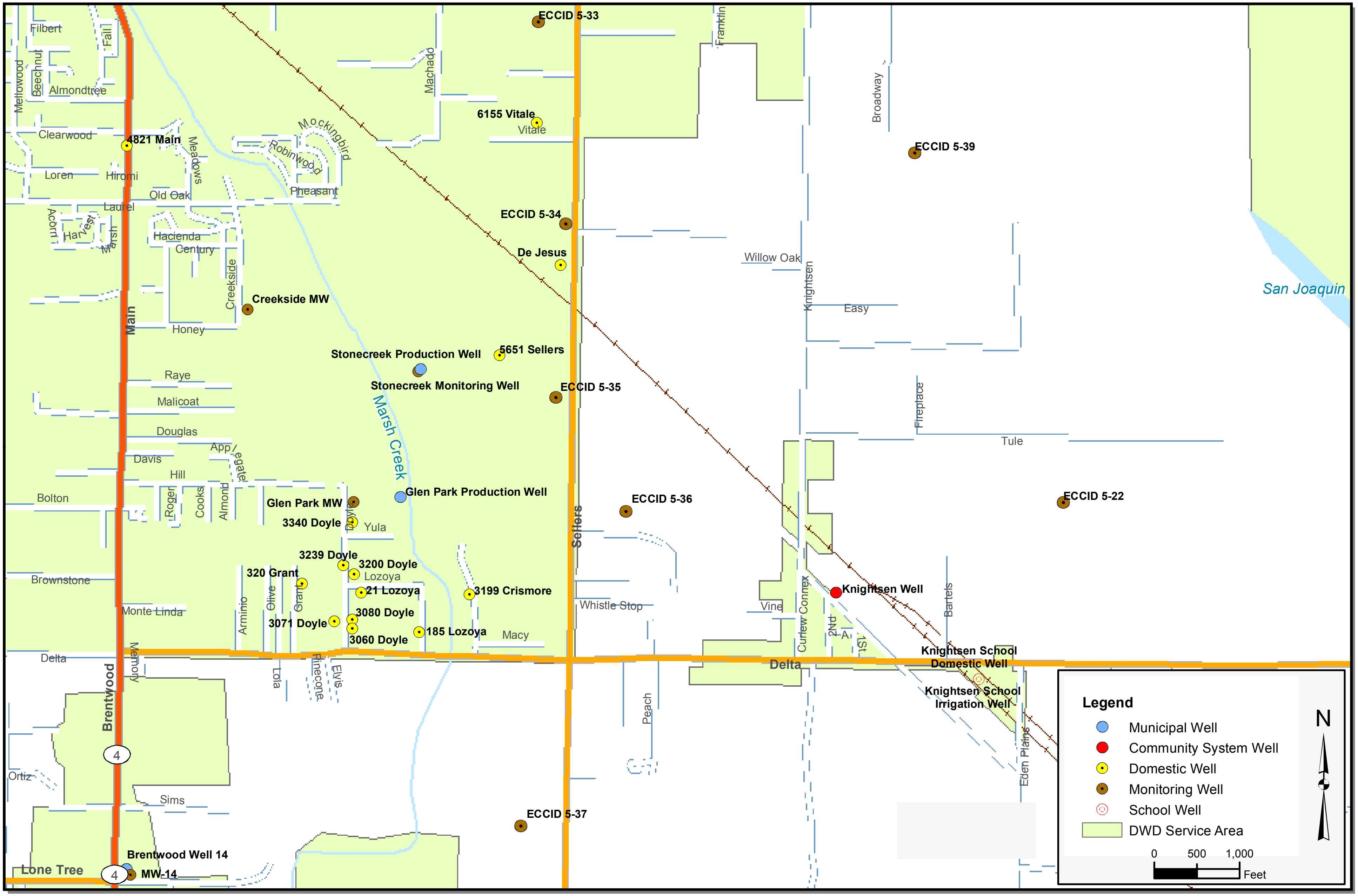
Well Type	Location Name(s) (ownership)	Well ID	Use/ Status	Owned by DWD	Operated by DWD	Well log No.	Year Drilled	Total Depth (feet)	Casing (in)	Perf-oration (feet bgs)	Seal ft bgs	Cap-acity (gpm)	Specific Capacity gpm/ft	No. of Connec-tions	Metered	Future Inter-tie with Main Water	Notes
DWD Wells	Glen Park	Glen Park Well	Primary Supply for DWD	Yes	Yes		5/1/2004	315	16	230-245 260-300	200	700-1,400	10-15		yes	yes	
		Glen Park MW	Monitoring Well				2001	560	8	220-230 260-290	190			-	-	-	
	Stoncreek	Stonecreek Well	Production for DWD				2010	305	16	220-295	187						
	Rose Avenue Corporation Yard	Corporation Yard Well (Well 1)	Standby Production				7/11/1977	170	12	100-		1,100					
	Summer Lake (previously Cyprus Lakes)	North Well	Non-Operation Production				6/30/2005	308	16	206-246 266-281	135		30	n/a			Used as stand-by well only due to high Fe-Mn.
		South Park Well	Stand-by Production				6/15/2005	323	16	204-264 284-299	140		27.5	n/a		yes	Mn=140 ug/L (6/05), 2ndary MCL=50 ug/L
		South Park MW	190			E013881	6/9/2004	190		170-180	160			-	-	-	Mn=250 ug/L (6/04), 2ndary MCL=50 ug/L
			260					260		215-255							Mn=200 ug/L (6/04), 2ndary MCL=50 ug/L
			380					380		360-370							Mn=150 ug/L (6/04), 2ndary MCL=50 ug/L As=12 ug/L (6/04), MCL=10 ug/L
		North MW	165			E013882	5/27/2004	165	2	150-160	130						Mn=330 ug/L (6/04), 2ndary MCL=50 ug/L
			235					235	2	220-230							Mn=220 ug/L (6/04), 2ndary MCL=50 ug/L
			290					290	2	270-280							Mn=220 ug/L (6/04), 2ndary MCL=50 ug/L
	Creekside	Creekside MW	Monitoring			E002337	4/8/2003	380	2	230-240	188						
Community Water System	Knightsen M-25	Knightsen Well	Production	Yes	Yes		11/15/1990	305	10	235-55 275-95	150			13	no	no	
	Beacon West M-26	Beacon West Well	Production	Yes	Yes	327495	1991	260	8	230-260	225			22	no	no	
	Rock Island Marina Subdivision 6610	East Well (#1)	Production	Undetermined at this time	Undetermined at this time	802087	12/20/2002	324	12	240-270 284-292	208		30	70	yes	no	Has current Fe-Mn treatment system.
		West Well (#2)	Production			802086	12/20/2002	320	12	240-270 284-292	203		30		yes		
		MW-shallow	Monitoring				12/2001	278	2	248-268	205			NA	NA	NA	
		MW-deep	Monitoring				12/2001	630	2	555-565 610-620							
	Willow Park Marina M-27 Subdivision	Well 1	Production	Yes	Yes	323222	9/13/1989	400	8	250-310	240			100	no	no	No current treatment system. Possible future As treatment.
		Well 2	Production			323223	9/21/1989	340	8	250-310	240						Wells located within about 50' of each other.
	Willow Mobile Home Park	Willow Mobile	Production	No	Yes	413188	10/6/1992	410	8	292-332	200						
	Delta Mutual	West	Production	No	Yes									100			
		East	Production														DWD contracted for maintenance

Appendix A Continued
Well Construction Information
Diablo Water District and Vicinity

Well Type	Location Name(s) (ownership)	Well ID	Use/ Status	Owned by DWD	Operated by DWD	Well log No.	Year Drilled	Total Depth (feet)	Casing (in)	Perf-oration (feet bgs)	Seal ft bgs	Cap-acity (gpm)	Specific Capacity gpm/ft	No. of Connec-tions	Metered	Future Inter-tie with Main Water	Notes
Brentwood Wells	Well 6		Production	No	No		1987	305	16	250-300	222	750	30				
	Well 7		Production				1988	300	16	265-295	178	750	10				
	Well 8		Production				1993	325	16	225-315	210	1,000	20				
	Well 9		Emerg. & Park Irrigation				4/22/1993	230	8	210-230	200	300					Domestic well for park irrigation, high nitrates, blend to use in emergency.
	Well 14	Well 14	Production			716526	11/3/2000	340	16	285-315	245	1,000	13				
		MW-1 (deep)	Monitoring				1999?	324	2	284-314	98						
		MW-2 (int.)	Monitoring					240	2	200-210 220-230							
		MW-3 (shallow)	Monitoring					154	2	114-144							
	Well 15	Well 15	Production			804384	8/2004	345	12	239-259 289-324	188		3.1				
Discovery Bay Wells	Well 1B	Well 1B	Production	No	No		1996	350	16	271-289 308-340	225		23				
	Well 2	Well 2	Production				1978	348	12	245-335	?		14				
	Well 4A	Well 4A	Production				1996	357	16	307-347	250		26				
	Well 5A	Well 5A	Production				1991	357	18	261-291 307-357	130		25				
Private Wells Monitored by DWD	Knightsen Elementary School	Knightsen School Domestic (#3)	Production	No	No	725554	03/29/2005	415	6	395-415	350						Supply for school
		Knightsen School Irrigation (#2)	Irrigation			427852	4/9/2092	230	8	167-191 210-230	165						
	Private	3080 Doyle	Domestic					60									Well depth from field notes
		3239 Doyle	Domestic					(PSD 125)									Well depth from field notes
ECCID Monitoring Wells	East Contra Costa Irrigation District	ECCID 5-22	Monitoring	No	No			20									Shallow wells monitored by ECCID twice a year, spring and fall.
		ECCID 5-33	Monitoring					20									
		ECCID 5-35	Monitoring					20									
		ECCID 5-36	Monitoring					20									
		ECCID 5-37	Monitoring					20									
		ECCID 5-39	Monitoring					20									

[a]source: personal communication, DWD, October 2006.
[b] 62 connections are being added to this system

Appendix B
Water Level Hydrographs



FILE: \\server_pe2900\public\Diablo WD 04-1-058\GIS\Basemap1.mxd Date: 9/9/2008

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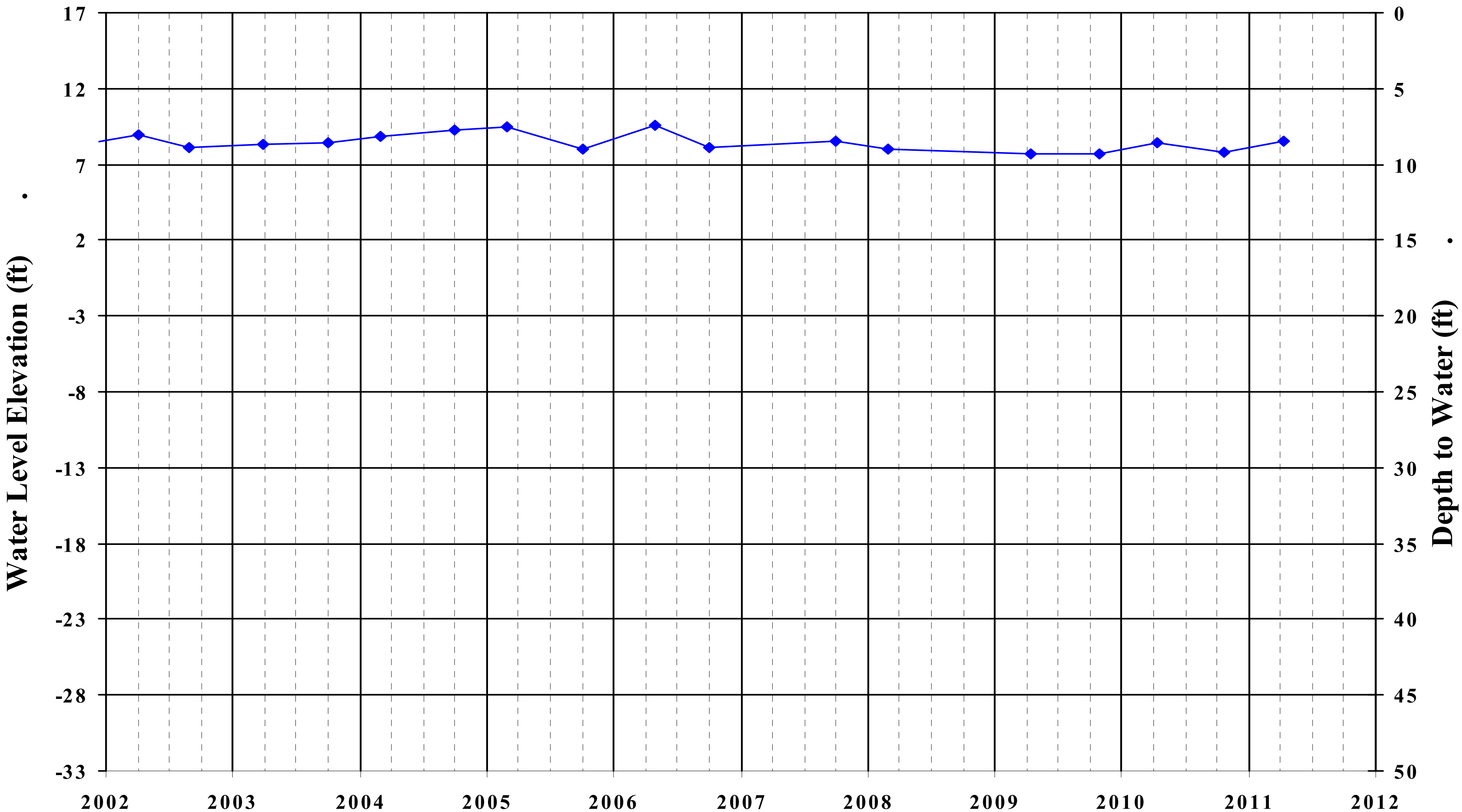
Groundwater Monitoring Locations

Water Level in ECCID 5-22

Perforation: ft
Well Depth: 20 ft

Reference Point Elevation: 17.2 ft/msl

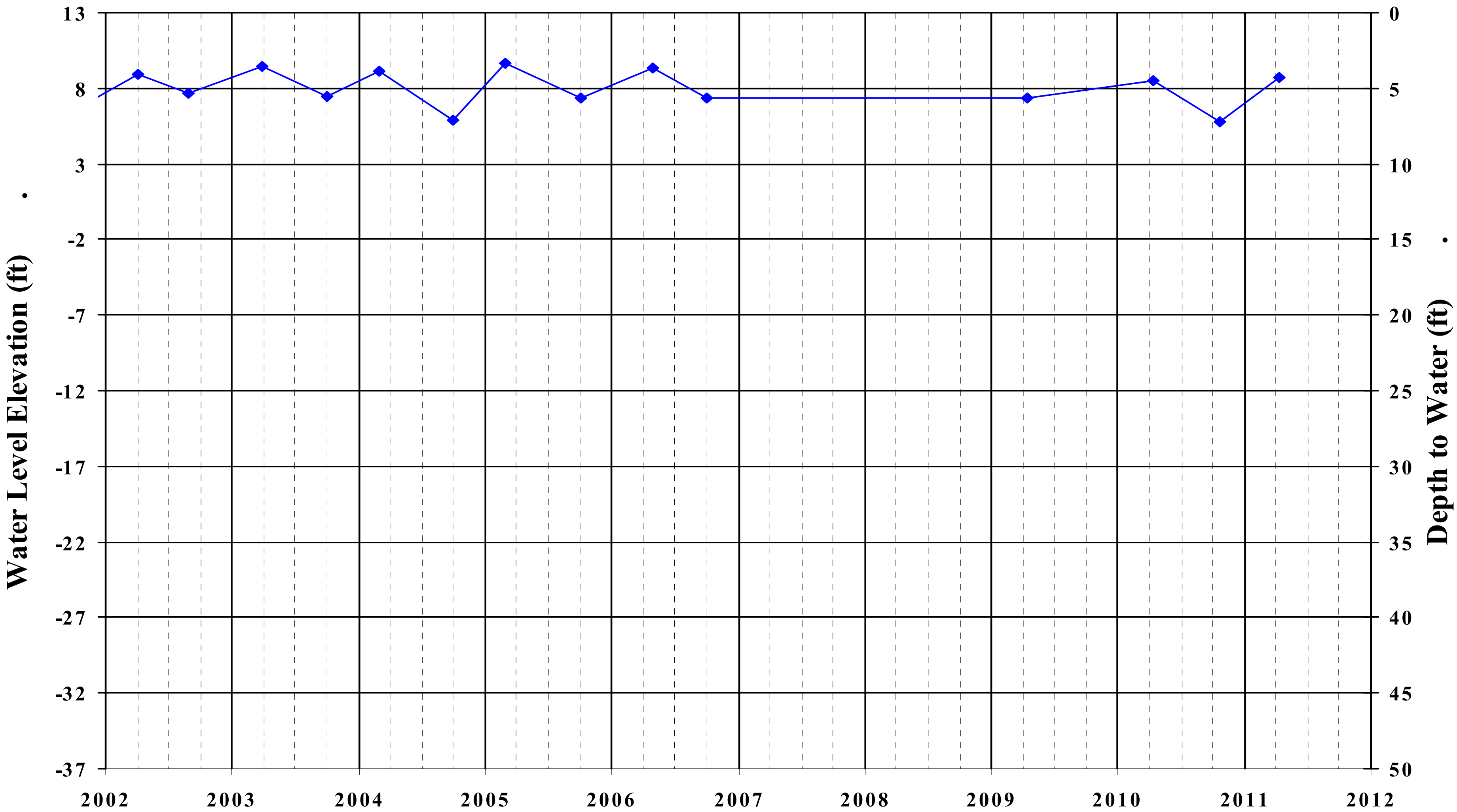


Note: Water Level are Static (Pump off)

Water Level in ECCID 5-33

Perforation: ft
Well Depth: 20 ft

Reference Point Elevation: 13.3 ft/msl

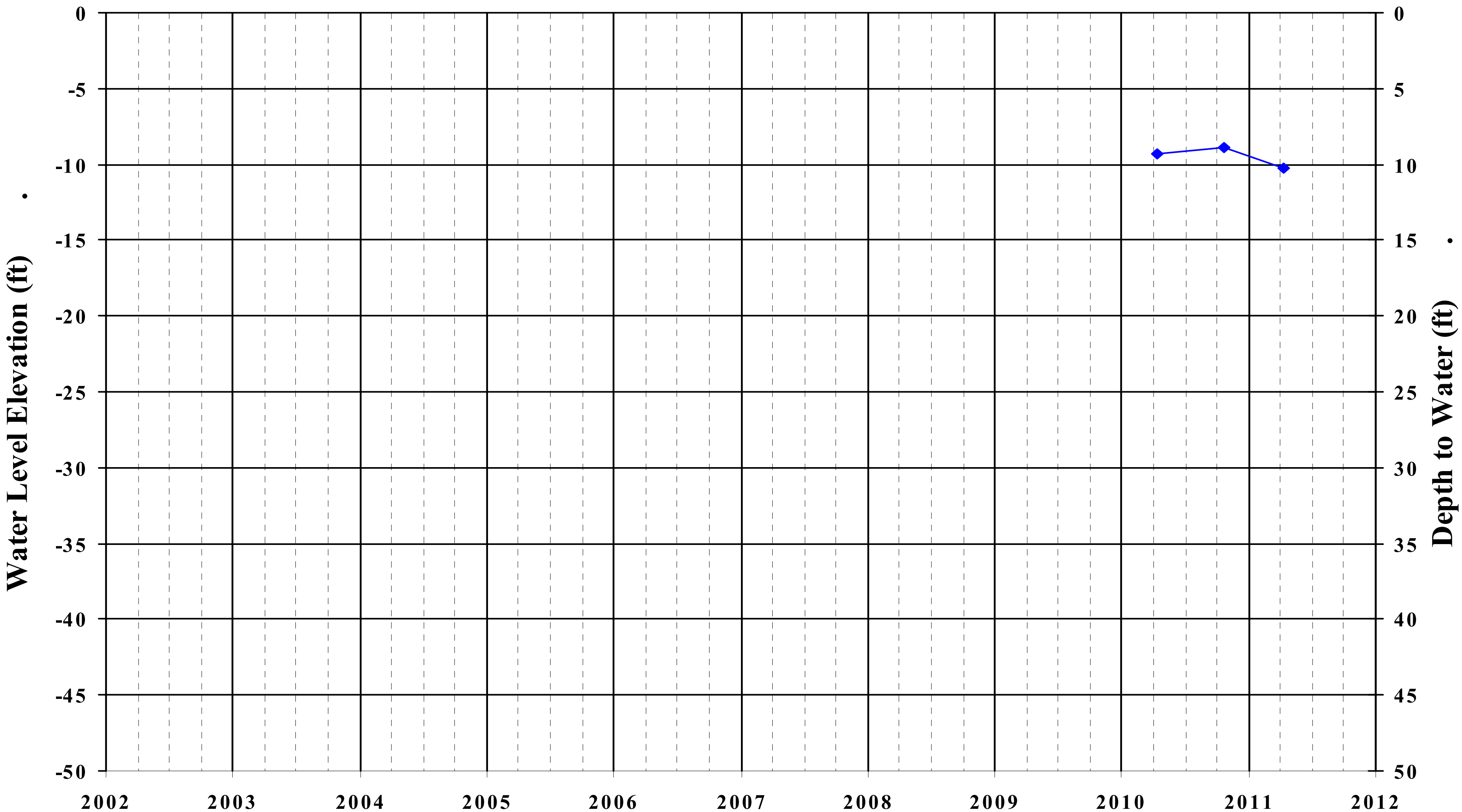


Note: Water Level are Static (Pump off)

Water Level in ECCID 5-34

Perforation: ft
Well Depth: ft

Reference Point Elevation: 0 ft/msl

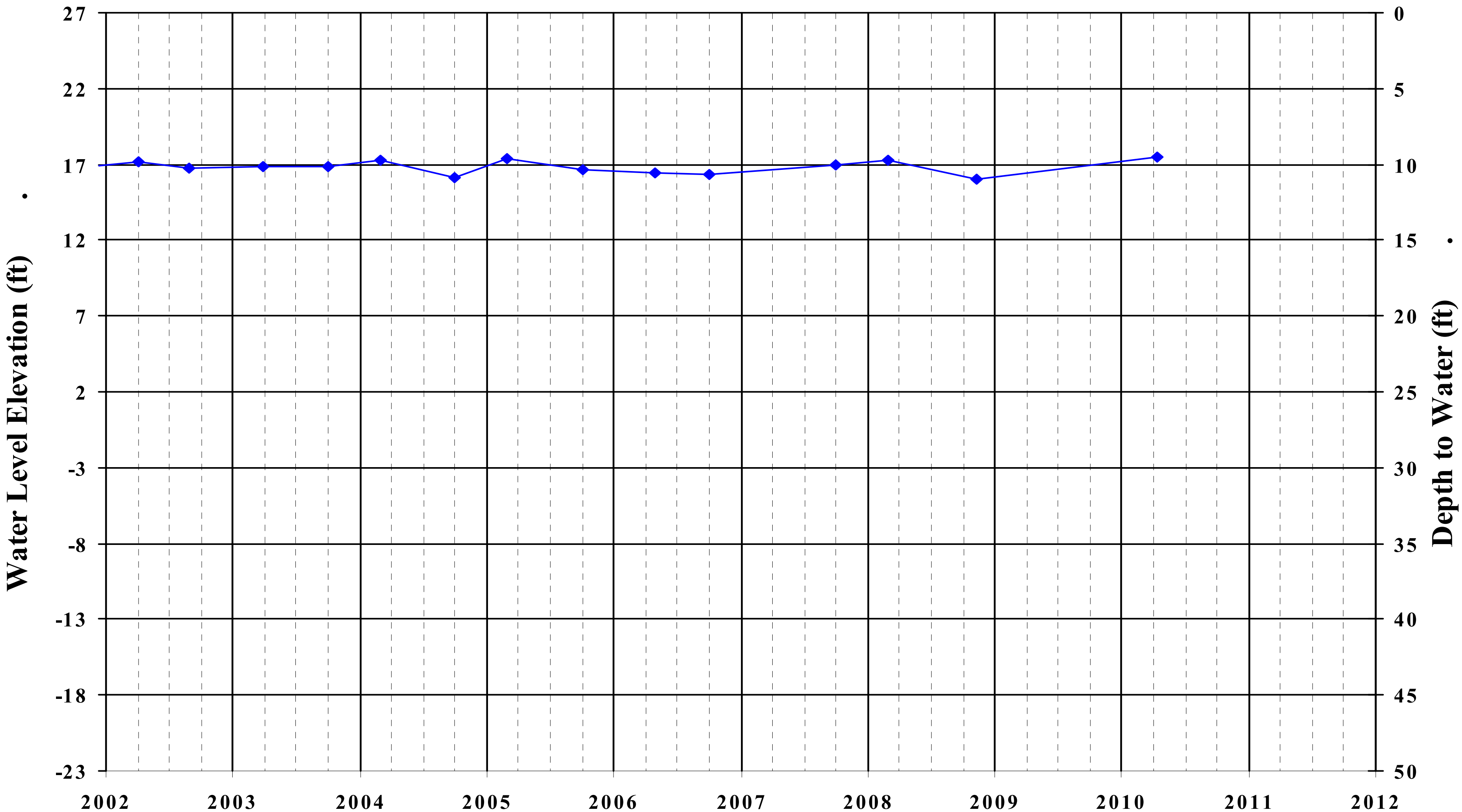


Note: Water Level are Static (Pump off)

Water Level in ECCID 5-36

Perforation: ft
Well Depth: 20 ft

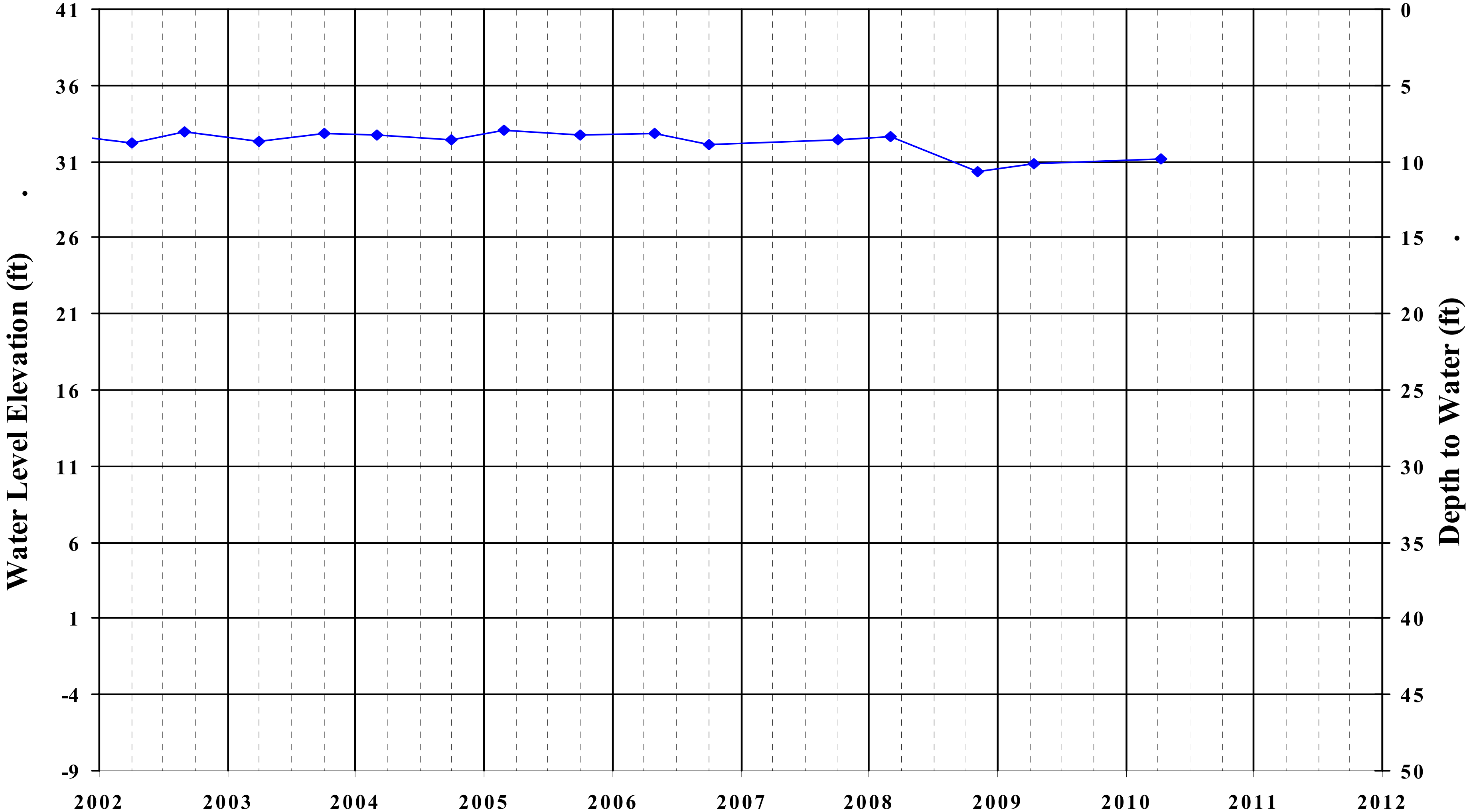
Reference Point Elevation: 27.4 ft/msl



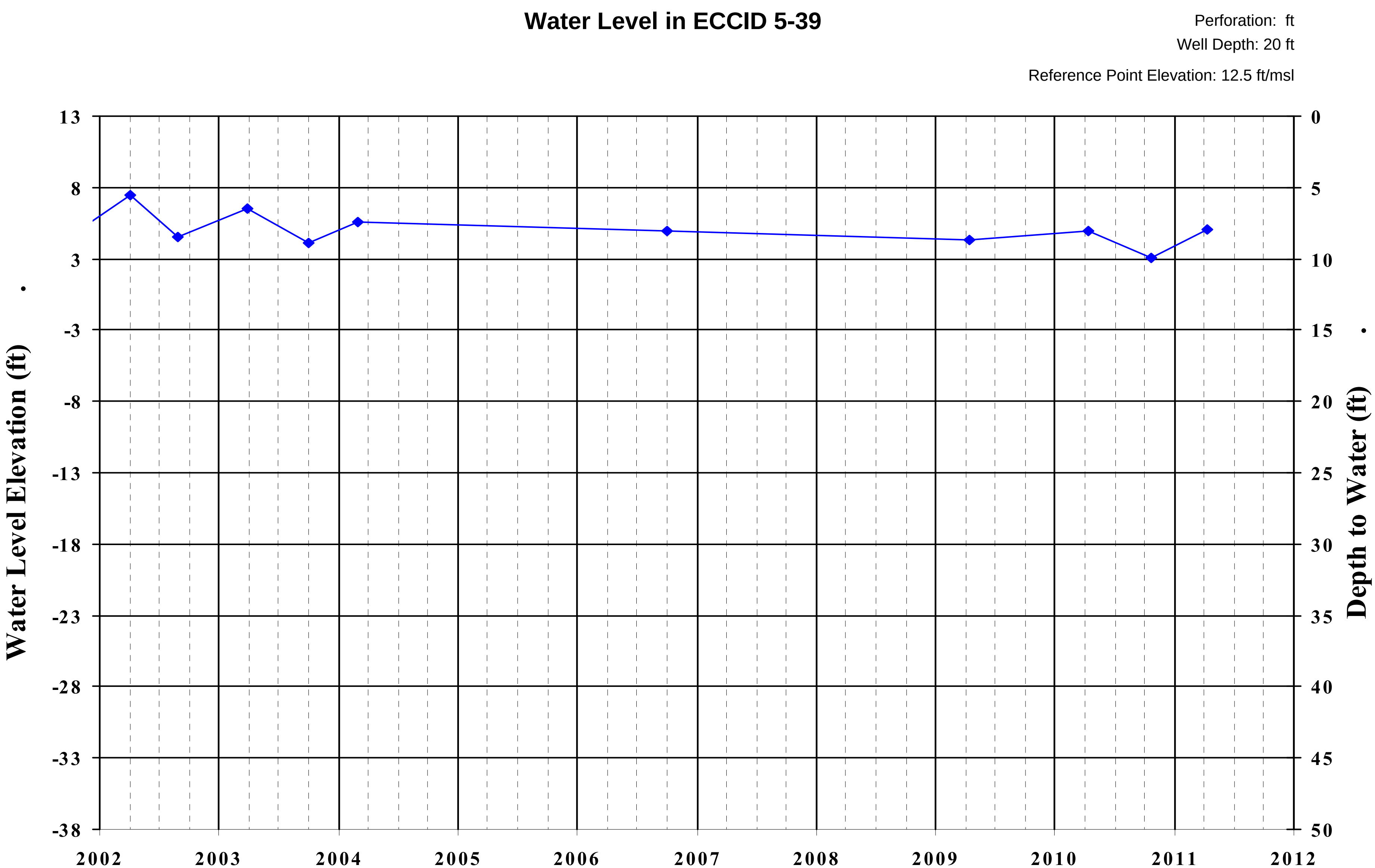
Note: Water Level are Static (Pump off)

Water Level in ECCID 5-37

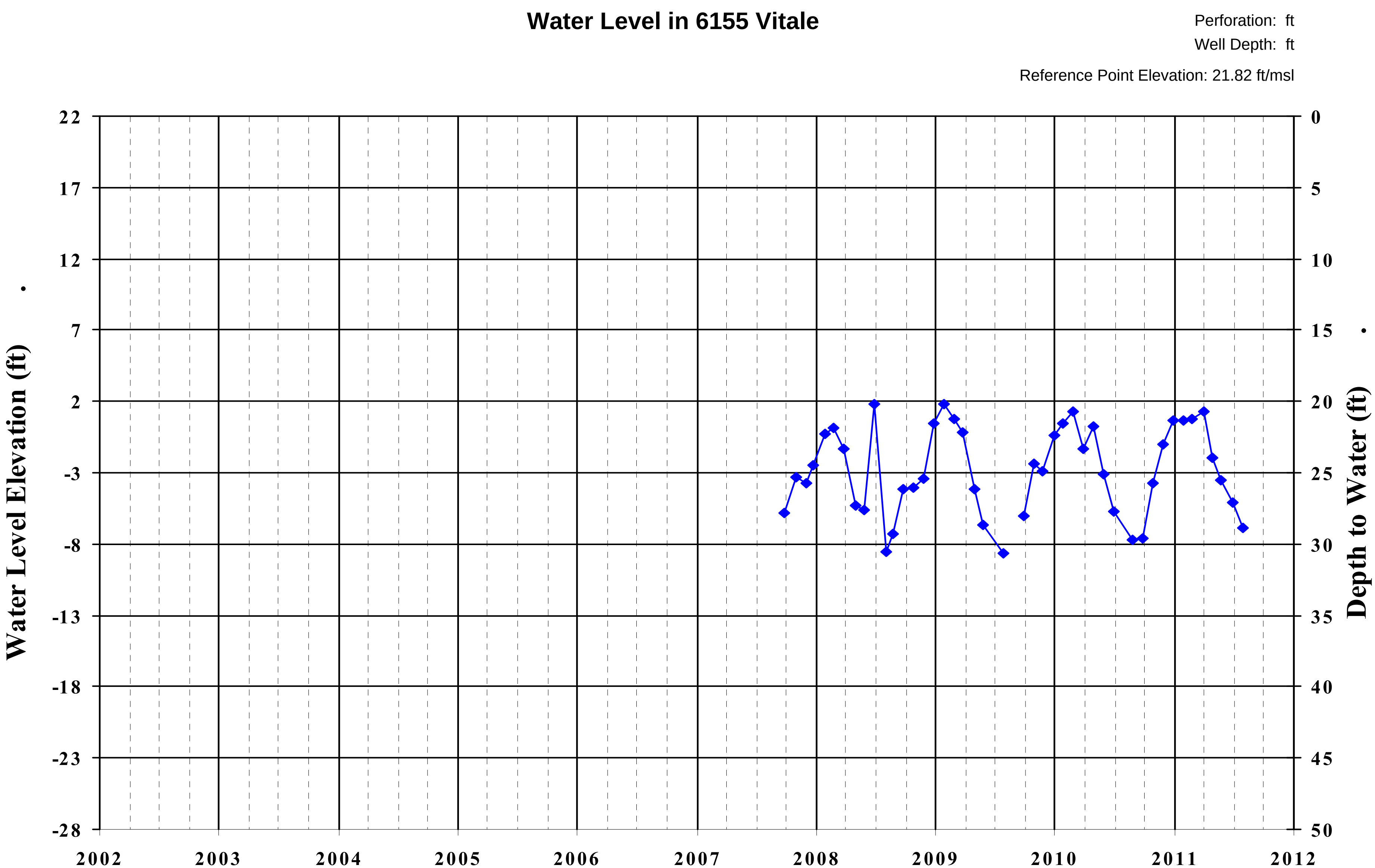
Perforation: ft
Well Depth: 20 ft
Reference Point Elevation: 40.6 ft/msl



Note: Water Level are Static (Pump off)



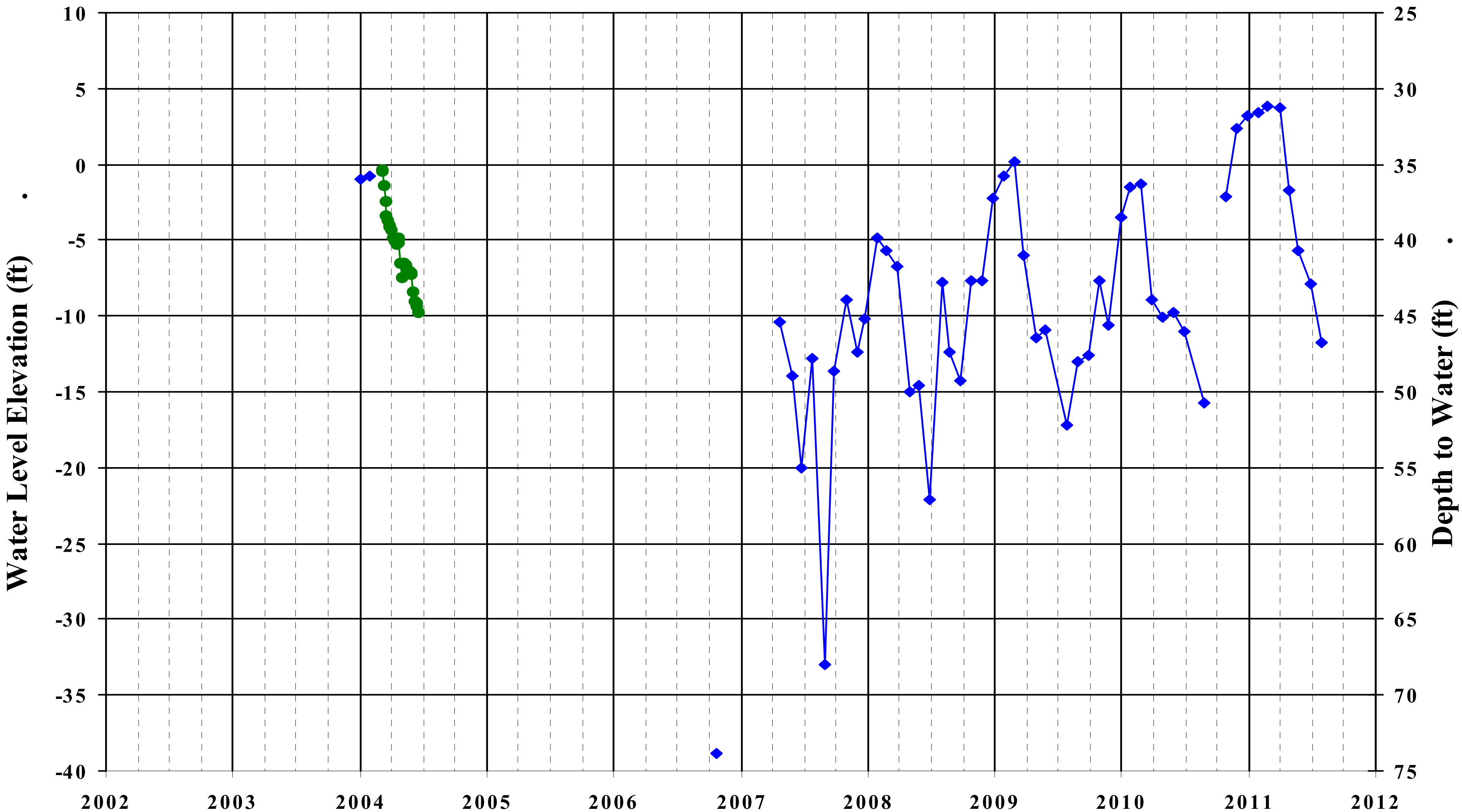
Note: Water Level are Static (Pump off)



Note: Water Level are Static (Pump off)

Water Level in DWD Creekside MW

Perforation: 230-240 ft
Well Depth: 380 ft
Reference Point Elevation: 34.514 ft/msl

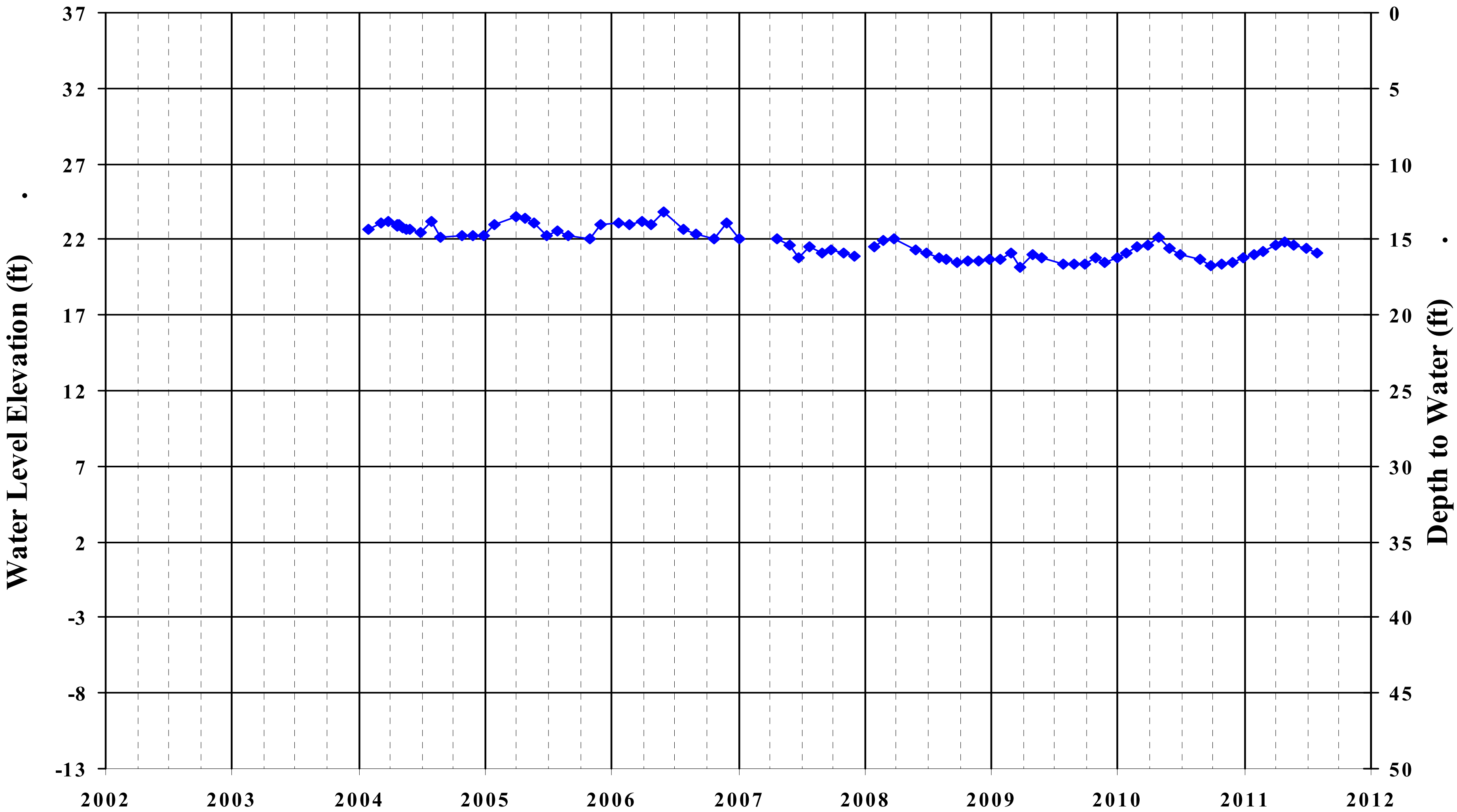


Note: Water Level are Static (Pump off)

Manual Water Measurement Transducer Water Measurement

Water Level in 3199 Crismore

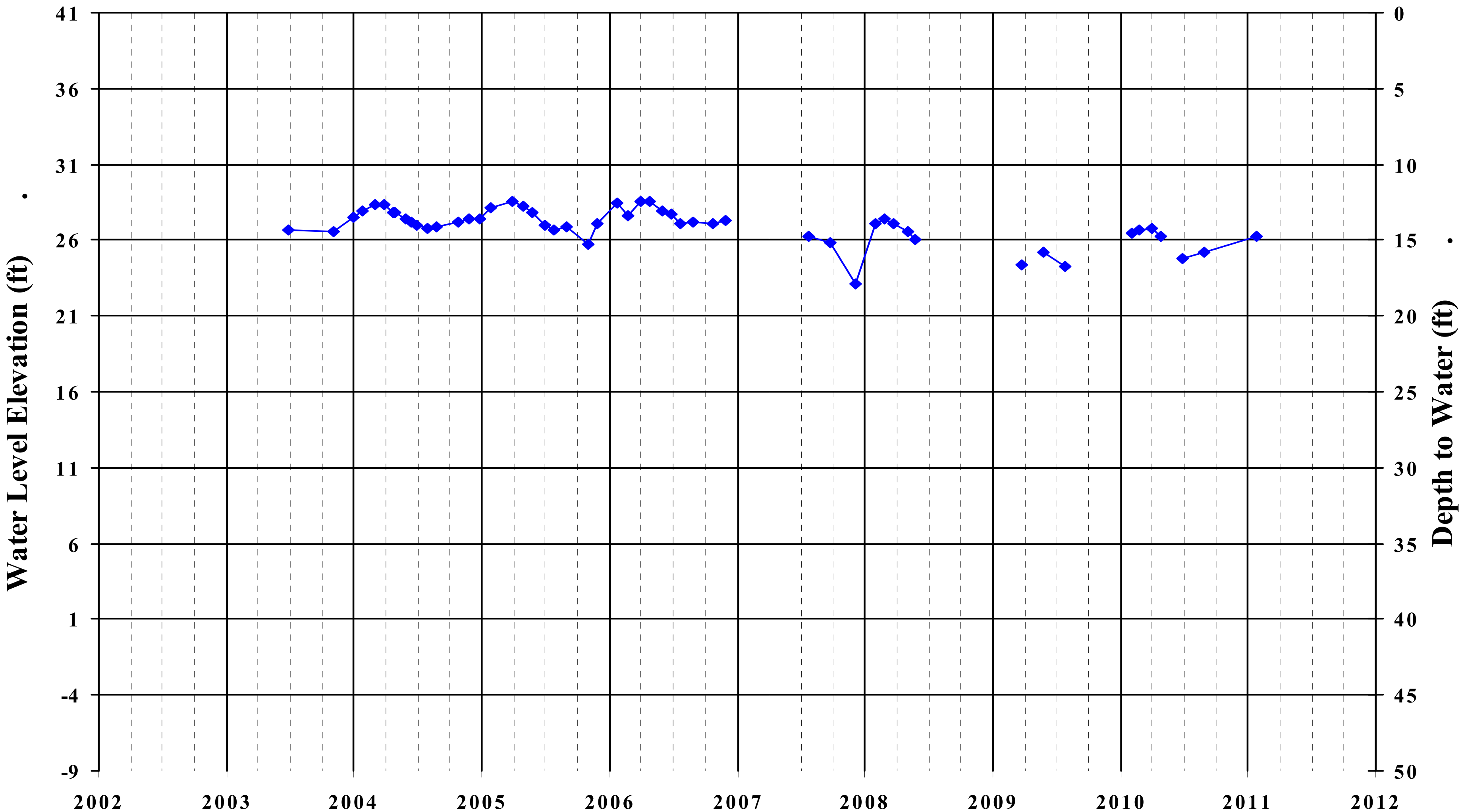
Perforation: ft
Well Depth: ft
Reference Point Elevation: 37.342 ft/msl



Note: Water Level are Static (Pump off)

Water Level in 3060 Doyle

Perforation: ft
Well Depth: ft
Reference Point Elevation: 41.12 ft/msl

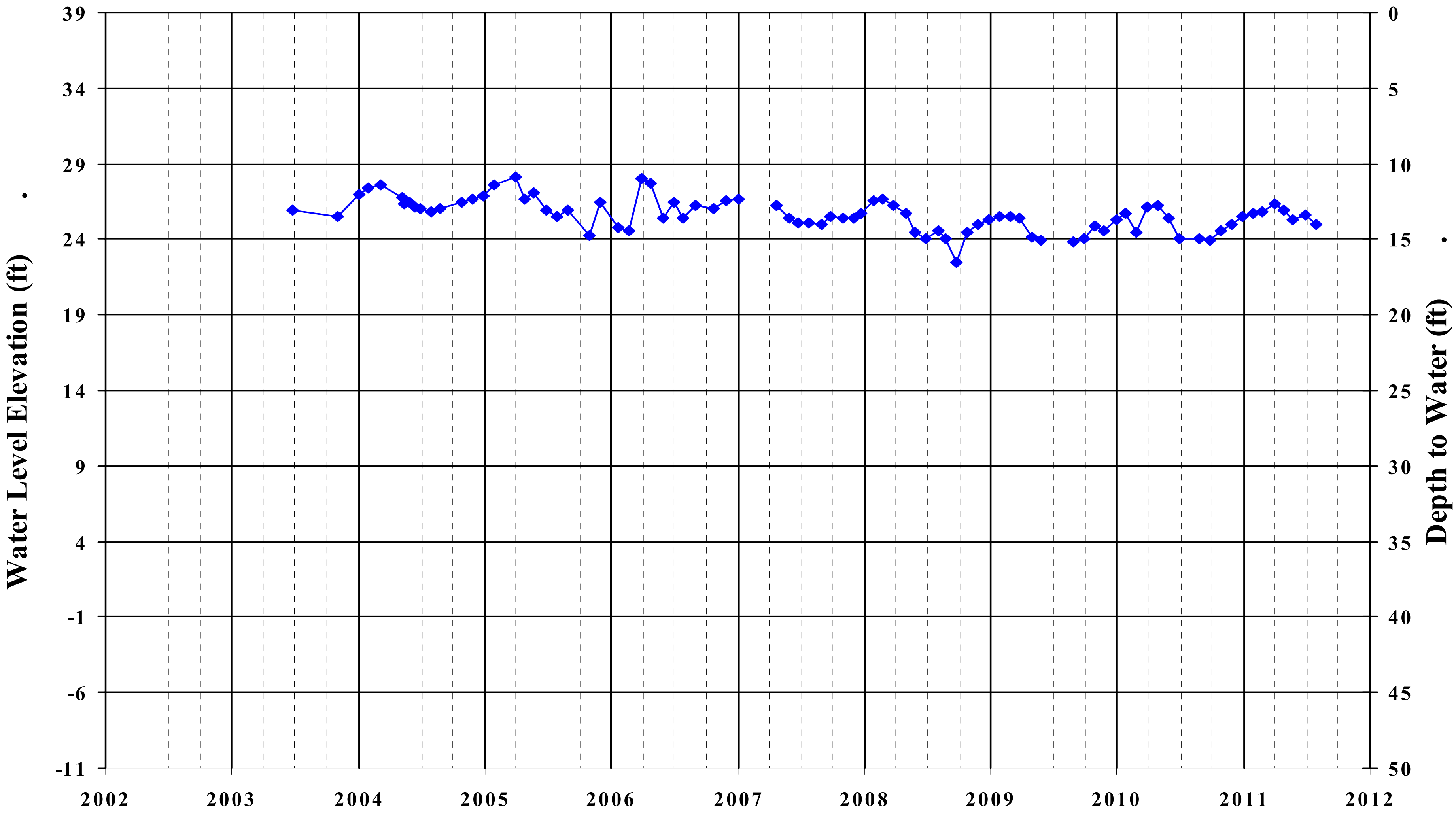


Note: Water Level are Static (Pump off)

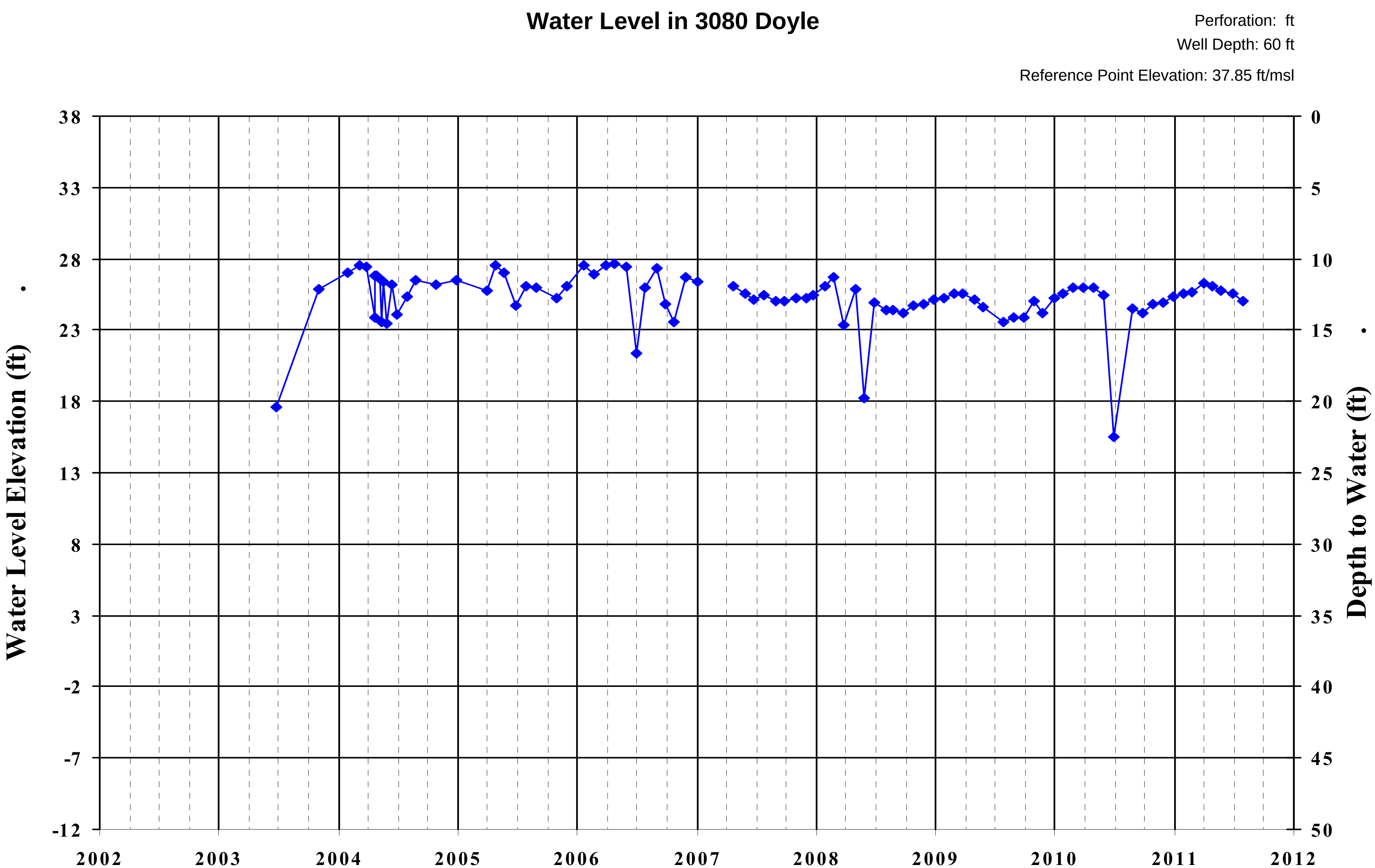
Water Level in 3071 Doyle

Perforation: ft
Well Depth: ft

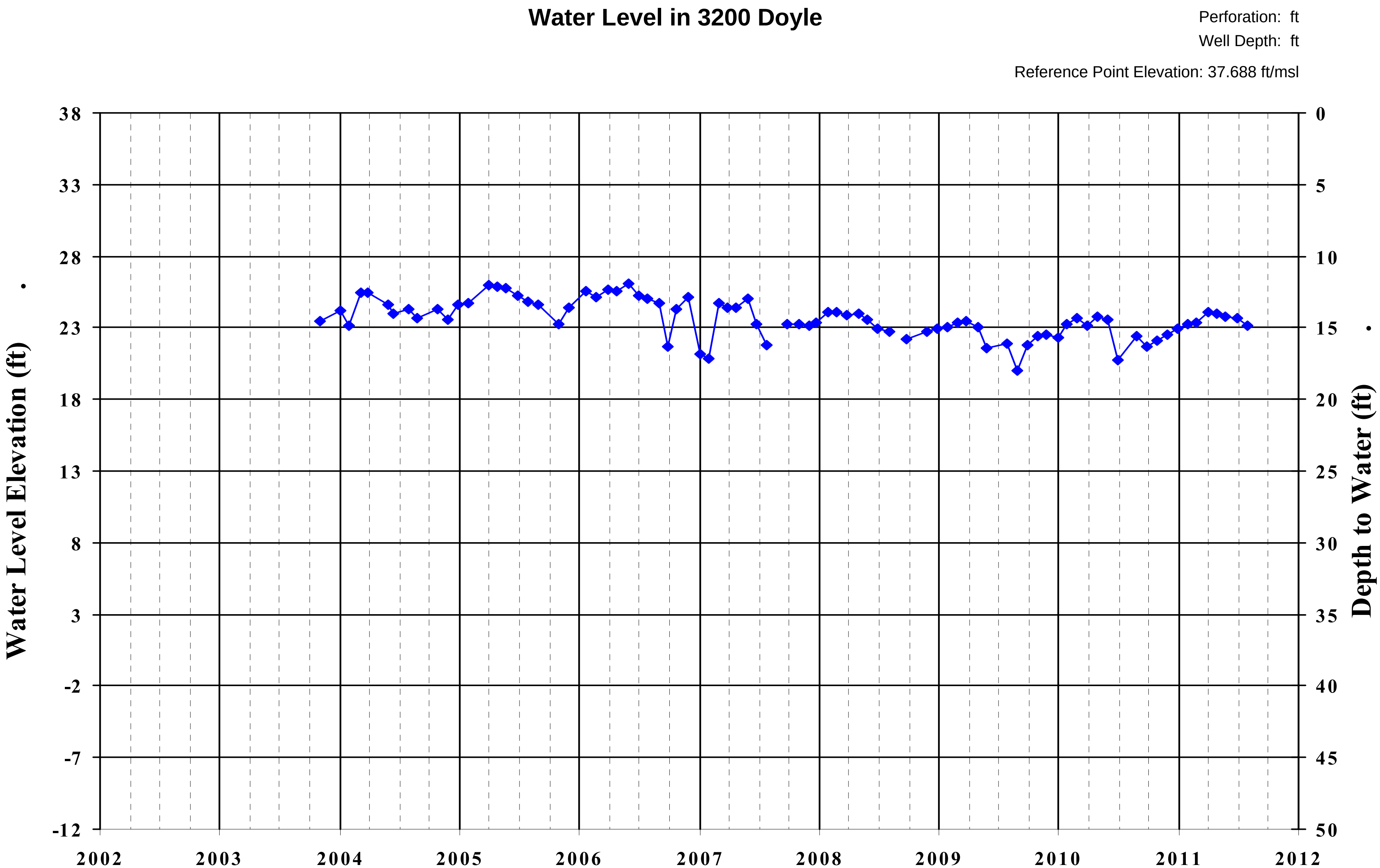
Reference Point Elevation: 39.059 ft/msl



Note: Water Level are Static (Pump off)



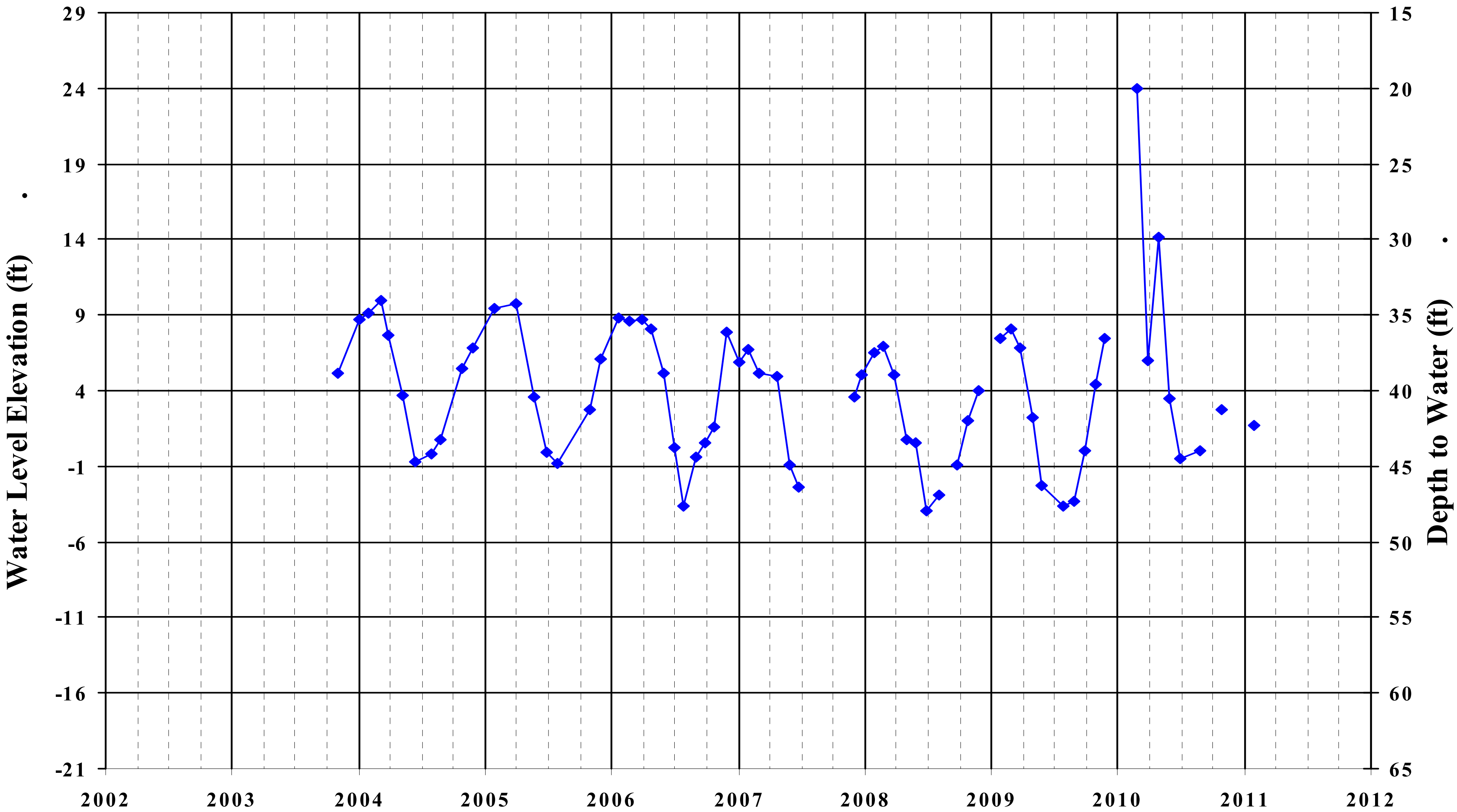
Note: Water Level are Static (Pump off)



Note: Water Level are Static (Pump off)

Water Level in 3239 Doyle

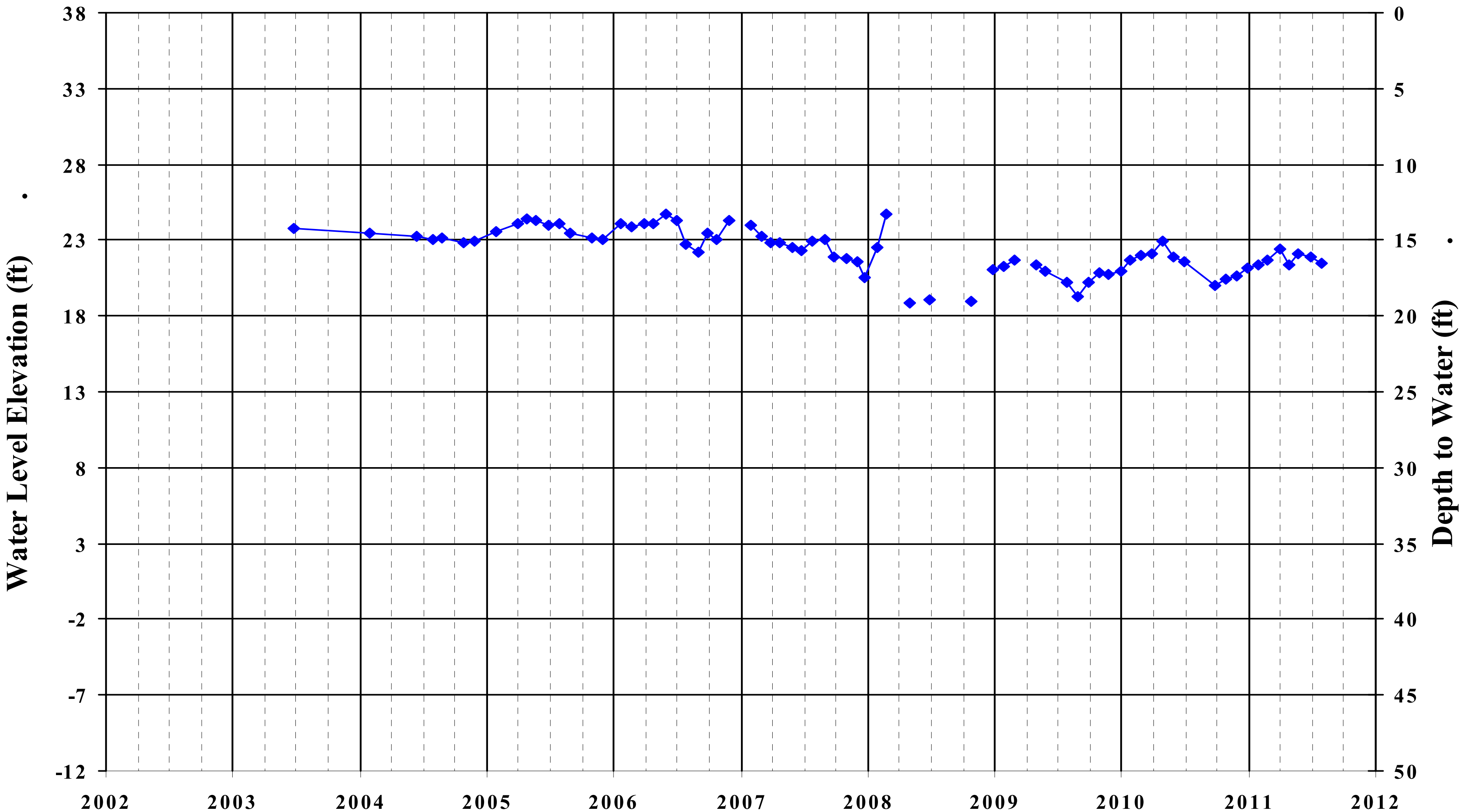
Perforation: ft
Well Depth: PSD 125 ft
Reference Point Elevation: 43.67 ft/msl



Note: Water Level are Static (Pump off)

Water Level in 3340 Doyle

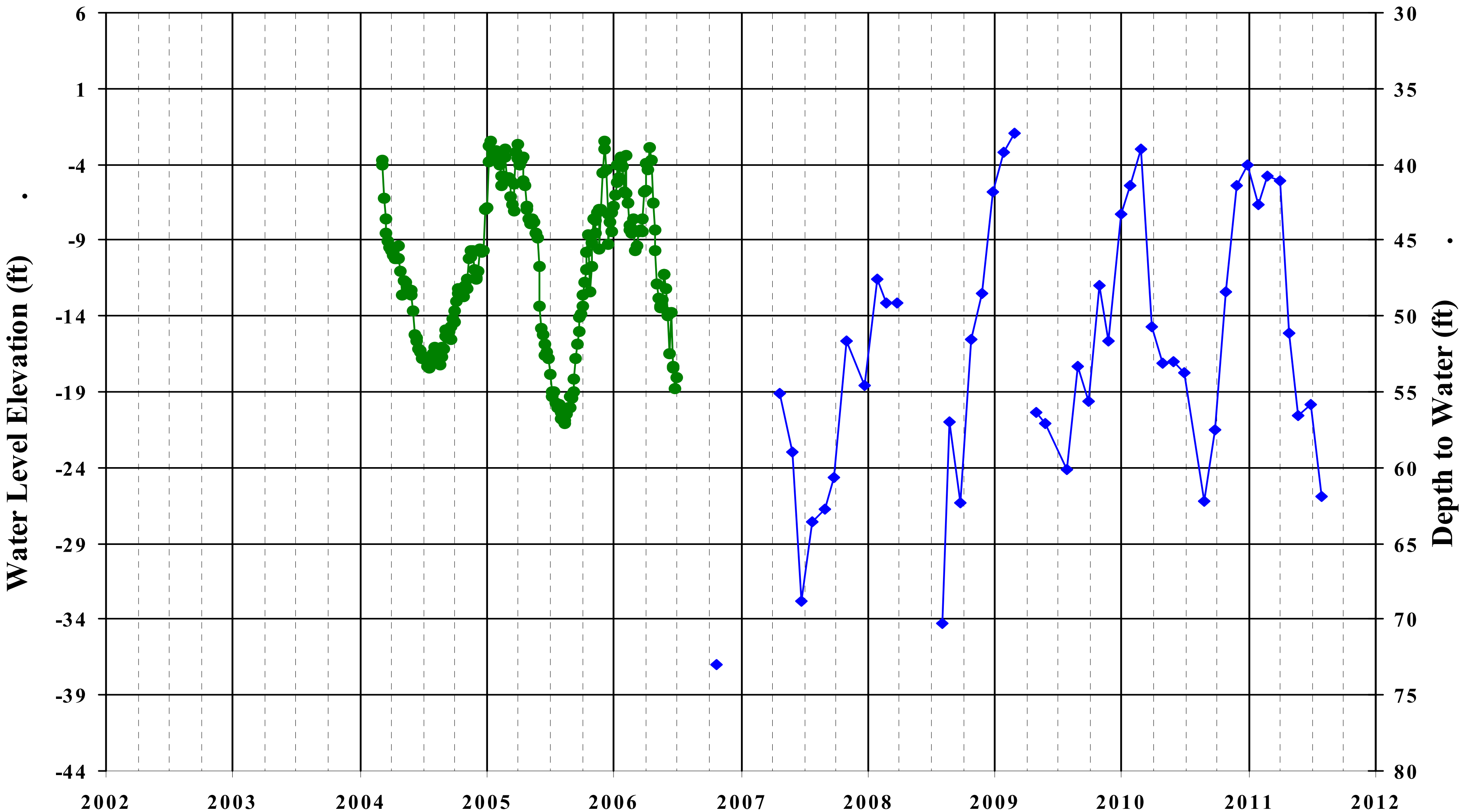
Perforation: ft
Well Depth: ft
Reference Point Elevation: 37.953 ft/msl



Note: Water Level are Static (Pump off)

Water Level in DWD Glen Park MW

Perforation: 220-230, 260-290 ft
Well Depth: 300 ft
Reference Point Elevation: 35.536 ft/msl

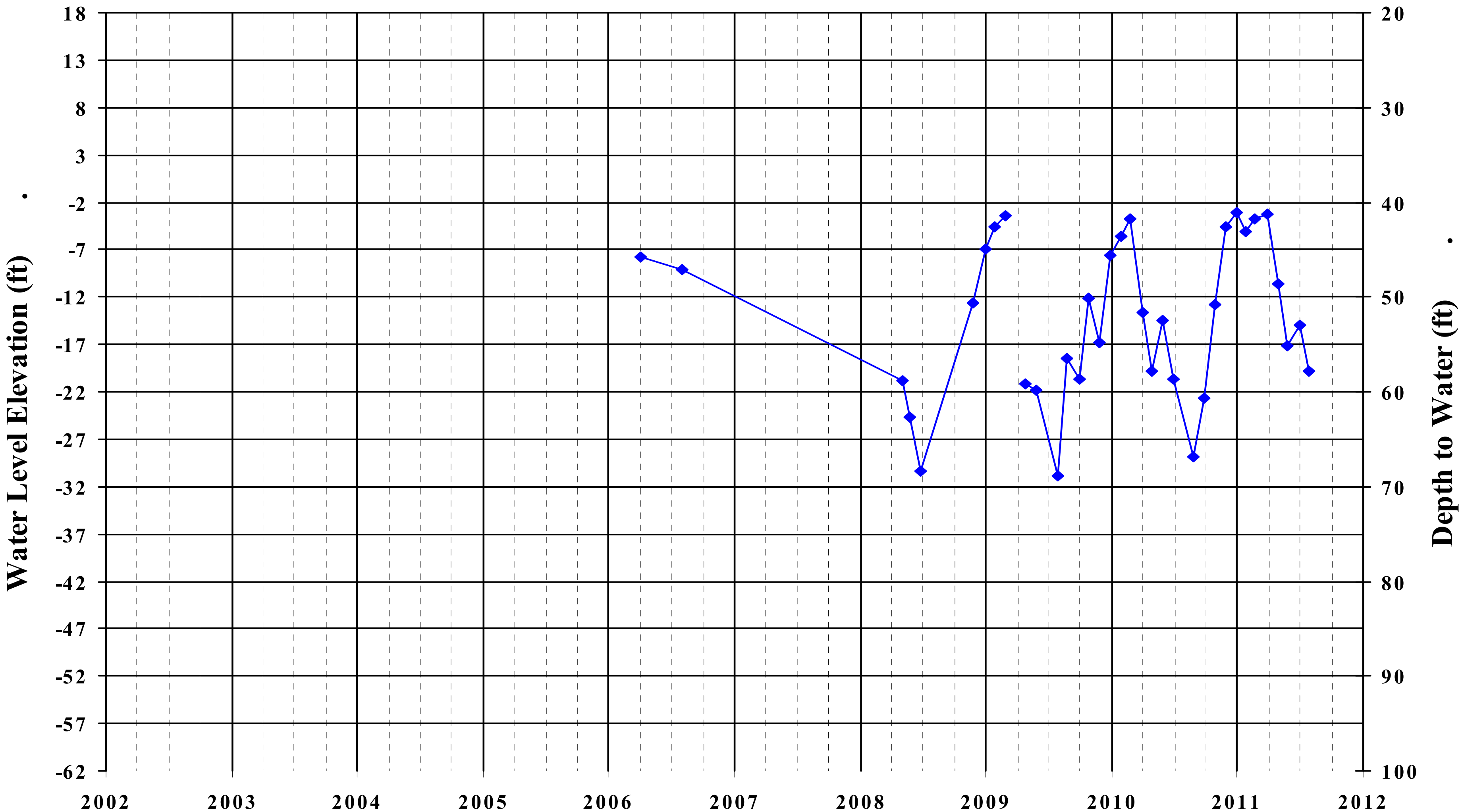


Note: Water Level are Static (Pump off)

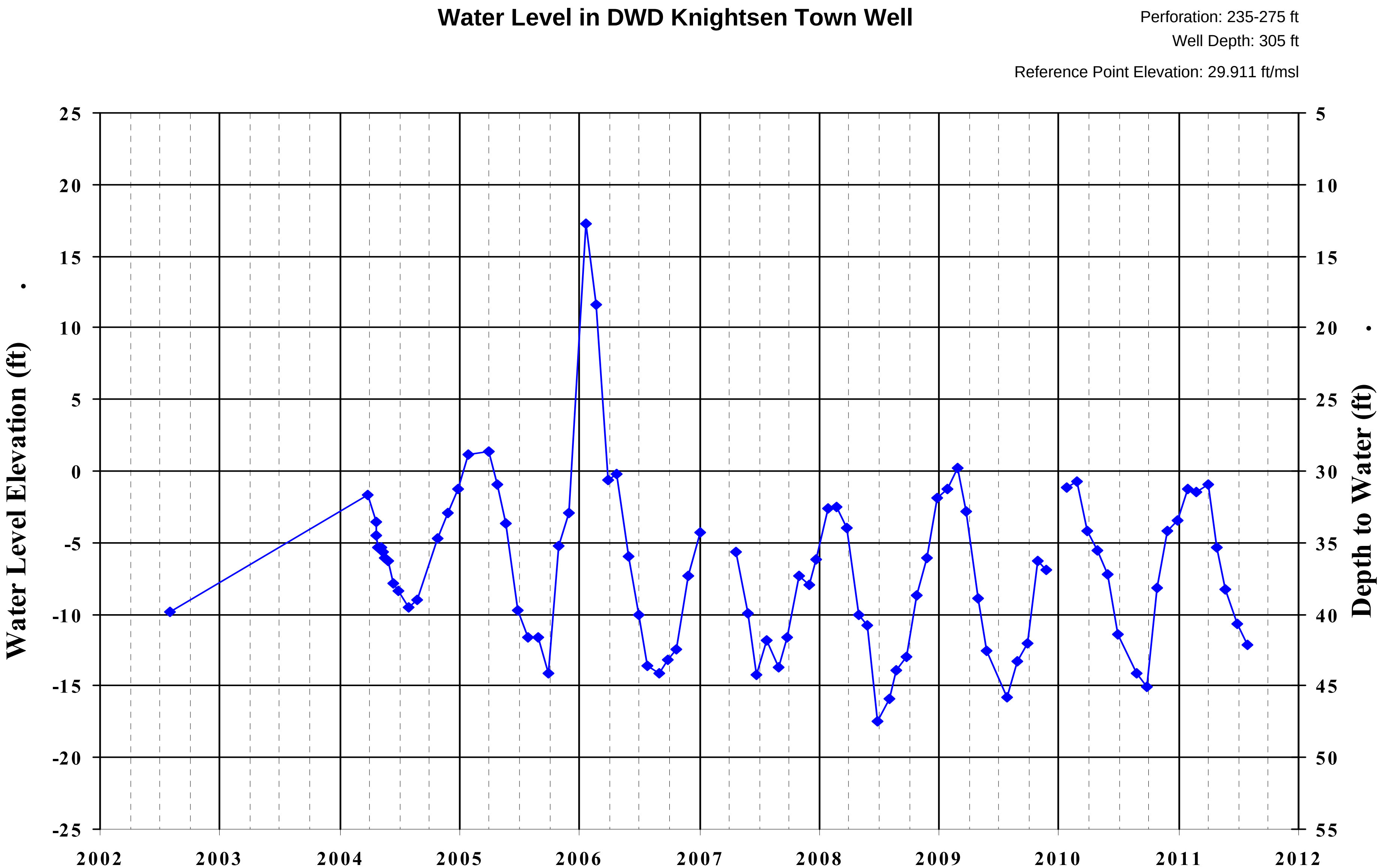
Manual Water Measurement — Transducer Water Measurement

Water Level in Glen Park Well

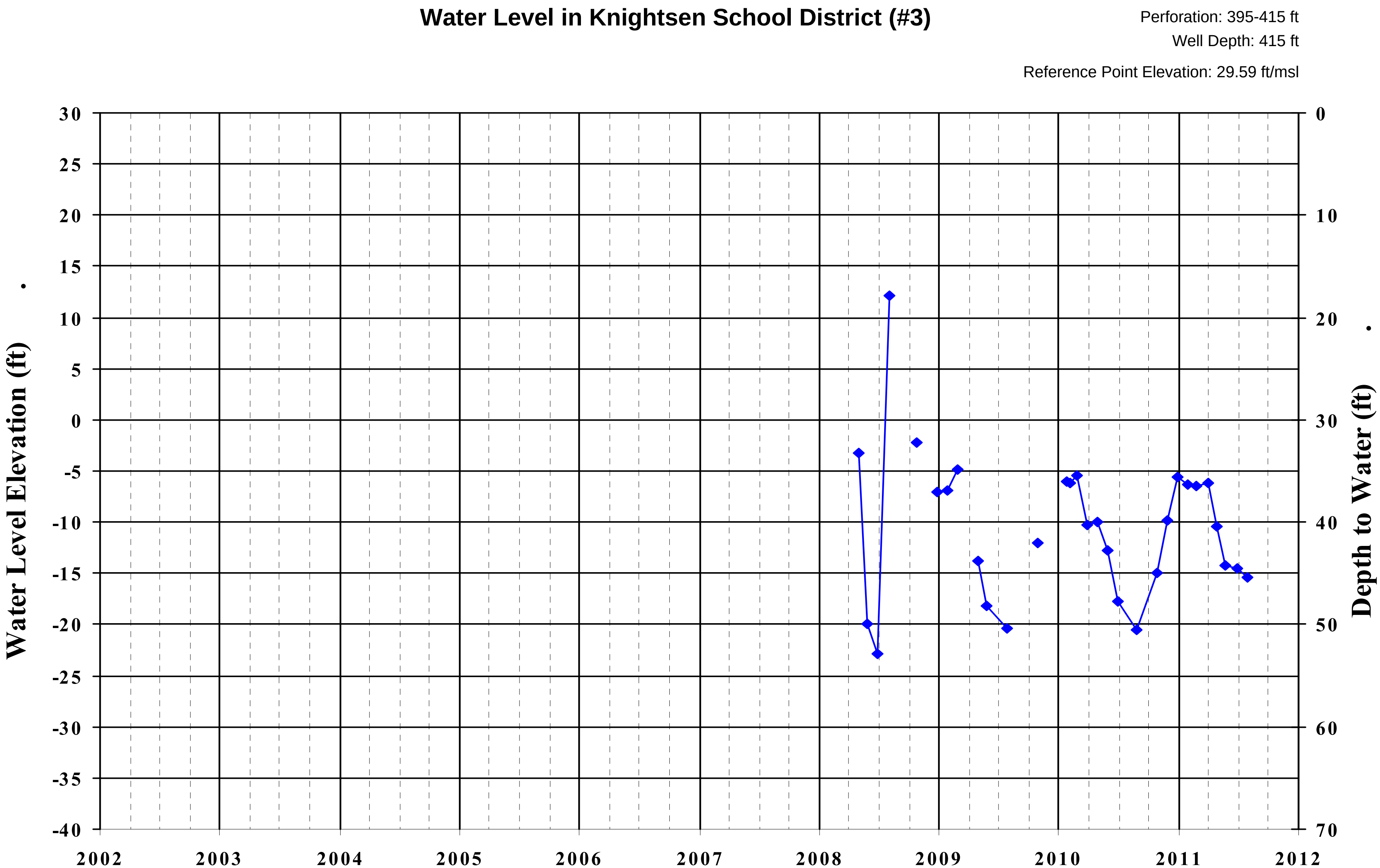
Perforation: ft
Well Depth: ft
Reference Point Elevation: 38.32 ft/msl



Note: Water Level are Static (Pump off)



Note: Water Level are Static (Pump off)

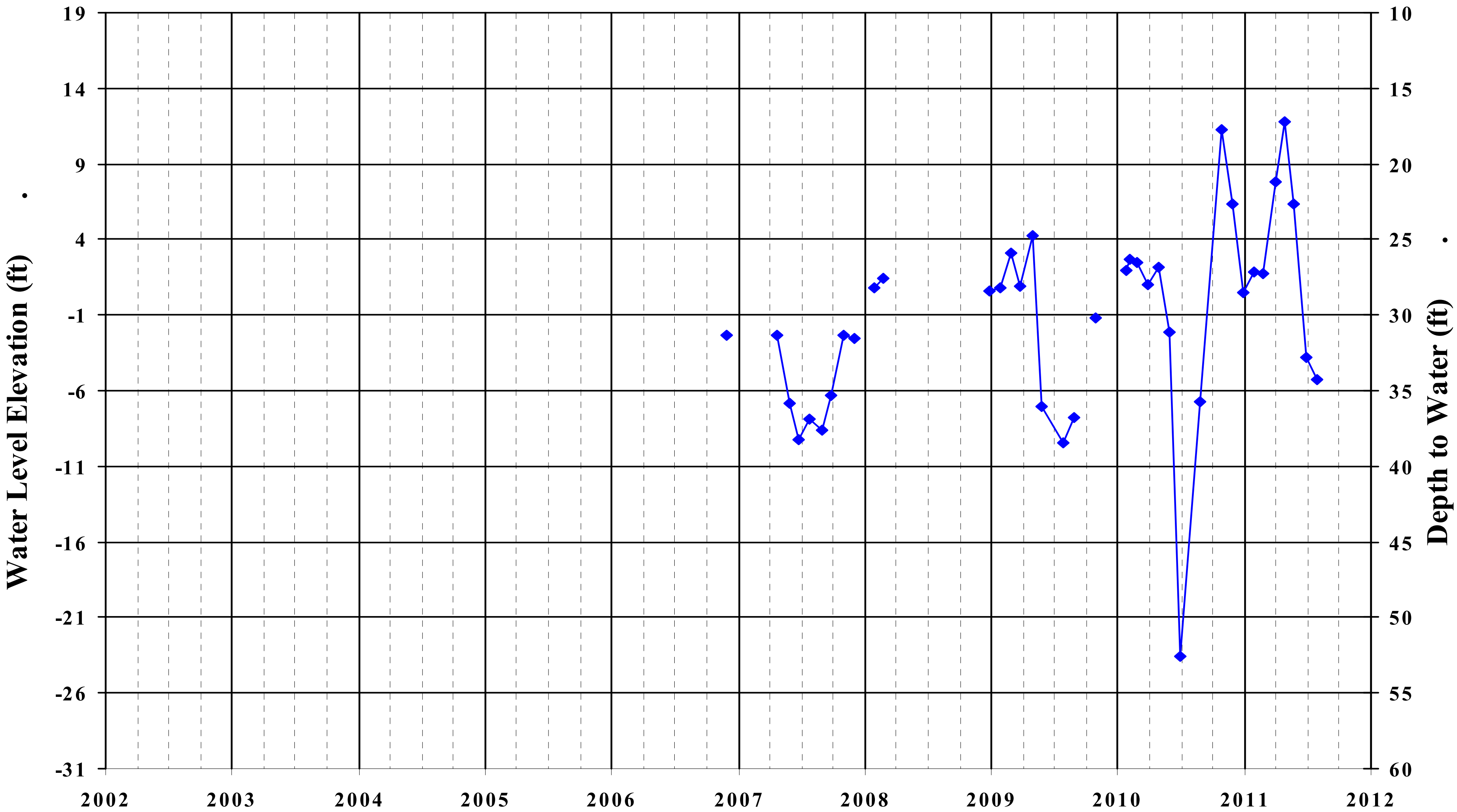


Note: Water Level are Static (Pump off)

Water Level in Knightsen School Irrigation (#2)

Perforation: 167-191, 210-230 ft
Well Depth: 230 ft

Reference Point Elevation: 29.425 ft/msl

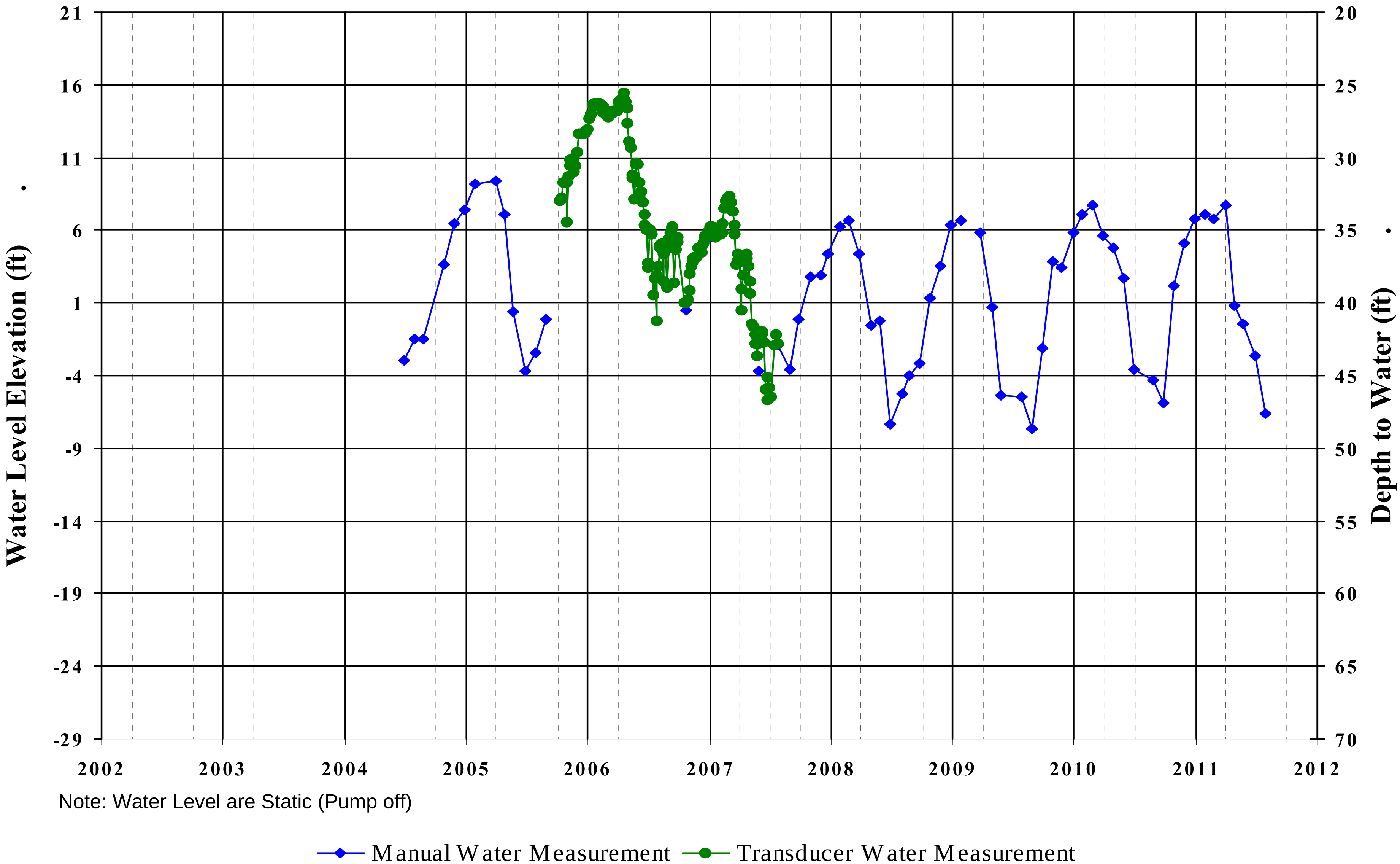


Note: Water Level are Static (Pump off)

Water Level in 185 Lozoya

Perforation: ft
Well Depth: ft

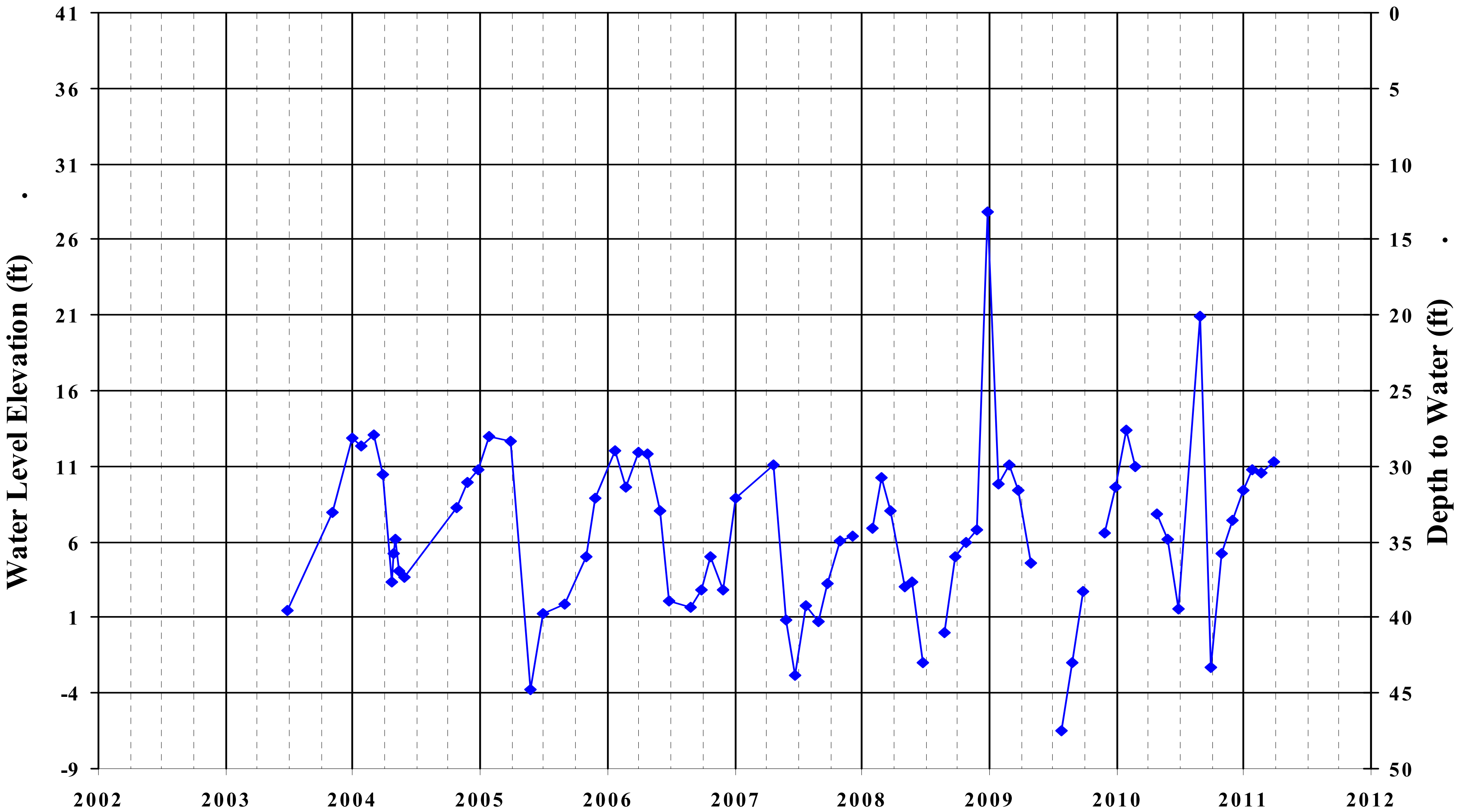
Reference Point Elevation: 41.096 ft/msl



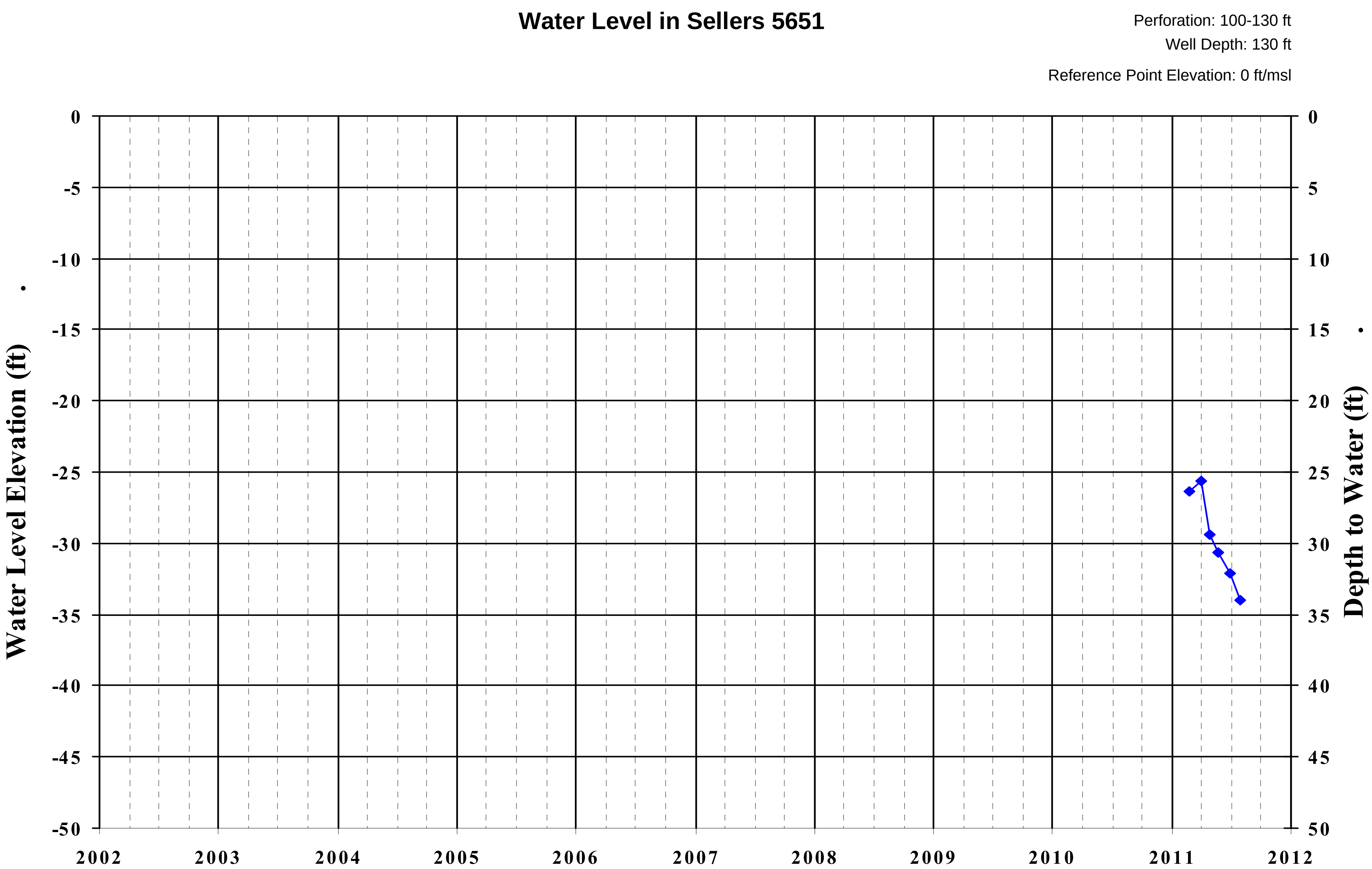
Note: Water Level are Static (Pump off)

Water Level in 21 Lozoya

Perforation: ft
Well Depth: ft
Reference Point Elevation: 41.096 ft/msl



Note: Water Level are Static (Pump off)

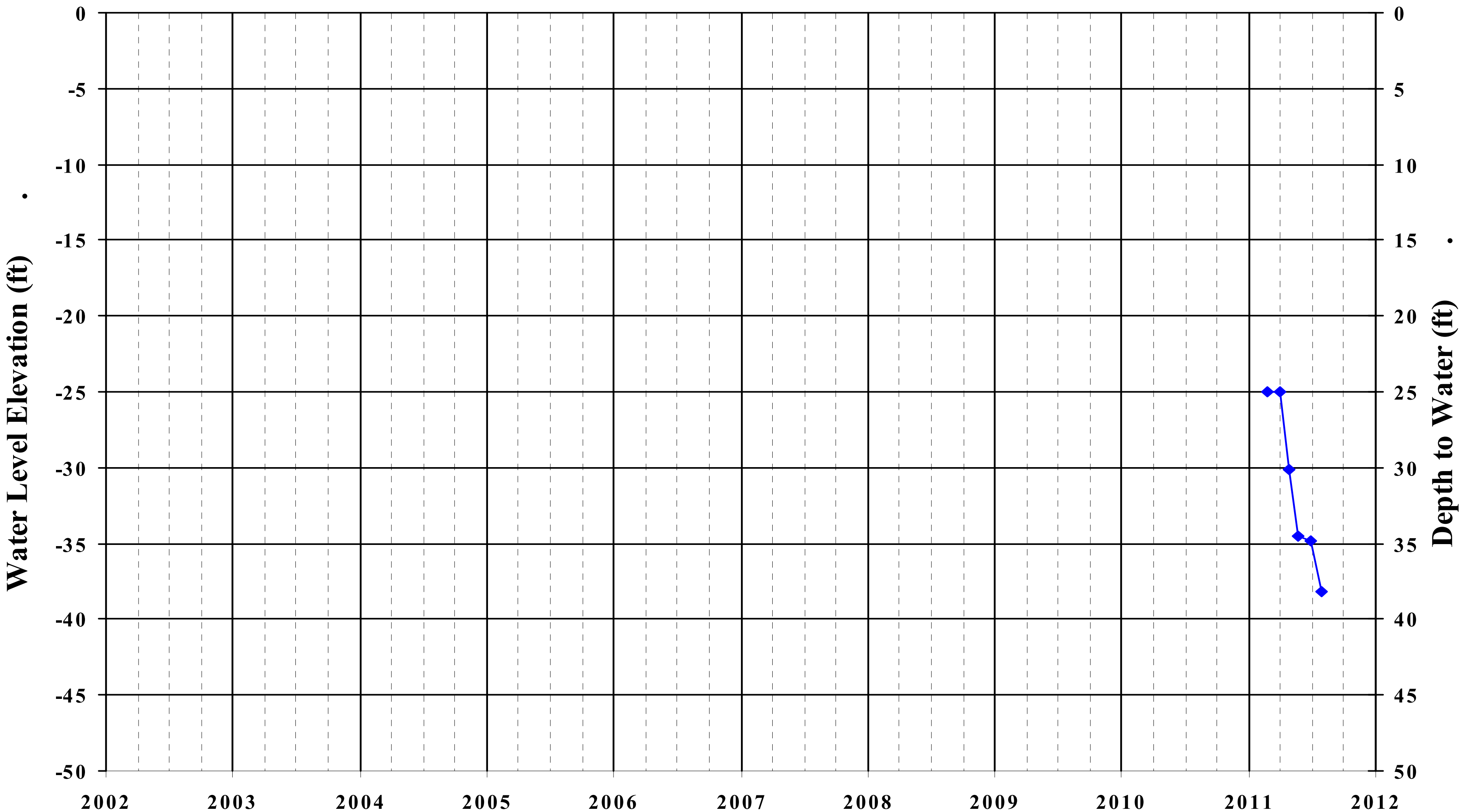


Note: Water Level are Static (Pump off)

Water Level in Sellers Ave Dejesus

Perforation: 233-253 ft
Well Depth: 253 ft

Reference Point Elevation: 0 ft/msl

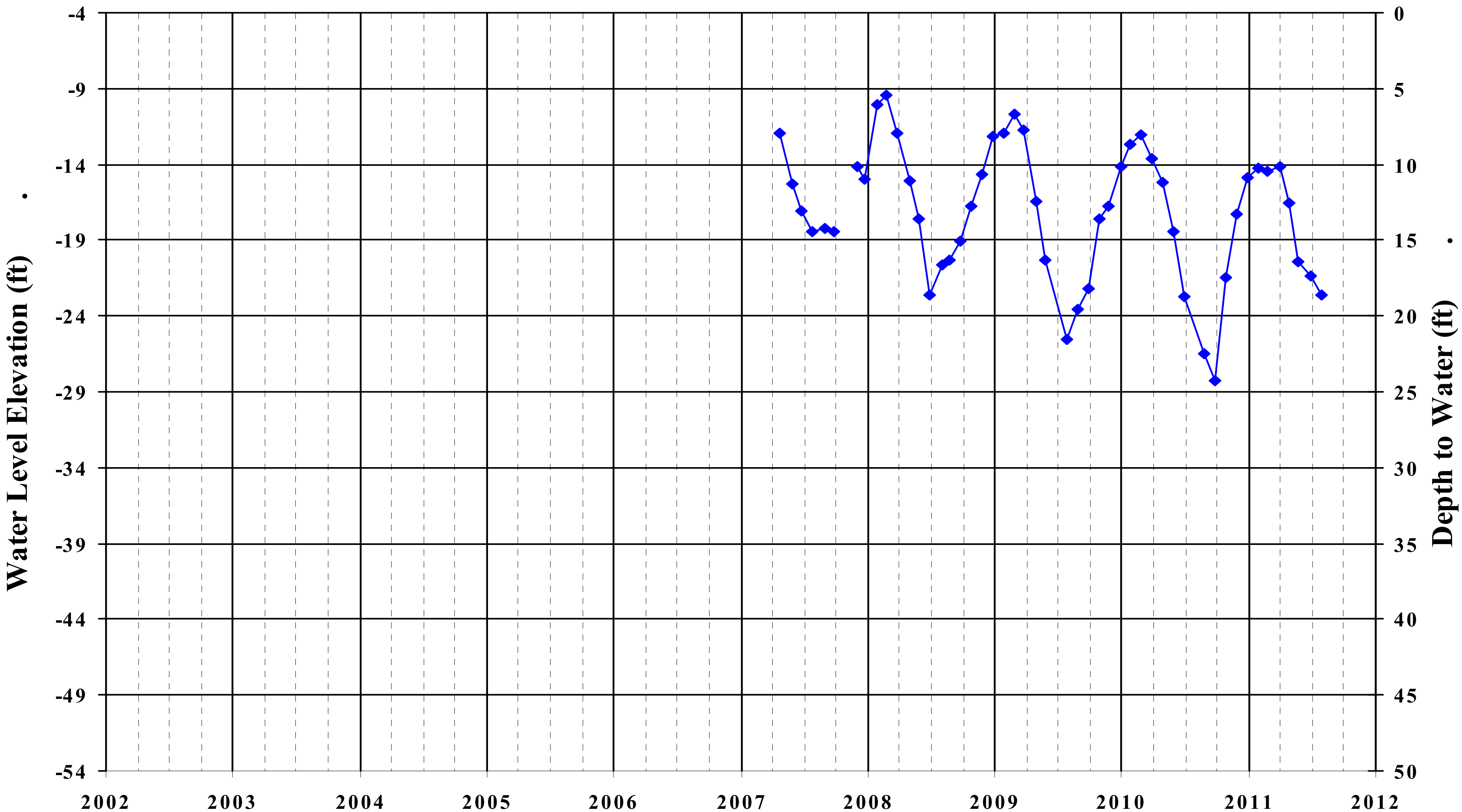


Note: Water Level are Static (Pump off)

Water Level in South Park PW

Perforation: 204-264, 284-299 ft
Well Depth: 323 ft

Reference Point Elevation: -3.5 ft/msl

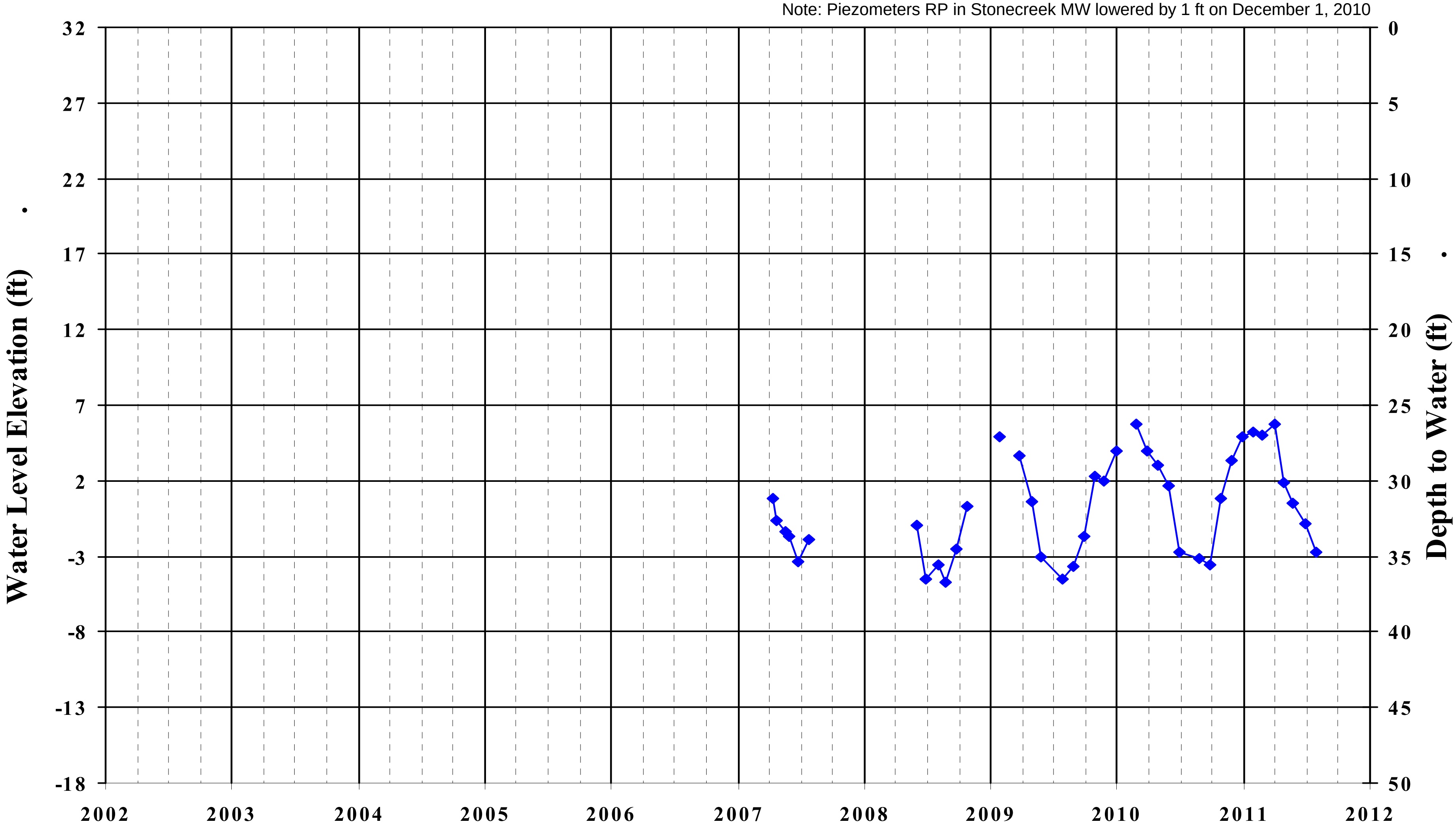


Note: Water Level are Static (Pump off)

Water Level in Stonecreek Site 160

Perforation: ft
Well Depth: ft

Reference Point Elevation: 31.656 ft/msl
Note: Piezometers RP in Stonecreek MW lowered by 1 ft on December 1, 2010



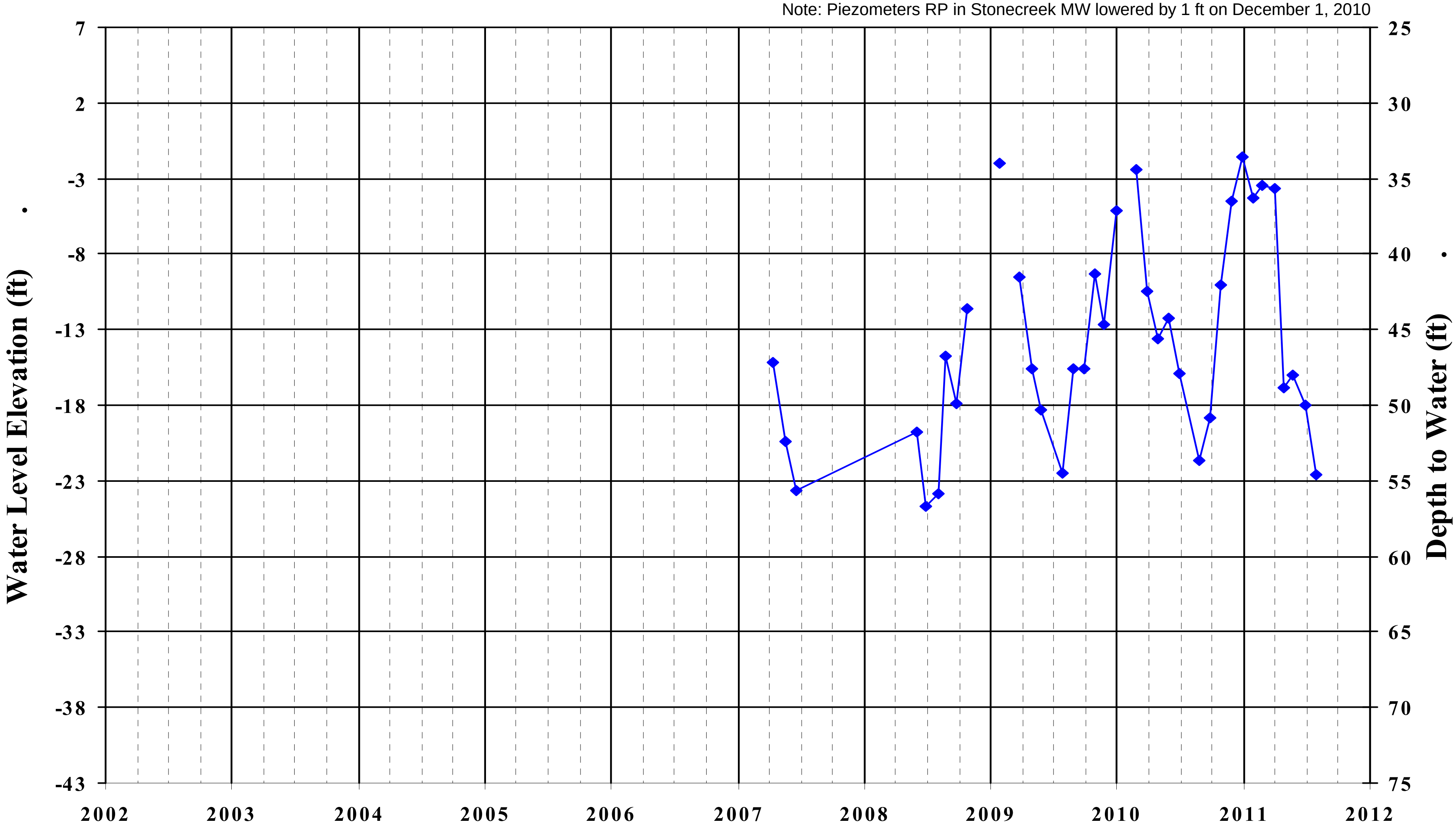
Note: Water Level are Static (Pump off)

Water Level in Stonecreek Site 300

Perforation: ft
Well Depth: ft

Reference Point Elevation: 31.572 ft/msl

Note: Piezometers RP in Stonecreek MW lowered by 1 ft on December 1, 2010

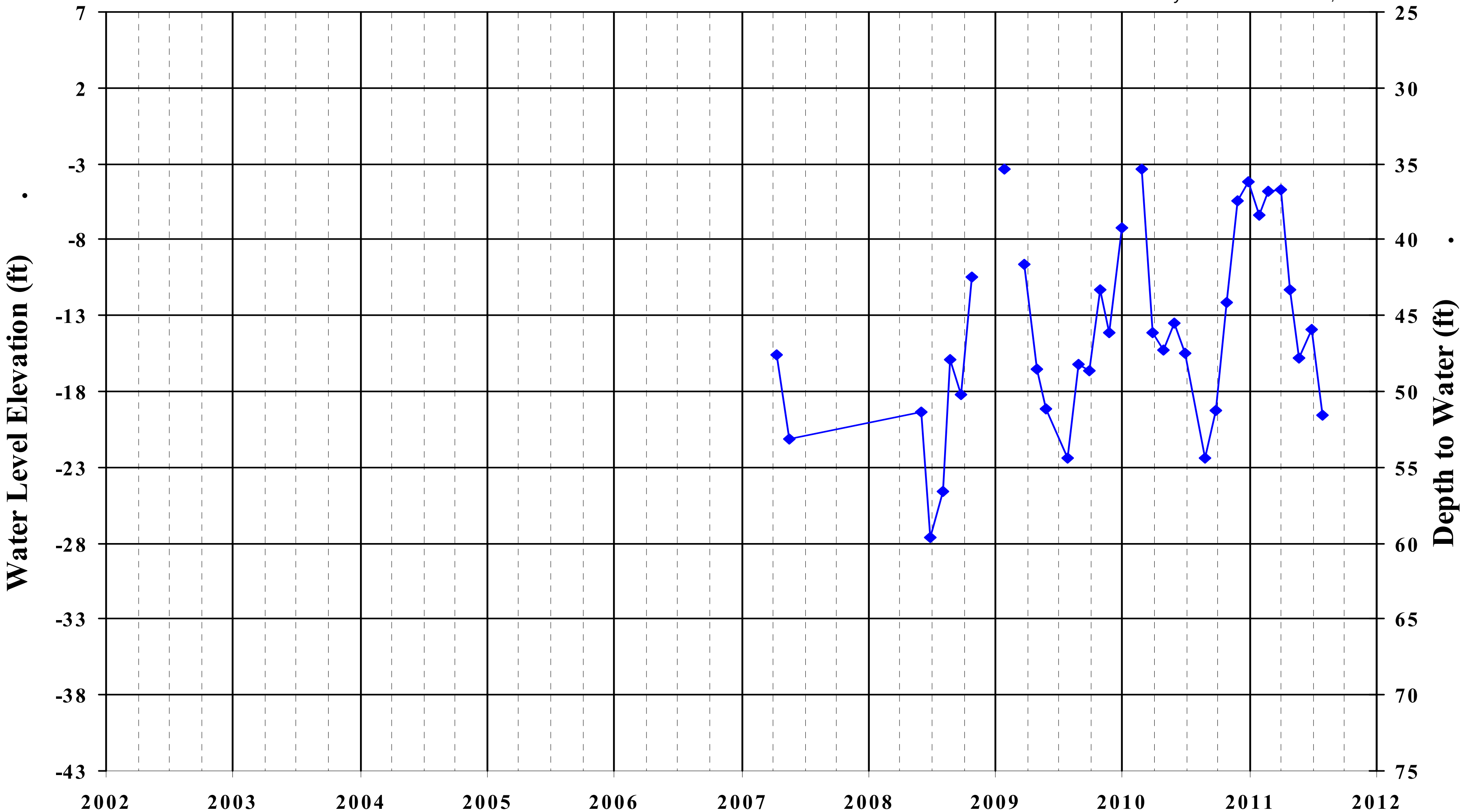


Note: Water Level are Static (Pump off)

Water Level in Stonecreek Site 360

Perforation: ft
Well Depth: ft

Reference Point Elevation: 31.597 ft/msl
Note: Piezometers RP in Stonecreek MW lowered by 1 ft on December 1, 2010



Note: Water Level are Static (Pump off)

Appendix C
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Appendix C
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

						Cations				Anions					Trace Elements							
Well Owner and Name	**Date**	**EC[1] (µmhos/cm)**	**TDS (mg/L)**	**pH**	**Total Alkalinity[2] (mg/L)**	**Ca (mg/L)**	**Mg (mg/L)**	**Na (mg/L)**	**K (mg/L)**	**SO_4 (mg/L)**	**Cl (mg/L)**	**HCO_3[2] (mg/L)**	**NO_3[2] (mg/L)**	**F (mg/L)**	**As (µg/L)**	**Ba (ug/L)**	**B (ugL)**	**Cu (ug/L)**	**Fe (ug/L)**	**Mn (ug/L)**	**Se (µg/L)**	**Zn (ug/L)**
		900/1600[a]	500/1000[a]	6.5-8.5[b]	--	--	--	--	--	250/500[a]	250[a]	--	45[c]	2[c]	10[d]	1000[c]	1000[e]	1300[c]	300[a]	50[a]	50[c]	5000[a]
Town of Knightsen																						
Elementary School Well 01	09/20/01	-	-		-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Elementary School Well 01	03/14/02	-	-		-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Elementary School Well 01	09/09/02	-	-		-	-	-	-	-	-	-	-	3.4	-	-	-	-	-	-	-	-	-
Elementary School Well 01	12/02/02	-	-		-	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-
Elementary School Well 01	04/29/03	-	-		-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Elementary School Well 01	07/16/03	-	-		-	-	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-	-	-
Elementary School Well 01	09/30/03	-	-		-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
Elementary School Well 01	01/21/04	-	-		-	-	-	-	-	-	-	-	9.2	-	-	-	-	-	-	-	-	-
Elementary School Well 01	04/15/04	-	-		-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Elementary School Well 01	06/30/04	1500	910	7.7	320	99	62	120	2.6	210	180	390	4.3	0.1	4.1	160	-	0	120	650	0	ND
Elementary School Well 01	07/29/04	-	-		-	-	-	-	-	-	-	-	6.3	-	-	-	-	-	-	-	-	-
Elementary School Well 01	10/18/04	-	-		-	-	-	-	-	-	-	-	9.4	-	-	-	-	-	-	-	-	-
Elementary School Well 01	01/19/05	-	-		-	-	-	-	-	-	-	-	1.9	-	-	-	-	-	-	-	-	-
Elementary School Well 01	04/14/05	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
Elementary School Well 01	07/19/05	-	-		-	-	-	-	-	-	-	-	7.4	-	-	-	-	-	-	-	-	-
Elementary School Well 02	09/20/01	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
Elementary School Well 02	03/14/02	-	-		-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-
Elementary School Well 02	09/09/02	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
Elementary School Well 02	12/02/02	-	-		-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-
Elementary School Well 02	04/29/03	-	-		-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-
Elementary School Well 02	07/16/03	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
Elementary School Well 02	10/13/03	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
Elementary School Well 02	01/21/04	-	-		-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
Elementary School Well 02	04/15/04	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
Elementary School Well 02	06/30/04	1500	880	7.7	320	100	62	120	2.6	210	180	390	4.2	0.1	2.5	158	-	0	150	650	0	ND
Elementary School Well 02	07/29/04	-	-		-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-
Elementary School Well 02	10/18/04	-	-		-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-
Elementary School Well 02	01/27/05	-	-		-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
Town Well 01	06/17/09	890	-	7.6	200	67	29	90	2.1	140	69	200	5.4	0.2	ND	ND	-	ND	ND	ND	ND	ND
Town of Discovery Bay																						
WELL 01B	03/28/95	-	-		-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	-	-
WELL 01B	05/08/96	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 01B	05/09/96	900	550	7.8	-	42	18	130	1.7	84	90	300	0	0.26	0	110	-	0	210	140	0	0
WELL 01B	03/10/97	920	670	7.2	290	40	19	160	2	94	100	360	0	0	-	-	2.1	0	80	140	-	0

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
d) US EPA Primary MCL
e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 01B	05/10/99	892	592	7.9	260	39	23	126	-	79	78	260	ND	0.3	ND	110	-	ND	110	120	ND	ND
WELL 01B	05/17/00	864	598	8.2	288	41	19	119	-	88	80	288	ND	-	-	-	-	ND	77	125	-	ND
WELL 01B	07/10/01	920	560	7.7	260	45	18	130	ND	66	76	260	ND	-	0	110	-	0	0	130	0	0
WELL 01B	05/28/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2200	-	-	-	-	-
WELL 01B	10/16/02	900	530	7.8	290	41	18	140	1.7	83	80	354	0	0.37	0	-	-	-	-	-	-	-
WELL 01B	10/29/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2100	-	-	-	-	-
WELL 01B	03/18/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	140	-	-
WELL 01B	06/03/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	06/10/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	06/17/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 01B	06/24/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	07/01/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 01B	07/08/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 01B	07/15/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	140	-	-
WELL 01B	07/23/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	07/29/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	08/05/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	140	-	-
WELL 01B	08/12/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	08/19/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	09/23/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	11/25/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	220	460	-	-
WELL 01B	01/28/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	120	-	-
WELL 01B	04/07/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 01B	04/21/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	130	-	-
WELL 01B	05/26/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	122	-	-
WELL 01B	06/09/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	120	-	-
WELL 01B	06/23/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	116	-	-
WELL 01B	06/30/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	124	-	-
WELL 01B	07/07/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	92.8	-	-
WELL 01B	07/14/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	108	-	-
WELL 01B	07/21/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	125	-	-
WELL 01B	07/28/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	127	-	-
WELL 01B	08/04/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	120	-	-
WELL 01B	08/11/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	121	-	-
WELL 01B	08/18/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	114	-	-
WELL 01B	08/25/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	122	-	-
WELL 01B	09/01/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	121	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

						Cations				Anions					Trace Elements							
Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 01B	09/08/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	120	-	-
WELL 01B	09/15/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	118	-	-
WELL 01B	09/22/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	122	-	-
WELL 01B	09/29/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	120	-	-
WELL 01B	10/06/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	124	-	-
WELL 01B	10/13/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	123	-	-
WELL 01B	10/20/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	115	-	-
WELL 01B	12/29/04	898	550	7.9	270	43	18	128	2	89	85	330	ND	0.3	ND	115	2300	ND	220	120	ND	ND
WELL 01B	05/04/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	121	-	-
WELL 01B	10/12/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	120	-	-
WELL 01B	12/19/05	906	540	7.9	270	43	18	125	2	85	82	330	ND	0.3	ND	114	2200	ND	80	130	ND	ND
WELL 01B	12/21/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	140	-	-
WELL 01B	01/25/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	120	-	-
WELL 01B	02/08/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	120	-	-
WELL 01B	02/22/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	130	-	-
WELL 01B	03/15/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	130	-	-
WELL 01B	04/19/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	120	-	-
WELL 01B	05/03/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	130	-	-
WELL 01B	05/17/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	130	-	-
WELL 01B	05/31/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	130	-	-
WELL 01B	06/27/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	120	-	-
WELL 01B	07/12/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	130	-	-
WELL 01B	07/19/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	-
WELL 01B	07/26/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	110	-	-
WELL 01B	08/23/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	140	-	-
WELL 01B	09/13/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	140	-	-
WELL 01B	09/28/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	130	-	-
WELL 01B	10/04/06	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	110	140	-	-
WELL 01B	10/11/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	130	-	-
WELL 01B	10/25/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	130	-	-
WELL 01B	11/08/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	130	-	-
WELL 01B	10/07/08	-	-		-	-	-	-	-	-	-	-	0	0.3	0	110	-	-	-	-	0	-
WELL 01B	03/10/09	890	560	8.2	260	42	18	130	ND	85	86	320	0	0.19	0	120	-	0	0	130	0	0
WELL 01B	08/25/09	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 01B	03/03/10	930	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 02	11/19/86	600	532	7.5	420	31.5	14.1	193	1.8	65	95	512	ND	0.33	ND	ND	-	ND	120	123	ND	ND
WELL 02	09/12/89	929	605	7.9	270	49.2	19.5	111	2.4	83.7	118	279	ND	0.29	ND	ND	-	ND	144	120	ND	ND

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 02	01/20/93	1000	560	8.1	293	28	14	2	170	74	96	357	0	0.2	0	0	-	0	120	200	0	0
WELL 02	03/28/95	-	-		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
WELL 02	05/08/96	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 02	03/10/97	960	630	7.7	290	50	20	170	1	92	120	350	0	0.1	-	-	2	0	150	120	-	0
WELL 02	05/10/99	921	588	8	274	42	19	134	-	86	81	274	ND	0.26	ND	ND	-	ND	120	130	ND	ND
WELL 02	05/17/00	886	592	8.2	291	42	17	118	-	88	84	291	ND	-	-	-	-	ND	175	134	-	ND
WELL 02	07/10/01	940	560	7.7	280	44	18	140	2	66	83	280	ND	-	0	110	-	0	120	140	0	0
WELL 02	05/28/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2000	-	-	-	-	-
WELL 02	12/11/02	890	570	7.9	300	42	19	160	1.6	74	87	366	0	0.31	0	110	2200	0	140	140	0	0
WELL 02	03/18/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	140	-	-
WELL 02	03/25/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	130	-	-
WELL 02	04/02/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	130	-	-
WELL 02	04/08/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	130	-	-
WELL 02	04/15/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	130	-	-
WELL 02	04/22/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 02	04/29/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 02	05/06/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 02	05/20/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	130	-	-
WELL 02	05/27/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 02	10/27/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	116	-	-
WELL 02	12/29/04	942	570	8	290	40	18	142	2	85	96	350	ND	0.3	ND	131	2100	ND	90	120	ND	30
WELL 02	12/19/05	925	560	7.9	280	39	17	136	2	74	87	340	ND	0.3	ND	106	2200	ND	90	120	ND	ND
WELL 02	10/04/06	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 02	10/07/08	-	-		-	-	-	-	-	-	-	-	0	0.39	2.4	100	-	-	-	-	0	-
WELL 02	03/10/09	950	590	8.2	270	40	18	140	ND	80	100	330	0	0.19	0	110	-	61	0	130	0	54
WELL 02	08/25/09	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 02	03/03/10	980	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 03 (Inactive)	11/19/86	600	528	7.6	400	31.7	14.8	199	1.84	72	95	488	ND	0.33	ND	ND	-	ND	ND	120	ND	ND
WELL 03 (Inactive)	09/12/89	939	691	7.9	293	41.2	16.6	125	2.5	79.7	115	293	ND	0.34	ND	104	-	ND	ND	122	ND	ND
WELL 03 (Inactive)	01/20/93	960	530	8.1	288	30	14	172	2	67	90	351	0	0.2	0	0	-	0	170	120	0	0
WELL 03 (Inactive)	03/28/95	-	-		-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
WELL 03 (Inactive)	03/10/97	1000	570	7.9	300	30	16	190	1	79	130	370	0	0.2	-	-	2.3	0	310	120	-	0
WELL 04 (Inactive)	01/20/93	920	600	8	300	26	13	189	2	80	100	366	0	0.3	0	0	-	0	100	80	0	0
WELL 04A	08/01/96	1000	550	7.7	-	49	23	110	1	97	84	270	0	0.37	0	0	-	0	60	90	0	0
WELL 04A	03/10/97	1000	590	8.1	340	20	10	230	0	80	130	420	0	0.2	-	-	3	0	170	80	-	0
WELL 04A	05/10/99	905	600	7.8	244	52	24	110	-	99	84	244	ND	0.31	ND	ND	-	ND	100	100	ND	ND
WELL 04A	05/17/00	874	602	8.1	265	48	26	106	-	105	85	265	ND	-	-	-	-	ND	62	95	-	ND

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
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Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 04A	07/10/01	910	600	7.7	250	56	26	120	ND	86	80	250	ND	-	2	0	-	0	0	110	0	0
WELL 04A	05/28/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2100	-	-	-	-	-
WELL 04A	08/20/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	10/16/02	910	520	7.7	260	51	26	120	1.4	100	87	317	0	0.42	-	-	-	-	0	110	-	-
WELL 04A	10/23/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	10/24/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	10/29/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2000	-	0	110	-	-
WELL 04A	10/30/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	11/05/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	11/06/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	99	-	-
WELL 04A	11/12/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	11/19/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 04A	11/20/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	12/03/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	12/10/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	12/17/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	12/23/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	12/30/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	01/07/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	01/14/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	01/21/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	02/11/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	110	-	-
WELL 04A	02/18/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	02/25/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	88	-	-
WELL 04A	03/05/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	120	-	-
WELL 04A	03/11/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	03/18/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	330	110	-	-
WELL 04A	03/25/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	04/02/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	04/08/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	-	-
WELL 04A	04/15/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	04/22/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	04/29/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	05/06/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	05/20/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	05/27/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	06/03/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	06/10/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-

1. Electrical conductivity at 25 C

2. HCO_3 , total alkalinity and NO_3 reported as HCO_3 , $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
d) US EPA Primary MCL
e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

						Cations				Anions					Trace Elements							
Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 04A	06/17/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	06/24/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	07/01/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	07/08/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	07/15/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	07/23/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	07/29/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	08/05/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 04A	08/12/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	08/19/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	09/23/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	120	-	-
WELL 04A	11/25/03	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	01/28/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	97	-	-
WELL 04A	04/07/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110	-	-
WELL 04A	04/21/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-
WELL 04A	05/26/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	102	-	-
WELL 04A	06/09/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	98.4	-	-
WELL 04A	06/23/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	98.5	-	-
WELL 04A	06/30/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	99.9	-	-
WELL 04A	07/07/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	88.4	-	-
WELL 04A	07/14/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	93.7	-	-
WELL 04A	07/21/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	105	-	-
WELL 04A	07/28/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	104	-	-
WELL 04A	08/04/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	102	-	-
WELL 04A	08/11/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	101	-	-
WELL 04A	08/18/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	94.8	-	-
WELL 04A	08/25/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	99.7	-	-
WELL 04A	09/01/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	149	-	-
WELL 04A	09/08/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	101	-	-
WELL 04A	09/15/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	98.9	-	-
WELL 04A	09/22/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	100	-	-
WELL 04A	09/29/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	137	-	-
WELL 04A	10/06/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	150	-	-
WELL 04A	10/13/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	137	-	-
WELL 04A	10/20/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	92	-	-
WELL 04A	10/27/04	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	101	-	-
WELL 04A	12/29/04	924	590	8	260	50	24	116	1	100	94	320	ND	0.3	2	94.4	2100	ND	60	110	ND	ND

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
d) US EPA Primary MCL
e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 04A	05/04/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	100	-	-
WELL 04A	09/21/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	100	-	-
WELL 04A	10/12/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	40	-	-
WELL 04A	12/19/05	930	580	7.8	260	50	24	111	1	97	90	320	ND	0.3	ND	76.1	2100	ND	60	110	ND	ND
WELL 04A	12/21/05	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	380	110	-	-
WELL 04A	01/25/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	2770	400	-	-
WELL 04A	02/08/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	100	-	-
WELL 04A	02/22/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	110	-	-
WELL 04A	03/15/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	730	80	-	-
WELL 04A	04/05/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	50	-	-
WELL 04A	04/19/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	150	100	-	-
WELL 04A	05/03/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	110	-	-
WELL 04A	05/17/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	110	-	-
WELL 04A	05/31/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	110	-	-
WELL 04A	06/27/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	160	-	-
WELL 04A	07/12/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	100	-	-
WELL 04A	07/19/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	-
WELL 04A	07/26/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	110	-	-
WELL 04A	08/23/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	110	-	-
WELL 04A	09/13/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	110	-	-
WELL 04A	09/28/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	-
WELL 04A	10/04/06	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	100	110	-	-
WELL 04A	10/11/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	110	-	-
WELL 04A	10/25/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	100	-	-
WELL 04A	11/08/06	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	100	-	-
WELL 04A	10/07/08	-	-		-	-	-	-	-	-	-	-	0	0.4	0	0	-	-	-	-	0	-
WELL 04A	03/10/09	920	580	8.1	250	50	25	120	ND	96	94	300	0	0.26	2.7	0	-	0	0	110	0	0
WELL 04A	08/25/09	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	98	-	-
WELL 04A	03/03/10	960	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 05A	03/28/90	985	753	7.6	307	26.3	17.8	138	2.3	84.4	98.9	307	ND	0.4	ND	ND	-	ND	131	146	ND	ND
WELL 05A	01/20/93	820	570	8.1	303	23	13	190	2	83	99	370	0	0.3	0	0	-	0	70	140	0	0
WELL 05A	03/28/95	-	-		-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
WELL 05A	05/08/96	-	-		-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
WELL 05A	06/14/96	1000	590	8.2	340	29	15	180	0.41	85	71	340	-	-	-	-	-	0	0	0.13	-	0
WELL 05A	03/10/97	1000	630	8	310	30	17	200	0	89	120	380	0	0.2	-	-	2.7	0	50	150	-	0
WELL 05A	05/10/99	1010	667	8.1	310	30	17	174	-	79	95	310	ND	0.39	2	ND	-	ND	140	140	ND	ND
WELL 05A	05/17/00	977	660	8.2	318	29	18	163	-	86	113	318	ND	-	-	-	-	ND	106	141	-	ND

1. Electrical conductivity at 25 C

2. HCO_3 , total alkalinity and NO_3 reported as HCO_3 , $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
d) US EPA Primary MCL
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
Town of Discovery Bay																						
WELL 05A	07/10/01	1100	640	7.8	320	34	17	180	ND	79	100	320	ND	-	3	0	-	0	0	150	0	0
WELL 05A	05/28/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	3100	-	-	-	-	-
WELL 05A	10/16/02	930	530	7.9	270	51	26	120	1.4	100	91	329	0	0.43	0	0	-	0	380	57	0	0
WELL 05A	10/29/02	-	-		-	-	-	-	-	-	-	-	-	-	-	-	2000	-	-	-	-	-
WELL 05A	08/18/04	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 05A	12/29/04	1190	750	8.1	370	36	18	203	1	79	130	450	ND	0.4	4	94.2	3400	10	80	50	2	ND
WELL 05A	12/19/05	949	580	8.1	260	49	24	117	1	97	100	310	ND	0.3	2	82.2	2100	ND	150	ND	ND	ND
WELL 05A	10/04/06	-	-		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-
WELL 05A	10/07/08	-	-		-	-	-	-	-	-	-	-	ND	0.46	3.3	0	-	-	-	-	0	-
WELL 05A	06/09/09	970	560		260	49	24	120	ND	96	96	320	0	0.33	2.7	0	-	0	110	0	0	0
WELL 05A	03/03/10	1000	-		-	-	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	-	-
Diablo Water District																						
Glen Park Well	05/04/04	930	-	8	240	60	31	100	ND	160	72	-	ND	0.3	3	ND	-	ND	ND	ND	ND	ND
Glen Park Well	07/05/06	993	620		-	-	-	-	-	-	-	-	-	-	-	-	1200	-	-	-	-	-
Glen Park Well	10/19/06	1000	620	7.9	-	67	32	107	-	170	80	230	4.1	ND	ND	ND	1400	ND	ND	38	ND	ND
Glen Park Well	06/23/10	1100	-		230	52	36	100	2.7	180	100	230	4.1	0.3	-	ND	-	ND	ND	-	ND	ND
Glen Park Well	07/26/11	1082	661		-	-	-	-	-	-	108	-	-	-	-	-	-	-	-	-	-	-
South Park Well (Standby)	06/06/06	940	560	7.7	270	56	24	100	1.4	110	88	330	ND	0.3	ND	ND	1800	ND	210	140	ND	ND
Stonecreek Well	05/10/10	1000	640	7.58	0	58	33	110	2.2	180	85	210	3.4	0.33	4.8	0	1300	0	0	47	0	0
Stonecreek Well	07/26/11	1151	742		-	-	-	-	-	-	123	-	-	-	-	-	-	-	-	-	-	-
WELL 01 (Standby)	01/07/92	1400	940	7.7	240	70	43	140	4.4	350	130	240	4.5	1.1	2.2	0	0.8	2	52	145.4	2.4	0
WELL 01 (Standby)	07/13/92	1750	1090	7.8	240	110	57	170	5.1	430	160	240	15	0.3	0	0	0.9	0	0	76	0	20
WELL 01 (Standby)	10/06/92	-	1040	7.6	243	69	51	180	5.2	420	150	243	14	0.32	3.3	0	0.9	0	0	58	0	0
WELL 01 (Standby)	04/05/93	1440	920	7.8	230	88	43	140	4.7	360	140	230	6.5	0	2.1	0	0	0	0	71	0	34
WELL 01 (Standby)	07/20/93	1550	1030	7.7	247	74	46	178	4.8	420	150	247	6.8	0	3.9	0	700	0	25	180	0	23
WELL 01 (Standby)	10/05/93	1490	970	7.8	239	85	60	140	4.6	390	140	239	5.8	0	3.1	0	740	2.8	0	150	0	0
WELL 01 (Standby)	01/04/94	1460	930	7.7	236	82	37	160	4.7	360	140	236	3.3	0.21	5.2	0	860	0	0	270	0	0
WELL 01 (Standby)	04/05/94	1470	890	7.8	240	81	48	150	4.4	320	140	240	5.4	0.26	3.7	0	650	0.008	0	240	0	0
WELL 01 (Standby)	12/08/97	1780	1020	7.64	245	85	53	150	4	390	180	245	10.3	0.34	ND	ND	920	ND	ND	62	ND	ND
WELL 01 (Standby)	07/13/99	1730	1120	7.73	240	130	55	180	5	400	190	240	13	0	-	0	780	-	0	-	-	0
WELL 01 (Standby)	08/08/00	1680	1080	7.55	234	119	58	184	6	360	200	234	6.6	0.33	4.2	ND	900	ND	ND	62	ND	ND
WELL 01 (Standby)	06/18/08	2400	-	7.6	290	190	83	190	6.5	570	240	290	ND	1.5	4.5	130	-	50	ND	400	ND	ND
WELL 01 (Standby)	06/23/10	-	-		-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-
City of Brentwood																						
WELL 06	08/16/90	1080	657	7.8	223	57.6	33.3	108	3.2	192	94.6	223	13.5	0.35	ND	ND	-	ND	ND	ND	ND	ND

1. Electrical conductivity at 25 C

2. HCO3, total alkalinity and NO3 reported as HCO3, CaCO3 and NO3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 06	04/30/91	960	640	8	225	73	33	95	3	99	126	274	13	0.3	ND	ND	-	ND	ND	ND	ND	ND
WELL 06	01/07/93	1200	793	7.7	217	93	39	3	110	204	133	265	8.9	0.2	ND	ND	-	ND	ND	ND	ND	ND
WELL 06	05/02/94	-	-		-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-
WELL 06	06/30/99	1450	930	7.4	230	94	45	156	3	269	184	280	14.6	0.3	0	44.5	1.2	0	0	0	9	0
WELL 06	12/26/00	1510	920	6.6	210	90	45	157	4	269	180	260	15.2	0.2	0	40.1	1.2	0	0	0	6	0
WELL 06	05/02/01	-	-		-	-	-	-	-	-	-	-	16.1	-	-	-	-	-	-	-	-	-
WELL 06	08/01/01	1510	990	7.5	220	84	42	163	4	277	174	260	14.4	0.4	0	42.7	1.19	0	0	0	8	0
WELL 06	02/27/02	-	-		-	-	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-
WELL 06	09/11/02	1530	1000	7.1	220	94	45	148	4	246	181	270	14.1	0.3	ND	44.6	1210	ND	ND	ND	8	ND
WELL 06	04/17/03	1560	970	7.1	220	93	44	171	4	291	205	260	17.8	0.2	ND	44.6	1180	ND	ND	ND	9	ND
WELL 06	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 06	06/02/04	1600	1000	6.5	210	95	44	173	4	275	215	260	17.4	0.7	ND	49.5	1100	ND	ND	ND	8	ND
WELL 06	03/30/05	1500	980	7.5	220	95	45	164	4	253	168	270	15.6	0.4	ND	42	1300	ND	ND	ND	9	ND
WELL 06	03/29/06	1590	1010	7.2	210	94	44	160	3	294	206	260	18.3	0.4	ND	40.3	1200	ND	ND	ND	8	ND
WELL 06	03/20/07	1490	920	7.7	220	79	36	218	3	260	179	260	18.3	0.4	ND	39	1300	ND	ND	ND	9	ND
WELL 06	03/12/08	1520	950	7.6	210	88	42	150	3	240	174	250	17.3	0.2	ND	42.3	1200	ND	60	ND	10	ND
WELL 06	04/09/08	-	-		-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-
WELL 06	08/27/08	-	-		-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-
WELL 06	02/18/09	1600	810	7.9	220	100	49	170	3.7	280	210	260	20	0.34	2	ND	-	ND	ND	ND	11	ND
WELL 06	02/16/11	-	1100		-	-	-	-	-	-	220	-	22	-	-	-	-	-	-	-	-	-
WELL 06	07/14/11	-	1100		-	-	-	-	-	-	230	-	23	-	-	-	-	-	-	-	-	-
WELL 07	05/05/88	986	660	7.6	230	62	33	110	3.2	150	64	230	12	0.2	ND	ND	-	ND	ND	ND	ND	ND
WELL 07	08/16/90	947	608	7.7	224	49.7	30.2	102	3.7	166	75.1	224	9.1	0.3	ND	ND	-	ND	287	18	ND	ND
WELL 07	04/30/91	940	620	7.9	206	60	29	100	3	112	99	251	8.1	0.3	ND	ND	-	ND	ND	ND	ND	ND
WELL 07	01/07/93	1000	650	7.7	220	75	32	3	110	146	99	268	2	0.2	ND	ND	-	ND	ND	ND	ND	ND
WELL 07	05/02/94	-	-		-	-	-	-	-	-	-	-	6.9	-	-	-	-	-	-	-	-	-
WELL 07	06/30/99	1140	720	7.4	220	72	32	124	2	208	99	270	6.4	0.3	0	32.7	1.4	0	110	0	7	0
WELL 07	12/20/00	1200	740	6.2	210	66	32	133	3	238	102	260	6.9	0.2	0	31.8	1.4	0	0	0	6	0
WELL 07	05/02/01	-	-		-	-	-	-	-	-	-	-	7.6	-	-	-	-	-	-	-	-	-
WELL 07	08/01/01	1210	790	7.6	220	65	31	140	3	234	106	270	6.9	0.3	0	35.3	1.34	0	0	0	8	0
WELL 07	02/27/02	-	-		-	-	-	-	-	-	-	-	7.5	-	-	-	-	-	-	-	-	-
WELL 07	09/11/02	1160	760	7.2	220	68	32	120	3	184	105	270	6.4	0.2	2	34.6	1340	ND	70	ND	7	ND
WELL 07	04/17/03	1190	760	7.4	220	69	31	137	3	215	110	270	8.2	0.2	ND	35.1	1380	ND	ND	ND	8	ND
WELL 07	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 07	03/29/04	1270	760	7.1	220	82	37	138	3	218	131	270	10.3	0.3	ND	36.3	1400	ND	ND	ND	7	ND
WELL 07	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 07	05/12/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 07	03/30/05	1370	880	7.5	220	80	36	161	3	222	155	260	5.3	0.4	ND	39.9	1500	ND	ND	ND	8	ND
WELL 07	03/29/06	1270	830	7.3	210	70	31	141	3	216	137	240	7.7	0.3	ND	32.6	1400	ND	ND	ND	6	ND
WELL 07	10/10/07	1380	880	8	210	74	33	182	3	240	171	260	9.3	0.4	2	38.8	1.5	ND	ND	ND	9	ND
WELL 07	02/25/08	1490	810	7.5	200	75	34	167	3	210	197	240	8	0.5	2	41.8	1400	ND	ND	ND	10	ND
WELL 07	02/18/09	1300	730	7.9	210	75	35	160	3	230	150	260	10	0.35	2	ND	-	ND	ND	ND	9.2	ND
WELL 07	02/10/10	1300	840	8.1	210	76	35	160	3	220	160	250	11	0.33	ND	ND	1500	ND	ND	ND	7.1	ND
WELL 07	02/16/11	-	890		-	-	-	-	-	-	110	-	5.8	-	-	-	-	-	-	-	-	-
WELL 08	06/14/93	1000	510	7.6	230	86	13	100	-	140	70	-	18	0.32	0	0	-	10	130	0	6	20
WELL 08	02/01/94	-	-		-	-	-	-	-	-	-	-	7.9	-	-	-	-	-	-	-	-	-
WELL 08	02/15/94	-	-		-	-	-	-	-	-	-	-	7.9	-	-	-	-	-	-	-	-	-
WELL 08	12/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	0	-	0	ND	0	0	0
WELL 08	07/07/99	1340	840	7.5	240	90	41	137	4	228	146	290	5.2	0.3	0	46.8	1.3	0	0	0	8	0
WELL 08	08/01/01	1400	940	7.5	220	87	39	149	4	260	156	270	4.9	0.3	0	48.3	1.36	0	0	0	7	0
WELL 08	03/06/02	-	-		-	-	-	-	-	-	-	-	5.4	-	-	-	-	-	-	-	-	-
WELL 08	08/21/02	1350	890	7.8	220	81	38	145	3	217	153	270	4.5	0.2	ND	43.7	1320	ND	ND	ND	7	ND
WELL 08	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 08	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 08	03/29/04	1330	840	7.8	220	84	38	148	3	216	158	270	5.6	0.3	ND	38.6	1500	ND	ND	ND	7	ND
WELL 08	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 08	05/12/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 08	06/02/05	1200	750	7.5	220	76	31	130	3.4	190	140	270	4.1	0.2	0	0	1500	ND	3300	78	0	ND
WELL 08	09/22/05	1330	820	7.7	200	76	34	157	3	197	173	250	4.4	0.3	ND	40.6	1400	ND	ND	ND	6	ND
WELL 08	03/29/06	1300	840	7.2	210	72	32	141	3	204	162	250	4.4	0.2	ND	35.2	1400	ND	ND	ND	5	ND
WELL 08	03/20/07	1330	850	7.7	220	74	33	165	3	203	168	260	4.1	0.3	ND	37.8	1410	ND	ND	ND	7	ND
WELL 08	09/27/07	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	ND	-	-
WELL 08	12/04/07	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
WELL 08	04/09/08	-	-		-	-	-	-	-	-	-	-	4.2	-	-	-	-	-	-	-	-	-
WELL 08	04/16/08	1170	690	7.6	210	67	31	137	3	185	122	250	4.4	0.4	ND	34	1400	ND	70	ND	6	ND
WELL 08	06/06/08	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
WELL 08	08/27/08	-	-		-	-	-	-	-	-	-	-	3.7	-	-	-	-	-	ND	ND	-	-
WELL 08	12/10/08	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
WELL 08	02/18/09	1400	760	7.9	210	80	37	160	3.1	200	180	260	4.3	0.27	ND	ND	-	ND	ND	ND	7.8	ND
WELL 08	06/03/09	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
WELL 08	12/16/09	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-	-
WELL 08	02/10/10	1500	890	8.1	210	87	40	170	3.3	210	220	250	4	0.25	ND	ND	1500	ND	ND	ND	6.5	ND
WELL 09	07/19/04	1370	850	7	250	101	42	108	3	143	187	310	36.1	0.3	ND	44.6	1300	ND	ND	ND	5	ND
WELL 09	03/30/05	1380	870	7.5	250	109	47	112	3	136	186	310	36	0.3	ND	47.5	1400	ND	ND	ND	4	40

1. Electrical conductivity at 25 C

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City of Brentwood																						
WELL 09	06/28/05	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 09	07/12/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	07/26/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	08/09/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	08/23/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	09/14/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	09/27/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	10/11/05	-	-		-	-	-	-	-	-	-	-	6.2	-	-	-	-	-	-	-	-	-
WELL 09	10/25/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	11/22/05	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	12/16/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	12/27/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	01/10/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	01/24/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	02/14/06	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 09	03/01/06	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 09	03/14/06	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 09	03/29/06	1360	860	7.5	250	103	44	108	2	142	192	280	36	0.1	ND	45.8	1400	ND	ND	ND	5	40
WELL 09	04/11/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	04/25/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	05/17/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 09	06/21/06	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 09	07/19/06	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 09	08/15/06	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 09	09/20/06	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 09	10/18/06	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 09	11/21/06	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	06/29/94	1700	900	7.3	230	130	49	130	-	310	170	-	14	0.45	0	0	-	15	220	20	0	250
WELL 10A (Irrigation)	11/10/94	1895	1289	7.3	305	168	77	142	-	339	245	-	8.82	0.42	0	49	-	11	44	0	0	55
WELL 10A (Irrigation)	07/07/99	1730	1180	7.4	300	129	68	135	13	324	189	370	23.7	0.4	8	53.2	1.4	0	100	0	8	0
WELL 10A (Irrigation)	12/27/00	1740	1140	7	270	122	71	137	14	349	201	330	25.3	0.2	8	54.4	1.4	0	100	0	7	0
WELL 10A (Irrigation)	08/01/01	1780	1230	7.3	300	119	67	139	13	335	187	370	25.1	0.3	6	52.1	1.35	0	0	0	6	20
WELL 10A (Irrigation)	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-
WELL 10A (Irrigation)	07/19/04	1780	1200	7	320	129	68	134	12	326	188	400	28.2	0.3	6	51	1300	ND	ND	ND	5	ND
WELL 10A (Irrigation)	03/30/05	1760	1190	7.4	330	138	73	141	12	310	175	400	25	0.3	6	50.5	1400	ND	ND	ND	5	ND
WELL 10A (Irrigation)	06/15/05	1800	1250	7.8	320	136	73	139	13	362	198	390	24.8	0.3	-	-	1400	ND	260	ND	-	20
WELL 10A (Irrigation)	07/26/05	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
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e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 10A (Irrigation)	08/09/05	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	08/23/05	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	09/27/05	-	-		-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	10/11/05	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	10/25/05	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	11/08/05	-	-		-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	11/22/05	-	-		-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	12/16/05	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	12/27/05	-	-		-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	01/10/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	01/24/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	02/14/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	03/01/06	-	-		-	-	-	-	-	-	-	-	26	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	03/14/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	04/11/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	04/25/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	05/17/06	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	06/21/06	-	-		-	-	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	07/19/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	08/15/06	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	09/20/06	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	10/18/06	-	-		-	-	-	-	-	-	-	-	29	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	11/21/06	-	-		-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	12/20/06	-	-		-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	01/17/07	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	02/21/07	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	03/21/07	-	-		-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	04/17/07	1820	1240	7.5	340	140	76	157	13	330	196	420	30.5	0.3	6	50.4	1500	ND	90	ND	5	30
WELL 10A (Irrigation)	04/18/07	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	05/16/07	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	06/19/07	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	07/17/07	-	-		-	-	-	-	-	-	-	-	30.7	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	08/21/07	-	-		-	-	-	-	-	-	-	-	28.9	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	09/18/07	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	02/06/08	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	03/19/08	1840	1120	7.4	320	130	71	138	12	320	182	390	26.1	0.3	7	53.5	1400	10	ND	ND	7	ND
WELL 10A (Irrigation)	04/02/08	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	05/07/08	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
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e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 10A (Irrigation)	08/27/08	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 10A (Irrigation)	02/18/09	1800	940	8	320	140	76	150	13	350	180	390	28	0.26	7.2	ND	-	ND	ND	ND	8.8	ND
WELL 10A (Irrigation)	02/10/10	1800	1200	8.1	320	140	74	150	13	370	190	390	28	0.28	7	ND	1500	ND	ND	ND	7.3	ND
WELL 10A (Irrigation)	02/16/11	-	1200		-	-	-	-	-	-	110	-	16	-	-	-	-	-	-	-	-	-
WELL 11	05/05/95	1109	645	7.58	235	82	37	110	1.2	114	127	235	16.2	0.25	0	0	-	0	0	0	0	0
WELL 11	10/26/95	1325	688	7.6	275	159.4	10.2	156.6	3.2	155	152.7	275	24.8	0.3	0	184	1500	0	0	0	0	0
WELL 11	06/30/99	1370	850	7.7	270	108	47	110	4	164	168	330	32.1	0.2	0	63	1.4	0	0	0	3	0
WELL 11	12/20/00	1620	980	6.5	290	123	58	117	5	203	214	350	40.4	0.2	0	72.8	1.3	0	0	0	5	0
WELL 11	05/21/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	05/25/01	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	06/01/01	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	06/06/01	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	06/10/01	-	-		-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
WELL 11	06/13/01	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 11	06/28/01	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	07/06/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	07/12/01	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 11	07/19/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	07/26/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	08/01/01	1450	950	7.3	280	109	50	113	4	186	187	340	34.8	0.3	0	67.2	1.36	0	0	0	3	0
WELL 11	08/02/01	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	08/16/01	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	08/24/01	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	09/05/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	09/13/01	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	09/28/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	10/10/01	1440	890	7.6	280	121	53	103	5	174	190	340	35	0.2	-	-	1.51	ND	ND	ND	-	ND
WELL 11	10/12/01	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	11/13/01	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	11/27/01	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	12/11/01	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	12/13/01	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	12/18/01	-	-		-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
WELL 11	01/08/02	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	01/22/02	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	02/12/02	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	02/26/02	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

						Cations				Anions					Trace Elements							
Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 11	05/08/02	-	-		-	-	-	-	-	-	-	-	38.6	-	-	-	-	-	-	-	-	-
WELL 11	05/22/02	-	-		-	-	-	-	-	-	-	-	34.7	-	-	-	-	-	-	-	-	-
WELL 11	06/11/02	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 11	07/24/02	1430	890	6.9	280	107	48	109	4	157	176	340	32.8	0.2	ND	67.4	1310	ND	ND	ND	3	ND
WELL 11	08/13/02	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	08/14/02	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 11	01/09/03	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	01/28/03	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	02/11/03	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	02/27/03	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	03/13/03	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	03/27/03	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	04/08/03	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	04/17/03	1540	960	7.1	280	122	54	120	5	192	215	350	42.2	0.2	ND	70	1390	ND	ND	ND	4	ND
WELL 11	04/22/03	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	06/05/03	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	07/08/03	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	07/23/03	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	08/14/03	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 11	09/09/03	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	10/14/03	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 11	10/28/03	-	-		-	-	-	-	-	-	-	-	32	-	-	-	-	-	-	-	-	-
WELL 11	11/13/03	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 11	12/11/03	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	12/23/03	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	01/15/04	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	01/28/04	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	02/26/04	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	03/11/04	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 11	04/13/04	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 11	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 11	04/27/04	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	05/11/04	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	05/12/04	1470	940	7.1	270	114	50	108	4	192	190	330	37.4	0.3	ND	62.3	1400	ND	80	ND	4	ND
WELL 11	05/25/04	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	06/08/04	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 11	07/13/04	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	07/27/04	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	08/10/04	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	08/24/04	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	09/14/04	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 11	09/28/04	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 11	10/12/04	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 11	10/26/04	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	11/16/04	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	11/23/04	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	01/11/05	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	01/27/05	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	02/23/05	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	03/08/05	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	03/22/05	-	-		-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
WELL 11	03/30/05	1510	990	7.5	280	126	55	119	4	186	187	350	37.2	0.3	ND	58.4	1400	ND	ND	ND	4	ND
WELL 11	04/12/05	-	-		-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	-
WELL 11	04/26/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	05/10/05	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	05/24/05	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	06/14/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	06/28/05	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	07/12/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	07/26/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	08/09/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	08/23/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	09/14/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	09/27/05	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	10/11/05	-	-		-	-	-	-	-	-	-	-	33	-	-	-	-	-	-	-	-	-
WELL 11	10/25/05	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	11/22/05	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	12/16/05	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 11	12/27/05	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	01/10/06	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	01/24/06	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	02/14/06	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	03/01/06	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	03/14/06	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3 , total alkalinity and NO_3 reported as HCO_3 , $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 11	03/29/06	1650	1020	7.4	290	132	58	119	4	220	224	360	46.1	0.2	ND	66.2	1300	ND	ND	ND	5	ND
WELL 11	04/11/06	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	04/25/06	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	05/17/06	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	06/21/06	-	-		-	-	-	-	-	-	-	-	37	-	-	-	-	-	-	-	-	-
WELL 11	07/19/06	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	08/15/06	-	-		-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-
WELL 11	09/20/06	-	-		-	-	-	-	-	-	-	-	34	-	-	-	-	-	-	-	-	-
WELL 11	10/18/06	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	11/21/06	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	12/20/06	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	01/17/07	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	02/21/07	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	03/21/07	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	04/18/07	-	-		-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
WELL 11	05/08/07	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	05/23/07	-	-		-	-	-	-	-	-	-	-	43.4	-	-	-	-	-	-	-	-	-
WELL 11	05/30/07	-	-		-	-	-	-	-	-	-	-	42.9	-	-	-	-	-	-	-	-	-
WELL 11	06/12/07	-	-		-	-	-	-	-	-	-	-	43.5	-	-	-	-	-	-	-	-	-
WELL 11	06/19/07	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	07/17/07	-	-		-	-	-	-	-	-	-	-	45.3	-	-	-	-	-	-	-	-	-
WELL 11	08/21/07	-	-		-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-
WELL 11	09/18/07	-	-		-	-	-	-	-	-	-	-	43.8	-	-	-	-	-	-	-	-	-
WELL 11	10/10/07	1480	950	8	280	118	51	126	4	194	192	340	37.7	0.3	ND	57.6	1.4	20	ND	ND	4	ND
WELL 11	10/17/07	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	11/14/07	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	12/04/07	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	02/06/08	-	-		-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	-
WELL 11	03/05/08	-	-		-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	-
WELL 11	03/12/08	1660	950	7.3	280	132	58	110	4	200	207	340	40.9	0.3	ND	66.3	1400	ND	80	ND	4	ND
WELL 11	04/02/08	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	05/07/08	-	-		-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-
WELL 11	06/03/08	-	-		-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-
WELL 11	08/27/08	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	12/04/08	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	01/07/09	-	-		-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-
WELL 11	02/04/09	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	02/19/09	1700	1100	7.8	290	150	64	120	4.6	230	220	350	46	0.27	ND	ND	-	ND	ND	ND	ND	ND

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

a) California Secondary MCL (recommended/upper level)
b) US EPA Secondary MCL
c) California Primary MCL
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e) California DHS Action Level for Drinking Water

Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 11	03/04/09	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	04/01/09	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	05/06/09	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	06/03/09	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	07/08/09	-	-		-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
WELL 11	07/15/09	-	-		-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-
WELL 11	08/12/09	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	09/03/09	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	10/07/09	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	11/18/09	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	12/02/09	-	-		-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-
WELL 11	01/06/10	-	-		-	-	-	-	-	-	-	-	46	-	-	-	-	-	-	-	-	-
WELL 11	02/10/10	1700	1100	8	290	150	65	120	4.7	240	230	350	49	0.29	ND	ND	1400	ND	ND	ND	ND	ND
WELL 11	02/17/10	-	-		-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-
WELL 11	03/10/10	-	-		-	-	-	-	-	-	-	-	47.5	-	-	-	-	-	-	-	-	-
WELL 11	04/14/10	-	-		-	-	-	-	-	-	-	-	47.1	-	-	-	-	-	-	-	-	-
WELL 11	05/12/10	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	07/14/10	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	08/18/10	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	09/15/10	-	-		-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-
WELL 11	11/03/10	-	-		-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-
WELL 11	12/08/10	-	-		-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-
WELL 11	01/05/11	-	-		-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	-
WELL 11	02/16/11	-	1100		-	-	-	-	-	-	140	-	46	-	-	-	-	-	-	-	-	-
WELL 12	12/18/97	840	500		200	59	23	80	3	110	88	240	5.1	0.2	0	32	1.8	0	0	0	3	0
WELL 12	07/07/99	864	510	7.5	200	61	24	85	4	103	89	250	5.5	0.2	0	36.7	1.7	0	0	0	3	0
WELL 12	12/20/00	894	530	7	190	60	25	90	3	113	100	240	7.2	0.1	0	36	1.8	0	0	0	3	0
WELL 12	08/01/01	-	-		-	-	-	-	-	-	-	-	-	-	0	37.3	-	-	-	-	3	-
WELL 12	08/08/01	842	500	7.7	190	58	23	79	3	109	88	230	5.2	0.2	-	-	1.8	0	110	0	-	0
WELL 12	02/21/02	-	-		-	-	-	-	-	-	-	-	6.4	-	-	-	-	-	-	-	-	-
WELL 12	07/24/02	872	530	6.9	200	60	24	86	3	100	96	250	5.8	0.1	ND	43.6	1670	ND	ND	ND	3	ND
WELL 12	08/14/02	-	-		-	-	-	-	-	-	-	-	5.8	-	-	-	-	-	-	-	-	-
WELL 12	04/17/03	889	530	7.3	200	61	24	84	3	113	97	240	7.5	ND	ND	37.8	1780	ND	ND	ND	3	ND
WELL 12	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 12	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 12	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 12	05/12/04	880	550	7.2	200	60	24	81	3	107	97	240	6.9	0.2	ND	36.3	1700	30	70	ND	3	ND

1. Electrical conductivity at 25 C

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City of Brentwood																						
WELL 12	03/30/05	886	540	7.6	200	65	25	86	3	101	89	240	6.5	0.2	ND	37.4	1800	ND	ND	ND	2	ND
WELL 12	03/20/07	895	540	7.8	200	61	23	87	2	106	99	240	7.6	0.2	ND	34.2	1740	ND	ND	ND	2	ND
WELL 12	03/19/08	878	470	7.7	180	55	22	77	3	100	93	220	5.7	ND	ND	37.7	1700	ND	ND	ND	3	ND
WELL 12	04/16/08	-	-		-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-
WELL 12	08/27/08	-	-		-	-	-	-	-	-	-	-	5.6	-	-	-	-	-	ND	ND	-	-
WELL 12	02/19/09	870	530	8	190	61	24	84	2.7	100	94	230	7.3	0.19	ND	ND	-	ND	ND	ND	ND	ND
WELL 12	02/10/10	900	540	8.1	200	65	26	86	2.8	100	99	240	8.8	0.2	ND	ND	1900	ND	ND	ND	ND	ND
WELL 12	02/16/11	-	530		-	-	-	-	-	-	100	-	9	-	-	-	-	-	-	-	-	-
WELL 13	12/17/97	720	440		120	33	10	99	4	110	68	150	4.1	0.1	0	29	1.7	0	150	0	3	0
WELL 13	07/07/99	767	470	7.8	180	42	14	88	3	107	72	190	5.2	0.1	0	32	1.6	0	0	0	3	0
WELL 13	06/08/00	800	490	7.4	170	45	15	92	3	108	74	200	5.6	0.1	0	34.6	1.7	0	0	0	3	0
WELL 13	08/29/01	775	460	7.4	170	47	16	97	4	111	73	200	5.4	0.2	-	-	-	-	-	-	-	-
WELL 13	02/21/02	-	-		-	-	-	-	-	-	-	-	7.1	-	-	-	-	-	-	-	-	-
WELL 13	08/21/02	776	480	8	170	46	15	102	4	113	82	210	5.3	0.1	ND	33.7	1590	ND	ND	ND	4	ND
WELL 13	04/17/03	791	490	7.4	170	45	15	96	4	118	78	210	6.4	ND	ND	33.1	1680	ND	ND	ND	3	ND
WELL 13	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 13	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 13	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 13	05/12/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 13	06/02/04	788	500	6.9	170	46	15	94	3	112	79	210	6.2	0.2	ND	34.9	1600	ND	ND	ND	3	ND
WELL 13	03/30/05	797	510	7.6	170	48	16	97	3	105	74	210	5.9	0.2	ND	33.6	1700	ND	ND	ND	3	ND
WELL 13	03/29/06	892	550	7.6	200	61	24	90	3	111	84	230	7.6	0.1	ND	36.6	1800	ND	ND	ND	3	ND
WELL 13	03/20/07	821	490	7.8	170	47	16	99	3	112	85	210	7.4	0.2	ND	32.9	1640	ND	100	ND	3	ND
WELL 13	03/12/08	827	480	7.5	160	46	15	90	3	105	82	200	7	ND	ND	35	1600	ND	ND	ND	3	ND
WELL 13	04/16/08	-	-		-	-	-	-	-	-	-	-	7.6	-	-	-	-	-	-	-	-	-
WELL 13	08/27/08	-	-		-	-	-	-	-	-	-	-	7	-	-	-	-	-	ND	ND	-	-
WELL 13	02/19/09	810	460	8	180	50	17	97	3.3	110	83	220	7.6	0.14	ND	ND	-	ND	ND	ND	ND	ND
WELL 13	02/10/10	820	490	8.2	170	49	17	97	3.2	110	83	210	7.9	0.15	ND	ND	1800	ND	ND	ND	ND	ND
WELL 13	02/16/11	-	490		-	-	-	-	-	-	81	-	7.7	-	-	-	-	-	-	-	-	-
WELL 14	11/03/00	1400	880	7.3	210	75	38	190	3.5	300	120	-	5.3	0.4	0	0	1400	ND	ND	ND	0	ND
WELL 14	02/27/02	-	-		-	-	-	-	-	-	-	-	8.2	-	-	-	-	-	-	-	-	-
WELL 14	03/06/02	1430	900	7.1	210	65	31	181	3	308	129	260	7.5	0.2	4	33.6	1.19	ND	ND	ND	11	ND
WELL 14	06/04/02	1370	880	7.9	220	68	33	177	4	313	123	270	7.2	0.3	3	30.1	1.12	ND	180	ND	11	ND
WELL 14	09/11/02	1430	950	7.4	220	72	34	174	5	269	123	260	7.4	0.3	4	32.2	1240	ND	ND	ND	11	ND
WELL 14	12/11/02	1440	930	8.2	220	70	33	192	4	310	139	260	11.1	0.4	3	32.8	1270	ND	ND	ND	14	ND
WELL 14	11/19/03	-	-		-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
WELL 14	03/18/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

2. HCO_3, total alkalinity and NO_3 reported as HCO_3, $CaCO_3$ and NO_3 respectivel

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Appendix C (continued)
Summary of Groundwater Quality Laboratory Results for Diablo Water District Area

						Cations				Anions					Trace Elements							
Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)
City of Brentwood																						
WELL 14	04/14/04	-	-		-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
WELL 14	05/12/04	-	-		-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
WELL 14	06/02/04	1500	940	6.9	210	73	34	194	3	313	154	250	12.5	0.6	3	32.1	1300	70	ND	ND	11	ND
WELL 14	03/30/05	1560	1030	7.7	210	80	37	208	3	308	169	250	11.7	0.4	3	33.8	1300	ND	80	ND	13	ND
WELL 14	03/29/06	1580	1010	7.5	140	75	34	188	3	314	183	170	15.5	0.4	3	31.2	1300	ND	ND	ND	12	ND
WELL 14	03/20/07	1600	1040	7.8	200	74	36	222	4	310	192	250	17.6	0.5	3	32.6	1400	ND	ND	ND	14	ND
WELL 14	03/12/08	1680	1000	7.6	190	78	36	210	3	300	204	230	15.3	0.4	4	36	1300	ND	60	ND	17	ND
WELL 14	04/09/08	-	-		-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-
WELL 14	08/27/08	-	-		-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-
WELL 14	02/24/09	1500	1300	7.9	270	71	34	180	3.4	310	190	330	20	0.34	4	ND	-	ND	ND	ND	18	ND
WELL 14	02/10/10	1600	930	8.1	200	81	38	200	3.3	300	190	240	19	0.38	3.3	ND	1400	ND	ND	ND	15	ND
WELL 14	02/16/11	-	980		-	-	-	-	-	-	100	-	15.3	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	07/19/06	-	-		-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	07/26/06	1030	630	7.7	230	67	29	98	2	132	101	280	10.5	0.3	ND	30.5	1500	ND	ND	ND	4	ND
WELL 15 (Active-Pending)	08/15/06	-	-		-	-	-	-	-	-	-	-	9.9	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	09/20/06	-	-		-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	10/18/06	-	-		-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	11/21/06	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	01/17/07	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	02/21/07	-	-		-	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	03/21/07	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	04/17/07	-	740		-	-	-	-	-	-	148	-	27.1	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	05/02/07	-	-		-	-	-	-	-	-	-	-	26.9	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	07/24/07	-	-		-	-	-	-	-	-	-	-	28.5	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	08/21/07	-	-		-	-	-	-	-	-	-	-	30.1	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	10/17/07	-	-		-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	11/14/07	-	-		-	-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	04/16/08	-	950		-	-	-	-	-	-	200	-	15.5	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	02/24/09	-	980		-	-	-	-	-	-	160	-	19	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	02/10/10	-	590		-	-	-	-	-	-	40	-	4.4	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	09/15/10	-	-		-	-	-	-	-	-	-	-	11.4	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	12/08/10	-	-		-	-	-	-	-	-	-	-	18.8	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	01/05/11	-	-		-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	02/16/11	-	650		-	-	-	-	-	-	110	-	14	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	03/02/11	-	-		-	-	-	-	-	-	-	-	10.1	-	-	-	-	-	-	-	-	-
WELL 15 (Active-Pending)	04/27/11	-	-		-	-	-	-	-	-	-	-	10.7	-	-	-	-	-	-	-	-	-

1. Electrical conductivity at 25 C

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Well Owner and Name	Date	EC[1] (µmhos/cm)	TDS (mg/L)	pH	Total Alkalinity[2] (mg/L)	Cations: Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Anions: SO_4 (mg/L)	Cl (mg/L)	HCO_3[2] (mg/L)	NO_3[2] (mg/L)	F (mg/L)	Trace Elements: As (µg/L)	Ba (ug/L)	B (ug/L)	Cu (ug/L)	Fe (ug/L)	Mn (ug/L)	Se (µg/L)	Zn (ug/L)

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