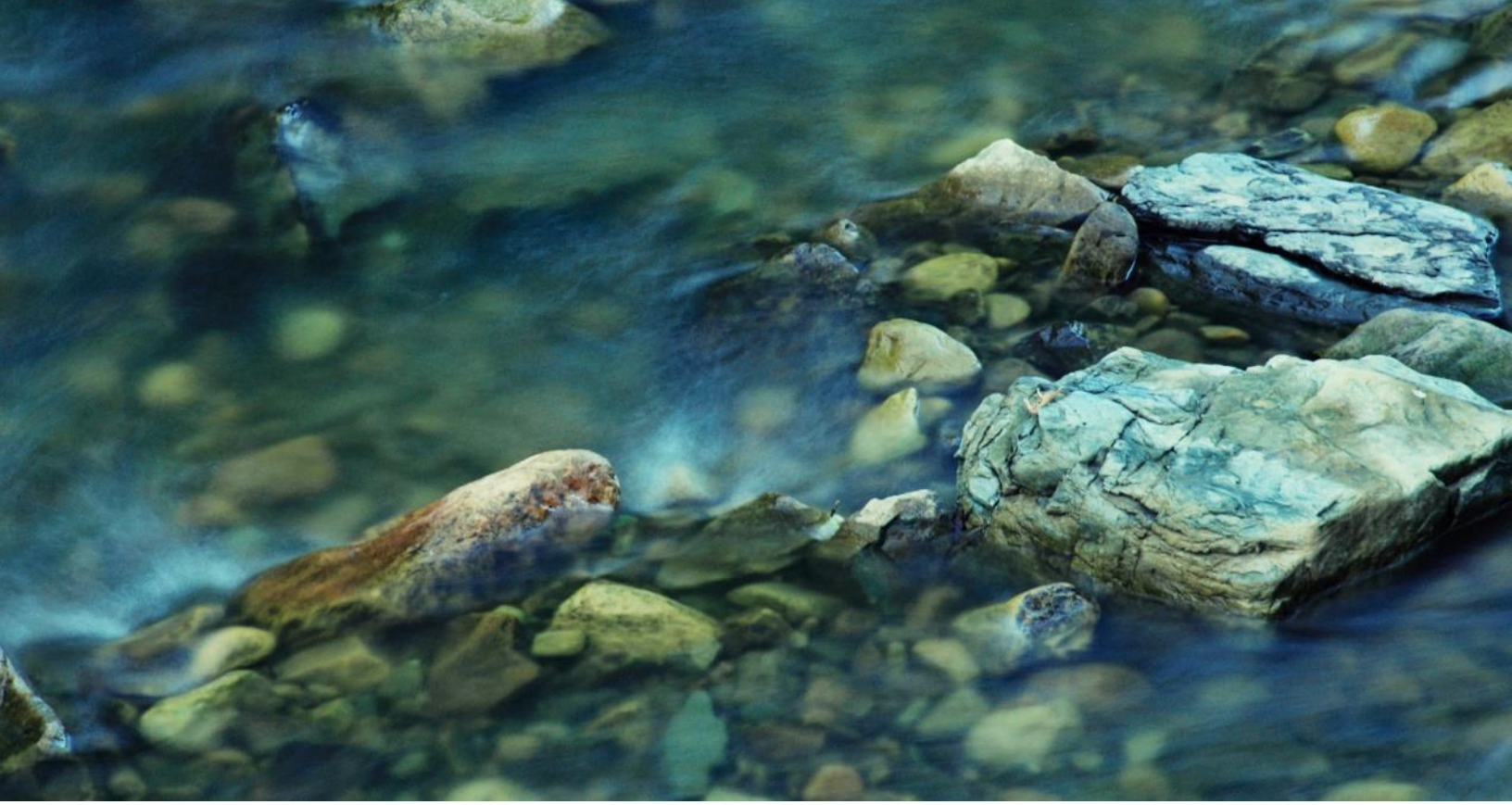

May 1, 2017
Yakima Valley Dairies

ANCHOR QEA

Groundwater Monitoring Data Report
Yakima Valley Dairies
Fourth Quarter 2016
SDWA-10-2013-0080

Prepared for
Cow Palace, LLC
George DeRuyter & Son Dairy, LLC/D&A Dairy, LLC/George & Margaret, LLC
Liberty Dairy, LLC/H&S Bosma Dairy

February 14, 2017
Yakima Valley Dairies

Groundwater Monitoring Data Report
Fourth Quarter 2016

SDWA-10-2013-0080

Prepared for
Cow Palace, LLC
George DeRuyter & Son Dairy, LLC, D&A Dairy, LLC,
George & Margaret, LLC
Liberty Dairy, LLC, H&S Bosma Dairy

Prepared by
Anchor QEA, LLC
1119 Pacific Avenue, Suite 1600
Tacoma, Washington 98042

Project Number: 160996-03.01
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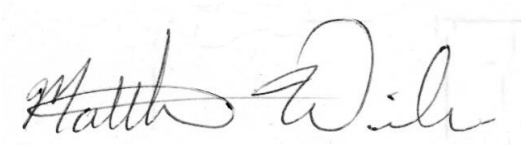
EPA Docket No. SDWA-10-2013-0080

Groundwater Monitoring Data Report
Fourth Quarter 2016

Prepared by:

_____ Date: February 14, 2017

Mark Larsen
Project Coordinator, Anchor QEA, LLC



_____ Date: February 14, 2017

Matt Wilson, R.G.
Field Team Leader, Anchor QEA, LLC

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Adam Dolsen	Cow Palace, LLC
	George DeRuyter & Son Dairy, LLC
Dan DeRuyter	D&A Dairy, LLC
	George & Margaret, LLC
	Liberty Dairy, LLC
Henry Bosma	H&S Bosma Dairy
Eric Winiecki	U.S. Environmental Protection Agency, Region 10
Rene Fuentes	U.S. Environmental Protection Agency, Region 10
Jennifer MacDonald	U.S. Environmental Protection Agency, Region 10
Patrick Ryan	Perkins Coie LLP
Brendan Monahan	Stokes Lawrence Velikanje Moore & Shore
Lori Terri Gregory	Foster Pepper PLLC

ABBREVIATIONS

AOC	Administrative Order on Consent
bgs	below ground surface
btoc	below top of casing
Dairies	Yakima Valley Dairies
EPA	U.S. Environmental Protection Agency
ft/ft	foot per foot
HASP	Health and Safety Plan
MCL	maximum contaminant level
MDL	method detection limit
MRL	method reporting limit
mg/L	milligrams per liter
mV	millivolts
NAVD88	North American Vertical Datum of 1988
NTU	nephelometric turbidity unit
NPDES	National Pollution Discharge Elimination System
ORP	oxidation-reduction potential
OSHA	Occupational Safety and Health Administration
PC	Project Coordinator
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QAPP Addendum 1	Groundwater Monitoring Quality Assurance Project Plan Addendum 1
QC	Quality Control
Report	Quarterly Groundwater Monitoring Data Report
SOP	Standard Operating Procedure
SOW	Statement of Work
SMCL	secondary maximum contaminant level
STORET/WQX	Storage and Retrieval and Water Quality Exchange
TKN	total Kjeldahl nitrogen
WQX	Water Quality Exchange

Executive Summary

The (1) Cow Palace Dairy, LLC; (2) D & A Dairy, LLC (also known as D and A Dairy L.L.C.), George DeRuyter & Son Dairy, L.L.C., and George & Margaret, L.L.C; and (3) Liberty Dairy LLC and its associated dairy facility H&S Bosma Dairy (Yakima Valley Dairies) present this Quarterly Groundwater Monitoring Data Report (Report) for the Yakima Valley Dairies (Dairies). The Report is prepared in accordance with requirements identified in Section III.E of the Statement of Work (SOW; Appendix B of Administrative Order on Consent [AOC] SDWA-10-2013-0080). Groundwater monitoring at the Dairies is required by the AOC in accordance with the Groundwater Monitoring Quality Assurance Project Plan (QAPP) dated June 21, 2013, and revised August 28, 2015 (IES 2015).

Pursuant to Section III.E of the AOC SOW, the objectives of groundwater monitoring are to establish a baseline of groundwater quality information at the Dairies to evaluate whether actions taken to reduce nitrogen loading are effective over time, and to collect information to supplement and verify existing information on the environmental setting at the Dairies, including further clarification of the hydraulic gradient of the aquifer beneath the Dairies. After 8 years of quarterly groundwater monitoring (32 quarters), the nitrate levels in the monitoring wells that are downgradient of the Dairies nitrogen sources will be evaluated. For any individual monitoring well where the nitrate level is not trending downward, additional source control actions will be required in accordance with Section III.G of the AOC SOW.

A network of 26 groundwater monitoring wells is in place at the Dairies. In addition to 7 groundwater monitoring wells that were installed by the U.S. Environmental Protection Agency (EPA) in 2012, the Dairies installed 19 groundwater monitoring wells as part of the AOC in 2013. Twenty-three of the monitoring wells were completed at the top of the shallow surficial aquifer (at the water table), and three of the monitoring wells were completed deeper in the surficial aquifer. All the wells were installed in the surficial aquifer, which is used as a source of drinking water. All the wells were designed and installed according to Washington State regulations and an EPA-approved QAPP.

This is the 14th Report prepared under the AOC SOW. From December 11 to 16, 2016, the Dairies sampled 25 of 26 wells at the site, in accordance with the sampling procedures outlined as follows and in the QAPP (IES 2015), and the *Groundwater Monitoring Quality Assurance Project Plan Addendum 1* (QAPP Addendum 1; Anchor QEA 2016a). No sample was collected at YVD-02; YVD-02 went dry during low-flow purging procedures and did not recover during the sampling event. In addition, a depth-to-water reading could not be collected at YVD-06 during the synoptic water level measurement event on December 11, 2016. The well was covered with snow and ice and could not be located. There were no other problems or deviations from the approved QAPP during the Fourth Quarter 2016 groundwater monitoring event.

Nitrate was measured as nitrogen (Nitrate-N). The nitrate results are presented spatially on a map in Figure 16A. Historical nitrate concentrations since 2013 are listed in Figure 16B and charted in Figures 17 through 21. The monitoring well network includes wells that are located upgradient and downgradient of the Dairies. There are four groundwater monitoring wells located upgradient of the Dairy facilities' footprint. All four wells were screened at the top of the aquifer. Nitrate concentrations reported in milligrams per liter (mg/L) in the upgradient monitoring wells for the Fourth Quarter 2016 are:

Well	Nitrate (mg/L)
DC-01	8.89J
YVD-02	Not sampled
YVD-03	4.47
YVD-04	3.74

The nitrate concentrations in these upgradient groundwater monitoring wells ranged from 3.74 to 8.89 mg/L. The drinking water standard, or maximum contaminant level (MCL), for nitrate is 10 mg/L. Nitrate concentrations in the upgradient monitoring wells were less than the MCL.

Nitrate concentrations (reported in mg/L) in the downgradient monitoring wells that were screened at the top of the aquifer (water table wells) for the Fourth Quarter 2016 are:

Well	Nitrate (mg/L)
DC-03	168
DC-04	45.2
DC-05	33.7
DC-07	2.15
DC-09	5.62
DC-14	4.45
YVD-05	3.15
YVD-06	0.70
YVD-07	2.15
YVD-08	34.5J
YVD-09	42.8J
YVD-10	109J
YVD-11	55.5
YVD-12	12.2
YVD-13	23.1
YVD-14R	92.3J
YVD-15	25.5

YVD-16	19.7
YVD-17	0.59

Nitrate concentrations in the downgradient water table groundwater monitoring wells ranged from 0.59 to 168 mg/L. Nitrate concentrations in 7 of the downgradient water table wells were less than the MCL; nitrate concentrations in 12 of the downgradient water table wells exceeded the MCL.

Three downgradient groundwater monitoring wells have well screens positioned at depths that were estimated by EPA to approximate the depth of a typical residential drinking water well in the area. Each of these deeper wells was paired at the same location with a water table well. The results for each well pair, with the water table well listed above its deeper counterpart, are:

Well	Nitrate (mg/L)	Well	Nitrate (mg/L)	Well	Nitrate (mg/L)
YVD-13	23.1	DC-03	168J	DC-05	33.7
YVD-18	21.5	DC-03D	33.8J	DC-05D	11.2

The results show higher nitrate concentrations at the top of the water table and lower concentrations at depth. This is consistent with a scenario of nitrate loading occurring at the top of the aquifer, and the nitrate becoming increasingly diluted as it mixes with water with lower nitrate concentrations at depth.

Groundwater samples were also analyzed for:

- Nitrite
- Ammonia
- Total Kjeldahl nitrogen
- Total phosphorus
- Inorganic anions (chloride, fluoride, sulfate)
- Metals (calcium, potassium, magnesium, sodium)
- Alkalinity (total and bicarbonate)

These results are presented in Figures 23, 24, 25, and 26. The sulfate concentration detected in one downgradient well, YVD-13, met or exceeded the secondary maximum contaminant level (SMCL) of 250 mg/L.

Site geology observed in most of the monitoring well borings typically consisted of finer-grained materials in the upper portion of borings and coarser-grained material in lower portions of borings. The surficial aquifer was typically encountered in the gravelly sand or sandy gravel that dominated

most of the subsurface throughout the site. Depth to groundwater from the top of the well casings ranged from 32.52 to 221.07 feet. Depth to groundwater was typically greatest in borings located in areas of the site that were topographically higher. Comparatively, depth to groundwater was typically lower in borings located in areas of the site that were topographically lower towards the center of the Yakima Valley.

The groundwater gradient at the site is generally to the southwest at an average hydraulic gradient of 0.025 foot per foot (ft/ft). Hydraulic gradients are higher in the topographically higher areas in the northern section of the site, with an average of 0.047 ft/ft. As groundwater flows to the southwest toward the center of the Yakima River valley, hydraulic gradients decrease to about 0.011 ft/ft in the central portion of the site, and then to 0.004 ft/ft in the southern portion of the site. The estimated average linear groundwater flow velocities for the area under the Dairies range from 4.0 to 23.8 feet per day.

Site groundwater is primarily classified as calcium-bicarbonate type water, which were present in groundwater samples collected from 19 monitoring wells. Calcium-sulfate type waters were present in groundwater samples collected from six monitoring wells.

Total dissolved ions and nitrate increase in concentration in the downgradient direction from YVD-07 to DC-03, as shown in Figure 22. The increase of dissolved ion concentrations in the areas downgradient of the Dairies can be seen graphically in Figure 28.

1 Report Organization

This Report includes the following sections: Executive Summary, Introduction, Investigation Activities, Soil and Groundwater Characteristics, Analytical Program, Data Validation and Usability, Groundwater Sampling Results, References, and Certifications.

2 Introduction

The (1) Cow Palace Dairy, LLC; (2) D & A Dairy, LLC (also known as D and A Dairy L.L.C.), George DeRuyter & Son Dairy, L.L.C., and George & Margaret, L.L.C.; and (3) Liberty Dairy LLC and its associated dairy facility H&S Bosma Dairy (Yakima Valley Dairies), present this Quarterly Groundwater Monitoring Data Report (Report) for the Yakima Valley Dairies (Dairies). The Report is prepared in accordance with requirements identified in Section III.E of the Statement of Work (SOW; Appendix B of Administrative Order on Consent [AOC] SDWA-10-2013-0080). Groundwater monitoring at the Dairies is required by the AOC in accordance with the Groundwater Monitoring Quality Assurance Project Plan (QAPP) dated June 21, 2013, and revised August 28, 2015 (IES 2015).

Pursuant to Section III.E of the AOC SOW, the objectives of groundwater monitoring are to establish a baseline of groundwater quality information at the Dairies to evaluate whether actions taken to reduce nitrogen loading are effective over time, and to collect information to supplement and verify existing information on the environmental setting at the Dairies, including further clarification of the hydraulic gradient of the aquifer beneath the Dairies. After 8 years of quarterly groundwater monitoring (32 quarters), the nitrate levels in the monitoring wells that are downgradient of the Dairies nitrogen sources will be evaluated. For any individual monitoring well where the nitrate level is not trending downward, additional source control actions will be required in accordance with Section III.G of the AOC SOW.

2.1 Location and Setting

The Dairies include the George DeRuyter & Son Dairy, D & A Dairy, Cow Palace 1 and 2, Liberty Dairy, and H&S Bosma Dairy. The Dairies are located in an area that occupies both the easternmost portion of the Toppenish Basin and the westernmost portion of the Benton Basin within the southcentral part of the Yakima Basin, just south of the Rattlesnake Hills in Yakima County, Washington.

The Dairies are located approximately 10 road miles northwest of Sunnyside, Washington. A site vicinity map is presented as Figure 1. The Dairies occupy portions or all of Sections 25, 26, 27, 35, and 36 of Township 11 North, Range 21 East; Sections 19, 30, 31, and 32 of Township 11 North, Range 22 East; Section 1 of Township 10 North, Range 21 East; and Sections 6 and 7 of Township 10 North, Range 22 East, Willamette Meridian. Figure 2A shows the location of the Dairies, the installed monitoring wells, and general topography of the area. Figure 2B shows an aerial photograph of the Dairies. A figure showing the general facility plan for the Dairies, which includes land use information within the Dairies boundary, is included as Figure 3A.

Figures 3B, 3C, and 3D present a facility plan for each individual Dairy; these include facility-specific features, such as dairy production areas, irrigation and domestic water wells, pipelines, and outfalls.

One outfall is located within the footprint of Liberty Dairy, as shown in Figure 3D. Discharge from the outfall is non-contact process water related to milk plate cooler. Cooling water from the plate cooler is discharged to Sunnyside Valley Irrigation District Joint Drain 26-6. This outfall is not covered by a National Pollution Discharge Elimination System (NPDES) permit. There are no outfalls within the footprint of Cow Palace. One outfall is located within the footprint of the George DeRuyter & Son-owned property, as shown in Figure 3C. Discharge from the outfall is non-contact process water related to milk plate cooler. Cooling water from the plate cooler is discharged to Roza Irrigation District drain. This outfall is not covered by a NPDES permit. There are no French drains, sewer pipes, stormwater drains, or tile drains within the footprint of the Dairies.

Topography of the area containing the Dairies consists of gently rolling hills. Land use is predominantly large dairy farms, which are concentrated animal feeding operations, and irrigated cropland, including corn fields, apple and cherry orchards, and grape vineyards. Residences are interspersed throughout the area and are serviced by private water wells for drinking water.

2.2 Regional Geology and Hydrogeology

The information presented below is summarized from the U.S. Geological Survey publication *Hydrogeologic Framework of the Yakima River Basin Aquifer System, Washington* (Vaccaro et al. 2009) and the U.S. Environmental Protection Agency (EPA) publication *Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley, Washington* (EPA 2012). Surface soils and drainage classification, as mapped by the Natural Resources Conservation Service within the footprint of the Dairies' facilities, are illustrated in Appendix A.

The Toppenish and Benton basins consist of fine- and coarse-grained sediments overlying a sequence of three major basalt flows. The structural setting is created by bounding ridges, such as the Rattlesnake Mountains, Ahtanum Ridge, Toppenish Ridge, and Horse Heaven Hills. The uppermost basalts of the Saddle Mountain Unit of the Columbia River Basalt Group are typically exposed in these upland ridges. This unit averages more than 500 feet thick. The underlying Wanapum unit averages 600 feet thick. These units are separated by the Mabton Interbed, with an average thickness of 70 feet.

The valley is filled with a variety of sediments that pinch out along the flanks of the ridges. These sediments include Touchet Beds, loess and thick alluvial sands and gravels, and significant thickness of Ellensburg Formation. The thickness of these sedimentary units decreases from an average of more than 500 feet in the Toppenish Basin to less than 200 feet in the lower Benton Basin.

Groundwater is found in fractures and interbeds formed of clinkers, permeable lava, lake deposits, or paleosols and may occur at significant depths in the upland ridges, such as Horse Heaven Hills, and especially in the basalts. The water table is found at shallower depths as the valley is approached

from these ridges. Near the Yakima River, depth to water may be less than 10 feet, especially during the irrigation season.

There are two main aquifers underlying the Dairies. They include a surficial unconfined to semi-confined alluvial aquifer and an extensive basalt aquifer of great thickness underlying the sedimentary deposits. The basalt aquifer is believed to be semi-isolated from the surficial aquifer and stream systems. Groundwater flow within the surficial aquifer generally follows topography, with natural recharge occurring within the headlands and on the sides of the valley and discharge occurring to the Yakima River. Flow within the uppermost portions of the underlying deep surficial basaltic aquifer also generally follows this pattern.

Because the basalts extend to great depths, the deeper basaltic layers may convey waters across local flow divides to more regionally significant discharge locations, such as the Columbia River. This pattern produces a major flow direction from northwest to southeast as water moves down the valley parallel to the course of the Yakima River. Other, more localized directions of flow, typically at shallower depths in the uppermost sediments, tend to flow toward the Yakima River. Locally, the flow direction may be modified by geologic structures and by irrigation practices, drains, ditches, canals, and other hydrologic features.

The lower Yakima valley is filled with sediments shed by the ridges at the margins of the study area and those deposited in the valley bottom by the Yakima River. These sediments have an internal structure that strongly controls groundwater movement. As the water moves through these sediments, it tends to follow preferential flow paths composed of coarser sediments.

3 Investigation Activities

Investigation efforts were initiated as a result of the March 19, 2013, AOC. As stated in Section 2, the objectives of groundwater monitoring are to establish a baseline of groundwater quality information at the Dairies to evaluate whether actions taken to reduce nitrogen loading are effective over time, and to collect information to supplement and verify existing information on the environmental setting at the Dairies, including further clarification of the hydraulic gradient of the aquifer beneath the Dairies. As part of the ongoing activities a conceptual site model was developed and will be updated and modified as necessary (Figures 4 and 5).

The QAPP, dated June 21, 2013, was conditionally approved with modification by EPA on June 19, 2013. Field investigation activities pursuant to the EPA-approved QAPP were initiated in June 27, 2013. Drilling and monitoring well construction activities began on June 27, 2013, and concluded on August 23, 2013. Well development activities began on August 26, 2013, and concluded September 4, 2013. A quarterly groundwater monitoring program was initiated in September 2013. The QAPP was revised and updated on August 28, 2015. An addendum to the QAPP (*Groundwater Monitoring Quality Assurance Project Plan Addendum 1* [QAPP Addendum 1]) was approved by EPA on January 13, 2017 (Anchor QEA 2016a).

3.1 Groundwater Monitoring Well Installation

A total of 19 groundwater monitoring wells were located, drilled, and installed as part of the AOC at the Dairies from June 27, 2013, through August 23, 2013. Sixteen monitoring wells were completed in the shallow surficial aquifer, and three monitoring wells were completed in the deep surficial aquifer. Cascade Drilling, L.P., of Woodinville, Washington, was subcontracted to drill and develop the monitoring wells.

The exact location of each well was jointly agreed upon in the field by representatives of the Dairies and EPA. Well locations were marked with an annotated lathe stake. Details of drilling, installation, and completion of monitoring wells is provided in the *Groundwater Monitoring Well Installation Report* (ARCADIS 2013).

Well YVD-14 was destroyed by agricultural harvesting activities sometime during the month of June 2015. Well YVD-14 was abandoned and decommissioned on December 2, 2015. Well YVD-14R was installed approximately 20 feet west of the previous location of YVD-14 on December 3 to 5, 2015, as a replacement well for well YVD-14 in accordance with the QAPP, Groundwater Monitoring Well Installation Work Plan, and Washington State Department of Ecology requirements.

3.2 Fourth Quarter 2016 Groundwater Sampling Event

Anchor QEA personnel performed groundwater monitoring of the 19 wells installed as part of the AOC SOW (the YVD wells) and the 7 wells previously installed by EPA (the DC wells) from December 12 through 16, 2016. A total of 25 wells were sampled during this event. The locations of the monitoring wells are shown in Figures 2A and 2B. The location and construction information for each well is presented in Table 1. Groundwater monitoring was performed in accordance with the sampling procedures documented in the Groundwater Monitoring QAPP (IES 2015).

3.2.1 Measurement of Static Water Levels

A set of synoptic (concurrent) water level measurements was collected from 25 of the 26 monitored wells on December 11, 2016. Monitoring well YVD-06 was covered in snow and ice and could not be located during the synoptic measurement event. Static water level measurements were recorded to the nearest 0.01-foot at the indicated reference point on the well casing. The static water level measurement was recorded on the Water Level Survey Form presented in Appendix B of the QAPP Addendum 1 (Anchor QEA 2016a). The recorded groundwater measurements for Fourth Quarter 2016 are summarized in Table 2.

3.2.2 Sample Collection

Groundwater samples were collected from 25 of the 26 wells. Groundwater samples were collected using low-flow sample collection procedures described in the Standard Operation Procedure (SOP) entitled *Low-Flow Groundwater Purging and Sampling Procedures for Monitoring Wells* (Appendix E of Anchor QEA 2016a). Low-flow sample collection is a method that minimizes the impact of the purging process on groundwater chemistry and results in a smaller volume of purge water generated.

The low-flow sample collection method requires water quality indicator parameters and water levels to be measured during purging, prior to sample collection. Stabilization of the water quality indicator parameters and monitoring water levels is a prerequisite to sample collection. Analyte specifications for field parameters and stabilization criteria are presented in Table 4 of the QAPP (IES 2015).

The purging and sampling of the monitoring wells was performed with either a QED Sample Pro® Portable Micropurge Pump (9 wells) or a dedicated 1-inch diameter stainless steel Solinst Model 407 bladder pump with polytetrafluoroethylene (Teflon®) bladders (17 wells).

The QED SamplePro® was fitted with disposable polyethylene bladders for each well. The pump was connected to dedicated, twin-bonded, 1/4-inch-outside-diameter polyethylene discharge line with a 1/4-inch-outside-diameter polyethylene air-line, complete with a stainless steel inlet screen.

Groundwater field parameters collected during well purging included pH, temperature, specific conductance, turbidity, dissolved oxygen, and oxidation-reduction potential. Water quality parameters were measured using a portable turbidimeter and a YSI Professional Plus multi-parameter water quality meter with a flow through cell. Parameters were measured every 3 to 5 minutes during well purging until the parameters stabilized to the requirements set forth in Appendix E of the QAPP Addendum 1 (Anchor QEA 2016a). Observations regarding odors present, the color and amount of sediment/turbidity, or foreign matter, if present, were noted in the comments section of the Field Sampling Data Sheet. Field data measurements recorded are presented in Table 3.

Sample collection was performed after both the depth to water from the top of casing and all field parameters stabilized within the requirements stated above for at least three consecutive readings. Sample collection was conducted using the correct type and number of sample containers and the correct preservatives (if needed). Samples were transported and analyzed in accordance with the QAPP (IES 2015) and the QAPP Addendum 1 (Anchor QEA 2016a).

No sample was collected from well YVD-02. Low-flow purging could not be attained in YVD-02 due to continuous drawdown of the water level at the slowest purging rate possible. An attempt was made to purge three well volumes and collect a sample, but the well went dry after two volumes were purged. The water level in the well did not recover to a level sufficient to collect a sample during the remainder of the monitoring event.

3.2.3 Sample Handling and Custody

All samples were accompanied by a chain-of-custody record. When custody of samples was transferred, the individuals relinquishing and receiving the samples signed and dated the chain-of-custody record. The chain-of-custody record documents the custody transfer from the sampler, often through another agent (shipping/transport company), to the laboratory sample custodian.

Prior to shipment, samples were packaged properly and a chain-of-custody record accompanied each shipping container. All shipping containers were sealed with custody seals for shipment/transport to the laboratory unless the samples were hand delivered to the laboratory. Custody seals were placed in a manner that would indicate if the container was opened during shipment. Courier names and other pertinent information were documented on the chain-of-custody record. All shipments were accompanied by the chain-of-custody record that identifies the contents of the shipment. The original and one copy was included in the shipment, an additional copy was retained by the sampler and provided to the Dairies' Project Coordinator (PC). All shipping documentation (e.g., freight bills) was retained as part of the chain-of-custody documentation by the Dairies' PC.

All samples collected for laboratory analyses were delivered to ALS Environmental (ALS) located at 1317 South 13th Avenue in Kelso, Washington. Upon arrival at the laboratory, the ALS sample custodian accepted custody of the samples from the carrier and entered information about the shipment into a sample receipt log that included the initials of the person delivering the package and the status of custody seals on the containers. The sample custodian logged in the samples following the laboratory SOP. Following sample analysis, the unused portions of all samples were disposed of by ALS in accordance with their laboratory SOP. A total of five sample delivery groups were submitted to the analytical laboratory; the delivery groups and collection dates are as follows:

Sample Delivery Group	Samples Collected	Date Received by Lab
K1615029	December 12, 2016	December 14, 2016
K1615045	December 12 and 13, 2016	December 14, 2016
K1615083	December 13 and 14, 2016	December 15, 2016
K1615126	December 14 and 15, 2016	December 16, 2016
K1615174	December 15 and 16, 2016	December 17, 2016

Field Sampling Data Sheets were completed at each well and indicate samples collected, sample identification, duplicate samples, and other pertinent information, including significant events and observations that occurred during sampling activities. Sufficient information was noted on field sampling forms to enable participants to reconstruct events that occurred and to refresh the memory of field personnel, if needed (Appendix B). Original copies of all field forms and chain-of-custody documents were retained by the Dairies' Field Lead in the project files.

3.2.3.1 Sample Containers, Preservatives, and Hold Times

Field personnel, in coordination with the analytical laboratory, determined the number and type of sample containers needed for a given sampling event, including enough sample containers for the quality assurance/quality control (QA/QC) samples, in addition to the containers required for the actual well sampling. Preservatives were required for EPA Method 350.1, 365.1, 351.2, and 200.7 analyses. ALS provided the appropriate containers for the analytes, including required container sizes. In addition, ALS provided deionized water for collection of field blank and equipment rinsate blank samples.

3.2.4 Measurement of Final Water Level

Low flow sampling methods were used and a consistent, stabilized water level was maintained during sampling.

3.2.5 Equipment Decontamination

Portable pumps and water level indicators were decontaminated to prevent cross-contamination between sampling sites. All other equipment and materials were either dedicated to a particular well, or were disposable. The following procedures were followed for the portable pump and depth to water indicators:

- The equipment was cleaned with a solution of phosphate-free detergent, such as Liquinox™ and potable water.
- The equipment was rinsed three successive times with deionized water.

Water used for decontamination was disposed in the immediate vicinity away from the nearest monitoring well. All disposable items, such as paper towels, disposable gloves, and wash cloths, were deposited into garbage bags and disposed in a solid waste container located at the staging area.

3.2.6 Health and Safety

Anchor QEA prepared a Project Health and Safety Plan (HASP; Anchor QEA 2016b). Work activities referenced in this Report were conducted in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations, as well as those specifically established in the Project HASP. All personnel involved in the work were current with respect to required OSHA training and refresher requirements of 29 Code of Federal Regulations Part 1920.120. The work was conducted in Level D personal protective equipment.

4 Soil and Groundwater Characteristics

The following section summarizes soil and groundwater conditions encountered during subsurface soil boring and well installation efforts conducted at the Dairies. Specific information for each soil boring is provided in the *Groundwater Monitoring Well Installation Report* (ARCADIS 2013).

4.1 Subsurface Soil Characteristics

Soil boring and groundwater monitoring well drilling efforts were conducted during June through August 2013. Borehole field observations are provided in geologic borehole logs provided in Appendix A of the *Groundwater Monitoring Well Installation Report* (ARCADIS 2013). Figure 6 illustrates the locations of geologic cross sections across the site. Figures 7 to 13 present geologic cross sections.

Lithology and depths of borings varied throughout most of the site. Site geology in most borings typically consisted of encountering finer-grained materials in the upper portion of borings and coarser-grained material in lower portions of borings. A silt loam, likely equivalent to Warden silt loam soils, was typically encountered in most borings at the surface or within 20 feet of the surface. Silt loam thickness was greatest in the areas containing YVD-13 and YVD-18 (Figures 7, 8, and 13) and in the upland areas where YVD-04 and DC-01 (Figures 8, 9, 10, 11, and 13) are located. Silt loam in these areas ranged from 23 to 57 feet thick. The silt loam typically pinched out with distance from the upland borings toward lower-elevation borings. In areas where the silt loam layer was deeper, such as in DC-01, the silt loam interbeds with the sand and gravelly sand sediments that typically dominate the lithology of borings located further downslope (Figures 9, 10, and 12).

Several borings encountered a partially cemented layer of sand and gravel (e.g., YVD-08, YVD-12, YVD-13/18, and YVD-15) located either beneath or interbedded with the silt loam. This partially cemented layer was slow to drill and was generally 5 to 10 feet thick. Lithology beneath the cemented layer varied from 10 to 20 feet of silt loam in some borings (e.g., YVD-13) and sand in other borings (e.g., YVD-12).

Various layers of sand, gravelly sand, and sandy gravel dominated most of the borings completed at the Dairies. Sand and gravel were typically poorly graded. Lenses of silty sand and clayey sand were encountered in some of the borings. These lenses typically were present in the deeper portion of borings.

Three borings, DC-01, YVD-02, and YVD-03, penetrated into weathered basalt, which was encountered in borings YVD-02 and YVD-03 at 12 and 184 feet below ground surface (bgs), respectively. The depth to the surface of the weathered basalt greatly increased in a short distance from these two wells in the down-slope direction. Basalt was not encountered in the nearest

down-slope wells, including YVD-04, YVD-06, and YVD-07. Total depths of these wells ranged from 168 to 245 feet bgs, thus indicating that the depth to the top of the basalt increases down-slope.

4.2 Groundwater Characteristics

The unconfined surficial aquifer is situated in sand, gravelly sand, or sandy gravel. Depth to water was measured from a surveyed reference point on the top of the well casing. The measured depth to water below the top of casing (btoc) on December 11, 2016, ranged from 32.52 to 221.07 feet. Depth to groundwater was greatest in borings located in areas of the site that were topographically higher (e.g., YVD-04, YVD-05, YVD-06, YVD-07, YVD-08, and YVD-09). Depths to water in these borings ranged from 111.84 to 221.07 feet btoc. Comparatively, depth to groundwater was least in borings located in areas of the site that were topographically lower (e.g., YVD-14R, YVD-15, YVD-17, DC-03, and DC-04). Depths to water in these borings ranged from 34.33 to 94.44 feet btoc. Depths to water in borings completed in the weathered basalt or basalt ranged from 32.52 feet btoc in YVD-02 to 191.25 feet btoc in YVD-03.

Groundwater elevations in the surficial aquifer measured on December 11, 2016, ranged from 1,256.45 feet North American Vertical Datum of 1988 (NAVD88) in YVD-02 to 823.35 feet NAVD88 in YVD-12. Depth to water ranged from 221.07 feet btoc in well YVD-04 to 32.52 feet btoc in well YVD-17. A summary of cumulative water level measurements and groundwater elevations is presented in Table 4. Figure 14 presents groundwater elevation contours developed from the synoptic water level measurement event on December 11, 2016. The groundwater elevation in well YVD-03 appears anomalous when compared to groundwater elevations in nearby wells and was not used to create the groundwater elevation contour map on Figure 14. Examination of cross sections C-C' (Figure 9) and G-G' (Figure 13) indicate that the well is screened in the underlying basalt and weathered basalt unit. Furthermore, the groundwater may be under semi-confined to confined conditions due to the presence of both a 40-foot-thick silt layer from 1,030 to 1,070 feet elevation NAVD88 and a 25-foot-thick silt layer from 980 to 1,050 feet elevation NAVD88.

As can be seen in Figure 14, groundwater generally flows in a northeast to southwest direction. The average hydraulic gradient is 0.025 foot per foot (ft/ft). Larger hydraulic gradients exist in the topographically higher upslope areas in the northern section of the site, with an average of 0.047 ft/ft. As groundwater flows to the southwest toward the center of the Yakima River valley, hydraulic gradients decrease to about 0.011 ft/ft in the central portion of the site and then to 0.004 ft/ft in the southern portion of the site.

Comparison of groundwater elevations in the three shallow/deep monitoring well pairs (YVD-13/YVD-18, DC-03/DC-03D, and DC-05/DC-05D) indicates varying vertical hydraulic gradients as calculated using data collected during the synoptic measurement event on December 11, 2016. There are downward vertical gradients of 0.0096 and 0.0012 at well pairs DC-05/DC-05D and

DC-03/DC-03D, respectively. An upward vertical gradient of 0.0014 exists at well pair YVD-13/YVD-18. Analysis of vertical gradients over time indicate that, with a few exceptions, the vertical gradients at well pairs are generally consistent over time, with upward vertical gradients at well pairs DC-03/DC-03D and YVD-13/YVD-18, and a downward vertical gradient at well pair DC-05/DC-05D.

4.3 Temporal Groundwater Level Monitoring

Temporal groundwater levels were monitored using Solinst® Levelogger® Junior Edge pressure transducers in six monitoring wells to evaluate seasonal fluctuations and trends in groundwater elevations. Two pressure transducers were installed in one of the shallow/deep monitoring well pairs to evaluate differences in hydraulic head and vertical gradients between the shallow and deep portions of the surficial aquifer. Wells with transducers include DC-03, the DC-05/DC-05D well pair, YVD-03, YVD-08, and YVD-11. Additionally, a Solinst® Barologger® Edge barometric pressure transducer was deployed in YVD-08 to provide the basis to compensate water levels for barometric pressure changes. Water levels often exhibit a response to barometric pressure (i.e., a rise in barometric pressure will often result in a drop in water levels). The sensitivity of the water level response to pressure is termed barometric efficiency. Although barometric pressure compensation is calculated for each transducer, some fluctuation will be present due to the barometric efficiency of the aquifer.

Levelogger® transducers were suspended in the well screen intervals below the water table to the extent that water level fluctuations would not expose the transducers to air. Further, the transducers were appropriately rated for the respective anticipated head in each well. Transducers were secured within the steel surface casing to prevent vandalism or tampering. Two of the transducers are malfunctioning and will require removal or replacement prior to the First Quarter 2017 sampling.

Transducers have been recording water levels in hourly increments since noon on October 15, 2013. During data downloads, water levels in wells were manually gauged using an electronic water level meter. Following the data download, water level data was compensated for changes in barometric pressure and recalibrated with concurrent field-verified groundwater elevation measurements. The resulting groundwater hydrographs are presented in Figures 15A to 15G.

Hydrographs of the groundwater elevations in the wells in Figures 15A through 15G show that there are short-term fluctuations that occur over a few days to a week andseasonal fluctuations in groundwater elevations at the site with an overall long-term decreasing trend in elevations, as shown in Figure 15A. Instantaneous changes in elevations on plots are the result of transducer drift and subsequent recalibration of the transducers with field-verified elevations.

Groundwater elevations in DC-03 (Figure 15B) and DC-05 (Figure 15C) exhibit short-term fluctuations of approximately 0.1 feet and seasonal fluctuations of approximately 2 feet, with maximum elevations in late summer/early fall and minimum elevations in spring. Groundwater elevations in both wells shows a long-term trend of consistent gradually decreasing elevations since measurements began in 2013.

Groundwater elevations in DC-05D (Figure 15D) exhibit the same trend and seasonal fluctuations as DC-05, although with greater short-term fluctuations on the order of approximately 1 foot. Groundwater elevations are generally lower in DC-05D compared to water levels in DC-05, indicating a slight downward vertical hydraulic gradient.

Groundwater elevations in monitoring well YVD-03 (Figure 15E) exhibit short-term temporal fluctuations of approximately 0.5 to 1 foot. Long-term groundwater elevations in YVD-03 gradually increased from the beginning of the measurement period in 2013 to April 2015, with elevations increasing approximately 3 feet over this period. Since April 2015, elevations in YVD-03 have consistently declined through Fourth Quarter 2016.

Groundwater elevations in monitoring well YVD-08 (Figure 15F) exhibit short-term temporal fluctuations of approximately 0.5 to 1 foot. Long-term groundwater elevations in YVD-08 gradually increased from the beginning of the measurement period in 2013 to April 2015. Elevations began to decline in April 2015 and continue to decline through Fourth Quarter 2016.

Groundwater elevations in YVD-11 exhibit short-term fluctuations of approximately 0.1 foot (Figure 15G.) There is a consistent long-term trend of declining groundwater elevations in YVD-11, as shown in Figure 15G. Elevations decreased slightly from the beginning of the monitoring period in 2013 until Fourth Quarter 2015. The rate of decrease increased as of Fourth Quarter 2015 and continued through Third Quarter 2016. Groundwater elevations increased slightly from Third Quarter 2016 to Fourth Quarter 2016.

4.4 Human Influences on Groundwater Flow

Human influences in the Yakima River valley may affect the hydrology and hydrogeology on and around the Dairies. These human influences include, but are not limited to: water extraction wells, large septic systems, storm water basins/structures, irrigation ditches/pipelines, surface water structures, such as ponds, and field irrigation methods. A number of these structures are depicted in Figures 3B, 3C, and 3D.

Supply wells and regional wells withdraw water for irrigation, residential use, and other farming uses. These wells may withdraw consistent volumes of water year round or large volumes of water seasonally. Supply wells will likely affect the local hydraulic regime of the underlying aquifer, particularly within the area of well influence. Leakage of irrigation water from the Roza and

Sunnyside Irrigation Canals is a source of recharge to the upper surficial aquifer during months when flow is present in the canals.

4.5 Average Linear Groundwater Flow Velocity

A potential average linear groundwater flow velocity for the surficial alluvial aquifer can be estimated based on the measured groundwater gradient and the observed characteristics of the aquifer material. The average linear velocity of groundwater flow (V_x) is determined according to the equation:

Equation 4-1

$$V_x = \frac{K}{n_e} \times I$$

where:

K	=	hydraulic conductivity of the aquifer material
I	=	hydraulic gradient of the aquifer
n_e	=	effective porosity of the aquifer material

No direct testing or analysis of hydraulic conductivity or effective porosity was performed for the surficial alluvial aquifer. Measurements of hydraulic conductivity and effective porosity are typically made using methods, such as aquifer tests (i.e., pumping tests or slug tests) or physical analysis of aquifer material (e.g., permeameter testing, grain-size analysis). However, an estimate of the average linear groundwater velocity can be made using data (developed by others) for hydraulic conductivities and effective porosities of materials similar to those composing the surficial alluvial aquifer.

Review of the boring logs for wells completed at the Dairies indicate that the shallow surficial aquifer is chiefly composed of the following materials:

- Sands of fine grain size
- Sands of medium grain size with fine gravels
- Gravelly sands of medium to coarse grain size with fine to coarse gravels
- Sandy gravels of fine grain size with fine to coarse sands

Estimated values for hydraulic conductivity and effective porosity of the shallow surficial aquifer material are obtained from Method 9100, *Saturated Hydraulic Conductivity, Saturated Leachate Conductivity, and Intrinsic Permeability* (EPA 1986), and *Data Collection Handbook to Support Modeling Impacts of Radioactive Material in Soil* (Yu et al. 1993), respectively. Values of hydraulic

conductivity (K) and effective porosity (n_e) for materials similar to the shallow surficial aquifer were selected from the previously referenced literature. The selected values are presented in Table 5.

The hydraulic gradient (I) as measured during September 2016 near the Dairies averages 0.025 ft/ft. Hydraulic gradients in the topographically higher areas average of 0.047 ft/ft. Hydraulic gradients decrease to approximately 0.011 ft/ft in the central portion of the Dairies and further decrease to 0.004 ft/ft in the southern portion of the Dairies. A calculated range of average linear groundwater flow velocities in feet per day is presented in Table 5 based on the average and specific gradients. The estimated average linear groundwater flow velocities for the area under the Dairies range from 4.0 to 23.8 feet per day.

The average linear groundwater flow velocities presented in Table 5 are a range of estimated possible values only; they are calculated using data elements (hydraulic conductivity and effective porosity) that are not site-specific and may not reflect the actual conditions present at the Dairies. However, this range of calculated groundwater velocity, based on values of material properties and hydraulic conductivity presented in literature together with the measured site-specific hydraulic gradients, is the best estimate of groundwater velocity that can be determined at this time.

5 Analytical Program

5.1 Analytical Methods

Groundwater samples were analyzed for the following:

- Nitrate (as nitrogen) by EPA Method 300.0
- Nitrite (as nitrogen) by EPA Method 300.0
- Ammonia by EPA Method 350.1
- Total phosphorus by EPA Method 365.1
- Total Kjeldahl nitrogen (TKN) by EPA Method 351.2
- Inorganic anions (chloride, fluoride, sulfate) by EPA Method 300.0
- Metals (calcium, potassium, magnesium, sodium) by EPA Method 200.7
- Alkalinity (total and bicarbonate) by Standard Method 2320B

The QAPP Addendum 1 (Anchor QEA 2016a, Table 3) presents the analytes, method, container, preservation method, and holding times for the groundwater samples collected during the groundwater monitoring event. Because of the 48-hour holding time for nitrate analysis by EPA Method 300.0, samples were either hand delivered or shipped using an overnight delivery service each day (Sunday through Thursday). ALS analyzed the samples immediately upon receipt to ensure holding time compliance. Analytical laboratory reports are presented in Appendix C.

5.2 Quality Control

This section presents the field and laboratory QC requirements for groundwater monitoring sampling.

5.2.1 Field Quality Control Samples

The groundwater monitoring sampling included the collection of field QC samples, including field duplicates, field blanks, and equipment rinsate blanks. Field QC samples were collected at the required frequency as specified in the QAPP.

5.2.2 Laboratory Quality Control Procedures

Laboratory QC procedures included the following:

- Nitrate analysis of water samples according to EPA Method 300.0
- Instrument calibration and standards as defined in the associated EPA method or Standard Method
- Laboratory blank measurements at a minimum 5%, or one per batch frequency
- Accuracy and precision measurements at a minimum of 1 in 20, or one per set
- Data reduction and reporting according to laboratory SOP requirements

- Laboratory documentation according to laboratory SOP requirements

5.3 Data Validation and Usability

All data underwent review and validation as described in Section 4 of the QAPP. The Data Usability Summary Report is presented in Appendix D.

5.4 Data Management

All field data collected during the groundwater monitoring sampling were recorded on Field Sampling Data Sheets (Appendix B). Pertinent information, such as field parameter measurements, was transferred to an Excel spreadsheet.

The analytical data obtained from the laboratory is maintained in an electronic data management tool. Additionally, the data are provided to the EPA in accordance with the procedures presented in EPA Region 10 Monitoring and Analytical Data Deliverables Data Submission Process for Water Quality Exchange (WQX) Compatible Deliverables for Yakima Dairies (Docket No. SDWA-10-2013-0080), and EPA Region 10 Geographic Information System Data Deliverable Guidance for Yakima Dairies (Docket No. SDWA-10-2013-0080). Data submitted to the EPA is provided in the requested format which is consistent with the examples provided by the EPA to the Dairies. Data is available via the Storage and Retrieval and Water Quality Exchange (STORET/WQX) Data Warehouse (http://www.epa.gov/waterdata/storage-and-retrieval-and-water-quality-exchange) under the Organization ID *YAKIMAVLYDAIRIES_WQX*.

5.5 Corrective Actions

No corrective actions were required for the Fourth Quarter 2016 sampling event.

6 Data Validation and Usability

6.1 Data Review, Verification, and Validation

All data underwent a Stage 2 validation, which included a data package completeness review. Data were validated in accordance with EPA National Functional Guidelines. The data validation report is presented in Appendix D. Any deviation from the approved QAPP was either documented within the body of this Report or in the data validation report. Results met project data quality goals and criteria with some exceptions. Data are usable as reported or as qualified for all purposes.

7 Groundwater Sampling Results

Groundwater field parameter measurements for the Fourth Quarter 2016 sampling event are presented in Table 3. Groundwater analytical results for Fourth Quarter 2016 are presented in Table 6. A summary of cumulative groundwater sampling results is presented in Table 7. Additionally, a summary of the cation/anion balance is presented in Appendix E. These results establish current groundwater quality conditions in the surficial alluvial aquifer. Further, analytical results will be compared to subsequent quarterly events to identify spatial and temporal water quality trends.

7.1 Field Parameters

Groundwater field parameters collected during well purging included dissolved oxygen, pH, oxidation-reduction potential, specific conductance, temperature, and turbidity. Parameters were measured every 3 to 5 minutes during well purging until the parameters stabilized to the requirements set forth in Appendix E of the QAPP Addendum 1 (Anchor QEA 2016a). A summary of the final measurements recorded during the purging of each well are presented in Table 3.

Dissolved oxygen measures the concentration of molecular oxygen dissolved in groundwater. Oxygen's limited solubility, as described by Henry's law, is directly related to atmospheric pressure and inversely related to water temperature and salinity. The solubility of oxygen increases proportionately with hydrostatic pressure, hence depth. In dilute solutions at sea level, the solubility of oxygen ranges between 7.0 and 10.0 mg/L, at temperatures ranging between 15 °C to 31 °C (APHA 1981).

The primary chemical characteristic of molecular oxygen is its ability to accept electrons from (oxidize) other species in water. Aerobic bacteria utilize dissolved oxygen as part of their metabolism. This results in the oxidation of organic carbon, hydrogen sulfide, ammonium, molecular nitrogen, and other reductants. An important aspect of these biochemical reactions is their irreversibility; dissolved oxygen is always consumed and never produced as a result of bacterial metabolism. Groundwater sources usually contain a low level of dissolved oxygen compared to surface waters. A dissolved oxygen level less than 1.0 mg/L is considered indicative of anaerobic conditions.

Dissolved oxygen in the measured wells ranged from 0.35 mg/L in monitoring well DC-03D to 13.92 mg/L in monitoring well YVD-18.

Oxidation reduction potential (ORP) is a measure of the intensity or activity of an aqueous environment or soil to mediate reactions of important elements in biological systems (e.g., oxygen, nitrogen, manganese, iron, sulfur, and carbon) and other metallic elements (EPA 2013). The ORP is the tendency of a chemical species to acquire electrons and thereby be reduced. Each species has its own intrinsic reduction potential; the more positive the potential, the greater the species' affinity for electrons and tendency to be reduced.

In aqueous solutions, the ORP is the tendency of the solution to either gain or lose electrons when it is subject to change by introduction of a new species. A solution with a higher (more positive) ORP than the new species will tend to gain electrons from the new species (i.e., to be reduced by oxidizing the new species) and a solution with a lower (more negative) ORP will tend to lose electrons to the new species (i.e., to be oxidized by reducing the new species). The transfer of electrons between chemical species determines the ORP of an aqueous solution. It does not characterize the capacity of the system for oxidation or reduction, in much the same way that pH does not characterize the buffering capacity. A numerically positive ORP represents an environment conducive to the oxidation of an introduced substance by reduction of the original media.

Groundwater typically contains both reduced and oxidized species; however, what is termed the redox buffer capacity of an aquifer is normally dominated by the chemistry of the aquifer matrix. In most natural groundwater systems iron is the dominant (by one to three orders of magnitude) buffering species involved in redox reactions.

The denitrification (NO_3 to N_2) reaction [$3CH_2O + 4NO_3^- = 2N_2 + 3HCO_3^- + H^+ + 2H_2O$] consumes organic matter in groundwater (Vance 1996). Denitrification can occur under ORP conditions in the range of +100 millivolts (mV) to +250 mV. Water in contact with air will have an ORP in the range of +350 mV to +500 mV.

Most work with oxidation/reduction reactions involves solutions in closed systems that are in an equilibrium state. In groundwater with more than one oxidation/reduction species, the ORP cannot be accurately measured unless the reactants are at thermodynamic equilibrium. Some redox reactions can take from 10 to 1,000 years to reach equilibrium. However, environmental processes are typically in disequilibrium, caused by:

- Flowing groundwater conditions
- Biological activity
- Reactions of light bioactive elements (carbon, hydrogen, oxygen, and sulfur), which most often involve the breaking of covalent bonds, a process that is normally slow
- Electrochemical reactions of exposed active mineral surfaces

ORP ranged from -33.4 to +194.4 mV in monitoring wells DC-03D and DC-05, respectively.

The measured pH ranged from 6.37 to 8.13 standard units, with the lowest reading measured in monitoring well DC-07 and the highest reading measured in well YVD-07.

Specific conductance is a measurement of the dissolved material in an aqueous solution, which relates to the ability of the media to conduct an electrical current. The greater the amount of dissolved material in a media, the higher the specific conductance value. Specific conductance in water depends on the concentration of ions, mobility, valence, relative concentrations, and the

temperature of the solution. Natural waters have specific conductance that are usually much less than 1 micromho per centimeter. An estimate of total dissolved solids in mg/L can be made by multiplying specific conductance in micromhos per centimeter by a factor ranging from 0.55 to 0.9, depending on the concentration of soluble component. The presence of charged ionic species allows current to be conducted through the solution, but other undissociated species in the solution complicate the relationship between specific conductance and total dissolved solids. Specific conductance, as a field parameter, may best reflect major ion chemistry in groundwater, as it is less affected by either volatilization or small-scale heterogeneity. Comparing temporal and spatial specific conductance measurements can provide an approximation of the mobility of the ionic species in the system. Specific conductance ranged from 290.5 to 2,591 microsiemens per centimeter, with the lowest reading measured in monitoring well YVD-06 and the highest reading measured in well DC-03.

Groundwater temperature measurements ranged from 8.4 °C to 14.2 °C in monitoring wells DC-01 and YVD-09, respectively. Groundwater temperature measurements are made at the surface and do not necessarily indicate the water temperature of the aquifer.

The lowest turbidity reading was 0.01 nephelometric turbidity units (NTUs) in monitoring wells YVD-04 and YVD-18. The highest turbidity reading of greater than 1,000 NTUs was recorded in well YVD-02; however, the pump was set on the bottom of the well in order to purge the well dry, thus stirring up sediment and artificially increasing the turbidity of the water.

7.2 Nitrate

Nitrate (as nitrogen) was detected above the MDL in all 25 monitoring wells sampled (Figure 16A). Detected concentrations range from 0.59 mg/L in well YVD-17 to 168 mg/L in well DC-03 (Table 6).

Nitrate was detected in ten wells at concentrations less than the MCL of 10 mg/L:

- DC-01 (8.89J mg/L)
- DC-09 (5.62 mg/L)
- YVD-03 (4.47 mg/L)
- YVD-05 (3.15 mg/L)
- YVD-07 (2.15 mg/L)
- DC-07 (1.44 mg/L)
- YVD-04 (3.74 mg/L)
- YVD-06 (0.70 mg/L)
- YVD-17 (0.59 mg/L)
- DC-14 (4.45 mg/L)

Nitrate was detected in 15 wells at concentrations greater than the MCL of 10 mg/L:

- DC-03 (168J mg/L)
- DC-04 (45.2 mg/L)
- DC-05D (11.2 mg/L)
- YVD-08 (34.5J mg/L)
- DC-03D (33.8J mg/L)
- DC-05 (33.7 mg/L)
- YVD-09 (42.8J mg/L)
- YVD-11 (55.5J mg/L)

- YVD-10 (109J mg/L)
- YVD-12 (12.2 mg/L)
- YVD-14R (92.3J mg/L)
- YVD-16 (19.7 mg/L)
- YVD-13 (23.1 mg/L)
- YVD-15 (25.5 mg/L)
- YVD-18 (21.5 mg/L)

Nitrate concentrations in well pairs showed lower detected concentrations in the deep well compared to the shallow well. Nitrate was detected in well pair YVD-13 (shallow) and YVD-18 (deep) at 23.1 and 21.5 mg/L, respectively. Nitrate was detected in well pair DC-03 (shallow) and DC-03D (deep) at 168 J and 33.8 J mg/L, respectively. Nitrate was detected in well pair DC-05 (shallow) and DC-05D (deep) at 33.7 and 11.2 mg/L, respectively.

Historical nitrate concentrations are presented in Figure 16B. Nitrate concentrations detected in wells over time are presented in Figures 17 through 22. Figure 17 presents nitrate concentrations detected over time in wells DC-04, DC-05, CD-05D, DC-07, YVD-15, and YVD-17 (the East Downgradient wells). Figure 18 presents nitrate concentrations detected over time in wells DC-03, DC-03D, DC-07, YVD-12, YVD-13, YVD-14/14R, and YVD-18 (the West Downgradient wells). Figure 19 presents nitrate concentrations detected over time in wells YVD-08, YVD-09, YVD-10, YVD-11, and YVD-16 (the Central wells). Figure 20 presents nitrate concentrations detected over time in wells DC-09, DC-14, YVD-05, YVD-06, and YVD-07 (the Northern wells). Figure 21 presents nitrate concentrations detected over time in wells DC-01, YVD-02, YVD-03, and YVD-04 (the Upgradient wells). Figure 22 presents nitrate versus total dissolved ion concentrations in wells along the transect of cross section F-F' (wells YVD-02, YVD 07, YVD-10, YVD-14R, and DC-03).

7.3 Nitrite

Nitrite was not detected above the MDL of 0.004 mg/L in any of the monitoring wells in the Fourth Quarter 2016 (Figure 23; Table 6).

7.4 Ammonia

Ammonia was detected in a duplicate sample from YVD-18 at 0.115 mg/L. Ammonia was not detected above the MRL of 0.050 mg/L in the remaining samples. Ammonia concentrations are presented in Table 6 and depicted in Figure 23.

7.5 Total Kjeldahl Nitrogen

TKN was not detected above the MRL of 0.5 mg/L in any of the monitoring wells in the Fourth Quarter 2016. TKN concentrations are presented in Table 6 and depicted in Figure 23.

7.6 Total Phosphorus

Total phosphorus concentrations ranged from 0.007 mg/L in well DC-09 to 0.421 mg/L in well YVD-11. Phosphorous concentrations are presented in Table 6 and depicted in Figure 23.

7.7 Inorganic Anions

Inorganic anions analyzed included chloride, fluoride, and sulfate. The analytical results for the Fourth Quarter 2016 sampling event are presented in Table 6 and depicted in Figure 24. A summary of the results is discussed as follows.

7.7.1 Chloride

Detected chloride concentrations ranged from 2.42 mg/L in well YVD-17 to 141 mg/L in well YVD-10. All chloride concentrations were less than the secondary maximum contaminant level (SMCL) of 250 mg/L.

7.7.2 Fluoride

Detected fluoride concentrations ranged from 0.019 mg/L in well YVD-14R to 0.69 mg/L in well YVD-03. Fluoride was not detected above the reporting limit of 0.006 mg/L in one well, DC-07. These concentrations are below the SMCL for fluoride of 2.0 mg/L.

7.7.3 Sulfate

Detected sulfate concentrations ranged from 6.00 mg/L in well YVD-17 to 313 mg/L in well YVD-13. Sulfate was detected in one well, YVD-13, at a concentration equal to or greater than the SMCL of 250 mg/L.

7.8 Metals

Metals analyzed included calcium, magnesium, potassium, and sodium. The analytical results for the Fourth Quarter 2016 sampling event are presented in Table 6 and depicted in Figure 25. A summary of the results is discussed as follows.

7.8.1 Calcium

Calcium concentrations ranged from 25.9 mg/L in well YVD-07 to 303 mg/L in well YVD-10.

7.8.2 Magnesium

Magnesium concentrations ranged from 5.73 mg/L in well YVD-06 to 66.9 mg/L in well YVD-10.

7.8.3 Potassium

Potassium concentrations ranged from 1.05 mg/L in well DC-07 to 8.42 mg/L in well YVD-09.

7.8.4 Sodium

Sodium concentrations ranged from 7.44 mg/L in well YVD-17 to 185 mg/L in well YVD-09.

7.9 Alkalinity

Alkalinity included bicarbonate alkalinity and total alkalinity. The analytical results for the Fourth Quarter 2016 sampling event are presented in Table 6 and depicted in Figure 26. A summary of the results is discussed as follows.

7.9.1 Bicarbonate Alkalinity

Bicarbonate concentrations ranged from 111 mg/L in well YVD-18 to 578 mg/L in well YVD-14R.

7.9.2 Total Alkalinity

Total alkalinity concentrations ranged from 111 mg/L in well YVD-18 to 578 mg/L in well YVD-14R.

7.10 Water Type Classifications

Analytical results for cations and anions were used to construct Stiff diagrams and Piper diagrams. These diagrams are used to evaluate the natural water chemistry of the shallow surficial aquifer, describe water type classifications, and map hydrochemical facies.

7.10.1 Anion and Cation Balance

Anion/cation balances for several monitoring wells have fluctuated in past sampling events and appeared elevated (i.e., greater than 5%). It should be noted that anion/cation balance is not a definitive result, meaning that is a calculated value rather than directly measured. Elevated anion/cation balances can suggest issues with analysis for anions (by EPA Method 300.0, an ion chromatography technique) or due to sample heterogeneity issues (e.g., turbidity). Each of these analytical methods were evaluated for quality control outliers and were found to be acceptable. A summary showing the calculated values of each of the ion concentrations is provided in Appendix E.

The total cation concentration was calculated as the sum of calcium, magnesium, sodium, and potassium. The total anion concentration was calculated as the sum of chloride, sulfate, and bicarbonate; nitrate was also included because this negative ion was indicated to be at a relatively significant concentration in some samples. This information is summarized in Appendix E in a table with the calculated milliequivalents per liter (equivalent weight or equivalent mass) for the groundwater analytical results.

All of the ion balances for the groundwater samples were within +/- 4%, with the exception of the sample at YVD-17, which was +4.7%. The average ion balances of the groundwater samples were +/-1.2%, indicating that the major-ion laboratory analyses were of good quality.

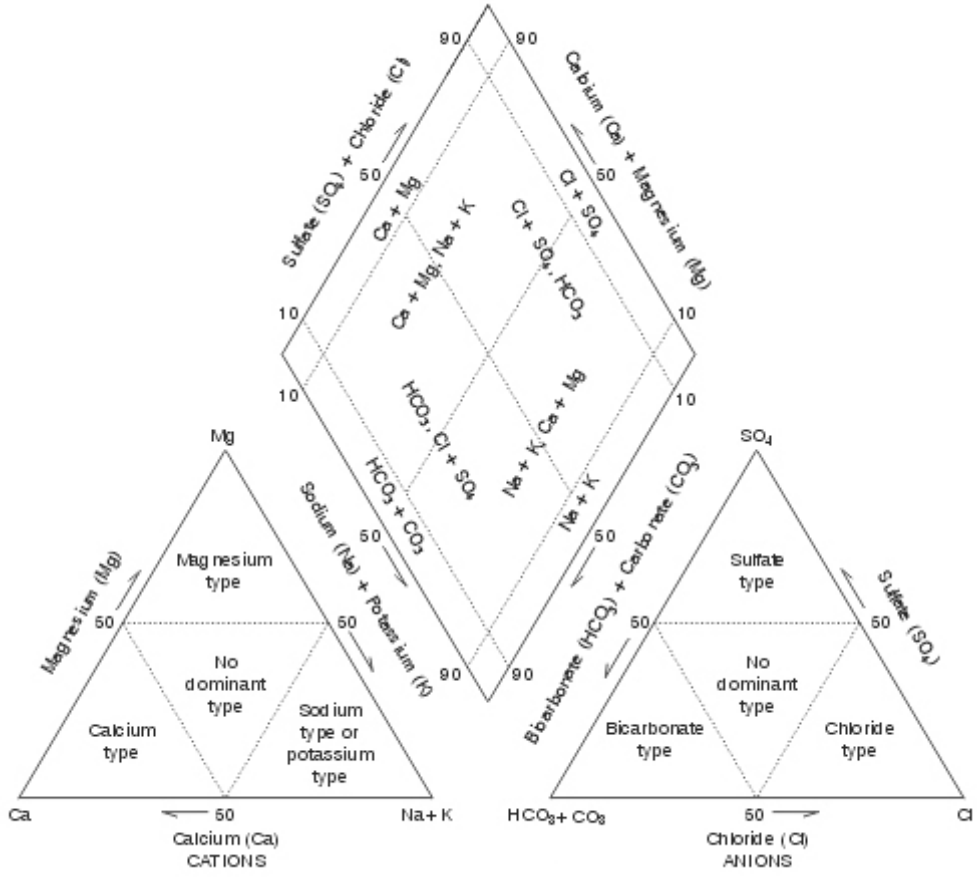
7.10.2 Stiff Diagrams

Stiff diagrams are used to graphically compare the cation and anion concentrations for wells throughout the site both spatially and over time. A polygonal shape is created from four parallel horizontal lines extending on either side of a vertical zero axis. Cations are plotted on the left of the zero axis, one to each horizontal axis, and anions are plotted to the right, extending along a given horizontal axis. Stiff diagrams are useful in making rapid visual comparison between water of different sources; generally, waters with the same polygonal shapes are derived from the same source. The larger the area of the polygonal shape, the greater the concentrations of the various ions associated with the depicted sample. Figures 27A through 27I present Stiff diagrams for 25 of the 26 wells, with the exception of YVD-02, which was not sampled. Figure 28 presents the Stiff diagrams next to their respective sample point on a facility base map. Concentrations in the Stiff diagrams are expressed in milliequivalents per liter and require a specific conversion for each individual ion concentration.

7.10.3 Piper Diagrams

Piper diagrams illustrate the geochemical characteristics of each sample point within the lithological flow path by plotting dissolved ion concentrations (expressed in milliequivalents per liter) on two-dimensional trilinear diagrams. Each trilinear diagram represents the relative percentages of three ions. Cations are represented in the left trilinear diagram, anions in the right. The apex of each of the triangles represents 100% of the ion shown at that corner. For example, water compositions with more than 50% relative calcium ions would plot in the bottom left corner of the cation diagram and would be considered calcium dominant. Compositions with less than 50% of each of the represented cations would plot in the center of the diagram and would therefore be considered to have no dominant type. Each of the data points from the cation and anion diagrams are then projected into the quadrilateral above. The quadrilateral represents the water composition with respect to the six represented ions.

Chart 1
Piper Diagram Displaying Relative Ion Composition (Bartos and Ogle 2002)



The Piper diagrams were constructed in general accordance with ASTM International D5754-95 (2006) *Standard Guide for Displaying the Results of Chemical Analyses of Groundwater for Major Ions and Trace Elements – Trilinear Diagrams for Two or More Analyses*. Figure 29 presents a Piper diagram of general water quality for all 25 well samples. The wells are divided into well groups, based on location and with respect to groundwater gradient and shown on individual Piper diagrams as Figures 30 through Figure 32. Individual data points within each sample group demonstrate the changes in the hydrochemical facies throughout the flow path.

Group 1 consists of nine wells (DC-03, DC-03D, YVD-04, YVD-05, YVD-08, YVD-09, YVD-12, YVD-13, and YVD-18) located within the western portion of the Dairies. The groundwater in the Group 1 wells is generally of the calcium-bicarbonate type in the upgradient wells (DC-03, DC-03D, YVD-04, and YVD-05), calcium sulfate in the downgradient wells (YVD-08, YVD-12, YVD-13, and YVD-18), or "of no dominant type" (YVD-09), as shown in Figure 30.

Group 2 consists ten wells (DC-01, DC-04, DC-07, DC-14, YVD-03, YVD-06, YVD-10, YVD-14R, YVD-15, and YVD-17) located within in the central portion of the Dairies. The groundwater in the Group 2 wells is of the calcium-bicarbonate type, with the exception of upgradient well DC-01, which is screened in the underlying basalt and is of the calcium-sulfate type.

Group 3 consists of seven wells (DC-05, DC-05D, DC-09, YVD-02, YVD-07, YVD-11, and YVD-16) located within the eastern portion of the Dairies. The groundwater in the Group 3 wells is of the calcium-bicarbonate type. Well YVD-02 was not sampled in Fourth Quarter 2016 and is not shown in Figure 32.

8 Summary and Conclusions

Data collected during the Fourth Quarter 2016 indicate that nitrate concentrations, hydraulic gradients, and groundwater chemistry in the shallow aquifer have generally remained stable and are consistent with results from previous years of the groundwater monitoring program, with a few exceptions.

Nitrate concentrations in groundwater are generally stable or decreasing, with occasional fluctuations, since monitoring began in 2013. In the Fourth Quarter 2016, there were 15 wells located on or downgradient of the Dairies with nitrate concentrations in groundwater above the MCL (10 mg/L), which is consistent with past Fourth Quarter monitoring events.

Groundwater in the surficial aquifer flows in a north-northeast to south-southwest direction with little seasonal change in hydraulic gradient. Groundwater hydrographs shown in Figures 15A through 15G show that groundwater elevations have been decreasing in the surficial aquifer since monitoring began in 2013. Groundwater elevations in the surficial aquifer fluctuate seasonally as well. Annual groundwater elevations in the surficial aquifer are generally highest during the third quarter and lowest in the fourth quarter, suggesting recharge from the effects of agricultural irrigation activities from March to October.

Groundwater in the surficial aquifer in the location of the Dairies from the Fourth Quarter 2016 is mainly calcium-bicarbonate type, with calcium-sulfate groundwater present in several downgradient wells and one upgradient well partially screened in the basalt formation. For all the wells sampled in the Fourth Quarter 2016, groundwater is calcium-bicarbonate type in 19 wells, calcium-sulfate type in 5 wells, and no dominant type in 1 well. This is consistent with analysis of groundwater quality from previous years of the groundwater monitoring program.

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10 Certifications

Cow Palace Certification

I certify under the penalty of law that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of any and all persons directly responsible for gathering and analyzing the information obtained, I certify that the information contained in or accompanying this submittal is to the best of my knowledge and belief, true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

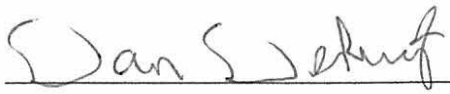
Cow Palace, LLC

Signature	
Name	Adam Dolsen
Title	Member
Date	2-13-17

D & A Dairy, George DeRuyter & Son Dairy, and George & Margaret, LLC Certification

I certify under the penalty of law that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of any and all persons directly responsible for gathering and analyzing the information obtained, I certify that the information contained in or accompanying this submittal is to the best of my knowledge and belief, true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

D & A Dairy LLC (also known as D and A Dairy, L.L.C.),
George DeRuyter & Son Dairy, LLC, and George & Margaret, LLC

Signature	
Name	Dan DeRuyter
Title	Member
Date	2/10/17

Liberty Dairy Certification

I certify under the penalty of law that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of any and all persons directly responsible for gathering and analyzing the information obtained, I certify that the information contained in or accompanying this submittal is to the best of my knowledge and belief, true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Liberty Dairy, LLC (and its associated dairy facility H & S Bosma Dairy)

Signature	Henry W Bosma
Name	Henry Bosma
Title	Partner
Date	2-10-2017

Tables

Table 1
Monitoring Well Construction

Well ID	Coordinates		Ground Surface Elevation (feet NAVD88)	Surface Completion	Well Depth (feet bgs)	Casing and Screen Material	Screen Slot Size (inches)	Screen Length (feet)	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Elevation of Top of Screen (feet NAVD88)	Elevation of Base of Screen (feet NAVD88)	Depth to Top of Filter Pack (feet bgs)	Depth to Bottom of Filter Pack (feet bgs)
	Latitude	Longitude												
Monitoring Wells														
DC-01	46.41879473	-120.13818510	1,199.64	Flush	160.0	Schedule 40 PVC	0.020	20.0	140.0	160.0	1,059.6	1,039.6	136.0	160.0
DC-03	46.38628888	-120.14614525	911.04	Flush	85.0	Schedule 40 PVC	0.020	20.0	62.5	82.5	848.5	828.5	58.5	85.0
DC-03D	46.38622013	-120.14605399	908.83	Stick-up	116.1	Schedule 40 PVC	0.020	9.5	106.1	115.6	802.7	793.2	100.0	116.5
DC-04	46.38244597	-120.13112916	877.62	Flush	51.0	Schedule 40 PVC	0.020	20.0	29.5	49.5	848.1	828.1	24.5	51.0
DC-05	46.38235835	-120.12023653	912.35	Flush	86.0	Schedule 40 PVC	0.020	20.0	63.5	83.5	848.9	828.9	59.5	86.0
DC-05D	46.38251688	-120.12020991	913.55	Stick-up	126.8	Schedule 40 PVC	0.020	9.5	116.8	126.3	796.8	787.3	114.0	128.0
DC-07	46.38961248	-120.14167140	889.78	Flush	61.0	Schedule 40 PVC	0.020	20.0	38.5	58.5	851.3	831.3	34.5	61.0
DC-09	46.40422954	-120.12085803	1,048.97	Flush	196.0	Schedule 40 PVC	0.020	20.0	173.5	193.5	875.5	855.5	169.5	196.0
DC-14	46.40424001	-120.13968549	1,036.92	Flush	151.0	Schedule 40 PVC	0.020	20.0	128.5	148.5	908.4	888.4	124.5	151.0
YVD-02	46.42260142	-120.11369707	1,285.81	Stick-up	35.0	Schedule 40 PVC	0.020	19.5	15.0	34.5	1,270.8	1,251.3	13.0	36.0
YVD-03	46.41422690	-120.13963782	1,118.15	Stick-up	200.1	Schedule 40 PVC	0.020	19.5	180.1	199.6	938.1	918.6	176.0	202.0
YVD-04	46.40806206	-120.15622396	1,116.06	Stick-up	245.2	Schedule 40 PVC	0.020	19.5	225.2	244.7	890.9	871.4	220.0	248.0
YVD-05	46.40445691	-120.14279042	1,052.26	Flush	182.2	Schedule 40 PVC	0.020	19.5	162.2	181.7	890.1	870.6	156.0	208.0
YVD-06	46.40767071	-120.13719080	1,053.88	Flush	169.0	Schedule 40 PVC	0.020	19.5	149.0	168.5	904.9	885.4	144.0	170.0
YVD-07	46.40443244	-120.12520522	1,070.59	Stick-up	168.3	Schedule 40 PVC	0.020	19.5	148.3	167.8	922.3	902.8	145.0	169.0
YVD-08	46.39691976	-120.15277093	1,011.92	Stick-up	182.5	Schedule 40 PVC	0.020	19.5	162.5	182.0	849.4	829.9	155.0	188.0
YVD-09	46.39683198	-120.14407816	964.28	Stick-up	122.3	Schedule 40 PVC	0.020	19.5	102.3	121.8	862.0	842.5	9.5	128.0
YVD-10	46.39697787	-120.13616530	955.45	Stick-up	103.1	Schedule 40 PVC	0.020	19.5	83.1	102.6	872.4	852.9	76.0	103.5
YVD-11	46.39344626	-120.12362653	965.51	Stick-up	116.9	Schedule 40 PVC	0.020	19.5	96.9	116.4	868.6	849.1	94.0	117.3
YVD-12	46.38972988	-120.16699550	959.51	Stick-up	151.4	Schedule 40 PVC	0.020	19.5	131.4	150.9	828.1	808.6	127.0	154.0
YVD-13	46.38970847	-120.15167317	963.07	Stick-up	141.0	Schedule 40 PVC	0.020	19.5	121.0	140.5	842.1	822.6	117.0	148.0
YVD-14R	46.389532	-120.145124	918.80	Stick-up	93.0	Schedule 40 PVC	0.020	20.0	72.0	92.0	846.8	826.8	69.0	93.0
YVD-15	46.38980233	-120.13715271	938.08	Stick-up	105.1	Schedule 40 PVC	0.020	19.5	85.1	104.6	853.0	833.5	81.0	128.0
YVD-16	46.38958628	-120.11478279	972.99	Stick-up	122.1	Schedule 40 PVC	0.020	19.5	102.1	121.6	870.9	851.4	100.5	127.0
YVD-17	46.38076091	-120.14206677	864.28	Stick-up	47.7	Schedule 40 PVC	0.020	19.5	27.7	47.2	836.6	817.1	25.0	58.0
YVD-18	46.38975797	-120.15167075	963.42	Stick-up	179.9	Schedule 40 PVC	0.020	9.5	169.9	179.4	793.5	784.0	166.0	181.5
Decommissioned Wells														
YVD-14	46.38953605	-120.14506741	917.64	Stick-up	91.0	Schedule 40 PVC	0.020	19.5	71.0	90.5	846.6	827.1	66.0	98.0

Notes:

Latitude and longitude in decimal degrees, based on World Geodetic Survey 1984 (WGS84).

Vertical elevation based on NAVD88.

bgs: below ground surface

NAVD88: North American Vertical Datum of 1988

PVC: polyvinyl chloride

Table 2
Summary of Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
DC-01	12/11/2016	1,199.17	150.65	1,048.52
DC-03	12/11/2016	910.58	72.93	837.65
DC-03D	12/11/2016	911.33	73.73	837.60
DC-04	12/11/2016	877.22	34.33	842.89
DC-05	12/11/2016	911.95	70.24	841.71
DC-05D	12/11/2016	915.91	74.65	841.26
DC-07	12/11/2016	889.29	45.61	843.68
DC-09	12/11/2016	1,048.60	148.71	899.89
DC-14	12/11/2016	1,036.61	133.45	903.16
YVD-02	12/11/2016	1,288.97	32.52	1,256.45
YVD-03	12/11/2016	1,120.68	191.25	929.43
YVD-04	12/11/2016	1,118.66	221.07	897.59
YVD-05	12/11/2016	1,051.78	168.51	883.27
YVD-06	12/11/2016	1,053.51	NM	---[1]
YVD-07	12/11/2016	1,073.03	160.00	913.03
YVD-08	12/11/2016	1,014.38	171.52	842.86
YVD-09	12/11/2016	966.81	111.84	854.97
YVD-10	12/11/2016	958.00	93.02	864.98
YVD-11	12/11/2016	967.91	108.90	859.01
YVD-12	12/11/2016	961.91	138.56	823.35
YVD-13	12/11/2016	965.59	127.57	838.02
YVD-14R	12/11/2016	921.41	78.57	842.84
YVD-15	12/11/2016	940.61	94.44	846.17
YVD-16	12/11/2016	975.90	115.17	860.73
YVD-17	12/11/2016	866.73	35.20	831.53
YVD-18	12/11/2016	965.74	127.66	838.08

Notes:

1. Not measured. Well was covered in snow and ice and could not be located.

BTOC: below top of casing

NAVD88: North American Vertical Datum of 1988

Table 3
Field Parameter Measurements

Well ID	Sample Date	Bladder Pump Type (portable or dedicated)	Purge Time (minutes)	Volume Purged (liters)	Temperature (°C)	Specific Conductance (µS/cm)	pH (standard units)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	Oxidation/ Reduction Potential (mV)
DC-01	12/12/2016	Dedicated	39	2.3	8.4	824	7.60	0.75	8.47	-1.5
DC-03	12/12/2016	Dedicated	15	4.0	12.8	2,591	6.98	0.59	7.08	15.6
DC-03D	12/12/2016	Dedicated	21	5.0	13.4	1,539	6.81	0.23	0.35	-33.4
DC-04	12/16/2016	Portable	42	10.3	12.8	1,427	6.96	9.55	7.13	139.1
DC-05	12/16/2016	Portable	33	5.3	11.8	1,174	7.13	6.20	6.60	194.4
DC-05D	12/14/2016	Portable	21	2.9	10.9	767	8.05	2.94	10.97	70.6
DC-07	12/14/2016	Portable	24	5.2	12.7	617.8	6.37	1.68	1.97	86.0
DC-09	12/15/2016	Dedicated	33	3.4	10.7	396.7	7.92	0.48	10.06	115.9
DC-14	12/16/2016	Dedicated	15	3.2	13.8	909	7.09	0.48	2.33	95.0
YVD-02	NS[1]	Portable	43	8.0	12.5	311.3	7.90	>1,000	4.04	2.2
YVD-03	12/13/2016	Dedicated	21	3.0	11.9	518.7	7.64	4.23	8.23	72.6
YVD-04	12/13/2016	Dedicated	30	2.4	11.2	478.6	7.84	0.01	9.02	32.8
YVD-05	12/15/2016	Dedicated	36	4.0	12.9	465.9	7.88	0.24	7.56	150.6
YVD-06	12/15/2016	Dedicated	33	3.1	13.6	290.5	7.97	0.11	7.53	128.5
YVD-07	12/13/2016	Dedicated	27	4.0	12.3	400.3	8.13	2.33	8.39	36.1
YVD-08	12/13/2016	Dedicated	54	11.0	13.1	1,333	7.31	17.32	6.39	42.0
YVD-09	12/13/2016	Dedicated	33	7.1	14.2	1,617	7.29	8.59	6.36	49.3
YVD-10	12/12/2016	Dedicated	24	4.7	12.7	2,523	6.86	3.07	6.37	12.9
YVD-11	12/14/2016	Portable	71	11.7	11.7	1,531	7.46	629	9.52	85.9
YVD-12	12/13/2016	Dedicated	18	4.5	13.7	1,058	7.63	6.24	7.60	48.3
YVD-13	12/14/2016	Dedicated	24	4.0	13.6	1,212	7.75	0.29	10.45	124.9
YVD-14R	12/12/2016	Dedicated	24	7.0	13.9	2,230	6.70	0.02	1.29	-8.5
YVD-15	12/15/2016	Portable	42	9.5	12.5	1,166	7.18	74.30	5.66	62.5
YVD-16	12/15/2016	Portable	55	6.7	9.6	1,018	7.47	75.10	6.83	75.0
YVD-17	12/15/2016	Portable	46	9.4	12.4	332.7	7.95	88.10	3.72	58.7
YVD-18	12/14/2016	Dedicated	22	5.2	14.0	884	7.84	0.01	13.92	113.2

Notes:

1. Well went dry during purging and did not recover during sampling event.

µS/cm: microsiemens per centimeter

mg/L: milligram per liter

mV: millivolt

NS: not sampled

NTU: nephelometric turbidity unit

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
DC-01	9/16/2013	1,199.17	150.45	1,048.72
DC-01	12/9/2013	1,199.17	150.66	1,048.51
DC-01	3/16/2014	1,199.17	150.43	1,048.74
DC-01	6/1/2014	1,199.17	150.50	1,048.67
DC-01	9/21/2014	1,199.17	150.32	1,048.85
DC-01	12/14/2014	1,199.17	150.20	1,048.97
DC-01	3/5/2015	1,199.17	150.35	1,048.82
DC-01	6/15/2015	1,199.17	150.41	1,048.76
DC-01	9/21/2015	1,199.17	150.50	1,048.67
DC-01	12/13/2015	1,199.17	150.46	1,048.71
DC-01	3/8/2016	1,199.17	150.53	1,048.64
DC-01	6/19/2016	1,199.17	150.70	1,048.47
DC-01	9/25/2016	1,199.17	150.70	1,048.47
DC-01	12/11/2016	1,199.17	150.65	1,048.52
DC-03	9/16/2013	910.58	72.43	838.15
DC-03	12/9/2013	910.58	72.55	838.03
DC-03	3/16/2014	910.58	73.62	836.96
DC-03	6/1/2014	910.58	73.25	837.33
DC-03	9/21/2014	910.58	72.26	838.32
DC-03	12/14/2014	910.58	72.40	838.18
DC-03	3/5/2015	910.58	73.60	836.98
DC-03	6/15/2015	910.58	73.12	837.46
DC-03	9/21/2015	910.58	72.35	838.23
DC-03	12/13/2015	910.58	73.64	837.94
DC-03	3/8/2016	910.58	73.99	836.59
DC-03	6/19/2016	910.58	73.84	836.74
DC-03	9/25/2016	910.58	72.87	837.71
DC-03	12/11/2016	910.58	72.93	837.65
DC-03D	9/16/2013	911.33	73.03	838.30
DC-03D	12/9/2013	911.33	73.16	838.17
DC-03D	3/16/2014	911.33	74.35	836.98
DC-03D	6/1/2014	911.33	73.90	837.43
DC-03D	9/21/2014	911.33	72.87	838.46
DC-03D	12/14/2014	911.33	73.13	838.20
DC-03D	3/5/2015	911.33	74.28	837.05
DC-03D	6/15/2015	911.33	73.72	837.61
DC-03D	9/21/2015	911.33	72.96	838.37
DC-03D	12/13/2015	911.33	73.31	838.02
DC-03D	3/8/2016	911.33	74.66	836.67
DC-03D	6/19/2016	911.33	74.47	836.86
DC-03D	9/25/2016	911.33	73.44	837.89
DC-03D	12/11/2016	911.33	73.73	837.60

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
DC-04	9/16/2013	877.22	31.75	845.47
DC-04	12/9/2013	877.22	32.61	844.61
DC-04	3/16/2014	877.22	34.55	842.67
DC-04	6/1/2014	877.22	34.65	842.57
DC-04	9/21/2014	877.22	31.99	845.23
DC-04	12/14/2014	877.22	32.98	844.24
DC-04	3/5/2015	877.22	34.31	842.91
DC-04	6/15/2015	877.22	34.70	842.52
DC-04	9/21/2015	877.22	33.61	843.61
DC-04	12/13/2015	877.22	34.38	842.84
DC-04	3/8/2016	877.22	35.60	841.62
DC-04	6/19/2016	877.22	34.74	842.48
DC-04	9/25/2016	877.22	33.81	843.41
DC-04	12/11/2016	877.22	34.33	842.89
DC-05	9/16/2013	911.95	67.78	844.17
DC-05	12/9/2013	911.95	68.28	843.67
DC-05	3/16/2014	911.95	69.25	842.70
DC-05	6/1/2014	911.95	70.15	841.80
DC-05	9/21/2014	911.95	69.43	842.52
DC-05	12/14/2014	911.95	68.80	843.15
DC-05	3/5/2015	911.95	69.33	842.62
DC-05	6/15/2015	911.95	70.28	841.67
DC-05	9/21/2015	911.95	69.94	842.01
DC-05	12/13/2015	911.95	69.59	842.36
DC-05	3/8/2016	911.95	70.58	841.37
DC-05	6/19/2016	911.95	71.43	840.52
DC-05	9/25/2016	911.95	71.08	840.87
DC-05	12/11/2016	911.95	70.24	841.71
DC-05D	9/16/2013	915.91	71.92	843.99
DC-05D	12/9/2013	915.91	72.04	843.87
DC-05D	3/16/2014	915.91	73.83	842.08
DC-05D	6/1/2014	915.91	74.80	841.11
DC-05D	9/21/2014	915.91	73.78	842.13
DC-05D	12/14/2014	915.91	73.02	842.89
DC-05D	3/5/2015	915.91	73.66	842.25
DC-05D	6/15/2015	915.91	74.71	841.20
DC-05D	9/21/2015	915.91	74.38	841.53
DC-05D	12/13/2015	915.91	73.88	842.03
DC-05D	3/8/2016	915.91	74.70	841.21
DC-05D	6/19/2016	915.91	75.71	840.20
DC-05D	9/25/2016	915.91	75.40	840.51
DC-05D	12/11/2016	915.91	74.65	841.26

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
DC-07	9/16/2013	889.29	44.76	844.53
DC-07	12/9/2013	889.29	44.15	845.14
DC-07	3/16/2014	889.29	44.76	844.53
DC-07	6/1/2014	889.29	35.12	854.17
DC-07	9/21/2014	889.29	44.59	844.70
DC-07	12/14/2014	889.29	44.13	845.16
DC-07	3/5/2015	889.29	44.90	844.39
DC-07	6/15/2015	889.29	45.30	843.99
DC-07	9/21/2015	889.29	45.08	844.21
DC-07	12/13/2015	889.29	44.65	844.64
DC-07	3/8/2016	889.29	45.50	843.79
DC-07	6/19/2016	889.29	46.16	843.13
DC-07	9/25/2016	889.29	45.69	843.60
DC-07	12/11/2016	889.29	45.61	843.68
DC-09	9/16/2013	1,048.60	147.16	901.44
DC-09	12/9/2013	1,048.60	143.10	905.50
DC-09	3/16/2014	1,048.60	139.81	908.79
DC-09	6/1/2014	1,048.60	142.53	906.07
DC-09	9/21/2014	1,048.60	143.67	904.93
DC-09	12/14/2014	1,048.60	139.42	909.18
DC-09	3/5/2015	1,048.60	137.83	910.77
DC-09	6/15/2015	1,048.60	146.33	902.27
DC-09	9/21/2015	1,048.60	151.28	897.32
DC-09	12/13/2015	1,048.60	147.46	901.14
DC-09	3/8/2016	1,048.60	146.70	901.90
DC-09	6/19/2016	1,048.60	151.03	897.57
DC-09	9/25/2016	1,048.60	151.98	896.62
DC-09	12/11/2016	1,048.60	148.71	899.89
DC-14	9/16/2013	1,036.61	131.08	905.53
DC-14	12/9/2013	1,036.61	131.10	905.51
DC-14	3/16/2014	1,036.61	130.32	906.29
DC-14	6/1/2014	1,036.61	130.02	906.59
DC-14	9/21/2014	1,036.61	130.25	906.36
DC-14	12/14/2014	1,036.61	137.91	898.70
DC-14	3/5/2015	1,036.61	129.51	907.10
DC-14	6/15/2015	1,036.61	129.37	907.24
DC-14	9/21/2015	1,036.61	130.28	906.33
DC-14	12/13/2015	1,036.61	130.71	905.90
DC-14	3/8/2016	1,036.61	131.26	905.35
DC-14	6/19/2016	1,036.61	131.89	904.72
DC-14	9/25/2016	1,036.61	132.76	903.85
DC-14	12/11/2016	1,036.61	133.45	903.16

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-02	9/16/2013	1,288.97	24.21	1,264.76
YVD-02	12/9/2013	1,288.97	32.85	1,256.12
YVD-02	3/16/2014	1,288.97	34.45	1,254.52
YVD-02	6/1/2014	1,288.97	22.10	1,266.87
YVD-02	9/21/2014	1,288.97	26.14	1,262.83
YVD-02	12/14/2014	1,288.97	33.01	1,255.96
YVD-02	3/5/2015	1,288.97	34.42	1,254.55
YVD-02	6/15/2015	1,288.97	19.69	1,269.28
YVD-02	9/21/2015	1,288.97	25.36	1,263.61
YVD-02	12/13/2015	1,288.97	33.25	1,255.72
YVD-02	3/8/2016	1,288.97	33.93	1,255.04
YVD-02	6/19/2016	1,288.97	27.49	1,261.48
YVD-02	9/25/2016	1,288.97	27.72	1,261.25
YVD-02	12/11/2016	1,288.97	32.52	1,256.45
YVD-03	9/16/2013	1,120.68	189.88	930.80
YVD-03	12/9/2013	1,120.68	190.42	930.26
YVD-03	3/16/2014	1,120.68	189.10	931.58
YVD-03	6/1/2014	1,120.68	188.97	931.71
YVD-03	9/21/2014	1,120.68	189.04	931.64
YVD-03	12/14/2014	1,120.68	188.73	931.95
YVD-03	3/5/2015	1,120.68	187.92	932.76
YVD-03	6/15/2015	1,120.68	188.70	931.98
YVD-03	9/21/2015	1,120.68	189.63	931.05
YVD-03	12/13/2015	1,120.68	189.85	930.83
YVD-03	3/8/2016	1,120.68	190.64	930.04
YVD-03	6/19/2016	1,120.68	191.31	929.37
YVD-03	9/25/2016	1,120.68	191.61	929.07
YVD-03	12/11/2016	1,120.68	191.25	929.43
YVD-04	9/16/2013	1,118.66	220.55	898.11
YVD-04	12/9/2013	1,118.66	223.50	895.16
YVD-04	3/16/2014	1,118.66	222.20	896.46
YVD-04	6/1/2014	1,118.66	221.04	897.62
YVD-04	9/21/2014	1,118.66	220.67	897.99
YVD-04	12/14/2014	1,118.66	221.30	897.36
YVD-04	3/5/2015	1,118.66	220.72	897.94
YVD-04	6/15/2015	1,118.66	221.61	897.05
YVD-04	9/21/2015	1,118.66	221.99	896.67
YVD-04	12/13/2015	1,118.66	221.71	896.95
YVD-04	3/8/2016	1,118.66	220.74	897.92
YVD-04	6/19/2016	1,118.66	221.50	897.16
YVD-04	9/25/2016	1,118.66	221.05	897.61
YVD-04	12/11/2016	1,118.66	221.07	897.59

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-05	9/16/2013	1,051.78	167.50	884.28
YVD-05	12/9/2013	1,051.78	166.35	885.43
YVD-05	3/16/2014	1,051.78	165.40	886.38
YVD-05	6/1/2014	1,051.78	165.58	886.20
YVD-05	9/21/2014	1,051.78	166.01	885.77
YVD-05	12/14/2014	1,051.78	165.35	886.43
YVD-05	3/5/2015	1,051.78	164.86	886.92
YVD-05	6/15/2015	1,051.78	166.04	885.74
YVD-05	9/21/2015	1,051.78	168.04	883.74
YVD-05	12/13/2015	1,051.78	167.75	884.03
YVD-05	3/8/2016	1,051.78	167.71	884.07
YVD-05	6/19/2016	1,051.78	168.45	883.33
YVD-05	9/25/2016	1,051.78	168.97	882.81
YVD-05	12/11/2016	1,051.78	168.51	883.27
YVD-06	9/16/2013	1,053.51	110.65	942.86
YVD-06	12/9/2013	1,053.51	108.21	945.30
YVD-06	3/16/2014	1,053.51	105.98	947.53
YVD-06	6/1/2014	1,053.51	106.49	947.02
YVD-06	9/21/2014	1,053.51	108.02	945.49
YVD-06	12/14/2014	1,053.51	106.32	947.19
YVD-06	3/5/2015	1,053.51	104.68	948.83
YVD-06	6/15/2015	1,053.51	106.37	947.14
YVD-06	9/21/2015	1,053.51	109.01	944.50
YVD-06	12/13/2015	1,053.51	108.72	944.79
YVD-06	3/8/2016	1,053.51	108.90	944.61
YVD-06	6/19/2016	1,053.51	111.03	942.48
YVD-06	9/25/2016	1,053.51	112.05	941.46
YVD-06	12/11/2016	1,053.51	NM	
YVD-07	9/16/2013	1073.03	157.99	915.04
YVD-07	12/9/2013	1073.03	157.26	915.77
YVD-07	3/16/2014	1073.03	153.95	919.08
YVD-07	6/1/2014	1073.03	153.87	919.16
YVD-07	9/21/2014	1073.03	155.93	917.10
YVD-07	12/14/2014	1073.03	155.40	917.63
YVD-07	3/5/2015	1073.03	153.42	919.61
YVD-07	6/15/2015	1073.03	154.30	918.73
YVD-07	9/21/2015	1073.03	157.09	915.94
YVD-07	12/13/2015	1073.03	158.05	914.98
YVD-07	3/8/2016	1073.03	157.96	915.07
YVD-07	6/19/2016	1073.03	158.75	914.28
YVD-07	9/25/2016	1073.03	160.29	912.74
YVD-07	12/11/2016	1073.03	160.00	913.03

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-08	9/16/2013	1014.38	170.83	843.55
YVD-08	12/9/2013	1014.38	171.08	843.30
YVD-08	3/16/2014	1014.38	170.66	843.72
YVD-08	6/1/2014	1014.38	170.50	843.88
YVD-08	9/21/2014	1014.38	170.50	843.88
YVD-08	12/14/2014	1014.38	170.22	844.16
YVD-08	3/5/2015	1014.38	169.83	844.55
YVD-08	6/15/2015	1014.38	170.13	844.25
YVD-08	9/21/2015	1014.38	170.67	843.71
YVD-08	12/13/2015	1014.38	170.63	843.75
YVD-08	3/8/2016	1014.38	171.00	843.38
YVD-08	6/19/2016	1014.38	171.51	842.87
YVD-08	9/25/2016	1014.38	171.75	842.63
YVD-08	12/11/2016	1014.38	171.52	842.86
YVD-09	9/16/2013	966.81	111.14	855.67
YVD-09	12/9/2013	966.81	109.93	856.88
YVD-09	3/16/2014	966.81	109.65	857.16
YVD-09	6/1/2014	966.81	109.95	856.86
YVD-09	9/21/2014	966.81	110.08	856.73
YVD-09	12/14/2014	966.81	109.90	856.91
YVD-09	3/5/2015	966.81	109.95	856.86
YVD-09	6/15/2015	966.81	110.35	856.46
YVD-09	9/21/2015	966.81	110.83	855.98
YVD-09	12/13/2015	966.81	110.89	855.92
YVD-09	3/8/2016	966.81	111.16	855.65
YVD-09	6/19/2016	966.81	111.41	855.40
YVD-09	9/25/2016	966.81	111.68	855.13
YVD-09	12/11/2016	966.81	111.84	854.97
YVD-10	9/16/2013	958.00	90.04	867.96
YVD-10	12/9/2013	958.00	89.20	868.80
YVD-10	3/16/2014	958.00	89.39	868.61
YVD-10	6/1/2014	958.00	90.35	867.65
YVD-10	9/21/2014	958.00	90.41	867.59
YVD-10	12/14/2014	958.00	88.76	869.24
YVD-10	3/5/2015	958.00	89.90	868.10
YVD-10	6/15/2015	958.00	91.10	866.90
YVD-10	9/21/2015	958.00	91.85	866.15
YVD-10	12/13/2015	958.00	91.52	866.48
YVD-10	3/8/2016	958.00	91.91	866.09
YVD-10	6/19/2016	958.00	92.92	865.08
YVD-10	9/25/2016	958.00	92.99	865.01
YVD-10	12/11/2016	958.00	93.02	864.98

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-11	9/16/2013	967.91	106.03	861.88
YVD-11	12/9/2013	967.91	105.77	862.14
YVD-11	3/16/2014	967.91	105.72	862.19
YVD-11	6/1/2014	967.91	106.07	861.84
YVD-11	9/21/2014	967.91	106.04	861.87
YVD-11	12/14/2014	967.91	106.08	861.83
YVD-11	3/5/2015	967.91	106.18	861.73
YVD-11	6/15/2015	967.91	106.67	861.24
YVD-11	9/21/2015	967.91	106.52	861.39
YVD-11	12/13/2015	967.91	106.88	861.03
YVD-11	3/8/2016	967.91	107.58	860.33
YVD-11	6/19/2016	967.91	108.52	859.39
YVD-11	9/25/2016	967.91	108.95	858.96
YVD-11	12/11/2016	967.91	108.90	859.01
YVD-12	9/16/2013	961.91	138.50	823.41
YVD-12	12/9/2013	961.91	138.34	823.57
YVD-12	3/16/2014	961.91	137.55	824.36
YVD-12	6/1/2014	961.91	137.61	824.30
YVD-12	9/21/2014	961.91	137.45	824.46
YVD-12	12/14/2014	961.91	137.25	824.66
YVD-12	3/5/2015	961.91	136.52	825.39
YVD-12	6/15/2015	961.91	137.85	824.06
YVD-12	9/21/2015	961.91	138.95	822.96
YVD-12	12/13/2015	961.91	138.11	823.80
YVD-12	3/8/2016	961.91	138.26	823.65
YVD-12	6/19/2016	961.91	139.23	822.68
YVD-12	9/25/2016	961.91	139.13	822.78
YVD-12	12/11/2016	961.91	138.56	823.35
YVD-13	9/16/2013	965.59	127.43	838.16
YVD-13	12/9/2013	965.59	127.25	838.34
YVD-13	3/16/2014	965.59	127.58	838.01
YVD-13	6/1/2014	965.59	127.59	838.00
YVD-13	9/21/2014	965.59	127.29	838.30
YVD-13	12/14/2014	965.59	127.20	838.39
YVD-13	3/5/2015	965.59	127.35	838.24
YVD-13	6/15/2015	965.59	127.60	837.99
YVD-13	9/21/2015	965.59	127.36	838.23
YVD-13	12/13/2015	965.59	127.13	838.46
YVD-13	3/8/2016	965.59	127.87	837.72
YVD-13	6/19/2016	965.59	128.17	837.42
YVD-13	9/25/2016	965.59	127.88	837.71
YVD-13	12/11/2016	965.59	127.57	838.02

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-14	9/16/2013	920.19	77.30	842.89
YVD-14	12/9/2013	920.19	76.97	843.22
YVD-14	3/16/2014	920.19	77.45	842.74
YVD-14	6/1/2014	920.19	77.61	842.58
YVD-14	9/21/2014	920.19	77.28	842.91
YVD-14	12/14/2014	920.19	76.90	843.29
YVD-14	3/5/2015	920.19	77.51	842.68
YVD-14	6/17/2015	NM	NM	
YVD-14	9/21/2015	NM	NM	
YVD-14R	12/13/2015	921.41	77.76	843.65
YVD-14R	3/8/2016	921.41	78.53	842.88
YVD-14R	6/19/2016	921.41	79.03	842.38
YVD-14R	9/25/2016	921.41	78.68	842.73
YVD-14R	12/11/2016	921.41	78.57	842.84
YVD-15	9/16/2013	940.61	90.34	850.27
YVD-15	12/9/2013	940.61	90.49	850.12
YVD-15	3/16/2014	940.61	91.62	848.99
YVD-15	6/1/2014	940.61	92.57	848.04
YVD-15	9/21/2014	940.61	88.84	851.77
YVD-15	12/14/2014	940.61	90.56	850.05
YVD-15	3/5/2015	940.61	92.03	848.58
YVD-15	6/15/2015	940.61	93.22	847.39
YVD-15	9/21/2015	940.61	93.43	847.18
YVD-15	12/13/2015	940.61	93.21	847.40
YVD-15	3/8/2016	940.61	93.83	846.78
YVD-15	6/19/2016	940.61	94.70	845.91
YVD-15	9/25/2016	940.61	94.70	845.91
YVD-15	12/11/2016	940.61	94.44	846.17
YVD-16	9/16/2013	975.90	112.95	862.95
YVD-16	12/9/2013	975.90	112.84	863.06
YVD-16	3/16/2014	975.90	112.50	863.40
YVD-16	6/1/2014	975.90	112.62	863.28
YVD-16	9/21/2014	975.90	113.02	862.88
YVD-16	12/14/2014	975.90	112.86	863.04
YVD-16	3/5/2015	975.90	112.42	863.48
YVD-16	6/15/2015	975.90	112.85	863.05
YVD-16	9/21/2015	975.90	113.95	861.95
YVD-16	12/13/2015	975.90	114.04	861.86
YVD-16	3/8/2016	975.90	114.51	861.39
YVD-16	6/19/2016	975.90	115.18	860.72
YVD-16	9/25/2016	975.90	115.67	860.23
YVD-16	12/11/2016	975.90	115.17	860.73

Table 4
Cumulative Groundwater Elevations

Well ID	Date of Measurement	Reference Point Elevation (feet NAVD88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet NAVD88)
YVD-17	9/16/2013	866.73	32.07	834.66
YVD-17	12/9/2013	866.73	34.81	831.92
YVD-17	3/16/2014	866.73	37.97	828.76
YVD-17	6/1/2014	866.73	35.50	831.23
YVD-17	9/21/2014	866.73	31.86	834.87
YVD-17	12/14/2014	866.73	34.74	831.99
YVD-17	3/5/2015	866.73	37.79	828.94
YVD-17	6/15/2015	866.73	34.57	832.16
YVD-17	9/21/2015	866.73	31.92	834.81
YVD-17	12/13/2015	866.73	35.16	831.57
YVD-17	3/8/2016	866.73	37.47	829.26
YVD-17	6/19/2016	866.73	35.37	831.36
YVD-17	9/25/2016	866.73	32.31	834.42
YVD-17	12/11/2016	866.73	35.20	831.53
YVD-18	9/16/2013	965.74	127.49	838.25
YVD-18	12/9/2013	965.74	127.45	838.29
YVD-18	3/16/2014	965.74	127.75	837.99
YVD-18	6/1/2014	965.74	127.69	838.05
YVD-18	9/21/2014	965.74	127.33	838.41
YVD-18	12/14/2014	965.74	127.33	838.41
YVD-18	3/5/2015	965.74	127.46	838.28
YVD-18	6/15/2015	965.74	127.71	838.03
YVD-18	9/21/2015	965.74	127.42	838.32
YVD-18	12/13/2015	965.74	127.24	838.50
YVD-18	3/8/2016	965.74	128.05	837.69
YVD-18	6/19/2016	965.74	128.29	837.45
YVD-18	9/25/2016	965.74	127.92	837.82
YVD-18	12/11/2016	965.74	127.66	838.08

Notes:
BTOC: below top of casing
NAVD88: North American Vertical Datum of 1988
NM: not measured due to well damage

Table 5

Estimated Possible Average Linear Groundwater Flow Velocities

Material	Hydraulic Conductivity[1,2] [K] (feet per day)	Effective Porosity[3] [n_e]	$\frac{K}{n_e}$	Estimated Possible Average Linear Groundwater Flow Velocities [V_X] (feet per day)			
				Average I[4]	Upslope I	Central I	Southern I
				-0.025	*-0.047*	*-0.011*	*-0.004*
Fine sand	53	0.33	161	4.0	7.5	1.8	0.6
Medium sand to fine gravel	131	0.32	409	10.2	19.2	4.5	1.6
Medium sand to coarse gravel	164	0.30	547	13.7	25.7	6.0	2.2
Fine gravel	267	0.28	954	23.8	44.8	10.5	3.8

Notes:

1. Hydraulic conductivities obtained from U.S. Environmental Protection Agency Method 9100, Saturated Hydraulic Conductivity, Saturated Leachate Conductivity, and Intrinsic Permeability, Chapter 6 – Properties , Publication SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 1986.
2. Hydraulic conductivities presented are for well-sorted (poorly graded) material.
3. Effective porosity obtained from *Data Collection Handbook to Support Modeling Impacts of Radioactive Material in Soil* , Environmental Assessment and Information Sciences Division, Argonne National Laboratory, Argonne, Illinois. April 1993.
4. Hydraulic gradient [I] in feet per foot

Table 6
Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate as N		Nitrite as N		Sulfate		Ammonia	
				Analytical Method	EPA 200.7		EPA 200.7		EPA 200.7		EPA 200.7		EPA 300.0		EPA 300.0		EPA 300.0		EPA 300.0		EPA 300.0		EPA 350.1	
Well ID	Sample ID	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-01	DC-01-161212	12/12/2016	Primary	K1615045	**81.1**	---	**27.9**	---	**5.52**	---	**40.4**	---	**31.9**	---	**0.39**	---	**8.89 J**	---	0.1 UJ	---	**191**	---	0.05 U	---
DC-03	DC-03-161212	12/12/2016	Primary	K1615029	**254**	---	**65.7**	---	**3.05**	---	**167**	---	**131**	---	**0.24**	---	**168 J**	---	0.1 U	---	**112**	---	0.05 U	---
DC-03D	DC-03D-161212	12/12/2016	Primary	K1615029	**200**	---	**44.8**	---	**2.98**	---	**65**	---	**57.8**	---	**0.12 J**	---	**33.8 J**	---	0.1 U	---	**90.7**	---	0.05 U	---
DC-04	DC-04-161216	12/12/2016	Primary	K1615174	**214**	---	**39.7**	---	**4.11**	---	**36.9**	---	**44.7**	---	**0.15 J**	---	**45.2**	---	0.1 U	---	**155**	---	0.05 U	---
DC-05	DC-05-161216	12/16/2016	Primary	K1615174	**129**	---	**45.4**	---	**2.60**	---	**47.9**	---	**28.6**	---	**0.19 J**	---	**33.7**	---	0.1 U	---	**108**	---	0.05 U	---
DC-05	YVD-D5-161216	12/16/2016	Duplicate	K1615174	**128**	---	**48**	---	**2.65**	---	**49.6**	---	**28.9**	---	**0.19 J**	---	**33.3**	---	0.1 U	---	**107**	---	0.05 U	---
DC-05D	DC-05D-161214	12/14/2016	Primary	K1615126	**78.1**	---	**27.5**	---	**3.90**	---	**38.2**	---	**25.7**	---	**0.28**	---	**11.2**	---	0.1 U	---	**114**	---	0.05 U	---
DC-07	DC-07-161214	12/14/2016	Primary	K1615083	**77**	---	**13.1**	---	**1.05**	---	**32**	---	**19.2**	---	0.2 U	---	**1.44**	---	0.1 U	---	**72.4**	---	0.05 U	---
DC-09	DC-09-161215	12/15/2016	Primary	K1615126	**33**	---	**6.65**	---	**1.99**	---	**38.9**	---	**15**	---	**0.41**	---	**5.62**	---	0.1 U	---	**30.6**	---	0.05 U	---
DC-09	YVD-D4-161215	12/15/2016	Duplicate	K1615126	**32.8**	---	**6.62**	---	**1.98**	---	**37.8**	---	**15**	---	**0.42**	---	**5.61**	---	0.1 U	---	**30.6**	---	0.05 U	---
DC-14	DC-14-161216	12/16/2016	Primary	K1615174	**93.3**	---	**22.3**	---	**4.37**	---	**68.8**	---	**53.9**	---	**0.36**	---	**4.45**	---	0.1 U	---	**21.9**	---	0.05 U	---
FieldQC	YVD-EB1-161214	12/14/2016	Equipment Blank	K1615083	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	0.2 U	---	0.05 U	---
FieldQC	YVD-EB2-161215	12/15/2016	Equipment Blank	K1615126	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	0.2 U	---	0.05 U	---
FieldQC	YVD-EB3-161216	12/16/2016	Equipment Blank	K1615174	0.035 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	**0.4**	---	0.05 U	---
FieldQC	YVD-FB1-161212	12/12/2016	Field Blank	K1615029	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 UJ	---	0.2 U	---	0.05 U	---
FieldQC	YVD-FB2-161213	12/13/2016	Field Blank	K1615045	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	0.2 U	---	0.05 U	---
FieldQC	YVD-FB3-161214	12/14/2016	Field Blank	K1615083	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	**0.35**	---	0.05 U	---
FieldQC	YVD-FB4-161215	12/15/2016	Field Blank	K1615126	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	0.2 U	---	0.05 U	---
FieldQC	YVD-FB5-161216	12/16/2016	Field Blank	K1615174	0.021 U	---	0.0053 U	---	0.21 U	---	0.21 U	---	0.2 U	---	0.2 U	---	0.1 U	---	0.1 U	---	0.2 U	---	0.05 U	---
YVD-03	YVD-03-161213	12/13/2016	Primary	K1615045	**40**	---	**17.4**	---	**6.57**	---	**38.9**	---	**11.6**	---	**0.69**	---	**4.47**	---	0.1 U	---	**43.3**	---	0.05 U	---
YVD-04	YVD-04-161213	12/13/2016	Primary	K1615045	**35.2**	---	**10.9**	---	**4.43**	---	**47.5**	---	**13.2**	---	**0.23**	---	**3.74**	---	0.1 U	---	**31.7**	---	0.05 U	---
YVD-05	YVD-05-161215	12/15/2016	Primary	K1615174	**33.3**	---	**13.1**	---	**3.37**	---	**46.5**	---	**8.3**	---	**0.48**	---	**3.15**	---	0.1 U	---	**49**	---	0.05 U	---
YVD-06	YVD-06-161215	12/15/2016	Primary	K1615126	**33.5**	---	**5.73**	---	**2.12**	---	**17.1**	---	**3.14**	---	**0.23**	---	**0.70**	---	0.1 U	---	**10.2**	---	0.05 U	---
YVD-07	YVD-07-161213	12/13/2016	Primary	K1615083	**25.9**	---	**10.2**	---	**3.59**	---	**36.6**	---	**6.38**	---	**0.4**	---	**2.15**	---	0.1 U	---	**64**	---	0.05 U	---
YVD-08	YVD-08-161213	12/13/2016	Primary	K1615045	**122**	---	**41.9**	---	**5.10**	---	**84.5**	---	**89.3**	---	**0.23**	---	**34.5 J**	---	0.1 U	---	**182**	---	0.05 U	---
YVD-09	YVD-09-161213	12/13/2016	Primary	K1615045	**107**	---	**38.1**	---	**8.42**	---	**185**	---	**59.8**	---	**0.4**	---	**42.8 J**	---	0.1 U	---	**238**	---	0.05 U	---
YVD-09	YVD-D2-161213	12/13/2016	Duplicate	K1615045	**108**	---	**37.1**	---	**8.04**	---	**181**	---	**61.4**	---	**0.4**	---	**43.3 J**	---	0.1 U	---	**240**	---	0.05 U	---
YVD-10	YVD-10-161212	12/12/2016	Primary	K1615029	**303**	---	**66.9**	---	**2.68**	---	**118**	---	**141**	---	**0.1 J**	---	**109 J**	---	0.1 U	---	**191**	---	0.05 U	---
YVD-11	YVD-11-161214	12/14/2016	Primary	K1615126	**209**	---	**57.8**	---	**4.82**	---	**25.6**	---	**82.5**	---	**0.19 J**	---	**55.5**	---	0.1 U	---	**104**	---	0.05 U	---
YVD-12	YVD-12-161213	12/13/2016	Primary	K1615083	**93.4**	---	**33.6**	---	**2.29**	---	**67.9**	---	**81.7**	---	**0.33**	---	**12.2**	---	0.1 U	---	**150**	---	0.05 U	---
YVD-13	YVD-13-161214	12/13/2016	Primary	K1615083	**100**	---	**27.5**	---	**4.02**	---	**111**	---	**57.3**	---	**0.33**	---	**23.1**	---	0.1 U	---	313	---	0.05 U	---
YVD-14R	YVD-14R-161212	12/12/2016	Primary	K1615029	**251**	---	**65.7**	---	**4.09**	---	**119**	---	**94.7**	---	**0.24**	---	**92.3 J**	---	0.1 UJ	---	**158**	---	0.05 U	---
YVD-14R	YVD-D1-161212	12/12/2016	Duplicate	K1615029	**255**	---	**66.5**	---	**4.17**	---	**121**	---	**93.3**	---	**0.19**	---	**92.3 J**	---	0.1 UJ	---	**155**	---	0.05 U	---
YVD-15	YVD-15-161215	12/15/2016	Primary	K1615126	**113**	---	**50.4**	---	**3.40**	---	**59.1**	---	**22.1**	---	**0.32**	---	**25.5**	---	0.1 U	---	108	---	0.05 U	---
YVD-16	YVD-16-161215	12/15/2016	Primary	K1615126	**88.4**	---	**31.1**	---	**5.59**	---	**82.5**	---	**33.7**	---	**0.24**	---	**19.7**	---	0.1 U	---	112	---	0.05 U	---
YVD-17	YVD-17-161215	12/15/2016	Primary	K1615174	**39.6**	---	**15.8**	---	**1.46**	---	**7.44**	---	**2.42**	---	**0.34**	---	**0.59**	---	0.1 U	---	**6**	---	0.05 U	---
YVD-18	YVD-18-161214	12/14/2016	Primary	K1615083	**62.5**	---	**19.6**	---	**3.69**	---	**82.5**	---	**56.3**	---	**0.38**	---	**21.5**	---	0.1 U	---	139	---	0.05 U	---
YVD-18	YVD-D3-161214	12/14/2016	Duplicate	K1615083	**60.6**	---	**20.1**	---	**3.82**	---	**84**	---	**56.4**	---	**0.37**	---	**21.5**	---	0.1 U	---	142	---	**0.115**	---

Table 6
Groundwater Analytical Results

				Analyte	Total Kjeldahl Nitrogen		Phosphorous		Alkalinity, Bicarbonate (as $CaCO_3$)		Alkalinity, Total (as $CaCO_3$)	
				Analytical Method	EPA 351.2		EPA 365.1		SM2320B		SM2320B	
Well ID	Sample ID	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-01	DC-01-161212	12/12/2016	Primary	K1615045	0.5 U	---	**0.04**	---	**144**	---	**144**	---
DC-03	DC-03-161212	12/12/2016	Primary	K1615029	0.5 U	---	**0.199**	---	**371**	---	**371**	---
DC-03D	DC-03D-161212	12/12/2016	Primary	K1615029	0.5 U	---	**0.085**	---	**544**	---	**544**	---
DC-04	DC-04-161216	12/12/2016	Primary	K1615174	0.5 U	---	**0.052**	---	**384**	---	**384**	---
DC-05	DC-05-161216	12/16/2016	Primary	K1615174	0.5 U	---	**0.048**	---	**348**	---	**348**	---
DC-05	YVD-D5-161216	12/16/2016	Duplicate	K1615174	0.5 U	---	**0.04**	---	**340**	---	**340**	---
DC-05D	DC-05D-161214	12/14/2016	Primary	K1615126	0.5 U	---	**0.015**	---	**202**	---	**202**	---
DC-07	DC-07-161214	12/14/2016	Primary	K1615083	0.5 U	---	**0.078**	---	**218**	---	**218**	---
DC-09	DC-09-161215	12/15/2016	Primary	K1615126	0.5 U	---	**0.009 J**	---	**127**	---	**127**	---
DC-09	YVD-D4-161215	12/15/2016	Duplicate	K1615126	0.5 U	---	**0.007 J**	---	**127**	---	**127**	---
DC-14	DC-14-161216	12/16/2016	Primary	K1615174	0.5 U	---	**0.014**	---	**361**	---	**361**	---
FieldQC	YVD-EB1-161214	12/14/2016	Equipment Blank	K1615083	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-EB2-161215	12/15/2016	Equipment Blank	K1615126	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-EB3-161216	12/16/2016	Equipment Blank	K1615174	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-FB1-161212	12/12/2016	Field Blank	K1615029	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-FB2-161213	12/13/2016	Field Blank	K1615045	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-FB3-161214	12/14/2016	Field Blank	K1615083	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-FB4-161215	12/15/2016	Field Blank	K1615126	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
FieldQC	YVD-FB5-161216	12/16/2016	Field Blank	K1615174	0.5 U	---	0.01 U	---	2.0 U	---	2.0 U	---
YVD-03	YVD-03-161213	12/13/2016	Primary	K1615045	0.5 U	---	**0.11**	---	**189**	---	**189**	---
YVD-04	YVD-04-161213	12/13/2016	Primary	K1615045	0.5 U	---	**0.026**	---	**181**	---	**181**	---
YVD-05	YVD-05-161215	12/15/2016	Primary	K1615174	0.5 U	---	**0.04**	---	**163**	---	**163**	---
YVD-06	YVD-06-161215	12/15/2016	Primary	K1615126	0.5 U	---	**0.01**	---	**136**	---	**136**	---
YVD-07	YVD-07-161213	12/13/2016	Primary	K1615083	0.5 U	---	**0.01 J**	---	**120**	---	**120**	---
YVD-08	YVD-08-161213	12/13/2016	Primary	K1615045	0.5 U	---	**0.058**	---	**222**	---	**222**	---
YVD-09	YVD-09-161213	12/13/2016	Primary	K1615045	0.5 U	---	**0.048**	---	**340**	---	**340**	---
YVD-09	YVD-D2-161213	12/13/2016	Duplicate	K1615045	0.5 U	---	**0.078**	---	**340**	---	**340**	---
YVD-10	YVD-10-161212	12/12/2016	Primary	K1615029	0.5 U	---	**0.074**	---	**524**	---	**524**	---
YVD-11	YVD-11-161214	12/14/2016	Primary	K1615126	0.5 U	---	**0.421**	---	**352**	---	**352**	---
YVD-12	YVD-12-161213	12/13/2016	Primary	K1615083	0.5 U	---	**0.018**	---	**183**	---	**183**	---
YVD-13	YVD-13-161214	12/13/2016	Primary	K1615083	0.5 U	---	**0.047**	---	**132**	---	**132**	---
YVD-14R	YVD-14R-161212	12/12/2016	Primary	K1615029	0.5 U	---	**0.058**	---	**578**	---	**578**	---
YVD-14R	YVD-D1-161212	12/12/2016	Duplicate	K1615029	0.5 U	---	**0.092**	---	**571**	---	**571**	---
YVD-15	YVD-15-161215	12/15/2016	Primary	K1615126	0.5 U	---	**0.095**	---	**395**	---	**395**	---
YVD-16	YVD-16-161215	12/15/2016	Primary	K1615126	0.5 U	---	**0.068**	---	**298**	---	**298**	---
YVD-17	YVD-17-161215	12/15/2016	Primary	K1615174	0.5 U	---	**0.103**	---	**154**	---	**157 J**	---
YVD-18	YVD-18-161214	12/14/2016	Primary	K1615083	0.5 U	---	**0.043**	---	**111**	---	**111**	---
YVD-18	YVD-D3-161214	12/14/2016	Duplicate	K1615083	0.5 U	---	**0.019**	---	**111**	---	**111**	---

Table 6
Groundwater Analytical Results

Notes:
Bold: detected result
Results reported in milligrams per liter (mg/L).
(as N): reported as Nitrogen
(as $CaCO_3$): reported as calcium carbonate
EPA: U.S. Environmental Protection Agency
J: The compound was positively identified; however, the associated numerical value is an estimated concentration.
MSD: MS/MSD percent recoveries were outside acceptance limits.
R: The sample results are rejected as unusable. The compound may or may not be present in the sample.
SM: Standard Method
U: The compound was analyzed for but not detected. The associated value is the compound reporting limit. Or the compound is considered non-detect at the listed value due to associated blank contamination.
UJ: The compound was not detected above the reported sample reporting limit; however, the reporting limit is approximate and may or may not represent the actual limit of quantitation.

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-01	DC-01-130104	01/04/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**9.8**	-	-	-	-	-
DC-01	DC-01-130924	09/24/2013	Primary	SWI0178	**88.9**	-	**32.5**	-	**6.10**	-	**43.0**	-	**44.0**	-	0.50 U	-	**11.1**	-	0.20 U	-	**223**	-
DC-01	DC-01-131211	12/11/2013	Primary	SWL0063	**91.4**	-	**32.6**	-	**5.94**	-	**41.9**	-	**47.8**	-	5.0 U	-	**11.5**	-	2.0 U	-	**280 J-**	MSD
DC-01	DC-01-140318	03/18/2014	Primary	SXC0095	**90.5**	-	**31.4**	-	**5.93**	-	**40.2**	-	**48.2**	-	5.0 U	-	**11.2**	-	2.0 U	-	**250 J-**	MSD
DC-01	DC-01-140602	06/02/2014	Primary	SXF0017	**88.6**	-	**31.9**	-	**6.74**	-	**41.8**	-	**41.4**	-	2.0 U	-	**9.76**	-	0.80 U	-	**224 J-**	MSD
DC-01	DC-01-140923	09/23/2014	Primary	SXI0158	**89.4**	-	**31.2**	-	**6.02**	-	**44.3 J+**	MSD	**41.8**	-	5.0 U	-	**9.0**	-	2.0 U	-	**216**	-
DC-01	DC-01-141216	12/16/2014	Primary	SXL0121	**92.8**	-	**34.0**	-	**6.18**	-	**43.1**	-	**85.7**	-	5.0 U	-	**18.9**	-	2.0 U	-	**463**	-
DC-01	DC-01-150316	03/16/2015	Primary	5904471	**91**	-	**32**	-	**6.5**	-	**44**	-	**44**	-	5.0 U	-	**11**	-	2.0 U	-	**220**	-
DC-01	DC-01-150616	06/16/2015	Primary	59010751	**91 J+**	MSD	**33 J+**	MSD	**6.2 J+**	MSD	**42 J+**	MSD	**42**	-	5.0 U	-	**9.5**	-	2.0 U	-	**200 J-**	MSD
DC-01	DC-01-150923	09/23/2015	Primary	59020281	**83**	-	**32**	-	**6.0**	-	**43**	-	**37**	-	5.0 U	-	**8.6**	-	2.0 U	-	**200**	-
DC-01	YVD-D1-150923	09/23/2015	Duplicate	59020281	**85**	-	**33**	-	**6.1**	-	**43**	-	**43**	-	0.50 U	-	**10**	-	0.20 U	-	**210**	-
DC-01	DC-01-151214	12/14/2015	Primary	59025431	**97**	-	**34**	-	**6.8**	-	**48**	-	**38**	-	5.0 U	-	**8.8**	-	2.0 U	-	**220**	-
DC-01	DC-01-160308	03/08/2016	Primary	59029711	**83**	-	**30**	-	**6.2**	-	**42**	-	**40**	-	5.0 U	-	**8.6**	-	2.0 U	-	**210 J+**	MSD
DC-01	DC-01-160620	6/20/2016	Primary	59037101	**83**	-	**31**	-	**6.5**	-	**46**	-	**40**	-	5.0 U	-	**9.2**	-	2.0 U	-	**220 J-**	MSD
DC-01	DC-01-160928	9/28/2016	Primary	K1611629	**80.6**	-	**28.5**	-	**5.76**	-	**41.6**	-	**34.0**	-	**0.25**	-	**9.15**	-	0.1 U	-	**193**	-
DC-01	DC-01-161212	12/12/2016	Primary	K1615045	**81.1**	-	**27.9**	-	**5.52**	-	**40.4**	-	**31.9**	-	**0.39**	-	**8.89 J**	-	0.1 UJ	-	**191**	-
DC-03	DC-03-130102	01/02/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**190**	-	-	-	-	-
DC-03	DC-03-130918	09/18/2013	Primary	SWI0138	**284**	-	**73.7**	-	**2.73**	-	**173**	-	**176**	-	5.0 U	-	**166**	-	2.0 U	-	**176**	-
DC-03	DC-03-131212	12/12/2013	Primary	SWL0078	**280**	-	**75.0**	-	**3.29**	-	**172**	-	**172**	-	5.0 U	-	**174**	-	2.0 U	-	**176**	-
DC-03	YVD-D3-131212	12/12/2013	Duplicate	SWL0078	**292**	-	**77.3**	-	**3.53**	-	**181**	-	**142**	-	5.0 U	-	**182**	-	2.0 U	-	**160**	-
DC-03	DC-03-140319	03/19/2014	Primary	SXC0107	**261**	-	**66.8**	-	**2.91**	-	**165**	-	**159 J**	FDP	5.0 U	-	**195**	-	2.0 U	-	**189 J**	FDP
DC-03	YVD-D3-140319	03/19/2014	Duplicate	SXC0107	**261**	-	**66.7**	-	**2.81**	-	**166**	-	**128 J**	FDP	5.0 U	-	**164**	-	2.0 U	-	**150 J**	FDP
DC-03	DC-03-140604	06/04/2014	Primary	SXF0025	**259**	-	**67.7**	-	**3.11**	-	**177**	-	**201**	-	10.0 U	-	**234**	-	4.0 U	-	**214**	-
DC-03	DC-03-140924	09/24/2014	Primary	SXI0173	**291**	-	**77.1**	-	**3.28**	-	**178**	-	**147**	-	5.0 U	-	**170**	-	2.0 U	-	**166**	-
DC-03	DC-03-141217	12/17/2014	Primary	SXL0144	**274**	-	**74.9**	-	**3.76**	-	**185**	-	**157**	-	10.0 U	-	**193**	-	4.0 U	-	**182**	-
DC-03	YVD-D4-141217	12/17/2014	Duplicate	SXL0144	**271**	-	**72.6**	-	**3.19**	-	**180**	-	**182**	-	5.0 U	-	**156**	-	10.0 U	-	**211**	-
DC-03	DC-03-150318	03/18/2015	Primary	5904651	**260**	-	**73**	-	**3.3 J-**	MSD	**180**	-	**160**	-	5.0 U	-	**180**	-	2.0 U	-	**160**	-
DC-03	YVD-D4-150318	03/18/2015	Duplicate	5904651	**270**	-	**74**	-	**3.6 J-**	MSD	**180**	-	**150**	-	2.5 U	-	**180**	-	1.0 U	-	**160**	-
DC-03	DC-03-150617	06/17/2015	Primary	59011021	**290**	-	**78 J**	RPD	**3.6 J**	RPD	**190 J**	RPD	**170**	-	5.0 U	-	**180 J-**	MSD, FDP	2.0 U	-	**170**	-
DC-03	YVD-D4-150617	06/17/2015	Duplicate	59011021	**290**	-	**77 J**	RPD	**3.6 J**	RPD	**190 J**	RPD	**180**	-	5.0 U	-	**10 J-**	MSD, FDP	2.0 U	-	**180**	-
DC-03	DC-03-150925	09/25/2015	Primary	59020431	**270**	-	**73**	-	**3.3**	-	**180**	-	**140**	-	10.0 U	-	**180**	-	4.0 U	-	**150**	-
DC-03	YVD-D4-150925	09/25/2015	Duplicate	59020431	**260**	-	**69**	-	**3.2**	-	**180**	-	**140**	-	0.50 U	-	**180**	-	4.0 U	-	**160**	-
DC-03	DC-03-151216	12/16/2015	Primary	59025501	**260**	-	**75**	-	**3.5**	-	**160**	-	**170**	-	5.0 U	-	**200**	-	2.0 U	-	**130**	-
DC-03	YVD-D4-151216	12/16/2015	Duplicate	59025501	**250**	-	**75**	-	**3.5**	-	**160**	-	**160**	-	2.5 U	-	**170**	-	1.0 U	-	**130**	-
DC-03	DC-03-160310	03/10/2016	Primary	59029941	**270**	-	**72**	-	**3.1**	-	**180**	-	**150**	-	5.0 U	-	**180**	-	2.0 U	-	**170 J**	DUP
DC-03	YVD-D4-160310	03/10/2016	Duplicate	59029941	**270**	-	**72**	-	**3.0**	-	**180**	-	**160**	-	5.0 U	-	**190**	-	2.0 U	-	**180 J**	DUP
DC-03	YVD-D4-160310	03/10/2016	Duplicate	59029941	**270**	-	**72**	-	**3.0**	-	**180**	-	**160**	-	5.0 U	-	**190**	-	2.0 U	-	**180 J**	DUP

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-01	DC-01-130104	01/04/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-01	DC-01-130924	09/24/2013	Primary	SWI0178	0.10 U	-	0.25 U	-	-	-	**0.123**	-	-	-	**110**	-	**110**	-
DC-01	DC-01-131211	12/11/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**0.186**	-	**159**	-	**160**	-
DC-01	DC-01-140318	03/18/2014	Primary	SXC0095	**0.101**	-	**0.304**	-	**0.079**	-	-	-	-	-	**159**	-	**160**	-
DC-01	DC-01-140602	06/02/2014	Primary	SXF0017	0.10 U	-	**0.45**	-	**0.81**	-	-	-	-	-	**164**	-	**165**	-
DC-01	DC-01-140923	09/23/2014	Primary	SXI0158	0.10 R	MSD	0.25 U	-	**0.12**	-	-	-	-	-	**154**	-	**155**	-
DC-01	DC-01-141216	12/16/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	0.10 U	-	-	-	-	-	**140**	-	**140**	-
DC-01	DC-01-150316	03/16/2015	Primary	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**150**	-	**150**	-
DC-01	DC-01-150616	06/16/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**150**	-	**150**	-
DC-01	DC-01-150923	09/23/2015	Primary	59020281	**0.13**	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**150**	-	**150**	-
DC-01	YVD-D1-150923	09/23/2015	Duplicate	59020281	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**160**	-	**160**	-
DC-01	DC-01-151214	12/14/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	**0.30 J**	FDP	-	-	-	-	**170 J**	FDP	**170 J**	FDP
DC-01	DC-01-160308	03/08/2016	Primary	59029711	0.11 R	FBK, FDP	0.25 R	MSD	**0.26**	-	-	-	-	-	**150**	-	**150**	-
DC-01	DC-01-160620	6/20/2016	Primary	59037101	0.10 U	-	0.25 UJ	MSD	**0.009 J**	-	-	-	-	-	**150**	-	**150**	-
DC-01	DC-01-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U	-	0.25 U	-	-	-	-	-	**147**	-	**147**	-
DC-01	DC-01-161212	12/12/2016	Primary	K1615045	0.05 U	-	0.5 U	-	**0.04**	-	-	-	-	-	**144**	-	**144**	-
DC-03	DC-03-130102	01/02/2013	Primary	EPA01	0.10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-03	DC-03-130918	09/18/2013	Primary	SWI0138	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**435**	-	**435**	-
DC-03	DC-03-131212	12/12/2013	Primary	SWL0078	0.02 U	-	0.20 U	-	-	-	-	-	**0.244**	-	**474**	-	**475**	-
DC-03	YVD-D3-131212	12/12/2013	Duplicate	SWL0078	0.02 U	-	0.8311 U	ERL	-	-	-	-	**0.221**	-	**459**	-	**460**	-
DC-03	DC-03-140319	03/19/2014	Primary	SXC0107	0.10 U	-	**0.938 J-**	MSD	**0.057**	-	-	-	-	-	**459**	-	**460**	-
DC-03	YVD-D3-140319	03/19/2014	Duplicate	SXC0107	0.10 U	-	**0.718 J-**	MSD	**0.062**	-	-	-	-	-	**469**	-	**470**	-
DC-03	DC-03-140604	06/04/2014	Primary	SXF0025	0.10 U	-	0.25 UJ	MSD	**0.12**	-	-	-	-	-	**425**	-	**425**	-
DC-03	DC-03-140924	09/24/2014	Primary	SXI0173	0.10 U	-	**2.27 J+**	MSD	**0.054 J+**	FBK	-	-	-	-	**409**	-	**410**	-
DC-03	DC-03-141217	12/17/2014	Primary	SXL0144	**0.18 J+**	FBK, MBK	0.25 R	MSD	**0.13 J-**	MSD	-	-	-	-	**429**	-	**430**	-
DC-03	YVD-D4-141217	12/17/2014	Duplicate	SXL0144	0.10 U	-	0.25 R	MSD	0.10 UJ	MSD	-	-	-	-	**423**	-	**425**	-
DC-03	DC-03-150318	03/18/2015	Primary	5904651	0.10 U	-	**0.45 J-**	MSD	0.25 U	-	-	-	-	-	**420**	-	**420**	-
DC-03	YVD-D4-150318	03/18/2015	Duplicate	5904651	**0.12**	-	**0.53 J-**	MSD	0.25 U	-	-	-	-	-	**410**	-	**410**	-
DC-03	DC-03-150617	06/17/2015	Primary	59011021	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**460**	-	**460**	-
DC-03	YVD-D4-150617	06/17/2015	Duplicate	59011021	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**450**	-	**450**	-
DC-03	DC-03-150925	09/25/2015	Primary	59020431	**0.10**	-	0.25 U	-	0.25 U	-	-	-	-	-	**390**	-	**390**	-
DC-03	YVD-D4-150925	09/25/2015	Duplicate	59020431	**0.20**	-	0.25 U	-	0.25 U	-	-	-	-	-	**460**	-	**460**	-
DC-03	DC-03-151216	12/16/2015	Primary	59025501	**0.18 J-**	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**400**	-	**400**	-
DC-03	YVD-D4-151216	12/16/2015	Duplicate	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**380**	-	**380**	-
DC-03	DC-03-160310	03/10/2016	Primary	59029941	0.10 U	-	**0.94 J-**	FDP, MSD	0.25 U	-	-	-	-	-	**460**	-	**460**	-
DC-03	YVD-D4-160310	03/10/2016	Duplicate	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**480**	-	**480**	-
DC-03	YVD-D4-160310	03/10/2016	Duplicate	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**480**	-	**480**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-03	DC-03-160623	6/23/2016	Primary	59037371	**270**	-	**73**	-	**3.5**	-	**190**	-	**150**	-	5 U	-	**180**	-	2 U	-	**160**	-
DC-03	YVD-D4-160623	6/23/2016	Duplicate	59037371	**250**	-	**71**	-	**3.3**	-	**180**	-	**160**	-	2.5 U	-	**170**	-	1 U	-	**160**	-
DC-03	DC-03-160927	9/27/2016	Primary	K1611565	**265**	-	**72.4**	-	**2.85**	-	**182**	-	**136**	-	**0.2 J**	-	**163**	-	0.1 U	-	**139**	-
DC-03	DC-03-D2-160927	9/27/2016	Duplicate	K1611565	**262**	-	**71.9**	-	**2.87**	-	**183**	-	**137**	-	**0.19 J**	-	**163**	-	0.1 U	-	**138**	-
DC-03	DC-03-161212	12/12/2016	Primary	K1615029	**254**	-	**65.7**	-	**3.05**	-	**167**	-	**131**	-	**0.24**	-	**168 J**	-	0.1 U	-	**112**	-
DC-03D	DC-03D-130918	09/18/2013	Primary	SWI0138	**198**	-	**44.0**	-	**2.71**	-	**62.1**	-	**56.0**	-	5.0 U	-	**46.4**	-	2.0 U	-	**101**	-
DC-03D	DC-03D-131212	12/12/2013	Primary	SWL0073	**194**	-	**43.3**	-	**2.67**	-	**59.7**	-	**67.9**	-	5.0 U	-	**38.9**	-	2.0 U	-	**99.1**	-
DC-03D	DC-03D-140319	03/19/2014	Primary	SXC0107	**200**	-	**43.9**	-	**2.67**	-	**57.5**	-	**65.9**	-	5.0 U	-	**42.5**	-	2.0 U	-	**106**	-
DC-03D	DC-03D-140603	06/03/2014	Primary	SXF0017	**179**	-	**40.9**	-	**2.66**	-	**59.0**	-	**65.5**	-	2.0 U	-	**42.0**	-	0.80 U	-	**103 J-**	MSD
DC-03D	DC-03D-140923	09/23/2014	Primary	SXI0173	**216**	-	**46.6**	-	**3.40**	-	**67.8**	-	**59.5**	-	2.5 U	-	**38.0**	-	1.0 U	-	**89.4**	-
DC-03D	DC-03D-141217	12/17/2014	Primary	SXL0121	**203**	-	**46.8**	-	**2.92**	-	**60.7**	-	**62.8**	-	2.5 U	-	**38.6**	-	1.0 U	-	**92.2**	-
DC-03D	DC-03D-150317	03/17/2015	Primary	5904651	**210**	-	**48**	-	**3.0 J-**	MSD	**68**	-	**63**	-	2.5 U	-	**37**	-	1.0 U	-	**87**	-
DC-03D	DC-03D-150617	06/17/2015	Primary	59011021	**210**	-	**48 J**	RPD	**3.2 J**	RPD	**68 J**	RPD	**71**	-	2.5 U	-	**42 J-**	MSD	1.0 U	-	**93**	-
DC-03D	DC-03D-150925	09/25/2015	Primary	59020431	**200**	-	**47**	-	**3.0**	-	**65**	-	**58**	-	10.0 U	-	**33**	-	4.0 U	-	**86**	-
DC-03D	DC-03D-151216	12/16/2015	Primary	59025501	**210**	-	**50**	-	**3.2**	-	**69**	-	**70**	-	2.5 U	-	**36**	-	1.0 U	-	**94**	-
DC-03D	DC-03D-160310	03/10/2016	Primary	59029941	**200**	-	**47**	-	**3.0**	-	**68**	-	**65**	-	2.5 U	-	**37**	-	1.0 U	-	**90 J**	DUP
DC-03D	DC-03D-160623	6/23/2016	Primary	59037371	**200**	-	**47**	-	**3**	-	**70**	-	**65**	-	5 U	-	**36**	-	2 U	-	**89**	-
DC-03D	DC-03D-160927	9/27/2016	Primary	K1611565	**188**	-	**47.1**	-	**2.73**	-	**63**	-	**58.7**	-	**0.1 J**	-	**32.8**	-	0.1 U	-	**90.9**	-
DC-03D	DC-03D-161212	12/12/2016	Primary	K1615029	**200**	-	**44.8**	-	**2.98**	-	**65**	-	**57.8**	-	**0.12 J**	-	**33.8 J**	-	0.1 U	-	**90.7**	-
DC-04	DC-04-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**26**	-	-	-	-	-
DC-04	DC-04-130920	09/20/2013	Primary	SWI0142	**141**	-	**25.5**	-	**3.45**	-	**32.1**	-	**39.4**	-	5.0 U	-	-	-	-	-	**93.6**	-
DC-04	DC-04-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	**31.7**	-	2.0 U	-	-	-
DC-04	DC-04-131212	12/12/2013	Primary	SWL0073	**148**	-	**28.4**	-	**3.51**	-	**31.7**	-	**41.1**	-	5.0 U	-	**36.7**	-	2.0 U	-	**110**	-
DC-04	DC-04-140318	03/18/2014	Primary	SXC0107	**153**	-	**28.0**	-	**3.58**	-	**30.4**	-	**42.0**	-	5.0 U	-	**37.3**	-	2.0 U	-	**107**	-
DC-04	DC-04-140603	06/03/2014	Primary	SXF0017	**134**	-	**28.9**	-	**3.65**	-	**32.3**	-	**36.2**	-	2.0 U	-	**36.4**	-	0.80 U	-	**104 J-**	MSD
DC-04	DC-04-140923	09/23/2014	Primary	SXI0173	**174**	-	**34.2**	-	**4.51**	-	**35.5**	-	**39.7**	-	2.5 U	-	**37.8**	-	1.0 U	-	**108**	-
DC-04	DC-04-141217	12/17/2014	Primary	SXL0121	**182**	-	**35.7**	-	**4.34**	-	**34.9**	-	**42.7**	-	2.5 U	-	**40.8**	-	1.0 U	-	**120**	-
DC-04	DC-04-150317	03/17/2015	Primary	5904651	**180**	-	**34**	-	**3.9 J-**	MSD	**36**	-	**41**	-	2.5 U	-	**39**	-	1.0 U	-	**110**	-
DC-04	DC-04-150617	06/17/2015	Primary	59010961	**180**	-	**34**	-	**4.1 J+**	MSD	**36 J+**	MSD	**46**	-	5.0 U	-	**42**	-	2.0 U	-	**110**	-
DC-04	DC-04-150924	09/24/2015	Primary	59020391	**160**	-	**36**	-	**3.9**	-	**33**	-	**48**	-	2.5 U	-	**48 J+**	MSD	1.0 U	-	**140 J-**	MSD
DC-04	YVD-D3-150924	09/24/2015	Duplicate	59020391	**170**	-	**37**	-	**4.1**	-	**35**	-	**53**	-	2.5 U	-	**53 J+**	MSD	1.0 U	-	**150 J-**	MSD
DC-04	DC-04-151215	12/15/2015	Primary	59025431	**180**	-	**36**	-	**4.2**	-	**36**	-	**46**	-	2.5 U	-	**48**	-	1.0 U	-	**130**	-
DC-04	DC-04-160309	03/09/2016	Primary	59029711	**190**	-	**36**	-	**4.0**	-	**36**	-	**53**	-	2.5 U	-	**53**	-	1.0 U	-	**150 J+**	MSD
DC-04	DC-04-160621	6/21/2016	Primary	59037271	**200**	-	**40**	-	**4.4**	-	**39**	-	**50**	-	2.5 U	-	**50**	-	1 U	-	**150**	-
DC-04	DC-04-160926	9/26/2016	Primary	K1611506	**194**	-	**40.6**	-	**4.50**	-	**38.2**	-	**43.4**	-	**0.12 J**	-	**44.1**	-	0.1 U	-	**142**	-
DC-04	DC-04-161216	12/12/2016	Primary	K1615174	**214**	-	**39.7**	-	**4.11**	-	**36.9**	-	**44.7**	-	**0.15 J**	-	**45.2**	-	0.1 U	-	**155**	-
DC-05	DC-05-130104	01/04/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**32**	-	-	-	-	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-03	DC-03-160623	6/23/2016	Primary	59037371	**0.12 J-**	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**420**	-	**420**	-
DC-03	YVD-D4-160623	6/23/2016	Duplicate	59037371	**0.11 J-**	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**410**	-	**410**	-
DC-03	DC-03-160927	9/27/2016	Primary	K1611565	0.05 U	-	R	MSD	**0.006 J**	-	-	-	-	-	**425**	-	**425**	-
DC-03	DC-03-D2-160927	9/27/2016	Duplicate	K1611565	0.05 U	-	R	MSD	0.01 U	-	-	-	-	-	**427**	-	**427**	-
DC-03	DC-03-161212	12/12/2016	Primary	K1615029	0.05 U	-	0.5 U	-	**0.199**	-	-	-	-	-	**371**	-	**371**	-
DC-03D	DC-03D-130918	09/18/2013	Primary	SWI0138	0.10 U	-	**0.255**	-	-	-	0.10 U	-	-	-	**509**	-	**510**	-
DC-03D	DC-03D-131212	12/12/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	0.06 U	-	**559**	-	**560**	-
DC-03D	DC-03D-140319	03/19/2014	Primary	SXC0107	**0.127**	-	**0.427 J-**	MSD	0.05 U	-	-	-	-	-	**564**	-	**565**	-
DC-03D	DC-03D-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.468**	-	**0.074 J+**	FBK	-	-	-	-	**542**	-	**543**	-
DC-03D	DC-03D-140923	09/23/2014	Primary	SXI0173	0.10 U	-	0.25 U	-	**0.098**	-	-	-	-	-	**514**	-	**515**	-
DC-03D	DC-03D-141217	12/17/2014	Primary	SXL0121	0.10 U	-	**0.282 J-**	MSD	0.10 U	-	-	-	-	-	**514**	-	**515**	-
DC-03D	DC-03D-150317	03/17/2015	Primary	5904651	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**530**	-	**530**	-
DC-03D	DC-03D-150617	06/17/2015	Primary	59011021	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**530**	-	**530**	-
DC-03D	DC-03D-150925	09/25/2015	Primary	59020431	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**610**	-	**610**	-
DC-03D	DC-03D-151216	12/16/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**590**	-	**590**	-
DC-03D	DC-03D-160310	03/10/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**580**	-	**580**	-
DC-03D	DC-03D-160623	6/23/2016	Primary	59037371	**0.11 J-**	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**530**	-	**530**	-
DC-03D	DC-03D-160927	9/27/2016	Primary	K1611565	0.05 U	-	R	MSD	**0.006 J**	-	-	-	-	-	**546**	-	**546**	-
DC-03D	DC-03D-161212	12/12/2016	Primary	K1615029	0.05 U	-	0.5 U	-	**0.085**	-	-	-	-	-	**544**	-	**544**	-
DC-04	DC-04-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-04	DC-04-130920	09/20/2013	Primary	SWI0142	0.10 U	-	**3.03**	-	-	-	0.10 U	-	-	-	**305**	-	**305**	-
DC-04	DC-04-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-04	DC-04-131212	12/12/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	**0.104**	-	**315**	-	**315**	-
DC-04	DC-04-140318	03/18/2014	Primary	SXC0107	0.10 U	-	**0.707 J-**	MSD	**0.13**	-	-	-	-	-	**325**	-	**325**	-
DC-04	DC-04-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.645**	-	**0.24 J+**	FBK	-	-	-	-	**310**	-	**310**	-
DC-04	DC-04-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**0.524 J+**	MSD	**0.29**	-	-	-	-	-	**317**	-	**320**	-
DC-04	DC-04-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.17**	-	-	-	-	-	**329**	-	**330**	-
DC-04	DC-04-150317	03/17/2015	Primary	5904651	0.10 U	-	**0.33 J-**	MSD	0.25 U	-	-	-	-	-	**340**	-	**340**	-
DC-04	DC-04-150617	06/17/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**330**	-	**330**	-
DC-04	DC-04-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	**0.25 J-**	MSD	0.25 U	-	-	-	-	-	**400**	-	**400**	-
DC-04	YVD-D3-150924	09/24/2015	Duplicate	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**380**	-	**380**	-
DC-04	DC-04-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	0.25 UJ	FDP	-	-	-	-	**400 J**	FDP	**400 J**	FDP
DC-04	DC-04-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**390**	-	**390**	-
DC-04	DC-04-160621	6/21/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**360**	-	**360**	-
DC-04	DC-04-160926	9/26/2016	Primary	K1611506	0.05 U	-	R	MSD	**0.137**	-	-	-	-	-	**374**	-	**374**	-
DC-04	DC-04-161216	12/12/2016	Primary	K1615174	0.05 U	-	0.5 U	-	**0.052**	-	-	-	-	-	**384**	-	**384**	-
DC-05	DC-05-130104	01/04/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-05	DC-05-130920	09/20/2013	Primary	SWI0142	**129**	-	**48.5**	-	**2.88**	-	**64.2**	-	**36.7**	-	5.0 U	-	-	-	-	-	**154**	-
DC-05	DC-05-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	**33.6**	-	2.0 U	-	-	-
DC-05	DC-05-131212	12/12/2013	Primary	SWL0073	**130**	-	**50.2**	-	**3.92**	-	**64.2**	-	**35.9**	-	5.0 U	-	**42.6**	-	2.0 U	-	**178**	-
DC-05	DC-05-140318	03/18/2014	Primary	SXC0107	**133**	-	**49.7**	-	**2.90**	-	**59.4**	-	**33.0**	-	5.0 U	-	**33.1**	-	2.0 U	-	**150**	-
DC-05	DC-05-140603	06/03/2014	Primary	SXF0017	**118**	-	**46.7**	-	**3.25**	-	**61.3**	-	**31.6**	-	2.0 U	-	**32.6**	-	0.80 U	-	**128 J-**	MSD
DC-05	DC-05-140923	09/23/2014	Primary	SXI0173	**140**	-	**53.5**	-	**3.86**	-	**71.0**	-	**35.0**	-	2.5 U	-	**35.8**	-	1.0 U	-	**122**	-
DC-05	DC-05-141217	12/17/2014	Primary	SXL0121	**147**	-	**58.9**	-	**3.41**	-	**59.0**	-	**34.4**	-	2.5 U	-	**33.4**	-	1.0 U	-	**141**	-
DC-05	DC-05-150317	03/17/2015	Primary	5904541	**150**	-	**58**	-	**3.0**	-	**61**	-	**36**	-	**2.0**	-	**38 J-**	MSD	0.80 U	-	**140 J-**	MSD
DC-05	DC-05-150616	06/16/2015	Primary	59010961	**140**	-	**57**	-	**3.0 J+**	MSD	**64 J+**	MSD	**35**	-	2.0 U	-	**37**	-	0.80 U	-	**120**	-
DC-05	YVD-D2-150616	06/16/2015	Duplicate	59010961	**140**	-	**56**	-	**3.3 J+**	MSD	**64 J+**	MSD	**35**	-	5.0 U	-	**41**	-	2.0 U	-	**110**	-
DC-05	DC-05-150923	09/23/2015	Primary	59020391	**130**	-	**57**	-	**3.1**	-	**56**	-	**33**	-	2.0 U	-	**38 J+**	MSD	0.80 U	-	**110 J-**	MSD
DC-05	DC-05-151215	12/15/2015	Primary	59025431	**140**	-	**55**	-	**2.9**	-	**51**	-	**29**	-	2.0 U	-	**38**	-	0.80 U	-	**120**	-
DC-05	DC-05-160309	03/09/2016	Primary	59029711	**140**	-	**54**	-	**2.9**	-	**53**	-	**35**	-	2.0 U	-	**43**	-	0.80 U	-	**140 J+**	MSD
DC-05	DC-05-160621	6/21/2016	Primary	59037151	**130**	-	**54**	-	**2.8**	-	**53**	-	**34**	-	2 U	-	**36**	-	0.8 U	-	**130**	-
DC-05	DC-05-160926	9/26/2016	Primary	K1611506	**119**	-	**49.7**	-	**2.89**	-	**54.9**	-	**26.5**	-	**0.15 J**	-	**32.1**	-	0.1 U	-	**114**	-
DC-05	DC-05-D1-160926	9/26/2016	Duplicate	K1611506	**124**	-	**52.5**	-	**3.06**	-	**58.1**	-	**26.6**	-	**0.16 J**	-	**32.2**	-	0.1 U	-	**114**	-
DC-05	DC-05-161216	12/16/2016	Primary	K1615174	**129**	-	**45.4**	-	**2.60**	-	**47.9**	-	**28.6**	-	**0.19 J**	-	**33.7**	-	0.1 U	-	**108**	-
DC-05	YVD-D5-161216	12/16/2016	Duplicate	K1615174	**128**	-	**48.0**	-	**2.65**	-	**49.6**	-	**28.9**	-	**0.19 J**	-	**33.3**	-	0.1 U	-	**107**	-
DC-05D	DC-05D-130920	09/20/2013	Primary	SWI0142	**86.7**	-	**30.3**	-	**3.67**	-	**40.5**	-	**43.6**	-	5.0 U	-	-	-	-	-	**167**	-
DC-05D	DC-05D-130924	09/24/2013	Primary	SWI0178	-	-	-	-	-	-	-	-	-	-	-	-	**14.6**	-	0.20 U	-	-	-
DC-05D	DC-05D-131211	12/11/2013	Primary	SWL0073	**81.8**	-	**28.8**	-	**3.52**	-	**37.5**	-	**32.3**	-	5.0 U	-	**16.0**	-	2.0 U	-	**145**	-
DC-05D	DC-05D-140318	03/18/2014	Primary	SXC0095	**86.2**	-	**29.4**	-	**3.73**	-	**36.7**	-	**33.4**	-	5.0 U	-	**12.8**	-	2.0 U	-	**137 J-**	MSD
DC-05D	DC-05D-140602	06/02/2014	Primary	SXF0017	**67.4**	-	**24.6**	-	**4.99**	-	**34.3**	-	**30.6**	-	2.0 U	-	**3.36**	-	0.80 U	-	**122 J-**	MSD
DC-05D	DC-05D-140922	09/22/2014	Primary	SXI0148	**83.3**	-	**30.2**	-	**3.56**	-	**37.8**	-	**30.9**	-	2.0 U	-	**11.7**	-	0.80 U	-	**127**	-
DC-05D	DC-05D-141216	12/16/2014	Primary	SXL0121	**78.9**	-	**29.5**	-	**5.18**	-	**36.8**	-	**35.9**	-	5.0 U	-	**7.90**	-	0.20 U	-	**140**	-
DC-05D	DC-05D-150317	03/17/2015	Primary	5904541	**78**	-	**29**	-	**4.6**	-	**39**	-	**31**	-	2.0 U	-	**7.7 J-**	MSD	0.80 U	-	**120 J-**	MSD
DC-05D	DC-05D-150616	06/16/2015	Primary	59010961	**79**	-	**30**	-	**4.7 J+**	MSD	**41 J+**	MSD	**34**	-	2.0 U	-	**8.6**	-	0.80 U	-	**120**	-
DC-05D	DC-05D-150923	09/23/2015	Primary	59020391	**74**	-	**31**	-	**4.4**	-	**38**	-	**31**	-	2.0 U	-	**8.9 J+**	MSD	0.80 U	-	**120 J-**	MSD
DC-05D	YVD-D2-150923	09/23/2015	Duplicate	59020391	**73**	-	**30**	-	**4.4**	-	**38**	-	**33**	-	0.50 U	-	**10 J+**	MSD	0.20 U	-	**120 J-**	MSD
DC-05D	DC-05D-151215	12/15/2015	Primary	59025431	**78**	-	**29**	-	**4.4**	-	**39**	-	**30**	-	2.0 U	-	**9.9**	-	0.80 U	-	**120**	-
DC-05D	DC-05D-160309	03/09/2016	Primary	59029711	**81**	-	**30**	-	**4.3**	-	**41**	-	**33**	-	2.0 U	-	**13**	-	0.80 U	-	**140 J+**	MSD
DC-05D	DC-05D-160621	6/21/2016	Primary	59037271	**78**	-	**30**	-	**4.1**	-	**41**	-	**32**	-	2 U	-	**12**	-	0.8 U	-	**130**	-
DC-05D	DC-05D-160926	9/26/2016	Primary	K1611506	**81.4**	-	**28.4**	-	**3.93**	-	**39.4 J**	-	**25.6**	-	**0.26**	-	**11.2**	-	0.1 U	-	**113**	-
DC-05D	DC-05D-161214	12/14/2016	Primary	K1615126	**78.1**	-	**27.5**	-	**3.90**	-	**38.2**	-	**25.7**	-	**0.28**	-	**11.2**	-	0.1 U	-	**114**	-
DC-07	DC-07-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**2.8**	-	-	-	-	-
DC-07	DC-07-130918	09/18/2013	Primary	SWI0123	**122**	-	**18.4**	-	1.0 U	-	**45.7**	-	**30.5**	-	5.0 U	-	**4.30**	-	2.0 U	-	**168**	-
DC-07	YVD-D1-130918	09/18/2013	Duplicate	SWI0123	**122**	-	**18.5**	-	1.0 U	-	**46.1**	-	**32.8**	-	5.0 U	-	**4.30**	-	2.0 U	-	**179**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-05	DC-05-130920	09/20/2013	Primary	SWI0142	**0.255**	-	0.25 U	-	-	-	0.10 U	-	-	-	**414**	-	**415**	-
DC-05	DC-05-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-05	DC-05-131212	12/12/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	**0.723**	-	**424**	-	**425**	-
DC-05	DC-05-140318	03/18/2014	Primary	SXC0107	**0.131**	-	**0.558 J-**	MSD	**0.060**	-	-	-	-	-	**404**	-	**405**	-
DC-05	DC-05-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.581**	-	**0.28 J+**	FBK	-	-	-	-	**412**	-	**413**	-
DC-05	DC-05-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**0.998 J+**	MSD	**0.16**	-	-	-	-	-	**408**	-	**410**	-
DC-05	DC-05-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.13**	-	-	-	-	-	**414**	-	**415**	-
DC-05	DC-05-150317	03/17/2015	Primary	5904541	0.10 U	-	**0.27 J-**	MSD	0.25 U	-	-	-	-	-	**430**	-	**430**	-
DC-05	DC-05-150616	06/16/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**410**	-	**410**	-
DC-05	YVD-D2-150616	06/16/2015	Duplicate	59010961	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**410**	-	**410**	-
DC-05	DC-05-150923	09/23/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**440**	-	**440**	-
DC-05	DC-05-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	0.25 UJ	FDP	-	-	-	-	**440 J**	FDP	**440 J**	FDP
DC-05	DC-05-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**410**	-	**410**	-
DC-05	DC-05-160621	6/21/2016	Primary	59037151	0.1 UJ	-	0.25 U	-	0.25 U	-	-	-	-	-	**390**	-	**390**	-
DC-05	DC-05-160926	9/26/2016	Primary	K1611506	0.05 U	-	R	MSD	**0.031**	-	-	-	-	-	**346**	-	**346**	-
DC-05	DC-05-D1-160926	9/26/2016	Duplicate	K1611506	0.05 U	-	R	MSD	**0.028**	-	-	-	-	-	**364**	-	**364**	-
DC-05	DC-05-161216	12/16/2016	Primary	K1615174	0.05 U	-	0.5 U	-	**0.048**	-	-	-	-	-	**348**	-	**348**	-
DC-05	YVD-D5-161216	12/16/2016	Duplicate	K1615174	0.05 U	-	0.5 U	-	**0.040**	-	-	-	-	-	**340**	-	**340**	-
DC-05D	DC-05D-130920	09/20/2013	Primary	SWI0142	0.10 U	-	**0.361**	-	-	-	**0.163**	-	-	-	**214**	-	**215**	-
DC-05D	DC-05D-130924	09/24/2013	Primary	SWI0178	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-05D	DC-05D-131211	12/11/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	0.06 U	-	**209**	-	**210**	-
DC-05D	DC-05D-140318	03/18/2014	Primary	SXC0095	**0.182**	-	0.25 U	-	**0.072**	-	-	-	-	-	**209**	-	**210**	-
DC-05D	DC-05D-140602	06/02/2014	Primary	SXF0017	**0.163**	-	**0.591**	-	**0.56 J+**	FBK	-	-	-	-	**214**	-	**215**	-
DC-05D	DC-05D-140922	09/22/2014	Primary	SXI0148	0.10 U	-	**0.424**	-	**0.057**	-	-	-	-	-	**203**	-	**205**	-
DC-05D	DC-05D-141216	12/16/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.39**	-	-	-	-	-	**199**	-	**200**	-
DC-05D	DC-05D-150317	03/17/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	**0.30**	-	-	-	-	-	**210**	-	**210**	-
DC-05D	DC-05D-150616	06/16/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	**0.27**	-	-	-	-	-	**210**	-	**210**	-
DC-05D	DC-05D-150923	09/23/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**200**	-	**200**	-
DC-05D	YVD-D2-150923	09/23/2015	Duplicate	59020391	**0.16 J**	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**220**	-	**220**	-
DC-05D	DC-05D-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	0.25 UJ	FDP	-	-	-	-	**230 J**	FDP	**230 J**	FDP
DC-05D	DC-05D-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**220**	-	**220**	-
DC-05D	DC-05D-160621	6/21/2016	Primary	59037271	**0.13 J-**	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**210**	-	**210**	-
DC-05D	DC-05D-160926	9/26/2016	Primary	K1611506	0.05 U	-	R	MSD	**0.014**	-	-	-	-	-	**209**	-	**209**	-
DC-05D	DC-05D-161214	12/14/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.015**	-	-	-	-	-	**202**	-	**202**	-
DC-07	DC-07-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-07	DC-07-130918	09/18/2013	Primary	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**315**	-	**315**	-
DC-07	YVD-D1-130918	09/18/2013	Duplicate	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**295**	-	**295**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-07	DC-07-131210	12/10/2013	Primary	SWL0055	**27.5**	-	**11.5**	-	**3.82**	-	**38.4**	-	**31.0**	-	5.0 U	-	**4.70**	-	2.0 U	-	**117**	-
DC-07	DC-07-140316	03/16/2014	Primary	SXC0081	**88.4**	-	**15.4**	-	**1.04**	-	**33.5**	-	**26.5**	-	2.0 U	-	**4.72**	-	0.80 U	-	**78.9**	-
DC-07	DC-07-140602	06/02/2014	Primary	SXF0008	**93.7**	-	**16.5**	-	1.0 U	-	**36.3**	-	**28.2**	-	2.0 U	-	0.80 U	-	0.80 U	-	**105**	-
DC-07	DC-07-140922	09/22/2014	Primary	SXI0148	**87.1**	-	**16.1**	-	1.0 U	-	**33.7**	-	**29.8**	-	2.0 U	-	**4.88**	-	0.80 U	-	**98.2**	-
DC-07	DC-07-141216	12/16/2014	Primary	SXL0108	**83.6**	-	**15.1**	-	1.0 U	-	**30.6**	-	**24.2**	-	2.0 U	-	**2.80**	-	0.80 U	-	**80.4**	-
DC-07	YVD-D2-141216	12/16/2014	Duplicate	SXL0108	**84.2**	-	**15.1**	-	1.0 U	-	**30.8**	-	**25.6**	-	0.50 U	-	**2.92**	-	0.20 U	-	**82.1**	-
DC-07	DC-07-150317	03/17/2015	Primary	5904541	**94**	-	**17**	-	**1.0**	-	**35**	-	**29**	-	2.0 U	-	**4.6 J-**	MSD	0.80 U	-	**83 J-**	MSD
DC-07	DC-07-150617	06/17/2015	Primary	59011021	**97**	-	**17 J**	RPD	1.0 U	-	**37 J**	RPD	**32**	-	2.0 U	-	**4.0 J-**	MSD	0.80 U	-	**93**	-
DC-07	DC-07-150924	09/24/2015	Primary	59020391	**76**	-	**15**	-	1.0 U	-	**33**	-	**30**	-	2.0 U	-	**2.7 J+**	MSD	0.80 U	-	**95 J-**	MSD
DC-07	DC-07-151215	12/15/2015	Primary	59025501	**87**	-	**16**	-	1.0 U	-	**34**	-	**29**	-	2.0 U	-	**2.5**	-	0.80 U	-	**70**	-
DC-07	DC-07-160309	03/09/2016	Primary	59029941	**91**	-	**17**	-	**1.1**	-	**36**	-	**31**	-	2.0 U	-	**2.2**	-	0.80 U	-	**78 J**	DUP
DC-07	DC-07-160621	6/21/2016	Primary	59037271	**96**	-	**18**	-	**1.2**	-	**38**	-	**33**	-	2 U	-	**4.8**	-	0.8 U	-	**96**	-
DC-07	DC-07-160926	9/26/2016	Primary	K1611565	**82.3**	-	**15.0**	-	**1.06**	-	**36.6**	-	**24.4**	-	0.2 U	-	**2.74**	-	0.1 U	-	**92.3**	-
DC-07	DC-07-161214	12/14/2016	Primary	K1615083	**77.0**	-	**13.1**	-	**1.05**	-	**32.0**	-	**19.2**	-	0.2 U	-	**1.44**	-	0.1 U	-	**72.4**	-
DC-09	DC-09-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**6.0**	-	-	-	-	-
DC-09	DC-09-130923	09/23/2013	Primary	SWI0178	**34.0**	-	**8.41**	-	**2.75**	-	**39.7**	-	-	-	-	-	-	-	-	-	-	-
DC-09	DC-09-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	**16.2**	-	0.50 U	-	**6.02**	-	0.20 U	-	**30.7**	-
DC-09	DC-09-131211	12/11/2013	Primary	SWL0063	**34.8**	-	**7.89**	-	**2.48**	-	**39.1**	-	**17.4**	-	0.50 U	-	**6.78**	-	0.20 U	-	**34.4 J-**	MSD
DC-09	DC-09-140317	03/17/2014	Primary	SXC0095	**35.4**	-	**8.43**	-	**2.88**	-	**36.5**	-	**15.6**	-	**0.82**	-	**5.85**	-	0.20 U	-	**28.8 J-**	MSD
DC-09	DC-09-140602	06/02/2014	Primary	SXF0008	**33.9**	-	**8.27**	-	**2.92**	-	**38.1**	-	**15.9**	-	0.50 U	-	**6.18**	-	0.20 U	-	**29.4**	-
DC-09	YVD-D3-140602	06/02/2014	Duplicate	SXF0008	**34.2**	-	**8.73**	-	**3.08**	-	**37.9**	-	**15.8**	-	0.50 U	-	**5.97**	-	0.20 U	-	**29.1**	-
DC-09	DC-09-140923	09/23/2014	Primary	SXI0158	**32.2**	-	**6.75**	-	**1.94**	-	**38.9 J+**	MSD	**15.8**	-	0.50 U	-	**6.01**	-	0.20 U	-	**29.6**	-
DC-09	DC-09-141216	12/16/2014	Primary	SXL0108	**35.3**	-	**7.98**	-	**2.48**	-	**39.1**	-	**16.3**	-	0.50 U	-	**5.94**	-	0.20 U	-	**30.2**	-
DC-09	DC-09-150316	03/16/2015	Primary	5904541	**36**	-	**8.0**	-	**2.6**	-	**43**	-	**17**	-	**0.60**	-	**5.9 J-**	MSD	0.20 U	-	**29 J-**	MSD
DC-09	DC-09-150616	06/16/2015	Primary	59010751	**34 J+**	MSD	**8.1 J+**	MSD	**2.3 J+**	MSD	**38 J+**	MSD	**16**	-	0.50 U	-	**5.8**	-	0.20 U	-	**28 J-**	MSD
DC-09	DC-09-150923	09/23/2015	Primary	59020281	**33**	-	**8.1**	-	**2.5**	-	**40**	-	**16**	-	0.50 U	-	**5.8**	-	0.20 U	-	**30**	-
DC-09	DC-09-151214	12/14/2015	Primary	59025431	**34**	-	**8.2**	-	**2.7**	-	**40**	-	**16**	-	0.50 U	-	**5.9**	-	0.20 U	-	**31**	-
DC-09	DC-09-160308	03/08/2016	Primary	59029711	**35**	-	**8.8**	-	**3.3**	-	**39**	-	**16**	-	0.50 U	-	**5.7**	-	0.20 U	-	**31 J+**	MSD
DC-09	YVD-D2-160308	03/08/2016	Duplicate	59029711	**34**	-	**8.6**	-	**3.1**	-	**39**	-	**16**	-	0.50 U	-	**5.7**	-	0.20 U	-	**31 J+**	MSD
DC-09	DC-09-160621	6/21/2016	Primary	59037151	**32**	-	**7.5**	-	**2.2**	-	**41**	-	**17**	-	**0.51**	-	**5.9**	-	0.2 U	-	**32**	-
DC-09	DC-09-160929	9/29/2016	Primary	K1611704	**30.6**	-	**6.25**	-	**2**	-	**39.3**	-	**14.8**	-	**0.38**	-	**5.53**	-	0.1 U	-	**29.8**	-
DC-09	DC-09-D4-160929	9/29/2016	Duplicate	K1611704	**30.4**	-	**6.22**	-	**1.98**	-	**38.8**	-	**14.9**	-	**0.38**	-	**5.53**	-	0.1 U	-	**29.6**	-
DC-09	DC-09-161215	12/15/2016	Primary	K1615126	**33.0**	-	**6.65**	-	**1.99**	-	**38.9**	-	**15.0**	-	**0.41**	-	**5.62**	-	0.1 U	-	**30.6**	-
DC-09	YVD-D4-161215	12/15/2016	Duplicate	K1615126	**32.8**	-	**6.62**	-	**1.98**	-	**37.8**	-	**15.0**	-	**0.42**	-	**5.61**	-	0.1 U	-	**30.6**	-
DC-14	DC-14-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	**26**	-	-	-	-	-
DC-14	DC-14-130917	09/17/2013	Primary	SWI0113	**121**	-	**32.3**	-	**5.85**	-	**94.9**	-	**80.2**	-	0.50 U	-	**12.0**	-	0.20 U	-	**34.2**	-
DC-14	DC-14-131211	12/11/2013	Primary	SWL0063	**91.2**	-	**23.9**	-	**4.71**	-	**94.0**	-	**64.4**	-	5.0 U	-	**5.80**	-	2.0 U	-	**33.9 J-**	MSD

Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-07	DC-07-131210	12/10/2013	Primary	SWL0055	0.02 UJ	MSD	0.4366 UJ	ERL, MSD	-	-	-	-	**0.0648**	-	**260**	-	**260**	-
DC-07	DC-07-140316	03/16/2014	Primary	SXC0081	**0.116**	-	0.25 U	-	**0.11**	-	-	-	-	-	**260**	-	**260**	-
DC-07	DC-07-140602	06/02/2014	Primary	SXF0008	0.10 U	-	**0.340**	-	**0.12**	-	-	-	-	-	**245**	-	**245**	-
DC-07	DC-07-140922	09/22/2014	Primary	SXI0148	0.10 U	-	**0.487**	-	**0.19**	-	-	-	-	-	**215**	-	**215**	-
DC-07	DC-07-141216	12/16/2014	Primary	SXL0108	0.10 U	-	**0.261**	-	0.10 U	-	-	-	-	-	**210**	-	**210**	-
DC-07	YVD-D2-141216	12/16/2014	Duplicate	SXL0108	0.10 U	-	**0.305**	-	0.10 U	-	-	-	-	-	**210**	-	**210**	-
DC-07	DC-07-150317	03/17/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**240**	-	**240**	-
DC-07	DC-07-150617	06/17/2015	Primary	59011021	0.10 U	-	**0.28 J-**	MSD	0.25 U	-	-	-	-	-	**230**	-	**230**	-
DC-07	DC-07-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**240**	-	**240**	-
DC-07	DC-07-151215	12/15/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	**0.41 J-**	MSD	-	-	-	-	**240**	-	**240**	-
DC-07	DC-07-160309	03/09/2016	Primary	59029941	0.10 U	-	0.25 R	FBK, FDP, MSD	0.25 U	-	-	-	-	-	**280**	-	**280**	-
DC-07	DC-07-160621	6/21/2016	Primary	59037271	**0.1 J-**	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**250**	-	**250**	-
DC-07	DC-07-160926	9/26/2016	Primary	K1611565	0.05 U	-	R	MSD	**0.057**	-	-	-	-	-	**204**	-	**204**	-
DC-07	DC-07-161214	12/14/2016	Primary	K1615083	0.05 U	-	0.5 U	-	**0.078**	-	-	-	-	-	**218**	-	**218**	-
DC-09	DC-09-130103	01/03/2013	Primary	EPA01	0.10 U	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-09	DC-09-130923	09/23/2013	Primary	SWI0178	0.10 U	-	**0.447**	-	-	-	0.10 U	-	-	-	**44.7**	-	**45.0**	-
DC-09	DC-09-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-09	DC-09-131211	12/11/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**0.125**	-	**129**	-	**130**	-
DC-09	DC-09-140317	03/17/2014	Primary	SXC0095	0.10 U	-	**0.251**	-	**0.18**	-	-	-	-	-	**144**	-	**145**	-
DC-09	DC-09-140602	06/02/2014	Primary	SXF0008	**0.106**	-	**0.279**	-	**0.16 J**	FDP	-	-	-	-	**129**	-	**130**	-
DC-09	YVD-D3-140602	06/02/2014	Duplicate	SXF0008	0.10 U	-	**0.359**	-	**0.22 J**	FDP	-	-	-	-	**129**	-	**130**	-
DC-09	DC-09-140923	09/23/2014	Primary	SXI0158	0.10 R	MSD	0.25 U	-	0.05 U	-	-	-	-	-	**124**	-	**125**	-
DC-09	DC-09-141216	12/16/2014	Primary	SXL0108	0.10 U	-	0.25 U	-	**0.13**	-	-	-	-	-	**129**	-	**130**	-
DC-09	DC-09-150316	03/16/2015	Primary	5904541	**0.15**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
DC-09	DC-09-150616	06/16/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
DC-09	DC-09-150923	09/23/2015	Primary	59020281	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
DC-09	DC-09-151214	12/14/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	**0.30 J**	FDP	-	-	-	-	**150 J**	FDP	**150 J**	FDP
DC-09	DC-09-160308	03/08/2016	Primary	59029711	0.25 R	FBK, FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
DC-09	YVD-D2-160308	03/08/2016	Duplicate	59029711	0.10 UJ	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
DC-09	DC-09-160621	6/21/2016	Primary	59037151	0.1 UJ	-	0.25 U	-	0.25 U	-	-	-	-	-	**130**	-	**130**	-
DC-09	DC-09-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U	-	**0.016**	-	-	-	-	-	**129**	-	**129**	-
DC-09	DC-09-D4-160929	9/29/2016	Duplicate	K1611704	0.05 U	-	0.5 U	-	**0.013**	-	-	-	-	-	**128**	-	**128**	-
DC-09	DC-09-161215	12/15/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.009 J**	-	-	-	-	-	**127**	-	**127**	-
DC-09	YVD-D4-161215	12/15/2016	Duplicate	K1615126	0.05 U	-	0.5 U	-	**0.007 J**	-	-	-	-	-	**127**	-	**127**	-
DC-14	DC-14-130103	01/03/2013	Primary	EPA01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC-14	DC-14-130917	09/17/2013	Primary	SWI0113	**0.115**	-	**0.310**	-	-	-	**0.199**	-	-	-	**454**	-	**455**	-
DC-14	DC-14-131211	12/11/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**0.167**	-	**434**	-	**435**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-14	DC-14-140318	03/18/2014	Primary	SXC0095	**107**	-	**28.4**	-	**5.25**	-	**87.0**	-	**71.8**	-	5.0 U	-	**10.6**	-	2.0 U	-	**35.7 J-**	MSD
DC-14	DC-14-140602	06/02/2014	Primary	SXF0017	**95.9**	-	**26.3**	-	**5.37**	-	**83.2**	-	**56.1**	-	1.0 U	-	**6.46**	-	0.40 U	-	**24.2 J-**	MSD
DC-14	DC-14-140923	09/23/2014	Primary	SXI0158	**106**	-	**27.6**	-	**4.95**	-	**88.6 J+**	MSD	**63.7**	-	1.0 U	-	**8.90**	-	0.40 U	-	**25.9**	-
DC-14	DC-14-141216	12/16/2014	Primary	SXL0108	**110**	-	**31.5**	-	**5.57**	-	**84.5**	-	**74.4**	-	1.0 U	-	**10.4**	-	0.40 U	-	**29.8**	-
DC-14	DC-14-150316	03/16/2015	Primary	5904541	**140**	-	**38**	-	**6.1**	-	**100**	-	**80**	-	1.0 U	-	**18 J-**	MSD	0.40 U	-	**38 J-**	MSD
DC-14	DC-14-150616	06/16/2015	Primary	59010961	**120**	-	**33**	-	**6.5 J+**	MSD	**85 J+**	MSD	**76**	-	1.0 U	-	**12**	-	0.40 U	-	**29**	-
DC-14	DC-14-150924	09/24/2015	Primary	59020391	**130**	-	**42**	-	**6.3**	-	**92**	-	**96**	-	1.0 U	-	**22 J+**	MSD	0.40 U	-	**42 J-**	MSD
DC-14	DC-14-151214	12/14/2015	Primary	59025351	**150**	-	**43**	-	**6.6**	-	**100**	-	**90**	-	1.0 U	-	**21**	-	0.40 U	-	**39**	-
DC-14	YVD-D1-151214	12/14/2015	Duplicate	59025351	**150**	-	**43**	-	**6.6**	-	**100**	-	**85**	-	0.50 U	-	**22**	-	0.20 U	-	**41**	-
DC-14	DC-14-160309	03/09/2016	Primary	59029711	**130**	-	**38**	-	**6.6**	-	**95**	-	**82**	-	1.0 U	-	**16**	-	0.40 U	-	**39 J+**	MSD
DC-14	DC-14-160620	6/20/2016	Primary	59037151	**120**	-	**36**	-	**6**	-	**92**	-	**75**	-	1 U	-	**16**	-	0.4 U	-	**38**	-
DC-14	DC-14-160929	9/29/2016	Primary	K1611704	**97.2**	-	**28.9**	-	**4.75**	-	**74.9**	-	**56.4**	-	**0.30**	-	**7.19**	-	0.1 U	-	**23.1**	-
DC-14	DC-14-161216	12/16/2016	Primary	K1615174	**93.3**	-	**22.3**	-	**4.37**	-	**68.8**	-	**53.9**	-	**0.36**	-	**4.45**	-	0.1 U	-	**21.9**	-
Equipment Blank	YVD-EB-130918	09/18/2013	Equipment Blank	SWI0123	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-130925	09/25/2013	Equipment Blank	SWI0175	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-131212	12/12/2013	Equipment Blank	SWL0078	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-140317	03/17/2014	Equipment Blank	SXC0081	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-140318	03/18/2014	Equipment Blank	SXC0095	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-140319	03/19/2014	Equipment Blank	SXC0107	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-140604	06/04/2014	Equipment Blank	SXF0025	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	**1.46**	-	0.50 U	-	0.20 U	-	0.20 U	-	**1.24**	-
Equipment Blank	YVD-EB-140924	09/24/2014	Equipment Blank	SXI0173	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-141217	12/17/2014	Equipment Blank	SXL0144	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	**0.9**	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-150617	06/17/2015	Equipment Blank	59011021	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-150925	09/25/2015	Equipment Blank	59020431	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-151216	12/16/2015	Equipment Blank	59025501	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-160310	03/10/2016	Equipment Blank	59029941	1.0 U	-	0.50 U	-	1.0 U	-	**1.1**	-	**1.1**	-	**0.67**	-	0.20 U	-	0.20 U	-	0.50 U	-
Equipment Blank	YVD-EB-160623	6/23/2016	Equipment Blank	59037371	1 U	-	0.5 U	-	1 U	-	0.5 U	-	0.8 U	-	0.5 U	-	0.2 U	-	0.2 U	-	0.5 U	-
Equipment Blank	YVD-EB-160926	9/26/2016	Equipment Blank	K1611506	**0.097**	-	**0.0346**	-	**0.100 J**	-	**0.130 J**	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Equipment Blank	YVD-EB-160927	9/27/2016	Equipment Blank	K1611629	**0.011 J**	-	**0.0004 J**	-	0.200 U	-	**0.040 J**	-	0.1 U	-	0.1 U	-	0.05 UJ	-	0.05 UJ	-	**0.08 J**	-
Equipment Blank	YVD-EB-160928	9/28/2016	Equipment Blank	K1611629	**0.05 J**	-	0.05 U	-	0.200 U	-	**0.040 J**	-	**0.03 J**	-	0.1 U	-	0.05 U	-	0.05 U	-	**0.51**	-
Equipment Blank	YVD-EB1-161214	12/14/2016	Equipment Blank	K1615083	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Equipment Blank	YVD-EB2-161215	12/15/2016	Equipment Blank	K1615126	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Equipment Blank	YVD-EB3-161216	12/16/2016	Equipment Blank	K1615174	0.035 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	**0.4**	-
Field Blank	YVD-F1-130916	09/16/2013	Field Blank	SWI0113	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	**0.530**	-
Field Blank	YVD-F2-130917	09/17/2013	Field Blank	SWI0113	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	**0.510**	-
Field Blank	YVD-F3-130918	09/18/2013	Field Blank	SWI0123	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-130918	09/18/2013	Field Blank	SWI0138	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-

Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
DC-14	DC-14-140318	03/18/2014	Primary	SXC0095	0.10 U	-	0.25 U	-	**0.26**	-	-	-	-	-	**494**	-	**495**	-
DC-14	DC-14-140602	06/02/2014	Primary	SXF0017	0.10 U	-	**0.367**	-	**0.42 J+**	FBK	-	-	-	-	**425**	-	**425**	-
DC-14	DC-14-140923	09/23/2014	Primary	SXI0158	0.10 R	MSD	**0.315**	-	**0.30**	-	-	-	-	-	**424**	-	**425**	-
DC-14	DC-14-141216	12/16/2014	Primary	SXL0108	0.10 U	-	0.25 U	-	**0.14**	-	-	-	-	-	**429**	-	**430**	-
DC-14	DC-14-150316	03/16/2015	Primary	5904541	**0.16**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**490**	-	**490**	-
DC-14	DC-14-150616	06/16/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	**0.30**	-	-	-	-	-	**430**	-	**430**	-
DC-14	DC-14-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	**0.31**	-	-	-	-	-	**470**	-	**470**	-
DC-14	DC-14-151214	12/14/2015	Primary	59025351	0.10 R	MSD	0.25 UJ	MSD	**0.35**	-	-	-	-	-	**550**	-	**550**	-
DC-14	YVD-D1-151214	12/14/2015	Duplicate	59025351	0.10 R	MSD	0.25 UJ	MSD	**0.38**	-	-	-	-	-	**540**	-	**540**	-
DC-14	DC-14-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	**0.33**	-	-	-	-	-	**490**	-	**490**	-
DC-14	DC-14-160620	6/20/2016	Primary	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**460**	-	**460**	-
DC-14	DC-14-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U	-	**0.009 J**	-	-	-	-	-	**394**	-	**394**	-
DC-14	DC-14-161216	12/16/2016	Primary	K1615174	0.05 U	-	0.5 U	-	**0.014**	-	-	-	-	-	**361**	-	**361**	-
Equipment Blank	YVD-EB-130918	09/18/2013	Equipment Blank	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-130925	09/25/2013	Equipment Blank	SWI0175	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-131212	12/12/2013	Equipment Blank	SWL0078	0.02 U	-	0.20 U	-	-	-	-	-	0.06 U	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-140317	03/17/2014	Equipment Blank	SXC0081	**0.124**	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-140318	03/18/2014	Equipment Blank	SXC0095	**0.13**	-	0.25 U	-	**0.050**	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-140319	03/19/2014	Equipment Blank	SXC0107	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-140604	06/04/2014	Equipment Blank	SXF0025	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-140924	09/24/2014	Equipment Blank	SXI0173	0.10 U	-	**1.20**	-	**0.062**	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-141217	12/17/2014	Equipment Blank	SXL0144	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-150617	06/17/2015	Equipment Blank	59011021	0.10 U	-	**0.37**	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Equipment Blank	YVD-EB-150925	09/25/2015	Equipment Blank	59020431	**0.10**	-	**0.38**	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Equipment Blank	YVD-EB-151216	12/16/2015	Equipment Blank	59025501	**0.12 J-**	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Equipment Blank	YVD-EB-160310	03/10/2016	Equipment Blank	59029941	0.10 U	-	**1.9**	-	0.25 U	-	-	-	-	-	**15**	-	**15**	-
Equipment Blank	YVD-EB-160623	6/23/2016	Equipment Blank	59037371	0.1 U	-	**0.43**	-	0.25 U	-	-	-	-	-	**5**	-	**5**	-
Equipment Blank	YVD-EB-160926	9/26/2016	Equipment Blank	K1611506	0.05 U	-	R	MSD	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Equipment Blank	YVD-EB-160927	9/27/2016	Equipment Blank	K1611629	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Equipment Blank	YVD-EB-160928	9/28/2016	Equipment Blank	K1611629	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Equipment Blank	YVD-EB1-161214	12/14/2016	Equipment Blank	K1615083	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Equipment Blank	YVD-EB2-161215	12/15/2016	Equipment Blank	K1615126	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Equipment Blank	YVD-EB3-161216	12/16/2016	Equipment Blank	K1615174	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Field Blank	YVD-F1-130916	09/16/2013	Field Blank	SWI0113	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-130917	09/17/2013	Field Blank	SWI0113	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-130918	09/18/2013	Field Blank	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-130918	09/18/2013	Field Blank	SWI0138	**0.120**	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
Field Blank	YVD-F5-130919	09/19/2013	Field Blank	SWI0142	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	-	-	-	-	0.50 U	-
Field Blank	YVD-F6-130923	09/23/2013	Field Blank	SWI0178	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	-	-	-	-	-	-	-	-	-	-
Field Blank	YVD-F7-130924	09/24/2013	Field Blank	SWI0175	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F7-130926	09/26/2013	Field Blank	SWI0190	-	-	-	-	-	-	-	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-131209	12/09/2013	Field Blank	SWL0055	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-131210	12/10/2013	Field Blank	SWL0063	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-131211	12/11/2013	Field Blank	SWL0073	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-131212	12/12/2013	Field Blank	SWL0078	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-140316	03/16/2014	Field Blank	SXC0081	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-140317	03/17/2014	Field Blank	SXC0095	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-140318	03/18/2014	Field Blank	SXC0107	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-140319	03/19/2014	Field Blank	SXC0107	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-140601	06/01/2014	Field Blank	SXF0008	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-140602	06/02/2014	Field Blank	SXF0017	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-140603	06/03/2014	Field Blank	SXF0025	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-140921	09/21/2014	Field Blank	SXI0148	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-140922	09/22/2014	Field Blank	SXI0148	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-140923	09/23/2014	Field Blank	SXI0158	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-140924	09/24/2014	Field Blank	SXI0173	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-141215	12/15/2014	Field Blank	SXL0103	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 UJ	DUP	0.20 U	-	0.50 UJ	DUP
Field Blank	YVD-F2-141215	12/15/2014	Field Blank	SXL0108	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-141216	12/16/2014	Field Blank	SXL0121	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-141217	12/17/2014	Field Blank	SXL0144	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 R	HTQ	0.20 R	HTQ	0.50 U	-
Field Blank	YVD-F1-150315	03/15/2015	Field Blank	5904471	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-150316	03/16/2015	Field Blank	5904541	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-150317	03/17/2015	Field Blank	5904651	**1.2**	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-150615	06/15/2015	Field Blank	59010751	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-150616	06/16/2015	Field Blank	59010961	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-150617	06/17/2015	Field Blank	59011021	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-150922	09/22/2015	Field Blank	59020141	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-150923	09/23/2015	Field Blank	59020281	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-150923	09/23/2015	Field Blank	59020391	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-150924	09/24/2015	Field Blank	59020391	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F5-150925	09/25/2015	Field Blank	59020431	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-151213	12/13/2015	Field Blank	59025351	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-151214	12/14/2015	Field Blank	59025431	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-151215	12/15/2015	Field Blank	59025501	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-

Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
Field Blank	YVD-F5-130919	09/19/2013	Field Blank	SWI0142	0.10 U	-	**0.373**	-	-	-	**0.243**	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F6-130923	09/23/2013	Field Blank	SWI0178	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F7-130924	09/24/2013	Field Blank	SWI0175	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F7-130926	09/26/2013	Field Blank	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field Blank	YVD-F1-131209	12/09/2013	Field Blank	SWL0055	0.02 U	-	**0.33**	-	-	-	-	-	0.06 U	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-131210	12/10/2013	Field Blank	SWL0063	0.02 U	-	**3.7**	-	-	-	-	-	0.06 U	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-131211	12/11/2013	Field Blank	SWL0073	0.02 U	-	**0.43**	-	-	-	-	-	0.06 U	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-131212	12/12/2013	Field Blank	SWL0078	0.02 U	-	0.20 U	-	-	-	-	-	0.06 U	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-140316	03/16/2014	Field Blank	SXC0081	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-140317	03/17/2014	Field Blank	SXC0095	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-140318	03/18/2014	Field Blank	SXC0107	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-140319	03/19/2014	Field Blank	SXC0107	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-140601	06/01/2014	Field Blank	SXF0008	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	**4.25**	-	**4.25**	-
Field Blank	YVD-F2-140602	06/02/2014	Field Blank	SXF0017	0.10 U	-	0.25 U	-	**0.061**	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-140603	06/03/2014	Field Blank	SXF0025	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-140921	09/21/2014	Field Blank	SXI0148	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-140922	09/22/2014	Field Blank	SXI0148	0.10 U	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-140923	09/23/2014	Field Blank	SXI0158	**0.128**	-	0.25 U	-	0.05 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-140924	09/24/2014	Field Blank	SXI0173	0.10 U	-	0.25 U	-	**0.054**	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-141215	12/15/2014	Field Blank	SXL0103	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-141215	12/15/2014	Field Blank	SXL0108	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-141216	12/16/2014	Field Blank	SXL0121	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-141217	12/17/2014	Field Blank	SXL0144	**0.101**	-	0.25 U	-	0.10 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-150315	03/15/2015	Field Blank	5904471	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**15**	-	**15**	-
Field Blank	YVD-F2-150316	03/16/2015	Field Blank	5904541	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**7.5**	-	**7.5**	-
Field Blank	YVD-F3-150317	03/17/2015	Field Blank	5904651	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**4.5**	-	**4.5**	-
Field Blank	YVD-F1-150615	06/15/2015	Field Blank	59010751	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**10**	-	**10**	-
Field Blank	YVD-F2-150616	06/16/2015	Field Blank	59010961	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Field Blank	YVD-F3-150617	06/17/2015	Field Blank	59011021	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Field Blank	YVD-F1-150922	09/22/2015	Field Blank	59020141	0.10 U	-	**0.26**	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-150923	09/23/2015	Field Blank	59020281	0.10 U	-	0.25 U	-	**0.26**	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-150923	09/23/2015	Field Blank	59020391	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-150924	09/24/2015	Field Blank	59020391	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F5-150925	09/25/2015	Field Blank	59020431	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F1-151213	12/13/2015	Field Blank	59025351	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Field Blank	YVD-F2-151214	12/14/2015	Field Blank	59025431	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Field Blank	YVD-F3-151215	12/15/2015	Field Blank	59025501	0.10 R	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
Field Blank	YVD-F4-151216	12/16/2015	Field Blank	59025501	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-160307	03/07/2016	Field Blank	59029521	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F2-160308	03/08/2016	Field Blank	59029711	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F3-160309	03/09/2016	Field Blank	59029941	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F4-160310	03/10/2016	Field Blank	59029941	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Field Blank	YVD-F1-160620	6/20/2016	Field Blank	59037101	1 U	-	0.5 U	-	1 U	-	0.5 U	-	0.8 U	-	0.5 U	-	0.2 U	-	0.2 U	-	0.5 U	-
Field Blank	YVD-F2-160621	6/21/2016	Field Blank	59037151	1 U	-	0.5 U	-	1 U	-	0.5 U	-	0.8 U	-	0.5 U	-	0.2 U	-	0.2 U	-	0.5 U	-
Field Blank	YVD-F3-160622	6/22/2016	Field Blank	59037271	1 U	-	0.5 U	-	1 U	-	0.5 U	-	0.8 U	-	0.5 U	-	0.2 U	-	0.2 U	-	0.5 U	-
Field Blank	YVD-F4-160623	6/23/2016	Field Blank	59037371	1 U	-	0.5 U	-	1 U	-	0.5 U	-	0.8 U	-	0.5 U	-	0.2 U	-	0.2 U	-	0.5 U	-
Field Blank	YVD-FB-160926	9/26/2016	Field Blank	K1611506	0.020 U	-	**0.0025 J**	-	**0.080 J**	-	**0.030 J**	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Field Blank	YVD-FB-160927	9/27/2016	Field Blank	K1611565	0.020 U	-	0.05 U	-	0.200 U	-	0.200 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Field Blank	YVD-FB-160928	9/28/2016	Field Blank	K1611629	**0.05 J**	-	0.05 U	-	0.200 U	-	**0.050 J**	-	0.1 U	-	0.1 U	-	0.05 U	-	0.05 U	-	**3.61**	-
Field Blank	YVD-FB-160929	9/29/2016	Field Blank	K1611698	**0.07 J**	-	0.05 U	-	0.200 U	-	**0.050 J**	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Field Blank	YVD-FB1-161212	12/12/2016	Field Blank	K1615029	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 UJ	-	0.2 U	-
Field Blank	YVD-FB2-161213	12/13/2016	Field Blank	K1615045	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Field Blank	YVD-FB3-161214	12/14/2016	Field Blank	K1615083	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	**0.35**	-
Field Blank	YVD-FB4-161215	12/15/2016	Field Blank	K1615126	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Field Blank	YVD-FB5-161216	12/16/2016	Field Blank	K1615174	0.021 U	-	0.0053 U	-	0.21 U	-	0.21 U	-	0.2 U	-	0.2 U	-	0.1 U	-	0.1 U	-	0.2 U	-
Blank Check	WW-1	4/25/2016	Blank Check	59032861	1.7 U	-	0.83 U	-	**190**	-	**400**	-	160 U	-	100 U	-	40 U	-	40 U	-	100 U	-
Blank Check	DW-1	4/25/2016	Blank Check	59032861	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
Blank Check	DI-1	4/25/2016	Blank Check	59032861	1.0 U	-	0.50 U	-	1.0 U	-	0.50 U	-	0.80 U	-	0.50 U	-	0.20 U	-	0.20 U	-	0.50 U	-
YVD-02	YVD-02-130924	09/24/2013	Primary	SWI0178	**20.4**	-	**5.89**	-	**3.50**	-	**8.56**	-	**3.85**	-	0.50 U	-	**0.410**	-	0.20 U	-	**5.77**	-
YVD-02	YVD-02-140316	03/16/2014	Primary	SXC0081	**90.8**	-	**71.7**	-	**12.6**	-	**88.6**	-	**3.93**	-	**1.02**	-	0.20 U	-	0.20 U	-	**66.9**	-
YVD-02	YVD-02-140602	06/02/2014	Primary	SXF0008	**62.7**	-	**48.7**	-	**8.53**	-	**23.0**	-	**2.75**	-	0.50 U	-	0.20 U	-	0.20 U	-	**3.12**	-
YVD-02	YVD-02-140921	09/21/2014	Primary	SXI0148	**29.6**	-	**13.7 J**	FDP	**4.53**	-	**11.6 J**	FDP	**2.64**	-	0.50 U	-	0.20 U	-	0.20 U	-	**13.8**	-
YVD-02	YVD-D1-140921	09/21/2014	Duplicate	SXI0148	**35.8**	-	**18.2 J**	FDP	**5.05**	-	**15.7 J**	FDP	**2.20**	-	0.50 U	-	0.20 U	-	0.20 U	-	**15.6**	-
YVD-02	YVD-02-141215	12/15/2014	Primary	SXL0103	**35.7**	-	**17.4**	-	**5.35**	-	**16.1**	-	**2.90 J+**	MSD	0.50 U	-	**0.220 J**	DUP	0.20 U	-	**33.6 J+**	MSD, DUP
YVD-02	YVD-02-150615	06/15/2015	Primary	59010751	**32 J+**	MSD	**16 J+**	MSD	**4.1 J+**	MSD	**12 J+**	MSD	**2.6**	-	0.50 U	-	**0.23**	-	0.20 U	-	**3.2 J-**	MSD
YVD-02	YVD-02-150923	09/23/2015	Primary	59020281	**28**	-	**17**	-	**4.8**	-	**14**	-	**2.5**	-	0.50 U	-	0.20 U	-	0.20 U	-	**9.5**	-
YVD-02	YVD-02-151214	12/14/2015	Primary	59025351	**38**	-	**23**	-	**6.3**	-	**25**	-	**2.6**	-	0.50 U	-	0.20 U	-	0.20 U	-	**24**	-
YVD-02	YVD-02-160308	03/08/2016	Primary	59029521	**32**	-	**20**	-	**5.8**	-	**22**	-	**3.0**	-	**0.57**	-	0.20 U	-	0.20 U	-	**54**	-
YVD-02	YVD-02-160620	6/20/2016	Primary	59037101	**25**	-	**10**	-	**4.2**	-	**9.7**	-	**2.9**	-	0.5 U	-	**0.31**	-	0.2 U	-	**8 J-**	MSD
YVD-02	YVD-02-160928	9/28/2016	Primary	K1611629	**17.2**	-	**4.64**	-	**3.41**	-	**5.07**	-	**2.79 J**	-	**0.16 J**	-	**0.13**	-	0.1 U	-	**3.13**	-
YVD-03	YVD-03-130916	09/16/2013	Primary	SWI0113	**57.5**	-	**24.3**	-	**9.00**	-	**43.0**	-	**14.0**	-	**0.740**	-	**4.75**	-	**0.490**	-	**70.7**	-
YVD-03	YVD-03-131210	12/10/2013	Primary	SWL0063	**48.7**	-	**20.4**	-	**6.67**	-	**40.2**	-	**14.3**	-	1.0 U	-	**5.96**	-	0.40 U	-	**54.8 J-**	MSD
YVD-03	YVD-03-140317	03/17/2014	Primary	SXC0081	**51.2**	-	**18.2**	-	**4.10**	-	**37.6**	-	**13.3**	-	**1.03**	-	**4.75**	-	0.20 U	-	**38.0**	-
YVD-03	YVD-03-140602	06/02/2014	Primary	SXF0008	**46.4**	-	**16.8**	-	**3.93**	-	**36.8**	-	**10.7**	-	0.50 U	-	**3.86**	-	0.20 U	-	**36.0**	-

Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
Field Blank	YVD-F4-151216	12/16/2015	Field Blank	59025501	0.10 R	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**5.0**	-	**5.0**	-
Field Blank	YVD-F1-160307	03/07/2016	Field Blank	59029521	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F2-160308	03/08/2016	Field Blank	59029711	**0.19**	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F3-160309	03/09/2016	Field Blank	59029941	0.10 U	-	**0.30**	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Field Blank	YVD-F4-160310	03/10/2016	Field Blank	59029941	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**13**	-	**13**	-
Field Blank	YVD-F1-160620	6/20/2016	Field Blank	59037101	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**5**	-	**5**	-
Field Blank	YVD-F2-160621	6/21/2016	Field Blank	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4 U	-	4 U	-
Field Blank	YVD-F3-160622	6/22/2016	Field Blank	59037271	**0.22**	-	**0.36**	-	0.25 U	-	-	-	-	-	**5**	-	**5**	-
Field Blank	YVD-F4-160623	6/23/2016	Field Blank	59037371	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**10**	-	**10**	-
Field Blank	YVD-FB-160926	9/26/2016	Field Blank	K1611506	0.05 U	-	R	MSD	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Field Blank	YVD-FB-160927	9/27/2016	Field Blank	K1611565	0.05 U	-	R	MSD	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Field Blank	YVD-FB-160928	9/28/2016	Field Blank	K1611629	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	15 U	-	15 U	-
Field Blank	YVD-FB-160929	9/29/2016	Field Blank	K1611698	0.05 U	-	R	MSD	0.01 U	-	-	-	-	-	2 U	-	2 U	-
Field Blank	YVD-FB1-161212	12/12/2016	Field Blank	K1615029	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Field Blank	YVD-FB2-161213	12/13/2016	Field Blank	K1615045	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Field Blank	YVD-FB3-161214	12/14/2016	Field Blank	K1615083	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Field Blank	YVD-FB4-161215	12/15/2016	Field Blank	K1615126	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Field Blank	YVD-FB5-161216	12/16/2016	Field Blank	K1615174	0.05 U	-	0.5 U	-	0.01 U	-	-	-	-	-	2.0 U	-	2.0 U	-
Blank Check	WW-1	4/25/2016	Blank Check	59032861	**0.33**	-	**1.4**	-	0.25 U	-	-	-	-	-	**110**	-	**110**	-
Blank Check	DW-1	4/25/2016	Blank Check	59032861	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
Blank Check	DI-1	4/25/2016	Blank Check	59032861	0.10 U	-	0.25 U	-	0.25 U	-	-	-	-	-	4.0 U	-	4.0 U	-
YVD-02	YVD-02-130924	09/24/2013	Primary	SWI0178	**0.146**	-	0.25 U	-	-	-	**0.124**	-	-	-	**54.9**	-	**55.0**	-
YVD-02	YVD-02-140316	03/16/2014	Primary	SXC0081	0.10 U	-	0.25 U	-	**0.54**	-	-	-	-	-	**199**	-	**200**	-
YVD-02	YVD-02-140602	06/02/2014	Primary	SXF0008	0.10 U	-	**0.490**	-	**3.8**	-	-	-	-	-	**82.2**	-	**82.5**	-
YVD-02	YVD-02-140921	09/21/2014	Primary	SXI0148	0.10 U	-	**0.274**	-	**0.86 J**	FDP	-	-	-	-	**89.4**	-	**90.0**	-
YVD-02	YVD-D1-140921	09/21/2014	Duplicate	SXI0148	0.10 U	-	0.25 U	-	**1.2 J**	FDP	-	-	-	-	**89.4**	-	**90.0**	-
YVD-02	YVD-02-141215	12/15/2014	Primary	SXL0103	0.10 U	-	**0.358**	-	**0.61**	-	-	-	-	-	**94.7**	-	**95.0**	-
YVD-02	YVD-02-150615	06/15/2015	Primary	59010751	**0.11**	-	0.25 UJ	MSD	**1.1**	-	-	-	-	-	**75 J+**	FBK	**75 J+**	FBK
YVD-02	YVD-02-150923	09/23/2015	Primary	59020281	0.10 U	-	**0.25 J-**	MSD	**1.0 J+**	FBK	-	-	-	-	**95**	-	**95**	-
YVD-02	YVD-02-151214	12/14/2015	Primary	59025351	0.10 R	MSD	**0.76 J-**	MSD	**0.68**	-	-	-	-	-	**100**	-	**100**	-
YVD-02	YVD-02-160308	03/08/2016	Primary	59029521	0.10 UJ	RPD	**0.25 J-**	MSD	**0.59**	-	-	-	-	-	**110 J**	FDP	**110 J**	FDP
YVD-02	YVD-02-160620	6/20/2016	Primary	59037101	0.1 U	-	**0.35 J-**	MSD	**0.52**	-	-	-	-	-	**75**	-	**75**	-
YVD-02	YVD-02-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U	-	**0.092**	-	-	-	-	-	**72**	-	**72**	-
YVD-03	YVD-03-130916	09/16/2013	Primary	SWI0113	0.10 U	-	**0.488**	-	-	-	**0.890**	-	-	-	**209**	-	**210**	-
YVD-03	YVD-03-131210	12/10/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**1.02**	-	**214**	-	**215**	-
YVD-03	YVD-03-140317	03/17/2014	Primary	SXC0081	**0.249**	-	0.25 U	-	**0.23**	-	-	-	-	-	**219**	-	**220**	-
YVD-03	YVD-03-140602	06/02/2014	Primary	SXF0008	0.10 U	-	**0.261**	-	**0.30**	-	-	-	-	-	**206**	-	**208**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-03	YVD-03-140923	09/23/2014	Primary	SXI0158	**52.2**	-	**19.5**	-	**4.66 J**	FDP	**40.7 J+**	MSD	**11.8**	-	**0.620**	-	**3.97**	-	0.20 U	-	**34.7**	-
YVD-03	YVD-D3-140923	09/23/2014	Duplicate	SXI0158	**45.4**	-	**16.2**	-	**3.62 J**	FDP	**38.0 J+**	MSD	**12.1**	-	**0.650**	-	**4.04**	-	0.20 U	-	**34.4**	-
YVD-03	YVD-03-141215	12/15/2014	Primary	SXL0108	**51.7**	-	**19.3**	-	**4.47**	-	**39.1**	-	**12.9**	-	**0.540**	-	**4.27**	-	0.20 U	-	**37.0**	-
YVD-03	YVD-03-150316	03/16/2015	Primary	5904541	**46**	-	**17**	-	**3.9**	-	**39**	-	**13**	-	**0.84**	-	**4.1 J-**	MSD	0.20 U	-	**33 J-**	MSD
YVD-03	YVD-03-150616	06/16/2015	Primary	59010751	**50 J+**	MSD	**20 J+**	MSD	**6.1 J+**	MSD	**37 J+**	MSD	**12**	-	**0.68**	-	**4.0**	-	0.20 U	-	**41 J-**	MSD
YVD-03	YVD-03-150922	09/22/2015	Primary	59020141	**43**	-	**19**	-	**6.5**	-	**40**	-	**14**	-	**0.66**	-	**4.9**	-	0.20 U	-	**51**	-
YVD-03	YVD-03-151214	12/14/2015	Primary	59025351	**49**	-	**22**	-	**7.8**	-	**43**	-	**14**	-	**0.74**	-	**4.9**	-	0.20 U	-	**51**	-
YVD-03	YVD-03-160307	03/07/2016	Primary	59029521	**43**	-	**20**	-	**7.1**	-	**40**	-	**13**	-	**0.72**	-	**4.6**	-	0.20 U	-	**47**	-
YVD-03	YVD-03-160620	6/20/2016	Primary	59037151	**46**	-	**21**	-	**7.7**	-	**40**	-	**14**	-	**0.76**	-	**4.6**	-	0.2 U	-	**61**	-
YVD-03	YVD-03-160929	9/29/2016	Primary	K1611758	**43.2**	-	**18.3**	-	**6.89**	-	**41.4**	-	**11.7**	-	**0.61**	-	**4.39**	-	0.1 U	-	**44.4**	-
YVD-03	YVD-03-161213	12/13/2016	Primary	K1615045	**40.0**	-	**17.4**	-	**6.57**	-	**38.9**	-	**11.6**	-	**0.69**	-	**4.47**	-	0.1 U	-	**43.3**	-
YVD-04	YVD-04-130916	09/16/2013	Primary	SWI0113	**37.4**	-	**11.2**	-	**4.23**	-	**49.2**	-	**14.9**	-	0.50 U	-	**4.45**	-	0.20 U	-	**39.1**	-
YVD-04	YVD-04-131210	12/10/2013	Primary	SWL0063	**38.2**	-	**11.7**	-	**4.44**	-	**49.9**	-	**15.0**	-	1.0 U	-	**4.64**	-	0.40 U	-	**42.2 J-**	MSD
YVD-04	YVD-04-140317	03/17/2014	Primary	SXC0081	**37.7**	-	**11.6**	-	**4.46**	-	**47.8**	-	**15.1**	-	**0.630**	-	**4.03**	-	0.20 U	-	**35.2**	-
YVD-04	YVD-04-140602	06/02/2014	Primary	SXF0008	**36.8**	-	**11.5**	-	**4.41**	-	**50.5**	-	**14.3**	-	1.0 U	-	**3.78**	-	0.40 U	-	**36.2**	-
YVD-04	YVD-04-140923	09/23/2014	Primary	SXI0158	**37.8**	-	**11.5**	-	**4.49**	-	**52.2 J+**	MSD	**15.3**	-	0.50 U	-	**3.87**	-	0.20 U	-	**35.8**	-
YVD-04	YVD-04-141215	12/15/2014	Primary	SXL0108	**38.8**	-	**12.4**	-	**4.62**	-	**50.0**	-	**15.2**	-	0.50 U	-	**3.81**	-	0.20 U	-	**35.8**	-
YVD-04	YVD-04-150315	03/15/2015	Primary	5904471	**38**	-	**12**	-	**4.7**	-	**52**	-	**16**	-	0.50 U	-	**4.3**	-	0.20 U	-	**34**	-
YVD-04	YVD-04-150615	06/15/2015	Primary	59010751	**38 J+**	MSD	**8.5 J+**	MSD	**4.7 J+**	MSD	**49 J+**	MSD	**15**	-	0.50 U	-	**4.0**	-	0.20 U	-	**34 J-**	MSD
YVD-04	YVD-04-150922	09/22/2015	Primary	59020141	**36**	-	**11**	-	**4.6**	-	**51**	-	**15**	-	0.50 U	-	**3.9**	-	0.20 U	-	**35**	-
YVD-04	YVD-04-151213	12/13/2015	Primary	59025351	**39**	-	**12**	-	**4.9**	-	**53**	-	**15**	-	0.50 U	-	**4.1**	-	0.20 U	-	**36**	-
YVD-04	YVD-04-160307	03/07/2016	Primary	59029521	**36**	-	**12**	-	**4.6**	-	**51**	-	**14**	-	0.50 U	-	**3.7**	-	0.20 U	-	**34**	-
YVD-04	YVD-04-160620	6/20/2016	Primary	59037101	**36**	-	**12**	-	**4.8**	-	**53**	-	**15**	-	0.5 U	-	**4**	-	0.2 U	-	**35 J-**	MSD
YVD-04	YVD-D1-160620	6/20/2016	Duplicate	59037101	**35**	-	**12**	-	**4.5**	-	**51**	-	**15**	-	0.5 U	-	**4**	-	0.2 U	-	**36 J-**	MSD
YVD-04	YVD-04-160928	9/28/2016	Primary	K1611629	**34.7**	-	**10.7**	-	**4.42**	-	**48.5**	-	**13.2**	-	**0.21**	-	**3.67**	-	0.1 U	-	**31.4**	-
YVD-04	YVD-04-D3-160928	9/28/2016	Duplicate	K1611629	**34.7**	-	**10.9**	-	**4.49**	-	**49.9**	-	**13.2**	-	**0.20**	-	**3.68**	-	0.1 U	-	**32.2**	-
YVD-04	YVD-04-161213	12/13/2016	Primary	K1615045	**35.2**	-	**10.9**	-	**4.43**	-	**47.5**	-	**13.2**	-	**0.23**	-	**3.74**	-	0.1 U	-	**31.7**	-
YVD-05	YVD-05-130917	09/17/2013	Primary	SWI0113	**66.0**	-	**31.0**	-	**6.95**	-	**46.2**	-	**10.2**	-	0.50 U	-	**4.90**	-	0.20 U	-	**76.8**	-
YVD-05	YVD-05-131211	12/11/2013	Primary	SWL0063	**41.5**	-	**17.0**	-	**3.33**	-	**45.5**	-	**10.0**	-	1.0 U	-	**4.36**	-	0.40 U	-	**68.4 J-**	MSD
YVD-05	YVD-05-140317	03/17/2014	Primary	SXC0081	**33.7**	-	**13.5**	-	**2.75**	-	**43.1**	-	**8.40**	-	**1.30**	-	**3.30**	-	0.40 U	-	**52.7**	-
YVD-05	YVD-05-140601	06/01/2014	Primary	SXF0008	**30.8**	-	**13.2**	-	**2.84**	-	**43.9**	-	**8.40**	-	1.0 U	-	**3.00**	-	0.40 U	-	**50.5**	-
YVD-05	YVD-05-140922	09/22/2014	Primary	SXI0148	**31.6**	-	**13.7**	-	**2.75**	-	**45.1**	-	**7.60**	-	1.0 U	-	**2.82**	-	0.40 U	-	**48.1**	-
YVD-05	YVD-05-141215	12/15/2014	Primary	SXL0103	**36.9**	-	**17.0**	-	**4.21**	-	**45.5**	-	**4.56 J+**	MSD, FDP	1.0 U	-	**1.50 J**	FDP, DUP	0.40 U	-	**27.7 J+**	MSD, FDP, DUP
YVD-05	YVD-D1-141215	12/15/2014	Duplicate	SXL0103	**34.2**	-	**15.0**	-	**3.54**	-	**44.9**	-	**7.80 J+**	MSD, FDP	0.50 U	-	**2.65 J**	FDP, DUP	0.20 U	-	**46.0 J+**	MSD, FDP, DUP
YVD-05	YVD-05-150316	03/16/2015	Primary	5904471	**33**	-	**15**	-	**3.6**	-	**47**	-	**8.0**	-	1.0 U	-	**2.8**	-	0.40 U	-	**47**	-
YVD-05	YVD-05-150616	06/16/2015	Primary	59010751	**35 J+**	MSD	**16 J+**	MSD	**4.0 J+**	MSD	**47 J+**	MSD	**8.9**	-	1.0 U	-	**3.1**	-	0.40 U	-	**49 J-**	MSD
YVD-05	YVD-05-150922	09/22/2015	Primary	59020281	**42**	-	**20**	-	**4.9**	-	**51**	-	**8.8**	-	1.0 U	-	**3.0**	-	0.40 U	-	**51**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-03	YVD-03-140923	09/23/2014	Primary	SXI0158	0.10 R	MSD	0.25 U	-	**0.33 J**	FDP	-	-	-	-	**199**	-	**200**	-
YVD-03	YVD-D3-140923	09/23/2014	Duplicate	SXI0158	0.10 R	MSD	0.25 U	-	**0.24 J**	FDP	-	-	-	-	**199**	-	**200**	-
YVD-03	YVD-03-141215	12/15/2014	Primary	SXL0108	0.10 U	-	**0.40**	-	**0.76**	-	-	-	-	-	**199**	-	**200**	-
YVD-03	YVD-03-150316	03/16/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**210**	-	**210**	-
YVD-03	YVD-03-150616	06/16/2015	Primary	59010751	**0.12**	-	0.25 UJ	MSD	**0.59**	-	-	-	-	-	**200**	-	**200**	-
YVD-03	YVD-03-150922	09/22/2015	Primary	59020141	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**220**	-	**220**	-
YVD-03	YVD-03-151214	12/14/2015	Primary	59025351	0.10 R	MSD	0.25 UJ	MSD	**0.78**	-	-	-	-	-	**230**	-	**230**	-
YVD-03	YVD-03-160307	03/07/2016	Primary	59029521	0.10 UJ	RPD	0.25 UJ	MSD	**0.34**	-	-	-	-	-	**150 J**	FDP	**150 J**	FDP
YVD-03	YVD-03-160620	6/20/2016	Primary	59037151	0.1 U	-	0.25 U	-	**0.47**	-	-	-	-	-	**190**	-	**190**	-
YVD-03	YVD-03-160929	9/29/2016	Primary	K1611758	0.05 U	-	0.5 U	-	**0.047**	-	-	-	-	-	**196**	-	**196**	-
YVD-03	YVD-03-161213	12/13/2016	Primary	K1615045	0.05 U	-	0.5 U	-	**0.11**	-	-	-	-	-	**189**	-	**189**	-
YVD-04	YVD-04-130916	09/16/2013	Primary	SWI0113	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**184**	-	**185**	-
YVD-04	YVD-04-131210	12/10/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**0.112**	-	**203**	-	**205**	-
YVD-04	YVD-04-140317	03/17/2014	Primary	SXC0081	0.10 U	-	0.25 U	-	**0.078**	-	-	-	-	-	**209**	-	**210**	-
YVD-04	YVD-04-140602	06/02/2014	Primary	SXF0008	**0.113**	-	0.25 U	-	**0.053**	-	-	-	-	-	**191**	-	**193**	-
YVD-04	YVD-04-140923	09/23/2014	Primary	SXI0158	0.10 R	MSD	0.25 U	-	**0.061**	-	-	-	-	-	**188**	-	**190**	-
YVD-04	YVD-04-141215	12/15/2014	Primary	SXL0108	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	**188**	-	**190**	-
YVD-04	YVD-04-150315	03/15/2015	Primary	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**190**	-	**190**	-
YVD-04	YVD-04-150615	06/15/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**190**	-	**190**	-
YVD-04	YVD-04-150922	09/22/2015	Primary	59020141	**0.13**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**200**	-	**200**	-
YVD-04	YVD-04-151213	12/13/2015	Primary	59025351	0.10 R	MSD	0.25 UJ	MSD	**0.39**	-	-	-	-	-	**200**	-	**200**	-
YVD-04	YVD-04-160307	03/07/2016	Primary	59029521	0.10 UJ	RPD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**250 J**	FDP	**250 J**	FDP
YVD-04	YVD-04-160620	6/20/2016	Primary	59037101	0.1 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**190**	-	**190**	-
YVD-04	YVD-D1-160620	6/20/2016	Duplicate	59037101	0.1 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**180**	-	**180**	-
YVD-04	YVD-04-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U	-	**0.014**	-	-	-	-	-	**187**	-	**187**	-
YVD-04	YVD-04-D3-160928	9/28/2016	Duplicate	K1611629	0.05 U	-	0.5 U	-	**0.008 J**	-	-	-	-	-	**185**	-	**185**	-
YVD-04	YVD-04-161213	12/13/2016	Primary	K1615045	0.05 U	-	0.5 U	-	**0.026**	-	-	-	-	-	**181**	-	**181**	-
YVD-05	YVD-05-130917	09/17/2013	Primary	SWI0113	**0.112**	-	**0.435**	-	-	-	**1.62**	-	-	-	**184**	-	**185**	-
YVD-05	YVD-05-131211	12/11/2013	Primary	SWL0063	0.02 R	MSD	0.20 U	-	-	-	-	-	**0.462**	-	**174**	-	**175**	-
YVD-05	YVD-05-140317	03/17/2014	Primary	SXC0081	0.10 U	-	0.25 U	-	**0.14**	-	-	-	-	-	**174**	-	**175**	-
YVD-05	YVD-05-140601	06/01/2014	Primary	SXF0008	0.10 U	-	0.25 U	-	**0.15**	-	-	-	-	-	**164**	-	**165**	-
YVD-05	YVD-05-140922	09/22/2014	Primary	SXI0148	0.10 U	-	**0.259**	-	**0.20**	-	-	-	-	-	**159**	-	**160**	-
YVD-05	YVD-05-141215	12/15/2014	Primary	SXL0103	0.10 U	-	**0.272**	-	**0.44 J**	FDP	-	-	-	-	**154**	-	**155**	-
YVD-05	YVD-D1-141215	12/15/2014	Duplicate	SXL0103	0.10 U	-	**0.264**	-	**0.29 J**	FDP	-	-	-	-	**153**	-	**155**	-
YVD-05	YVD-05-150316	03/16/2015	Primary	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**160**	-	**160**	-
YVD-05	YVD-05-150616	06/16/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	**0.51**	-	-	-	-	-	**170**	-	**170**	-
YVD-05	YVD-05-150922	09/22/2015	Primary	59020281	0.10 U	-	0.25 R	MSD	**0.80**	-	-	-	-	-	**160**	-	**160**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-05	YVD-05-151214	12/14/2015	Primary	59025351	**37**	-	**17**	-	**4.3**	-	**52**	-	**7.9**	-	1.0 U	-	**2.8**	-	0.40 U	-	**48**	-
YVD-05	YVD-05-160307	03/07/2016	Primary	59029521	**32**	-	**15**	-	**3.6**	-	**48**	-	**8.3**	-	1.0 U	-	**2.7**	-	0.40 U	-	**47**	-
YVD-05	YVD-D1-160307	03/07/2016	Duplicate	59029521	**32**	-	**15**	-	**3.6**	-	**48**	-	**8.7**	-	**0.59**	-	**2.9**	-	0.20 U	-	**48**	-
YVD-05	YVD-05-160620	6/20/2016	Primary	59037151	**31**	-	**14**	-	**3.4**	-	**48**	-	**9.1**	-	1 U	-	**3**	-	0.4 U	-	**49**	-
YVD-05	YVD-05-160928	9/28/2016	Primary	K1611698	**32.1**	-	**13.8**	-	**3.54**	-	**48.5**	-	**8.37**	-	**0.44**	-	**3.12**	-	0.1 U	-	**46.7**	-
YVD-05	YVD-05-161215	12/15/2016	Primary	K1615174	**33.3**	-	**13.1**	-	**3.37**	-	**46.5**	-	**8.30**	-	**0.48**	-	**3.15**	-	0.1 U	-	**49.0**	-
YVD-06	YVD-06-130917	09/17/2013	Primary	SWI0113	**46.0**	-	**12.8**	-	**4.07**	-	**17.6**	-	**3.13**	-	0.50 U	-	**0.510**	-	0.20 U	-	**8.14**	-
YVD-06	YVD-06-131209	12/09/2013	Primary	SWL0055	**31.2 J**	FDP	**5.27 J**	FDP	**1.76**	-	**13.0 J**	FDP	**2.73**	-	0.50 U	-	**0.490 J**	FDP	0.20 U	-	**8.53**	-
YVD-06	YVD-D1-131209	12/09/2013	Duplicate	SWL0055	**38.9 J**	FDP	**6.55 J**	FDP	**2.24**	-	**16.5 J**	FDP	8.0 U	-	5.0 U	-	**6.40 J**	FDP	2.0 U	-	**9.10**	-
YVD-06	YVD-06-140316	03/16/2014	Primary	SXC0081	**40.1**	-	**7.59**	-	**2.68**	-	**16.2**	-	**3.47**	-	**0.580**	-	**0.610**	-	0.20 U	-	**8.33**	-
YVD-06	YVD-D1-140316	03/16/2014	Duplicate	SXC0081	**40.5**	-	**7.78**	-	**2.74**	-	**16.6**	-	**3.16**	-	**0.550**	-	**0.620**	-	0.20 U	-	**8.18**	-
YVD-06	YVD-06-140601	06/01/2014	Primary	SXF0008	**37.8**	-	**6.50**	-	**2.28**	-	**16.7**	-	**2.88 J**	DUP	0.50 U	-	**0.510**	-	0.20 U	-	**7.59**	-
YVD-06	YVD-D1-140601	06/01/2014	Duplicate	SXF0008	**38.3**	-	**6.56**	-	**2.30**	-	**16.9**	-	**2.95**	-	0.50 U	-	**0.560**	-	0.20 U	-	**7.63**	-
YVD-06	YVD-06-140921	09/21/2014	Primary	SXI0148	**41.3**	-	**8.52**	-	**2.69**	-	**17.4**	-	**2.45**	-	0.50 U	-	**0.440**	-	0.20 U	-	**7.98**	-
YVD-06	YVD-06-141215	12/15/2014	Primary	SXL0103	**40.3**	-	**7.83**	-	**2.58**	-	**16.9**	-	**2.50 J+**	MSD	0.50 U	-	**0.45 J**	DUP	0.20 U	-	**7.47 J+**	MSD, DUP
YVD-06	YVD-06-150316	03/16/2015	Primary	5904471	**38**	-	**6.8**	-	**2.2**	-	**17**	-	**2.8**	-	0.50 U	-	**0.99**	-	0.20 U	-	**10**	-
YVD-06	YVD-06-150616	06/16/2015	Primary	59010751	**40 J+**	MSD	**7.0 J+**	MSD	**2.2 J+**	MSD	**17 J+**	MSD	**2.7**	-	0.50 U	-	**0.53**	-	0.20 U	-	**7.9 J-**	MSD
YVD-06	YVD-06-150922	09/22/2015	Primary	59020141	**41**	-	**9.8**	-	**3.1**	-	**17**	-	**2.8**	-	0.50 U	-	**0.51**	-	0.20 U	-	**7.9**	-
YVD-06	YVD-06-151214	12/14/2015	Primary	59025351	**42**	-	**7.3**	-	**2.4**	-	**18**	-	**2.4**	-	0.50 U	-	**0.51**	-	0.20 U	-	**8.0**	-
YVD-06	YVD-06-160307	03/07/2016	Primary	59029521	**38**	-	**7.2**	-	**2.5**	-	**17**	-	**2.8**	-	0.50 U	-	**0.51**	-	0.20 U	-	**7.8**	-
YVD-06	YVD-06-160620	6/20/2016	Primary	59037151	**37**	-	**6.6**	-	**2.3**	-	**17**	-	**3.1**	-	0.5 U	-	**0.53**	-	0.2 U	-	**8.1**	-
YVD-06	YVD-06-160929	9/29/2016	Primary	K1611704	**35.7**	-	**6.12**	-	**2.26**	-	**17.1**	-	**2.64**	-	**0.20**	-	**0.55**	-	0.1 U	-	**8.55**	-
YVD-06	YVD-06-161215	12/15/2016	Primary	K1615126	**33.5**	-	**5.73**	-	**2.12**	-	**17.1**	-	**3.14**	-	**0.23**	-	**0.70**	-	0.1 U	-	**10.2**	-
YVD-07	YVD-07-130923	09/23/2013	Primary	SWI0178	**27.7**	-	**16.2**	-	**5.03**	-	**37.7**	-	-	-	-	-	-	-	-	-	-	-
YVD-07	YVD-07-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	**7.53**	-	0.50 U	-	**4.40**	-	0.20 U	-	**37.4**	-
YVD-07	YVD-07-131210	12/10/2013	Primary	SWL0055	**99.2**	-	**16.0**	-	1.0 U	-	**40.4**	-	**8.46**	-	**0.550**	-	**5.30**	-	0.20 U	-	**50.0**	-
YVD-07	YVD-07-140316	03/16/2014	Primary	SXC0081	**33.4**	-	**14.1**	-	**4.45**	-	**42.5**	-	**11.6**	-	**0.83**	-	**3.90**	-	0.20 U	-	**69.2**	-
YVD-07	YVD-07-140604	06/04/2014	Primary	SXF0025	**38.4**	-	**18.3**	-	**5.57**	-	**44.5**	-	**9.74**	-	1.0 U	-	**3.36**	-	0.40 U	-	**57.0**	-
YVD-07	YVD-07-140922	09/22/2014	Primary	SXI0158	**31.4**	-	**12.7**	-	**4.05**	-	**42.7 J+**	MSD	**10.3**	-	1.0 U	-	**5.52**	-	0.40 U	-	**51.8**	-
YVD-07	YVD-07-141216	12/16/2014	Primary	SXL0108	**29.9**	-	**12.2**	-	**3.83**	-	**40.6**	-	**8.76**	-	1.0 U	-	**2.92**	-	0.40 U	-	**51.2**	-
YVD-07	YVD-07-150316	03/16/2015	Primary	5904541	**37**	-	**15**	-	**4.3**	-	**50**	-	**15**	-	1.0 U	-	**4.0 J-**	MSD	0.40 U	-	**73 J-**	MSD
YVD-07	YVD-D2-150316	03/16/2015	Duplicate	5904541	**35**	-	**14**	-	**4.3**	-	**48**	-	**16**	-	**0.65**	-	**4.2 J-**	MSD	0.20 U	-	**70 J-**	MSD
YVD-07	YVD-07-150616	06/16/2015	Primary	59010751	**34 J+**	MSD	**14 J+**	MSD	**4.2 J+**	MSD	**43 J+**	MSD	**13**	-	0.50 U	-	**3.3**	-	0.40 U	-	**74 J-**	MSD
YVD-07	YVD-D1-150616	06/16/2015	Duplicate	59010751	**35 J+**	MSD	**14 J+**	MSD	**4.2 J+**	MSD	**44 J+**	MSD	**14**	-	0.50 U	-	**3.5**	-	0.20 U	-	**74 J-**	MSD
YVD-07	YVD-07-150923	09/23/2015	Primary	59020281	**33**	-	**14**	-	**4.2**	-	**48**	-	**9.9**	-	1.0 U	-	**4.7**	-	0.40 U	-	**68**	-
YVD-07	YVD-07-151214	12/14/2015	Primary	59025431	**30**	-	**13**	-	**4.5**	-	**48**	-	**6.7**	-	1.0 U	-	**2.4**	-	0.40 U	-	**59**	-
YVD-07	YVD-07-160308	03/08/2016	Primary	59029711	**25**	-	**11**	-	**4.0**	-	**42**	-	**6.7**	-	1.0 U	-	**1.8**	-	0.40 U	-	**49 J+**	MSD

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-05	YVD-05-151214	12/14/2015	Primary	59025351	0.10 R	MSD	**0.60 J-**	MSD	**0.65**	-	-	-	-	-	**180**	-	**180**	-
YVD-05	YVD-05-160307	03/07/2016	Primary	59029521	0.10 UJ	RPD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**160 J**	FDP	**160 J**	FDP
YVD-05	YVD-D1-160307	03/07/2016	Duplicate	59029521	0.10 UJ	RPD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**170 J**	FDP	**170 J**	FDP
YVD-05	YVD-05-160620	6/20/2016	Primary	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**170**	-	**170**	-
YVD-05	YVD-05-160928	9/28/2016	Primary	K1611698	0.05 U	-	R	MSD	**0.01**	-	-	-	-	-	**171**	-	**171**	-
YVD-05	YVD-05-161215	12/15/2016	Primary	K1615174	0.05 U	-	0.5 U	-	**0.04**	-	-	-	-	-	**163**	-	**163**	-
YVD-06	YVD-06-130917	09/17/2013	Primary	SWI0113	0.10 U	-	**0.400**	-	-	-	**0.410**	-	-	-	**149**	-	**150**	-
YVD-06	YVD-06-131209	12/09/2013	Primary	SWL0055	0.02 UJ	MSD	**0.62 J**	FBK,MSD,FDP	-	-	-	-	0.06 U	-	**154**	-	**155**	-
YVD-06	YVD-D1-131209	12/09/2013	Duplicate	SWL0055	0.02 UJ	MSD	**0.40 J**	FBK,MSD,FDP	-	-	-	-	0.06 U	-	**159**	-	**160**	-
YVD-06	YVD-06-140316	03/16/2014	Primary	SXC0081	0.10 U	-	**0.297**	-	**0.13**	-	-	-	-	-	**174**	-	**175**	-
YVD-06	YVD-D1-140316	03/16/2014	Duplicate	SXC0081	0.10 U	-	0.25 U	-	**0.14**	-	-	-	-	-	**159**	-	**160**	-
YVD-06	YVD-06-140601	06/01/2014	Primary	SXF0008	**0.172**	-	0.25 U	-	**0.057**	-	-	-	-	-	**156**	-	**158**	-
YVD-06	YVD-D1-140601	06/01/2014	Duplicate	SXF0008	0.10 U	-	0.25 U	-	**0.064**	-	-	-	-	-	**153**	-	**155**	-
YVD-06	YVD-06-140921	09/21/2014	Primary	SXI0148	**0.139**	-	**0.359**	-	**0.18**	-	-	-	-	-	**149**	-	**150**	-
YVD-06	YVD-06-141215	12/15/2014	Primary	SXL0103	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	**149**	-	**150**	-
YVD-06	YVD-06-150316	03/16/2015	Primary	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**150**	-	**150**	-
YVD-06	YVD-06-150616	06/16/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**150**	-	**150**	-
YVD-06	YVD-06-150922	09/22/2015	Primary	59020141	**0.11**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**170**	-	**170**	-
YVD-06	YVD-06-151214	12/14/2015	Primary	59025351	0.10 R	MSD	**0.57 J-**	MSD	0.25 U	-	-	-	-	-	**170**	-	**170**	-
YVD-06	YVD-06-160307	03/07/2016	Primary	59029521	0.10 UJ	RPD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**160 J**	FDP	**160 J**	FDP
YVD-06	YVD-06-160620	6/20/2016	Primary	59037151	0.1 U	-	**0.42**	-	0.25 U	-	-	-	-	-	**150**	-	**150**	-
YVD-06	YVD-06-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U	-	**0.022**	-	-	-	-	-	**145**	-	**145**	-
YVD-06	YVD-06-161215	12/15/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.01**	-	-	-	-	-	**136**	-	**136**	-
YVD-07	YVD-07-130923	09/23/2013	Primary	SWI0178	0.10 U	-	**0.395**	-	-	-	**0.516**	-	-	-	**79.4**	-	**80.0**	-
YVD-07	YVD-07-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-07	YVD-07-131210	12/10/2013	Primary	SWL0055	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	0.06 U	-	**135**	-	**135**	-
YVD-07	YVD-07-140316	03/16/2014	Primary	SXC0081	**0.116**	-	0.25 U	-	**0.22**	-	-	-	-	-	**134**	-	**135**	-
YVD-07	YVD-07-140604	06/04/2014	Primary	SXF0025	0.10 U	-	**0.348 J-**	MSD	**0.69**	-	-	-	-	-	**137**	-	**138**	-
YVD-07	YVD-07-140922	09/22/2014	Primary	SXI0158	0.10 R	MSD	0.25 U	-	**0.20**	-	-	-	-	-	**134**	-	**135**	-
YVD-07	YVD-07-141216	12/16/2014	Primary	SXL0108	0.10 U	-	0.25 U	-	0.10 U	-	-	-	-	-	**133**	-	**135**	-
YVD-07	YVD-07-150316	03/16/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
YVD-07	YVD-D2-150316	03/16/2015	Duplicate	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
YVD-07	YVD-07-150616	06/16/2015	Primary	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**150**	-	**150**	-
YVD-07	YVD-D1-150616	06/16/2015	Duplicate	59010751	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
YVD-07	YVD-07-150923	09/23/2015	Primary	59020281	**0.22**	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**160**	-	**160**	-
YVD-07	YVD-07-151214	12/14/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	**0.97 J**	FDP	-	-	-	-	**140 J**	FDP	**140 J**	FDP
YVD-07	YVD-07-160308	03/08/2016	Primary	59029711	**1.1 J+**	FBK, FDP	0.25 U	-	0.25 U	-	-	-	-	-	**140**	-	**140**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-07	YVD-07-160621	6/21/2016	Primary	59037151	**19**	-	**9**	-	**3.5**	-	**37**	-	**6.2**	-	1 U	-	**1.2**	-	0.4 U	-	**31**	-
YVD-07	YVD-07-160929	9/29/2016	Primary	K1611704	**17.8**	-	**7.14**	-	**3.31**	-	**34.0**	-	**5.3**	-	**0.4**	-	**1.37**	-	0.1 U	-	**37.1**	-
YVD-07	YVD-07-161213	12/13/2016	Primary	K1615083	**25.9**	-	**10.2**	-	**3.59**	-	**36.6**	-	**6.38**	-	**0.4**	-	**2.15**	-	0.1 U	-	**64.0**	-
YVD-08	YVD-08-130919	09/19/2013	Primary	SWI0138	**126**	-	**43.8**	-	**6.03**	-	**88.3**	-	**145**	-	5.0 U	-	**8.00**	-	2.0 U	-	**105**	-
YVD-08	YVD-08-131211	12/11/2013	Primary	SWL0063	**134**	-	**53.8**	-	**7.55**	-	**82.2**	-	**123**	-	5.0 U	-	**22.5**	-	2.0 U	-	**273 J-**	MSD
YVD-08	YVD-08-140317	03/17/2014	Primary	SXC0095	**122**	-	**42.0**	-	**5.30**	-	**75.1**	-	**128**	-	5.0 U	-	**14.3**	-	2.0 U	-	**173 J-**	MSD
YVD-08	YVD-08-140602	06/02/2014	Primary	SXF0017	**138**	-	**64.6**	-	**11.2**	-	**78.3**	-	**118**	-	2.0 U	-	**14.7**	-	0.80 U	-	**175 J-**	MSD
YVD-08	YVD-08-140923	09/23/2014	Primary	SXI0173	**103**	-	**36.3**	-	**5.87**	-	**76.9**	-	**122**	-	2.5 U	-	**8.10**	-	1.0 U	-	**107**	-
YVD-08	YVD-08-141216	12/16/2014	Primary	SXL0108	**111**	-	**41.4**	-	**5.92**	-	**77.2**	-	**126**	-	2.5 U	-	**14.0**	-	1.0 U	-	**140**	-
YVD-08	YVD-08-150317	03/17/2015	Primary	5904541	**110**	-	**40**	-	**5.9**	-	**77**	-	**120**	-	2.5 U	-	**13 J-**	MSD	1.0 U	-	**130 J-**	MSD
YVD-08	YVD-D3-150317	03/17/2015	Duplicate	5904541	**100**	-	**39**	-	**5.7**	-	**76**	-	**130**	-	0.50 U	-	**14 J-**	MSD	0.20 U	-	**150 J-**	MSD
YVD-08	YVD-08-150617	06/17/2015	Primary	59010961	**110**	-	**40**	-	**6.0 J+**	MSD	**82 J+**	MSD	**120**	-	2.5 U	-	**19**	-	1.0 U	-	**140**	-
YVD-08	YVD-D3-150617	06/17/2015	Duplicate	59010961	**110**	-	**39**	-	**5.7 J+**	MSD	**77 J+**	MSD	**140**	-	5.0 U	-	**19**	-	0.20 U	-	**170**	-
YVD-08	YVD-08-150924	09/24/2015	Primary	59020391	**110**	-	**44**	-	**5.6**	-	**82**	-	**120**	-	2.5 U	-	**20 J+**	MSD	1.0 U	-	**170 J-**	MSD
YVD-08	YVD-08-151215	12/15/2015	Primary	59025501	**120**	-	**44**	-	**6.2**	-	**85**	-	**120**	-	2.5 U	-	**26**	-	1.0 U	-	**190**	-
YVD-08	YVD-D3-151215	12/15/2015	Duplicate	59025501	**120**	-	**46**	-	**6.2**	-	**85**	-	**110**	-	5.0 U	-	**26**	-	0.20 U	-	**180**	-
YVD-08	YVD-08-160310	03/10/2016	Primary	59029941	**120**	-	**44**	-	**5.6**	-	**87**	-	**120**	-	2.5 U	-	**32**	-	1.0 U	-	**210 J**	DUP
YVD-08	YVD-08-160622	6/22/2016	Primary	59037271	**120**	-	**46**	-	**5.9**	-	**87**	-	**110**	-	2.5 U	-	**34**	-	1 U	-	**200**	-
YVD-08	YVD-D3-160622	6/22/2016	Duplicate	59037271	**120**	-	**46**	-	**6**	-	**88**	-	**120**	-	0.5 U	-	**34**	-	0.2 U	-	**200**	-
YVD-08	YVD-08-160927	9/27/2016	Primary	K1611565	**120**	-	**47.0**	-	**4.95**	-	**84.7**	-	**96.0**	-	**0.18 J**	-	**30.6**	-	0.1 U	-	**193**	-
YVD-08	YVD-08-161213	12/13/2016	Primary	K1615045	**122**	-	**41.9**	-	**5.10**	-	**84.5**	-	**89.3**	-	**0.23**	-	**34.5 J**	-	0.1 U	-	**182**	-
YVD-09	YVD-09-130919	09/19/2013	Primary	SWI0138	**107**	-	**39.3**	-	**8.21**	-	**189**	-	**96.3**	-	5.0 U	-	**74.7**	-	2.0 U	-	**236**	-
YVD-09	YVD-09-131212	12/12/2013	Primary	SWL0078	**109**	-	**42.0**	-	**9.21**	-	**176**	-	**87.2**	-	5.0 U	-	**64.4**	-	2.0 U	-	**193**	-
YVD-09	YVD-09-140319	03/19/2014	Primary	SXC0107	**109**	-	**40.8**	-	**9.33**	-	**173**	-	**104**	-	**5.50**	-	**62.4**	-	2.0 U	-	**214**	-
YVD-09	YVD-09-140603	06/03/2014	Primary	SXF0025	**113**	-	**44.5**	-	**10.1**	-	**193**	-	**89.8**	-	5.0 U	-	**57.1**	-	2.0 U	-	**214**	-
YVD-09	YVD-09-140924	09/24/2014	Primary	SXI0173	**118**	-	**41.7**	-	**8.88**	-	**203**	-	**68.2**	-	5.0 U	-	**48.0**	-	2.0 U	-	**166**	-
YVD-09	YVD-09-141217	12/17/2014	Primary	SXL0121	**130**	-	**56.3**	-	**12.9**	-	**187**	-	**85.0**	-	5.0 U	-	**53.9**	-	2.0 U	-	**223**	-
YVD-09	YVD-09-150318	03/18/2015	Primary	5904651	**110**	-	**46**	-	**9.3 J-**	MSD	**190**	-	**74**	-	5.0 U	-	**47**	-	2.0 U	-	**190**	-
YVD-09	YVD-09-150617	06/17/2015	Primary	59010961	**110**	-	**43**	-	**9.8 J+**	MSD	**190 J+**	MSD	**89**	-	5.0 U	-	**54**	-	2.0 U	-	**230**	-
YVD-09	YVD-09-150923	09/23/2015	Primary	59020391	**110**	-	**46**	-	**9.6**	-	**180**	-	**78**	-	0.50 U	-	**56 J+**	MSD	0.20 U	-	**270 J-**	MSD
YVD-09	YVD-09-151215	12/15/2015	Primary	59025501	**110**	-	**42**	-	**9.6**	-	**190**	-	**77**	-	5.0 U	-	**52**	-	2.0 U	-	**250**	-
YVD-09	YVD-09-160310	03/10/2016	Primary	59029941	**110**	-	**42**	-	**9.2**	-	**190**	-	**72**	-	5.0 U	-	**48**	-	2.0 U	-	**250 J**	DUP
YVD-09	YVD-09-160622	6/22/2016	Primary	59037271	**100**	-	**42**	-	**8.9**	-	**190**	-	**76**	-	5 U	-	**49**	-	2 U	-	**260**	-
YVD-09	YVD-09-160929	9/29/2016	Primary	K1611704	**103**	-	**41.2**	-	**7.62**	-	**184**	-	**66.7**	-	**0.34**	-	**43.2**	-	0.1 U	-	**243**	-
YVD-09	YVD-09-161213	12/13/2016	Primary	K1615045	**107**	-	**38.1**	-	**8.42**	-	**185**	-	**59.8**	-	**0.4**	-	**42.8 J**	-	0.1 U	-	**238**	-
YVD-09	YVD-D2-161213	12/13/2016	Duplicate	K1615045	**108**	-	**37.1**	-	**8.04**	-	**181**	-	**61.4**	-	**0.4**	-	**43.3 J**	-	0.1 U	-	**240**	-
YVD-10	YVD-10-130917	09/17/2013	Primary	SWI0123	**216**	-	**51.8**	-	**3.28**	-	**104**	-	**95.4**	-	5.0 U	-	**95.0**	-	2.0 U	-	**199**	-

Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-07	YVD-07-160621	6/21/2016	Primary	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**100**	-	**100**	-
YVD-07	YVD-07-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U	-	**0.02**	-	-	-	-	-	**113**	-	**113**	-
YVD-07	YVD-07-161213	12/13/2016	Primary	K1615083	0.05 U	-	0.5 U	-	**0.01 J**	-	-	-	-	-	**120**	-	**120**	-
YVD-08	YVD-08-130919	09/19/2013	Primary	SWI0138	0.10 U	-	**0.935 J+**	FBK	-	-	0.10 U	-	-	-	**354**	-	**355**	-
YVD-08	YVD-08-131211	12/11/2013	Primary	SWL0063	0.02 R	MSD	0.750 U	ERL	-	-	-	-	**1.46**	-	**259**	-	**260**	-
YVD-08	YVD-08-140317	03/17/2014	Primary	SXC0095	**0.146**	-	**0.702**	-	**0.13**	-	-	-	-	-	**294**	-	**295**	-
YVD-08	YVD-08-140602	06/02/2014	Primary	SXF0017	0.10 U	-	**1.12**	-	**2.7**	-	-	-	-	-	**279**	-	**280**	-
YVD-08	YVD-08-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**0.867 J+**	MSD	**0.35**	-	-	-	-	-	**249**	-	**250**	-
YVD-08	YVD-08-141216	12/16/2014	Primary	SXL0108	0.10 U	-	**0.369**	-	**0.34**	-	-	-	-	-	**264**	-	**265**	-
YVD-08	YVD-08-150317	03/17/2015	Primary	5904541	0.10 U	-	**0.39 J-**	MSD	**0.67**	-	-	-	-	-	**230**	-	**230**	-
YVD-08	YVD-D3-150317	03/17/2015	Duplicate	5904541	0.10 U	-	0.25 UJ	MSD	**0.49**	-	-	-	-	-	**240**	-	**240**	-
YVD-08	YVD-08-150617	06/17/2015	Primary	59010961	**0.14**	-	**0.26 J-**	MSD, FDP	**0.53**	-	-	-	-	-	**280 J**	FDP	**280 J**	FDP
YVD-08	YVD-D3-150617	06/17/2015	Duplicate	59010961	0.10 U	-	**0.86 J-**	MSD, FDP	**0.39**	-	-	-	-	-	**220 J**	FDP	**220 J**	FDP
YVD-08	YVD-08-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	**0.31**	-	-	-	-	-	**260**	-	**260**	-
YVD-08	YVD-08-151215	12/15/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	**0.33 J-**	MSD	-	-	-	-	**260**	-	**260**	-
YVD-08	YVD-D3-151215	12/15/2015	Duplicate	59025501	**0.15 J-**	MSD	0.25 R	MSD	**0.27 J-**	MSD	-	-	-	-	**250**	-	**250**	-
YVD-08	YVD-08-160310	03/10/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**240**	-	**240**	-
YVD-08	YVD-08-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	**0.31**	-	-	-	-	-	**230**	-	**230**	-
YVD-08	YVD-D3-160622	6/22/2016	Duplicate	59037271	0.1 UJ	FBK, MSD	0.25 R	MSD	**0.28**	-	-	-	-	-	**230**	-	**230**	-
YVD-08	YVD-08-160927	9/27/2016	Primary	K1611565	0.05 U	-	R	MSD	**0.049**	-	-	-	-	-	**239**	-	**239**	-
YVD-08	YVD-08-161213	12/13/2016	Primary	K1615045	0.05 U	-	0.5 U	-	**0.058**	-	-	-	-	-	**222**	-	**222**	-
YVD-09	YVD-09-130919	09/19/2013	Primary	SWI0138	0.10 U	-	0.533 R	FBK	-	-	0.232 R	FBK	-	-	**369**	-	**370**	-
YVD-09	YVD-09-131212	12/12/2013	Primary	SWL0078	0.02 U	-	0.661 U	ERL	-	-	-	-	**0.647**	-	**384**	-	**385**	-
YVD-09	YVD-09-140319	03/19/2014	Primary	SXC0107	0.10 U	-	**0.653 J-**	MSD	**0.53**	-	-	-	-	-	**388**	-	**390**	-
YVD-09	YVD-09-140603	06/03/2014	Primary	SXF0025	0.10 U	-	**0.613 J-**	MSD	**0.72**	-	-	-	-	-	**367**	-	**368**	-
YVD-09	YVD-09-140924	09/24/2014	Primary	SXI0173	0.10 U	-	**0.502 J+**	MSD	**0.054 J+**	FBK	-	-	-	-	**359**	-	**360**	-
YVD-09	YVD-09-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**1.3**	-	-	-	-	-	**359**	-	**360**	-
YVD-09	YVD-09-150318	03/18/2015	Primary	5904651	**0.14**	-	0.25 UJ	MSD	**0.38**	-	-	-	-	-	**350**	-	**350**	-
YVD-09	YVD-09-150617	06/17/2015	Primary	59010961	**0.14**	-	**0.37 J-**	MSD	**0.36**	-	-	-	-	-	**350**	-	**350**	-
YVD-09	YVD-09-150923	09/23/2015	Primary	59020391	**0.21 J**	MSD	**0.26 J-**	MSD	**0.27**	-	-	-	-	-	**330**	-	**330**	-
YVD-09	YVD-09-151215	12/15/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	**0.25 J-**	MSD	-	-	-	-	**340**	-	**340**	-
YVD-09	YVD-09-160310	03/10/2016	Primary	59029941	**0.12**	-	0.25 UJ	FDP, MSD	**0.33**	-	-	-	-	-	**360**	-	**360**	-
YVD-09	YVD-09-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	**0.29**	-	-	-	-	-	**350**	-	**350**	-
YVD-09	YVD-09-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U	-	**0.016**	-					**347**	-	**347**	-
YVD-09	YVD-09-161213	12/13/2016	Primary	K1615045	0.05 U	-	0.5 U	-	**0.048**	-	-	-	-	-	**340**	-	**340**	-
YVD-09	YVD-D2-161213	12/13/2016	Duplicate	K1615045	0.05 U	-	0.5 U	-	**0.078**	-	-	-	-	-	**340**	-	**340**	-
YVD-10	YVD-10-130917	09/17/2013	Primary	SWI0123	0.10 U	-	0.25 U	-	-	-	**0.148**	-	-	-	**464**	-	**465**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-10	YVD-10-131212	12/12/2013	Primary	SWL0078	**202**	-	**55.6**	-	**4.49**	-	**102**	-	**91.4**	-	5.0 U	-	**86.9**	-	2.0 U	-	**174**	-
YVD-10	YVD-10-140319	03/19/2014	Primary	SXC0107	**218**	-	**54.0**	-	**3.93**	-	**96.8**	-	**86.8**	-	5.0 U	-	**77.6**	-	2.0 U	-	**163**	-
YVD-10	YVD-10-140603	06/03/2014	Primary	SXF0025	**232**	-	**58.6**	-	**4.07**	-	**103**	-	**94.3**	-	5.0 U	-	**86.1**	-	2.0 U	-	**188**	-
YVD-10	YVD-10-140924	09/24/2014	Primary	SXI0173	**276**	-	**65.8**	-	**3.86**	-	**116**	-	**115**	-	5.0 U	-	**97.2**	-	2.0 U	-	**217**	-
YVD-10	YVD-10-141217	12/17/2014	Primary	SXL0144	**248**	-	**60.4**	-	**3.88**	-	**110**	-	**97.9**	-	5.0 U	-	**78.7**	-	2.0 U	-	**180**	-
YVD-10	YVD-10-150318	03/18/2015	Primary	5904651	**400**	-	**92**	-	**4.0 J-**	MSD	**130**	-	**180**	-	5.0 U	-	**120**	-	2.0 U	-	**370**	-
YVD-10	YVD-10-150617	06/17/2015	Primary	59010961	**390**	-	**95**	-	**4.6 J+**	MSD	**130 J+**	MSD	**39**	-	5.0 U	-	**20**	-	2.0 U	-	**110**	-
YVD-10	YVD-10-150923	09/23/2015	Primary	59020391	**330**	-	**89**	-	**4.3**	-	**120**	-	**160**	-	5.0 U	-	**120 J+**	MSD	2.0 U	-	**370 J-**	MSD
YVD-10	YVD-10-151214	12/14/2015	Primary	59025351	**350**	-	**84**	-	**4.3**	-	**120**	-	**150**	-	5.0 U	-	**120**	-	2.0 U	-	**360**	-
YVD-10	YVD-10-160309	03/09/2016	Primary	59029711	**310**	-	**73**	-	**4.1**	-	**120**	-	**140**	-	5.0 U	-	**98**	-	2.0 U	-	**280 J+**	MSD
YVD-10	YVD-10-160621	6/21/2016	Primary	59037271	**270**	-	**73**	-	**4.5**	-	**110**	-	**120**	-	5 U	-	**96**	-	2 U	-	**240**	-
YVD-10	YVD-10-160929	9/29/2016	Primary	K1611698	**286**	-	**63.1**	-	**2.48**	-	**114**	-	**105**	-	0.2 U	-	**84**	-	0.1 U	-	**223**	-
YVD-10	YVD-10-161212	12/12/2016	Primary	K1615029	**303**	-	**66.9**	-	**2.68**	-	**118**	-	**141**	-	**0.1 J**	-	**109 J**	-	0.1 U	-	**191**	-
YVD-11	YVD-11-130923	09/23/2013	Primary	SWI0178	**183**	-	**51.9**	-	**5.44 J**	FDP	**23.2**	-	-	-	-	-	-	-	-	-	-	-
YVD-11	YVD-D2-130923	09/23/2013	Duplicate	SWI0178	**175**	-	**46.0**	-	**3.60 J**	FDP	**23.0**	-	-	-	-	-	-	-	-	-	-	-
YVD-11	YVD-11-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	**54.7**	-	5.0 U	-	**38.4**	-	2.0 U	-	**207**	-
YVD-11	YVD-D3-130926	09/26/2013	Duplicate	SWI0190	-	-	-	-	-	-	-	-	**61.4**	-	5.0 U	-	**46.2**	-	2.0 U	-	**228**	-
YVD-11	YVD-11-131212	12/12/2013	Primary	SWL0073	**171**	-	**43.4**	-	**3.37**	-	**23.2**	-	**58.7**	-	5.0 U	-	**49.9**	-	2.0 U	-	**208**	-
YVD-11	YVD-11-140318	03/18/2014	Primary	SXC0107	**183**	-	**44.4**	-	**3.15**	-	**22.2**	-	**61.6**	-	5.0 U	-	**43.7**	-	2.0 U	-	**193**	-
YVD-11	YVD-11-140603	06/03/2014	Primary	SXF0017	**176**	-	**50.3**	-	**5.38**	-	**26.1**	-	**67.2**	-	5.0 U	-	**49.1**	-	2.0 U	-	**203 J-**	MSD
YVD-11	YVD-11-140924	09/24/2014	Primary	SXI0173	**193**	-	**47.9**	-	**3.86**	-	**25.6**	-	**67.2**	-	2.5 U	-	**46.6**	-	1.0 U	-	**159**	-
YVD-11	YVD-11-141217	12/17/2014	Primary	SXL0121	**198**	-	**53.6**	-	**4.77**	-	**25.6**	-	**72.1**	-	5.0 U	-	**49.1**	-	2.0 U	-	**158**	-
YVD-11	YVD-11-150317	03/17/2015	Primary	5904651	**190**	-	**51**	-	**4.3 J-**	MSD	**26**	-	**76**	-	5.0 U	-	**52**	-	2.0 U	-	**150**	-
YVD-11	YVD-11-150616	06/16/2015	Primary	59010961	**200**	-	**50**	-	**3.2 J+**	MSD	**27 J+**	MSD	**86**	-	5.0 U	-	**56**	-	2.0 U	-	**140**	-
YVD-11	YVD-11-150923	09/23/2015	Primary	59020281	**200**	-	**55**	-	**3.4**	-	**25**	-	**90**	-	5.0 U	-	**66**	-	2.0 U	-	**130**	-
YVD-11	YVD-11-151215	12/15/2015	Primary	59025431	**210**	-	**60**	-	**5.2**	-	**25**	-	**100**	-	5.0 U	-	**74**	-	2.0 U	-	**140**	-
YVD-11	YVD-D2-151215	12/15/2015	Duplicate	59025431	**210**	-	**58**	-	**4.9**	-	**25**	-	**98**	-	0.50 U	-	**70**	-	0.20 U	-	**130**	-
YVD-11	YVD-11-160309	03/09/2016	Primary	59029711	**200**	-	**53**	-	**3.3**	-	**25**	-	**99**	-	5.0 U	-	**65**	-	2.0 U	-	**140 J+**	MSD
YVD-11	YVD-11-160621	6/21/2016	Primary	59037151	**200**	-	**56**	-	**3.5**	-	**27**	-	**120**	-	5 U	-	**71**	-	2 U	-	**130**	-
YVD-11	YVD-11-160927	9/27/2016	Primary	K1611629	**204**	-	**52.6**	-	**3.13**	-	**26.1**	-	**82.0**	-	**0.18 J**	-	**48.9 J**	-	0.1 U	-	**100**	-
YVD-11	YVD-11-161214	12/14/2016	Primary	K1615126	**209**	-	**57.8**	-	**4.82**	-	**25.6**	-	**82.5**	-	**0.19 J**	-	**55.5**	-	0.1 U	-	**104**	-
YVD-12	YVD-12-130919	09/19/2013	Primary	SWI0142	**98.6**	-	**37.5**	-	**3.14**	-	**77.3**	-	**98.2**	-	5.0 U	-	-	-	-	-	**245**	-
YVD-12	YVD-12-130925	09/25/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	**15.0**	-	2.0 U	-	-	-
YVD-12	YVD-12-131211	12/11/2013	Primary	SWL0073	**93.5**	-	**36.2**	-	**3.63**	-	**73.2**	-	**97.0**	-	5.0 U	-	**20.1**	-	2.0 U	-	**262**	-
YVD-12	YVD-12-140318	03/18/2014	Primary	SXC0095	**92.9**	-	**35.9**	-	**3.27**	-	**73.4**	-	**95.2**	-	5.0 U	-	**17.0**	-	2.0 U	-	**236 J-**	MSD
YVD-12	YVD-12-140603	06/03/2014	Primary	SXF0017	**92.6**	-	**34.9**	-	**2.96**	-	**70.7**	-	**8.33**	-	0.50 U	-	**1.44**	-	0.20 U	-	**21.3 J-**	MSD
YVD-12	YVD-12-140922	09/22/2014	Primary	SXI0148	**98.4**	-	**39.1**	-	**3.13**	-	**77.9**	-	**78.5**	-	5.0 U	-	**13.3**	-	2.0 U	-	**200**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-10	YVD-10-131212	12/12/2013	Primary	SWL0078	0.02 U	-	0.6495 U	ERL	-	-	-	-	**1.40**	-	**459**	-	**460**	-
YVD-10	YVD-10-140319	03/19/2014	Primary	SXC0107	**0.109**	-	**0.507 J-**	MSD	**0.77**	-	-	-	-	-	**489**	-	**490**	-
YVD-10	YVD-10-140603	06/03/2014	Primary	SXF0025	**0.105**	-	**0.577 J-**	MSD	**0.80**	-	-	-	-	-	**487**	-	**488**	-
YVD-10	YVD-10-140924	09/24/2014	Primary	SXI0173	0.10 U	-	**0.443 J+**	MSD	**0.054 J+**	FBK	-	-	-	-	**523**	-	**525**	-
YVD-10	YVD-10-141217	12/17/2014	Primary	SXL0144	0.50 U	-	0.25 R	MSD	**0.69 J-**	MSD	-	-	-	-	**503**	-	**505**	-
YVD-10	YVD-10-150318	03/18/2015	Primary	5904651	0.10 U	-	0.25 UJ	MSD	**0.42**	-	-	-	-	-	**590**	-	**590**	-
YVD-10	YVD-10-150617	06/17/2015	Primary	59010961	**0.12**	-	**0.44 J-**	MSD	**0.72**	-	-	-	-	-	**600**	-	**600**	-
YVD-10	YVD-10-150923	09/23/2015	Primary	59020391	**0.72 J**	MSD	0.25 UJ	MSD	**0.56**	-	-	-	-	-	**620**	-	**620**	-
YVD-10	YVD-10-151214	12/14/2015	Primary	59025351	0.10 R	MSD	0.25 UJ	MSD	**0.58**	-	-	-	-	-	**600**	-	**600**	-
YVD-10	YVD-10-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	**0.42**	-	-	-	-	-	**520**	-	**520**	-
YVD-10	YVD-10-160621	6/21/2016	Primary	59037271	**0.11 J-**	MSD	0.25 R	MSD	**0.71**	-	-	-	-	-	**510**	-	**510**	-
YVD-10	YVD-10-160929	9/29/2016	Primary	K1611698	0.05 U	-	R	MSD	**0.028**	-	-	-	-	-	**513**	-	**513**	-
YVD-10	YVD-10-161212	12/12/2016	Primary	K1615029	0.05 U	-	0.5 U	-	**0.074**	-	-	-	-	-	**524**	-	**524**	-
YVD-11	YVD-11-130923	09/23/2013	Primary	SWI0178	0.10 U	-	0.25 U	-	-	-	**0.753 J**	FDP	-	-	**254 J**	FDP	**255 J**	FDP
YVD-11	YVD-D2-130923	09/23/2013	Duplicate	SWI0178	0.10 U	-	0.25 U	-	-	-	0.10 UJ	FDP	-	-	**199 J**	FDP	**200 J**	FDP
YVD-11	YVD-11-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-11	YVD-D3-130926	09/26/2013	Duplicate	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-11	YVD-11-131212	12/12/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	**0.245**	-	**294**	-	**295**	-
YVD-11	YVD-11-140318	03/18/2014	Primary	SXC0107	0.10 U	-	**0.503 J-**	MSD	**0.17**	-	-	-	-	-	**324**	-	**325**	-
YVD-11	YVD-11-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.564**	-	**0.84**	-	-	-	-	-	**312**	-	**313**	-
YVD-11	YVD-11-140924	09/24/2014	Primary	SXI0173	0.10 U	-	**0.453 J+**	MSD	**0.054 J+**	FBK	-	-	-	-	**294**	-	**295**	-
YVD-11	YVD-11-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.46**	-	-	-	-	-	**289**	-	**290**	-
YVD-11	YVD-11-150317	03/17/2015	Primary	5904651	0.10 U	-	0.25 UJ	MSD	**0.30**	-	-	-	-	-	**290**	-	**290**	-
YVD-11	YVD-11-150616	06/16/2015	Primary	59010961	0.10 U	-	**0.31 J-**	MSD	0.25 U	-	-	-	-	-	**290**	-	**290**	-
YVD-11	YVD-11-150923	09/23/2015	Primary	59020281	**0.12**	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**310**	-	**310**	-
YVD-11	YVD-11-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	**0.59 J**	FDP	-	-	-	-	**110 J**	FDP	**110 J**	FDP
YVD-11	YVD-D2-151215	12/15/2015	Duplicate	59025431	0.10 R	MSD	0.25 R	MSD	**1.5 J**	FDP	-	-	-	-	**360 J**	FDP	**360 J**	FDP
YVD-11	YVD-11-160309	03/09/2016	Primary	59029711	**0.14 J**	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**340**	-	**340**	-
YVD-11	YVD-11-160621	6/21/2016	Primary	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**340**	-	**340**	-
YVD-11	YVD-11-160927	9/27/2016	Primary	K1611629	0.05 U	-	0.5 U		**0.071**	-	-	-	-	-	**375**	-	**375**	-
YVD-11	YVD-11-161214	12/14/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.421**	-	-	-	-	-	**352**	-	**352**	-
YVD-12	YVD-12-130919	09/19/2013	Primary	SWI0142	0.10 U	-	0.608 R	FBK	-	-	**0.356 J+**	FBK	-	-	**204**	-	**205**	-
YVD-12	YVD-12-130925	09/25/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-12	YVD-12-131211	12/11/2013	Primary	SWL0073	0.02 UJ	MSD	0.23 R	MSD, FBK	-	-	-	-	**0.218**	-	**194**	-	**195**	-
YVD-12	YVD-12-140318	03/18/2014	Primary	SXC0095	**0.248**	-	**0.564**	-	**0.22**	-	-	-	-	-	**204**	-	**205**	-
YVD-12	YVD-12-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.415**	-	**0.28 J+**	FBK	-	-	-	-	**199**	-	**200**	-
YVD-12	YVD-12-140922	09/22/2014	Primary	SXI0148	0.10 U	-	**0.669**	-	**0.25**	-	-	-	-	-	**189**	-	**190**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-12	YVD-D2-140922	09/22/2014	Duplicate	SXI0148	**99.3**	-	**39.0**	-	**3.00**	-	**77.8**	-	**82.4**	-	2.0 U	-	**15.5**	-	0.80 U	-	**200**	-
YVD-12	YVD-12-141216	12/16/2014	Primary	SXL0121	**99.3**	-	**39.6**	-	**3.23**	-	**71.8**	-	**84.1**	-	5.0 U	-	**15.1**	-	2.0 U	-	**228**	-
YVD-12	YVD-12-150317	03/17/2015	Primary	5904541	**93**	-	**37**	-	**3.6**	-	**73**	-	**75**	-	5.0 U	-	**14 J-**	MSD	2.0 U	-	**190 J-**	MSD
YVD-12	YVD-12-150617	06/17/2015	Primary	59010961	**90**	-	**35**	-	**2.6 J+**	MSD	**83 J+**	MSD	**84**	-	5.0 U	-	**12**	-	2.0 U	-	**180**	-
YVD-12	YVD-12-150924	09/24/2015	Primary	59020391	**92**	-	**39**	-	**3.5**	-	**73**	-	**78**	-	5.0 U	-	**15 J+**	MSD	2.0 U	-	**210 J-**	MSD
YVD-12	YVD-12-151216	12/16/2015	Primary	59025501	**95**	-	**37**	-	**3.1**	-	**74**	-	**76**	-	5.0 U	-	**14**	-	2.0 U	-	**180**	-
YVD-12	YVD-12-160309	03/09/2016	Primary	59029941	**95**	-	**35**	-	**2.6**	-	**73**	-	**73**	-	5.0 U	-	**13**	-	2.0 U	-	**170 J**	DUP
YVD-12	YVD-D3-160309	03/09/2016	Duplicate	59029941	**95**	-	**36**	-	**2.5**	-	**72**	-	**79**	-	0.50 U	-	**15**	-	0.20 U	-	**180 J**	DUP
YVD-12	YVD-12-160622	6/22/2016	Primary	59037271	**89**	-	**36**	-	**2.9**	-	**72**	-	**90**	-	5 U	-	**14**	-	2 U	-	**180**	-
YVD-12	YVD-12-160929	9/29/2016	Primary	K1611704	**88.9**	-	**37.2**	-	**2.28**	-	**67.7**	-	**83.5**	-	**0.33**	-	**13.5**	-	0.1 U	-	**158**	-
YVD-12	YVD-12-161213	12/13/2016	Primary	K1615083	**93.4**	-	**33.6**	-	**2.29**	-	**67.9**	-	**81.7**	-	**0.33**	-	**12.2**	-	0.1 U	-	**150**	-
YVD-13	YVD-13-130919	09/19/2013	Primary	SWI0138	**102**	-	**29.9**	-	**4.30**	-	**114**	-	**90.3**	-	5.0 U	-	**27.6**	-	2.0 U	-	**365**	-
YVD-13	YVD-13-131211	12/11/2013	Primary	SWL0073	**101**	-	**29.4**	-	**4.16**	-	**110**	-	**77.8**	-	5.0 U	-	**21.7**	-	2.0 U	-	**278**	-
YVD-13	YVD-13-140318	03/18/2014	Primary	SXC0095	**102**	-	**29.3**	-	**4.27**	-	**106**	-	**80.3**	-	5.0 U	-	**24.2**	-	2.0 U	-	**312 J-**	MSD
YVD-13	YVD-13-140603	06/03/2014	Primary	SXF0017	**94.8**	-	**27.7**	-	**3.70**	-	**113**	-	**39.7**	-	2.0 U	-	**12.4**	-	0.80 U	-	**151 J-**	MSD
YVD-13	YVD-13-140923	09/23/2014	Primary	SXI0173	**104**	-	**29.0**	-	**4.40**	-	**118**	-	**81.7**	-	5.0 U	-	**26.7**	-	2.0 U	-	**328**	-
YVD-13	YVD-13-141217	12/17/2014	Primary	SXL0121	**114**	-	**33.1**	-	**4.74**	-	**119**	-	**86.5**	-	5.0 U	-	**27.3**	-	2.0 U	-	**355**	-
YVD-13	YVD-13-150317	03/17/2015	Primary	5904541	**100**	-	**30**	-	**4.0**	-	**120**	-	**72**	-	5.0 U	-	**24 J-**	MSD	2.0 U	-	**290 J-**	MSD
YVD-13	YVD-13-150617	06/17/2015	Primary	59010961	**110**	-	**30**	-	**4.4 J+**	MSD	**120 J+**	MSD	**81**	-	5.0 U	-	**27**	-	2.0 U	-	**310**	-
YVD-13	YVD-13-150924	09/24/2015	Primary	59020391	**98**	-	**31**	-	**4.1**	-	**110**	-	**70**	-	5.0 U	-	**26 J+**	MSD	2.0 U	-	**330 J-**	MSD
YVD-13	YVD-13-151216	12/16/2015	Primary	59025501	**100**	-	**30**	-	**4.3**	-	**120**	-	**69**	-	5.0 U	-	**26**	-	2.0 U	-	**310**	-
YVD-13	YVD-13-160309	03/09/2016	Primary	59029941	**100**	-	**29**	-	**4.2**	-	**120**	-	**85**	-	5.0 U	-	**32**	-	2.0 U	-	**390 J**	DUP
YVD-13	YVD-13-160622	6/22/2016	Primary	59037271	**100**	-	**30**	-	**4.2**	-	**120**	-	**76**	-	5 U	-	**28**	-	2 U	-	**390**	-
YVD-13	YVD-13-160928	9/28/2016	Primary	K1611698	**101**	-	**28.1**	-	**3.91**	-	**113**	-	**60.0**	-	**0.30**	-	**23.5 J**	-	0.1 U	-	**321**	-
YVD-13	YVD-13-161214	12/13/2016	Primary	K1615083	**100**	-	**27.5**	-	**4.02**	-	**111**	-	**57.3**	-	**0.33**	-	**23.1**	-	0.1 U	-	**313**	-
YVD-14	YVD-14-130918	09/18/2013	Primary	SWI0123	**260**	-	**65.4**	-	**3.45**	-	**110**	-	**118**	-	5.0 U	-	**112**	-	2.0 U	-	**213**	-
YVD-14	YVD-14-131212	12/12/2013	Primary	SWL0078	**249**	-	**65.6**	-	**3.29**	-	**108**	-	**104**	-	5.0 U	-	**105**	-	2.0 U	-	**186**	-
YVD-14	YVD-14-140319	03/19/2014	Primary	SXC0107	**248**	-	**64.5**	-	**3.37**	-	**102**	-	**108**	-	5.0 U	-	**101**	-	2.0 U	-	**190**	-
YVD-14	YVD-14-140604	06/04/2014	Primary	SXF0025	**240**	-	**63.2**	-	**3.46**	-	**112**	-	**109**	-	5.0 U	-	**102**	-	2.0 U	-	**191**	-
YVD-14	YVD-14-140924	09/24/2014	Primary	SXI0173	**268**	-	**72.0**	-	**4.10**	-	**124**	-	**110**	-	5.0 U	-	**96.7**	-	2.0 U	-	**178**	-
YVD-14	YVD-14-141217	12/17/2014	Primary	SXL0121	**252**	-	**70.9**	-	**3.83**	-	**113**	-	**110**	-	5.0 U	-	**96.1**	-	2.0 U	-	**185**	-
YVD-14	YVD-14-150318	03/18/2015	Primary	5904651	**260**	-	**70**	-	**3.6 J-**	MSD	**130**	-	**110**	-	5.0 U	-	**91**	-	2.0 U	-	**180**	-
YVD-14R	YVD-14R-151216	12/16/2015	Primary	59025501	**250**	-	**69**	-	**4.4**	-	**120**	-	**110**	-	5.0 U	-	**98**	-	2.0 U	-	**160**	-
YVD-14R	YVD-14R-160309	03/09/2016	Primary	59029941	**250**	-	**67**	-	**4.4**	-	**130**	-	**110**	-	5.0 U	-	**100**	-	2.0 U	-	**180 J**	DUP
YVD-14R	YVD-14R-160622	6/22/2016	Primary	59037271	**230**	-	**67**	-	**4.3**	-	**130**	-	**110**	-	5 U	-	**110**	-	2 U	-	**150**	-
YVD-14R	YVD-14R-160928	9/28/2016	Primary	K1611698	**252**	-	**65.9**	-	**4.05**	-	**126**	-	**95.7**	-	**0.16 J**	-	**92.1 J**	-	0.1 U	-	**140**	-
YVD-14R	YVD-14R-161212	12/12/2016	Primary	K1615029	**251**	-	**65.7**	-	**4.09**	-	**119**	-	**94.7**	-	**0.24**	-	**92.3 J**	-	0.1 UJ	-	**158**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-12	YVD-D2-140922	09/22/2014	Duplicate	SXI0148	0.10 U	-	**0.653**	-	**0.20**	-	-	-	-	-	**194**	-	**195**	-
YVD-12	YVD-12-141216	12/16/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.25**	-	-	-	-	-	**194**	-	**195**	-
YVD-12	YVD-12-150317	03/17/2015	Primary	5904541	0.10 U	-	**0.56 J-**	MSD	**0.31**	-	-	-	-	-	**190**	-	**190**	-
YVD-12	YVD-12-150617	06/17/2015	Primary	59010961	0.10 U	-	**0.35 J-**	MSD	0.25 U	-	-	-	-	-	**190**	-	**190**	-
YVD-12	YVD-12-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**190**	-	**190**	-
YVD-12	YVD-12-151216	12/16/2015	Primary	59025501	0.10 R	MSD	**0.58 J-**	MSD	0.25 UJ	MSD	-	-	-	-	**210**	-	**210**	-
YVD-12	YVD-12-160309	03/09/2016	Primary	59029941	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**210**	-	**210**	-
YVD-12	YVD-D3-160309	03/09/2016	Duplicate	59029941	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**200**	-	**200**	-
YVD-12	YVD-12-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**190**	-	**190**	-
YVD-12	YVD-12-160929	9/29/2016	Primary	K1611704	0.05 U	-	0.5 U		**0.026**	-	-	-	-	-	**188**	-	**188**	-
YVD-12	YVD-12-161213	12/13/2016	Primary	K1615083	0.05 U	-	0.5 U	-	**0.018**	-	-	-	-	-	**183**	-	**183**	-
YVD-13	YVD-13-130919	09/19/2013	Primary	SWI0138	0.10 U	-	0.395 R	FBK	-	-	0.175 R	FBK	-	-	**134**	-	**135**	-
YVD-13	YVD-13-131211	12/11/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	**0.110**	-	**139**	-	**140**	-
YVD-13	YVD-13-140318	03/18/2014	Primary	SXC0095	**0.288**	-	**0.613**	-	**0.17**	-	-	-	-	-	**134**	-	**135**	-
YVD-13	YVD-13-140603	06/03/2014	Primary	SXF0017	**0.103**	-	**0.727**	-	**0.078 J+**	FBK	-	-	-	-	**129**	-	**130**	-
YVD-13	YVD-13-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**9.13 J+**	MSD	0.05 U	-	-	-	-	-	**124**	-	**125**	-
YVD-13	YVD-13-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	0.10 U	-	-	-	-	-	**124**	-	**125**	-
YVD-13	YVD-13-150317	03/17/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
YVD-13	YVD-13-150617	06/17/2015	Primary	59010961	0.10 U	-	**0.68 J-**	MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
YVD-13	YVD-13-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**150**	-	**150**	-
YVD-13	YVD-13-151216	12/16/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**140**	-	**140**	-
YVD-13	YVD-13-160309	03/09/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**140**	-	**140**	-
YVD-13	YVD-13-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
YVD-13	YVD-13-160928	9/28/2016	Primary	K1611698	0.05 U	-	R	MSD	**0.014**	-	-	-	-	-	**133**	-	**133**	-
YVD-13	YVD-13-161214	12/13/2016	Primary	K1615083	0.05 U	-	0.5 U	-	**0.047**	-	-	-	-	-	**132**	-	**132**	-
YVD-14	YVD-14-130918	09/18/2013	Primary	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**605**	-	**605**	-
YVD-14	YVD-14-131212	12/12/2013	Primary	SWL0078	0.02 U	-	0.7957 U	ERL	-	-	-	-	0.06 U	-	**544**	-	**545**	-
YVD-14	YVD-14-140319	03/19/2014	Primary	SXC0107	0.10 U	-	**0.562 J-**	MSD	0.05 U	-	-	-	-	-	**634**	-	**635**	-
YVD-14	YVD-14-140604	06/04/2014	Primary	SXF0025	0.10 U	-	0.25 UJ	MSD	**0.078**	-	-	-	-	-	**569**	-	**570**	-
YVD-14	YVD-14-140924	09/24/2014	Primary	SXI0173	**0.107**	-	0.25 U	-	**0.054 J+**	FBK	-	-	-	-	**554**	-	**555**	-
YVD-14	YVD-14-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	0.10 U	-	-	-	-	-	**539**	-	**540**	-
YVD-14	YVD-14-150318	03/18/2015	Primary	5904651	**0.11**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**530**	-	**530**	-
YVD-14R	YVD-14R-151216	12/16/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**550**	-	**550**	-
YVD-14R	YVD-14R-160309	03/09/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**600**	-	**600**	-
YVD-14R	YVD-14R-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**490**	-	**490**	-
YVD-14R	YVD-14R-160928	9/28/2016	Primary	K1611698	0.05 U	-	R	MSD	**0.015**	-	-	-	-	-	**535**	-	**535**	-
YVD-14R	YVD-14R-161212	12/12/2016	Primary	K1615029	0.05 U	-	0.5 U	-	**0.058**	-	-	-	-	-	**578**	-	**578**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-14R	YVD-D1-161212	12/12/2016	Duplicate	K1615029	**255**	-	**66.5**	-	**4.17**	-	**121**	-	**93.3**	-	**0.19**	-	**92.3 J**	-	0.1 UJ	-	**155**	-
YVD-15	YVD-15-130917	09/17/2013	Primary	SWI0123	**125**	-	**51.6**	-	**2.73**	-	**127**	-	**62.8**	-	5.0 U	-	**72.5**	-	2.0 U	-	**51.5**	-
YVD-15	YVD-15-131212	12/12/2013	Primary	SWL0078	**131**	-	**59.4**	-	**4.48**	-	**114**	-	**120**	-	5.0 U	-	**71.2**	-	2.0 U	-	**114**	-
YVD-15	YVD-15-140319	03/19/2014	Primary	SXC0107	**124**	-	**57.9**	-	**5.23**	-	**93.5**	-	**54.9**	-	5.0 U	-	**47.4**	-	2.0 U	-	**44.7**	-
YVD-15	YVD-15-140603	06/03/2014	Primary	SXF0025	**138**	-	**64.7**	-	**5.20**	-	**110**	-	**82.5**	-	5.0 U	-	**88.1**	-	2.0 U	-	**39.0**	-
YVD-15	YVD-15-140924	09/24/2014	Primary	SXI0173	**132**	-	**56.9**	-	**3.11**	-	**135**	-	**58.7**	-	5.0 U	-	**54.8**	-	2.0 U	-	**50.7**	-
YVD-15	YVD-15-141217	12/17/2014	Primary	SXL0121	**175**	-	**81.6**	-	**3.67**	-	**60.3**	-	**57.6**	-	5.0 U	-	**66.9**	-	2.0 U	-	**53.4**	-
YVD-15	YVD-15-150317	03/17/2015	Primary	5904651	**280**	-	**130**	-	**8.4 J-**	MSD	**160**	-	**65**	-	5.0 U	-	**67**	-	2.0 U	-	**53**	-
YVD-15	YVD-15-150617	06/17/2015	Primary	59011021	**140**	-	**66 J**	RPD	**4.6 J**	RPD	**110 J**	RPD	**42**	-	0.50 U	-	**39 J-**	MSD, HTQ	0.20 U	-	**59**	-
YVD-15	YVD-15-150925	09/25/2015	Primary	59020431	**98**	-	**46**	-	**3.9**	-	**80**	-	**22**	-	5.0 U	-	**14**	-	2.0 U	-	**47**	-
YVD-15	YVD-15-151215	12/15/2015	Primary	59025431	**120**	-	**59**	-	**4.1**	-	**80**	-	**37**	-	5.0 U	-	**38**	-	2.0 U	-	**40**	-
YVD-15	YVD-15-160309	03/09/2016	Primary	59029711	**120**	-	**60**	-	**4.2**	-	**75**	-	**32**	-	5.0 U	-	**36**	-	2.0 U	-	**65 J+**	MSD
YVD-15	YVD-15-160621	6/21/2016	Primary	59037271	**110**	-	**56**	-	**3.5**	-	**74**	-	**26**	-	5 U	-	**31**	-	2 U	-	**86**	-
YVD-15	YVD-15-160928	9/28/2016	Primary	K1611629	**112**	-	**50.9**	-	**3.15**	-	**66.2**	-	**22.5**	-	**0.29**	-	**26.6**	-	0.1 U	-	**108**	-
YVD-15	YVD-15-161215	12/15/2016	Primary	K1615126	**113**	-	**50.4**	-	**3.40**	-	**59.1**	-	**22.1**	-	**0.32**	-	**25.5**	-	0.1 U	-	**108**	-
YVD-16	YVD-16-130923	09/23/2013	Primary	SWI0178	**85.0**	-	**32.9**	-	**6.16**	-	**81.7**	-	-	-	-	-	-	-	-	-	-	-
YVD-16	YVD-16-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	**44.1**	-	5.0 U	-	**28.8**	-	2.0 U	-	**140**	-
YVD-16	YVD-16-131212	12/12/2013	Primary	SWL0073	**87.7**	-	**32.1**	-	**5.25**	-	**79.8**	-	**46.7**	-	5.0 U	-	**28.8**	-	2.0 U	-	**163**	-
YVD-16	YVD-16-140318	03/18/2014	Primary	SXC0107	**105**	-	**53.2**	-	**15.0**	-	**75.5**	-	**46.1**	-	5.0 U	-	**23.5**	-	2.0 U	-	**130**	-
YVD-16	YVD-16-140603	06/03/2014	Primary	SXF0017	**86.3**	-	**37.0**	-	**8.47**	-	**78.4**	-	**36.7**	-	2.0 U	-	**21.9**	-	0.80 U	-	**131 J-**	MSD
YVD-16	YVD-16-140923	09/23/2014	Primary	SXI0173	**99.2**	-	**38.9**	-	**7.48**	-	**94.1**	-	**38.0**	-	2.5 U	-	**21.4**	-	1.0 U	-	**114**	-
YVD-16	YVD-16-141217	12/17/2014	Primary	SXL0121	**94.9**	-	**37.1**	-	**6.77**	-	**83.7**	-	**37.9**	-	2.5 U	-	**20.6**	-	1.0 U	-	**118**	-
YVD-16	YVD-D3-141217	12/17/2014	Duplicate	SXL0121	**92.9**	-	**36.2**	-	**6.27**	-	**81.7**	-	**39.9**	-	0.50 U	-	**22.4**	-	0.20 U	-	**130**	-
YVD-16	YVD-16-150317	03/17/2015	Primary	5904651	**93**	-	**34**	-	**6.1 J-**	MSD	**87**	-	**39**	-	2.5 U	-	**22**	-	1.0 U	-	**120**	-
YVD-16	YVD-16-150616	06/16/2015	Primary	59010961	**96**	-	**35**	-	**6.2 J+**	MSD	**91 J+**	MSD	**43**	-	2.5 U	-	**23**	-	1.0 U	-	**120**	-
YVD-16	YVD-16-150923	09/23/2015	Primary	59020281	**88**	-	**37**	-	**6.5**	-	**85**	-	**39**	-	2.5 U	-	**23**	-	1.0 U	-	**130**	-
YVD-16	YVD-16-151215	12/15/2015	Primary	59025431	**89**	-	**34**	-	**5.7**	-	**85**	-	**38**	-	2.5 U	-	**22**	-	1.0 U	-	**120**	-
YVD-16	YVD-16-160309	03/09/2016	Primary	59029711	**90**	-	**36**	-	**7.4**	-	**86**	-	**39**	-	2.5 U	-	**23**	-	1.0 U	-	**130 J+**	MSD
YVD-16	YVD-16-160621	6/21/2016	Primary	59037151	**85**	-	**33**	-	**5.9**	-	**86**	-	**42**	-	2.5 U	-	**22**	-	1 U	-	**120**	-
YVD-16	YVD-D2-160621	6/21/2016	Duplicate	59037151	**86**	-	**34**	-	**6**	-	**88**	-	**40**	-	0.5 U	-	**22**	-	0.2 U	-	**120**	-
YVD-16	YVD-16-160928	9/28/2016	Primary	K1611629	**92.4**	-	**33.2**	-	**5.69**	-	**90.2**	-	**33.3**	-	**0.22**	-	**19.7**	-	0.1 U	-	**110**	-
YVD-16	YVD-16-161215	12/15/2016	Primary	K1615126	**88.4**	-	**31.1**	-	**5.59**	-	**82.5**	-	**33.7**	-	**0.24**	-	**19.7**	-	0.1 U	-	**112**	-
YVD-17	YVD-17-130919	09/19/2013	Primary	SWI0142	**72.7**	-	**35.8**	-	**8.32**	-	**12.2**	-	**3.10**	-	0.50 U	-	-	-	-	-	**6.48**	-
YVD-17	YVD-17-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	**0.800**	-	0.20 U	-	-	-
YVD-17	YVD-17-131210	12/10/2013	Primary	SWL0055	**54.2**	-	**28.4**	-	**5.25**	-	**7.89**	-	**2.98**	-	0.50 U	-	**0.680**	-	0.20 U	-	**6.64**	-
YVD-17	YVD-17-140316	03/16/2014	Primary	SXC0081	**36.0**	-	**17.6**	-	**1.73**	-	**6.09**	-	**3.45**	-	**0.650**	-	**1.07**	-	0.20 U	-	**6.42**	-
YVD-17	YVD-17-140601	06/01/2014	Primary	SXF0008	**42.3**	-	**18.5**	-	**2.22**	-	**8.71**	-	**3.17**	-	0.50 U	-	**0.670**	-	0.20 U	-	**5.74**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
				Analytical Method	E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-14R	YVD-D1-161212	12/12/2016	Duplicate	K1615029	0.05 U	-	0.5 U	-	**0.092**	-	-	-	-	-	**571**	-	**571**	-
YVD-15	YVD-15-130917	09/17/2013	Primary	SWI0123	0.10 U	-	0.25 U	-	-	-	0.10 U	-	-	-	**514**	-	**515**	-
YVD-15	YVD-15-131212	12/12/2013	Primary	SWL0078	0.02 U	-	0.20 U	-	-	-	-	-	**0.238**	-	**494**	-	**495**	-
YVD-15	YVD-15-140319	03/19/2014	Primary	SXC0107	**0.112**	-	**0.553 J-**	MSD	**0.22**	-	-	-	-	-	**534**	-	**535**	-
YVD-15	YVD-15-140603	06/03/2014	Primary	SXF0025	0.10 U	-	**0.475 J-**	MSD	**0.31**	-	-	-	-	-	**509**	-	**510**	-
YVD-15	YVD-15-140924	09/24/2014	Primary	SXI0173	**0.246**	-	**1.19 J+**	MSD	**0.054 J+**	FBK	-	-	-	-	**541**	-	**545**	-
YVD-15	YVD-15-141217	12/17/2014	Primary	SXL0121	0.10 U	-	**0.414 J-**	MSD	**0.17**	-	-	-	-	-	**518**	-	**520**	-
YVD-15	YVD-15-150317	03/17/2015	Primary	5904651	0.10 U	-	0.25 UJ	MSD	**0.27**	-	-	-	-	-	**550**	-	**550**	-
YVD-15	YVD-15-150617	06/17/2015	Primary	59011021	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**550**	-	**550**	-
YVD-15	YVD-15-150925	09/25/2015	Primary	59020431	0.10 U	-	2.5 U	-	0.25 U	-	-	-	-	-	**480**	-	**480**	-
YVD-15	YVD-15-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	0.25 UJ	FDP	-	-	-	-	**540 J**	FDP	**540 J**	FDP
YVD-15	YVD-15-160309	03/09/2016	Primary	59029711	0.10 UJ	FDP	0.25 R	MSD	0.25 U	-	-	-	-	-	**520**	-	**520**	-
YVD-15	YVD-15-160621	6/21/2016	Primary	59037271	**0.13 J-**	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**430**	-	**430**	-
YVD-15	YVD-15-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U		**0.023**	-	-	-	-	-	**401**	-	**401**	-
YVD-15	YVD-15-161215	12/15/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.095**	-	-	-	-	-	**395**	-	**395**	-
YVD-16	YVD-16-130923	09/23/2013	Primary	SWI0178	0.10 U	-	**0.375**	-	-	-	0.10 U	-	-	-	**189**	-	**190**	-
YVD-16	YVD-16-130926	09/26/2013	Primary	SWI0190	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-16	YVD-16-131212	12/12/2013	Primary	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	0.06 U	-	**309**	-	**310**	-
YVD-16	YVD-16-140318	03/18/2014	Primary	SXC0107	0.10 U	-	**1.01 J-**	MSD	**1.4**	-	-	-	-	-	**298**	-	**300**	-
YVD-16	YVD-16-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.741**	-	**0.83**	-	-	-	-	-	**287**	-	**288**	-
YVD-16	YVD-16-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**0.747 J+**	MSD	**0.22**	-	-	-	-	-	**303**	-	**305**	-
YVD-16	YVD-16-141217	12/17/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	**0.25 J**	FDP	-	-	-	-	**298**	-	**300**	-
YVD-16	YVD-D3-141217	12/17/2014	Duplicate	SXL0121	0.10 U	-	**0.29 J-**	MSD	**0.10 J**	FDP	-	-	-	-	**308**	-	**310**	-
YVD-16	YVD-16-150317	03/17/2015	Primary	5904651	**0.11**	-	**0.29 J-**	MSD	0.25 U	-	-	-	-	-	**310**	-	**310**	-
YVD-16	YVD-16-150616	06/16/2015	Primary	59010961	**0.10**	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**310**	-	**310**	-
YVD-16	YVD-16-150923	09/23/2015	Primary	59020281	0.10 U	-	0.25 R	MSD	0.25 U	-	-	-	-	-	**330**	-	**330**	-
YVD-16	YVD-16-151215	12/15/2015	Primary	59025431	0.10 R	MSD	0.25 R	MSD	0.25 UJ	FDP	-	-	-	-	**350 J**	FDP	**350 J**	FDP
YVD-16	YVD-16-160309	03/09/2016	Primary	59029711	**0.15 J**	FDP	0.25 R	MSD	**0.27**	-	-	-	-	-	**300**	-	**300**	-
YVD-16	YVD-16-160621	6/21/2016	Primary	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**300**	-	**300**	-
YVD-16	YVD-D2-160621	6/21/2016	Duplicate	59037151	0.1 U	-	0.25 U	-	0.25 U	-	-	-	-	-	**300**	-	**300**	-
YVD-16	YVD-16-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U		**0.016**	-	-	-	-	-	**301**	-	**301**	-
YVD-16	YVD-16-161215	12/15/2016	Primary	K1615126	0.05 U	-	0.5 U	-	**0.068**	-	-	-	-	-	**298**	-	**298**	-
YVD-17	YVD-17-130919	09/19/2013	Primary	SWI0142	0.10 U	-	2.5 U	-	-	-	**3.64**	-	-	-	**213**	-	**215**	-
YVD-17	YVD-17-130924	09/24/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-17	YVD-17-131210	12/10/2013	Primary	SWL0055	0.02 UJ	MSD	0.29 R	FBK, MSD	-	-	-	-	**1.61**	-	**169**	-	**170**	-
YVD-17	YVD-17-140316	03/16/2014	Primary	SXC0081	**0.166**	-	0.25 U	-	**0.30**	-	-	-	-	-	**144**	-	**145**	-
YVD-17	YVD-17-140601	06/01/2014	Primary	SXF0008	0.10 U	-	**0.287**	-	**0.52**	-	-	-	-	-	**169**	-	**170**	-

Table 7
Cumulative Groundwater Analytical Results

				Analyte	Calcium		Magnesium		Potassium		Sodium		Chloride		Fluoride		Nitrate (as N)		Nitrite (as N)		Sulfate	
				Analytical Method	E200.7		E200.7		E200.7		E200.7		E300		E300		E300		E300		E300	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-17	YVD-17-140922	09/22/2014	Primary	SXI0148	**47.5**	-	**21.2**	-	**2.91**	-	**9.92**	-	**2.87**	-	0.50 U	-	**0.96**	-	0.20 U	-	**5.08**	-
YVD-17	YVD-17-141215	12/15/2014	Primary	SXL0103	**42.1**	-	**17.8**	-	**1.84**	-	**9.15**	-	**2.99 J+**	MSD	0.50 U	-	**0.660 J**	DUP	0.20 U	-	**6.01 J+**	MSD, DUP
YVD-17	YVD-17-150316	03/16/2015	Primary	5904471	**33**	-	**17**	-	**1.4**	-	**6.3**	-	**3.5**	-	**0.50**	-	**1.1**	-	0.20 U	-	**5.7**	-
YVD-17	YVD-D1-150316	03/16/2015	Duplicate	5904471	**33**	-	**17**	-	**1.5**	-	**6.2**	-	**3.5**	-	**0.51**	-	**1.2**	-	0.20 U	-	**5.7**	-
YVD-17	YVD-17-150617	06/17/2015	Primary	59010961	**41**	-	**18**	-	**1.8 J+**	MSD	**8.7 J+**	MSD	**3.0**	-	0.50 U	-	**0.59**	-	0.20 U	-	**5.4**	-
YVD-17	YVD-17-150924	09/24/2015	Primary	59020391	**40**	-	**18**	-	**2.0**	-	**9.0**	-	**3.1**	-	**0.60**	-	0.20 U	-	**1.2**	-	**5.6 J-**	MSD
YVD-17	YVD-17-151216	12/16/2015	Primary	59025501	**38**	-	**17**	-	**1.4**	-	**8.0**	-	**2.6**	-	0.50 U	-	**0.55**	-	0.20 U	-	**5.4**	-
YVD-17	YVD-17-160310	03/10/2016	Primary	59029941	**35**	-	**16**	-	**1.2**	-	**6.4**	-	**2.8**	-	0.50 U	-	**0.32**	-	0.20 U	-	**4.8 J**	DUP
YVD-17	YVD-17-160623	6/23/2016	Primary	59037371	**39**	-	**18**	-	**1.6**	-	**8.3**	-	**3.4**	-	0.5 U	-	**0.55**	-	0.2 U	-	**5.3**	-
YVD-17	YVD-17-160926	9/26/2016	Primary	K1611565	**40.8**	-	**17.3**	-	**1.59**	-	**8.30**	-	**2.91**	-	**0.32**	-	**1.16**	-	0.1 U	-	**7.9**	-
YVD-17	YVD-17-161215	12/15/2016	Primary	K1615174	**39.6**	-	**15.8**	-	**1.46**	-	**7.44**	-	**2.42**	-	**0.34**	-	**0.59**	-	0.1 U	-	**6.0**	-
YVD-18	YVD-18-130919	09/19/2013	Primary	SWI0142	**42.9**	-	**13.7**	-	**3.22**	-	**78.3**	-	**61.4**	-	5.0 U	-	-	-	-	-	**122**	-
YVD-18	YVD-18-130925	09/25/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	**13.6**	-	2.0 U	-	-	-
YVD-18	YVD-18-131211	12/11/2013	Primary	SWL0073	**50.4**	-	**17.1**	-	**3.02**	-	**71.3**	-	**62.9**	-	5.0 U	-	**14.2 J**	FDP	2.0 U	-	**116**	-
YVD-18	YVD-D2-131211	12/11/2013	Duplicate	SWL0073	**50.2**	-	**16.7**	-	**3.06**	-	**70.9**	-	**66.5**	-	5.0 U	-	**23.5 J**	FDP	2.0 U	-	**129**	-
YVD-18	YVD-18-140318	03/18/2014	Primary	SXC0095	**51.7**	-	**16.5**	-	**3.30**	-	**77.5**	-	**66.7**	-	5.0 U	-	**18.8**	-	2.0 U	-	**147 J-**	MSD
YVD-18	YVD-D2-140318	03/18/2014	Duplicate	SXC0095	**52.0**	-	**16.6**	-	**3.26**	-	**78.0**	-	**62.1**	-	5.0 U	-	**17.1**	-	2.0 U	-	**140 J-**	MSD
YVD-18	YVD-18-140603	06/03/2014	Primary	SXF0017	**46.8**	-	**15.4**	-	**3.24**	-	**77.7**	-	**64.0**	-	2.0 U	-	**16.9**	-	0.80 U	-	**135 J-**	MSD
YVD-18	YVD-18-140923	09/23/2014	Primary	SXI0173	**48.5**	-	**15.6**	-	**3.80**	-	**81.6**	-	**54.7**	-	2.5 U	-	**13.8**	-	1.0 U	-	**111**	-
YVD-18	YVD-18-141216	12/16/2014	Primary	SXL0121	**52.7**	-	**17.7**	-	**3.63**	-	**81.8**	-	**59.6**	-	2.5 U	-	**16.5**	-	1.0 U	-	**131**	-
YVD-18	YVD-18-150317	03/17/2015	Primary	5904541	**56**	-	**19**	-	**3.5**	-	**87**	-	**64**	-	2.5 U	-	**20 J-**	MSD	1.0 U	-	**140 J-**	MSD
YVD-18	YVD-18-150617	06/17/2015	Primary	59010961	**55**	-	**18**	-	**4.1 J+**	MSD	**86 J+**	MSD	**65**	-	2.5 U	-	**17**	-	1.0 U	-	**120**	-
YVD-18	YVD-18-150924	09/24/2015	Primary	59020391	**52**	-	**19**	-	**3.5**	-	**77**	-	**63**	-	2.5 U	-	**20 J+**	MSD	1.0 U	-	**140 J-**	MSD
YVD-18	YVD-18-151216	12/16/2015	Primary	59025501	**60**	-	**20**	-	**4.0**	-	**91**	-	**66**	-	2.5 U	-	**23**	-	1.0 U	-	**150**	-
YVD-18	YVD-18-160309	03/09/2016	Primary	59029941	**62**	-	**21**	-	**3.8**	-	**89**	-	**63**	-	2.5 U	-	**22**	-	1.0 U	-	**150 J**	DUP
YVD-18	YVD-18-160622	6/22/2016	Primary	59037271	**55**	-	**19**	-	**3.7**	-	**86**	-	**61**	-	2.5 U	-	**21**	-	1 U	-	**140**	-
YVD-18	YVD-18-160928	9/28/2016	Primary	K1611629	**58.2**	-	**19.7**	-	**3.75**	-	**83.8**	-	**56.8**	-	**0.36**	-	**20.5**	-	0.1 U	-	**135**	-
YVD-18	YVD-18-161214	12/14/2016	Primary	K1615083	**62.5**	-	**19.6**	-	**3.69**	-	**82.5**	-	**56.3**	-	**0.38**	-	**21.5**	-	0.1 U	-	**139**	-
YVD-18	YVD-D3-161214	12/14/2016	Duplicate	K1615083	**60.6**	-	**20.1**	-	**3.82**	-	**84.0**	-	**56.4**	-	**0.37**	-	**21.5**	-	0.1 U	-	**142**	-

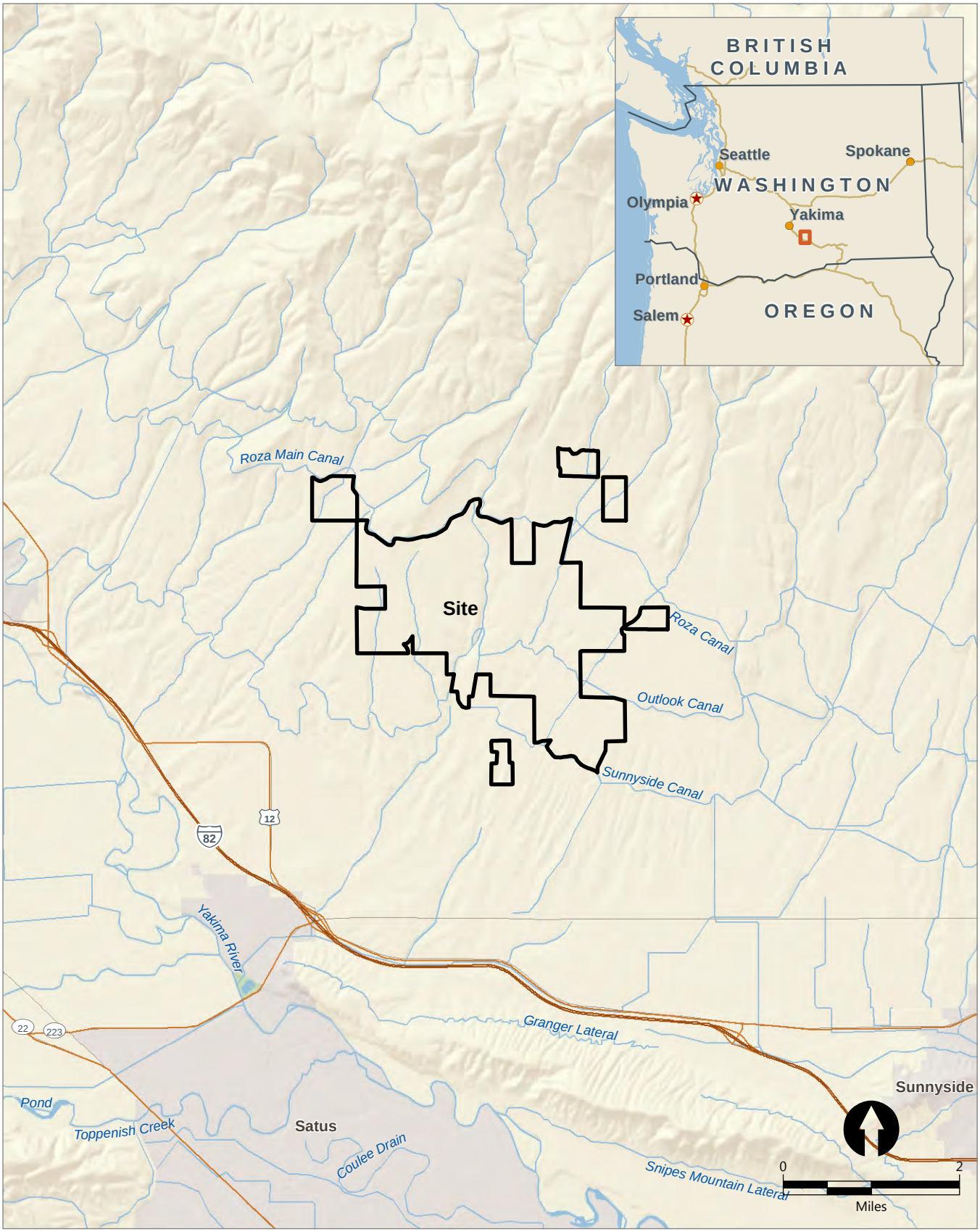
Table 7
Cumulative Groundwater Analytical Results

Analyte					Ammonia (as N)		Total Kjeldahl Nitrogen (TKN)		Phosphorus		Phosphorus		Phosphorus		Alkalinity, Bicarbonate (as CaCO3)		Alkalinity, Total (as CaCO3)	
Analytical Method					E350.1		E351.2		E365.1		E365.4		SM4500-P-E		SM2320B		SM2320B	
Well ID	Sample Name	Sample Date	Sample Type	Sample Group	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code	Result, Qualifier	Validation Code
YVD-17	YVD-17-140922	09/22/2014	Primary	SXI0148	0.10 U	-	**0.293**	-	**0.36**	-	-	-	-	-	**183**	-	**185**	-
YVD-17	YVD-17-141215	12/15/2014	Primary	SXL0103	0.10 U	-	0.25 U	-	**0.19**	-	-	-	-	-	**168**	-	**170**	-
YVD-17	YVD-17-150316	03/16/2015	Primary	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**130**	-	**130**	-
YVD-17	YVD-D1-150316	03/16/2015	Duplicate	5904471	0.10 U	-	0.25 UJ	MSD	0.25 UJ	MSD	-	-	-	-	**130**	-	**130**	-
YVD-17	YVD-17-150617	06/17/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	**0.25**	-	-	-	-	-	**160**	-	**160**	-
YVD-17	YVD-17-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	**0.26**	-	-	-	-	-	**170**	-	**170**	-
YVD-17	YVD-17-151216	12/16/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**180**	-	**180**	-
YVD-17	YVD-17-160310	03/10/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP	0.25 U	-	-	-	-	-	**150**	-	**150**	-
YVD-17	YVD-17-160623	6/23/2016	Primary	59037371	0.1 R	MSD	0.25 U	-	0.25 U	-	-	-	-	-	**170**	-	**170**	-
YVD-17	YVD-17-160926	9/26/2016	Primary	K1611565	0.05 U	-	R	MSD	**0.095**	-	-	-	-	-	**182**	-	**182**	-
YVD-17	YVD-17-161215	12/15/2016	Primary	K1615174	0.05 U	-	0.5 U	-	**0.103**	-	-	-	-	-	**154**	-	**157 J**	-
YVD-18	YVD-18-130919	09/19/2013	Primary	SWI0142	0.10 U	-	0.456 R	FBK	-	-	0.10 U	-	-	-	**119**	-	**120**	-
YVD-18	YVD-18-130925	09/25/2013	Primary	SWI0175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YVD-18	YVD-18-131211	12/11/2013	Primary	SWL0073	0.02 UJ	MSD	1.5 UJ	MSD	-	-	-	-	0.06 U	-	**109**	-	**110**	-
YVD-18	YVD-D2-131211	12/11/2013	Duplicate	SWL0073	0.02 UJ	MSD	0.20 UJ	MSD	-	-	-	-	0.06 U	-	**114**	-	**115**	-
YVD-18	YVD-18-140318	03/18/2014	Primary	SXC0095	**0.134 J**	FDP	**0.358**	-	**0.068**	-	-	-	-	-	**119**	-	**120**	-
YVD-18	YVD-D2-140318	03/18/2014	Duplicate	SXC0095	**0.28 J**	FDP	**0.342**	-	**0.082**	-	-	-	-	-	**124**	-	**125**	-
YVD-18	YVD-18-140603	06/03/2014	Primary	SXF0017	0.10 U	-	**0.796**	-	**0.071 J+**	FBK	-	-	-	-	**117**	-	**118**	-
YVD-18	YVD-18-140923	09/23/2014	Primary	SXI0173	0.10 U	-	**0.335 J+**	MSD	**0.086**	-	-	-	-	-	**114**	-	**115**	-
YVD-18	YVD-18-141216	12/16/2014	Primary	SXL0121	0.10 U	-	0.25 UJ	MSD	0.10 U	-	-	-	-	-	**114**	-	**115**	-
YVD-18	YVD-18-150317	03/17/2015	Primary	5904541	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**110**	-	**110**	-
YVD-18	YVD-18-150617	06/17/2015	Primary	59010961	0.10 U	-	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**110**	-	**110**	-
YVD-18	YVD-18-150924	09/24/2015	Primary	59020391	0.10 UJ	MSD	0.25 UJ	MSD	0.25 U	-	-	-	-	-	**120**	-	**120**	-
YVD-18	YVD-18-151216	12/16/2015	Primary	59025501	0.10 R	MSD	0.25 R	MSD	0.25 UJ	MSD	-	-	-	-	**120**	-	**120**	-
YVD-18	YVD-18-160309	03/09/2016	Primary	59029941	0.10 U	-	0.25 UJ	FDP, MSD	0.25 U	-	-	-	-	-	**120**	-	**120**	-
YVD-18	YVD-18-160622	6/22/2016	Primary	59037271	0.1 UJ	MSD	0.25 R	MSD	0.25 U	-	-	-	-	-	**130**	-	**130**	-
YVD-18	YVD-18-160928	9/28/2016	Primary	K1611629	0.05 U	-	0.5 U		**0.013**	-	-	-	-	-	**114**	-	**114**	-
YVD-18	YVD-18-161214	12/14/2016	Primary	K1615083	0.05 U	-	0.5 U	-	**0.043**	-	-	-	-	-	**111**	-	**111**	-
YVD-18	YVD-D3-161214	12/14/2016	Duplicate	K1615083	**0.115**	-	0.5 U	-	**0.019**	-	-	-	-	-	**111**	-	**111**	-

Table 7
Cumulative Groundwater Analytical Results

Notes:
Bold: detected result
Results reported in milligrams per liter (mg/L).
No samples were filtered in the field.
(as N): reported as nitrogen
(as CaCO3): reported as calcium carbonate
DUP: laboratory duplicate RPD was outside acceptance limits
ERL: elevated reporting limit
FBK, MBK: field or method blank contamination
FDP: field duplicate RPD exceedance
HTQ: holding time violation
J: The compound was positively identified; however, the associated numerical value is an estimated concentration.
J-: The result is an estimated quantity, but the result may be biased low.
J+: The result is an estimated quantity, but the result may be biased high.
MSD: matrix spike/matrix spike duplicate percent recoveries or RPD was outside acceptance limits.
R: The sample results are rejected as unusable. The compound may or may not be present in the sample.
RPD: relative percent difference was outside acceptance limits
U: The compound was analyzed for but not detected. The associated value is the compound reporting limit. Or the compound is considered non-detect at the listed value due to associated blank contamination.
UJ: The compound was not detected above the reported sample reporting limit; however, the reporting limit is approximate and may or may not represent the actual limit of quantitation.

Figures



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ANCHOR QEA

Figure 1
Site Vicinity Map
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

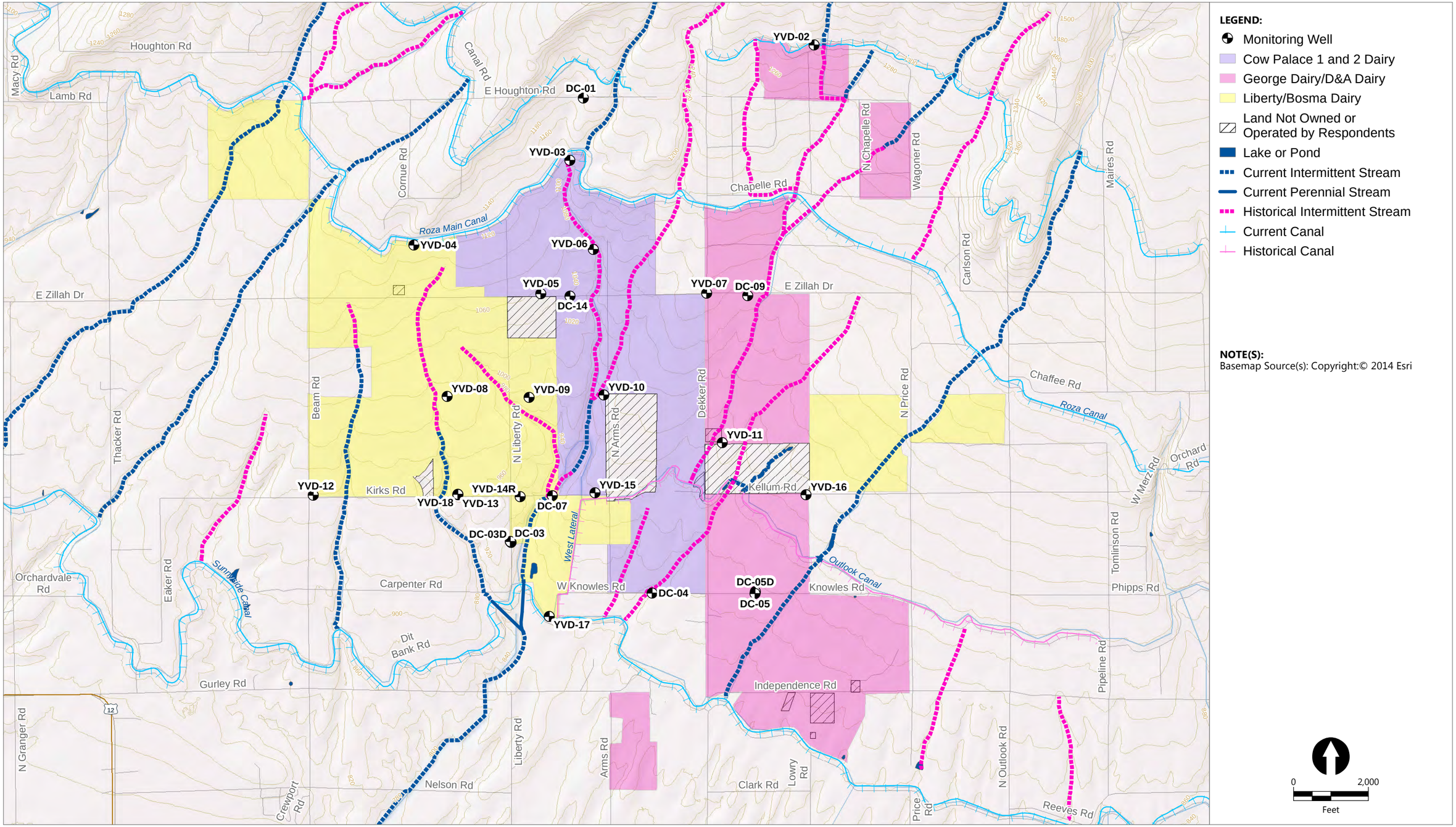

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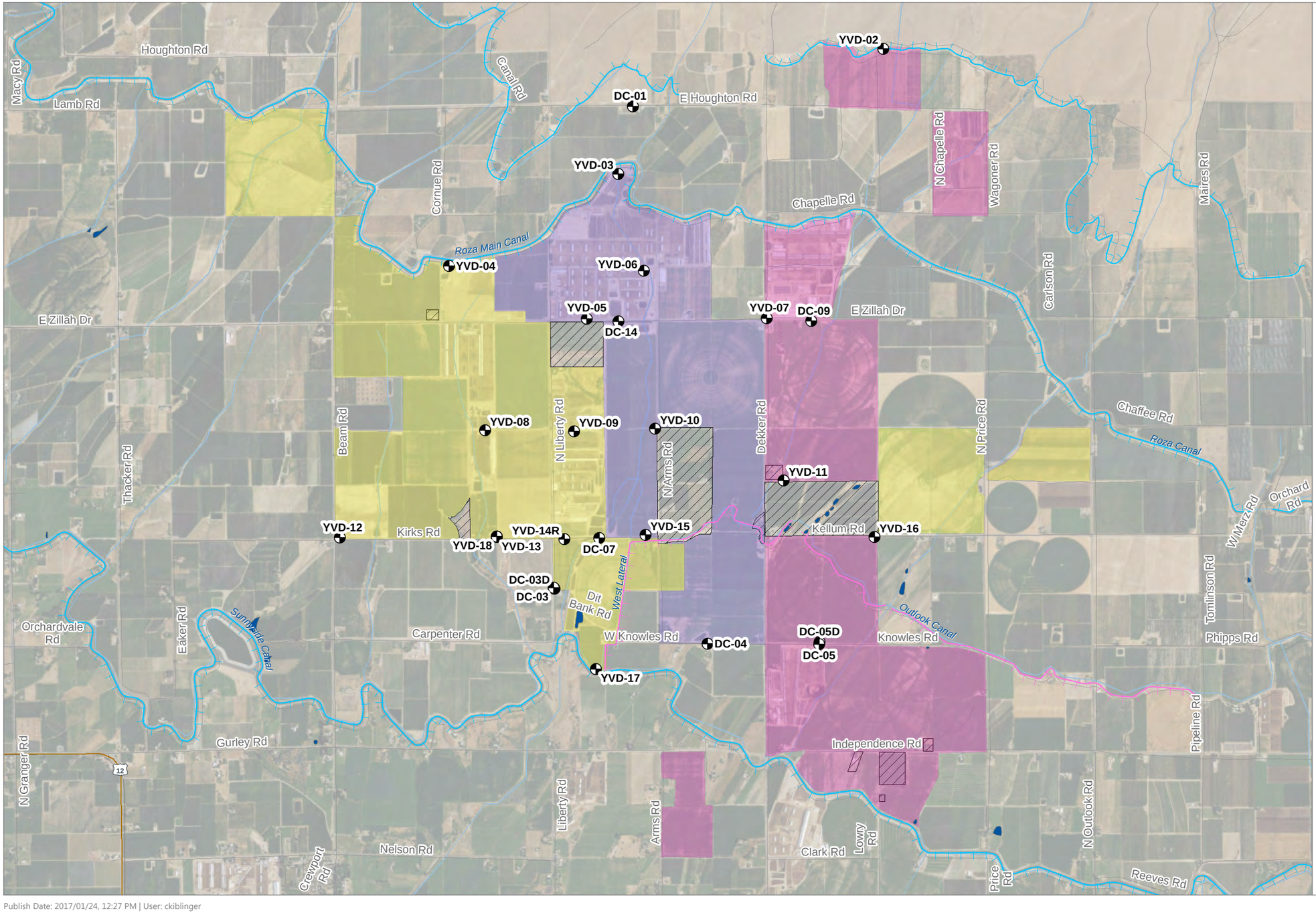
Figure 2A
Site Map
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy
- Land Not Owned or Operated by Respondents
- Lake or Pond
- Current Canal
- Historical Canal

NOTE(S):
Aerial Photo Source: USDA NAIP (2015).

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Feet

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Figure 2B
Aerial Photograph
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

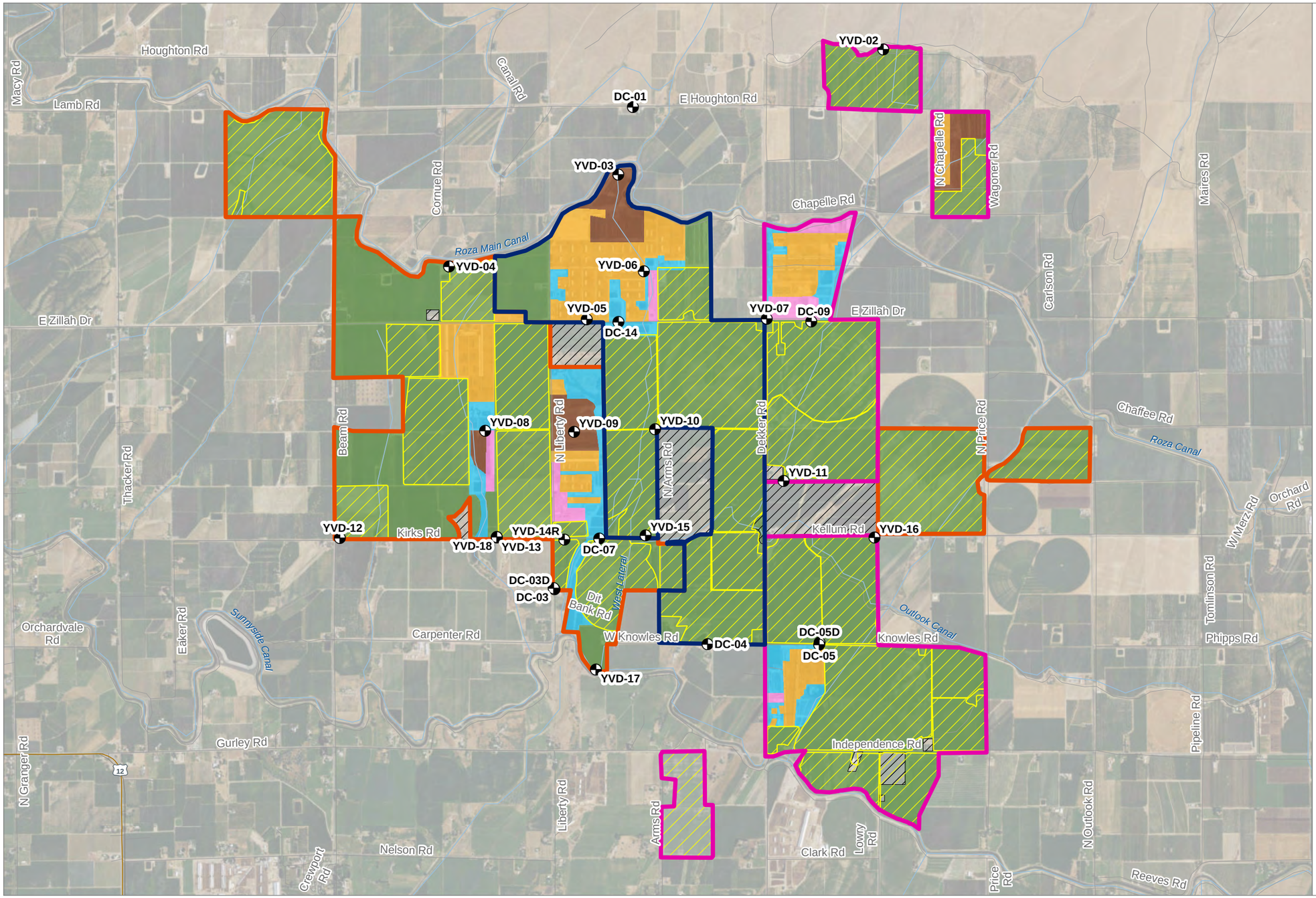

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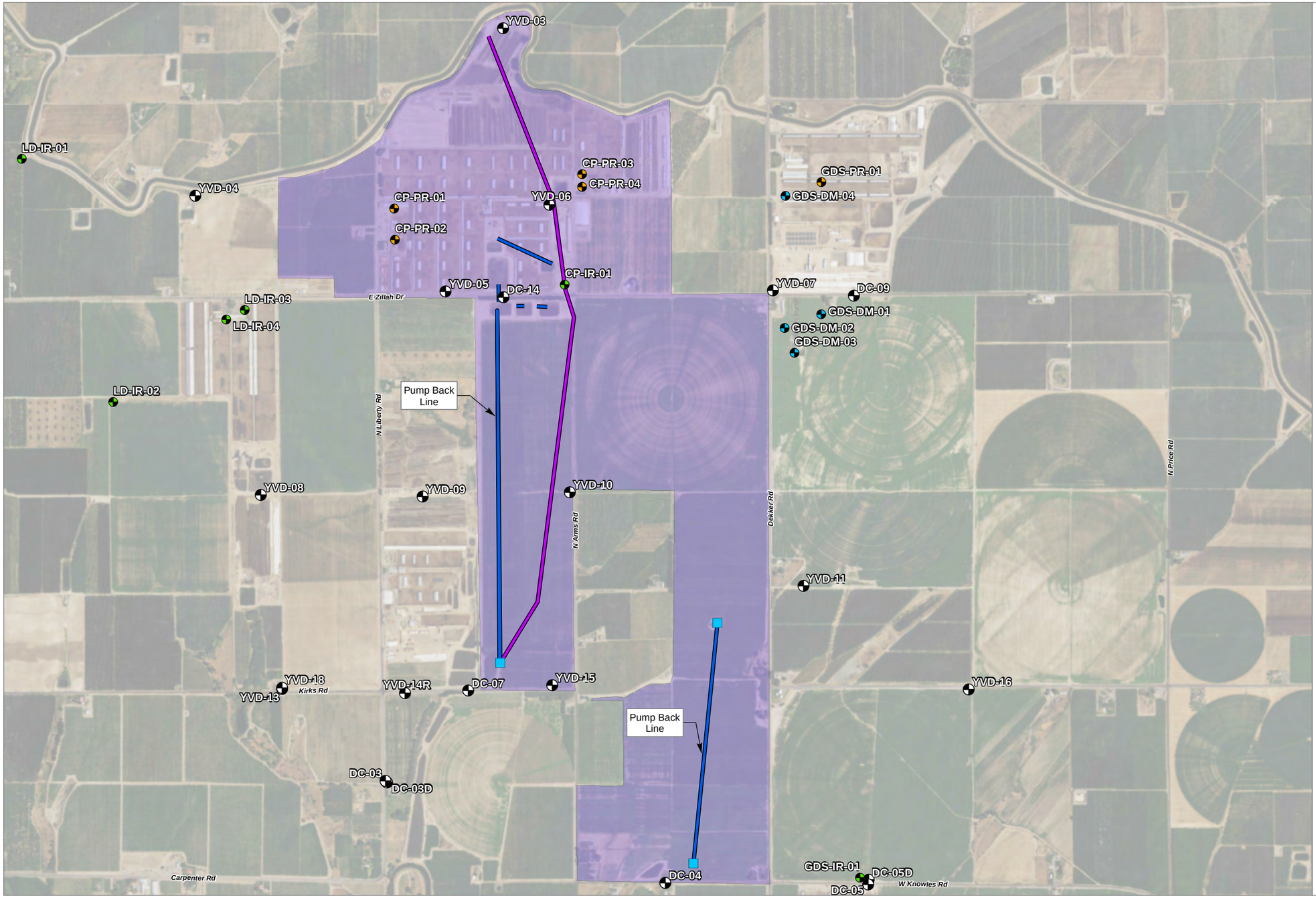
Figure 3A
General Facility Plan
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Domestic Well
- Irrigation Well
- Production Well
- Detention Basin
- Pipe
- Roza Canal Seepage Pipe
- Cow Palace Owned Property

NOTE(S):

1. All lands under agricultural use are irrigated and fertilized.
2. Aerial Photo Source: USDA NAIP (2015).

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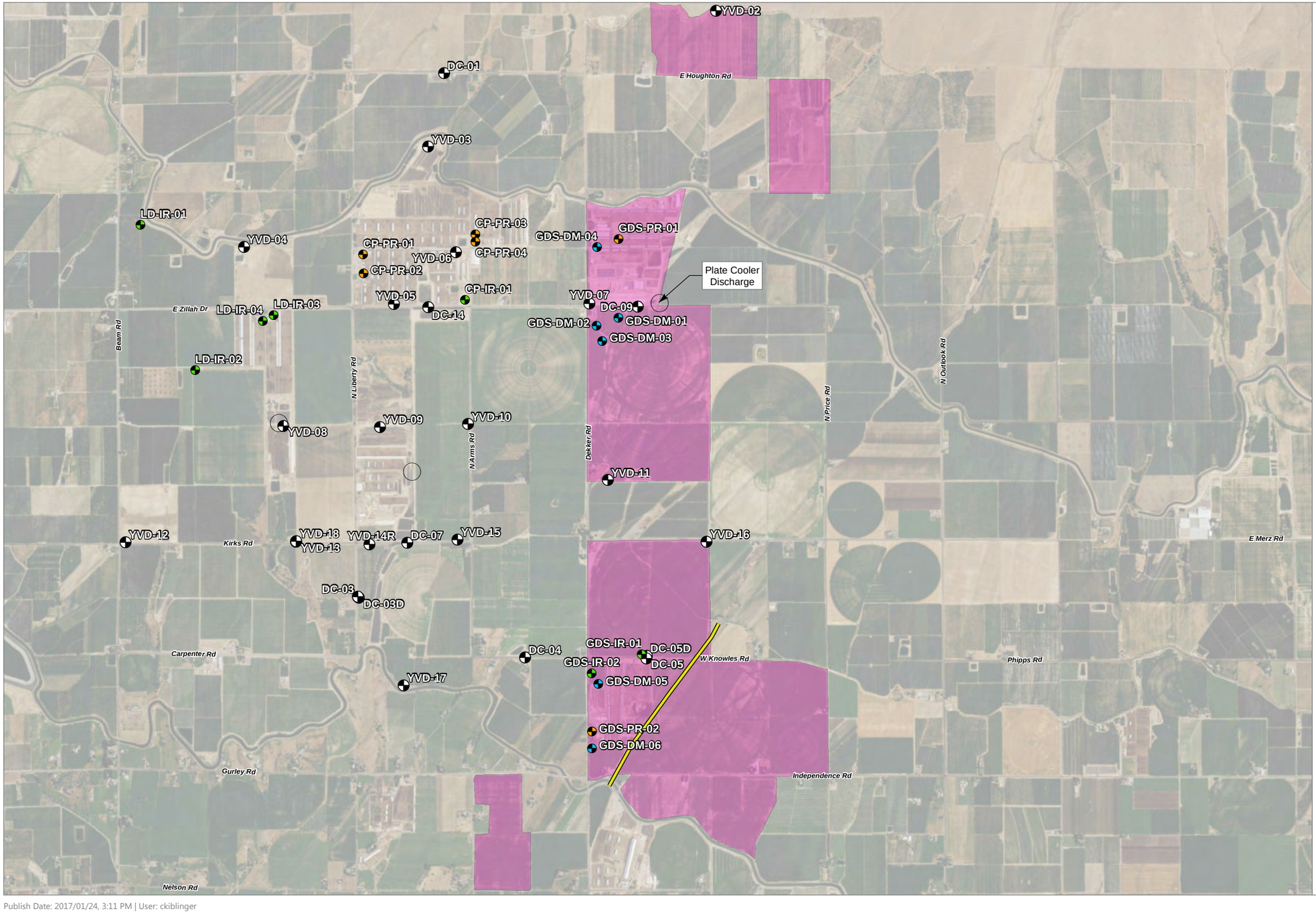
Figure 3B
Facility Plan – Cow Palace Dairy
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Domestic Well
- Irrigation Well
- Production Well
- Sunnyside Valley Irrigation District Pipe
- George DeRuyter & Son Owned Property

NOTE(S):

Aerial Photo Source: USDA NAIP (2015).

0 2,000

Feet

Publish Date: 2017/01/24, 3:11 PM | User: ckiblinger

Filepath: \\orcas\gis\Jobs\PerkinsCoie_0996\YakimaDairies\Maps\GW_Monitoring\Yakima_Dairies_DeRuyter_DA.mxd

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Figure 3C

Facility Plan – George DeRuyter & Son and D&A Dairies

Groundwater Monitoring Data Report Fourth Quarter 2016

Yakima Valley Dairies

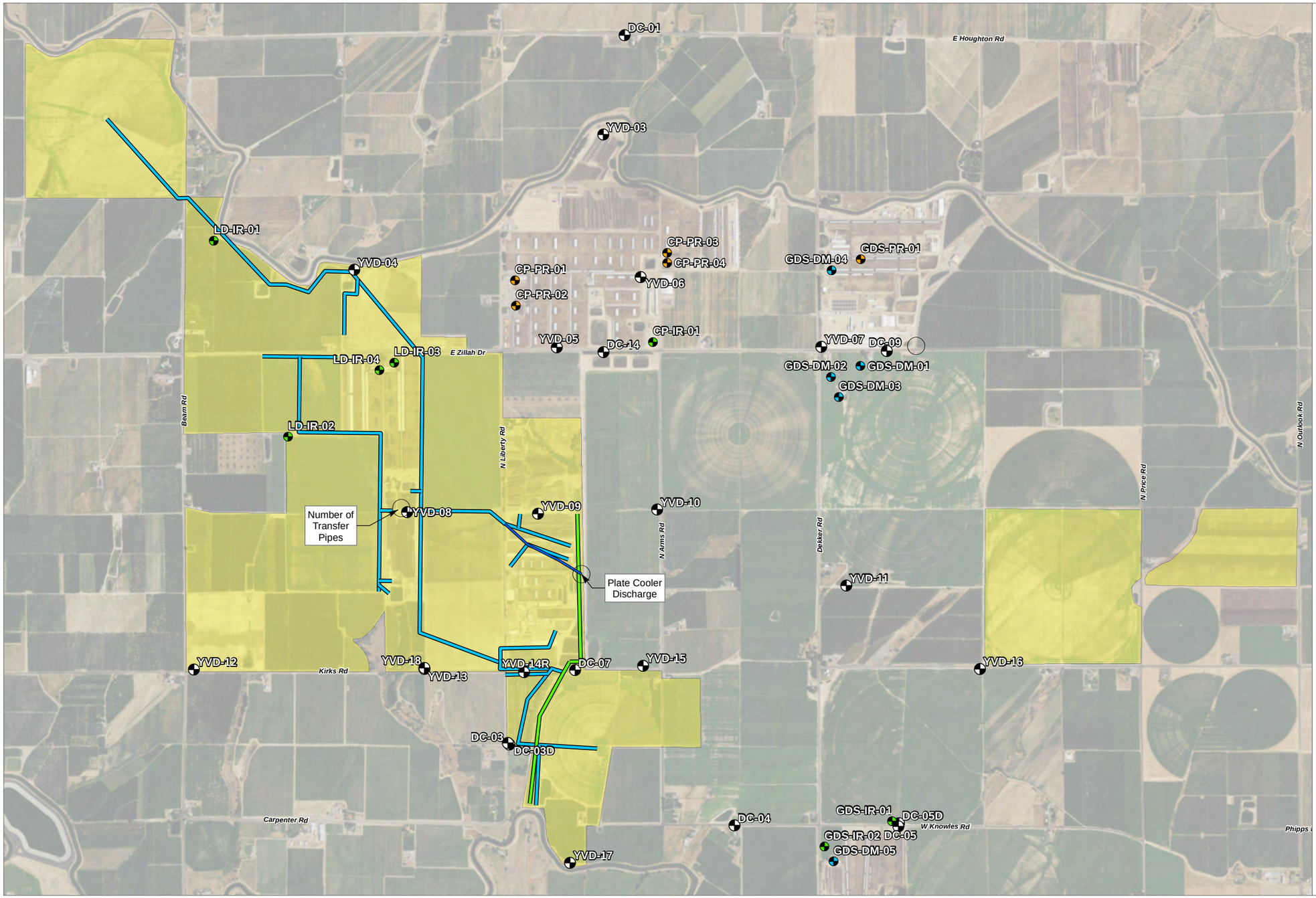

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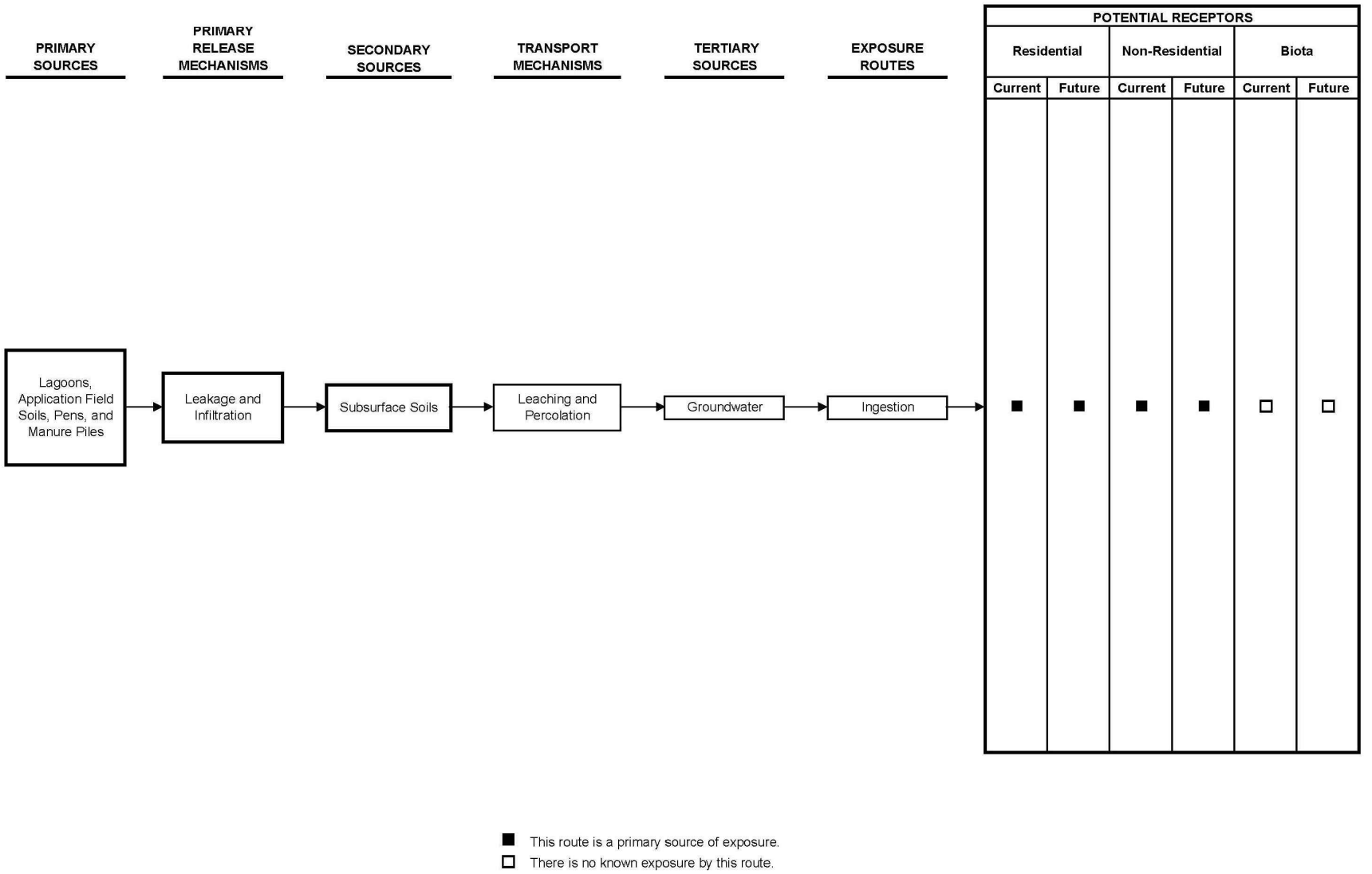
Figure 3D
Facility Plan – Liberty and H&S Bosma Dairies
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



SOURCE: ARCADIS

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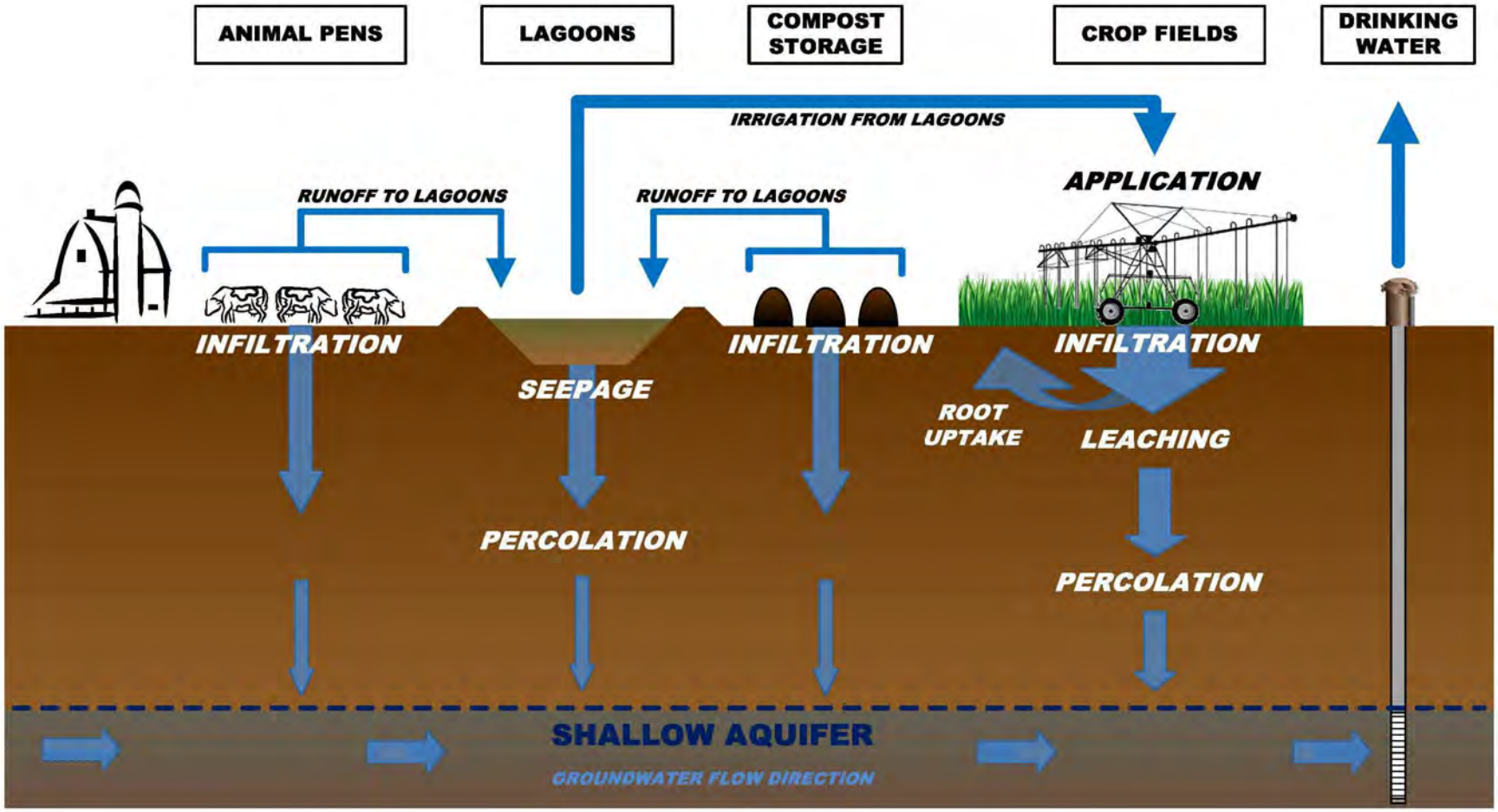
Figure 4
Conceptual Site Model Flow Chart

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



SOURCE: ARCADIS

Not to Scale

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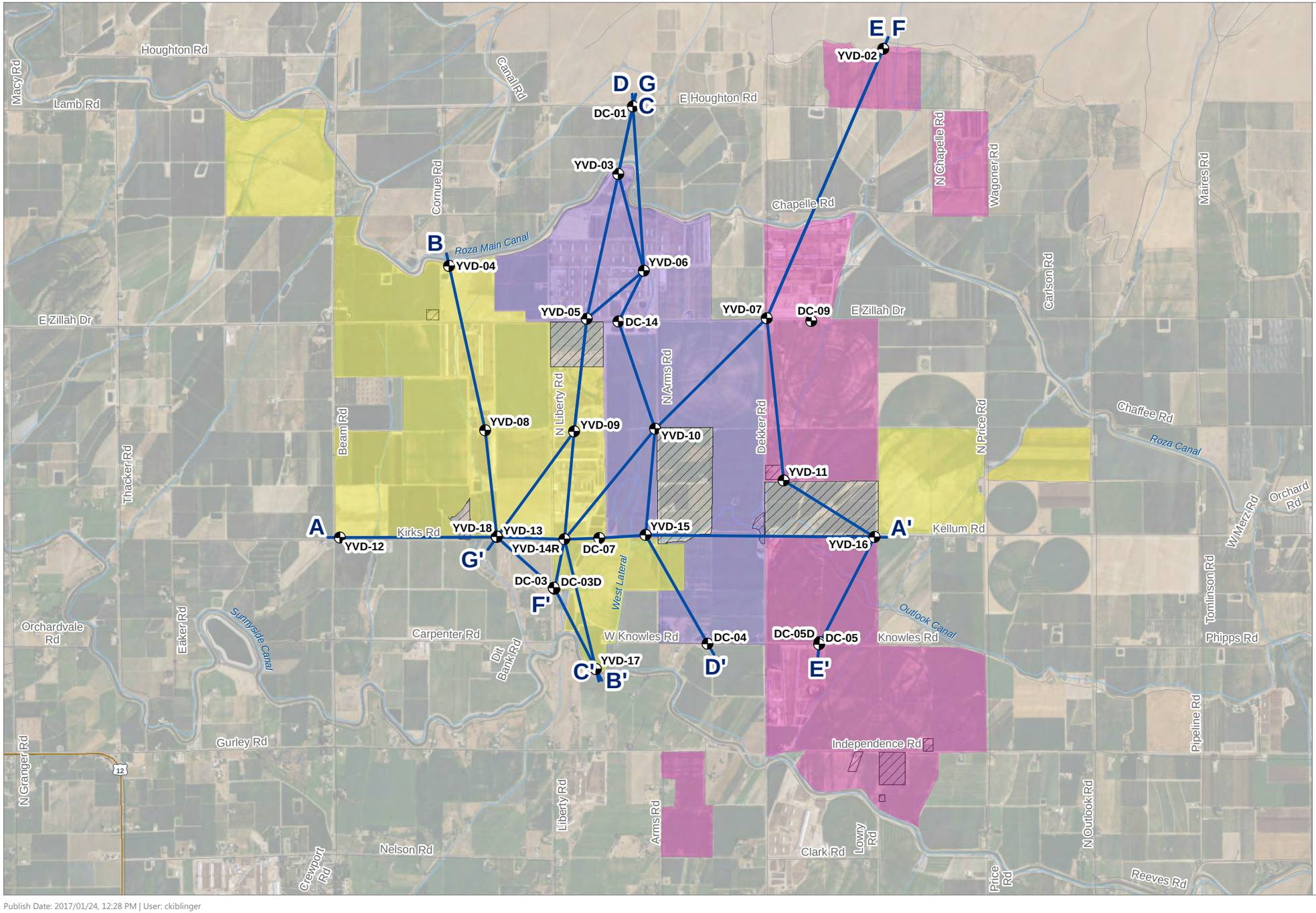
Figure 5
Conceptual Site Model

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Cross Sections
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy
- Land Not Owned or Operated by Respondents

NOTE(S):
Aerial Photo Source: USDA NAIP (2015).

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Figure 6
Cross Section Location Map
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

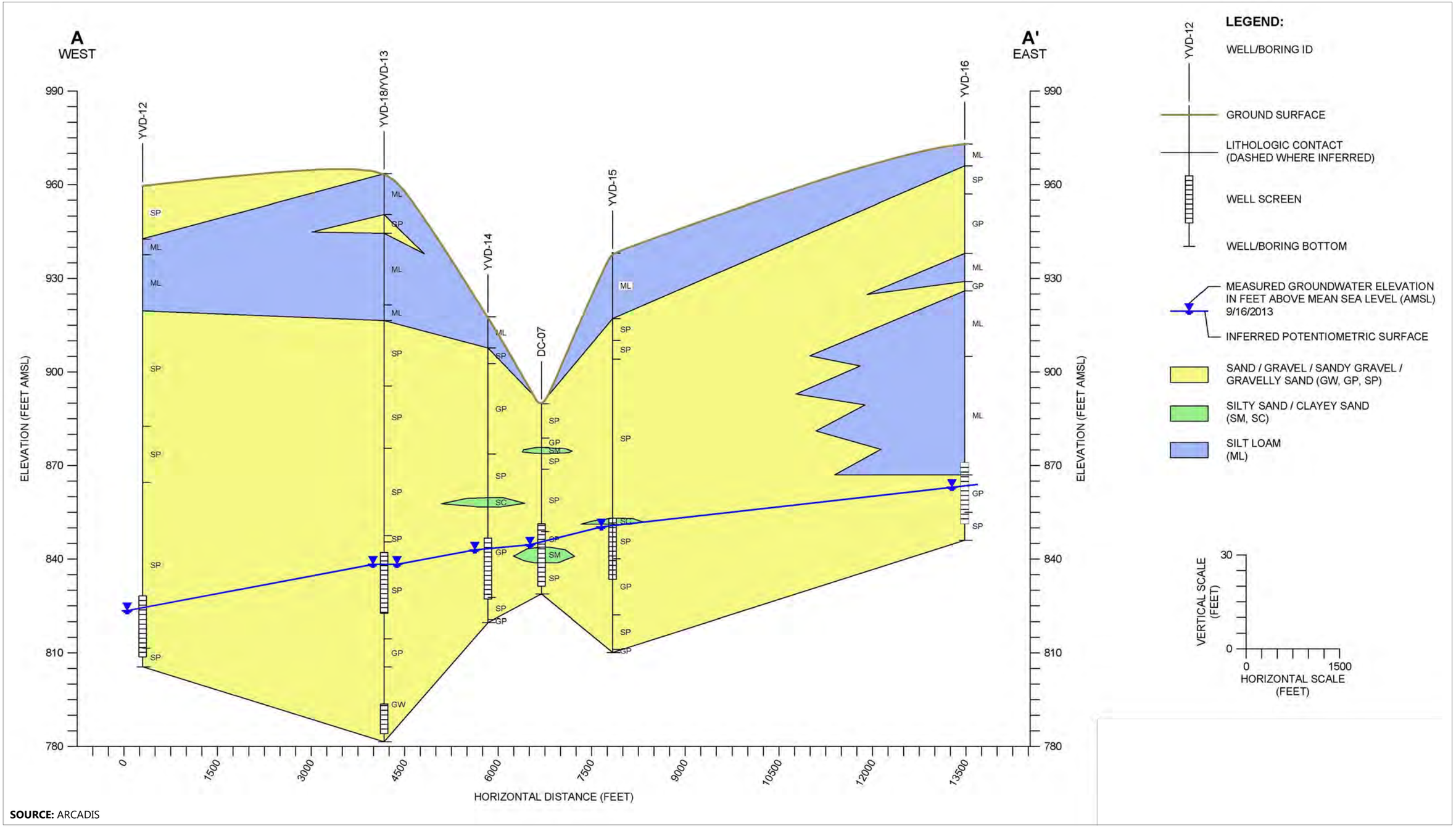

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Figure 7
Cross Section A-A'

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

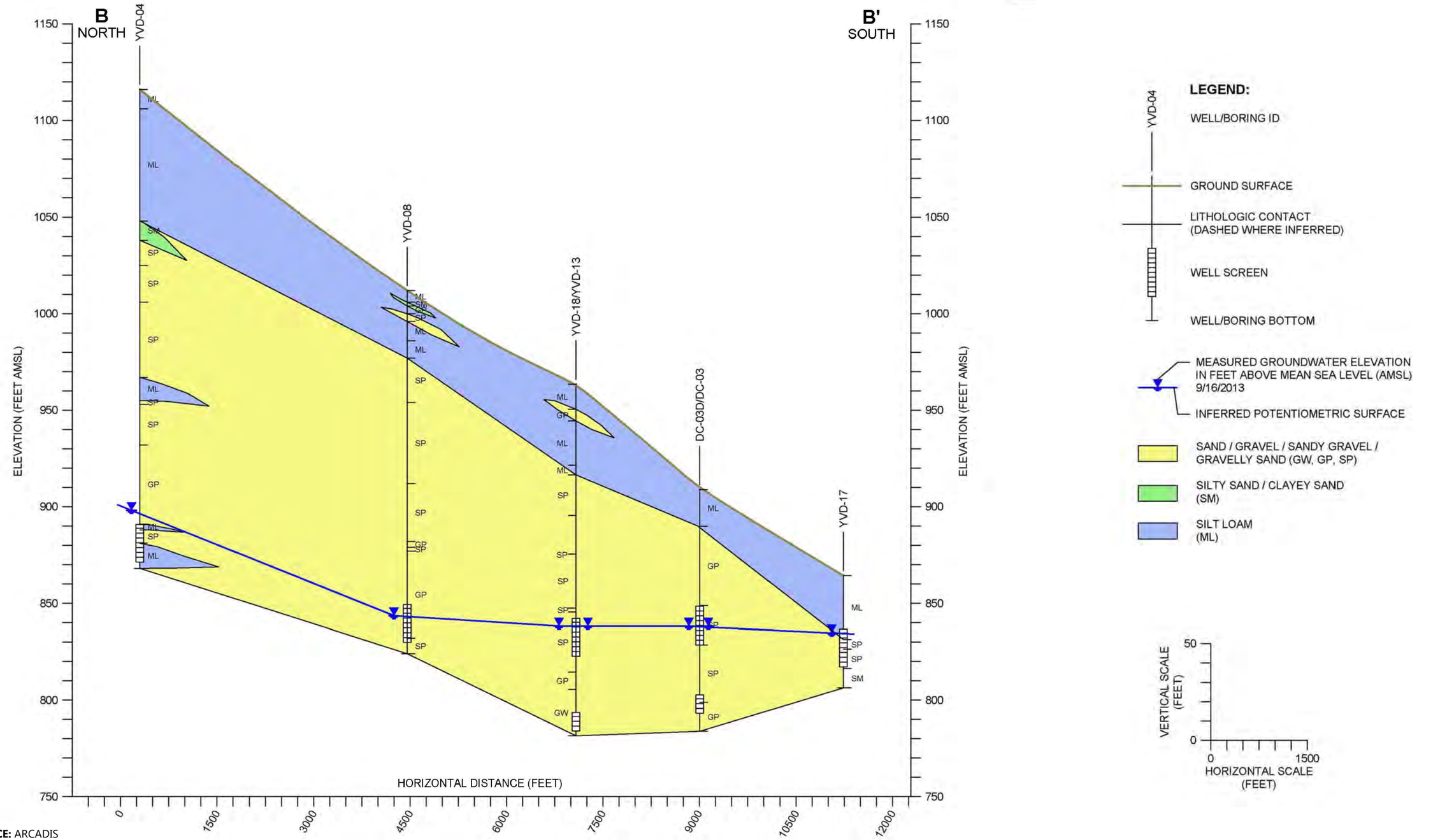

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Figure 8
Cross Section B-B'
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

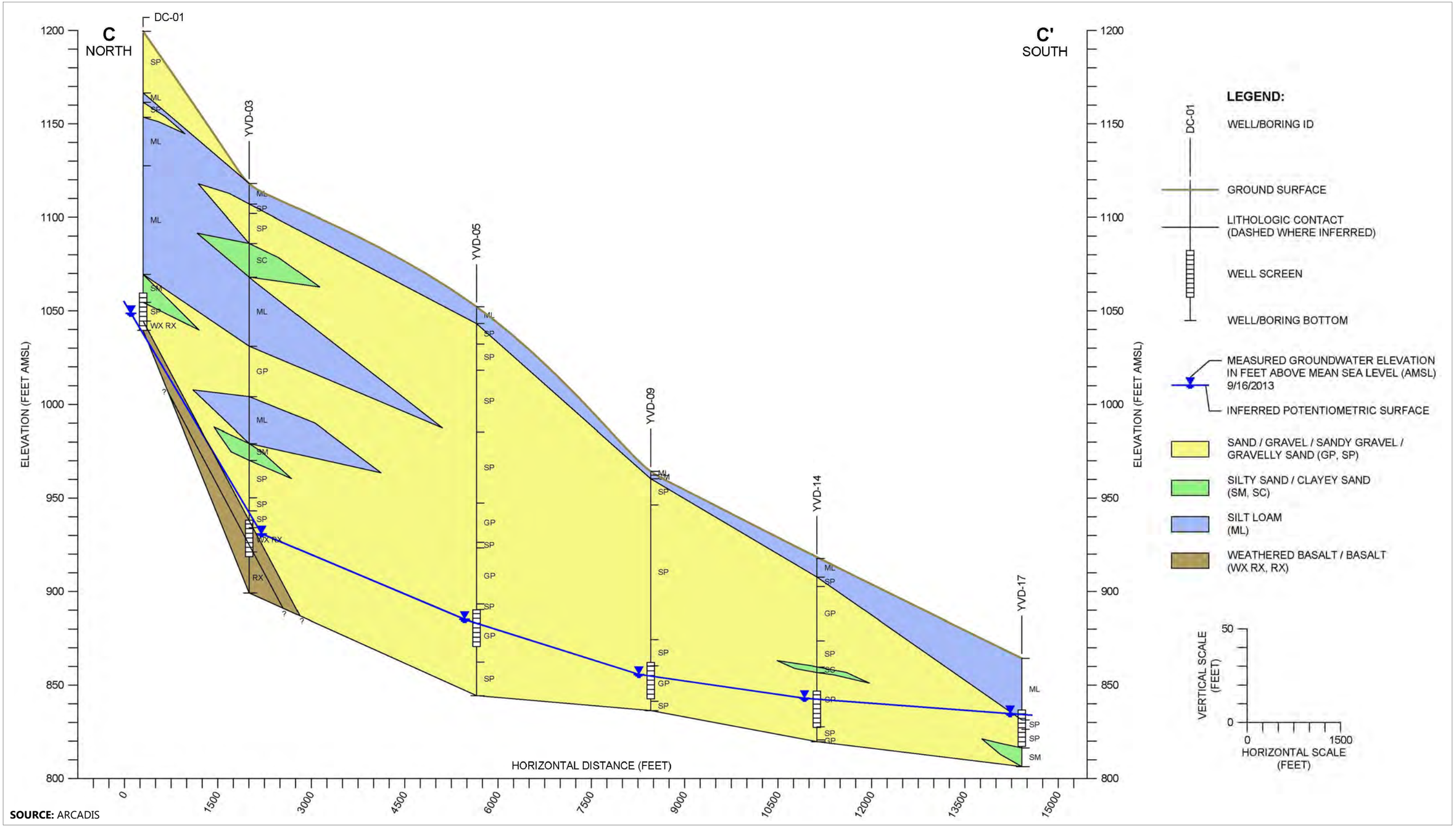

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Figure 9
Cross Section C-C'
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

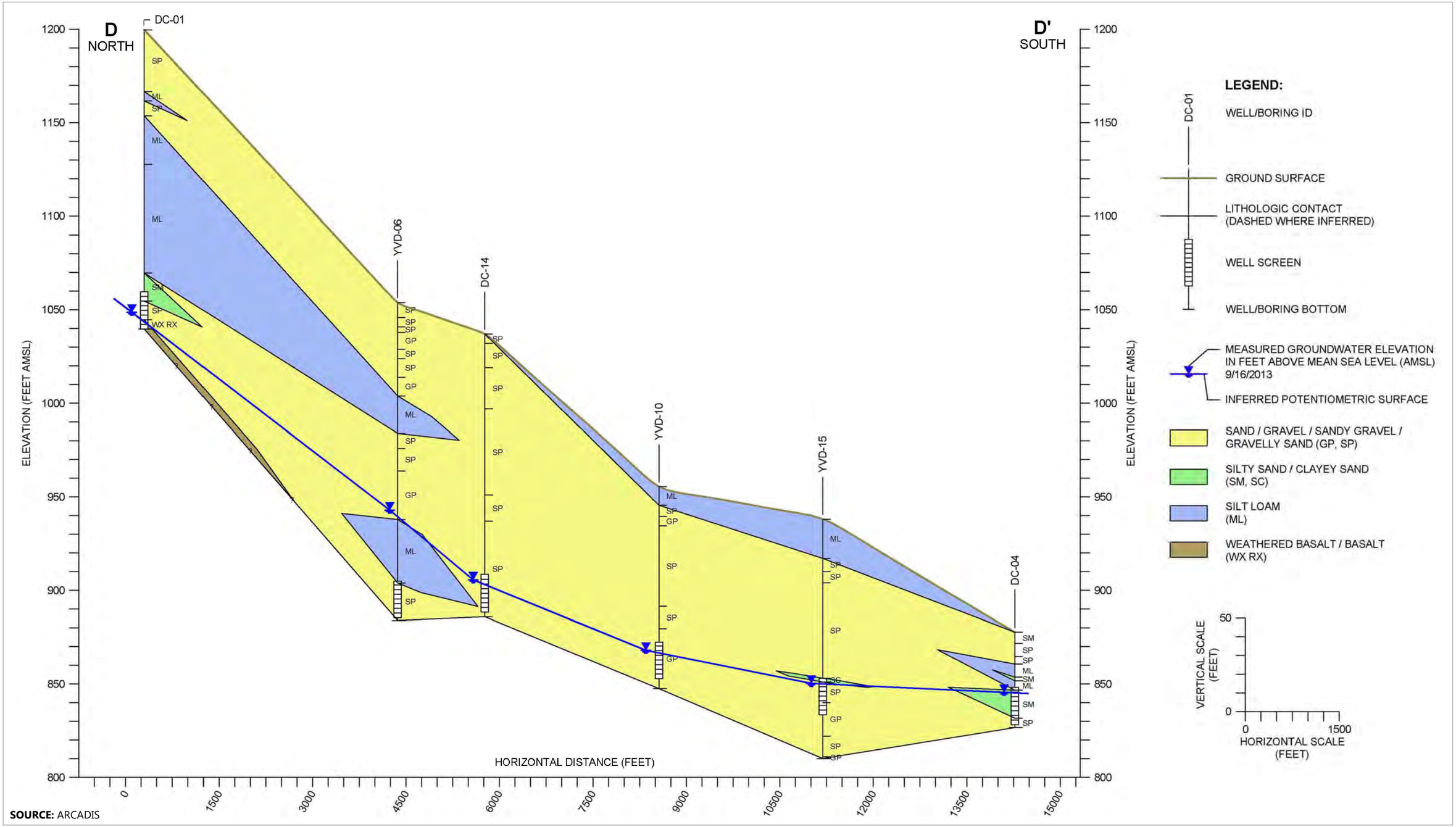

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Figure 10
Cross Section D-D'
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

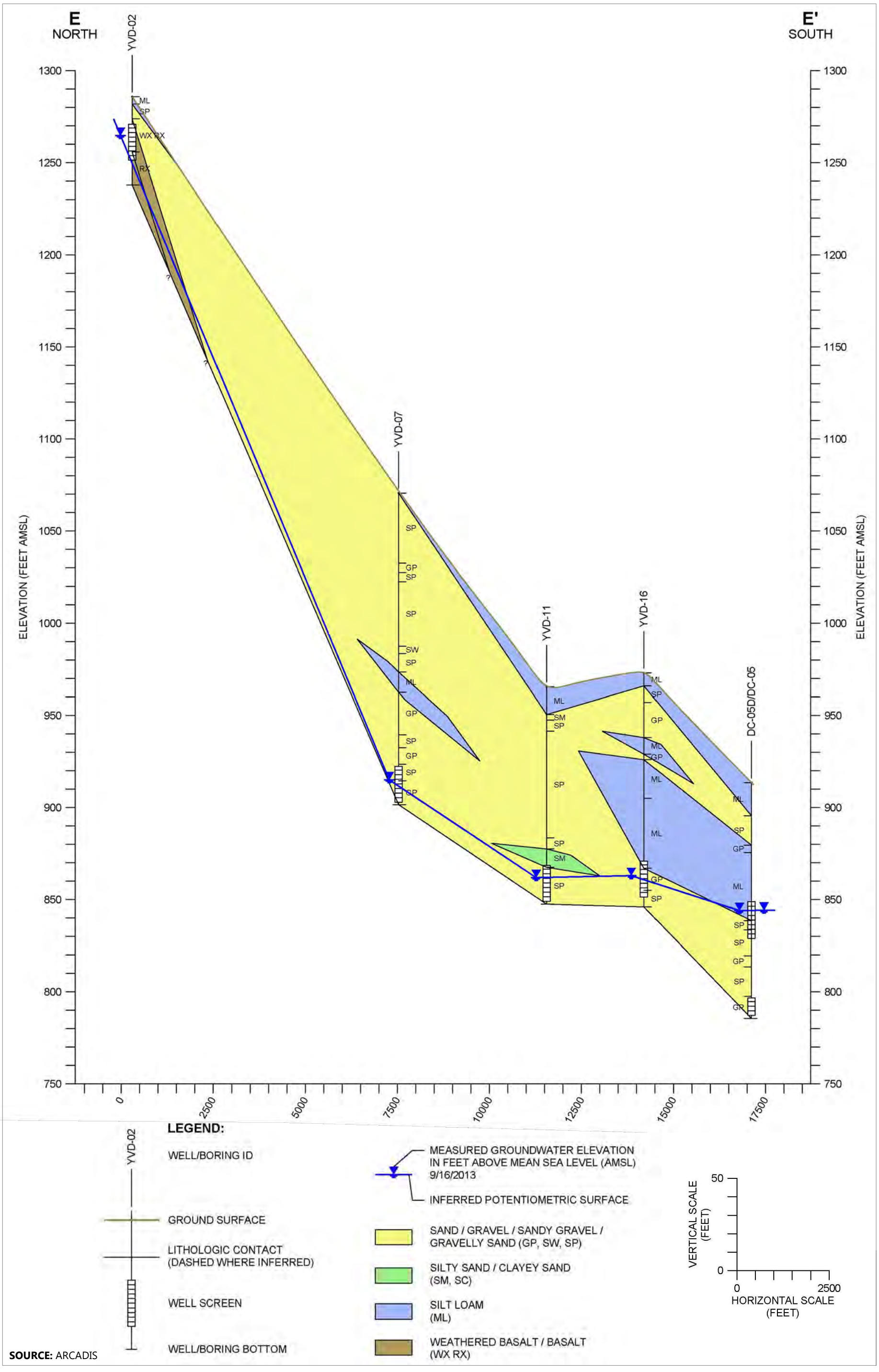

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Figure 11
Cross Section E-E'

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

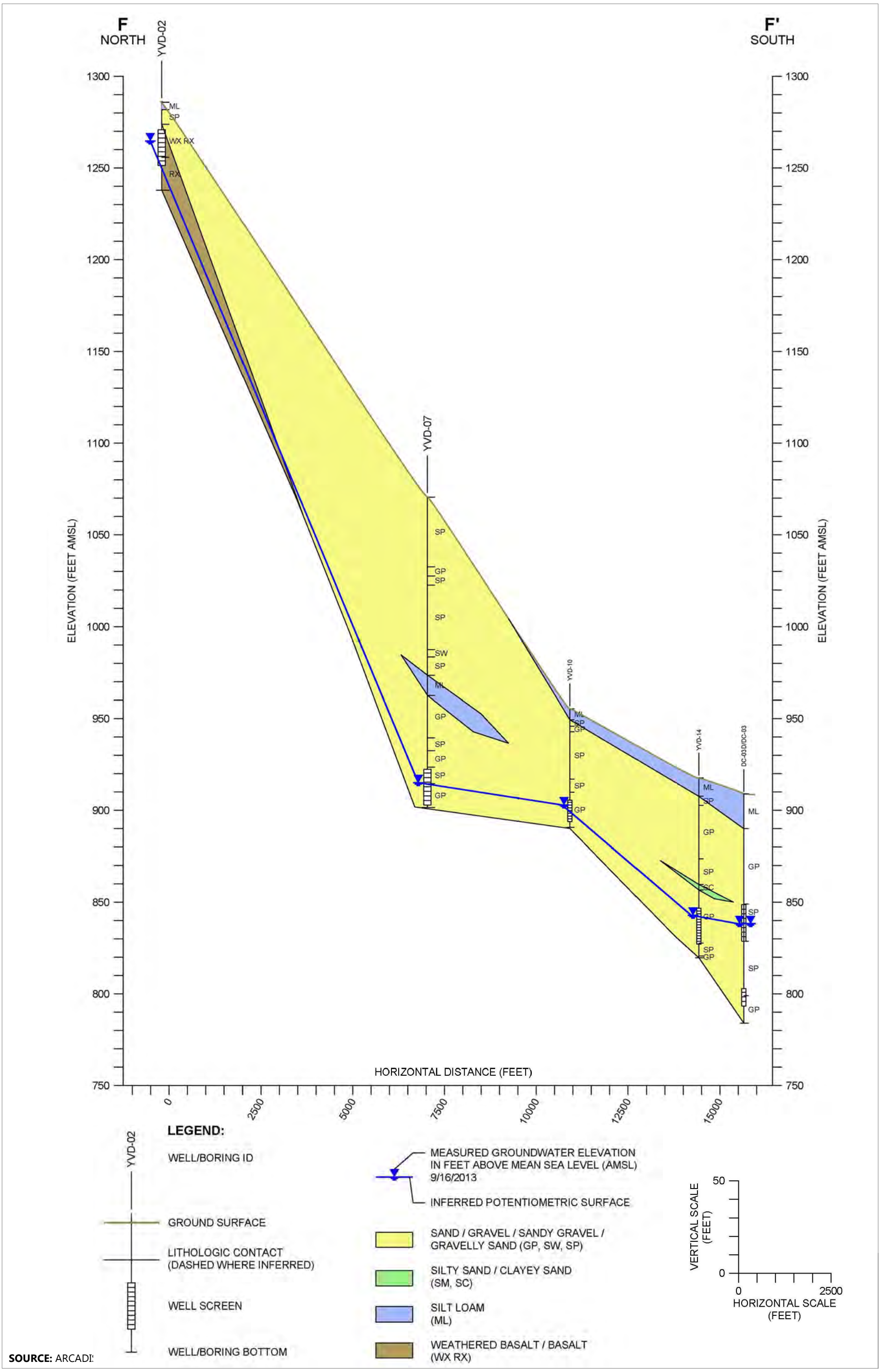

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Figure 12
Cross Section F-F'

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

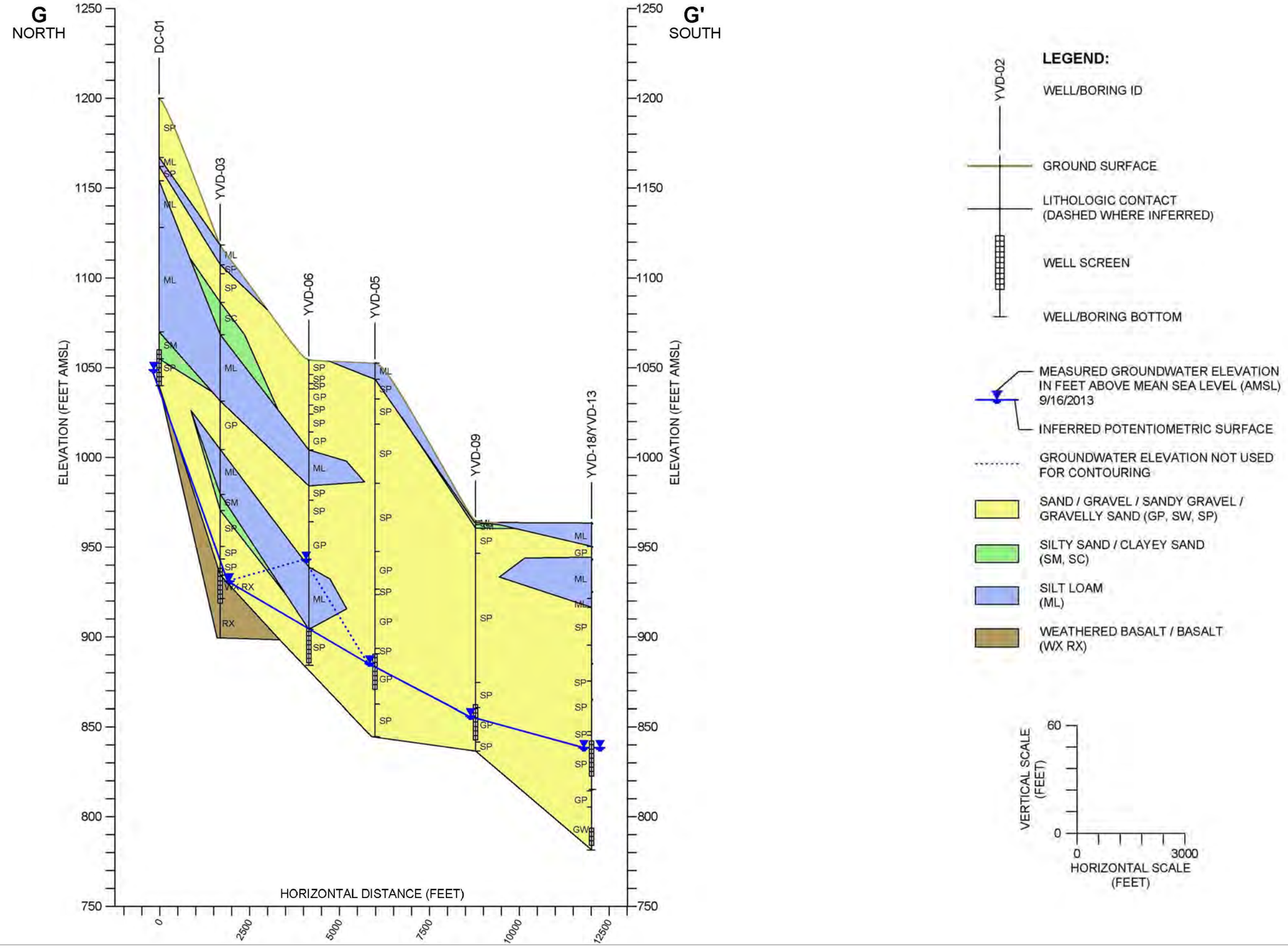

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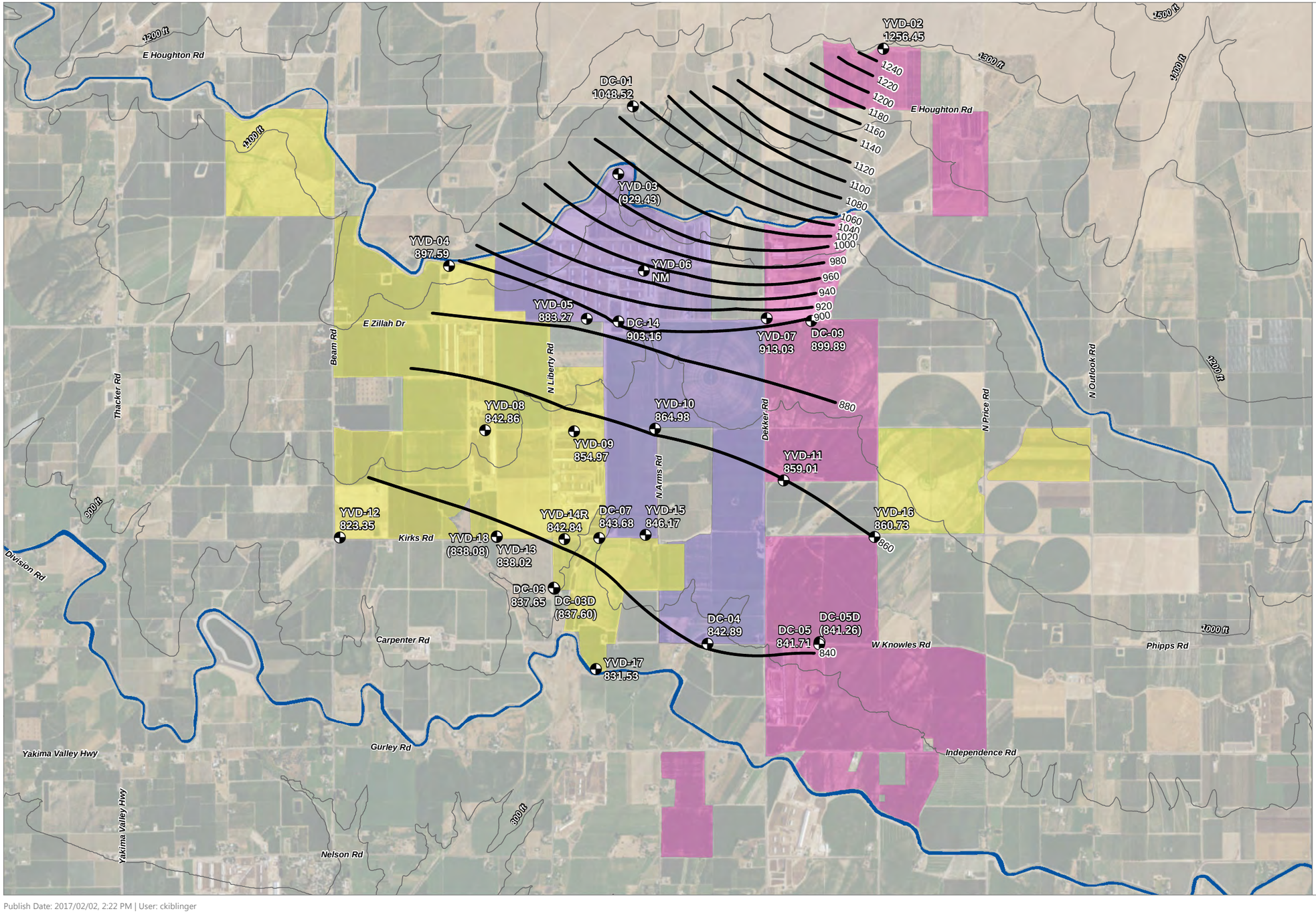
Figure 13
Cross Section G-G'
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- 843.41 - Groundwater Elevation (feet NAVD88)[1]
- Groundwater Elevation Contours, December 11, 2016 (feet NAVD88; contour interval 20 feet)
- Line of Equal Ground Surface Elevation (feet NAVD88; contour interval 100 feet)
- Canal
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy

NOTE:

1. Elevations listed in parentheses indicate groundwater elevation was not contoured.
2. Aerial Photo Source: USDA NAIP (2015).

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Figure 14
Groundwater Elevation Contour Map
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

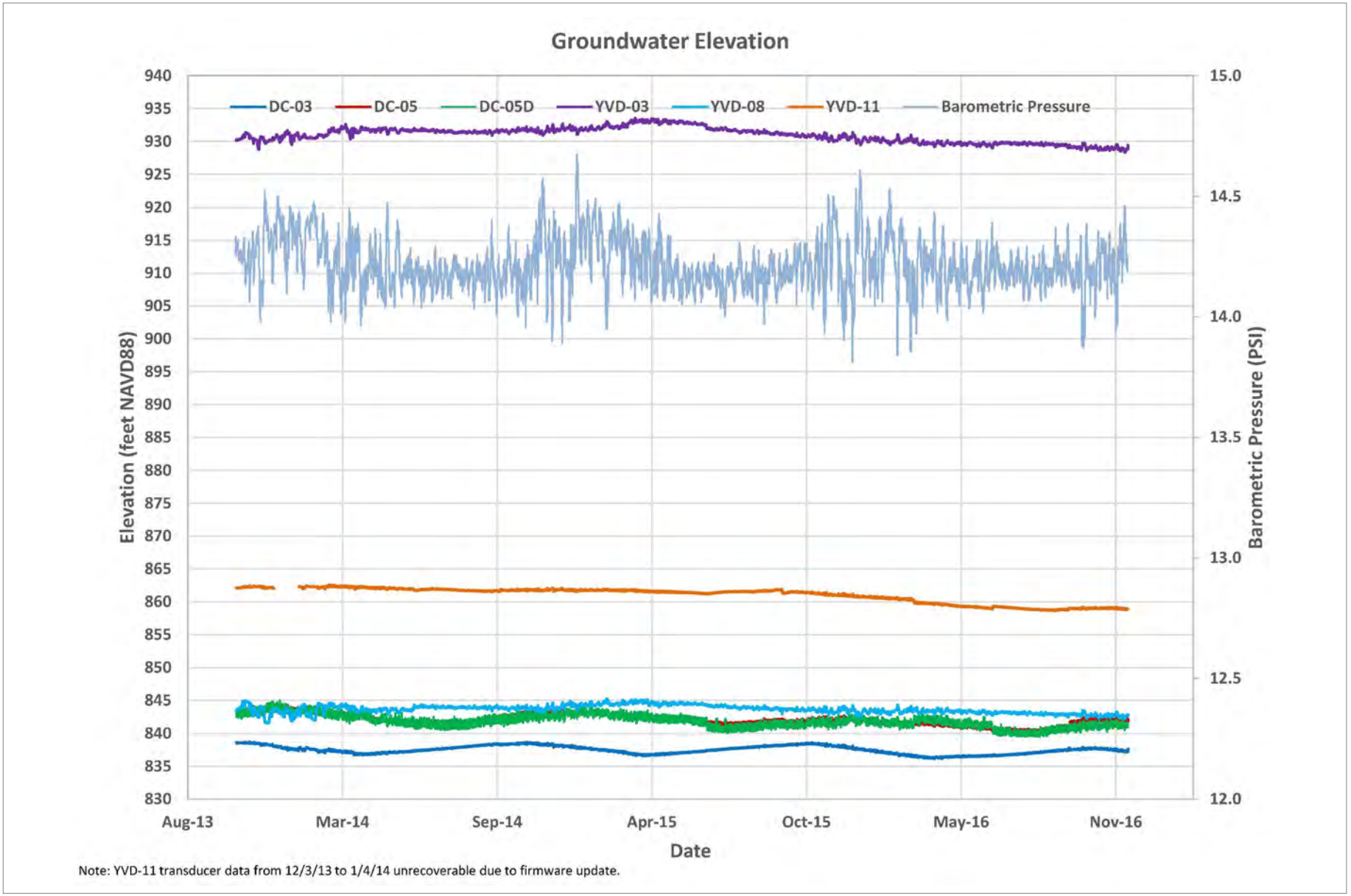

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Figure 15A
Groundwater Hydrographs – All Transducers

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

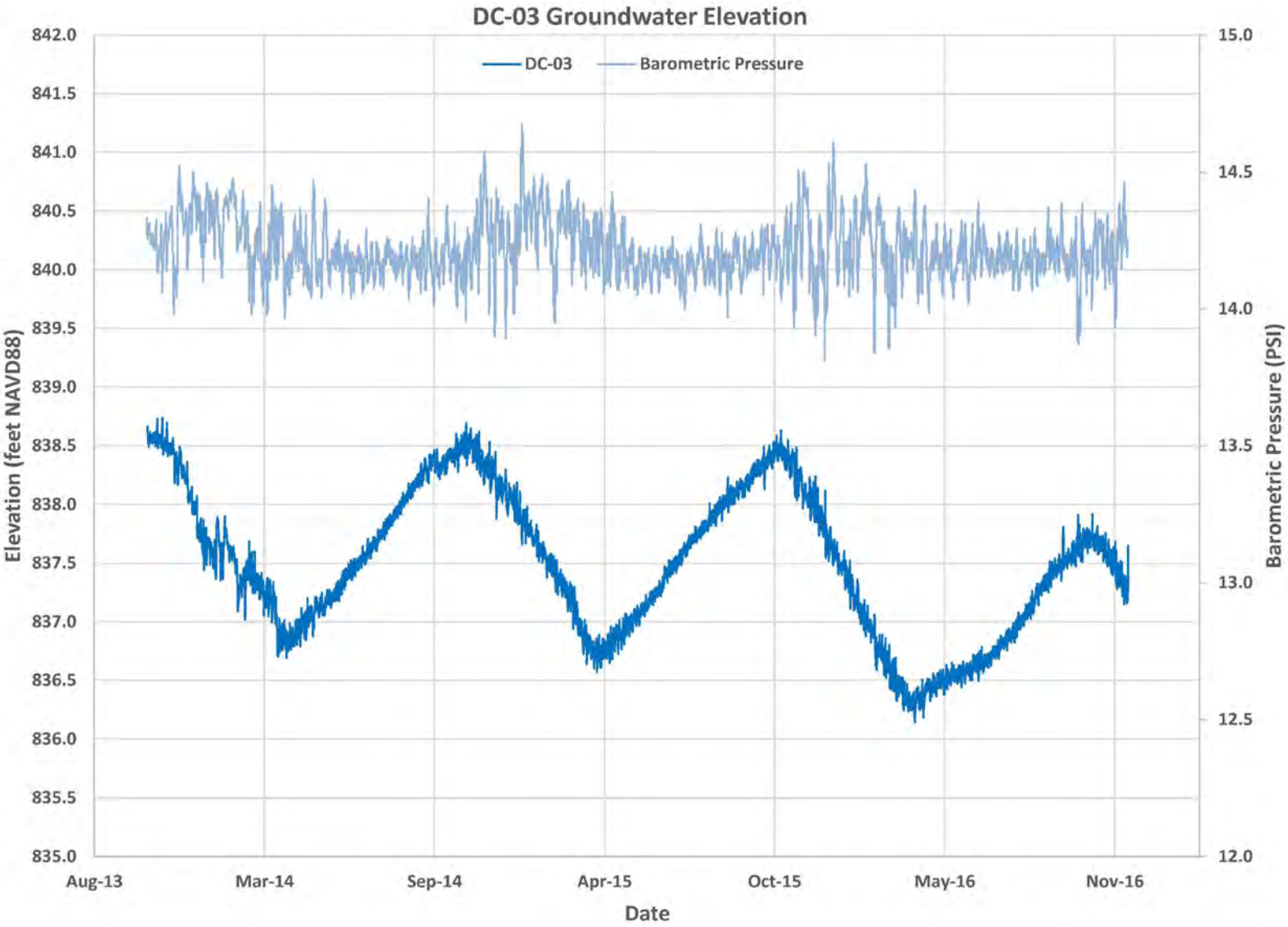

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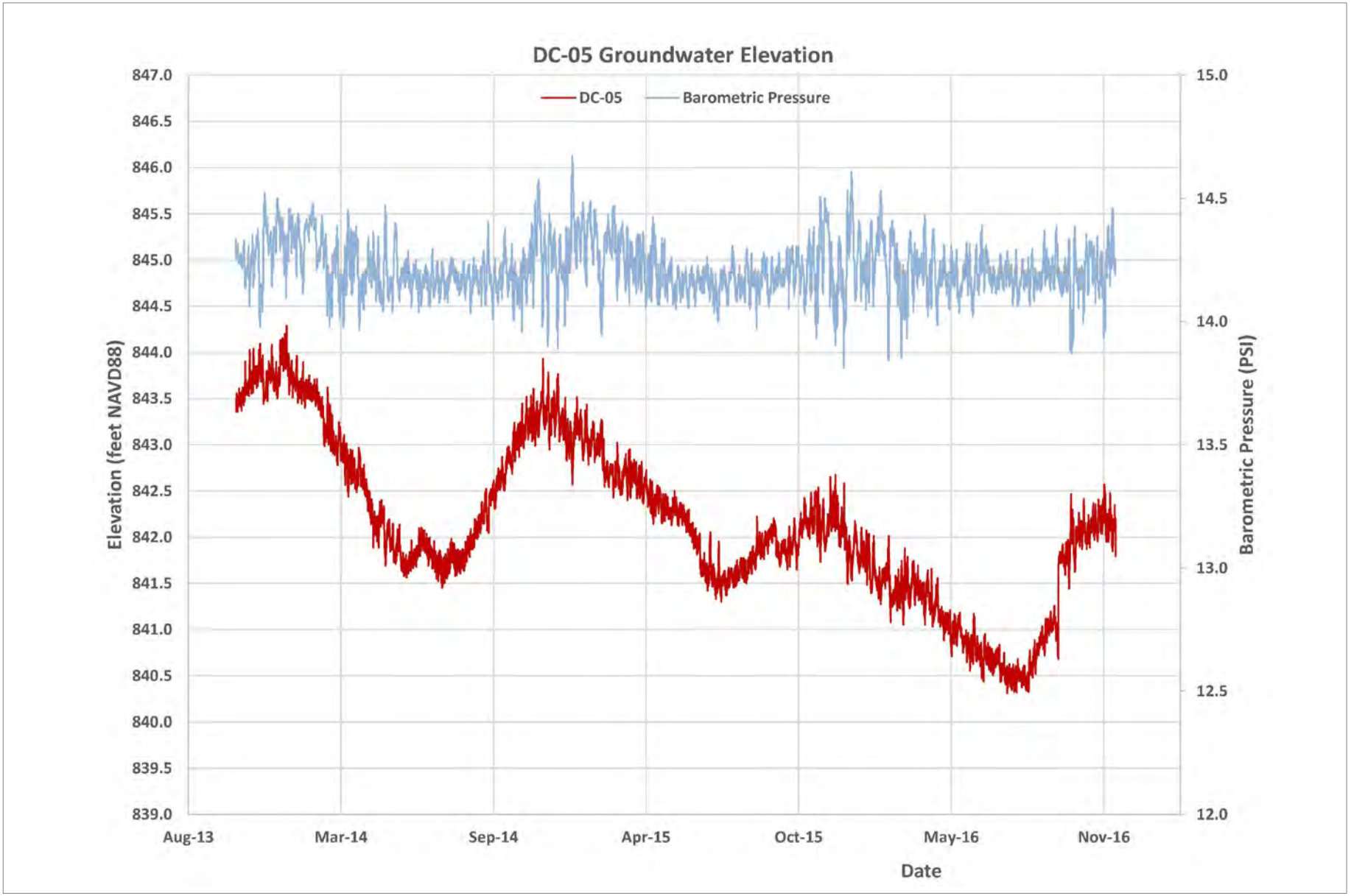
Figure 15B
Groundwater Hydrographs – DC-03

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 15C

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Figure 15C
Groundwater Hydrographs – DC-05

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

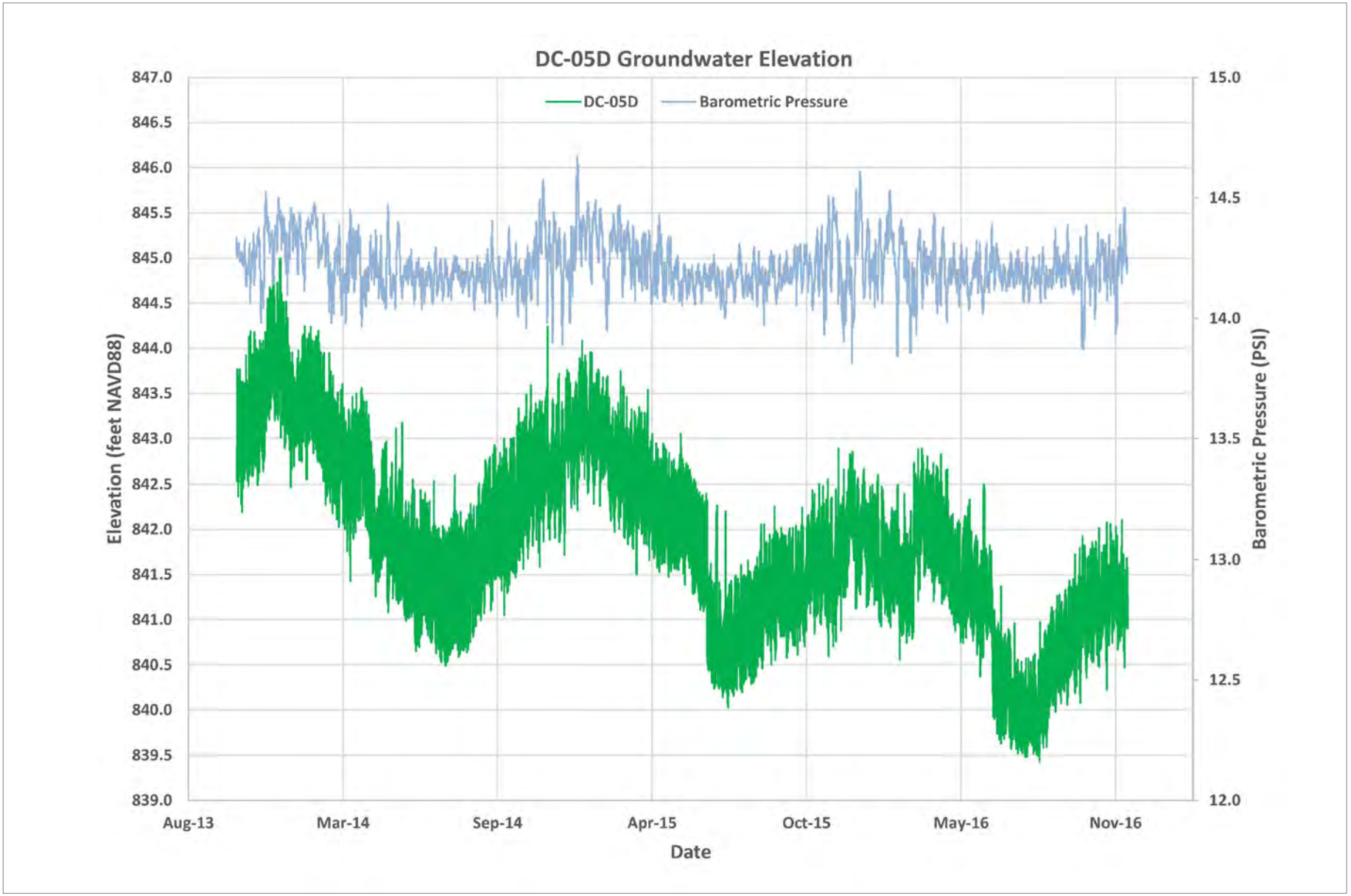

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Figure 15D
Groundwater Hydrographs – DC-05D

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

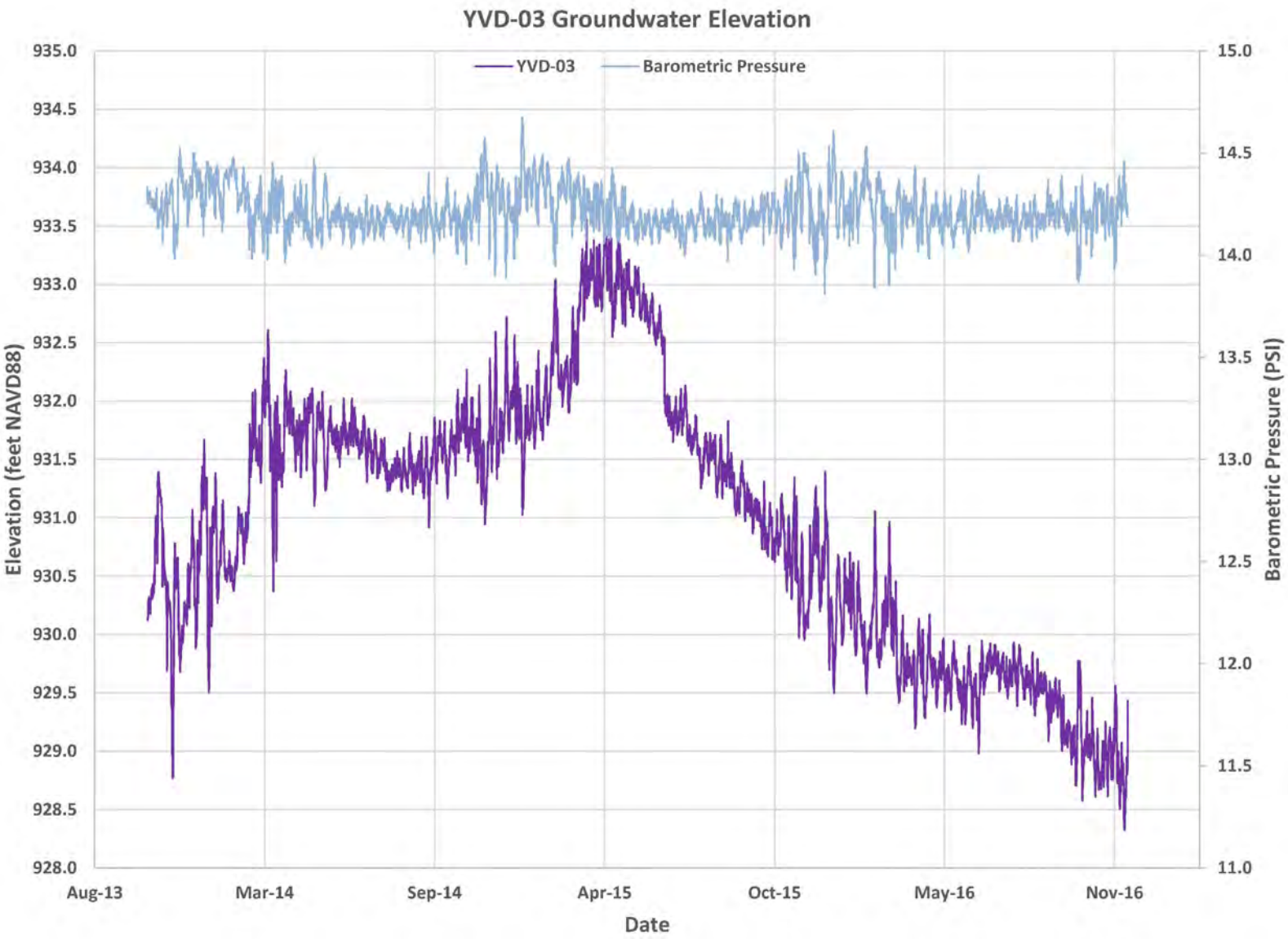

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Figure 15E
Groundwater Hydrographs – YVD-03

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

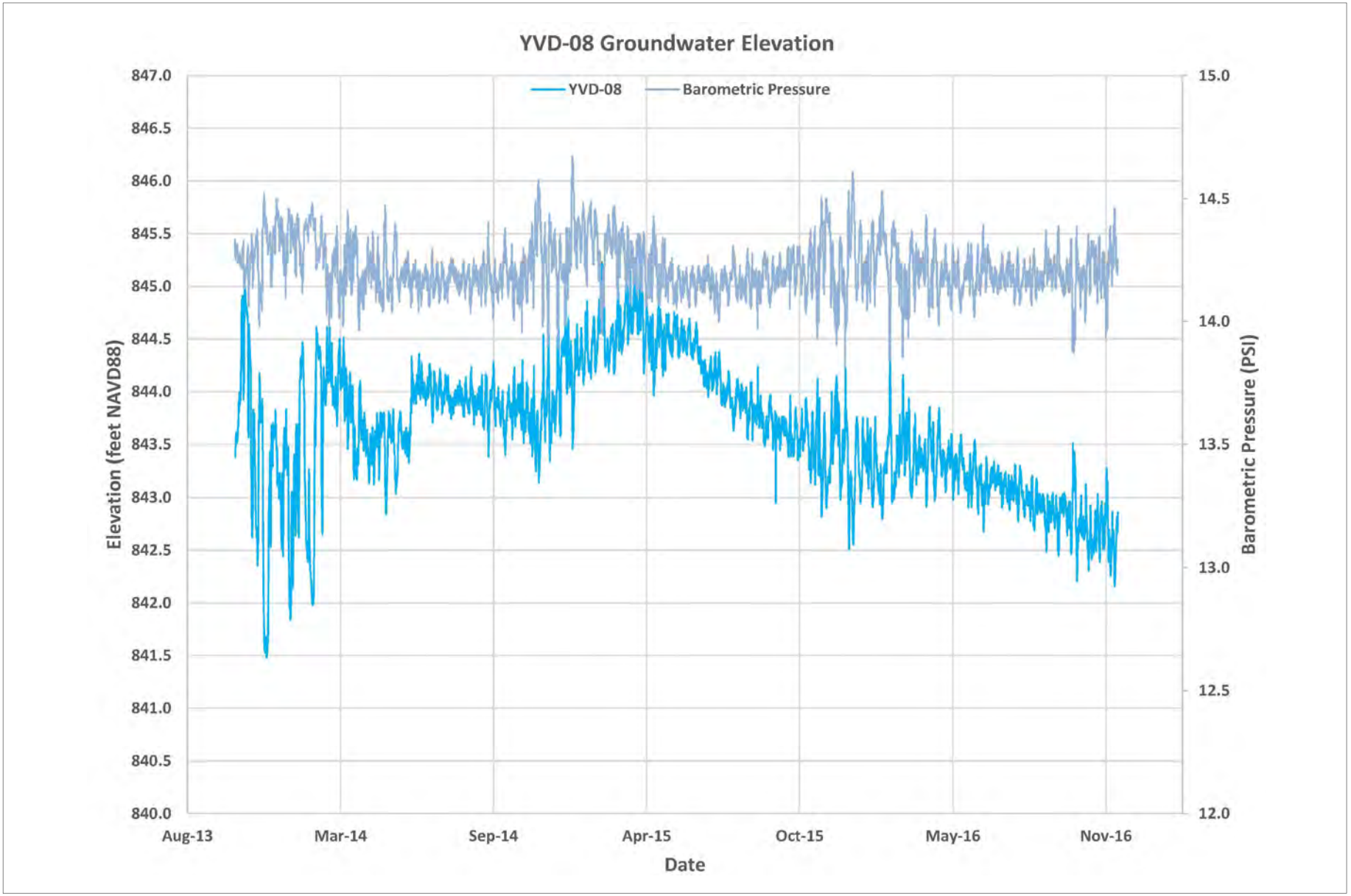

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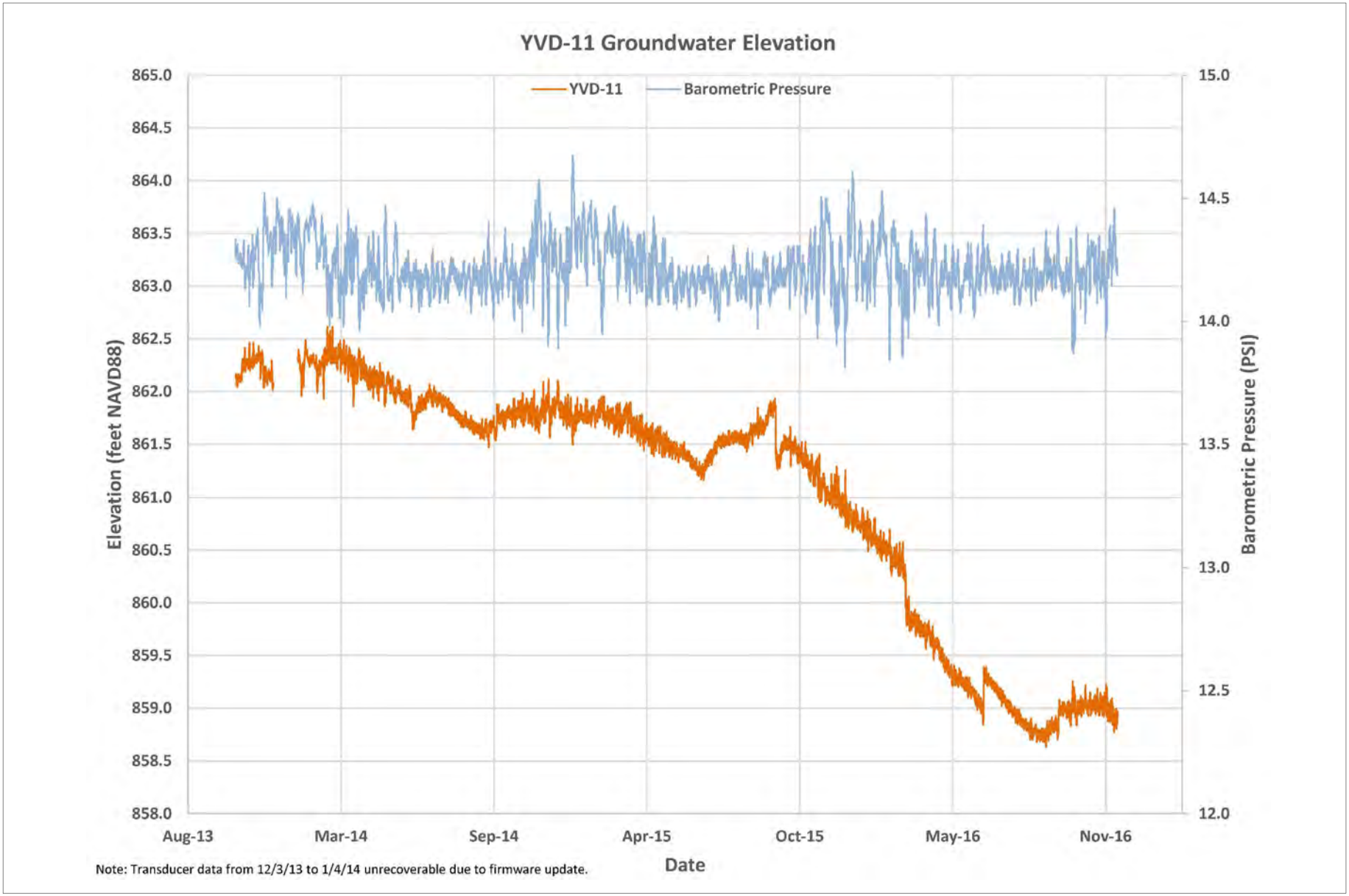
Figure 15F
Groundwater Hydrographs – YVD-08

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 15G

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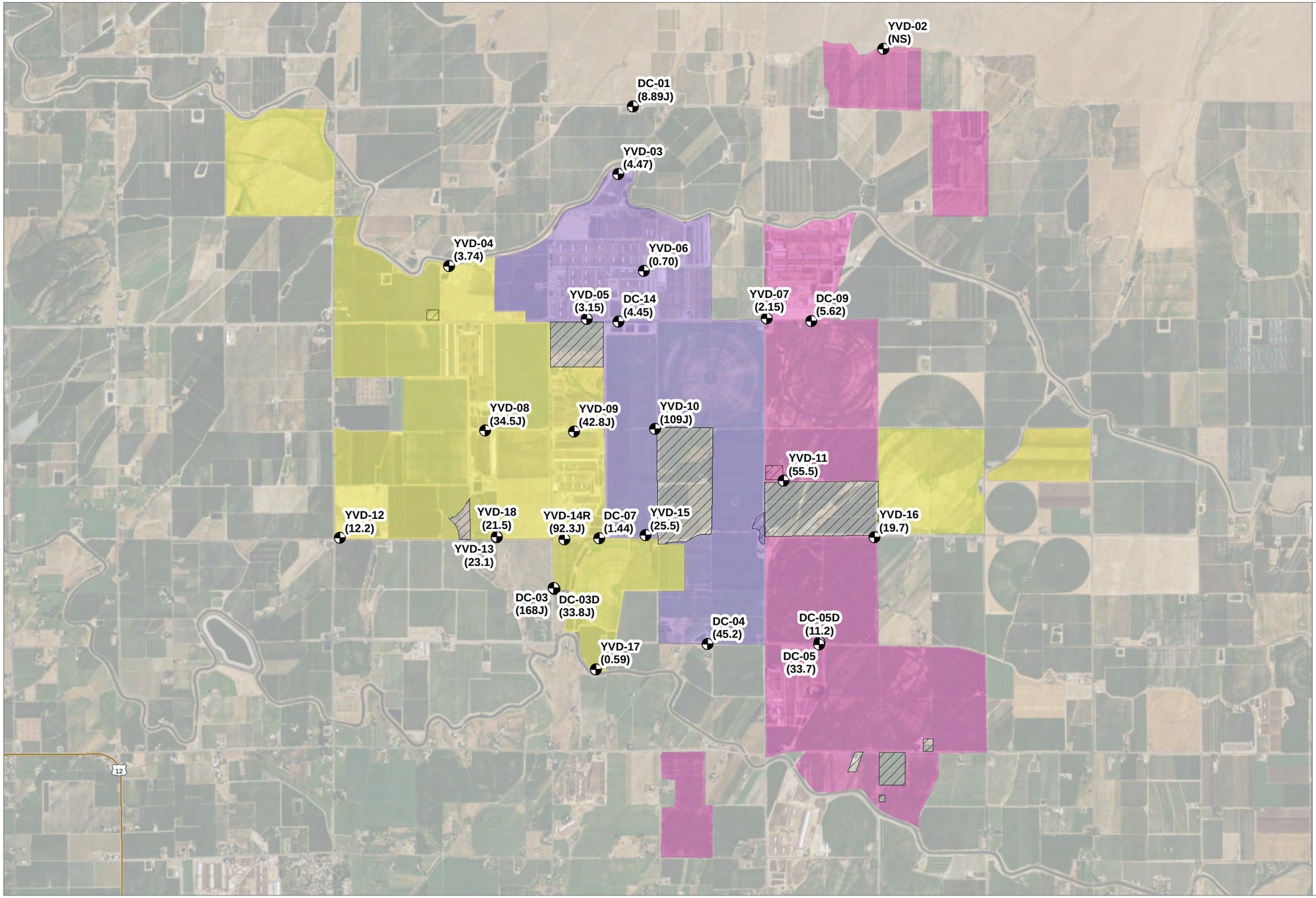
Figure 15G
Groundwater Hydrographs – YVD-11

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy
- Land Not Owned or Operated by Respondents

NOTES:

1. All concentrations are in milligrams per liter (mg/L).
2. Analytical results are for samples collected December 11 to 16, 2016.
3. Qualifiers and notations:
J = the compound was positively identified; however, the associated numerical value is an estimated concentration.
4. Aerial Photo Source: USDA NAIP (2015).
5. NS = Not Sampled

0 2,000
Feet

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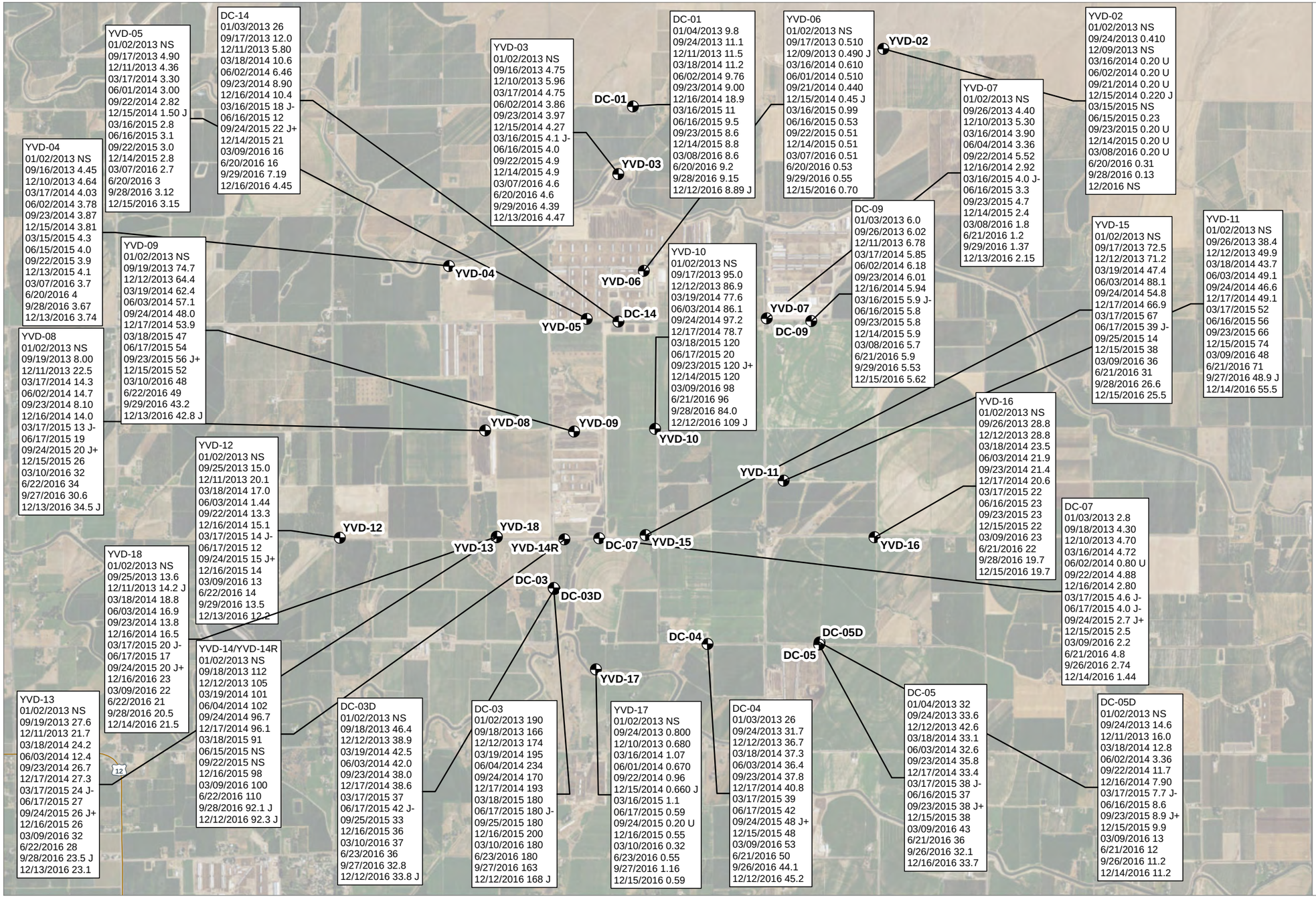
Figure 16A
Nitrate Concentrations in Groundwater Fourth Quarter 2016
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

Monitoring Well

NOTES:

1. All concentrations are in milligrams per liter (mg/L).
2. First quarter 2013 samples collected by USEPA.
3. Well YVD-14R replaced damaged well YVD-14 prior to fourth quarter 2015.
4. Qualifiers and notations:
NS = not sampled.
U = the compound was analyzed for but not detected. The associated value is the compound reporting limit or the compound is considered non-detect at the listed value due to associated blank contamination.
UJ = the compound was not detected above the reported sample reporting limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
R = the sample results are rejected as unusable. The compound may or may not be present in the sample.
J = the compound was positively identified; however, the associated numerical value is an estimated concentration.
J- = the result is an estimated quantity, but the result may be biased low.
J+ = the result is an estimated quantity, but the result may be biased high.
5. Aerial Photo Source: USDA NAIP (2015).

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Figure 16B
Historical Nitrate Concentrations in Groundwater
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

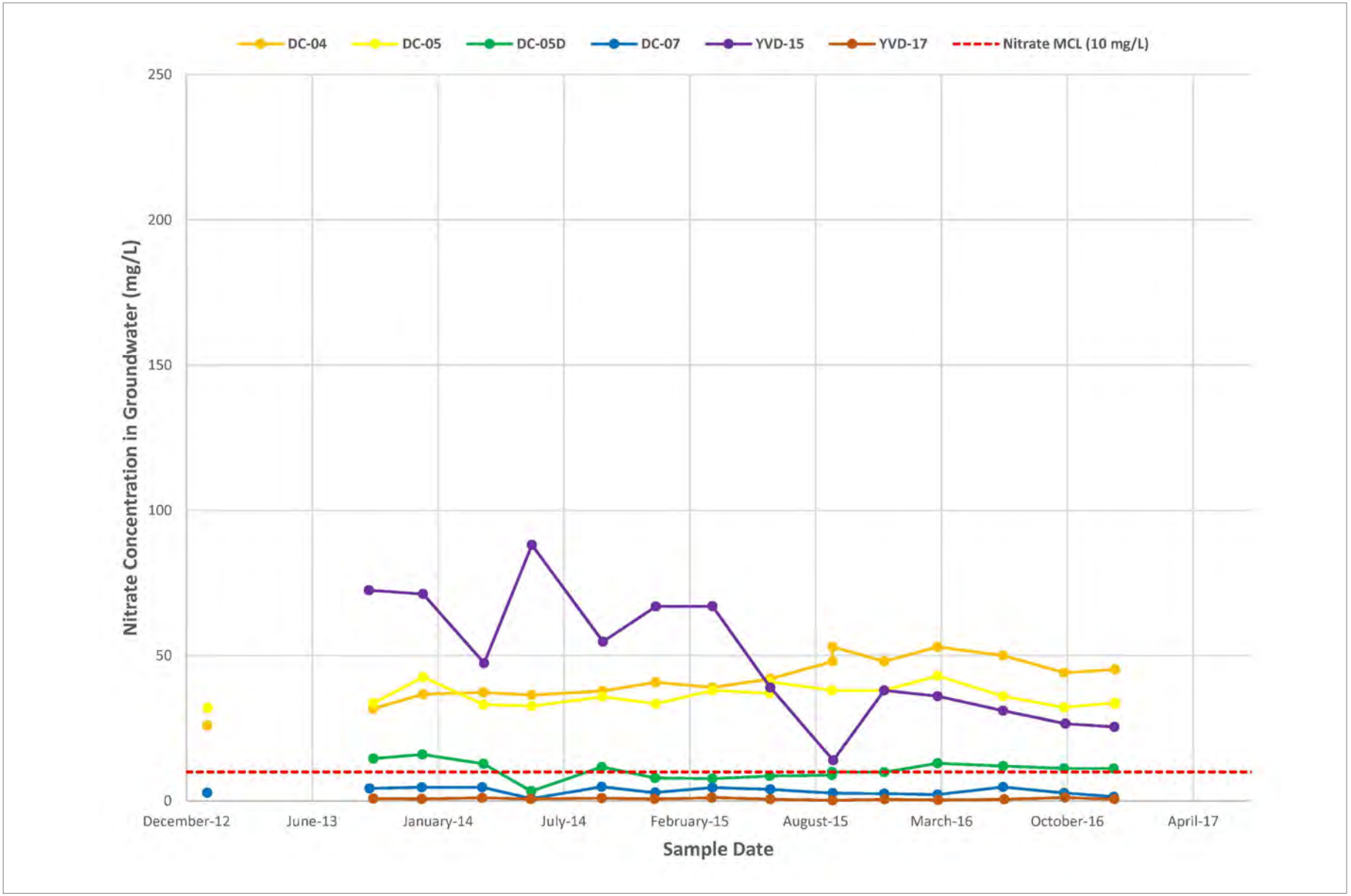

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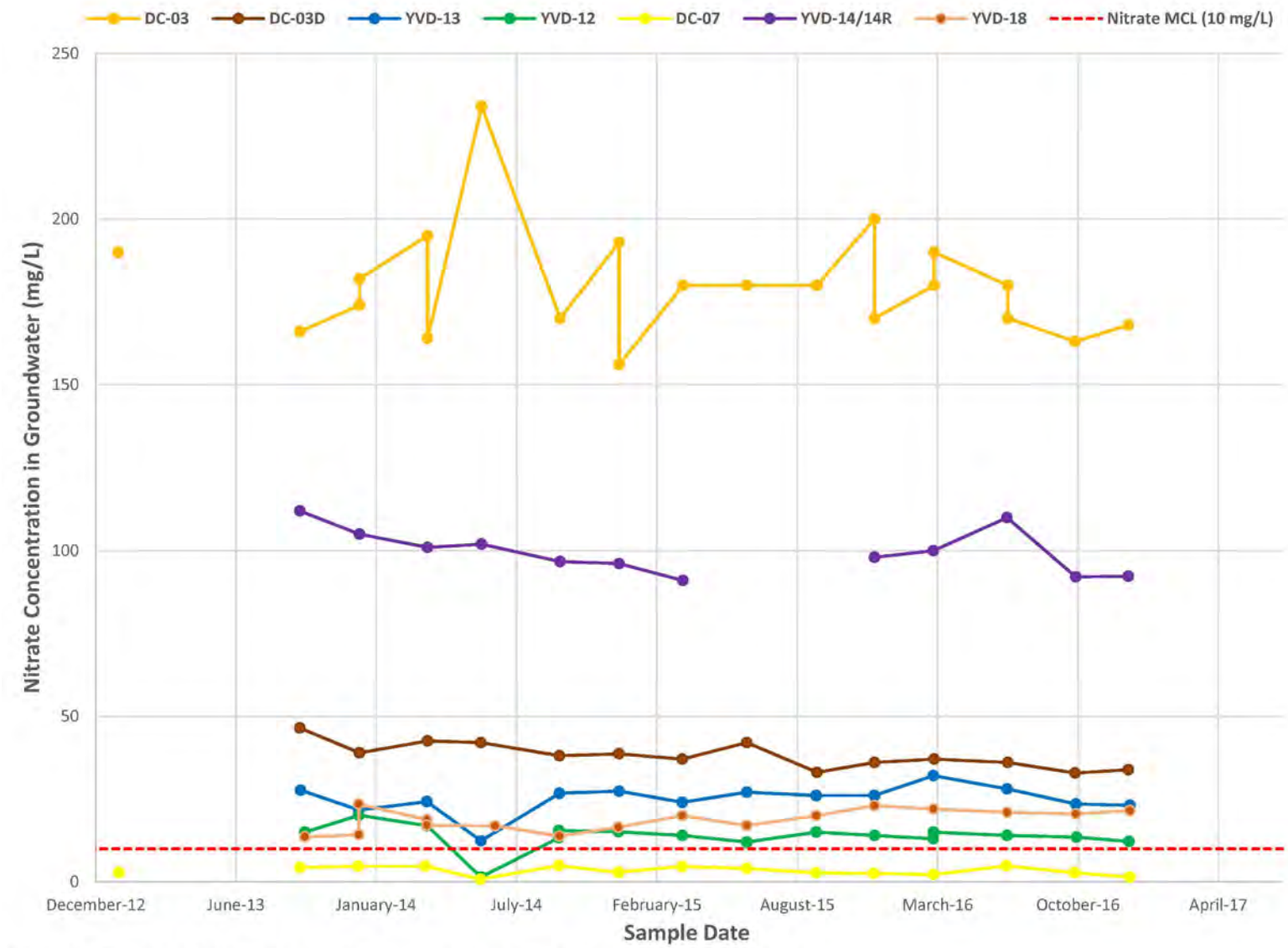
Figure 17
Nitrate Concentrations – East Downgradient Wells
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Note: In December 2015, YVD-14R was installed approximately 20 feet to the west of YVD-14, which was decommissioned.

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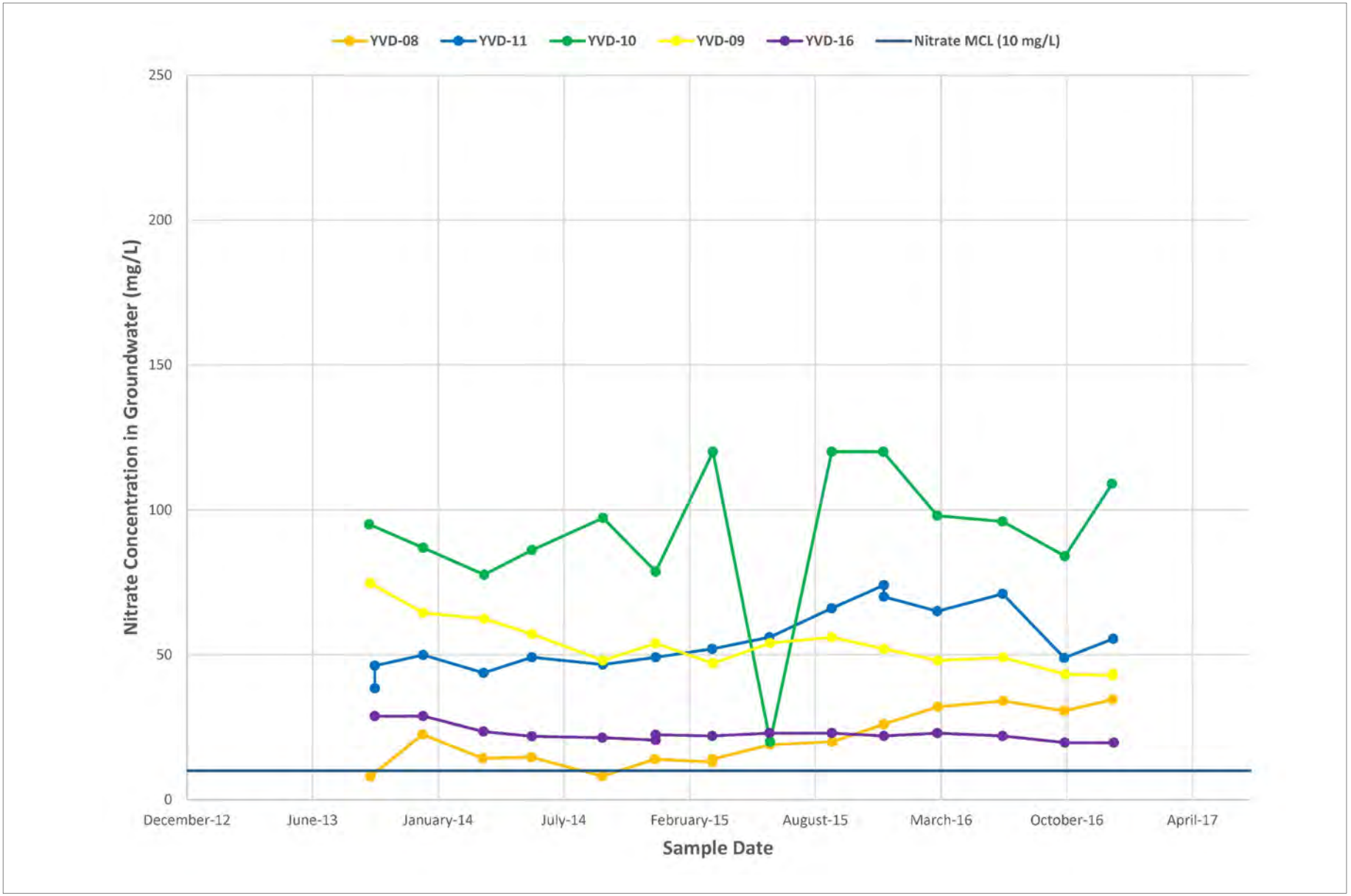
Figure 18
Nitrate Concentrations – West Downgradient Wells

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Publish Date: 2017/02/14 9:25 AM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 19

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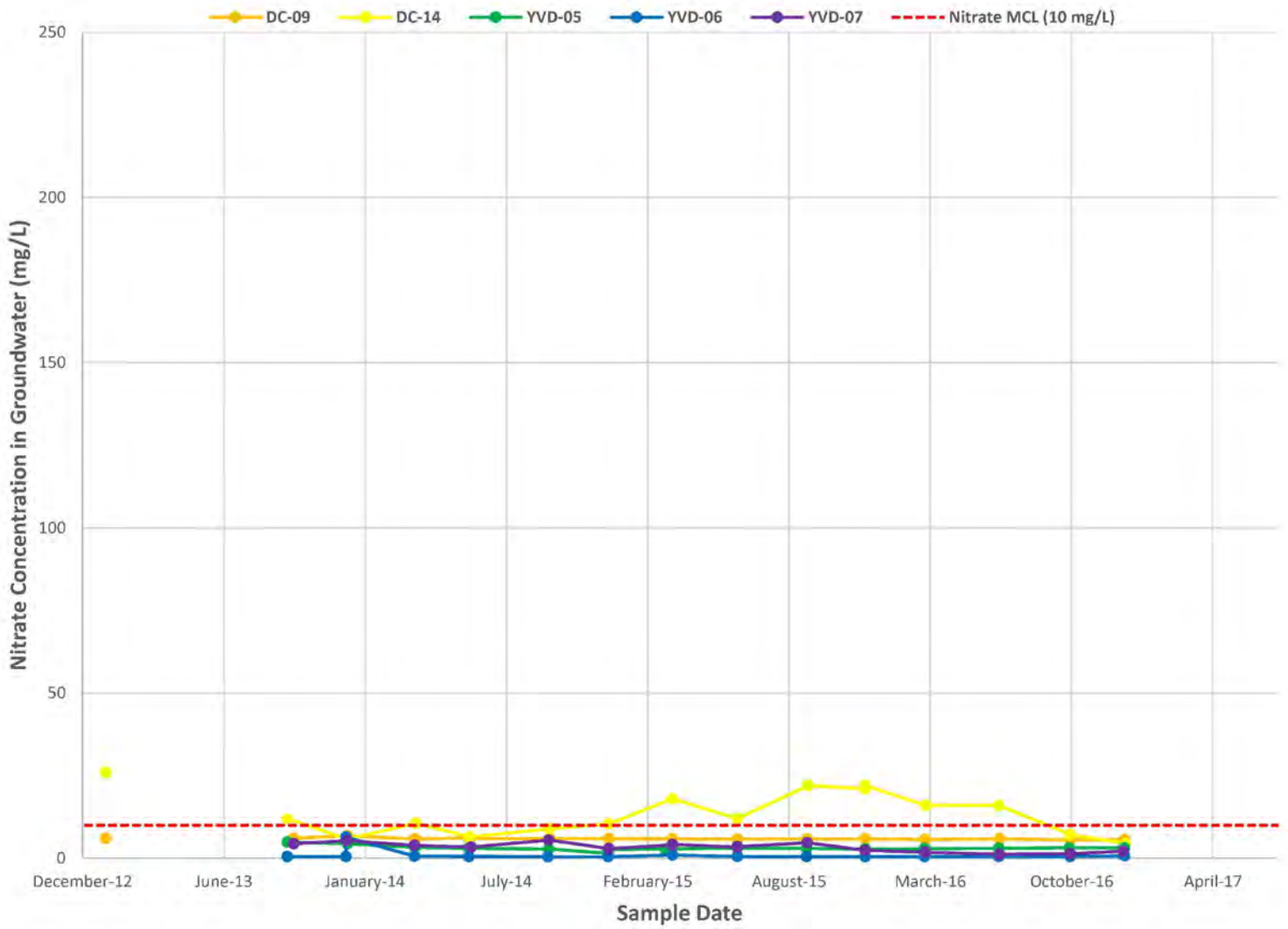
Figure 19
Nitrate Concentrations – Central Wells

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Publish Date: 2017/02/03 11:13 AM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 20

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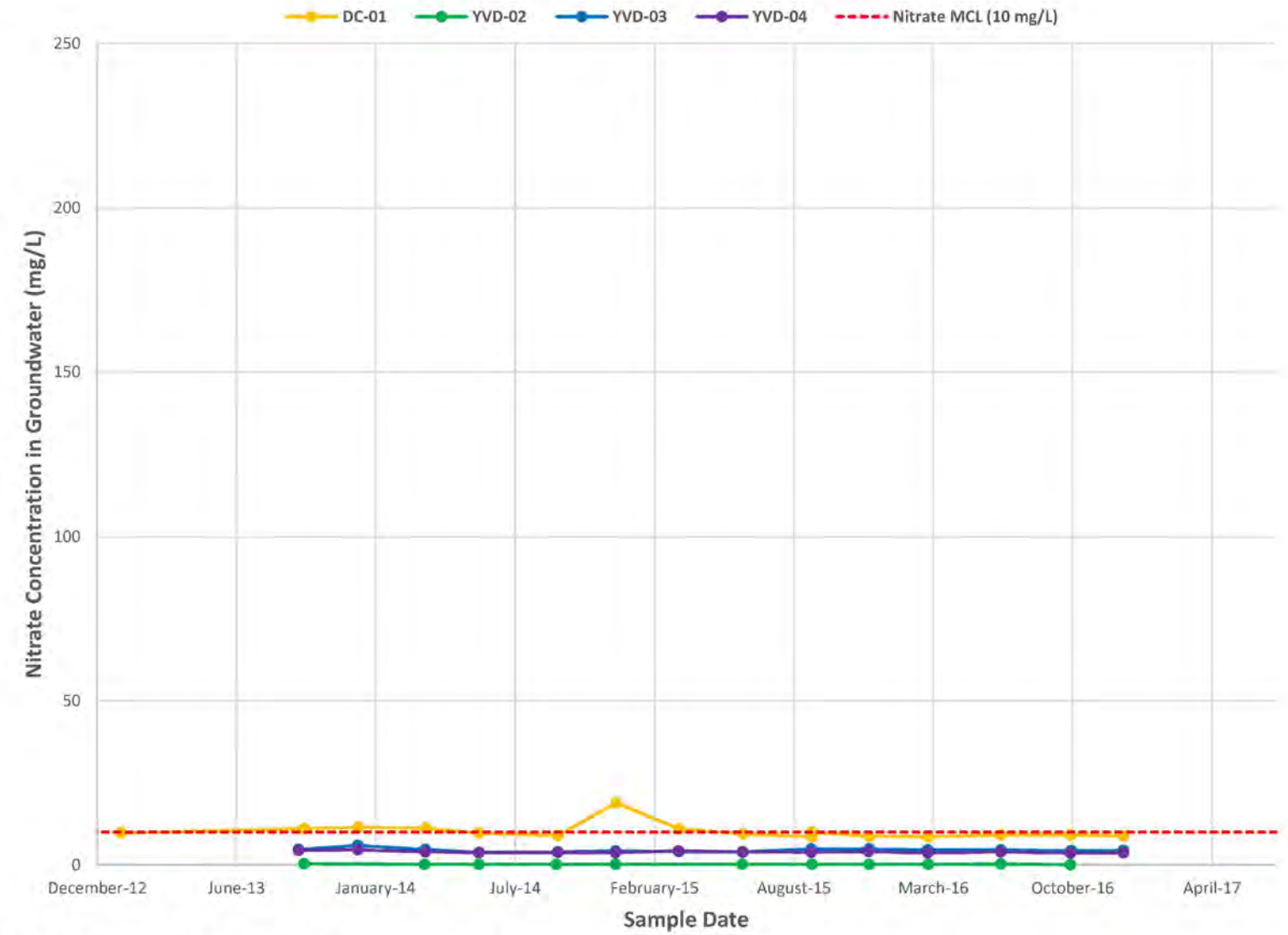
Figure 20
Nitrate Concentrations – Northern Wells

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Note: There was insufficient flow at YVD-02 to collect a groundwater sample during the Fourth Quarter 2016 event.

Publish Date: 2017/02/14 9:25 AM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 21

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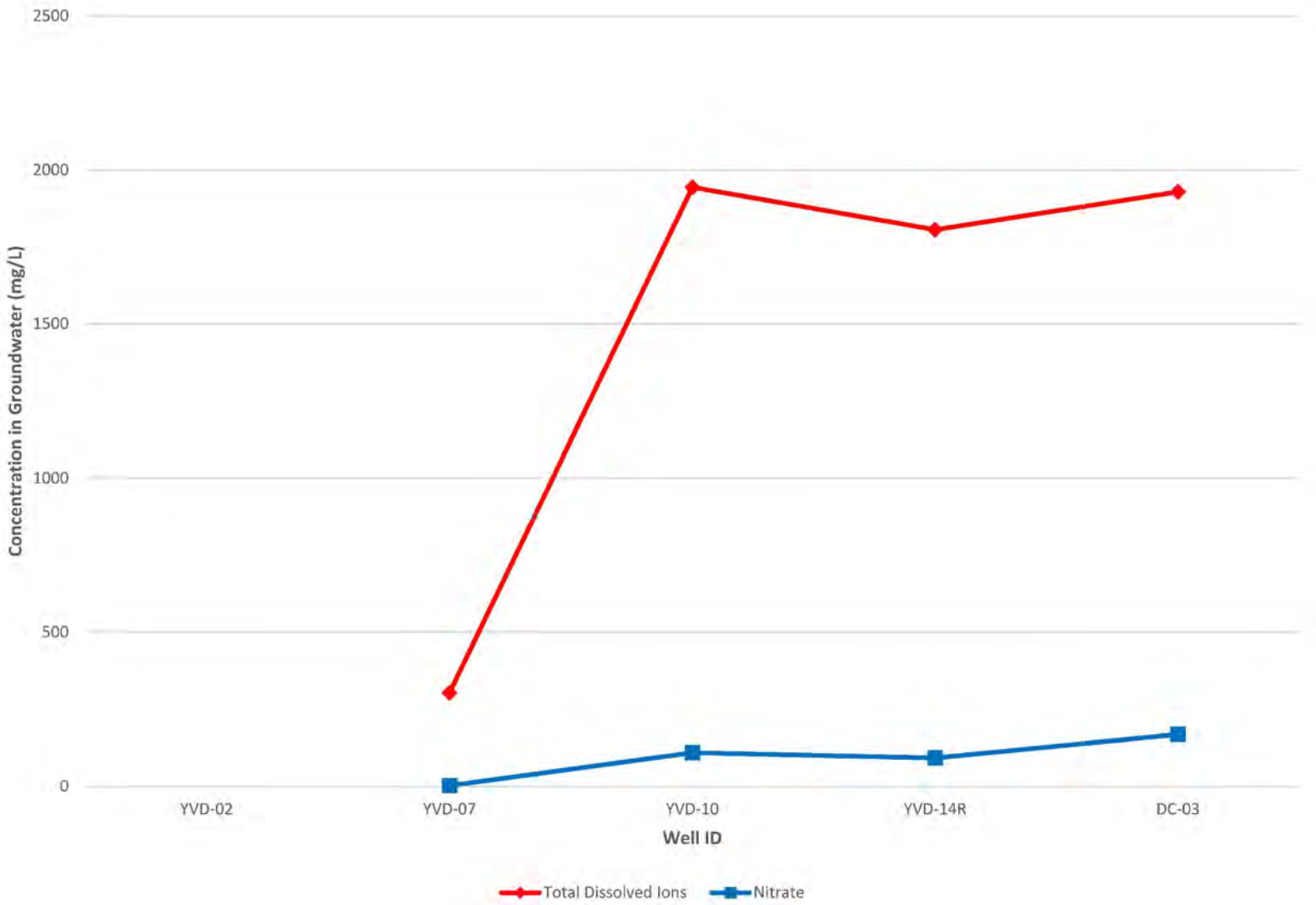
Figure 21
Nitrate Concentrations – Upgradient Wells

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Note: There was insufficient flow to collect a sample at YVD-02 during the Fourth Quarter event.

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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-004.dwg 22

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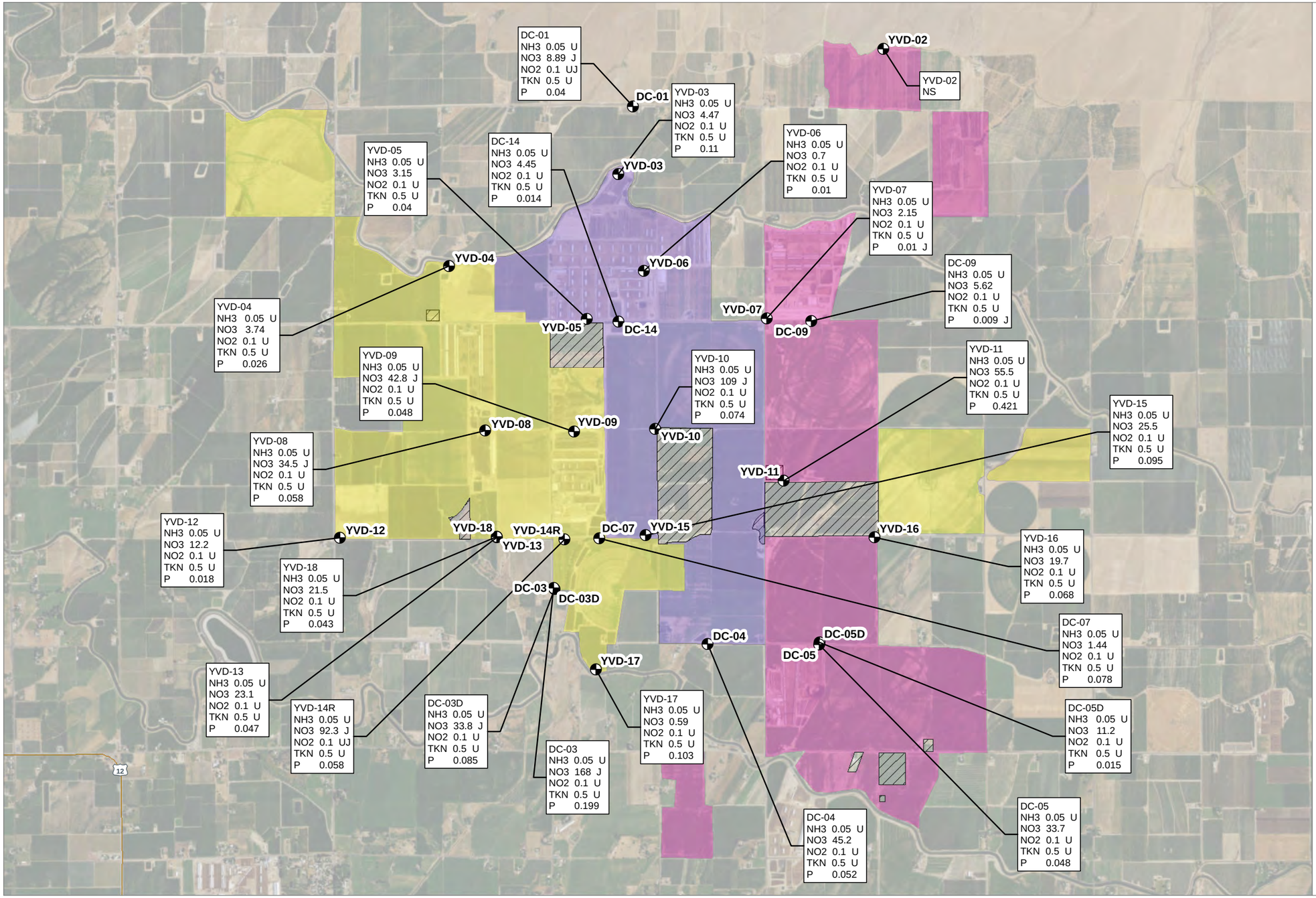
Figure 22
Nitrate and Total Dissolved Ion Concentration along Cross Section F-F Transect

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Publish Date: 2017/01/31, 11:17 AM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\PerkinsCoie_0996\YakimaDairies\Maps\GW_Monitoring\Yakima_Dairies_NutrientConc4Q2016.mxd

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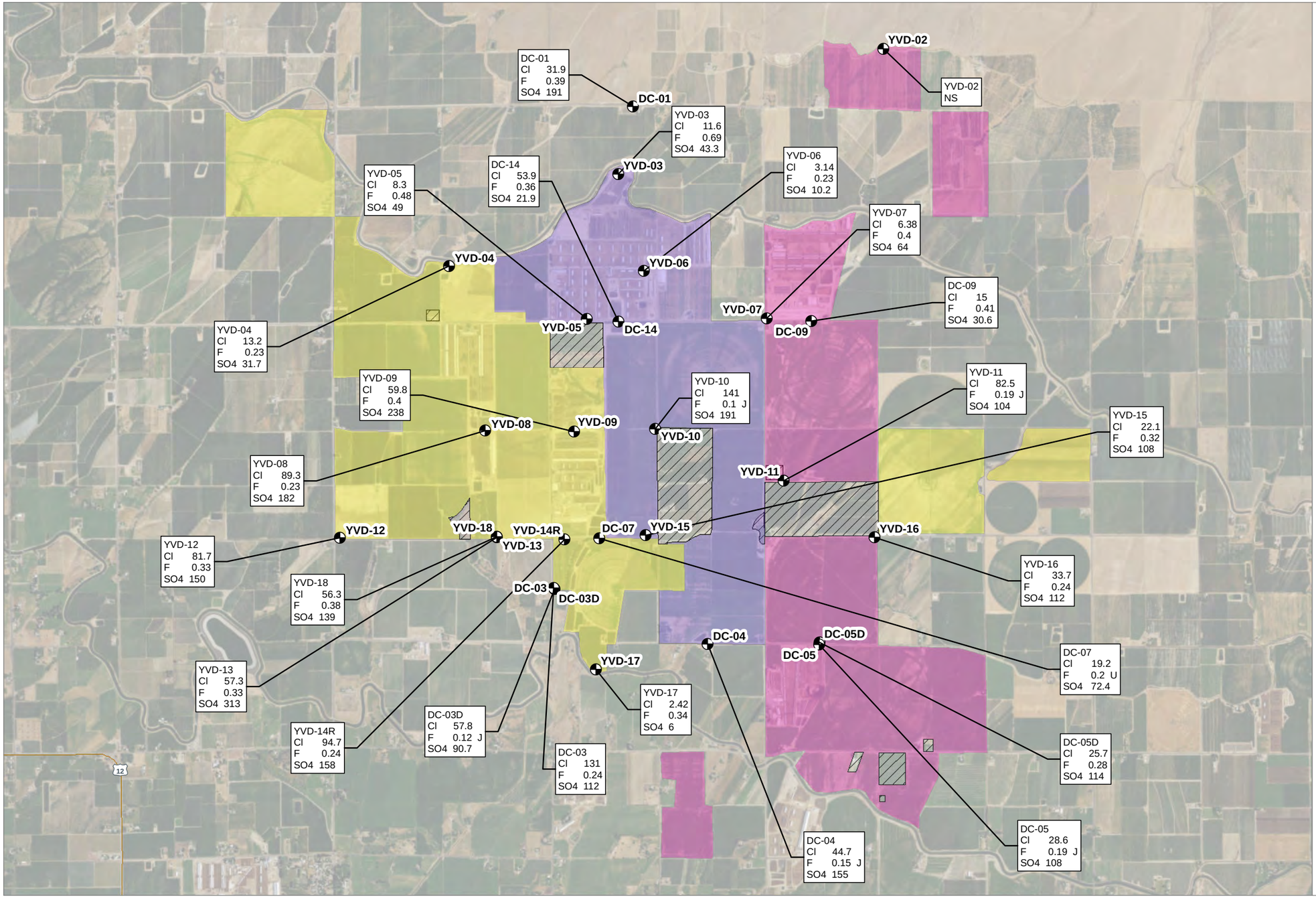
Figure 23
Nutrient Concentrations in Groundwater Fourth Quarter 2016
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



Publish Date: 2017/01/31, 11:12 AM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\PerkinsCoie_0996\YakimaDairies\Maps\GW_Monitoring\Yakima_Dairies_AnionConc4Q2016.mxd

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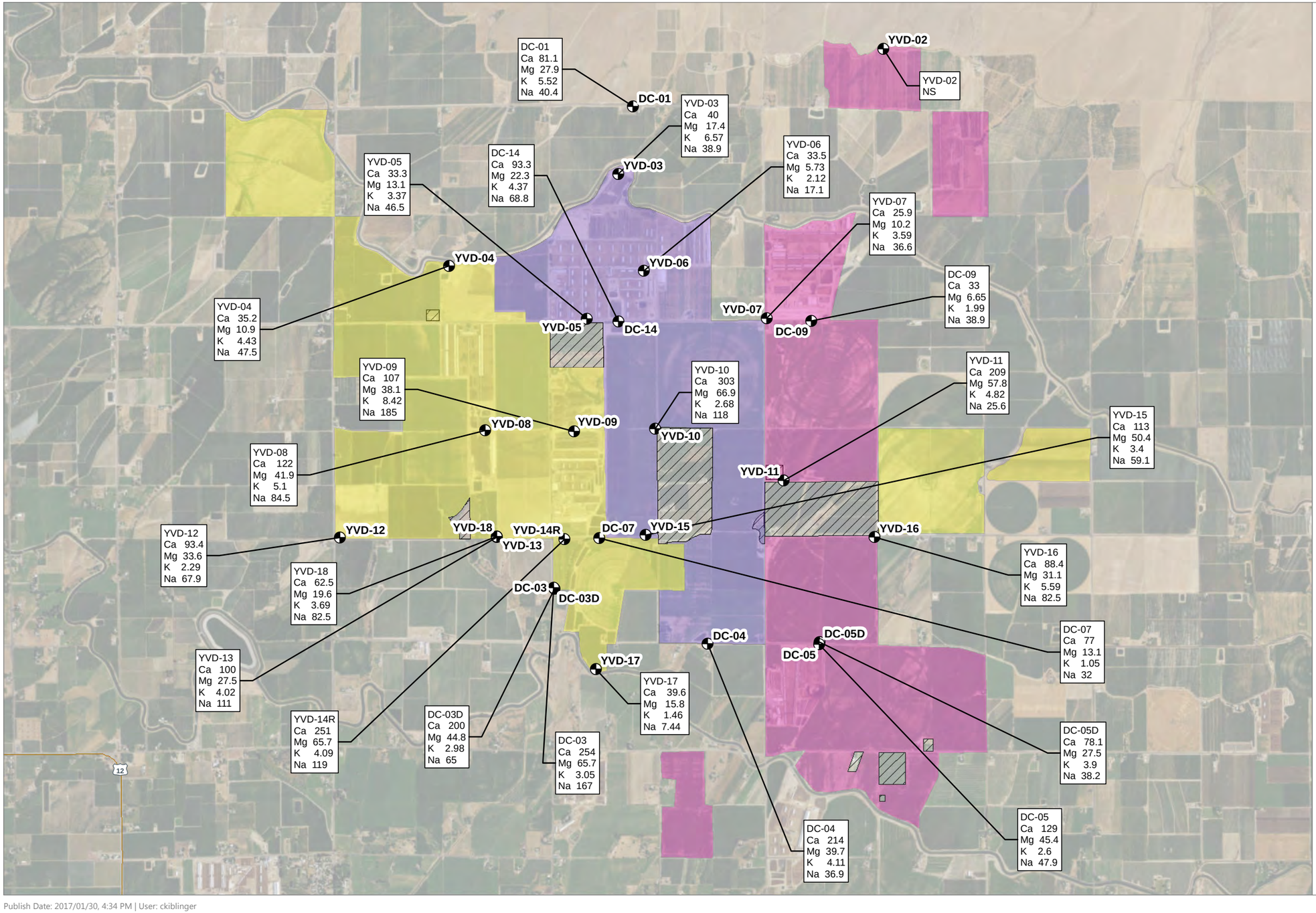
Figure 24
Anion Concentrations in Groundwater Fourth Quarter 2016
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy
- Land Not Owned or Operated by Respondents

NOTES:

1. All concentrations are in milligrams per liter (mg/L).
2. Analytical results are for samples collected December 11 to 16, 2016.
3. Ca = Calcium
   Mg = Magnesium
   K = Potassium
   Na = Sodium
   NS = Not Sampled
4. Aerial Photo Source: USDA NAIP (2015).

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Publish Date: 2017/01/30, 4:34 PM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\PerkinsCoie_0996\YakimaDairies\Maps\GW_Monitoring\Yakima_Dairies_MetalsConc4Q2016.mxd

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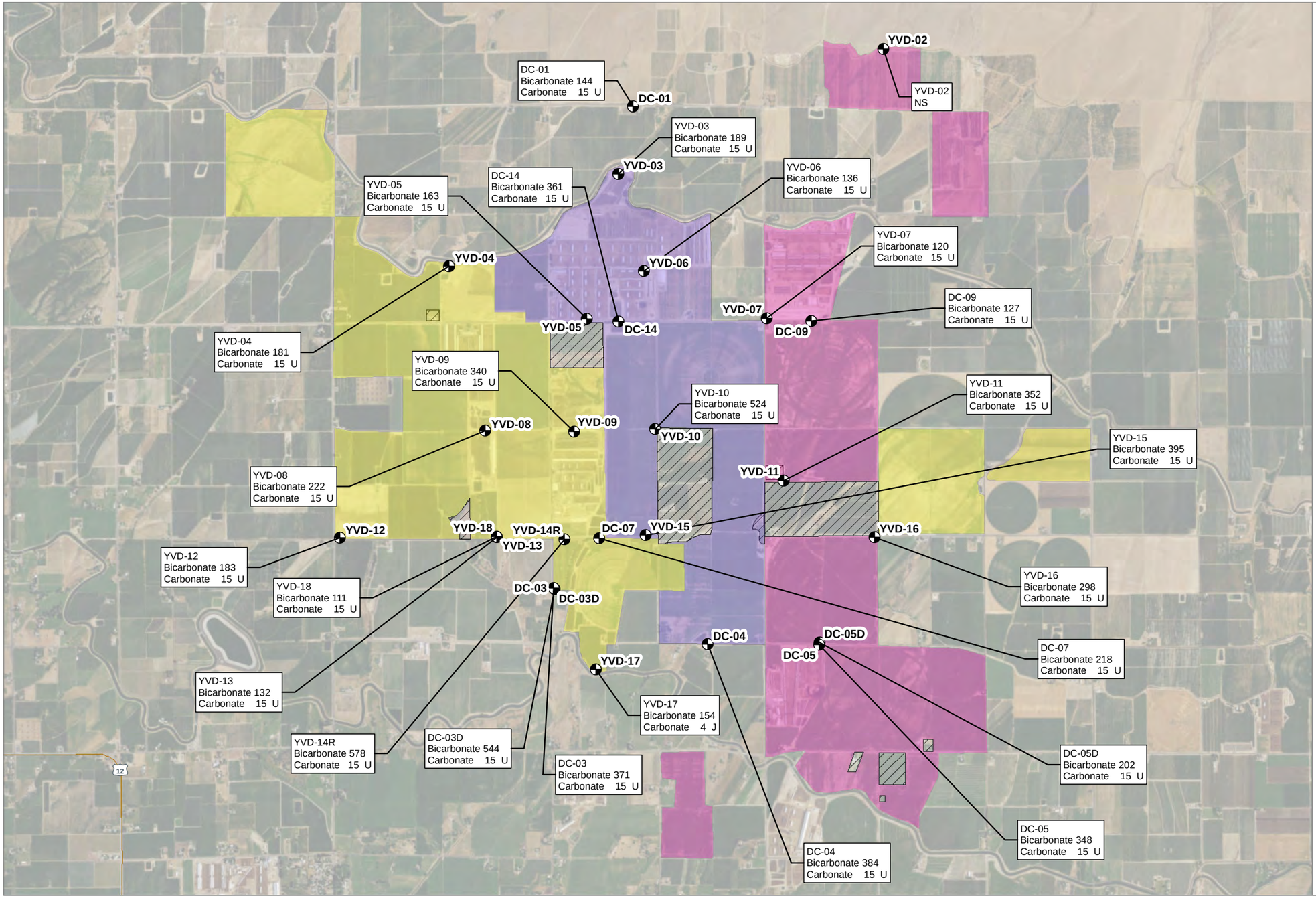
Figure 25
Metals Concentrations in Groundwater Fourth Quarter 2016
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



LEGEND:

- Monitoring Well
- Cow Palace 1 and 2 Dairy
- George Dairy/D&A Dairy
- Liberty/Bosma Dairy
- Land Not Owned or Operated by Respondents

NOTES:

1. All concentrations are in milligrams per liter (mg/L).
2. Analytical results are for samples collected December 11 to 16, 2016.
3. Qualifiers and notations:
U = the compound was analyzed for but not detected. The associated value is the compound reporting limit or the compound is considered non-detect at the listed value due to associated blank contamination.
4. Bicarbonate = Bicarbonate as CaCO3.
Carbonate = Calcium carbonate as CaCO3.
5. NS = Not Sampled
6. Aerial Photo Source: USDA NAIP (2015).

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Publish Date: 2017/01/31, 11:20 AM | User: ckiblinger
Filepath: \\orcas\gis\Jobs\PerkinsCoie_0996\YakimaDairies\Maps\GW_Monitoring\Yakima_Dairies_AlkalinityConc4Q2016.mxd

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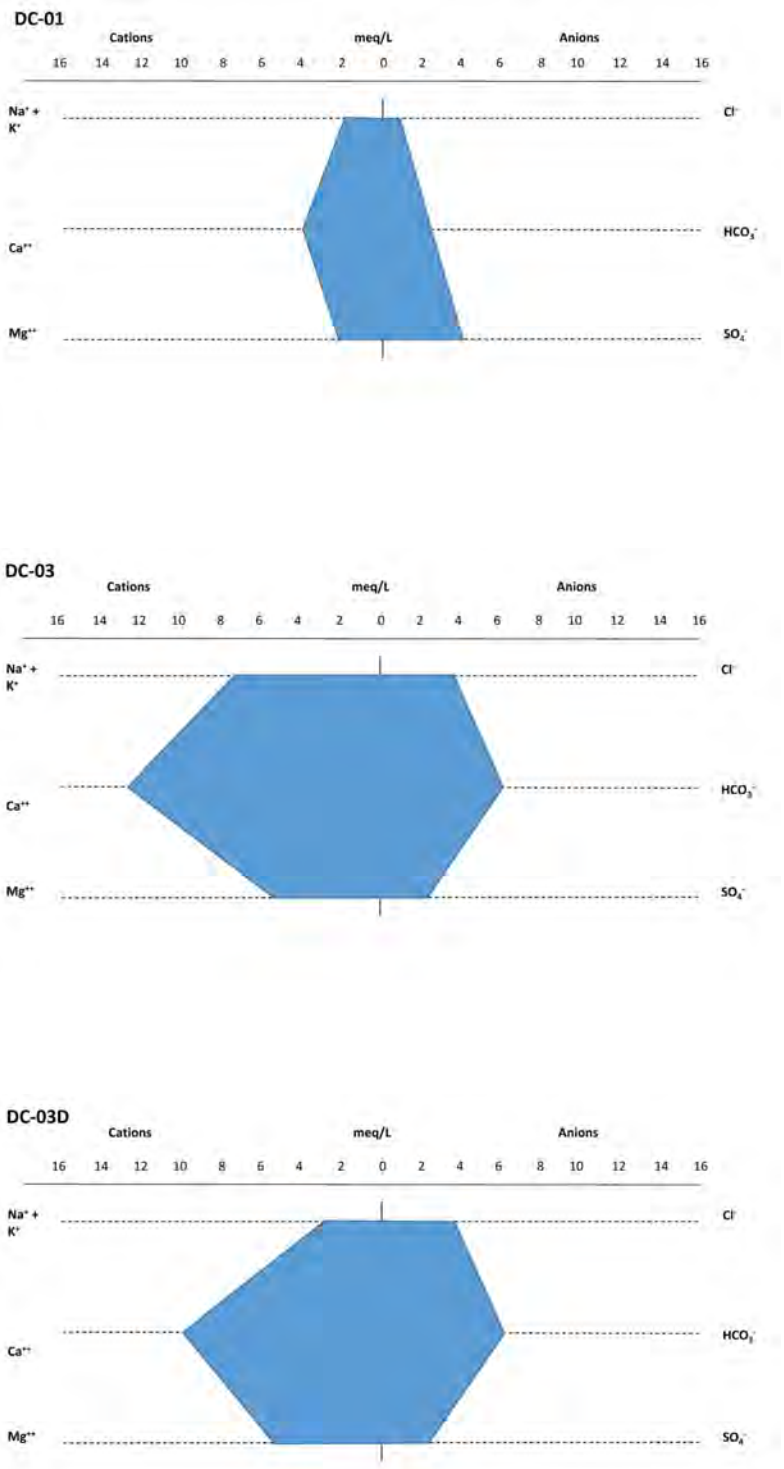
Figure 26
Alkalinity Concentrations in Groundwater Fourth Quarter 2016
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



NOTE: meq/l = milliequivalents per liter

Publish Date: 2017/02/02 1:14 PM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27A

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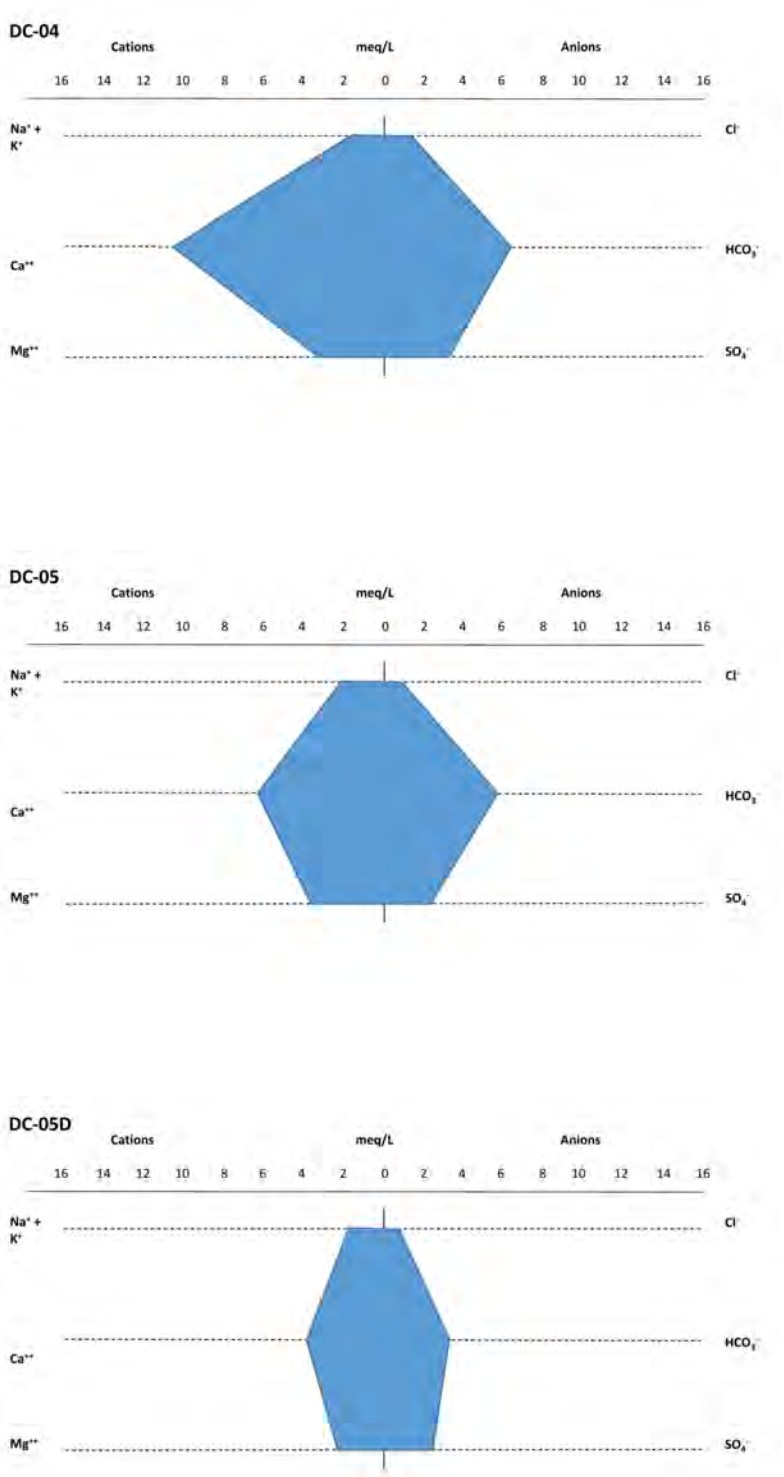
Figure 27A
Stiff Diagrams — DC-01, DC-03, DC-03D

Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies



NOTE: meq/l = milliequivalents per liter

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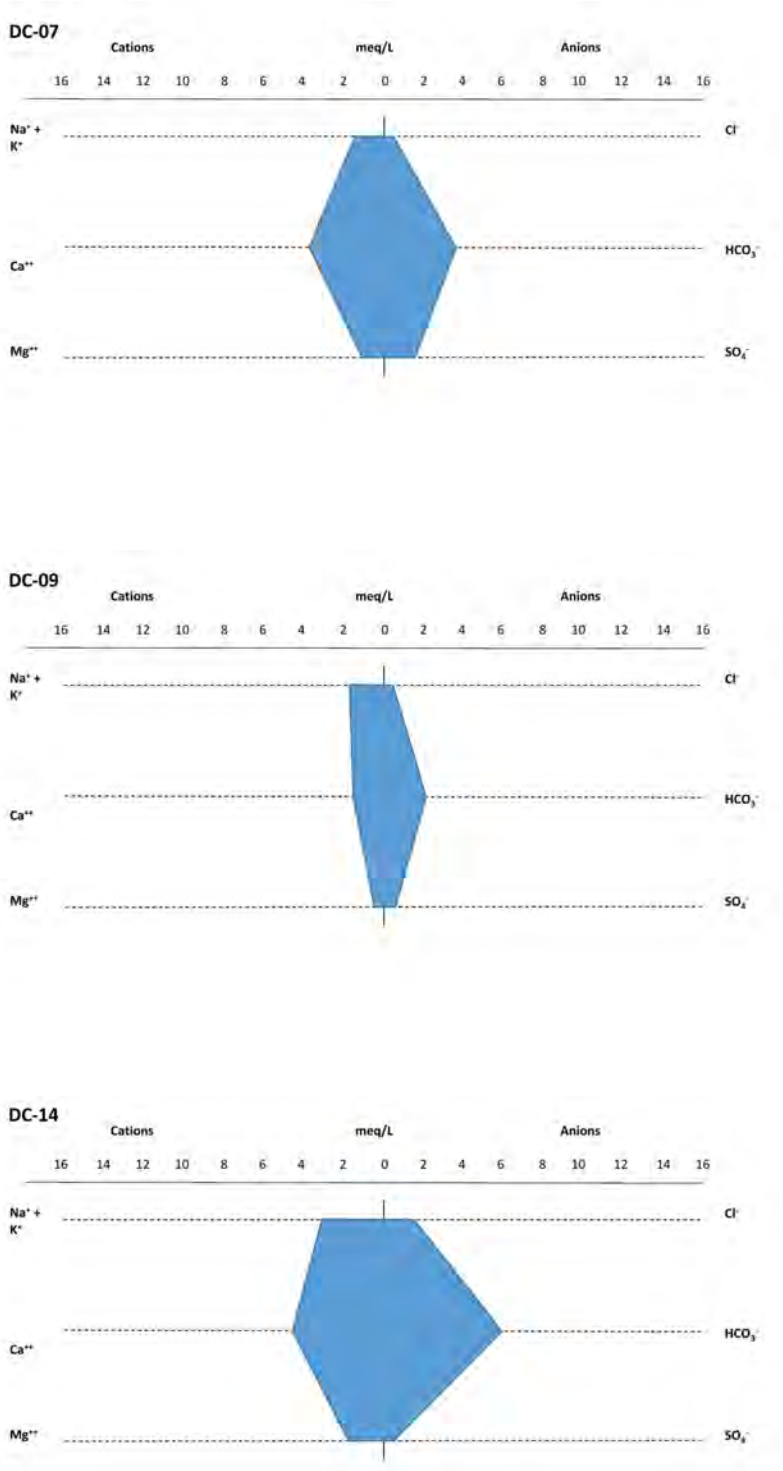
Figure 27B
Stiff Diagrams — DC-04, DC-05, DC-05D



NOTE: meq/l = milliequivalents per liter

Publish Date: 2017/02/02 1:15 PM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27C

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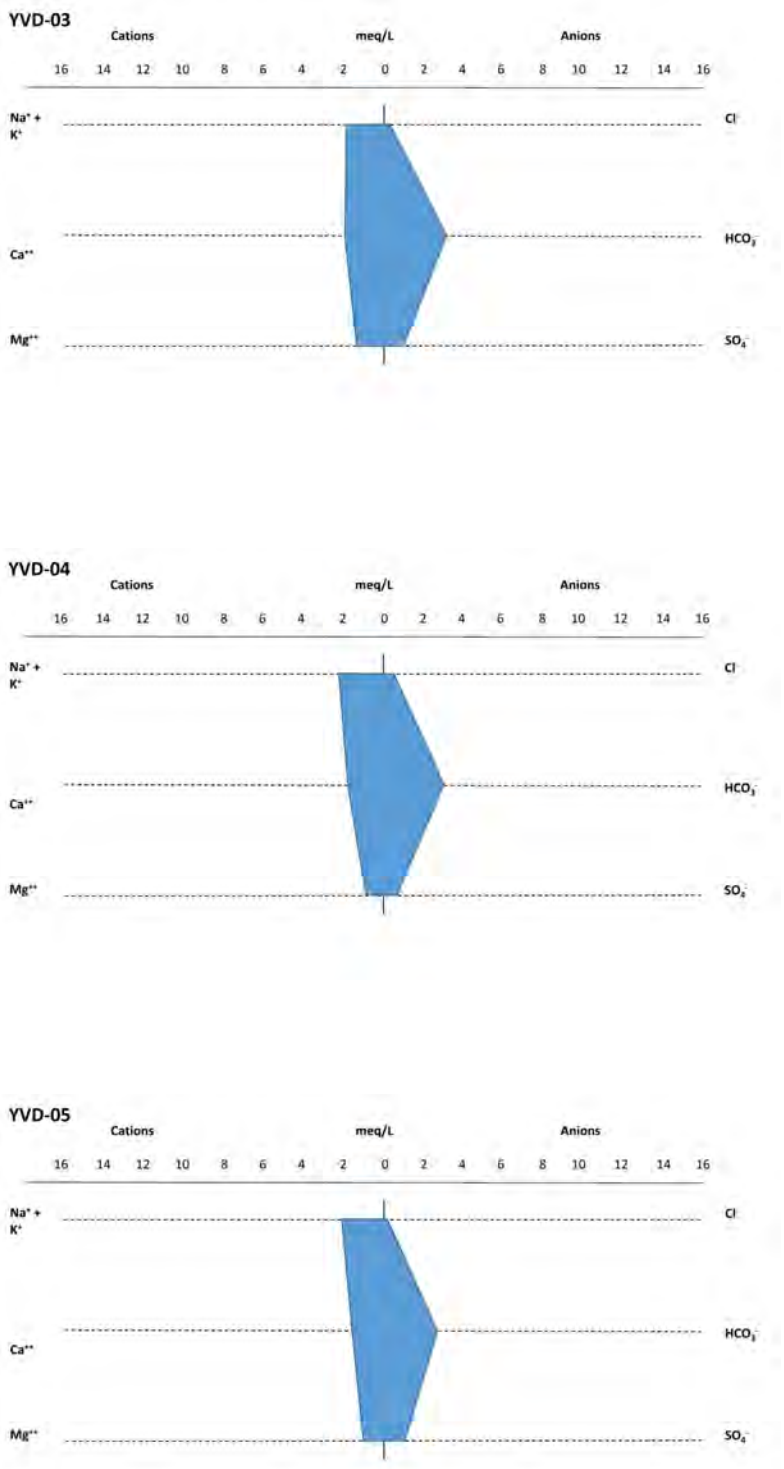
Figure 27C
Stiff Diagrams — DC-07, DC-09, DC-14



NOTE: meq/l = milliequivalents per liter

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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27D

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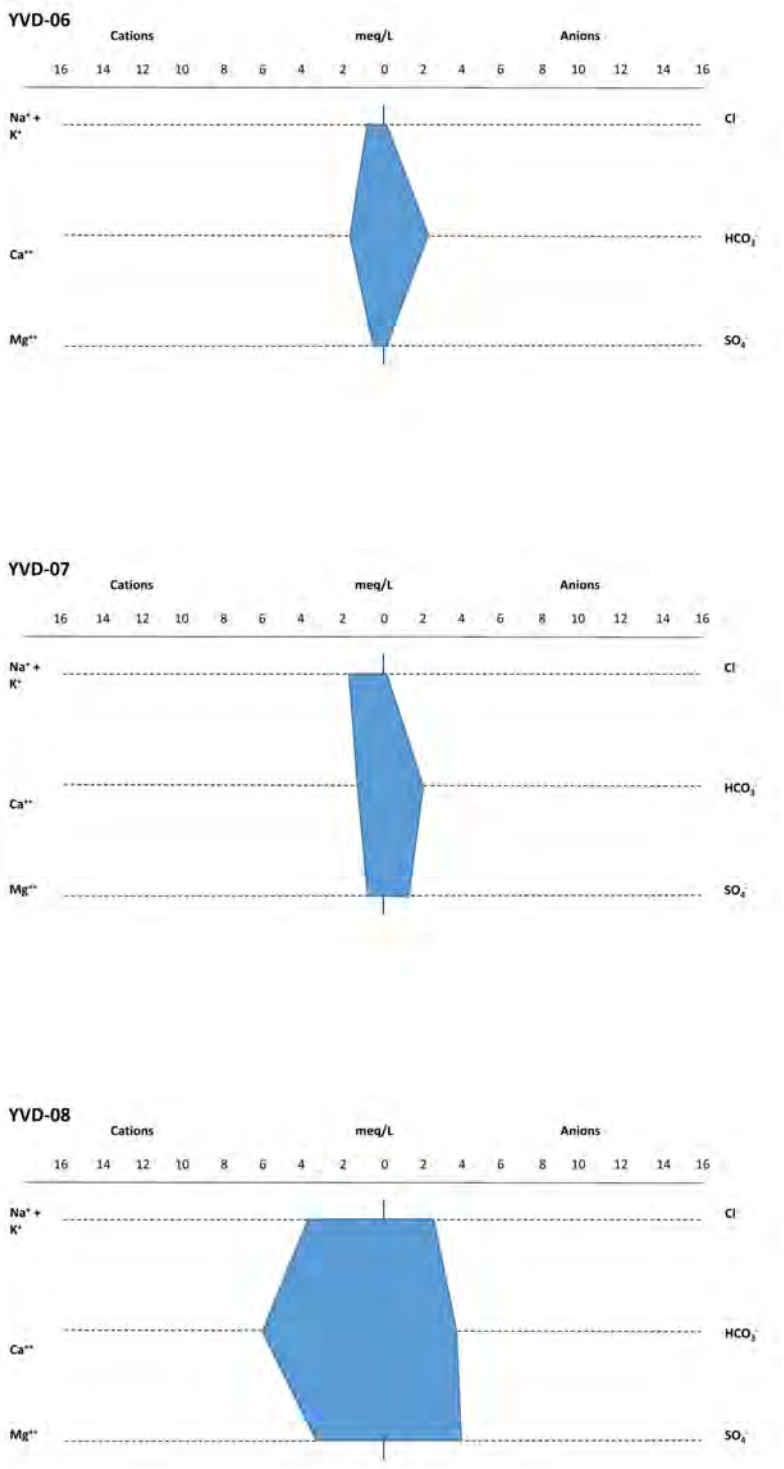
Figure 27D
Stiff Diagrams — YVD-03, YVD-04, YVD-05



NOTE: meq/l = milliequivalents per liter

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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27E

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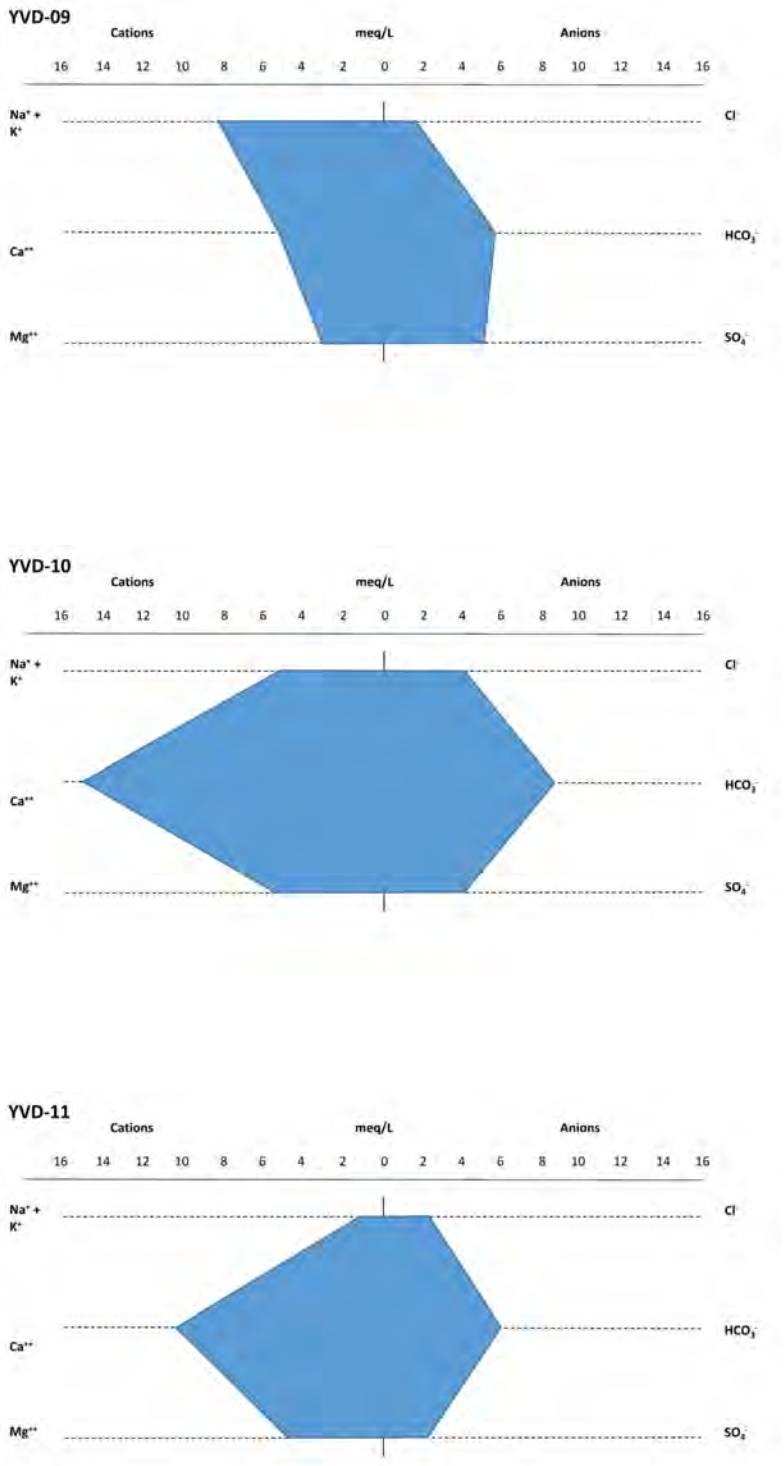
Figure 27E
Stiff Diagrams — YVD-06, YVD-07, YVD-08



NOTE: meq/l = milliequivalents per liter

Publish Date: 2017/02/02 1:15 PM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27F

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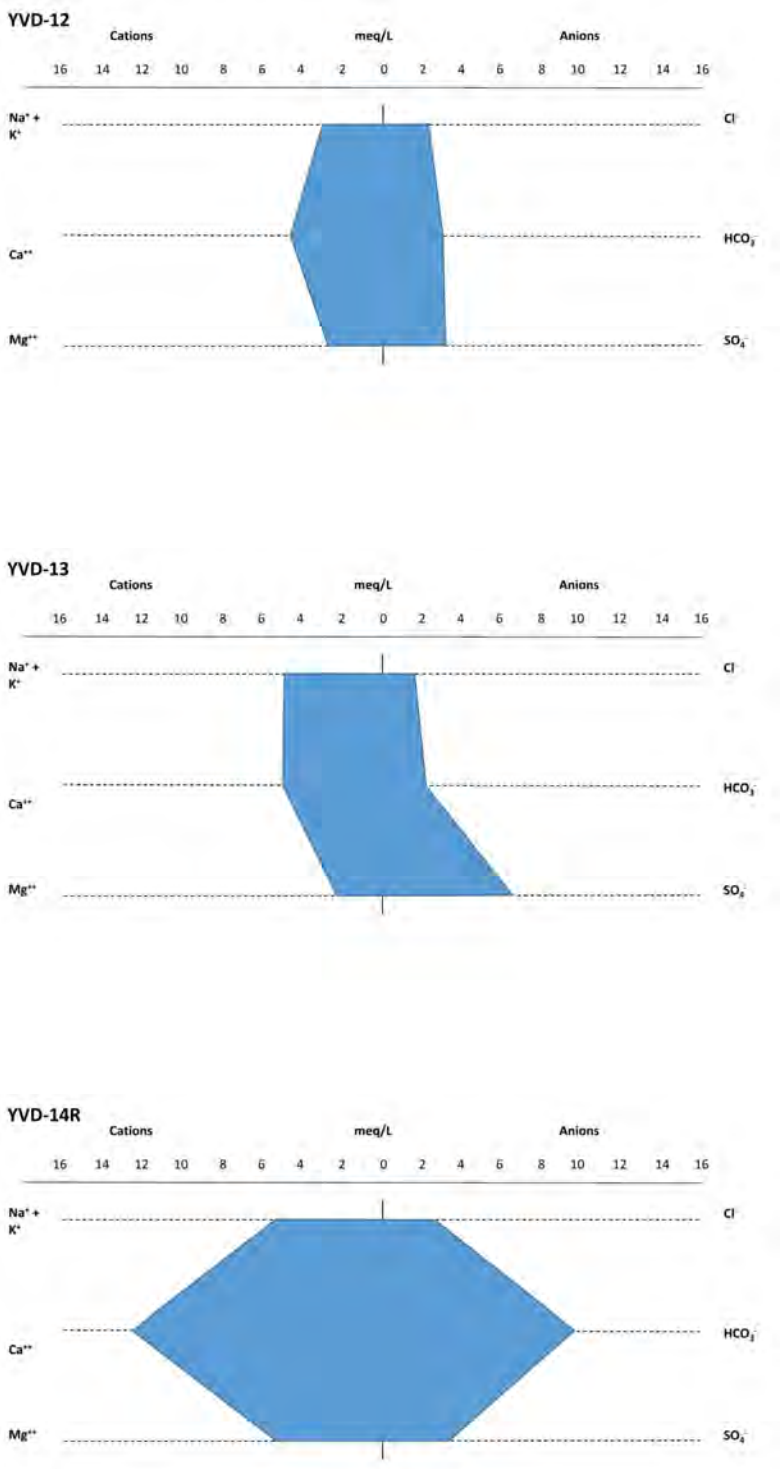
Figure 27F
Stiff Diagrams — YVD-09, YVD-10, YVD-11



NOTE: meq/l = milliequivalents per liter

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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27G

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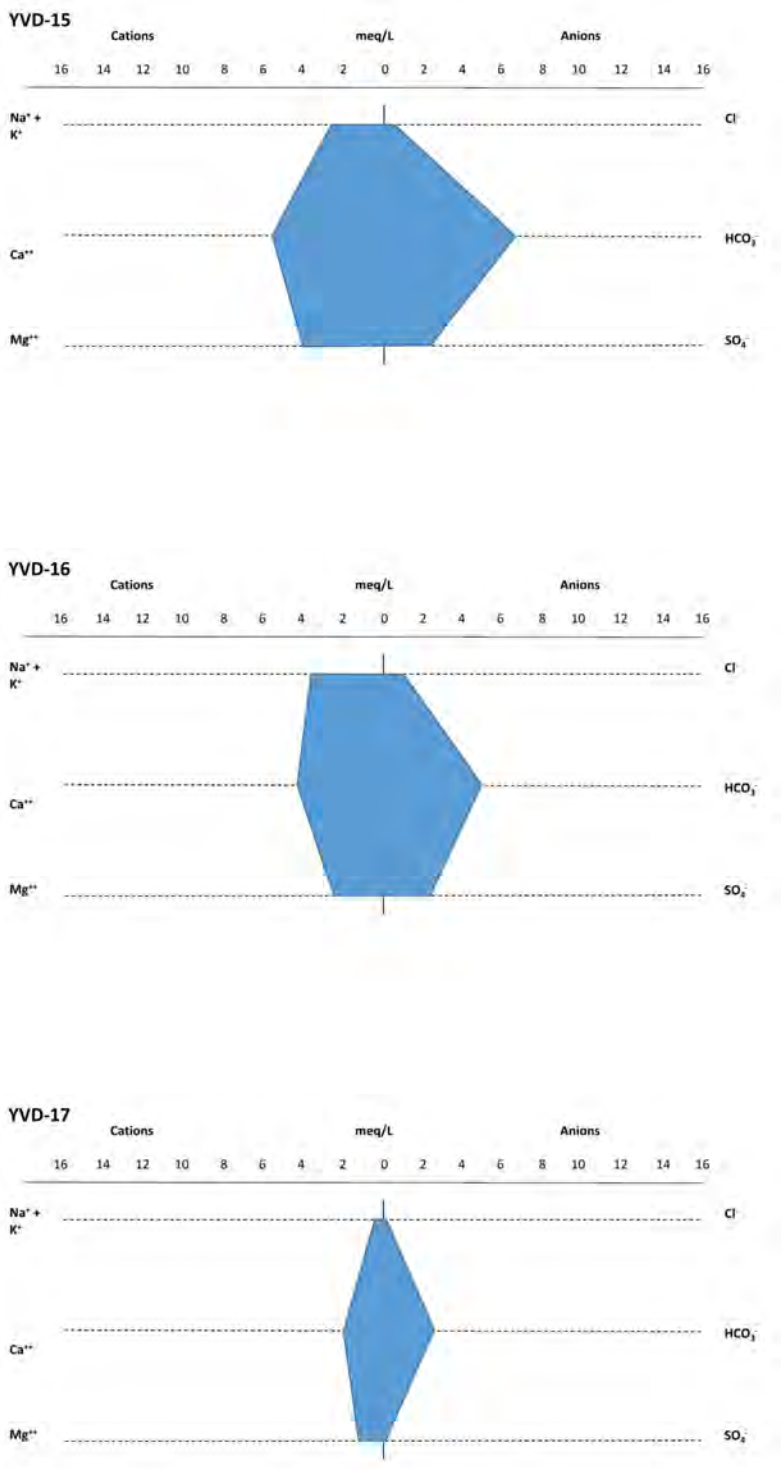
Figure 27G
Stiff Diagrams — YVD-12, YVD-13, YVD-14R



NOTE: meq/l = milliequivalents per liter

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Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27H

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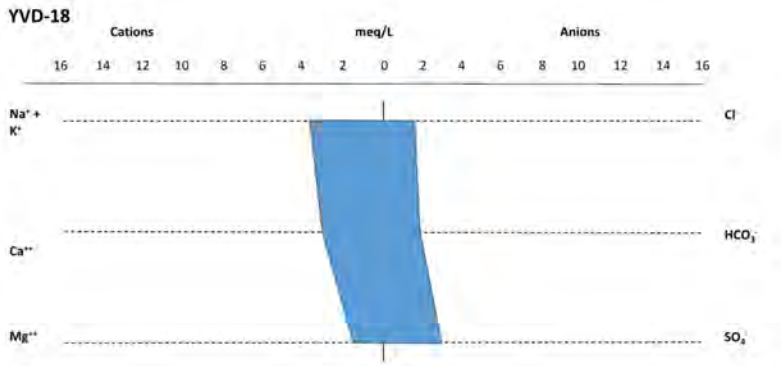
Figure 27H
Stiff Diagrams — YVD-15, YVD-16, YVD-17



NOTE: meq/l = milliequivalents per liter

Publish Date: 2017/02/02 1:15 PM | User: hhayward
Filepath: K:\Projects\0996-Perkins Coie\Yakima Dairies Project\GW Monitoring Summary Report\4th Quarter\0096-RP-003.dwg 27I

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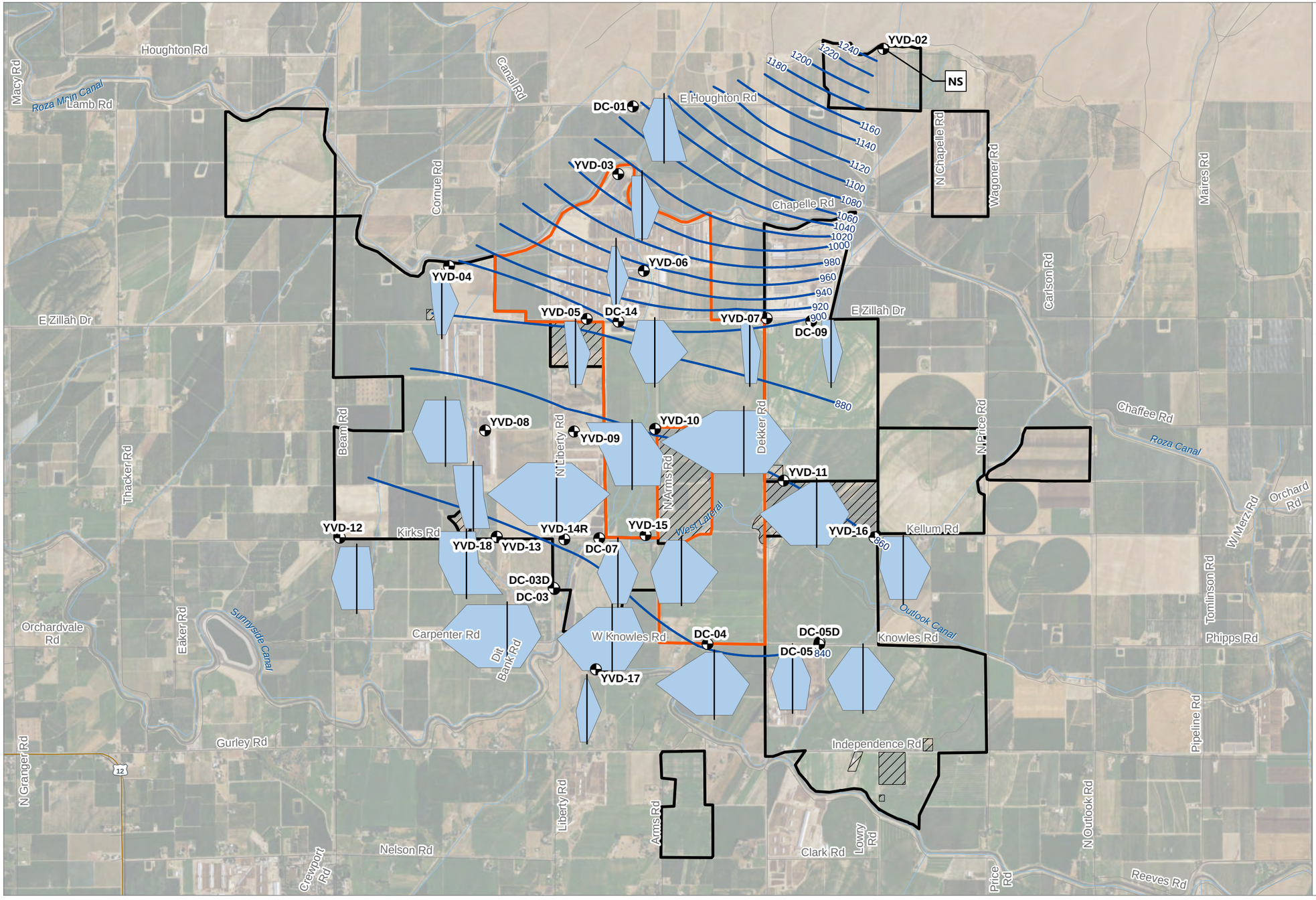
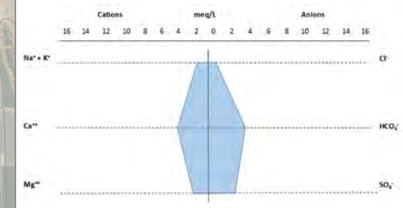
Figure 27I
Stiff Diagrams — YVD-18



LEGEND:

- Monitoring Well
- Groundwater Elevation Contours, December 11, 2016 (feet NAVD88; contour interval 20 feet)
- Respondent Ownership Boundary
- Approximate Boundary of Dairy Facilities
- Land Not Owned or Operated by Respondents



NOTE:
1. NS = Not Sampled

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Feet

Publish Date: 2017/01/27, 12:39 PM | User: ckiblinger
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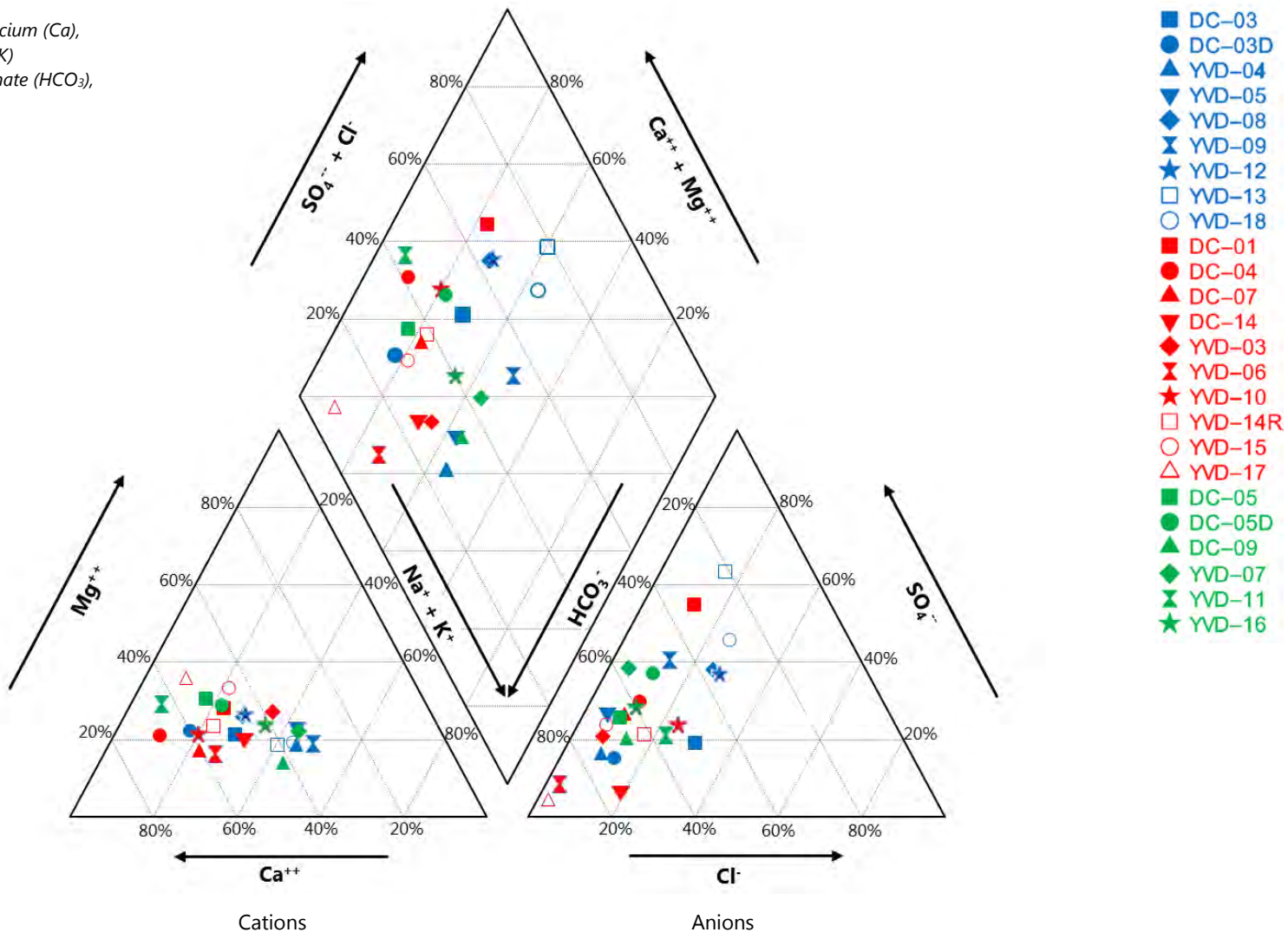
Figure 28
Stiff Diagrams and Groundwater Elevation Contour Map
Groundwater Monitoring Data Report Fourth Quarter 2016
Yakima Valley Dairies

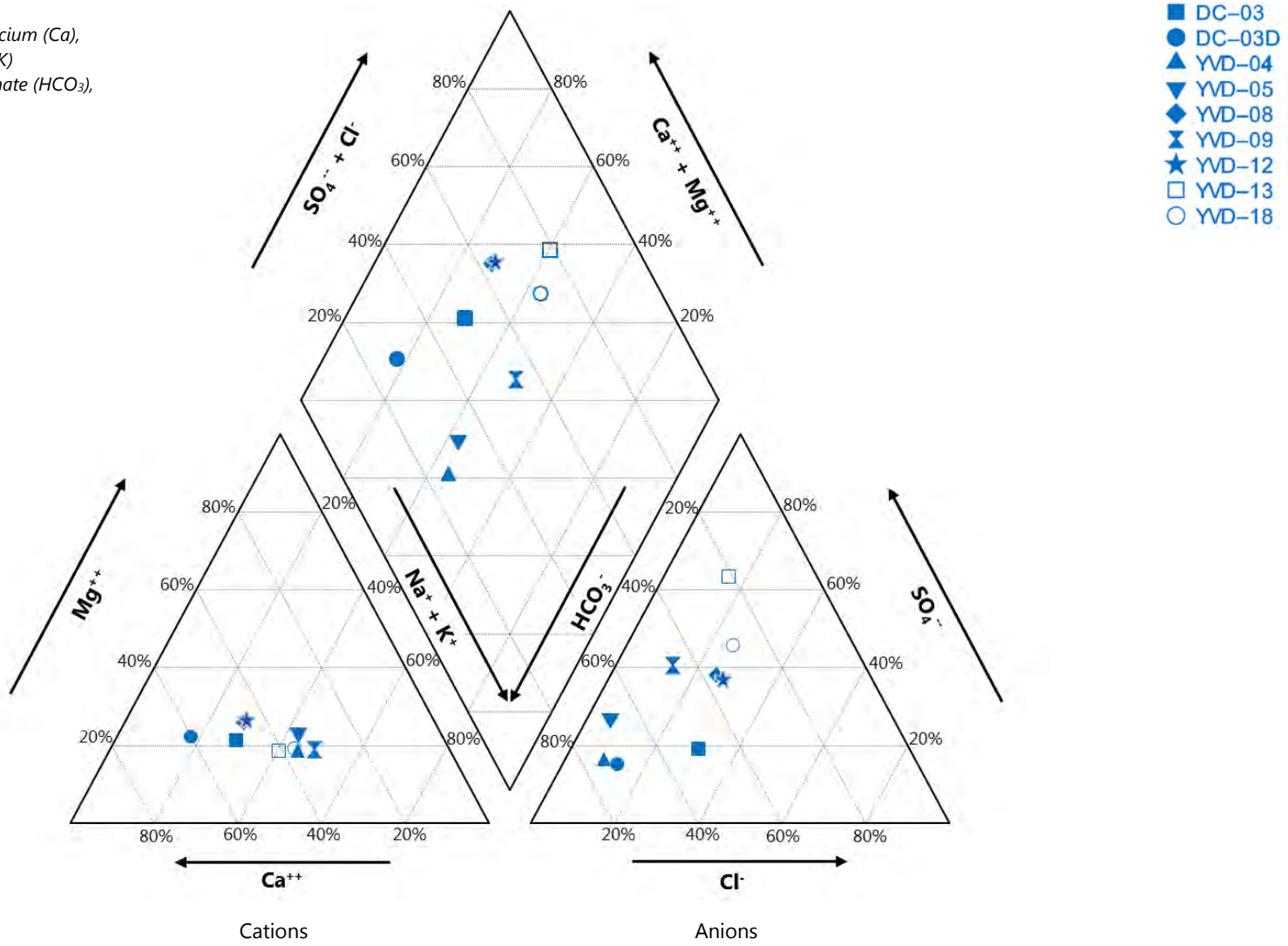
Notes:

1. *Cations: Magnesium (Mg), Calcium (Ca), Sodium (Na), and Potassium (K)*
2. *Anions: Sulfate (SO_4), Bicarbonate (HCO_3), and Chloride (Cl)*



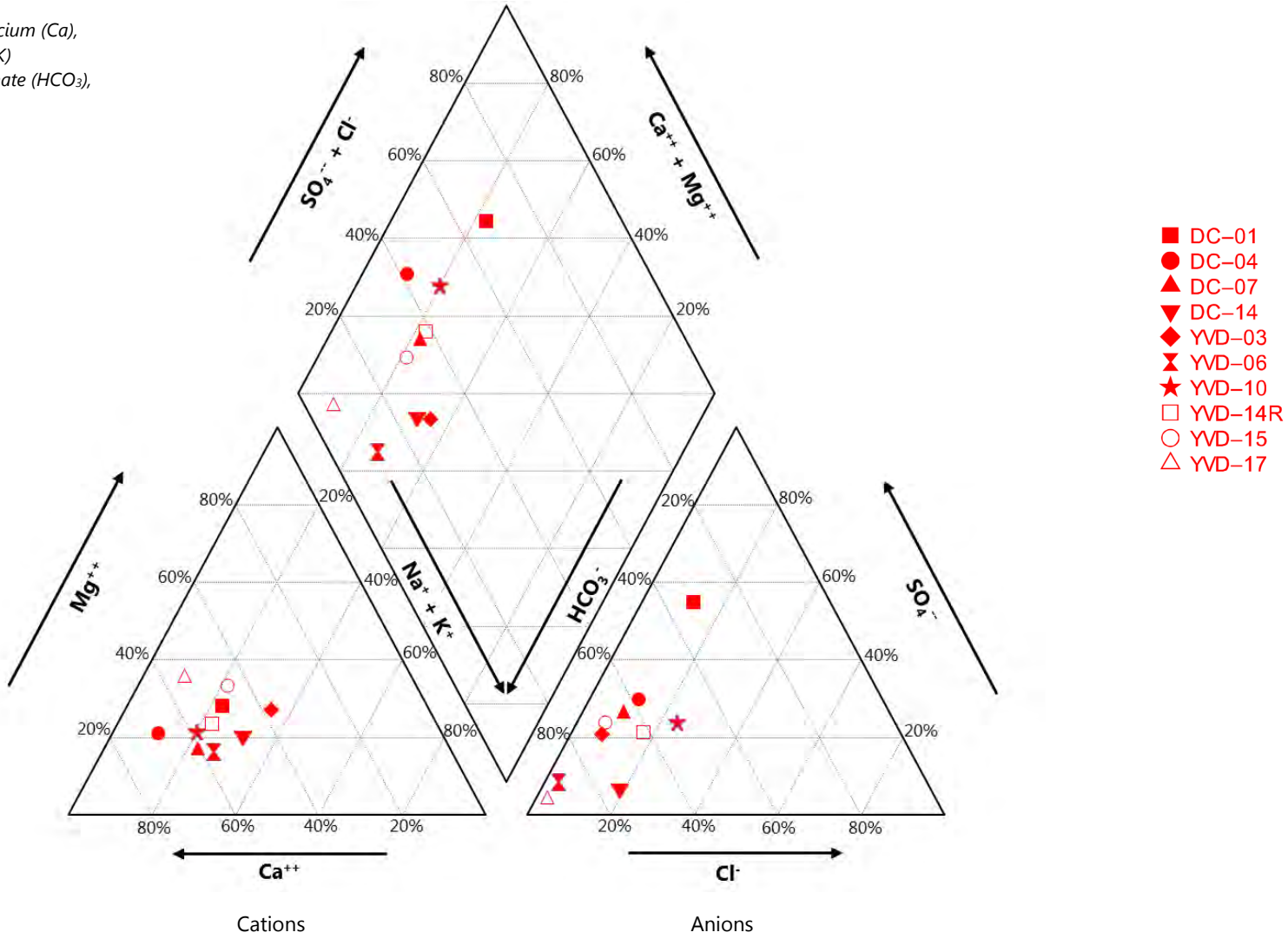
Notes:

1. *Cations: Magnesium (Mg), Calcium (Ca), Sodium (Na), and Potassium (K)*
2. *Anions: Sulfate (SO_4), Bicarbonate (HCO_3), and Chloride (Cl)*



Notes:

1. *Cations: Magnesium (Mg), Calcium (Ca), Sodium (Na), and Potassium (K)*
2. *Anions: Sulfate (SO_4), Bicarbonate (HCO_3), and Chloride (Cl)*



Notes:

1. *Cations: Magnesium (Mg), Calcium (Ca), Sodium (Na), and Potassium (K)*
2. *Anions: Sulfate (SO_4), Bicarbonate (HCO_3), and Chloride (Cl)*