



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 155  
Seattle, WA 98101-3188

OFFICE OF THE REGIONAL  
ADMINISTRATOR

**JUN 19 2019**

Honorable Dan Newhouse  
1414 Longworth House Office Building  
Washington DC 20515

Dear Congressman Newhouse:

Thank you for the opportunity to meet a few weeks ago in Seattle. It was a pleasure to have the opportunity to get to know each other better.

During our discussion, you asked that I send you the data gathered by the Lower Yakima Valley dairies since they and the EPA signed the Administrative Order on Consent in 2013. The dairies submit annual reports to the EPA that include the data collected and the work they completed during the previous year.

We have posted that information at:

[ftp://ftp.epa.gov/reg10ftp/sites/yakima/Consent Order Deliverables/01 Annual Progress Reports/](ftp://ftp.epa.gov/reg10ftp/sites/yakima/Consent%20Order%20Deliverables/01%20Annual%20Progress%20Reports/).

The data in the annual reports are consistent with the 2013 EPA report's conclusions regarding the dairies' manure handling practices and associated impacts to groundwater, including drinking water wells. The data also indicate that the source control actions taken by the dairies have begun to reduce the nitrate concentrations in groundwater. Though there is still more work to be done, EPA is pleased to see this progress. My staff would be pleased to review the reports with you and your staff.

In addition, enclosed is a PowerPoint presentation we produced for meetings we've had in Seattle with Larry Stap, Jay Gordon, and Gerald Baron. This presentation summarizes the status of the work, the progress being made by the AOC dairies, and the work remaining to be done.

When we met, we also discussed Save Family Farming's request to conduct additional peer review of EPA's 2013 report, "Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley, Washington." When EPA developed the report in 2012, we conducted both internal and external peer reviews and accepted public comment on the draft report. We revised the study where appropriate and shortly after finalizing it in 2013, we reached agreement with the dairies on the AOC. While some remain critical of the study, seven years later the EPA has not received any scientific studies or raw data as the basis for reconsidering the study's conclusions, or the basis of the AOC.

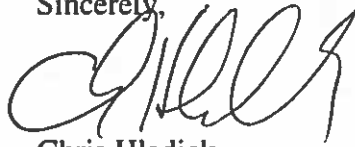
While we remain open to reviewing any new information offered by critics of the study, we do not think it would be useful to conduct a second peer review of a now seven-year-old study, the conclusions of which have been confirmed by subsequent data generated by the dairies themselves.

Developing a new report based upon the data gathered since 2013 could contribute to a further understanding of the issues. We are requesting that our national Office of Research and Development help us explore options regarding appropriate level of review for any new report.

As we discussed, when the digester, DAF unit, and nitrification-denitrification systems at the DeRuyter Dairy are all fully operational, we would like to tour the farm to see first-hand how all the pieces work together. I'm hopeful we can work out the timing of that visit so you can join the tour.

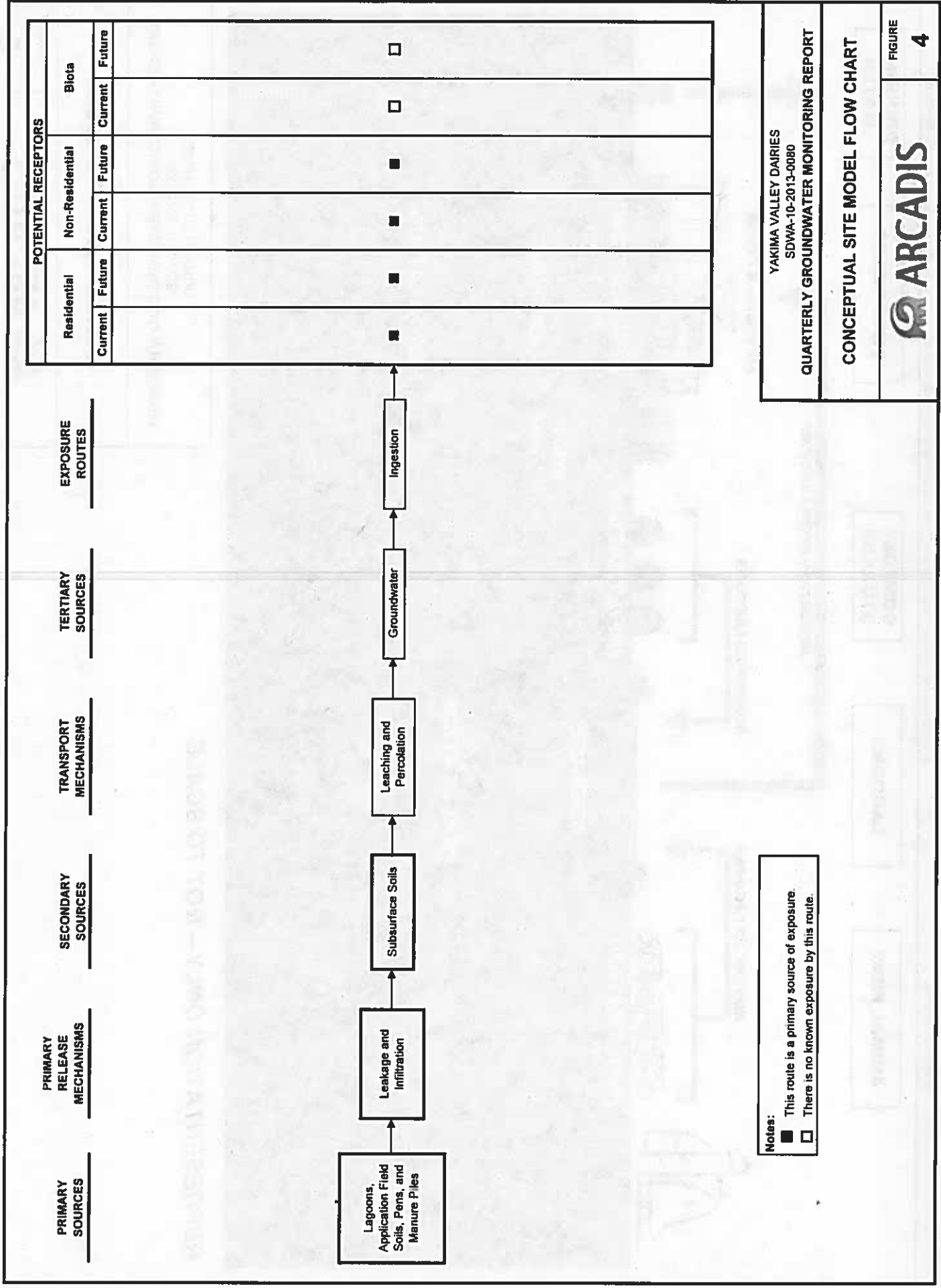
Thank you again for the good discussions. I look forward to meeting with you during August break, perhaps in your district, and talking further about how we can work collaboratively on these issues.

Sincerely,

A handwritten signature in black ink, appearing to read "CHLADICK", written in a cursive style.

Chris Hladick  
Regional Administrator

Enclosure



**Notes:**  
 ■ This route is a primary source of exposure.  
 □ There is no known exposure by this route.

POTENTIAL RECEPTORS					
Residential		Non-Residential		Biota	
Current	Future	Current	Future	Current	Future
■	■	■	■	□	□

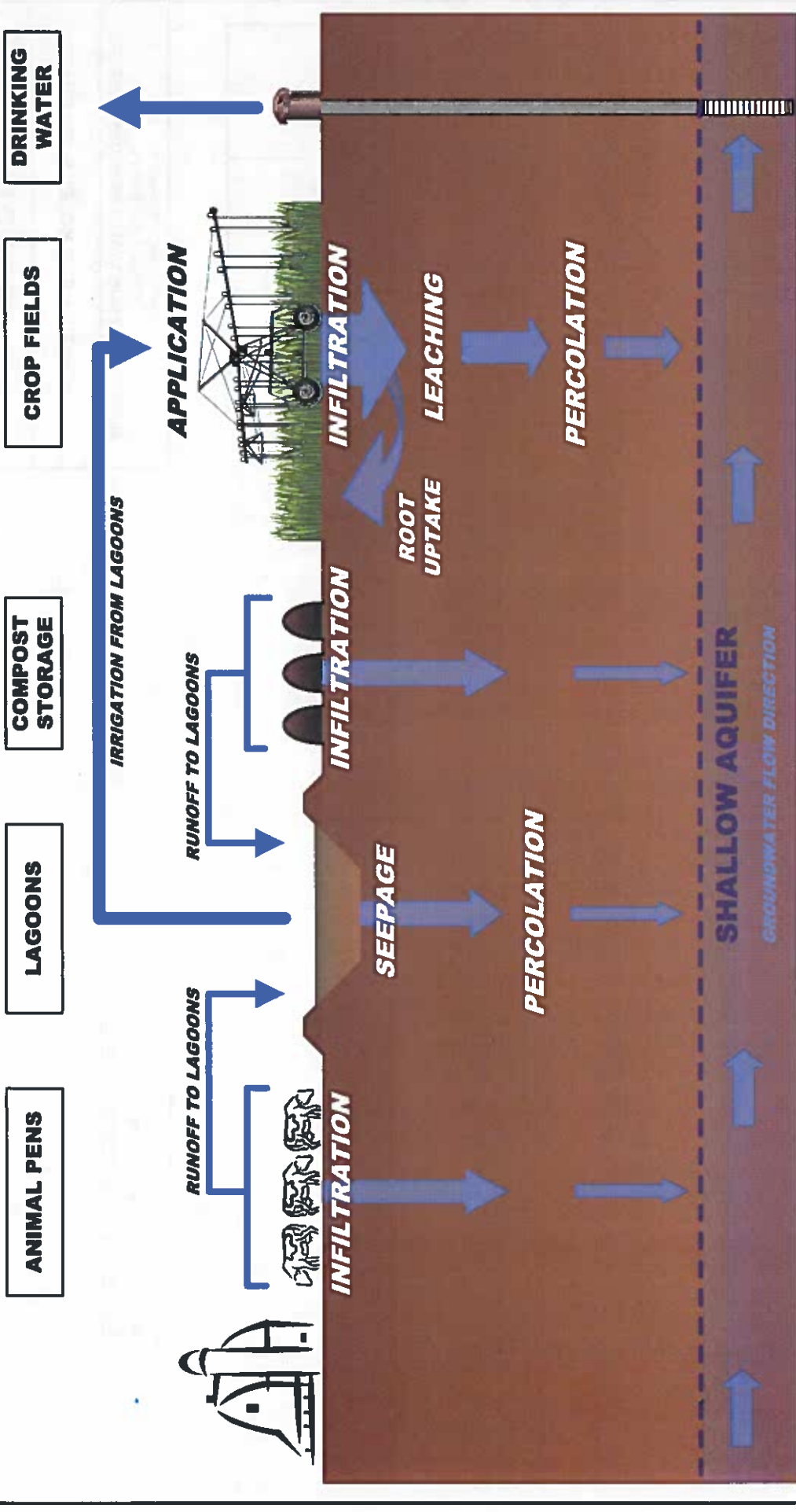
YAKIMA VALLEY DAIRIES  
 SDWA-10-2013-0080

QUARTERLY GROUNDWATER MONITORING REPORT

CONCEPTUAL SITE MODEL FLOW CHART



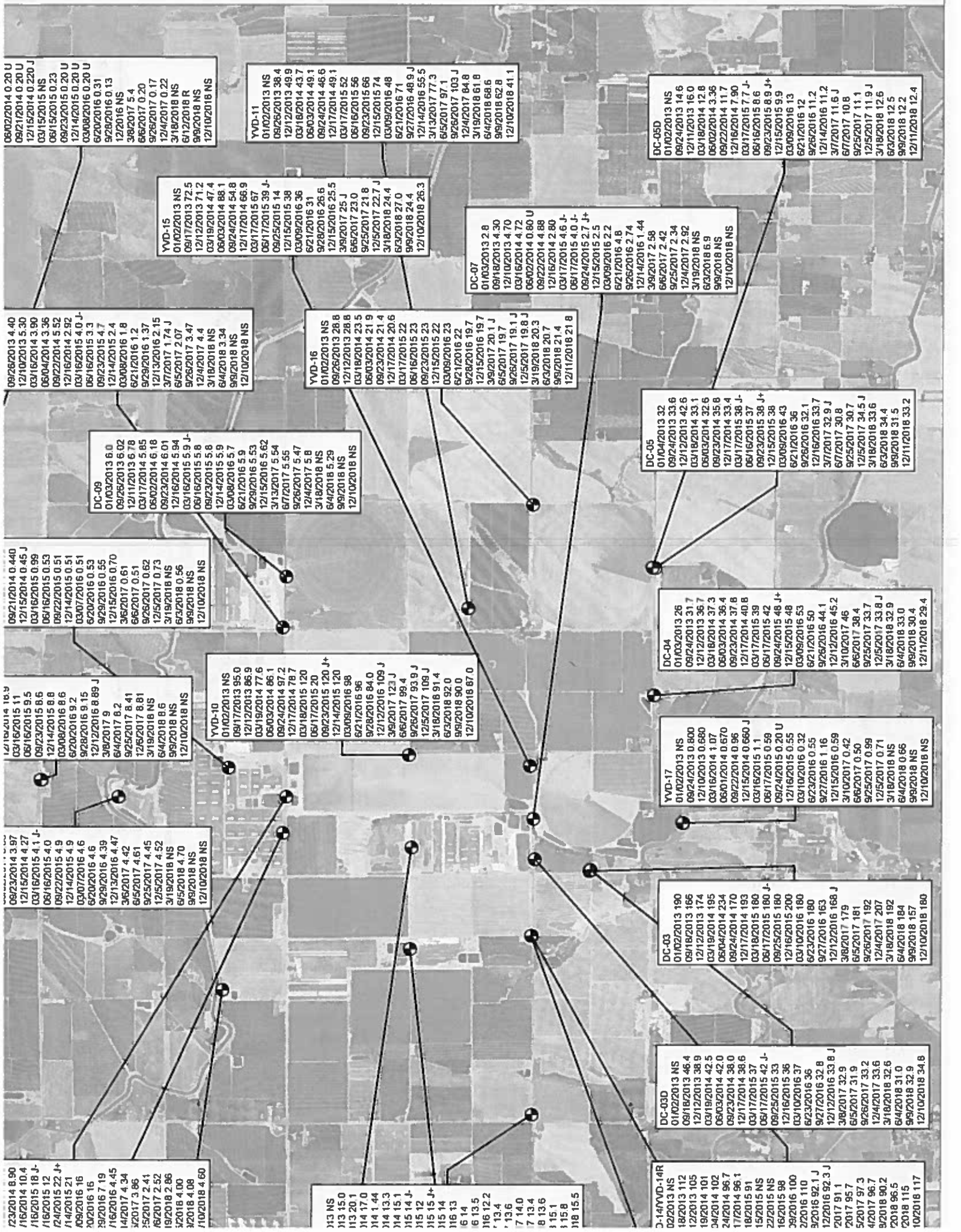
FIGURE 4



**REPRESENTATION ONLY – NOT TO SCALE**

YAKIMA VALLEY DAIRIES  
 SDWA-10-2013-0080  
 QUARERLY GROUNDWATER MONITORING REPORT

CONCEPTUAL SITE MODEL



06/02/2014 0.20 U  
09/21/2014 0.20 U  
12/15/2014 0.220 J  
03/15/2015 NS  
06/15/2015 0.23  
09/23/2015 0.20 U  
12/14/2015 0.20 U  
03/08/2016 0.20 U  
6/20/2016 0.31  
9/28/2016 0.13  
12/2016 NS  
3/6/2017 5.4  
6/6/2017 0.20  
9/26/2017 0.17  
12/4/2017 0.22  
3/18/2018 NS  
6/12/2018 R  
9/9/2018 NS  
12/10/2018 NS

YVD-11  
01/02/2013 NS  
09/26/2013 38.4  
12/12/2013 48.9  
03/18/2014 43.7  
06/03/2014 48.1  
09/24/2014 46.6  
12/17/2014 49.1  
03/17/2015 52  
06/16/2015 56  
09/23/2015 66  
12/15/2015 74  
03/09/2016 48  
6/3/2016 71  
9/27/2016 48.9 J  
12/14/2016 55.5  
3/13/2017 77.3  
6/5/2017 97.1  
9/28/2017 103 J  
12/4/2017 84.8  
3/19/2018 61.8  
6/4/2018 68.6  
9/9/2018 62.8  
12/10/2018 41.1

DC-05D  
01/02/2013 NS  
09/24/2013 14.6  
12/11/2013 16.0  
03/18/2014 12.8  
06/02/2014 3.36  
09/22/2014 11.7  
12/16/2014 7.90  
03/17/2015 7.7 J  
06/16/2015 8.6  
09/23/2015 8.9 J+  
12/15/2015 9.9  
03/09/2016 13  
6/21/2016 12  
9/25/2016 11.2  
12/14/2016 11.2  
3/7/2017 11.6 J  
6/7/2017 10.8  
9/25/2017 11.1 J  
12/5/2017 11.9 J  
3/18/2018 12.5  
6/3/2018 12.5  
9/9/2018 12.2  
12/11/2018 12.4

YVD-15  
01/02/2013 NS  
09/17/2013 72.5  
12/12/2013 71.2  
03/19/2014 47.4  
06/03/2014 88.1  
09/24/2014 54.8  
12/17/2014 66.9  
03/17/2015 67  
06/17/2015 39 J-  
12/15/2015 38  
03/09/2016 36  
9/28/2016 26.6  
12/15/2016 25.5  
3/9/2017 25 J  
6/6/2017 23  
9/25/2017 21.8  
12/5/2017 22.7 J  
3/18/2018 24.4  
6/3/2018 27.0  
9/9/2018 24.0  
12/10/2018 26.3

DC-07  
01/03/2013 2.8  
09/18/2013 4.30  
12/10/2013 4.70  
03/16/2014 4.72  
06/02/2014 0.80 U  
09/22/2014 4.88  
12/16/2014 2.80  
03/17/2015 4.6 J-  
06/17/2015 4.0 J-  
09/24/2015 2.7 J+  
12/15/2015 2.5  
03/09/2016 2.2  
6/21/2016 4.8  
9/25/2016 2.74  
12/14/2016 1.44  
3/9/2017 2.58  
6/6/2017 2.42  
9/25/2017 2.34  
12/4/2017 2.92  
3/19/2018 NS  
6/3/2018 6.9  
9/9/2018 NS  
12/10/2018 NS

09/26/2013 4.40  
12/10/2013 5.30  
03/16/2014 3.90  
06/04/2014 3.36  
09/22/2014 5.52  
12/16/2014 2.92  
03/16/2015 4.0 J-  
06/16/2015 3.3  
09/23/2015 4.7  
12/14/2015 2.4  
03/08/2016 1.8  
6/21/2016 1.2  
9/29/2016 1.37  
12/5/2016 2.15  
3/7/2017 1.74 J  
6/5/2017 2.07  
9/26/2017 3.47  
12/18/2018 NS  
3/18/2018 NS  
6/4/2018 3.34  
9/9/2018 NS  
12/10/2018 NS

YVD-16  
01/02/2013 NS  
09/26/2013 28.8  
12/12/2013 28.8  
03/19/2014 23.5  
06/03/2014 21.9  
09/23/2014 21.4  
12/17/2014 20.6  
03/17/2015 22  
06/16/2015 23  
09/23/2015 23  
12/15/2015 22  
03/09/2016 22  
6/21/2016 22  
9/28/2016 19.7  
12/15/2016 19.7  
3/9/2017 20.1 J  
6/5/2017 19.7  
9/25/2017 19.1 J  
12/5/2017 19.8 J  
3/19/2018 20.3  
6/3/2018 20.7  
9/9/2018 21.4  
12/11/2018 21.8

DC-05  
01/04/2013 32  
09/24/2013 32.6  
12/12/2013 42.6  
03/18/2014 31.1  
06/03/2014 32.6  
09/23/2014 35.8  
12/17/2014 33.4  
03/17/2015 38 J-  
06/16/2015 37  
09/23/2015 38 J+  
12/15/2015 38  
03/09/2016 43  
6/21/2016 36  
9/26/2016 32.1  
12/16/2016 33.7  
3/7/2017 32.9 J  
6/7/2017 30.8  
9/25/2017 30.7  
12/5/2017 34.5 J  
3/18/2018 33.6  
6/4/2018 34.4  
9/9/2018 31.5  
12/11/2018 33.2

DC-09  
01/03/2013 6.0  
09/26/2013 6.02  
12/11/2013 6.78  
03/17/2014 5.85  
06/02/2014 6.18  
09/23/2014 6.01  
12/16/2014 5.94  
03/16/2015 5.9 J-  
06/16/2015 5.8  
09/23/2015 5.8  
12/14/2015 5.9  
03/09/2016 5.7  
6/21/2016 5.9  
9/29/2016 5.53  
12/15/2016 5.62  
3/13/2017 5.54  
6/7/2017 5.47  
12/4/2017 5.8  
3/18/2018 NS  
6/4/2018 5.29  
9/9/2018 NS  
12/10/2018 NS

09/21/2014 0.440  
12/15/2014 0.45 J  
03/16/2015 0.99  
06/16/2015 0.53  
09/22/2015 0.51  
12/14/2015 0.51  
03/07/2016 0.51  
6/20/2016 0.53  
9/29/2016 0.55  
12/15/2016 0.70  
3/6/2017 0.61  
6/6/2017 0.51  
9/26/2017 0.62  
12/5/2017 0.73  
3/19/2018 NS  
6/3/2018 0.56  
9/9/2018 NS  
12/10/2018 NS

DC-04  
01/03/2013 26  
09/24/2013 31.7  
12/12/2013 36.7  
03/18/2014 37.3  
06/03/2014 36.4  
09/23/2014 37.8  
12/17/2014 40.8  
03/17/2015 39  
06/17/2015 42 J+  
09/24/2015 48 J+  
12/15/2015 48  
03/09/2016 53  
6/21/2016 50  
9/26/2016 44.1  
12/12/2016 45.2  
3/7/2017 46  
6/6/2017 38.4  
9/25/2017 33.7  
12/5/2017 33.8 J  
3/18/2018 32.9  
6/4/2018 33.0  
9/9/2018 30.4  
12/11/2018 29.4

YVD-10  
01/02/2013 NS  
09/17/2013 95.0  
12/12/2013 86.9  
03/19/2014 77.6  
06/03/2014 86.1  
09/24/2014 97.2  
12/17/2014 78.7  
03/18/2015 120  
06/17/2015 20  
09/23/2015 120 J+  
12/14/2015 120  
03/09/2016 98  
6/21/2016 96  
9/28/2016 84.0  
12/12/2016 109 J  
3/9/2017 123 J  
6/6/2017 99.4  
9/26/2017 93.9 J  
12/5/2017 109 J  
3/18/2018 91.4  
6/3/2018 92.0  
9/9/2018 90.0  
12/10/2018 67.0

YVD-17  
01/02/2013 NS  
09/24/2013 0.800  
12/10/2013 0.680  
03/16/2014 1.07  
06/01/2014 0.670  
09/22/2014 0.96  
12/15/2014 0.660 J  
03/16/2015 1.1  
06/17/2015 0.59  
09/24/2015 0.20 U  
12/16/2015 0.55  
03/10/2016 0.32  
6/23/2016 0.55  
9/27/2016 1.16  
12/15/2016 0.59  
3/10/2017 0.42  
6/6/2017 0.50  
9/25/2017 0.99  
12/5/2017 0.71  
3/18/2018 NS  
6/4/2018 0.66  
9/9/2018 NS  
12/10/2018 NS

09/23/2014 3.97  
12/15/2014 4.27  
03/16/2015 4.1 J-  
06/16/2015 4.0  
09/22/2015 4.9  
12/14/2015 4.9  
03/07/2016 4.6  
6/20/2016 4.6  
9/29/2016 4.39  
12/13/2016 4.47  
3/6/2017 4.42  
6/5/2017 4.61  
9/25/2017 4.45  
12/5/2017 4.52  
3/19/2018 NS  
6/5/2018 4.70  
9/9/2018 NS  
12/10/2018 NS

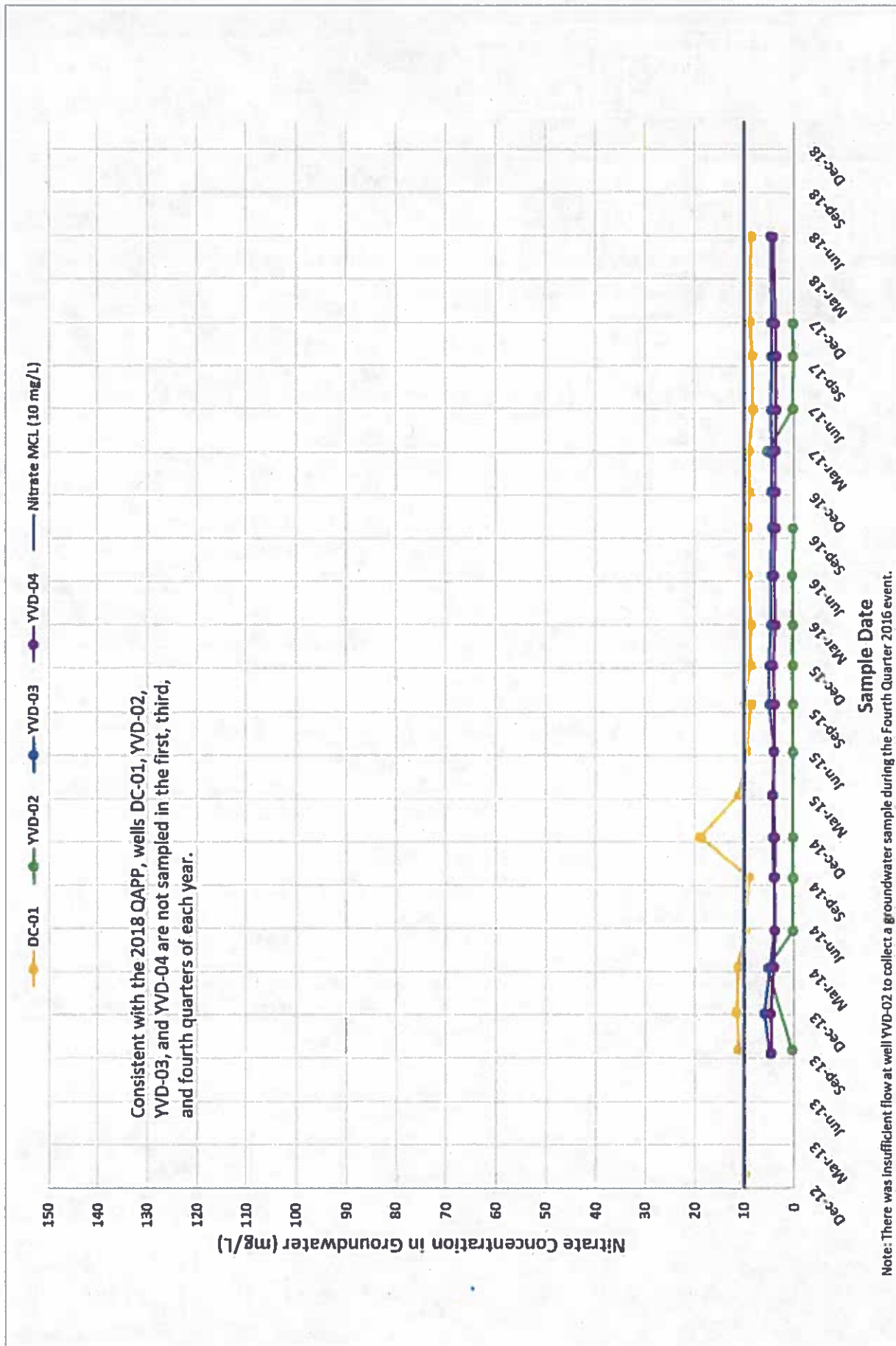
DC-03  
01/02/2013 190  
09/19/2013 166  
12/12/2013 174  
03/19/2014 195  
06/04/2014 234  
09/24/2014 170  
12/17/2014 193  
03/19/2015 180 J-  
06/17/2015 180  
09/25/2015 180  
12/16/2015 200  
03/10/2016 180  
6/23/2016 180  
9/27/2016 163  
12/12/2016 168 J  
3/8/2017 179  
6/5/2017 181  
9/26/2017 192  
12/4/2017 207  
3/18/2018 192  
6/4/2018 184  
9/9/2018 157  
12/10/2018 180

DC-03D  
01/02/2013 NS  
09/19/2013 46.4  
12/12/2013 38.9  
03/19/2014 42.5  
06/03/2014 42.0  
09/23/2014 38.0  
12/17/2014 36.6  
03/17/2015 37  
06/17/2015 42 J-  
09/25/2015 33  
12/16/2015 36  
03/10/2016 37  
6/23/2016 36  
9/27/2016 32.8  
12/12/2016 33.8 J  
3/8/2017 31.9  
6/5/2017 32.9  
9/26/2017 33.2  
12/4/2017 32.6  
3/18/2018 32.6  
6/4/2018 31.0  
9/9/2018 32.9  
12/10/2018 34.8

12/23/2014 8.90  
1/6/2015 10.4  
15/2015 18 J-  
16/2015 12  
12/4/2015 22 J+  
1/4/2015 21  
09/2016 16  
10/2016 16  
19/2016 7.19  
15/2016 4.45  
14/2016 4.34  
3/2017 3.86  
5/2017 2.41  
6/2017 2.52  
19/2018 2.86  
3/2018 4.00  
3/2018 4.08  
10/2018 4.60

J-14/YVD-14R  
02/2013 NS  
18/2013 112  
12/2013 105  
19/2014 101  
3/4/2014 102  
24/2014 96.7  
17/2014 96.1  
18/2015 91  
15/2015 NS  
22/2015 NS  
16/2015 98  
39/2016 100  
2/2016 110  
9/2016 92.1 J  
12/2016 92.3 J  
2017 91.1  
2017 95.7  
5/2017 97.3  
4/2018 96.7  
9/2018 90.2  
2018 96.5  
2018 115  
10/2018 117

113 NS  
113 45.0  
114 17.0  
114 1.44  
114 13.3  
114 15.1  
115 14 J-  
115 12  
115 15 J+  
115 14  
116 13  
116 14  
116 13.5  
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7 13.4  
8 13.6  
115.1  
115.8  
118 15.5

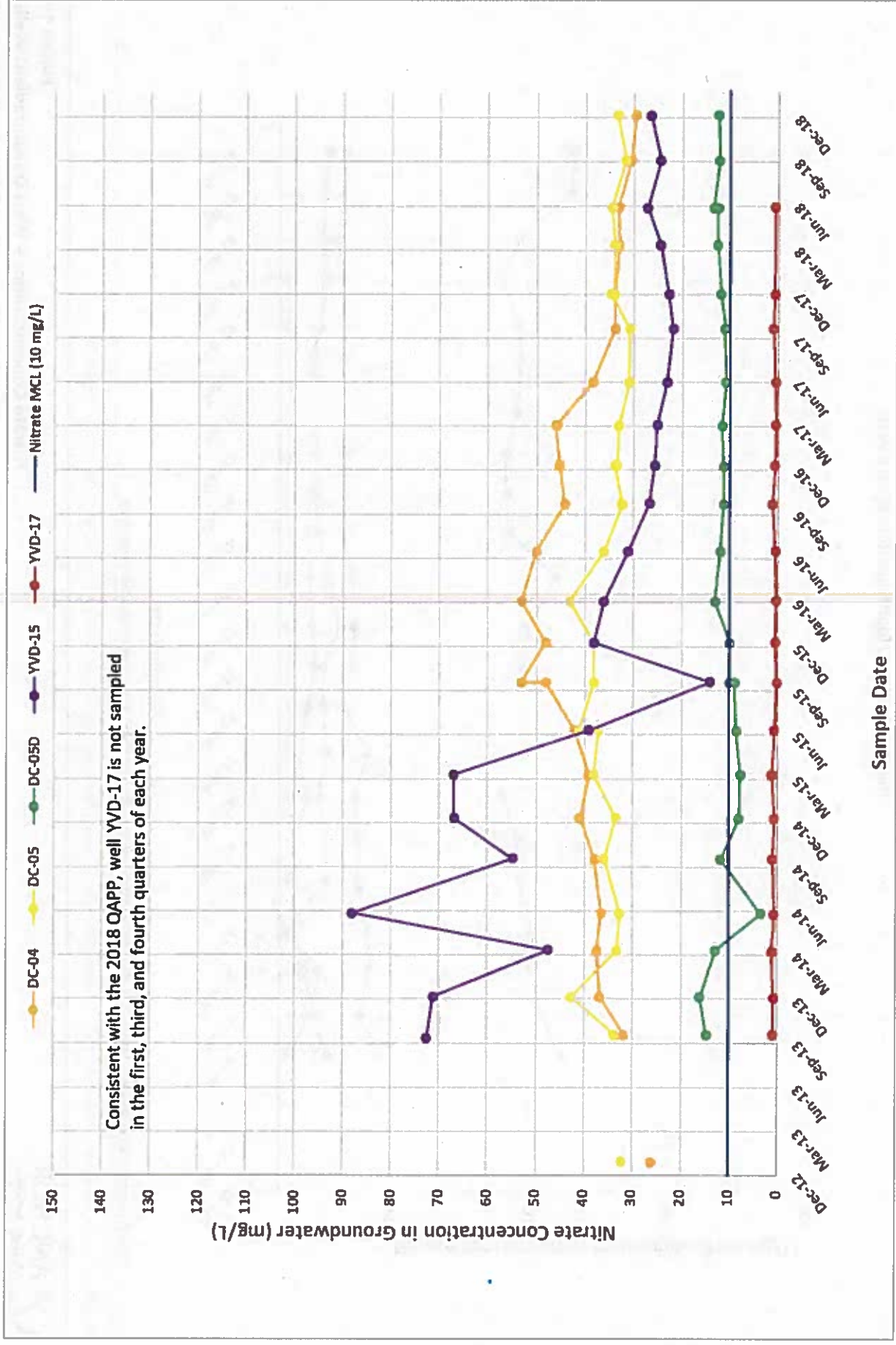


Note: There was insufficient flow at well YVD-02 to collect a groundwater sample during the Fourth Quarter 2016 event.

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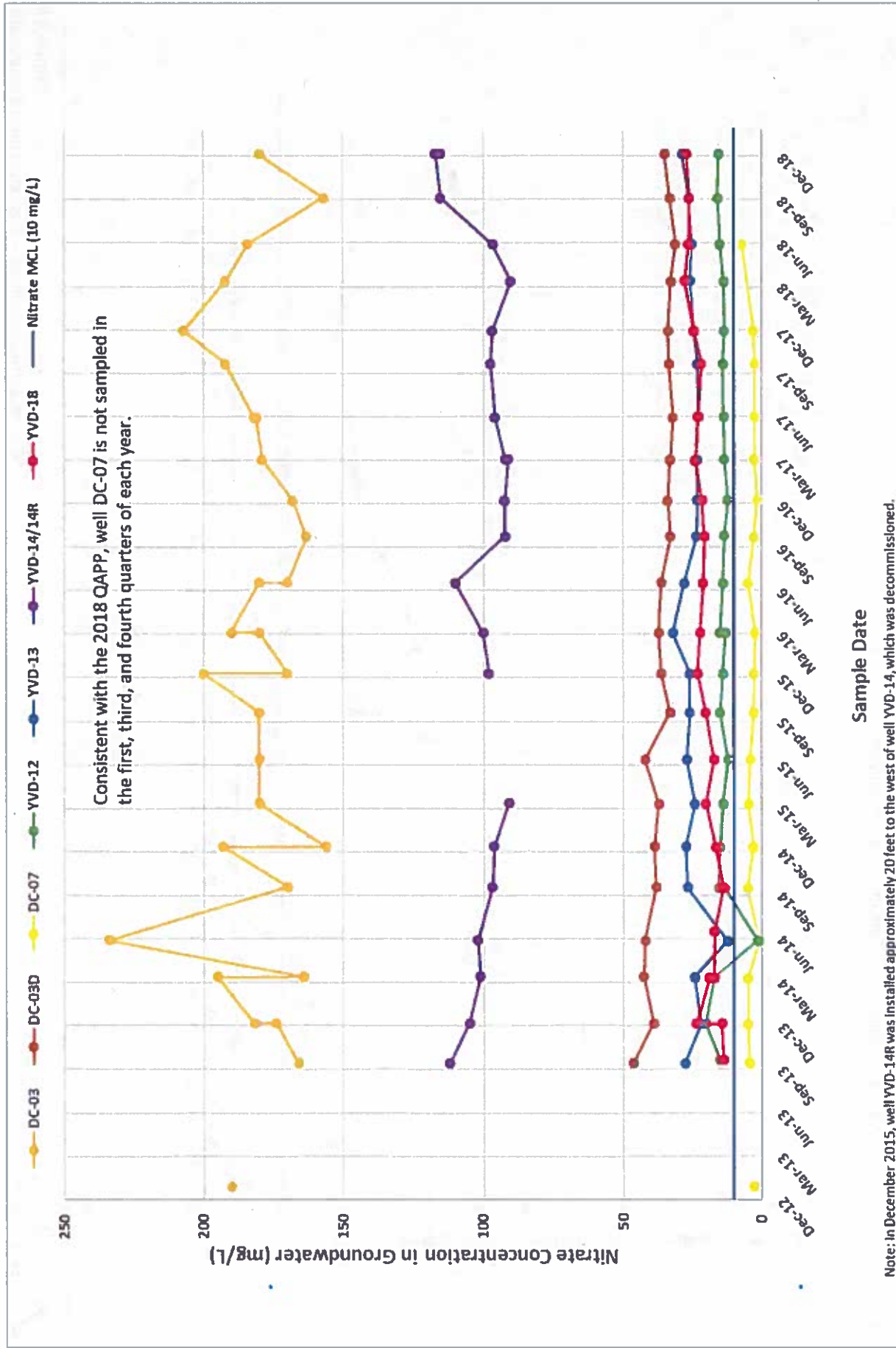
**Figure 22**  
**Nitrate Concentrations – Upgradient Wells**  
 Groundwater Monitoring Data Report – Fourth Quarter 2018  
 Yakima Valley Dairies



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**Figure 18**  
**Nitrate Concentrations – East Downgradient Wells**  
 Groundwater Monitoring Data Report – Fourth Quarter 2018  
 Yakima Valley Dairies



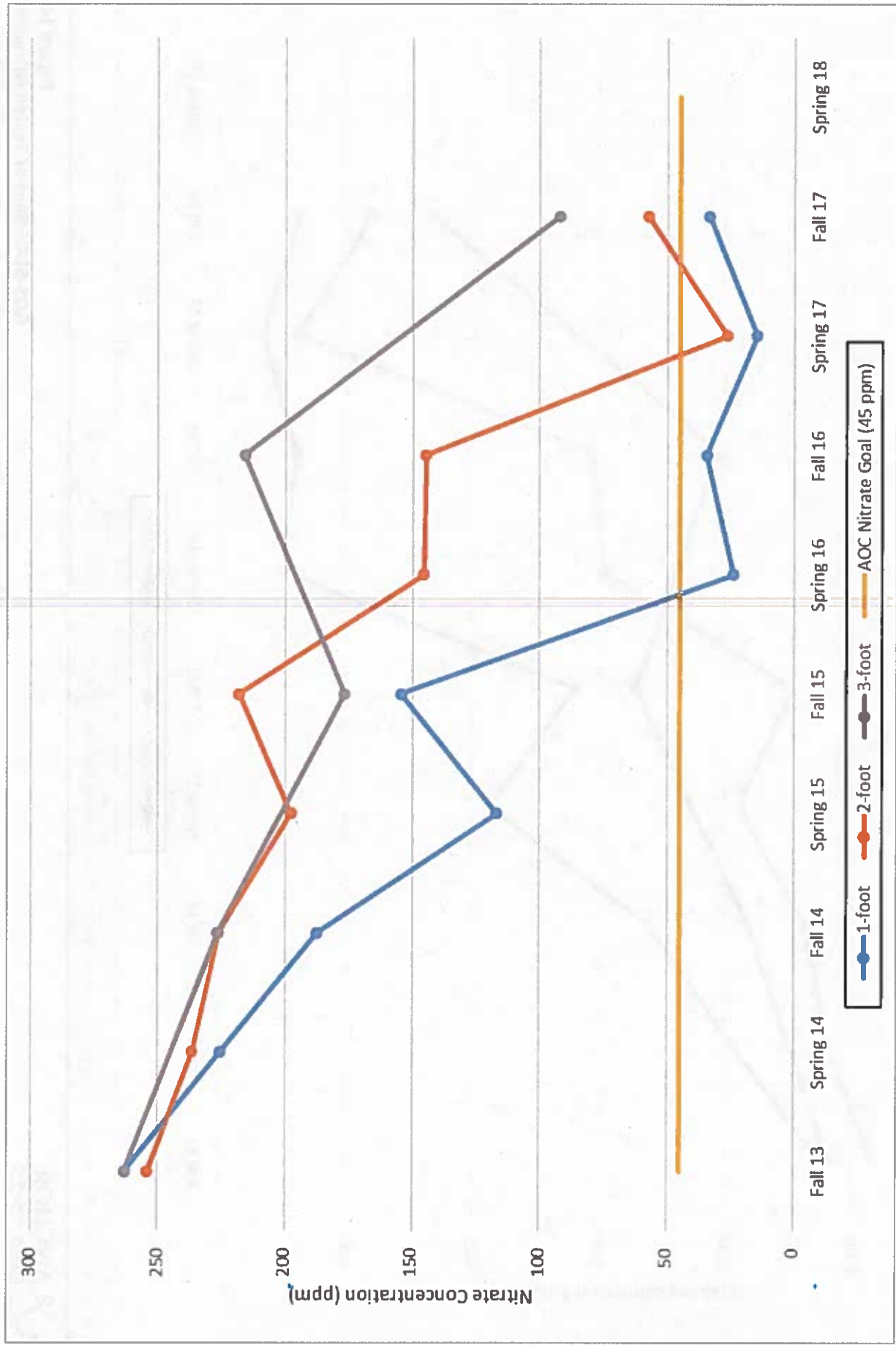
Note: In December 2015, well YVD-14R was installed approximately 20 feet to the west of well YVD-14, which was decommissioned.

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**Figure 19**  
**Nitrate Concentrations – West Downgradient Wells**  
 Groundwater Monitoring Data Report – Fourth Quarter 2018  
 Yakima Valley Daines





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**Figure 13**  
**GDS-SU05 Soil Nitrate Concentrations**  
 2017 Post-Harvest Dairy Application Field Report George DeRuyter & Son/D&A Dairies  
 Yakima Valley Dairies



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**Figure 14**  
**GDS-SU05 Sum of Tested Nitrogen**  
 2017 Post-Harvest Dairy Application Field Report George DeRuyter & Son/D&A Dairies  
 Yakima Valley Dairies

SOIL NUMBER	TEST METHOD	UNITS	17-0040	17-0041	17-0042	17-0043	17-0044	17-0045	17-0046	17-0047	17-0048	17-0049	17-0050
SOIL IDENTIFICATION	TOP BOTTOM	%	GD-SB L34N 170213	GD-SB L34N 170213	GD-SB L34N 170213	GD-SB L34N 170213	GD-SB L3E 170214	GD-SB L3E 170214	GD-SB L34S 170214	GD-SB L34S 170214	GD-SB L34S 170214	GD-SB L4W 170215	GD-SB L4V 170216
			5 10 170213	10 15 170213	15 20 170213	20 25 170213	5 11.5 170214	11.5 15 170214	0 5.5 170214	5.5 10 170214	5 15 170214	5 10 170215	5 10 170215
CONTENT		%		16.3	17.4	22.5	14.3	16.0	9.8	14.7	18.0		14.
Maximum Density		pcf	99.6									101.5	
Optimum Moisture		%	22.4									20.5	
PERMEABILITY		cm/sec											
FIT		%											
FIT INDEX		%											
ANALYSIS		%											
GRAVEL		3"											
		1 1/2"											
		1"											
		3/4"											
		1/2"											
		3/8"											
		#4											
		#10											
		#16											
		#30											
		#40											
		#100											
		#200											
SAND				79						71			
								68					

100  
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 82  
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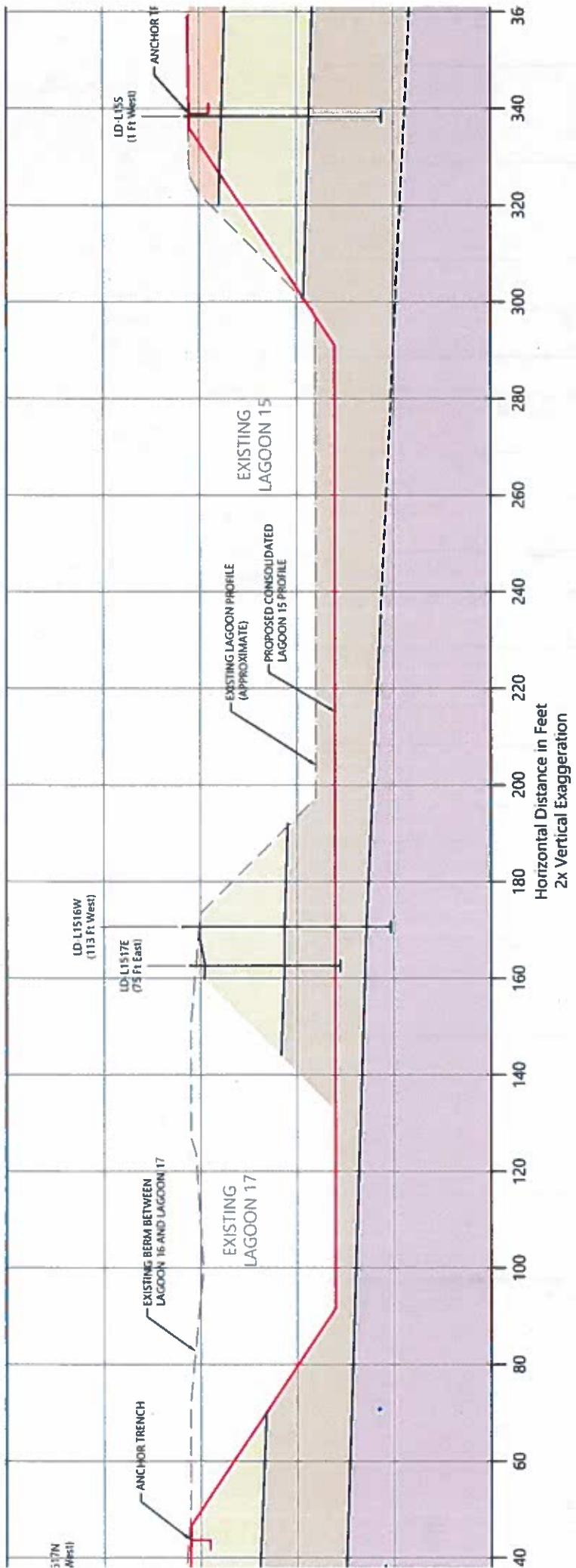
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**Stratigraphy Note:**  
 Soil layers presented are based on a limited number of subsurface explorations, therefore conditions during construction may vary from that shown. Stratigraphy delineations containing question marks are presented where no subsurface information is present, and are provided for visual purposes only.

LD-L1617N  
 (25 Ft West)

Boring Identification  
 (Offset distance / Direction)

Boring Location

- Sandy Fat Clay
- Lithologic Contact (Dashed where inferred)
- Existing Ground Surface