Environmental Functional Area

Environmental Support and Programmatic Outreach Group

LLNL-AR-411431-15-3

LLNL Experimental Test Site, Site 300 Compliance Monitoring Report for Waste Discharge Requirement (WDR) Order No. R5-2008-0148

Second Semester/Annual Report 2014

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- Cooling Tower Blowdown Effluent Monitoring Network with Discharges to Percolation Pits (Bldgs. 801, 812, 817A, 825, 826, 827A, and 851) and Cooling Tower Percolation Pit Inspection Forms

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- Mechanical Equipment Discharge Effluent Monitoring for Buildings 806A and 827A, 827C, 827D, and 827E Mechanical Equipment Room and Cooling Tower Percolation Pit Inspection Forms

Certification

I certify that the work presented in this report was performed under my supervision. To the best of my knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.

Richard G. Blake 2/24/15

Richard G. Blake — Date
California Professional Geologist
No. 5550
License expires: July 31, 2016

List of Abbreviations and Acronyms

3CMP	samples collected at Site 300 for Compliance Monitoring Program
3EMG	samples collected at Site 300 for the Environmental Support & Programmatic Outreach (ESPO) Group
3GIV	samples collected at Site 300 for site investigations
3VES	three casing volumes purged using an electric submersible pump
BCLABS-BAK	BC Laboratories, Inc. in Bakersfield, CA
BOD	biochemical oxygen demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMP	Compliance Monitoring Program (conducted under CERCLA)
CMR	Compliance Monitoring Report (prepared under CERCLA)
CoC	chain-of-custody form
CVRWQCB	Central Valley Regional Water Quality Control Board
DO	dissolved oxygen
DSWP	sewage percolation pond influent sampling location
DTW	depth to (ground) water
EC	electrical conductivity, or specific conductance (SC)
EFA	Environmental Functional Area
ESWP	sampling location within sewage evaporation pond
GF	Grundfos pump
FRUITGROWL	FGL Environmental Laboratories in Stockton, CA
ft	feet
gal	gallons
gpm	gallons per minute (measurement of flow)
GWE	ground water elevation (above mean sea level)
HSU	hydrostratigraphic unit
ID	identification number
ISWP	sewage evaporation pond influent sampling location
LLNL	Lawrence Livermore National Laboratory
MCL	maximum contaminant level (for drinking water)
mL	milliliters

List of Abbreviations and Acronyms (Continued)

MPN	most probable number
MRP	monitoring and reporting program
mV	millivolts (measure of oxidation-reduction potential)
NA	not applicable
ND	none detected, or not detected
NO_3	nitrate
NR	analysis not required by Permit at this sampling location
pH	measure of the acidity or alkalinity of a solution
OG	off gassing measured by scale of 1-5, 5 being high amounts of off gassing
OU	Operable Unit under CERCLA
Q	flow rate, or number of well volumes purged (according to context)
Qal	Quaternary Age alluvial deposits
QC	quality control
Qt	Quaternary Age terrace deposits
RHWM	Radioactive and Hazardous Waste Management
SC	specific conductance, or electrical conductivity (same as EC)
SHO	short analytical holding time (such as samples for coliform bacteria analyses)
VOA	samples collected for analysis of volatile organic compounds
WDR	waste discharge requirements (Permit)

Executive Summary

Under authority of the State of California, and required by the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board (CVRWQCB) issued Order No. R5-2008-0148 for the Experimental Test Site (Site 300), to Lawrence Livermore National Laboratory (LLNL). Monitoring and Reporting Program (MRP) Number R5-2008-0148 was adopted in September 2008, and revised effective December 1, 2009. The revised MRP terms and conditions have been implemented in this report. Under the terms of this MRP, LLNL submits semiannual and annual monitoring reports detailing its Site 300 discharges of domestic and wastewater effluent to the sewage evaporation pond and percolation pond in the General Services Area, and cooling tower blowdown to percolation pits and septic systems, and mechanical equipment discharges to percolation pits located throughout the site.

This second semester/annual report contains all the elements required by Waste Discharge Requirement (WDR) Order R5-2008-0148 for the second semester of 2014 and updates the status of equipment and facilities since the adoption of R5-2008-0148. Permit terms and conditions were met for all permitted networks. Compliance certification accompanies this report, as required by the permit.

1. Introduction

Site 300, operated by Lawrence Livermore National Security, LLC, is located in the Altamont Hills approximately 10.5 kilometers (6.5 miles) southwest of downtown Tracy, California. Required monitoring for specific Lawrence Livermore National Laboratory (LLNL) Site 300 monitoring networks is defined in the Monitoring and Reporting Program (MRP) Order Number R5-2008-0148, which was adopted in September 2008, and revised effective December 1, 2009. The revised MRP has been implemented in this report. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements specified in the Waste Discharge Requirements (WDR) Order R5-2008-0148 (CVRWQCB, 2008) permit and in the MRP R5-2008-0148.

This report provides a summary of monitoring in designated networks conducted during the first and second semesters of 2014 under the revised MRP R5-2008-0148 (CVRWQCB, 2008). The report details the monitoring results of the three compliance networks and presents analytical data, field summary sheets, and inspection logs associated with discharges at the networks.

Compliance monitoring networks discussed in the report include:

- Sewage evaporation and percolation ponds wastewater and ground water monitoring (Sections 2.1 through 2.5).
- Cooling tower blowdown discharge monitoring and percolation pit inspections (Sections 3.1 through 3.4).
- Mechanical equipment effluent discharge monitoring and percolation pit inspections (Sections 4.1 through 4.4).
- Permit related summaries and updates.

BC Laboratories, Inc., Alpha Labs, and FGL Environmental Laboratory provided off-site analytical support for the monitoring networks.

This second semester report summarizes the activities associated with these monitoring networks including: tabular summaries or data plots for all data for at least the last five years; ground water elevation contour map with well locations; identification of any data gaps or deficiencies; and a discussion of any changes to the monitoring program.

Figure 1 shows the locations of the wastewater systems permitted under WDR R5-2008-0148, including mechanical equipment percolation pits and the sewage oxidation and percolation ponds (sewage ponds) located in the General Services Area. None of the permitted mechanical equipment percolation pits overflowed during this monitoring period, and no standing water was observed within the Cristy boxes. There were no detected impacts to ground water around the sewage ponds. Discharges from cooling towers and mechanical equipment were consistent with historic information provided in the previous Reports of Waste Discharge.

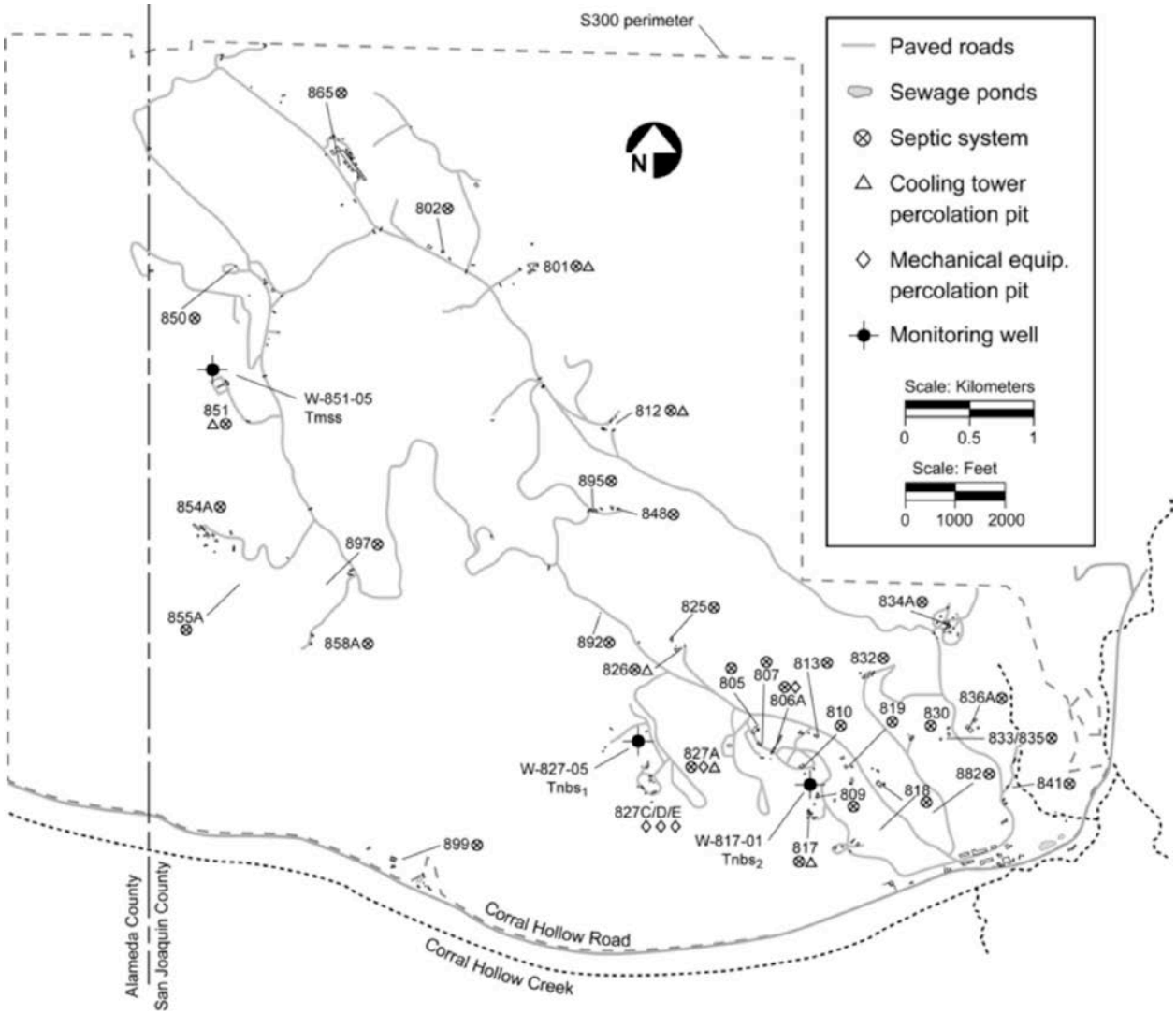

Figure 1. Locations of Site 300 facilities with septic systems and percolation pits.

2. Sewage Evaporation and Percolation Ponds

2.1. Effluent and Pond Compliance Monitoring Program

MRP R5-2008-0148 requires semi-annual and annual samples be collected of wastewater flowing into the sewage evaporation pond (sewage pond) for analysis. Sample collection is by grab sampling from a location west of the sewage pond (see sampling location ISWP in **Appendix A, Figure A-1** showing the Site 300 sewage evaporation and percolation ponds and ground water and wastewater compliance monitoring locations). Location ISWP is a port providing access to a section of pipe through which all waste streams flow before they flow into the sewage pond. The samples are analyzed for specific conductance (SC, or electrical conductivity), pH, and biochemical oxygen demand (BOD).

MRP R5-2008-0148 also requires samples be collected of wastewater within the sewage pond and wastewater discharging into the sewage percolation pond. Semiannual wastewater samples are collected by grab sampling from a dock at the eastern end of the sewage pond (sampling location ESWP) and analyzed for SC, pH, metals, dissolved oxygen (DO), BOD, and total and fecal coliform. Any discharge from the sewage pond to the sewage percolation pond (sampling location DSWP) is grab sampled and analyzed for the same constituents. Permit WDR R5-2008-0148 requires LLNL to operate the sewage pond with adequate freeboard to minimize the frequency of discharges to the sewage percolation pond.

Observations of the sewage pond are made and recorded at least monthly for freeboard, color, odor, and levee condition. **Appendix A** contains several 2014 data sets including; field tracking forms, sewer pond inspection reports, ground water sampling data forms, historical data plots for the sewage evaporation pond and percolation pond network, and ground water well field observation forms for the sewage pond. Inspection reports indicate some animal burrows are observed in the levee from time to time. These burrows continue to be monitored by operations personnel to ensure that the integrity of the levee is not compromised.

Leak detection and monitoring compliance at the sewage evaporation and percolation ponds is accomplished by monitoring the shallow ground water beneath and adjacent to the ponds. Ground water monitoring includes semiannual sampling during the first and second semesters when ground water levels are the highest and lowest and analysis of the collected samples for SC, pH, total and fecal coliform, chloride, nitrate, sulfate, total dissolved solids, sodium, and metals. In addition, ground water elevations are routinely recorded and contoured (**Appendix A, Figure A-2**). A map showing the locations of the monitor wells (**Appendix A, Figure A-1**) with respect to the ponds, and tables of ground water specifications and elevations for the second semester of 2014 for each well are provided (**Appendix A, Tables A-1 and A-2**).

In addition to normal operation of the sewer evaporation pond, discharges to the sewer pond occurred that were associated with the beneficial use of discharged water. These discharges were in preparation for potable water delivery to Site 300 from the San Francisco Public Utility District Hetch-Hetchy water system. The Hetch-Hetchy water is flushed from the line periodically to maintain sanitary conditions in the line. When a discharge to the sewage evaporation pond is scheduled, the chlorinated water in the Hetch-Hetchy line is analyzed for chlorine. When the water reaches a chlorine residual value at or below 1.0 mg/L, which generally

takes one or two weeks, the water is ready to flush. When flushing, a 4-inch hose is used to pump the water from the Hetch-Hetchy line to the sewer evaporation pond. Before the water is flushed, the residual chlorine concentration is adjusted and generally decreases to 1 mg/L or less; pH is also adjusted at this time. During the second semester 2014, no discharges associated with the pipeline flushing took place and no discharge water was used as evaporation loss makeup water to the sewage pond. Discharge only took place during the first semester of 2014 and details of that discharge are shown on **Table 1** below which provides the date the discharge occurred, the volume of water discharged, chlorine residual, and pH of the discharged water. These discharges are consistent with Waste Discharge Requirements Order Number R5-2008-0148 and the revised MRP (November 23, 2009).

Table 1. Summary water system pipeline flushing and pressure testing discharges at Site 300 during 2014.

Discharge Date	Volume Discharged (gallons)	Chlorine Residual (mg/L)	pH (units)	Reuse
5/21/2014	14,661	.01	8.4	Evaporation makeup water in sewage pond

2.2. Sewage Pond Wastewater Sampling and Analysis

For the sewage pond wastewater sampling and analysis, calibration is performed on DO, SC, and pH meters less than 12 hours before sampling. DO, SC, pH, and temperatures of the samples are measured and written on the field tracking forms (field logs) when the grab samples from ISWP, ESWP, and DSWP are collected. Chain-of-custody (CoC) forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

The samples required under MRP R5-2008-0148 for locations ISWP and ESWP were collected on October 14, 2014. These samples, and all samples collected with results presented in this report, were collected, analyzed, and results entered into the Environmental Functional Area (EFA) database according to a complete set of written protocols documented in the LLNL Environmental Functional Area's Environmental Monitoring Plan (Gallegos, 2012).

2.3. Sewage Pond Wastewater Monitoring Results

Results are summarized here for samples collected during the monitoring period as required under MRP R5-2008-0148. Monitoring data are found in **Appendix A**. Coliform, anion, BOD, DO, and specific conductance data summaries are presented in **Table A-3**. A metal data summary for the locations ESWP and DSWP are found in **Table A-4. Table A-5** provides a duplicate (QA) sampling data summary for the sewage pond's wastewater monitoring network. All results and observations were in compliance with the Permit's discharge specifications. Adequate free board was provided to prevent any over-topping or erosion of the pond embankment. Field tracking forms indicate normal operations and are provided in **Appendix A**,

which also contains the field logs, including field measurements. The CoCs and laboratory analytical results are stored at LLNL and are available upon request.

2.4. Ground Water Sampling and Analysis

Semiannual sampling of ground water from wells at the sewage evaporation and percolation ponds was performed during the second semester of 2014. Ground water samples were collected and analyzed, and results entered into the EFA database according to written protocol (Goodrich and Lorega, 2012). The monitor wells were purged and sampled during two phases, from August 18 through 21, and November 17 through 19, 2014, according to prescribed methods assigned to each monitor well. Information regarding the conditions during sampling, as well as field measurements taken at the time of sampling, is found in the ground water sampling data sheets located in **Appendix A**. The collected samples were transferred to an offsite analytical laboratory for physical parameters and analyses listed in **Section 2.1**. Following the initial sampling event, each well was treated with a pre-calculated dose of chlorine and pumped to circulate the chlorine throughout the water column. On the following day, wells were tested for residual chlorine and samples collected to be analyzed for total and fecal coliform bacteria at an offsite analytical laboratory. Wells that tested positive for chlorine were pumped until chlorine was not detected prior to sampling, according to the aforementioned written protocols.

2.5. Ground Water Monitoring Results

All monitored parameters were in compliance with the Permit limits; ground water data are presented in Tables found in **Appendix A**. Anion data are listed in **Table A-6**. Coliform data are found in **Table A-7**. **Table A-8** provides a summary of physical chemistry data and **Table A-9** lists metals data. QA data summaries for the monitoring network are located in **Table A-10**. During the second semester, fecal coliform was not detected above the <2 MPN/100mL detection limit in any monitoring wells (**Table A-7**). However, total coliform was detected at the detection limit of 2 MPM/100ml in one well (W-7DS) and found to be higher at 79 MPM/100ml in well W-35A-04. Because no fecal coliform was found to be present in any of these wells, we do not consider the low values of 2.0 or the 79 MPM/100ml value of total coliform to be the result of a release from the sewer pond. Well W-35A-04 has been retested several times in the past and has not displayed any fecal coliform hits. LLNL will continue to monitor the sewer pond monitoring wells for these constituents of concern.

Appendix A, Figure A-2 contains the ground water elevation contour map for the most shallow ground water zones (Hydrostratigraphic Units [HSUs]) in the sewage evaporation and percolation ponds area. This map reflects ground water elevation levels from August through November 2014. The sewer pond ground water network map showing concentrations of nitrates is presented in **Appendix A, Figure A-3**. Nitrate data is also shown in **Table A-6**. All the detailed ground water data CoCs and laboratory analytical results are archived at LLNL and are available upon request.

3. Cooling Tower Network

3.1. Cooling Tower Compliance Monitoring Program

Monitoring required for the cooling tower blowdown is specified in MRP R5-2008-0148. LLNL implemented the cooling tower blowdown monitoring starting the fourth quarter of 2008. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements of WDR R5-2008-0148 and the MRP.

Cooling towers located at Site 300 discharge either into percolation pits or into septic systems. Currently, there are eight operating cooling towers. The cooling tower locations are identified in **Appendix B, Figure B-1**. The cooling tower located at Building 825 discharges to a septic system. The remaining cooling towers located at Buildings 801, 817, 826, 827, and 851 all discharge to percolation pits. The two original cooling towers located at Building 851 were replaced in the second semester 2009 with a single new cooling tower. The two cooling towers located at Building 827 have blended cooling water and a combined discharge line and therefore only one sample is routinely collected to characterize the discharge of these cooling towers.

MRP R5-2008-0148 requires semi-annual sampling of the cooling tower blowdown. Grab samples are collected from the water circulating in the cooling tower, either at a valve or a drainpipe. The grab samples are collected directly into the containers specified by the laboratory. Samples are analyzed for metals, pH, sodium, SC, sulfate, total alkalinity, total dissolved solids, total hardness, and total phosphorus.

3.2. Cooling Tower Blowdown Effluent Sampling and Analysis

Second semester 2014 routine cooling tower blowdown samples were collected October 21, 2014. For the cooling tower blowdown sampling and analysis, calibration is performed on SC and pH meters less than 12 hours before sampling. SC and pH data measured in the field are written down on field tracking forms. CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

3.3. Cooling Tower Blowdown Monitoring Results

All cooling tower sample results are listed in Appendix B along with the Quality Assurance results, field tracking forms, and CoCs. **Table B-1** lists anion data, **Table B-2** lists metals results, and **Table B-3** provides data on the required physical characteristics. QC data from duplicate sampling is provided in **Table B-4**.

Analytical results for cooling tower blowdown samples collected this semester are compared to values shown in WDR Order No. R5-2008-0148, **Attachment 16**.

- Copper concentrations in samples collected ranged from 3.1 µg/L to 38 µg/L, as compared to the maximum historical effluent concentrations summarized in the WDR **Attachment 16** (2,400 µg/L). Cooling tower at Building 817 (38 µg/L) had the most elevated copper value (**Table B-2**) but was lower than the higher value that was reported last semester (240 µg/L).

- Molybdenum concentrations in samples collected ranged from <25 µg/L to 66 µg/L, as compared to the maximum historical effluent concentrations summarized in **Attachment 16** (45 µg/L). The concentrations at Building 827 (66 µg/L), Building 801 (50 µg/L), and Building 817 (37 µg/L) showed generally lower concentrations as compared to those reported last semester.
- Zinc concentrations in samples collected ranged from <20 µg/L to 53 µg/L and were significantly lower than the concentrations of data summarized in the WDR **Attachment 16** (340 µg/L). The cooling tower at Building 817 (53µg/L) was significantly lower than the 2500 µg/L zinc concentration reported last semester. This semester zinc concentrations were lower at five out of the six cooling towers sampled. These lower concentrations may be attributed to the use of a new ChemTreat cooling tower additive and new biocide.

Detailed water analysis by our new ChemTreat cooling tower water treatment supplier recommended changes to cooling tower operation, which were implemented this year during the second semester prior to cooling tower sampling. All CTs have been converted to the new additive. LLNL is now working to install automated conductivity controllers that will automatically control blowdown before water parameters reach levels which may cause scaling or equipment corrosion.

Since Site 300 implemented the new cooling tower additives, as well as a new biocide treatment, some of the metals concentrations in the effluent have significantly declined. The new biocide has also reduced corrosion at the facilities. Please see Section 5 for a discussion of the implementation of cooling tower additive products.

3.4. Cooling Tower Percolation Pit Monthly Inspections

LLNL implements monthly visual inspections of the cooling tower percolation pits that are located at Buildings 801, 812, 817A, 826, 827A, and 851 (**Appendix B**, **Figure B-1**), which collect effluent from the cooling towers as specified in MRP R5-2008-0148.

If standing water is present, the MRP requires the inspection frequency to be increased to weekly until standing water is no longer visible. Visual inspections are conducted to verify the percolation pits are working properly and do not have the potential to overflow. Copies of the inspection forms are found in **Appendix B**. During this semester, no standing water was observed in the cooling tower Christy Boxes. No other standing water was observed at other Site 300 cooling tower percolation pits and all demonstrated normal operations.

4. Mechanical Equipment Effluent Monitoring

4.1. Mechanical Equipment Discharge Monitoring Program

Monitoring required for mechanical equipment discharge effluent to percolation pits is specified in the MRP R5-2008-0148. LLNL monitors the mechanical equipment systems located at Buildings 806B, 827A, 827C, 827D, and 827E. **Appendix C, Figure C-1** provides the locations of those systems.

4.2. Mechanical Equipment Effluent Sampling and Analysis

The results for the mechanical equipment room effluent monitoring for the second semester of 2014 are reported in **Appendix C**. Monitoring is performed using composite sampling from Christy boxes that allows an automatic sampler to be placed within the boxes, allowing composite samples to be collected during operations. During this sampling period, samples were taken from the Buildings 806B, 827A, 827C, 827D, and 827E locations.

For the sampling and analysis of mechanical equipment effluent, CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs, provided in **Appendix C**. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

4.3. Mechanical Equipment Effluent Monitoring Results

Sample analytical results for this monitoring network are presented in **Appendix C**. Results are consistent with data found in Attachments 5 and 6 in the MRP R5-2008-0148. **Table C-1** lists anion data, **Table C-2** lists metals results and **Table C-3** provides data on the required physical characteristics. Data from duplicate sampling is provided in the data tables.

4.4. Mechanical Equipment Percolation Pit Monthly Inspections

MRP R5-2008-0148 requires monthly inspections of the five mechanical equipment percolation pits located at Buildings 806B, 827A, 827C, 827D, and 827E (**Appendix C, Figure C-1**). **Appendix C** contains the second semester 2014 mechanical equipment percolation pit inspection checklists. If standing water is visible during the inspection, the inspection frequency for the percolation pit with the standing water is increased to weekly until no standing water is visible. During this period, no standing water was observed at any of the mechanical equipment percolation pits.

5. Permit Related Summaries and Updates

5.1. Regulatory Correspondence

The following letters, verbal communication, or activities were conducted under the CVRWQCB WDR-R5-2008-0148 permit during the second semester of 2014.

- The Site 300 CVRWQCB Fall Inspection that was conducted on November 4, 2014.
- Discharge of water from the Hetch-Hetchy water line to the sewer evaporation pond occurred only once during 2014 on May 21, 2014. An effort is underway to start the delivery of Hetch-Hetchy water to Site 300. Site 300 staff has ordered recirculating pumps for the water line and hope to have them installed by June 30, 2015. Site 300 management hopes to receive Hetch-Hetchy water delivery by the end of calendar year 2015.
- During the second semester LLNL Site 300 implemented the new cooling tower additive ChemTreat CL-5531 to replace the old NALCO product that was used for corrosion reduction. In addition, the use of a new biocide agent (ChemTreat CL-49) replaced the

old bleach biocide. The use of these new ChemTreat additives have resulted in a significant reduction in metals concentrations in most of the cooling tower effluent as well as less corrosion at the facilities. The approval for these changes were granted by the Water Board and was based on a January 14, 2014 LLNL letter submitted to the Water Board entitled, *"Request to Change Chemical Additive to cooling Towers at Lawrence Livermore National Laboratory Experimental Test Site, Site 300"*. The request was granted by the Water Board in their reply letter of February 18, 2014.

References

Blake, R. (2008), LLNL Experimental Test Site 300 Compliance Monitoring Report for WasteDischarge Requirements 96-248, First Quarter 2008, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-AR-125915-08-1).

Brown, R. (2006), LLNL Experimental Test Site 300 Compliance Monitoring Report for WasteDischarge Requirements 96-248, First Quarter 2007, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-AR-125915-07-1).

Campbell, Chris (2010), Record of Communication (ROC) to the Central Valley Regional Water Quality Control Board (Kathryn Dominic) re: *Algae Removal at the Site 300 Sewer Pond, Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties*, ROC PRAD10:091, April 14, 2010.

Clesceri, L.S., Greenberg, A.E., and Eaton, A.D., Ed. (1998), *Standard Methods for the Examination of Water and Wastewater*, 20th ed.

Condon, C. (2006), Letter from the Central Valley Regional Water Quality Control Board to Ellen Raber re: *Revision of Monitoring and Reporting Program 96-248, Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties*, March 7, 2006.

CVRWQCB (1991), *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, Central Valley Regional Water Quality Control Board, March 1, 1991.

CVRWQCB (1996), *Order No. 96-248, Waste Discharge Requirements for University of California Lawrence Livermore National Laboratory Experimental Test Site (Site 300) and US Department of Energy Evaporation and Percolation Ponds and Class II Surface Impoundments, San Joaquin and Alameda Counties*, September 20, 1996.

CVRWQCB (2008), Order No. R5-2008-0148, Waste Discharge Requirements Issued To Lawrence Livermore National Security, LLC, and the U.S. Department of Energy for Lawrence Livermore National Laboratory Experimental Test Site (Site 300) Sewage Evaporation and Percolation Ponds, Septic Systems, Cooling Tower Discharges, Mechanical Equipment Wastewater Discharges, and Other Low Threat Discharges, September 2008.

Dominic, Kathryn (2010), Letter from the Central Valley Regional Water Quality Control Board re: *Report of Waste Discharge for New Equipment Under Waste Discharge Requirements No. R5-2008-0148 at Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties*, December 16, 2010.

Gallegos, G. [Ed.] (2012), *Environmental Monitoring Plan*, Environmental Protection Department, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-ID-106132, Rev. 6).

Goodrich, R., and G. Lorega (2012), *LLNL Livermore Site and Site 300 Environmental Restoration Project Standard Operating Procedures (SOPs)*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-MA-109115 Rev. 14).

Goodwin, S. (2007), *Release of Sewage Pond Wastewater to Ground While Fighting a Wildfire at Lawrence* Livermore *National Laboratory Experimental Test Site (Site 300),* Lawrence Livermore National Laboratory, Livermore, CA (FireSewageLtr_07_102).

Mansoor, K., and Z. Demir (2010), *Evaluation of Potential Impact to Ground Water from Percolation Pits and Septic Systems at Lawrence Livermore National Laboratory Site 300 for the Central Valley Regional Quality Control Board Waste Discharge Requirements Order No. R5-2008-0148*, Lawrence Livermore National Laboratory, Livermore, CA (LLNL-AR-461303).

Mansoor, K., and Z. Demir (2011), Evaluation *of Potential Impact to Ground Water from Percolation Pits and Septic Systems at Lawrence Livermore National Laboratory Site 300 for the Central Valley Regional Quality Control Board Waste Discharge Requirements Order No. R5-2008-0148*, Lawrence Livermore National Laboratory, Livermore, CA (LLNL-AR-461303. Revision 1).

Schultz, Bruce (2010), Letter to the Central Valley Regional Water Quality Control Board (Kathryn Dominic) re: Results of Tracer Investigation for Mechanical Equipment Discharges at Building 827A at Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties, November 12, 2010.

Schultz, Bruce (2010), Letter to the Central Valley Regional Water Quality Control Board (Kathryn Dominic) re: *Addition of New Equipment to LLNL Building 825 Under WDR R5-2008-0148 at Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties*, November 12, 2010(b).

Schultz, Bruce (2010), Letter to the Central Valley Regional Water Quality Control Board (Kathryn Dominic) re: *Report Summarizing Final Hetch Hetchy Water System Pipeline Flushing and Connection for Water Delivery to Lawrence Livermore National Laboratory Site 300, Alameda and San Joaquin Counties*, December 20, 2010.

U.S. Environmental Protection Agency (2005), *Title 40 Code of Federal Regulations, Part 136*.

Acknowledgments

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Appreciation is due to Environmental Restoration Department (ERD) sampling technologists Eric Walter and Mario Silva, and Bob Williams, Karl Brunckhorst, and Crystal Rosene from the Environmental Functional Area (EFA) for their field support. Data management assistance was performed by Kim Swanson (EFA) and Suzie Chamberlain (ERD). Amy Henke from TID provided graphic arts contributions; Rosanne Depue and Liz DaRosa from EFA provided strong administrative and document preparation assistance. Additional appreciation goes to Duane Landrum, Patrick Gallagher, and Nicole Grimsley for conducting Site 300 inspections and providing inspection data, and to Jeff Warner for his timely collection of field data for this report. EFA appreciates the support of the Site 300 Manager, John Scott, for his support in this effort.

Appendix A

Sewage Evaporation and Percolation Pond Network

- Field Tracking Forms
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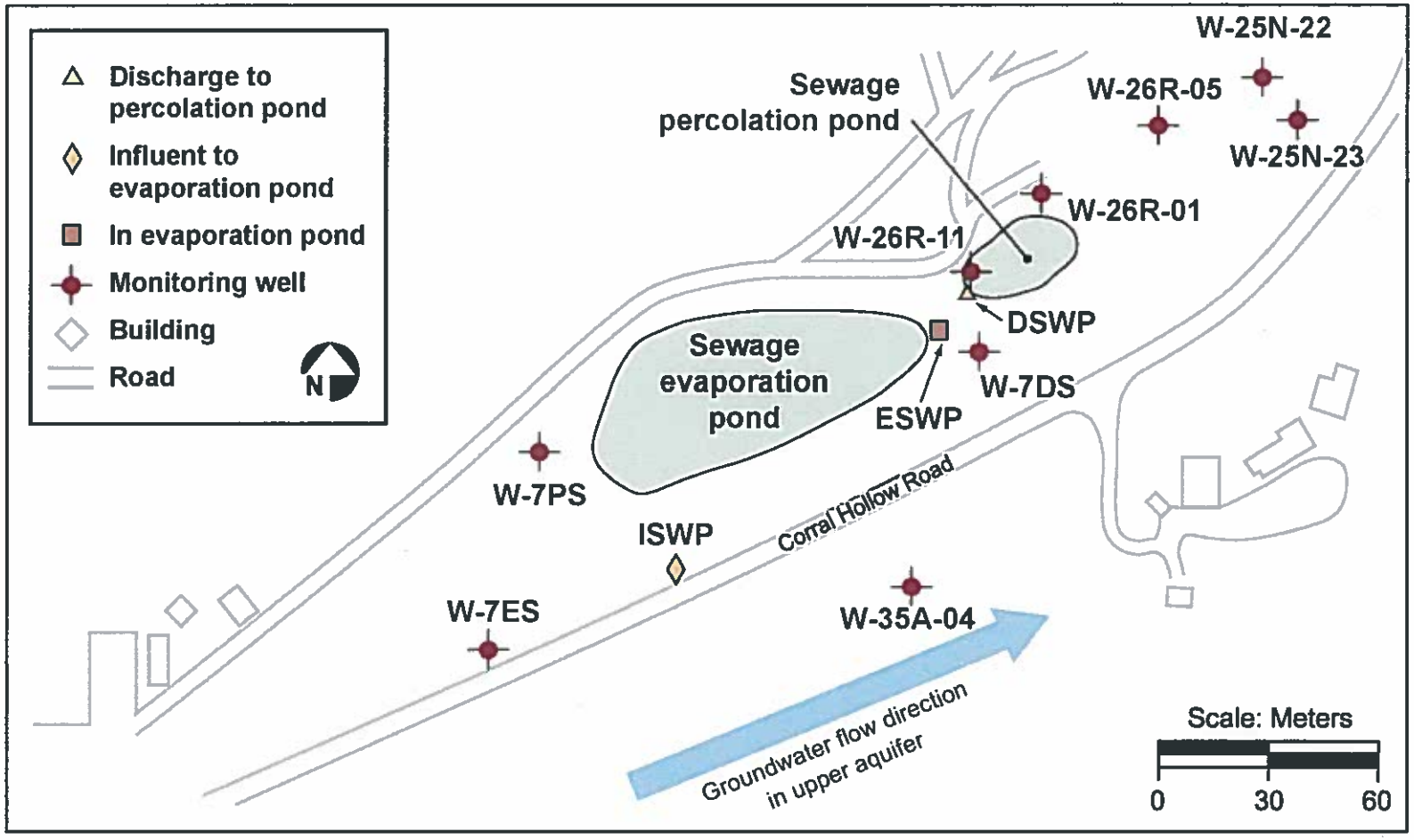
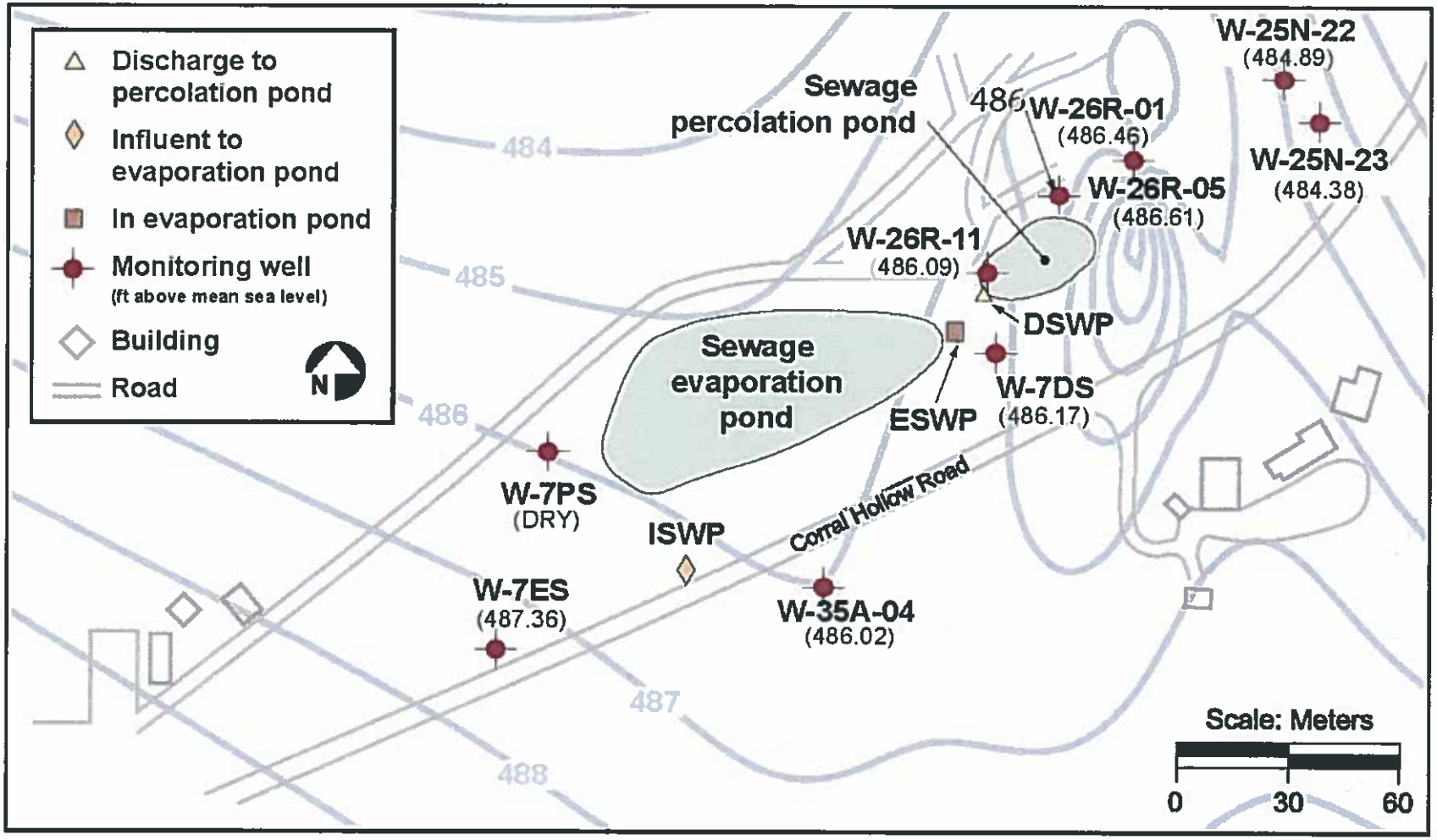
- Ground Water Sampling Data Forms
- Historical Data Plots: Sewage Evaporation Pond and Percolation PondNetwork (ISWP, ESWP, and Ground Water Wells) – Second Semester – Annual Report Only



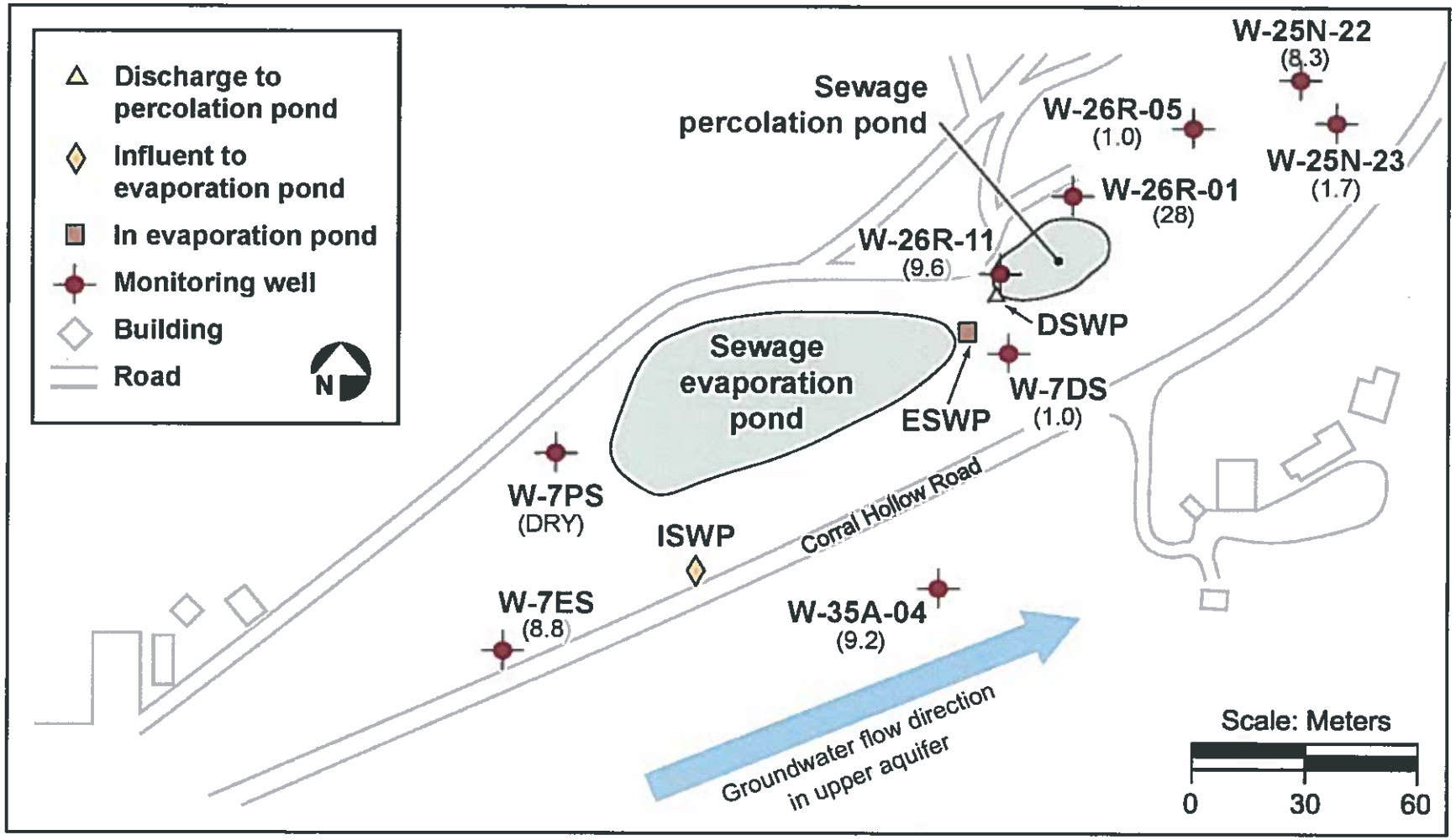
ERD-S3R-15-0016

Figure A-1. Sewer pond wastewater and ground water monitoring network.



ERD-S3R-15-0018

Figure A-2. Site 300 sewer pond wastewater and effluent monitoring network with ground water elevations (ft-above mean sea level).



ERD-S3R-15-0017

Figure A-3. Site 300 sewer pond wastewater and effluent monitoring network with nitrate concentrations (in mg/L).

Table A-1. Summary of Site 300 sewer pond well specifications.

Well	HSU	Easting	Northing	Ground surface elevation	Measuring point elevation	Screen top elevation	Screen bottom elevation	Bentonite top elevation	Filter pack top elevation	Well bottom elevation
W-7ES	Qal-Tnbs$_1$	1,711,719	414,586	506.41	509.71	491.41	481.41	496.41	495.41	479.61
W-7PS	Qal-Tnbs$_1$	1,711,773	414,782	506.10	508.78	489.60	486.60	494.10	492.10	486.60
W-35A-04	Qal-Tnbs$_1$	1,712,036	414,642	504.07	503.98	485.07	475.07	494.87	486.27	475.07
W-26R-01	Qal-Tnbs$_1$	1,712,267	415,036	506.74	509.71	486.94	481.94	494.24	490.74	476.94
W-26R-11	Qal-Tnbs$_1$	1,712,198	414,961	504.93	507.21	489.13	479.13	493.13	491.13	477.93
W-26R-05	Qal-Tnbs$_1$	1,712,339	415,070	511.31	513.11	491.11	486.11	500.81	498.81	485.81
W-25N-20	Qal-Tnbs$_1$	1,712,371	414,923	502.11	504.94	490.11	475.11	494.61	492.61	474.11
W-7DS	Qal-Tnbs$_1$	1,712,206	414,880	503.30	506.60	487.80	477.80	491.80	489.80	476.30
W-25N-22	Qal-Tnbs$_1$	1,712,486	415,152	510.25	513.06	492.25	482.25	497.25	495.25	481.75
W-25N-23	Qal-Tnbs$_1$	1,712,521	415,109	507.58	510.39	488.58	473.58	495.08	493.08	472.28

Notes:

All measurements are made in feet; elevations are in feet above mean sea level.

HSU = Hydrostratigraphic unit.

Qal-Tnbs$_1$ = Miocene Neroly Formation Lower Blue Sandstone.

Table A-2. Site 300 sewer pond ground water monitoring network 2014 ground water elevation summary.

Well	Date sampled	Pre-sampling measurement	Ground water depth (ft.)	Ground water elevation (ft. above MSL)
W-7ES	Feb 10		20.0	489.7
W-7ES	Feb 12	PS	20.1	489.6
W-7ES	Feb 13	PS	20.1	489.6
W-7ES	May 7	PS	21.1	488.6
W-7ES	May 8	PS	21.1	488.6
W-7ES	May 20		21.2	488.5
W-7ES	Aug 20	PS	22.3	487.4
W-7ES	Aug 21	PS	22.3	487.4
W-7ES	Aug 26		22.4	487.4
W-7ES	Nov 10		22.6	487.1
W-7ES	Nov 18	PS	23.0	486.7
W-7ES	Nov 19	PS	23.0	486.7
W-7PS	Feb 10		DRY	DRY
W-7PS	May 20		DRY	DRY
W-7PS	Aug 26		DRY	DRY
W-7PS	Nov 10		DRY	DRY
W-35A-04	Feb 12	PS	15.2	488.9
W-35A-04	Feb 13	PS	15.2	488.9
W-35A-04	Feb 19		15.8	488.3
W-35A-04	May 7	PS	16.3	487.8
W-35A-04	May 8	PS	16.2	487.8
W-35A-04	Jun 4		16.4	487.7
W-35A-04	Aug 20	PS	16.6	487.5
W-35A-04	Aug 21	PS	16.6	487.4
W-35A-04	Aug 27		18.1	486.0
W-35A-04	Nov 18	PS	18.2	485.9
W-35A-04	Nov 19	PS	18.2	485.8
W-35A-04	Dec 2		18.2	485.9
W-25N-23	Feb 10		23.5	486.6
W-25N-23	Feb 19	PS	23.5	486.6
W-25N-23	Feb 20	PS	23.5	486.6
W-25N-23	May 20		24.6	485.5
W-25N-23	Aug 19	PS	26.1	484.0
W-25N-23	Aug 20	PS	26.1	484.0
W-25N-23	Aug 26		25.7	484.4
W-25N-23	Nov 10		26.2	483.8
W-25N-22	Feb 10		25.6	487.2
W-25N-22	Feb 19	PS	25.6	487.2
W-25N-22	Feb 20	PS	25.7	487.1
W-25N-22	May 20		26.4	486.4
W-25N-22	Aug 19	PS	27.3	485.4
W-25N-22	Aug 20	PS	27.4	485.4
W-25N-22	Aug 26		27.9	484.9
W-25N-22	Nov 10		28.0	484.8
W-26R-01	Feb 10		21.7	488.1
W-26R-01	Feb 10	PS	21.7	488.0
W-26R-01	Feb 11	PS	21.7	488.1
W-26R-01	May 5	PS	22.5	487.2
W-26R-01	May 6	PS	22.6	487.1
W-26R-01	May 20		22.7	487.0

Table A-2. Site 300 sewer pond ground water monitoring network 2014 ground water elevation summary.

W-26R-01	Aug 18	PS	23.4	486.3
W-26R-01	Aug 19	PS	23.6	486.1
W-26R-01	Aug 26		23.2	486.5
W-26R-01	Nov 10		23.4	486.3
W-26R-01	Nov 17	PS	24.4	485.3
W-26R-01	Nov 18	PS	24.3	485.4
W-26R-01	Dec 3	PS	24.3	485.4
W-26R-05	Feb 10		25.5	487.6
W-26R-05	Feb 10	PS	24.6	488.5
W-26R-05	Feb 19	PS	26.2	486.9
W-26R-05	May 5	PS	25.3	487.8
W-26R-05	May 13	PS	25.4	487.8
W-26R-05	May 20		25.8	487.3
W-26R-05	Aug 18	PS	26.4	486.8
W-26R-05	Aug 21	PS	26.9	486.2
W-26R-05	Aug 26		26.5	486.6
W-26R-05	Nov 10		26.8	486.3
W-26R-11	Feb 10		18.9	488.3
W-26R-11	Feb 10	PS	19.0	488.2
W-26R-11	Feb 11	PS	18.9	488.3
W-26R-11	May 5	PS	19.9	487.3
W-26R-11	May 6	PS	19.9	487.3
W-26R-11	May 20		20.0	487.2
W-26R-11	Aug 18	PS	21.0	486.2
W-26R-11	Aug 19	PS	21.2	486.0
W-26R-11	Aug 26		21.1	486.1
W-26R-11	Nov 10		21.4	485.8
W-26R-11	Nov 17	PS	21.7	485.5
W-26R-11	Nov 18	PS	21.9	485.3
W-26R-11	Dec 4	PS	21.1	486.1
W-7DS	Feb 10		18.3	488.3
W-7DS	Feb 10	PS	13.5	493.1
W-7DS	Feb 11	PS	18.3	488.3
W-7DS	May 5	PS	19.3	487.3
W-7DS	May 6	PS	19.3	487.3
W-7DS	May 20		19.4	487.2
W-7DS	Aug 19	PS	20.4	486.2
W-7DS	Aug 20	PS	20.4	486.2
W-7DS	Aug 26		20.4	486.2
W-7DS	Nov 10		20.7	485.9
W-7DS	Nov 17	PS	21.0	485.6
W-7DS	Nov 18	PS	21.1	485.5

Table A-3. Site 300 sewer pond wastewater monitoring network 2014 coliform, anion, and physical characteristic data summary.

Well	Date	pH	Specific Conductance (µmhos/cm)	Biochemical Oxygen Demand (mg/L)	Dissolved Oxygen (mg/L)	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)	Sodium (mg/L)
3-ESWP-OW	Apr 23	9.7	5500	53	12	3500	3500	1500
3-ESWP-OW	Oct 14	9.6	6500	42	7.1	350	350	1600
3-ISWP-OW	Apr 23	8.3	1200	33	-	-	-	-
3-ISWP-OW	Oct 14	8.6	1600	250	-	-	-	-

Note:
– = Analysis not required.

Table A-4. Site 300 sewer pond wastewater monitoring network 2014 report metals data summary.

Analyte	Date	3-ESWP-OW (µg/L)
Aluminum	Apr 23	160
	Oct 14	<250
Arsenic	Apr 23	4.8
	Oct 14	<4
Barium	Apr 23	<50
	Oct 14	180
Boron	Apr 23	6600
	Oct 14	7000
Cadmium	Apr 23	<100
	Oct 14	<100
Calcium	Apr 23	11000
	Oct 14	8500
Chromium	Apr 23	3.9
	Oct 14	2.9
Hexavalent Chromium	Apr 23	<1
	Oct 14	<1
Copper	Apr 23	8.3
	Oct 14	6.6
Iron	Apr 23	200
	Oct 14	<500
Lead	Apr 23	<10
	Oct 14	<10
Magnesium	Apr 23	3600
	Oct 14	<2500
Manganese	Apr 23	56
	Oct 14	<150
Mercury	Apr 23	<0.2
	Oct 14	<0.2
Molybdenum	Apr 23	37
	Oct 14	<120
Nickel	Apr 23	4.5
	Oct 14	<4
Potassium	Apr 23	72000
	Oct 14	82000
Selenium	Apr 23	7.7
	Oct 14	5.0
Silver	Apr 23	<2
	Oct 14	<2
Vanadium	Apr 23	<40
	Oct 14	<40
Zinc	Apr 23	<40
	Oct 14	<40

Table A-5. Site 300 sewer pond wastewater monitoring network 2014 QA data.

Location	Date	Type	pH Units	Specific Conductance (µmhos/cm)	Biochemical Oxygen Demand (mg/L)	Dissolved Oxygen (mg/L)	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)	Sodium (mg/L)
3-ESWP-OW	Apr 23	Routine	9.7	5500	53	12	3500	3500	1500
3-ESWP-OW	Apr 23	Duplicate	-	1900	-	-	-	-	-
3-ISWP-OW	Oct 14	Routine	8.6	1600	250	-	-	-	-
3-ISWP-OW	Oct 14	Duplicate	8.6	-	-	-	-	-	-

Note:
– = Analysis not required.

Table A-6. Site 300 sewer pond ground water monitoring network 2014 anions data summary.

Well	Date	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)
W-7ES	Feb 12	170	160	7.6	340	0.28
W-7ES	May 7	-	-	8.1	-	-
W-7ES	Aug 20	180	160	8.8	340	0.27
W-7ES	Nov 18	-	-	9.3	-	-
W-35A-04	Feb 12	170	160	8.8	350	0.46
W-35A-04	May 7	-	-	8.6	-	-
W-35A-04	Aug 20	180	160	9.2	350	0.37
W-35A-04	Nov 18	-	-	9.2	-	-
W-25N-23	Feb 19	160	97	<1	430	0.37
W-25N-23	Aug 19	150	100	1.7	440	0.29
W-25N-22	Feb 19	180	140	6.9	450	0.39
W-25N-22	Aug 19	180	170	8.3	470	0.31
W-26R-01	Feb 10	190	160	29	240	0.29
W-26R-01	May 5	-	-	29	-	-
W-26R-01	Aug 18	200	160	30	240	0.39
W-26R-01	Nov 17	-	-	28	-	-
W-26R-05	Feb 10	160	110	0.64	210	0.51
W-26R-05	May 5	-	-	0.78	-	-
W-26R-05	Aug 18	150	94	1.0	210	0.44
W-26R-11	Feb 10	160	140	8.8	270	0.34
W-26R-11	May 5	-	-	9.1	-	-
W-26R-11	Aug 18	170	140	9.6	270	0.45
W-26R-11	Nov 17	-	-	7.8	-	-
W-7DS	Feb 10	170	160	7.9	340	0.37
W-7DS	May 5	-	-	7.7	-	-
W-7DS	Aug 19	14	6.8	1.0	<1	0.33
W-7DS	Nov 17	-	-	7.7	-	-

Note:
– = Analysis not required.

Table A-7. Site 300 sewer pond ground water monitoring network 2014 coliform data summary.

Well	Date	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)
W-7ES	Feb 13	<2	<2
W-7ES	May 8	<2	<2
W-7ES	Aug 21	<1.8	<1.8
W-7ES	Nov 19	<1.8	<1.8
W-35A-04	Feb 13	<2	<2
W-35A-04	May 8	<2	<2
W-35A-04	Aug 21	<1.8	79
W-35A-04	Nov 19	<1.8	<1.8
W-25N-23	Feb 20	<2	<2
W-25N-23	Aug 20	<1.8	<1.8
W-25N-22	Feb 20	<2	<2
W-25N-22	Aug 20	<1.8	<1.8
W-26R-01	Feb 11	<2	<2
W-26R-01	May 6	<2	<2
W-26R-01	Aug 19	<1.8	<1.8
W-26R-01	Nov 18	<1.8	<1.8
W-26R-05	Feb 19	<2	<2
W-26R-05	May 13	<2	2.0
W-26R-05	Aug 21	<1.8	<1.8
W-26R-11	Feb 11	<2	6.8
W-26R-11	May 6	<2	<2
W-26R-11	Aug 19	<1.8	<1.8
W-26R-11	Nov 18	<1.8	<1.8
W-7DS	Feb 11	<2	<2
W-7DS	May 6	<2	<2
W-7DS	Aug 20	<1.8	2.0
W-7DS	Nov 18	<1.8	<1.8

Table A-8. Site 300 sewer pond ground water monitoring network 2014 physical chemistry data.

Well	Date	pH	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
W-7ES	Feb 12	7.9	1570	280	1000	470	<1
W-7ES	May 7	7.8	1690	-	-	-	-
W-7ES	Aug 20	7.7	1670	290	1000	480	<1
W-7ES	Nov 18	7.8	1600	-	-	-	-
W-35A-04	Feb 12	7.9	1590	280	1100	460	<1
W-35A-04	May 7	7.9	1680	-	-	-	-
W-35A-04	Aug 20	7.9	1670	280	1100	460	<1
W-35A-04	Nov 18	7.9	1590	-	-	-	-
W-25N-23	Feb 19	7.9	1430	210	1000	450	<1
W-25N-23	Aug 19	7.8	1470	200	1100	480	<1
W-25N-22	Feb 19	7.9	1580	190	1200	470	<1
W-25N-22	Aug 19	7.8	1690	170	1200	520	<1
W-26R-01	Feb 10	7.9	1380	240	920	270	<1
W-26R-01	May 5	7.9	1430	-	-	-	-
W-26R-01	Aug 18	8.1	1410	240	960	280	<1
W-26R-01	Nov 17	7.8	1360	-	-	-	-
W-26R-05	Feb 10	8.2	1040	210	730	220	<1
W-26R-05	May 5	8.2	1050	-	-	-	-
W-26R-05	Aug 18	8.3	1060	210	730	220	<1
W-26R-11	Feb 10	7.8	1350	270	900	340	<1
W-26R-11	May 5	7.8	1380	-	-	-	-
W-26R-11	Aug 18	8.4	1340	260	1000	320	<1
W-26R-11	Nov 17	7.7	1250	-	-	-	-
W-7DS	Feb 10	7.9	1430	280	1000	450	<1
W-7DS	May 5	7.8	1590	-	-	-	-
W-7DS	Aug 19	8.3	312	150	<6.7	130	<1
W-7DS	Nov 17	7.7	1510	-	-	-	-

Note:
– = Analysis not required.

Table A–9. Site 300 sewer pond ground water monitoring network 2014 metals data summary.

Analyte (µg/L)	Month	W-7ES	W-35A-04	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Aluminum	Feb	<50	<50	<50	<50	<50	<50	<50	<50
	Aug	<50	<50	<50	<50	<50	<50	<50	<50
Arsenic	Feb	2.8	3.4	7.9	7.3	8.6	6.3	3.1	2.8
	Aug	3.0	3.6	<2	7.8	8.4	6.2	3.9	<2
	Nov	-	3.4	-	-	-	-	-	-
Barium	Feb	50	48	31	30	33	26	47	49
	Aug	49	47	28	25	36	27	46	<25
	Nov	-	51	-	-	-	-	-	-
Boron	Feb	2700	2900	1000	910	1600	900	2200	2600
	Aug	3000	3000	1000	930	1600	920	2200	52
Cadmium	Feb	<50	<50	<50	<50	<50	<50	<50	<50
	Aug	<50	<50	<50	<50	<50	<50	<50	<50
	Nov	-	<0.5	-	-	-	-	-	-
Calcium	Feb	110000	100000	110000	110000	66000	56000	78000	100000
	Aug	110000	100000	120000	130000	69000	55000	72000	32000
Chromium	Feb	1.0	1.1	<1	1.6	<1	4.8	<1	<1
	Aug	<1	<1	<1	<1	<1	<1	<1	<1
Hexavalent Chromium	Feb	<1	<1	<1	<1	<1	3.6	<1	<1
	Aug	<1	<1	<1	<1	<2	<2	<2	<1
Copper	Feb	1.0	1.0	1.6	1.6	1.6	1.9	<1	1.1
	Aug	<1	1.0	1.6	1.7	2.7	1.7	<1	<1
	Nov	-	<10	-	-	-	-	-	-
Iron	Feb	<100	<100	<100	<100	<100	<100	<100	<100
	Aug	<100	<100	<100	<100	<100	<100	<100	<100
Lead	Feb	<5	<5	<5	<5	<5	<5	<5	<5
	Aug	<5	<5	<5	<5	<5	<5	<5	<5
	Nov	-	<2	-	-	-	-	-	-
Magnesium	Feb	48000	48000	43000	45000	24000	20000	35000	47000

Table A–9. Site 300 sewer pond ground water monitoring network 2014 metals data summary.

	Aug	52000	50000	47000	48000	25000	21000	33000	12000
Manganese	Feb	<30	<30	<30	31	<30	<30	<30	<30
	Aug	<30	<30	<30	35	<30	<30	<30	<30
Mercury	Feb	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Aug	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Nov	-	<0.2	-	-	-	-	-	-
Molybdenum	Feb	<25	<25	<25	<25	<25	<25	<25	<25
	Aug	<25	<25	29	37	29	32	<25	<25
	Nov	-	<25	-	-	-	-	-	-
Nickel	Feb	2.0	2.1	<2	10	<2	<2	5.0	2.5
	Aug	<2	<2	6.6	15	2.5	<2	3.8	<2
	Nov	-	<5	-	-	-	-	-	-
Potassium	Feb	5700	5400	11000	12000	11000	9500	5500	5600
	Aug	5700	5800	12000	13000	11000	9500	5500	6600
	Nov	-	5800	-	-	-	-	-	-
Selenium	Feb	5.8	5.0	<2	3.5	9.4	<2	8.0	5.5
	Aug	8.6	4.9	<2	6.0	10	<2	9.4	<2
	Nov	-	4.9	-	-	-	-	-	-
Silver	Feb	<10	<10	<10	<10	<10	<10	<10	<10
	Aug	<10	<10	<10	<10	<10	<10	<10	<10
	Nov	-	<0.5	-	-	-	-	-	-
Vanadium	Feb	<20	<20	<20	<20	<20	<20	<20	<20
	Aug	<20	<20	<20	<20	<20	<20	<20	<20
	Nov	-	<25	-	-	-	-	-	-
Zinc	Feb	<20	<20	<20	<20	<20	<20	<20	<20
	Aug	<20	<20	<20	<20	<20	<20	<20	<20
	Nov	-	<20	-	-	-	-	-	-

Table A-10. Site 300 sewer pond ground water monitoring network 2014 QA data.

Constituent	Units	W-26R-01	W-26R-01	W-26R-01	W-26R-01
		Nov 17	Nov 17	Nov 18	Nov 18
		Routine	Duplicate	Routine	Duplicate
pH	Units	7.8	7.8	-	-
Specific Conductance	µmhos/cm	1360	1360	-	-
Fecal Coliform	MPN/100mL	-	-	<1.8	<1.8
Total Coliform	MPN/100mL	-	-	<1.8	<1.8
Nitrate (as NO3)	mg/L	28	28	-	-

Note:
– = Analysis not required.

FIELD TRACKING FORM
EAST END OF SITE 300 SEWAGE POND

Lab	Alpha	BC
CoC #	64731	64732
Ship It #		189430

DATE: 10/14/14 TIME: 0925

Special Instructions: Semi-Annual Sampling in 2nd and 4th Quarters (April & Oct)
Samples should be taken after 1 p.m.
Print collection time on sample bottles.
DO/conductivity/pH hold time 24 hr.

pH meter calibrated 10/14/14
Conductivity meter calibrated 10/14/14
DO meter calibrated 10/14/14

Location	Field Measurements					Comments	Initials	Samples for Lab Analysis
	pH	COND	Depth	DO (PPM)	Temp (°C)			Analytical Codes:
3-ESWP-01-OW (East end of Sewage Pond)	7.29	6.04 ms	1'	9.18	17.6		KS	Alpha LAB E360.1 *DO (1x300mL PET Poly with glass stopper)* 1 E120.1A & E150.1A *Conductivity/pH (2x250-mL poly)* 1 SM9221 *Total, Fecal Coliform (1x125mL sterilized poly) 6hr hold* 1 SM5210B-A *BOD (1x1 Liter poly)* 1
3-WSWP-01-OW *duplicate of* 3-ESWP-01-OW								BC Labs S3METALS (1X500mL Poly) 1

2Q2014 Duplicate SM9221
4Q2014 Duplicate See ISWP Field Tracking Form

☑ Copy to Analysts, Allen Grayson & Rick Blake

Revised 11/14/13

FIELD TRACKING FORM

INFLUENT TO SITE 300 SEWAGE POND

Lab	Alpha Lab
CoC #	64731
Ship It #	

DATE: 10/14/14 **TIME:** 0900

Special Instructions: **Semi-Annual Sampling in 2nd and 4th Quarters (April & Oct)**
Samples should be taken after 1 p.m. during higher flow.
Print collection time on sample bottles.
BOD Hold Time 48hr. Conductivity/pH Hold Time 24hr.

pH meter calibrated 10/14/14
Conductivity meter calibrated 10/14/14
DO meter calibrated 10/14/14

Location	Field Measurements				Comments	Initials	Samples for Lab Analysis
	pH	COND	DO (PPM)	Temp (°C)			Analytical Codes:
3-ISWP-01-OW (Influent to Sewage Pond)	8.64	1350 µS	4.03	24.1		KS	E120.1A & E150.1A (Conductivity/pH) *(2 X 250-mL poly)* ✓
3-WSWP-01-OW *duplicate of* 3-ISWP-01-OW						KS	SM5210B-A (BOD) *(1 X 1 Liter poly)* ✓

2Q2014 Duplicate **See ESWP Field Tracking Form**
4Q2014 Duplicate **E150.1A**

☑ Copy to Analysts, rick Blake and Allen Grayson

Revised 11/14/13

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64731
Document Control #: 64731
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.02.05
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : ALPHAANAL
TAT: 20d
Analytical Lab Log #:
Project/Network: WDRPOND
LLNL Acct #: 3297-41
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	10/14/2014 09:25	SW	P	1	WDR	E120.1A	ALL	
3-ESWP-01-OW	10/14/2014 09:25	SW	P	1	WDR	E150.1A	ALL	
3-ESWP-01-OW	10/14/2014 09:25	SW	G	1	WDR	E360.1	ALL	
3-ESWP-01-OW	10/14/2014 09:25	SW	PO	1	WDR	SM5210B-A	ALL	
3-ESWP-01-OW	10/14/2014 09:25	SW	P	1	WDR	SM9221	ALL	
3-ISWP-01-OW	10/14/2014 09:00	SW	P	1	WDR	E120.1A	ALL	
3-ISWP-01-OW	10/14/2014 09:00	SW	P	1	WDR	E150.1A	ALL	
3-ISWP-01-OW	10/14/2014 09:00	SW	PO	1	WDR	SM5210B-A	ALL	
3-WSWP-01-OW	10/14/2014 09:00	SW	P	1	WDR	E150.1A	ALL	

	Relinquished Signature	Company	Date	Time		Received Signature	Company	Date	Time
1	[illegible]	LLNL/EFA	10/14/2014	1055	2	[illegible]	ALPHA LABS	10/14/14	1055
2					3				
3					4				
4					5				

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64732
Document Control #: 64732
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.02.05
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: WDRPOND
LLNL Acct #: 3297-41
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	10/14/2014 00:00	SW	P	0	WDR	S3METALS	ALL	
3-ESWP-01-OW	10/14/2014 09:25	SW	P	1	WDR	S3METALS	TOTAL	

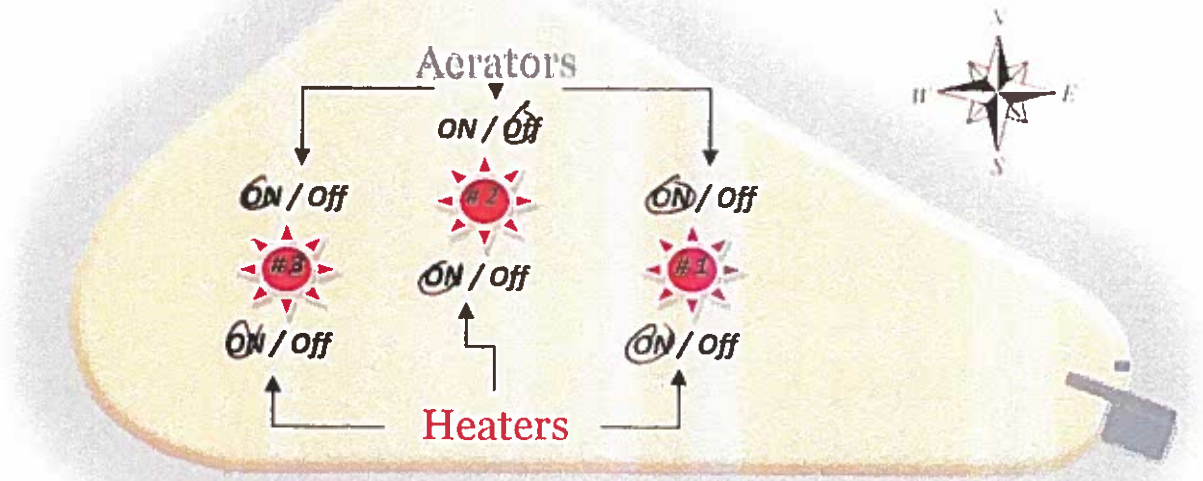
Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [signature]	LLNL/EFA	10/14/2014		2			
2				3			
3				4			
4				5			

Revision Printed: 07/30/2014/13/01/54

Signature Order - 1: Sampler, 2: Courier, 3: Lab, 4: Analyst, 5: DMT

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 12.0	Green (X)	Water Temp 10.3
Oxygen 79.6	Green Brown (_)	Oxygen 73.6
pH 9.68	Brown Green (_)	pH 9.23
Time 0500	Brown (_)	Time 05:30

Pond Water Level + 7½"	Air Temp 56	Animal Burrows Some
Water (Meter) Stop 9857588	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9857588	Erosion Some	Pond Oder None
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level ____

Weed Control Some

Animal Burrows Some

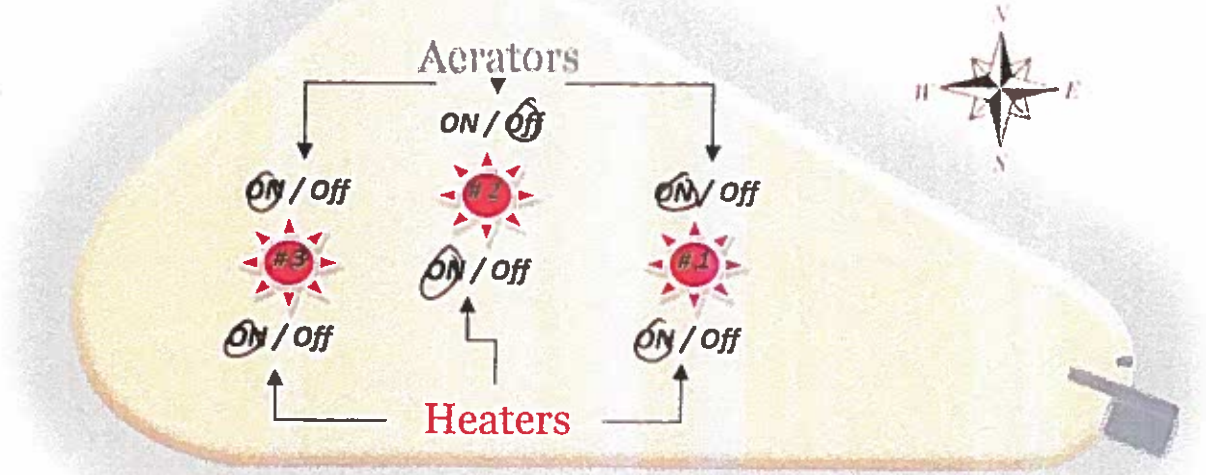
Inspected By Duane Sandman **Date** 12-16-14

Supervisor Review [signature] **Date** 12-16-14

Comments ____

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 15.0	Green (X)	Water Temp 14.6
Oxygen 67.0	Green Brown (__)	Oxygen 66.1
pH 9.12	Brown Green (__)	pH 9.08
Time 05:00	Brown (__)	Time 05:30

Pond Water Level +5 1/4"	Air Temp 14.4	Animal Burrows SOME
Water (Meter) Stop 9857588	Wind Direction S-W	Weed Control SOME
Water (Meter) Start 9857588	Erosion SOME	Pond Oder NONE
Water Added 0		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level NOT Flowing

Weed Control SOME

Animal Burrows SOME

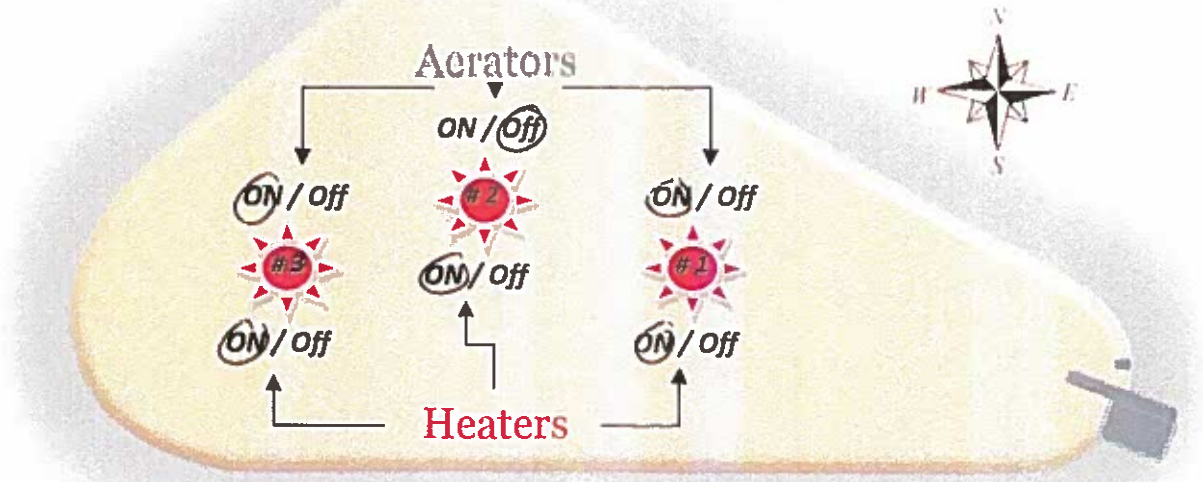
Inspected By Duane Jack **Date** 12-11-14

Supervisor Review [signature] **Date** 12/11/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 14.9	Green (X)	Water Temp 13.9
Oxygen 65.7	Green Brown (__)	Oxygen 64.0
pH 9.10	Brown Green (__)	pH 9.05
Time 05:00	Brown (__)	Time 05:30

Pond Water Level +5¼"	Air Temp 8.9	Animal Burrows SOME
Water (Meter) Stop 9857588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9857588	Erosion SOME	Pond Oder NONE
Water Added 0		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level NOT FLOWING

Weed Control SOME

Animal Burrows SOME

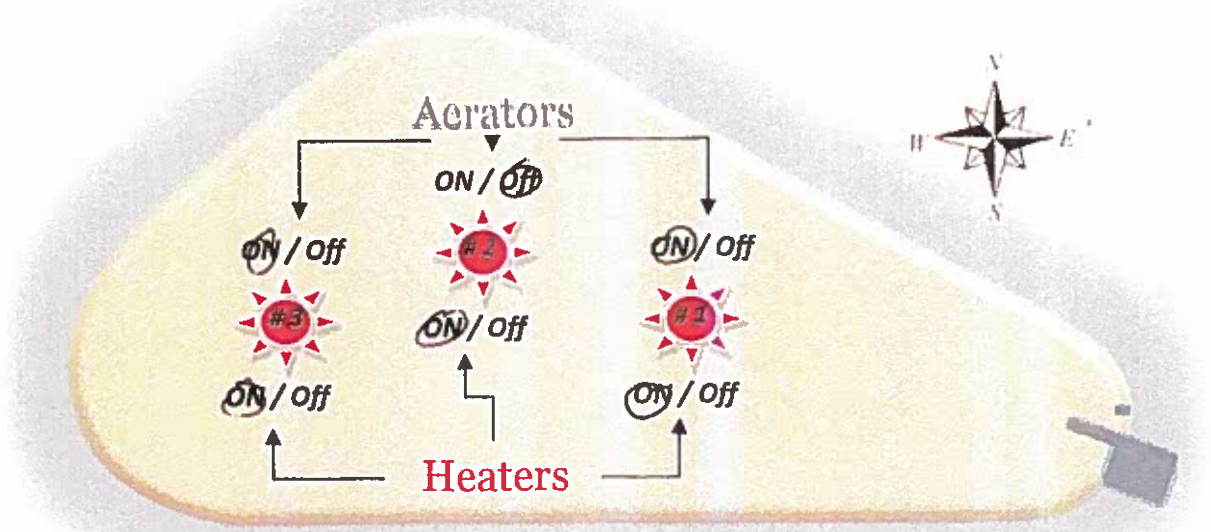
Inspected By [signature] **Date** 12-9-14.

Supervisor Review [signature] **Date** 12/9/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 14.0	Green (X)	Water Temp 14.6
Oxygen 59.9	Green Brown (_)	Oxygen 66.7
pH 9.34	Brown Green (_)	pH 9.28
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +4"	Air Temp 11.1	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level NOT KNOWN

Weed Control SOME

Animal Burrows SOME

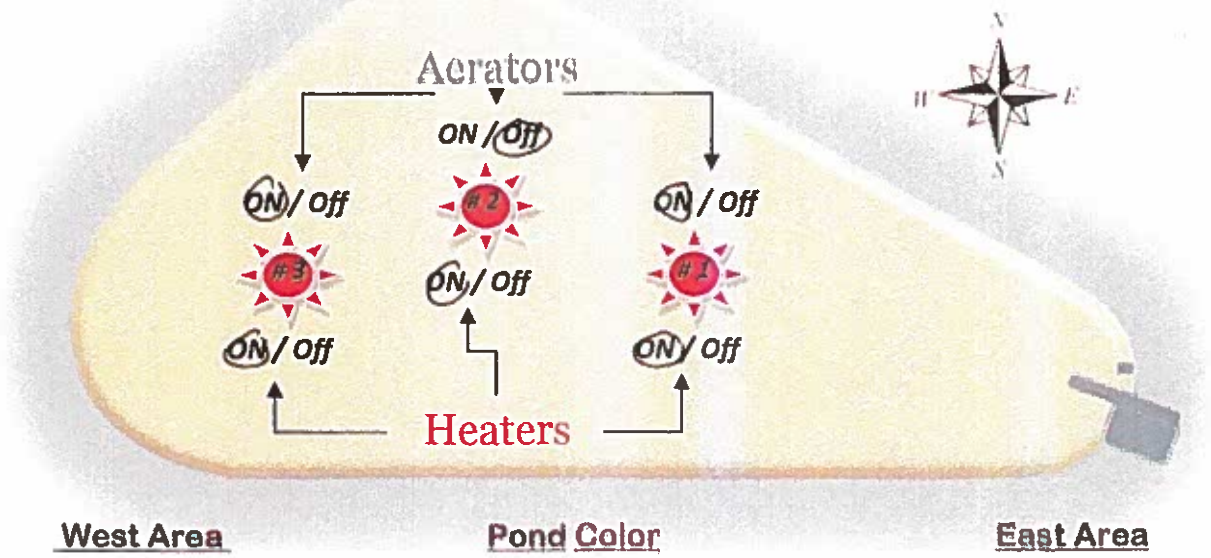
Inspected By Duane Fenchum **Date** 12-2-14

Supervisor Review [signature] **Date** 12/2/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 12.2	Green (X)	Water Temp 11.6
Oxygen 60.2	Green Brown (__)	Oxygen 62.1
pH 10.01	Brown Green (__)	pH 9.30
Time 05:00	Brown (__)	Time 05:30

Pond Water Level +2¾"	Air Temp 4.4	Animal Burrows SOME
Water (Meter) Stop 9857586	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9857586	Erosion SOME	Pond Oder VERY SLIGHT
Water Added 0		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level NOT FLOWING

Weed Control SOME

Animal Burrows SOME

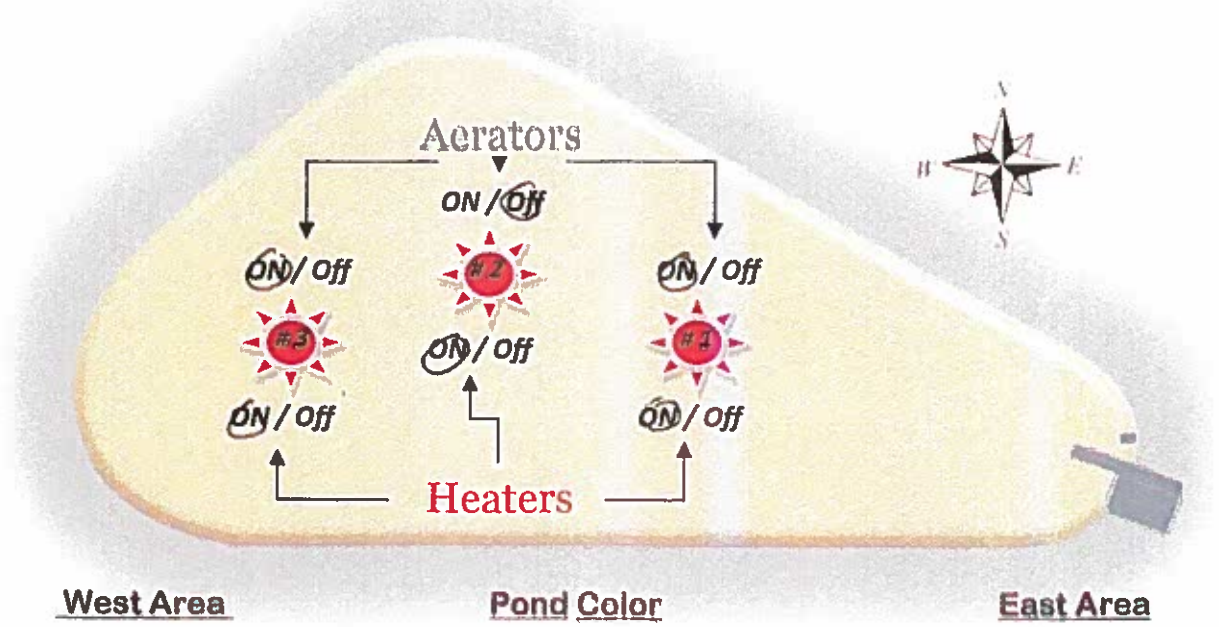
Inspected By Duane Jenkins **Date** 11-28-14

Supervisor Review [signature] **Date** 11/28/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 12.4	Green (X)	Water Temp 13.3
Oxygen 72.1	Green Brown (_)	Oxygen 61.2
pH 9.78	Brown Green (_)	pH 9.29
Time 05:00	Brown (_)	Time 05:30

Pond Water Level + 2 3/4"	Air Temp 2.2	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level NOT Flowing

Weed Control SOME

Animal Burrows SOME

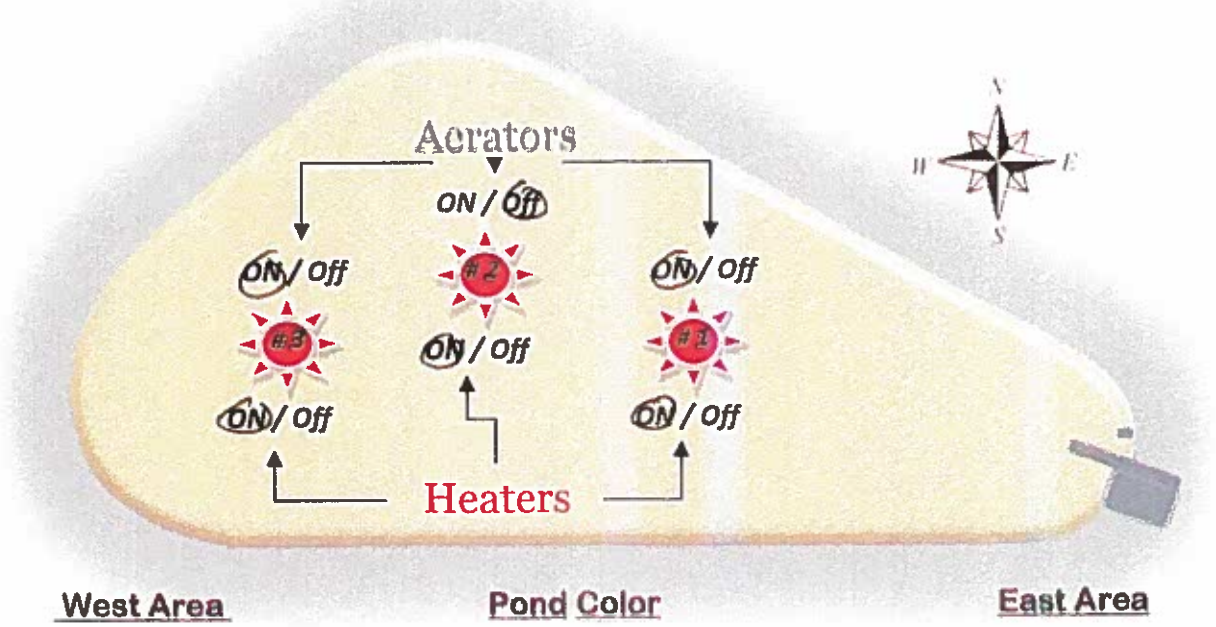
Inspected By Duane Jenkins **Date** 11-18-14

Supervisor Review [signature] **Date** 11/18/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 15.5	Green (X)	Water Temp 15.1
Oxygen 40.1	Green Brown (_)	Oxygen 16.2
pH 9.36	Brown Green (_)	pH 9.30
Time 05:05	Brown (_)	Time 05:30

Pond Water Level +2 3/4"	Air Temp 6.7	Animal Burrows Some
Water (Meter) Stop 9857.588	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9,857.588	Erosion Some	Pond Oder Slight
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level NOT Flowing

Weed Control Some

Animal Burrows Some

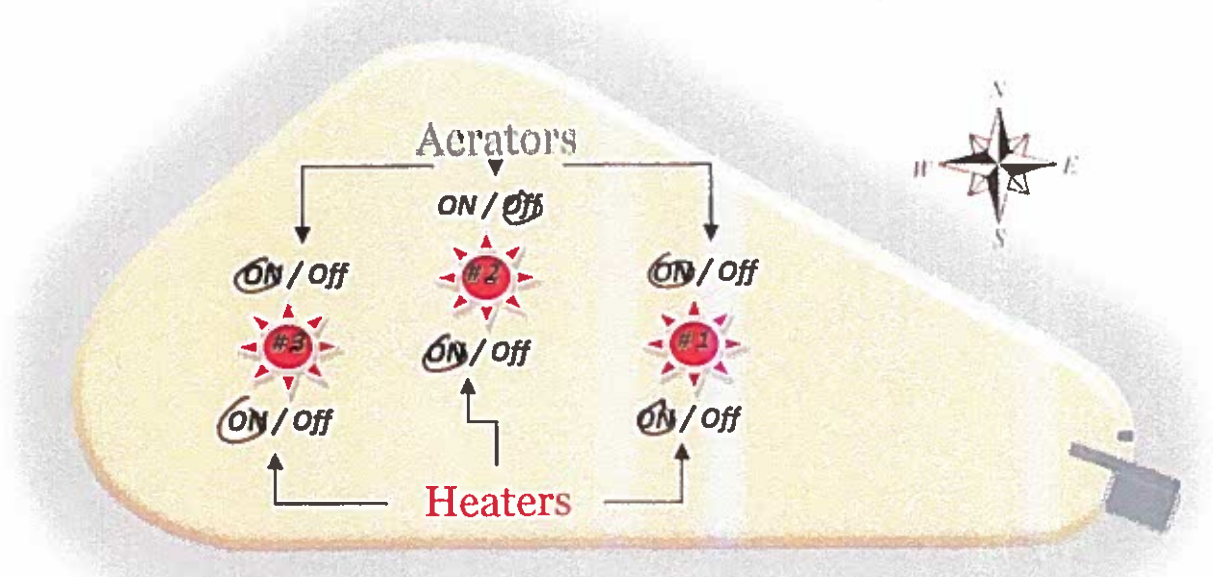
Inspected By Dwan Fendum **Date** 11-13-16

Supervisor Review [signature] **Date** 11/13/16

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 15.4	Green (X)	Water Temp 14.6
Oxygen 50.3	Green Brown (_)	Oxygen 14.3
pH 9.35	Brown Green (_)	pH 9.21
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +2¼"	Air Temp 4.4	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added Ø		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

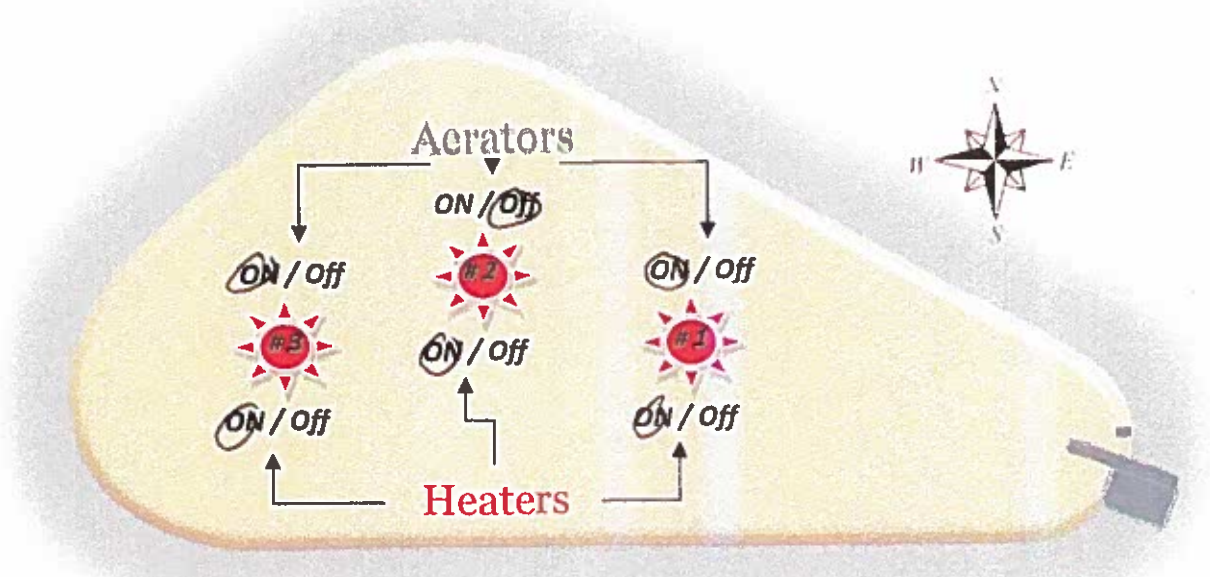
Inspected By Duane Lenhum **Date** 11-11-14

Supervisor Review **Date** 11/14/14.

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 14.5	Green (X)	Water Temp 14.0
Oxygen 44.3	Green Brown (_)	Oxygen 47.6
pH 9.45	Brown Green (_)	pH 9.19
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +3"	Air Temp 6.7	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

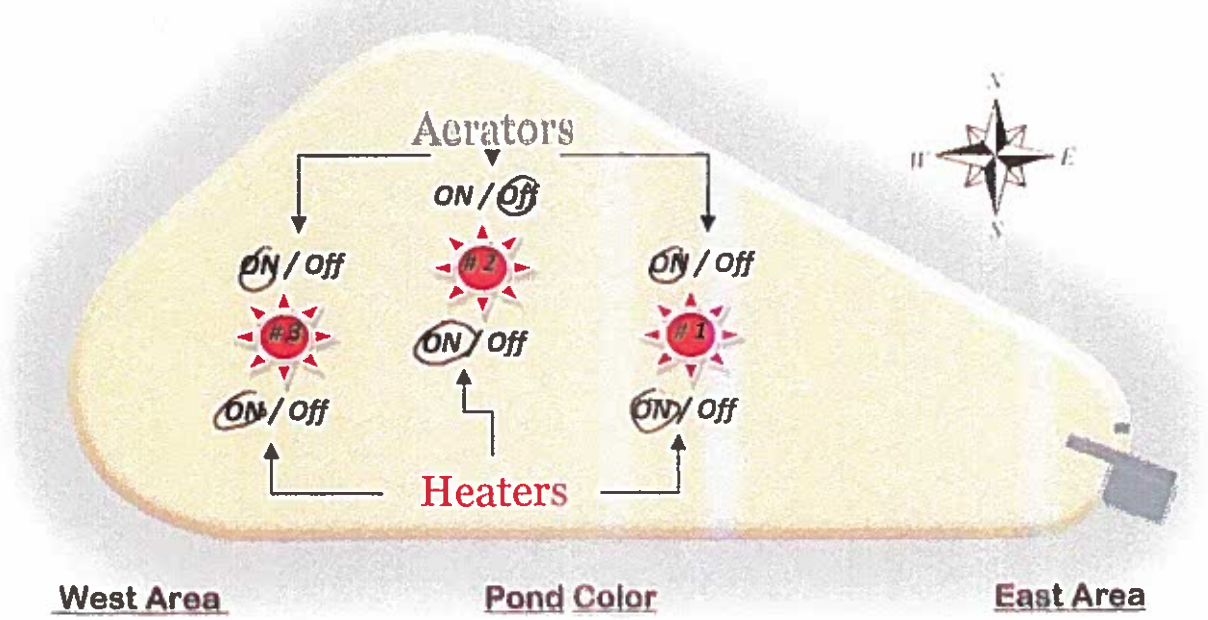
Inspected By Duane Sandum **Date** 11-6-14.

Supervisor Review **Date** 11/6/14.

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 13.1	Green (X)	Water Temp 12.8
Oxygen 90.1	Green Brown (_)	Oxygen 70.4
pH 9.35	Brown Green (_)	pH 9.36
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +23 1/4"	Air Temp 4.4	Animal Burrows Some
Water (Meter) Stop 9,857,588	Wind Direction None	Weed Control Some
Water (Meter) Start 9,857,588	Erosion Some	Pond Oder Slight
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Day

Weed Control Some

Animal Burrows Some

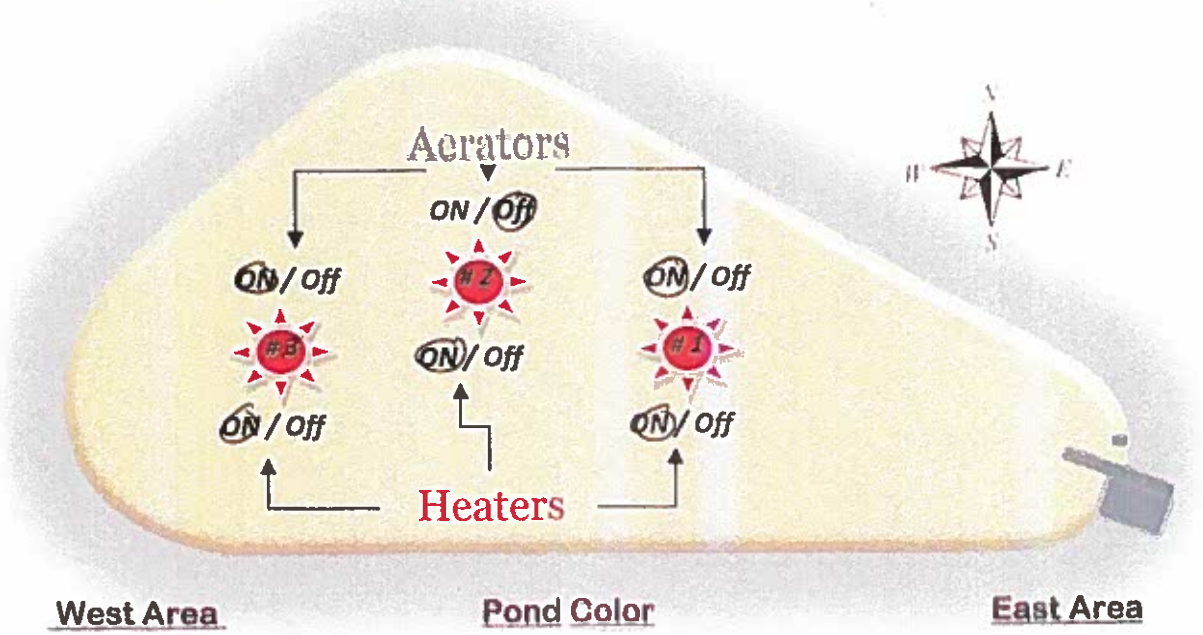
Inspected By Duane Fender **Date** 11-4-14

Supervisor Review **Date** 11/4/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 14.8	Green (X)	Water Temp 15.0
Oxygen 41.4	Green Brown (_)	Oxygen 30.4
pH 9.41	Brown Green (_)	pH 9.44
Time 07:00	Brown (_)	Time 05:30

Pond Water Level +2 1/2"	Air Temp 9.4	Animal Burrows SOME
Water (Meter) Stop 9,859,588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,859,588	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

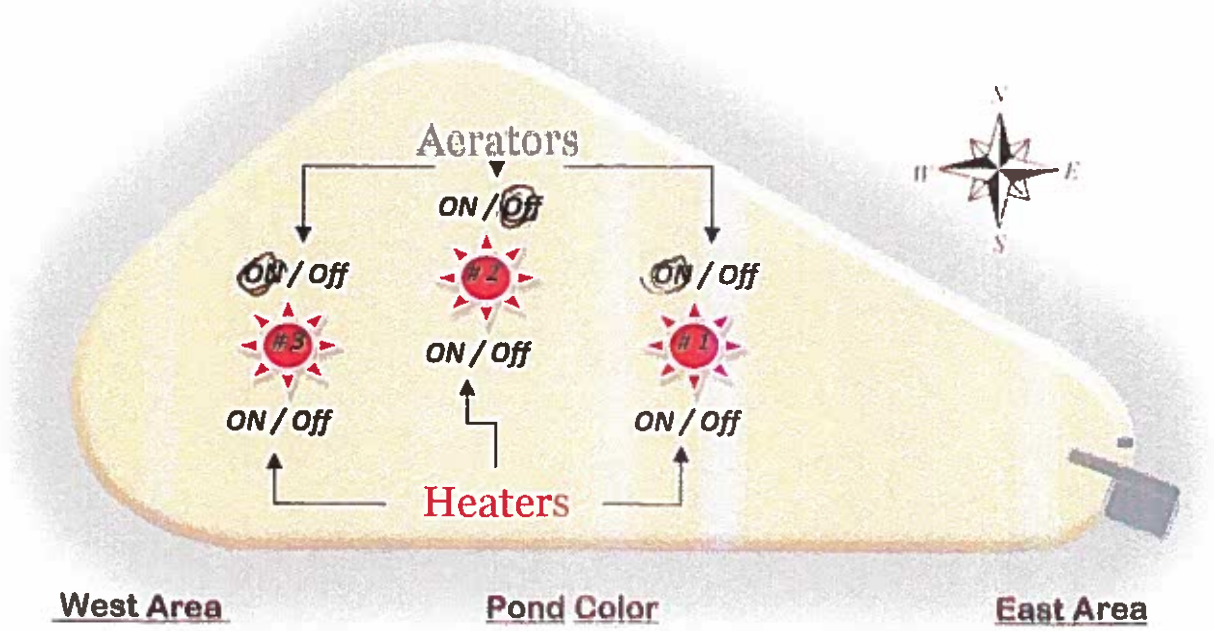
Inspected By Dean Jordan **Date** 10-30-11

Supervisor Review **Date** 10/30/11

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 15.1	Green (X)	Water Temp 14.5
Oxygen 54.8	Green Brown (_)	Oxygen 49.5
pH 9.39	Brown Green (_)	pH 9.16
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +2 3/4"	Air Temp 15.0	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

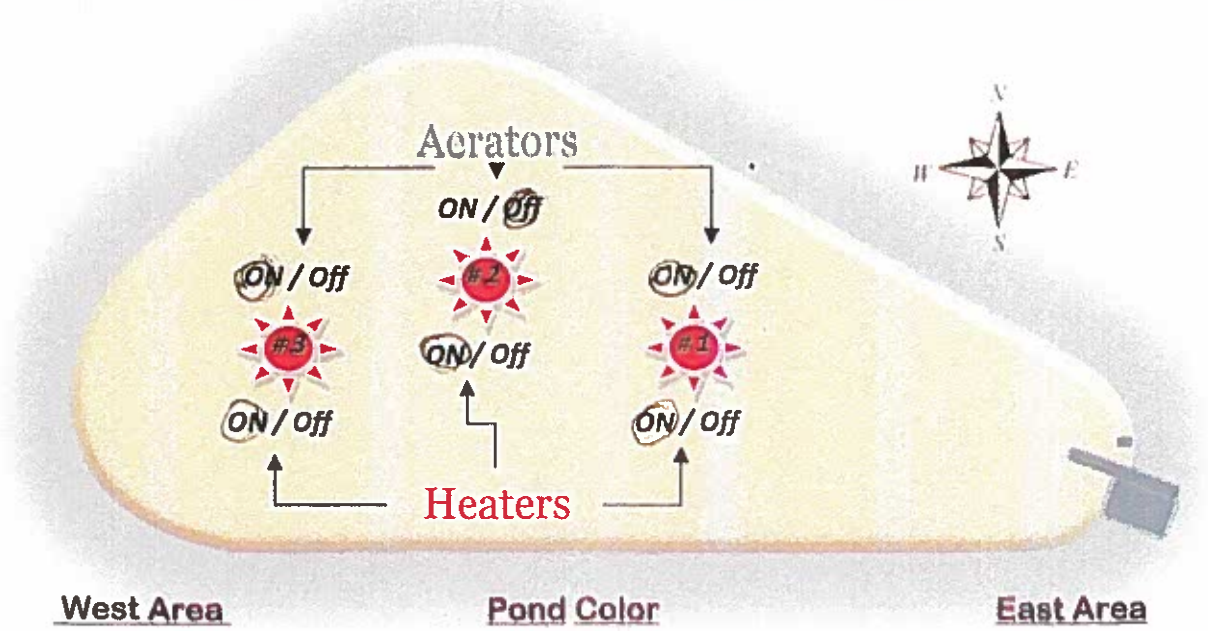
Inspected By Dwayne Sanders **Date** 10-28-14

Supervisor Review **Date** 10/28/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 17.3	Green (X)	Water Temp 16.1
Oxygen 35.1	Green Brown (_)	Oxygen 46.6
pH 9.17	Brown Green (_)	pH 9.16
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +3"	Air Temp 14.4	Animal Burrows SOME
Water (Meter) Stop 9,857,588	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,857,588	Erosion SOME	Pond Oder SLIGHT
Water Added -0-		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

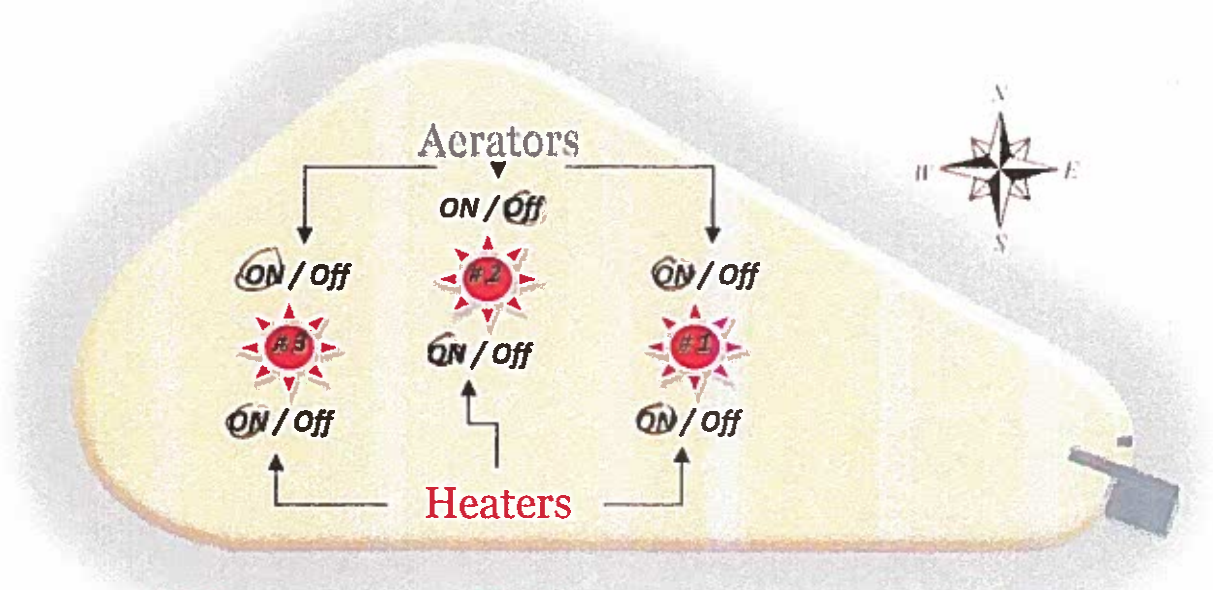
Inspected By [signature] **Date** 10-23-14

Supervisor Review [signature] **Date** 10/23/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 16.6	Green (X)	Water Temp 16.5
Oxygen 41.9	Green Brown (_)	Oxygen 8.01
pH 9.30	Brown Green (_)	pH 9.14
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +3"	Air Temp 9.4	Animal Burrows SOME
Water (Meter) Stop 9,857,586	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,857,586	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

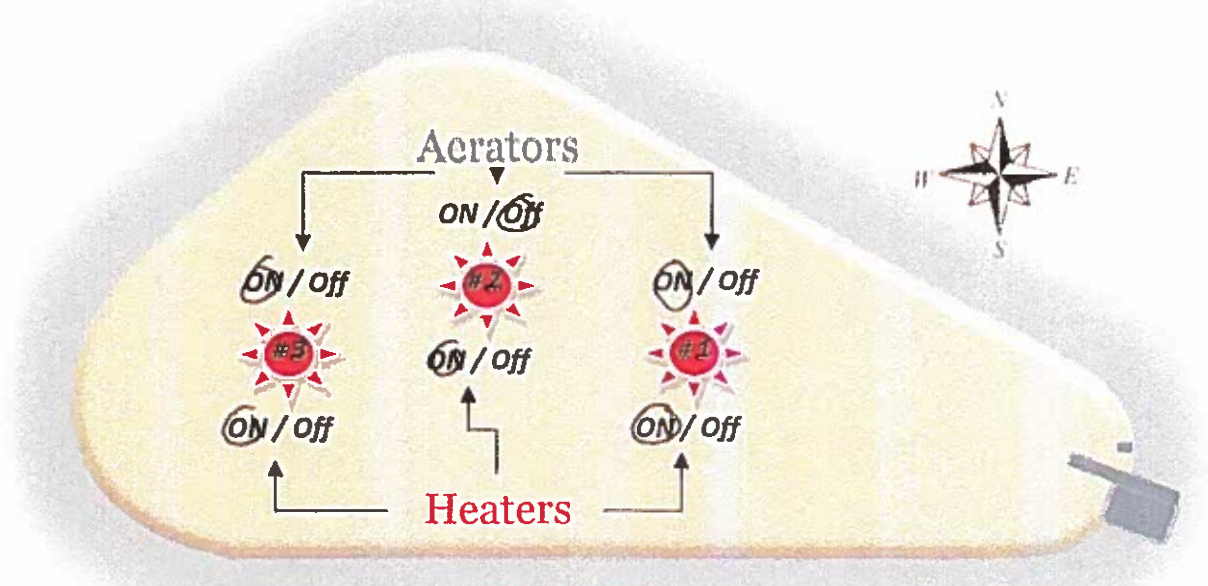
Animal Burrows SOME

Inspected By [signature] **Date** 10-21-14

Supervisor Review [signature] **Date** 10/21/14

Comments

SITE 300 SEWER POND
INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 17.2	Green (X)	Water Temp 17.8
Oxygen 22.2	Green Brown (_)	Oxygen 26.1
pH 9.21	Brown Green (_)	pH 9.21
Time 05:06	Brown (_)	Time 05:30

Pond Water Level +3¾"	Air Temp 12.2	Animal Burrows Some
Water (Meter) Stop 9,851,586	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9,851,586	Erosion Some	Pond Oder Very Slight
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

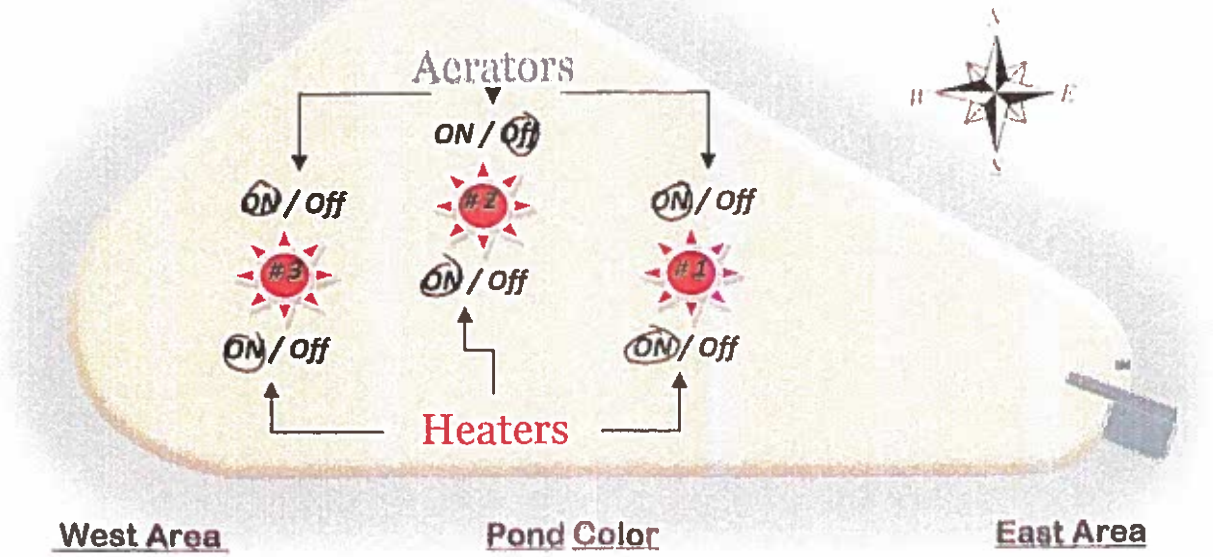
Inspected By Dwen Sanders **Date** 10-16-14

Supervisor Review **Date** 10/16/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 18.3	Green (X)	Water Temp 16.5
Oxygen 25.1	Green Brown (_)	Oxygen 30.2
pH 9.19	Brown Green (_)	pH 9.20
Time 05:00	Brown (_)	Time 05:30

Pond Water Level 3 3/4"	Air Temp 13.3	Animal Burrows SOME
Water (Meter) Stop 9,857,586	Wind Direction WEST	Weed Control SOME
Water (Meter) Start 9,857,586	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

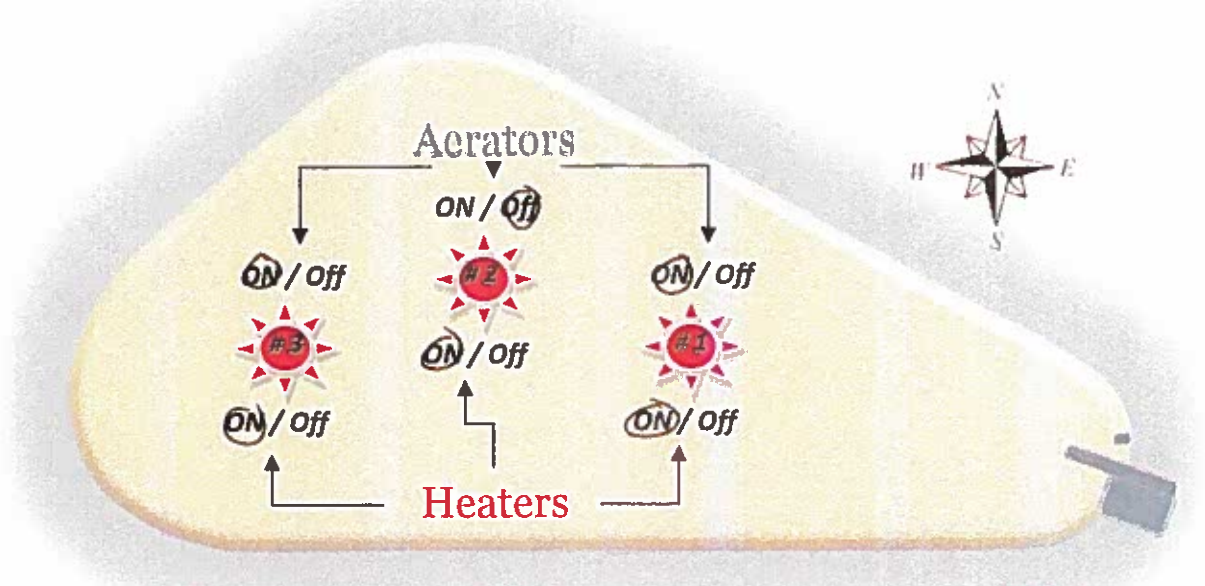
Inspected By Diana Sandum **Date** 10-14-14

Supervisor Review **Date** 10/14/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 18.3	Green (X)	Water Temp 16.5
Oxygen 25.1	Green Brown (_)	Oxygen 30.2
pH 9.19	Brown Green (_)	pH 9.20
Time 05:00	Brown (_)	Time 05:30

Pond Water Level 3 3/4"	Air Temp 13.3	Animal Burrows SOME
Water (Meter) Stop 9,857,586	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,857,586	Erosion SOME	Pond Oder SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

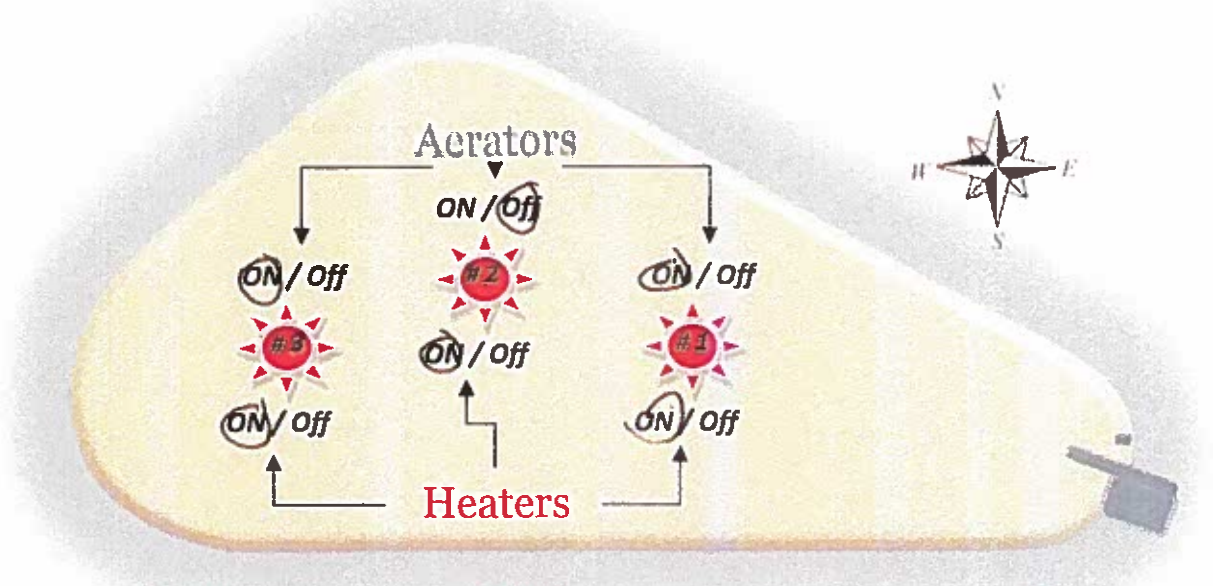
Inspected By Duane Sandum **Date** 10-14-14

Supervisor Review **Date** 10/14/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 20.1	Green (X)	Water Temp 19.0
Oxygen 19.4	Green Brown (_)	Oxygen 20.1
pH 9.40	Brown Green (_)	pH 9.41
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +4½"	Air Temp 15.6	Animal Burrows Some
Water (Meter) Stop 9,857,586	Wind Direction None	Weed Control Some
Water (Meter) Start 9,857,586	Erosion Some	Pond Oder None
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

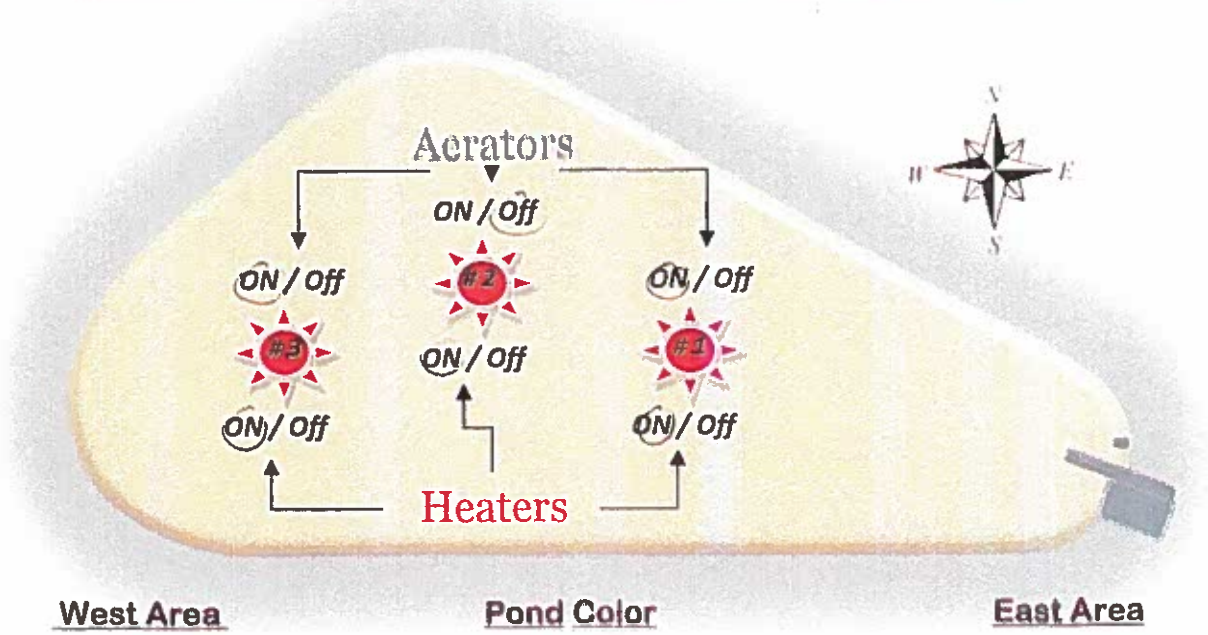
Inspected By [signature] **Date** 10-10-14

Supervisor Review [signature] **Date** 10/10/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.0	Green (X)	Water Temp 18.9
Oxygen 20.6	Green Brown (_)	Oxygen 19.6
pH 9.37	Brown Green (_)	pH 9.32
Time 05:00	Brown (_)	Time 05:00

Pond Water Level 4 3/4"	Air Temp 17.2	Animal Burrows Some
Water (Meter) Stop 9,857,586	Wind Direction None	Weed Control Some
Water (Meter) Start 9,857,586	Erosion Some	Pond Oder None
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

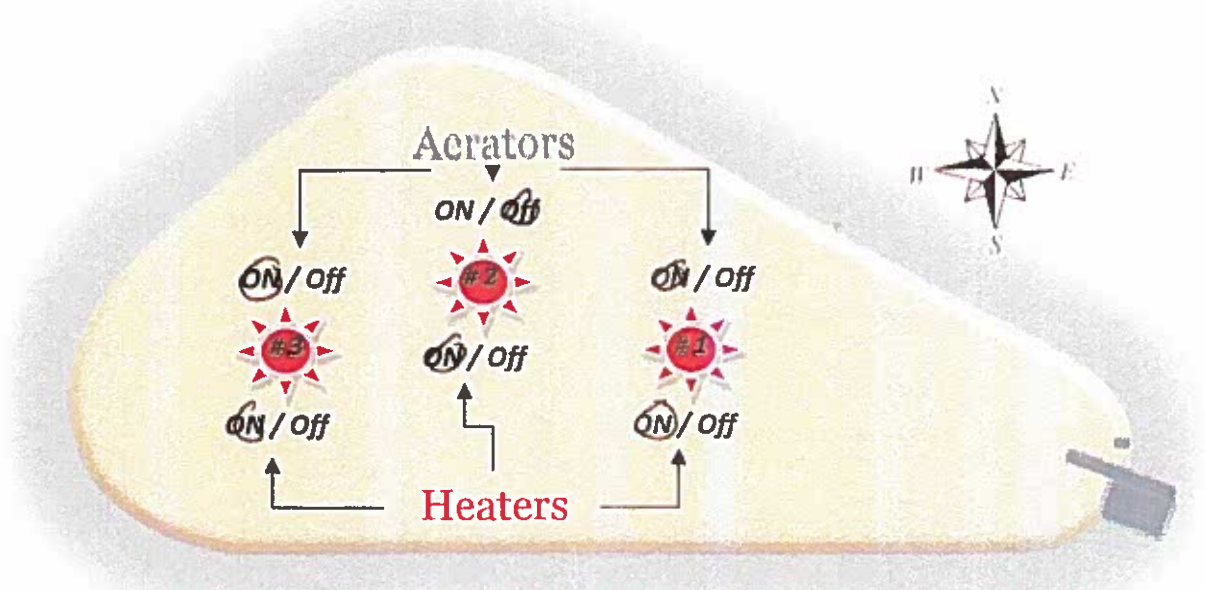
Inspected By [signature] **Date** 10-8-14

Supervisor Review [signature] **Date** 10/8/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 19.6	Green (✓)	Water Temp 18.2
Oxygen 34.8	Green Brown (_)	Oxygen 34.5
pH 9.57	Brown Green (_)	pH 9.48
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +5"	Air Temp 12.2	Animal Burrows SOME
Water (Meter) Stop 9,852,586	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,852,586	Erosion SOME	Pond Oder VERY SLIGHT
Water Added 0		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (✓)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

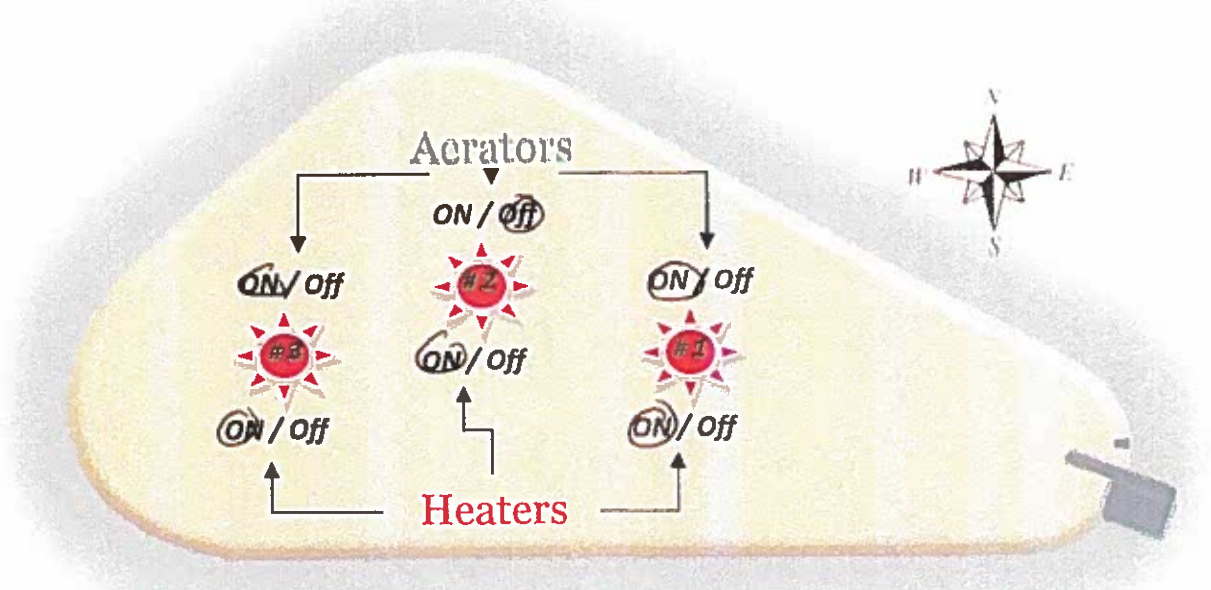
Inspected By Duane Fendelman **Date** 10-3-14

Supervisor Review **Date** 10/3/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 19.0	Green (X)	Water Temp 18.7
Oxygen 40.1	Green Brown (_)	Oxygen 39.6
pH 9.52	Brown Green (_)	pH 9.50
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +5½"	Air Temp 13.3	Animal Burrows Some
Water (Meter) Stop 9,857,586	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9,793,808	Erosion Some	Pond Oder ____
Water Added 63,778		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level DRY

Weed Control Some

Animal Burrows Some

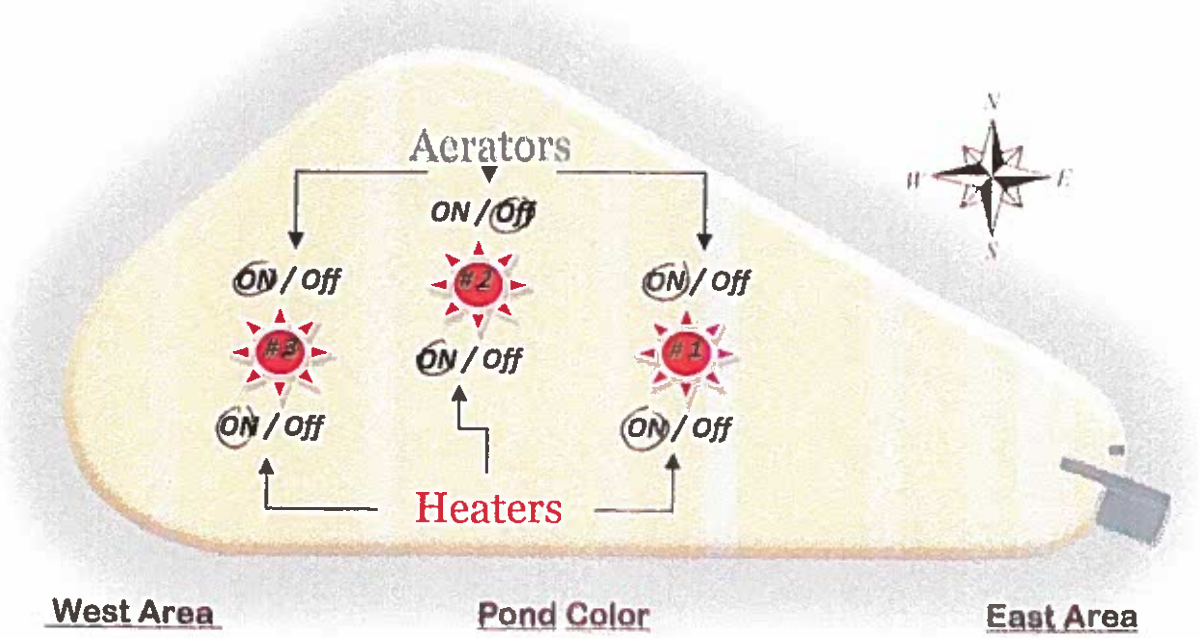
Inspected By Renee Jendrum **Date** 9-30-14

Supervisor Review [signature] **Date** 9/30/14

Comments _____

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 19.8	Green (✓)	Water Temp 18.5
Oxygen 63.2	Green Brown (_)	Oxygen 61.7
pH 9.52	Brown Green (_)	pH 9.55
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +3¼"	Air Temp 16.7	Animal Burrows SOME
Water (Meter) Stop 9,793,808	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,748,235	Erosion SOME	Pond Oder NONE
Water Added 45,573		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

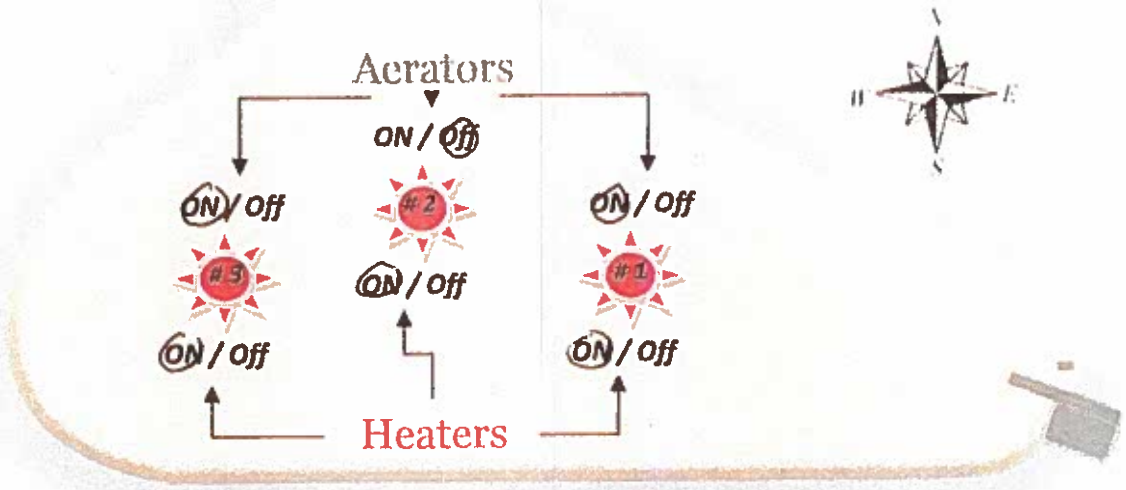
Inspected By Devon Jordan **Date** 9-23-14

Supervisor Review [signature] **Date** 9/23/14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 20.1	Green (X)	Water Temp 20.2
Oxygen 14.1	Green Brown (_)	Oxygen 20.1
pH 9.60	Brown Green (_)	pH 9.60
Time 05:00	Brown (_)	Time 05:30

Pond Water Level ___	Air Temp 20.0	Animal Burrows Some
Water (Meter) Stop 9748235	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9718999	Erosion Some	Pond Oder Slight
Water Added 29,236		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

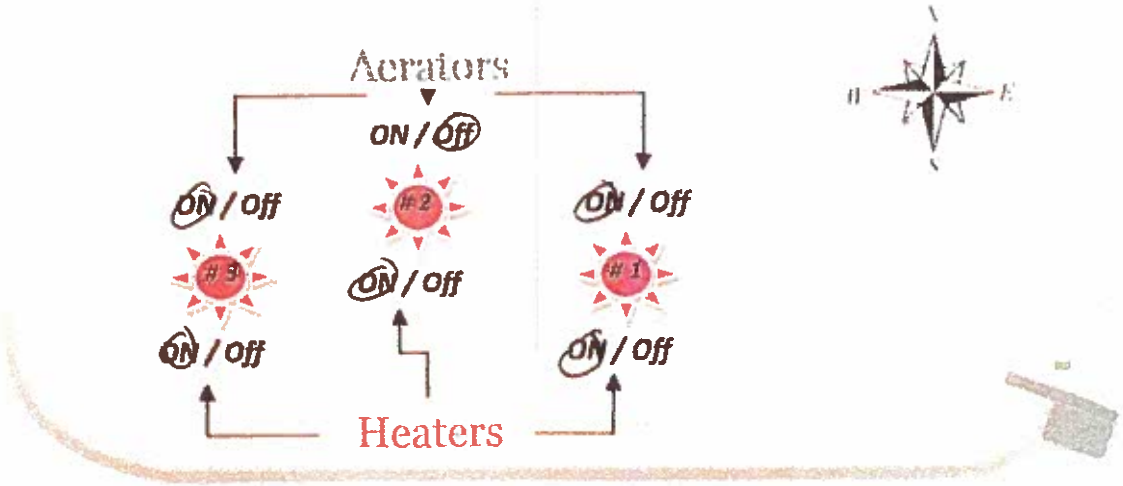
Inspected By Duane Sandusky **Date** 9-18-14.

Supervisor Review **Date** 9/18/14.

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.4	Green (X)	Water Temp 20.5
Oxygen 21.6	Green Brown (_)	Oxygen 5.7
pH 9.59	Brown Green (_)	pH 9.60
Time 05:00	Brown (_)	Time 05:30

Pond Water Level 2"+	Air Temp 21.1	Animal Burrows SOME
Water (Meter) Stop 9,718,999	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,702,076	Erosion SOME	Pond Oder SLIGHT
Water Added 16,923		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

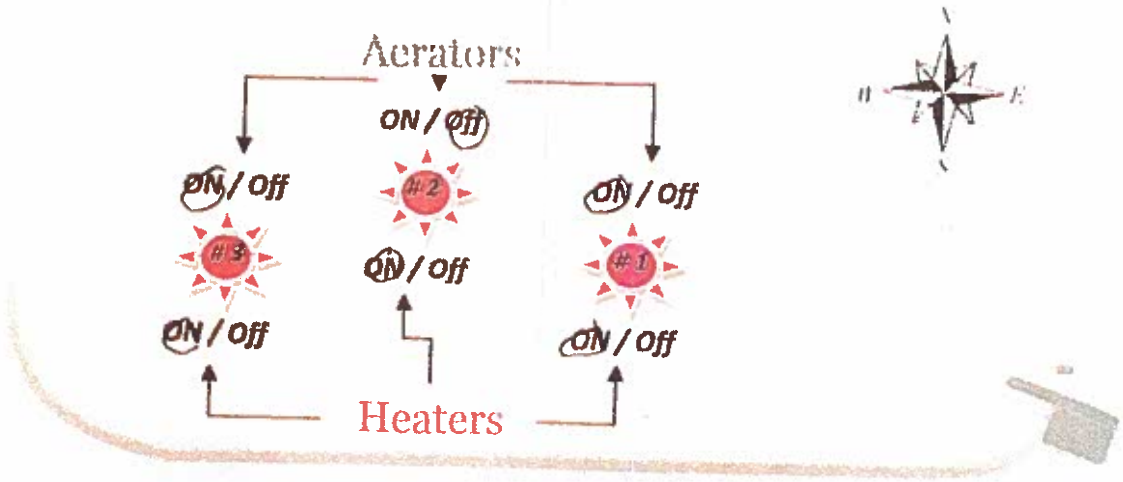
Animal Burrows SOME

Inspected By Duane Sandum **Date** 9-15-14

Supervisor Review Duane Sandum **Date** 9-15-14

Comments

SITE 300 SEWER POND
INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.2	Green (X)	Water Temp 20.1
Oxygen 20.4	Green Brown (_)	Oxygen 13.2
pH 9.62	Brown Green (_)	pH 9.63
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +3"	Air Temp 15.6	Animal Burrows SOME
Water (Meter) Stop 9,702,076	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9,678,548	Erosion SOME	Pond Oder VERY SLIGHT
Water Added 23,528		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

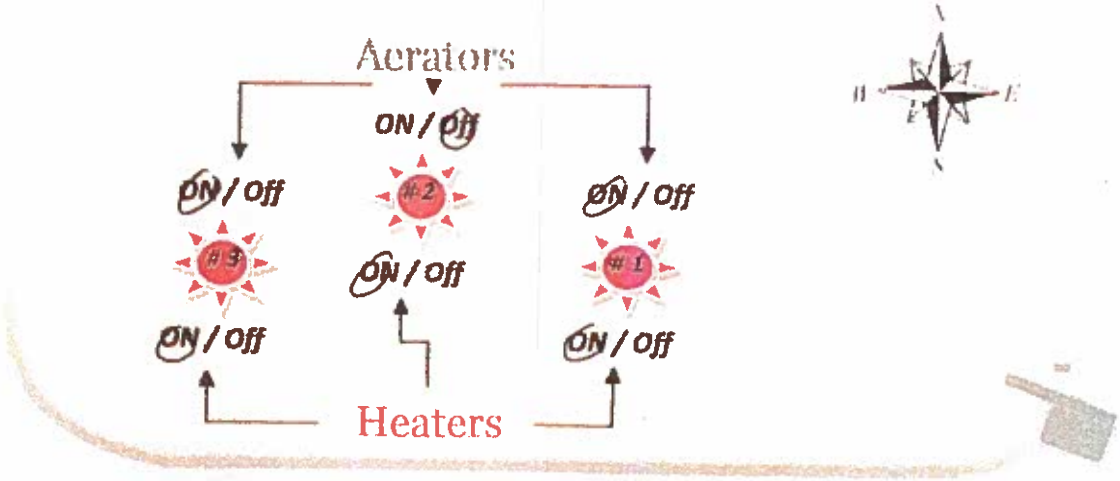
Inspected By [signature] **Date** 9-11-14

Supervisor Review [signature] **Date** 9-11-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.3	Green (X)	Water Temp 20.4
Oxygen 33.2	Green Brown ( )	Oxygen 17.2
pH 9.50	Brown Green ( )	pH 9.52
Time 05:00	Brown ( )	Time 05:30

Pond Water Level 2 3/4"+	Air Temp 17.2	Animal Burrows SOME
Water (Meter) Stop 9,678,548	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9,675,129	Erosion SOME	Pond Oder SLIGHT
Water Added 3,369		

Common Bacterium-Per Drop ( ) Activated Sludge ( ) Glass Tube Test ( ) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

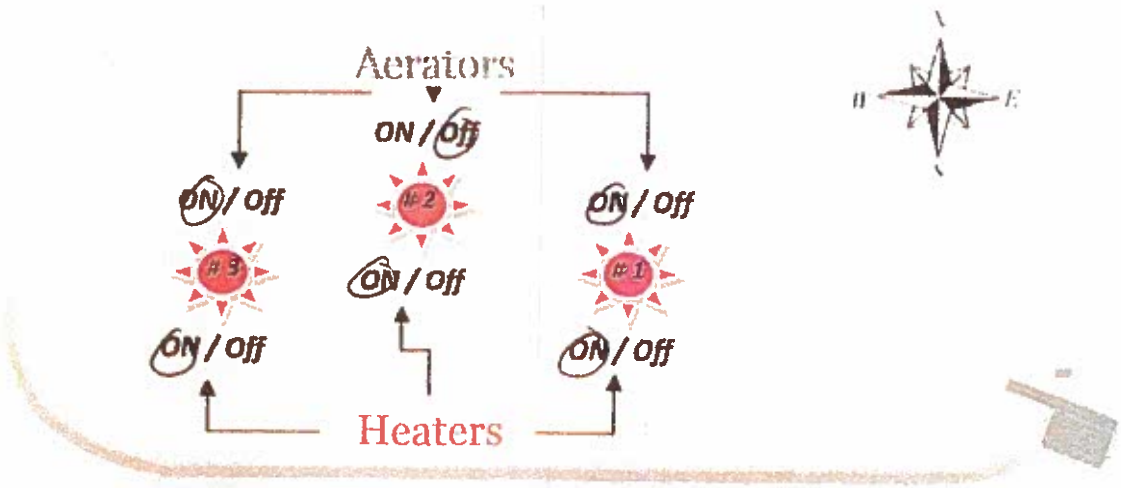
Inspected By Duane Sanders **Date** 9-5-14

Supervisor Review Duane Sanders **Date** 9-5-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.6	Green (X)	Water Temp 20.6
Oxygen 43.0	Green Brown (_)	Oxygen 15.1
pH 9.50	Brown Green (_)	pH 9.55
Time 0500	Brown (_)	Time 0530

Pond Water Level 2½" +	Air Temp 14.4	Animal Burrows SOME
Water (Meter) Stop 9675179	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9643199	Erosion SOME	Pond Oder SLIGHT
Water Added 31,980		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

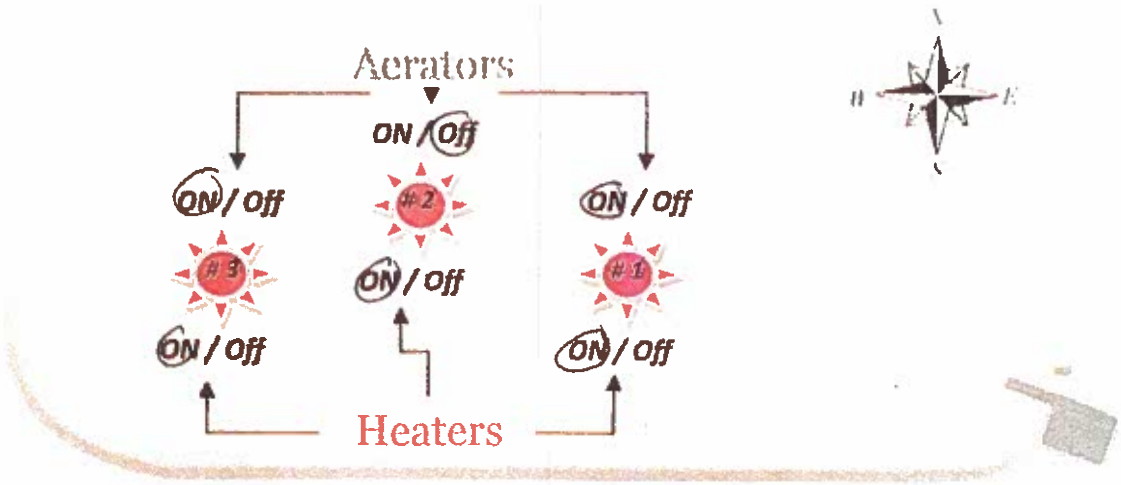
Inspected By Dream Sundram **Date** 9-3-14.

Supervisor Review Dream Sundram **Date** 9-3-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 19.2	Green (X)	Water Temp 19.3
Oxygen 28.1	Green Brown ( )	Oxygen 34.1
pH 9.56	Brown Green ( )	pH 9.51
Time 05:00	Brown ( )	Time 05:30

Pond Water Level +2½"	Air Temp 15.6	Animal Burrows SOME
Water (Meter) Stop 96,343,199	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 96,304,09	Erosion SOME	Pond Oder NONE
Water Added 12,790		

Common Bacterium-Per Drop ( ) Activated Sludge ( ) Glass Tube Test ( ) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

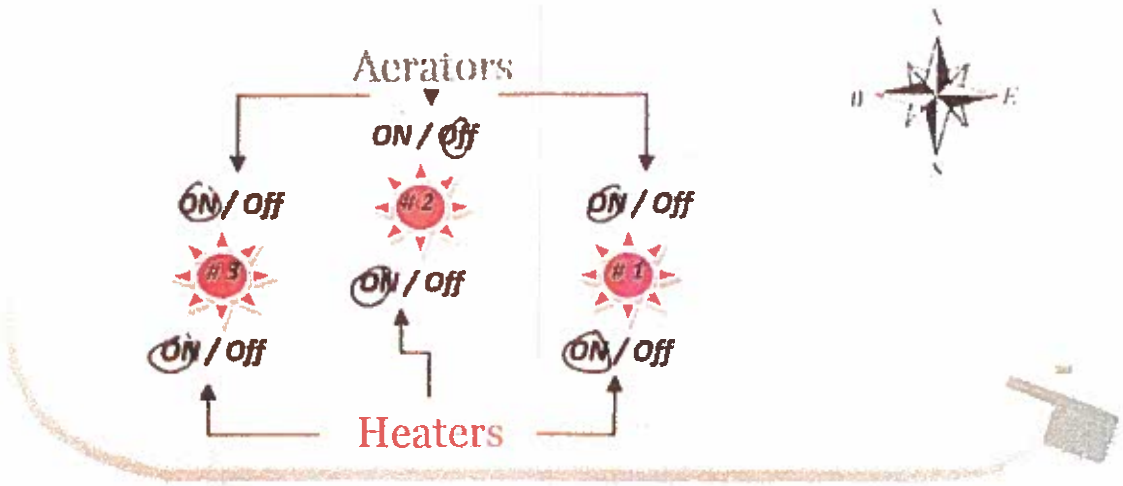
Inspected By [signature] **Date** 8-26-14.

Supervisor Review [signature] **Date** 8-26-14.

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.0	Green (X)	Water Temp 21.2
Oxygen 54.1	Green Brown ( )	Oxygen 11.3
pH 9.56	Brown Green ( )	pH 9.44
Time 0500	Brown ( )	Time 0530

Pond Water Level 3 1/4"	Air Temp 21.7	Animal Burrows SOME
Water (Meter) Stop 9630409	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9624033	Erosion SOME	Pond Oder VERY SLIGHT
Water Added 6,376		

Common Bacterium-Per Drop ( ) Activated Sludge ( ) Glass Tube Test ( ) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

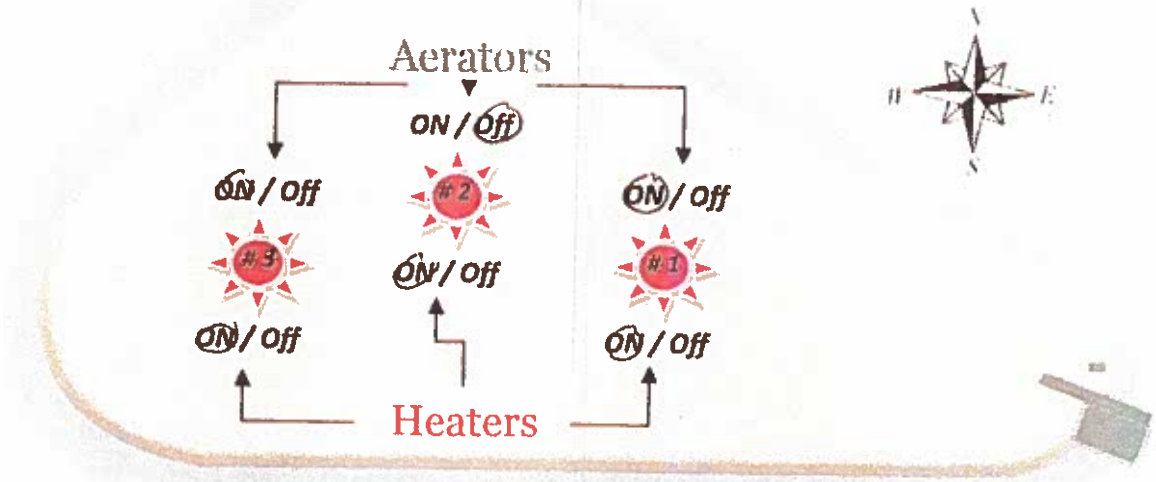
Inspected By [signature] **Date** 8-22-1

Supervisor Review [signature] **Date** 8-22-16

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 20.3	Green (X)	Water Temp 19.8
Oxygen 79.1	Green Brown (_)	Oxygen 33.2
pH 9.53	Brown Green (_)	pH 9.46
Time 0500	Brown (_)	Time 0530

Pond Water Level +3"	Air Temp 16.1	Animal Burrows SOME
Water (Meter) Stop 9624033	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9622738	Erosion SOME	Pond Oder NONE
Water Added 1,279		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

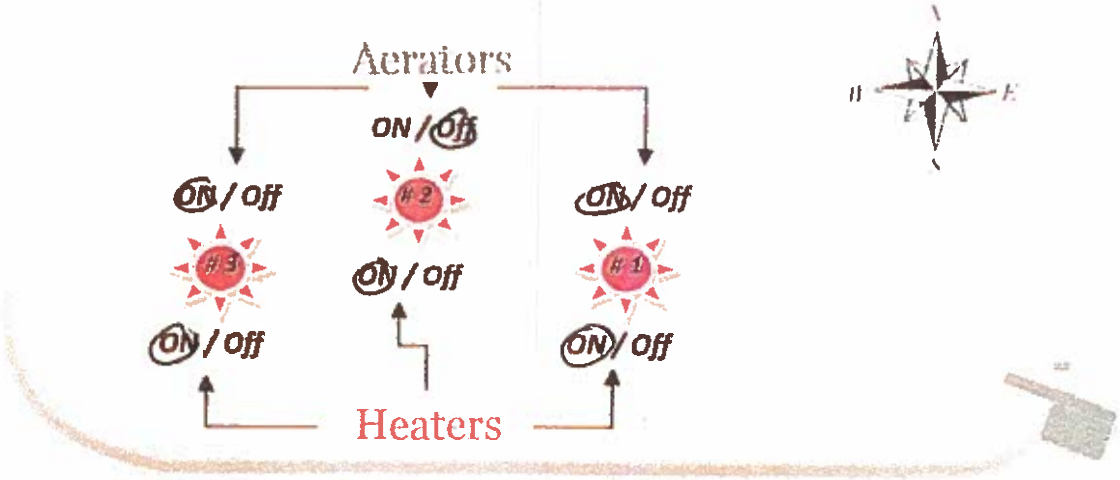
Inspected By [signature] **Date** 8-19-14

Supervisor Review [signature] **Date** 8-19-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 20.8	Green (X)	Water Temp 20.6
Oxygen 11.1	Green Brown ( )	Oxygen 12.4
pH 9.45	Brown Green ( )	pH 9.44
Time 0500	Brown ( )	Time 0530

Pond Water Level + 3 3/4"	Air Temp 18.1	Animal Burrows Some
Water (Meter) Stop 9,622,736	Wind Direction None	Weed Control Some
Water (Meter) Start 9,611,811	Erosion Some	Pond Oder Very Slight
Water Added 10,925		

Common Bacterium-Per Drop ( ) Activated Sludge ( ) Glass Tube Test ( ) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

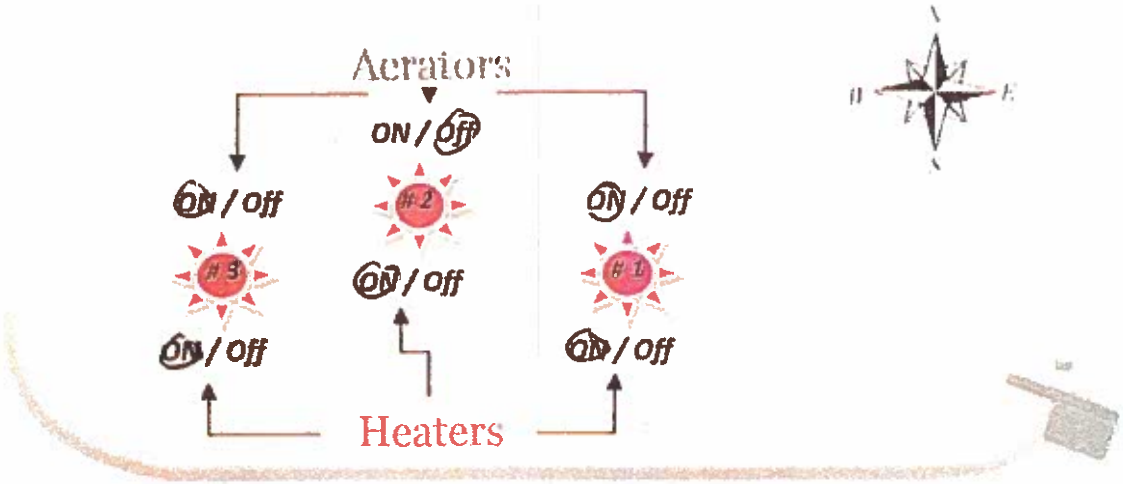
Inspected By [signature] Date 8-14-14

Supervisor Review [signature] Date 8-14-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.6	Green (X)	Water Temp 20.9
Oxygen 19.4	Green Brown (_)	Oxygen 12.4
pH 9.37	Brown Green (_)	pH 9.36
Time 05:00	Brown (_)	Time 05:30

Pond Water Level +4"	Air Temp 16.1	Animal Burrows SOME
Water (Meter) Stop 9611811	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9605496	Erosion SOME	Pond Oder SLIGHT
Water Added 6,315		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

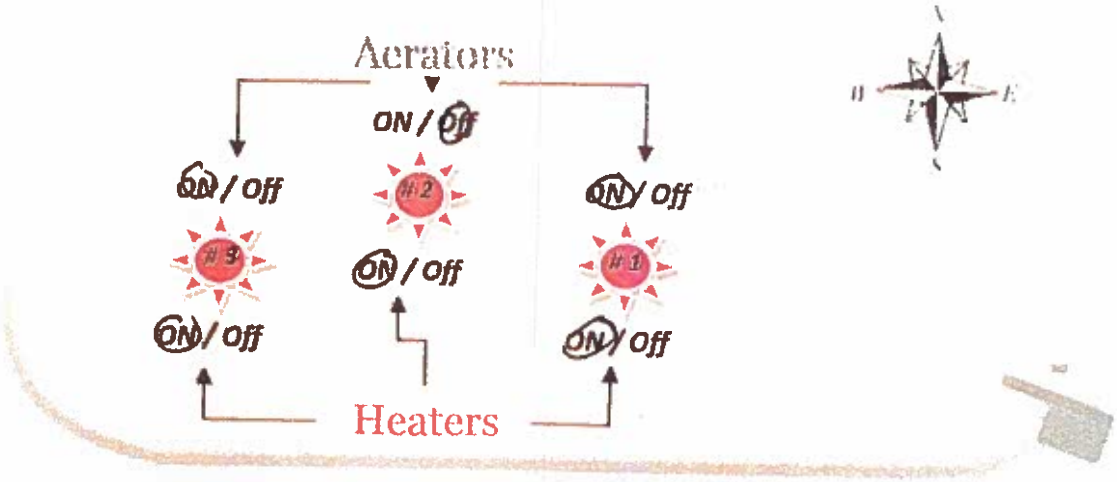
Inspected By Duane Sandner Date 8-11-14

Supervisor Review Duane Sandner Date 8-11-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 22.6	Green (X)	Water Temp 22.9
Oxygen 16.7	Green Brown ( )	Oxygen 12.9
pH 9.41	Brown Green ( )	pH 9.36
Time 0500	Brown ( )	Time 0530

Pond Water Level + 4 3/4"	Air Temp 21.1	Animal Burrows Some
Water (Meter) Stop 9605496	Wind Direction None	Weed Control Some
Water (Meter) Start 9600688	Erosion Some	Pond Oder None
Water Added 4,808		

Common Bacterium-Per Drop ( ) Activated Sludge ( ) Glass Tube Test ( ) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

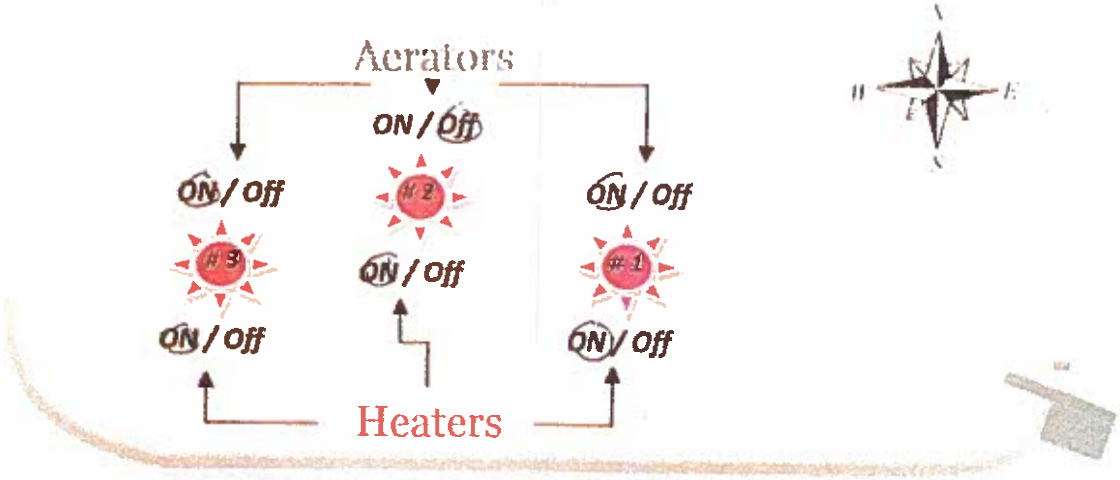
Inspected By Duane Jund **Date** 8-7-14.

Supervisor Review Duane Jund **Date** 8-7-14.

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 23.2	Green (X)	Water Temp 22.2
Oxygen 12.2	Green Brown (_)	Oxygen 4.2
pH 9.40	Brown Green (_)	pH 9.25
Time 0500	Brown (_)	Time 0530

Pond Water Level +5"	Air Temp 18.3	Animal Burrows SOME
Water (Meter) Stop 9600688	Wind Direction W-E	Weed Control SOME
Water (Meter) Start 9555003	Erosion SOME	Pond Oder NONE
Water Added 45,685		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (_)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

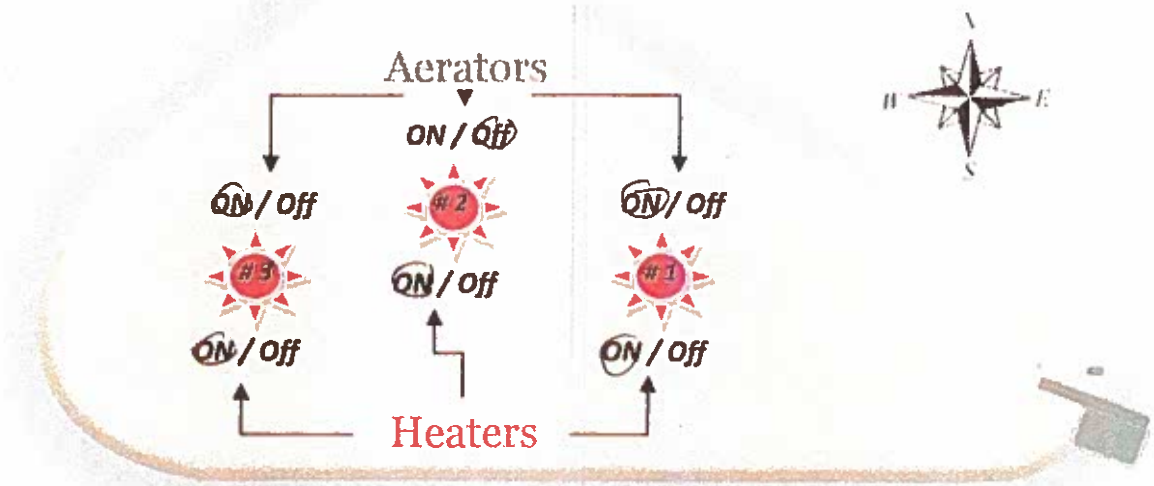
Inspected By [signature] **Date** 8-4-14

Supervisor Review [signature] **Date** 8-4-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 23.2	Green (X)	Water Temp 21.1
Oxygen 19.7	Green Brown (_)	Oxygen 5.4
pH 9.41	Brown Green (_)	pH 9.26
Time 0500	Brown (_)	Time 0530

Pond Water Level +4 1/4"	Air Temp 22.8	Animal Burrows Some
Water (Meter) Stop 9555003	Wind Direction E-W	Weed Control Some
Water (Meter) Start 9531879	Erosion Some	Pond Oder None
Water Added 23,126		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level DRY

Weed Control Some

Animal Burrows Some

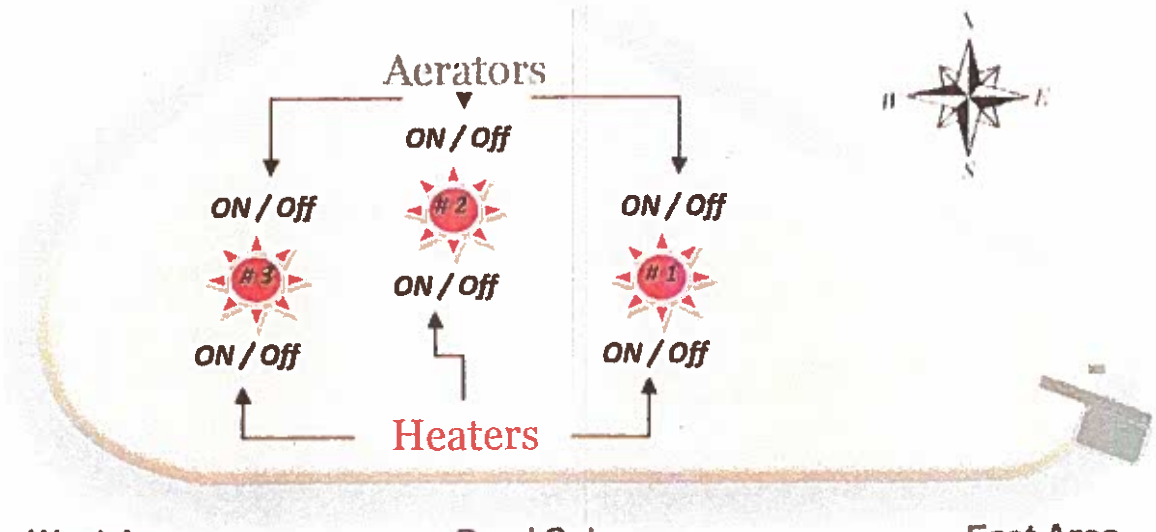
Inspected By [signature] **Date** 7-31-14

Supervisor Review [signature] **Date** 7-31-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 24.0	Green (X)	Water Temp 23.1
Oxygen 17.0	Green Brown (_)	Oxygen 5.1
pH 9.27	Brown Green (_)	pH 9.28
Time 0500	Brown (_)	Time 0530

Pond Water Level +4"	Air Temp 21.1	Animal Burrows SOME
Water (Meter) Stop 9531879	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9474725	Erosion SOME	Pond Oder NONE
Water Added 57,152		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level OK

Weed Control SOME

Animal Burrows SOME

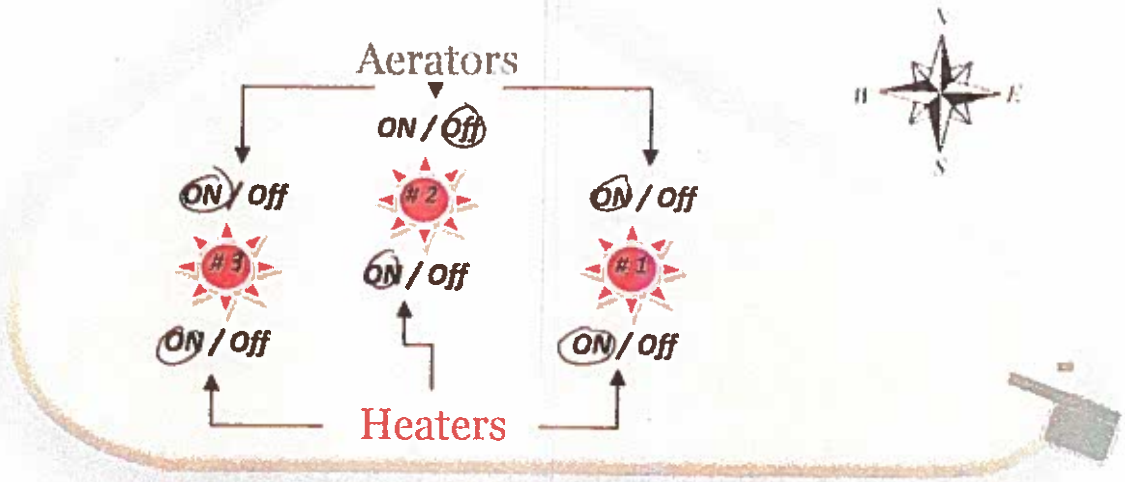
Inspected By [signature] **Date** 7-29-14

Supervisor Review [signature] **Date** 7-29-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 20.5	Green (X)	Water Temp 20.8
Oxygen 13.20	Green Brown (_)	Oxygen 6.3
pH 9.12	Brown Green (_)	pH 9.29
Time 0500	Brown (_)	Time 0530

Pond Water Level +3"	Air Temp 21.1	Animal Burrows SOME
Water (Meter) Stop 9474225	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9471888	Erosion SOME	Pond Oder VERY SLIGHT
Water Added 2,837		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

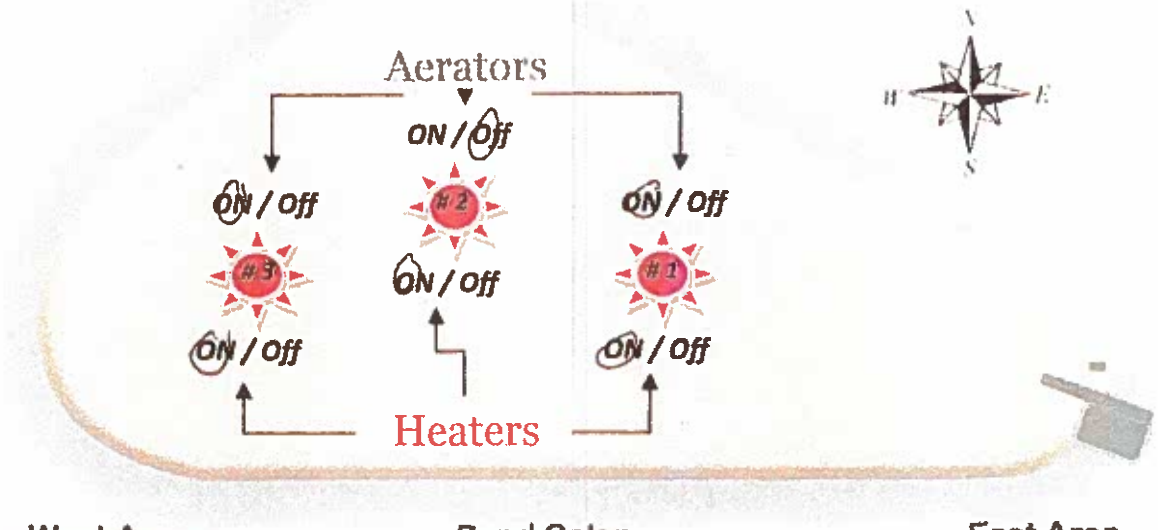
Inspected By Duane Lundeen **Date** 7-24-14

Supervisor Review Duane Lundeen **Date** 7-24-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 22.4	Green (X)	Water Temp 22.6
Oxygen 10.4	Green Brown (_)	Oxygen 11.1
pH 9.43	Brown Green (_)	pH 9.45
Time 0500	Brown (_)	Time ____

Pond Water Level +4½"	Air Temp 16.7	Animal Burrows Some
Water (Meter) Stop 947188	Wind Direction W-E	Weed Control Some
Water (Meter) Start 946432	Erosion Some	Pond Oder Slight
Water Added 7,456		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

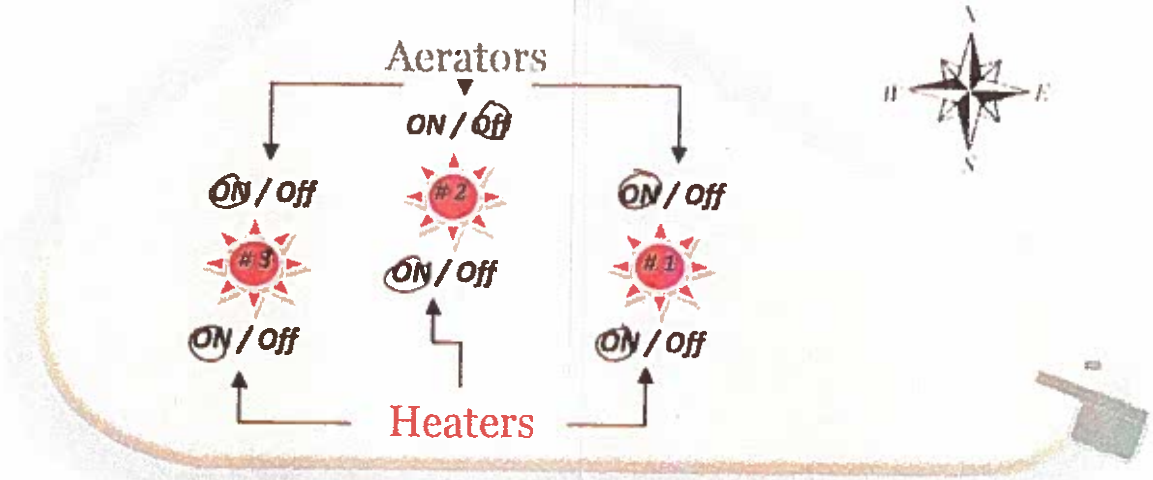
Inspected By Duane Pond **Date** 7-22-15

Supervisor Review Duane Pond **Date** 7-22-15

Comments _____

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.1	Green (X)	Water Temp 21.1
Oxygen 9.9	Green Brown (_)	Oxygen 4.8
pH 9.56	Brown Green (_)	pH 9.38
Time 0500	Brown (_)	Time 0530

Pond Water Level +5"	Air Temp 16.7	Animal Burrows Some
Water (Meter) Stop 9464392	Wind Direction W-E	Weed Control Some
Water (Meter) Start 9461202	Erosion Some	Pond Oder SLIGHT
Water Added 3,190		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level DRY

Weed Control Some

Animal Burrows Some

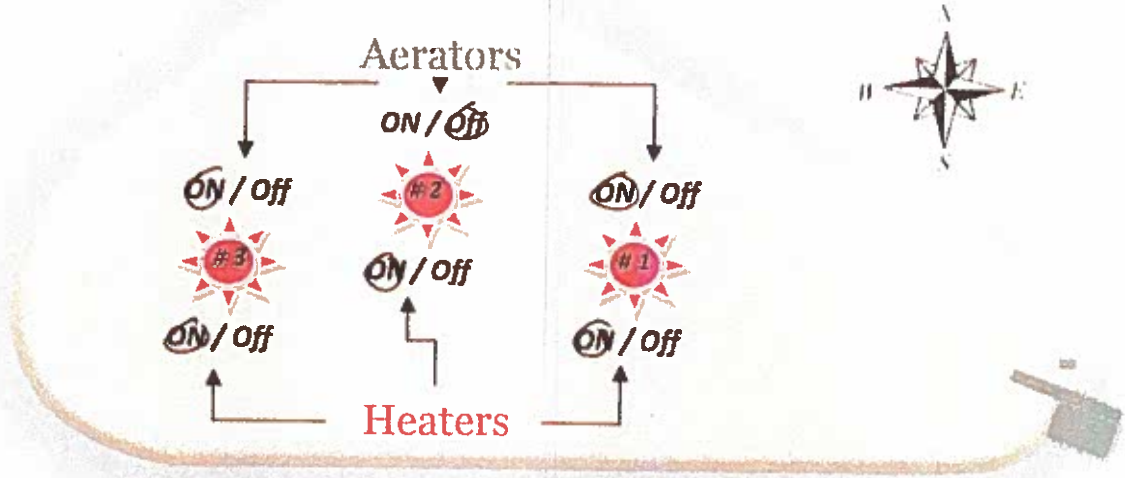
Inspected By [signature] **Date** 7-17-14

Supervisor Review [signature] **Date** 7-17-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 26.2	Green (X)	Water Temp 25.5
Oxygen 6.2	Green Brown (__)	Oxygen 5.1
pH 9.48	Brown Green (__)	pH 9.53
Time 0500	Brown (__)	Time 0530

Pond Water Level + 4 3/4"	Air Temp 24.4	Animal Burrows Some
Water (Meter) Stop 9461202	Wind Direction None	Weed Control Some
Water (Meter) Start 9410989	Erosion Some	Pond Oder None
Water Added 50,213		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

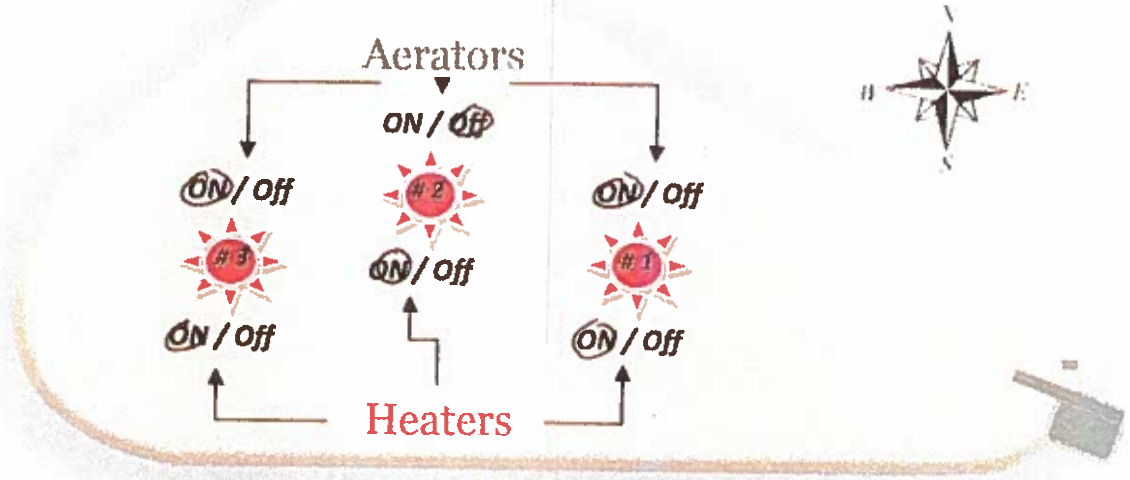
Inspected By [signature] **Date** 7-15-14

Supervisor Review [signature] **Date** 7-15-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.0	Green (X)	Water Temp 21.3
Oxygen 7.0	Green Brown (_)	Oxygen 3.2
pH 9.66	Brown Green (_)	pH 9.64
Time 0500	Brown (_)	Time 0530

Pond Water Level +4"	Air Temp 15.6	Animal Burrows SOME
Water (Meter) Stop 9410989	Wind Direction NONE	Weed Control SOME
Water (Meter) Start 9370855	Erosion SOME	Pond Oder NONE
Water Added 40,134		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (X)

Percolation Pond

Erosion SOME

Water Level DRY

Weed Control SOME

Animal Burrows SOME

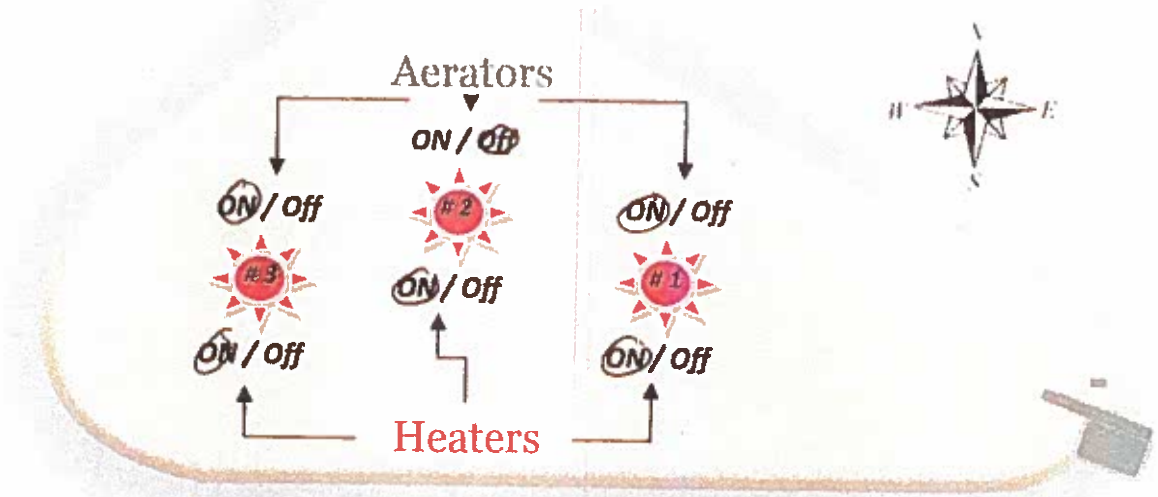
Inspected By Duane Jend **Date** 7-10-14

Supervisor Review Duane Jend **Date** 7-10-14

Comments

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 23.2	Green (X)	Water Temp 21.6
Oxygen 18.4	Green Brown (__)	Oxygen 11.9
pH 9.73	Brown Green (__)	pH 9.70
Time 0500	Brown (__)	Time 0530

Pond Water Level +3 3/4"	Air Temp 22.2	Animal Burrows Some
Water (Meter) Stop 9370855	Wind Direction Wave	Weed Control Some
Water (Meter) Start 9247389	Erosion Some	Pond Oder Slight
Water Added 123,466		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level Dry

Weed Control Some

Animal Burrows Some

Inspected By Duane Smith **Date** 7-8-14.

Supervisor Review Duane Smith **Date** 7-8-14.

Comments

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-22 AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VE6 CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 3.80 5.74.3 x3x = 12.96

DEPTH TO WATER(ft-bmp): 26.40 on 20-MAY-14 27.30 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 4.60 5.2 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 0959 INITIAL FLOW RATE (Q-GPM): 1.0

TIME PUMP OFF: 1023 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1004		4.3		7.58	22.8	1670	-90	1	29.61
1008		8.6		7.55	22.9	1693	-87	1	NM
1013		12.9		7.58	23.0	1701	-44	1	NM
1015				7.59	23.4	1704	-39	1	
1017				7.58	23.4	1700	-36		

METER	SERIAL #	CALIBRATED
pH :	610083	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 11.40 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-25N-22 / 3V85 TIME COLLECTED: 1023

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized~~ Polyethylene

Added 1.1 oz of CL

Shut off purge water after 3 cu to insure sufficient sample water.

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-22 AREA INFO: S300/GSA/EGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VES CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 3.80 4.2 x 3c = 12.6 Gal

DEPTH TO WATER(ft-bmp): 26.40 on 20-MAY-14 27.35 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 4.60 5.15 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1218 INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: 1239 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1223		4.2	1	7.56	22.7	1658	318	1	29.60
1227		8.4	2	7.54	22.7	1653	302	1	NM
1232		12.6	3	7.49	22.6	1650	277	1	NM
1234				7.52	22.6	1651	254	1	
1236				7.53	22.6	1649	250	1	

METER	SERIAL #	CALIBRATED		
pH :	610863	YES/NO	SAMPLER/EMPLOYER:	silva90
SC :		YES/NO	PROJECT:	3MRP
mV :		YES/NO	SAMPLE PRESERVATION/AMT of REAGENT:	NA
H2O:		YES/NO	PURGE VOL/EXCESS H2O DEST:	11.40 / S300-DRUM
			TF LOCATION:	S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-25N-22 / 3VES TIME COLLECTED: 1239

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS.FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 19-FEB-2014 Month: Norm Qtr: 1 Norm Year: 2014

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 19-Feb-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27014

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 12.12 (1.2 x 8 = 33.6)

DEPTH TO WATER(ft-bmp): 23.13 on 05-DEC-13 23.51 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 14.67 13.64 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1300 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1343 MEASURED BY (FLOW METER)/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1312		11.2	1	7.44	21.6	1505	76	1	24.52
1323		22.4	2	7.47	22.0	1495	75	1	25.13
1334		33.6	3	7.44	21.9	1496	80	1	25.21
1336				7.44	21.8	1493	77	1	
1338				7.45	21.8	1492	73	1	

METER	SERIAL #	CALIBRATED
pH :	6205340	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 36.36 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: - QC LAB(S): - QC SAMPLE TIME: -

SAMPLE ID (VERIFY): W-25N-23 / 3VES TIME COLLECTED: 1313

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 1.5 oz of CL

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 10.94 9.123w=

DEPTH TO WATER(ft-bmp): 24.56 on 20-MAY-14 26.09 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.24 11.06 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1109 INITIAL FLOW RATE (Q-GPM): 1.0 Q

TIME PUMP OFF: 1146 MEASURED BY: FLOW METER / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1118		9.1	1	7.37	23.1	1494	-135	1	26.71
1127		18.2	2	7.29	23.3	1485	-131	1	26.89
1136		27.3	3	7.28	23.3	1480	-115	1	27.12
1138				7.28	23.3	1479	-112	1	
1140				7.27	23.3	1481	-102	1	

METER	SERIAL #	CALIBRATED	
pH :	610883	YES/NO	
SC :		YES/NO	
mV :		YES/NO	
H2O:	/	YES/NO	

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 32.82 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: W-26R-48Y QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1209

SAMPLE ID (VERIFY): W-25N-23 / 3045 TIME COLLECTED: 1146

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 2.0 oz of CC

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 10.94 9.1 x 3 = 27.3 gal

DEPTH TO WATER(ft-bmp): 24.56 on 20-MAY-14 26.08 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.24 11.07 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1250 INITIAL FLOW RATE (Q-GPM): 1.0 Q

TIME PUMP OFF: 1325 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1259		9.1	1	7.40	23.0	1488	218	1	26.80
1300		18.2	2	7.38	23.1	1485	179	1	26.92
1317		27.3	3	7.37	23.1	1485	162	1	27.14
1319				7.38	23.1	1477	158	1	
1321				7.38	23.1	1479	155	1	

METER SERIAL # CALIBRATED

pH : 610663 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 32.82 / S300/DRUM

TF LOCATION: S300

QC SAMPLE ID: N-26R-48Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: ~~1400~~ 1415 ~~1325~~ ~~1325~~ ~~1330~~

SAMPLE ID (VERIFY): W-25N-23 / 3W45 TIME COLLECTED: 1325

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
3MRP	~~BCLABS-BAK~~	~~S3METALS+FILTER~~	~~0~~	500ml Polyethylene
~~3MRP~~	~~BCLABS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all cL

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27083

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 7.10 6.4x3= 19.2

DEPTH TO WATER(ft-bmp): 21.21 on 20-MAY-14 22.31 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.59 7.79 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 0915 INITIAL FLOW RATE (Q=GPM): 1.5

TIME PUMP OFF: 0941 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0920		6.4	1	7.58	22.7	1637	-41	1	22.48
0925		12.8	2	7.28	22.2	1640	-11	1	22.52
0929		19.2	3	7.24	22.2	1640	-8	1	22.53
0931				7.24	22.2	1638	-7	1	
0933				7.23	22.1	1640	-12	1	

METER	SERIAL #	CALIBRATED
pH :	610863	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 21.29 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75Y QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 0847

SAMPLE ID (VERIFY): ~~W~~ W-7ES / 3VES TIME COLLECTED: 0941

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
~~3MRP~~	BCLABS-BAK	S3METALS	1	500ml Polyethylene
~~3MRP~~	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
~~3MRP~~	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

mjs

Added 1.2 oz of CC

All Ground Water Sampling Data

Target Sample Date: 21-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 21-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA270854

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 7.10

DEPTH TO WATER(ft-bmp): 21.21 on 20-MAY-14 ~~23.34~~ 22.34 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.59 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1139 INITIAL FLOW RATE (Q=GPM): 1.5a

TIME PUMP OFF: MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1144		6.4	1	7.63	22.6	1634	412	1	22.50
1149		12.8	2	7.33	22.6	1630	315	1	22.54
1154		19.2	3	7.31	22.6	1635	273	1	22.54
1156				7.29	22.6	1633	250	1	
1158				7.29	22.6	1629	235	1	

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT OF REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 21.29 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75I QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1230

SAMPLE ID (VERIFY): W-7ES / 3VES TIME COLLECTED: 1202

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS:FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-7PS AREA INFO: S300/GSA/CGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27083

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-3/NO3-17

SCREENED INTERVAL (ft-bmp): 19.48 - 22.48 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 19.50 / 22.48 on 12-APR-94 CASING VOL (Gal/Time): 18.33

DEPTH TO WATER(ft-bmp): 0.00 on 20-MAY-14 Dry VOLUME FACTOR: 0.826

WATER IN CASING (ft): 22.18 CASING DIAMETER/TCASING HT(in): 6.5 / 2.68

TIME PUMP ON: INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: na

PURGE VOL/EXCESS H2O DEST: 54.98 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7PS / 3089 TIME COLLECTED:

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	E245.2	1	1 L Polyethylene
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Dry, No Samples

NOTE:
Purge rate/time: N/A since est_aus_flow = 0
Purge Volume: 23.7900009 gal.
Revision: 06/11/2014

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-35A-04 AREA INFO: 8300/GSA/CGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27083

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 10.43 9.8x3=29.4

DEPTH TO WATER(ft-bmp): 16.38 on 04-JUN-14 16.61 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 12.62 11.96 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1033 INITIAL FLOW RATE (Q=GPM): 2.0 Q

TIME PUMP OFF: MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1038		9.8	1	7.69	22.5	1638	63	1	17.03
1043		19.6	2	7.61	22.7	1639	64	1	17.41
1049		29.4	3	7.58	22.5	1636	61	1	17.68
1051				7.57	22.5	1629	58	1	
1053				7.57	22.4	1631	58	1	

METER	SERIAL #	CALIBRATED
pH :	610983	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 31.28 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-35A-04 | 3VES TIME COLLECTED: 1100

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~GH9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 2.5 oL of CL

All Ground Water Sampling Data

Target Sample Date: 21-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 21-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27089-4

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 10.43 9.8+2.0=29.4

DEPTH TO WATER(ft-bmp): 16.38 on 04-JUN-14 16.65 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 12.62 11.92 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1308 INITIAL FLOW RATE (Q=GPM): 2.0 Q

TIME PUMP OFF: 1330 MEASURED BY: FLOW METER / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1313		9.8	1	7.64	22.6	1630	482	1	17.05
1318		19.6	2	7.64	22.6	1635	412	1	17.40
1323		29.4	3	7.59	22.6	1633	388	1	17.71
1325				7.57	22.5	1630	359	1	
1327				7.57	22.4	1630	351	1	

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 31.28 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-35A-04 | 3VES TIME COLLECTED: 1330

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3MBTABS:FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3WBTCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 18-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-01 AREA INFO: S300/GSA/EGSA

DATE: 18-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27081

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 8.06 5.4 x 3w = 16.2

DEPTH TO WATER(ft-bmp): 22.71 on 20-MAY-14 23.41 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 9.76 6.59 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 1240 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1306 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1246		5.4	1	7.70	22.8	1438	42	1	27.71
1252		10.8	2	7.70	22.6	1434	40	1	27.73
1257		16.2	3	7.70	22.6	1431	40	1	NM
1259				7.68	22.6	1428	37	1	
1301				7.67	22.6	1420	39	1	

METER	SERIAL #	CALIBRATED
pH :	610888	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: 1.14

PURGE VOL/EXCESS H2O DEST: 24.19 / TF-834

TF LOCATION: 834

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): GW-26R-01 / 3VES TIME COLLECTED: 1306

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Turned off purge water to collect Sample

Added 1.0 oz of CL

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-01 AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27088 2

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 8.06 5.2 Gal

DEPTH TO WATER(ft-bmp): 22.71 on 20-MAY-14 23.63 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 9.76 6.37 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 1230 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1253 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1236		5.2	1	7.72	22.6	1431	379	1	27.70
1241		10.4	2	7.71	22.6	1434	302	1	NM
1246		15.6	3	7.69	22.6	1430	288	1	NM
1248				7.69	22.7	1431	277	1	
1250				7.68	22.7	1430	270	1	

METER	SERIAL #	CALIBRATED
pH :	610663	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 24.19 / TF-834

TF LOCATION: 834

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-01 / 3VES TIME COLLECTED: 1253

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~G3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~G3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALSTFILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~G3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all cc

All Ground Water Sampling Data

Target Sample Date: 18-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 18-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27081

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 7.39 (6.8 x 3) = 20.4

DEPTH TO WATER(ft-bmp): 20.04 on 20-MAY-14 21.03 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.94 8.25 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1318 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1350 MEASURED BY: FLOW METER GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1325		6.8	1	7.71	23.9	1354	-33	1	21.12
1332		13.6	2	7.69	23.7	1350	-32	1	22.18
1339		20.4	3	7.67	23.7	1344	-27	1	22.18
1341				7.67	23.7	1341	-28	1	
1343				7.67	23.7	1344	-28	1	

METER	SERIAL #	CALIBRATED		
pH :	608883	YES/NO	SAMPLER/EMPLOYER:	silva90
SC :		YES/NO	PROJECT:	3MRP
mV :		YES/NO	SAMPLE PRESERVATION/AMT of REAGENT:	NA
H2O:		YES/NO	PURGE VOL/EXCESS H2O DEST:	22.16 / S300-DRUM
			TF LOCATION:	S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-11 / 3xS TIME COLLECTED: 1350

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHANAL~~	~~SM9221~~	1	~~250 ml Sterilized Polyethylene~~

No Sample

Added 1.2 oz of CL

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27084-2

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 7.39 6.7+13.4=20.1

DEPTH TO WATER(ft-bmp): 20.04 on 20-MAY-14 21.20 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.94 8.08 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1310 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1335 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1317		6.7	1	7.70	23.8	1350	482	1	21.14
1324		13.4	2	7.70	23.8	1349	377	1	22.20
1331		20.1	3	7.69	23.7	1347	315	1	22.23
1333				~~7.69~~ 7.69	23.7	1344	289	1	
1335				7.68	23.7	1340	259	1	

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90
PROJECT: 3MRP
SAMPLE PRESERVATION/AMT of REAGENT: 2/2
PURGE VOL/EXCESS H2O DEST: 22.16 / S300-PRUM
TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-11/3045 TIME COLLECTED: 1338

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	S3METALS	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALSFILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	BCLABS-BAK	S3WETCHEM	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 18-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-05 AREA INFO: S300/GSA/EGSA

DATE: 18-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27081

PURGE METHOD/SAMPLE METHOD: PB / 90BA CONTAMINANT PRESENT: TCE-3.3/NO3-53

SCREENED INTERVAL (ft-bmp): 22.05 - 27.05 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 25.50 / 26.68 on 10-FEB-91 CASING VOL (Gal/Time): 0.97 .27 = .24

DEPTH TO WATER(ft-bmp): 25.82 on 20-MAY-14 26.35 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 1.18 .33 CASING DIAMETER/TCASING HT(in): 4.5 / 1.50

TIME PUMP ON: INITIAL FLOW RATE (Q=GPM): —

TIME PUMP OFF: MEASURED BY: FLOW METER/ GRAD CYL / BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1139		.20 Gal	90%	8.00	22.1	1065	100	1	26.55

METER	SERIAL #	CALIBRATED
pH :	6/08583	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 0.88 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-05 / 90BA TIME COLLECTED: 1217

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	~~2~~ 1	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

unable to collect (2) 500ml poly for S3Wetchem, was only able to collect 1 due to insuff H2O.

only able to collect a partial S3Anions

Added .1 oz of CL

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 10 gal.
Revision: 06/11/2014

All Ground Water Sampling Data

Target Sample Date: 21-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-26R-05 AREA INFO: S300/GSA/EGSA

DATE: 21-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA270844

PURGE METHOD/SAMPLE METHOD: PB / 90BA CONTAMINANT PRESENT: TCE-3.3/NO3-53

SCREENED INTERVAL (ft-bmp): 22.05 - 27.05 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 25.50 / 26.68 on 10-FEB-91 CASING VOL (Gal/Time): 0.97

DEPTH TO WATER(ft-bmp): 25.82 on 20-MAY-14 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 1.18 CASING DIAMETER/TCASING HT(in): 4.5 / 1.50

TIME PUMP ON: — INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: — MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1110			40%	8.03	22.0	1051	89	1	26.90

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 0.88 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-05 | QCSA TIME COLLECTED: 1115

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLRBS-BAK~~	~~S3ANIONS~~	~~1~~	~~250-ml Polyethylene~~
~~3MRP~~	~~BCLRBS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLRBS-BAK~~	~~S3METALSFILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLRBS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

NO Samples

Evacuated all CL

Very little water in well.

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 10 gal.
Revision: 06/11/2014

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 8.80 8.1(1.36) = 24.3

DEPTH TO WATER(ft-bmp): 19.35 on 20-MAY-14 20.58 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 10.65 9.92 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 0908 INITIAL FLOW RATE (Q=GPM): 2.0 Q

TIME PUMP OFF: 0931 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0912		8.1	1	7.67	22.1	1592	72	1	20.43
0916		16.2	2	7.59	22.4	1594	32	1	20.43
0920		24.3	3	7.54	22.3	1591	19	1	20.43
0922				7.52	22.3	1598	22		
0924				7.52	22.3	1597	21		

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT OF REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 26.40 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: EGSAFB QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 0931

SAMPLE ID (VERIFY): W-7DS / 3VES TIME COLLECTED: 0931

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~CH9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 2.0 oz of CL

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082 3

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 8.80 8.1 x 3 = 24.3

DEPTH TO WATER(ft-bmp): 19.35 on 20-MAY-14 20.39 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 10.65 9.91 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1330 INITIAL FLOW RATE (Q=GPM): 2.0

TIME PUMP OFF: MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1339		8.1	1	7.70	22.0	1603	312	1	20.45
1347		16.2	2	7.61	22.1	1598	301	1	20.47
1355		24.3	3	7.59	22.1	1590	284	1	20.47
1357				7.59	22.1	1588	251		
1359				7.57	22.1	1588	246		

METER	SERIAL #	CALIBRATED
pH :	610883	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 26.40 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: EGSAFB QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1404

SAMPLE ID (VERIFY): W-7DS / 3VES TIME COLLECTED: 1404

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
3MRP	BCLABS-BAK	S3METALS	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS:FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	S3WETCHEM	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-22 AREA INFO: 8300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VES CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 3.80 5.74.3 x3x.826=12.96

DEPTH TO WATER(ft-bmp): 26.40 on 20-MAY-14 27.30 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 4.60 5.2 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 0959 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1023 MEASURED BY: FLOW METER / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1004		4.3		7.58	22.8	1670	-90	1	29.61
1008		8.6		7.55	22.9	1693	-87	1	NM
1013		12.9		7.58	23.0	1701	-44	1	NM
1015				7.59	23.4	1704	-39	1	
1017				7.58	23.4	1700	-36		

METER	SERIAL #	CALIBRATED
pH :	610083	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 11.40 / 8300-DRUM

TF LOCATION: 8300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-25N-22 / 3VES TIME COLLECTED: 1023

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized~~ Polyethylene

Added 1.1 oz of CL

Shut off purge water after 3 cu to insure sufficient sample water.

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-22 AREA INFO: S300/GSA/EGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VES CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 3.80 4.2 x 3 = 12.6 Gal

DEPTH TO WATER(ft-bmp): 26.40 on 20-MAY-14 27.35 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 4.60 5.15 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1218 INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: 1239 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1223		4.2	1	7.56	22.7	1658	318	1	29.60
1227		8.4	2	7.54	22.7	1653	302	1	NM
1232		12.6	3	7.49	22.6	1650	277	1	NM
1234				7.52	22.6	1651	254	1	
1236				7.53	22.6	1649	250	1	

METER	SERIAL #	CALIBRATED		
pH :	610883	YES/NO	SAMPLER/EMPLOYER:	silva90
SC :		YES/NO	PROJECT:	3MRP
mV :		YES/NO	SAMPLE PRESERVATION/AMT of REAGENT:	NA
H2O:		YES/NO	PURGE VOL/EXCESS H2O DEST:	11.40 / S300-DRUM
			TF LOCATION:	S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-25N-22 / 3VES TIME COLLECTED: 1239

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS,FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 19-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 19-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 10.94 9.123w=

DEPTH TO WATER(ft-bmp): 24.56 on 20-MAY-14 26.09 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.24 11.06 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1109 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1146 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1118		9.1	1	7.37	23.1	1494	-135	1	26.71
1127		18.2	2	7.29	23.3	1485	-131	1	26.89
1136		27.3	3	7.28	23.3	1480	-115	1	27.12
1138				7.28	23.3	1479	-112	1	
1140				7.27	23.3	1481	-102	1	

METER	SERIAL #	CALIBRATED	
pH :	610883	YES/NO	
SC :		YES/NO	
mV :		YES/NO	
H2O:	/	YES/NO	

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 32.82 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: W-26R-48Y QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1209

SAMPLE ID (VERIFY): W-25N-23 / 3025 TIME COLLECTED: 1146

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3MRP	BCLABS-BAK	S3ANIONS	1	250 ml Polyethylene
3MRP	BCLABS-BAK	S3METALS	1	500ml Polyethylene
3MRP	BCLABS-BAK	S3METALS:FILTER	0	500ml Polyethylene
3MRP	BCLABS-BAK	S3WETCHEM	2	500ml Polyethylene
~~3MRP~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 2.0 oz of CC

All Ground Water Sampling Data

Target Sample Date: 20-AUG-2014 Month: Norm Qtr: 3 Norm Year: 2014

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 20-Aug-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27082

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 10.94 9.1 x 3 = 27.3 gal

DEPTH TO WATER(ft-bmp): 24.56 on 20-MAY-14 26.08 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.24 11.07 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 1250 INITIAL FLOW RATE (Q-GPM): 1.00

TIME PUMP OFF: 1325 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1259		9.1	1	7.40	23.0	1488	218	1	26.80
1300		18.2	2	7.38	23.1	1485	179	1	26.92
1317		27.3	3	7.37	23.1	1485	162	1	27.14
1319				7.38	23.1	1477	158	1	
1321				7.38	23.1	1479	155	1	

METER	SERIAL #	CALIBRATED
pH :	610663	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT:

PURGE VOL/EXCESS H2O DEST: 32.82 / S300 DRUM

TF LOCATION: S300

QC SAMPLE ID: W-26R-48Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: ~~1420~~ 1415 1325 ~~1430~~ ~~1420~~

SAMPLE ID (VERIFY): W-25N-23 / 3045 TIME COLLECTED: 1325

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3MRP~~	~~BCLABS-BAK~~	~~S3ANIONS~~	~~1~~	~~250 ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS~~	~~1~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3METALS+FILTER~~	~~0~~	~~500ml Polyethylene~~
~~3MRP~~	~~BCLABS-BAK~~	~~S3WETCHEM~~	~~2~~	~~500ml Polyethylene~~
3MRP	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all cL

All Ground Water Sampling Data

Target Sample Date: 18-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 18-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27116

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 6.16 5.9 x 3 = 17.7

DEPTH TO WATER(ft-bmp): 22.34 on 21-AUG-14 22.98 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 7.46 7.12 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1230 INITIAL FLOW RATE (Q=GPM): 20

TIME PUMP OFF: 1251 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1233		5.9	1	7.41	22.7	1657	35	1	23.08
1236		11.8	2	7.43	23.1	1648	60	1	23.08
1239		17.7	3	7.45	22.9	1643	80	1	23.11
1241				7.44	22.9	1640	77	1	
1243				7.42	22.8	1637	74	1	

METER	SERIAL #	CALIBRATED
pH :	604347	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: /UA

PURGE VOL/EXCESS H2O DEST: 18.49 / S300-DRUM

TF LOCATION: S100

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W 7ES / 3VES TIME COLLECTED: 1251

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS /	QUANTITY	/ TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3CMP	BCLABS-BAK	E601	3	40 mL Glass VOA vial
~~3EMG~~	~~ALPHAANAL~~	~~SM9221~~	~~1~~	~~250 ml Sterilized Polyethylene~~

Added 1.1 oz of CL

All Ground Water Sampling Data

Target Sample Date: 19-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 19-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27116 7

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 6.16 5.9x3=17.7

DEPTH TO WATER(ft-bmp): 22.34 on 21-AUG-14 23.00 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 7.46 7.10 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 0902 INITIAL FLOW RATE (Q=GPM): 2.0 Q

TIME PUMP OFF: 0926 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0905		5.9	1	7.39	21.7	1653	310	1	23.12
0908		11.8	2	7.40	22.4	1650	279	1	23.12
0911		17.7	3	7.42	22.4	1649	233	1	23.14
0913				7.43	22.4	1640	189	1	
0915				7.43	22.4	1644	177	1	
0920				7.40	22.6	1640	174	1	

METER	SERIAL #	CALIBRATED
pH :	641347	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 18.49 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7ES / 3VES TIME COLLECTED: 0926

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3EMG~~	~~SCLABS-BAK~~	~~B120.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~SCLABS-BAK~~	~~E150.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~SCLABS-BAK~~	~~B300.0:NO3~~	~~1~~	~~250 ml Polyethylene~~
~~3CMP~~	~~SCLABS-BAK~~	~~E601~~	~~3~~	~~40 mL Glass VOA vial~~
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 17-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-7PS AREA INFO: S300/GSA/CGSA

DATE: 17-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-3/NO3-17

SCREENED INTERVAL (ft-bmp): 19.48 - 22.48 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 19.50 / 22.48 on 12-APR-94 CASING VOL (Gal/Time): 18.33

DEPTH TO WATER(ft-bmp): 0.00 on 20-MAY-14 Dry VOLUME FACTOR: 0.826

WATER IN CASING (ft): 22.18 CASING DIAMETER/TCASING HT(in): 4.5 / 2.68

TIME PUMP ON: INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW

DRY

METER	SERIAL #	CALIBRATED
pH :		YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT:

PURGE VOL/EXCESS H2O DEST: 54.98 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: QC LAB(S): QC SAMPLE TIME:

SAMPLE ID (VERIFY): TIME COLLECTED:

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3CMP	CURTISTOMP	E601	3	40 mL Glass VOA vial
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Dry no water detected

NOTE:
Purge rate/time: N/A since est_aus_flow = 0
Purge Volume: 23.7900009 gal.
Revision: 06/11/2014

All Ground Water Sampling Data

Target Sample Date: 18-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-35A-04 AREA INFO: 8300/GSA/COSA

DATE: 18-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27116

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 10.20 8.6 x 3 = 25.8

DEPTH TO WATER(ft-bmp): 16.65 on 21-AUG-14 18.20 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 12.35 10.37 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1322 INITIAL FLOW RATE (Q=GPM): 3.0

TIME PUMP OFF: 1349 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1325		46.6	1	7.49	22.5	1656	129	1	18.11
1328		17.2	2	7.45	23.0	1612	116	1	18.18
1331		25.8	3	7.47	22.9	1644	119	1	
1333				7.44	22.9	1645	117	1	
1335				7.44	22.8	1645	115	1	

METER SERIAL # CALIBRATED
pH : ED1347 YES/NO
SC : YES/NO
mV : YES/NO
H2O: YES/NO

SAMPLER/EMPLOYER: silva90
PROJECT: 3CMP 3EMG
SAMPLE PRESERVATION/AMT of REAGENT: NA
PURGE VOL/EXCESS H2O DEST: 30.61 / None
TF LOCATION: Collect

QC SAMPLE ID: QC LAB(S): QC SAMPLE TIME:

SAMPLE ID (VERIFY): W-35A-04 TIME COLLECTED: 1349

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3EMG	GEL	AS:FILTER	0	1L Polyethylene
3EMG	GEL	AS:UISO	2	1L Polyethylene
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E200.7:FILTER	0	1L Polyethylene
3EMG	BCLABS-BAK	E200.7:K	1	1L Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:PERC	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E502.2	6	40 mL Glass VOA vial
3CMP	CURTISTOMP	E601	3	40 mL Glass VOA vial
3EMG	BCLABS-BAK	E8330:R+H	3	1L Amber Glass
3EMG	GEL	E900	1	1L Polyethylene
3EMG	GEL	E900:FILTER	0	1L Polyethylene
3EMG	GEL	E906	1	250 ml GLASS-AMBER
~~3EMG~~	~~ALPHAANAL~~	~~GH9221~~	1	~~250 ml Sterilized Polyethylene~~
3EMG	BCLABS-BAK	WGMGMET3	1	1L Polyethylene
3EMG	BCLABS-BAK	WGMGMET3:FILTER	0	1L Polyethylene

Added 2.0 oz of CC

All Ground Water Sampling Data

Target Sample Date: 19-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 19-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27116 7

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 10.20

DEPTH TO WATER(ft-bmp): 16.65 on 21-AUG-14 18.23 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 12.35 10.34 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1107 INITIAL FLOW RATE (Q=GPM): 3.0

TIME PUMP OFF: 1124 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1110		8.6	1	7.47	22.3	1649	412	1	18.26
1113		17.2	2	7.46	22.6	1653	370	1	18.26
1116		25.8	3	7.46	22.6	1651	321	1	18.29
1118				7.45	22.7	1647	287	1	
1120				7.46	22.6	1643	264	1	

METER	SERIAL #	CALIBRATED
pH :	604447	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 30.61 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-35A-04 | 3VES TIME COLLECTED: 1124

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3EMG~~	~~GEL~~	~~A6:FILTER~~	0	~~1L Polyethylene~~
~~3EMG~~	~~GEL~~	~~A8:UISO~~	2	~~1L Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	E120.1	1	~~250 ml Polyethylene~~
~~3EMG~~	BCLABS-BAK	E150.1	1	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E200.7:FILTER~~	0	~~1L Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E200.7:K~~	1	~~1L Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E300.0:NO3~~	1	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E300.0:PERC~~	1	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E503.2~~	6	40 mL Glass VOA vial
~~3CMP~~	~~CURTISTONP~~	~~P001~~	3	~~40 mL Glass VOA vial~~
~~3EMG~~	~~BCLABS-BAK~~	~~E8330:R+H~~	3	1L Amber Glass
~~3EMG~~	~~GEL~~	~~S900~~	1	~~1L Polyethylene~~
~~3EMG~~	~~GEL~~	~~S900:FILTER~~	0	~~1L Polyethylene~~
~~3EMG~~	~~GEL~~	~~S905~~	1	~~250 ml GLASS-AMBER~~
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene
~~3EMG~~	~~BCLABS-BAK~~	~~WGMGMET3~~	1	~~1L Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~WGMGMET3:FILTER~~	0	~~1L Polyethylene~~

Evacuated all CL

All Ground Water Sampling Data

Target Sample Date: 17-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-26R-01 AREA INFO: 8300/GSA/EGSA

DATE: 17-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 7.30 4.6 x 3 = 13.8 gal

DEPTH TO WATER(ft-bmp): 23.63 on 19-AUG-14 24.40 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.84 5.6 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 1012 INITIAL FLOW RATE (Q=GPM): .8 Q

TIME PUMP OFF: 1038 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1015		4.6	1	7.58	23.2	1439	123	1	28.11
1024		9.2	2	7.63	23.3	1435	65	1	*
1030		13.8	3	7.70	23.9	1442	80	1	*
1032	.3			7.72	24.2	1448	77	1	
1034	.3			7.71	24.3	1453	79	1	

METER	SERIAL #	CALIBRATED		
pH :	654347	YES/NO	SAMPLER/EMPLOYER:	silva90
SC :		YES/NO	PROJECT:	3EMG
mV :		YES/NO	SAMPLE PRESERVATION/AMT of REAGENT:	NA
H2O:		YES/NO	PURGE VOL/EXCESS H2O DEST:	21.91 / TF-834
			TF LOCATION:	834

QC SAMPLE ID: W-26R-49Y EGSAFB QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1059

SAMPLE ID (VERIFY): 13-26R-01 / 3VES TIME COLLECTED: 1038

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

* Dry top of pump (WC)

Added .9 oz of CL

All Ground Water Sampling Data

Target Sample Date: 18-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-26R-01 AREA INFO: 5300/GSA/EGSA

DATE: 18-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA2711~~5~~ 6

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 7.30 4.6 x 3x = 13.8

DEPTH TO WATER(ft-bmp): 23.63 on 19-AUG-14 24.23 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.84 5.67 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 0843 INITIAL FLOW RATE (Q-GPM): .5

TIME PUMP OFF: 0920 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0852		4.6	1	7.03	22.8	1460	731	1	26.54
0901		9.2	2	7.02	24.0	1453	680	1	*
0910		13.8	3	7.12	21.6	1449	533	1	*
0912				7.20	21.8	1441	488	1	
0914				7.20	21.8	1439	471	1	

METER	SERIAL #	CALIBRATED
pH :	C04347	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: n/a

PURGE VOL/EXCESS H2O DEST: 21.91 / TF-034

TF LOCATION: 834

QC SAMPLE ID: W-26R-49Y EGSAFB QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: ~~0947~~ 3VES

SAMPLE ID (VERIFY): W26R01 / 3VES TIME COLLECTED: 0920

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3EMG~~	~~BCLABS-BAK~~	~~E120.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E150.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E300.0:NO3~~	~~1~~	~~250 ml Polyethylene~~
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Evacuated all ok

* Hitting top of pump

All Ground Water Sampling Data

Target Sample Date: 17-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 17-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 6.43 6.2x3=18.6

DEPTH TO WATER(ft-bmp): 21.20 on 19-AUG-14 21.73 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 7.78 7.55 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1115 INITIAL FLOW RATE (Q-GPM): .80 a

TIME PUMP OFF: 1148 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1123		6.2	1	7.50	23.8	1304	-15	1	21.74
1131		12.4	2	7.48	24.1	1307	10	1	21.82
1139		18.6	3	7.52	24.3	1306	30	1	21.97
1141				7.52	24.4	1308	26	1	
1143				7.50	24.3	1312	24	1	

METER	SERIAL #	CALIBRATED
pH :	604387	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3GIV

SAMPLE PRESERVATION/AMT of REAGENT: —

PURGE VOL/EXCESS H2O DEST: 19.28 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-11/3VES TIME COLLECTED: 1148

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3GIV	BCLABS-BAK	E601	3	40 mL Glass VOA vial
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Added 1.2 oz of CL

All Ground Water Sampling Data

Target Sample Date: 18-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 18-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27118-6

PURGE METHOD/SAMPLE METHOD: GF / 3VEB CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 6.43 6.05 x 3 = 19

DEPTH TO WATER(ft-bmp): 21.20 on 19-AUG-14 21.90 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 7.78 7.38 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 0938 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1009 MEASURED BY: FLOW METER / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0945		6	1	7.43	22.5	1309	455	1	22.12
0951		12	2	7.71	22.1	1308	277	1	22.41
0957		18	3	7.68	22.6	1310	260	1	22.87
0959				7.66	22.6	1313	257	1	
1001				7.66	22.6	1315	250	1	

METER	SERIAL #	CALIBRATED
pH :	EC21317	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: / silva90

PROJECT: 3GIV 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 19.28 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: - QC LAB(S): - QC SAMPLE TIME: -

SAMPLE ID (VERIFY): W-26R-11 / 3W45 TIME COLLECTED: 1009

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3EMG~~	~~BCLABS-BAK~~	~~E120.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E130.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E300.0:NO3~~	~~1~~	~~250 ml Polyethylene~~
~~3GIV~~	~~BCLABS-BAK~~	~~E601~~	~~2~~	~~40 ml Glass VOA vial~~
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Eliminated all CL

All Ground Water Sampling Data

Target Sample Date: 17-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-26R-05 AREA INFO: S300/GSA/EGSA

DATE: 17-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: PB / 90BA CONTAMINANT PRESENT: TCE-3.3/NO3-53

SCREENED INTERVAL (ft-bmp): 22.05 - 27.05 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 25.50 / 26.68 on 10-FEB-91 CASING VOL (Gal/Time): 0.08

DEPTH TO WATER(ft-bmp): 26.90 on 21-AUG-14 DRY VOLUME FACTOR: 0.826

WATER IN CASING (ft): 0.10 CASING DIAMETER/TCASING HT(in): 4.5 / 1.50

TIME PUMP ON: INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW

DRY

METER	SERIAL #	CALIBRATED
pH :	604547	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 0.07 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R 05 / 90BA TIME COLLECTED:

PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

No Water detected

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 10 gal.
Revision: 06/11/2014

All Ground Water Sampling Data

Target Sample Date: 17-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 17-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 7.94 7.6x3=22.8

DEPTH TO WATER(ft-bmp): 20.39 on 20-AUG-14 21.03 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 9.61 9.27 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1319 INITIAL FLOW RATE (Q=GPM): 1.0 ~~2.5~~ Q

TIME PUMP OFF: 1355 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1327		7.6	1	7.60	22.4	1599	130	1	22.08
1335		15.2	2	7.39	22.7	1593	118	1	22.12
1344		22.8	3	7.37	22.7	1592	110	1	22.12
1346				7.37	22.8	1560	107	1	
1350				7.34	22.8	1557	106	1	

METER	SERIAL #	CALIBRATED
pH :	604347	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3CMP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 23.82 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7DS / 3VES TIME COLLECTED: 1355

PROJECT	ANALYTICAL LAB	REQUESTED ANALYSIS	QUANTITY	TYPE OF CONTAINERS
3EMG	BCLABS-BAK	E120.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E150.1	1	250 ml Polyethylene
3EMG	BCLABS-BAK	E300.0:NO3	1	250 ml Polyethylene
3CMP	BCLABS-BAK	E601	3	40 mL Glass VOA vial
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

Added 1.9 oz of CL

All Ground Water Sampling Data

Target Sample Date: 18-NOV-2014 Month: Norm Qtr: 4 Norm Year: 2014

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 18-Nov-2014 LOG BOOK (DOCUMENT CONTROL) #: AA27115

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 7.94 7.6 x 3 = 22.8

DEPTH TO WATER(ft-bmp): 20.39 on 20-AUG-14 21.11 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 9.61 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1020 INITIAL FLOW RATE (Q-GPM): 1.5 Q

TIME PUMP OFF: 1047 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1025	1.5	7.6	1	7.64	21.7	1599	309	1	21.13
1031	1.5	15.2	2	7.50	22.0	1587	269	1	21.17
1036	1.5	22.8	3	7.53	22.2	1510	242	1	21.24
1038				7.52	22.3	1569	237	1	
1040				7.52	22.4	1593	212	1	

METER SERIAL # CALIBRATED
pH : 6.0/7.0/7.0 YES/NO
SC : YES/NO
mV : YES/NO
H2O: YES/NO

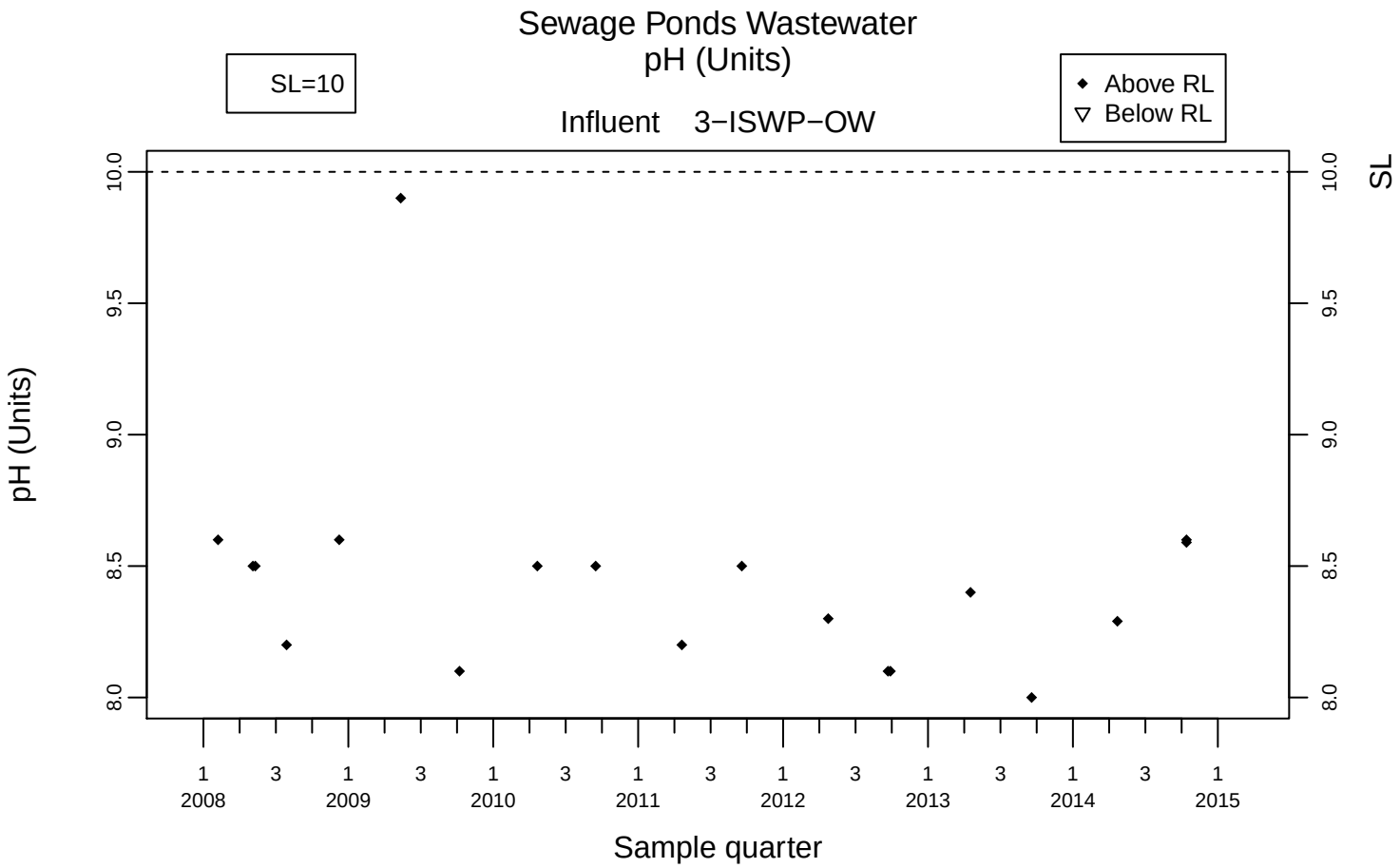
SAMPLER/EMPLOYER: silva90
PROJECT: 3CMP 3EMG
SAMPLE PRESERVATION/AMT of REAGENT: NA
PURGE VOL/EXCESS H2O DEST: 23.82 / S300-DRUM
TF LOCATION: S300

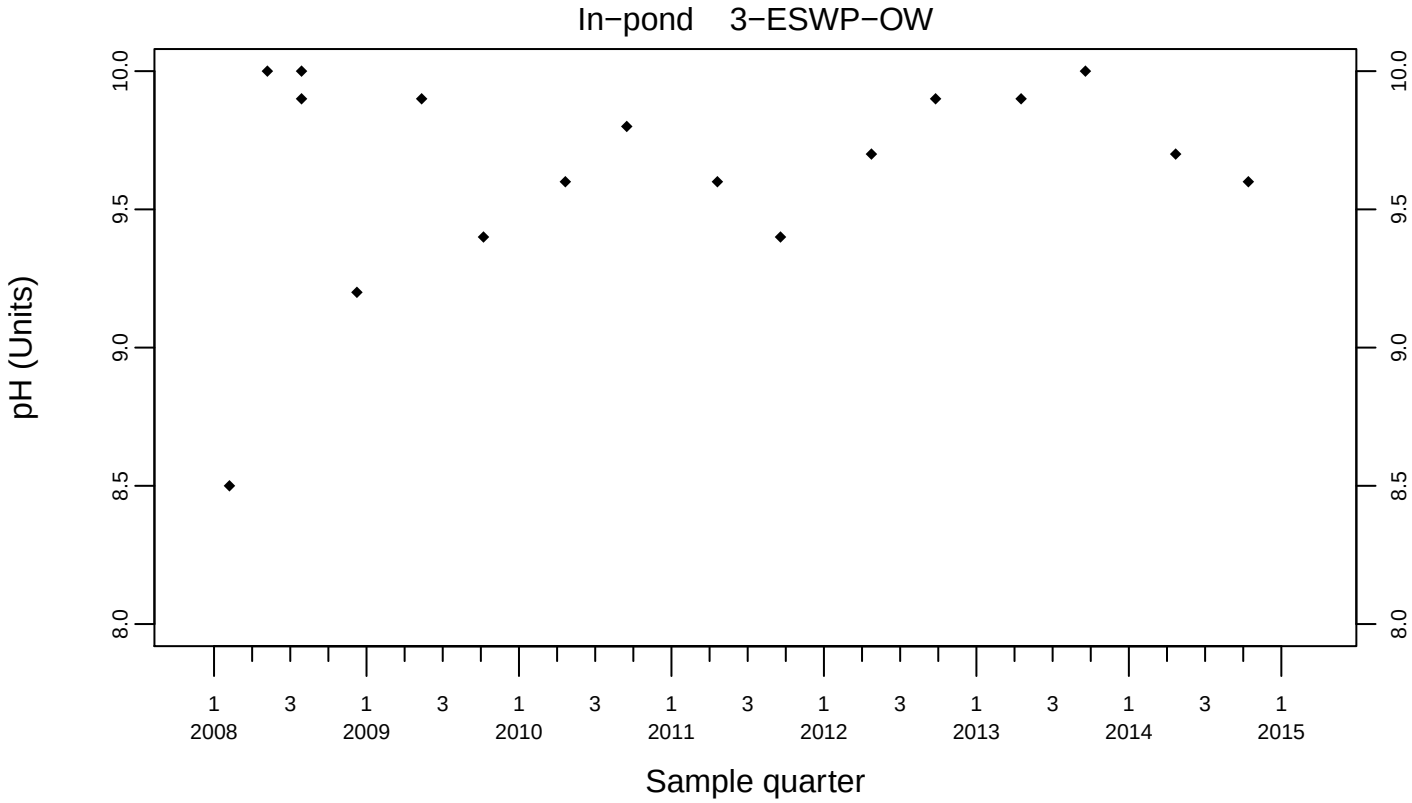
QC SAMPLE ID: QC LAB(S): QC SAMPLE TYPE:

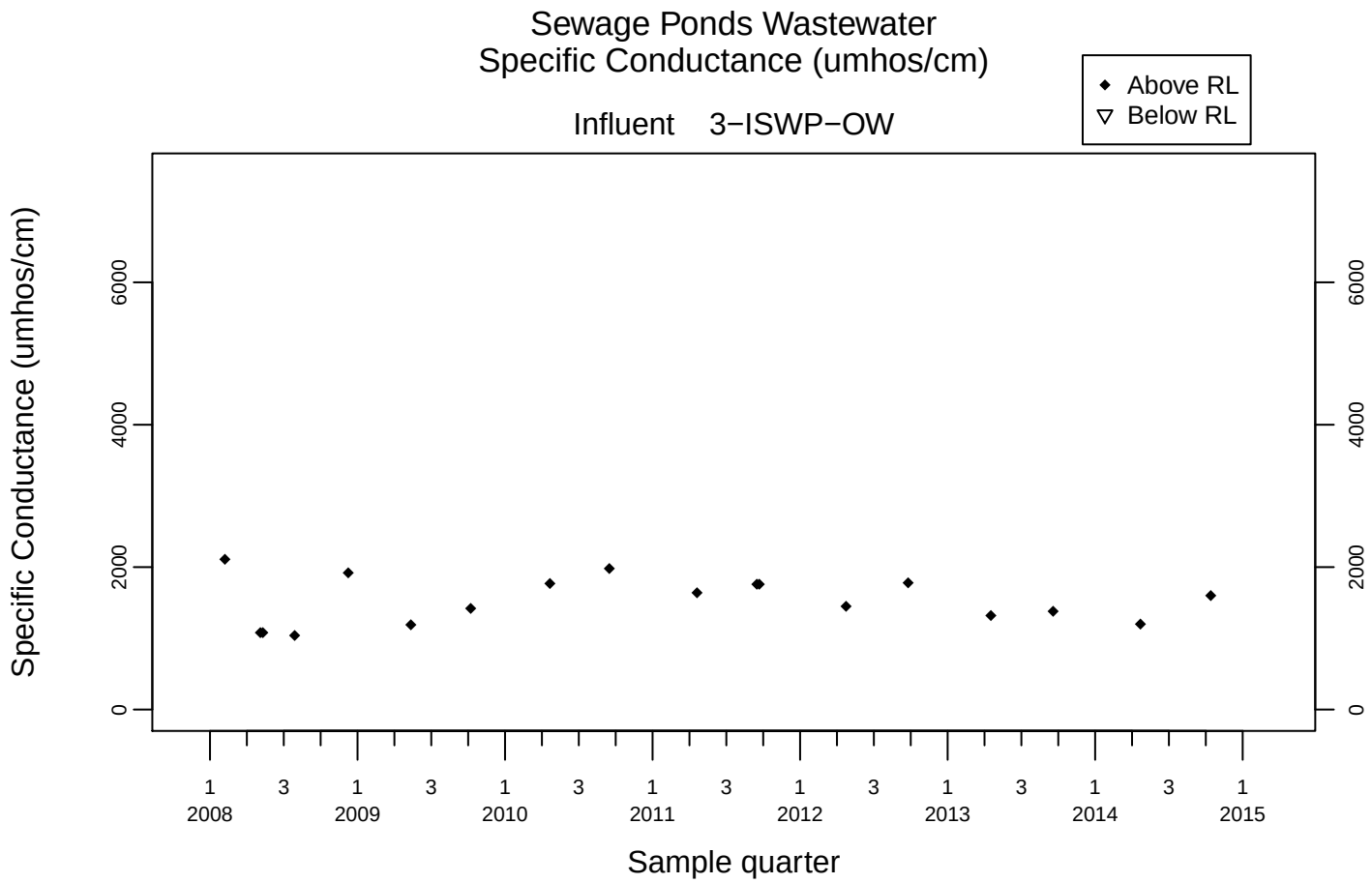
SAMPLE ID (VERIFY): W-7DS / 3DS TIME COLLECTED: 1047

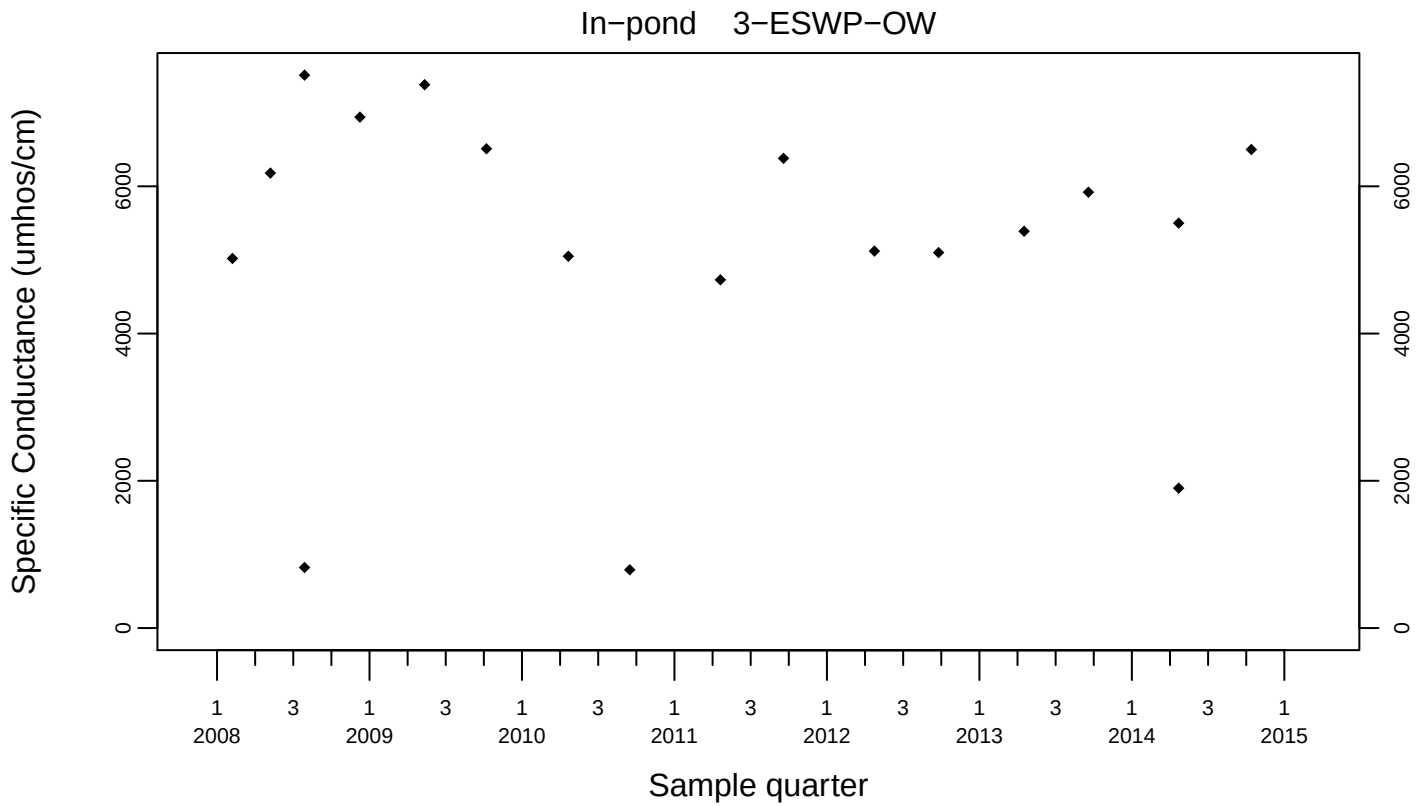
PROJECT	/ ANALYTICAL LAB	/ REQUESTED ANALYSIS	/ QUANTITY	/ TYPE OF CONTAINERS
~~3EMG~~	~~BCLABS-BAK~~	~~E120.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E150.1~~	~~1~~	~~250 ml Polyethylene~~
~~3EMG~~	~~BCLABS-BAK~~	~~E300.0:NO3~~	~~1~~	~~250 ml Polyethylene~~
~~3CMP~~	~~BCLABS-BAK~~	~~E601~~	~~3~~	~~40 mL Glass VOA vial~~
3EMG	ALPHAANAL	SM9221	1	250 ml Sterilized Polyethylene

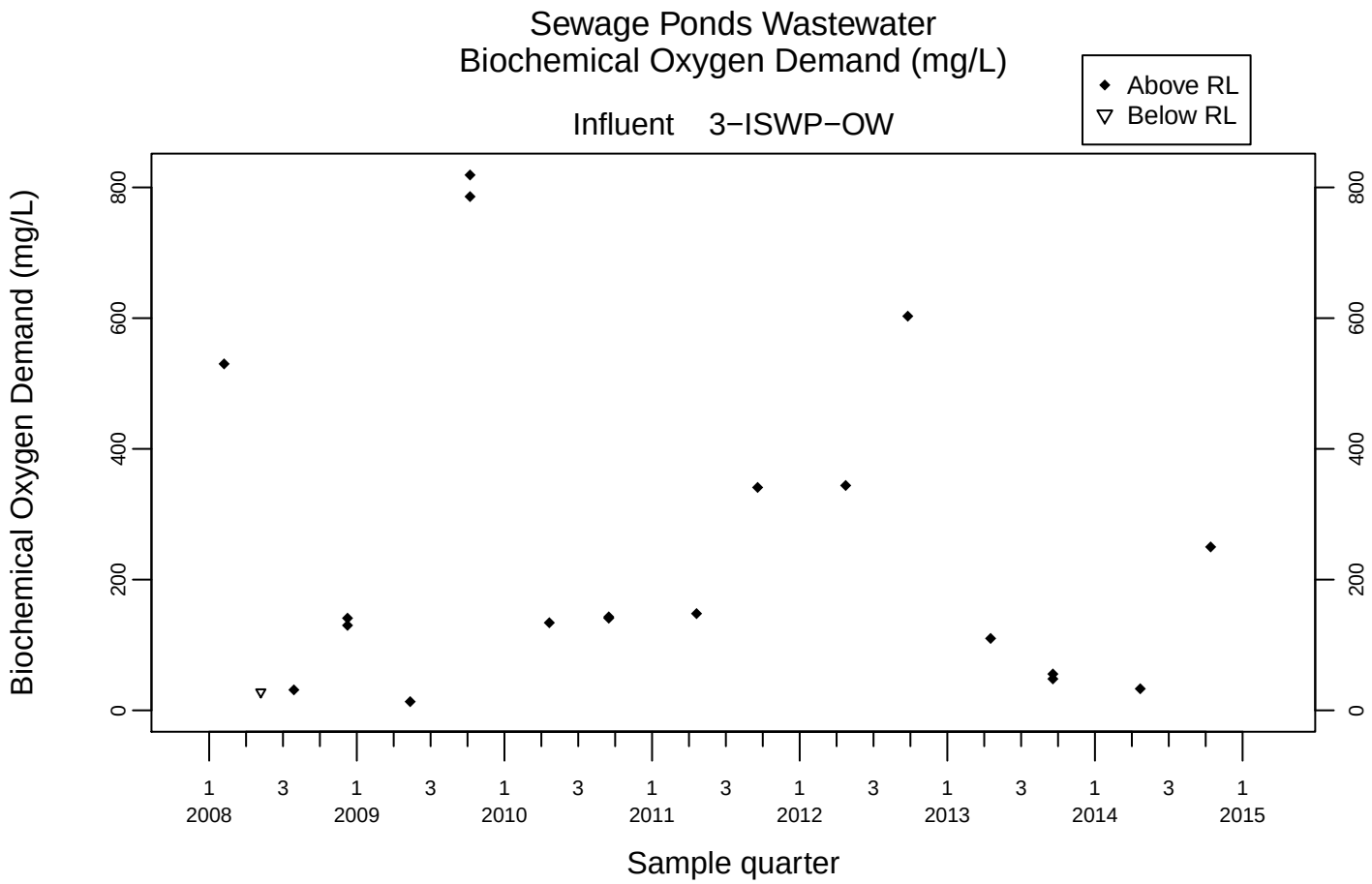
Executed all CC

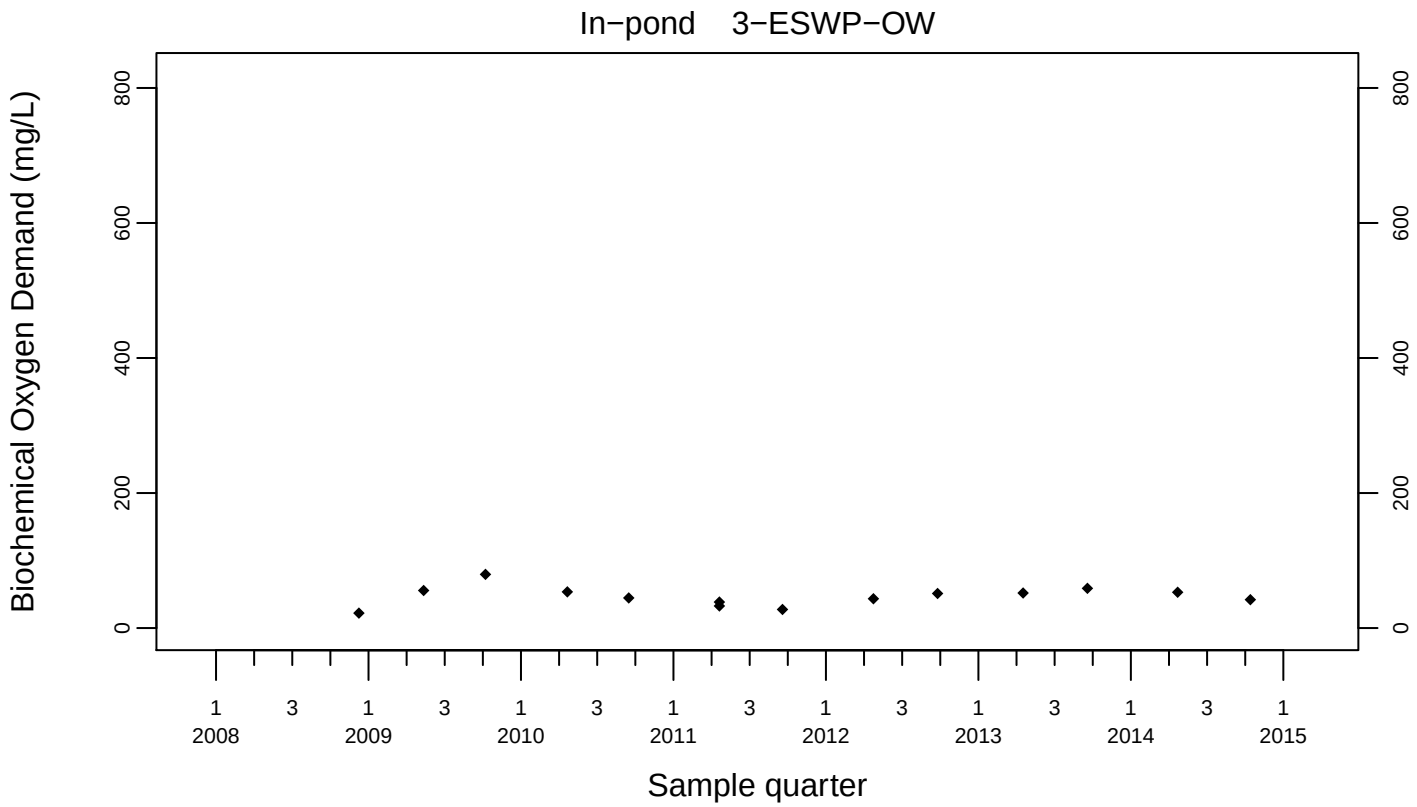

Sewage Ponds Wastewater
pH (Units)
SL=10
Above RL
Below RL
Influent 3−ISWP−OW
pH (Units)
SL
10.0
9.5
9.0
8.5
8.0
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

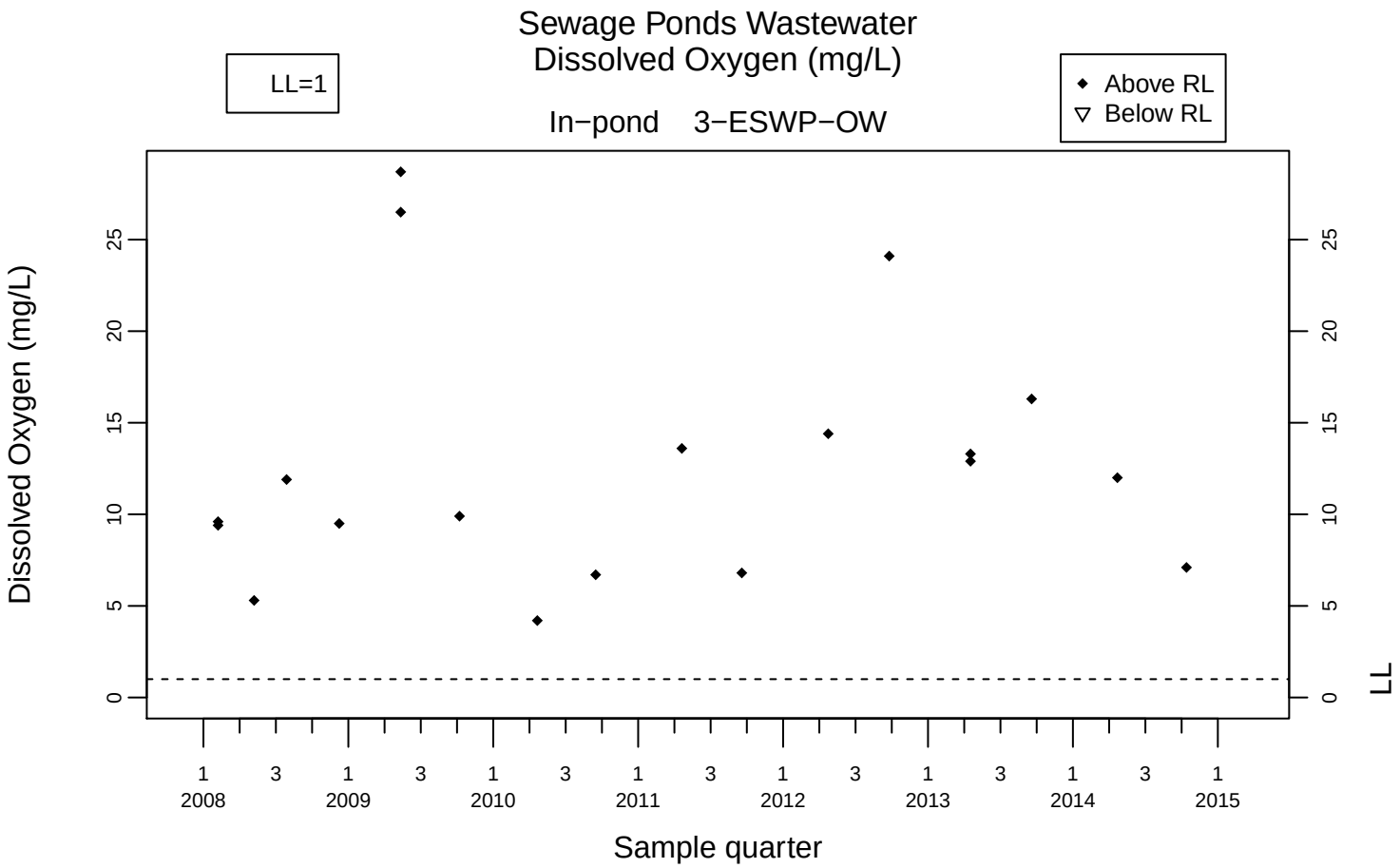

In−pond 3−ESWP−OW
pH (Units)
10.0
9.5
9.0
8.5
8.0
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

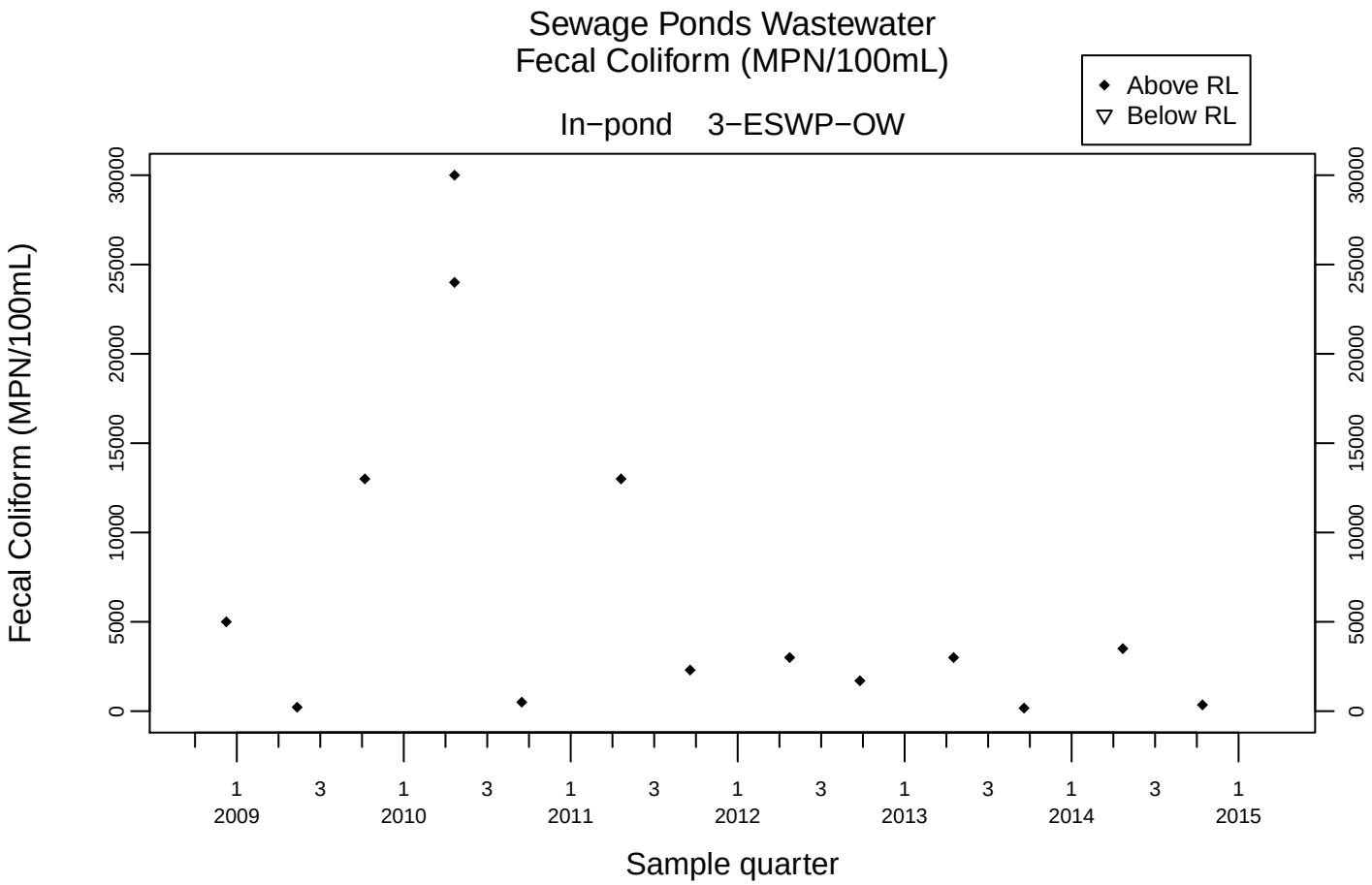

Sewage Ponds Wastewater
Specific Conductance (umhos/cm)
Influent 3−ISWP−OW
Above RL
Below RL
Specific Conductance (umhos/cm)
0
2000
4000
6000
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

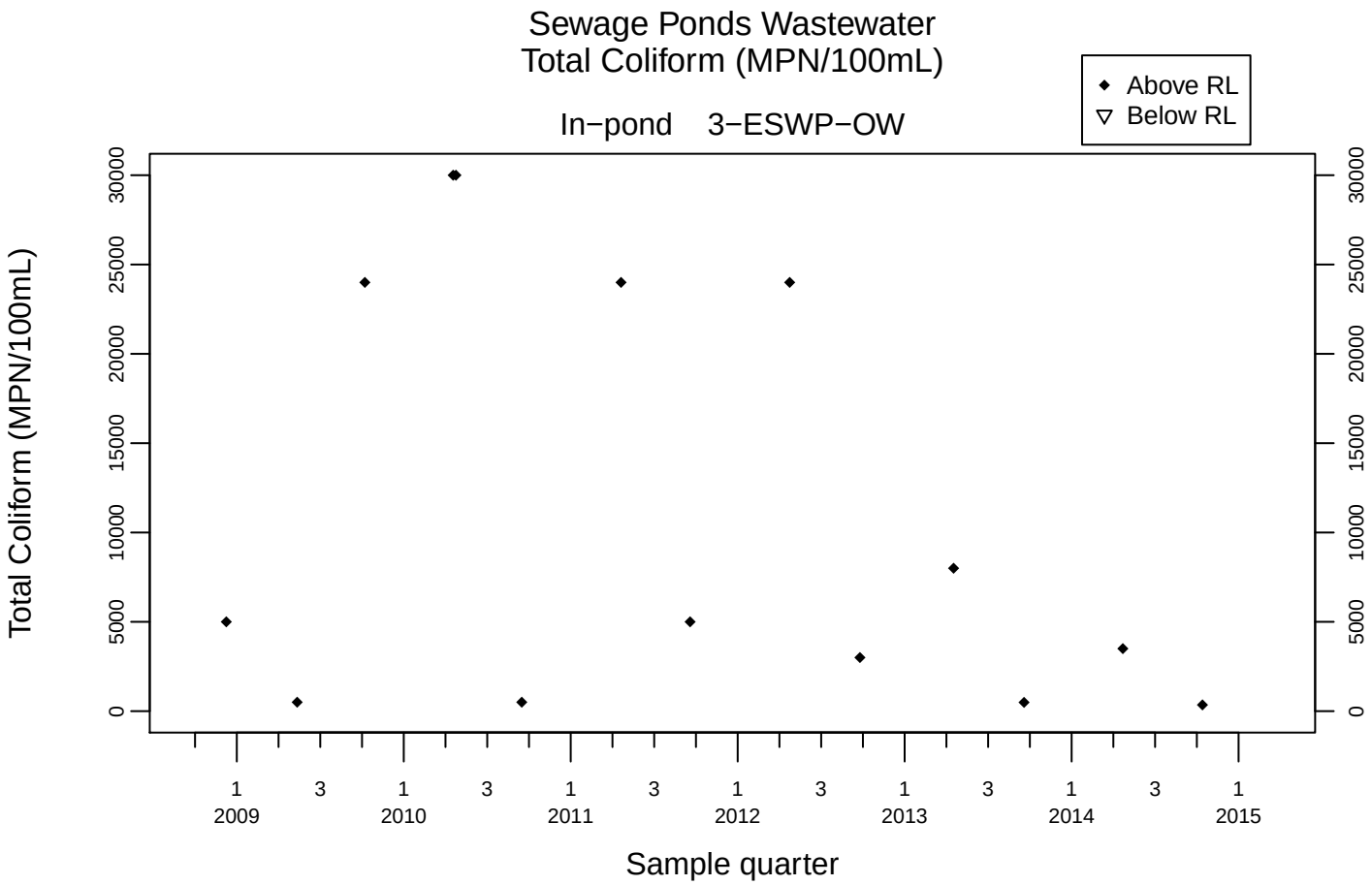

In−pond 3−ESWP−OW
Specific Conductance (umhos/cm)
0
2000
4000
6000
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

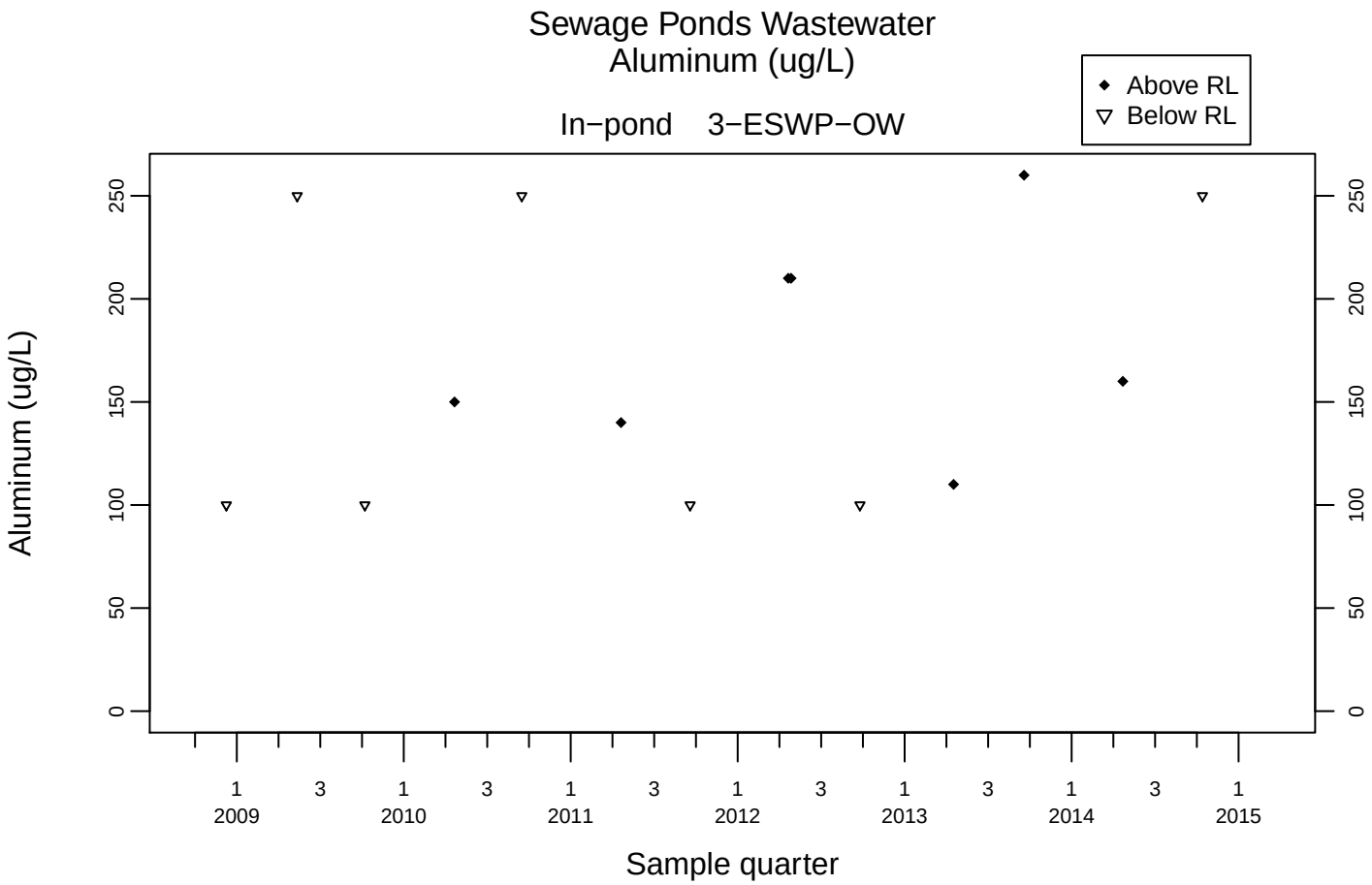

Sewage Ponds Wastewater
Biochemical Oxygen Demand (mg/L)
Influent 3−ISWP−OW
Above RL
Below RL
Biochemical Oxygen Demand (mg/L)
0
200
400
600
800
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

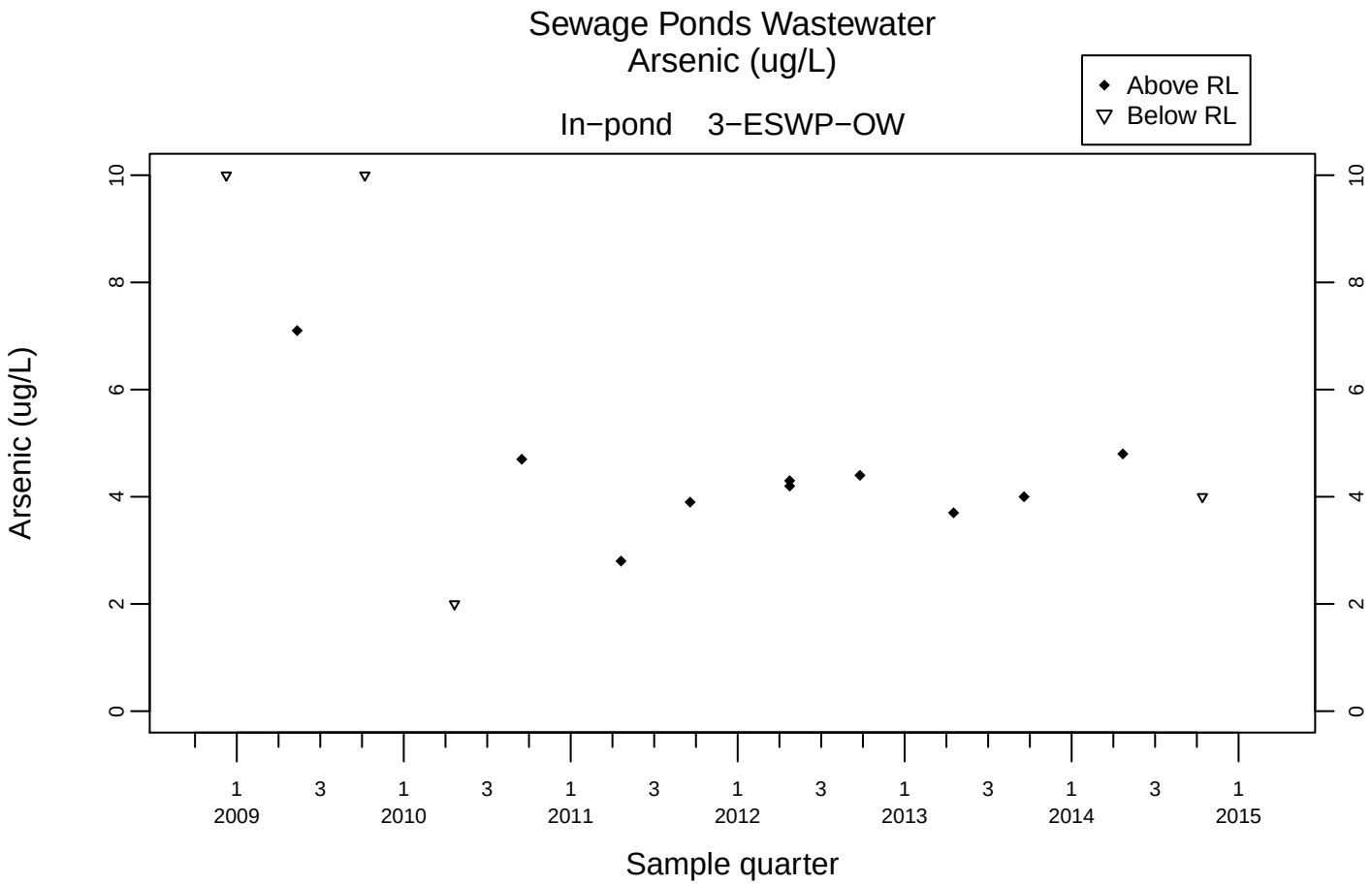

In−pond 3−ESWP−OW
Biochemical Oxygen Demand (mg/L)
0
200
400
600
800
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

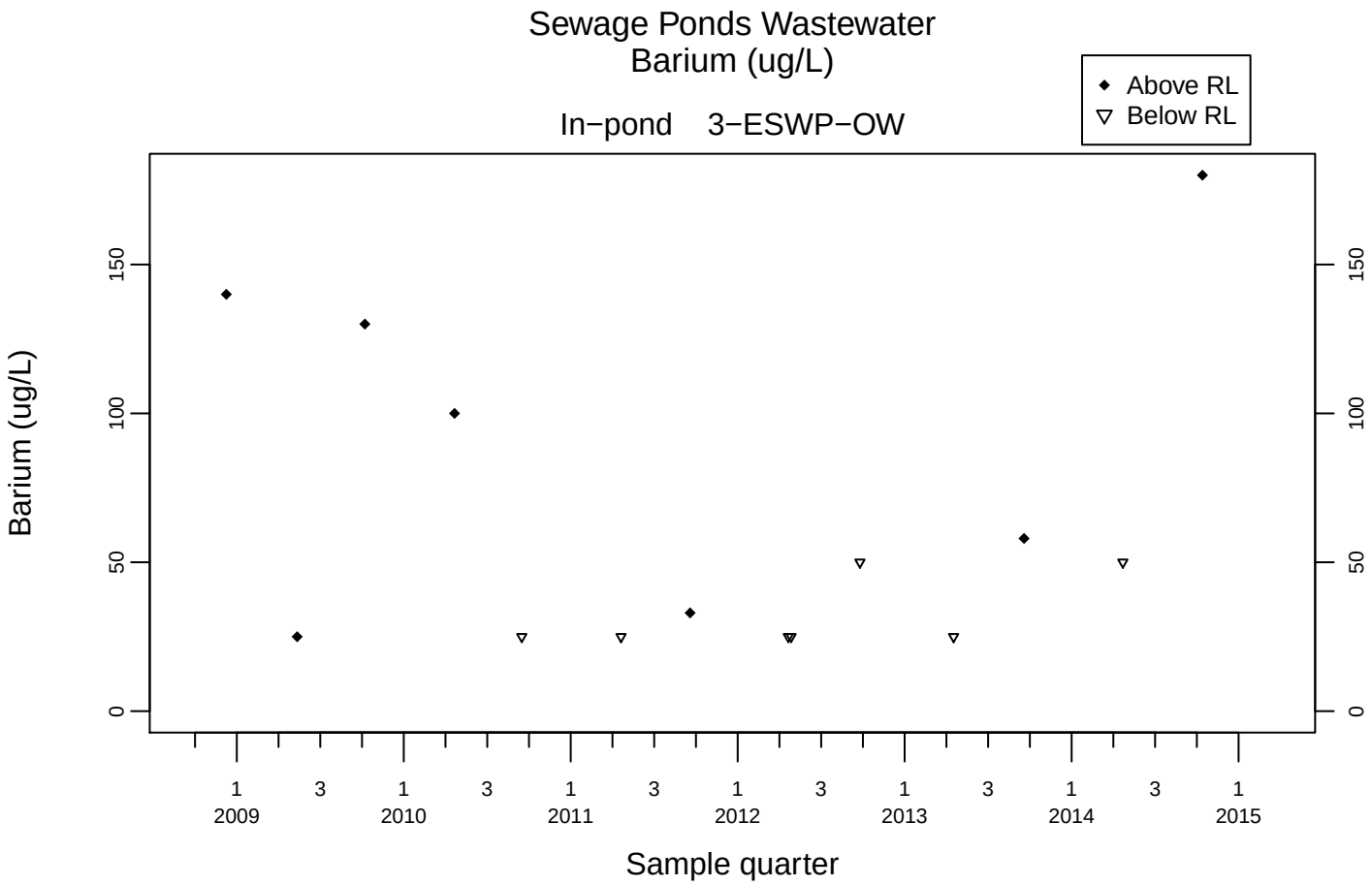

Sewage Ponds Wastewater
Dissolved Oxygen (mg/L)
In−pond 3−ESWP−OW
LL=1
Above RL
Below RL
Dissolved Oxygen (mg/L)
0
5
10
15
20
25
LL
1
3
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

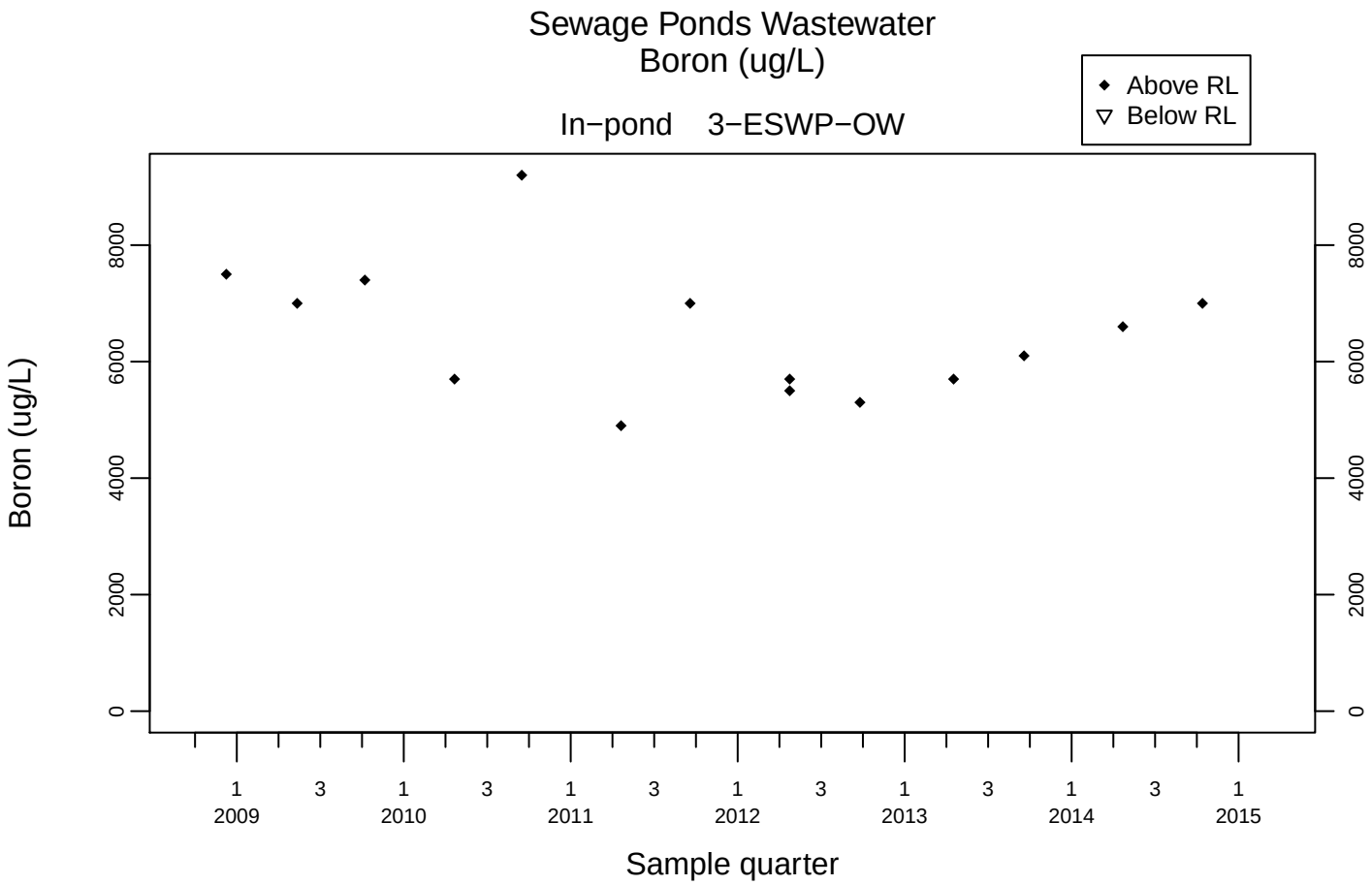

Sewage Ponds Wastewater
Fecal Coliform (MPN/100mL)
In−pond 3−ESWP−OW
Above RL
Below RL
Fecal Coliform (MPN/100mL)
0
5000
10000
15000
20000
25000
30000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

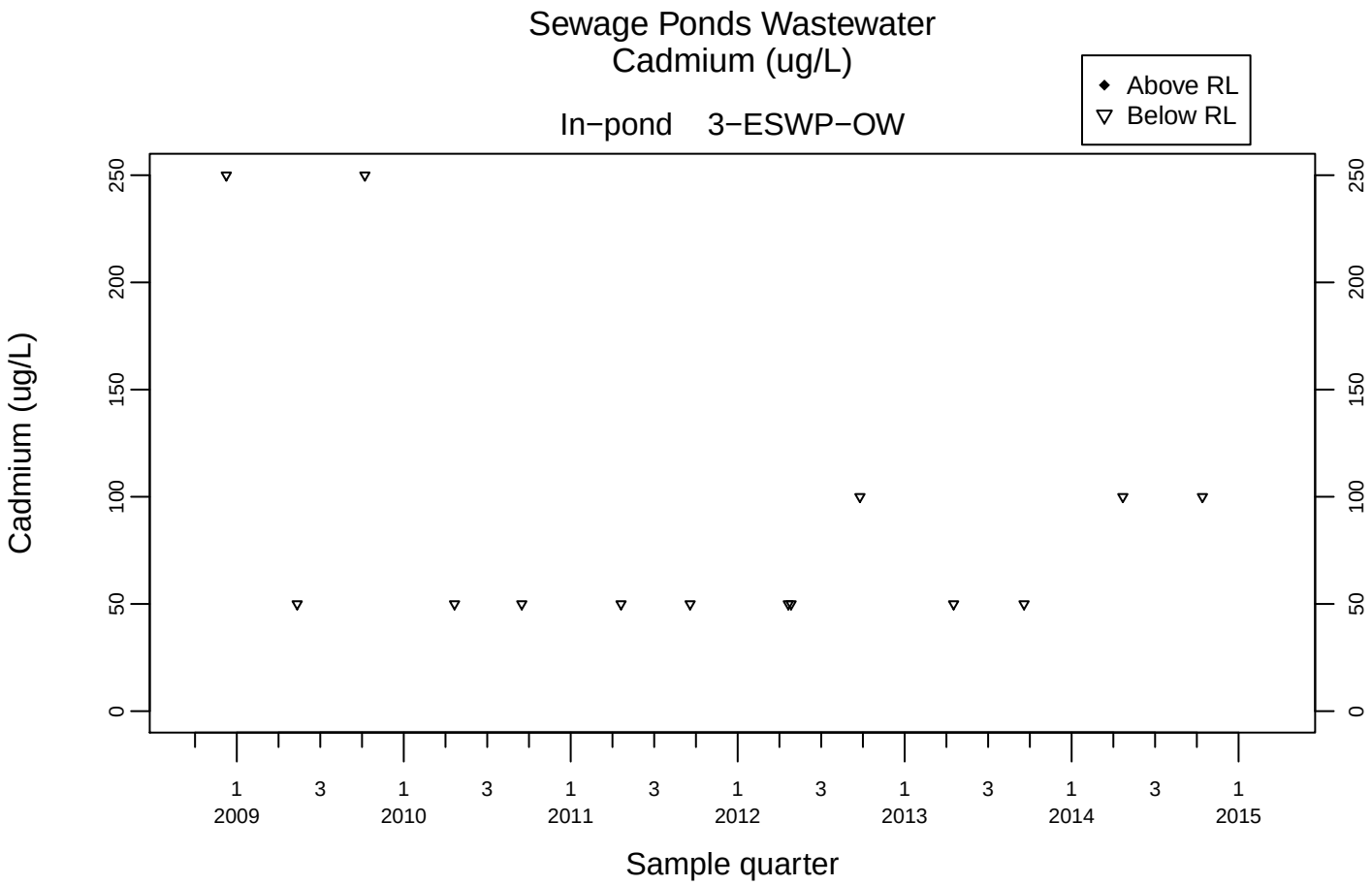

Sewage Ponds Wastewater
Total Coliform (MPN/100mL)
In−pond 3−ESWP−OW
Above RL
Below RL
Total Coliform (MPN/100mL)
0
5000
10000
15000
20000
25000
30000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

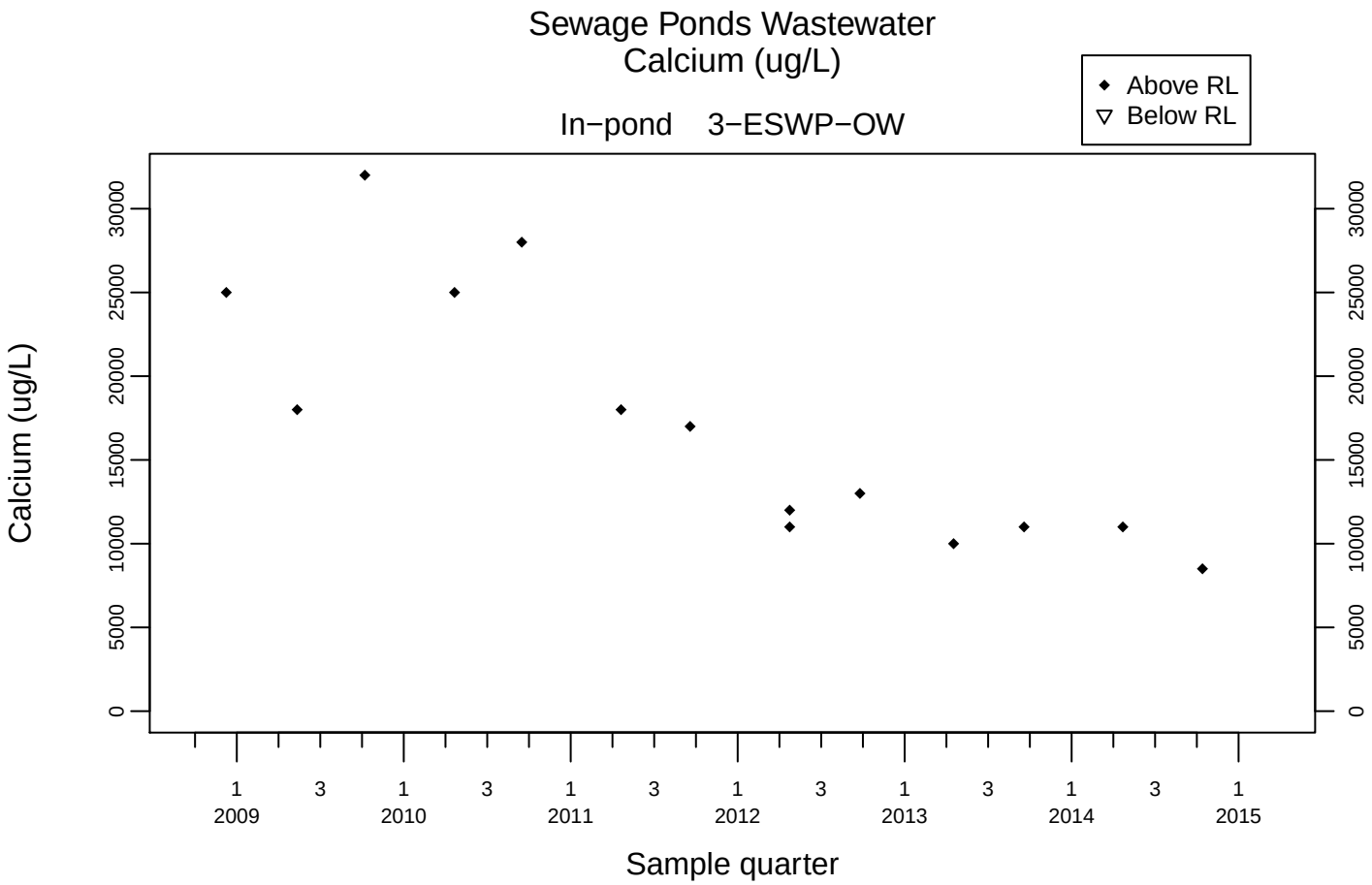

Sewage Ponds Wastewater
Aluminum (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Aluminum (ug/L)
0
50
100
150
200
250
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

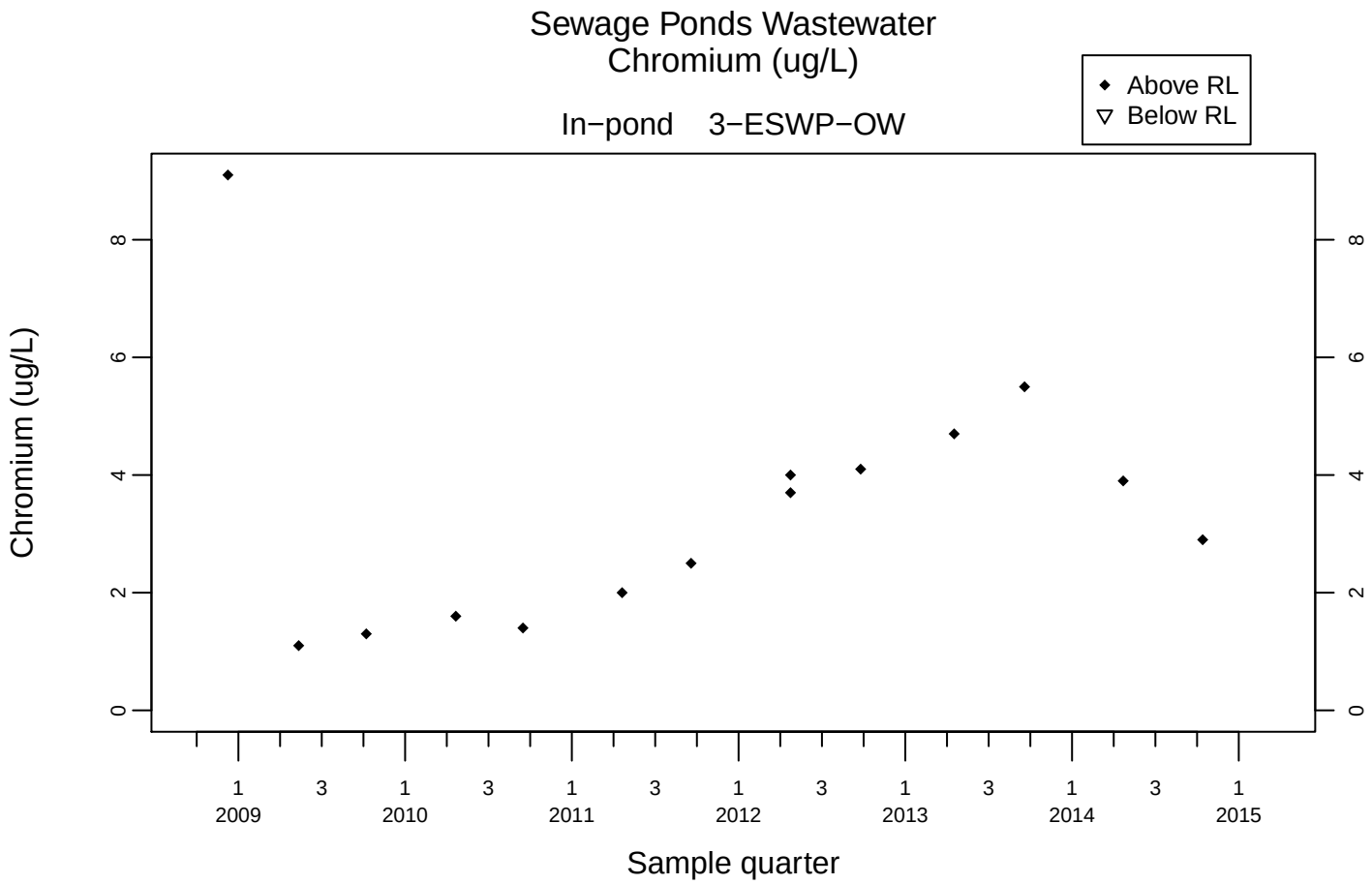

Sewage Ponds Wastewater
Arsenic (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

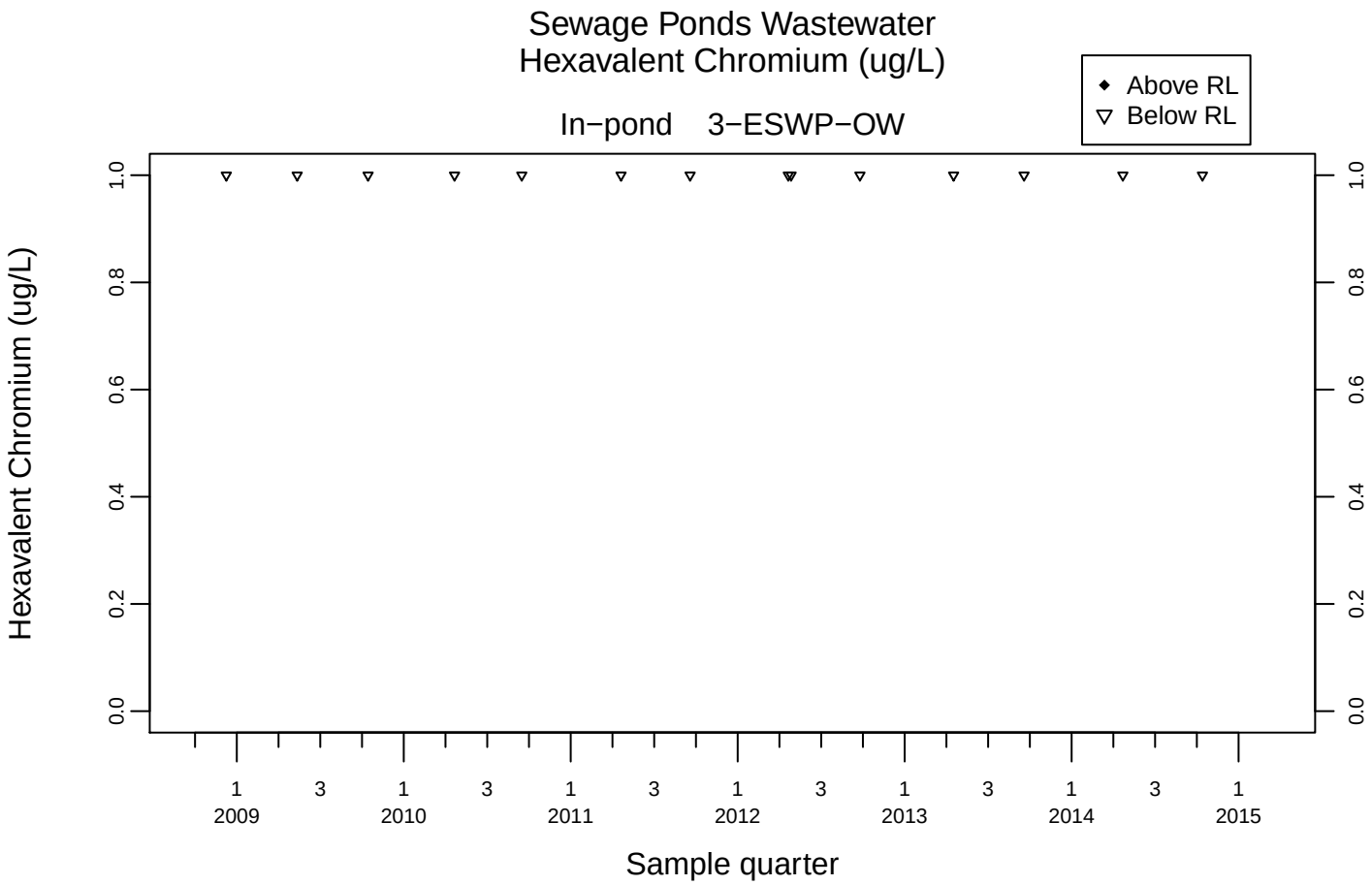

Sewage Ponds Wastewater
Barium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Barium (ug/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

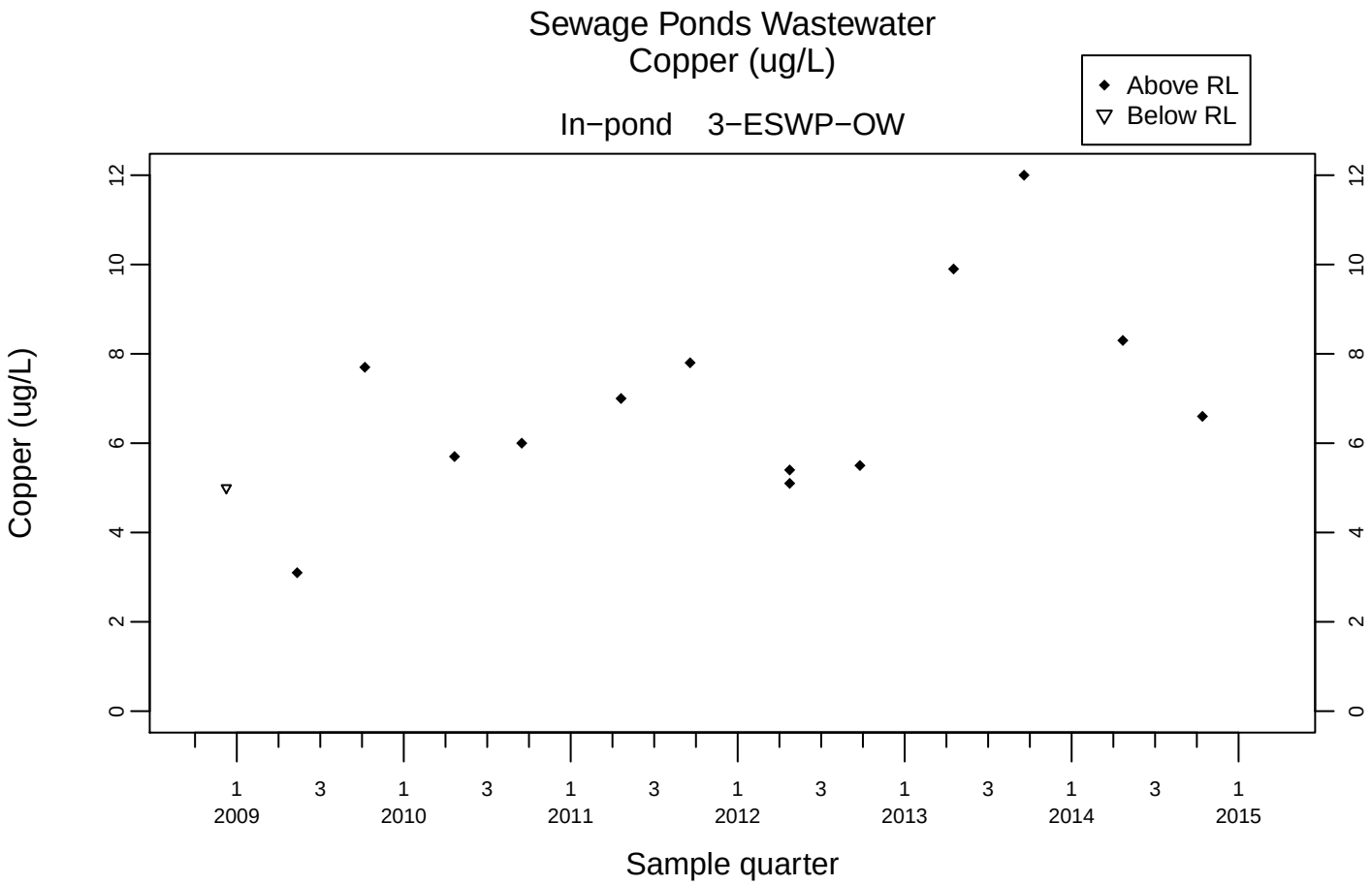

Sewage Ponds Wastewater
Boron (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Boron (ug/L)
0
2000
4000
6000
8000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

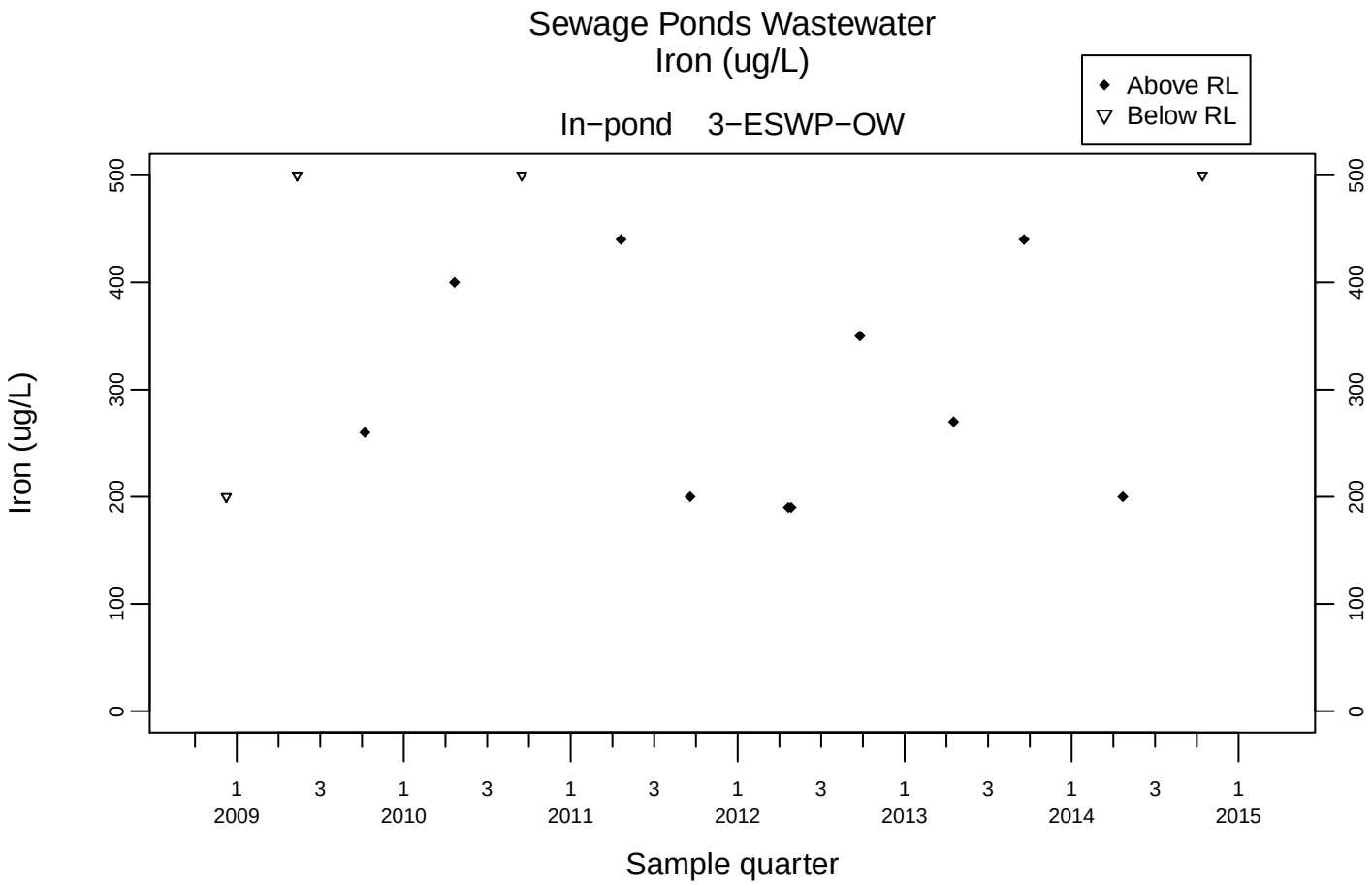

Sewage Ponds Wastewater
Cadmium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Cadmium (ug/L)
0
50
100
150
200
250
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

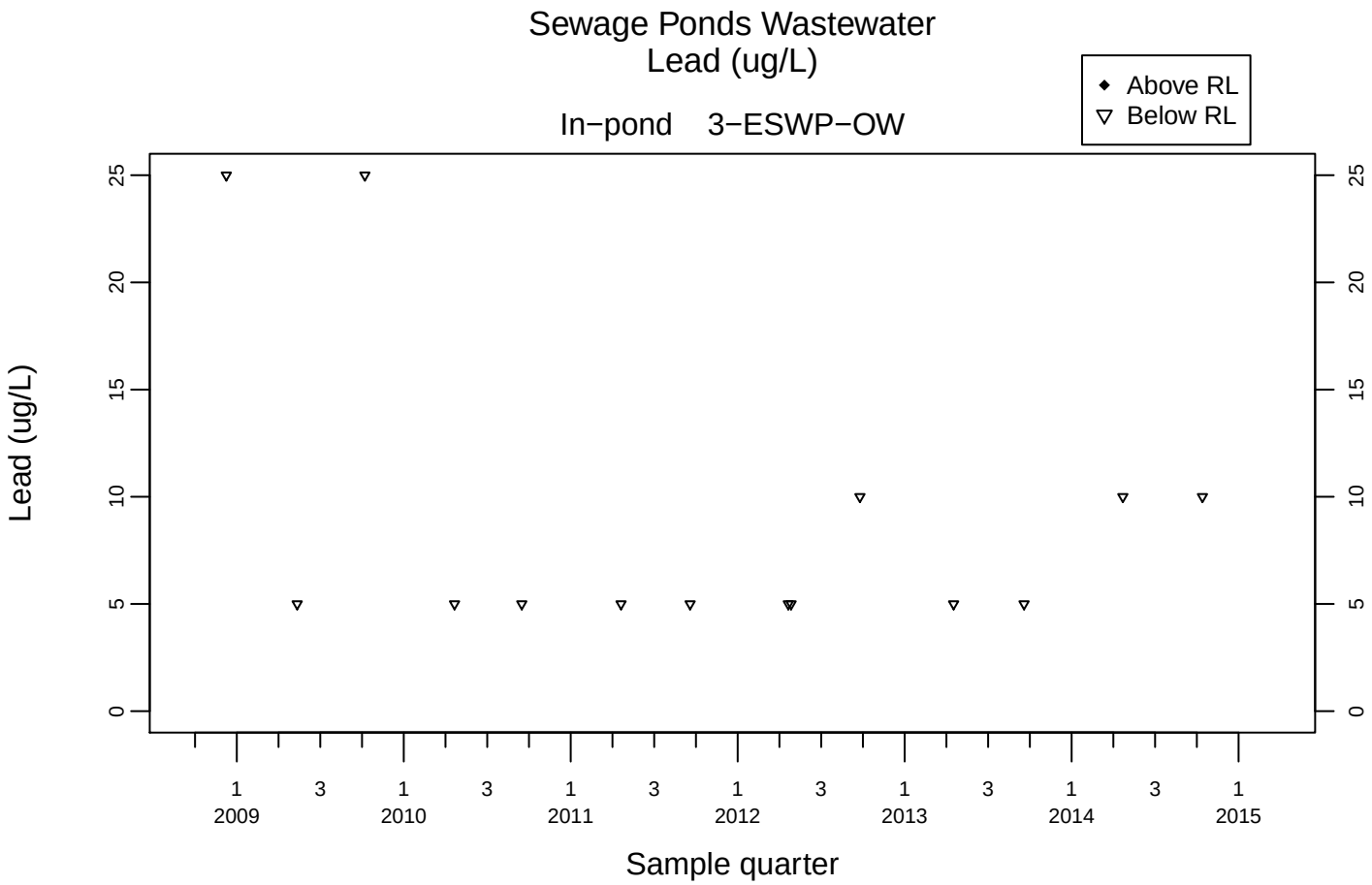

Sewage Ponds Wastewater
Calcium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Calcium (ug/L)
0
5000
10000
15000
20000
25000
30000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

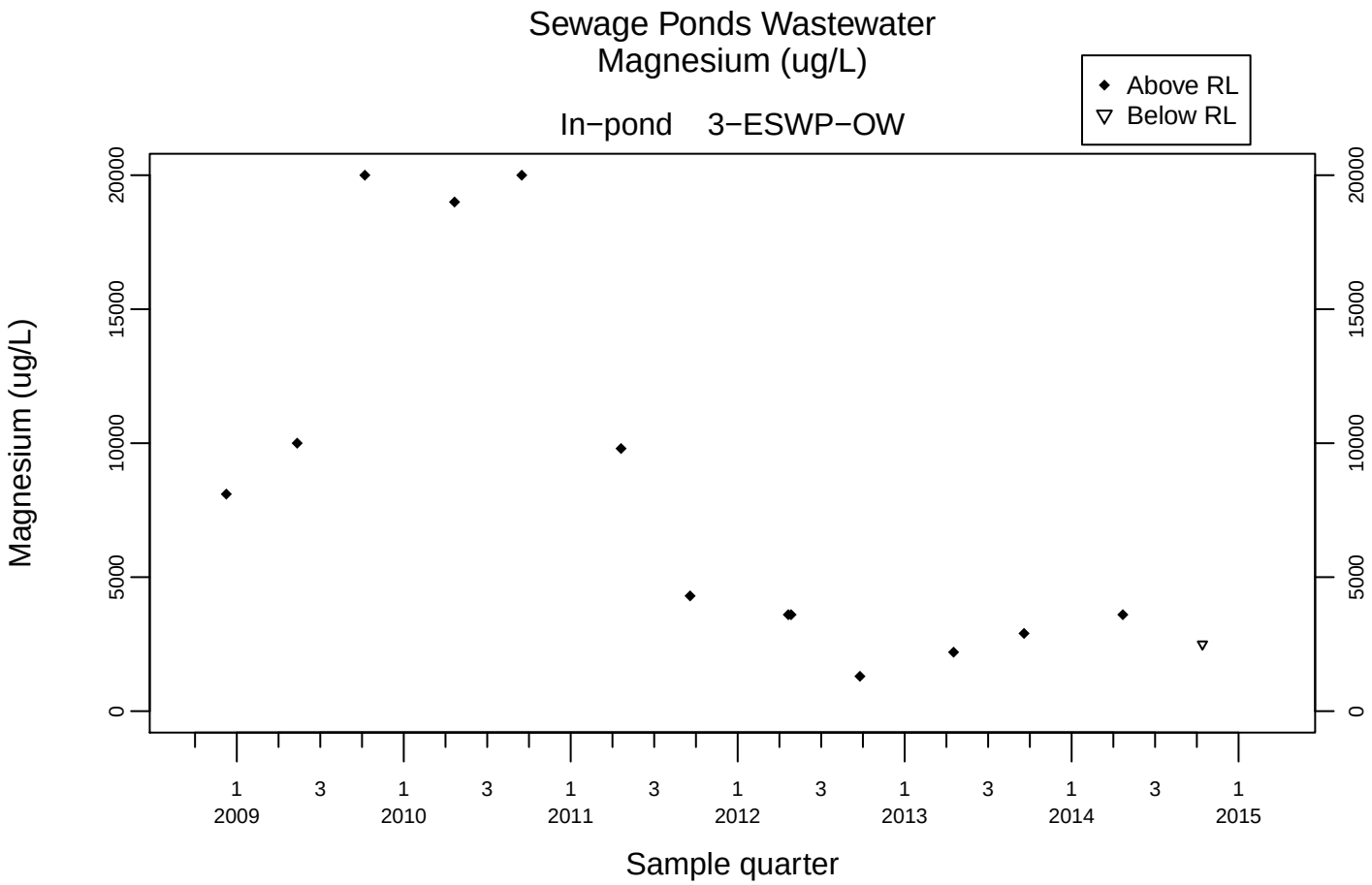

Sewage Ponds Wastewater
Chromium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Chromium (ug/L)
0
2
4
6
8
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

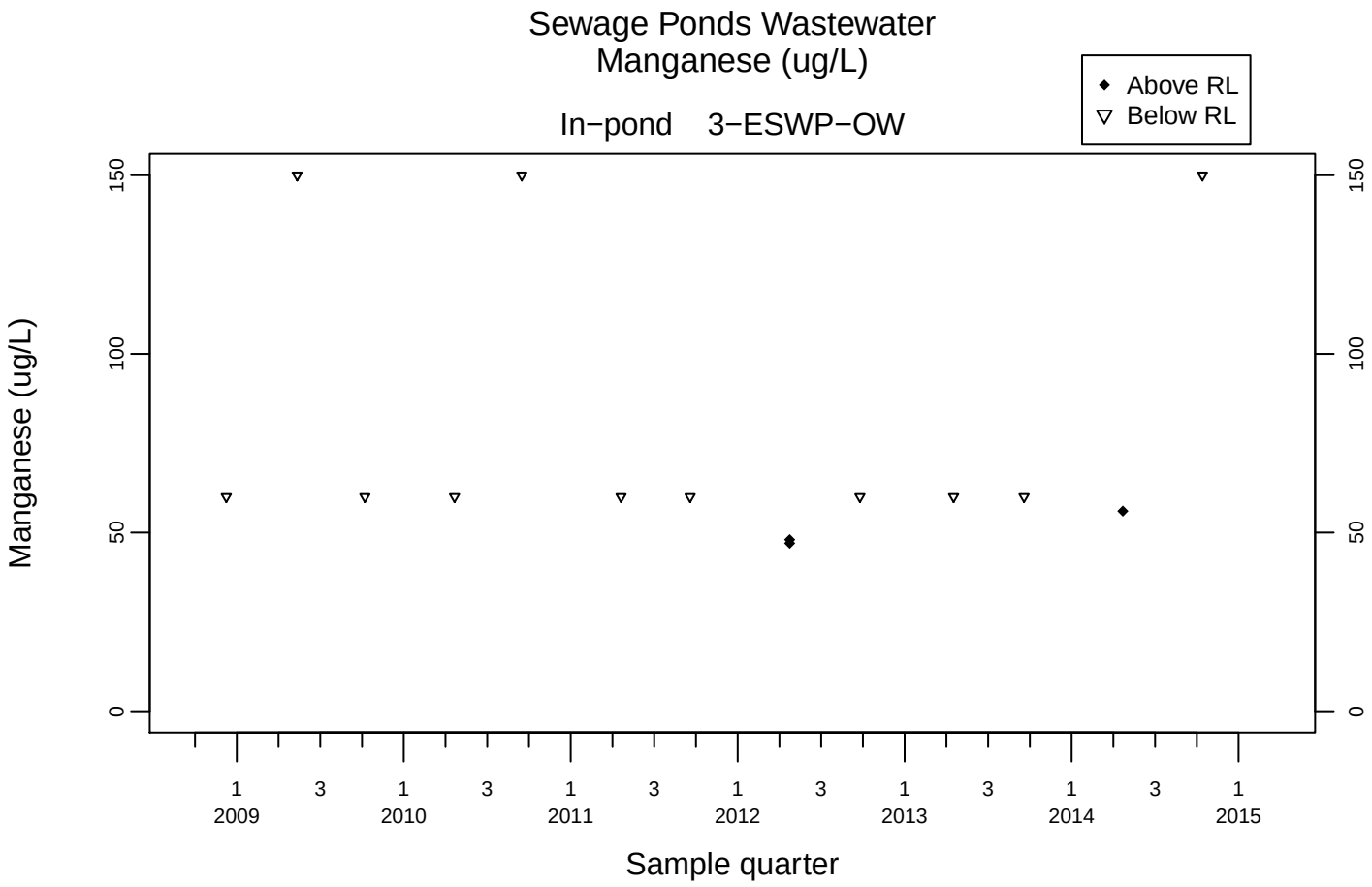

Sewage Ponds Wastewater
Hexavalent Chromium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Hexavalent Chromium (ug/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

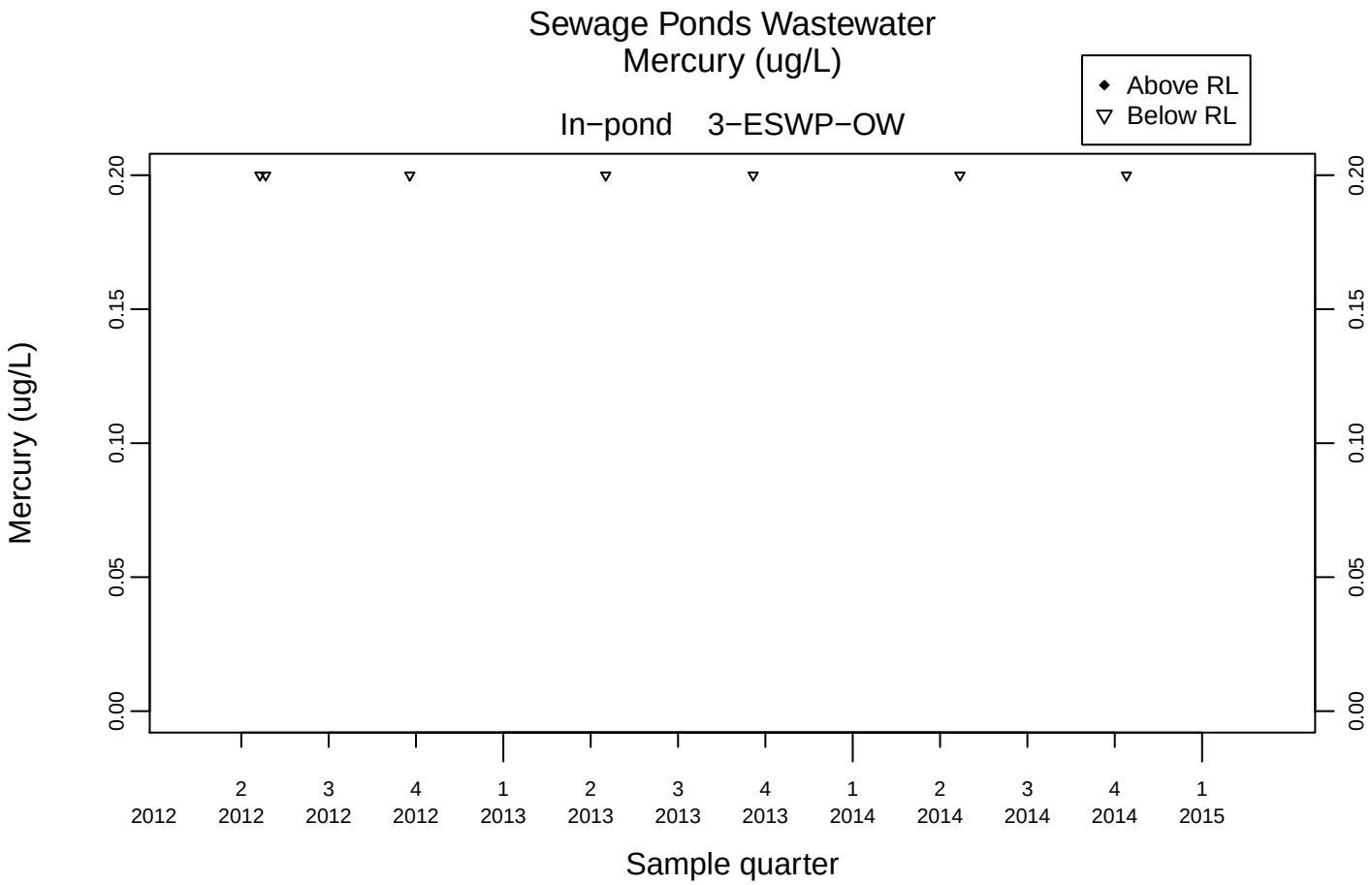

Sewage Ponds Wastewater
Copper (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Copper (ug/L)
0
2
4
6
8
10
12
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

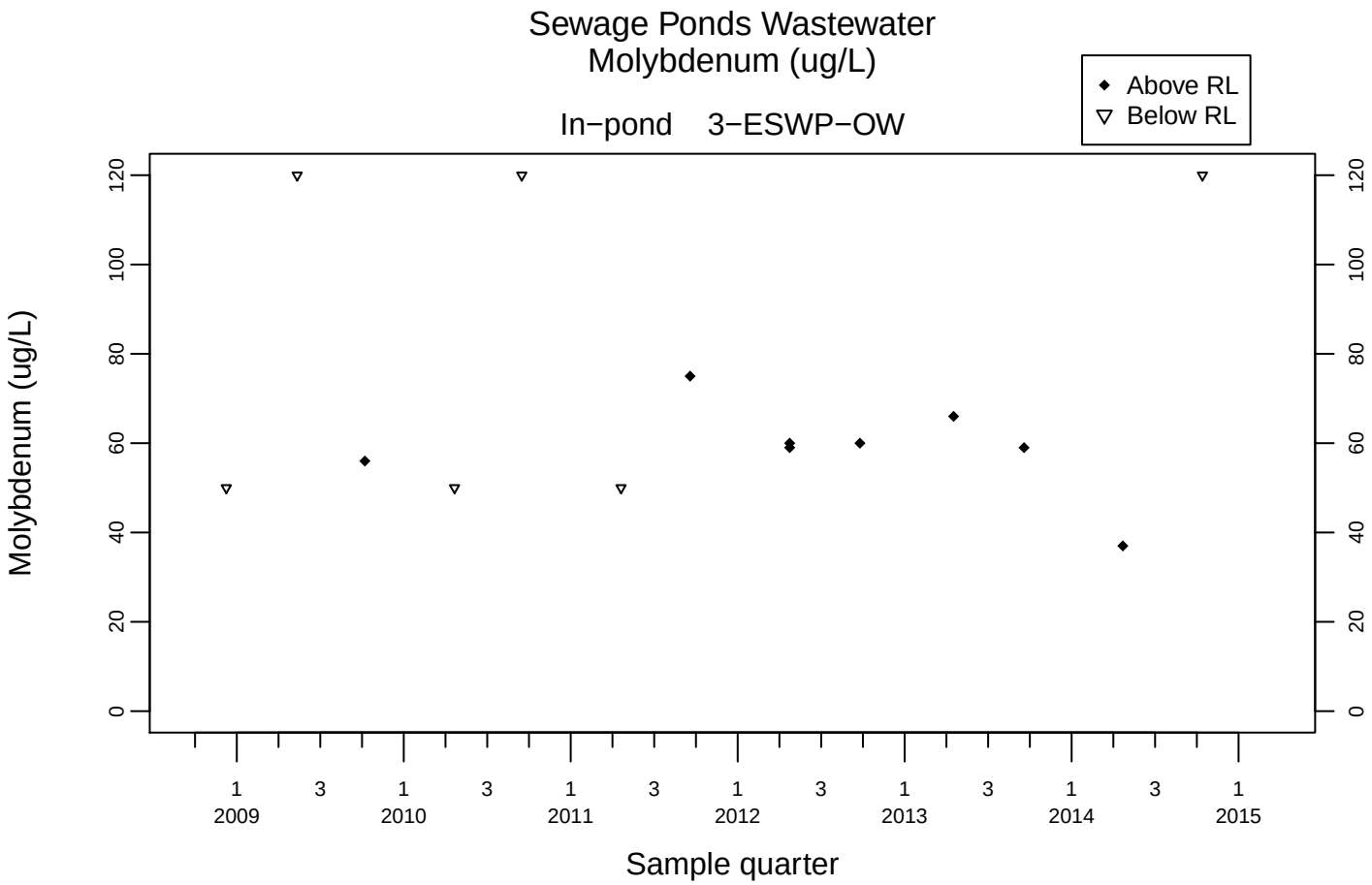

Sewage Ponds Wastewater
Iron (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Iron (ug/L)
0
100
200
300
400
500
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

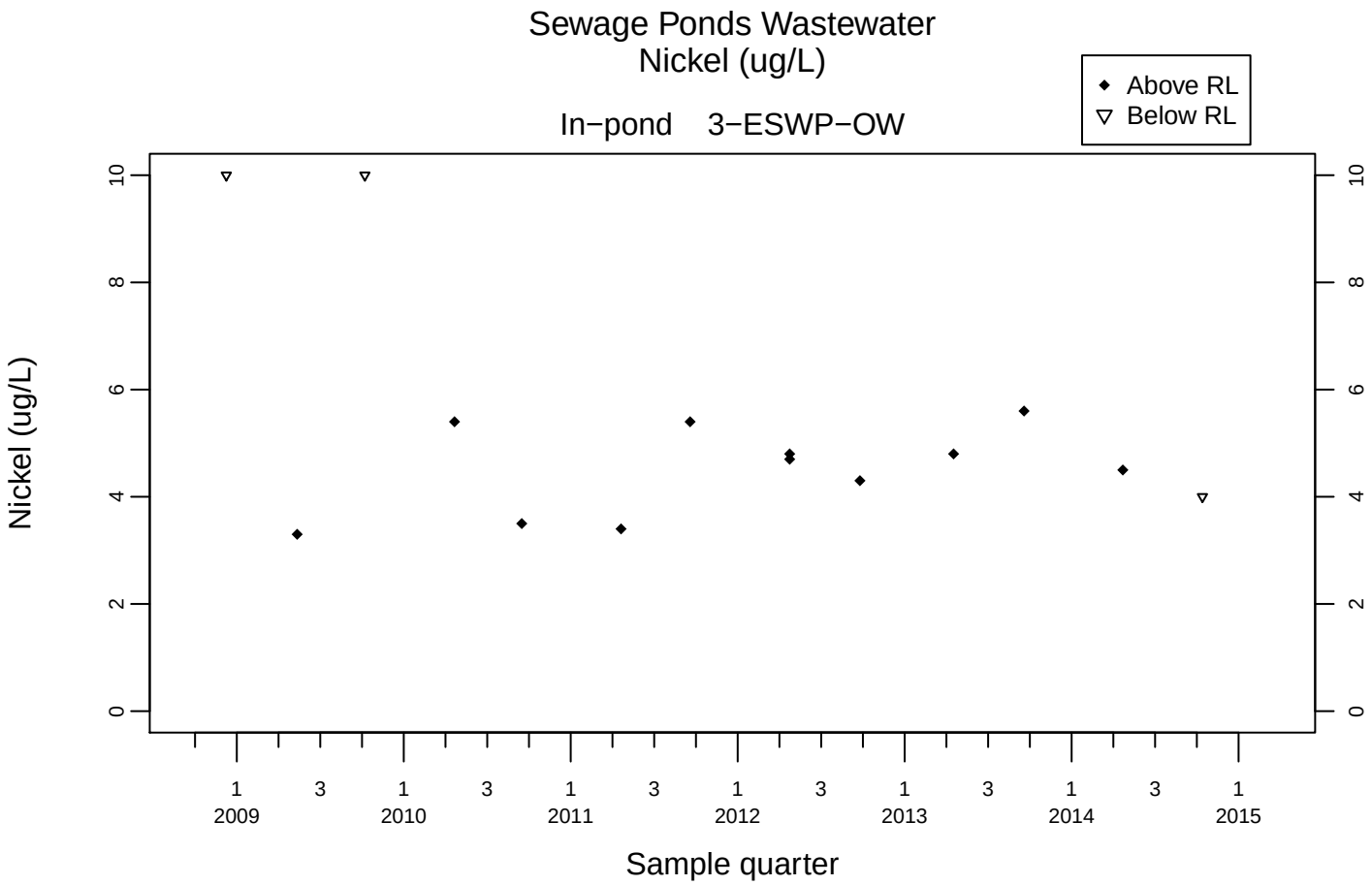

Sewage Ponds Wastewater
Lead (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Lead (ug/L)
0
5
10
15
20
25
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

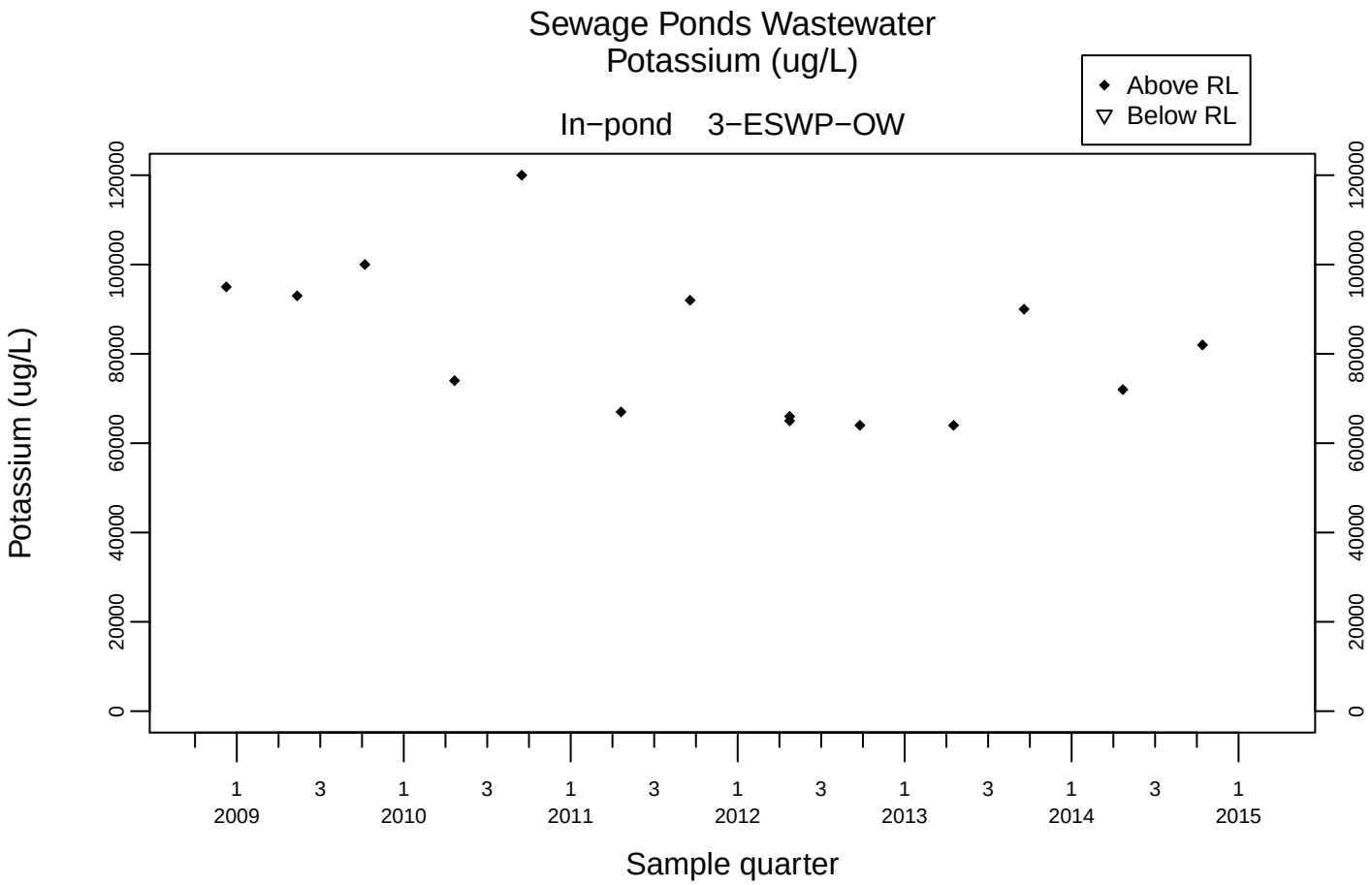

Sewage Ponds Wastewater
Magnesium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Magnesium (ug/L)
0
5000
10000
15000
20000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

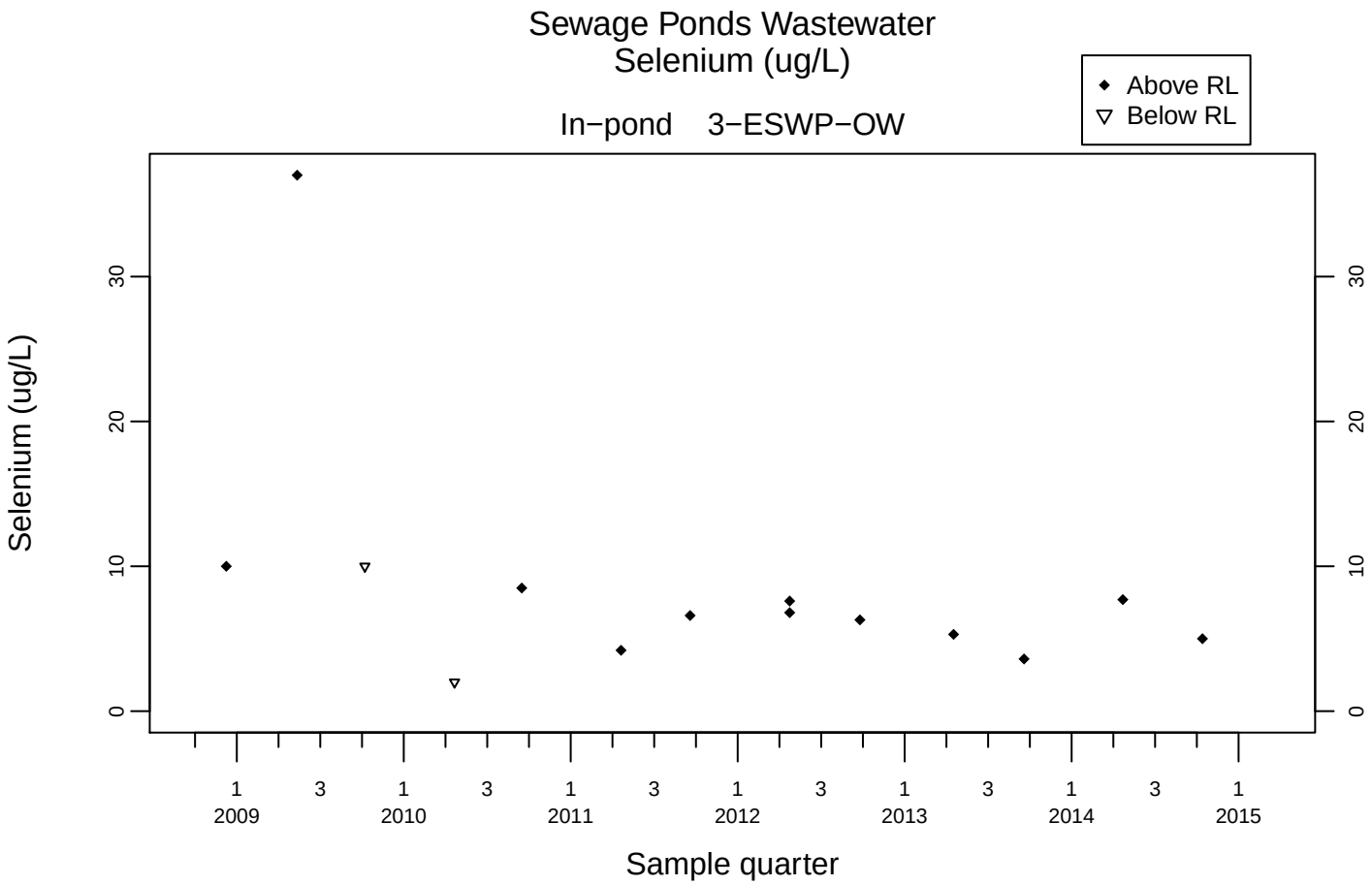

Sewage Ponds Wastewater
Manganese (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Manganese (ug/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

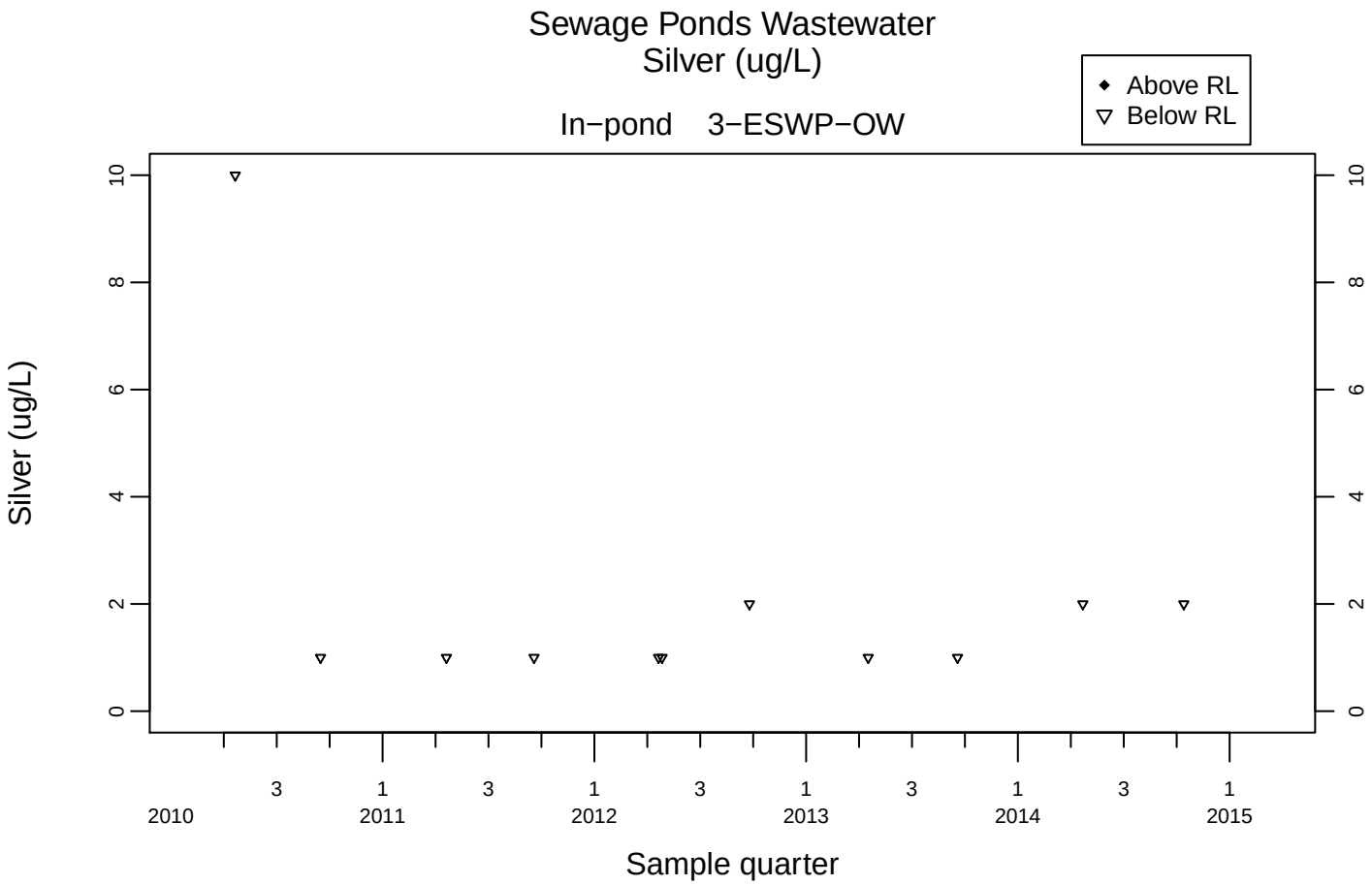

Sewage Ponds Wastewater
Mercury (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
2 2012
3 2012
4 2012
1 2013
2 2013
3 2013
4 2013
1 2014
2 2014
3 2014
4 2014
1 2015
Sample quarter

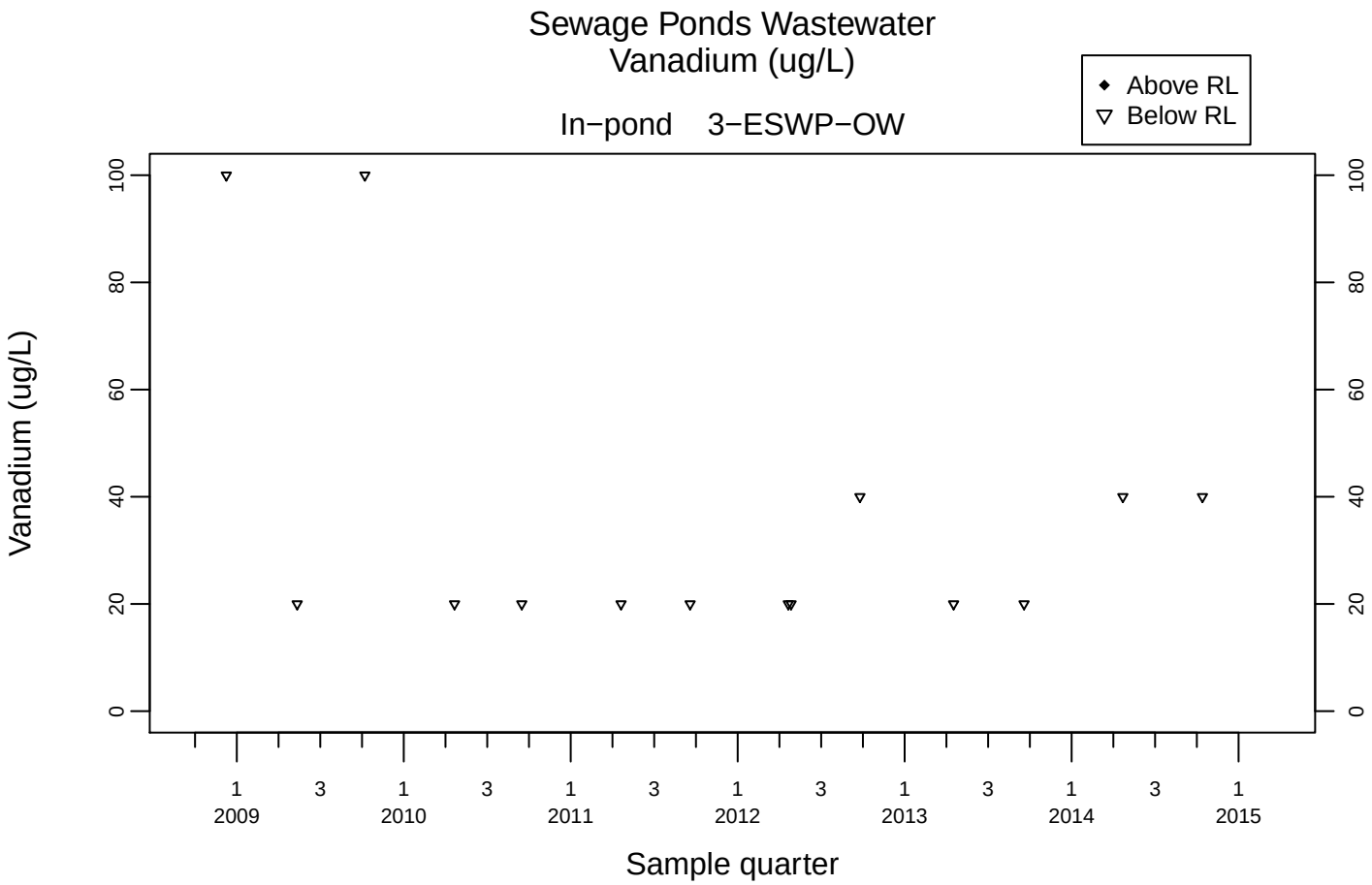

Sewage Ponds Wastewater
Molybdenum (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Molybdenum (ug/L)
0
20
40
60
80
100
120
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

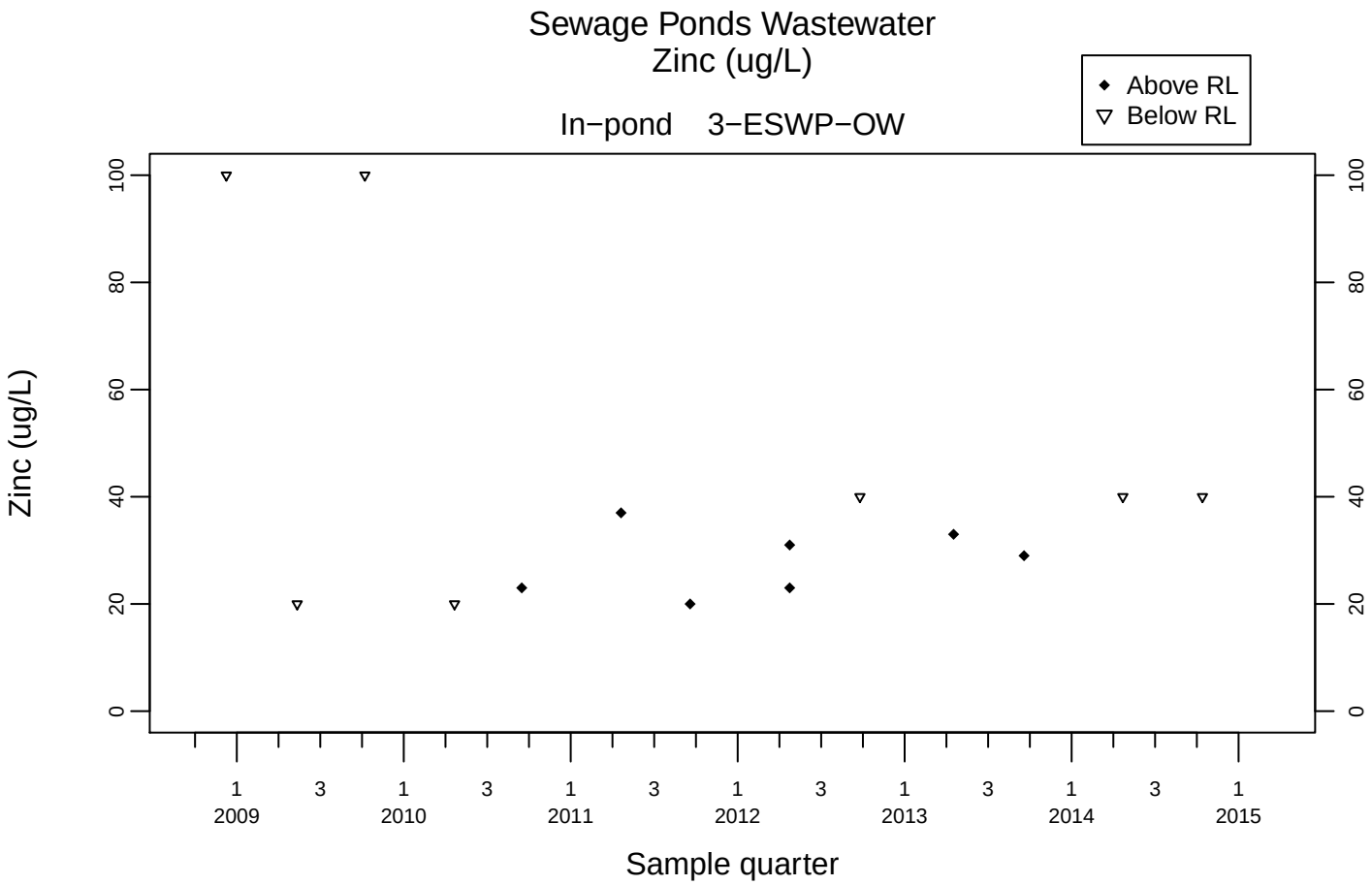

Sewage Ponds Wastewater
Nickel (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Nickel (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

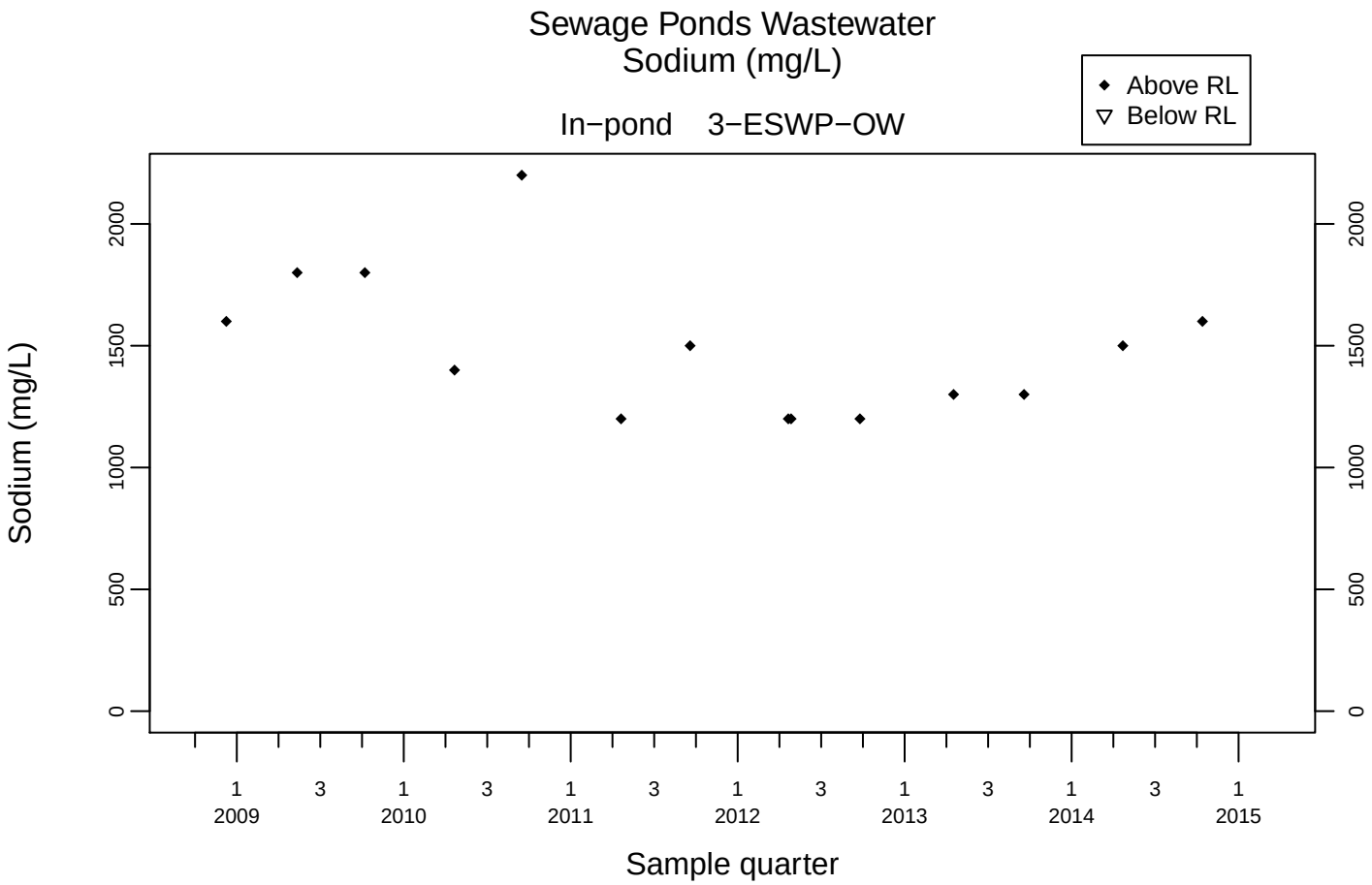

Sewage Ponds Wastewater
Potassium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Potassium (ug/L)
0
20000
40000
60000
80000
100000
120000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter


Sewage Ponds Wastewater
Selenium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Selenium (ug/L)
0
10
20
30
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

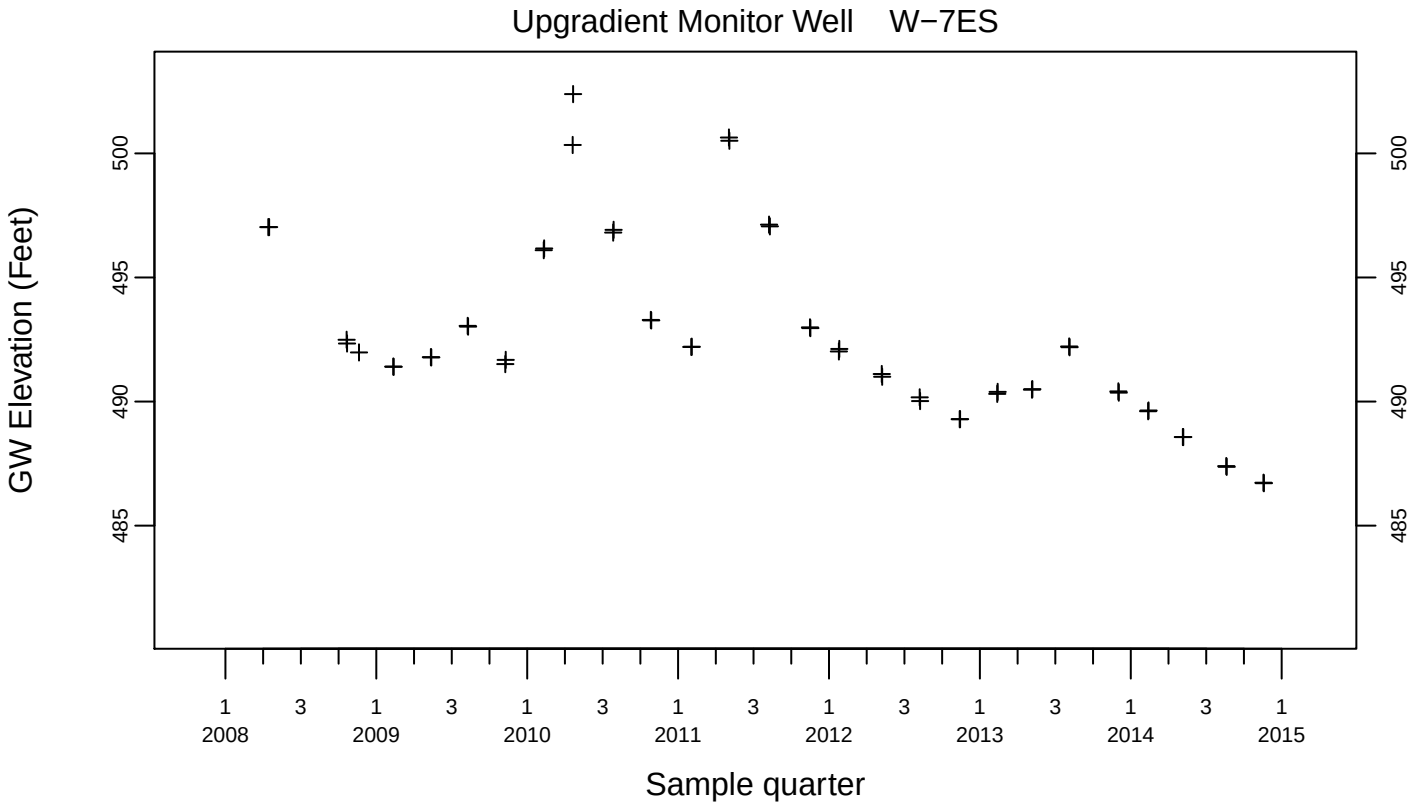

Sewage Ponds Wastewater
Silver (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Silver (ug/L)
0
2
4
6
8
10
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
Sample quarter

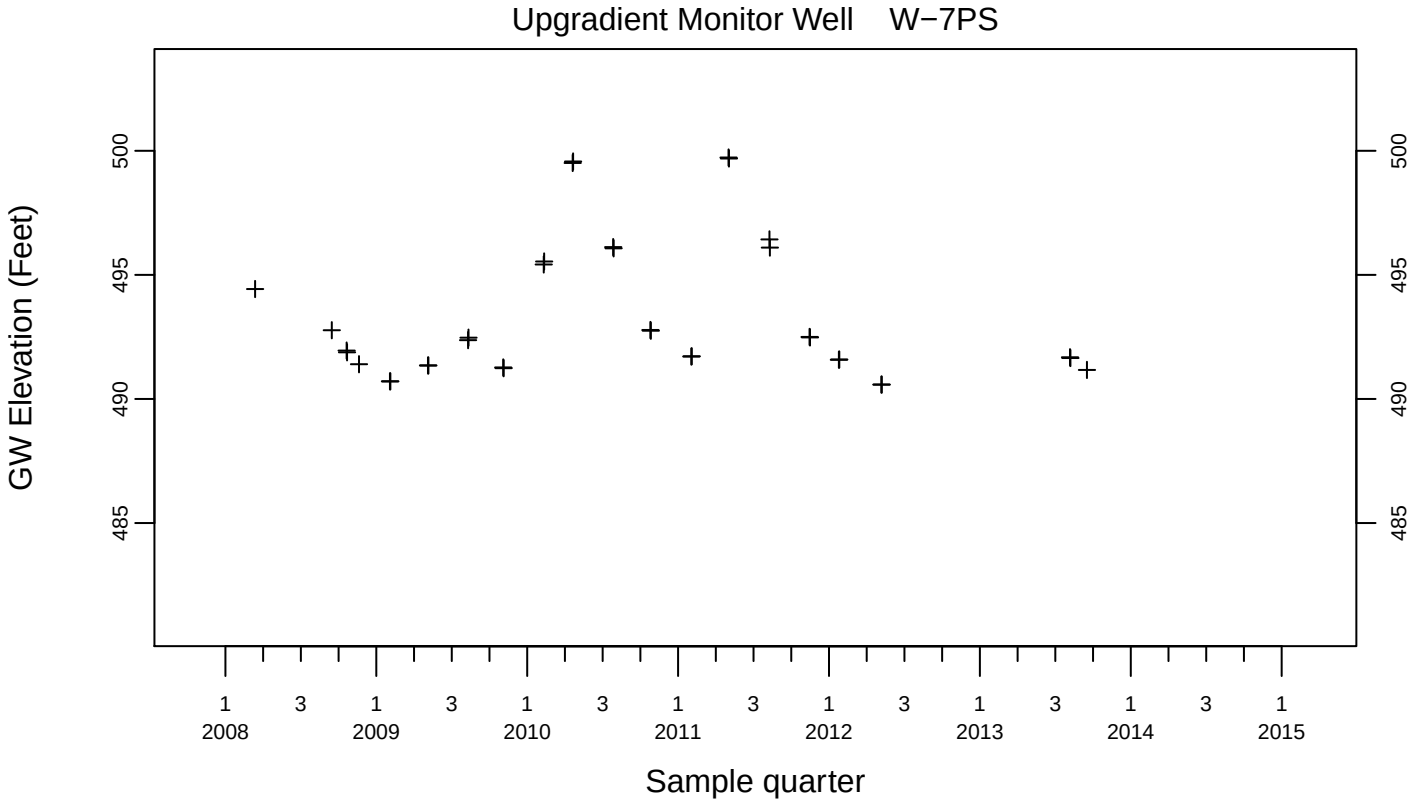

Sewage Ponds Wastewater
Vanadium (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Vanadium (ug/L)
0
20
40
60
80
100
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter


Sewage Ponds Wastewater
Zinc (ug/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Zinc (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

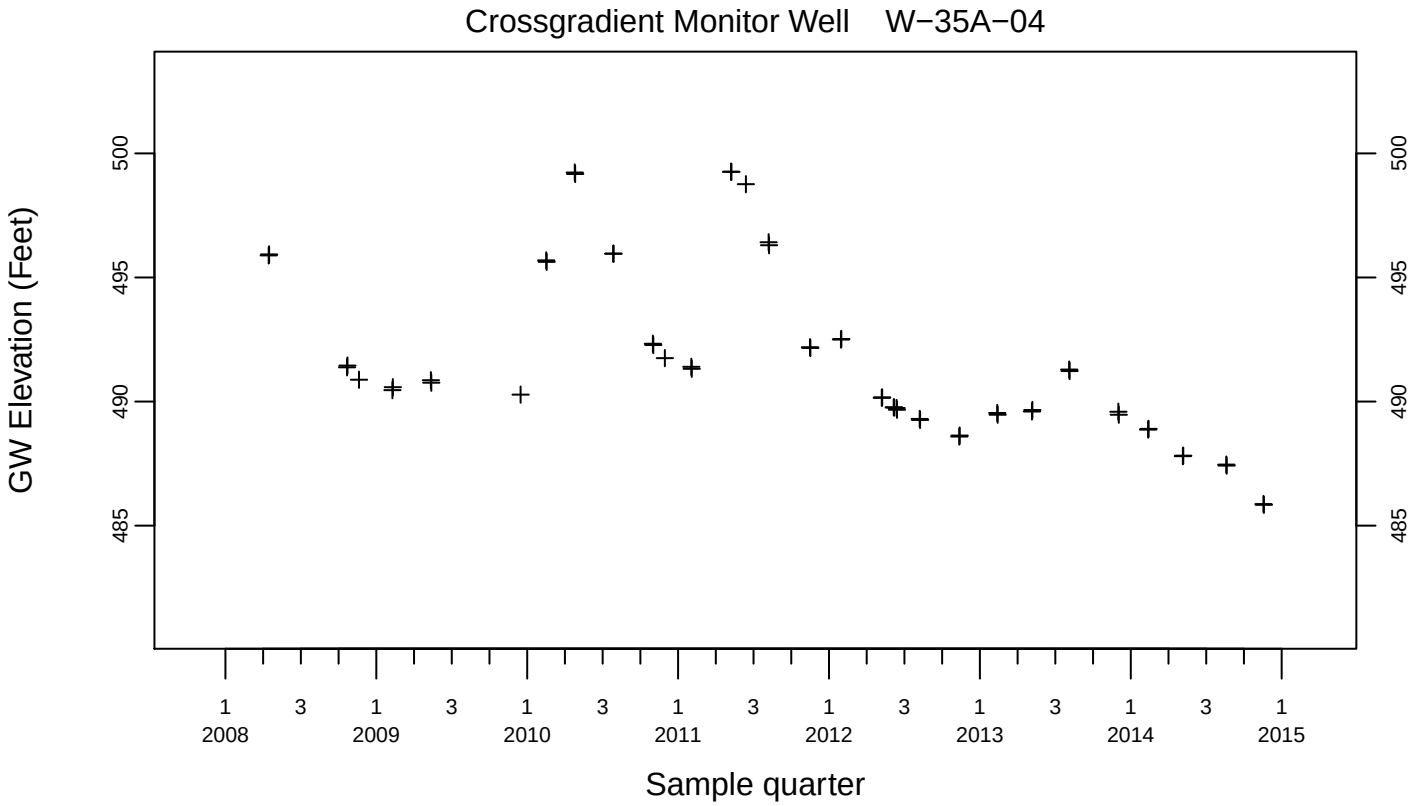

Sewage Ponds Wastewater
Sodium (mg/L)
In−pond 3−ESWP−OW
Above RL
Below RL
Sodium (mg/L)
0
500
1000
1500
2000
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

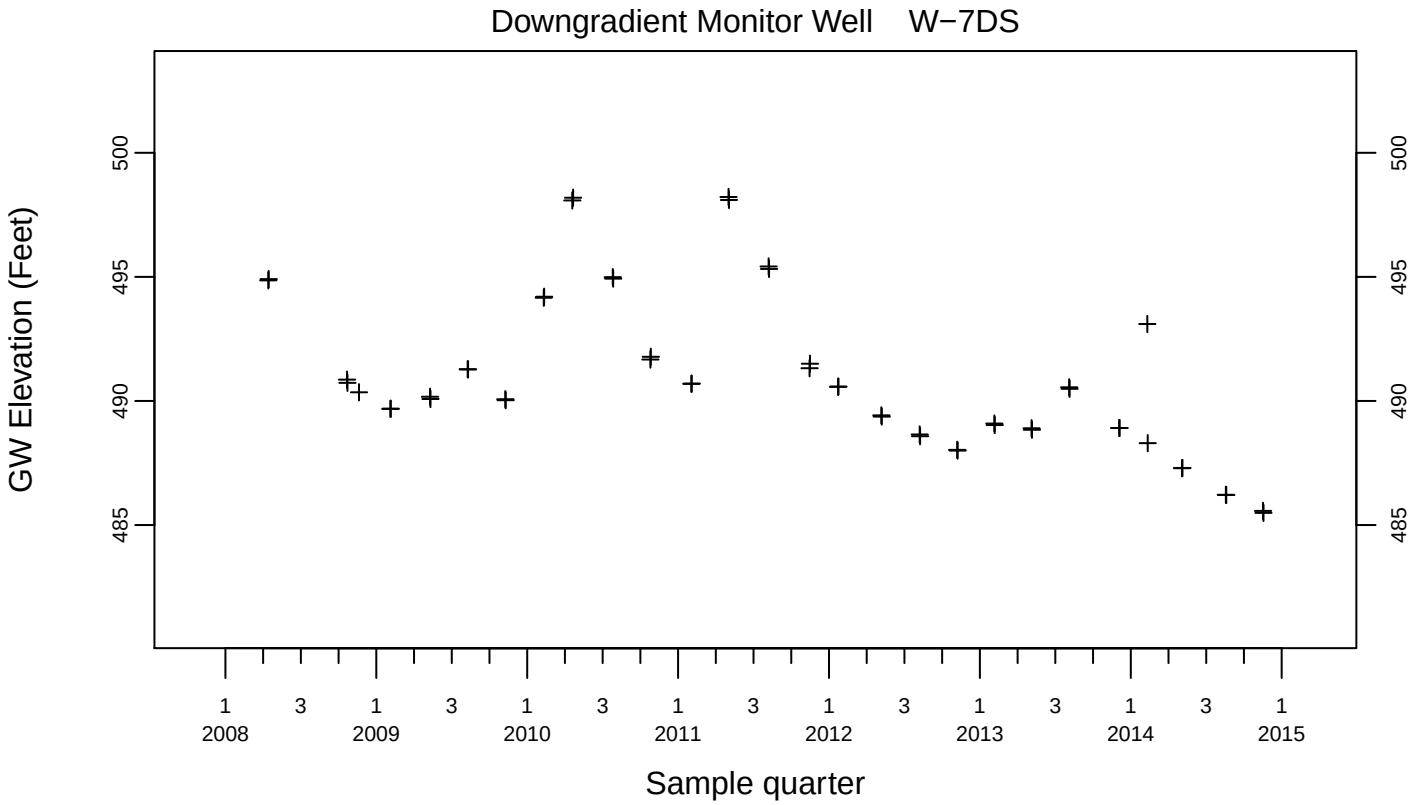
Sewage Ponds Ground Water
GW Elevation (Feet)



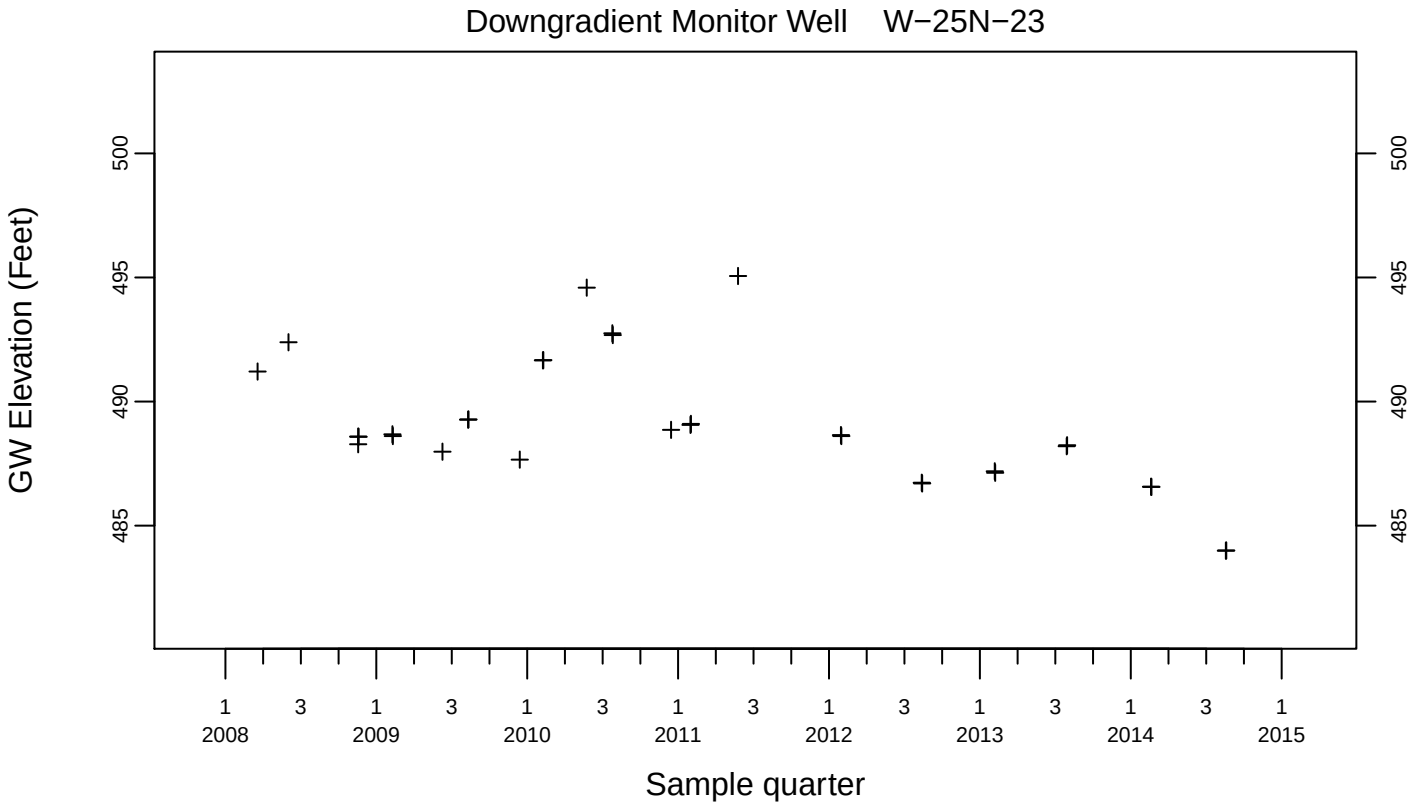


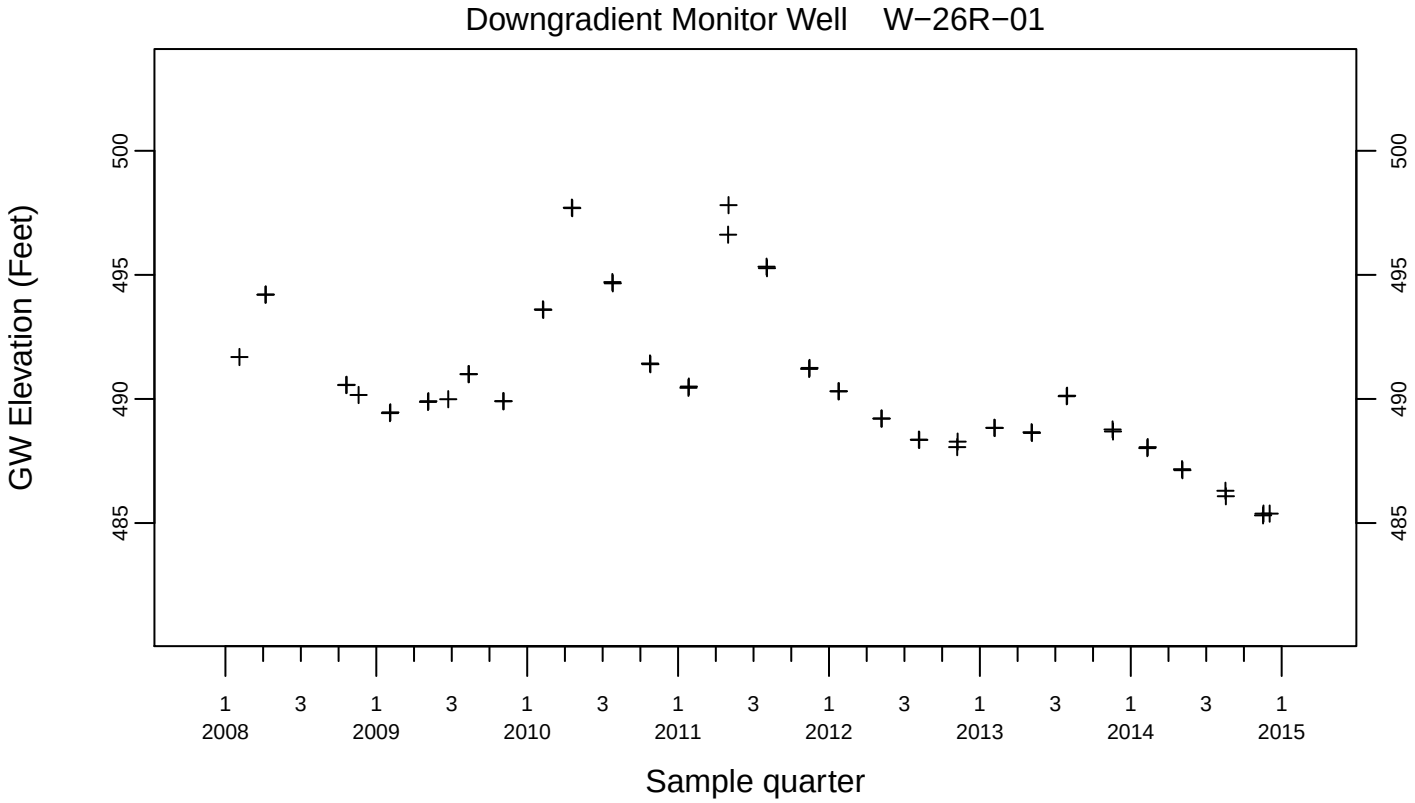
Sewage Ponds Ground Water
GW Elevation (Feet)



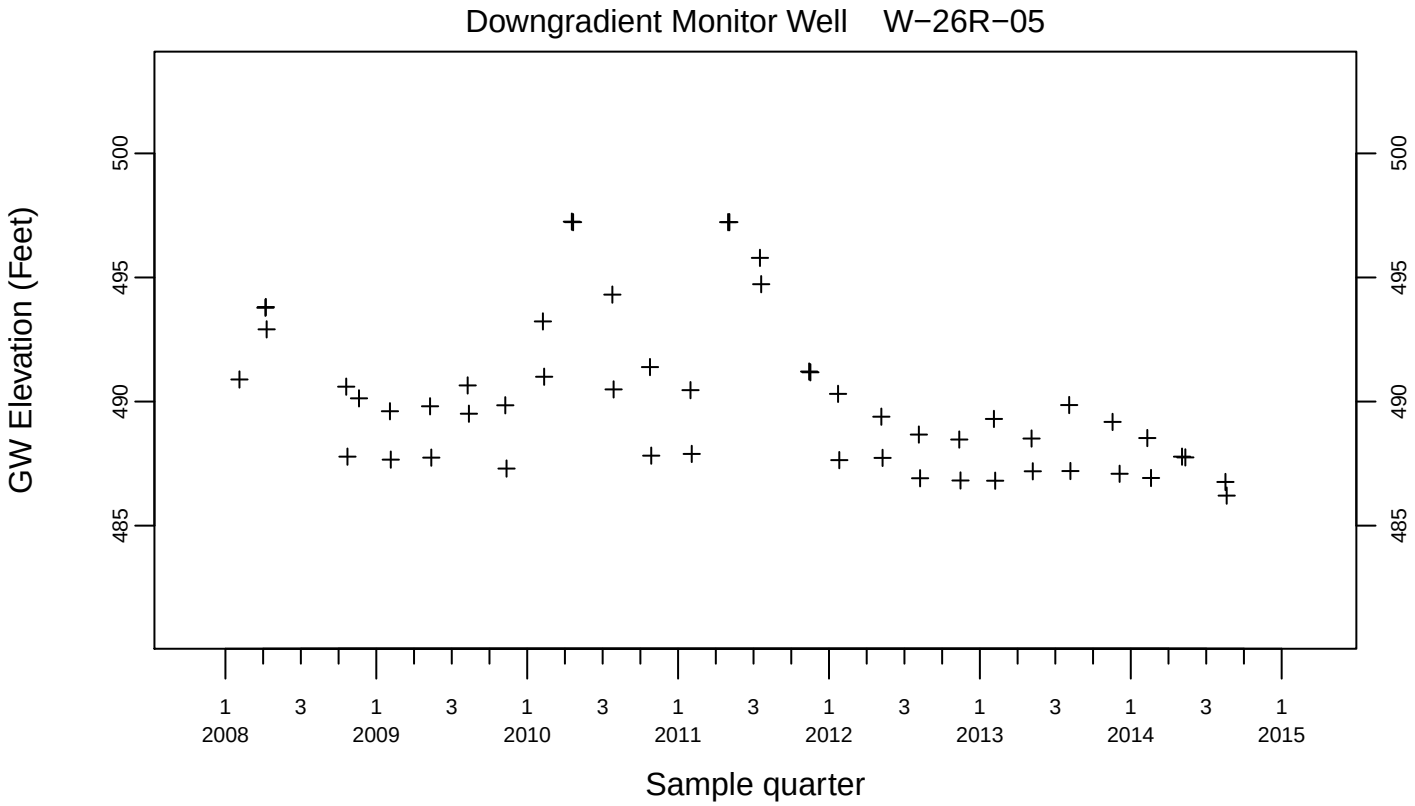


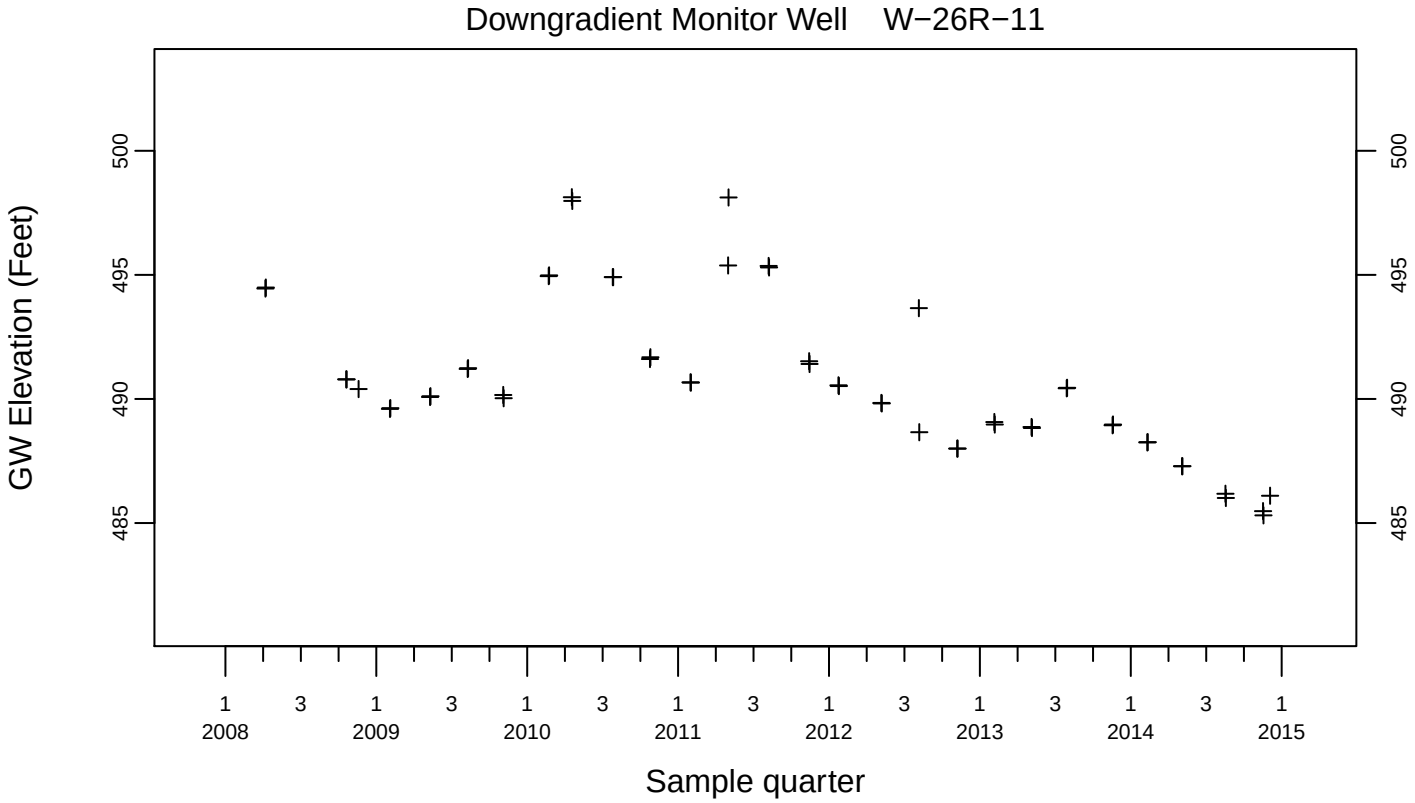
Sewage Ponds Ground Water
GW Elevation (Feet)

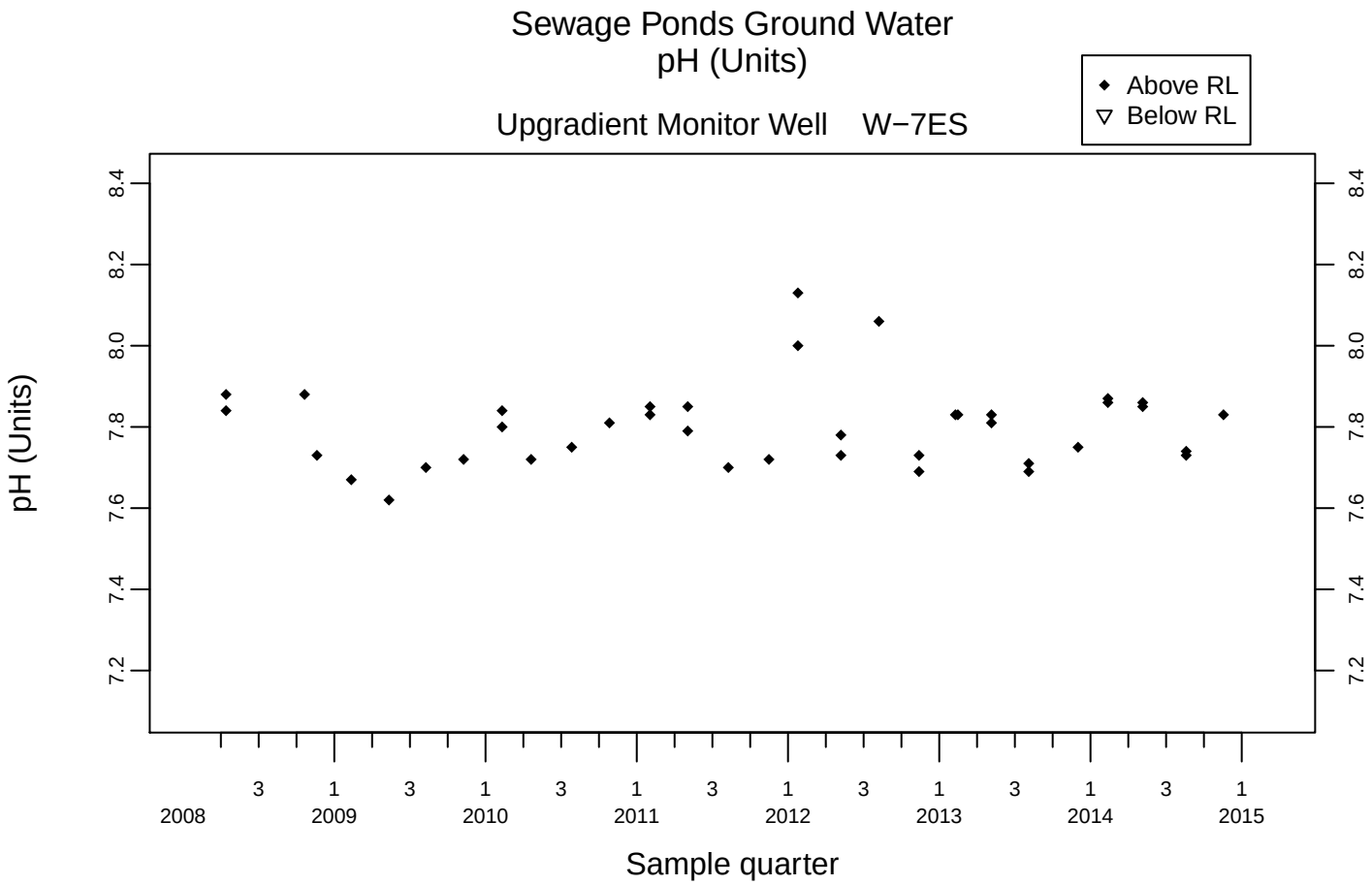


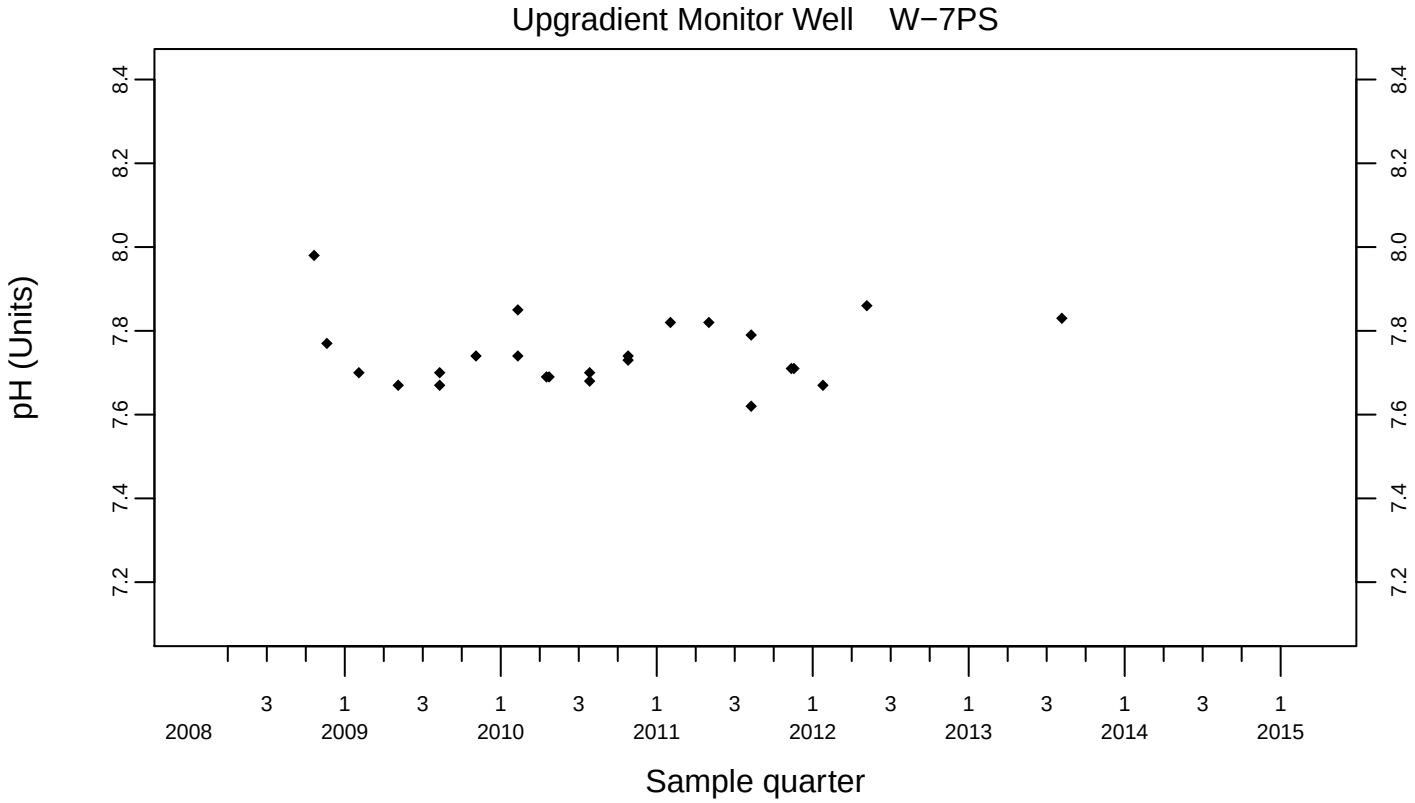


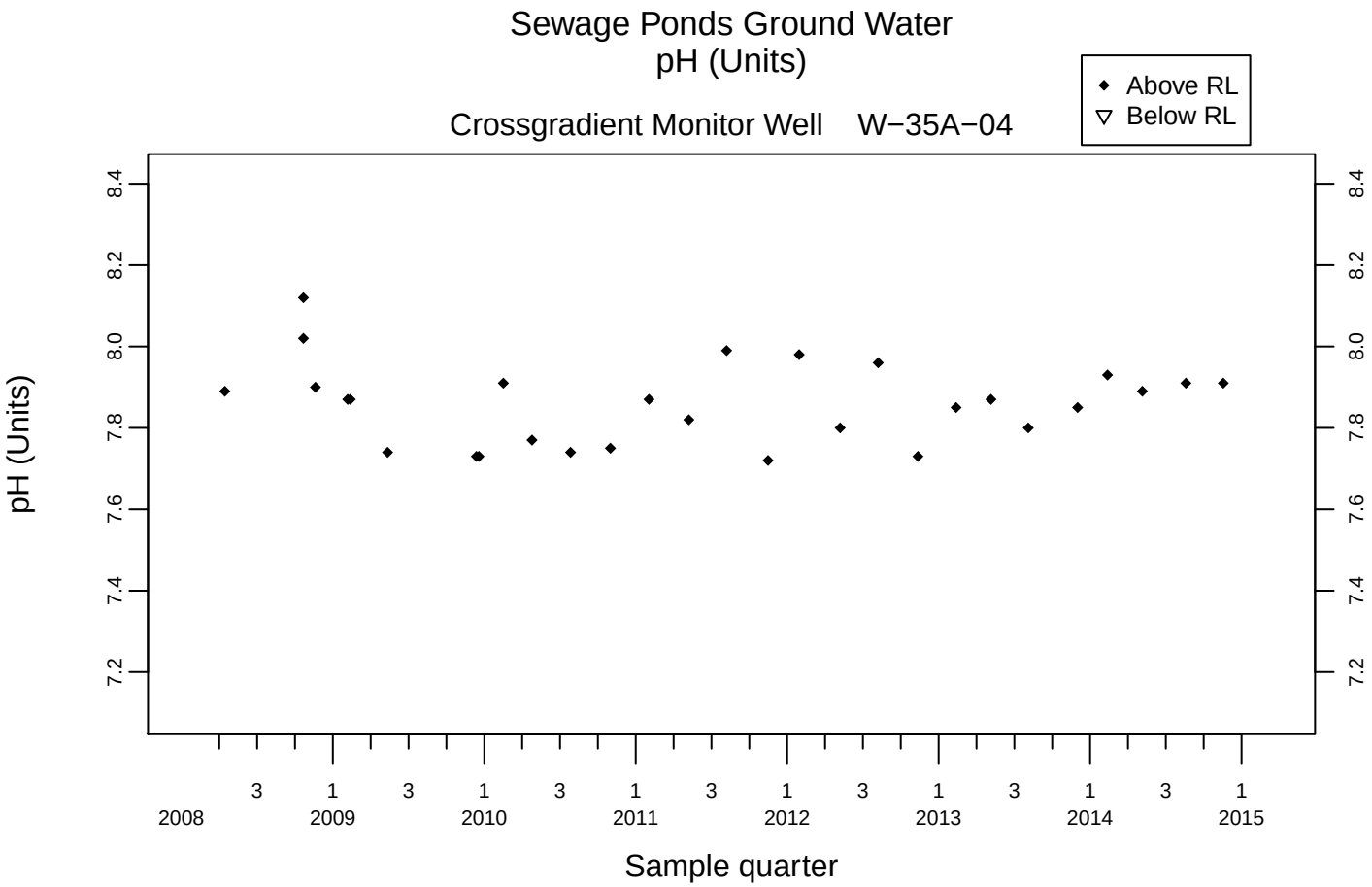
Sewage Ponds Ground Water
GW Elevation (Feet)

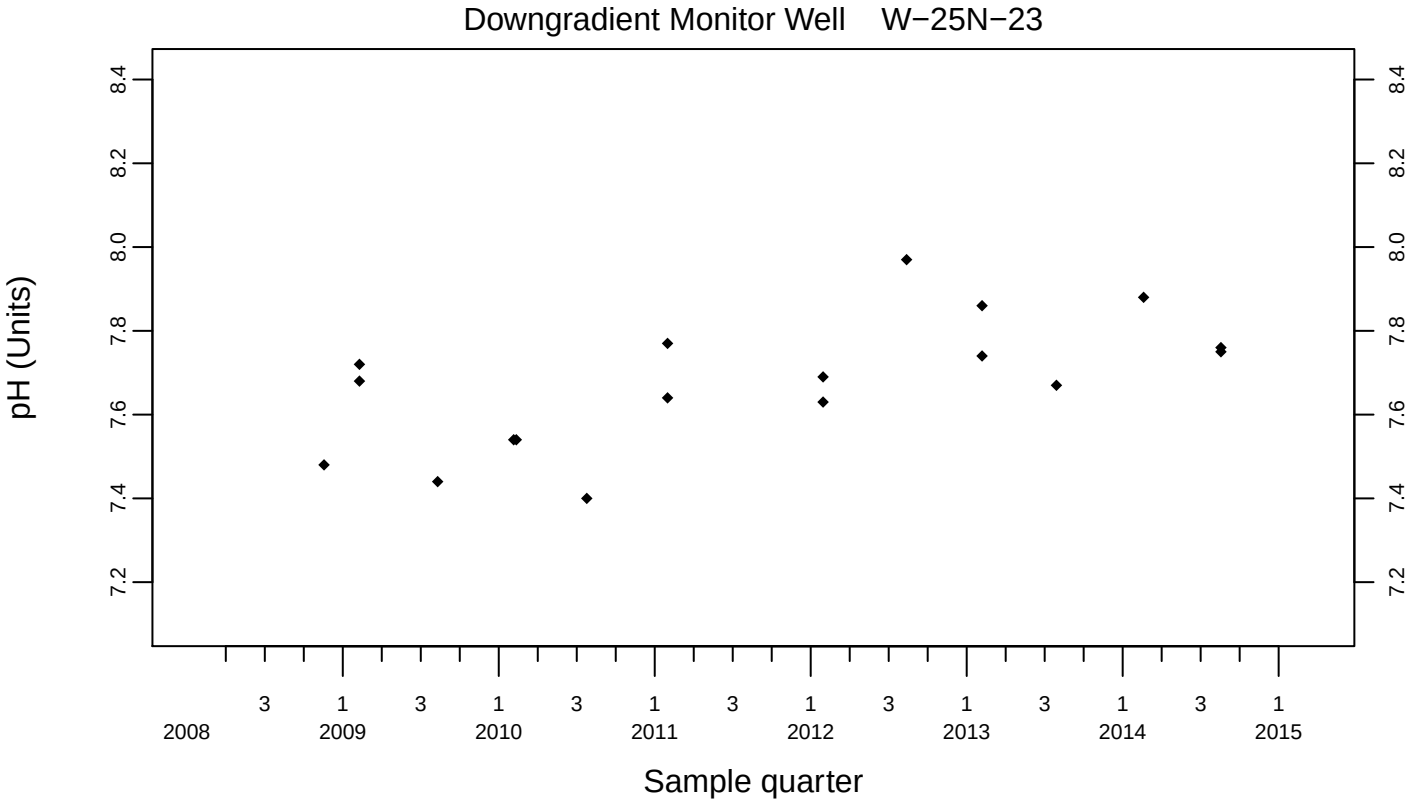


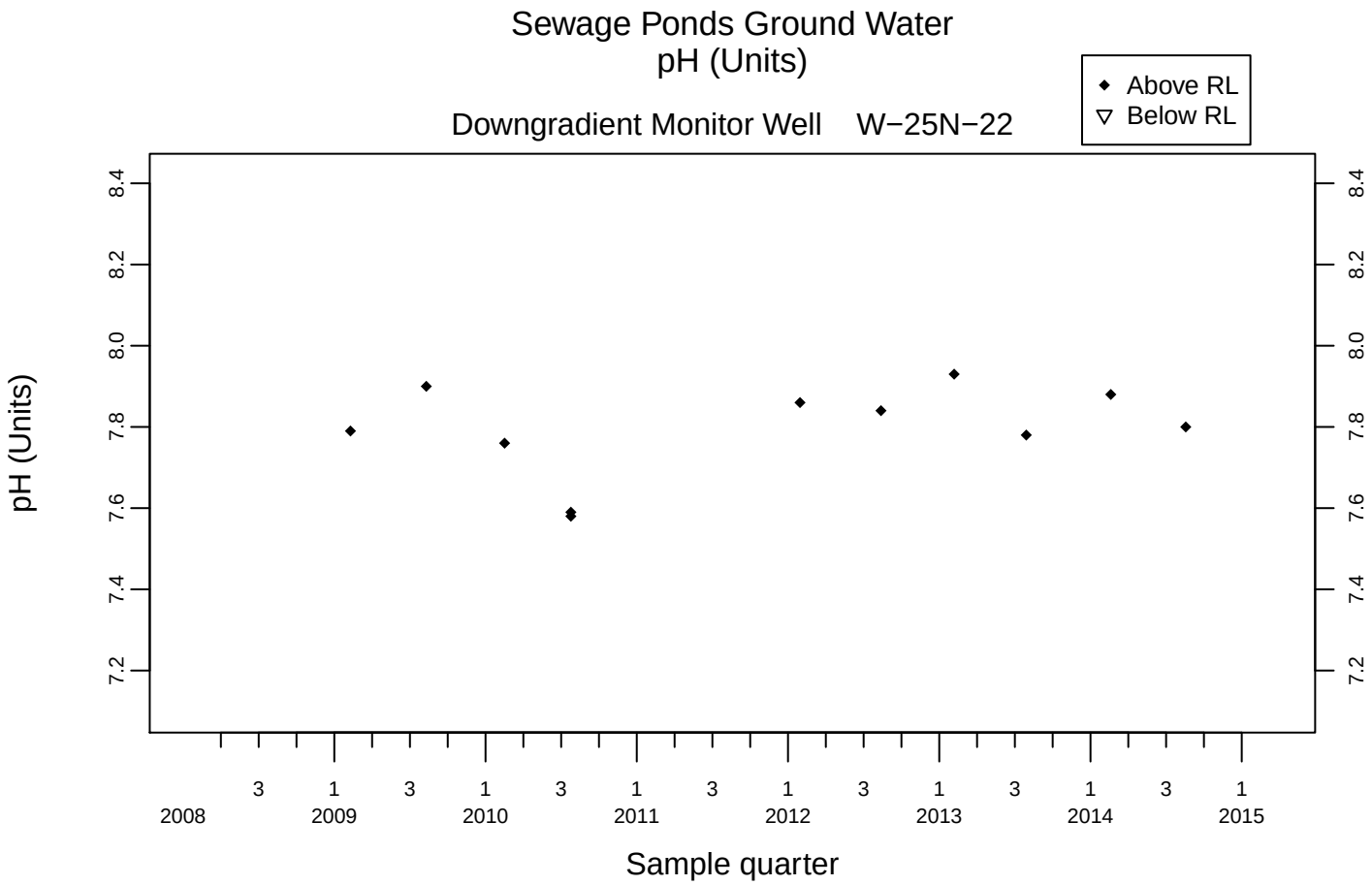


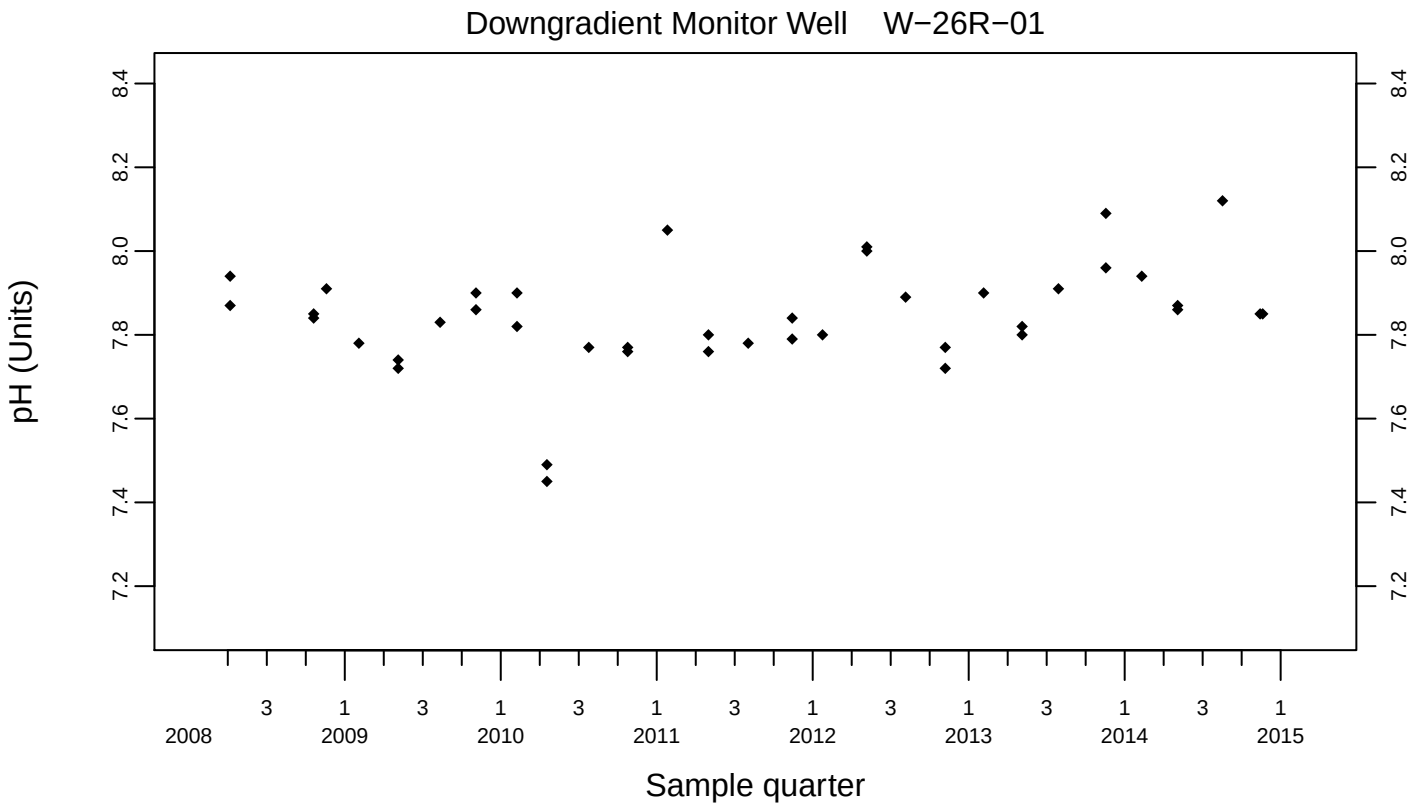

Sewage Ponds Ground Water
pH (Units)
Upgradient Monitor Well W−7ES
Above RL
Below RL
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

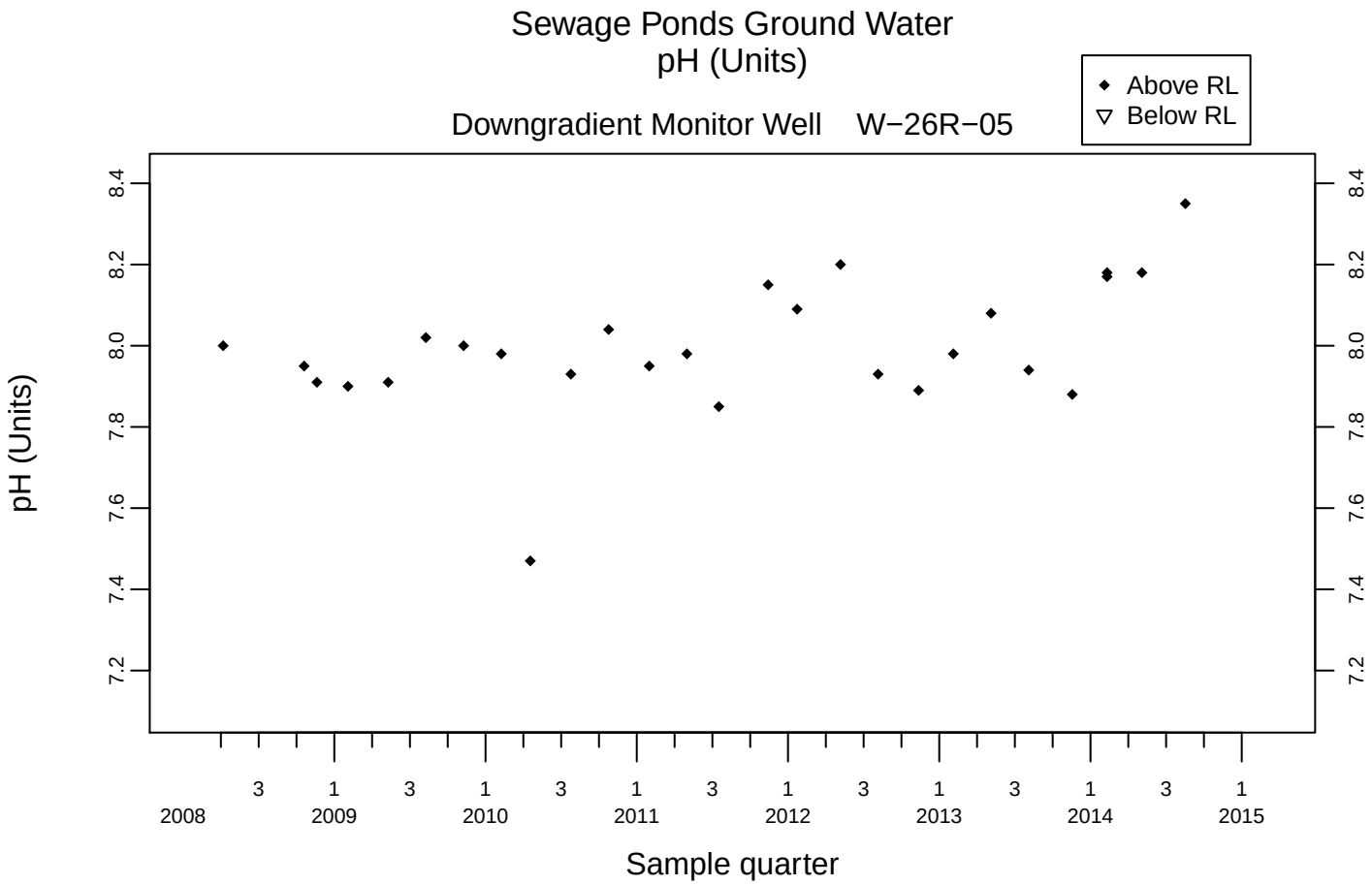

Upgradient Monitor Well W−7PS
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

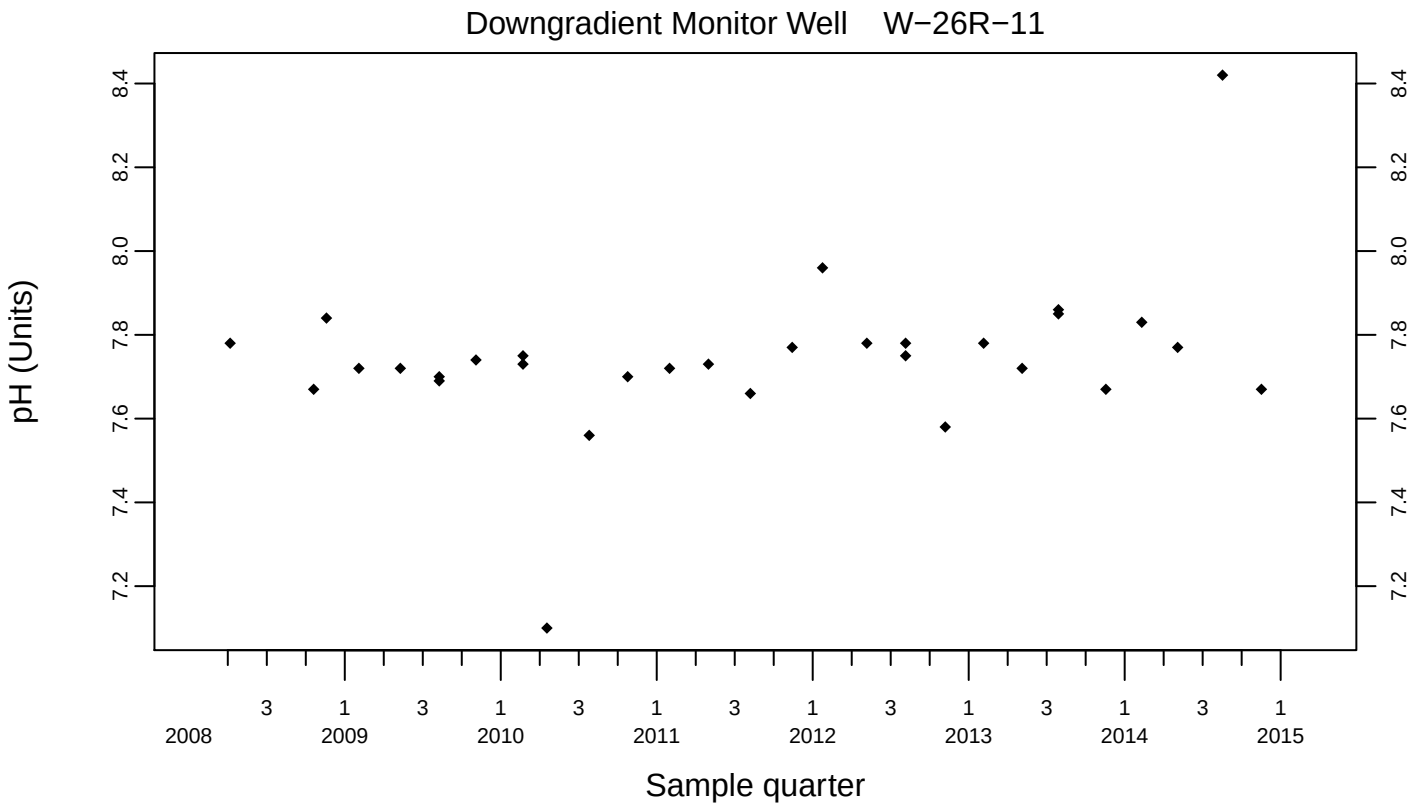

Sewage Ponds Ground Water
pH (Units)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

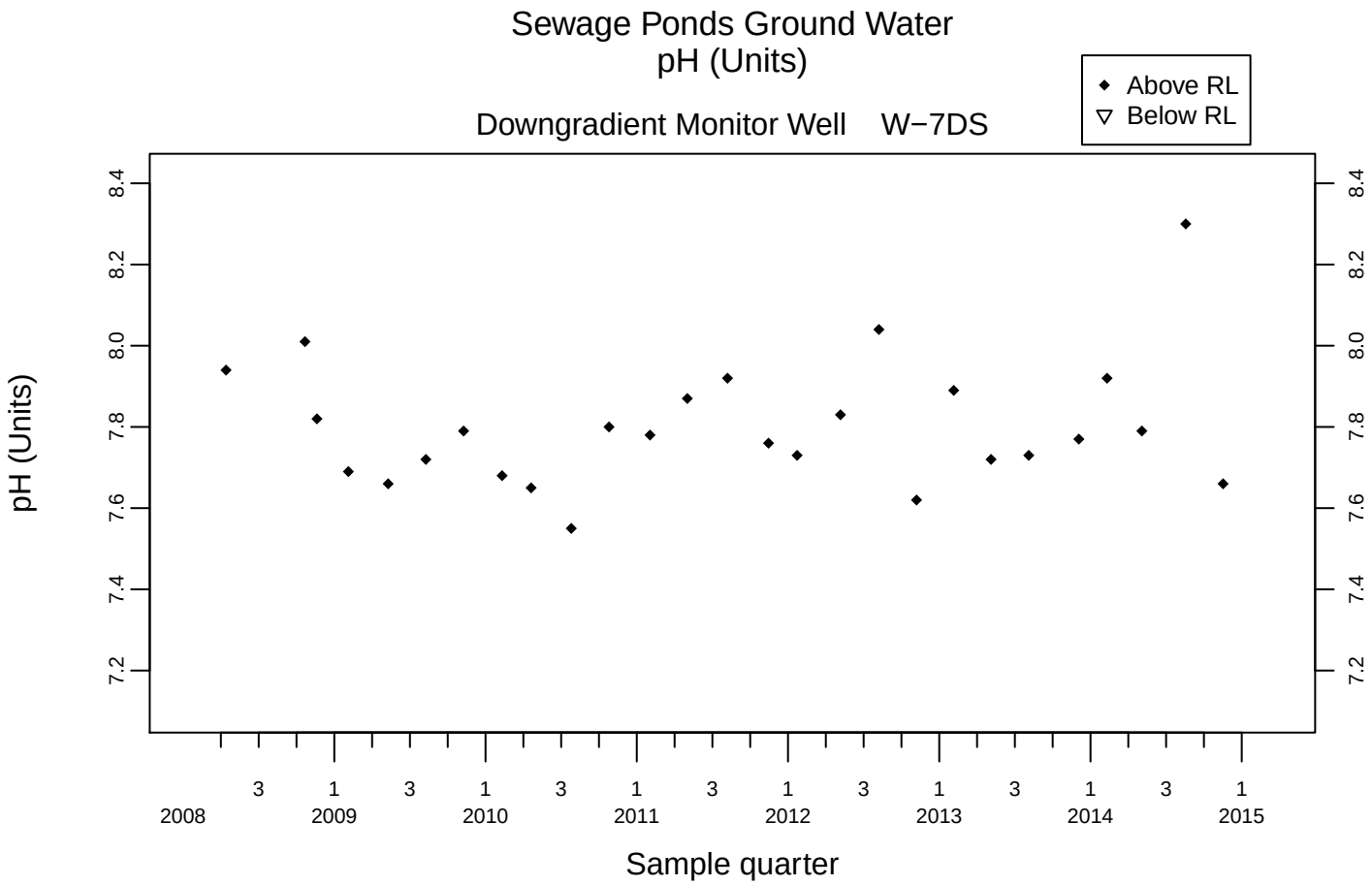

Downgradient Monitor Well W−25N−23
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

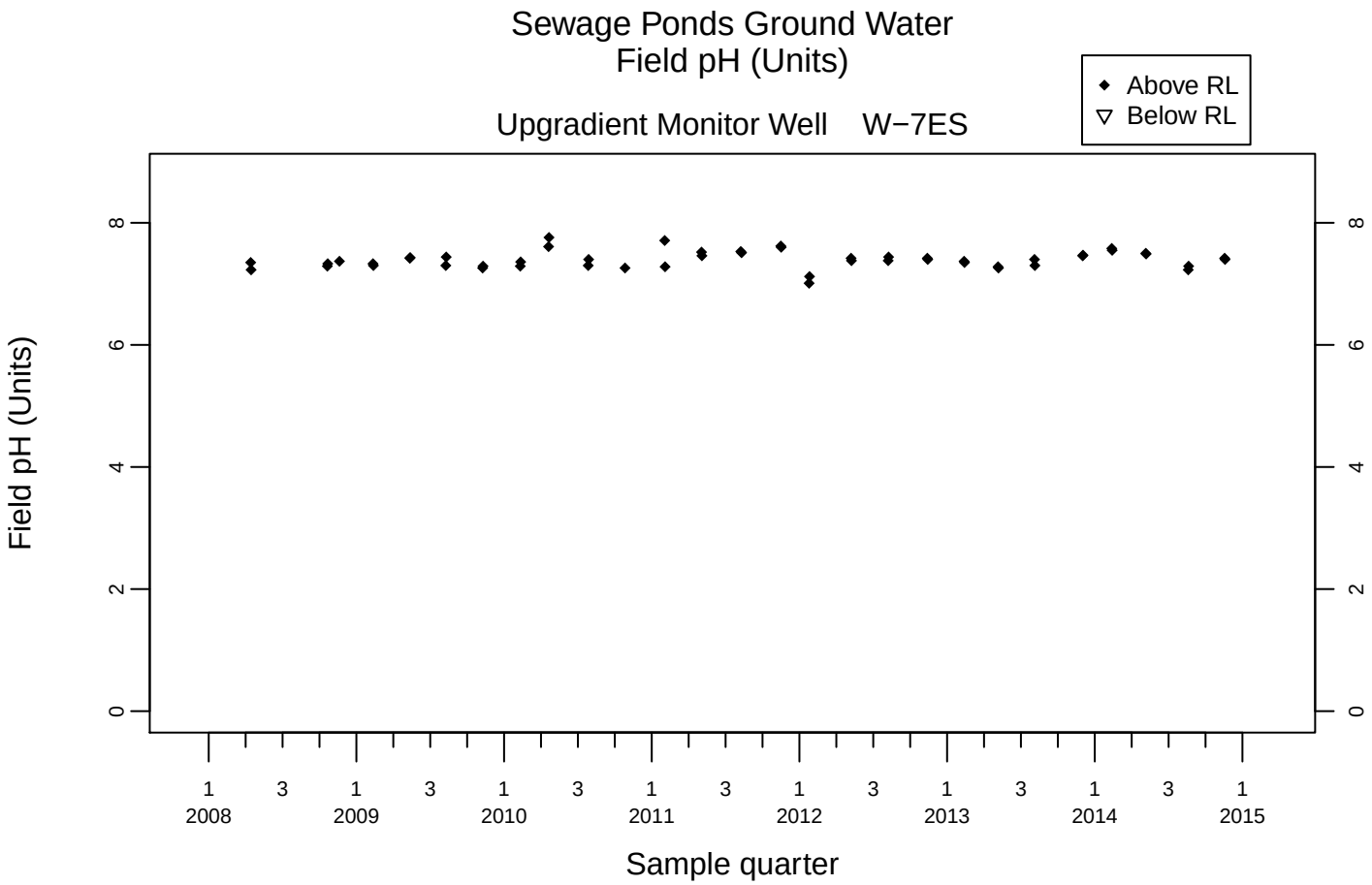

Sewage Ponds Ground Water
pH (Units)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

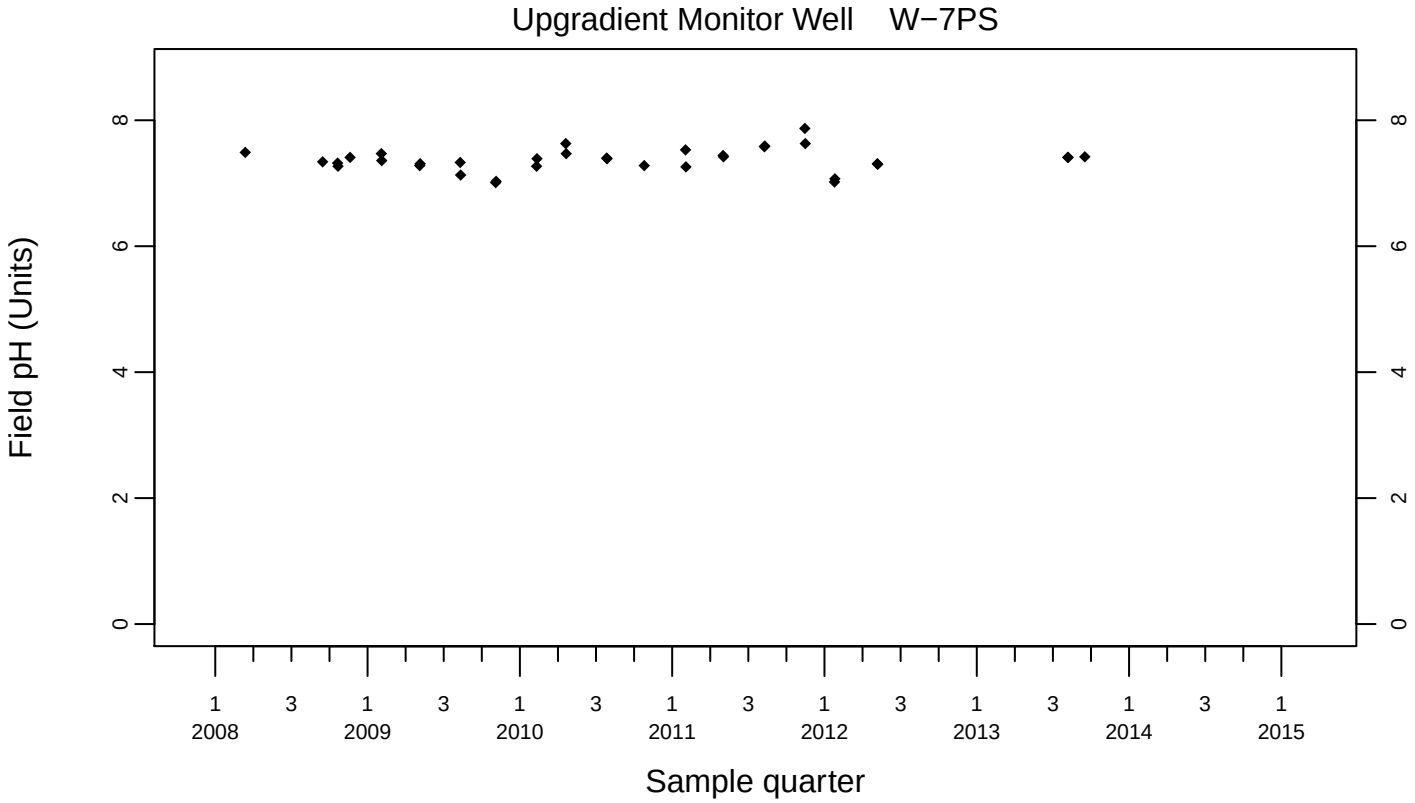

Downgradient Monitor Well W−26R−01
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

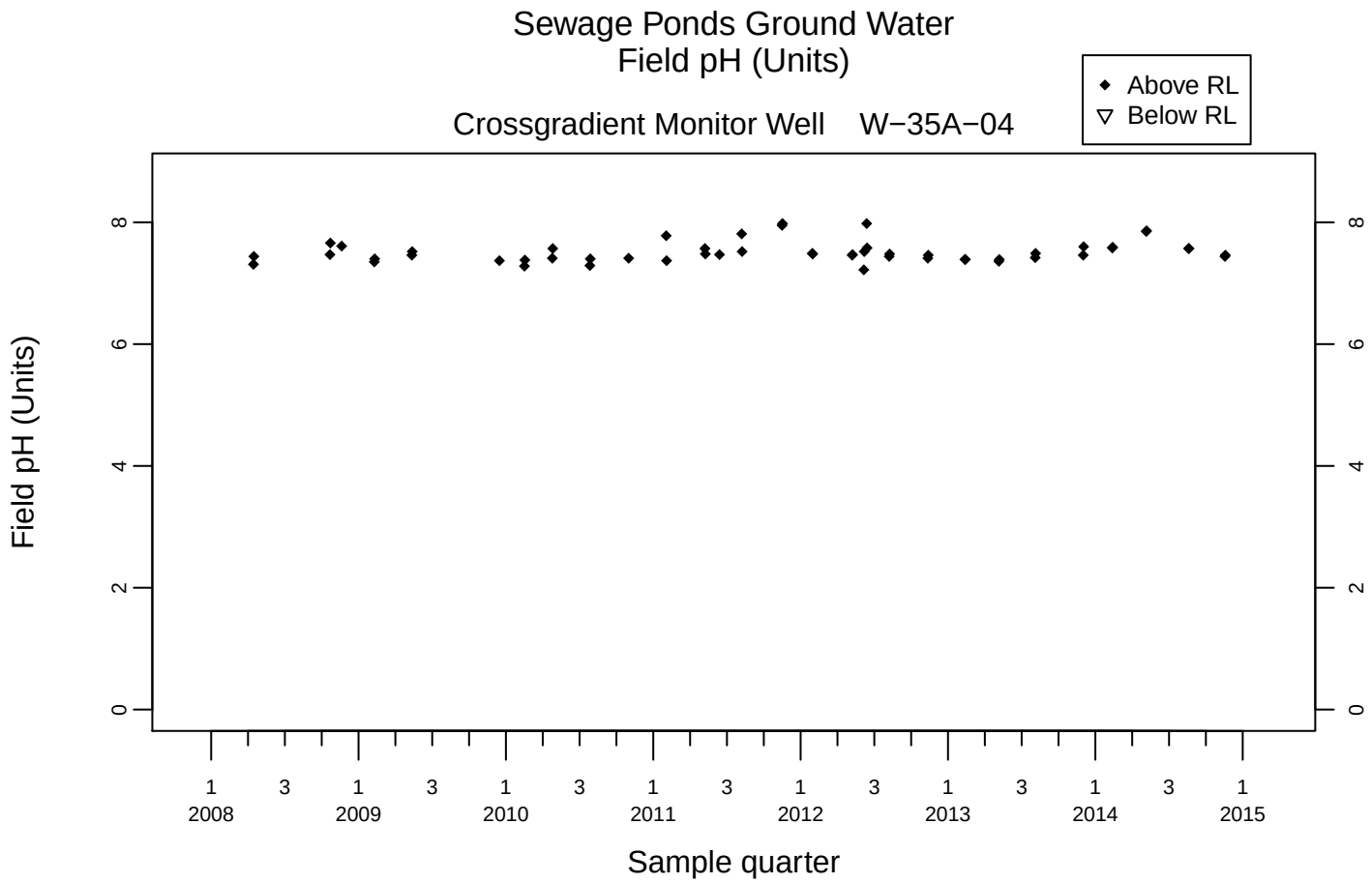

Sewage Ponds Ground Water
pH (Units)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

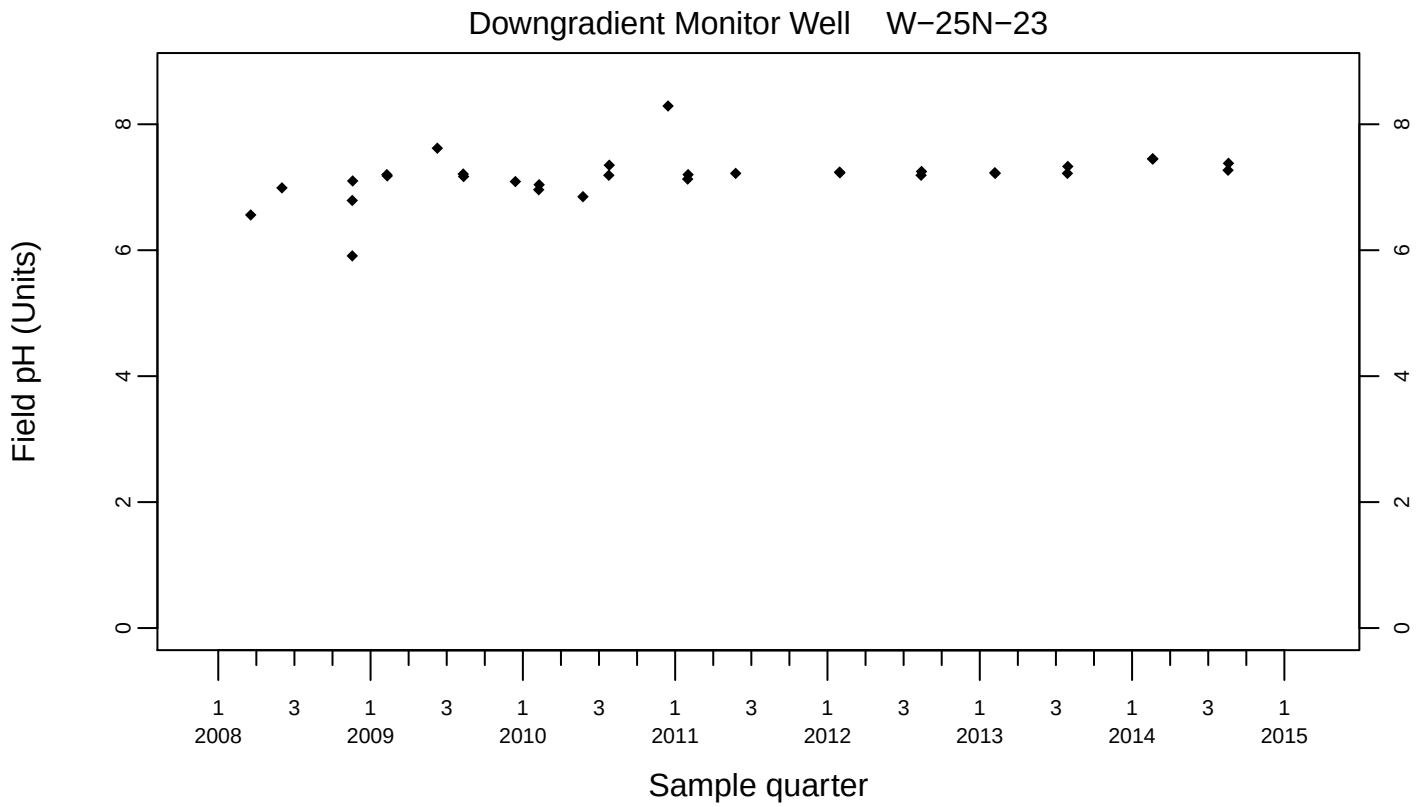

Downgradient Monitor Well W−26R−11
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

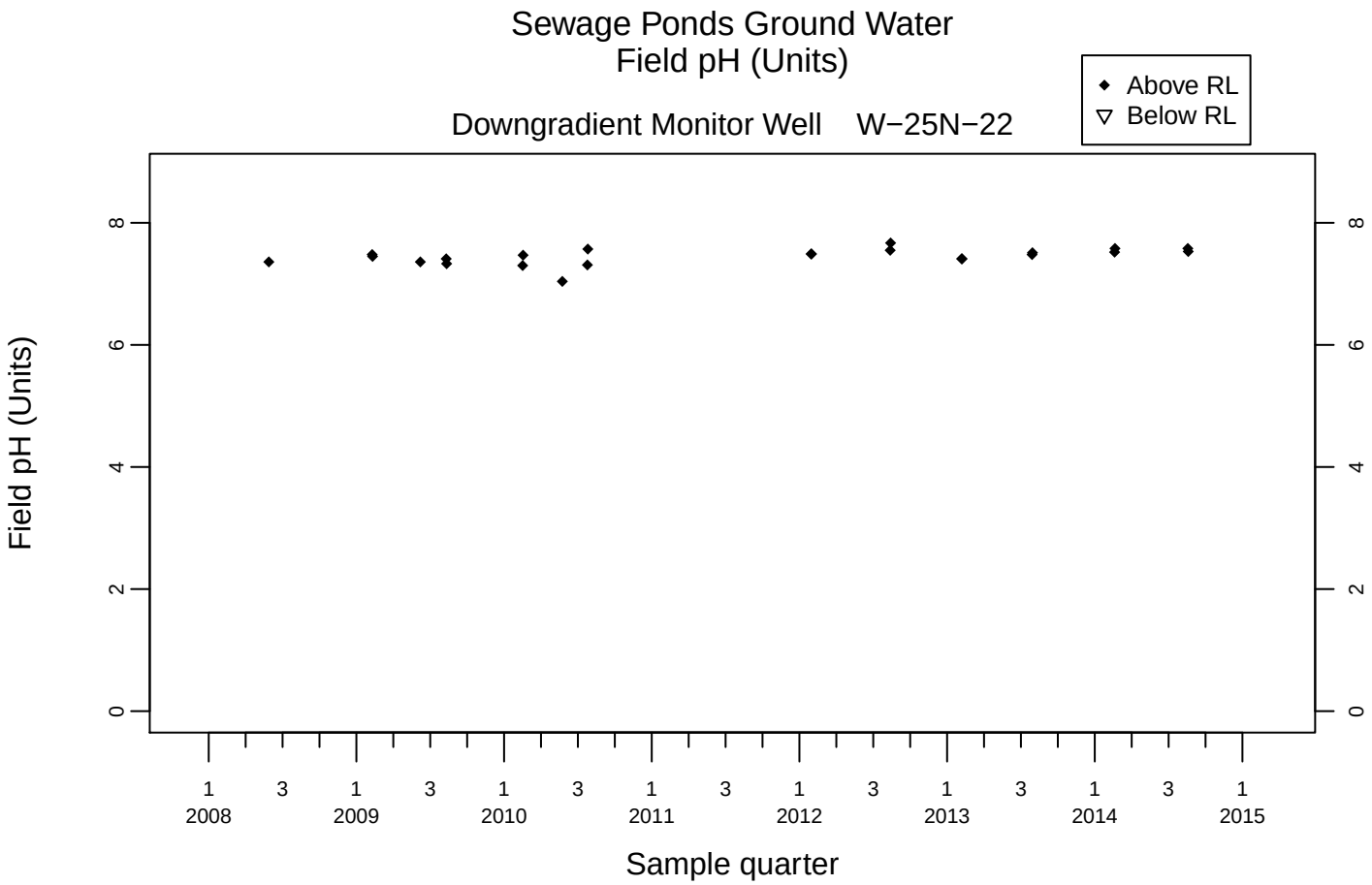

Sewage Ponds Ground Water
pH (Units)
Downgradient Monitor Well W−7DS
Above RL
Below RL
pH (Units)
8.4
8.2
8.0
7.8
7.6
7.4
7.2
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

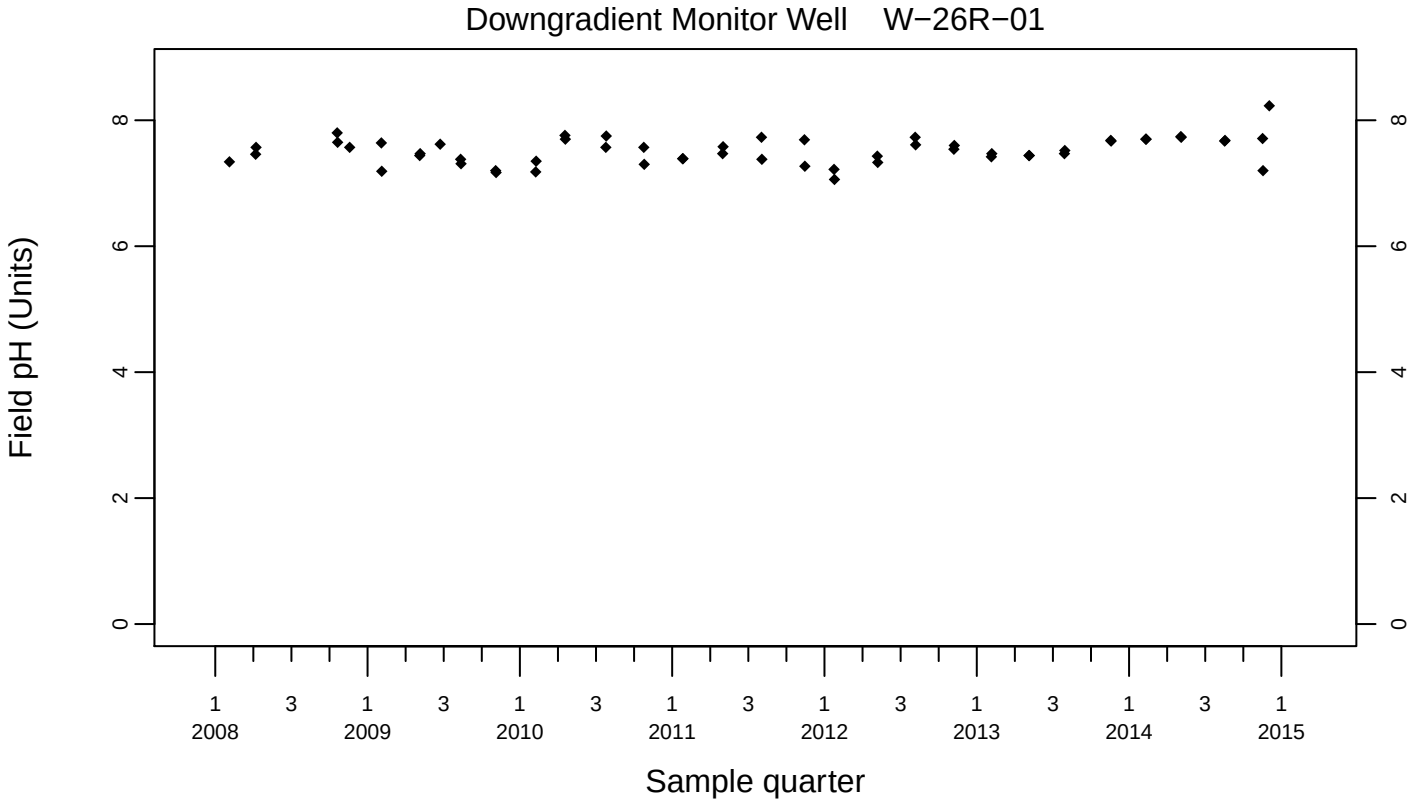

Sewage Ponds Ground Water
Field pH (Units)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

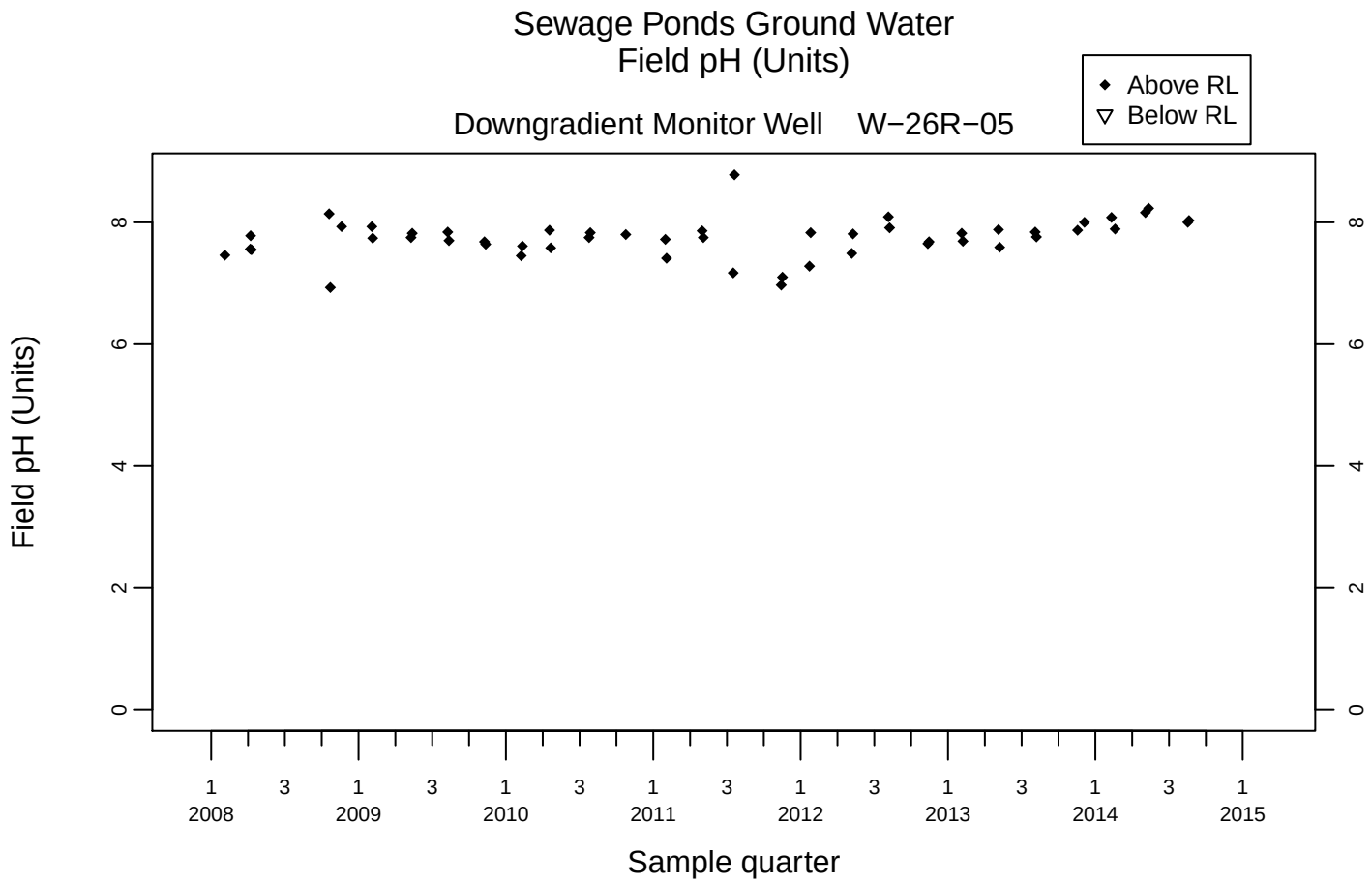

Upgradient Monitor Well W−7PS
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

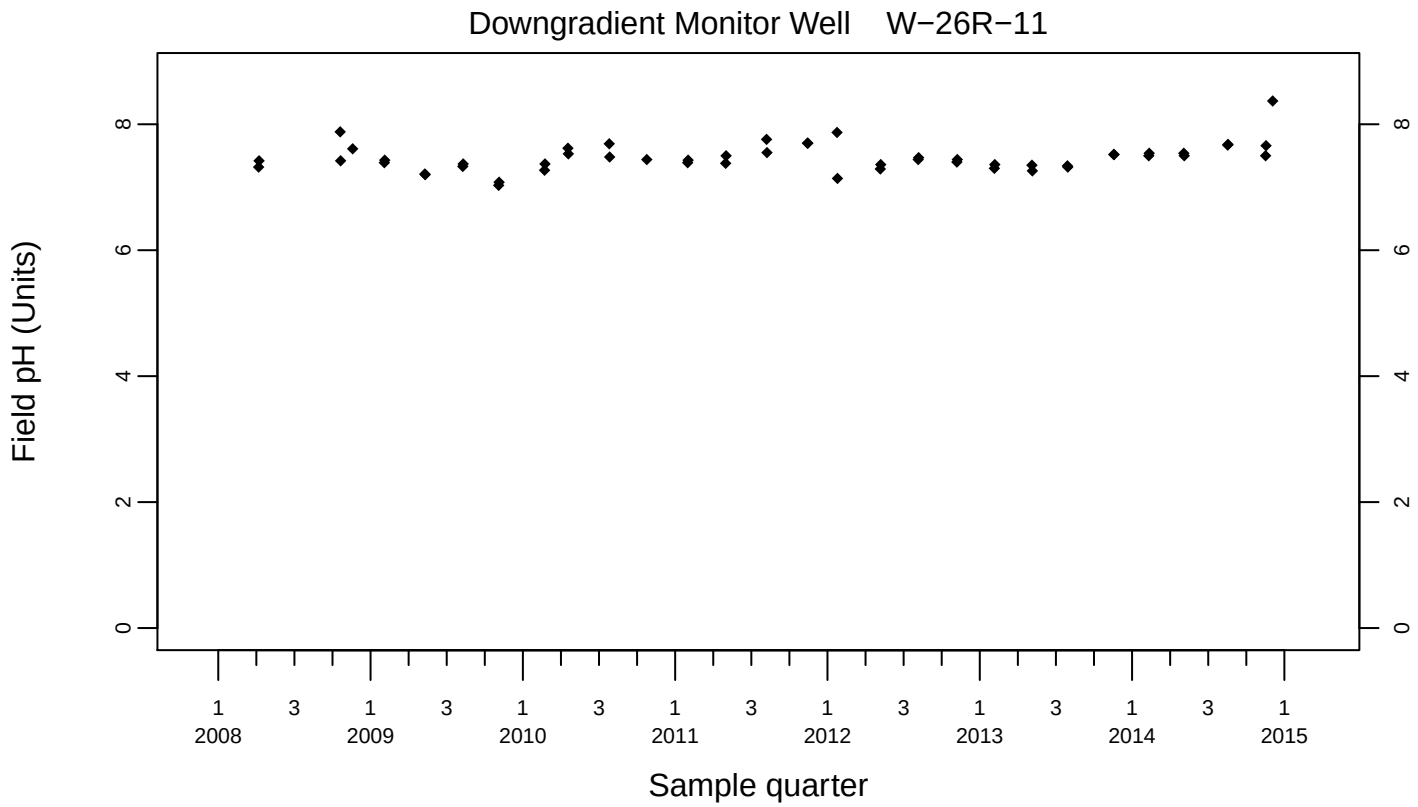

Sewage Ponds Ground Water
Field pH (Units)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

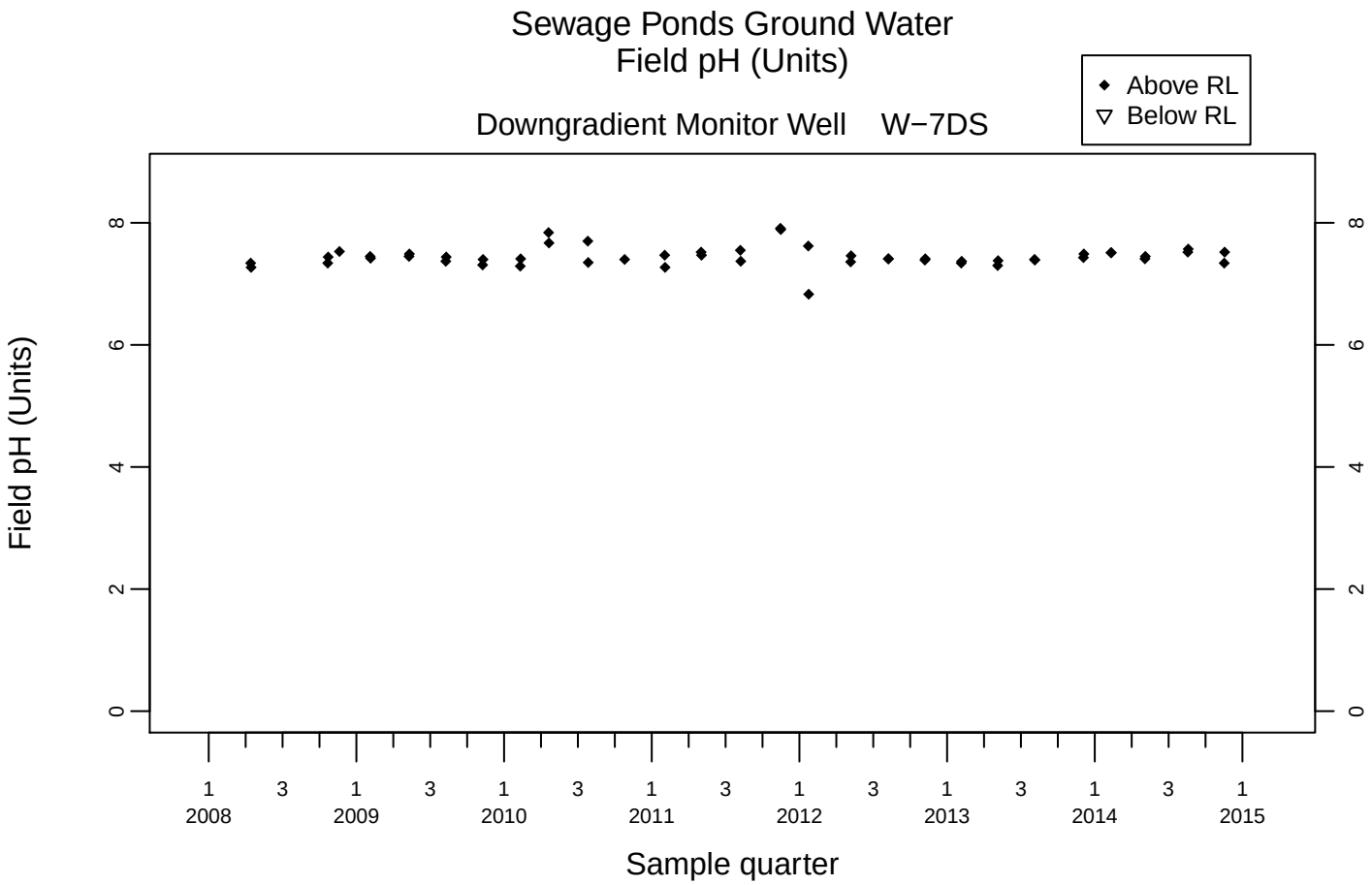

Downgradient Monitor Well W−25N−23
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

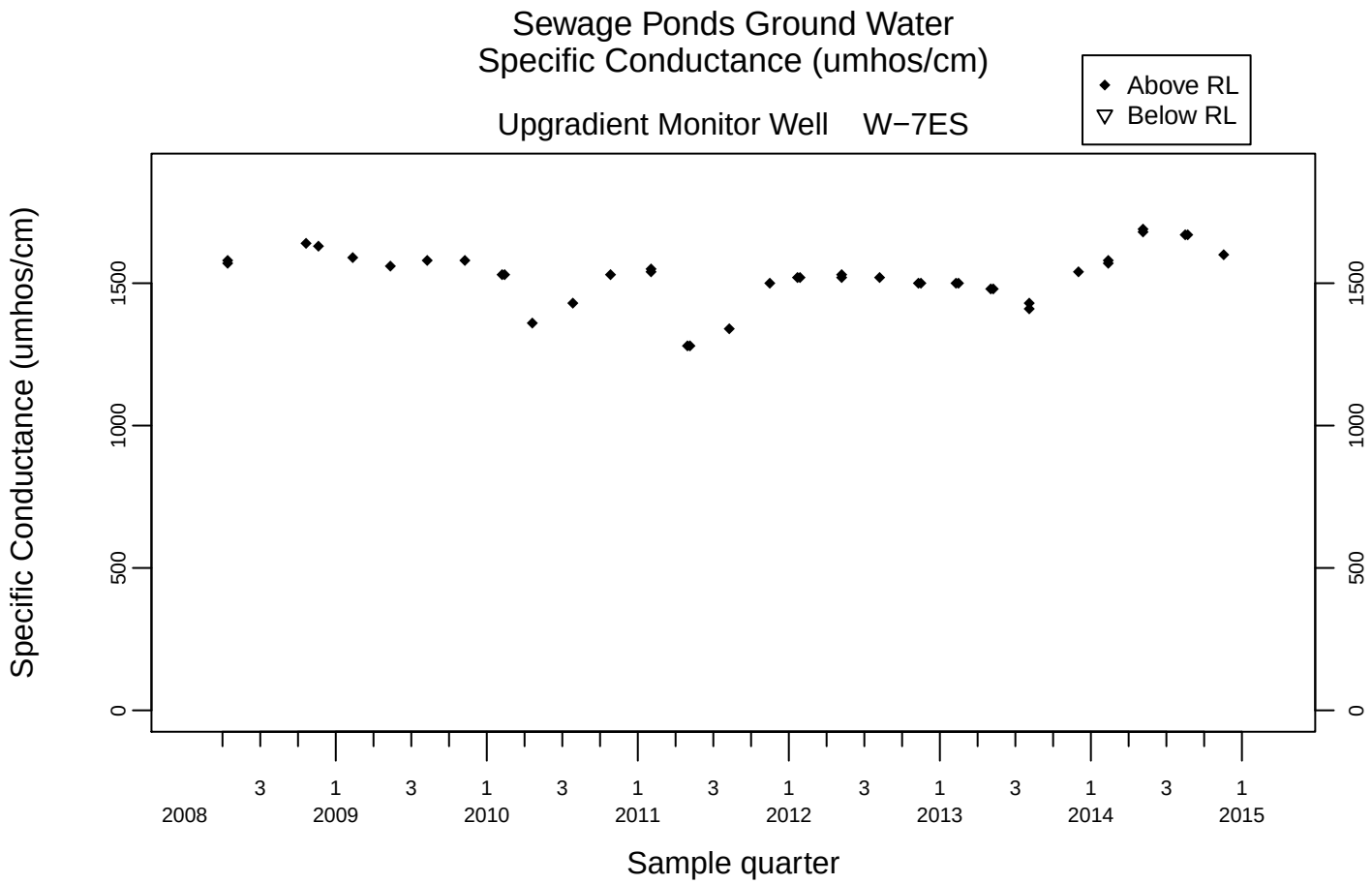

Sewage Ponds Ground Water
Field pH (Units)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

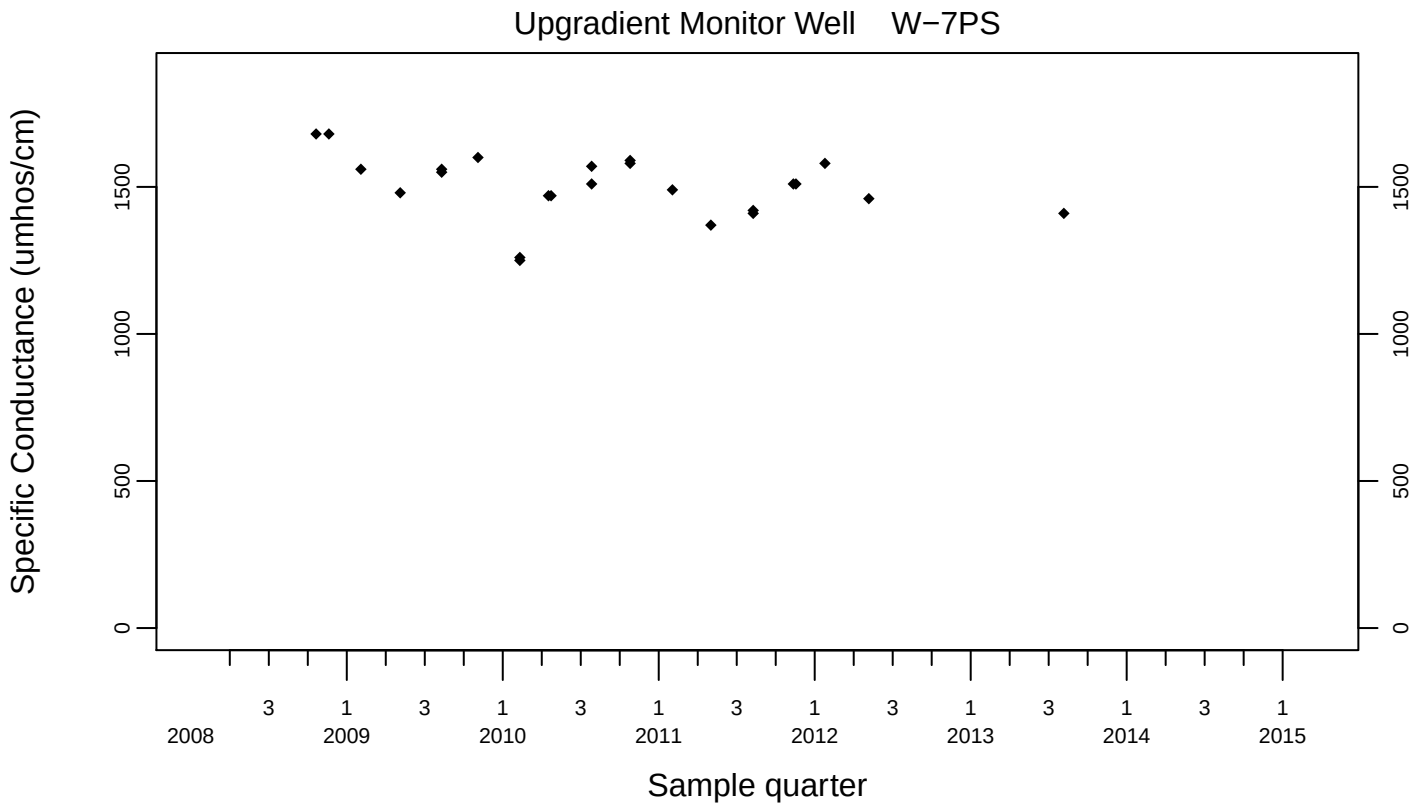

Downgradient Monitor Well W−26R−01
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

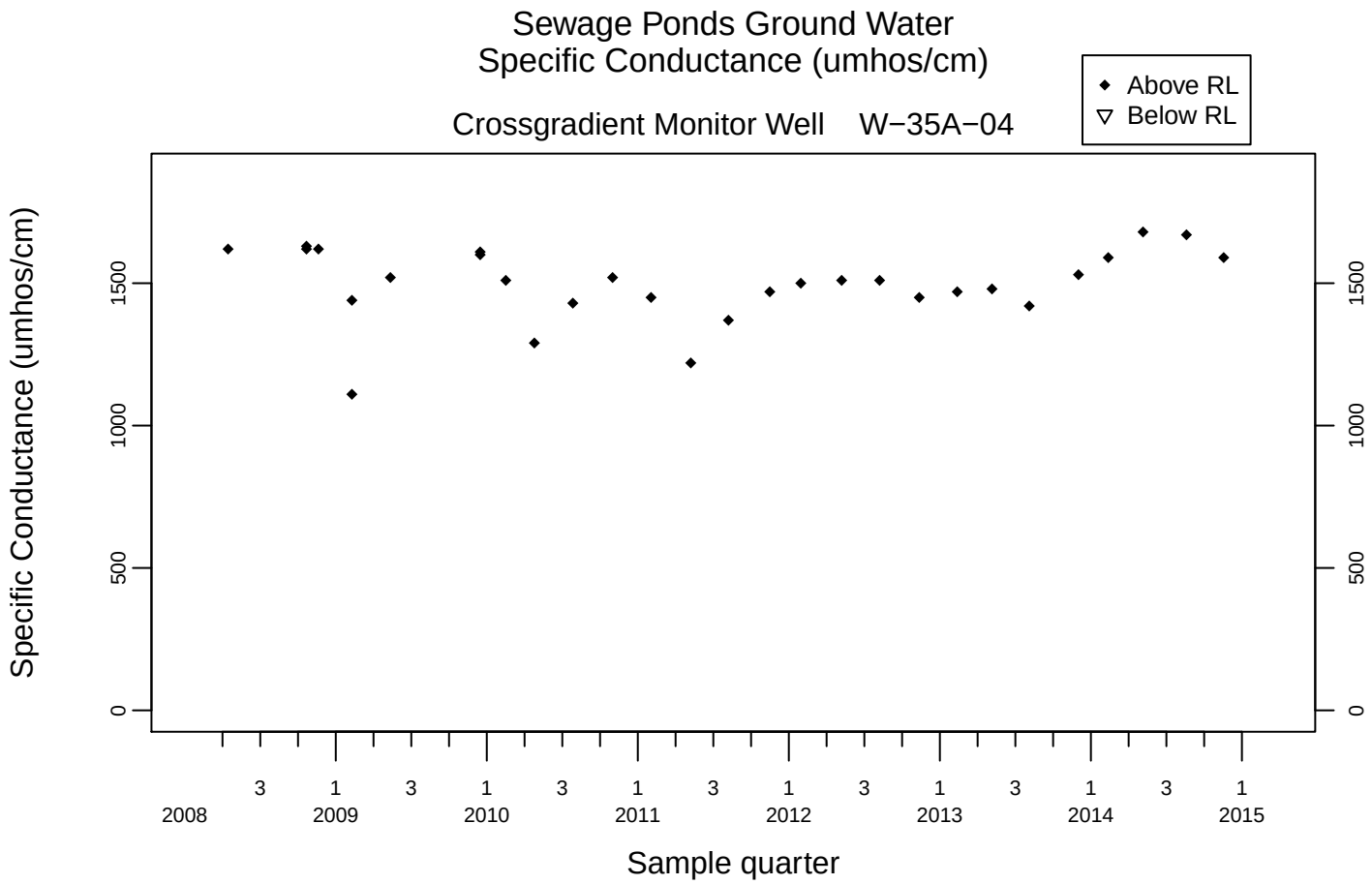

Sewage Ponds Ground Water
Field pH (Units)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

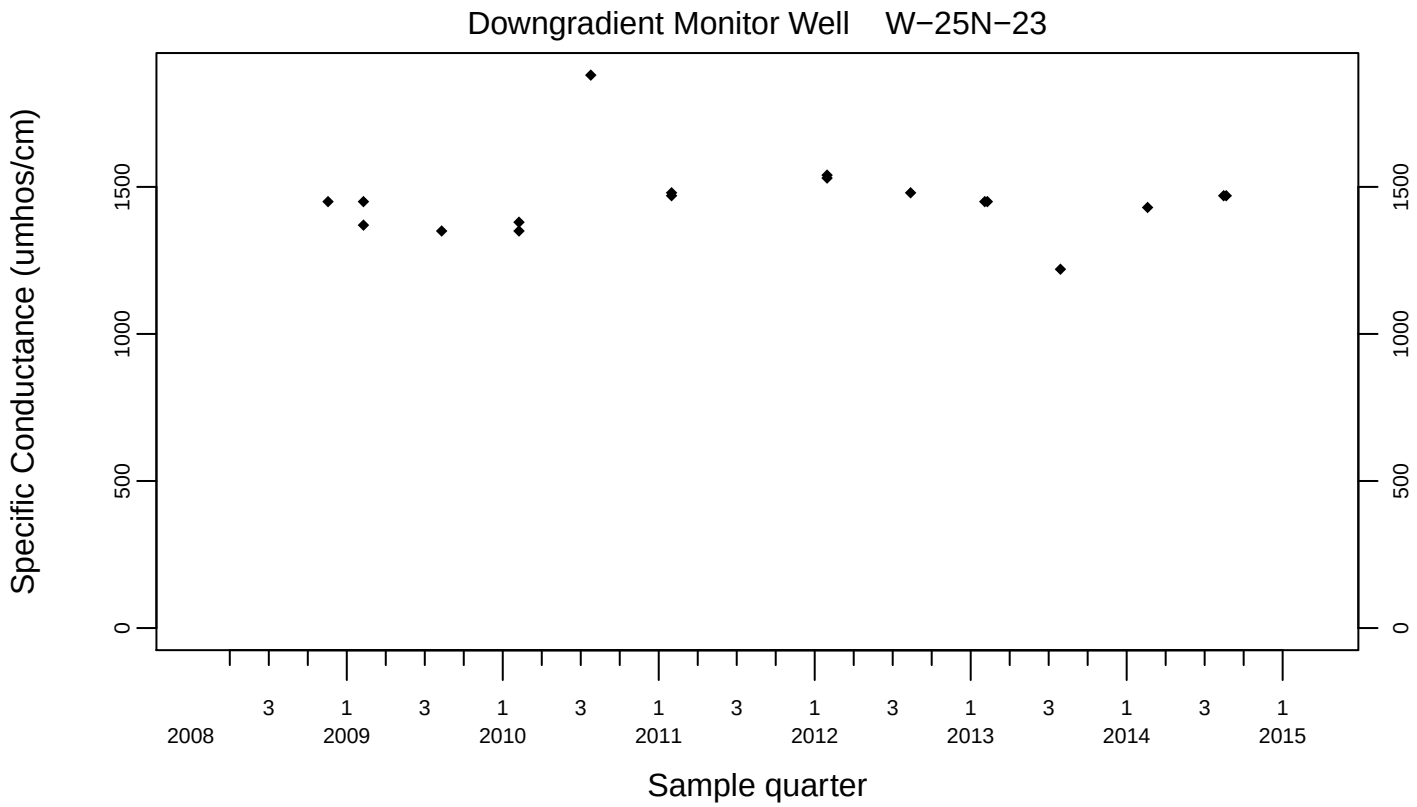

Downgradient Monitor Well W−26R−11
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

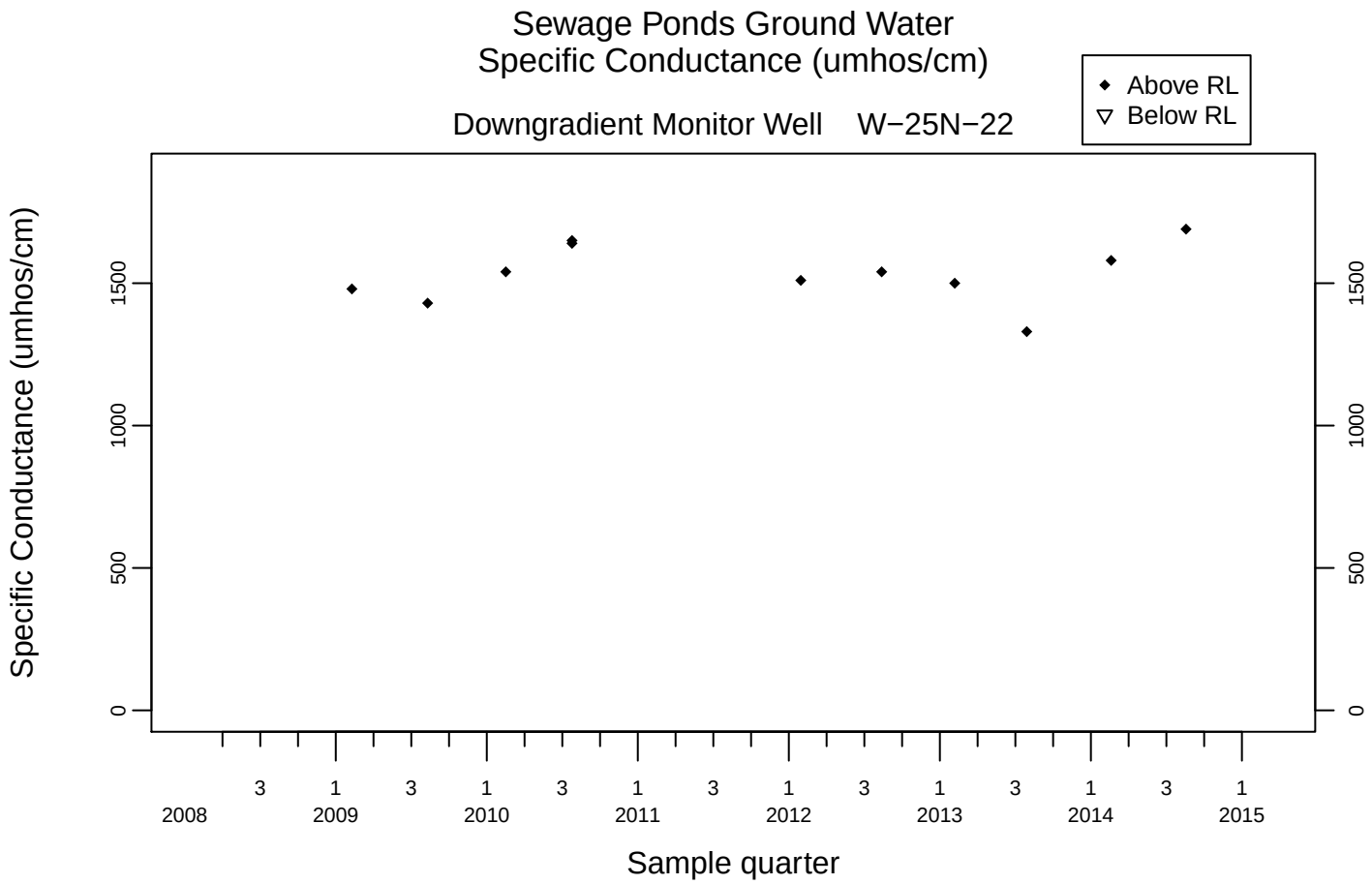

Sewage Ponds Ground Water
Field pH (Units)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

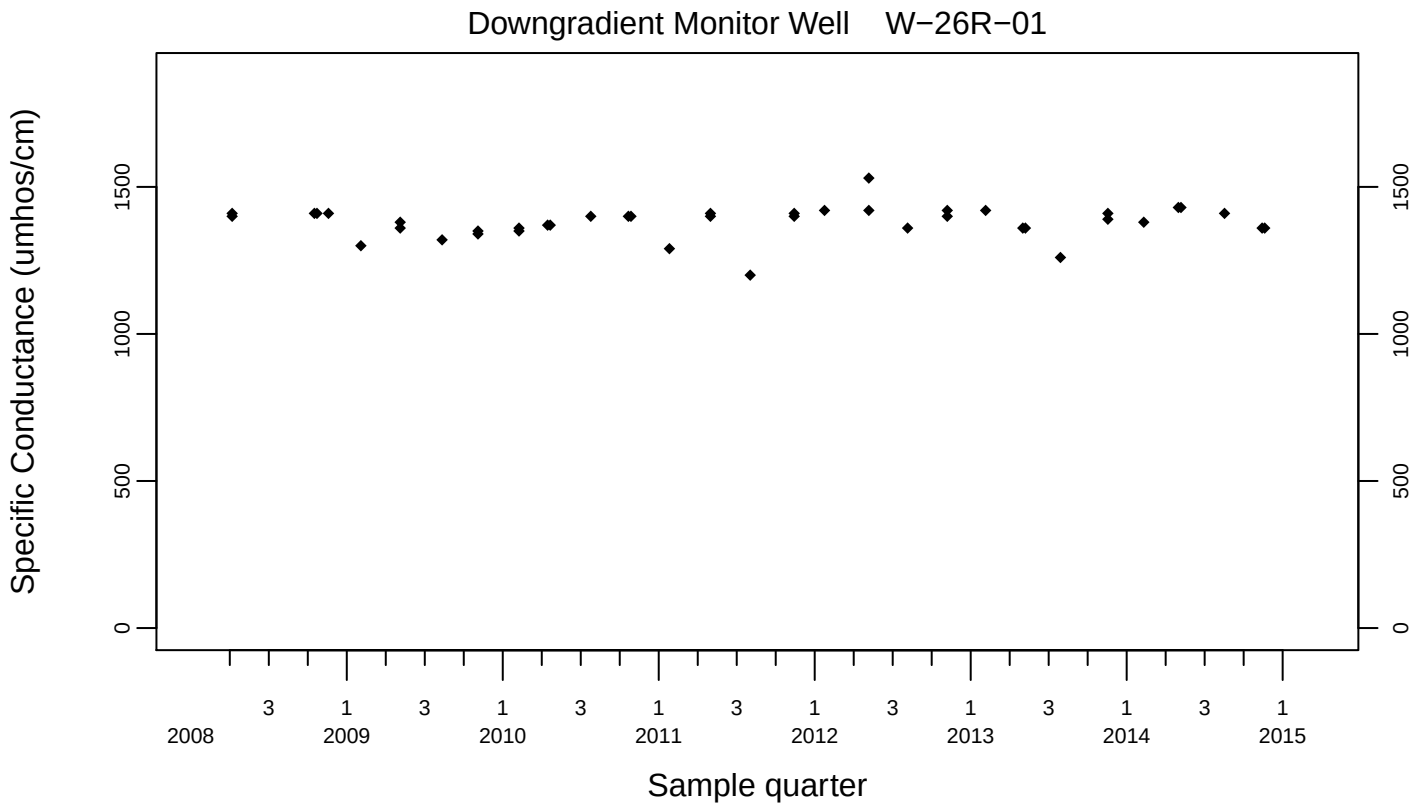

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

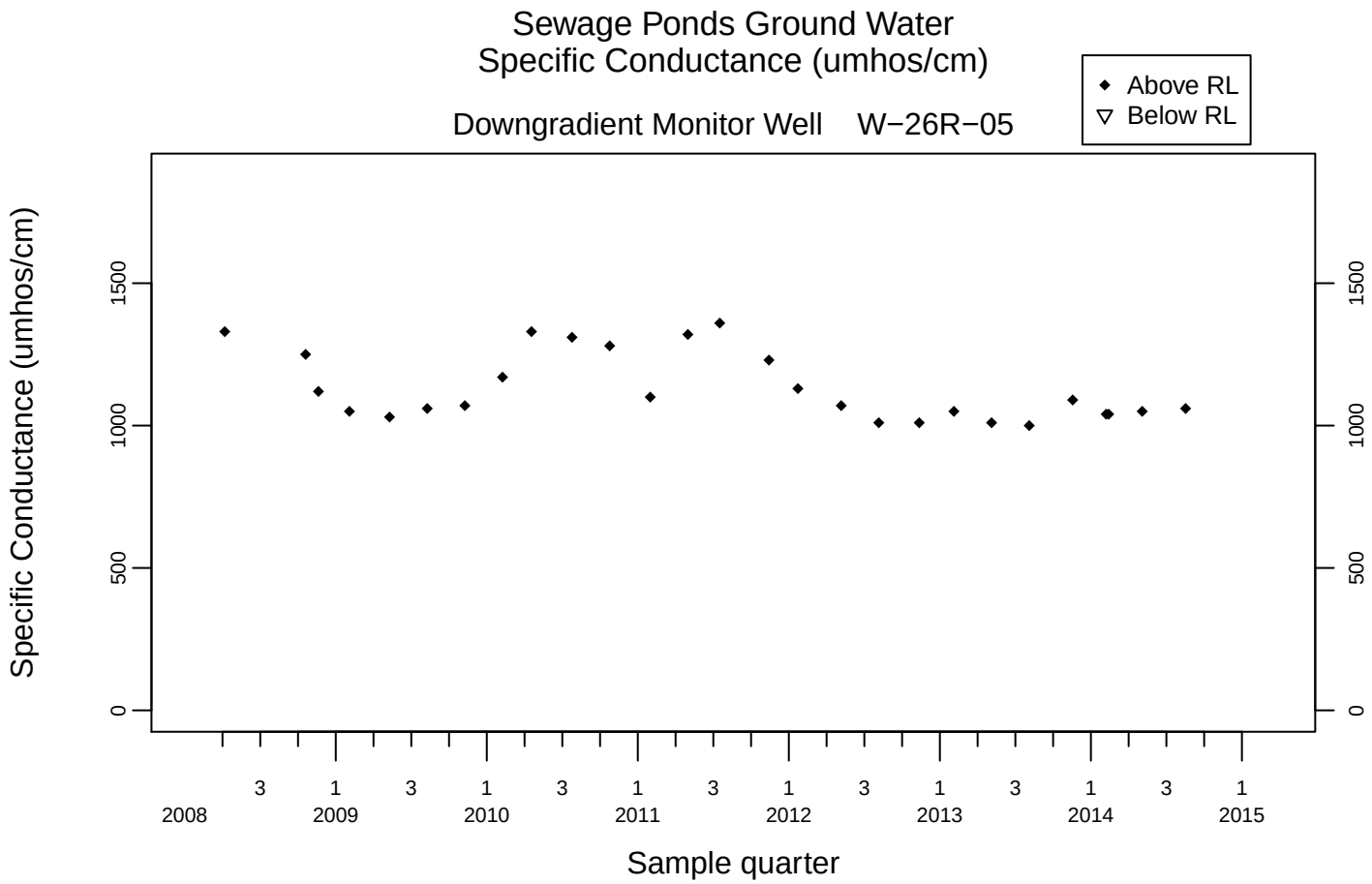

Upgradient Monitor Well W−7PS
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

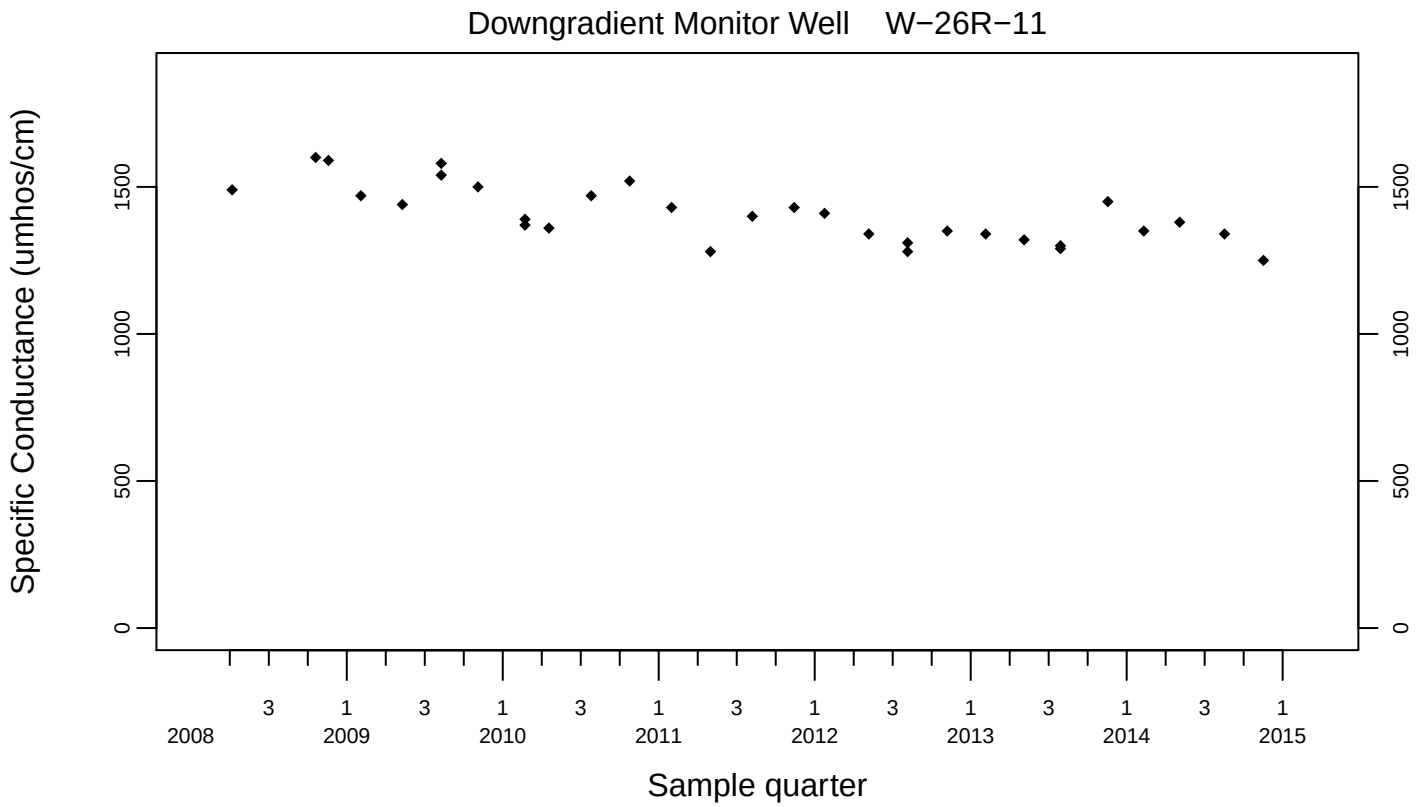

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

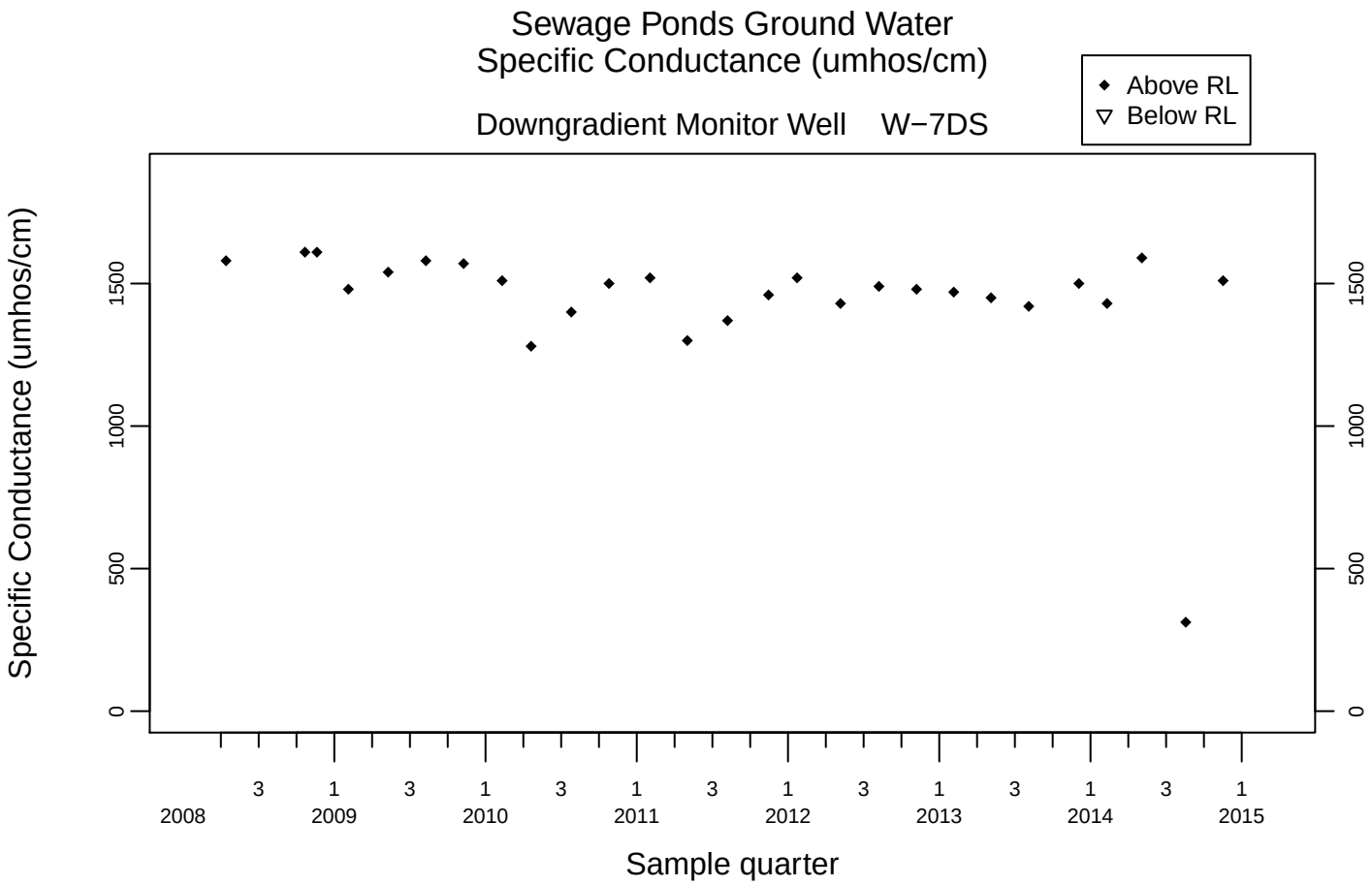

Downgradient Monitor Well W−25N−23
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

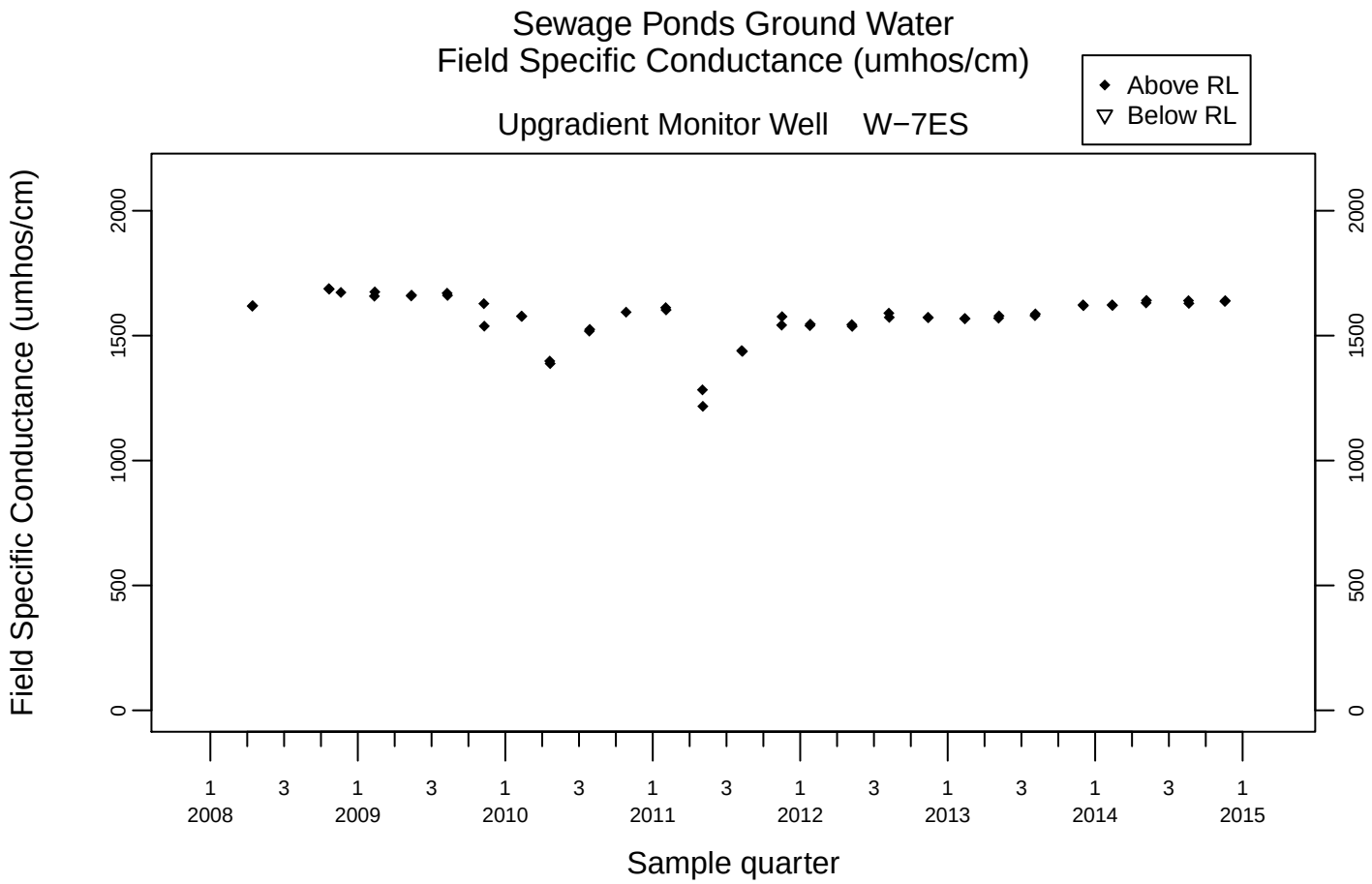

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

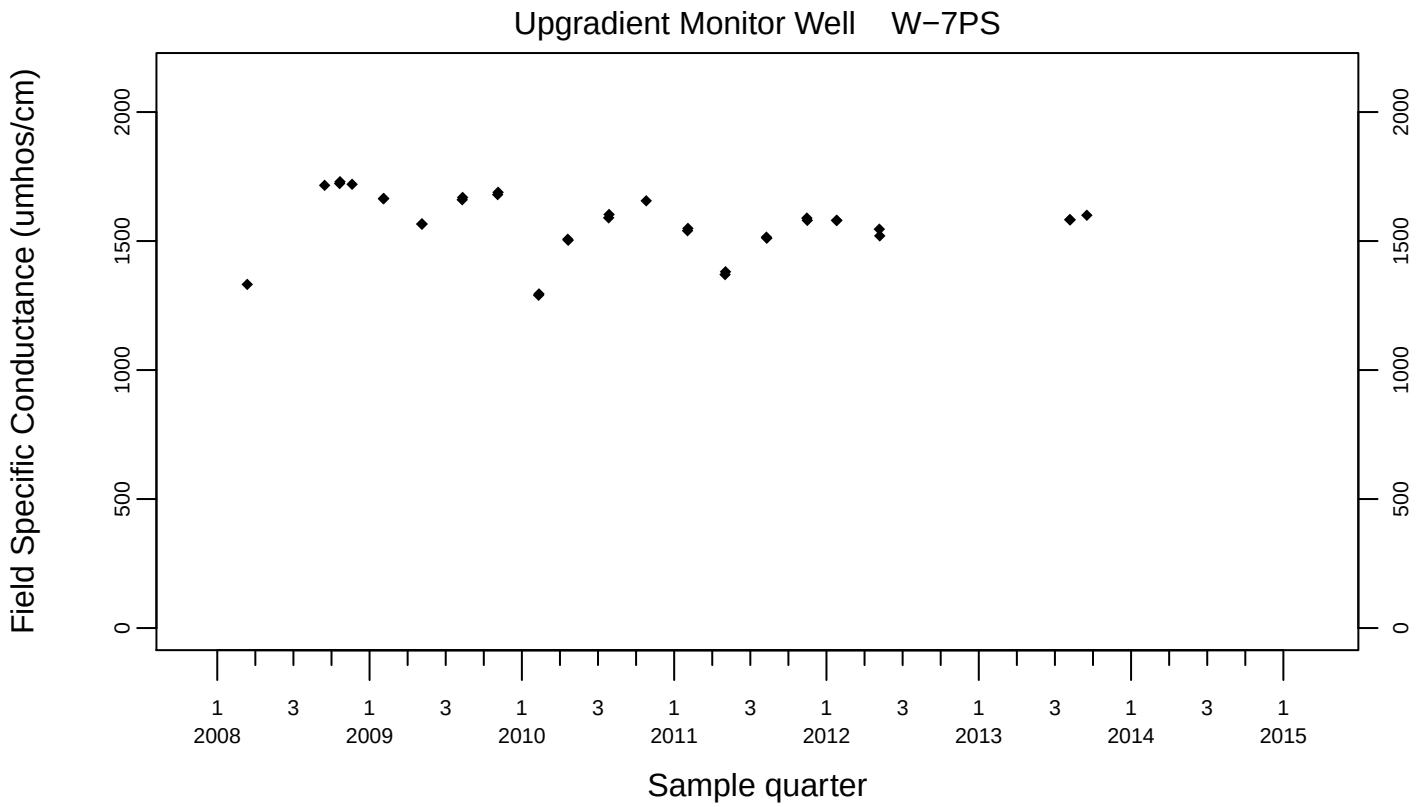

Downgradient Monitor Well W−26R−01
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

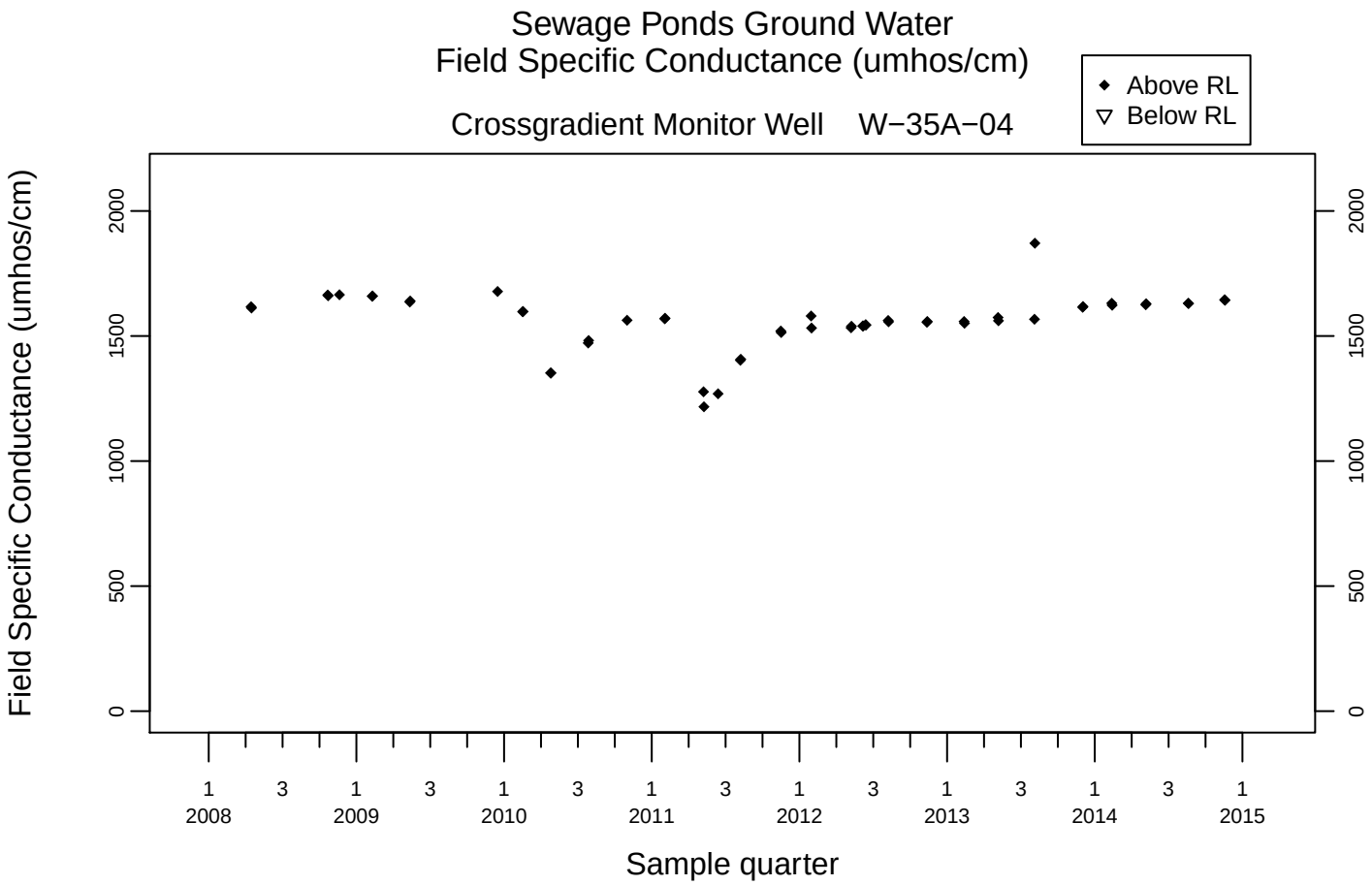

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

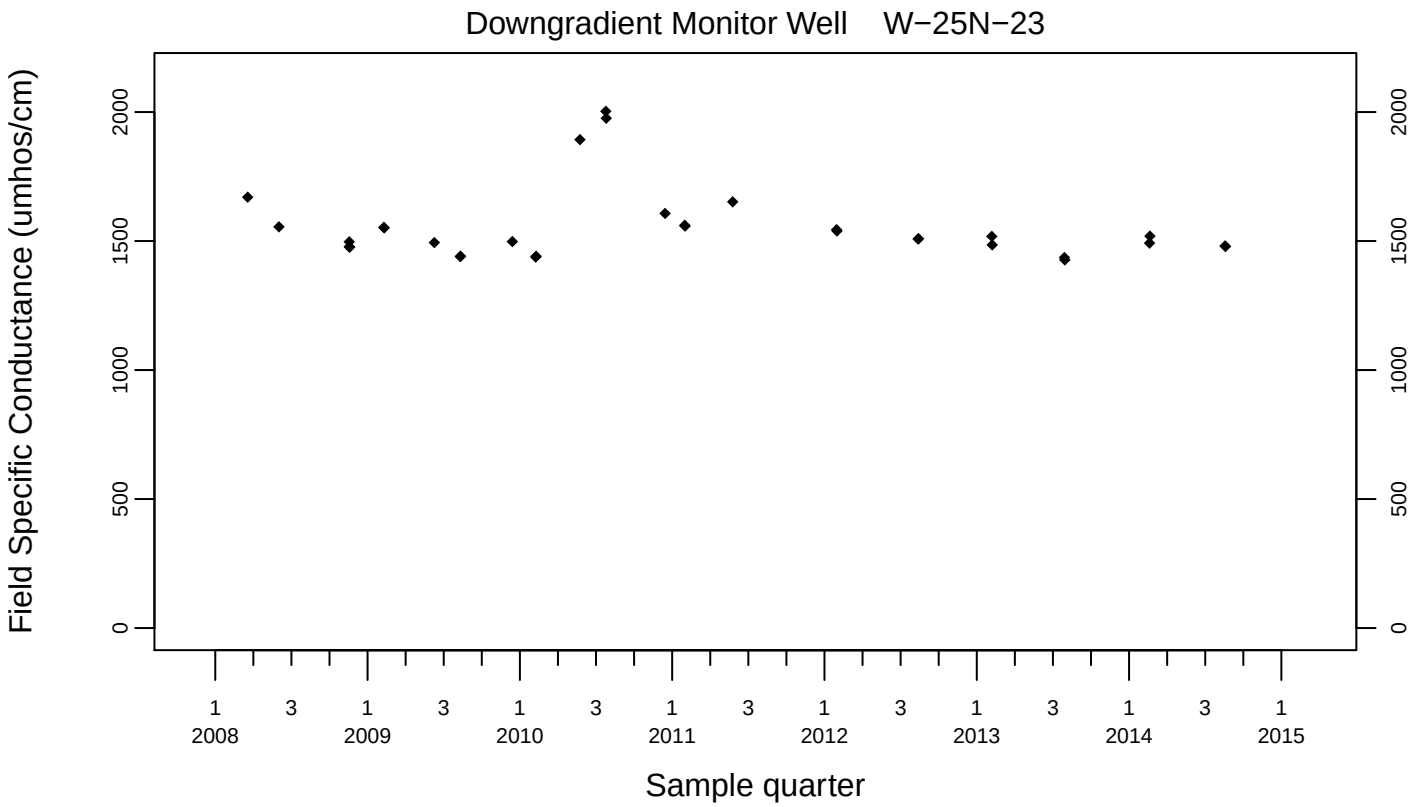

Downgradient Monitor Well W−26R−11
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

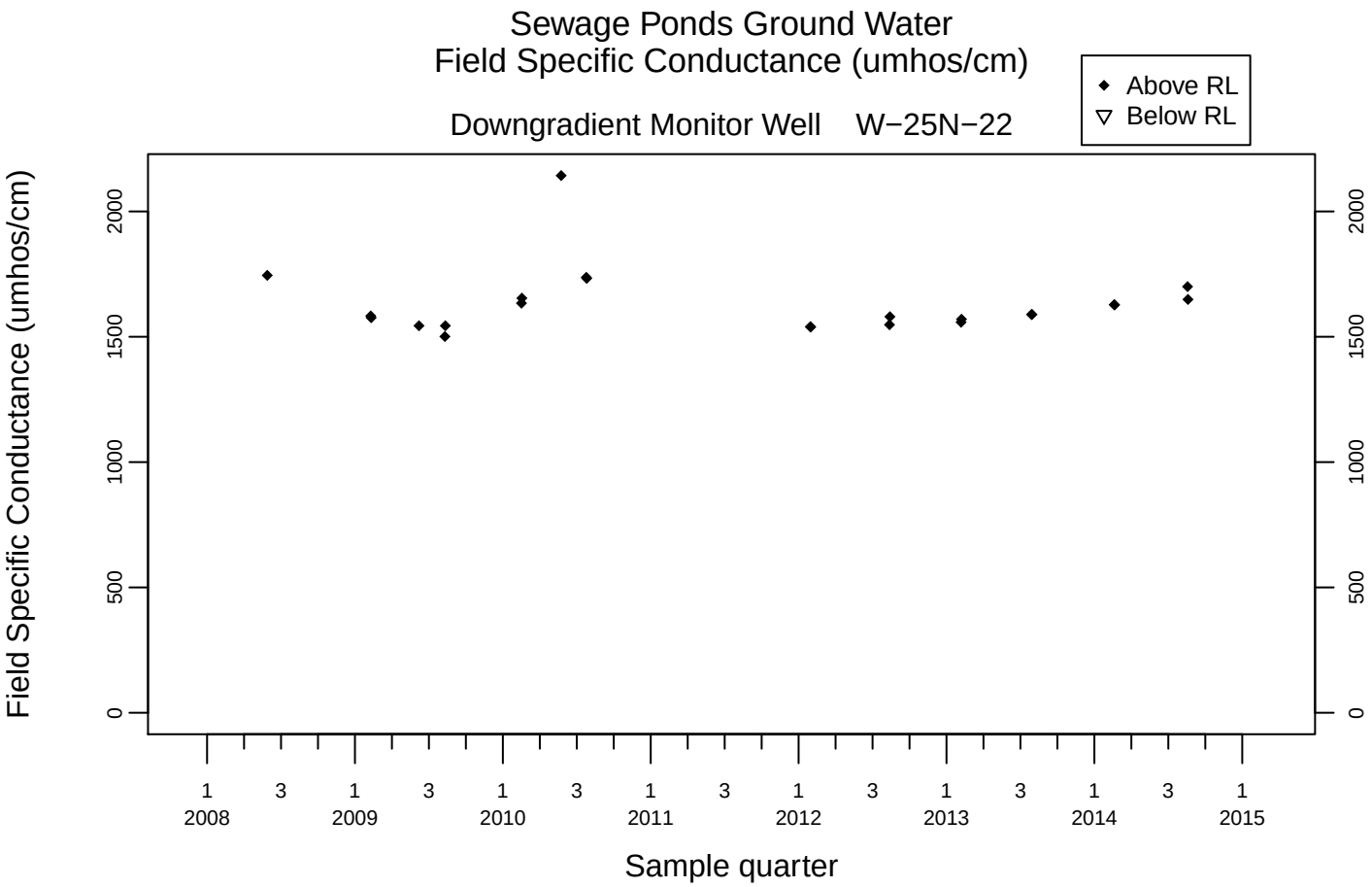

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

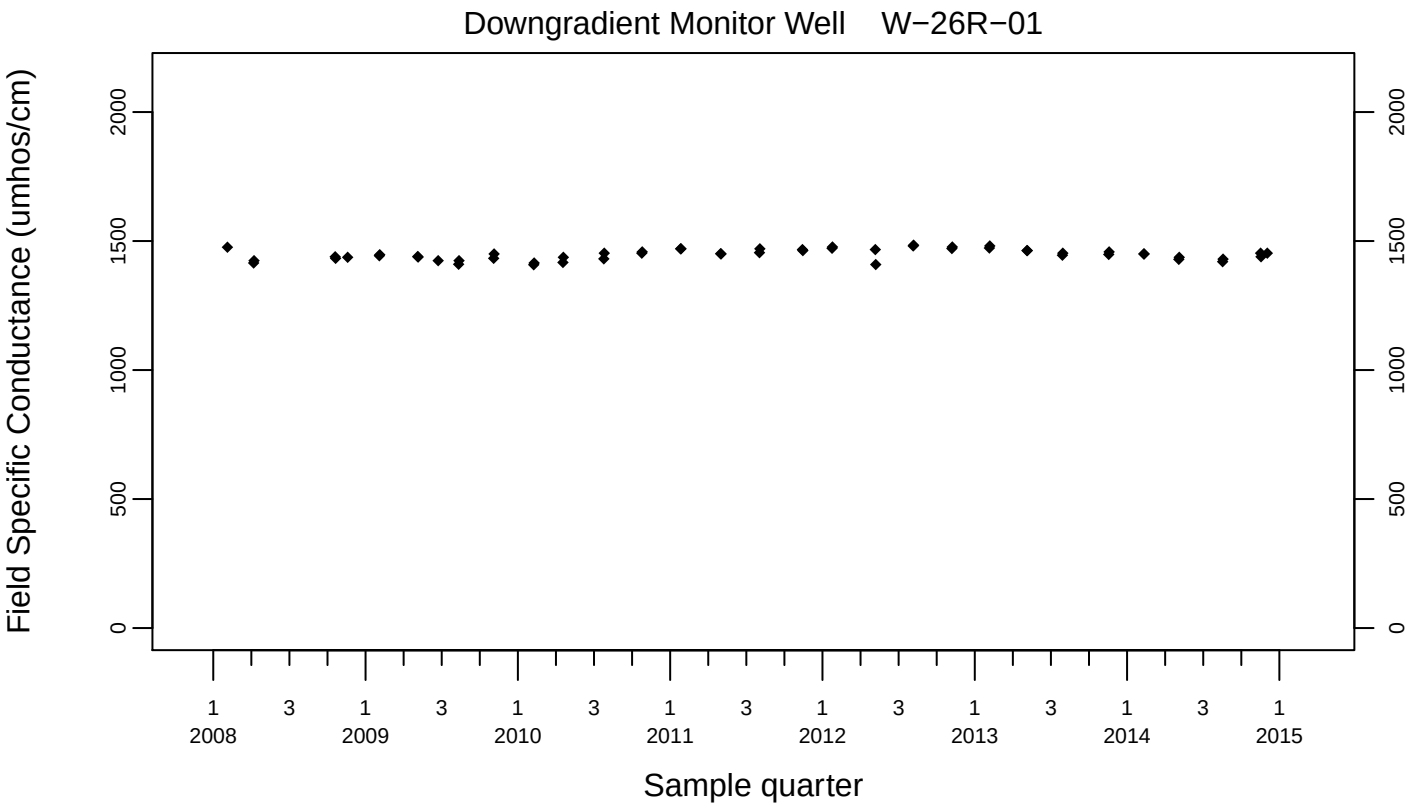

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

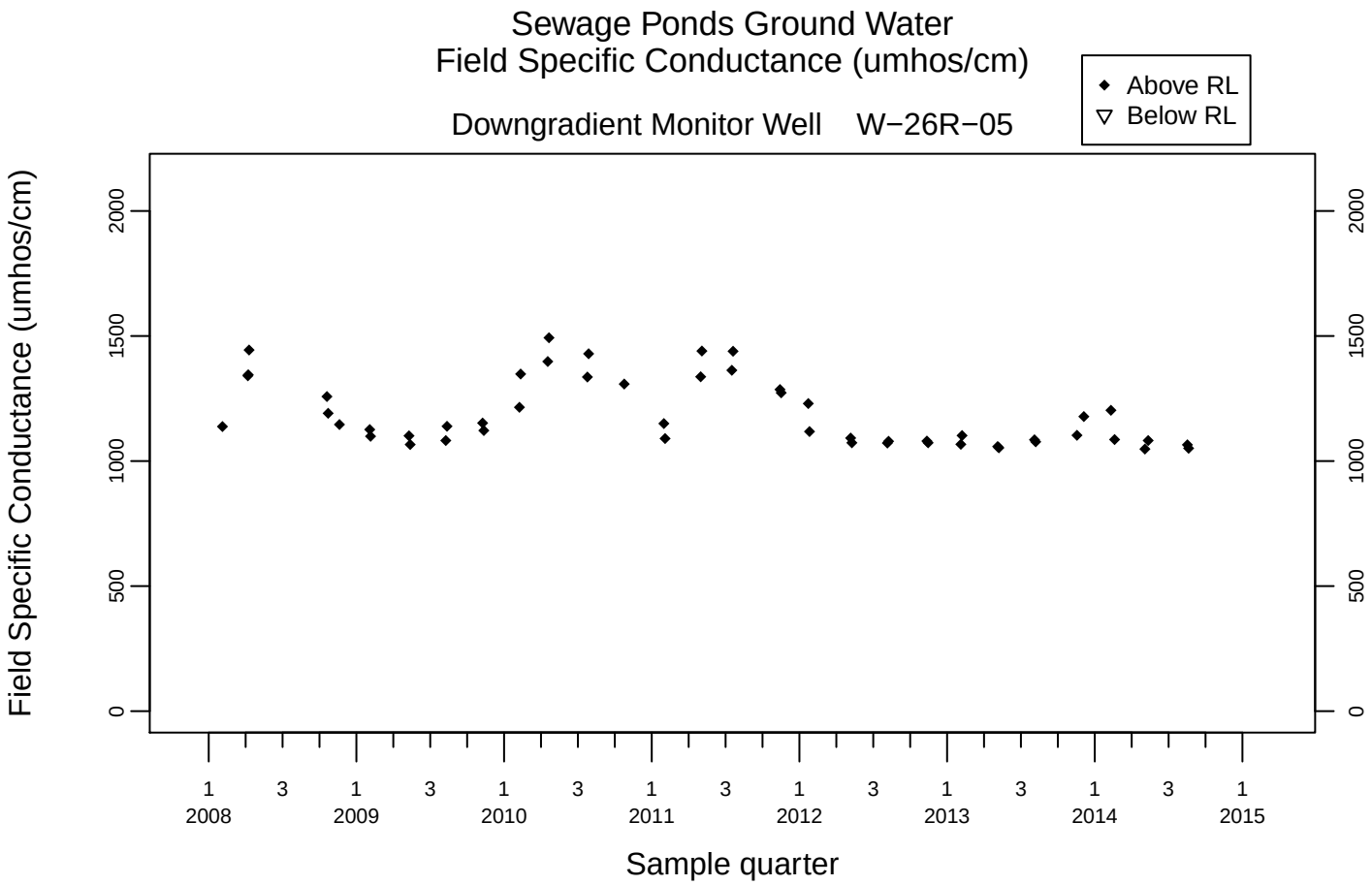

Upgradient Monitor Well W−7PS
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

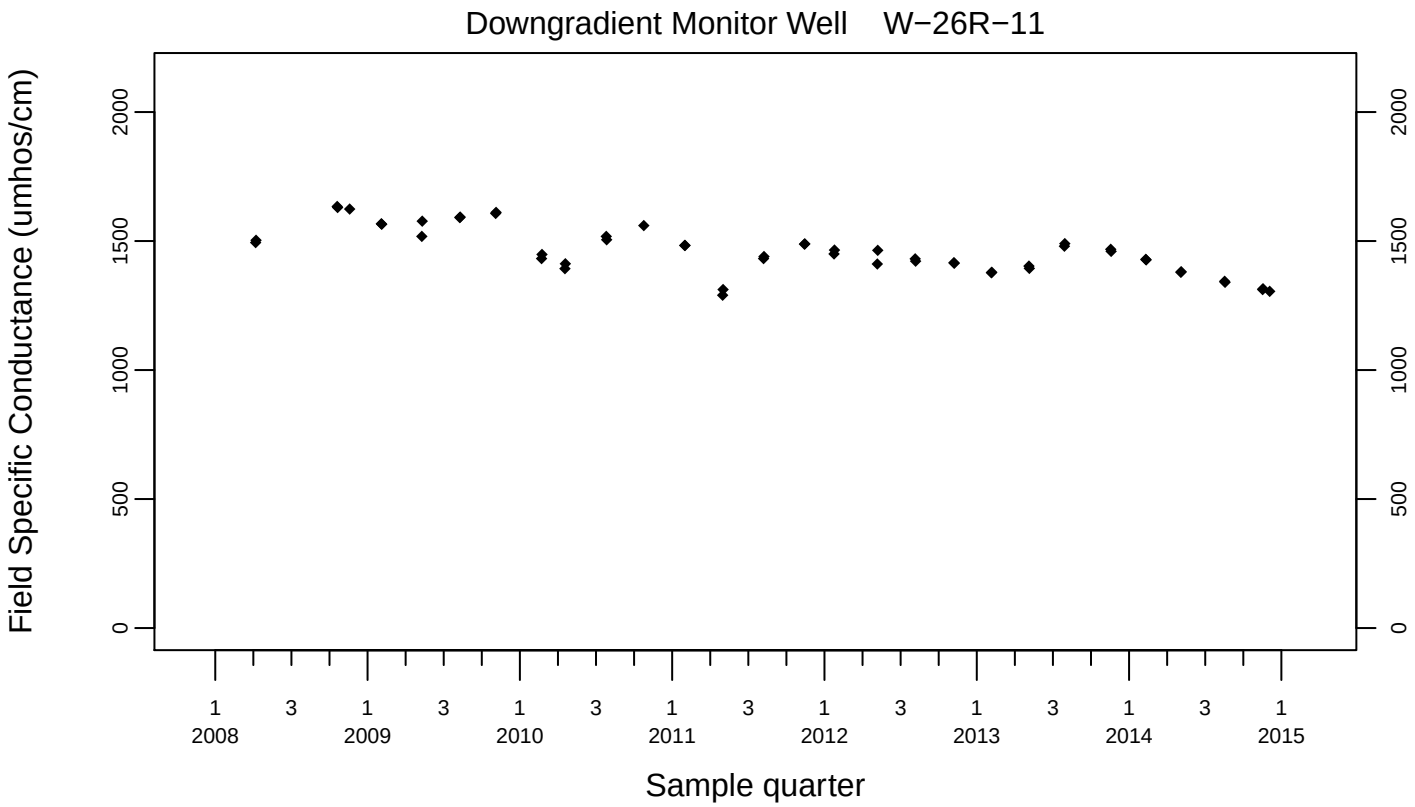

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

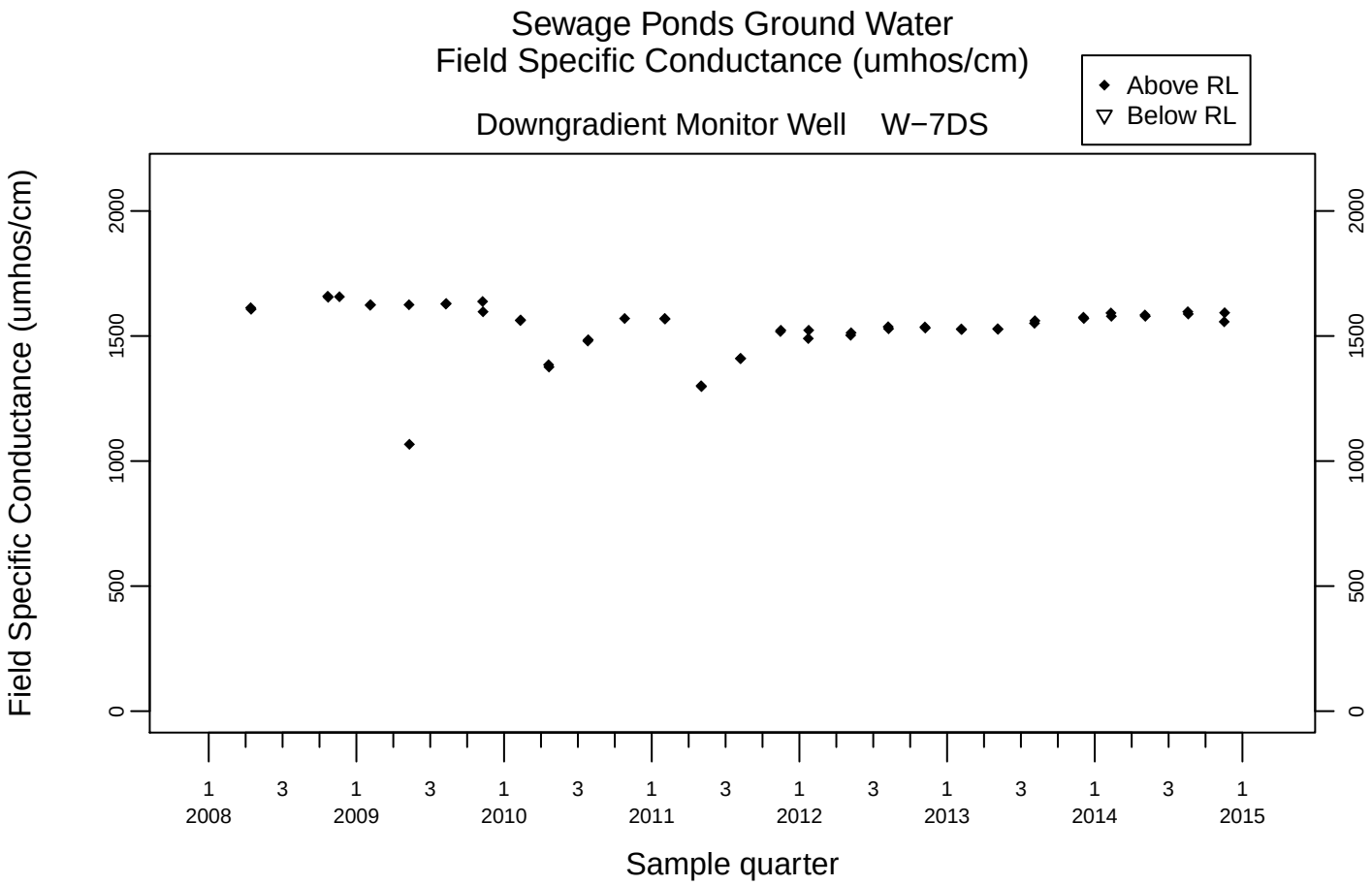

Downgradient Monitor Well W−25N−23
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

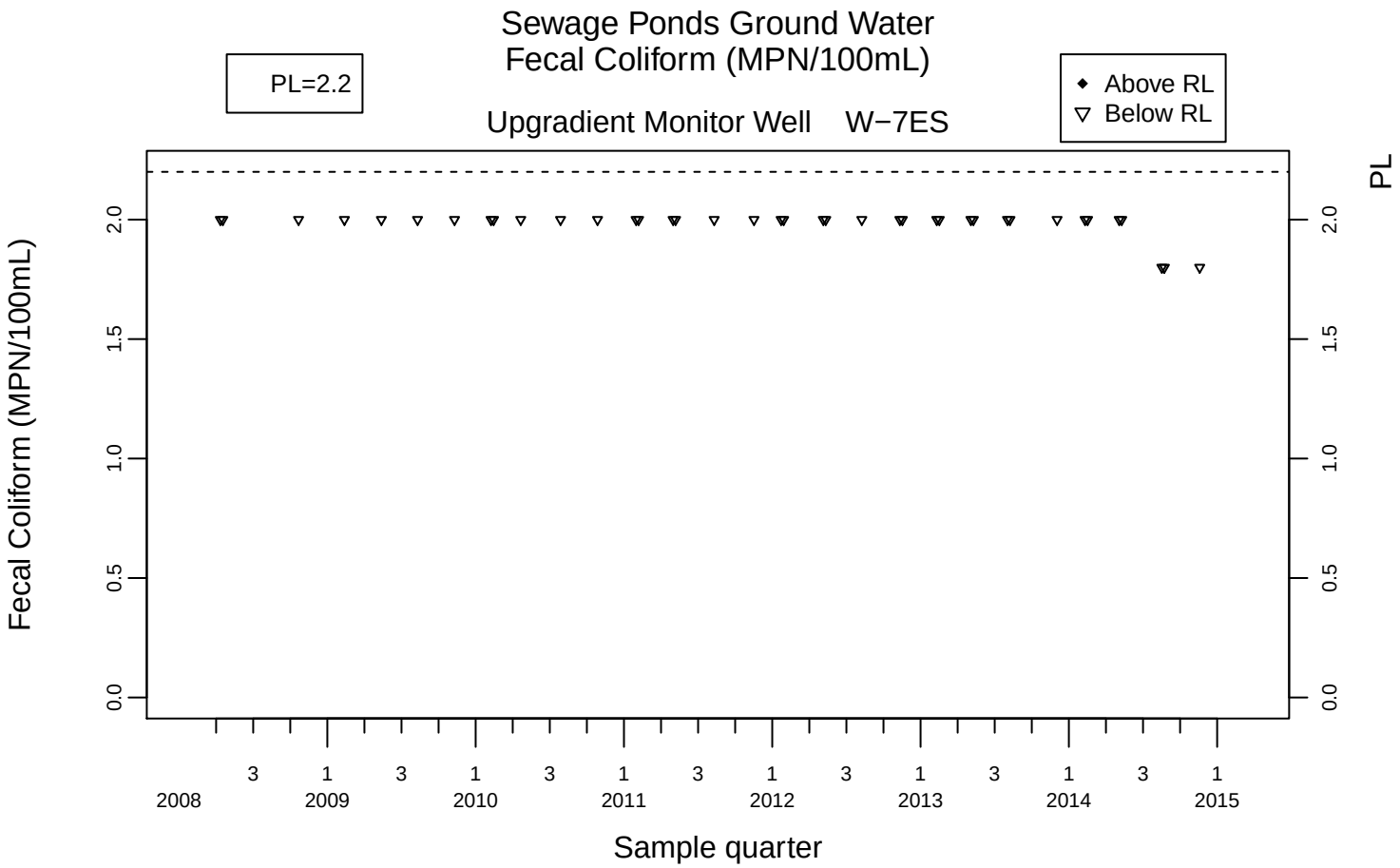

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

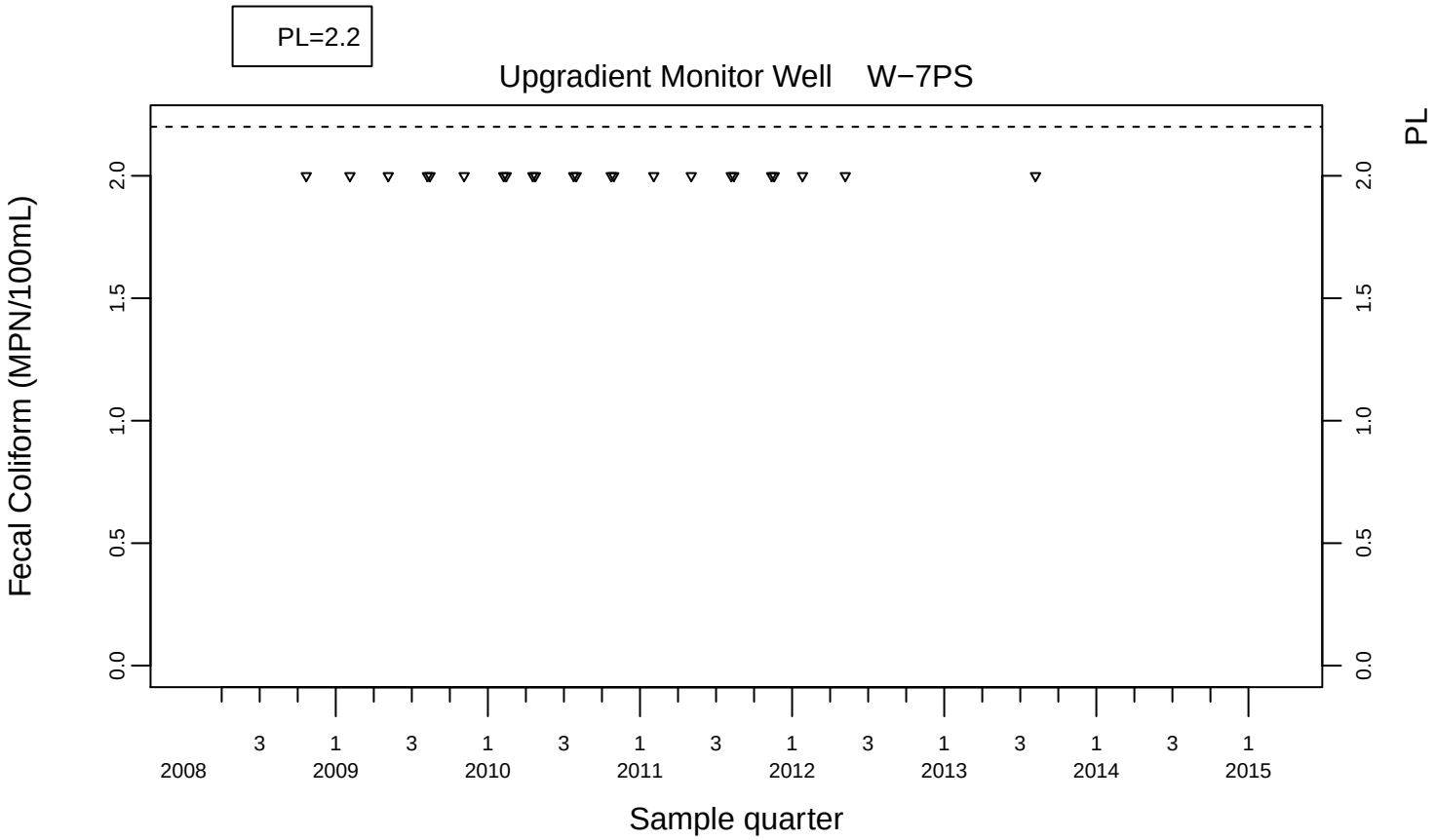

Downgradient Monitor Well W−26R−01
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

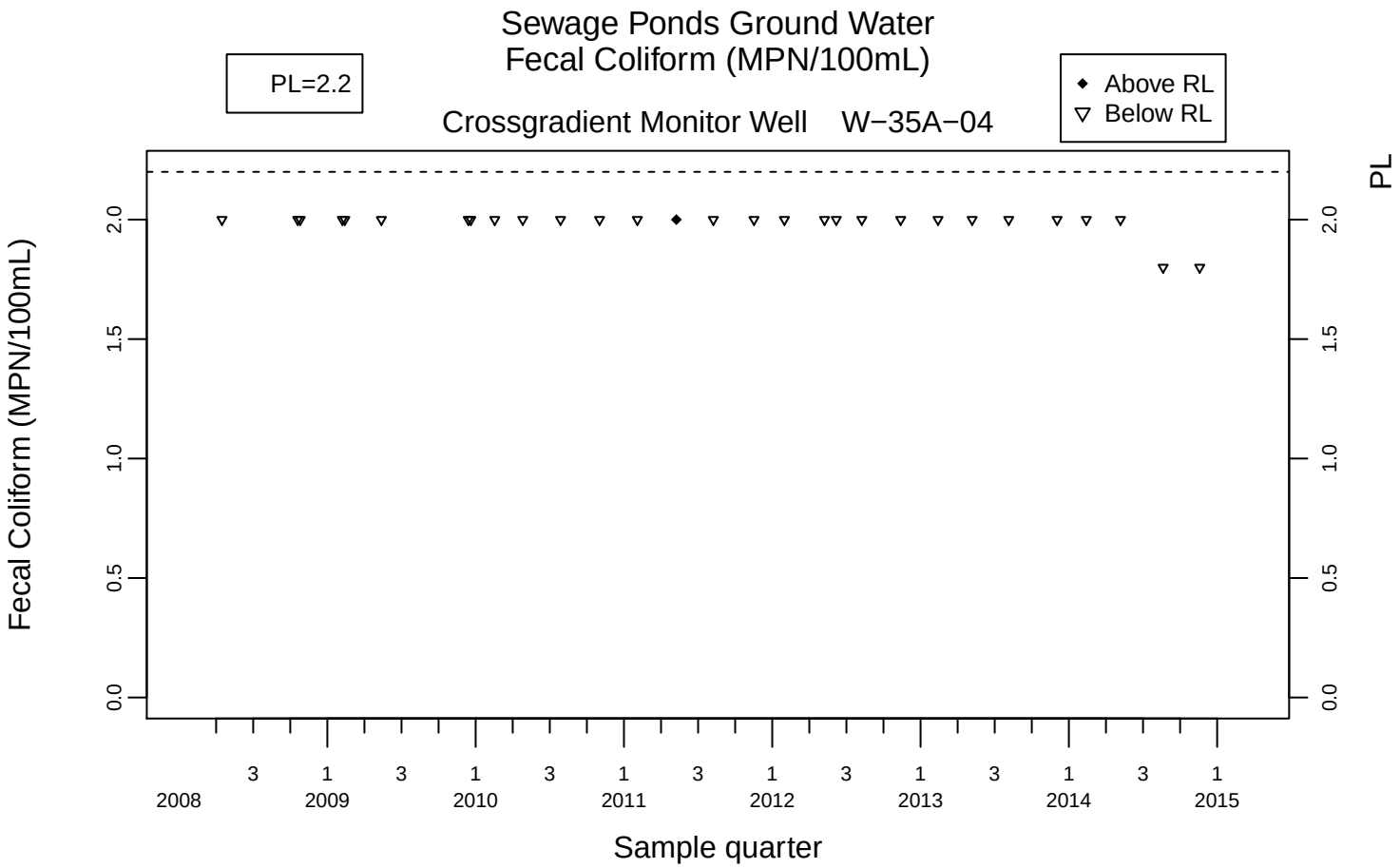

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

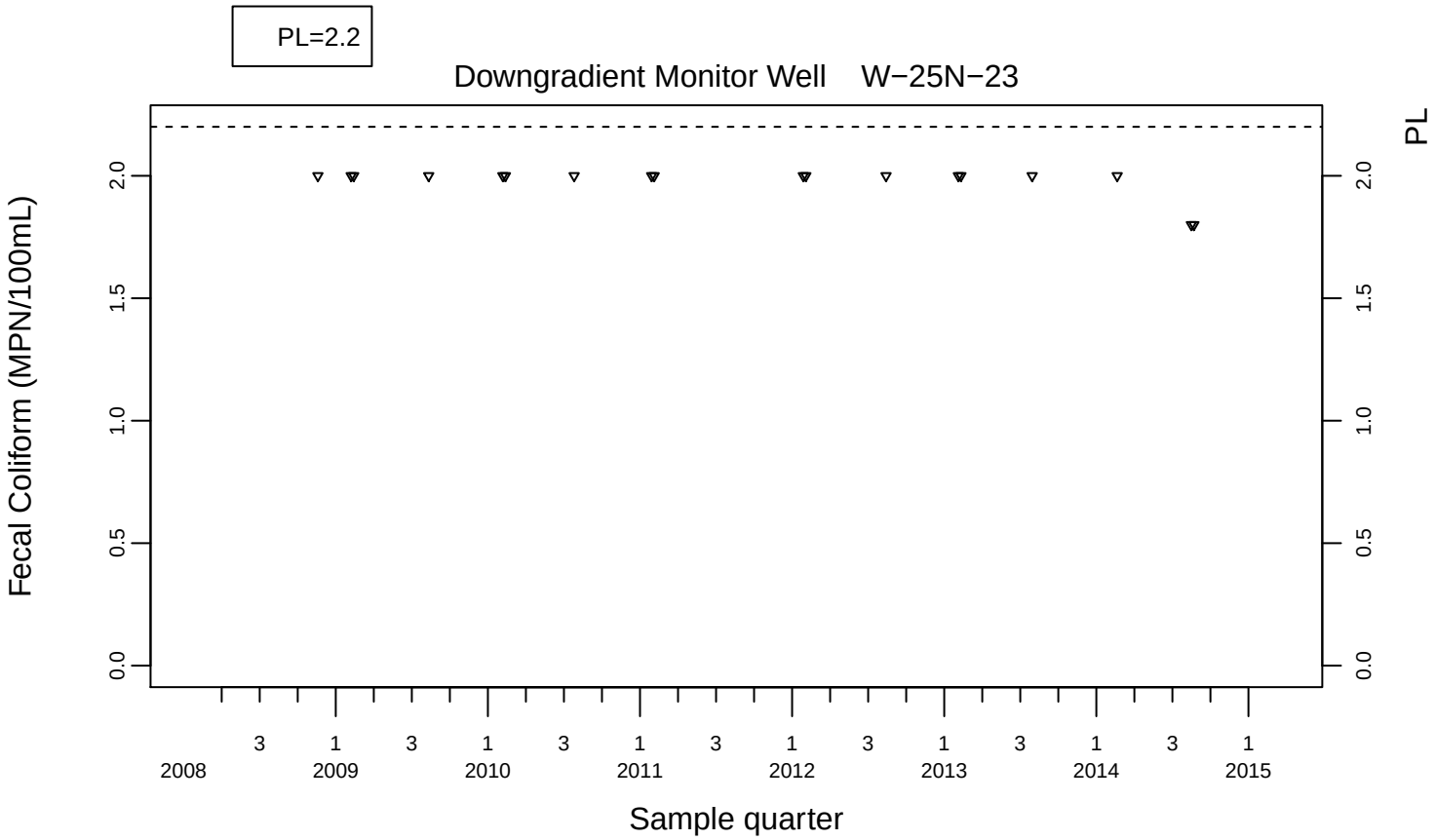

Downgradient Monitor Well W−26R−11
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2008 2009 2010 2011 2012 2013 2014 2015
Sample quarter

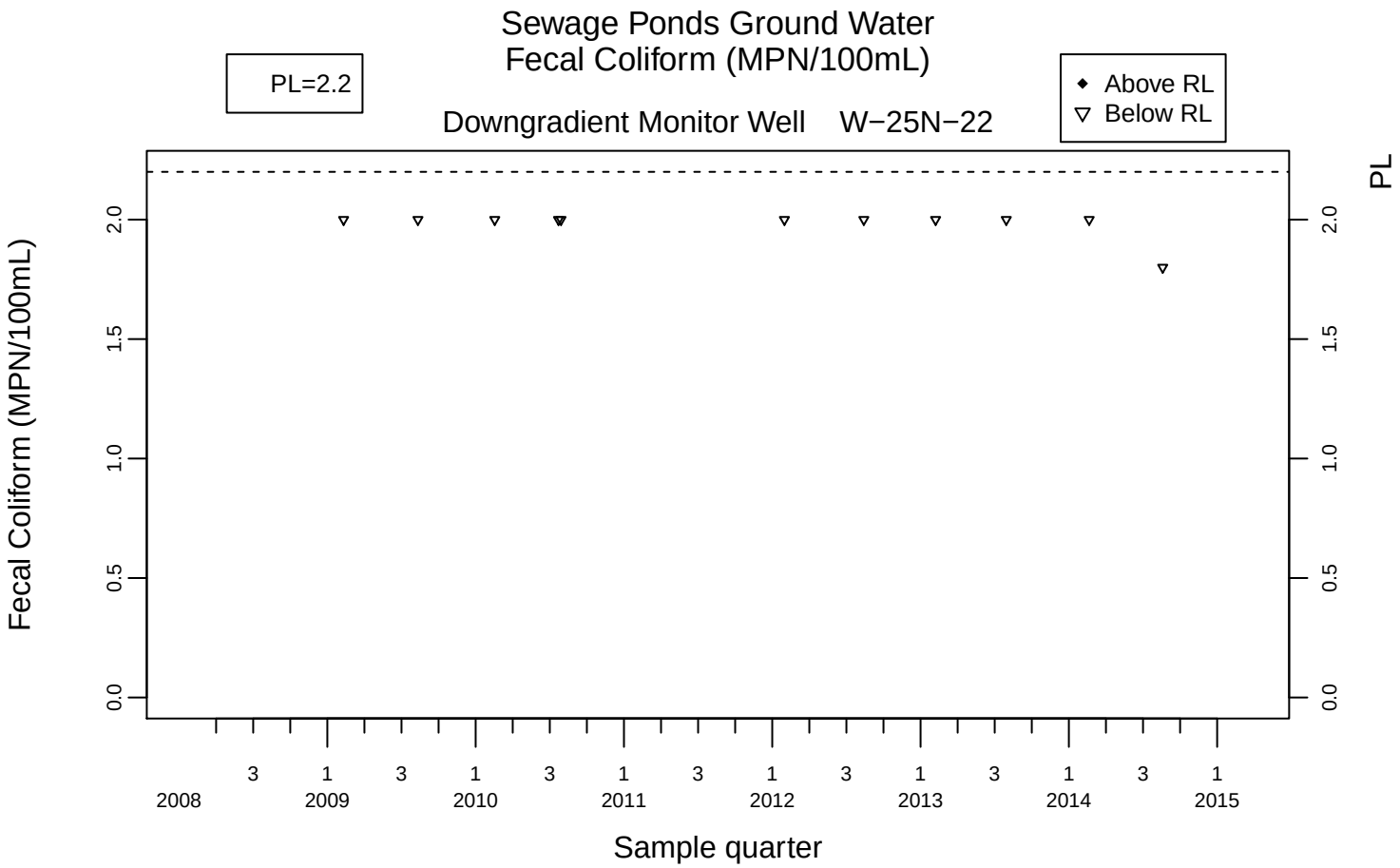

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2008
3
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

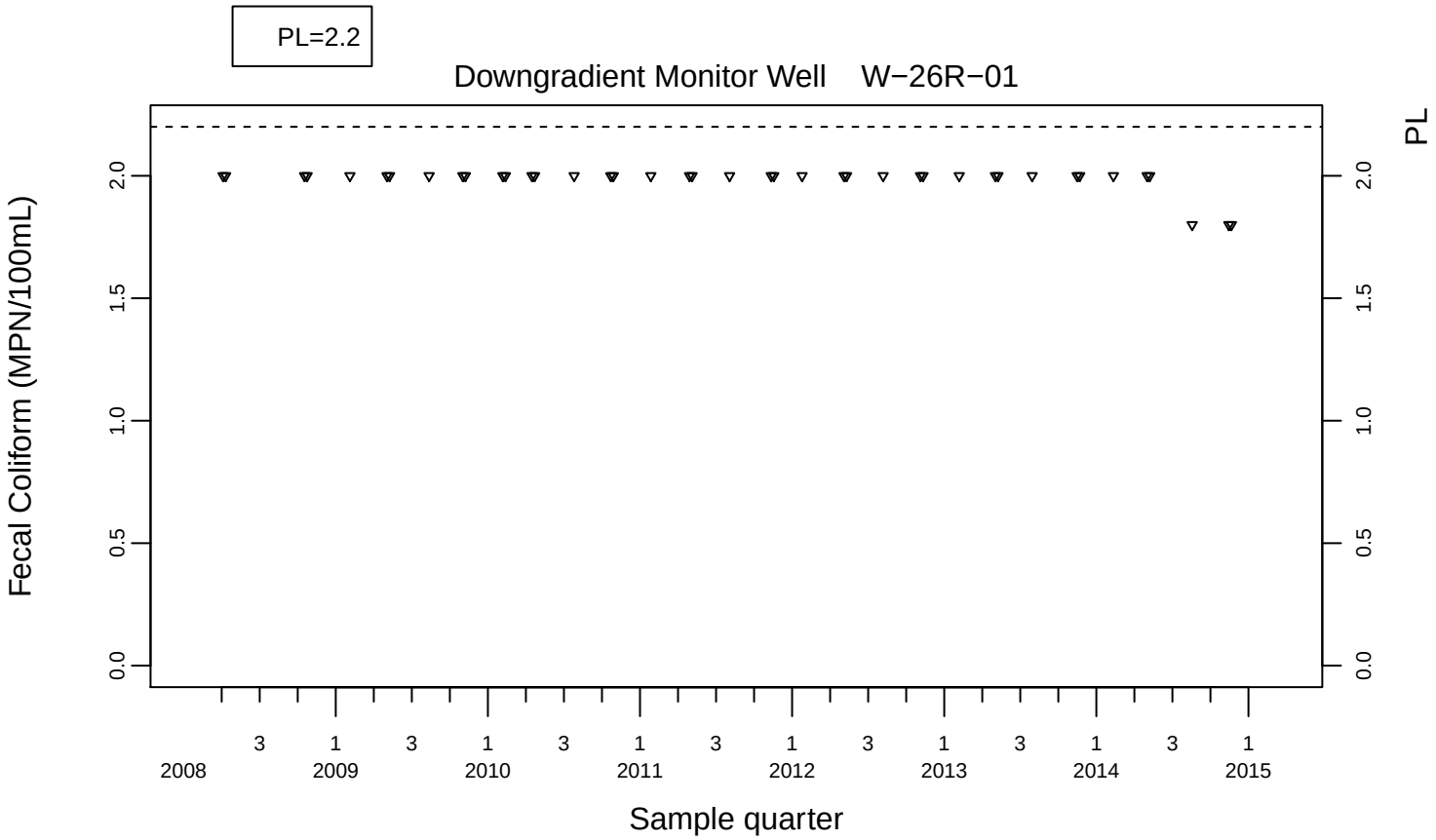

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Upgradient Monitor Well W−7ES
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

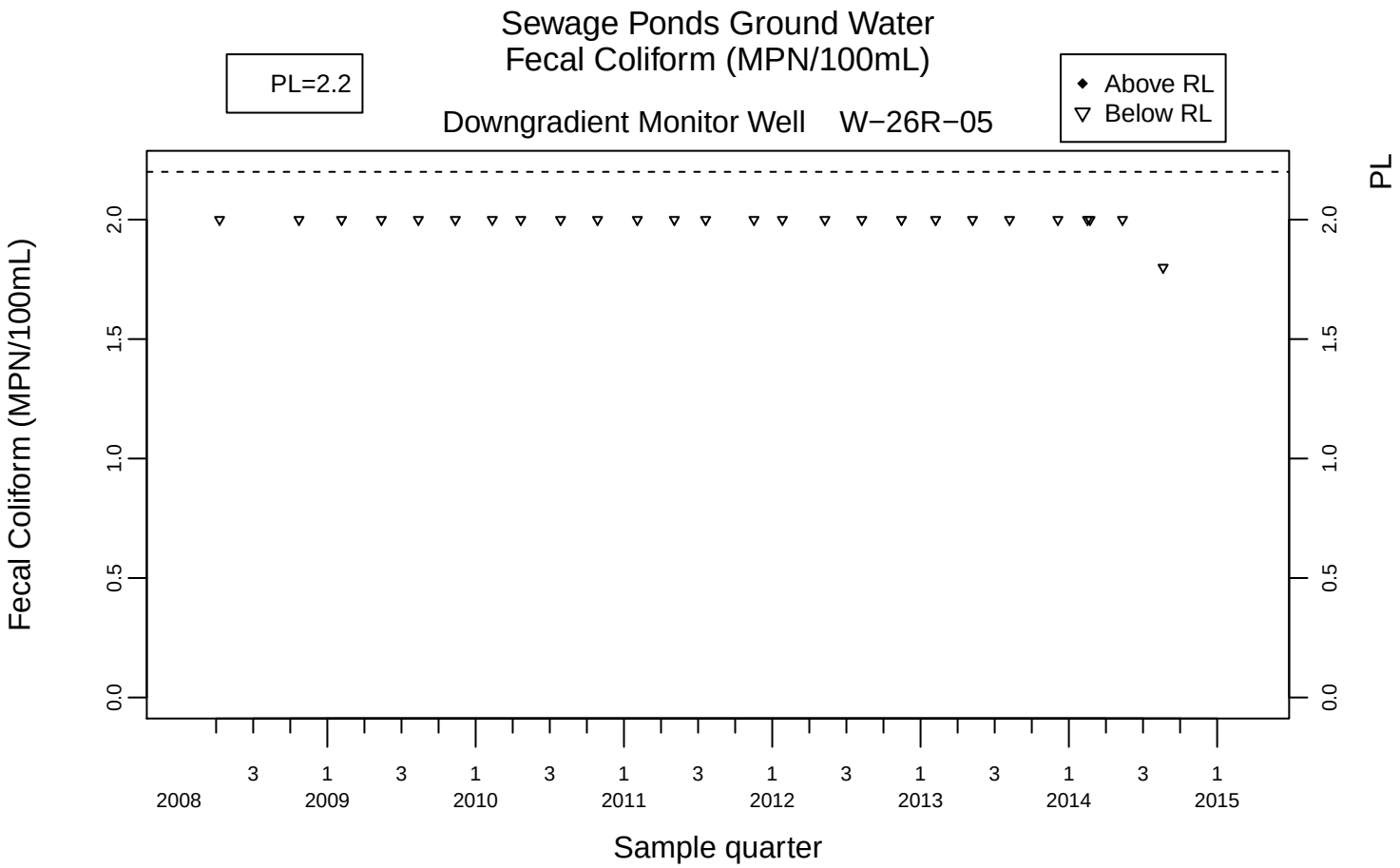

PL=2.2
Upgradient Monitor Well W−7PS
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

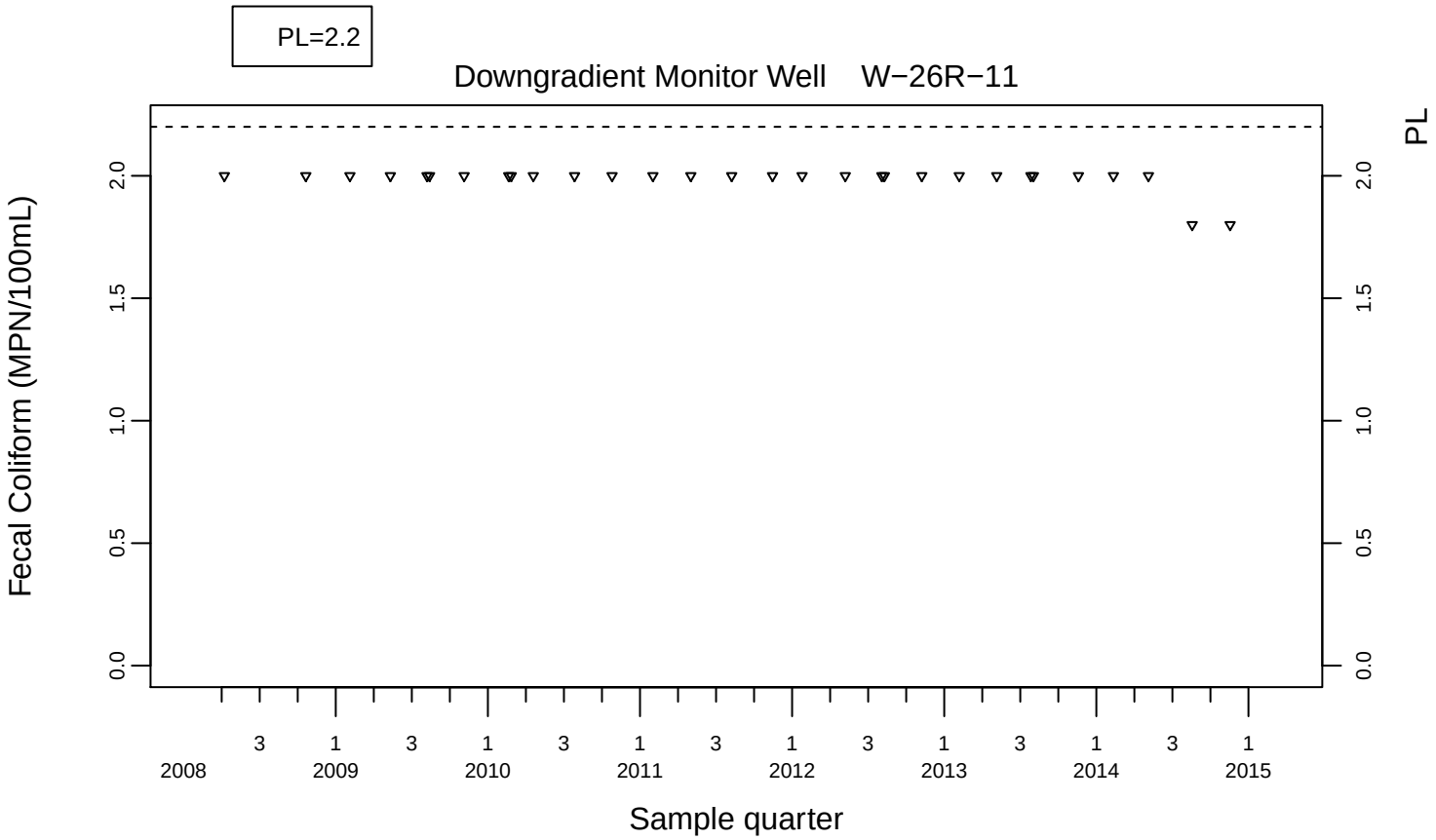

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Crossgradient Monitor Well W−35A−04
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

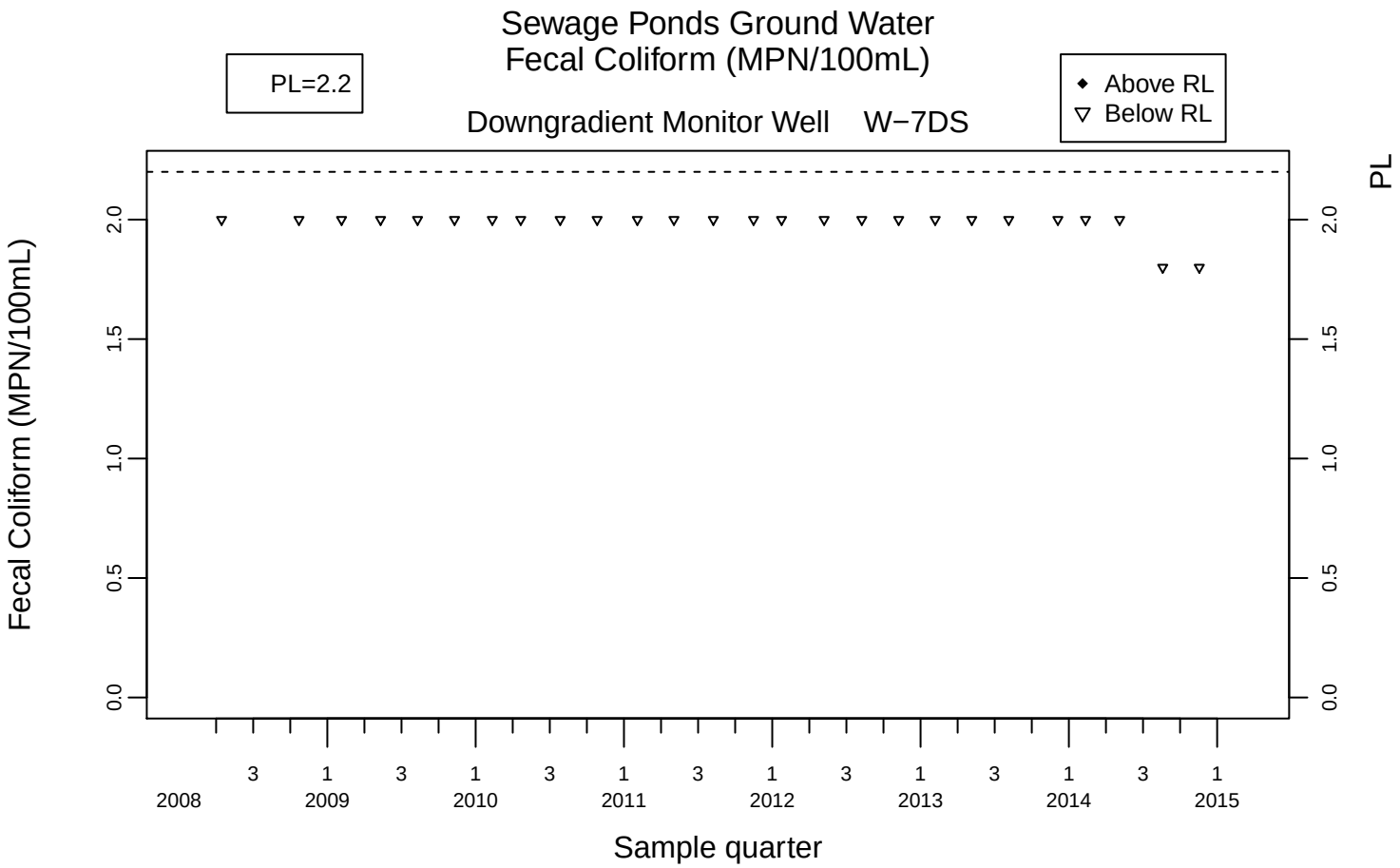

PL=2.2
Downgradient Monitor Well W−25N−23
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

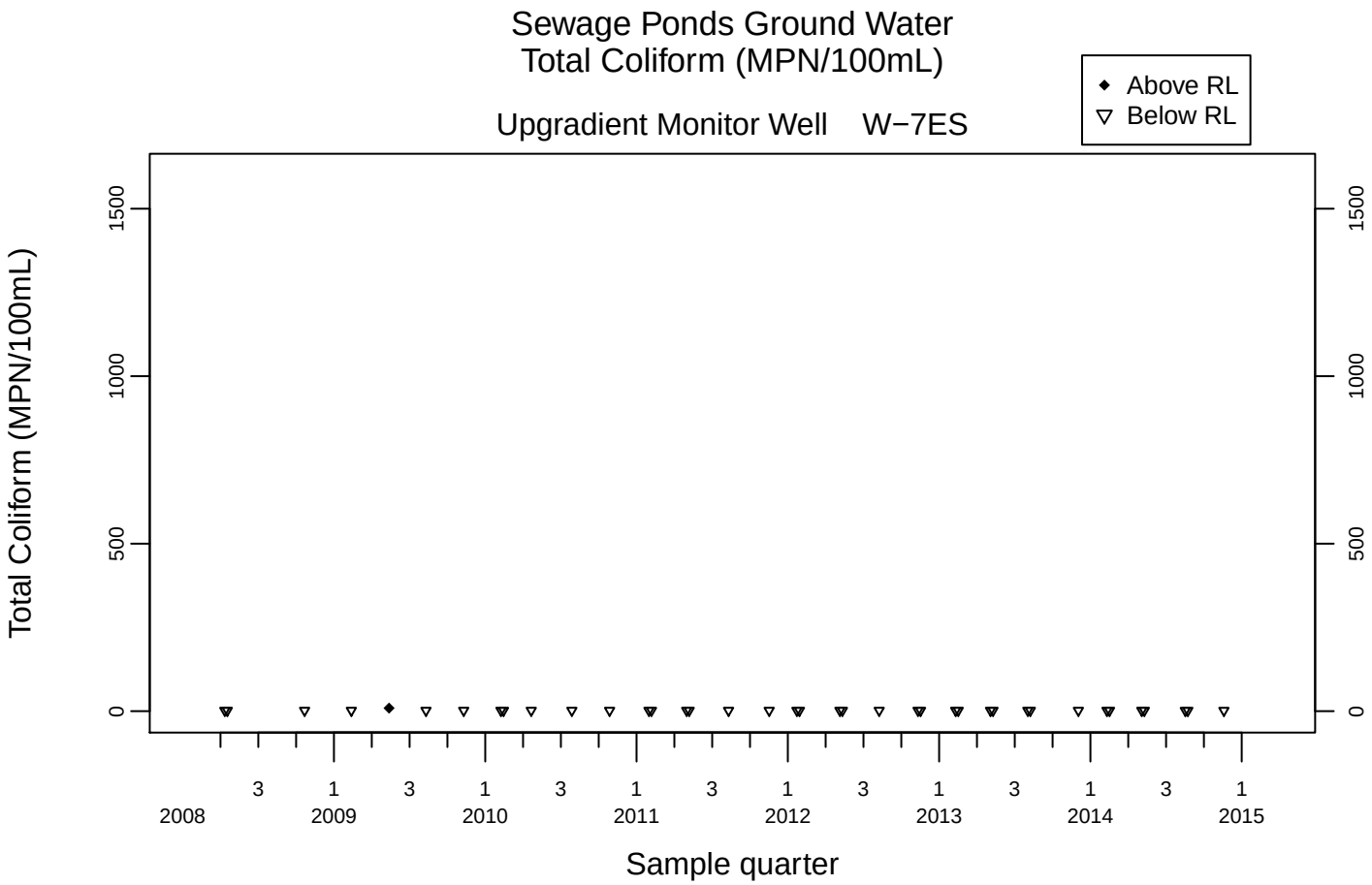

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

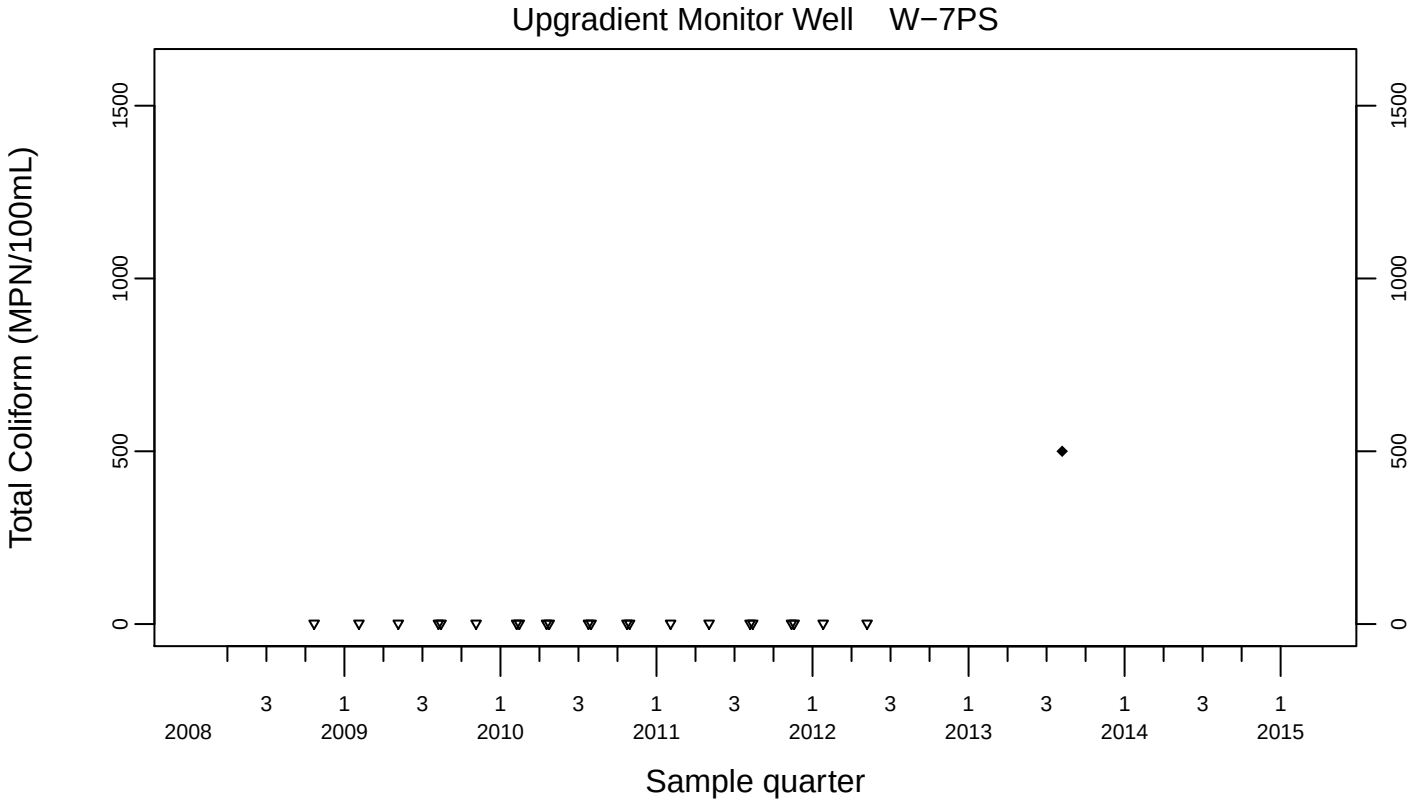

PL=2.2
Downgradient Monitor Well W−26R−01
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

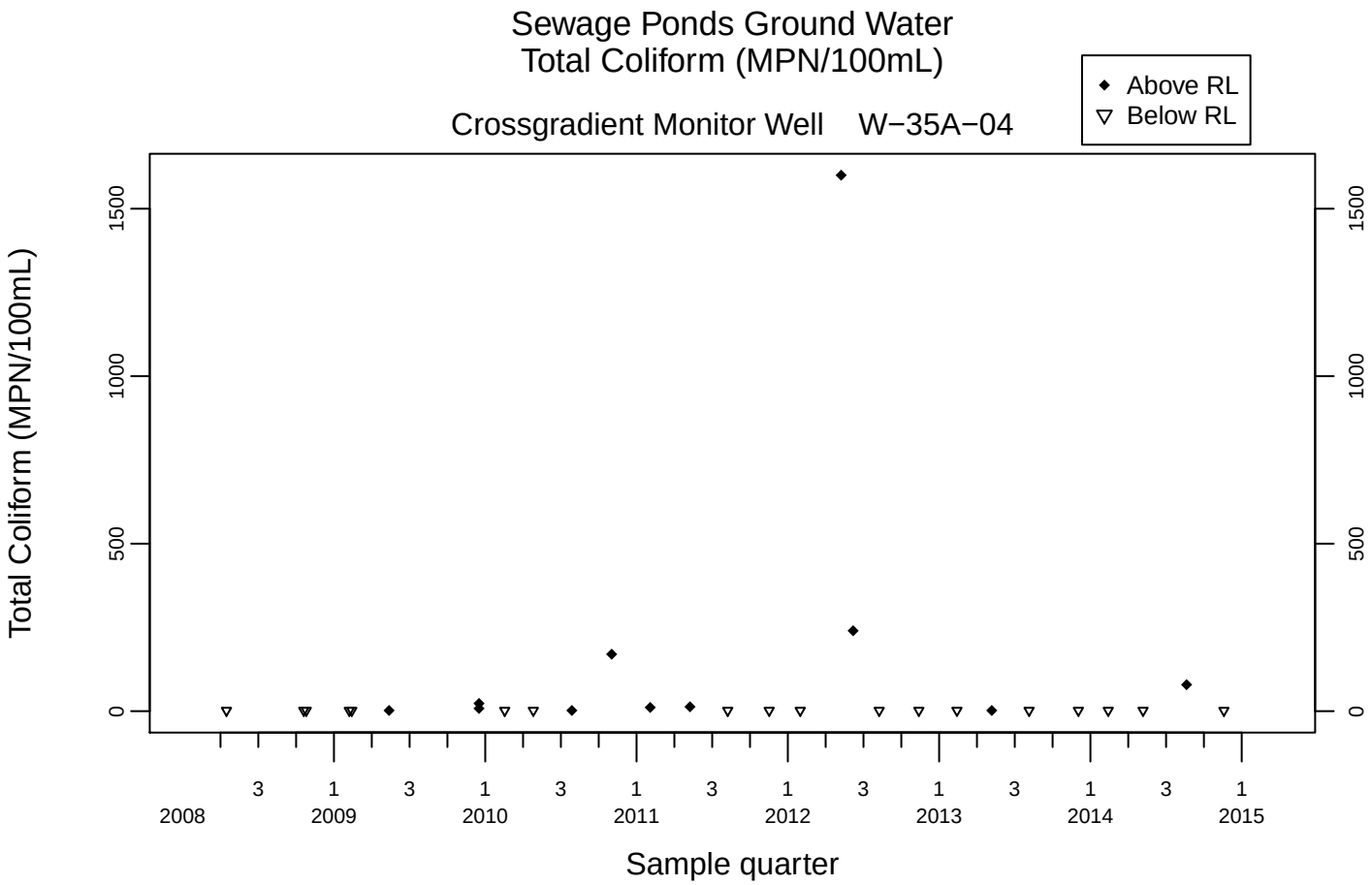

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

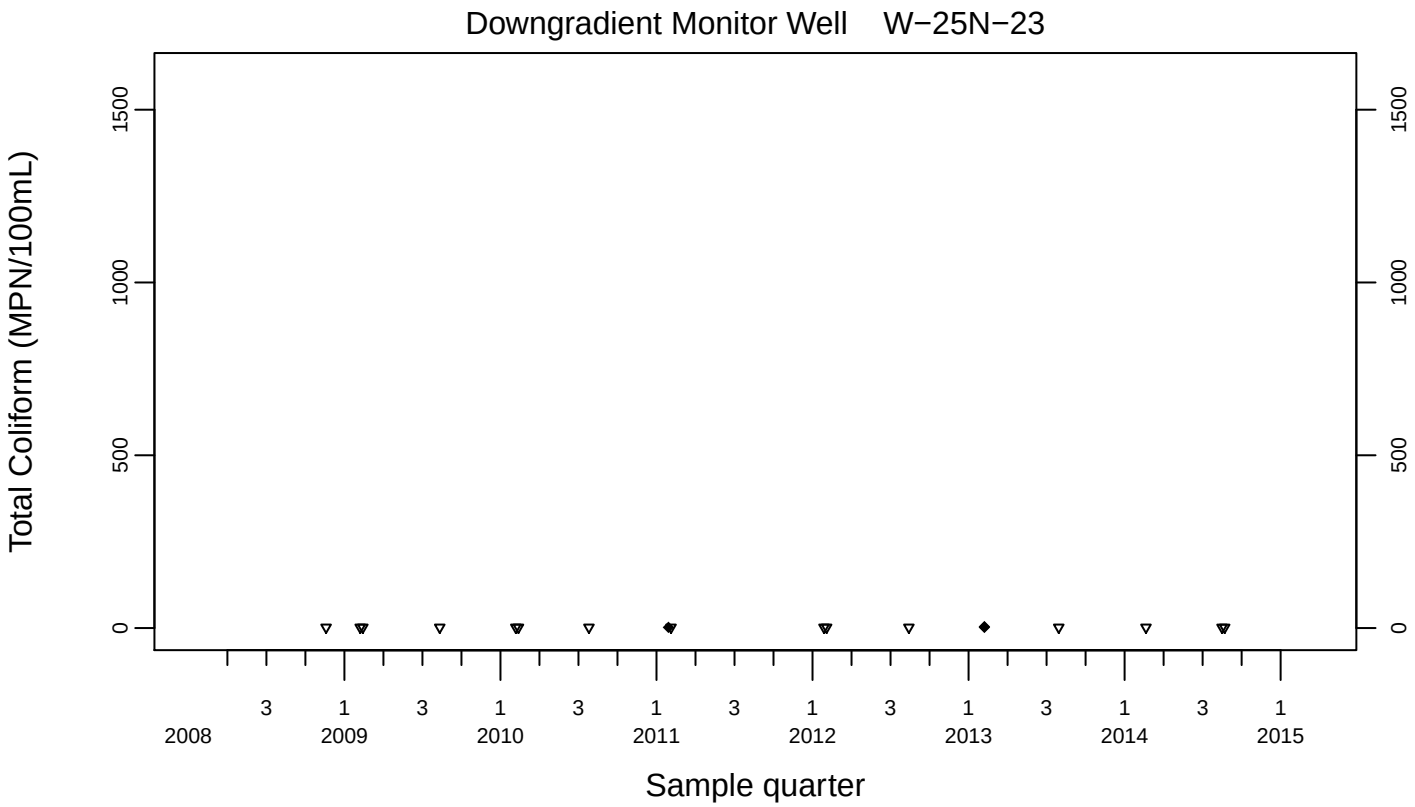

PL=2.2
Downgradient Monitor Well W−26R−11
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

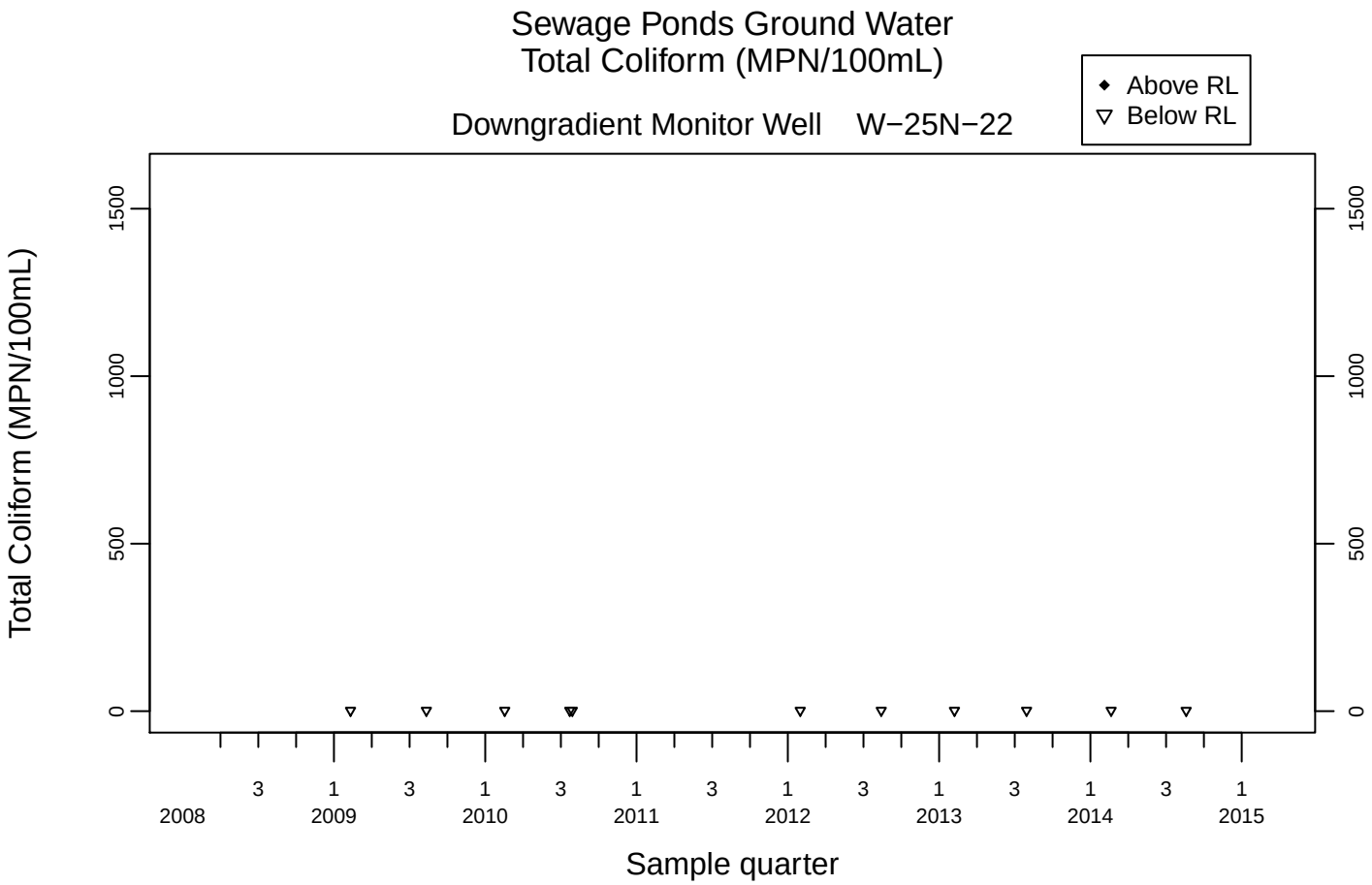

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
Downgradient Monitor Well W−7DS
PL=2.2
Above RL
Below RL
PL
Fecal Coliform (MPN/100mL)
0.0
0.5
1.0
1.5
2.0
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

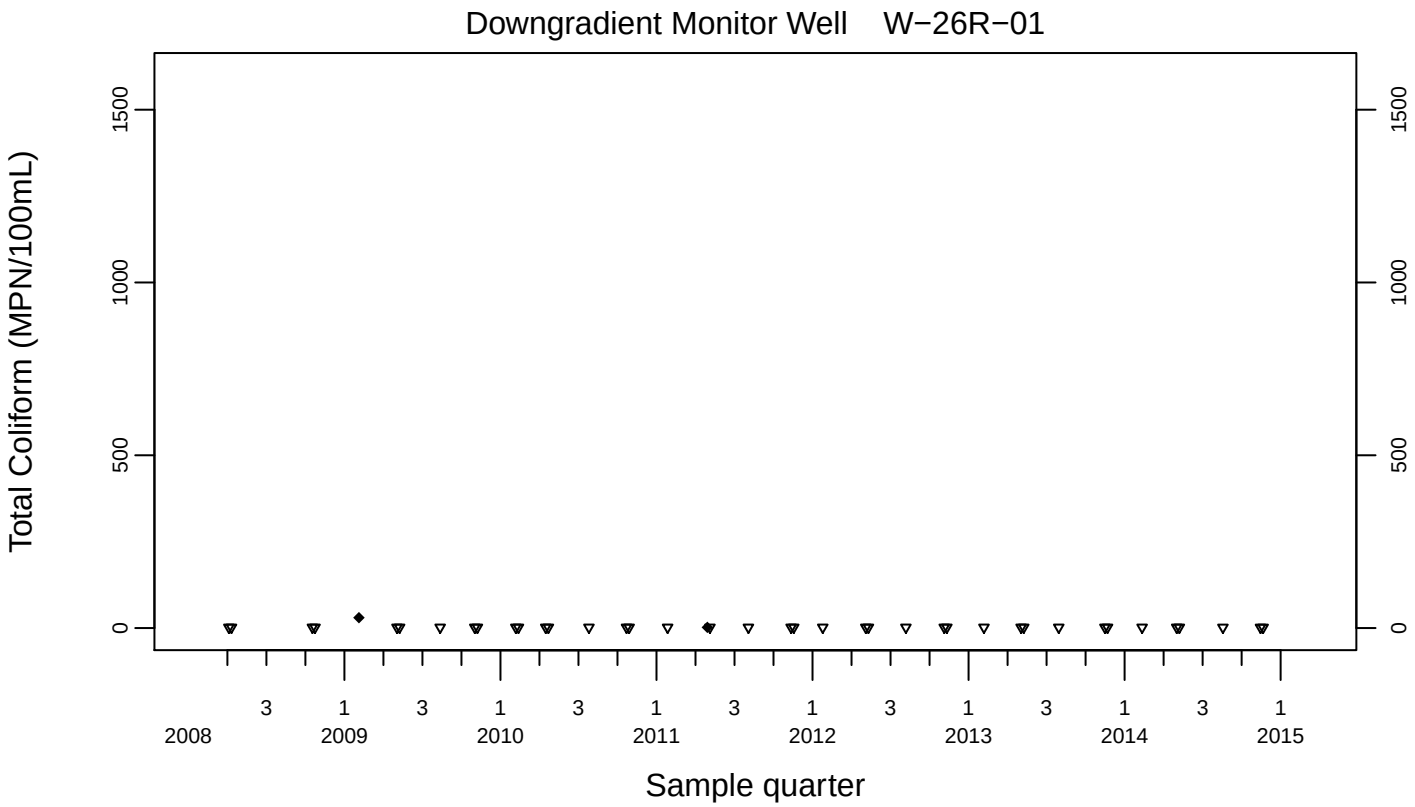

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

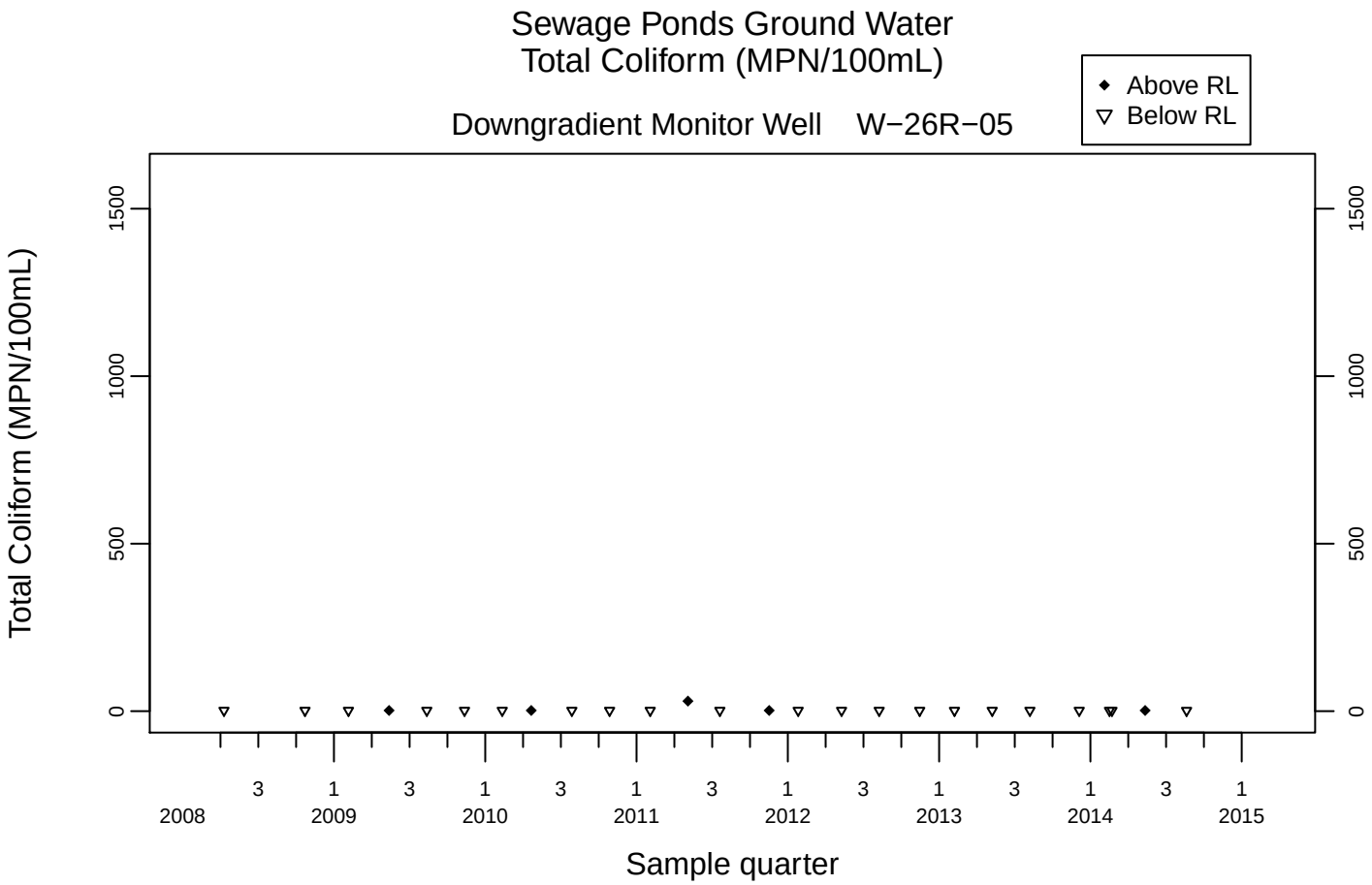

Upgradient Monitor Well W−7PS
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

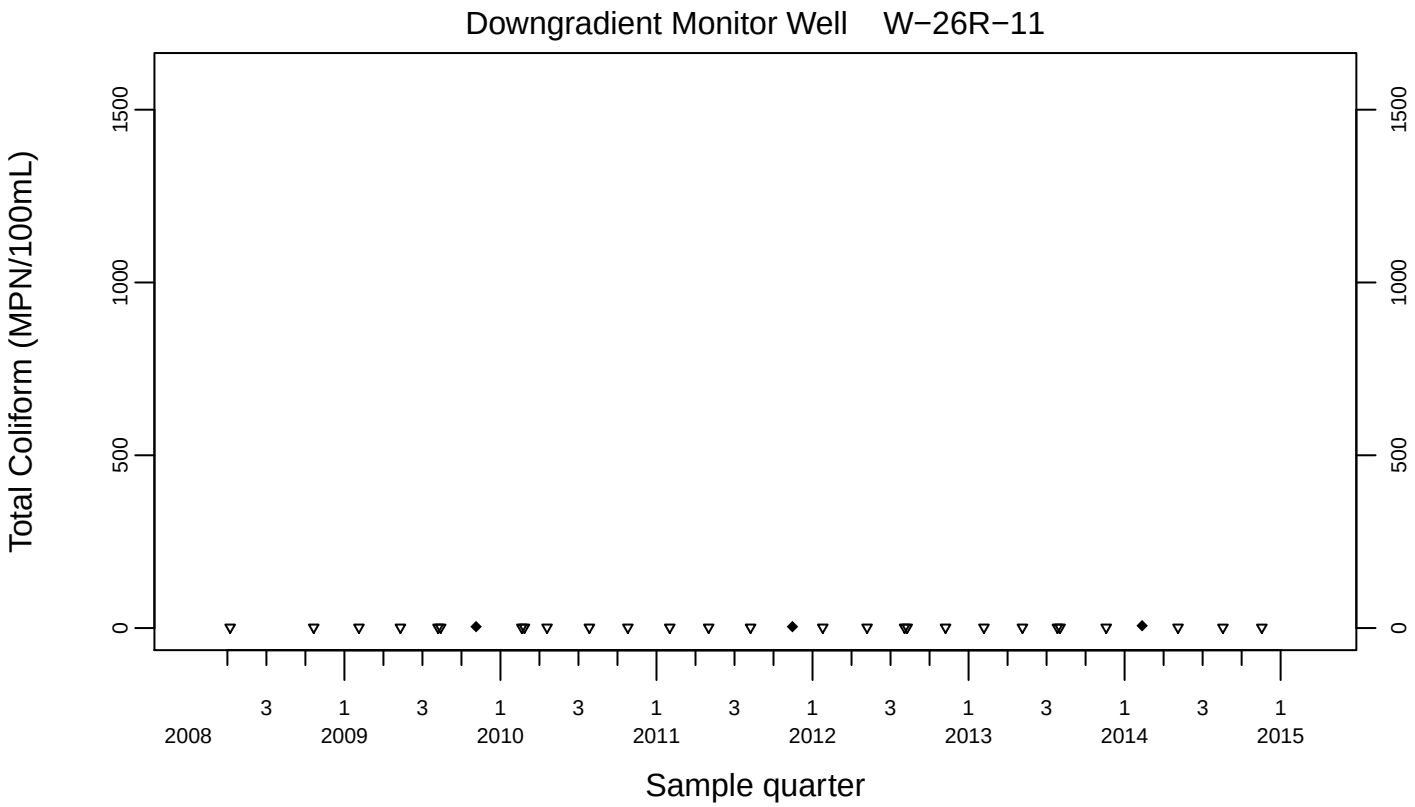

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

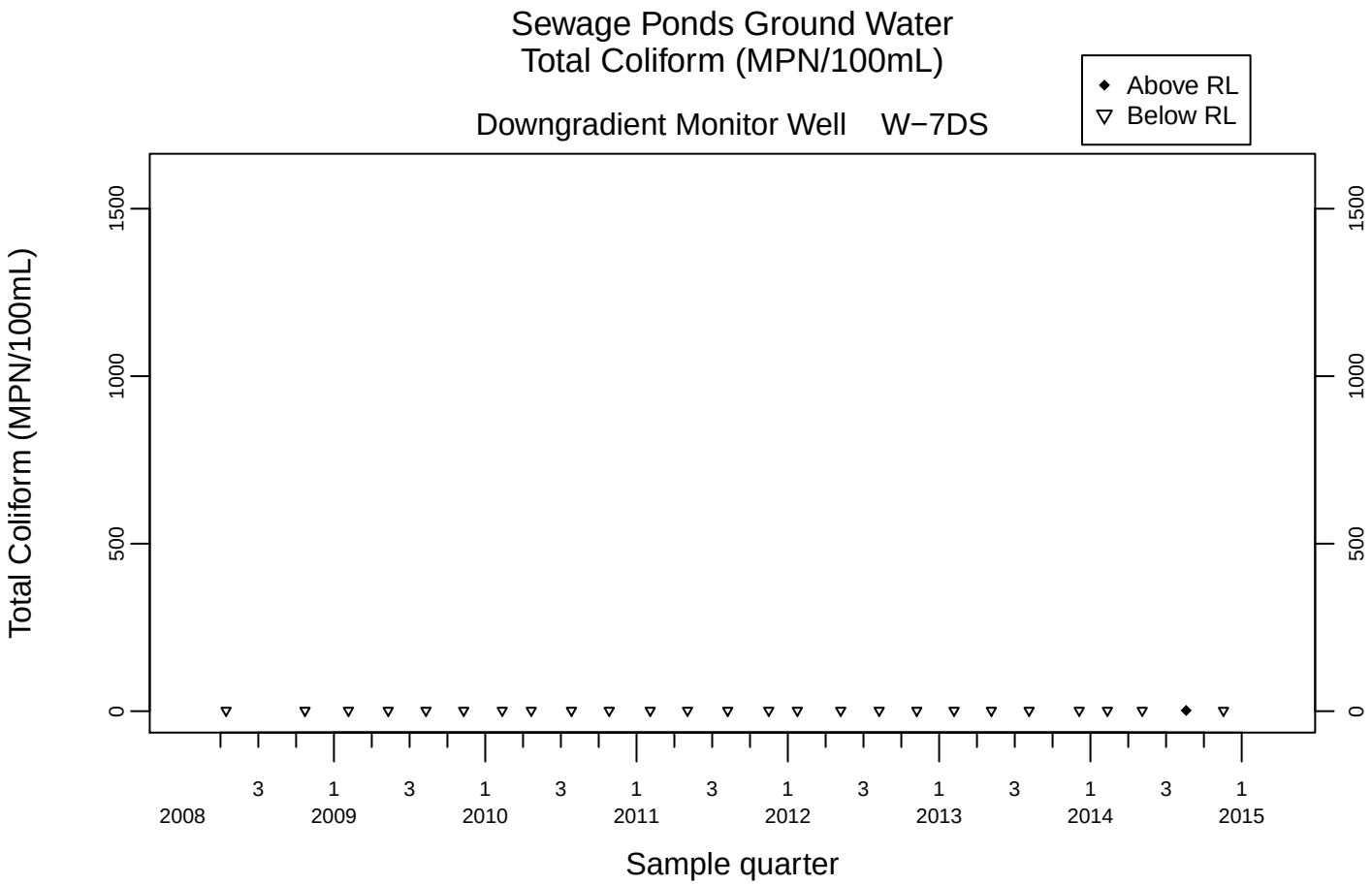

Downgradient Monitor Well W−25N−23
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

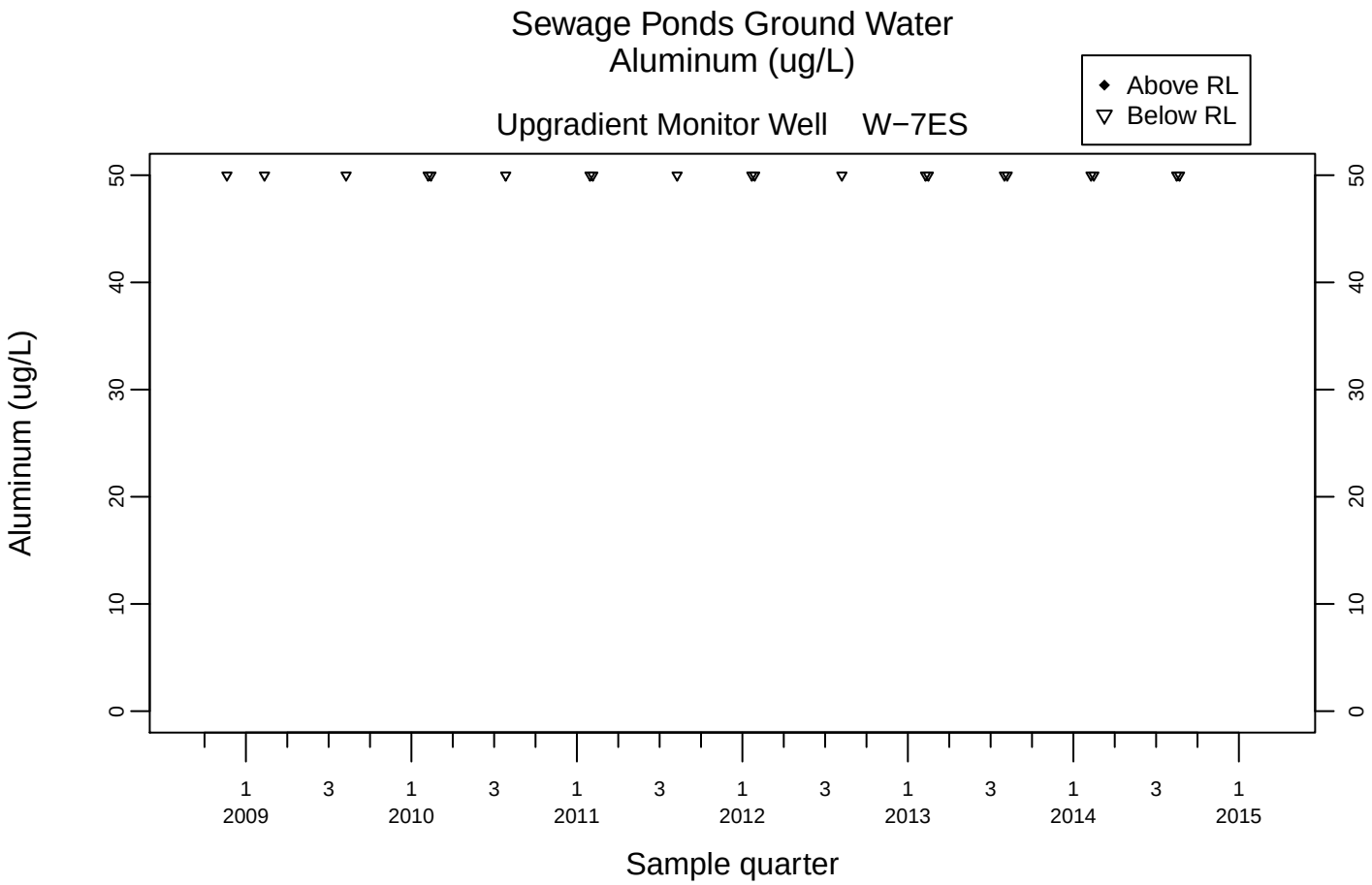

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

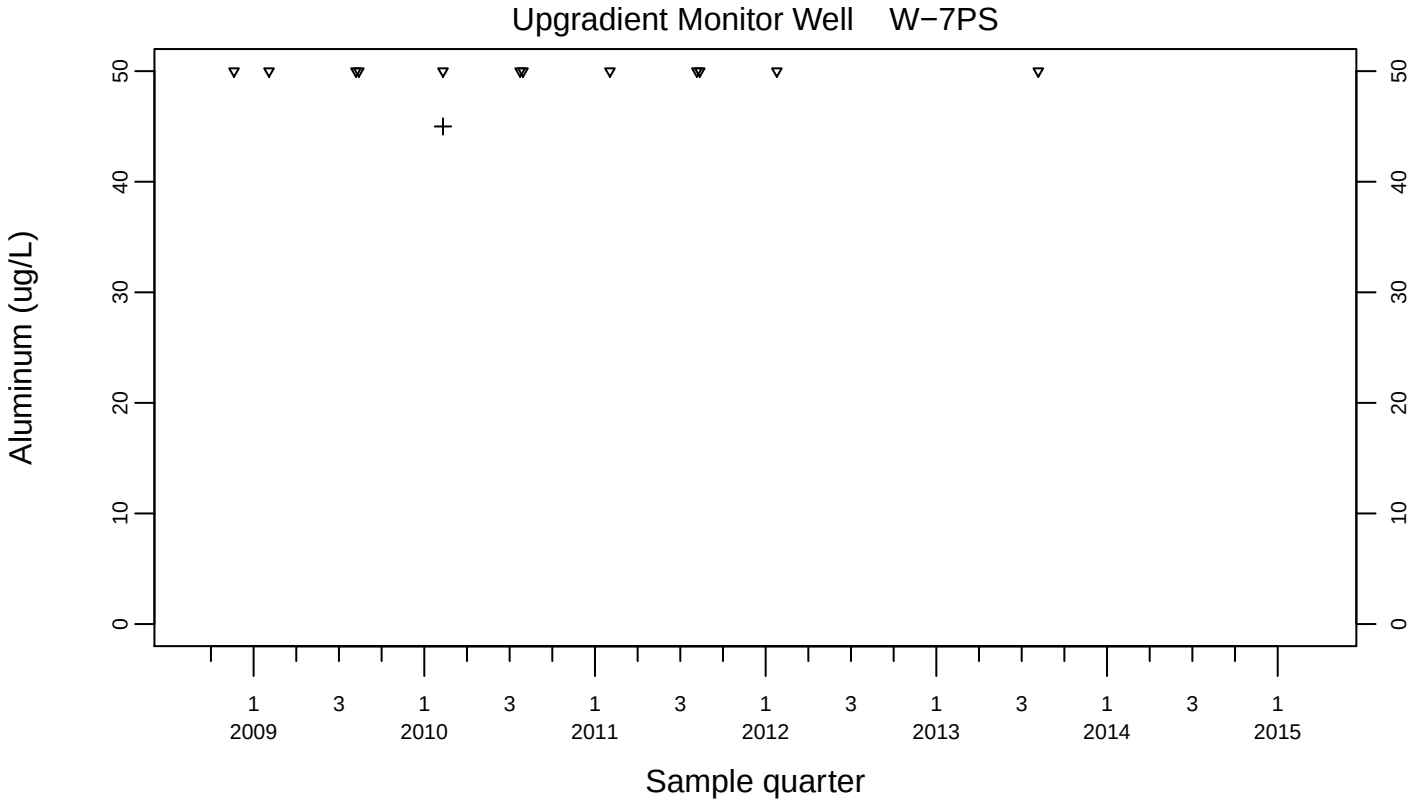

Downgradient Monitor Well W−26R−01
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

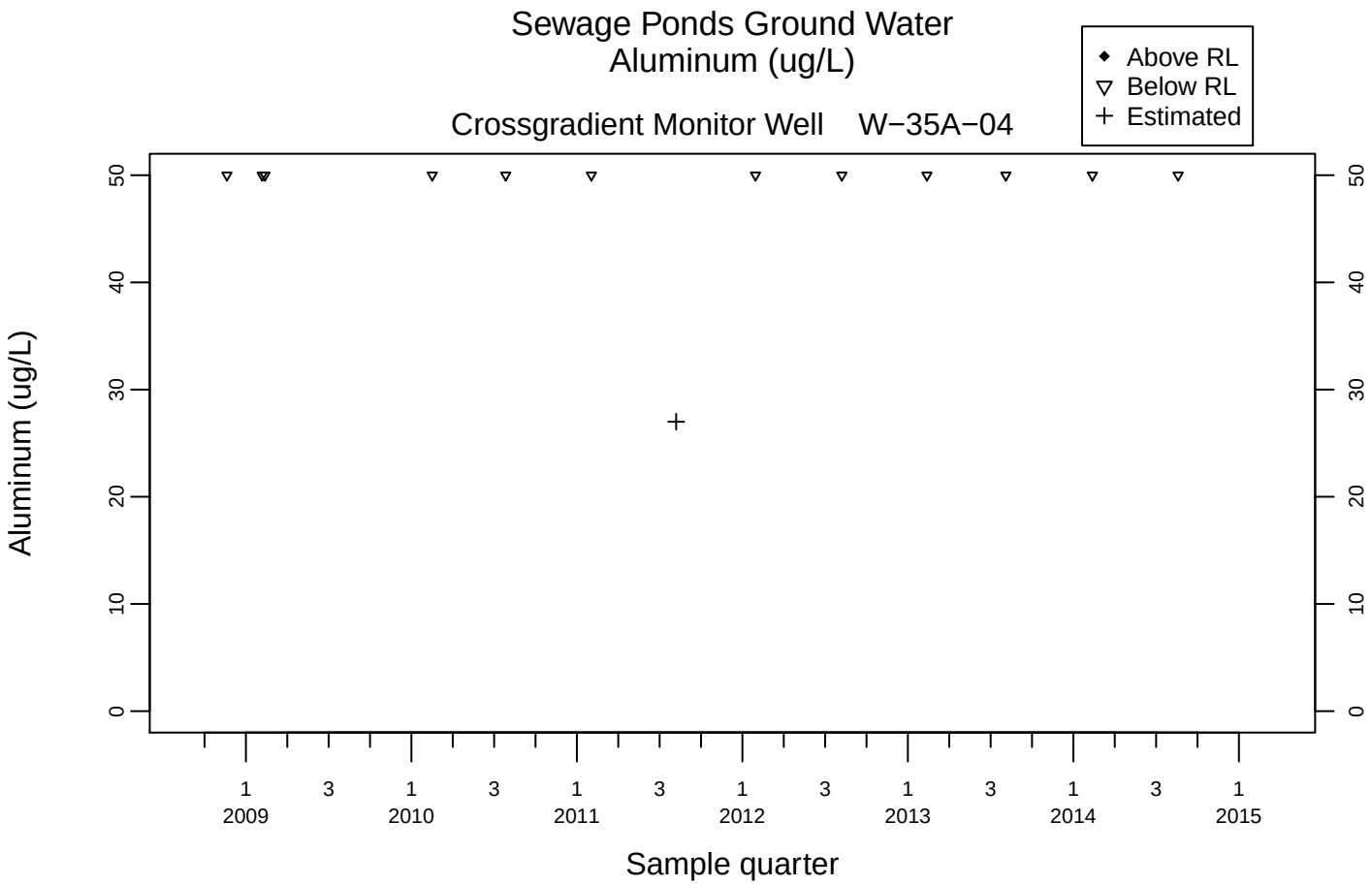

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

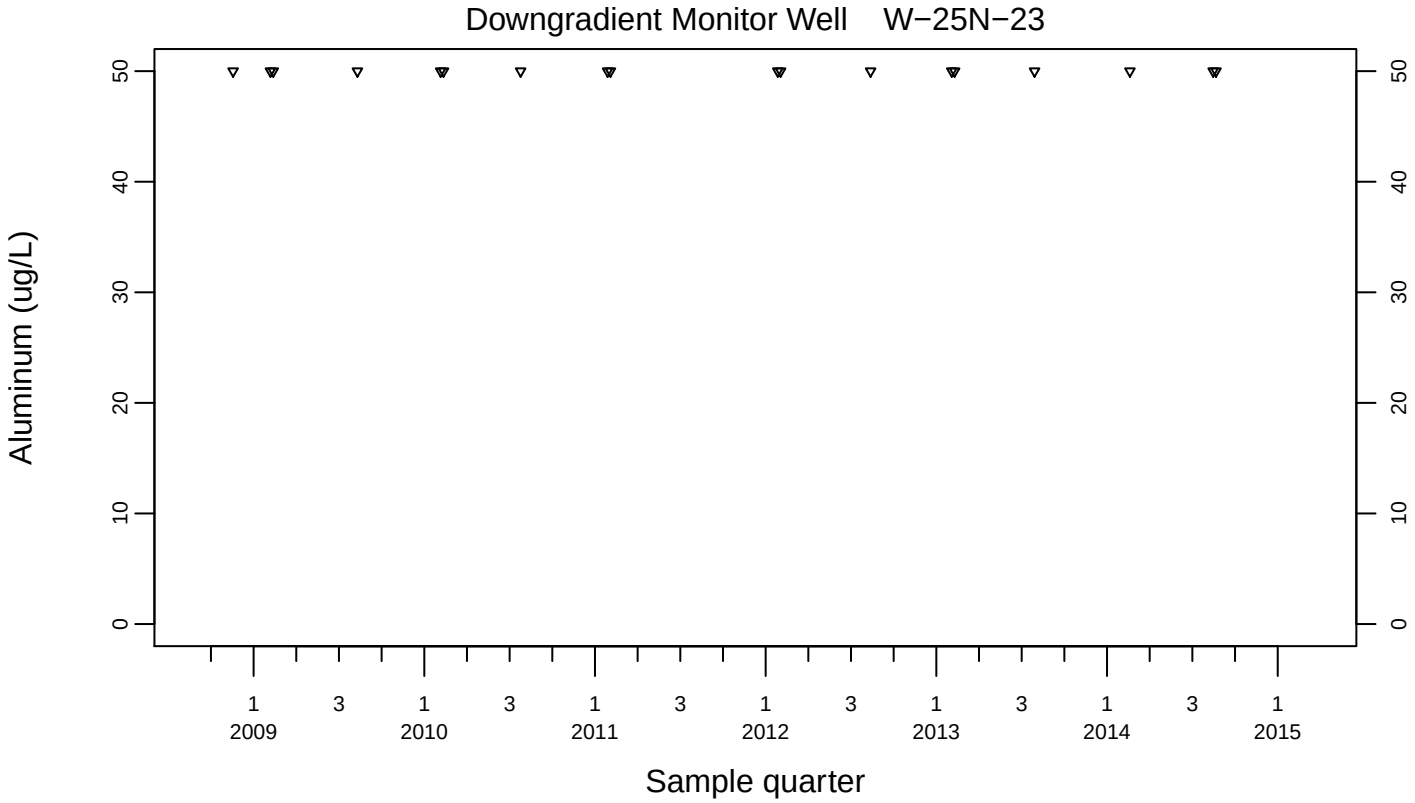

Downgradient Monitor Well W−26R−11
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

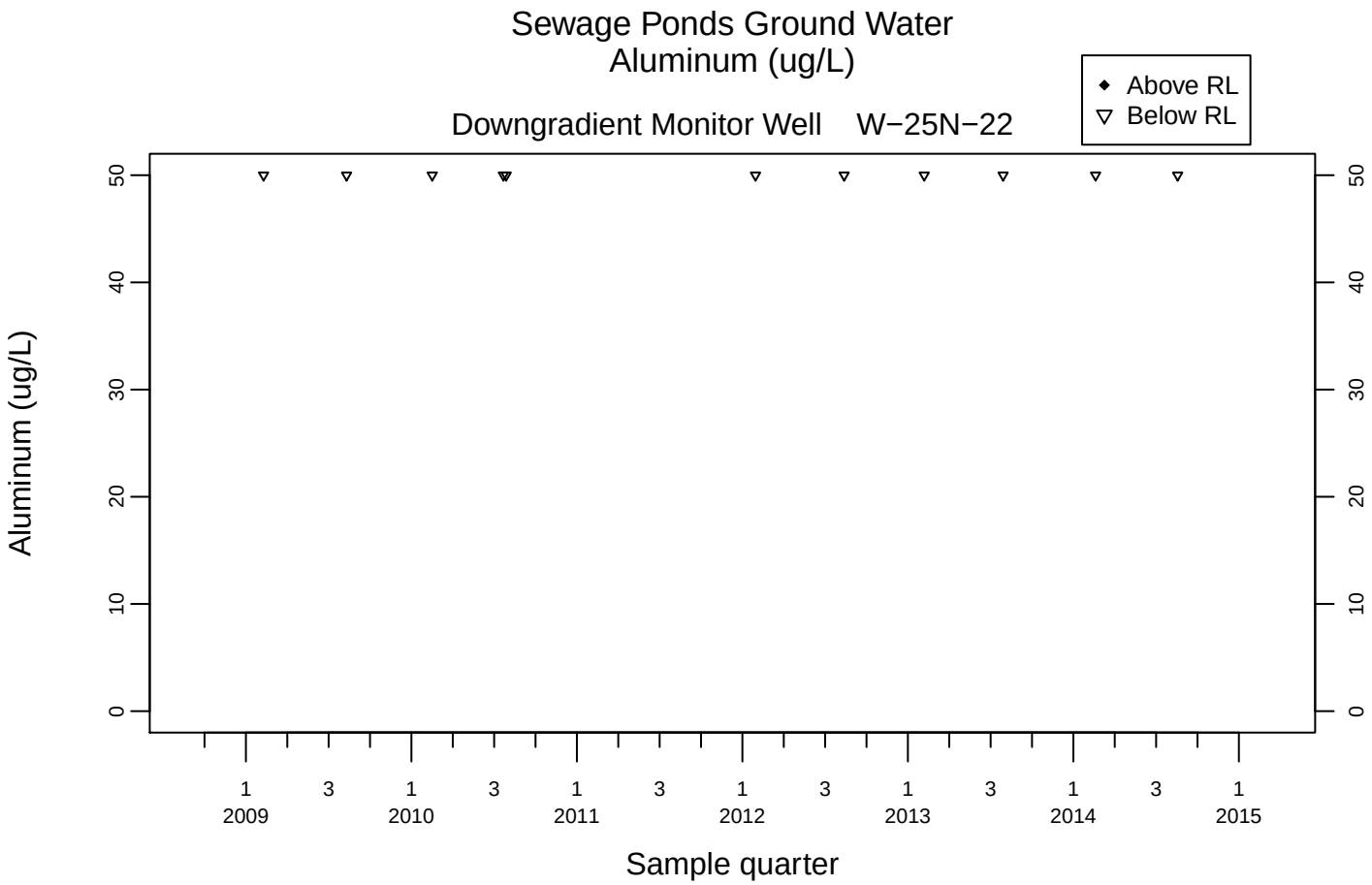

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

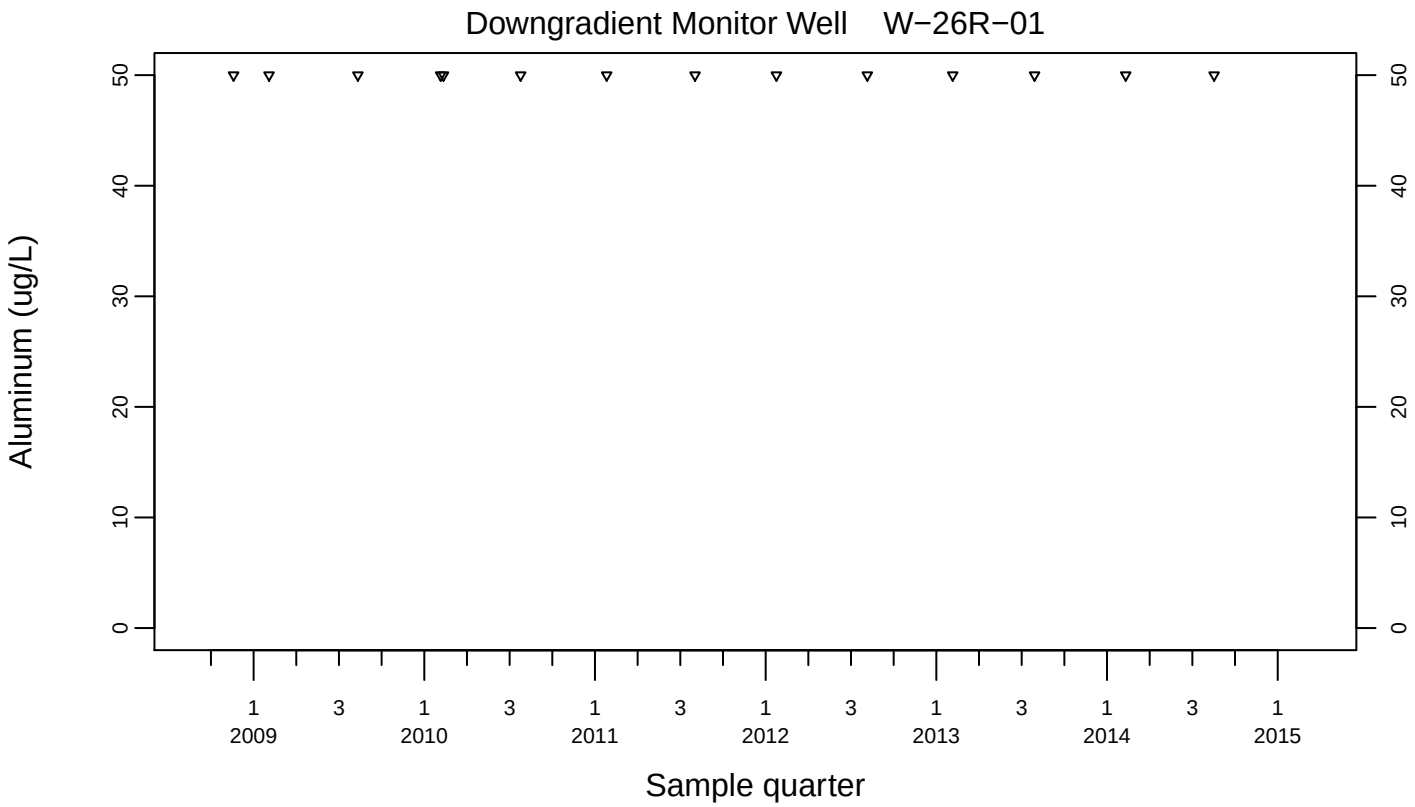

Sewage Ponds Ground Water
Aluminum (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

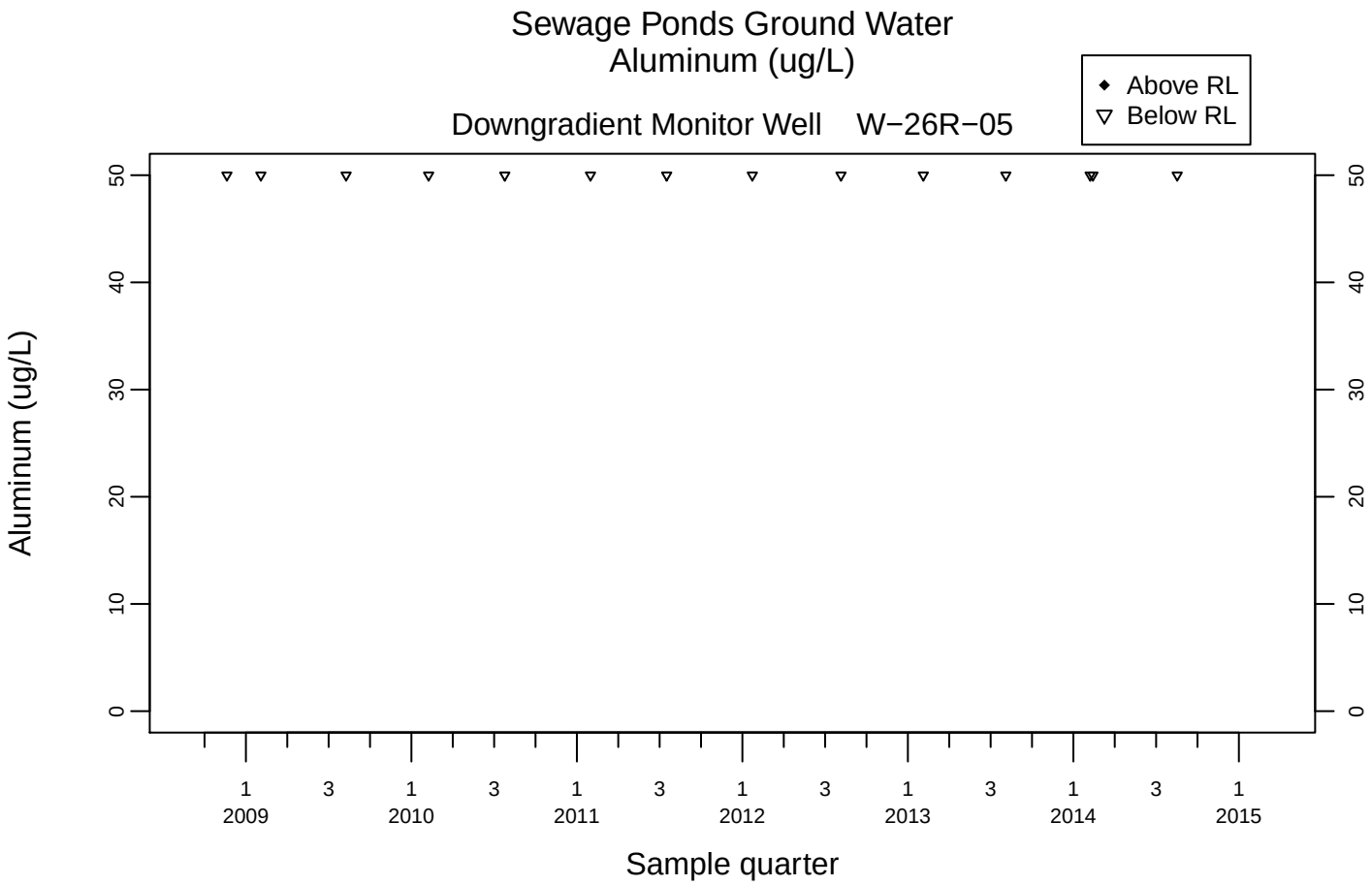

Upgradient Monitor Well W−7PS
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

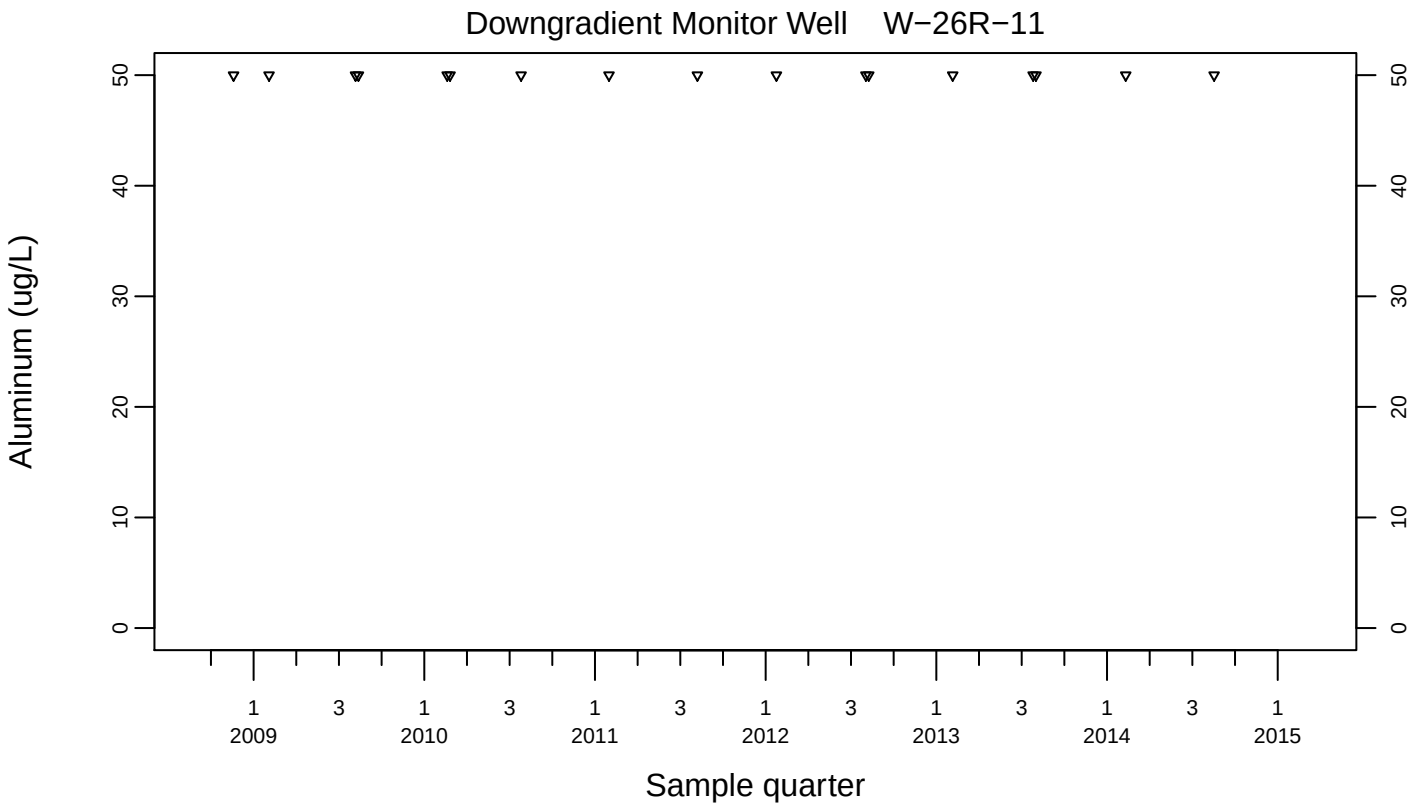

Sewage Ponds Ground Water
Aluminum (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

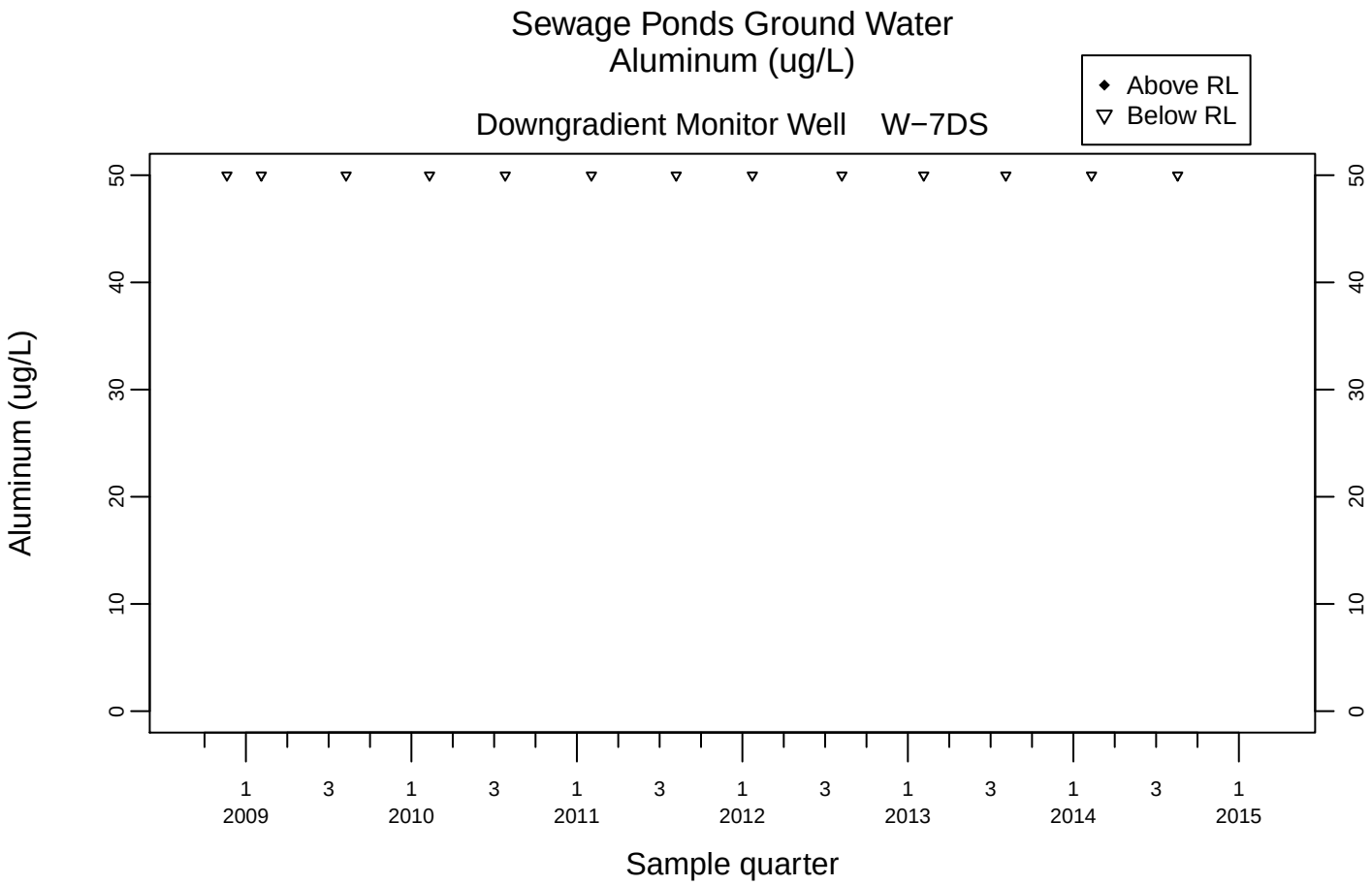

Downgradient Monitor Well W−25N−23
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

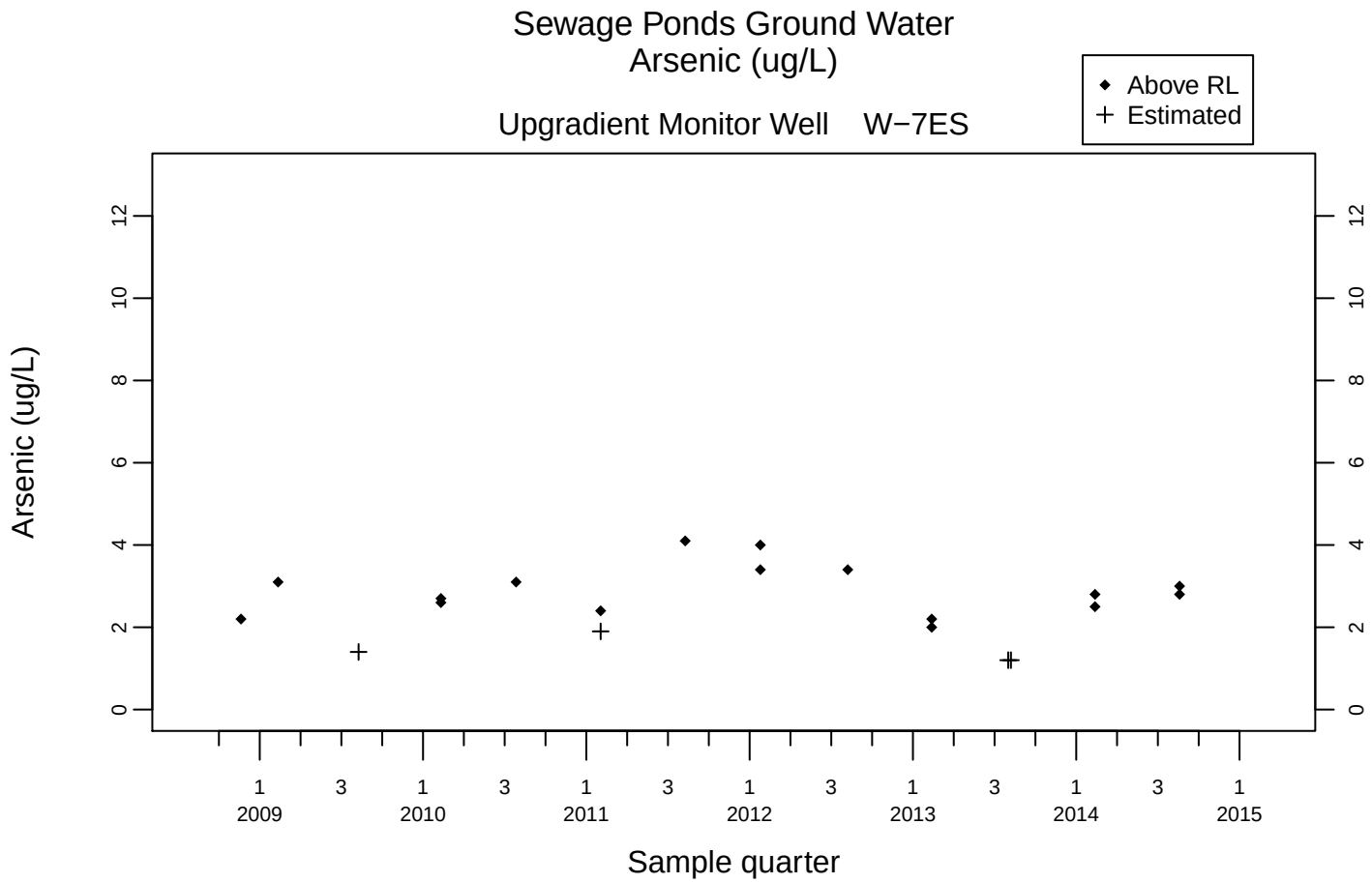

Sewage Ponds Ground Water
Aluminum (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

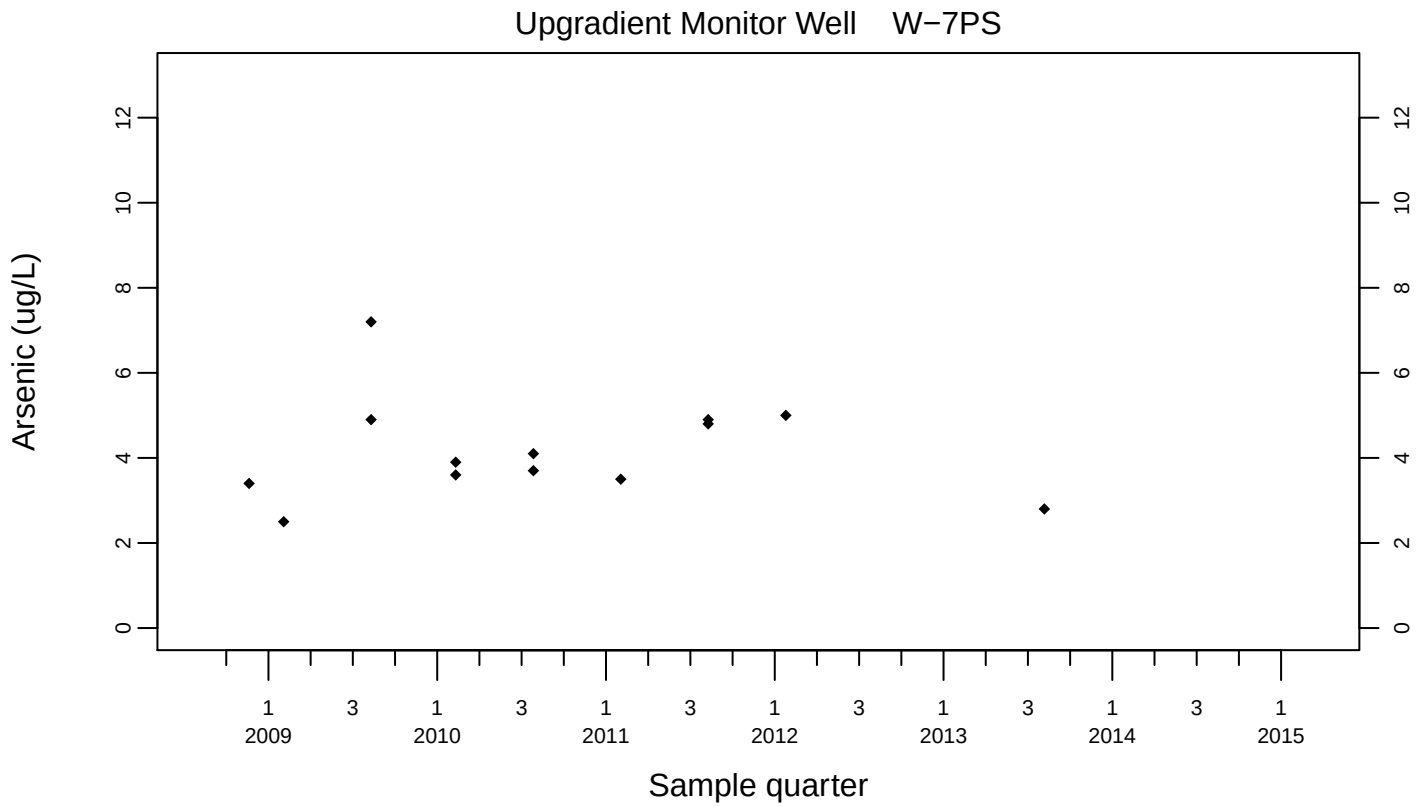

Downgradient Monitor Well W−26R−01
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

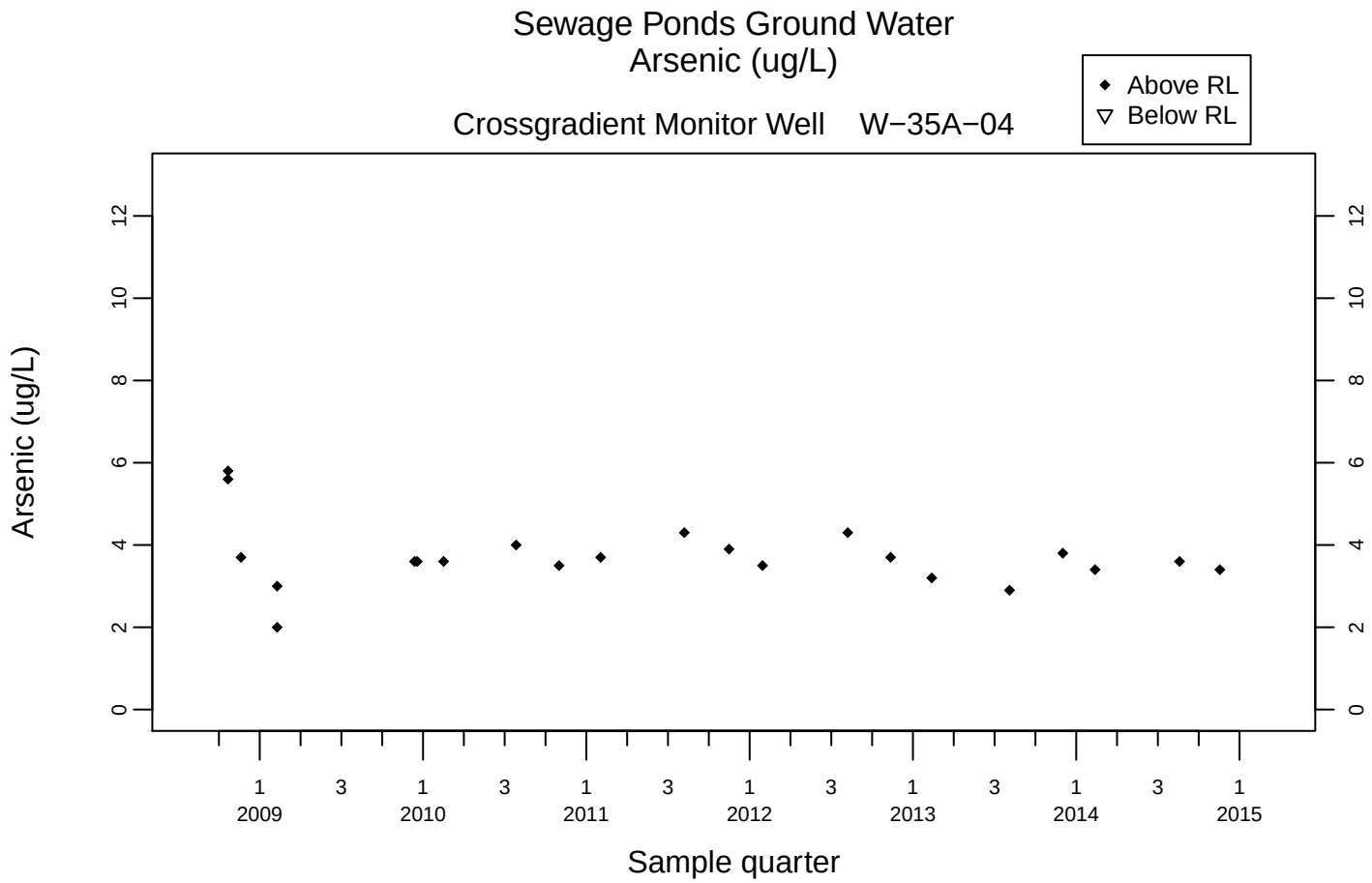

Sewage Ponds Ground Water
Aluminum (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

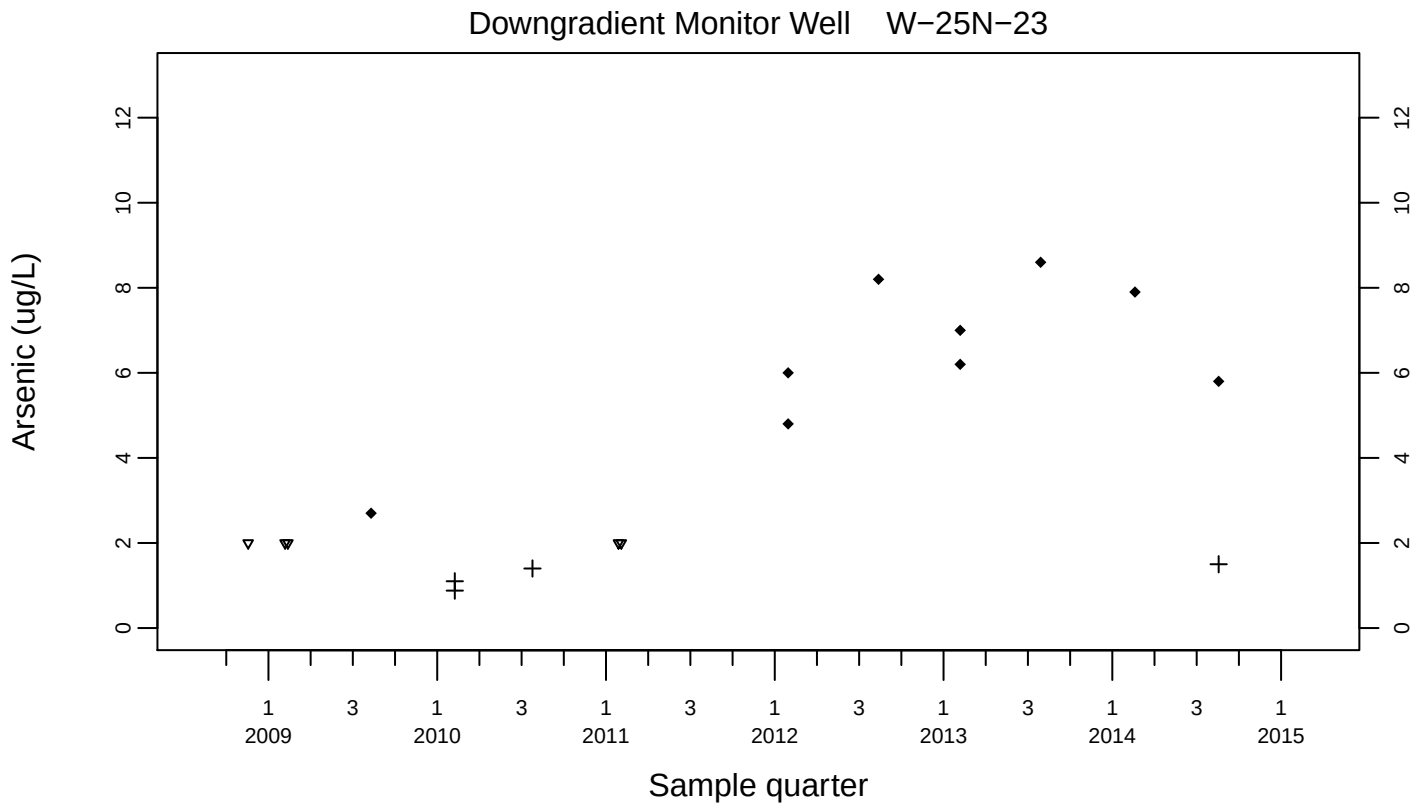

Downgradient Monitor Well W−26R−11
Aluminum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

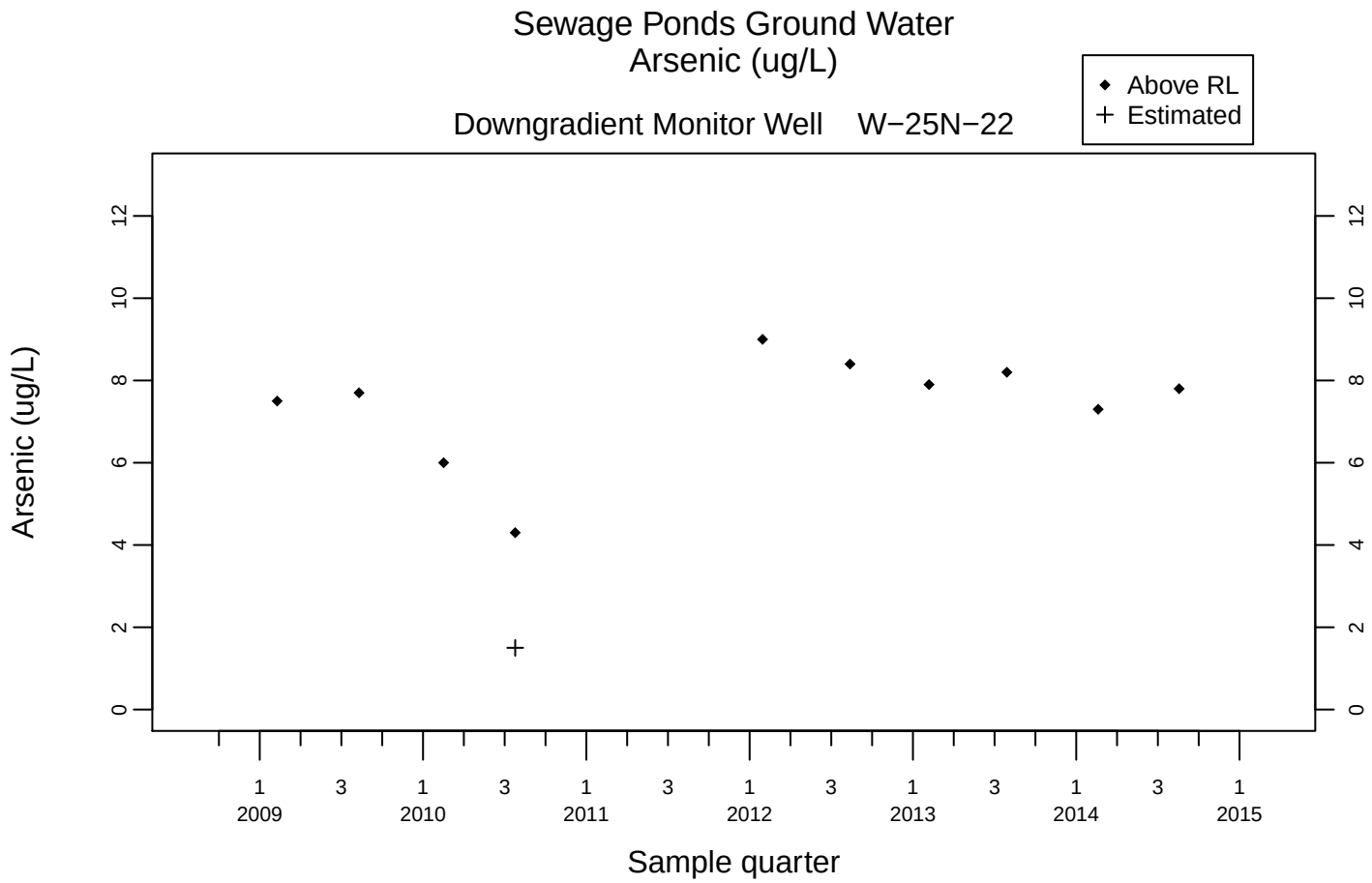

Sewage Ponds Ground Water
Aluminum (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

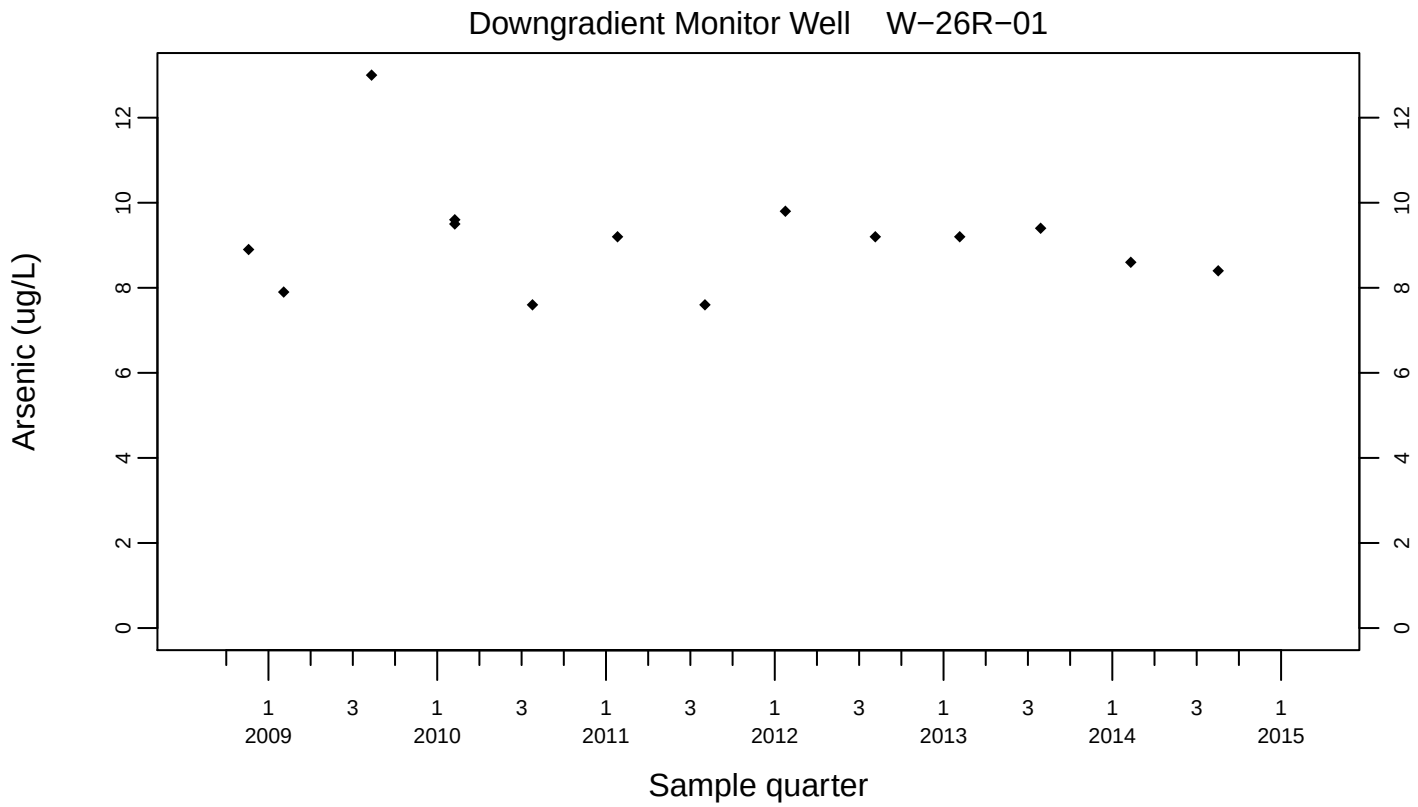

Sewage Ponds Ground Water
Arsenic (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Estimated
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

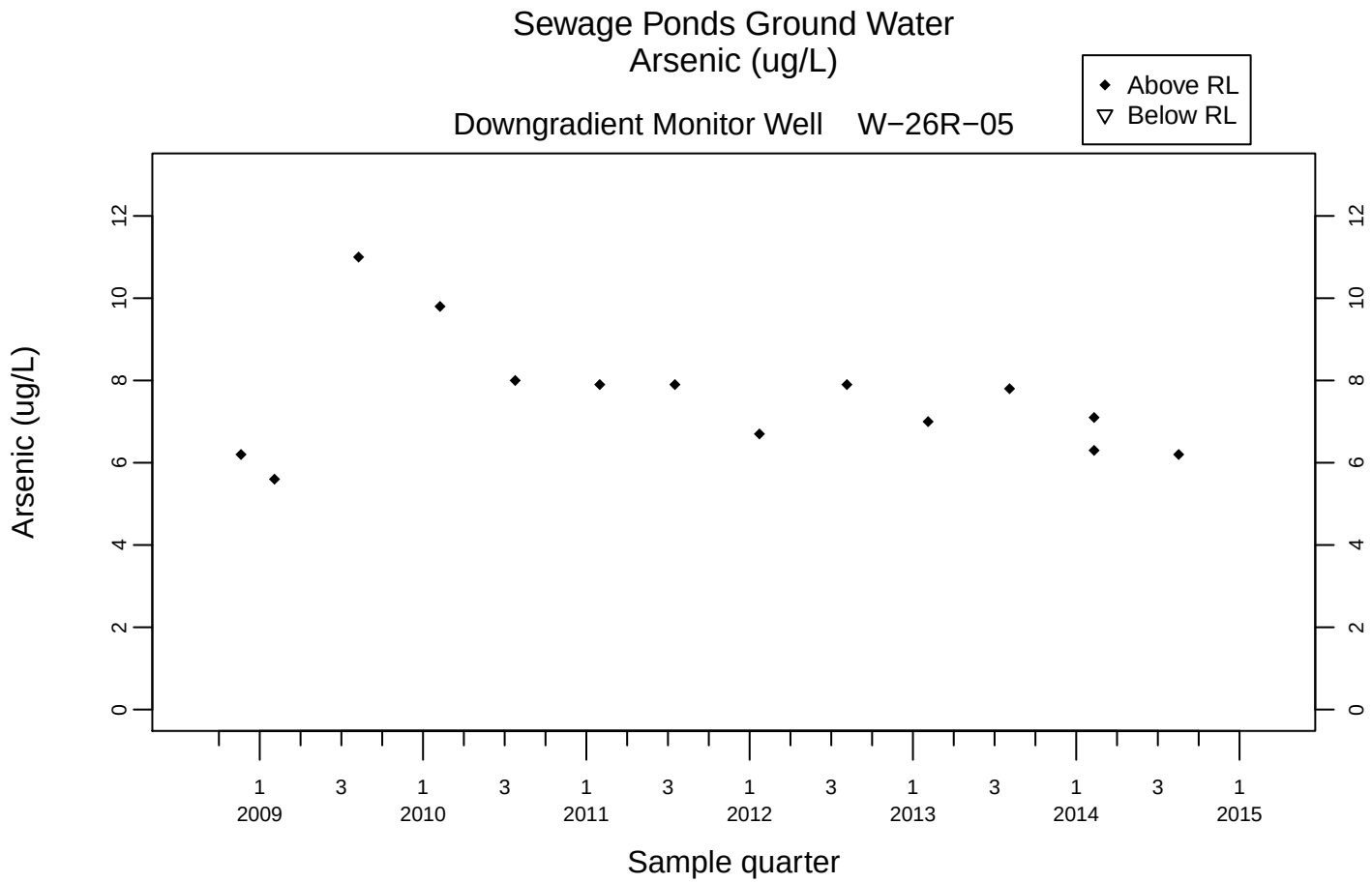

Upgradient Monitor Well W−7PS
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

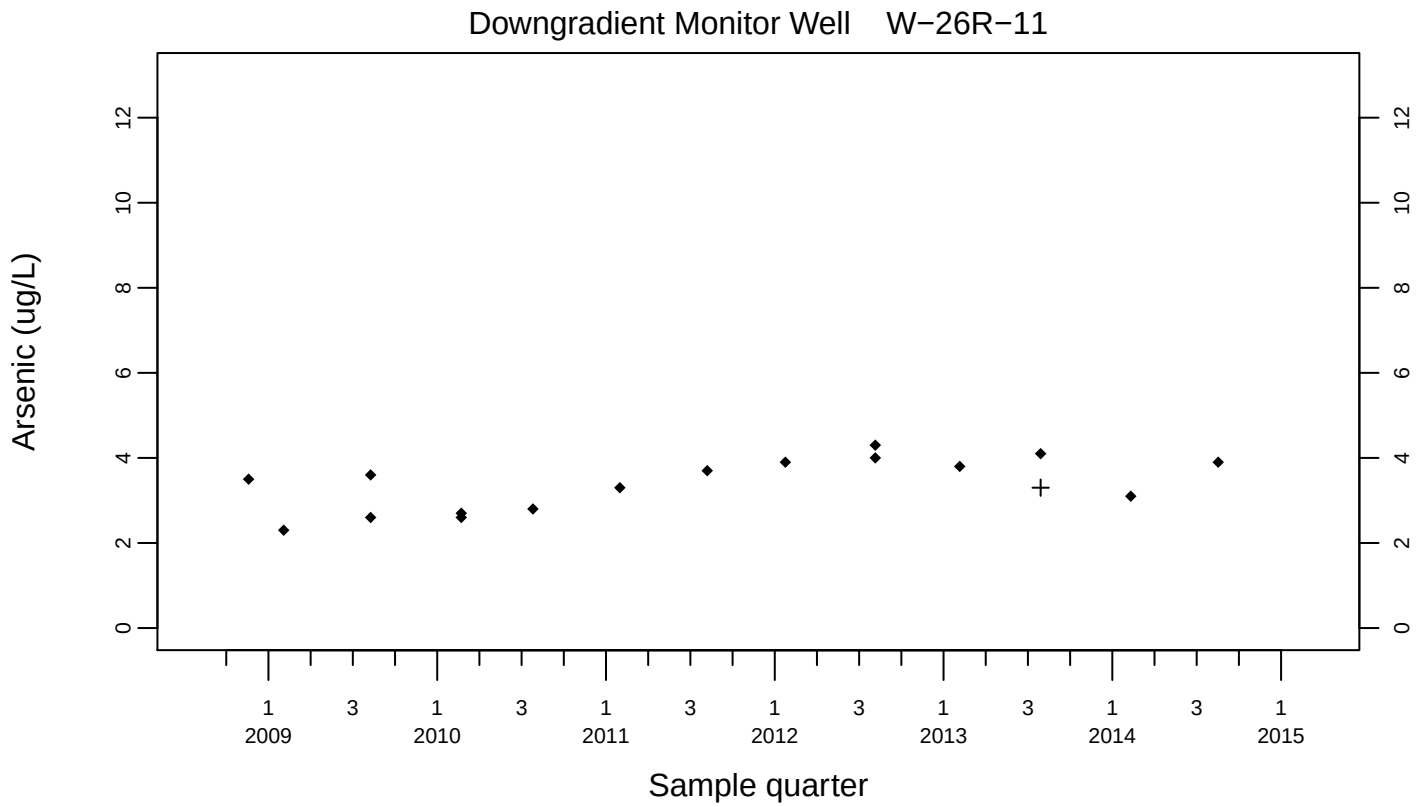

Sewage Ponds Ground Water
Arsenic (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
12
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

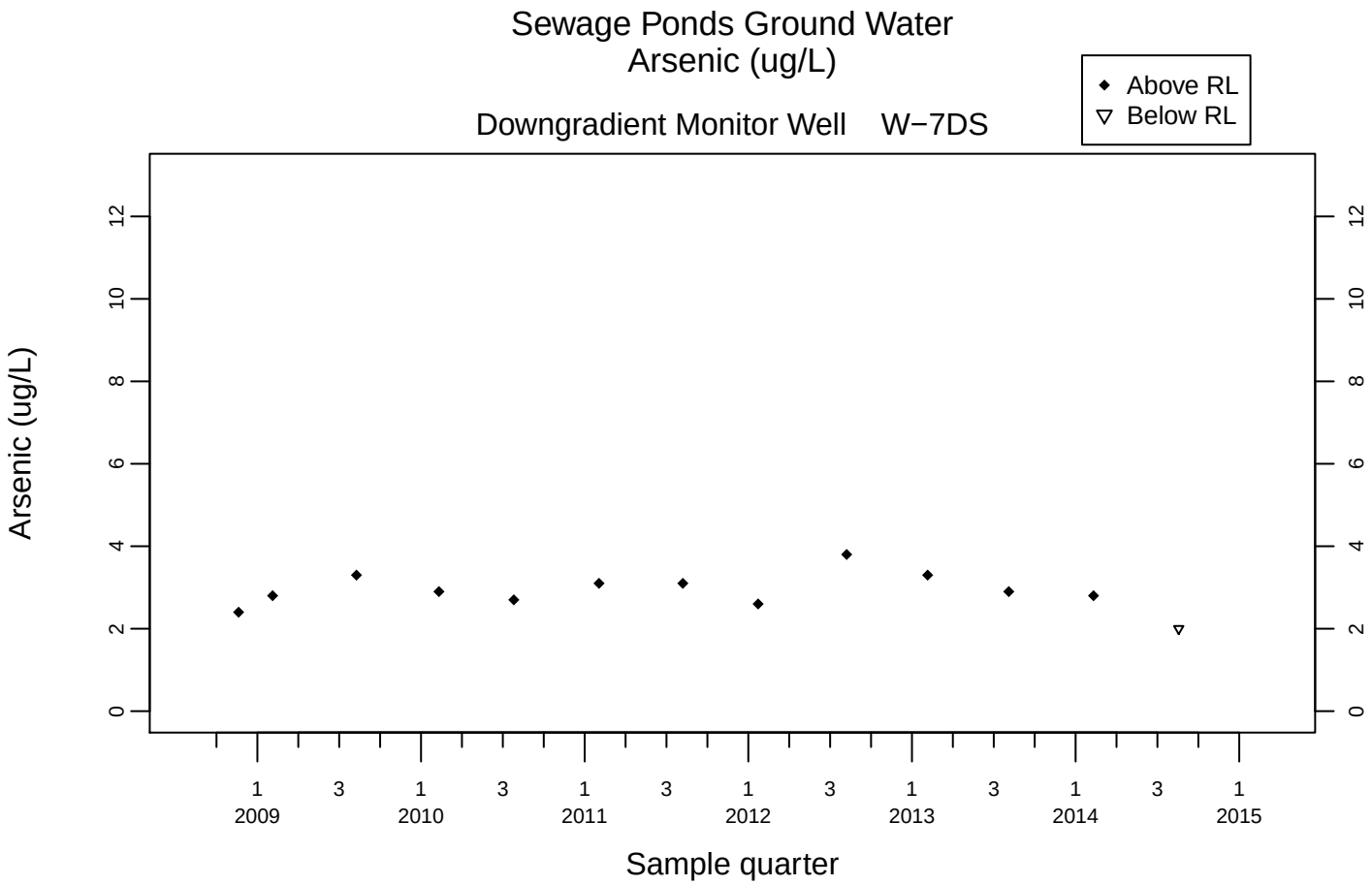

Downgradient Monitor Well W−25N−23
Arsenic (ug/L)
0
2
4
6
8
10
12
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

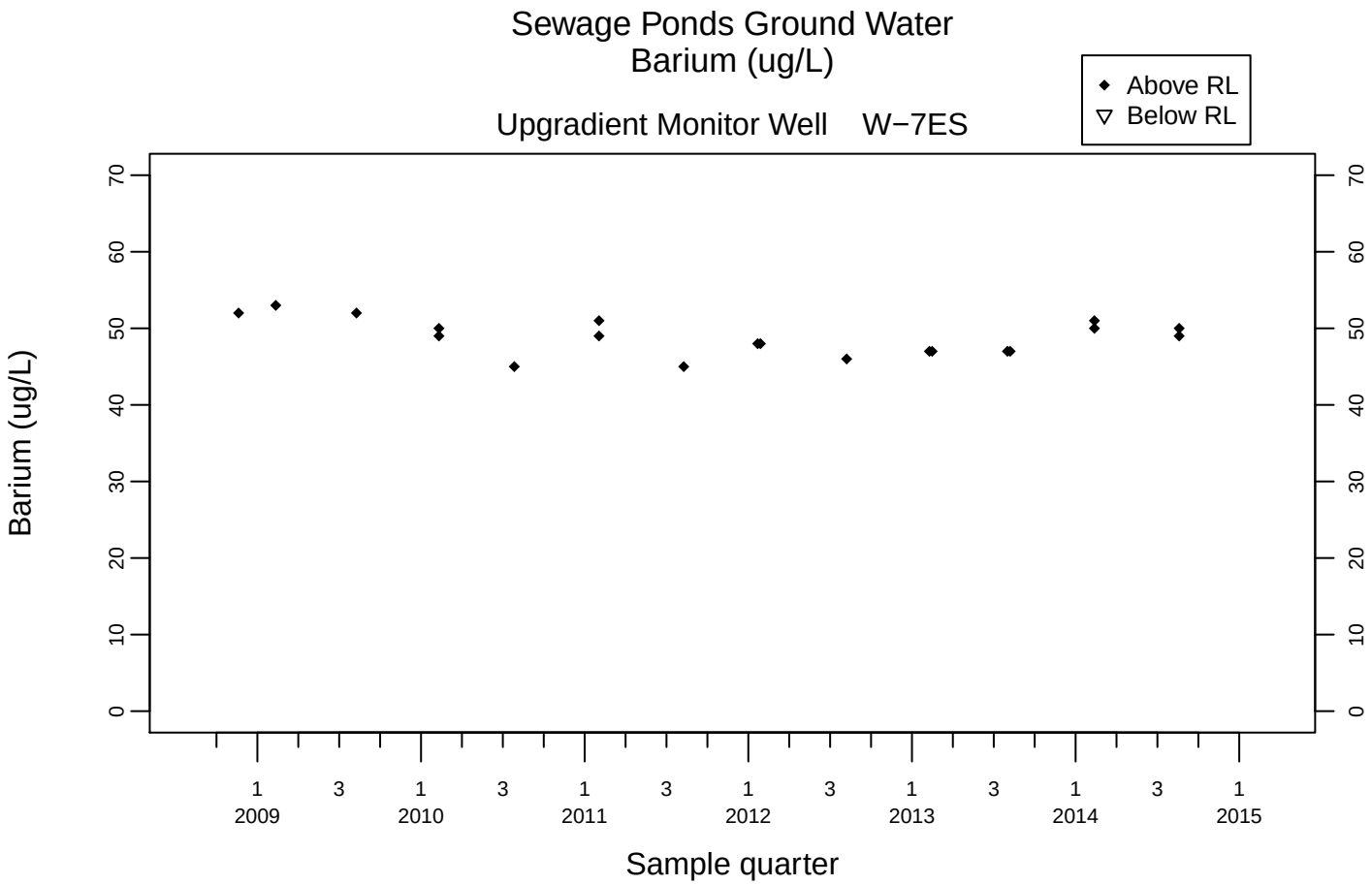

Sewage Ponds Ground Water
Arsenic (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Estimated
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

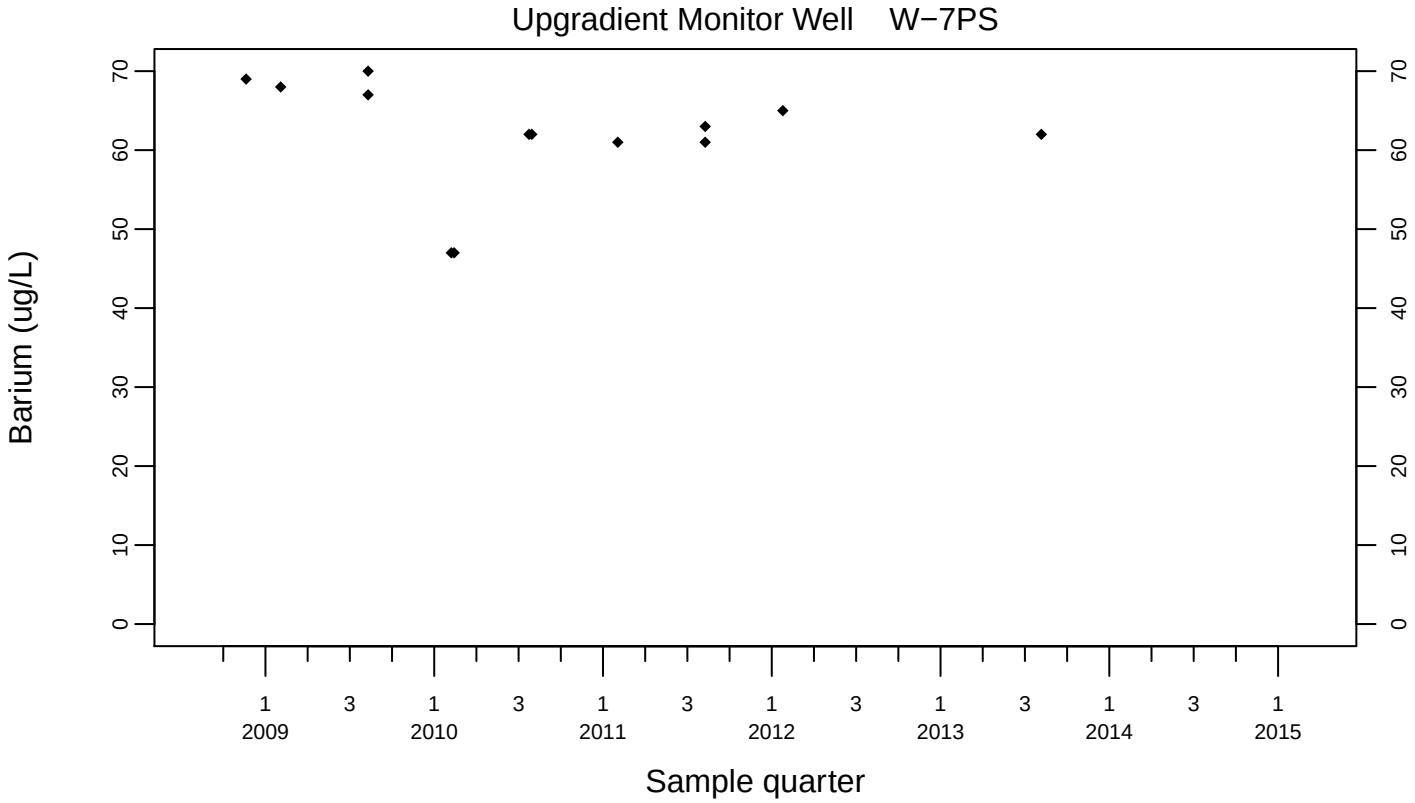

Downgradient Monitor Well W−26R−01
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

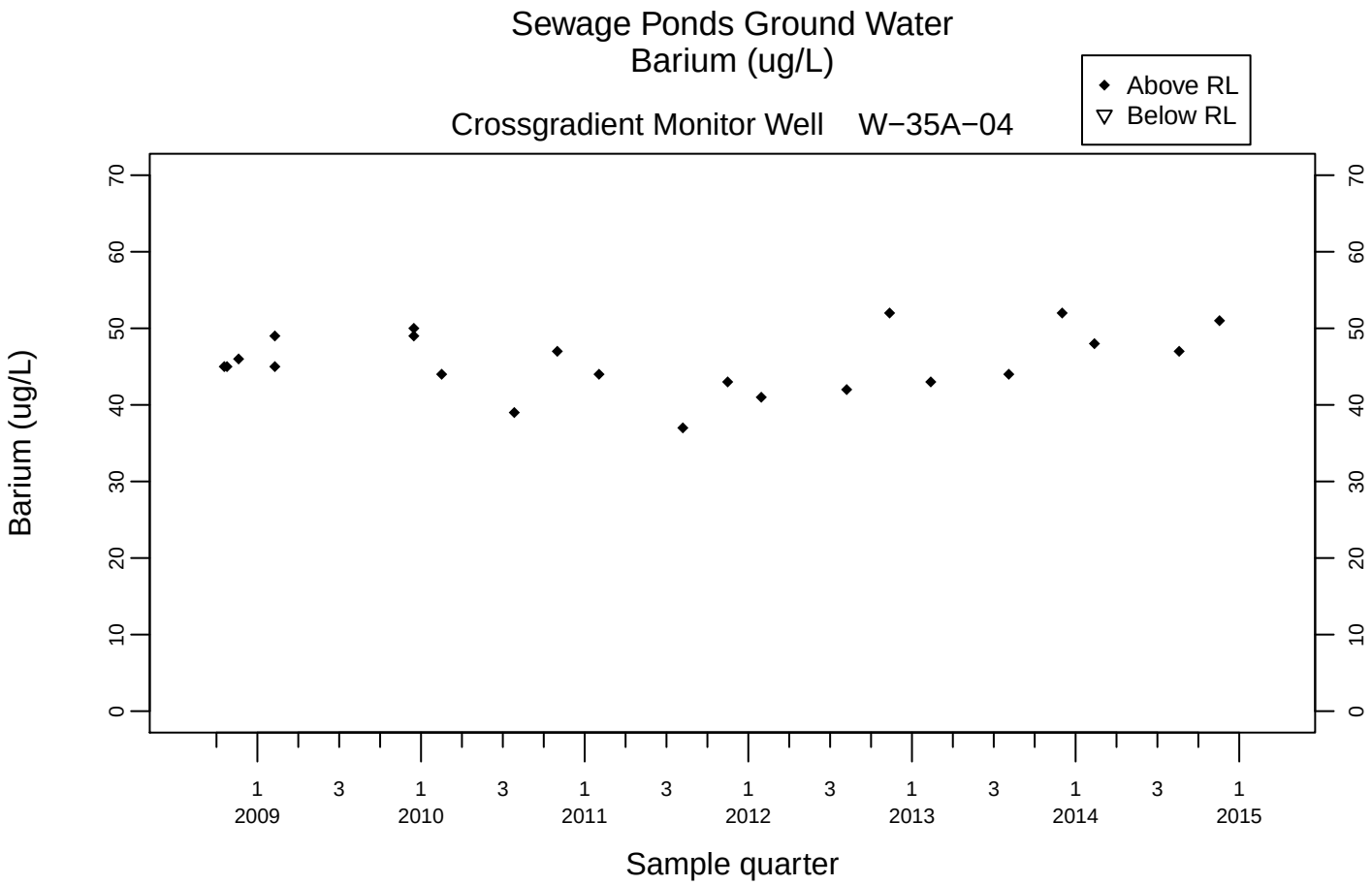

Sewage Ponds Ground Water
Arsenic (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

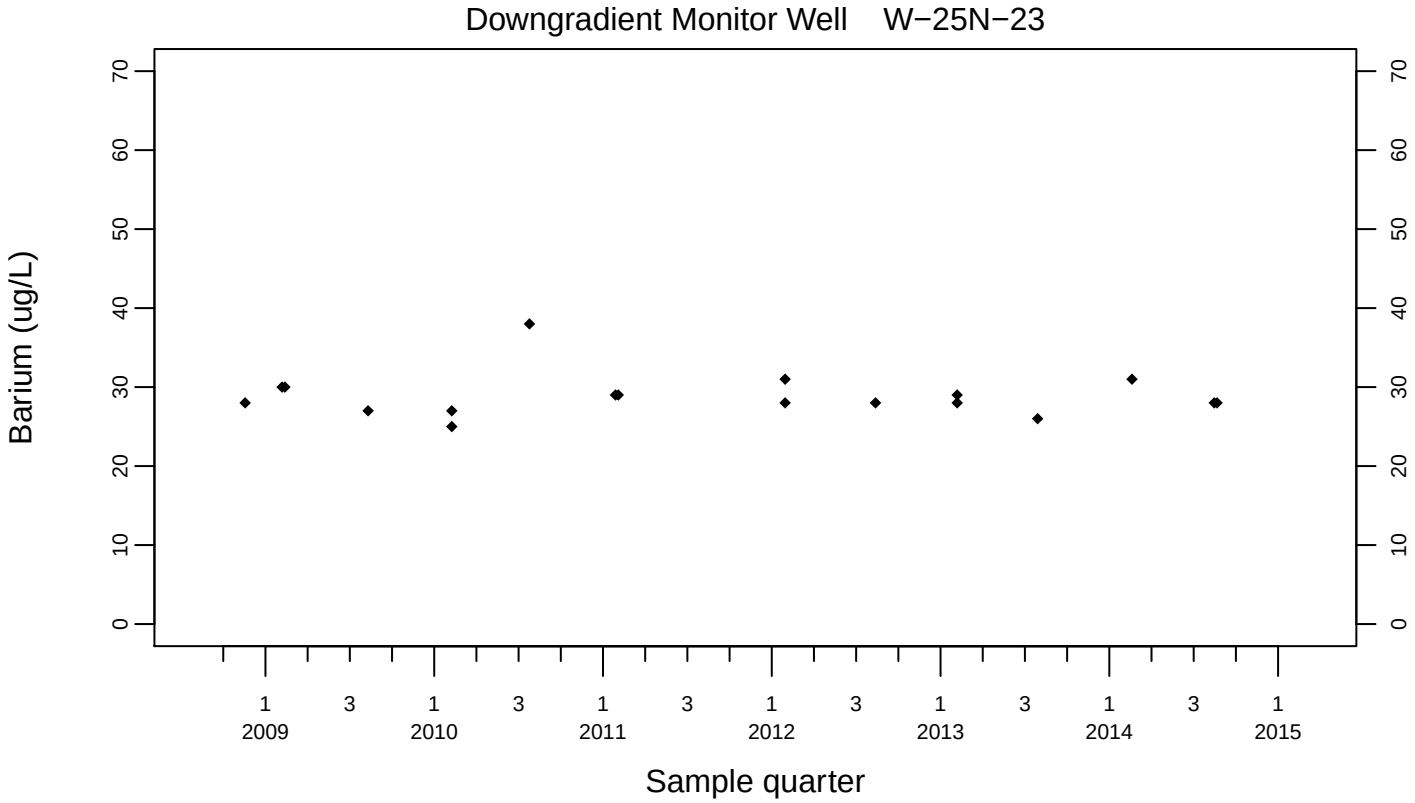

Downgradient Monitor Well W−26R−11
Arsenic (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

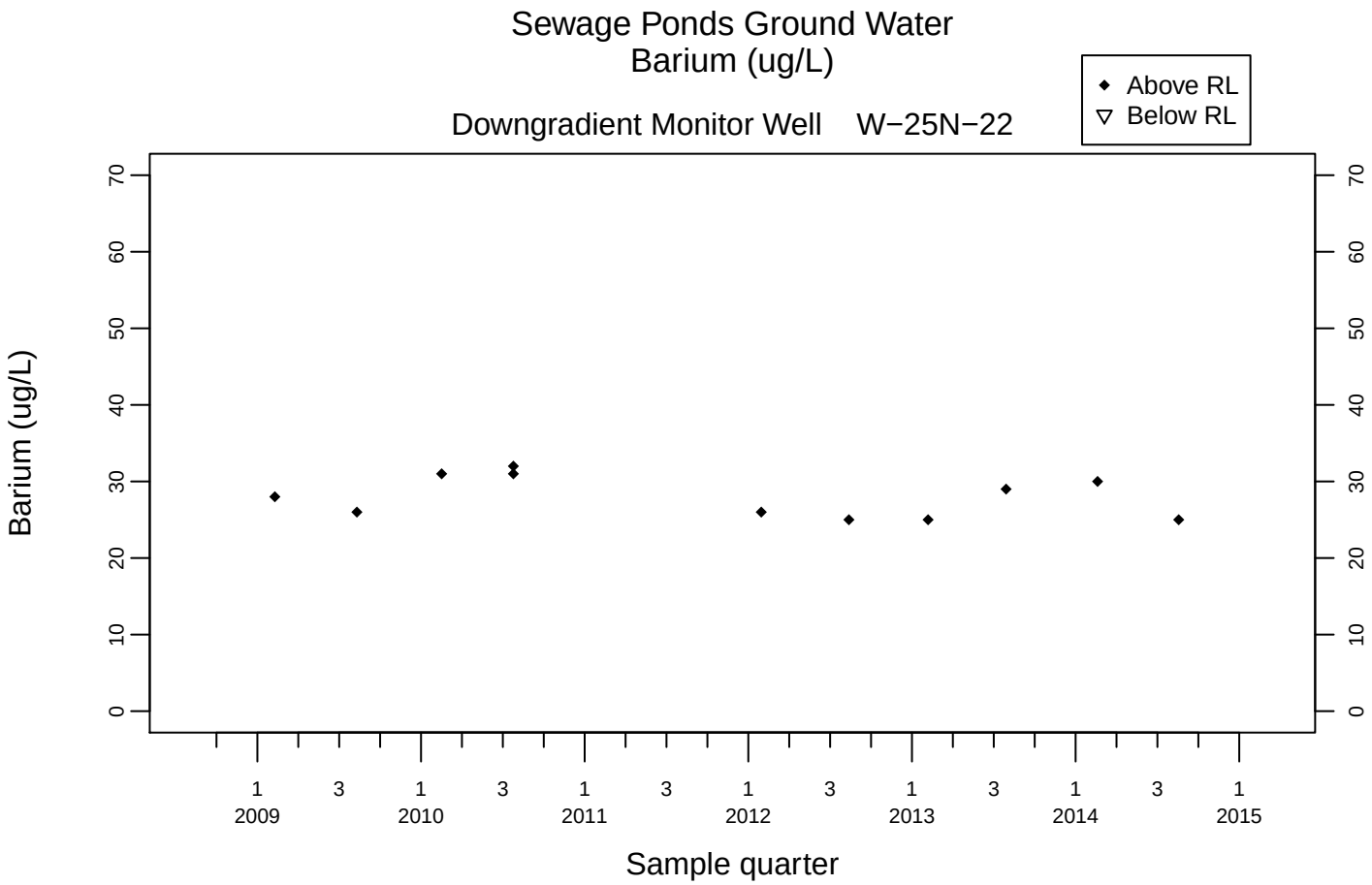

Sewage Ponds Ground Water
Arsenic (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
12
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

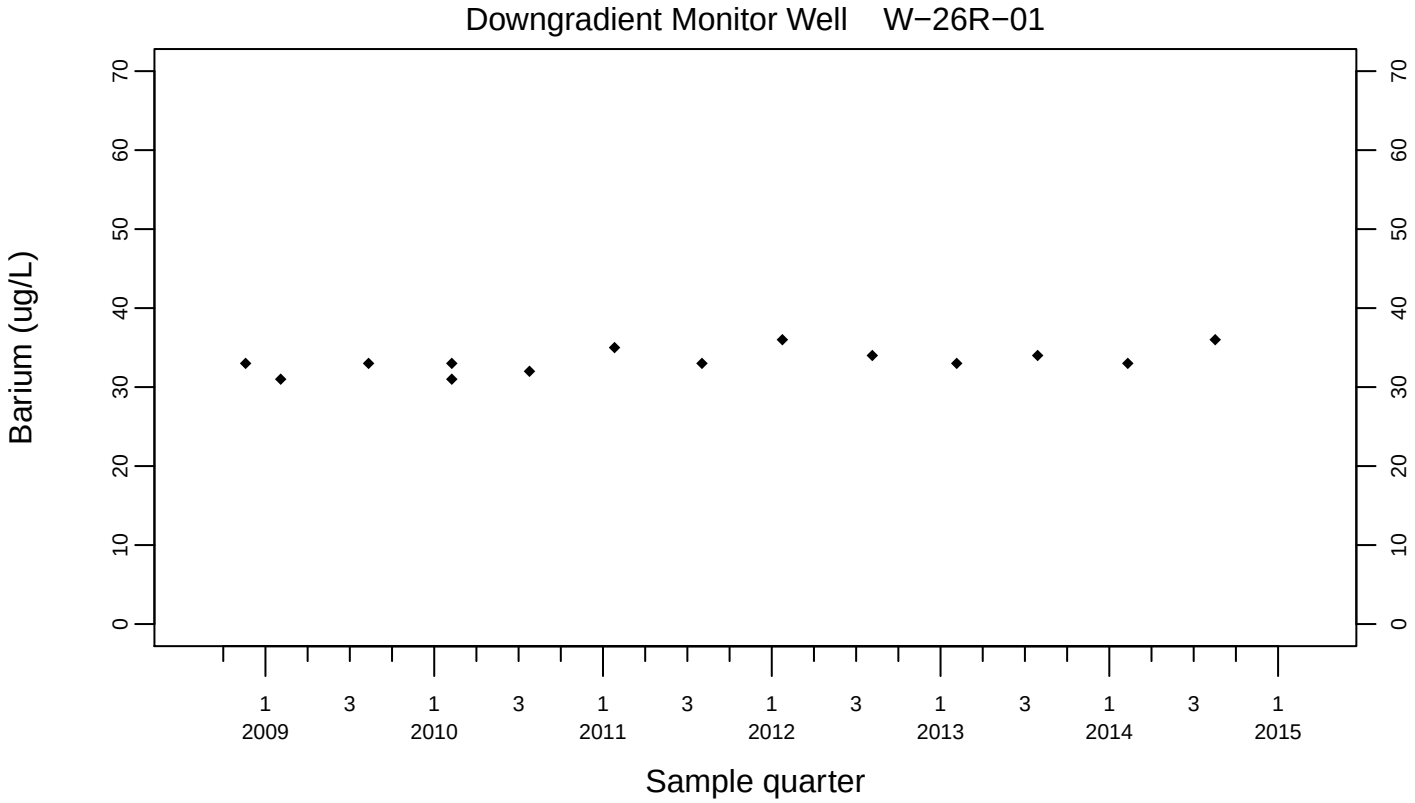

Sewage Ponds Ground Water
Barium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

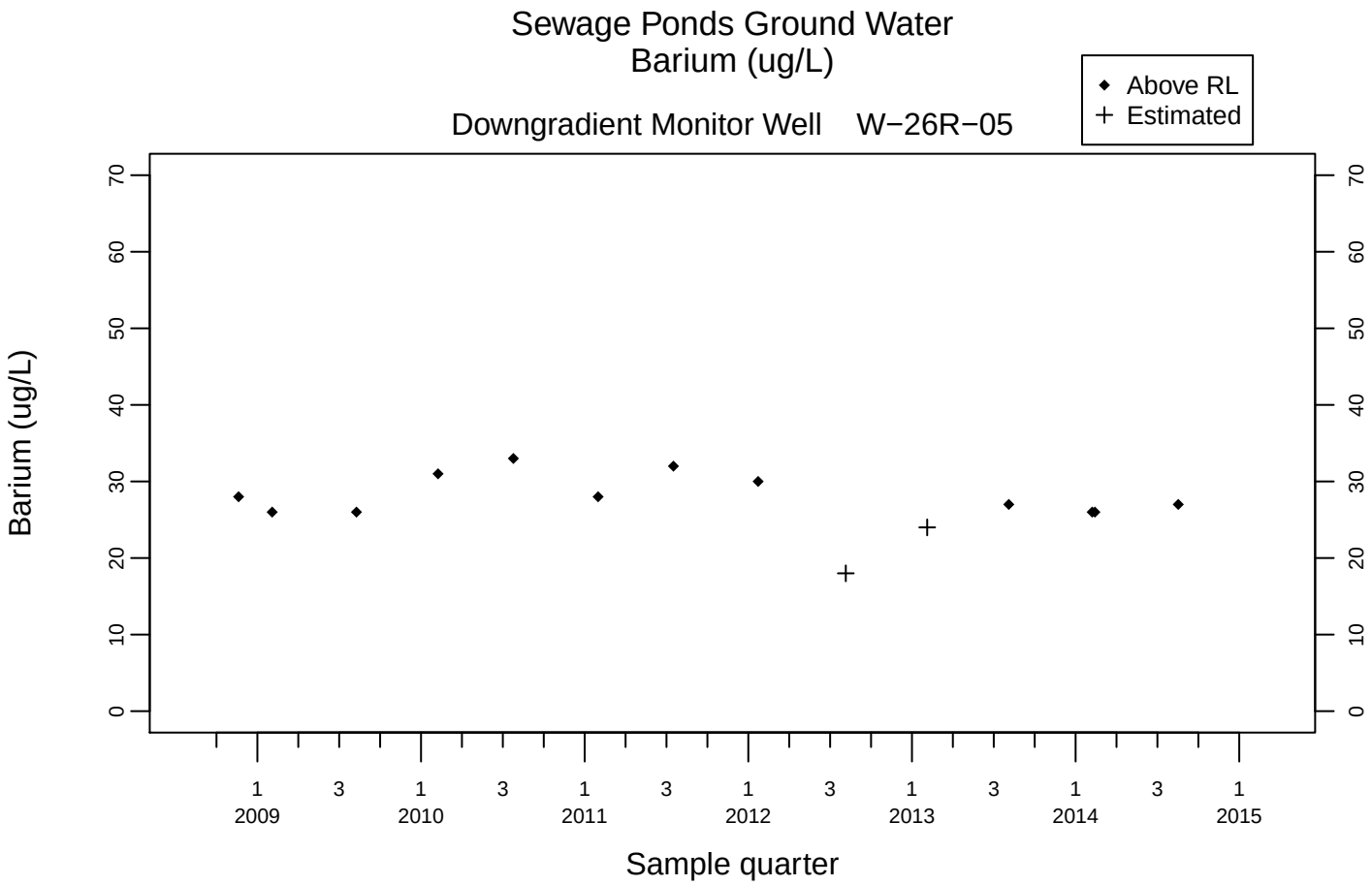

Upgradient Monitor Well W−7PS
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

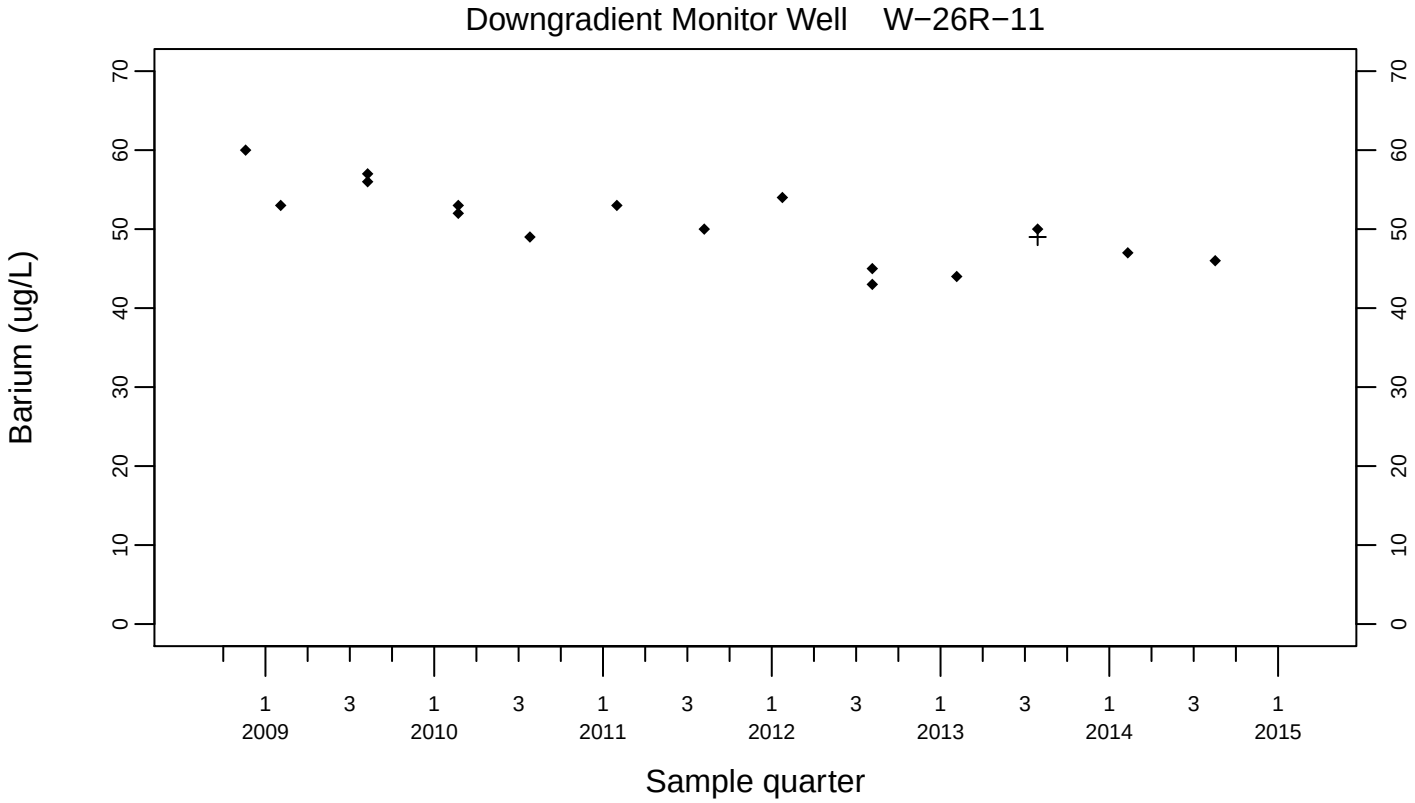

Sewage Ponds Ground Water
Barium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

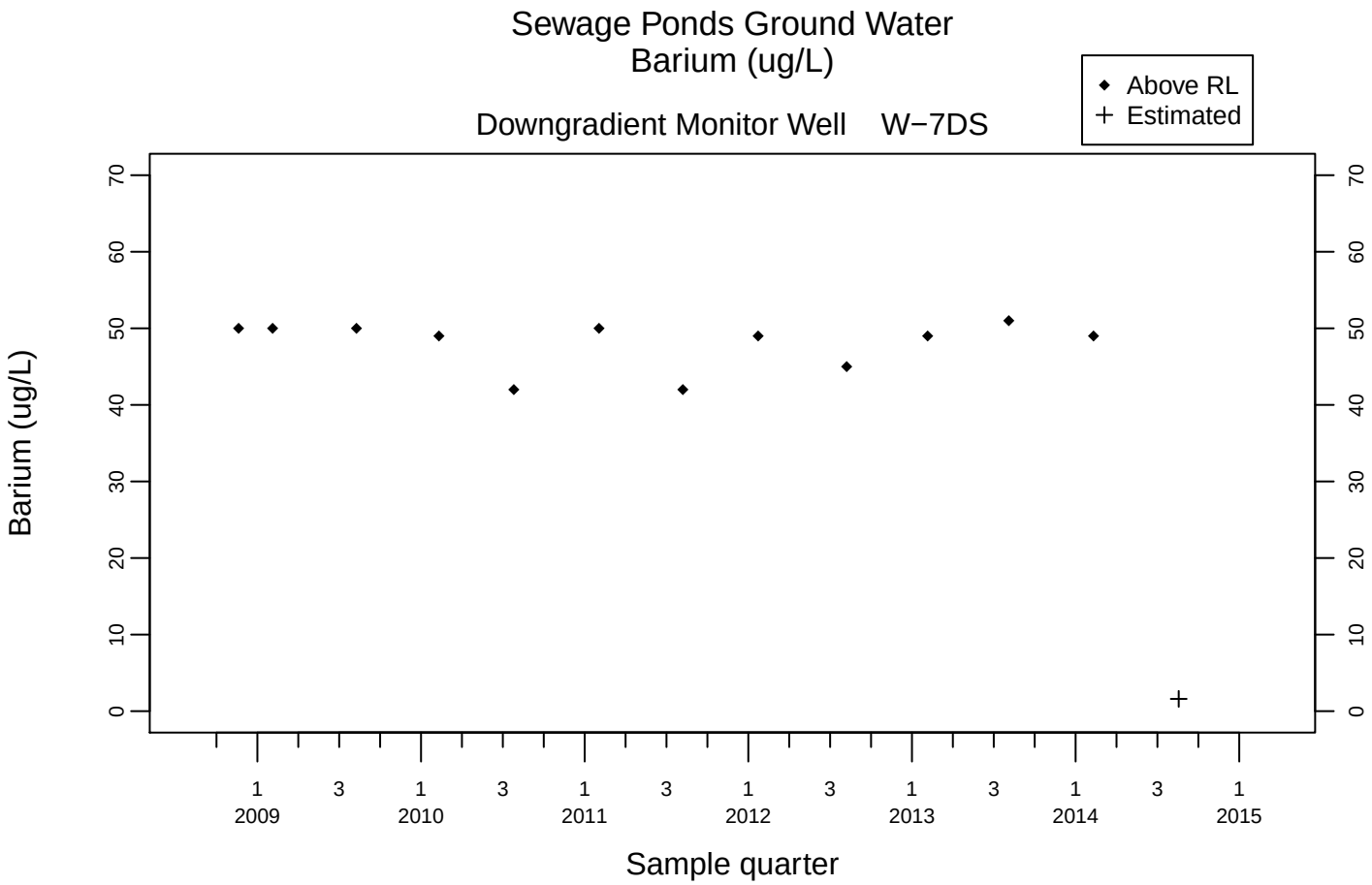

Downgradient Monitor Well W−25N−23
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

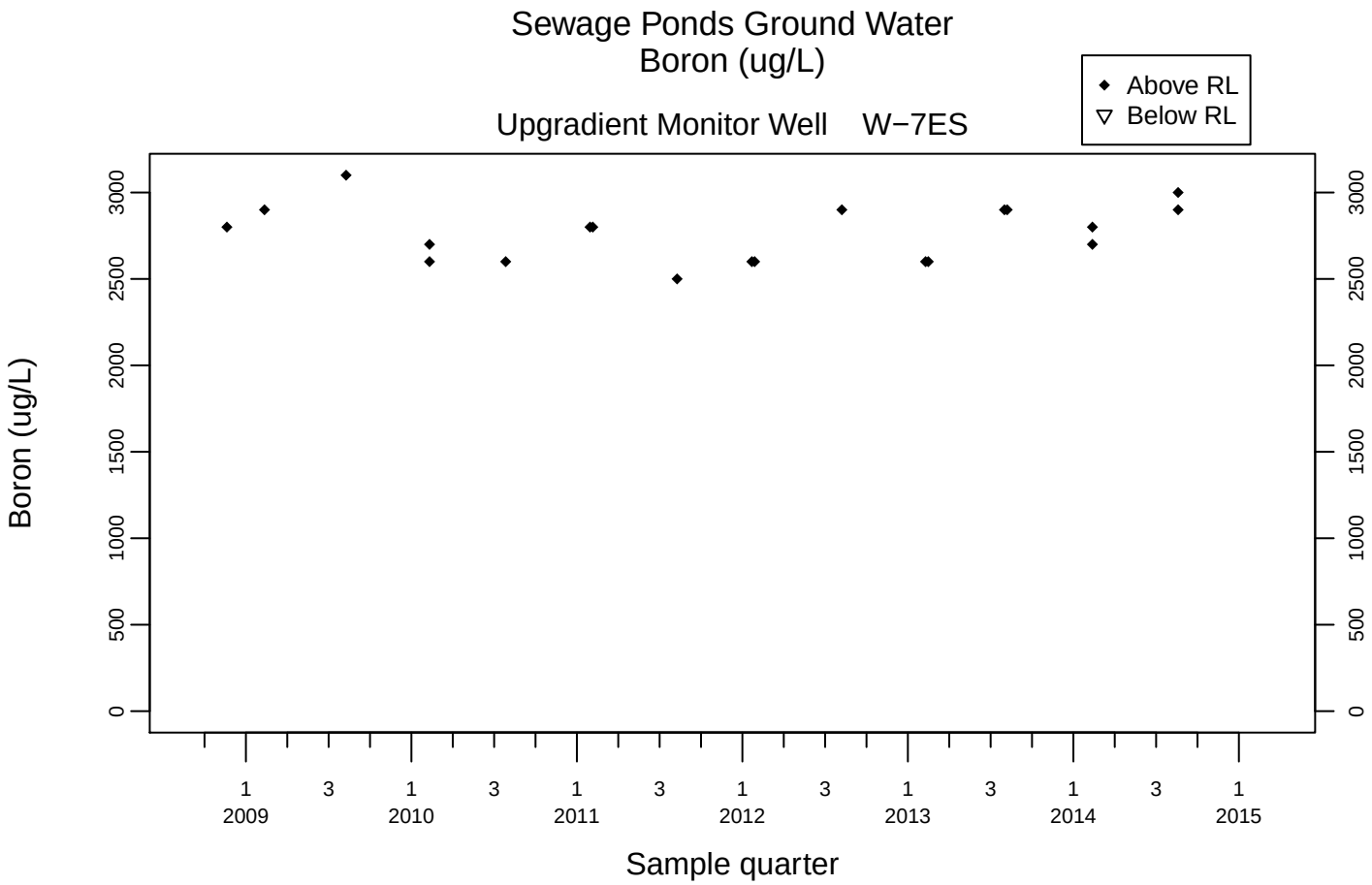

Sewage Ponds Ground Water
Barium (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

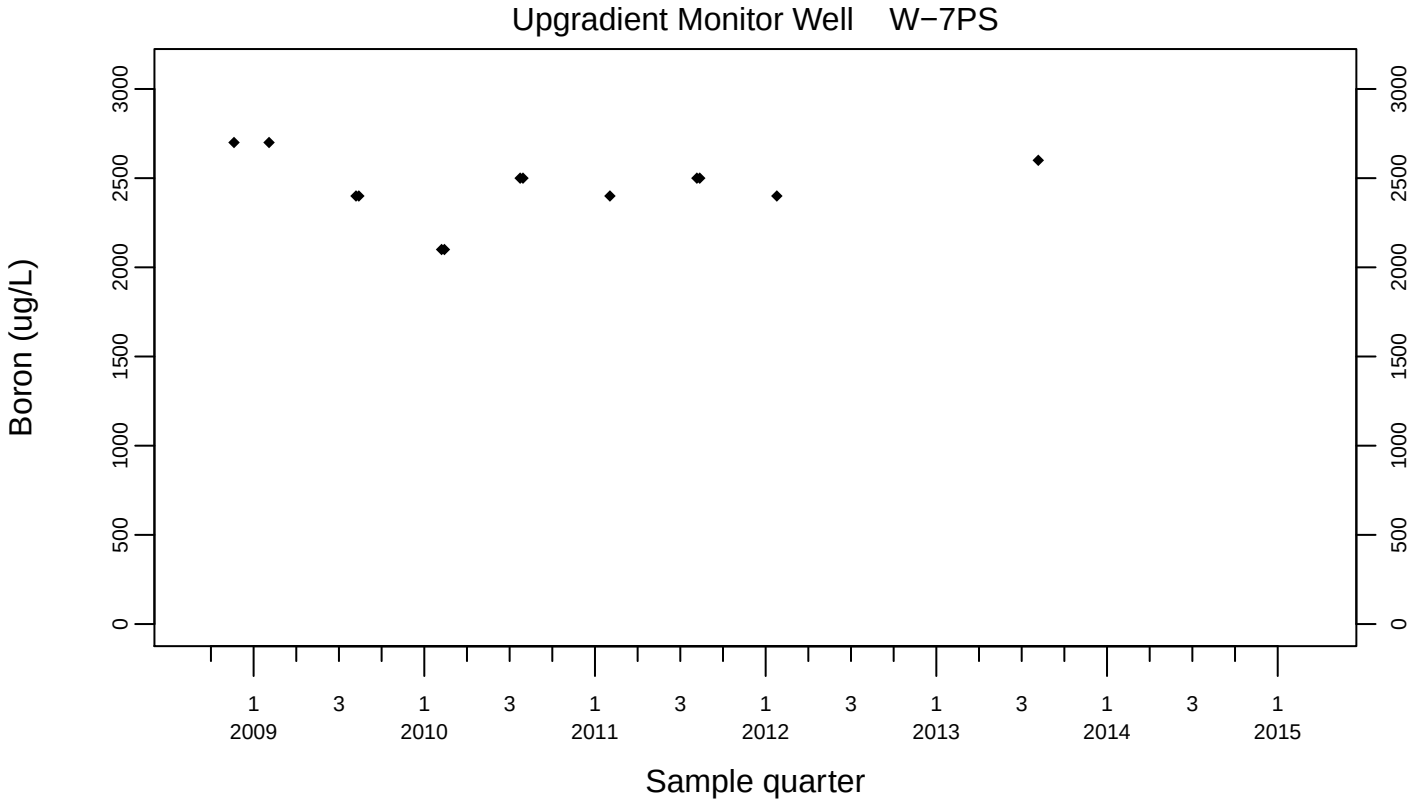

Downgradient Monitor Well W−26R−01
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

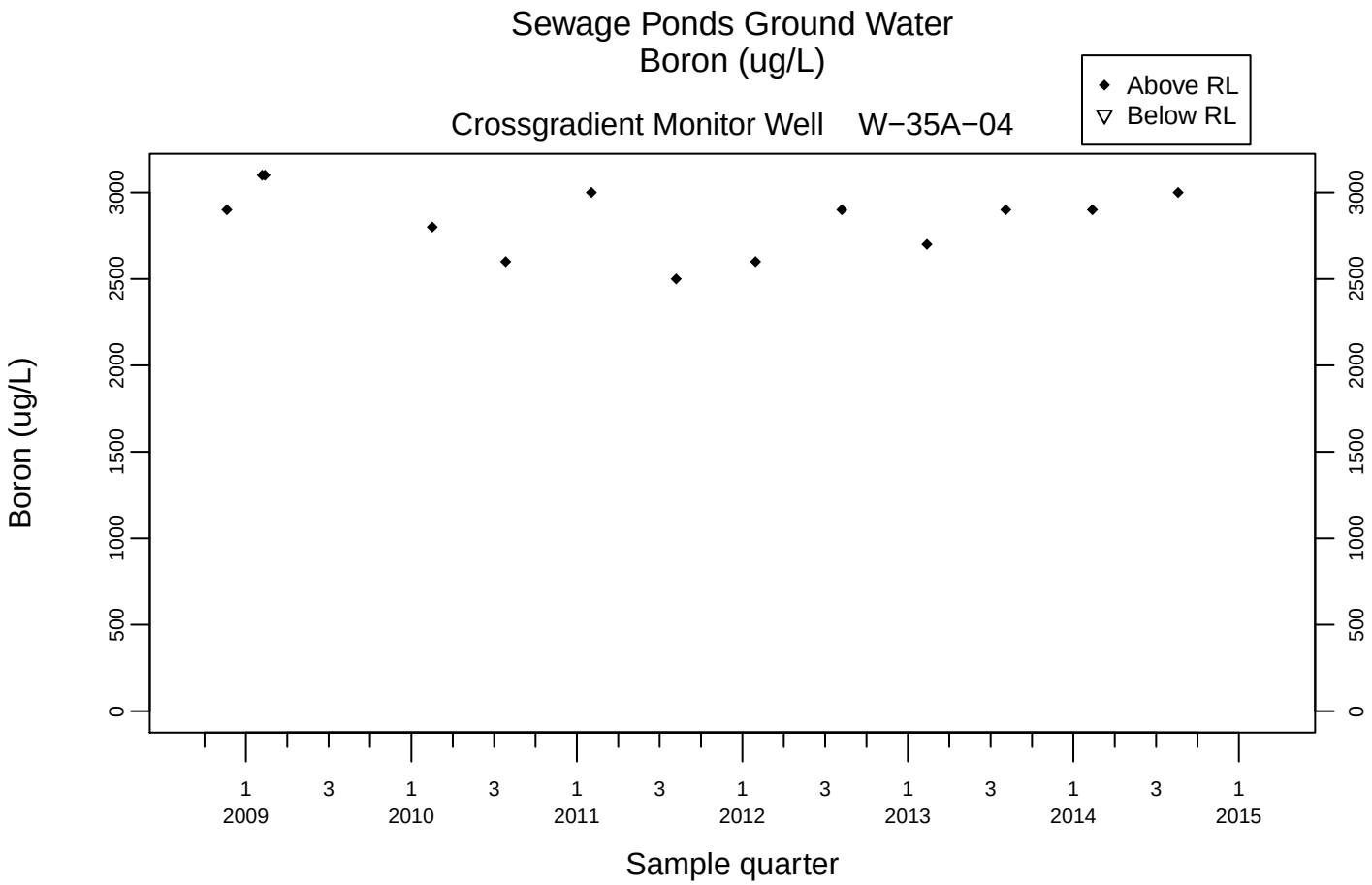

Sewage Ponds Ground Water
Barium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Estimated
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

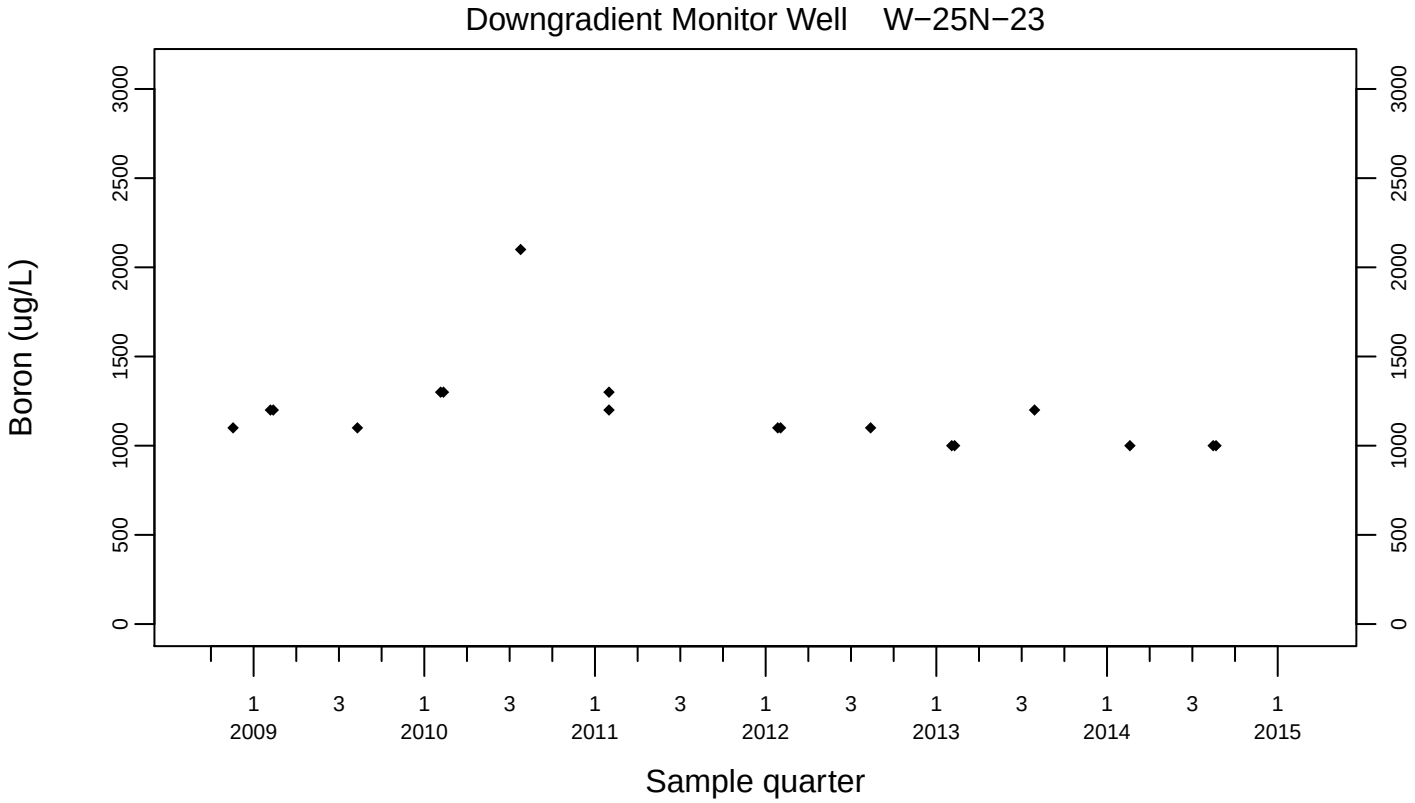

Downgradient Monitor Well W−26R−11
Barium (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

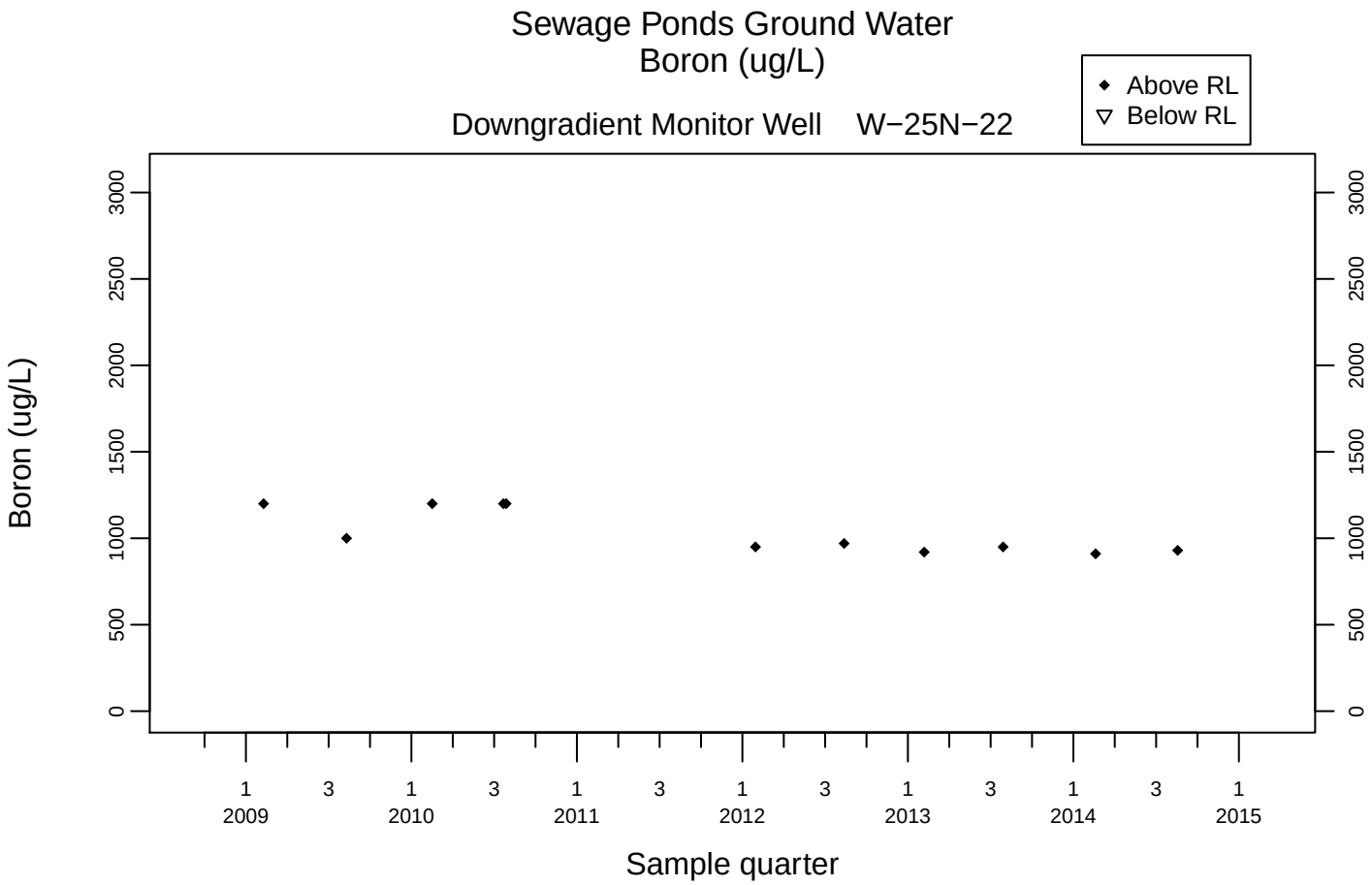

Sewage Ponds Ground Water
Barium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Estimated
Barium (ug/L)
0
10
20
30
40
50
60
70
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

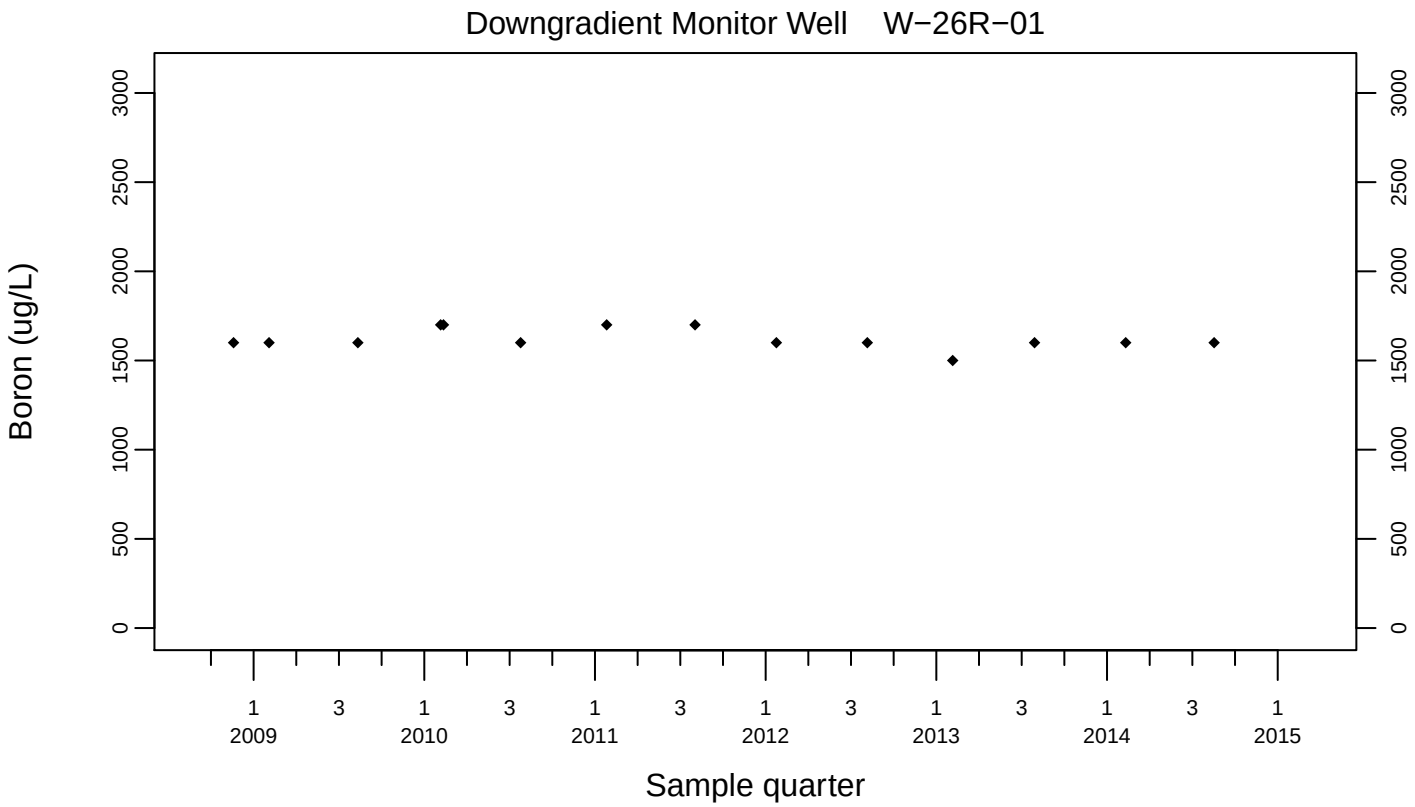

Sewage Ponds Ground Water
Boron (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

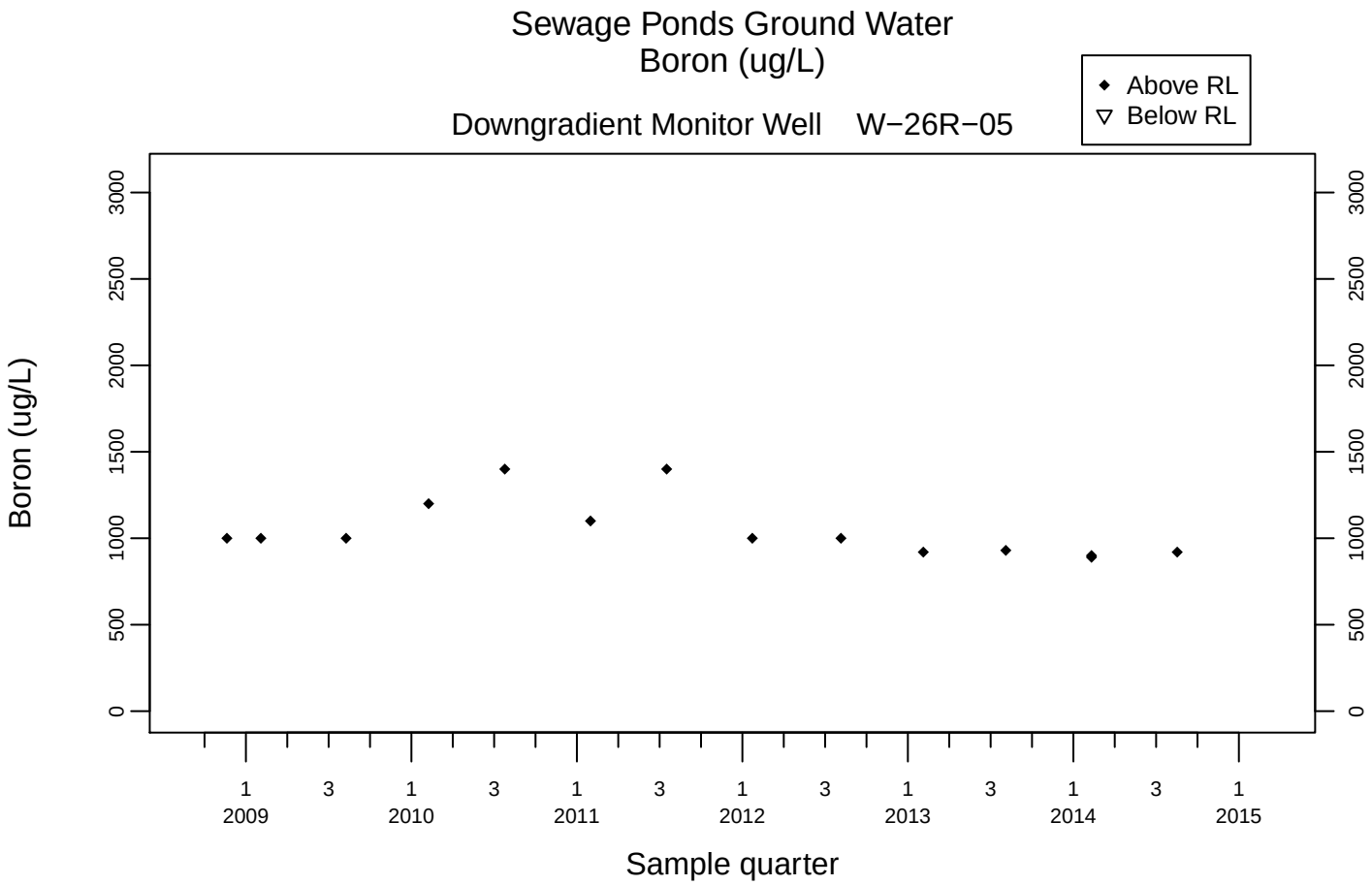

Upgradient Monitor Well W−7PS
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

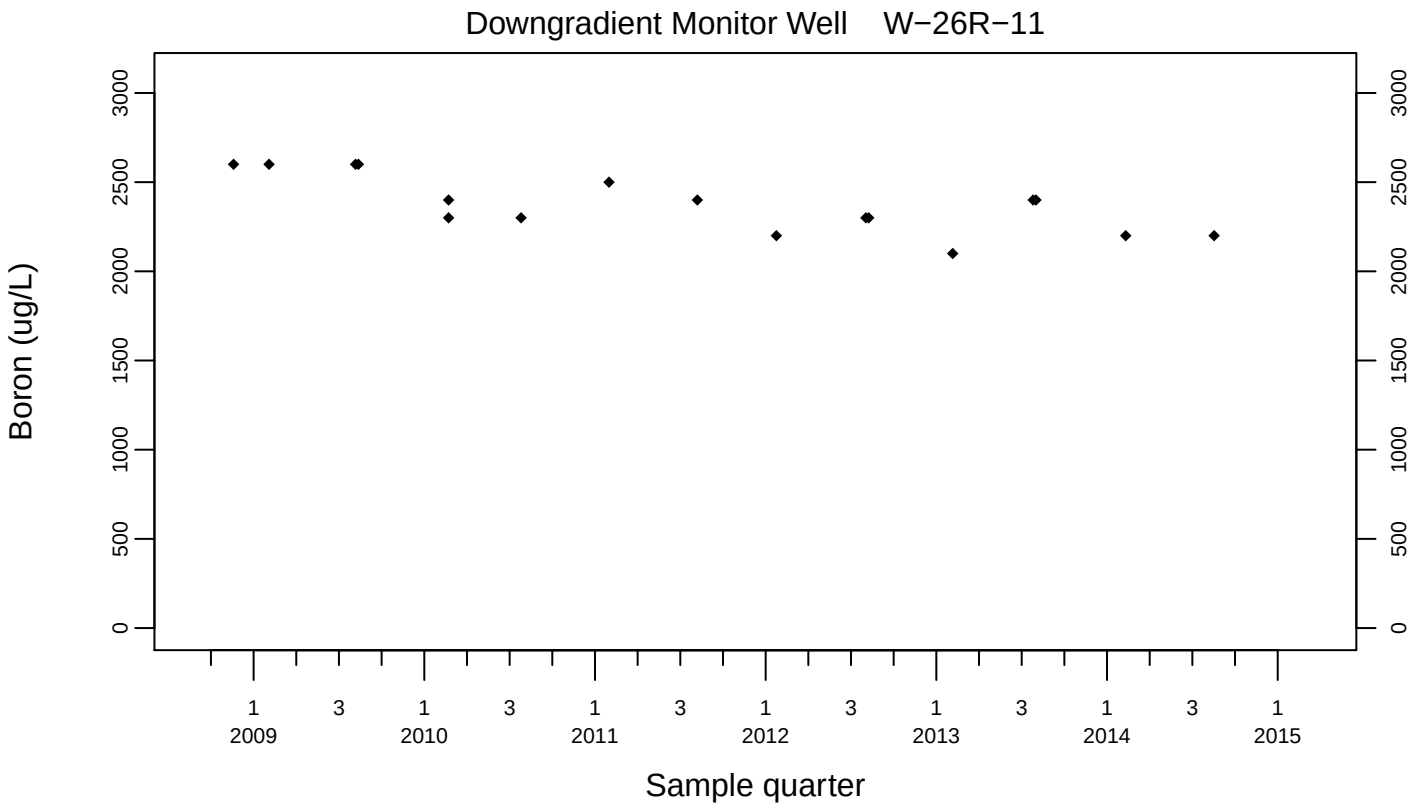

Sewage Ponds Ground Water
Boron (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

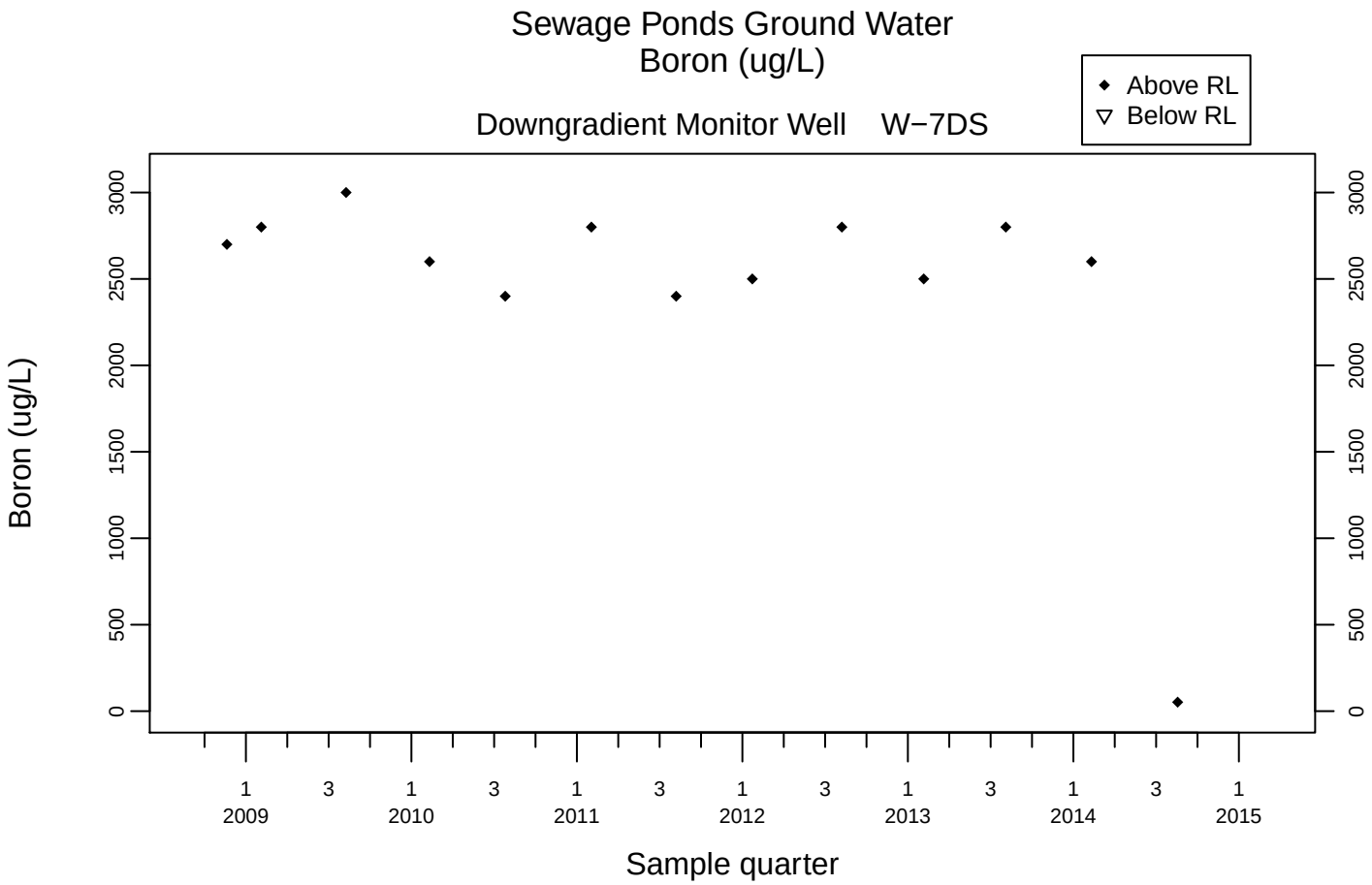

Downgradient Monitor Well W−25N−23
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

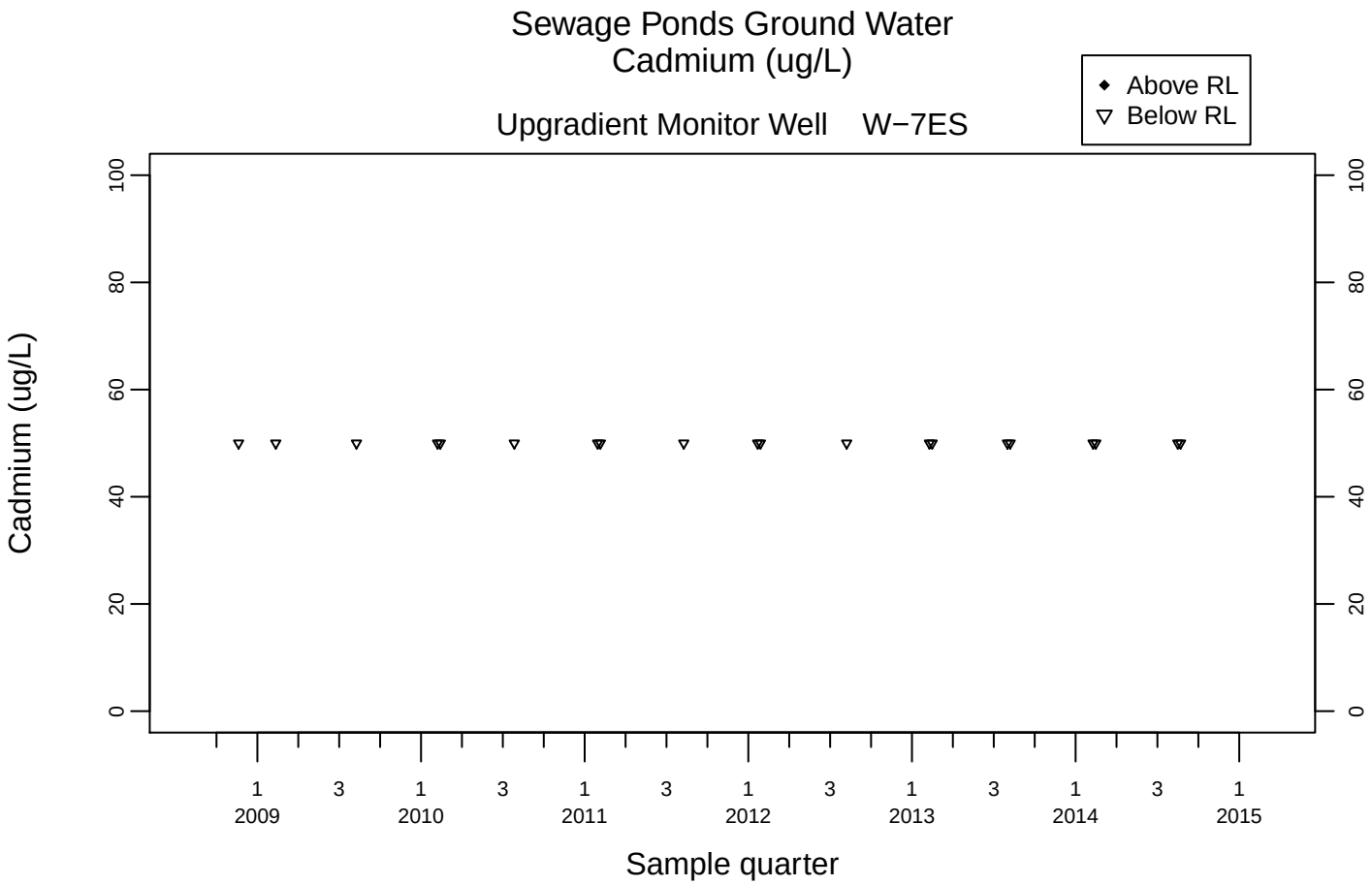

Sewage Ponds Ground Water
Boron (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

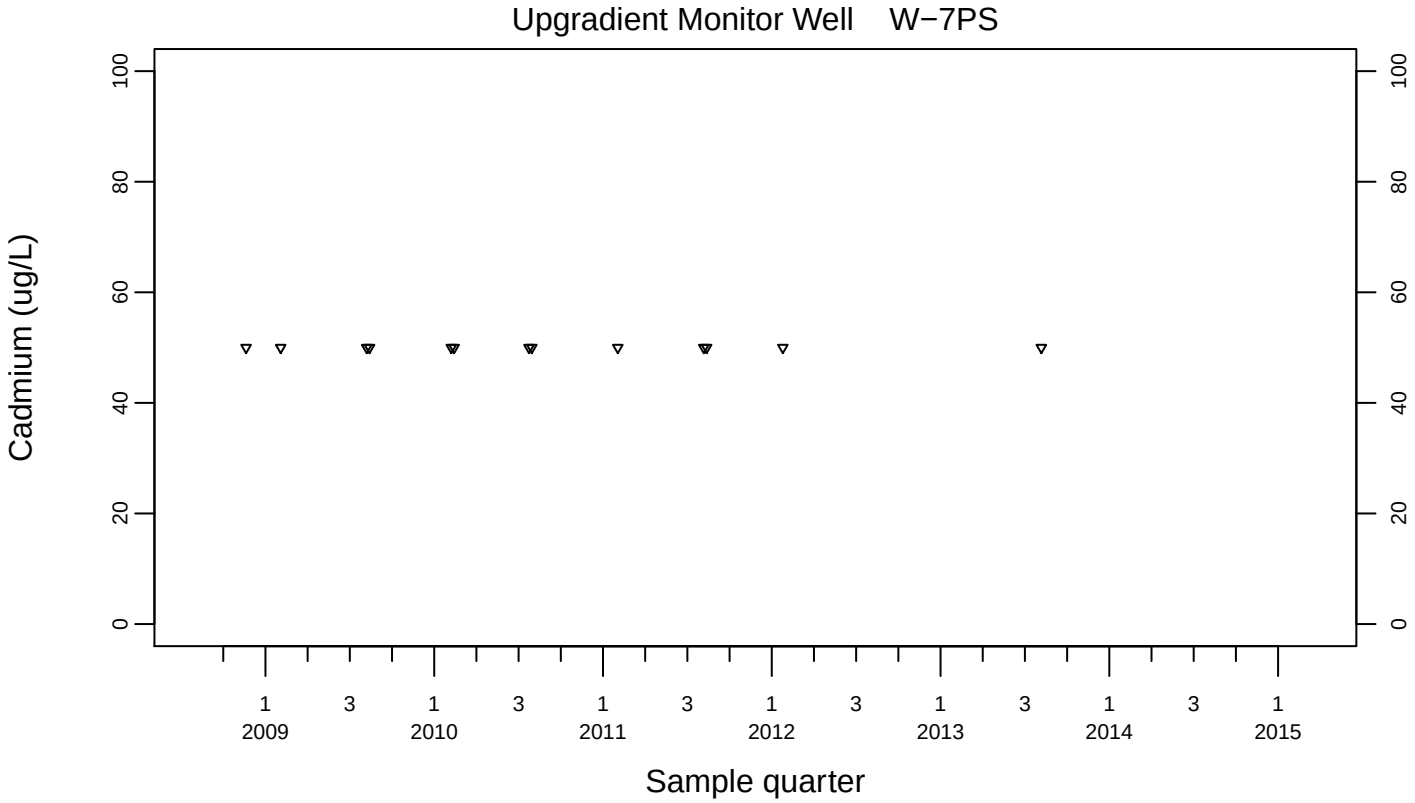

Downgradient Monitor Well W−26R−01
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

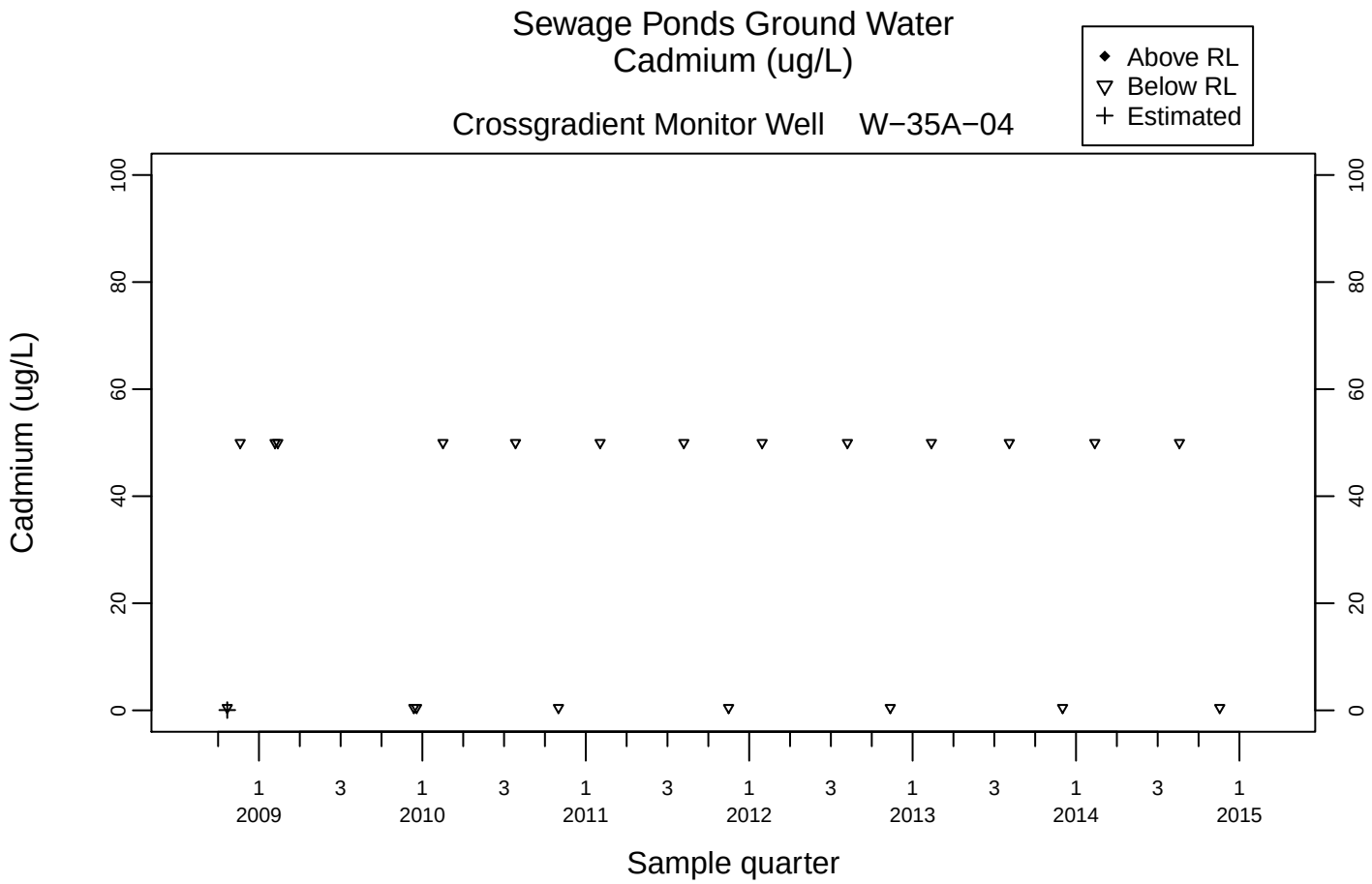

Sewage Ponds Ground Water
Boron (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

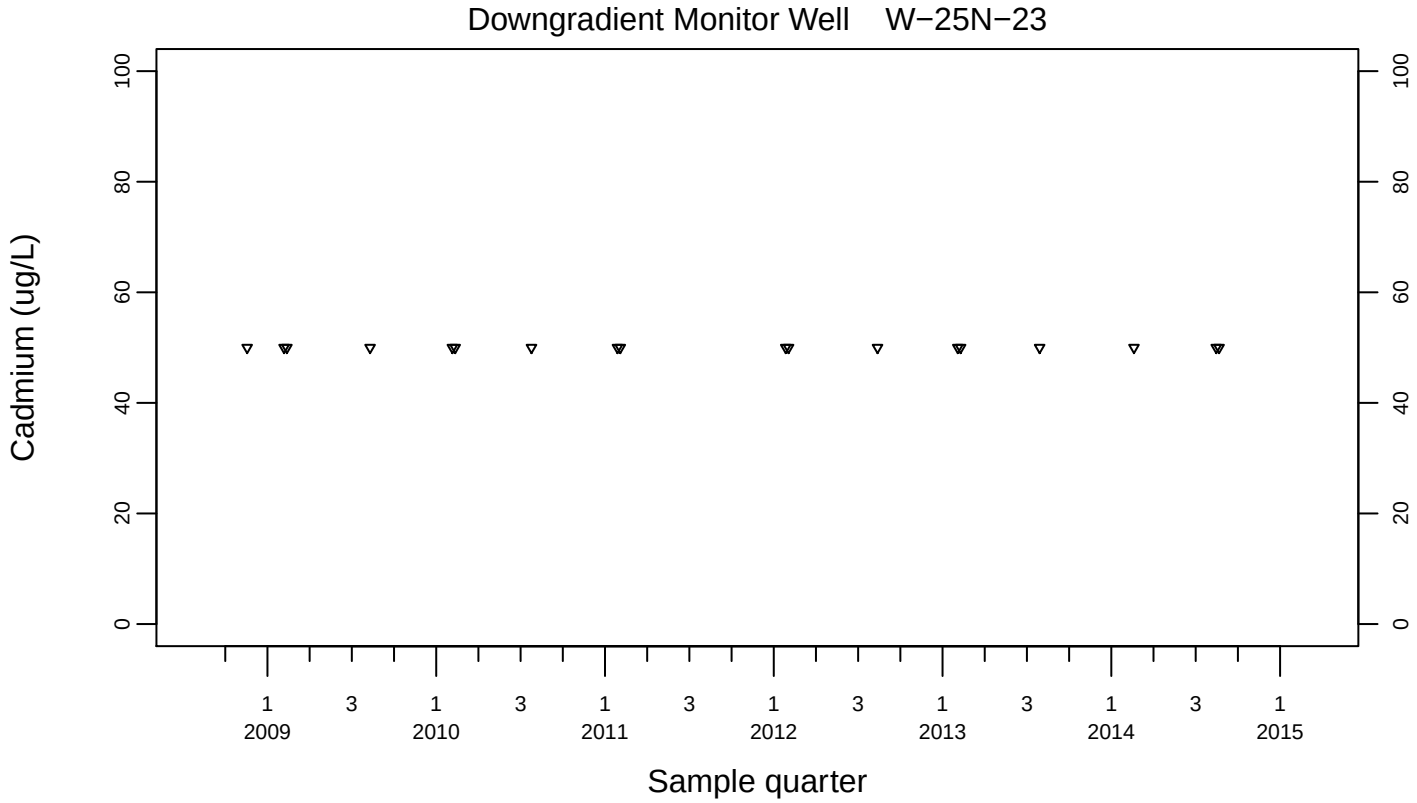

Downgradient Monitor Well W−26R−11
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

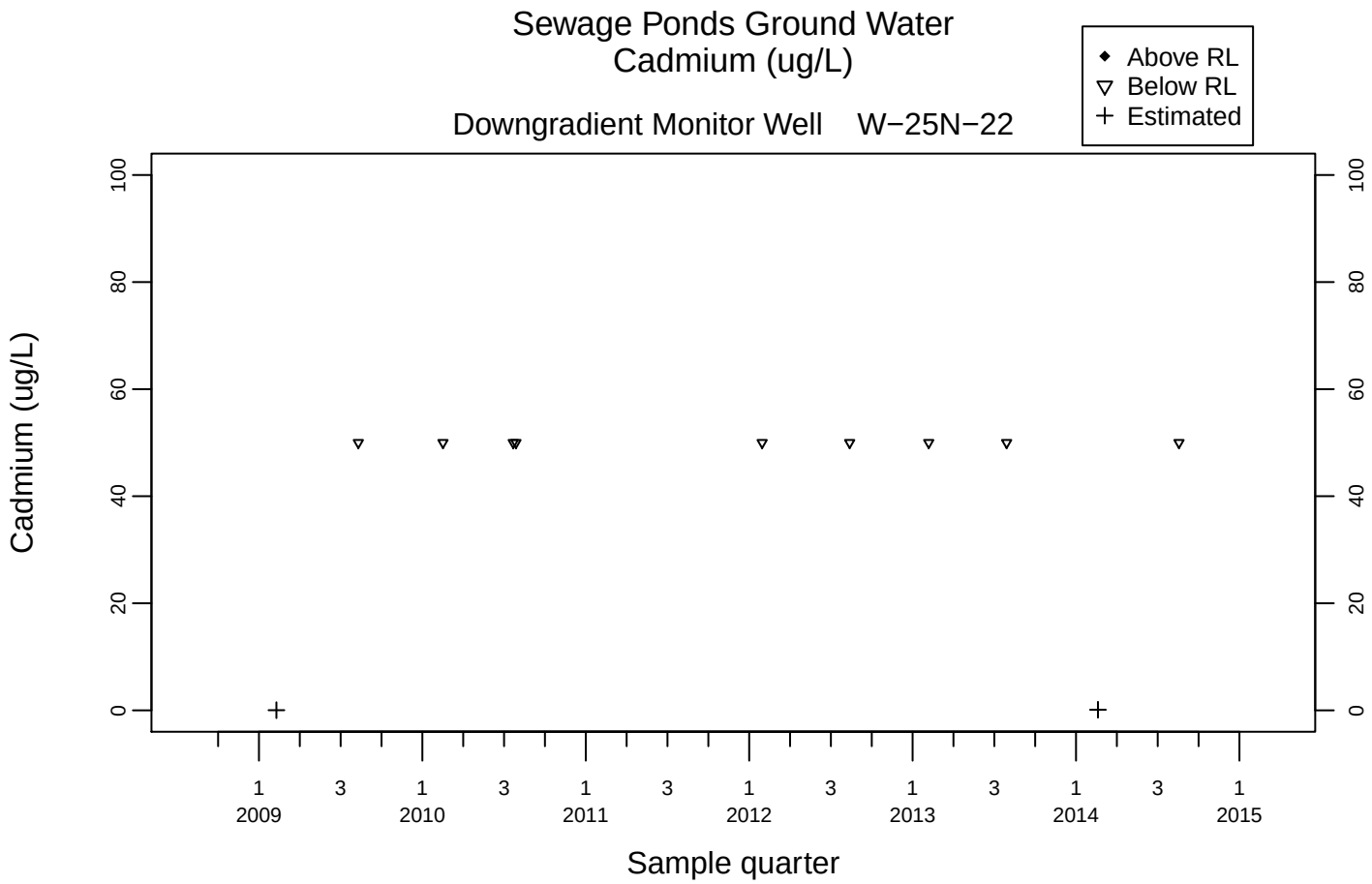

Sewage Ponds Ground Water
Boron (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

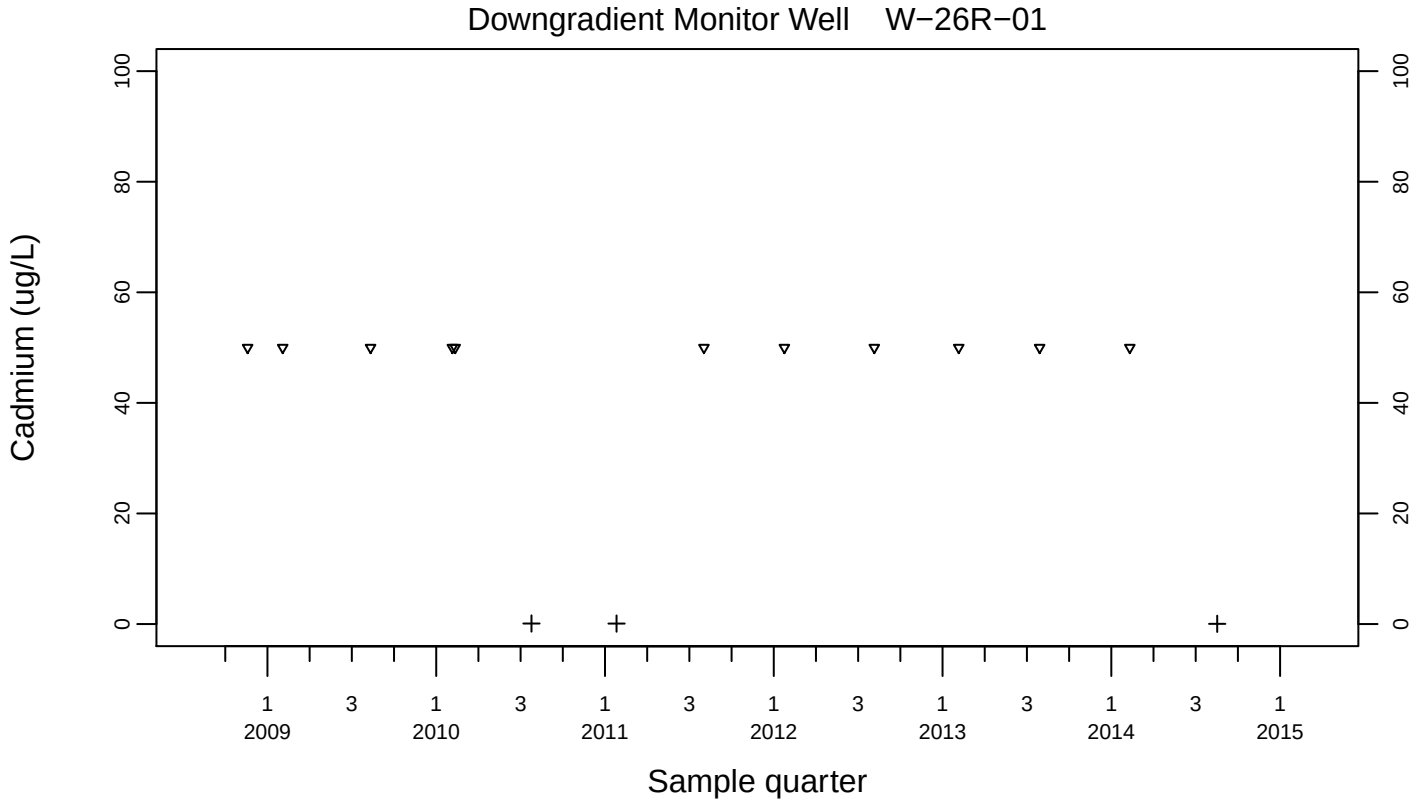

Sewage Ponds Ground Water
Cadmium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

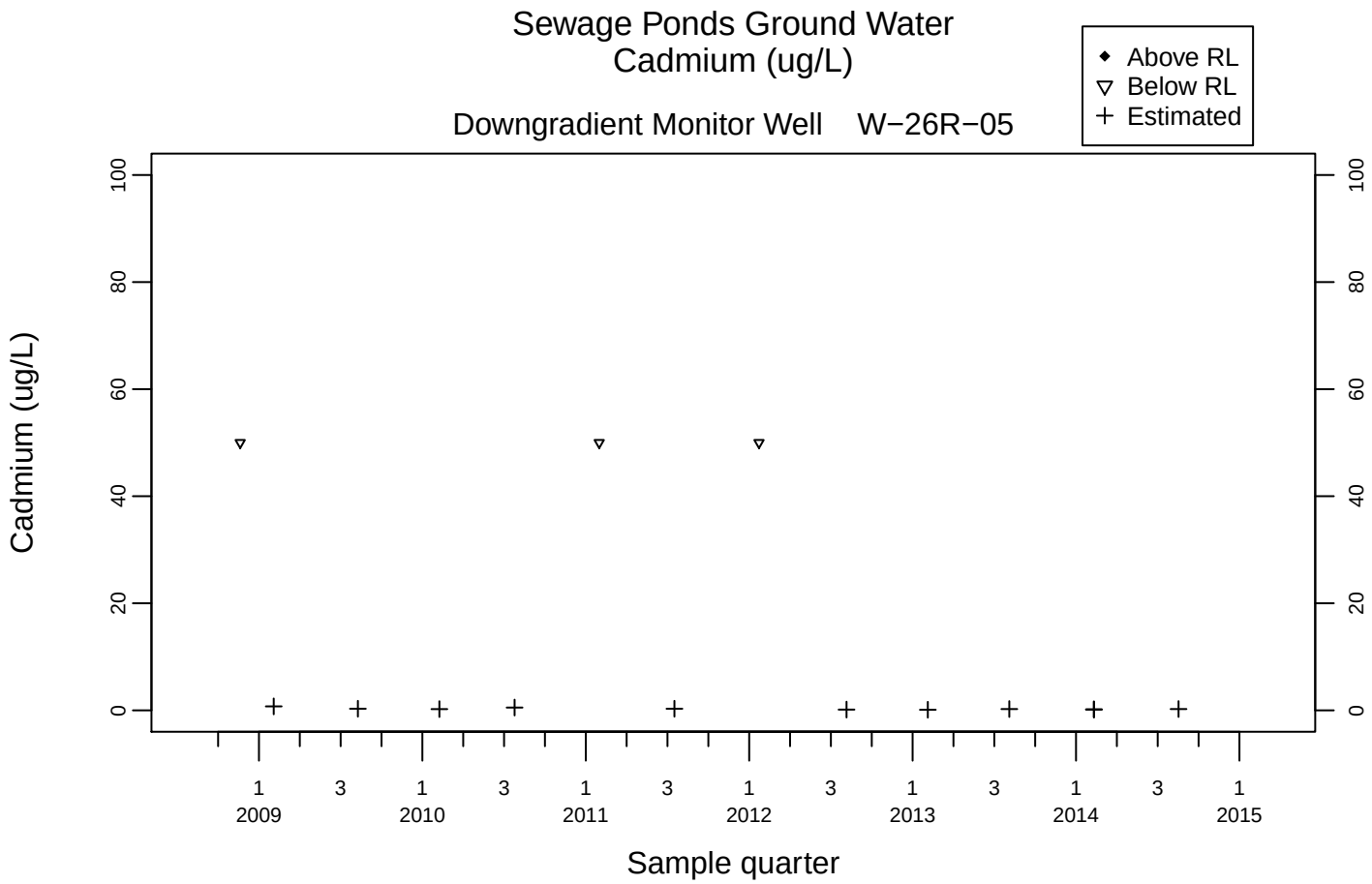

Upgradient Monitor Well W−7PS
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

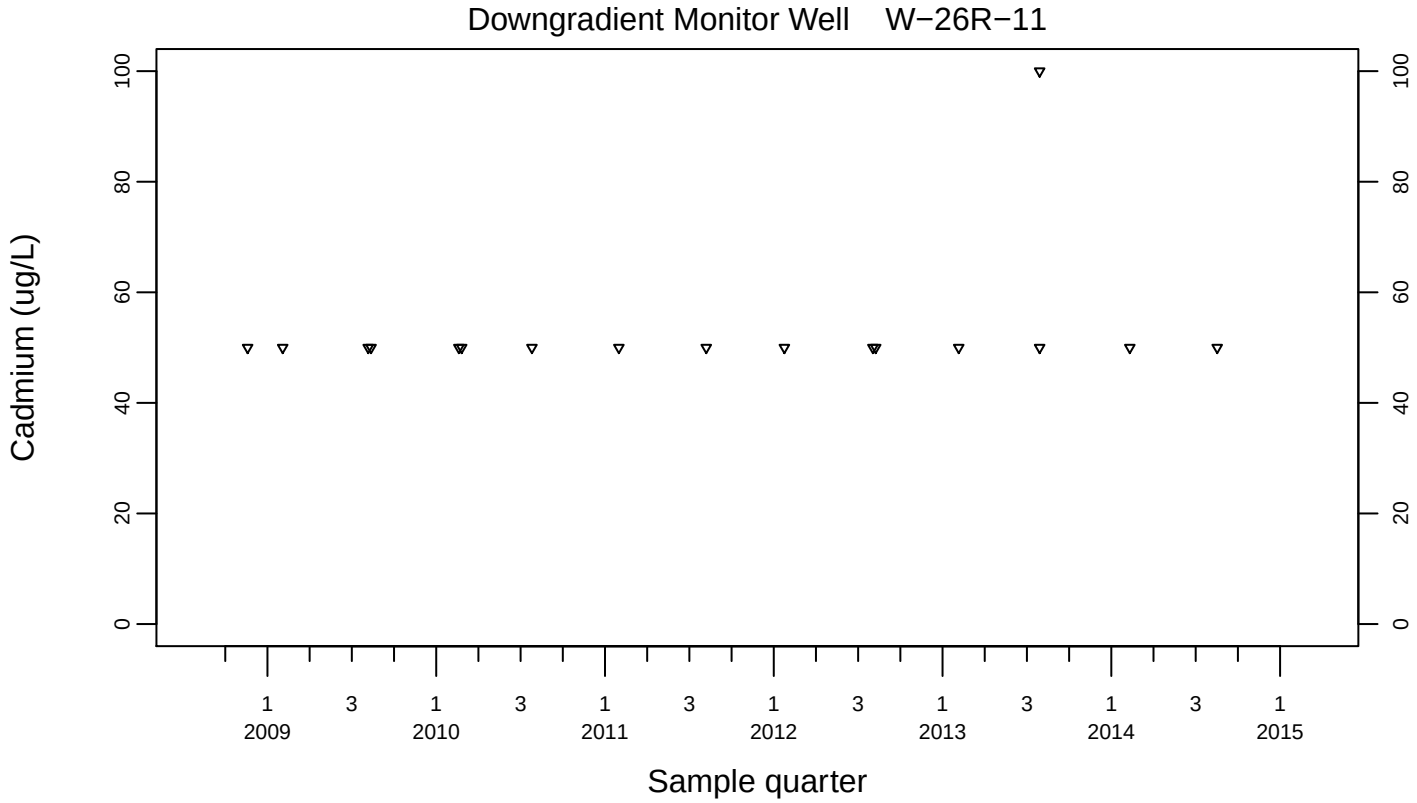

Sewage Ponds Ground Water
Cadmium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

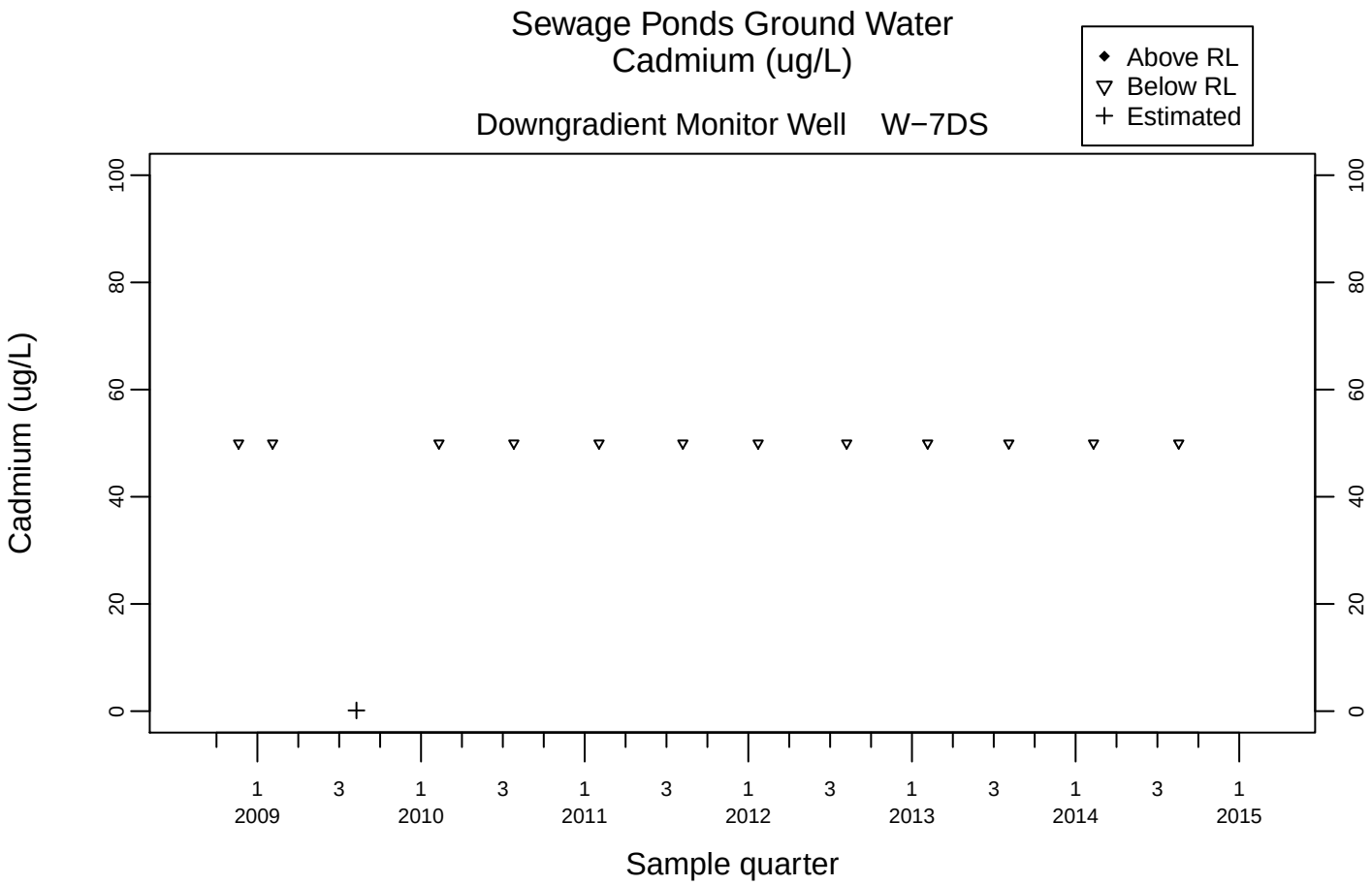

Downgradient Monitor Well W−25N−23
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

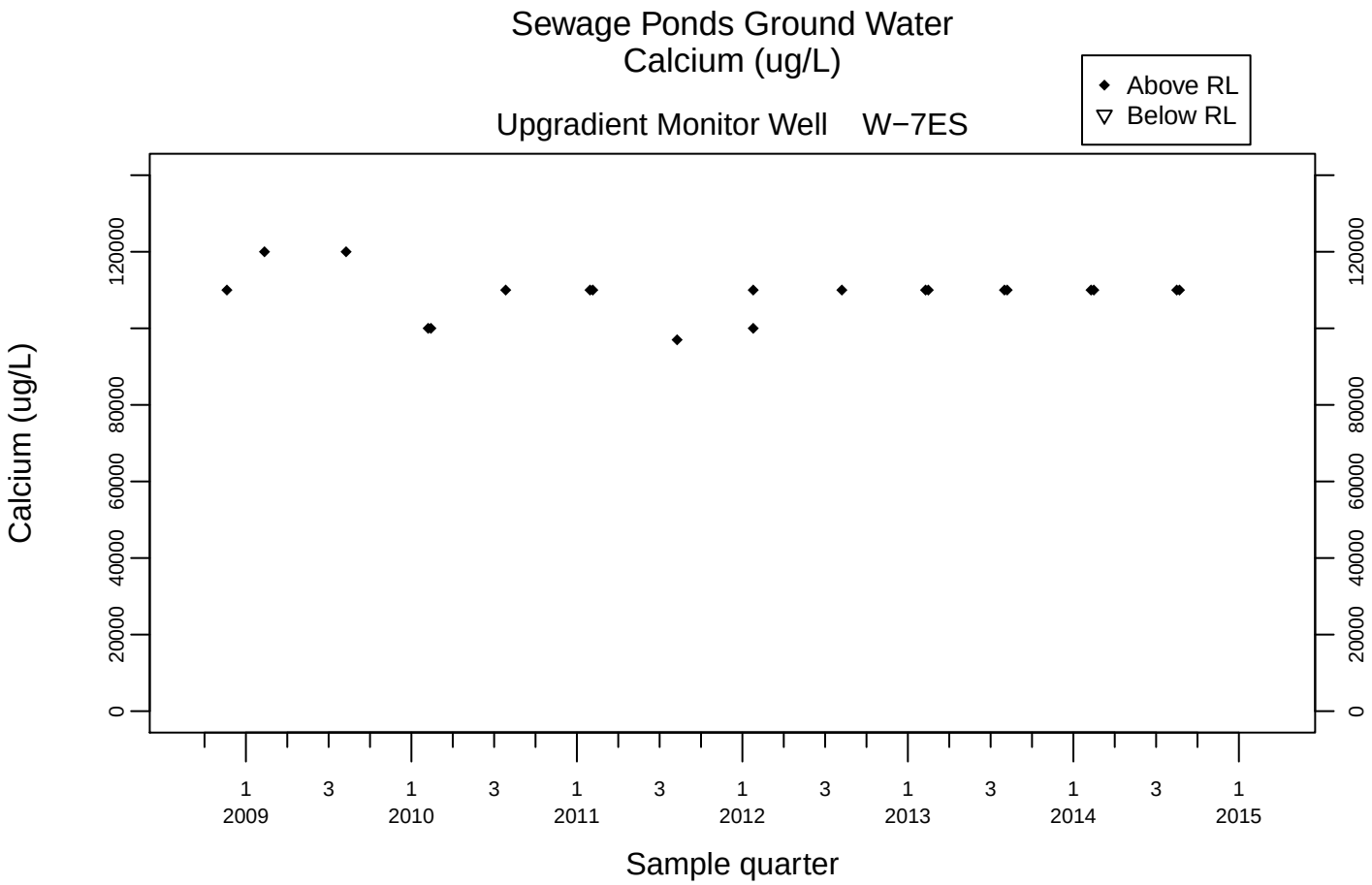

Sewage Ponds Ground Water
Cadmium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−25N−22
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

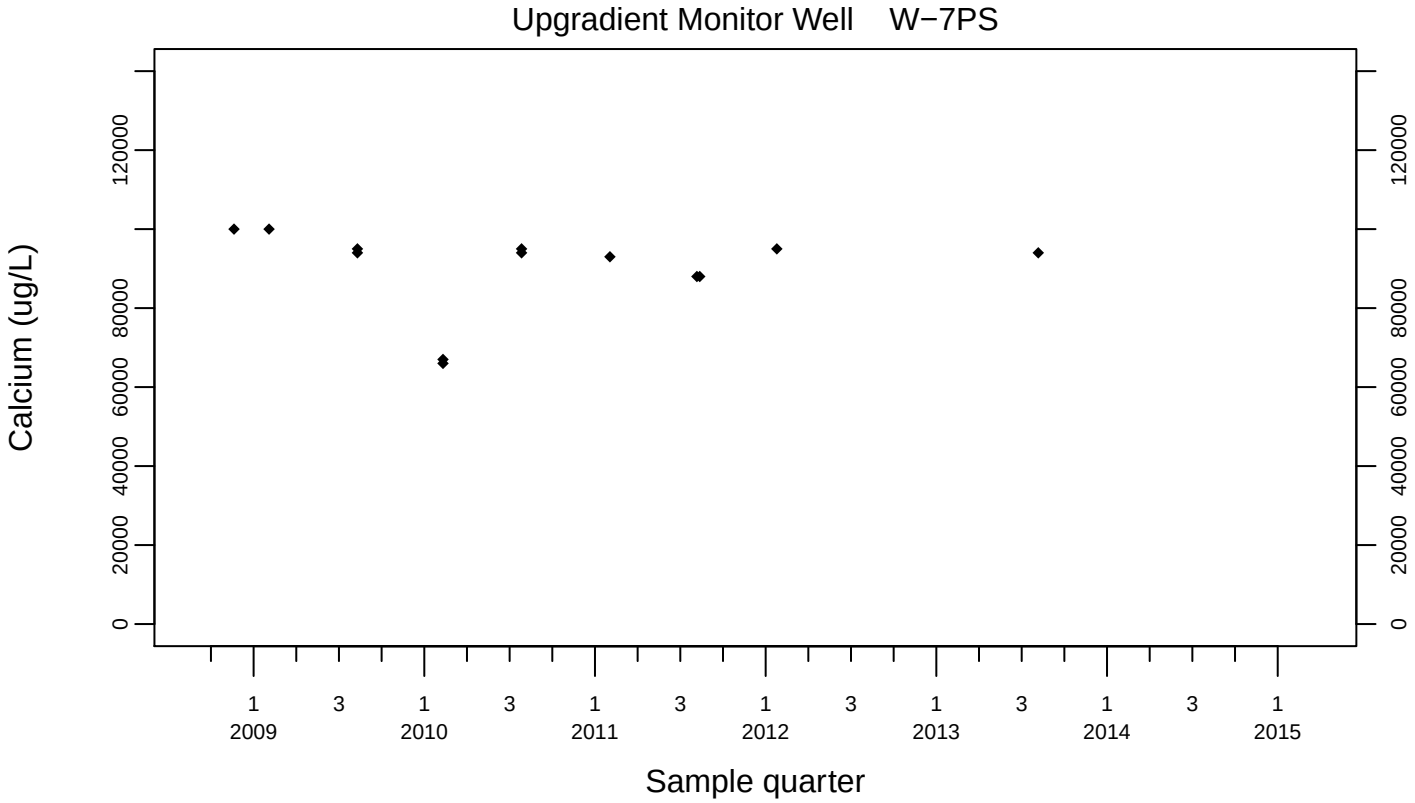

Downgradient Monitor Well W−26R−01
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

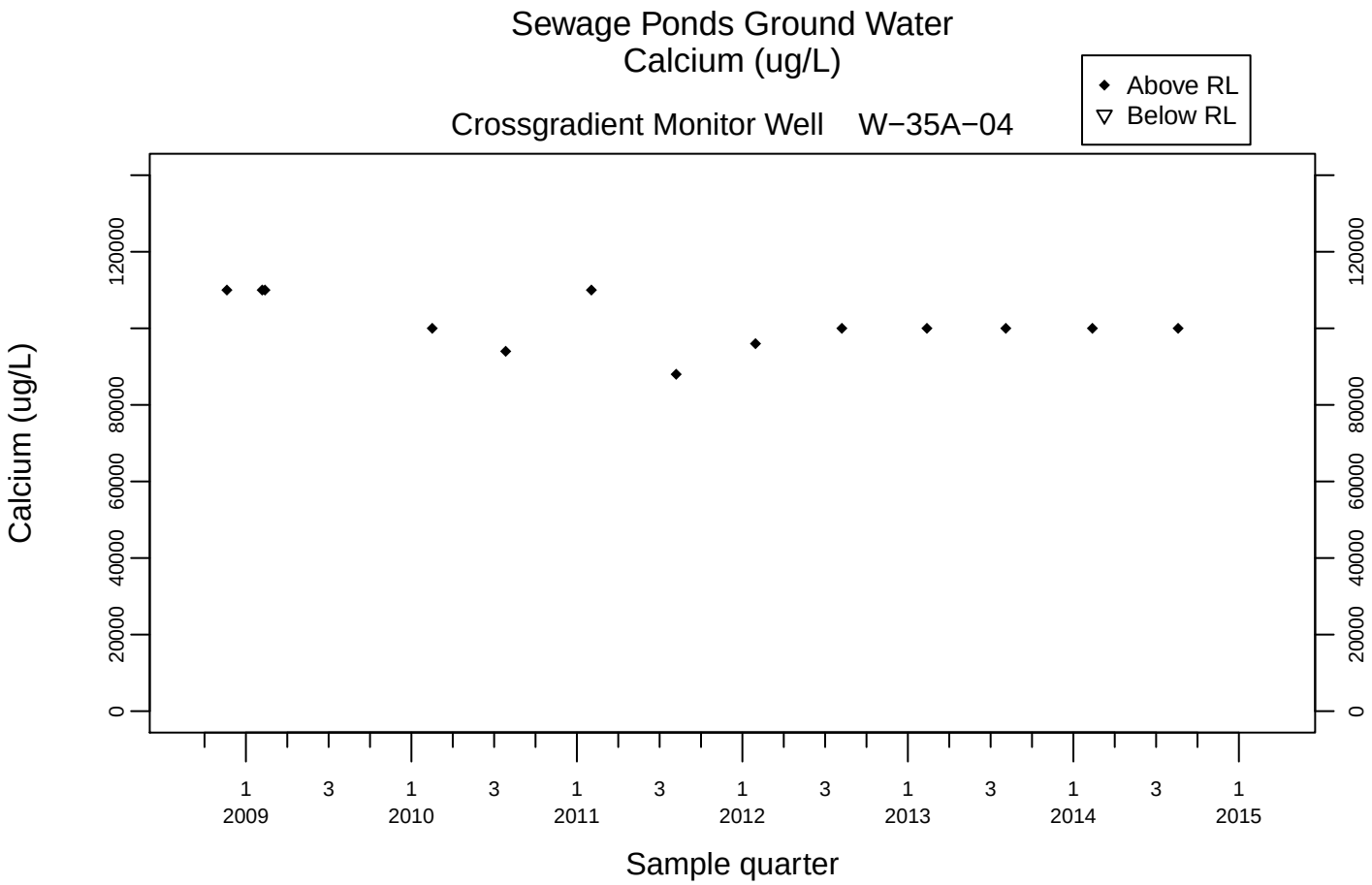

Sewage Ponds Ground Water
Cadmium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

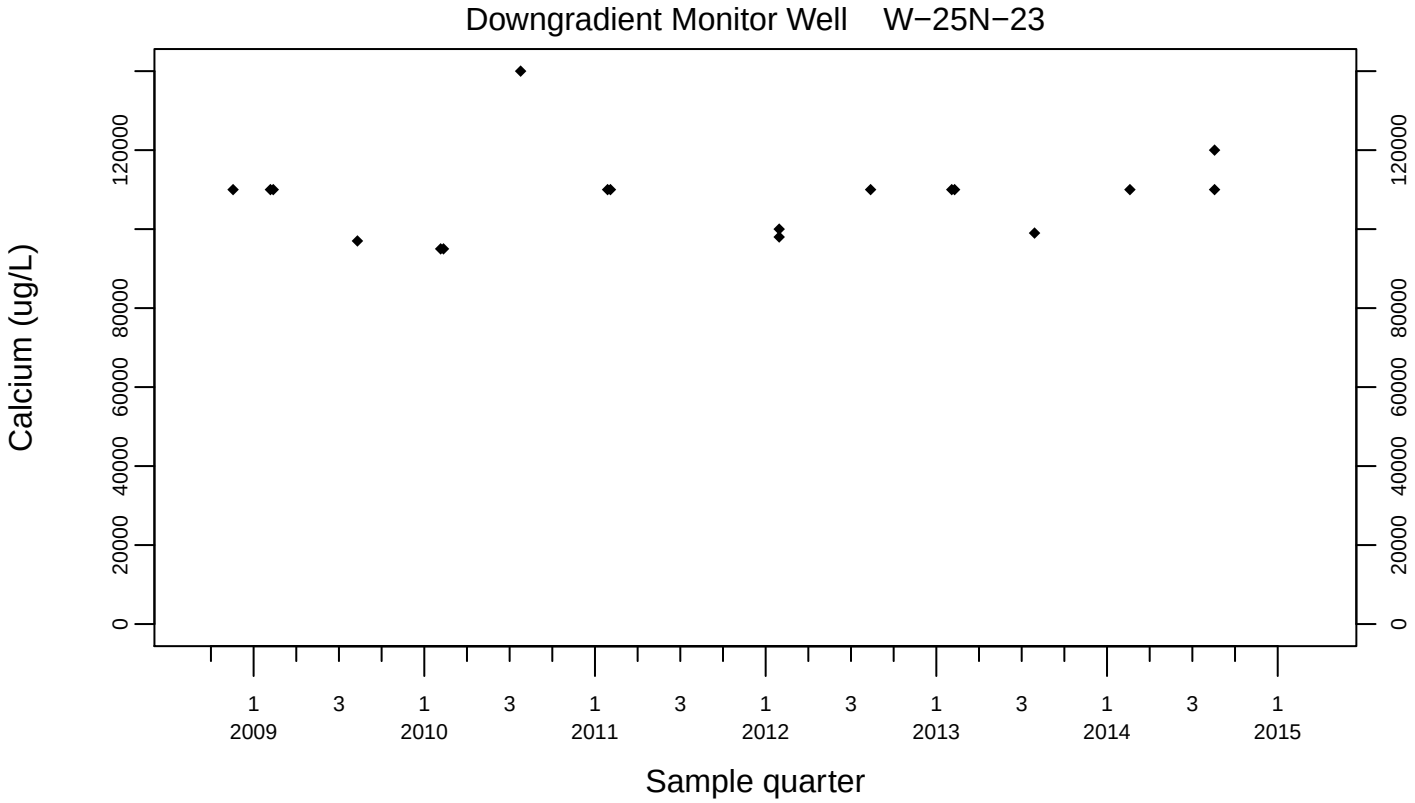

Downgradient Monitor Well W−26R−11
Cadmium (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

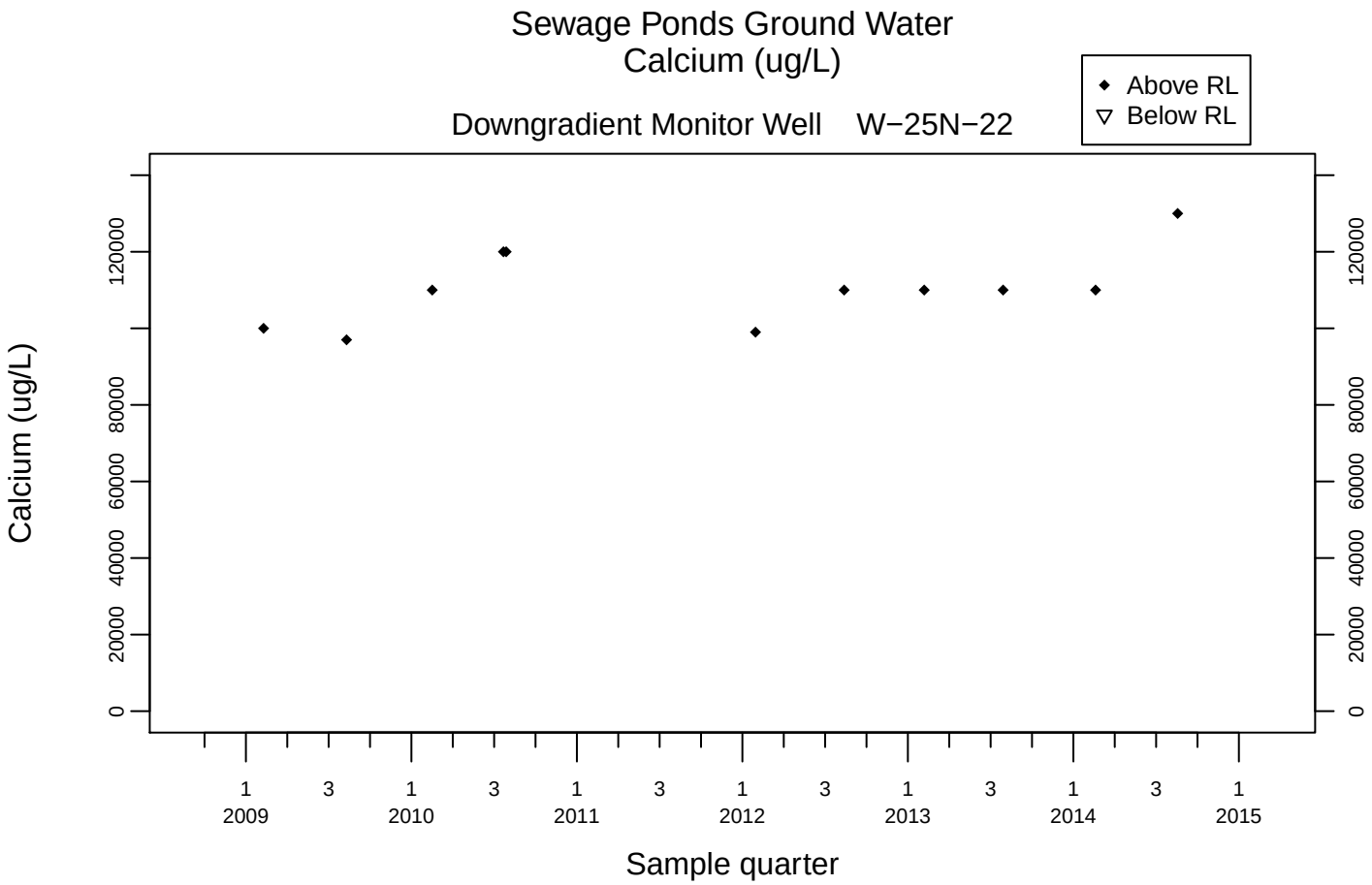

Sewage Ponds Ground Water
Cadmium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Cadmium (ug/L)
0
20
40
60
80
100
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

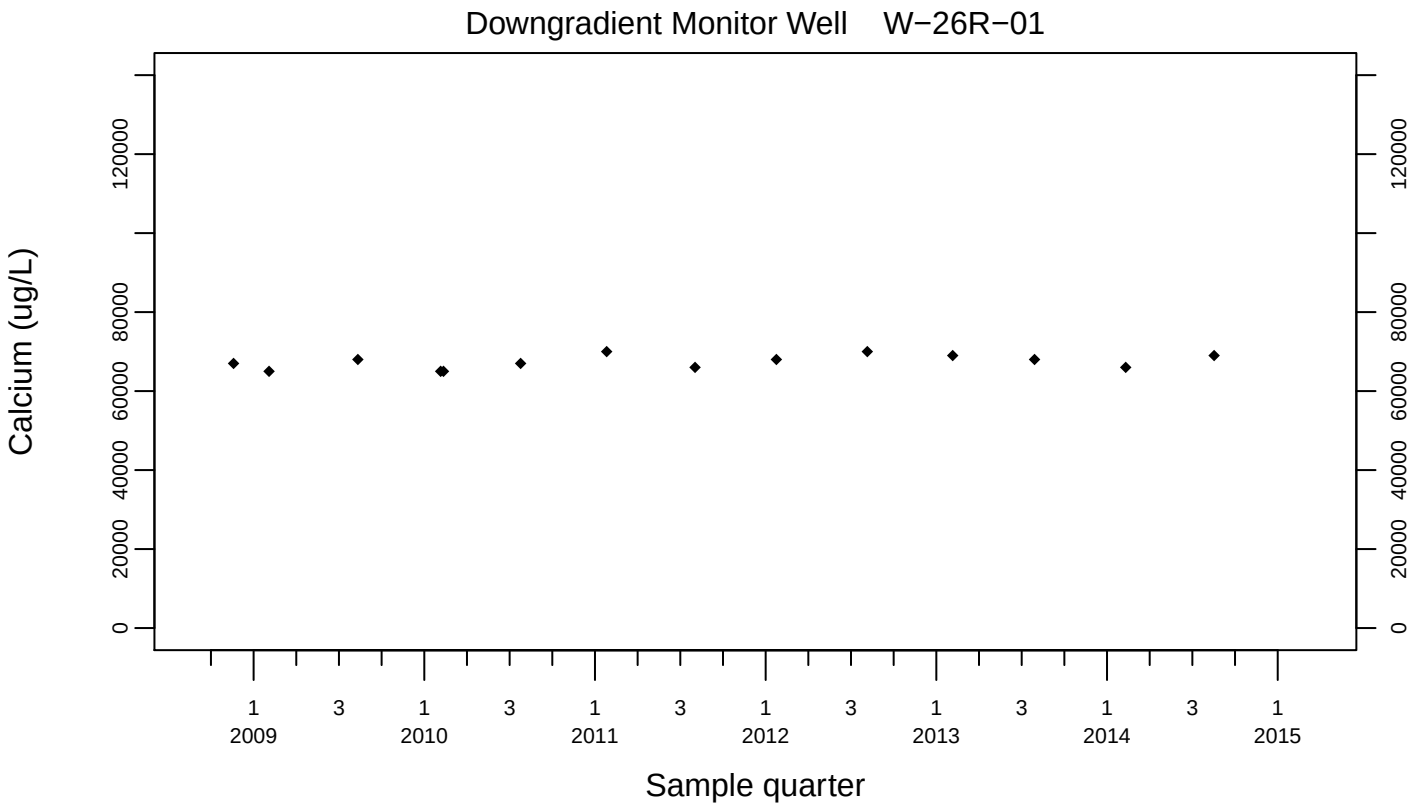

Sewage Ponds Ground Water
Calcium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

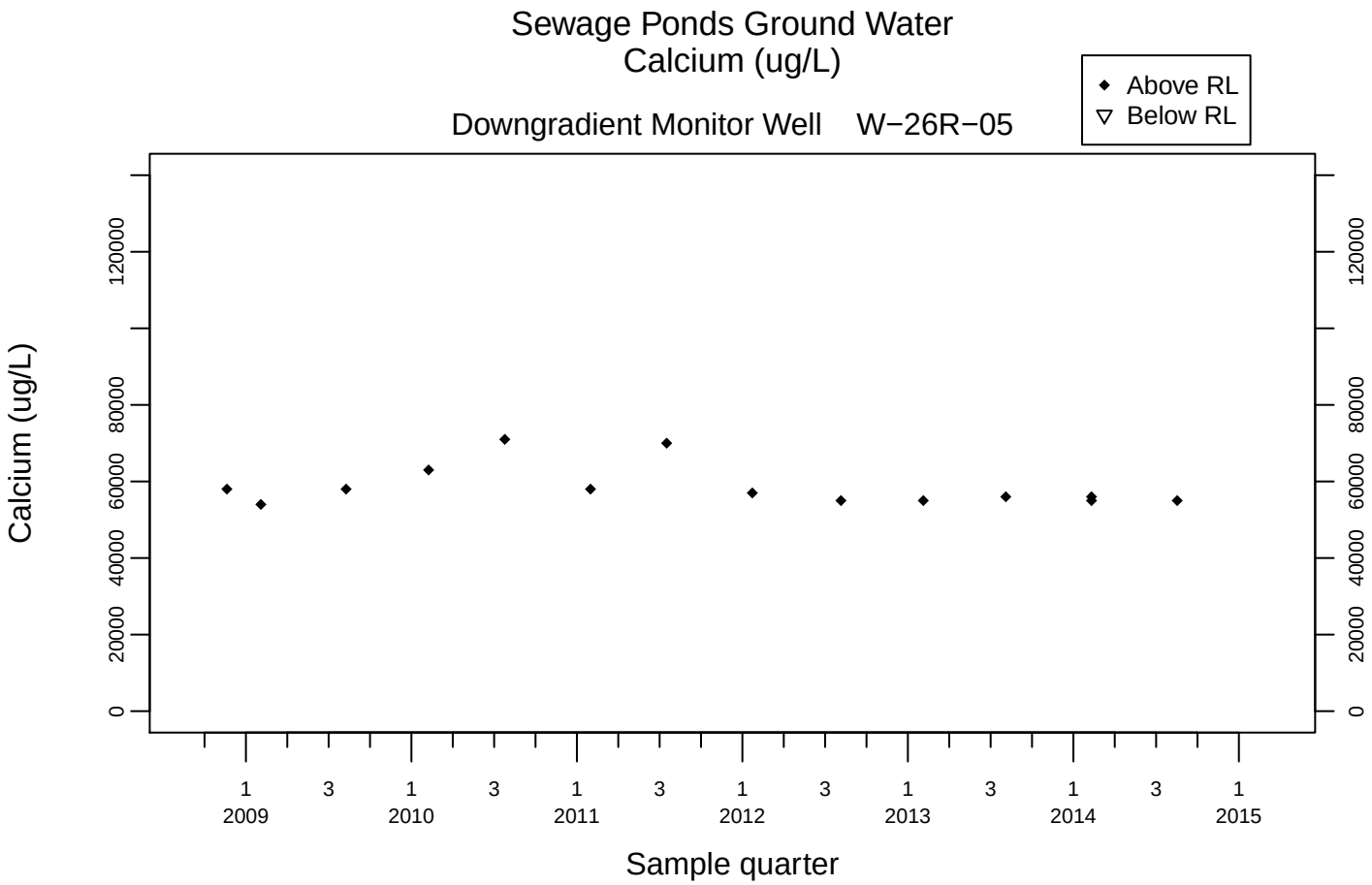

Upgradient Monitor Well W−7PS
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

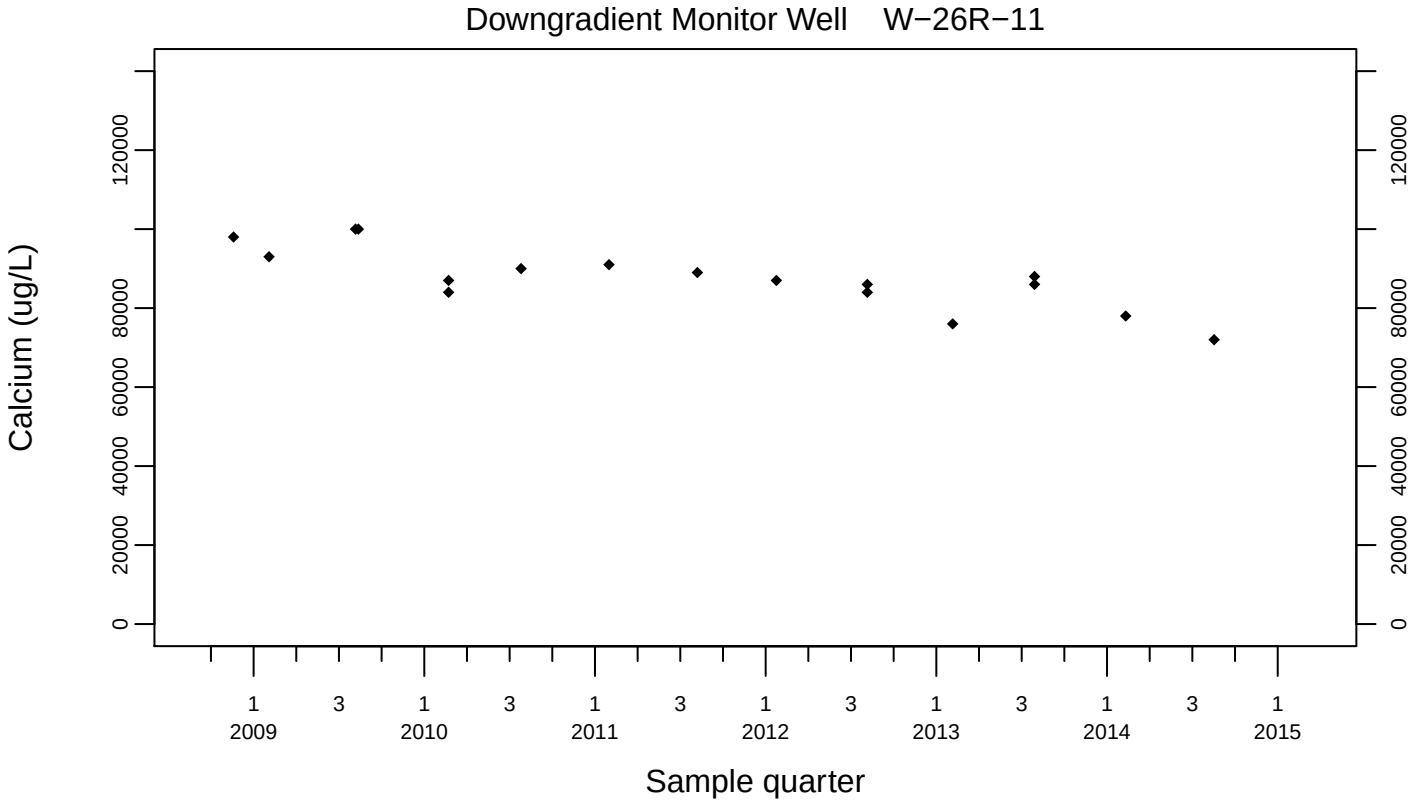

Sewage Ponds Ground Water
Calcium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

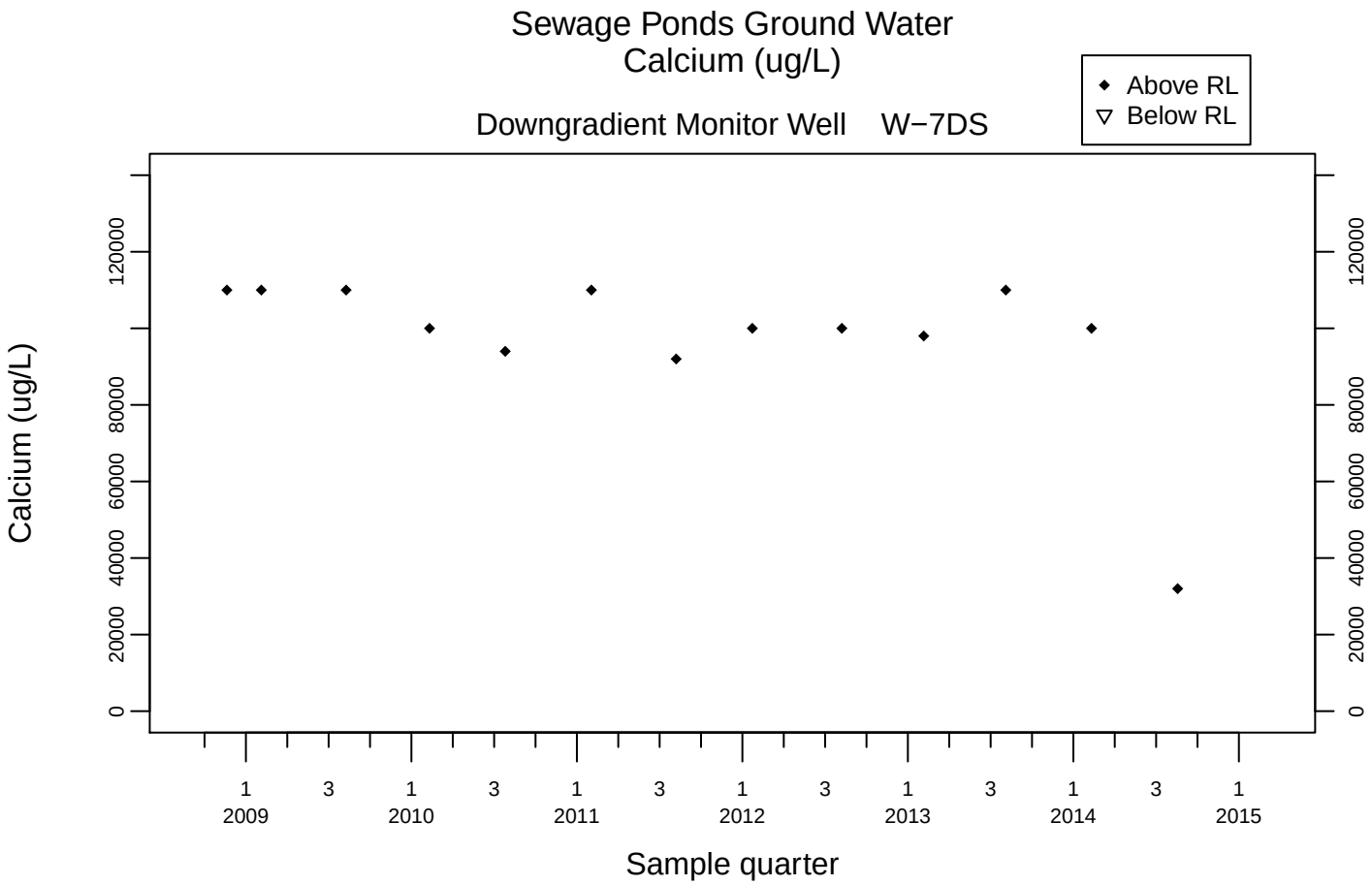

Downgradient Monitor Well W−25N−23
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

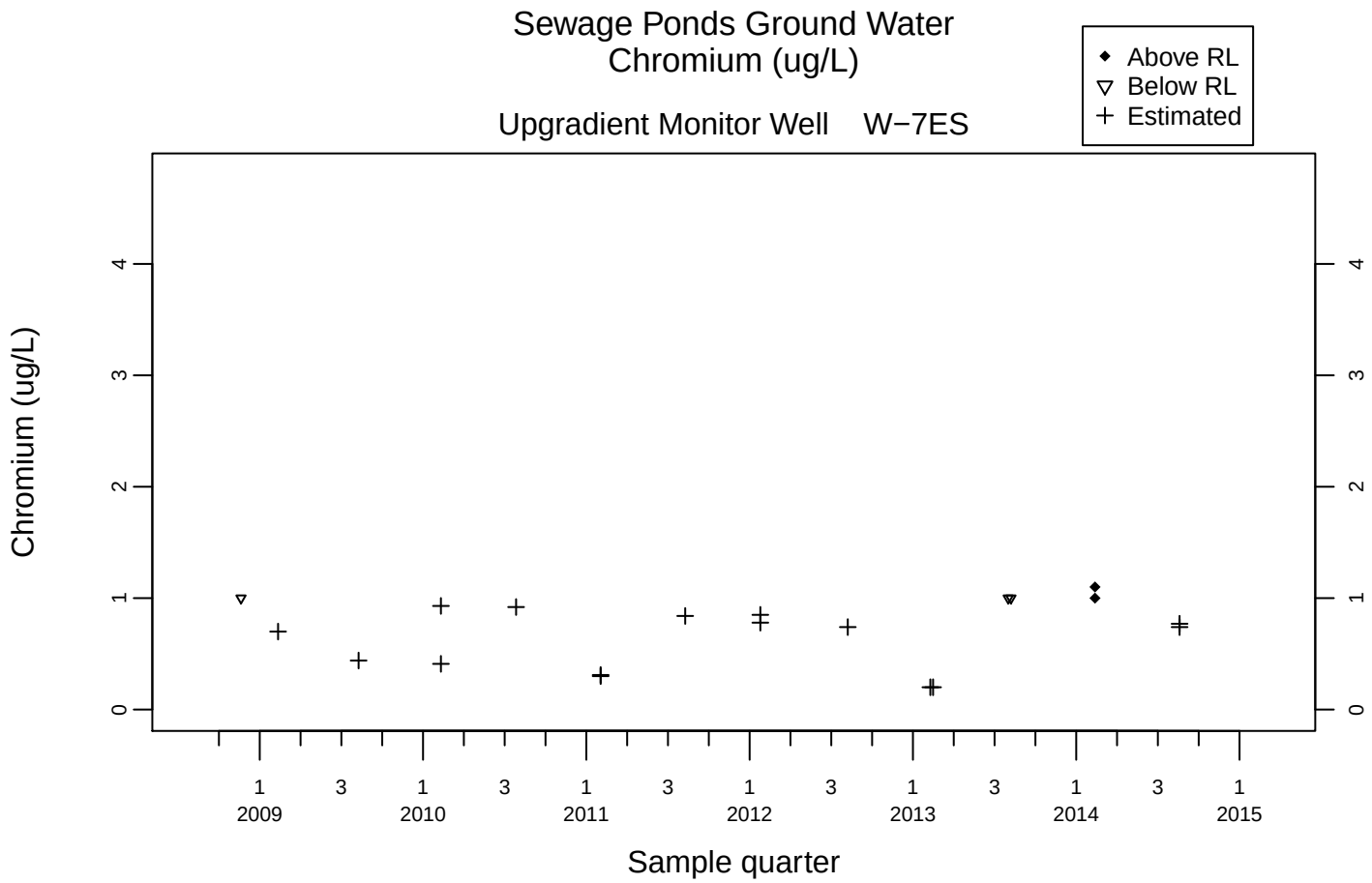

Sewage Ponds Ground Water
Calcium (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

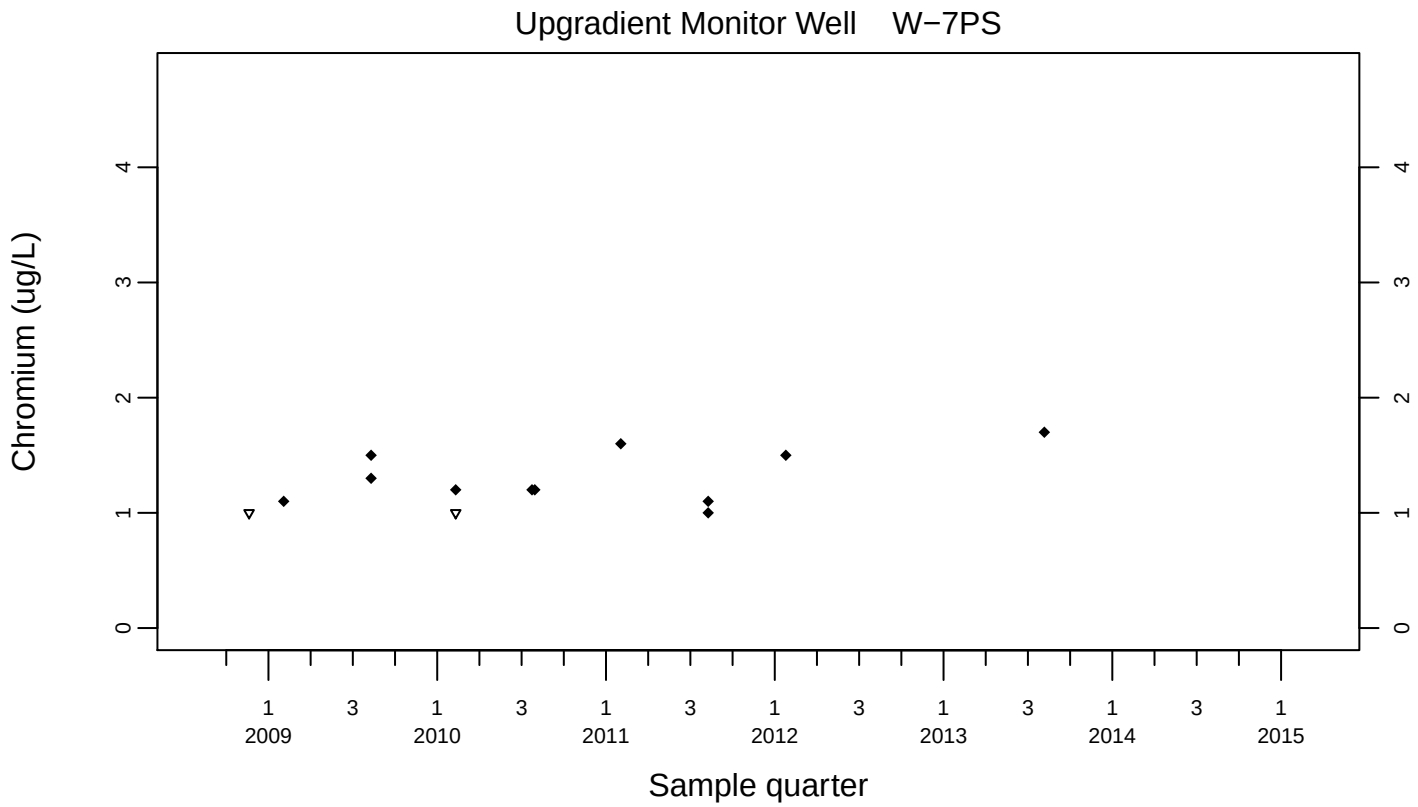

Downgradient Monitor Well W−26R−01
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

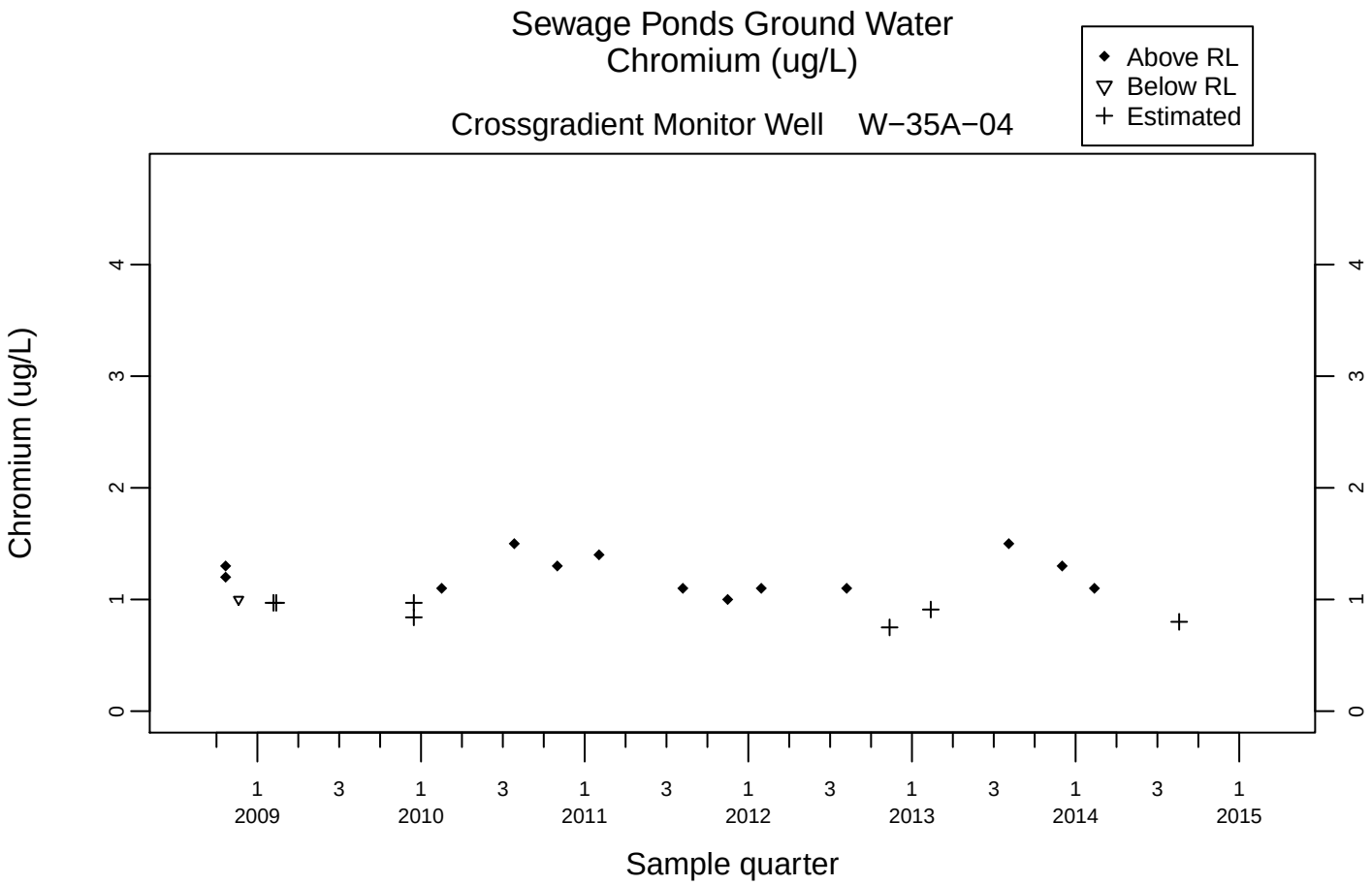

Sewage Ponds Ground Water
Calcium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

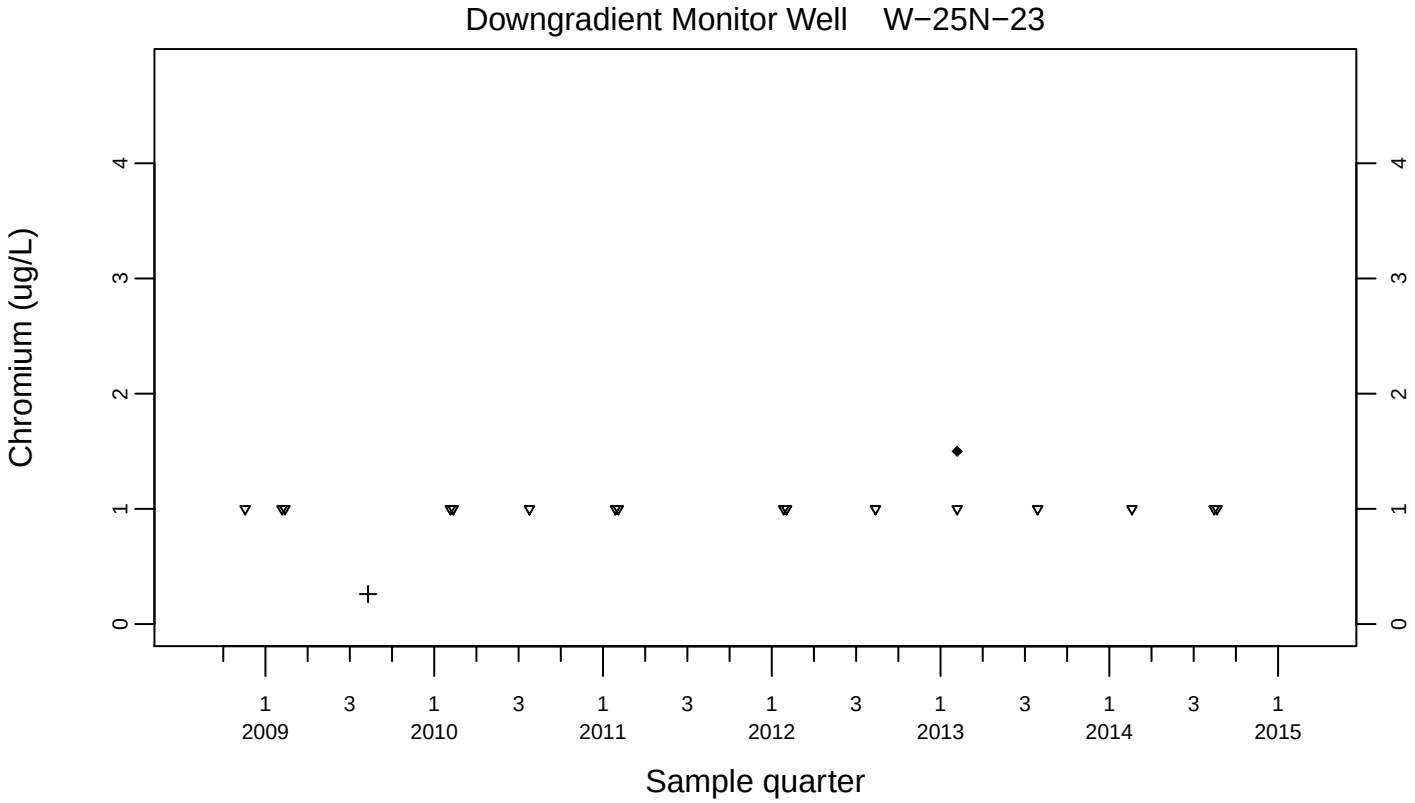

Downgradient Monitor Well W−26R−11
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

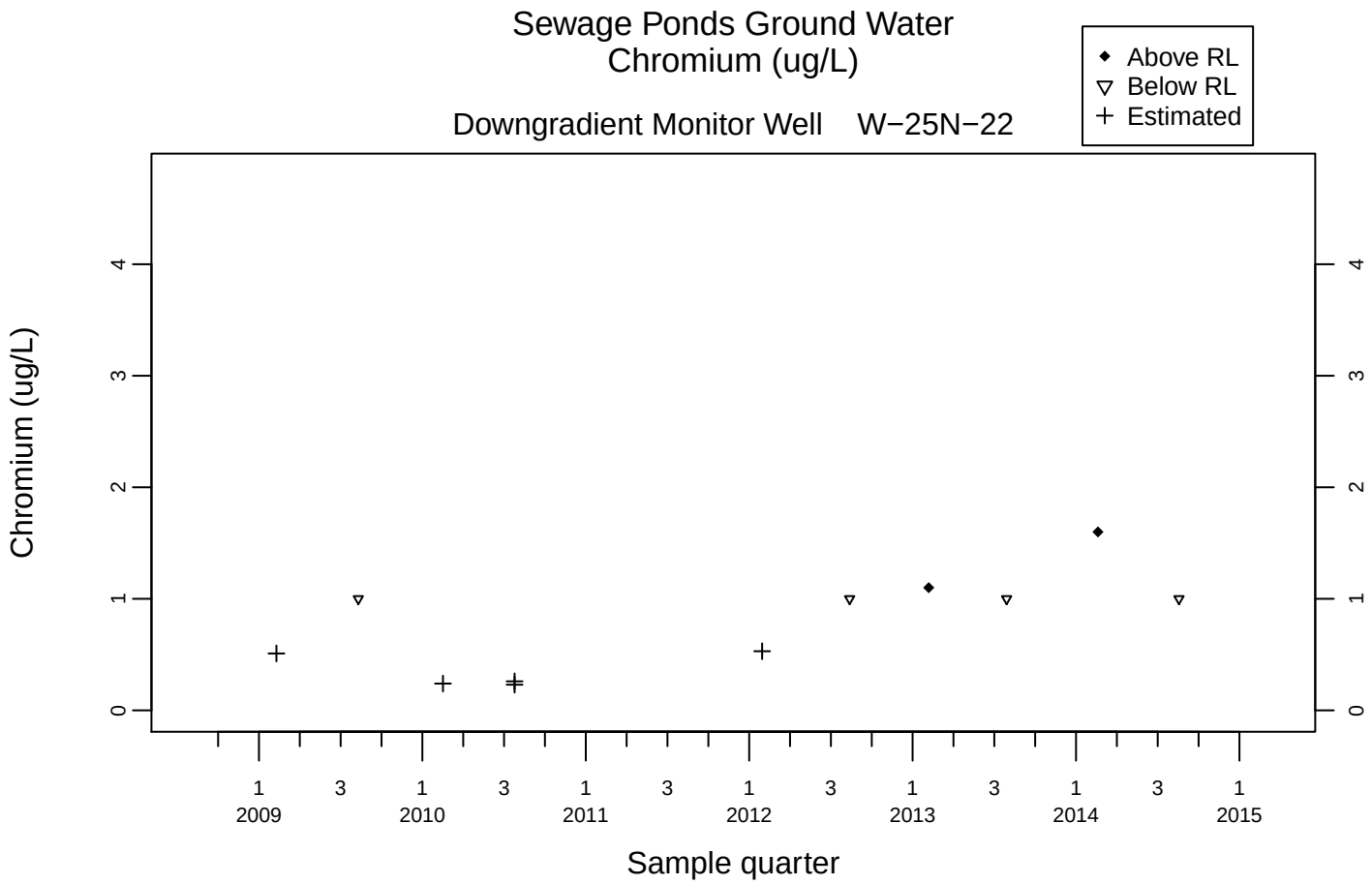

Sewage Ponds Ground Water
Calcium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

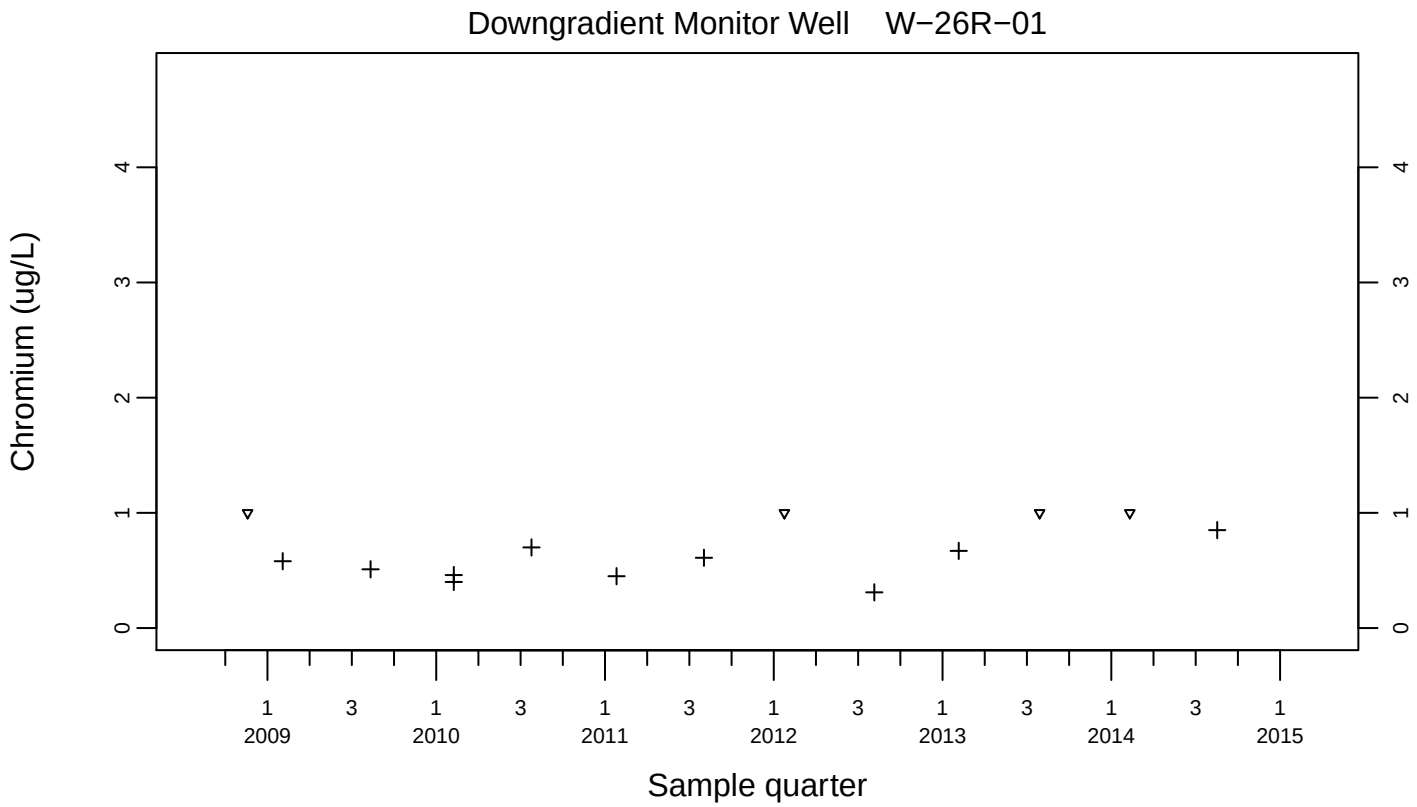

Sewage Ponds Ground Water
Chromium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

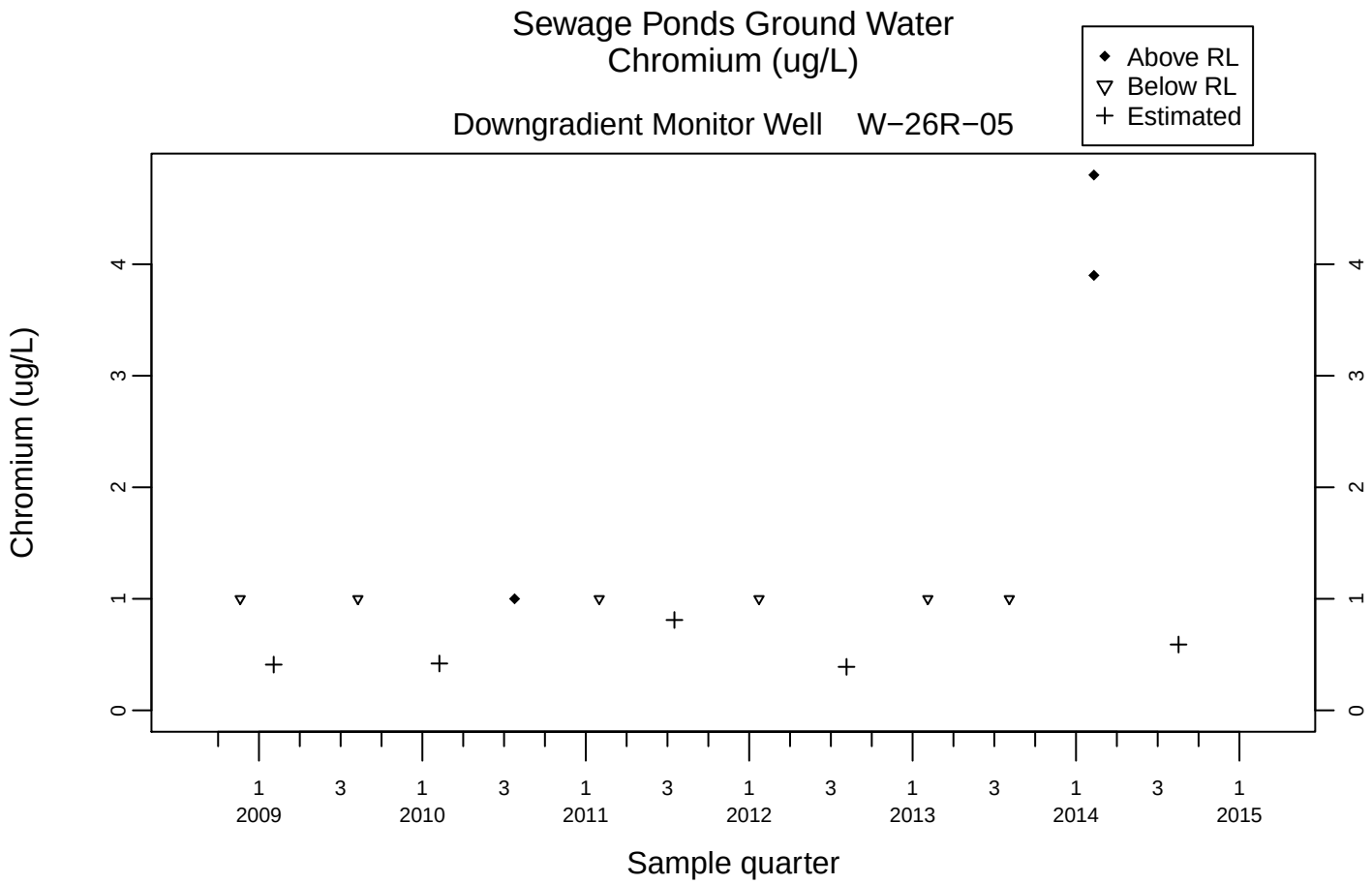

Upgradient Monitor Well W−7PS
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

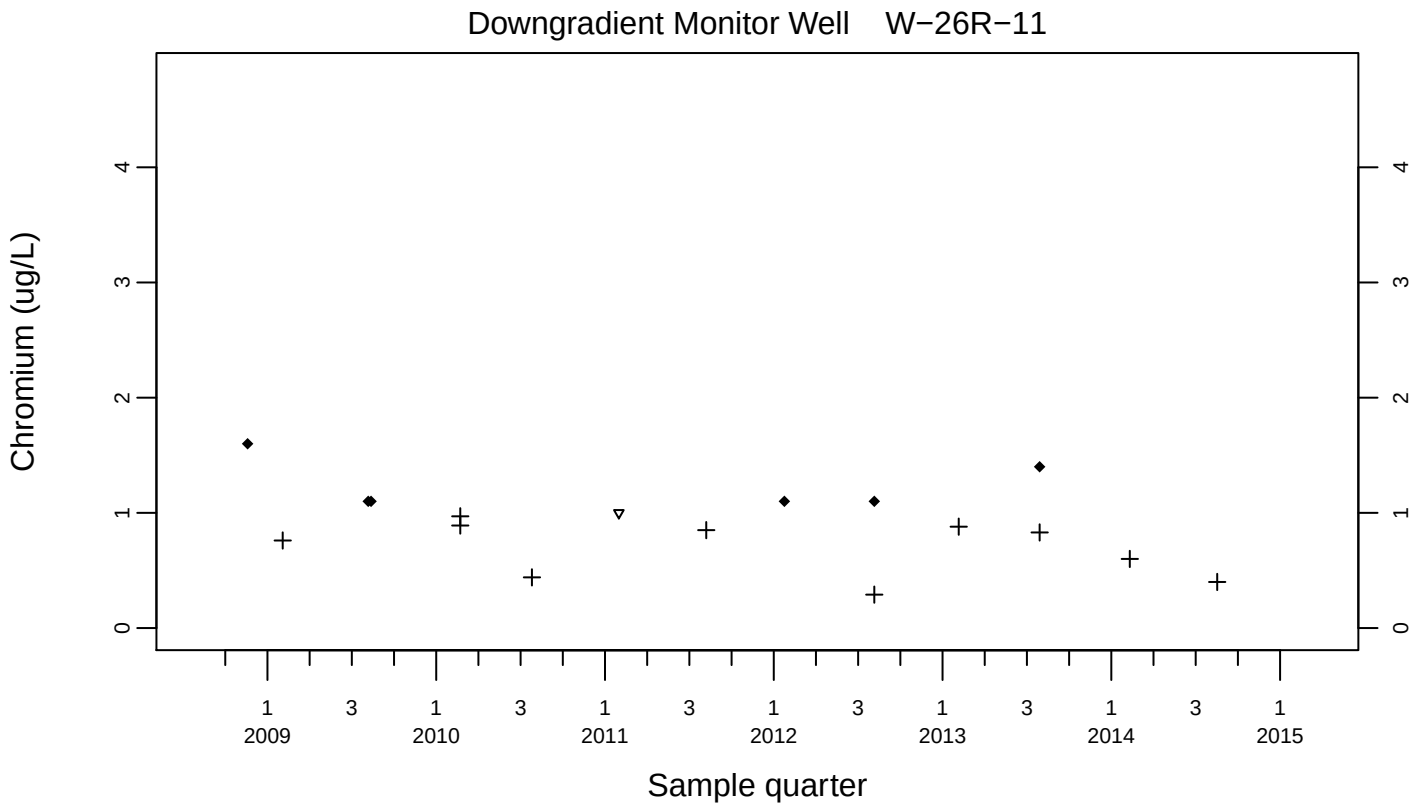

Sewage Ponds Ground Water
Chromium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

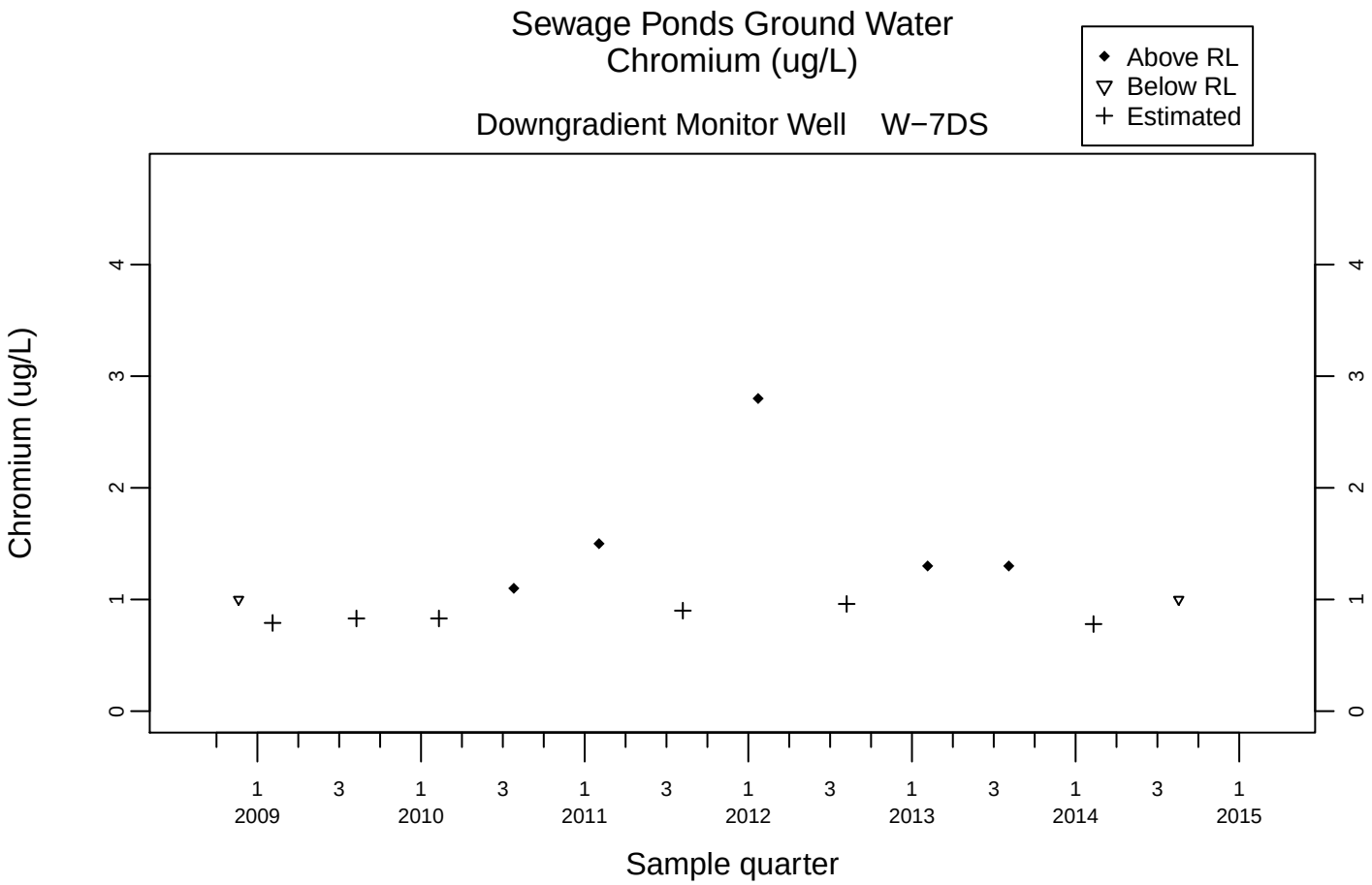

Downgradient Monitor Well W−25N−23
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

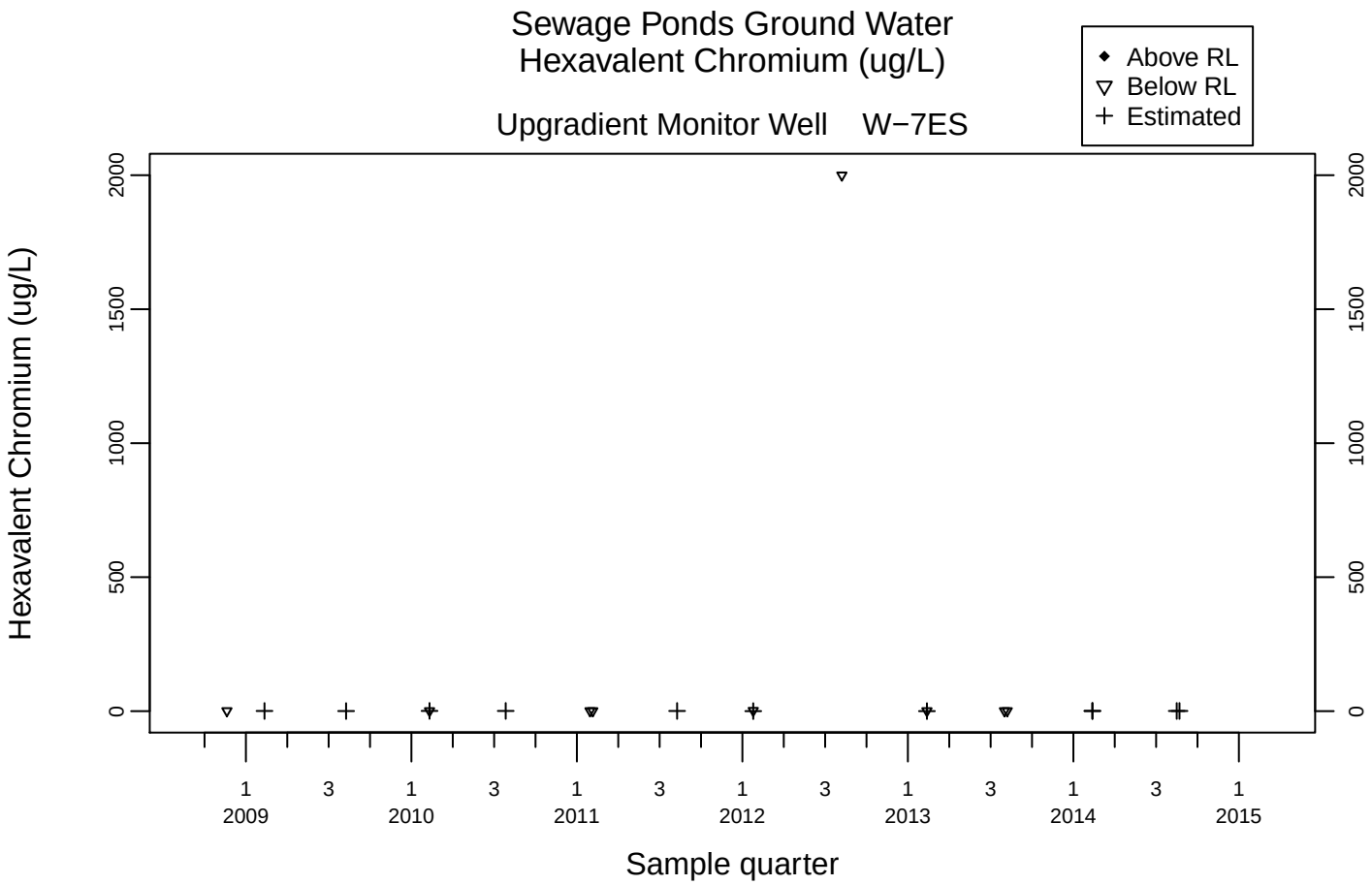

Sewage Ponds Ground Water
Chromium (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

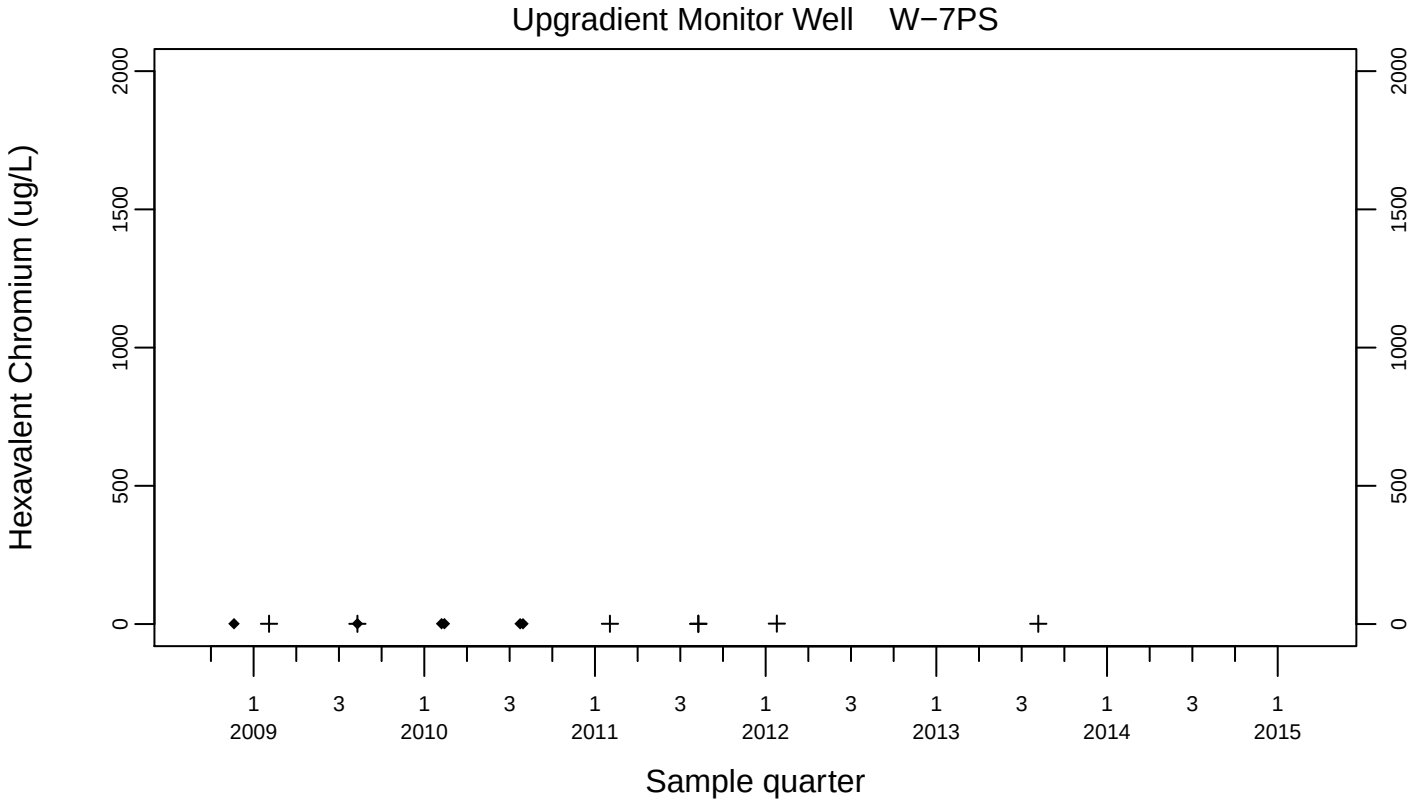

Downgradient Monitor Well W−26R−01
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

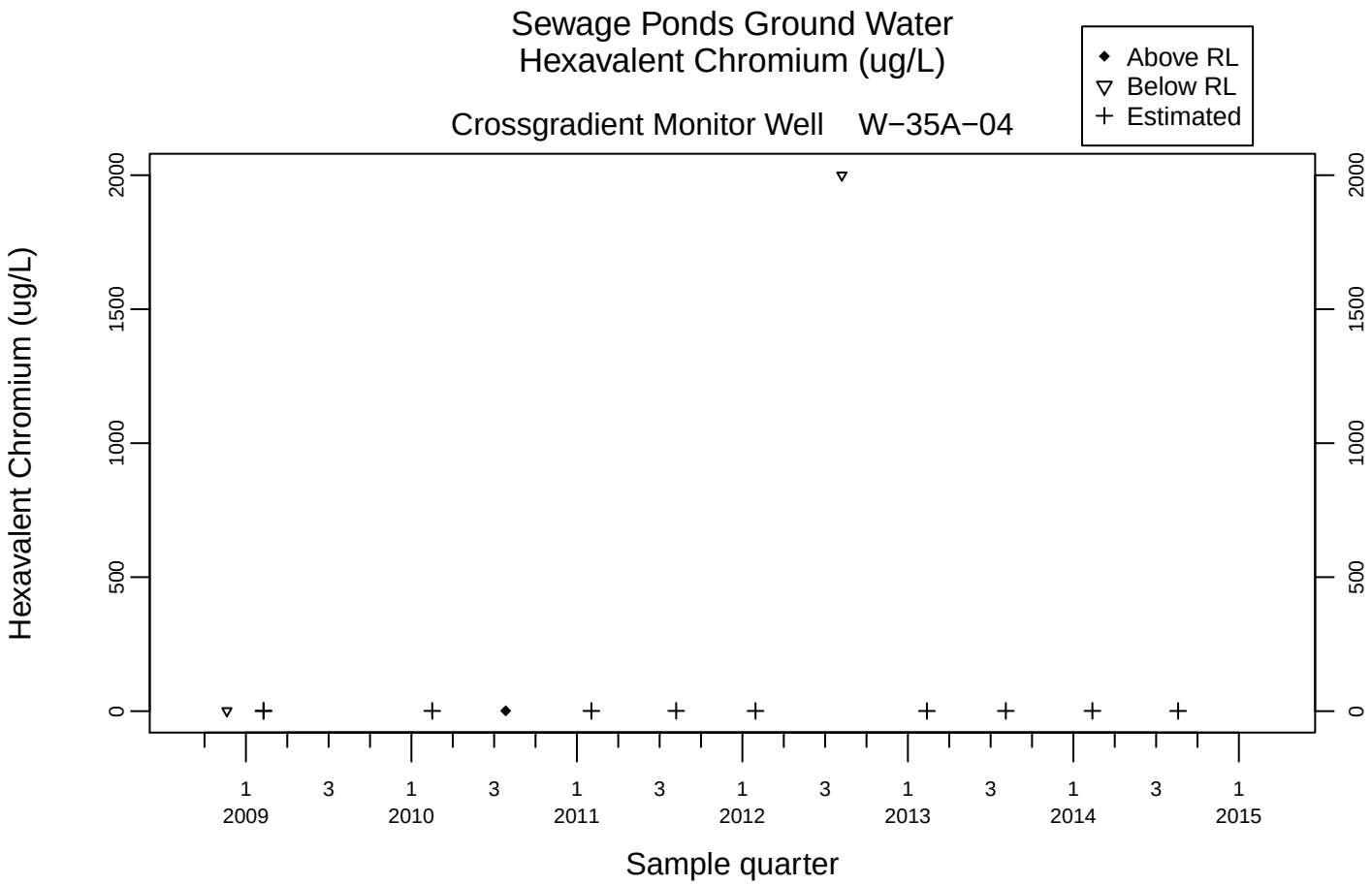

Sewage Ponds Ground Water
Chromium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

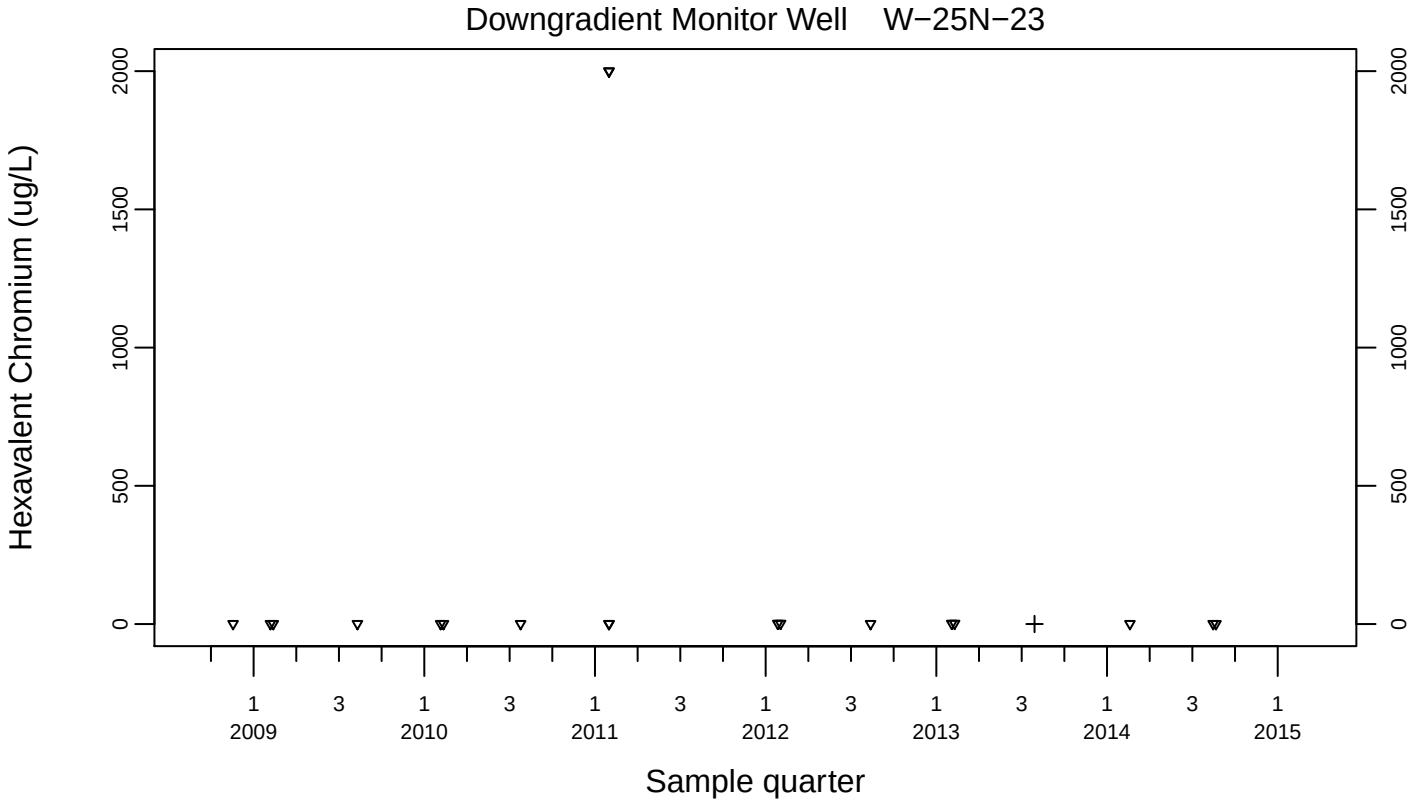

Downgradient Monitor Well W−26R−11
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

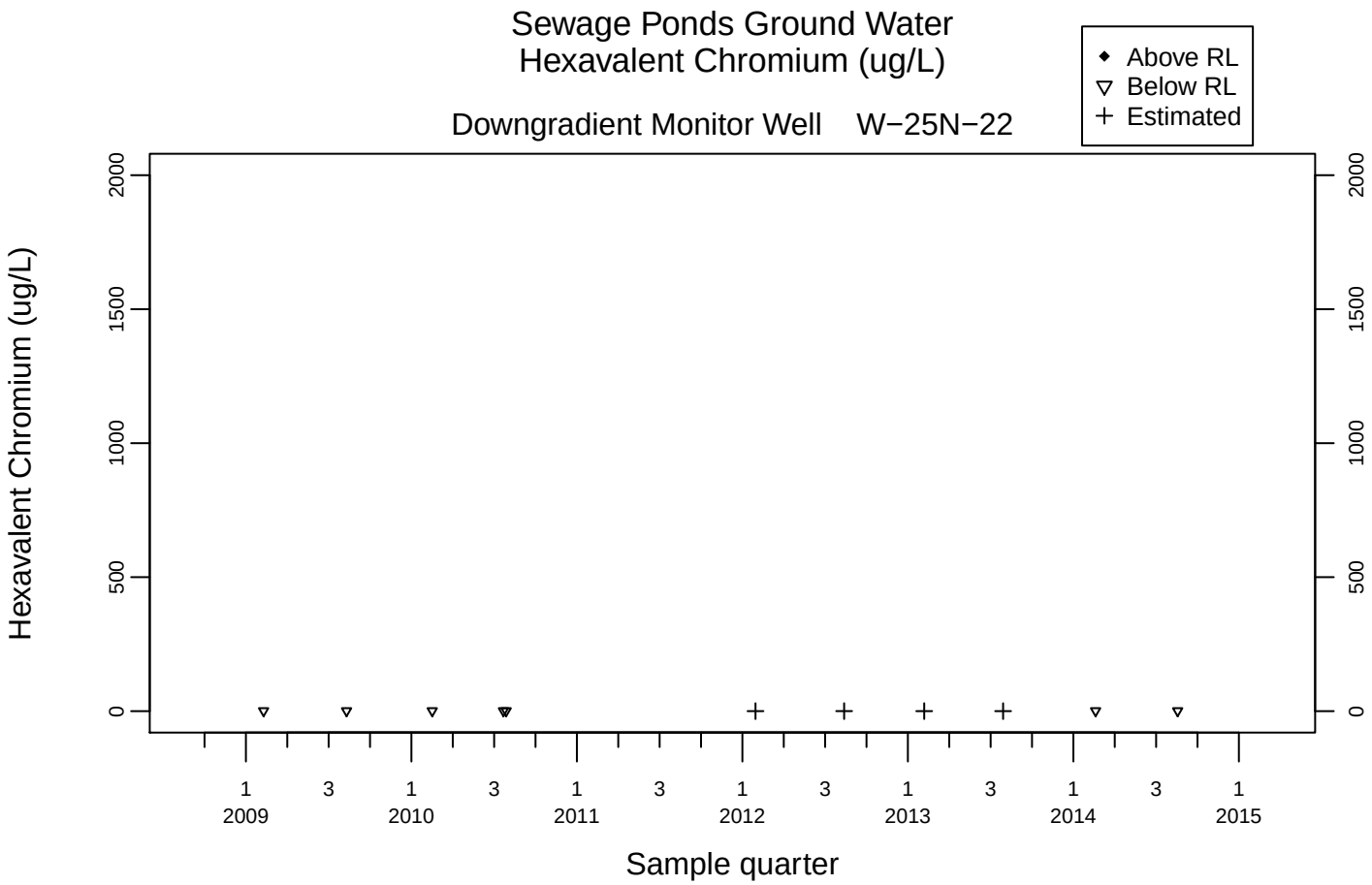

Sewage Ponds Ground Water
Chromium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

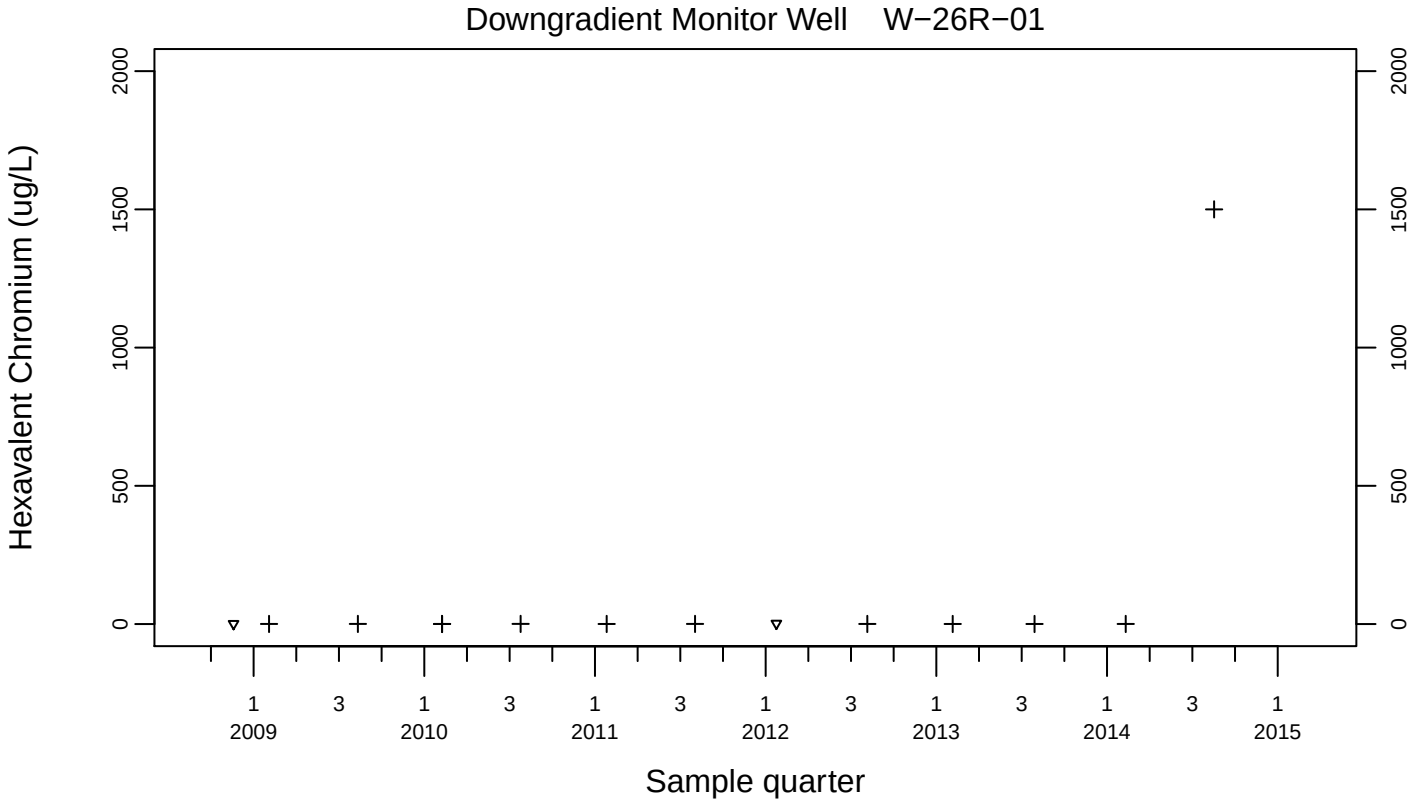

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

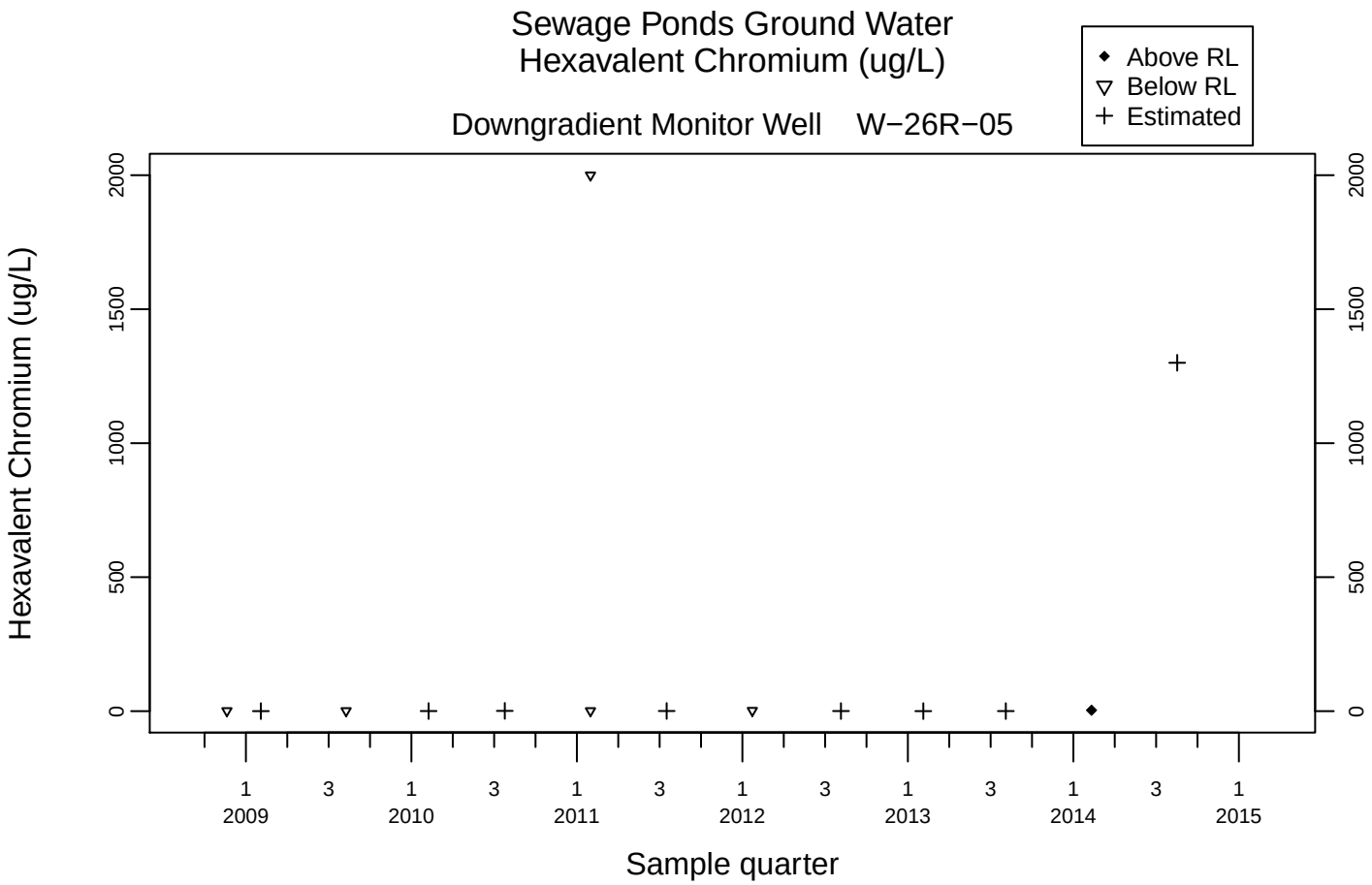

Upgradient Monitor Well W−7PS
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1
2009 2010 2011 2012 2013 2014 2015
Sample quarter

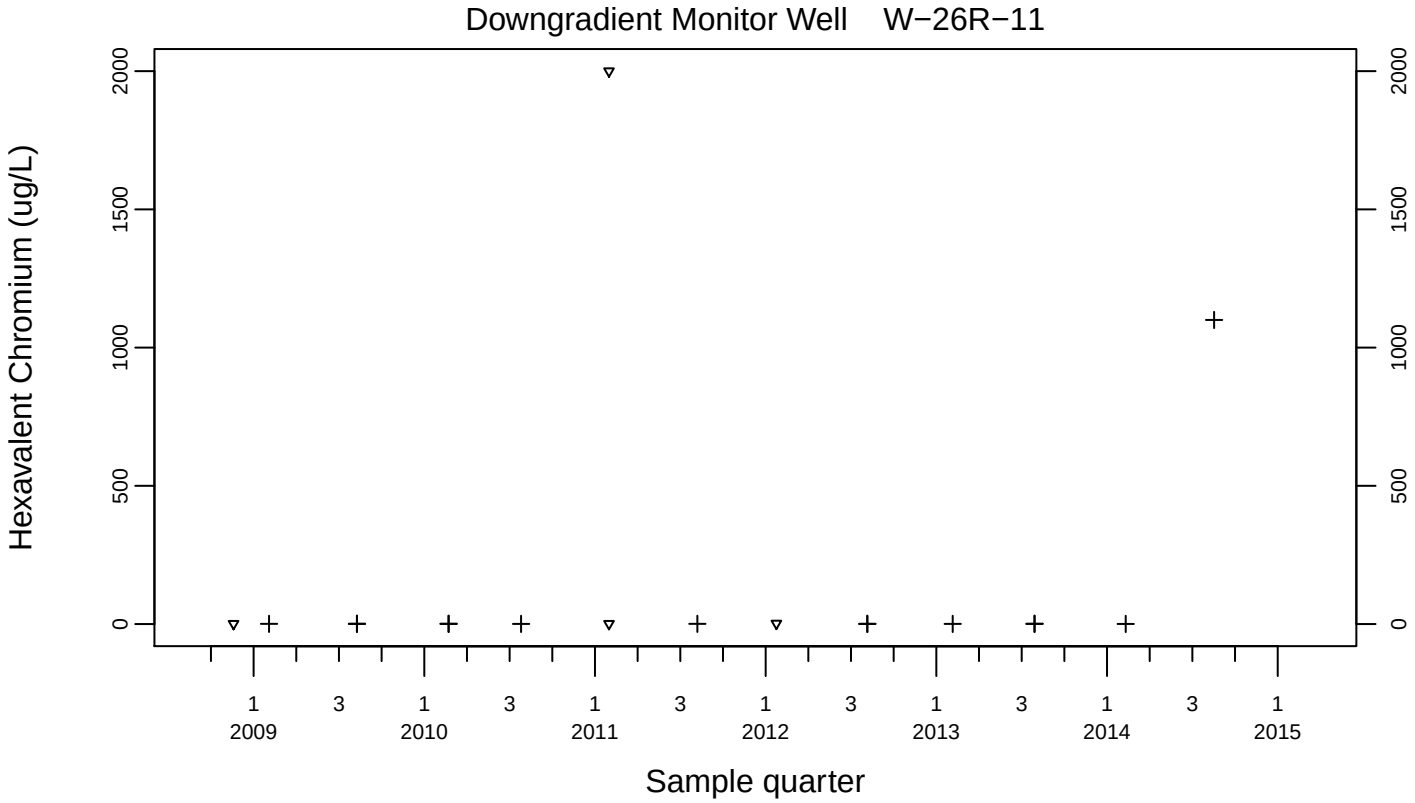

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W−35A−04
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

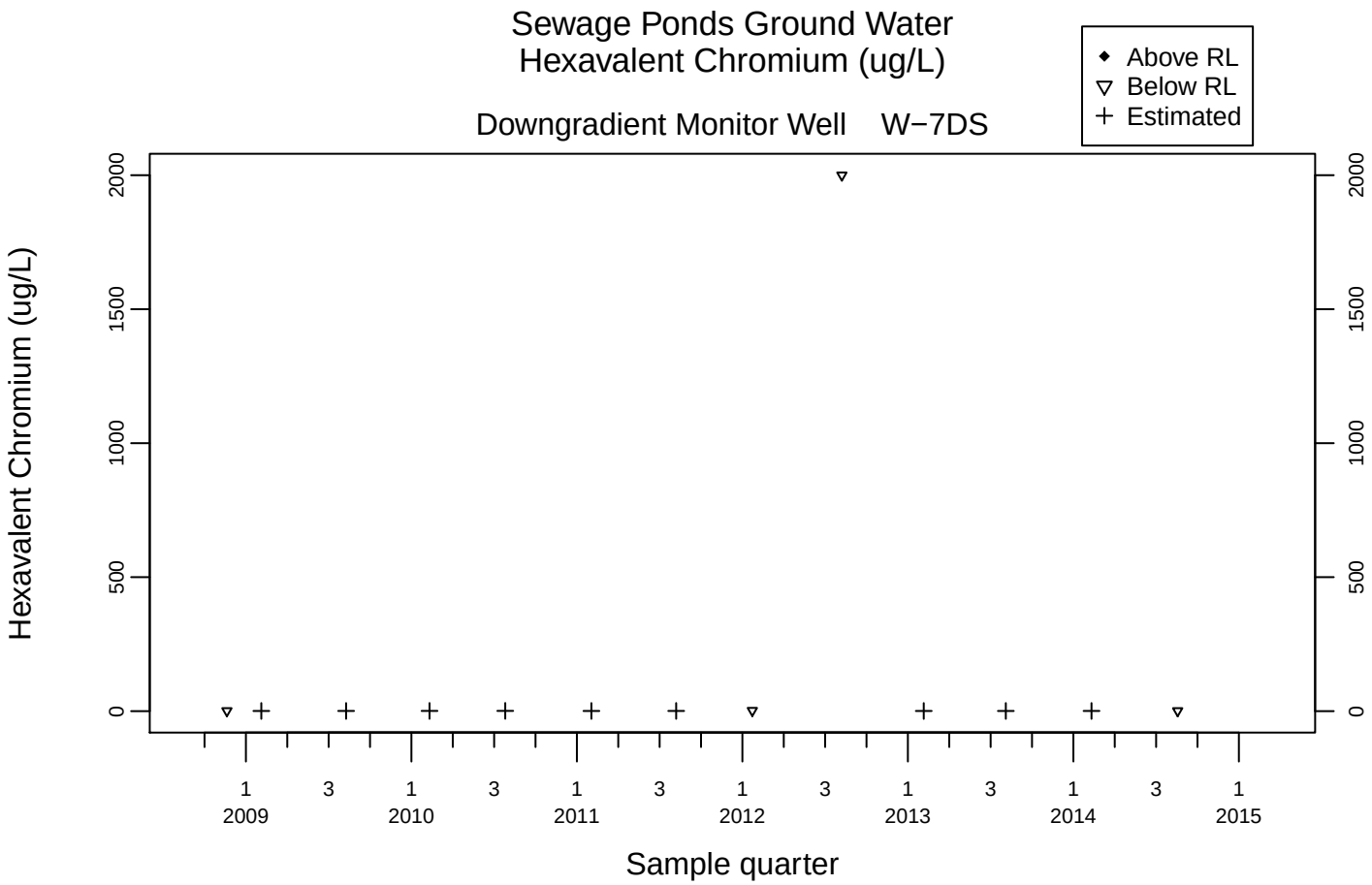

Downgradient Monitor Well W−25N−23
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

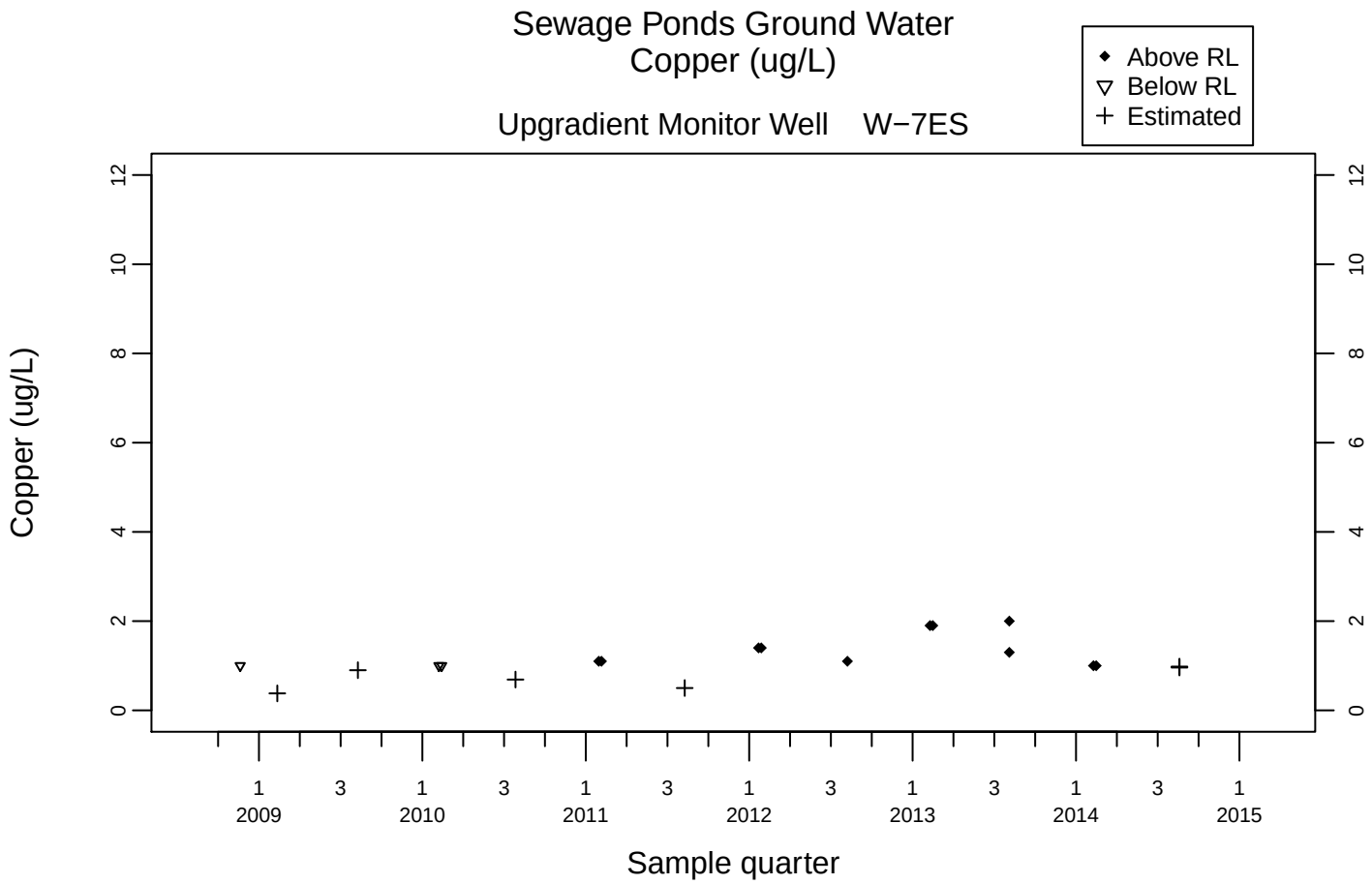

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−25N−22
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

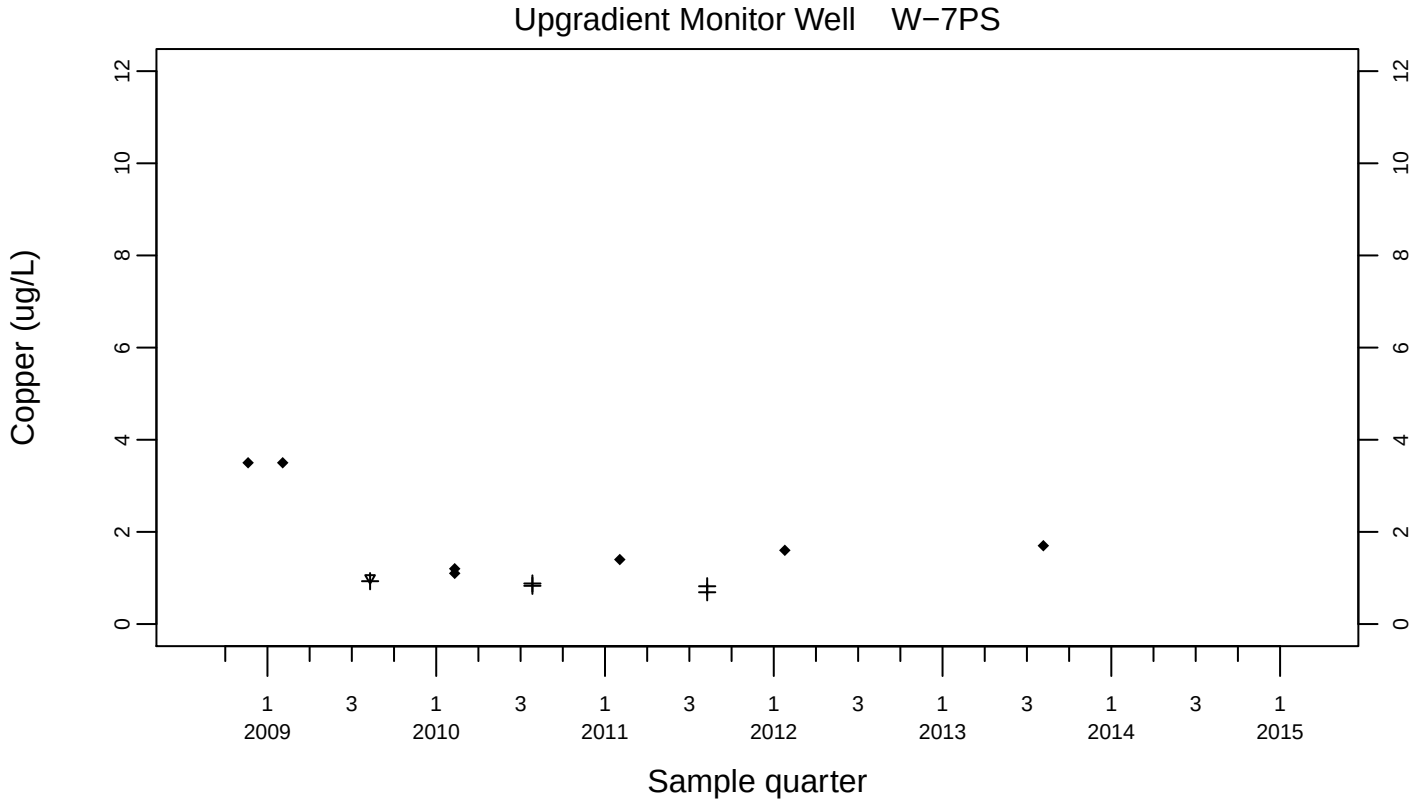

Downgradient Monitor Well W−26R−01
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

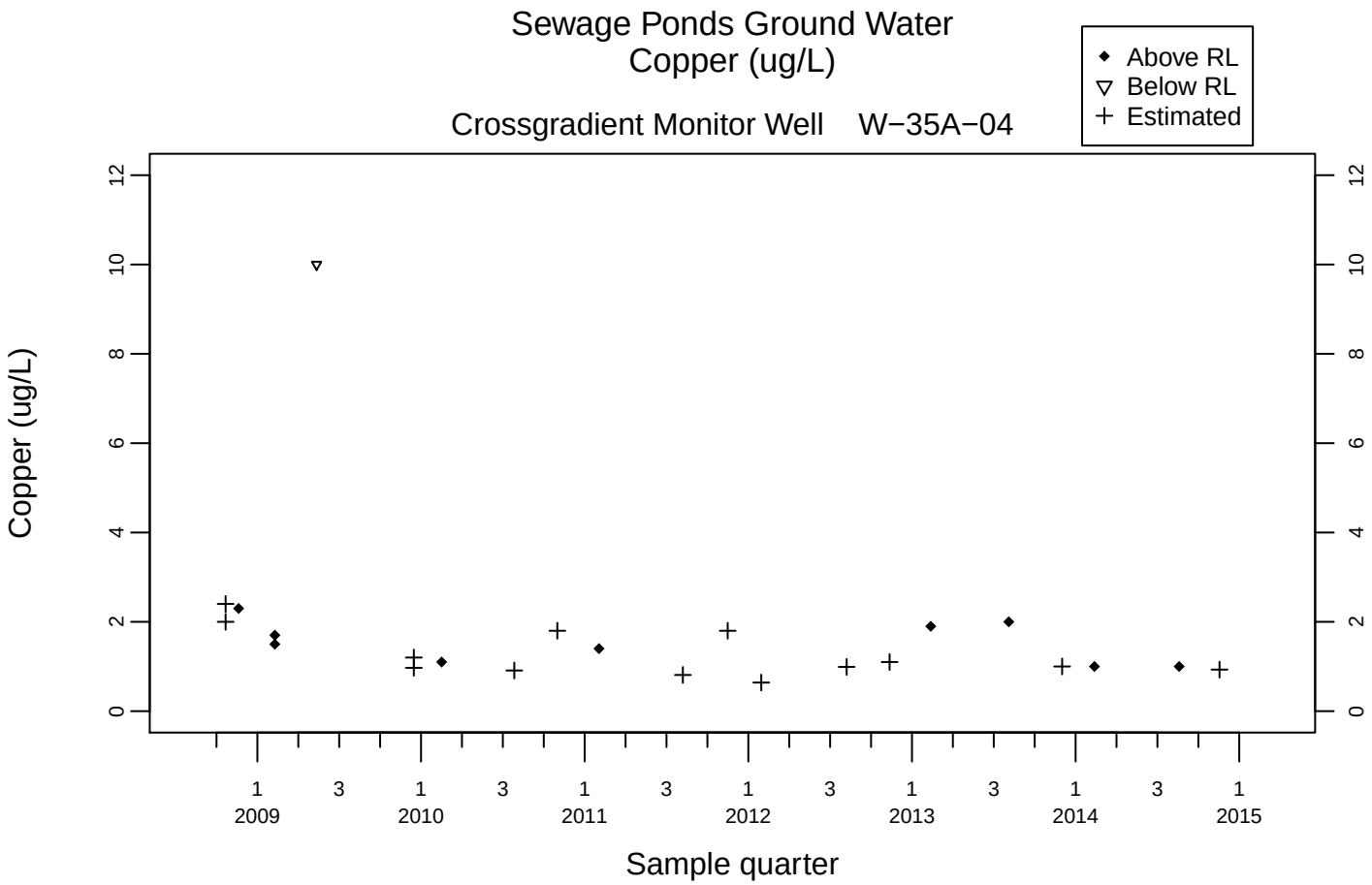

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−26R−05
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

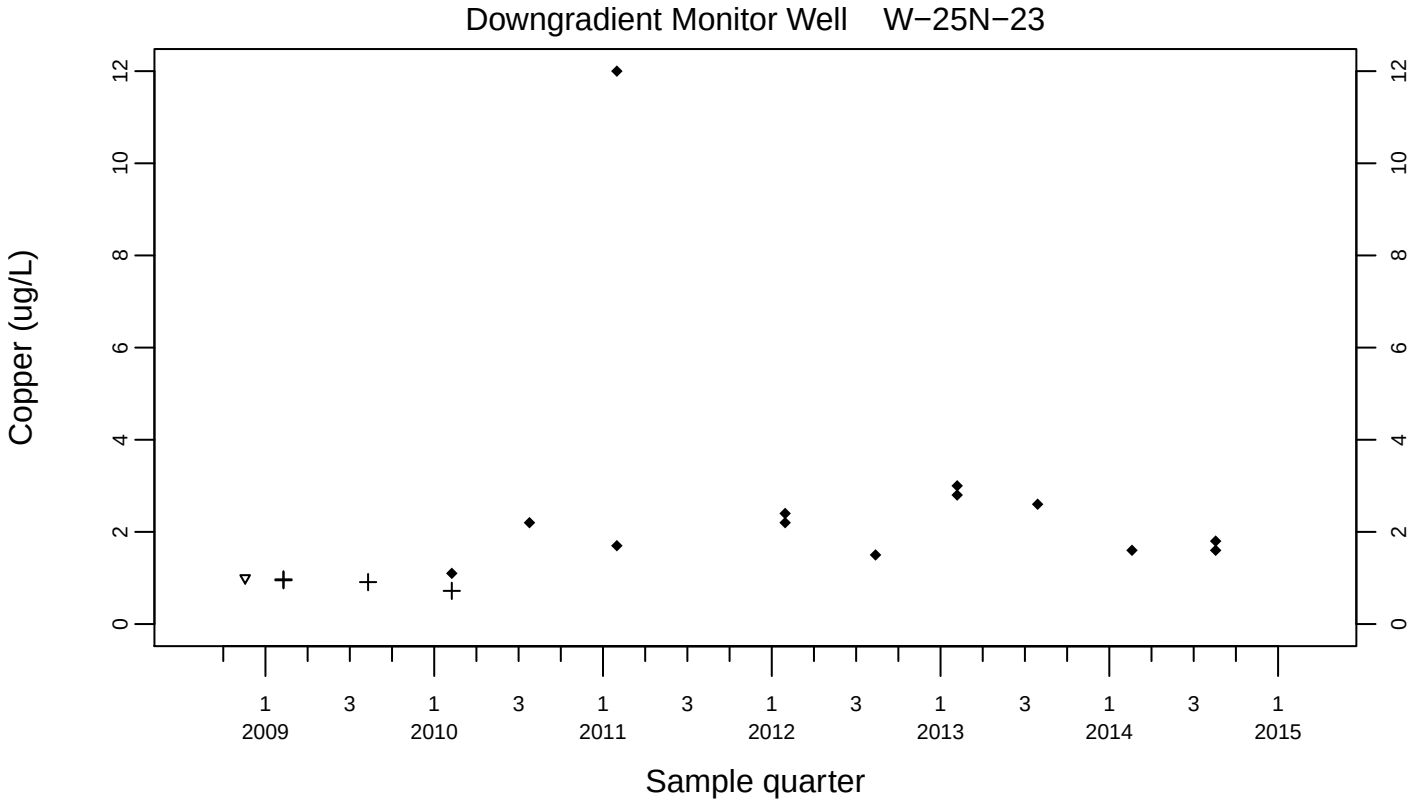

Downgradient Monitor Well W−26R−11
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

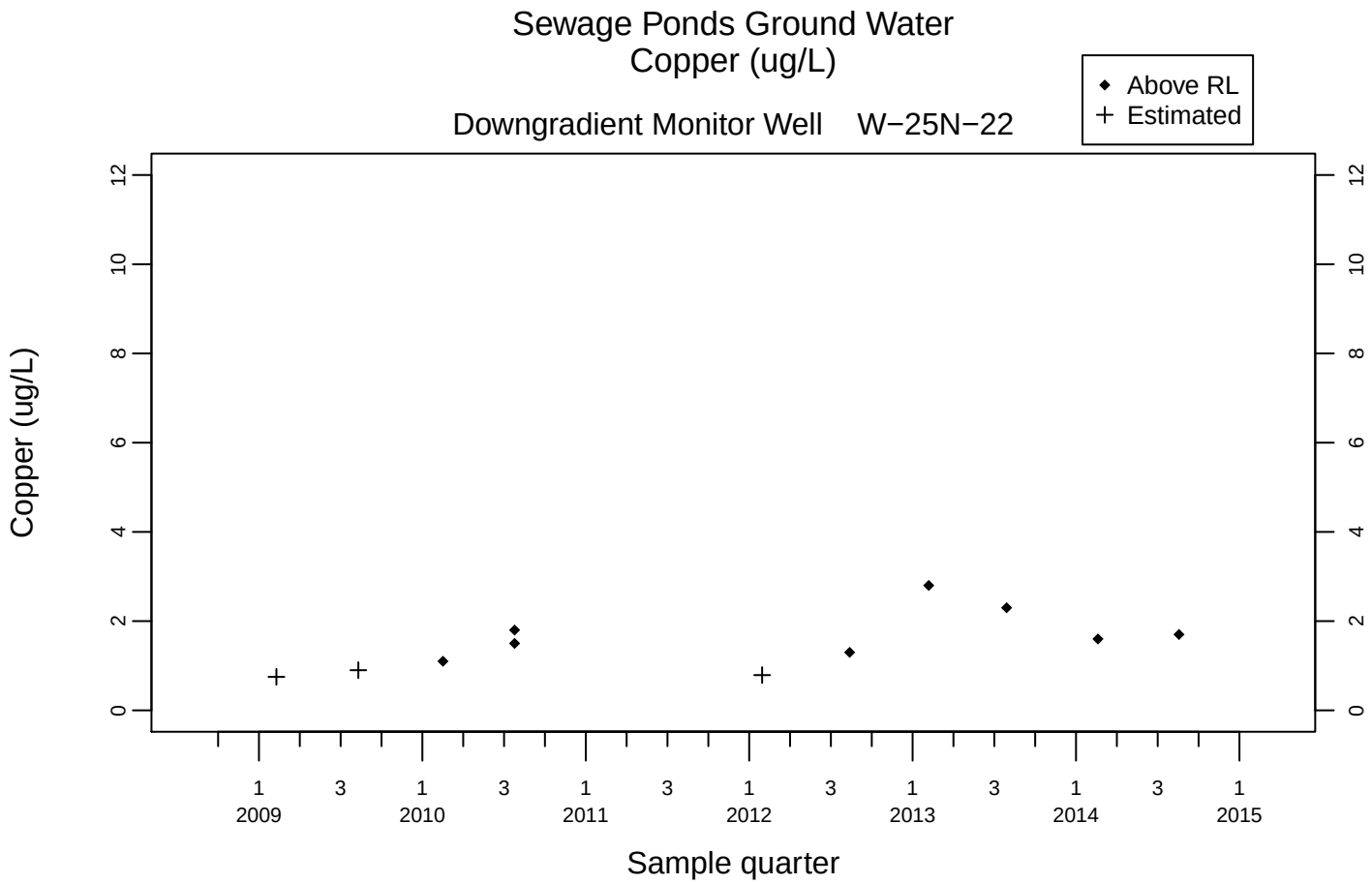

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

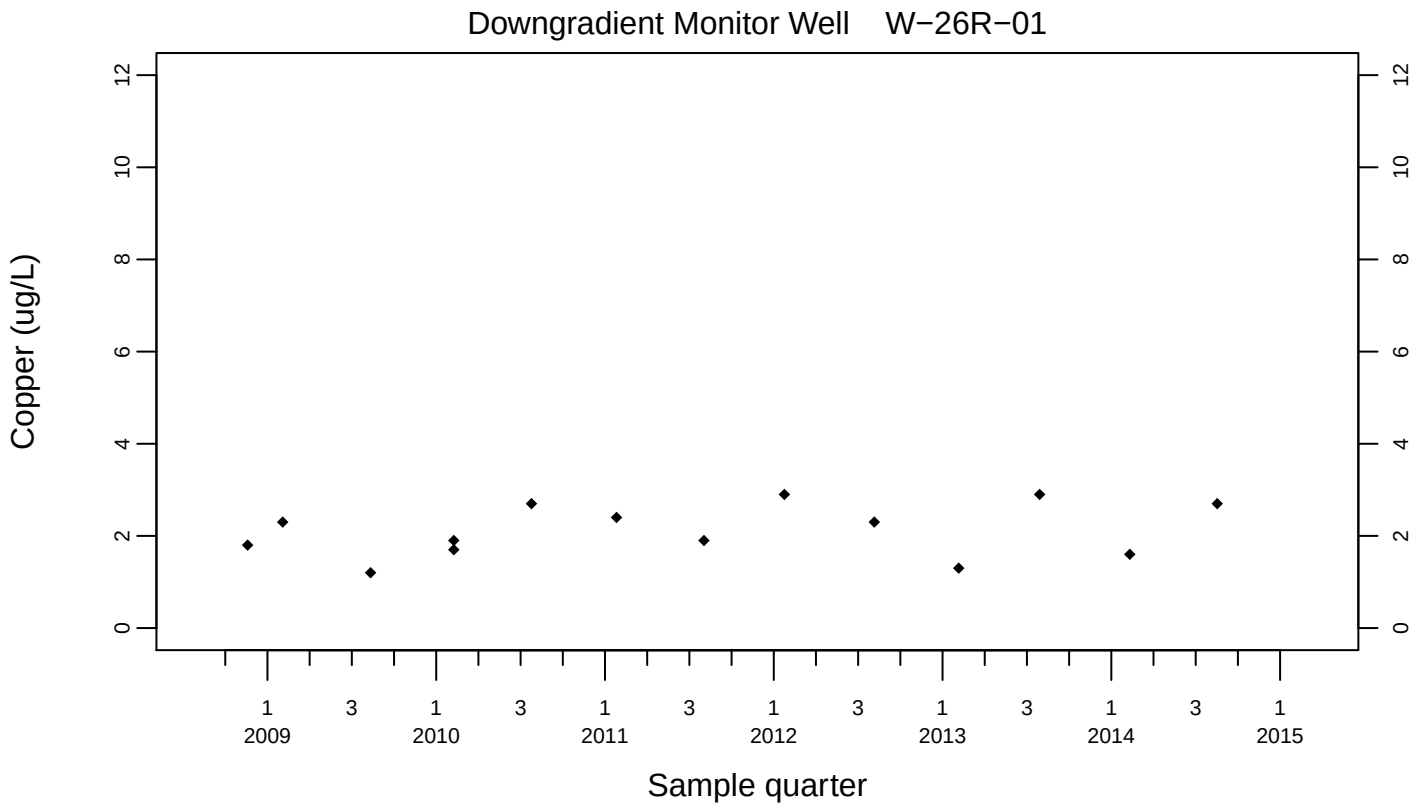

Sewage Ponds Ground Water
Copper (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

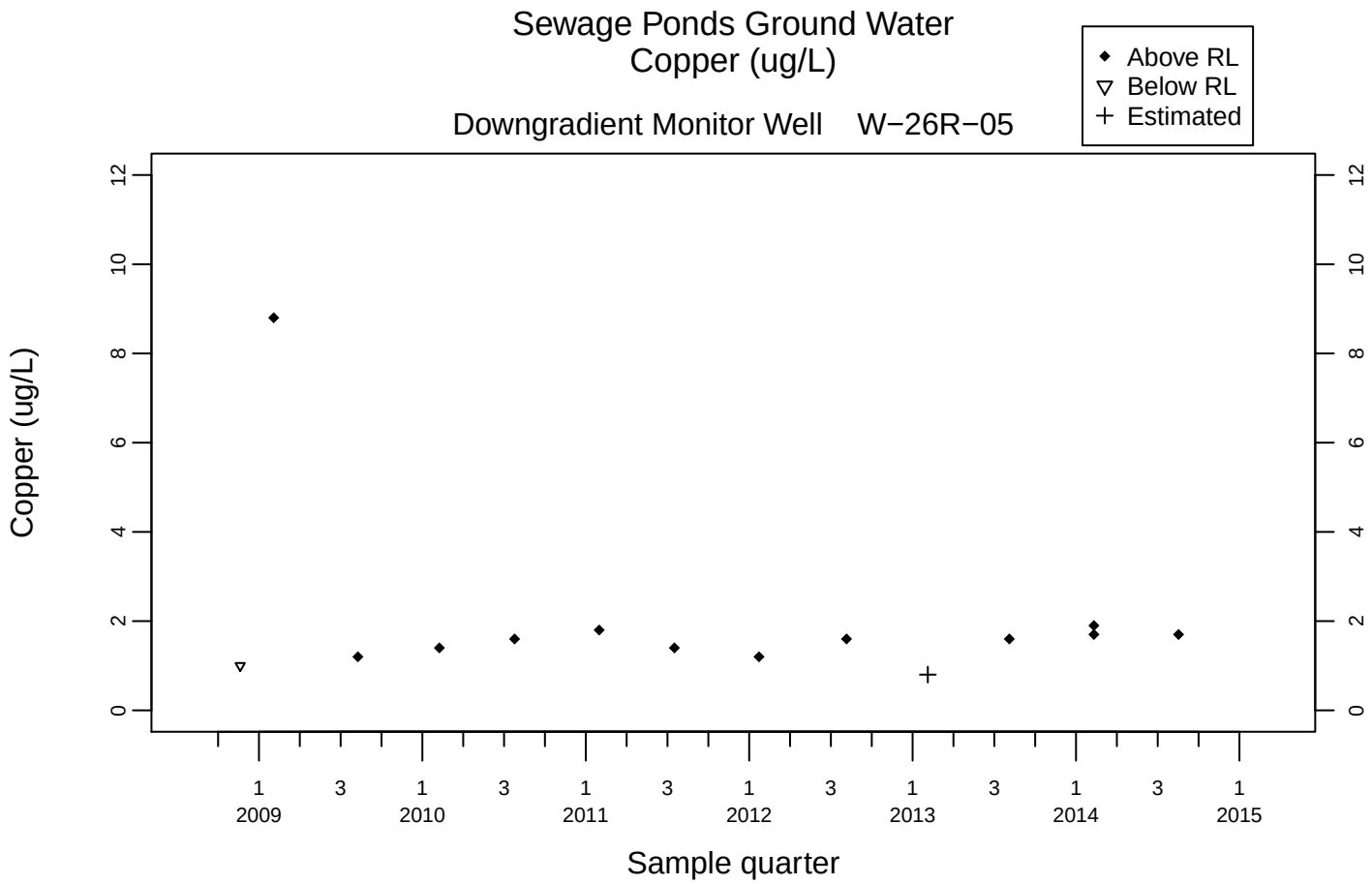

Upgradient Monitor Well W−7PS
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

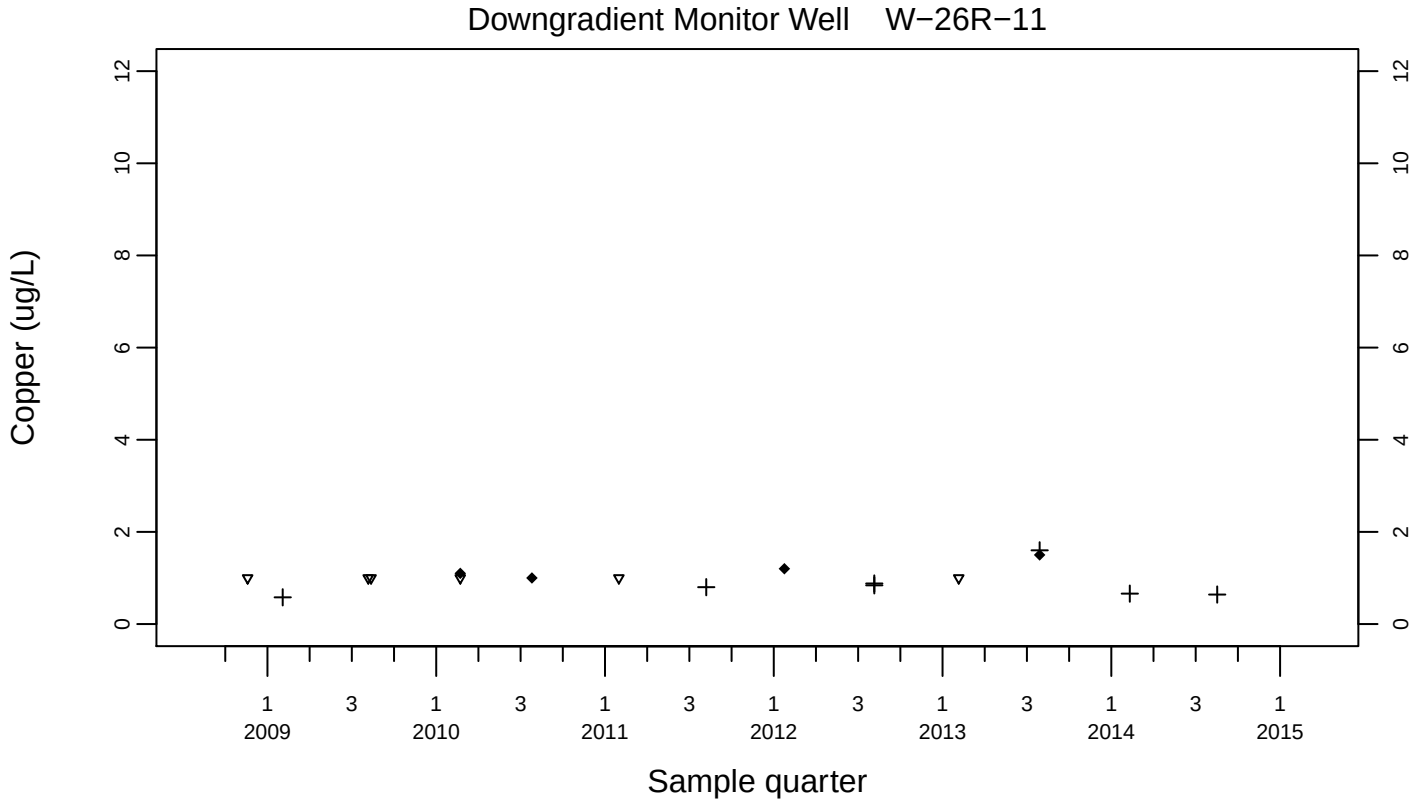

Sewage Ponds Ground Water
Copper (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

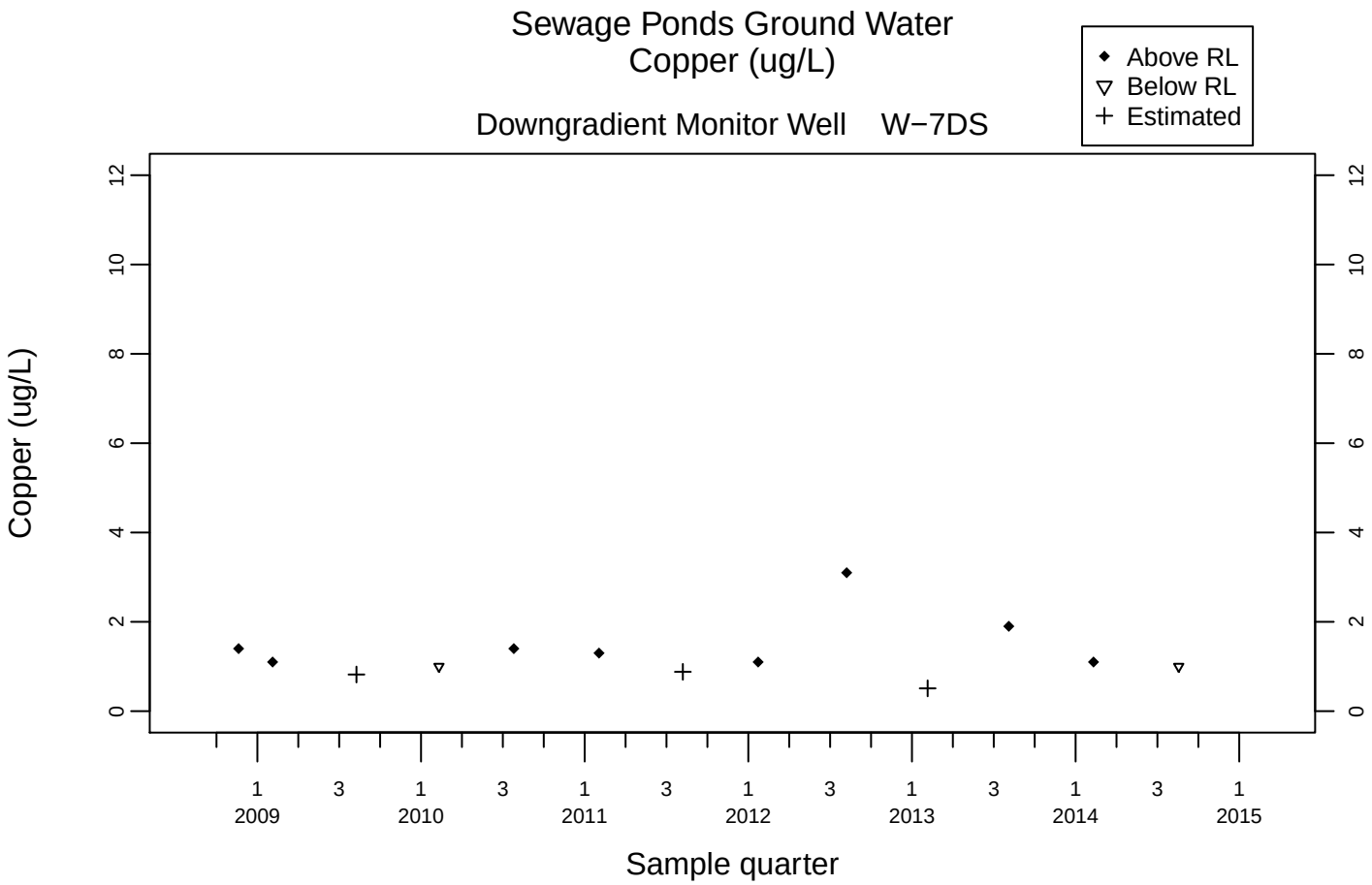

Downgradient Monitor Well W−25N−23
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

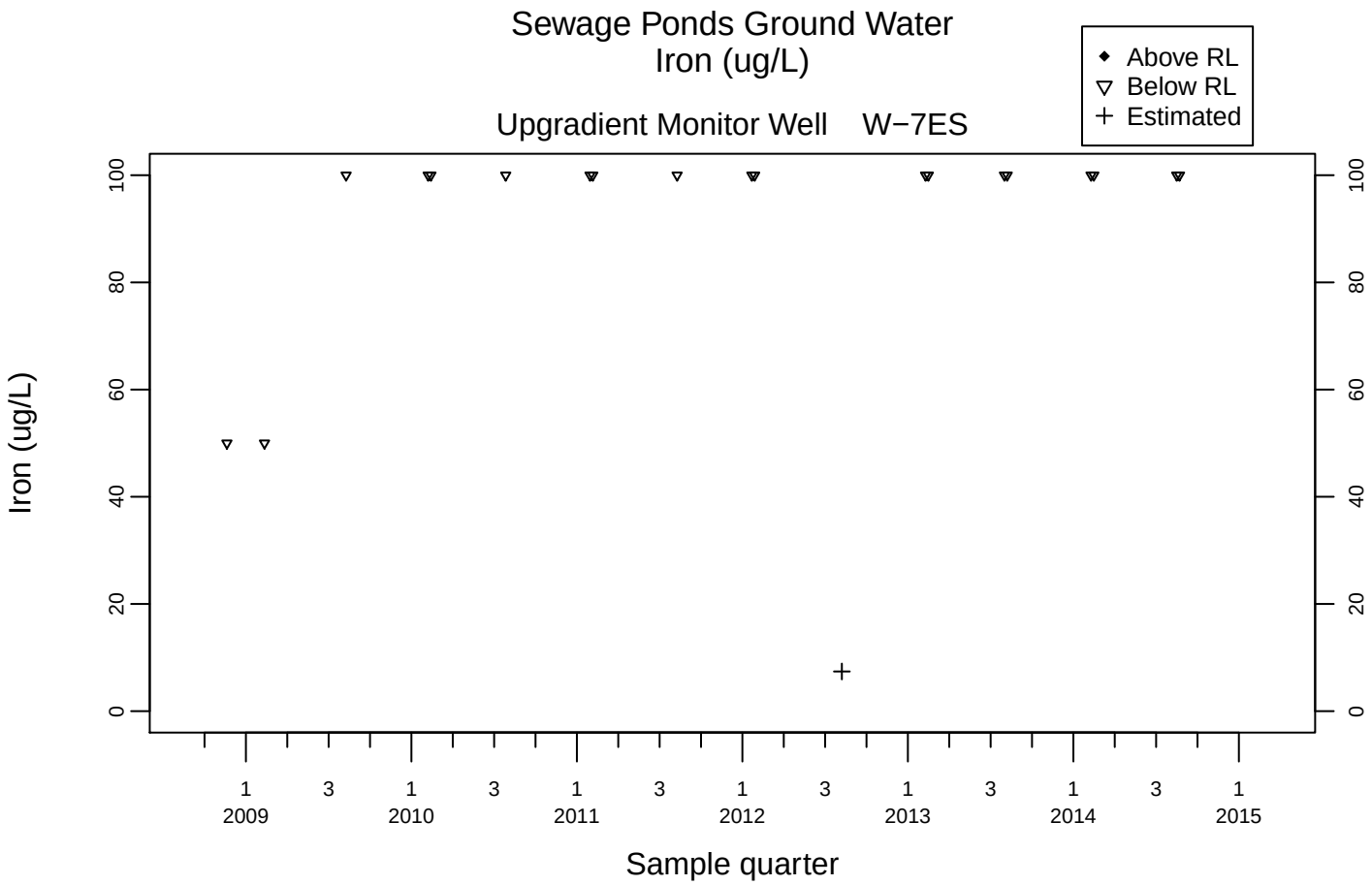

Sewage Ponds Ground Water
Copper (ug/L)
Above RL
Estimated
Downgradient Monitor Well W−25N−22
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

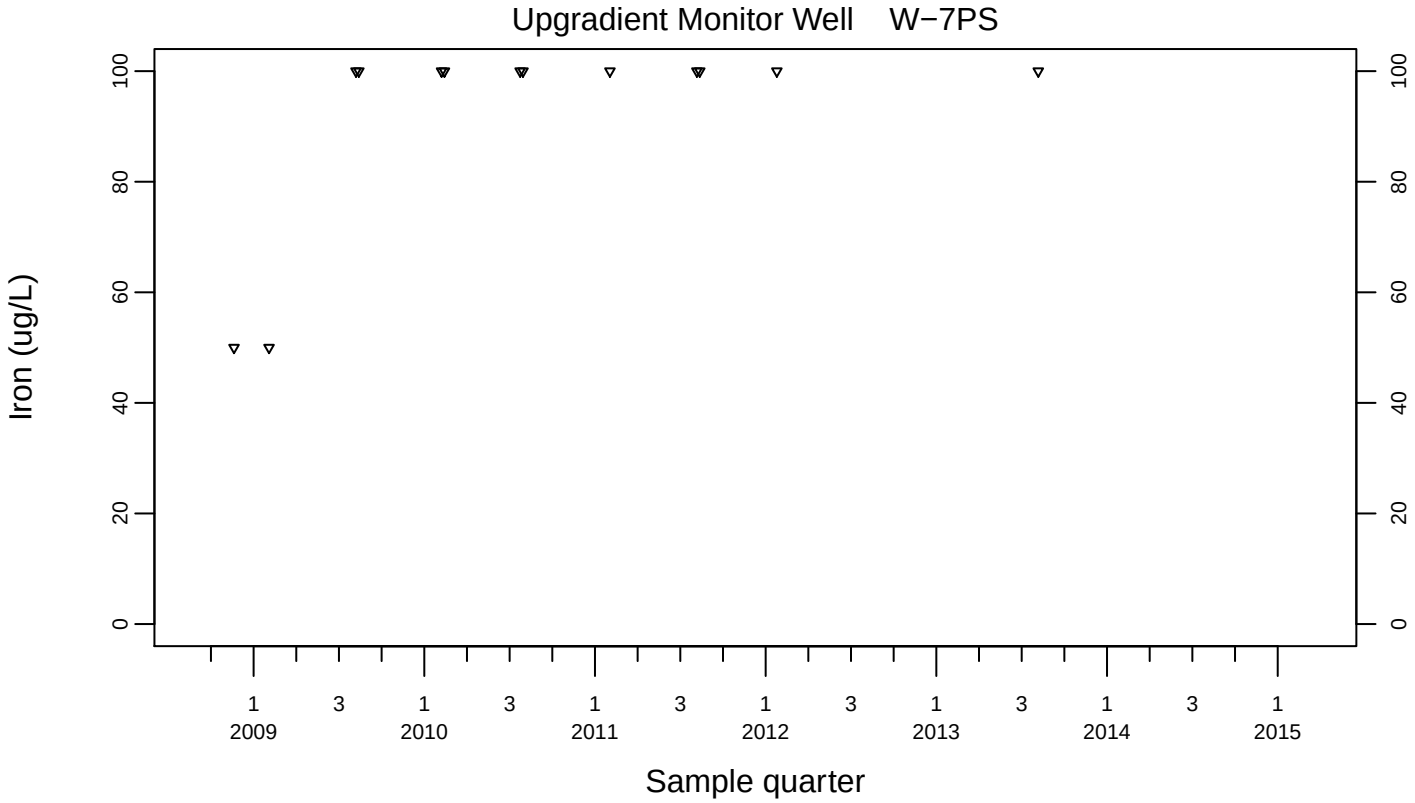

Downgradient Monitor Well W−26R−01
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

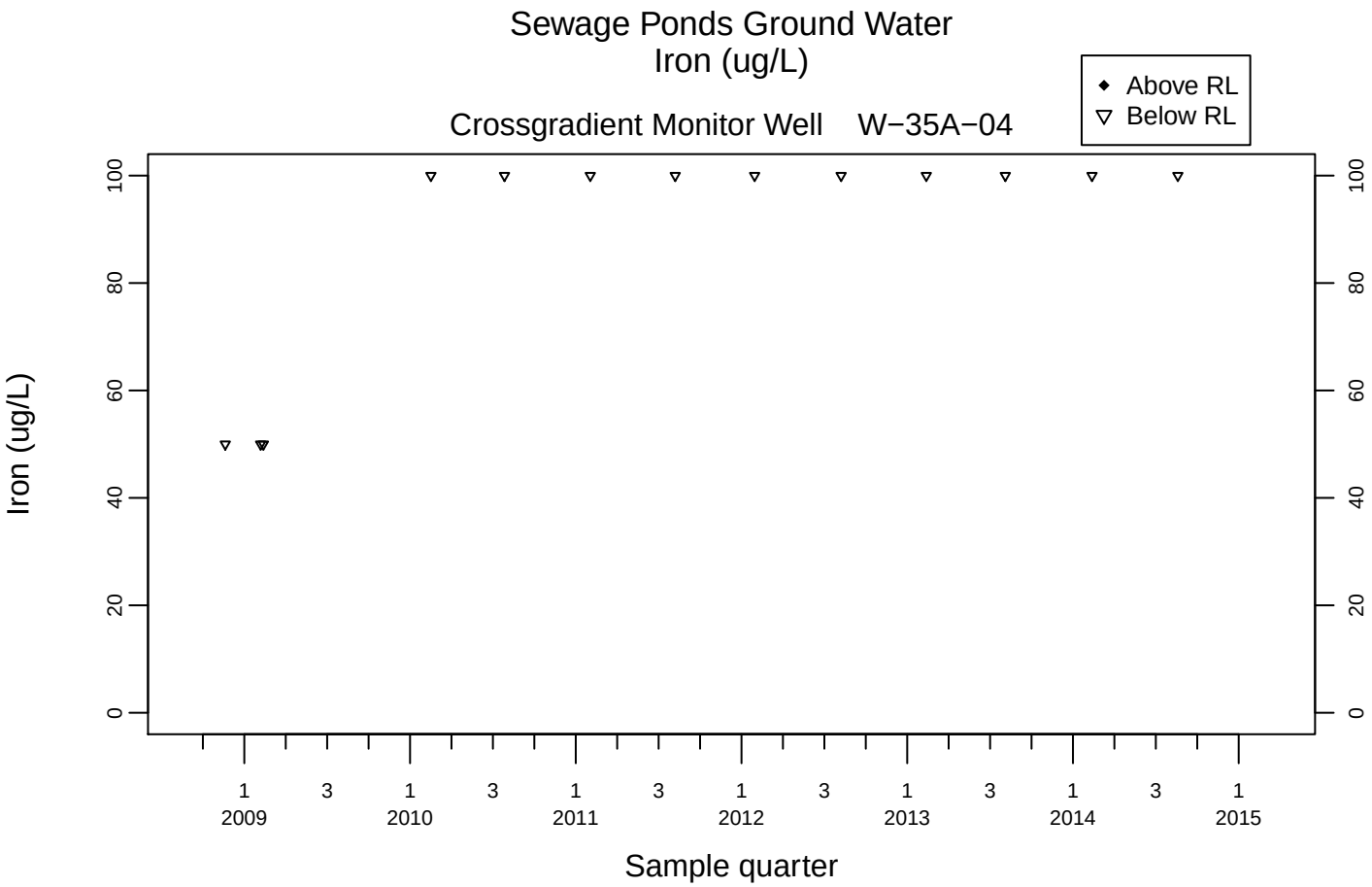

Sewage Ponds Ground Water
Copper (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

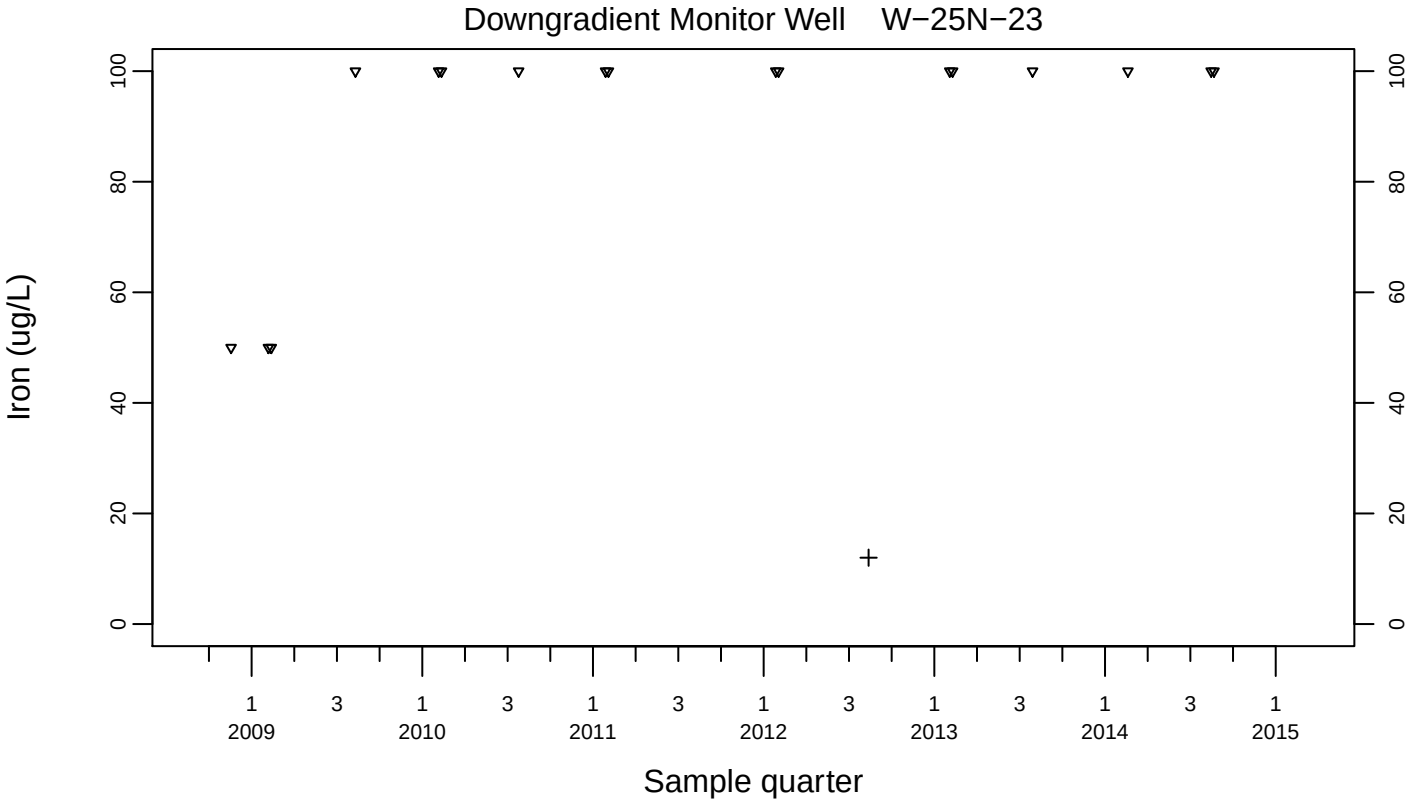

Downgradient Monitor Well W−26R−11
Copper (ug/L)
0
2
4
6
8
10
12
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

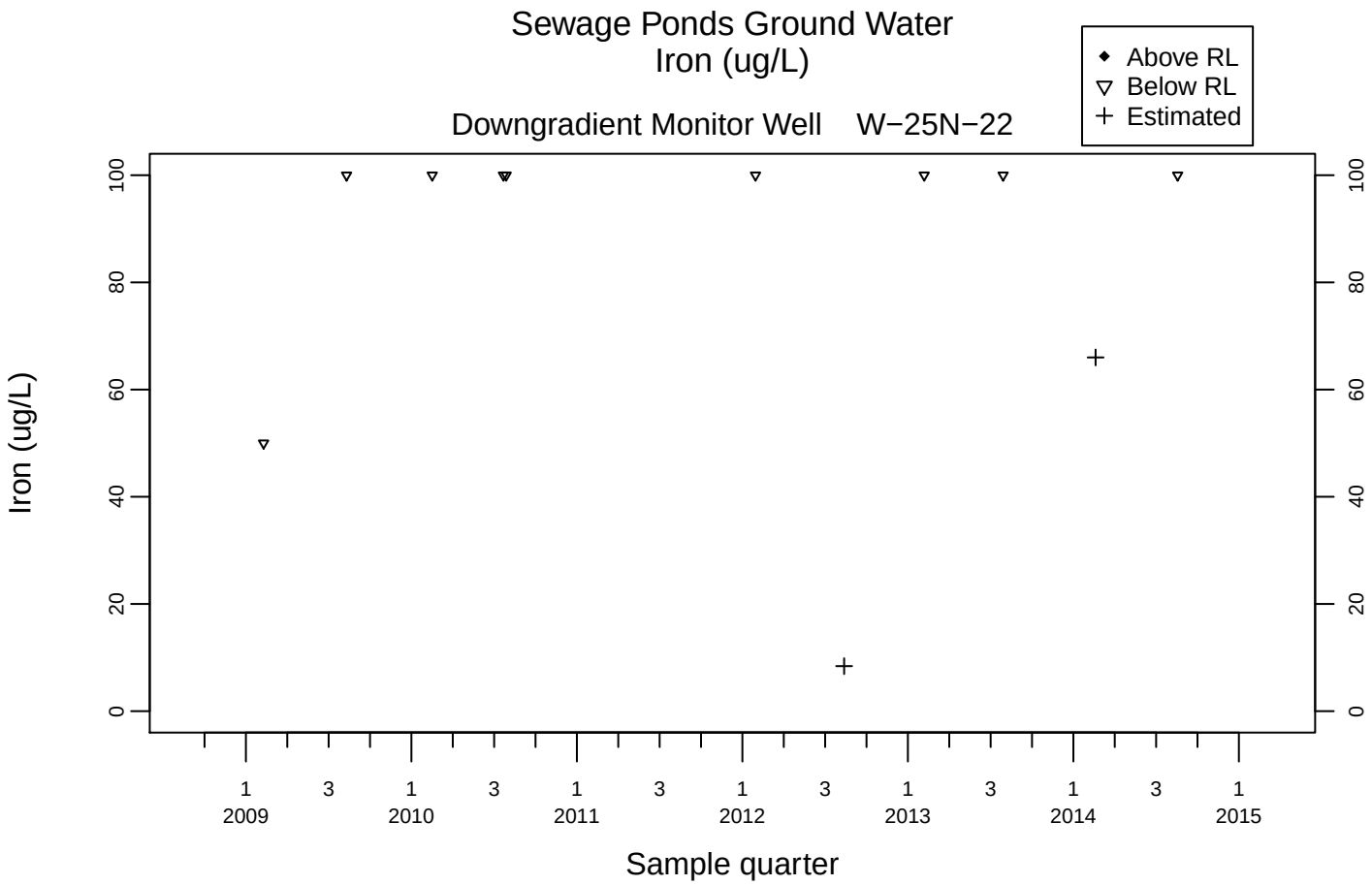

Sewage Ponds Ground Water
Copper (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Copper (ug/L)
0
2
4
6
8
10
12
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

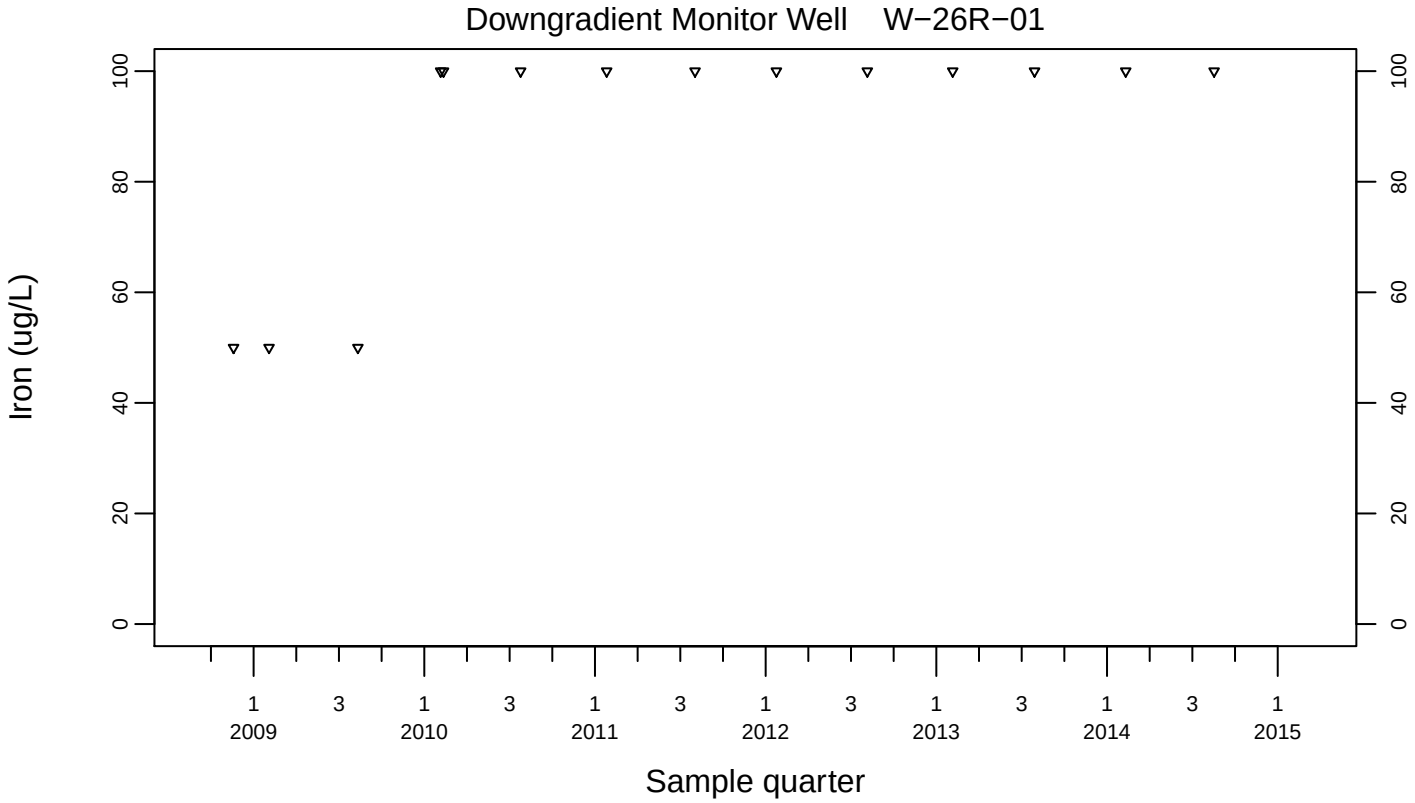

Sewage Ponds Ground Water
Iron (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

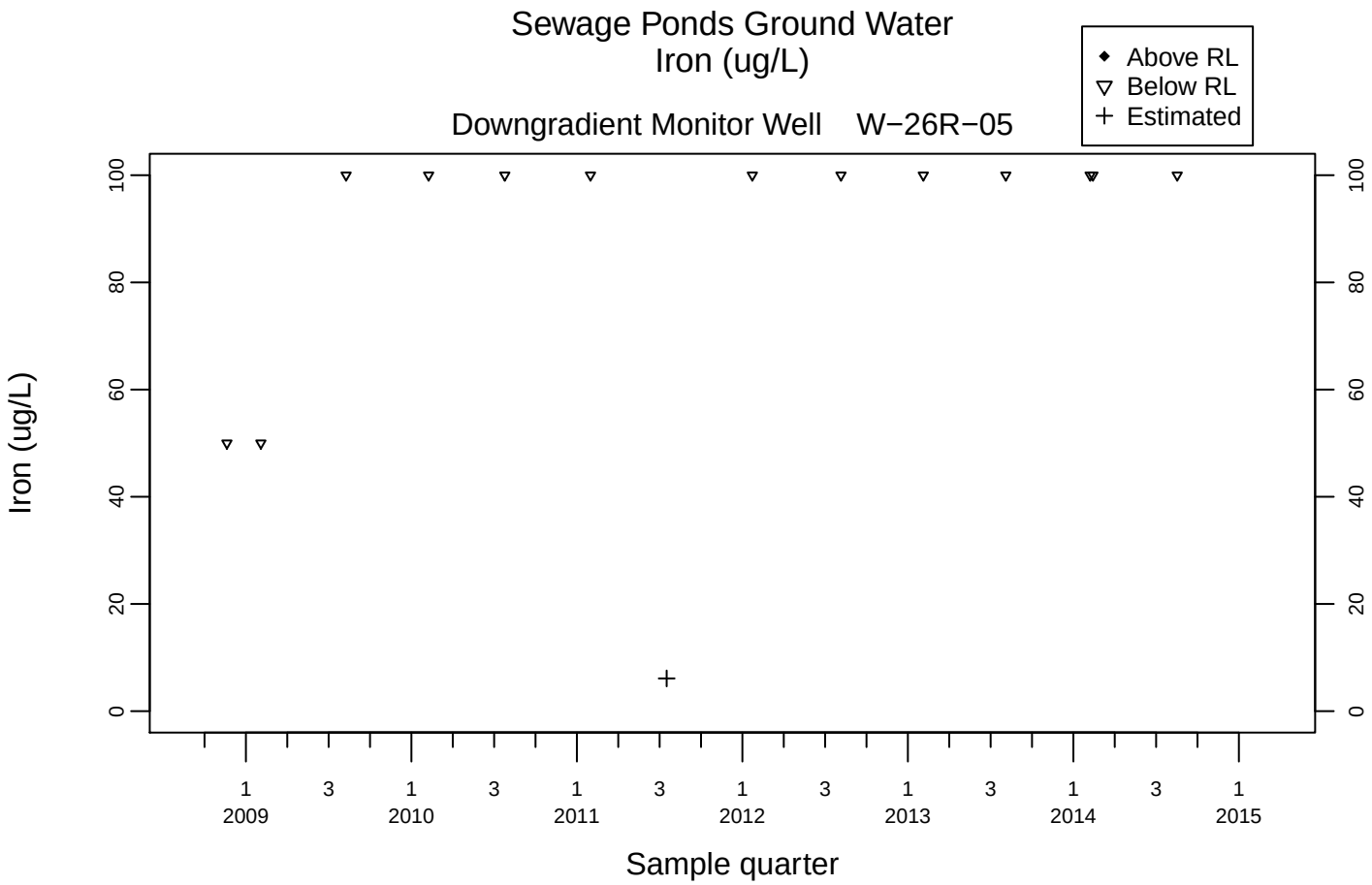

Upgradient Monitor Well W−7PS
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

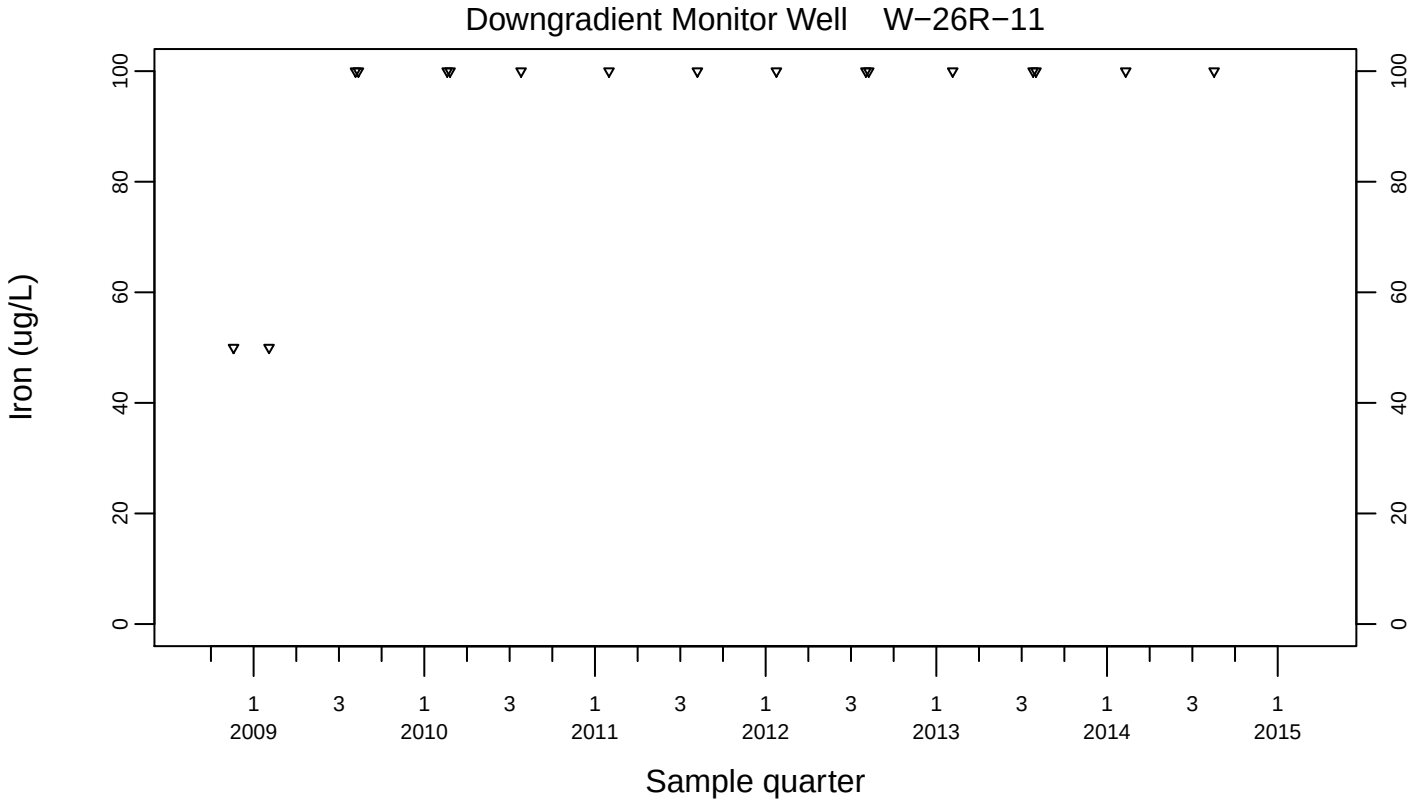

Sewage Ponds Ground Water
Iron (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

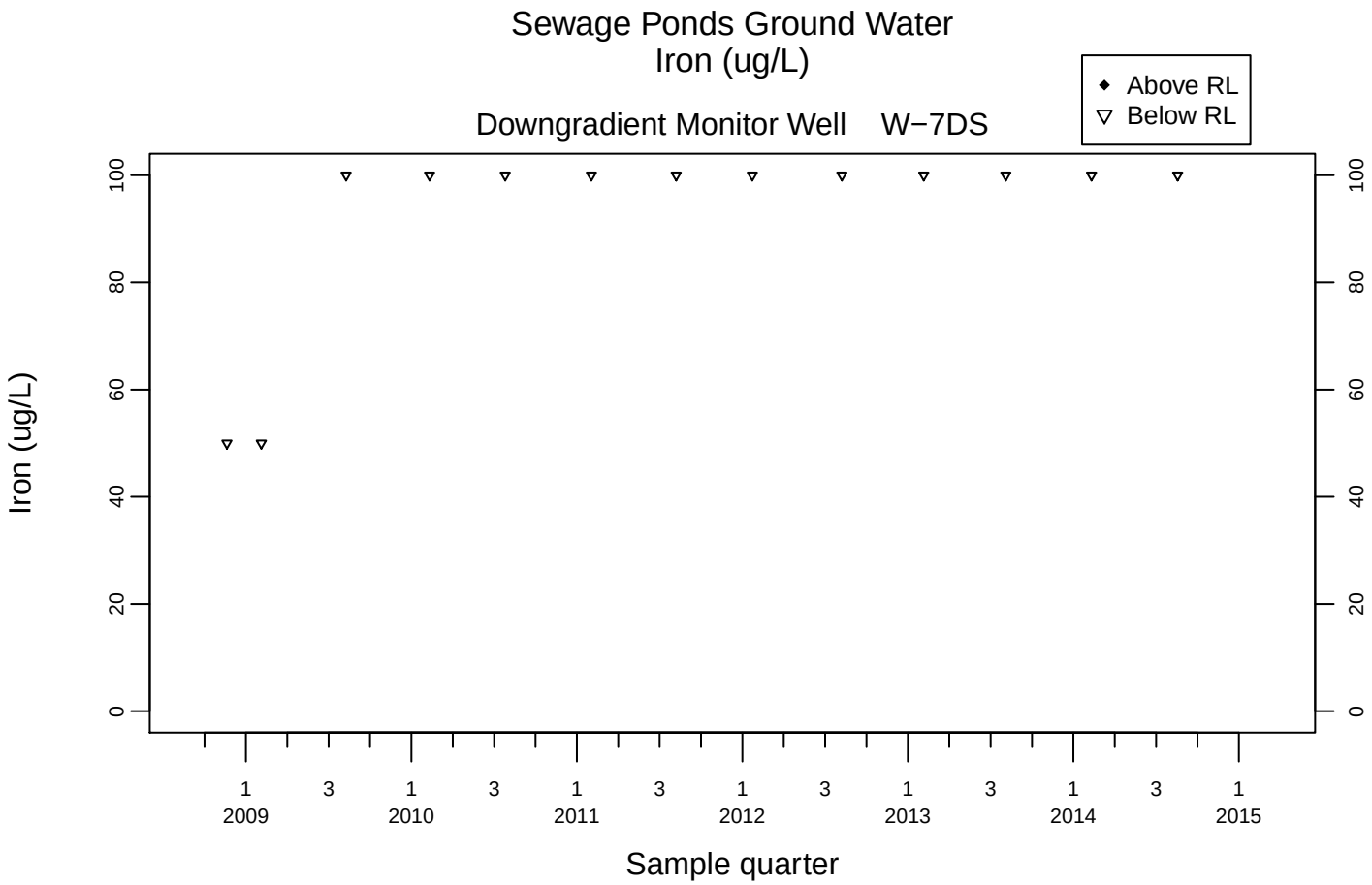

Downgradient Monitor Well W−25N−23
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

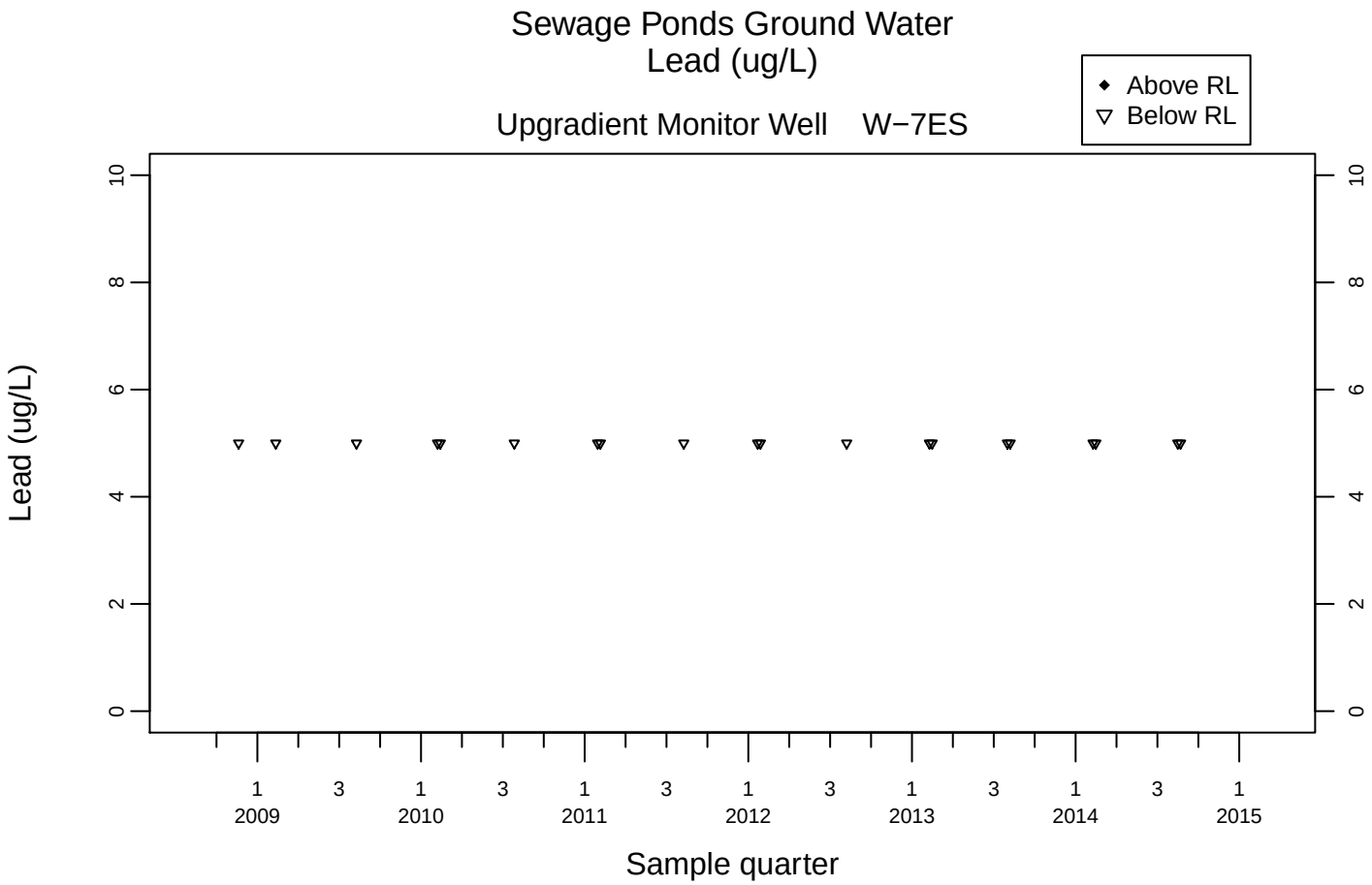

Sewage Ponds Ground Water
Iron (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Estimated
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

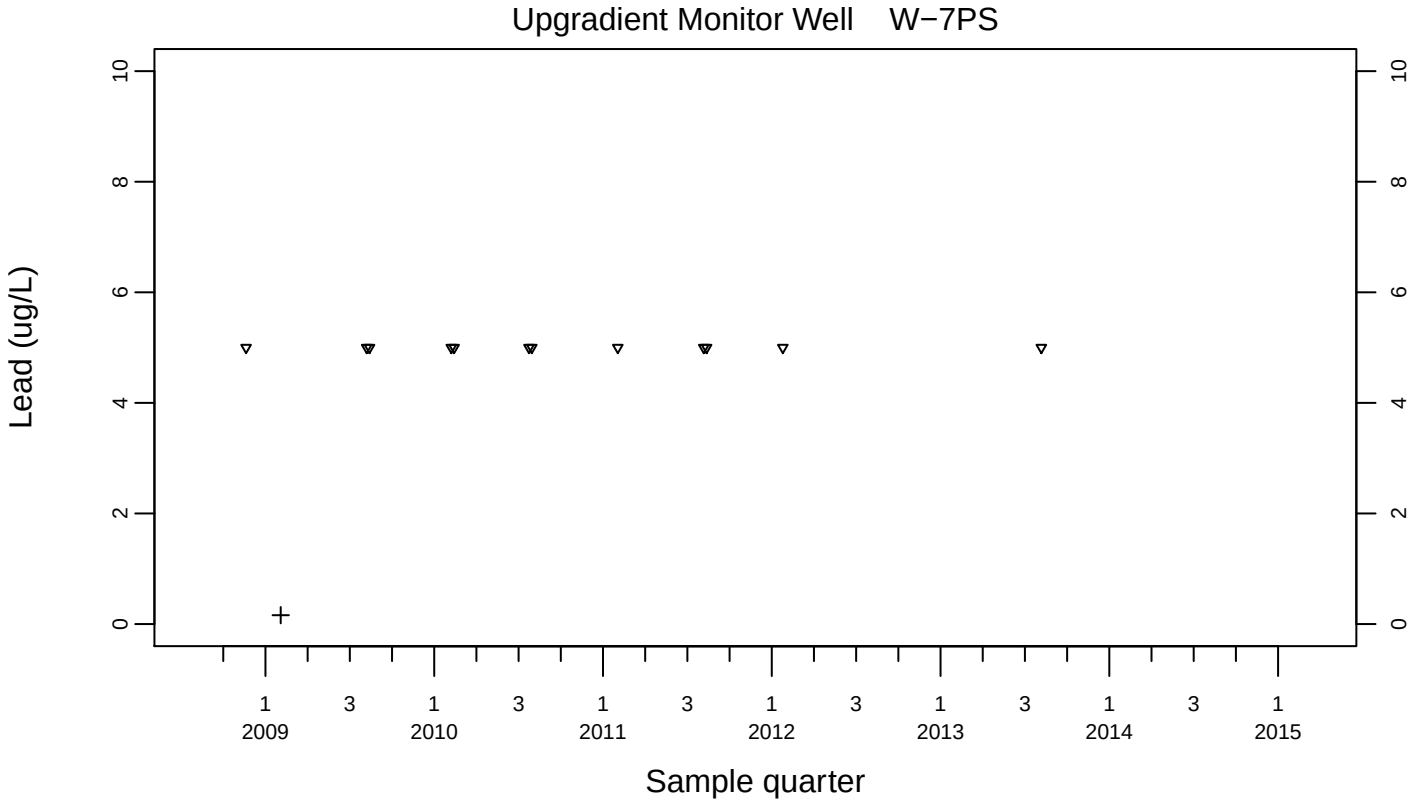

Downgradient Monitor Well W−26R−01
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

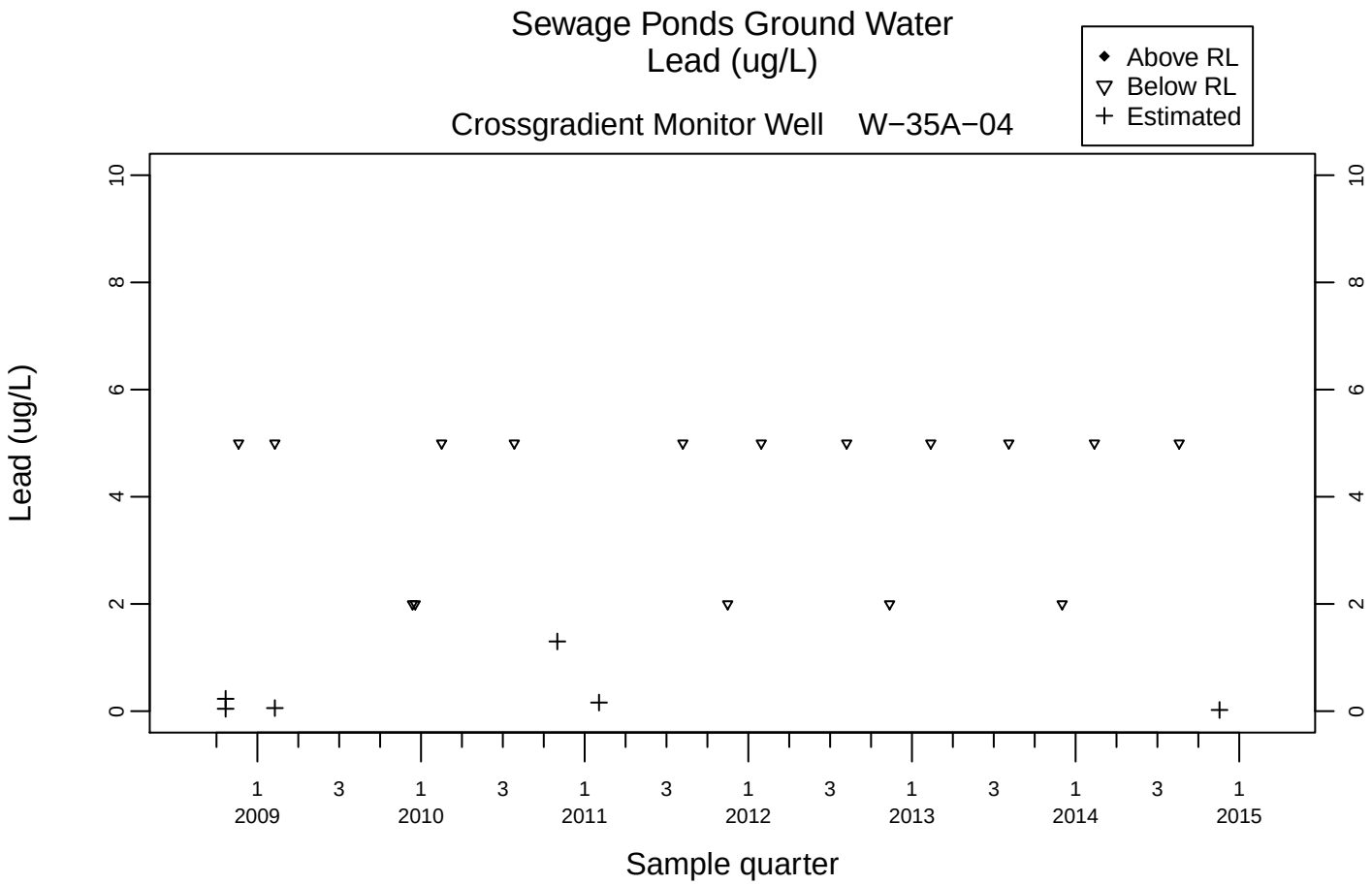

Sewage Ponds Ground Water
Iron (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

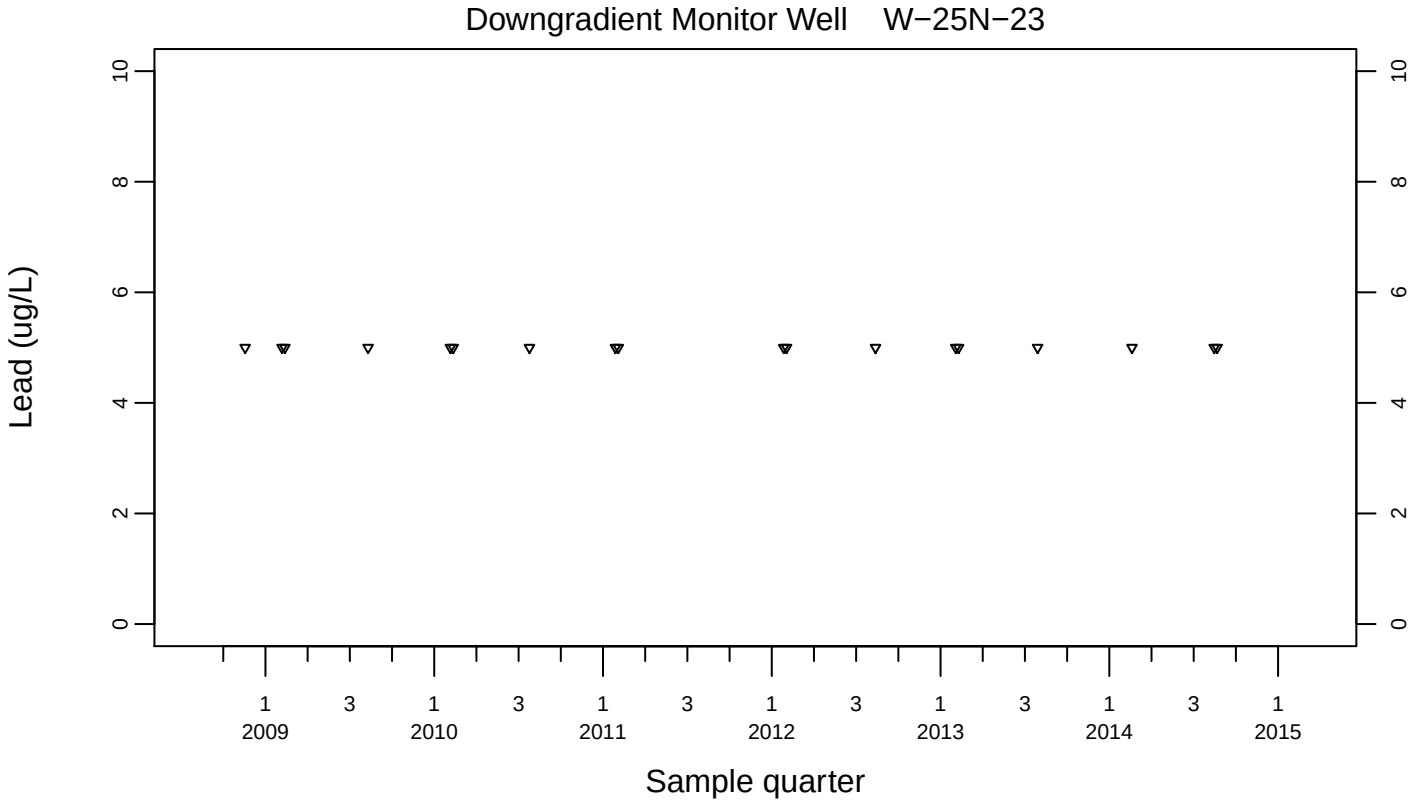

Downgradient Monitor Well W−26R−11
Iron (ug/L)
0
20
40
60
80
100
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

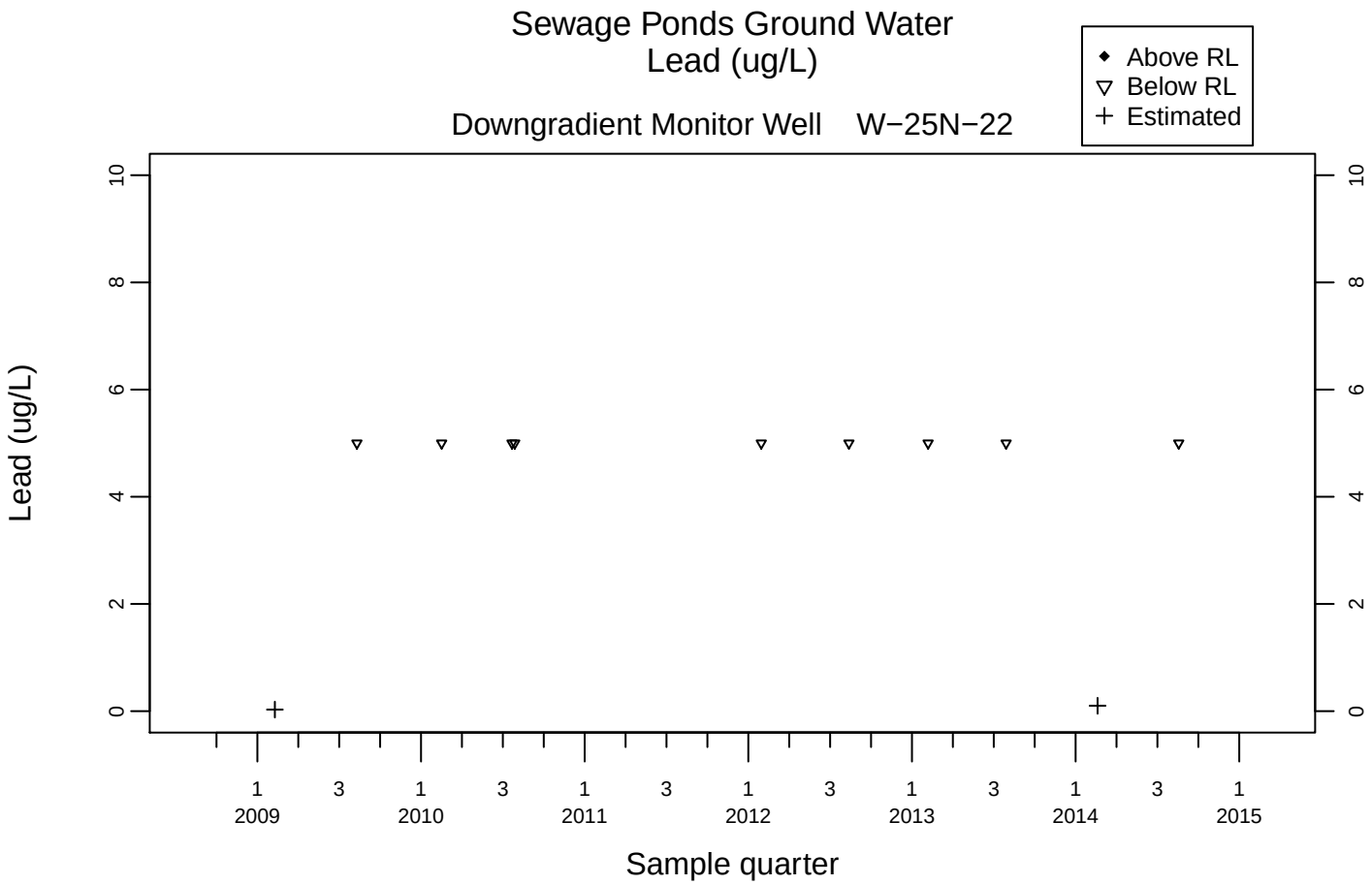

Sewage Ponds Ground Water
Iron (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Iron (ug/L)
0
20
40
60
80
100
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

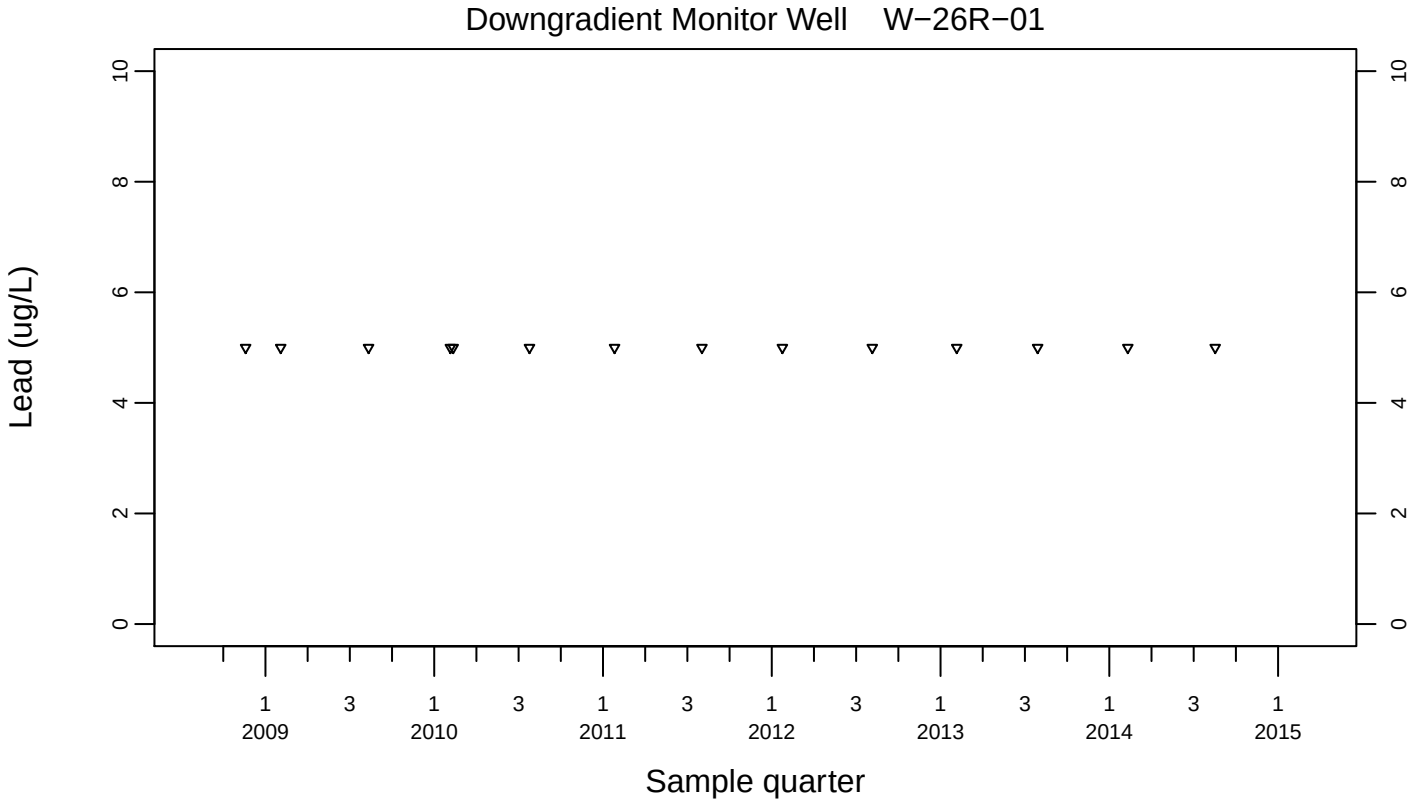

Sewage Ponds Ground Water
Lead (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

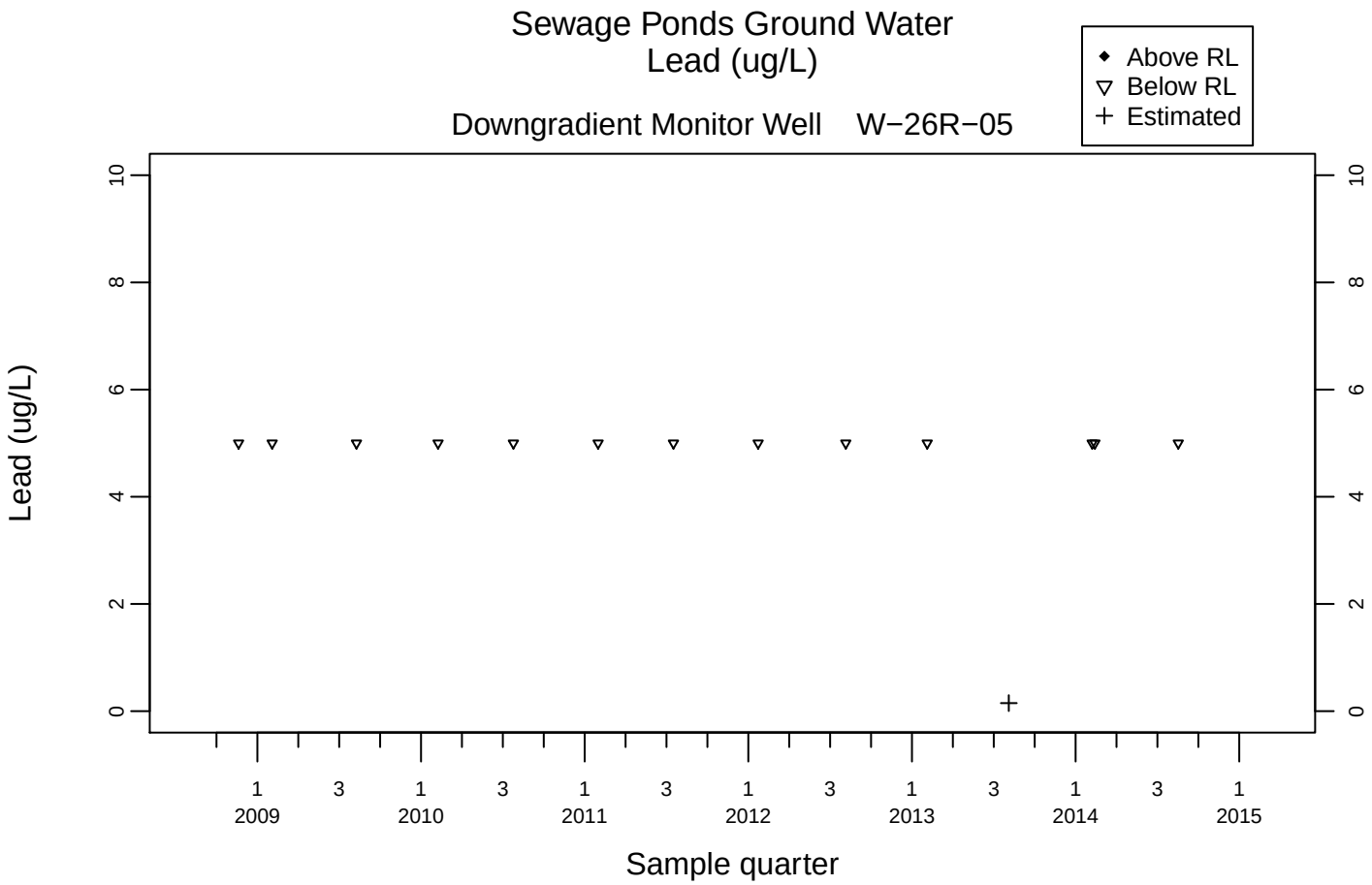

Upgradient Monitor Well W−7PS
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

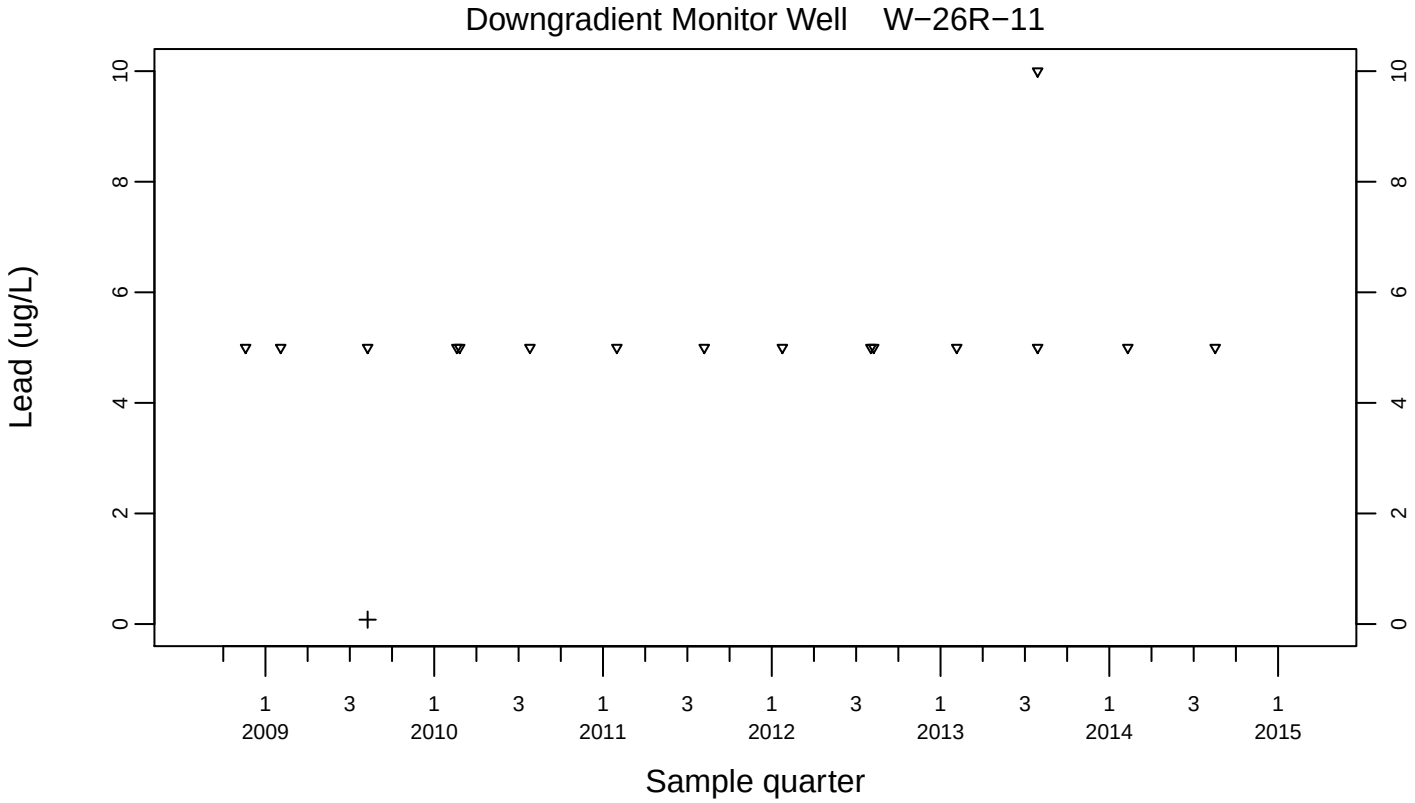

Sewage Ponds Ground Water
Lead (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

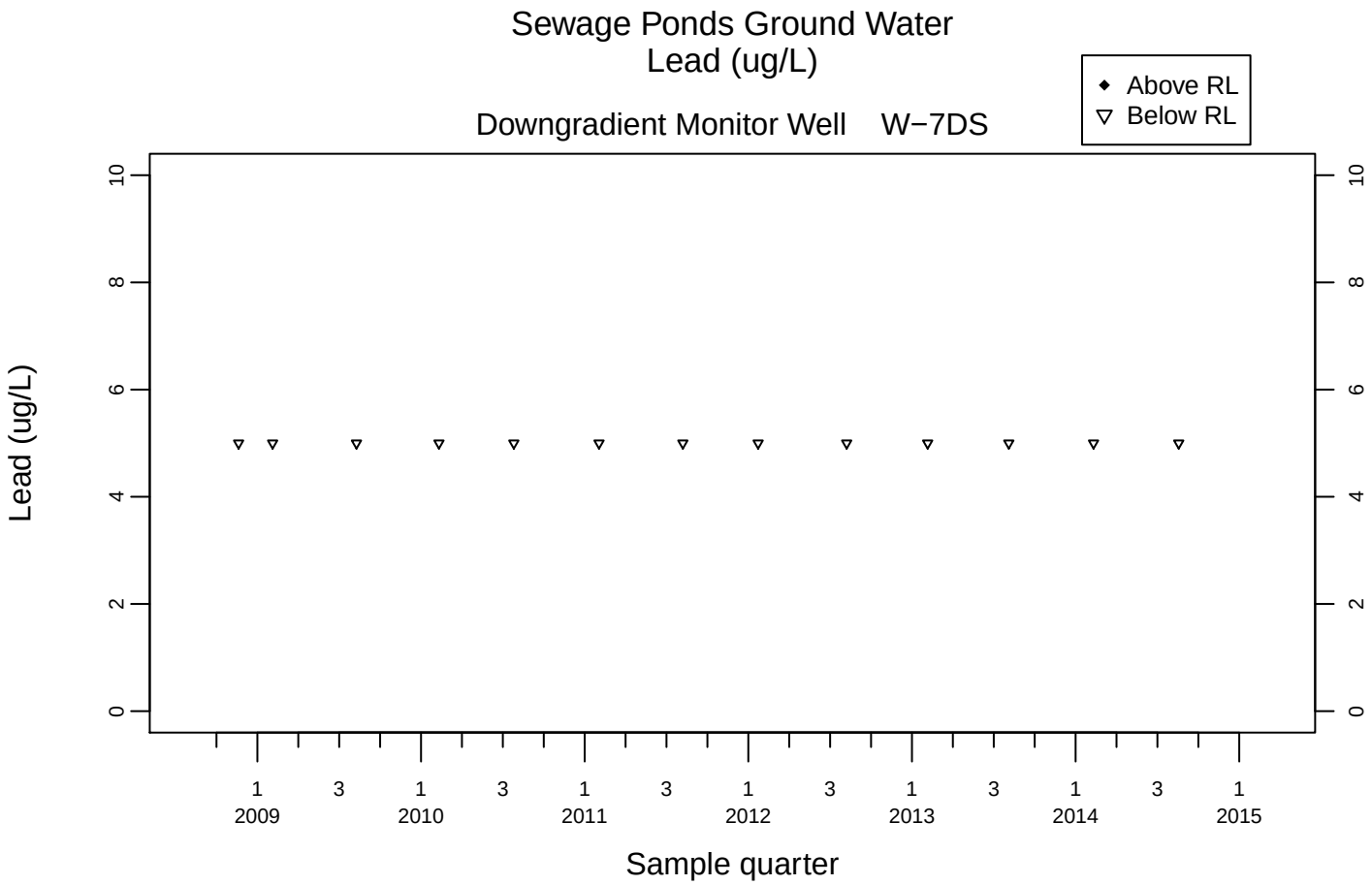

Downgradient Monitor Well W−25N−23
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

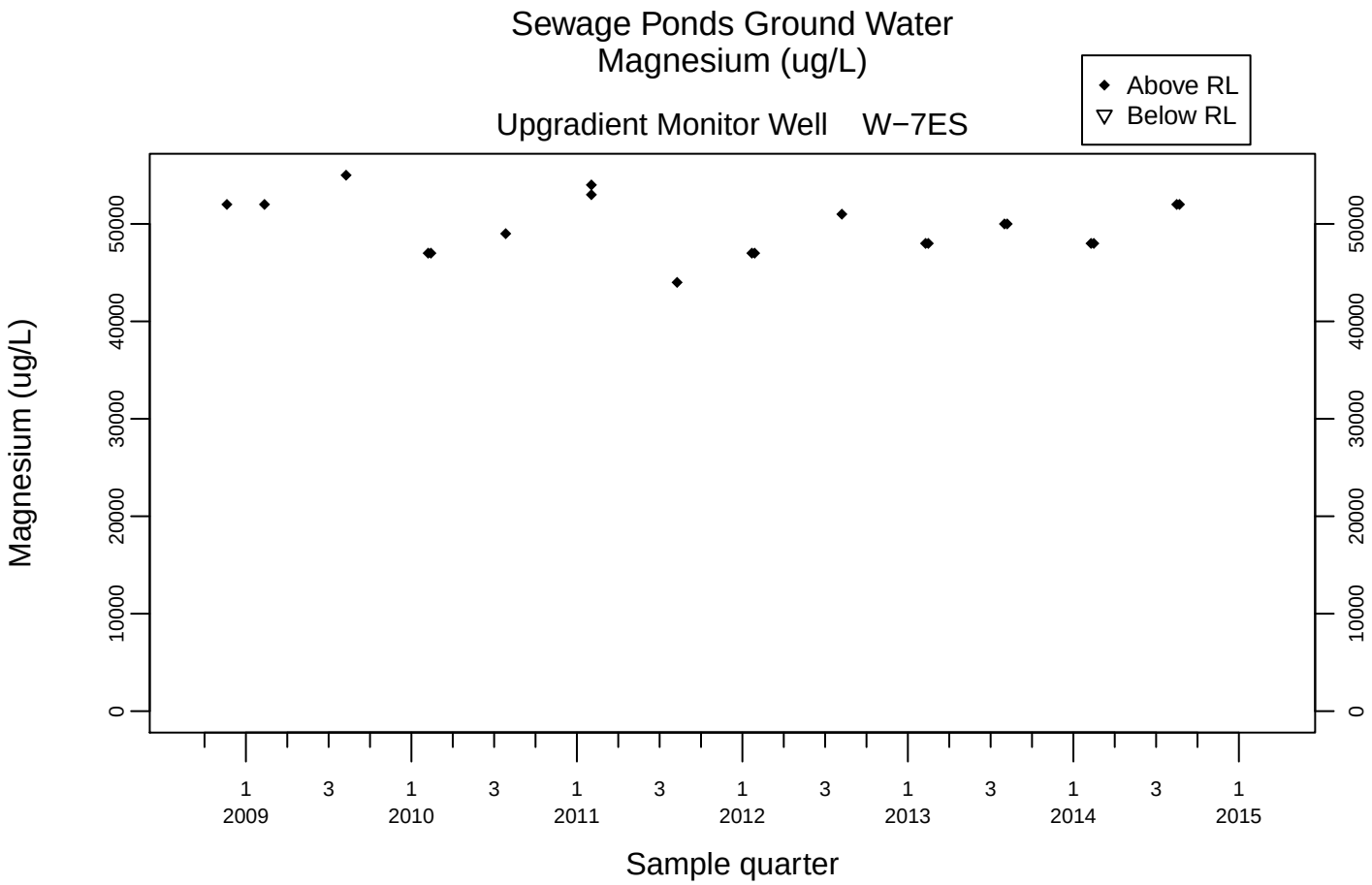

Sewage Ponds Ground Water
Lead (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−25N−22
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

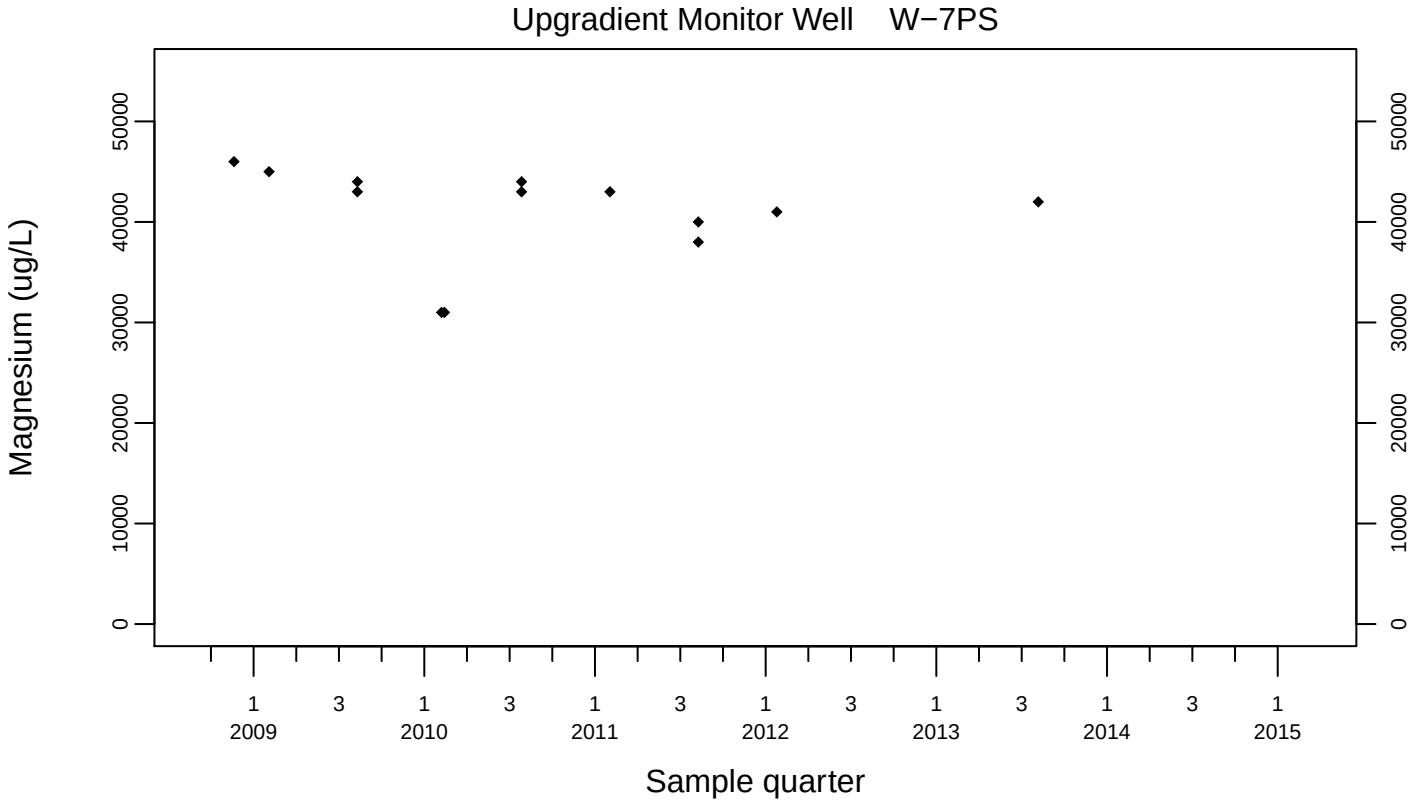

Downgradient Monitor Well W−26R−01
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

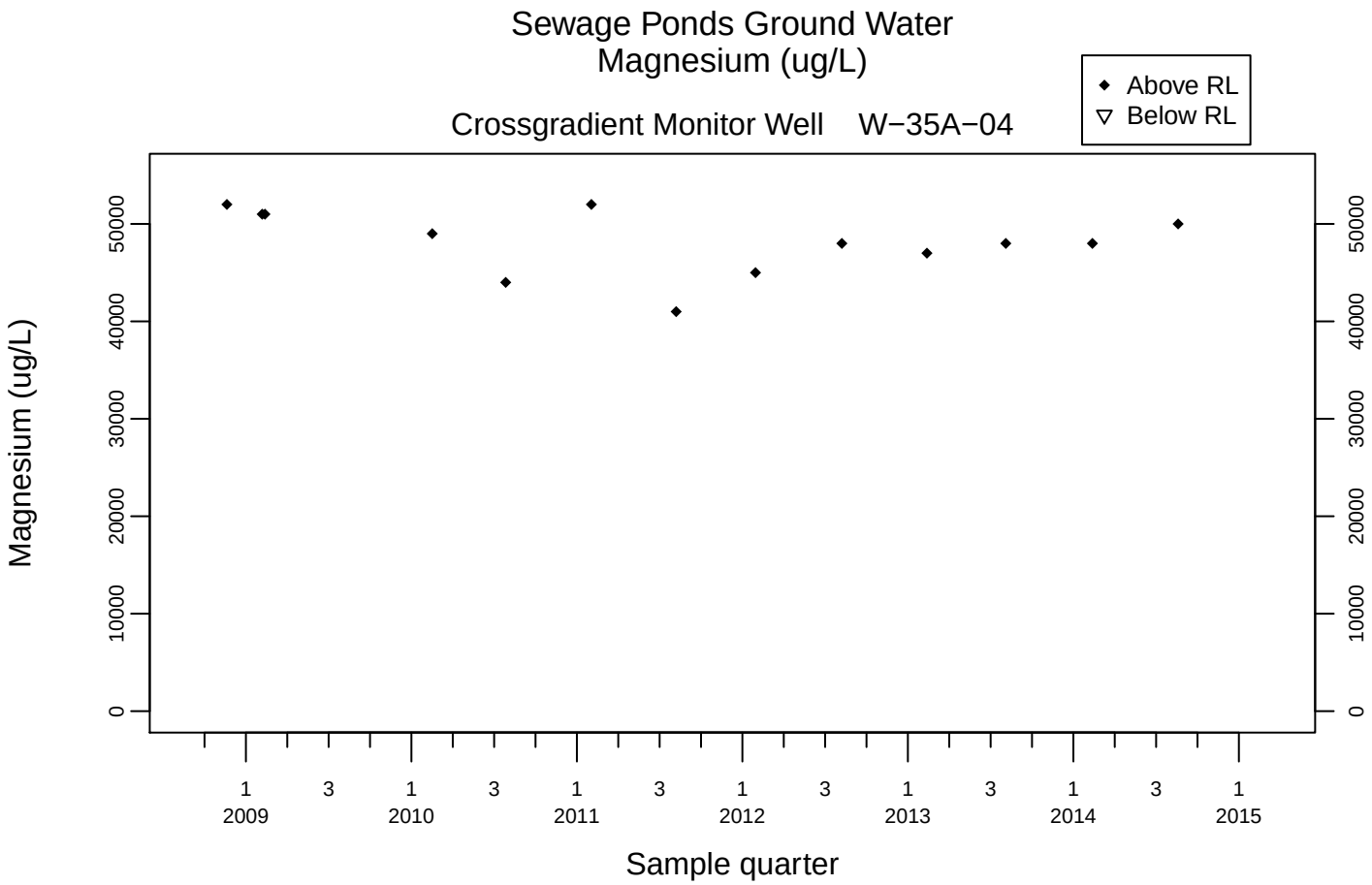

Sewage Ponds Ground Water
Lead (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

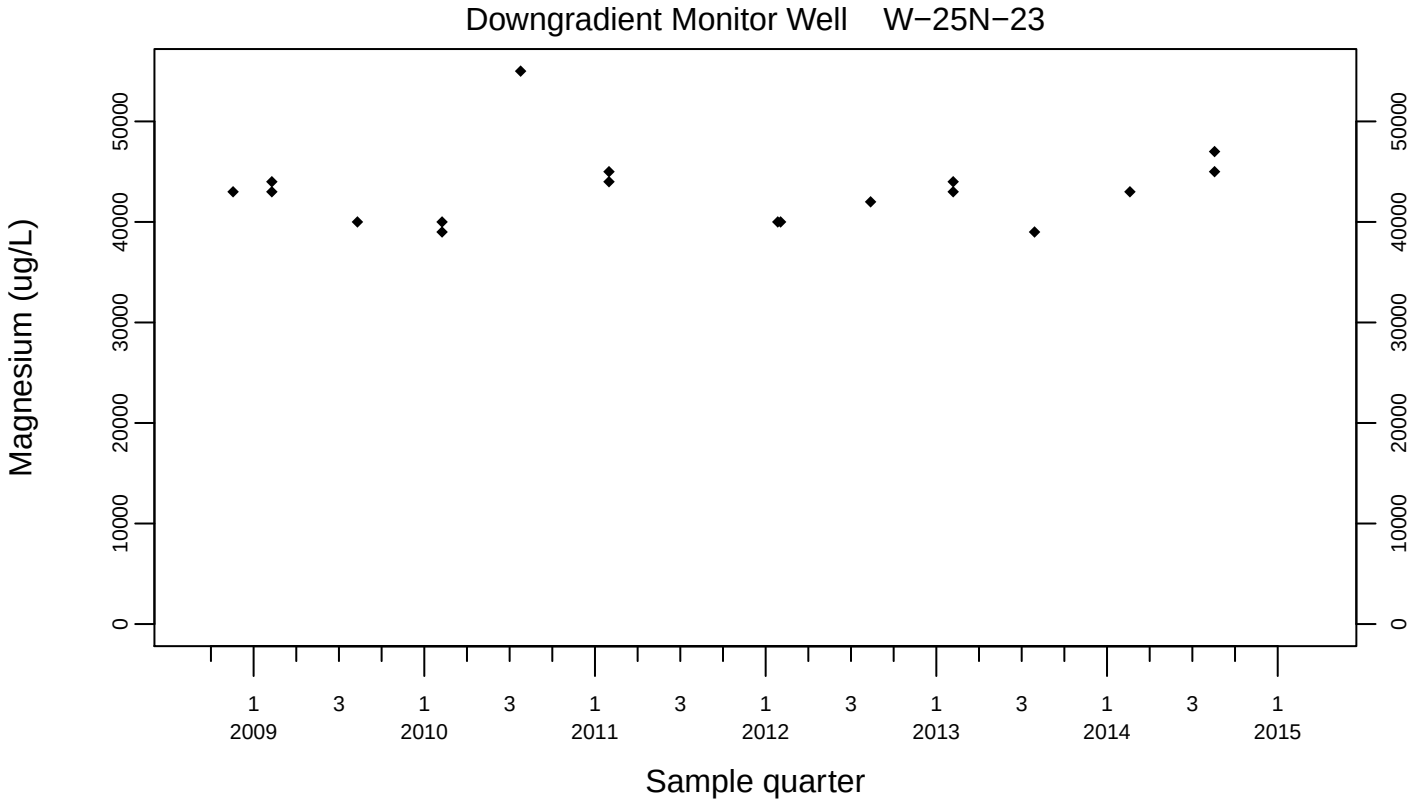

Downgradient Monitor Well W−26R−11
Lead (ug/L)
0
2
4
6
8
10
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

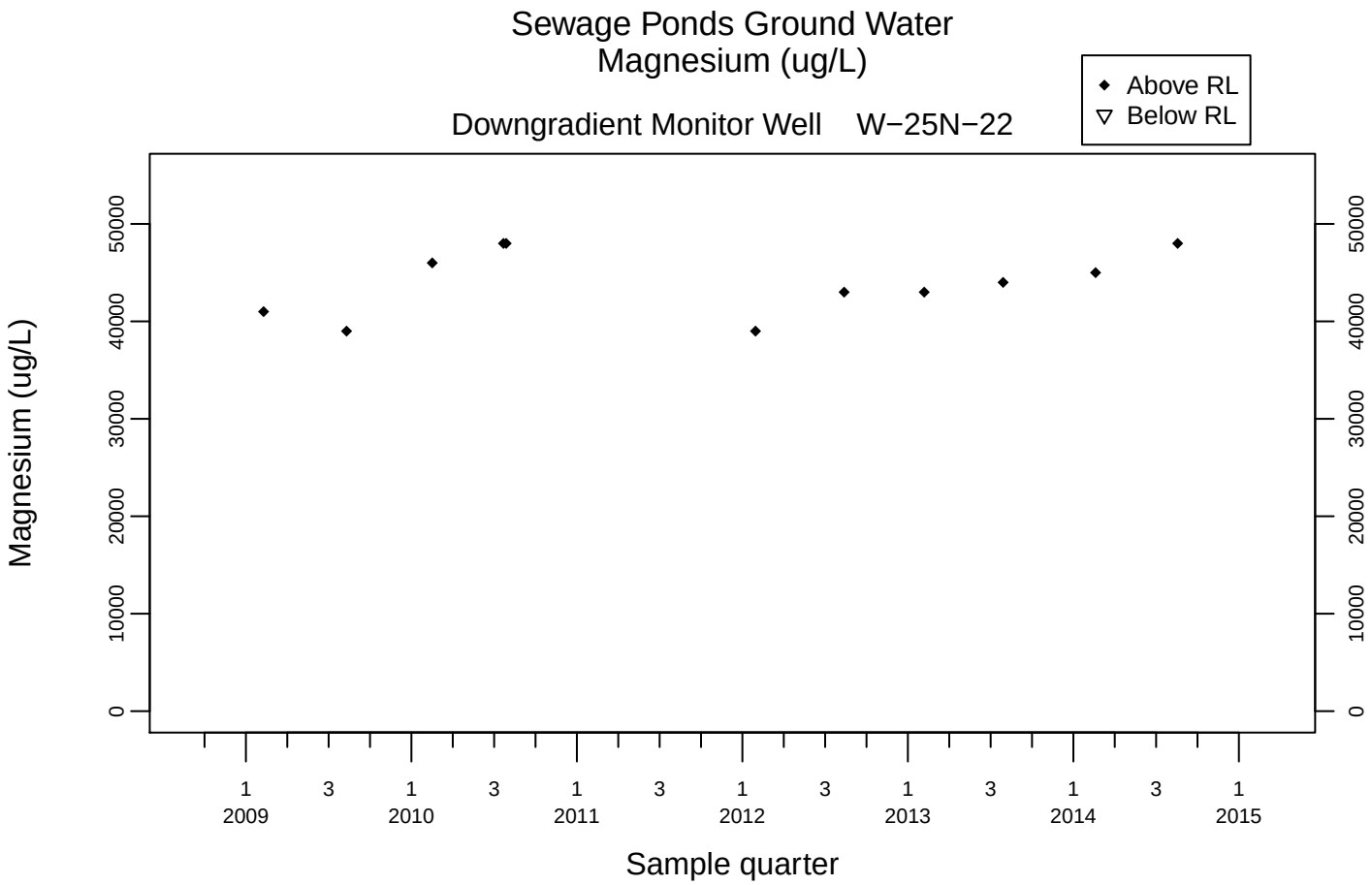

Sewage Ponds Ground Water
Lead (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Lead (ug/L)
0
2
4
6
8
10
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

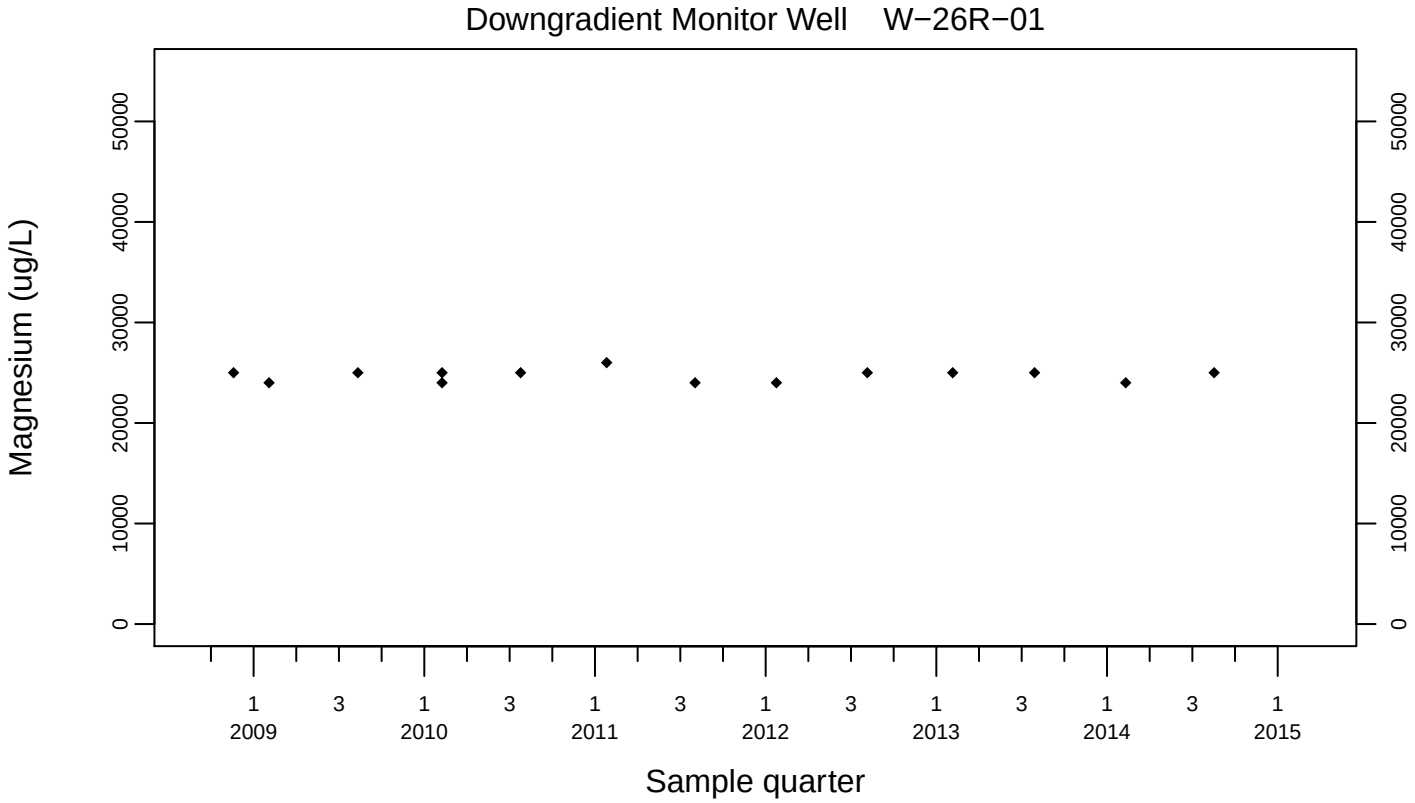

Sewage Ponds Ground Water
Magnesium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

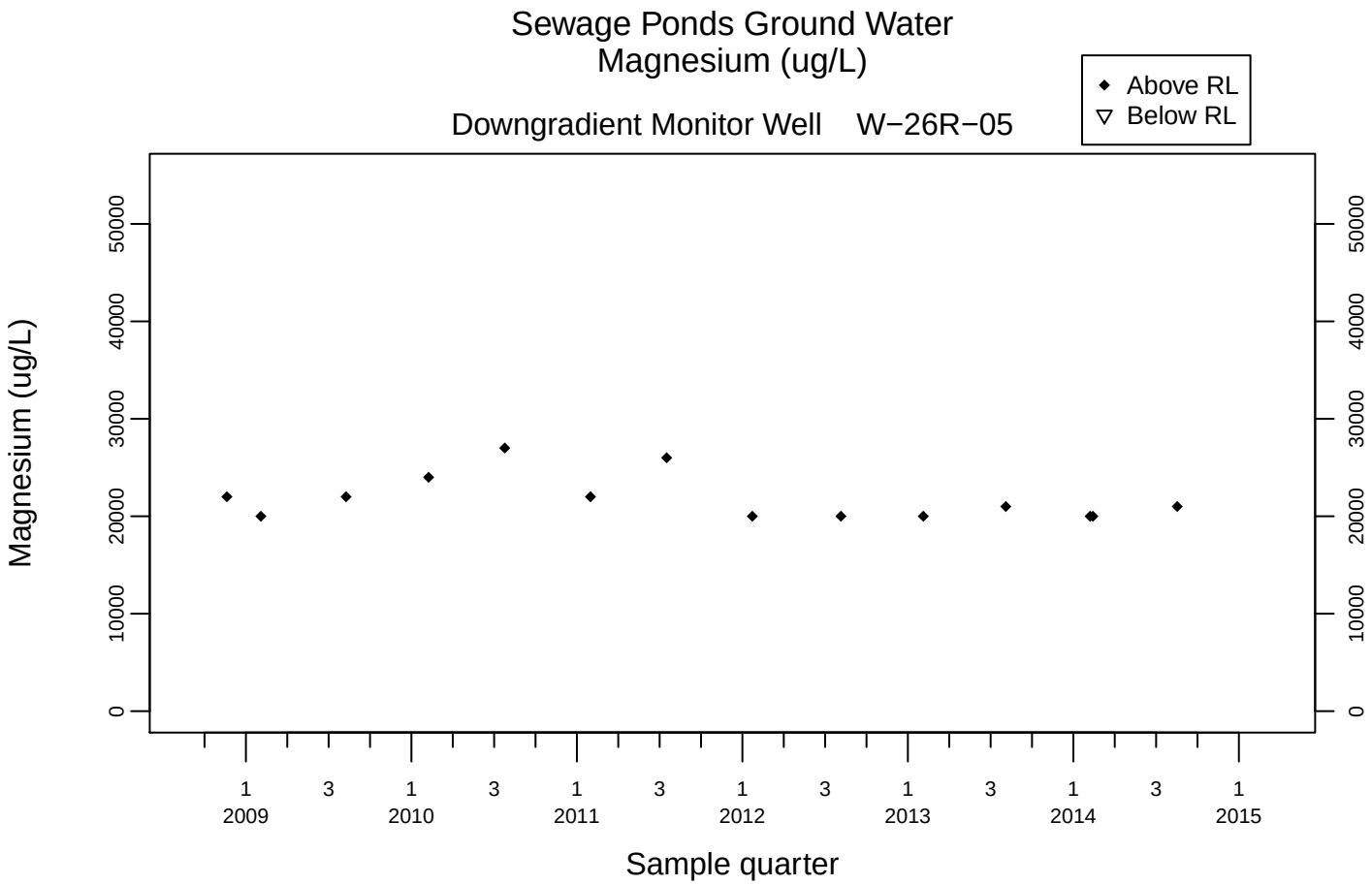

Upgradient Monitor Well W−7PS
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

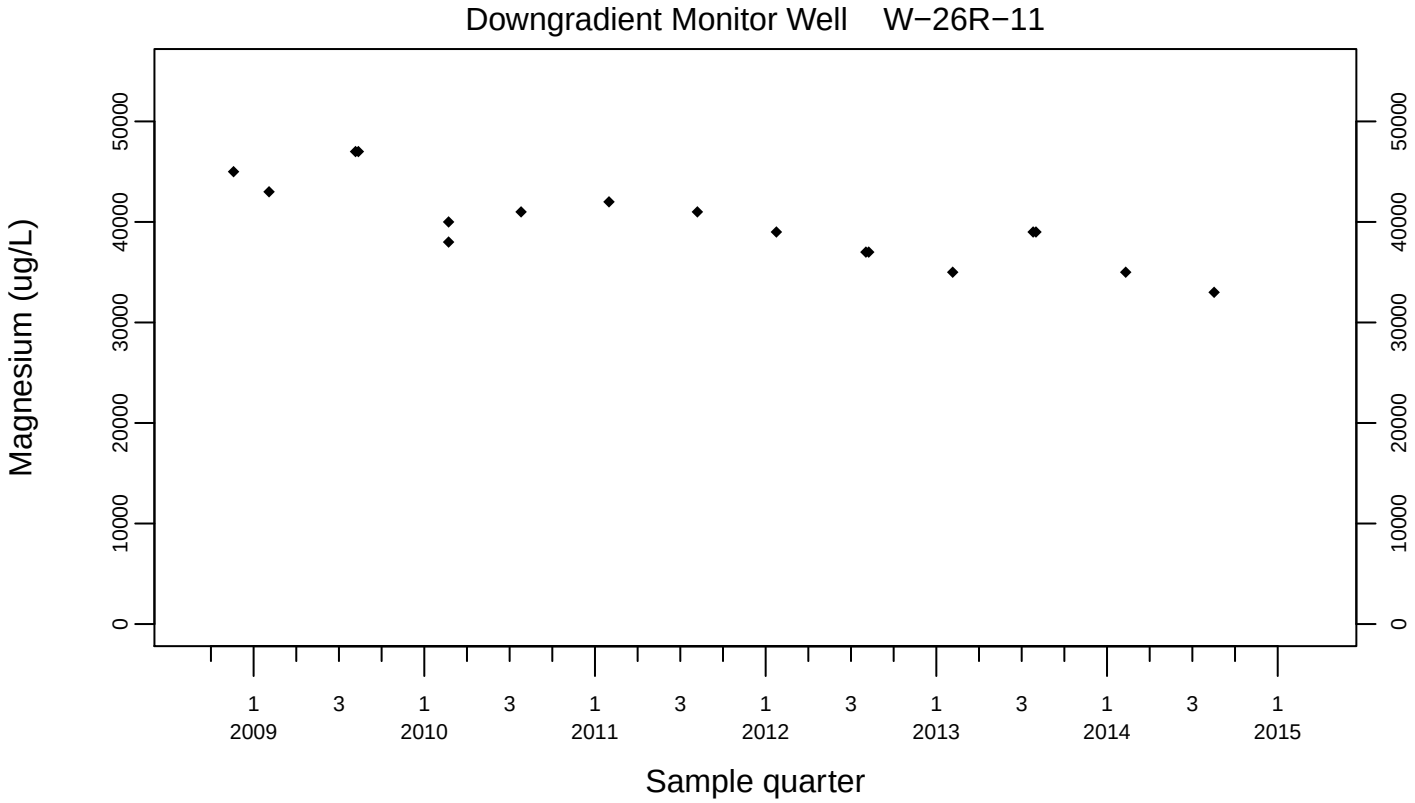

Sewage Ponds Ground Water
Magnesium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

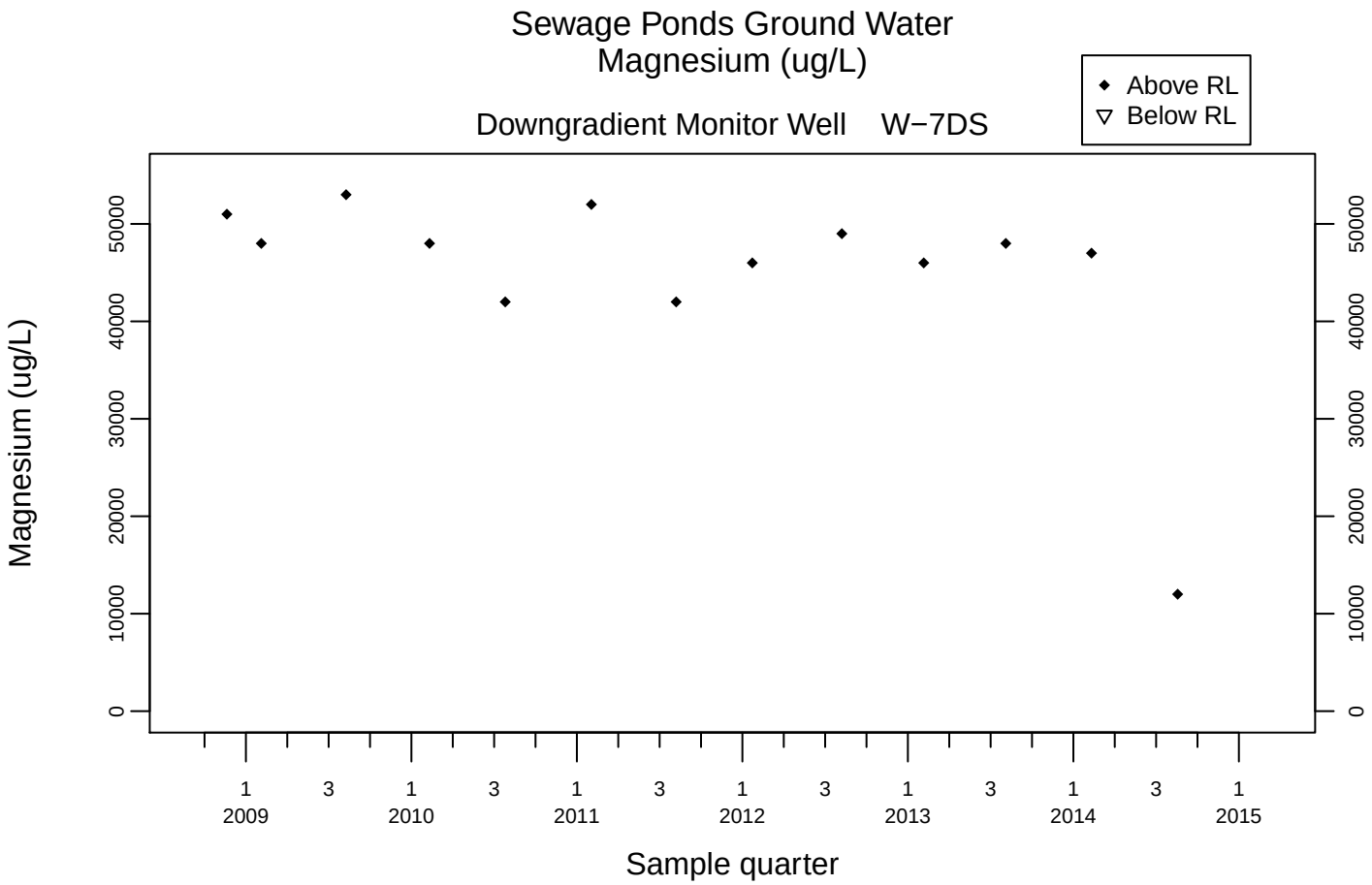

Downgradient Monitor Well W−25N−23
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

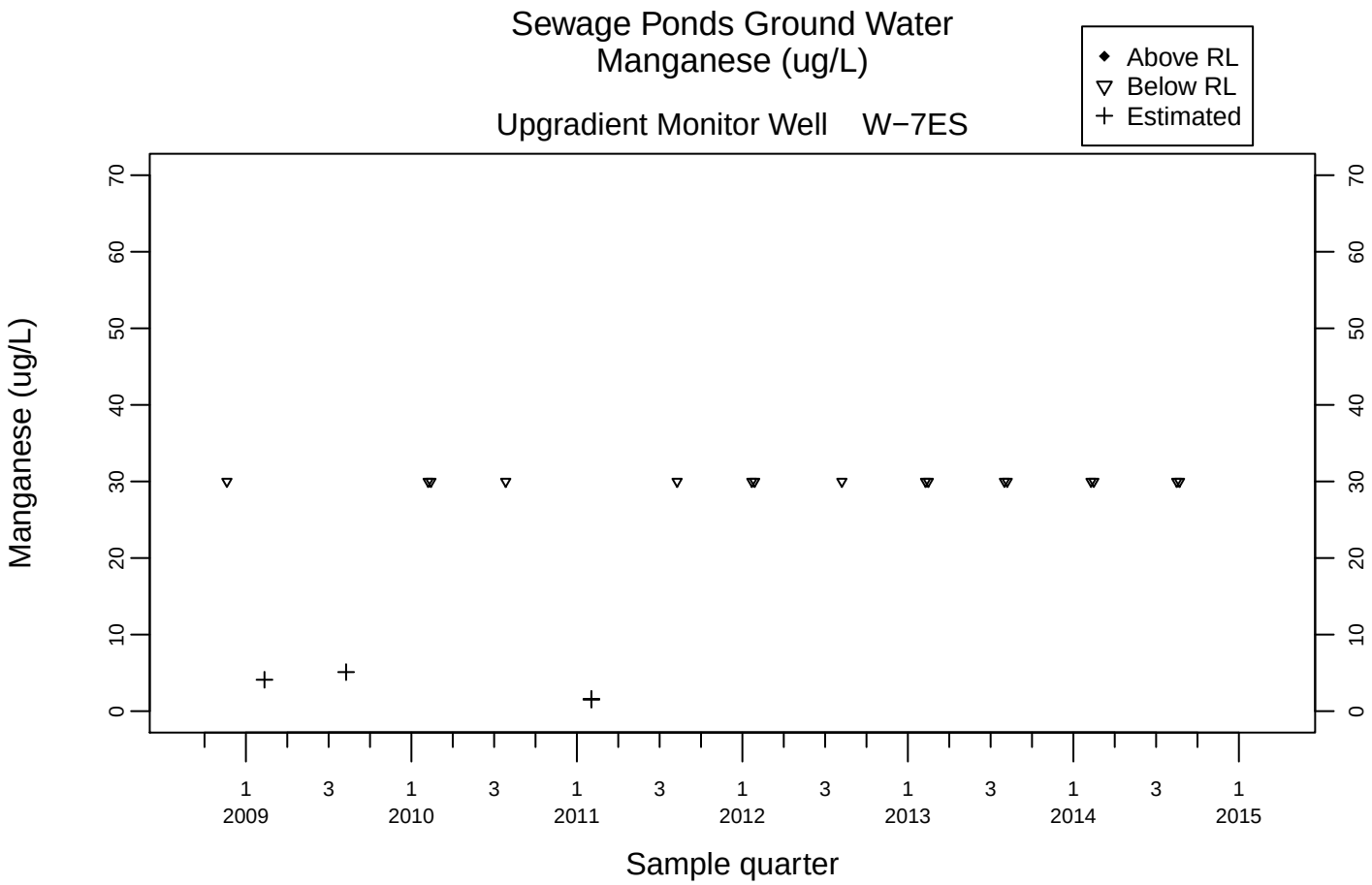

Sewage Ponds Ground Water
Magnesium (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

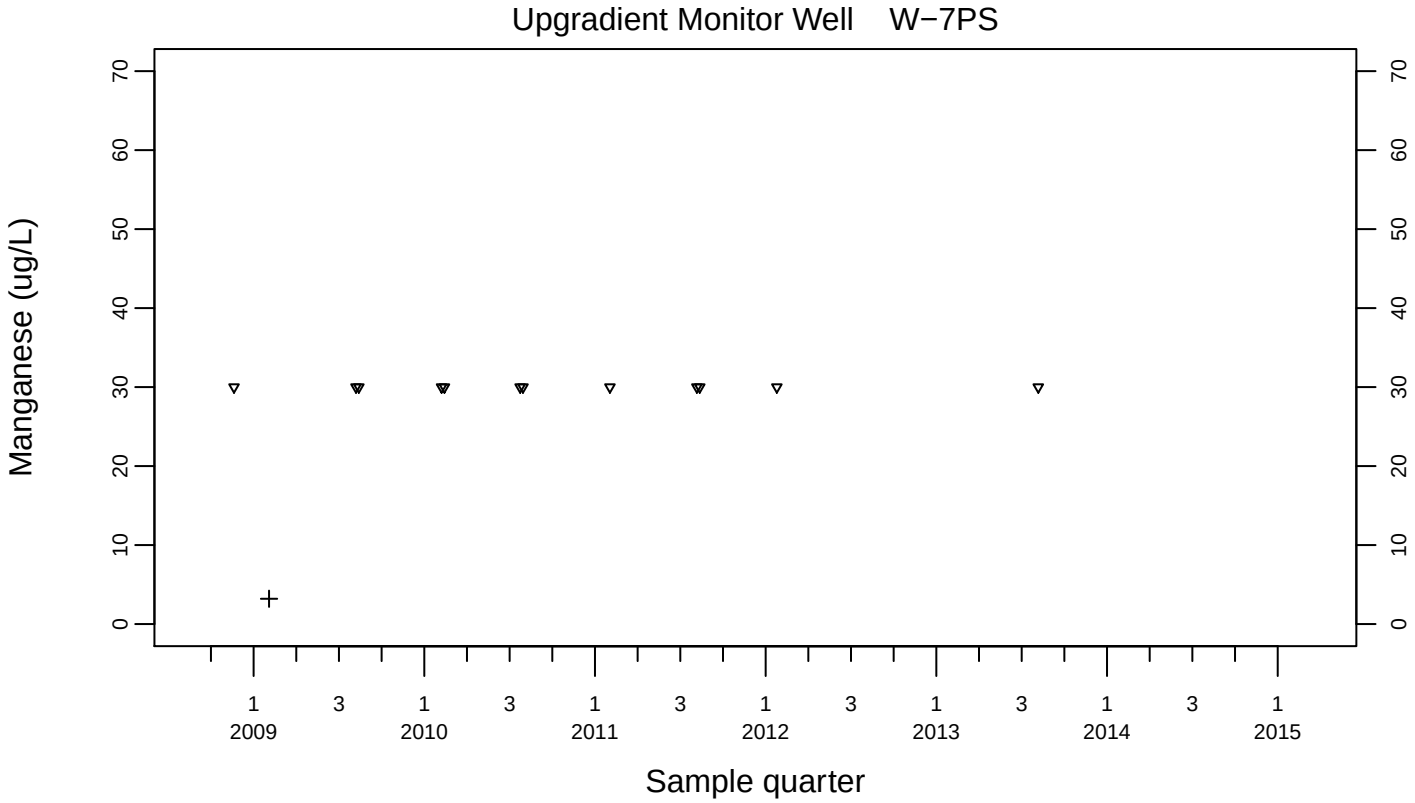

Downgradient Monitor Well W−26R−01
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

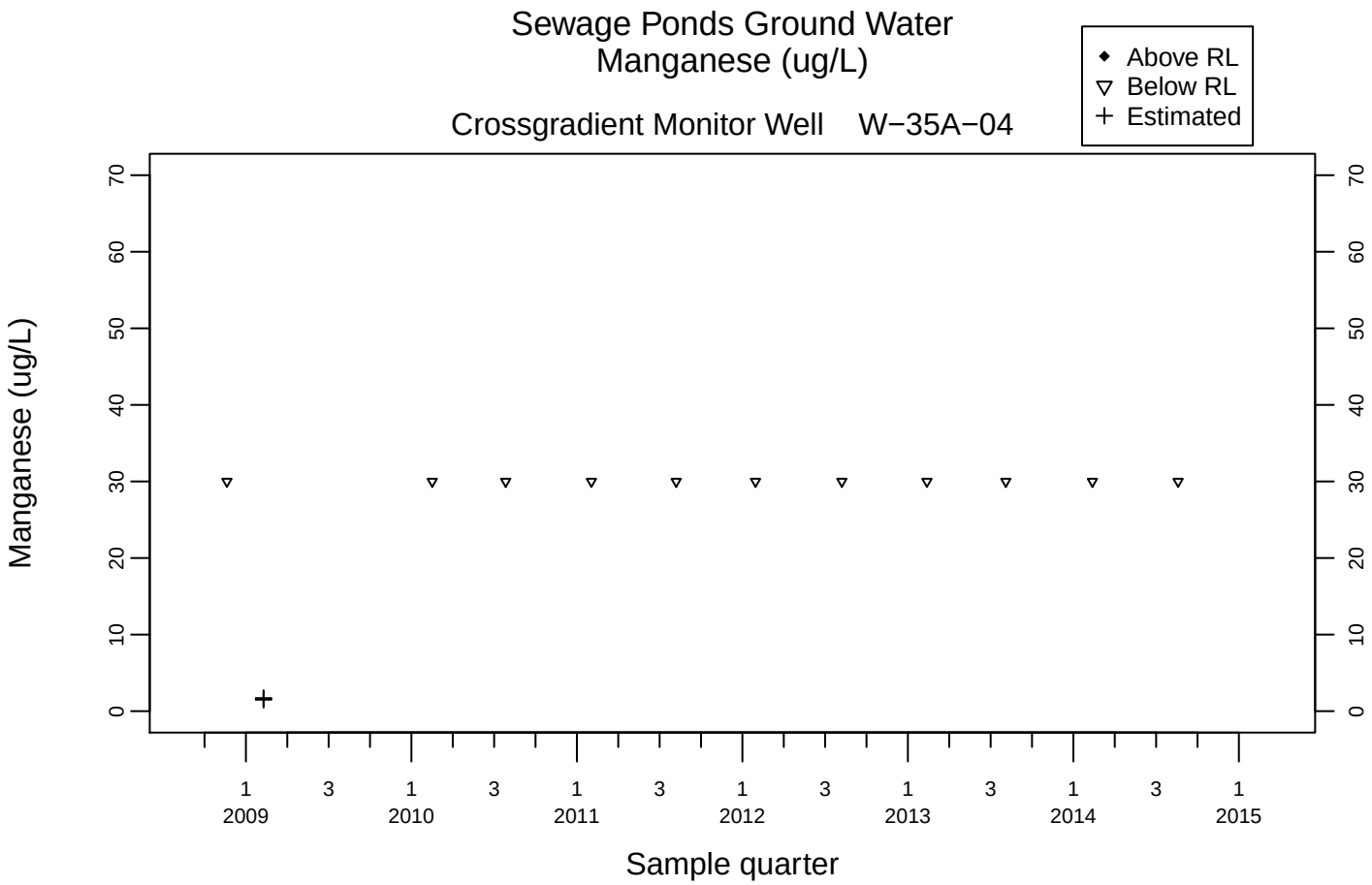

Sewage Ponds Ground Water
Magnesium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

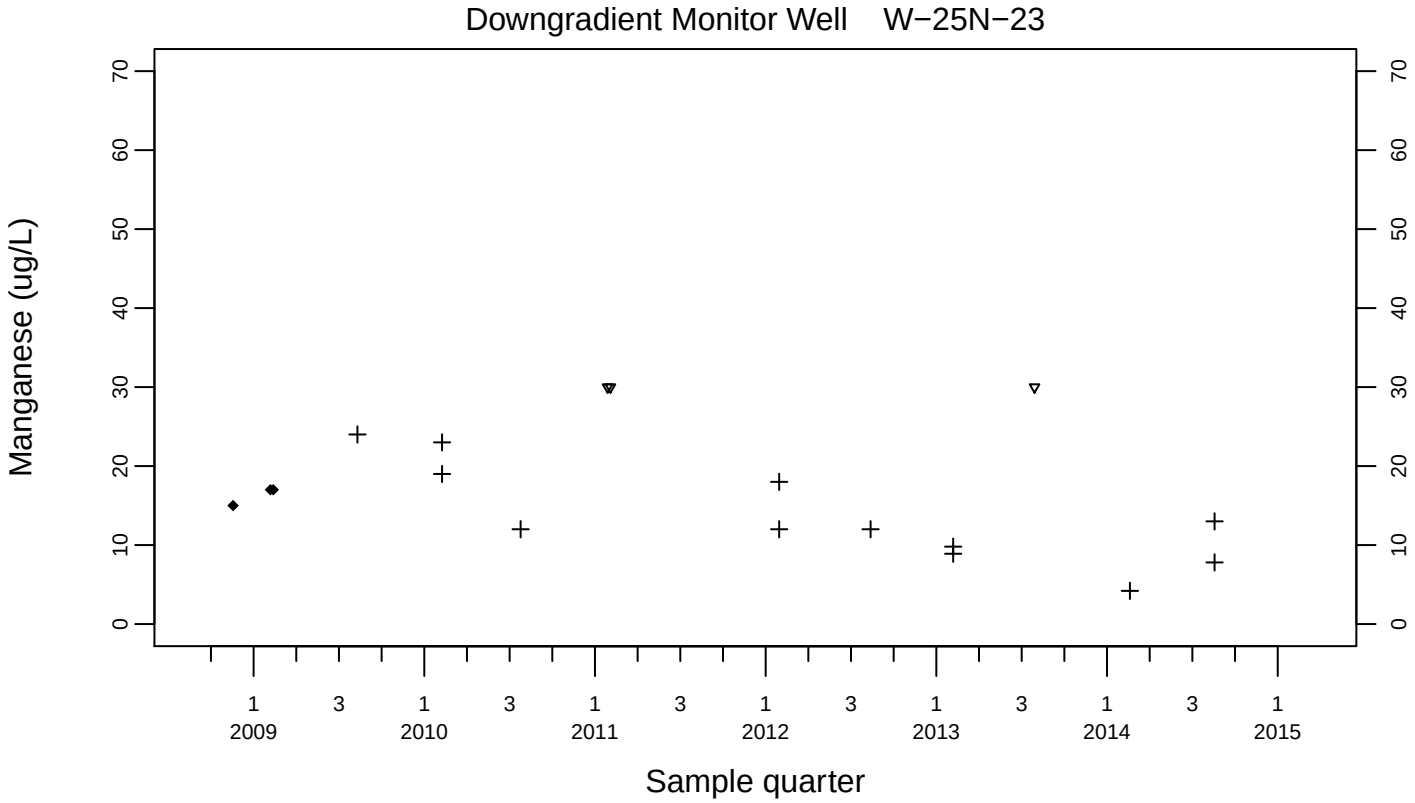

Downgradient Monitor Well W−26R−11
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

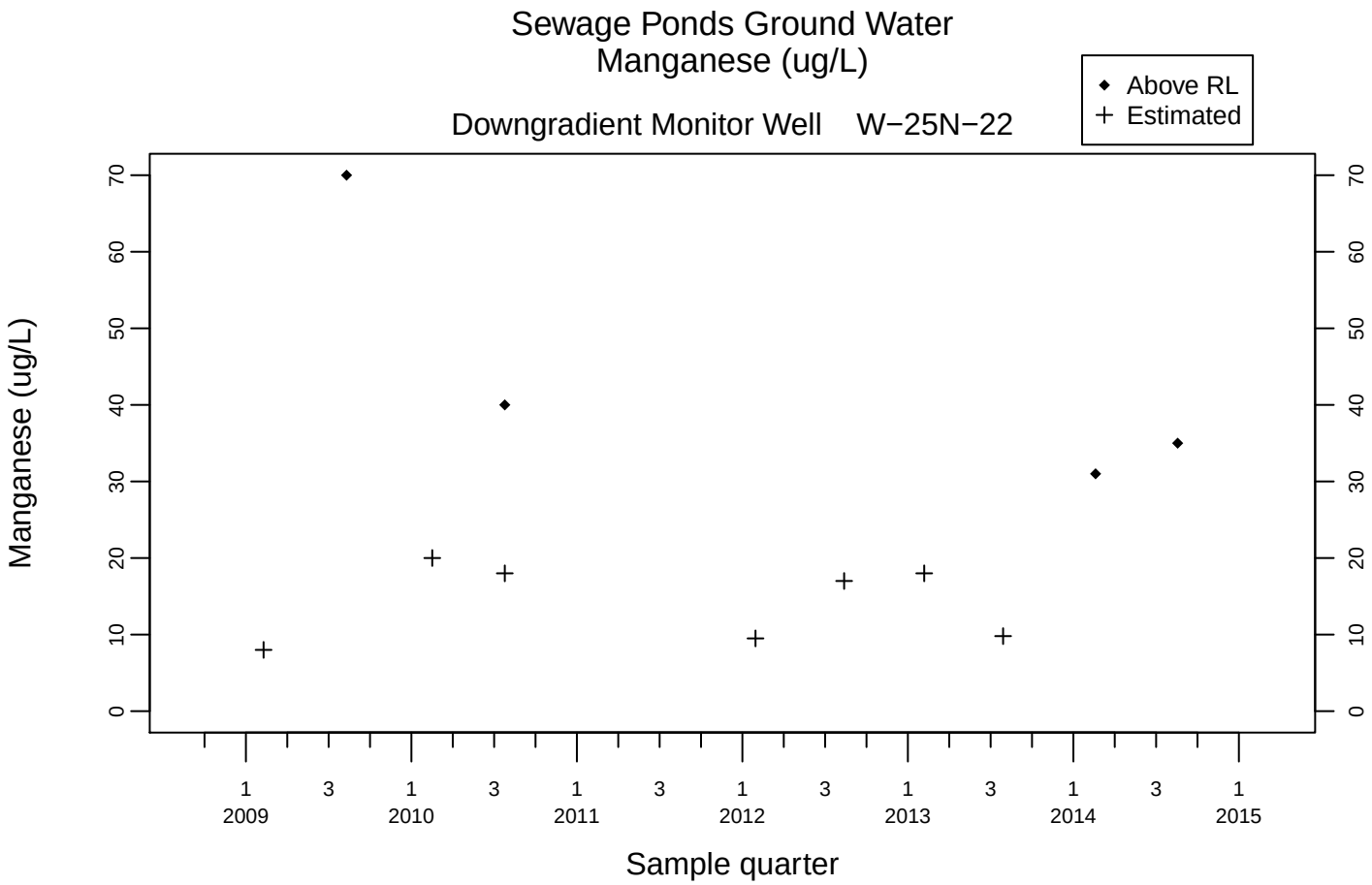

Sewage Ponds Ground Water
Magnesium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

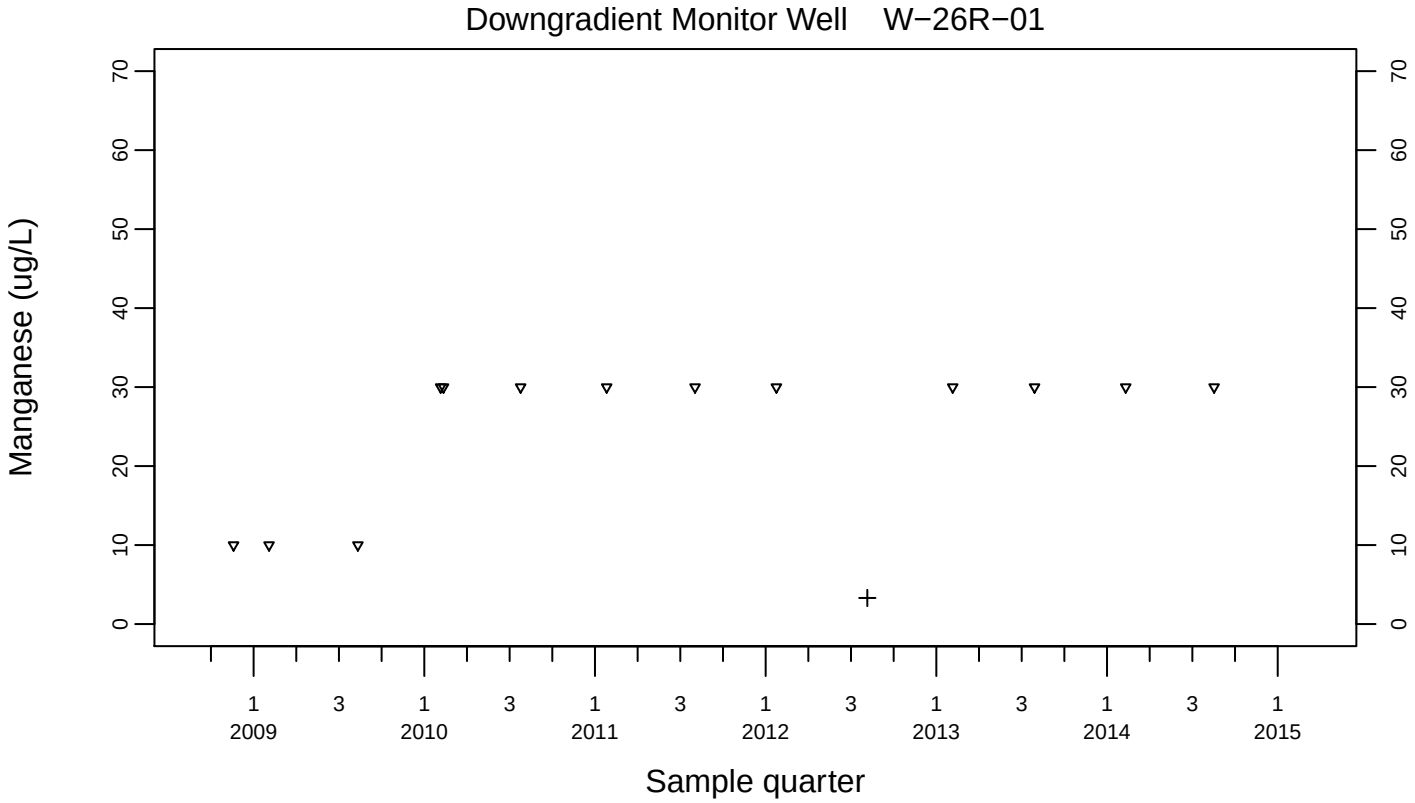

Sewage Ponds Ground Water
Manganese (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

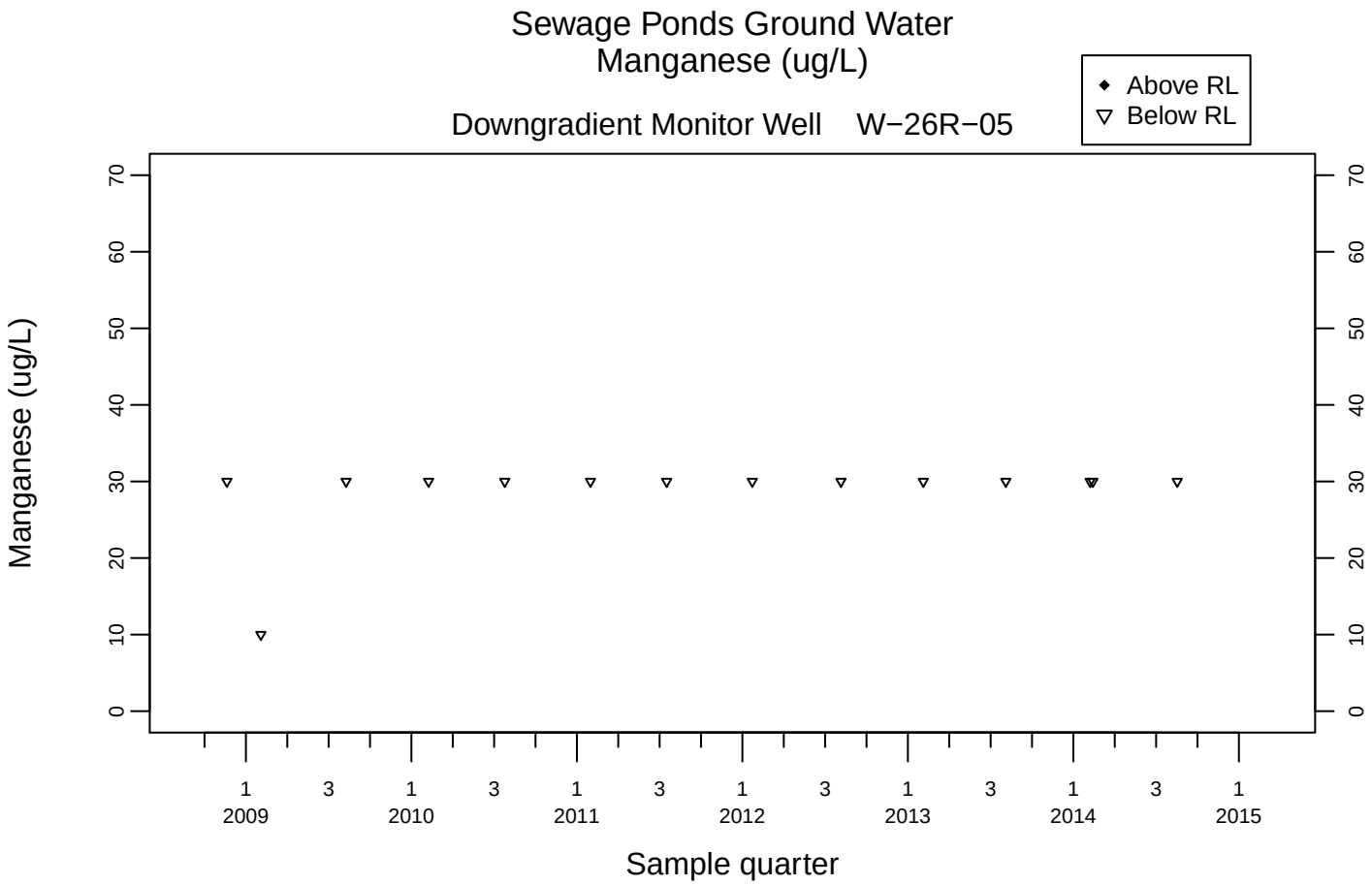

Upgradient Monitor Well W−7PS
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

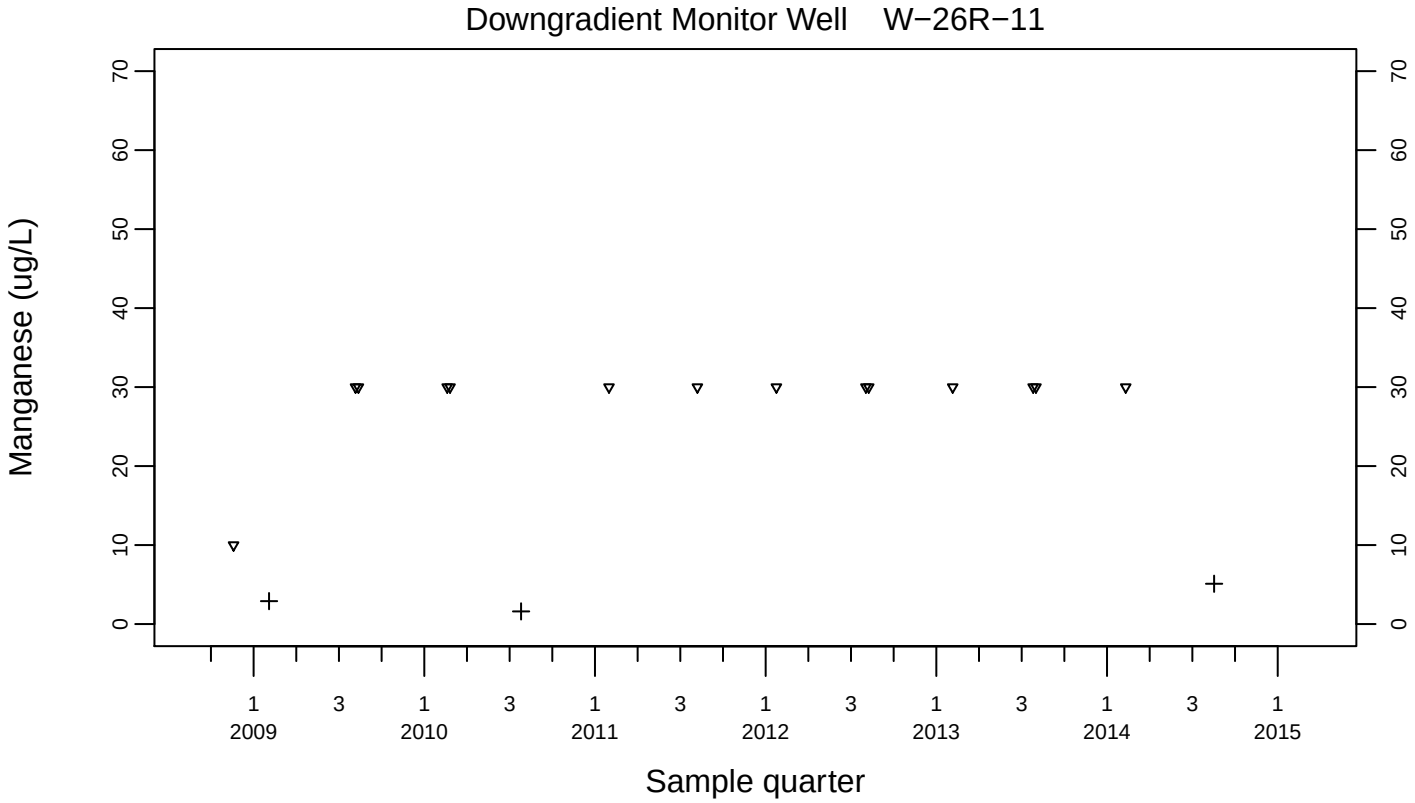

Sewage Ponds Ground Water
Manganese (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

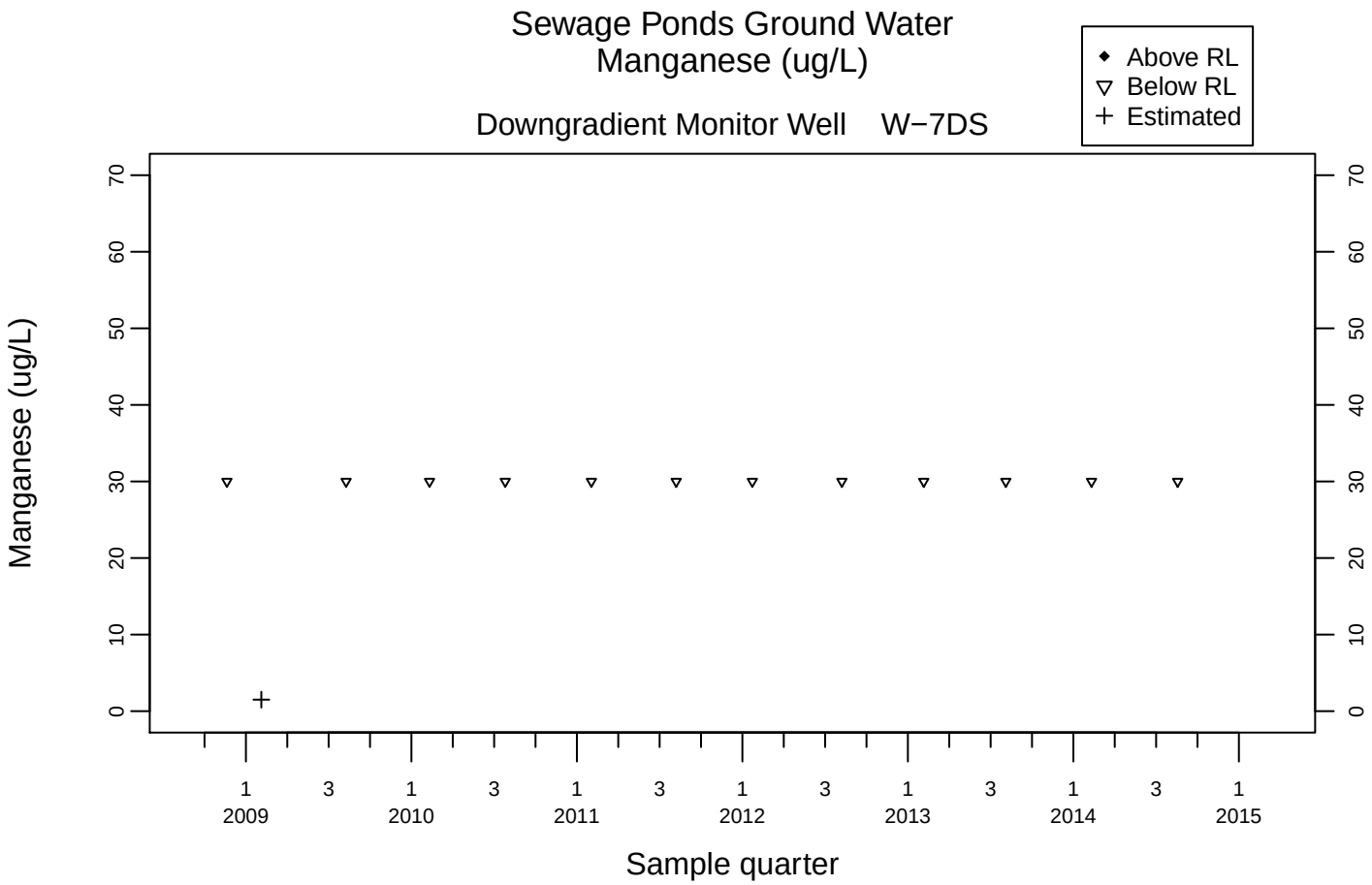

Downgradient Monitor Well W−25N−23
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

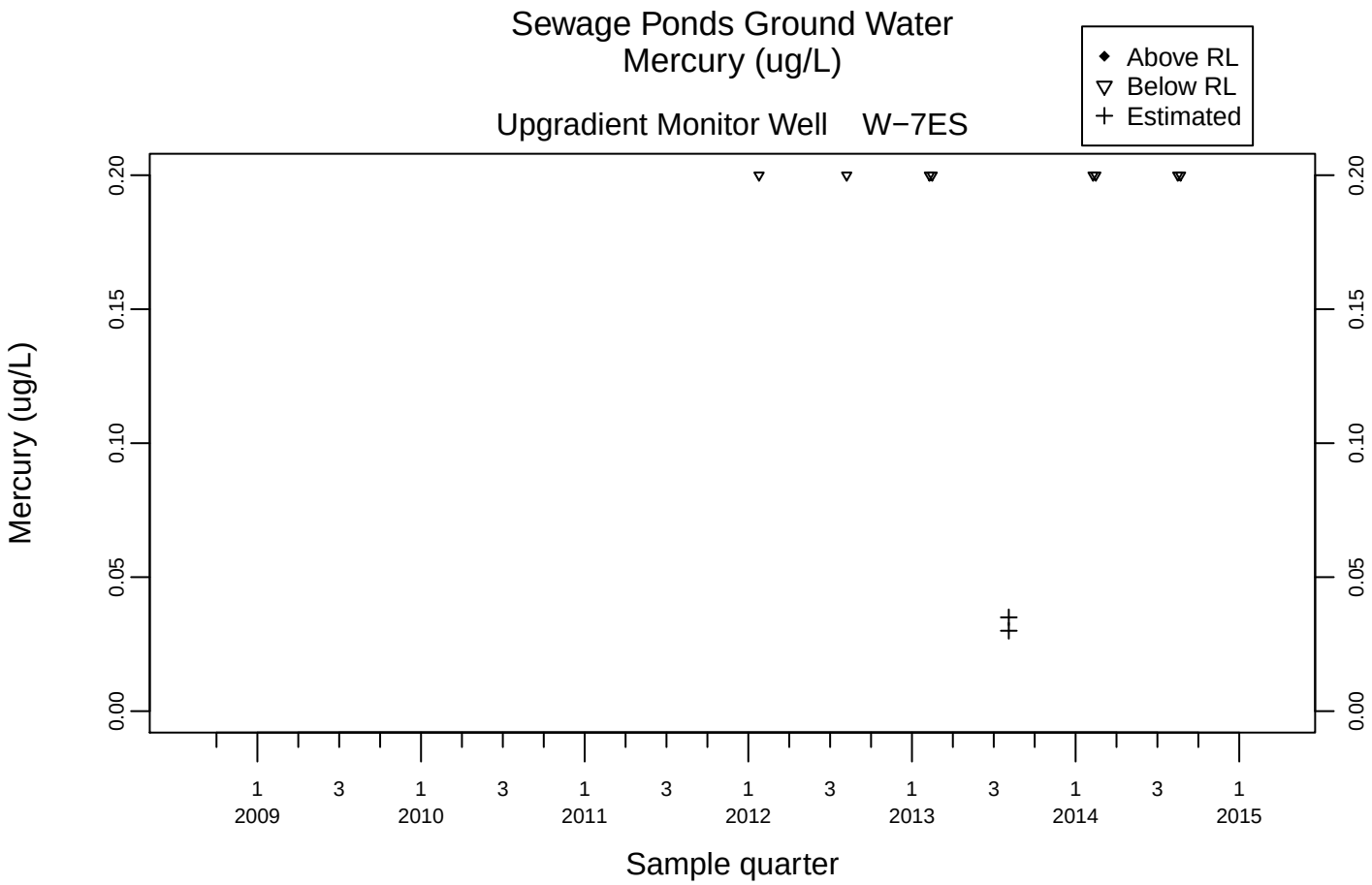

Sewage Ponds Ground Water
Manganese (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Estimated
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

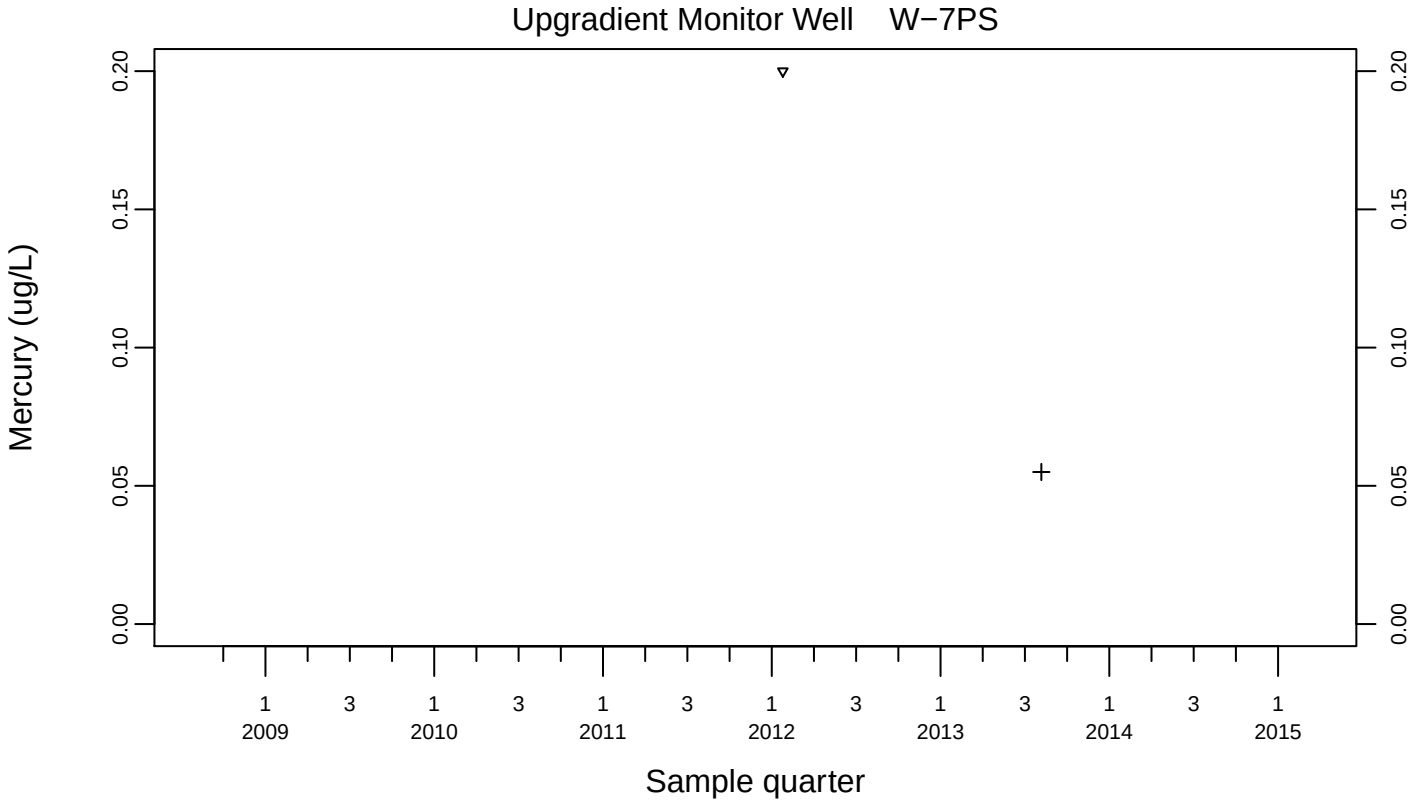

Downgradient Monitor Well W−26R−01
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

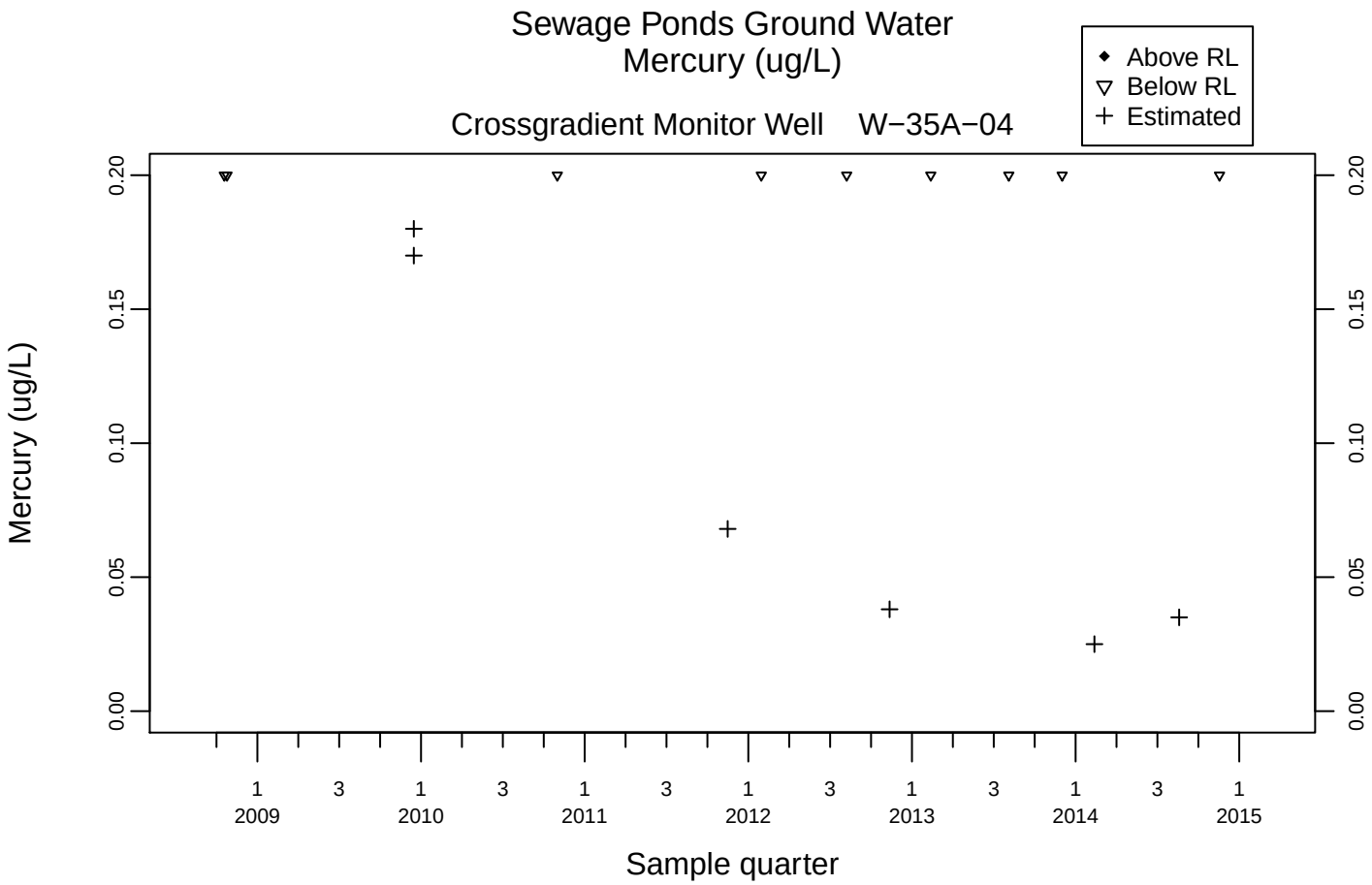

Sewage Ponds Ground Water
Manganese (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

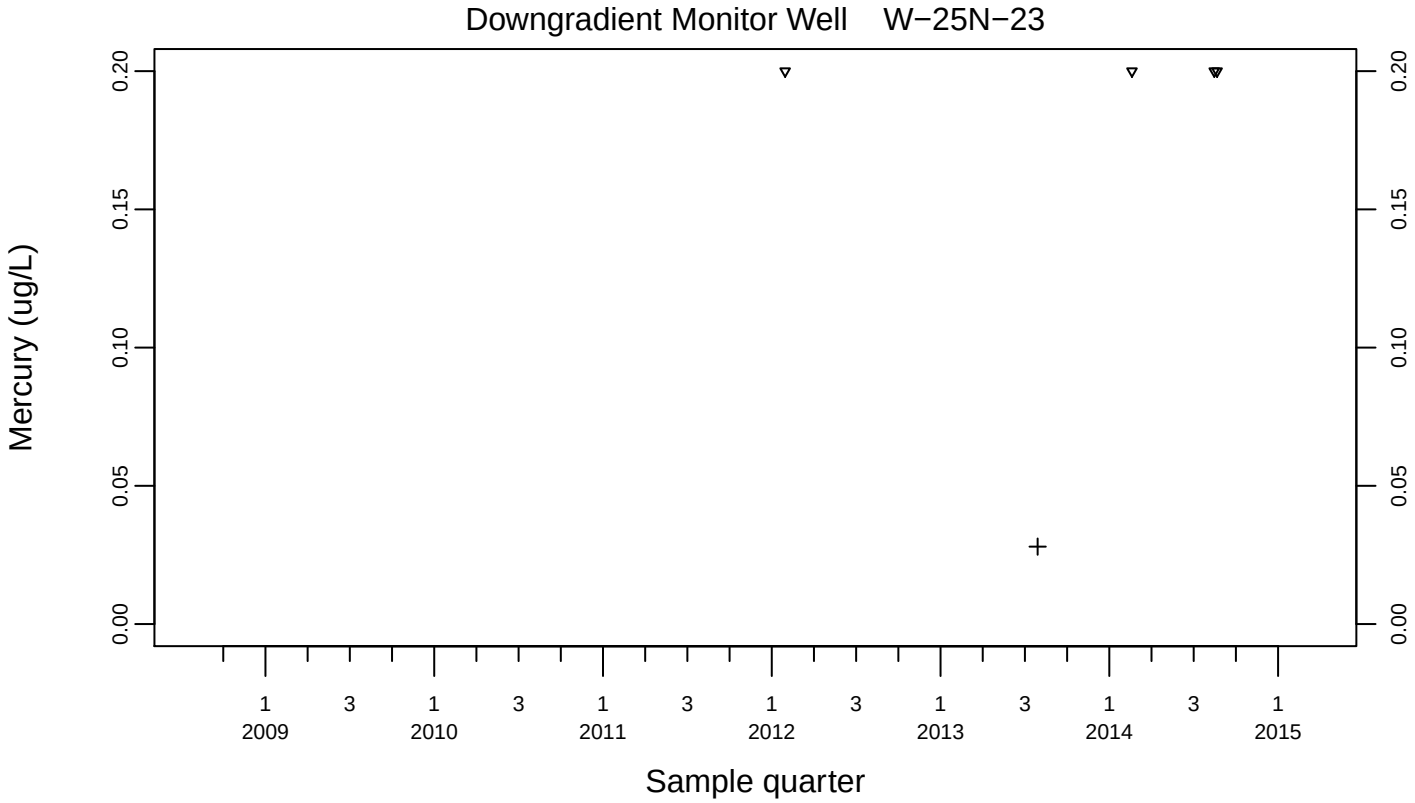

Downgradient Monitor Well W−26R−11
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

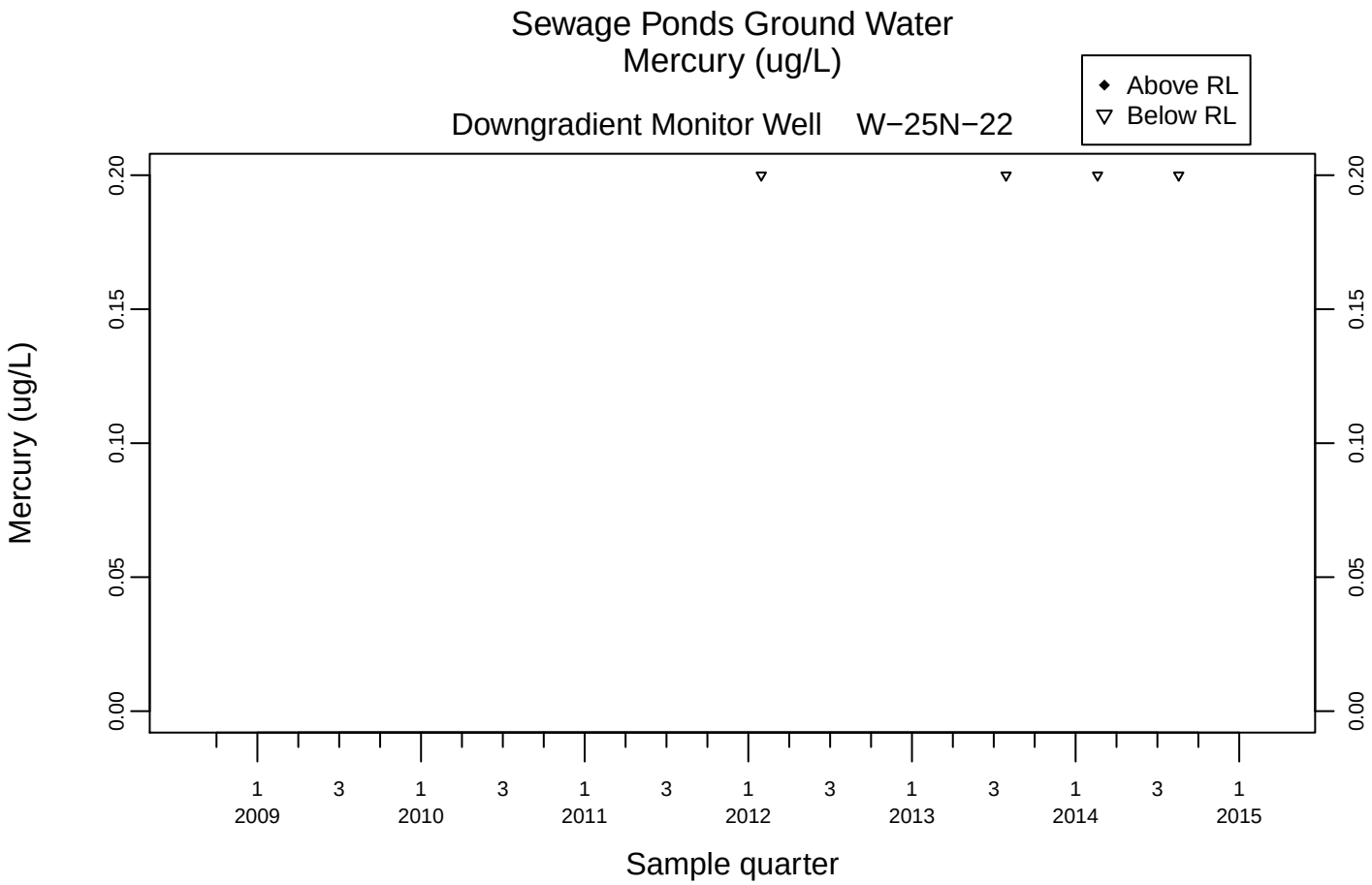

Sewage Ponds Ground Water
Manganese (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Manganese (ug/L)
0
10
20
30
40
50
60
70
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

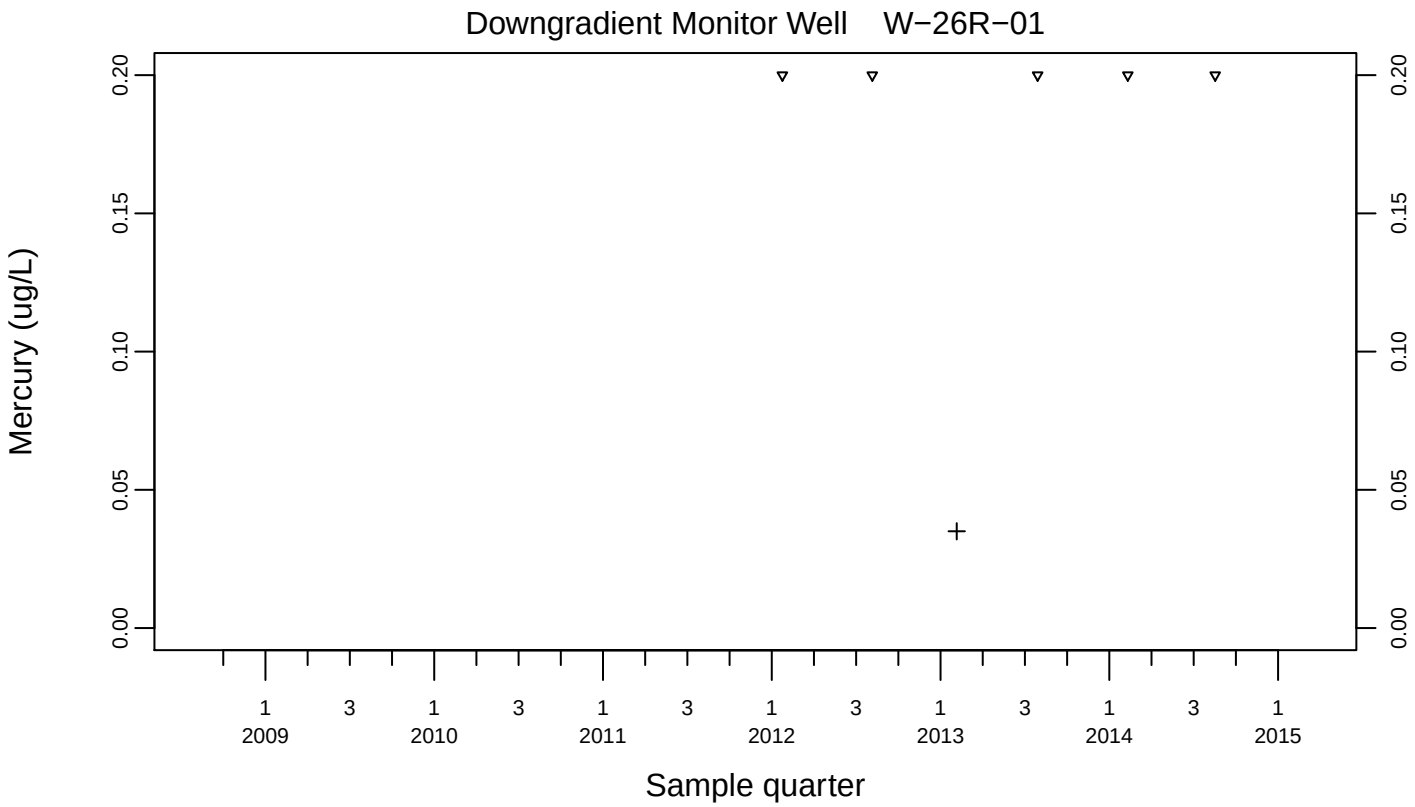

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Estimated
Upgradient Monitor Well W−7ES
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

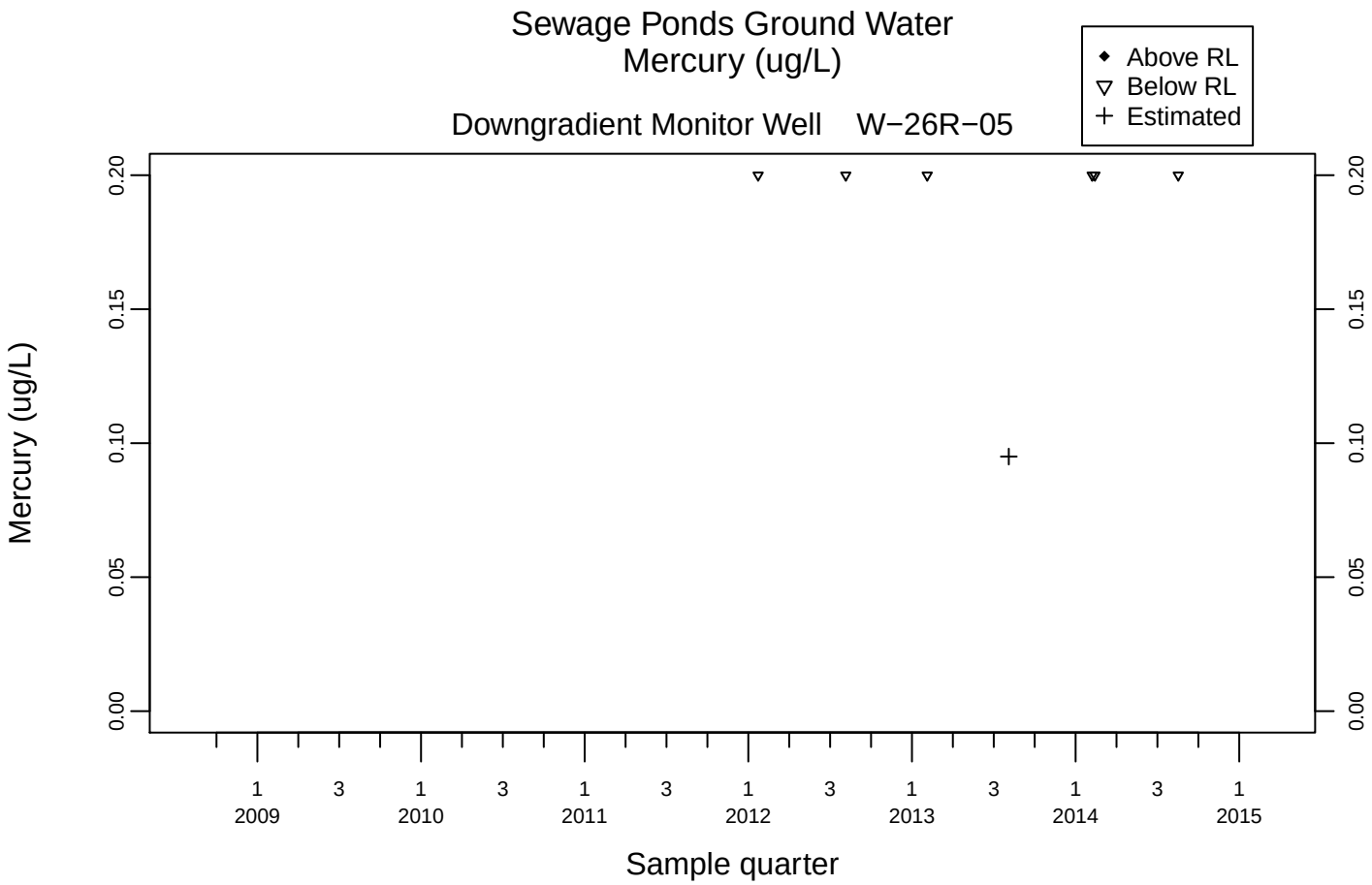

Upgradient Monitor Well W−7PS
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

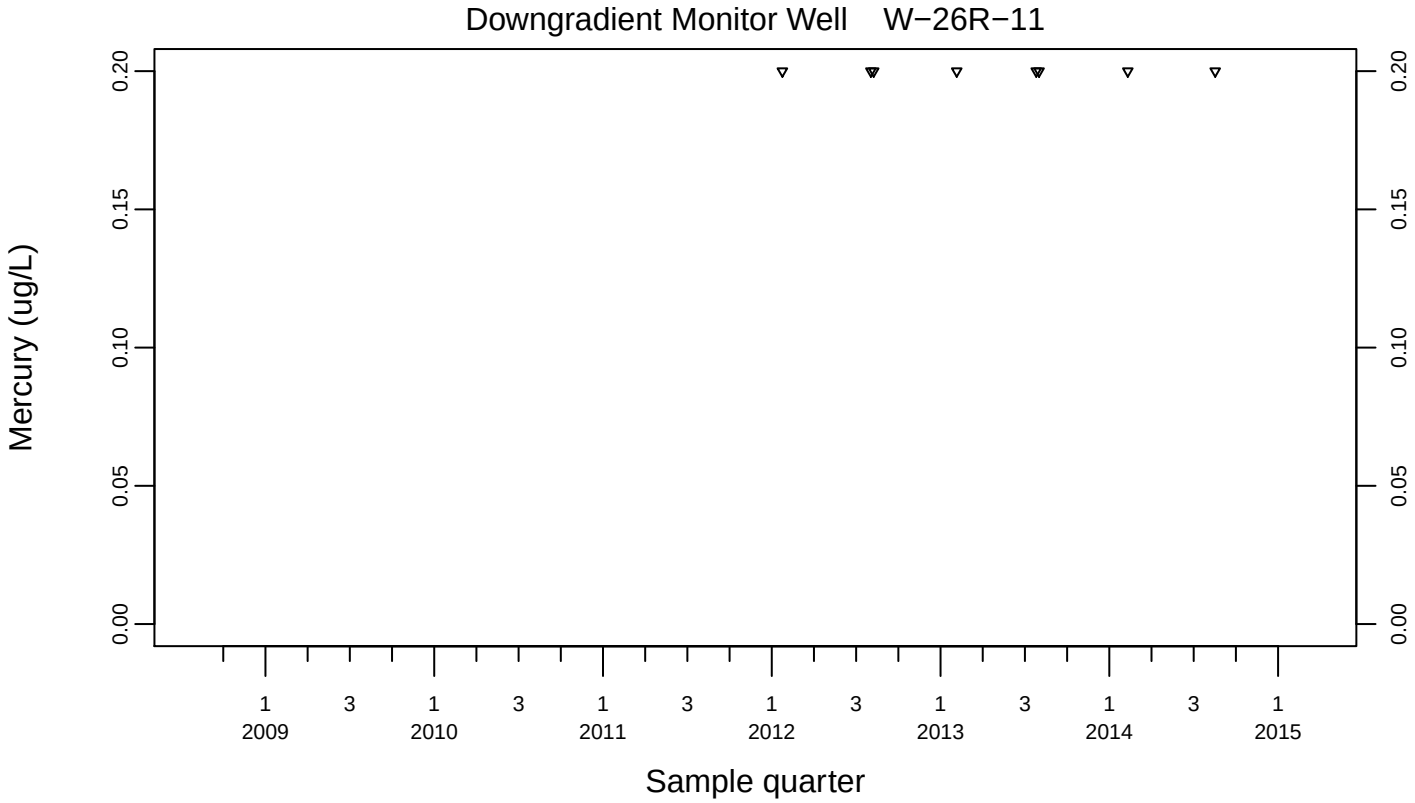

Sewage Ponds Ground Water
Mercury (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

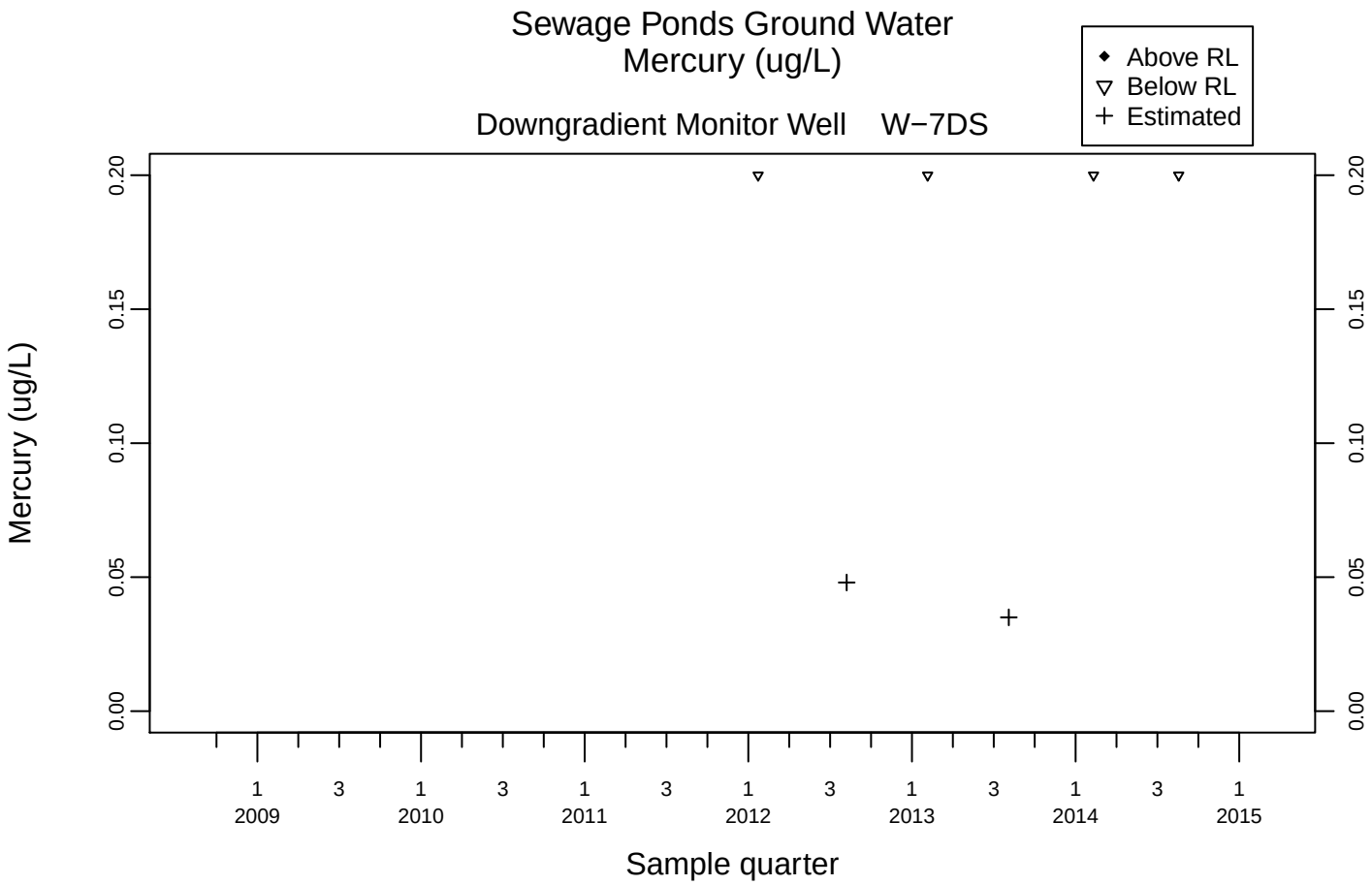

Downgradient Monitor Well W−25N−23
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

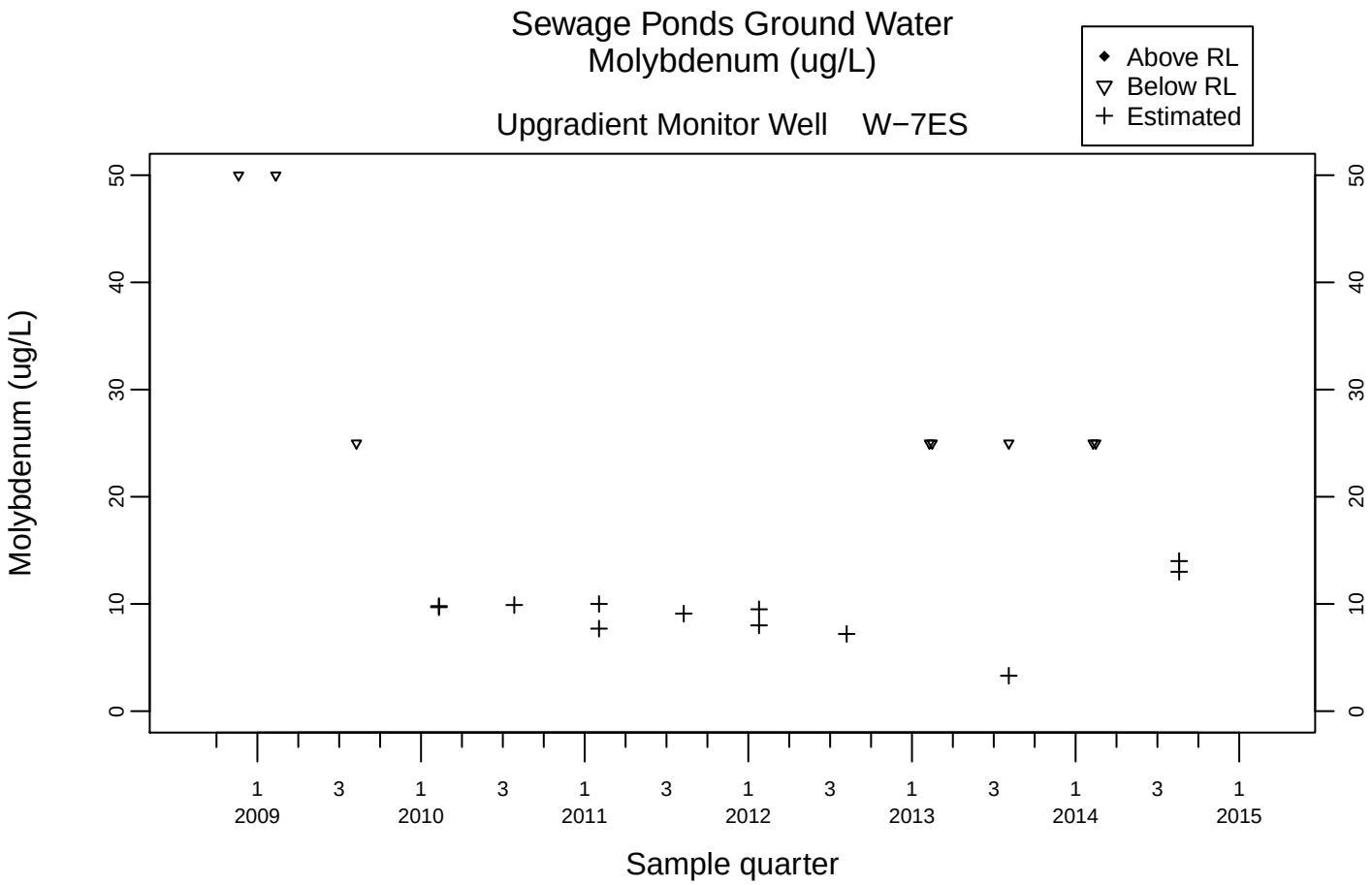

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

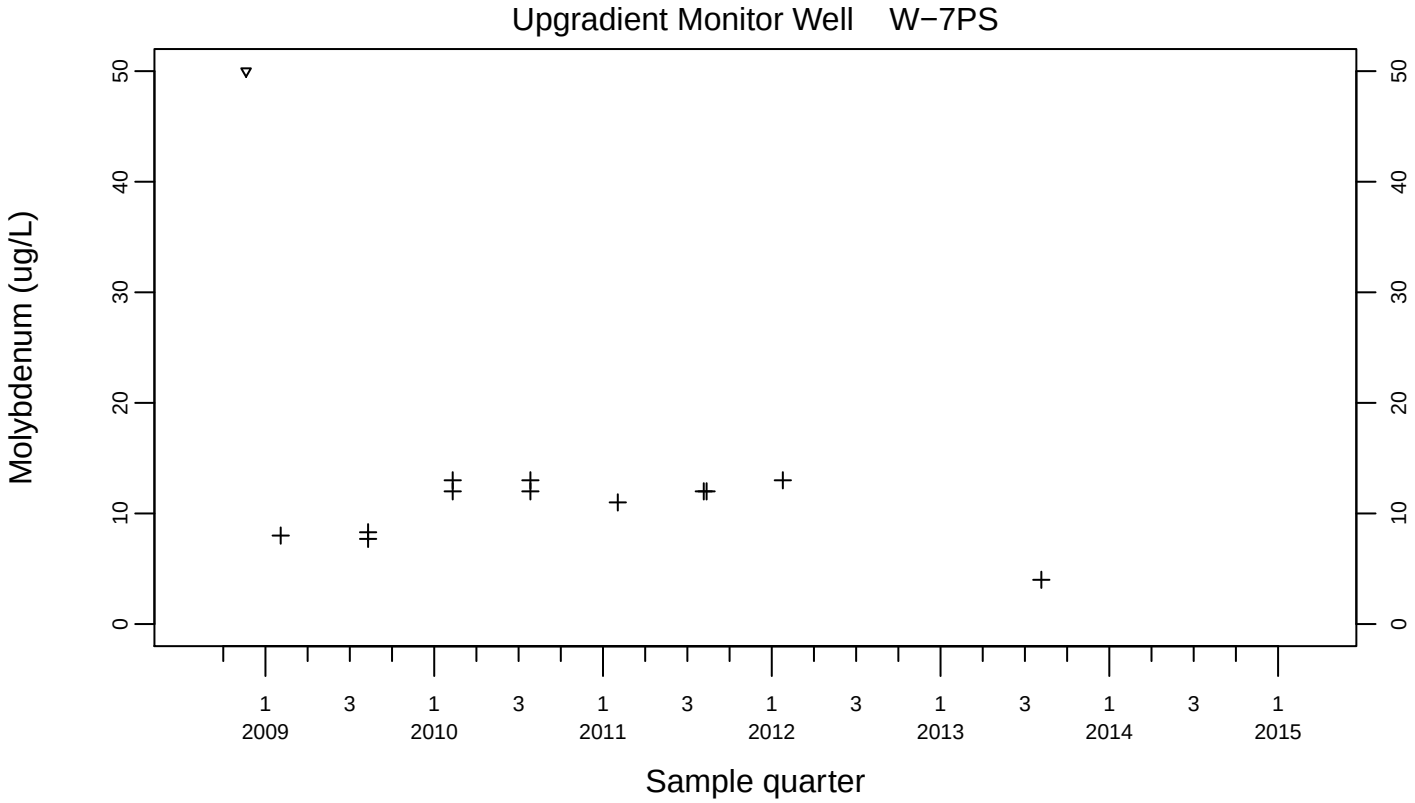

Downgradient Monitor Well W−26R−01
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

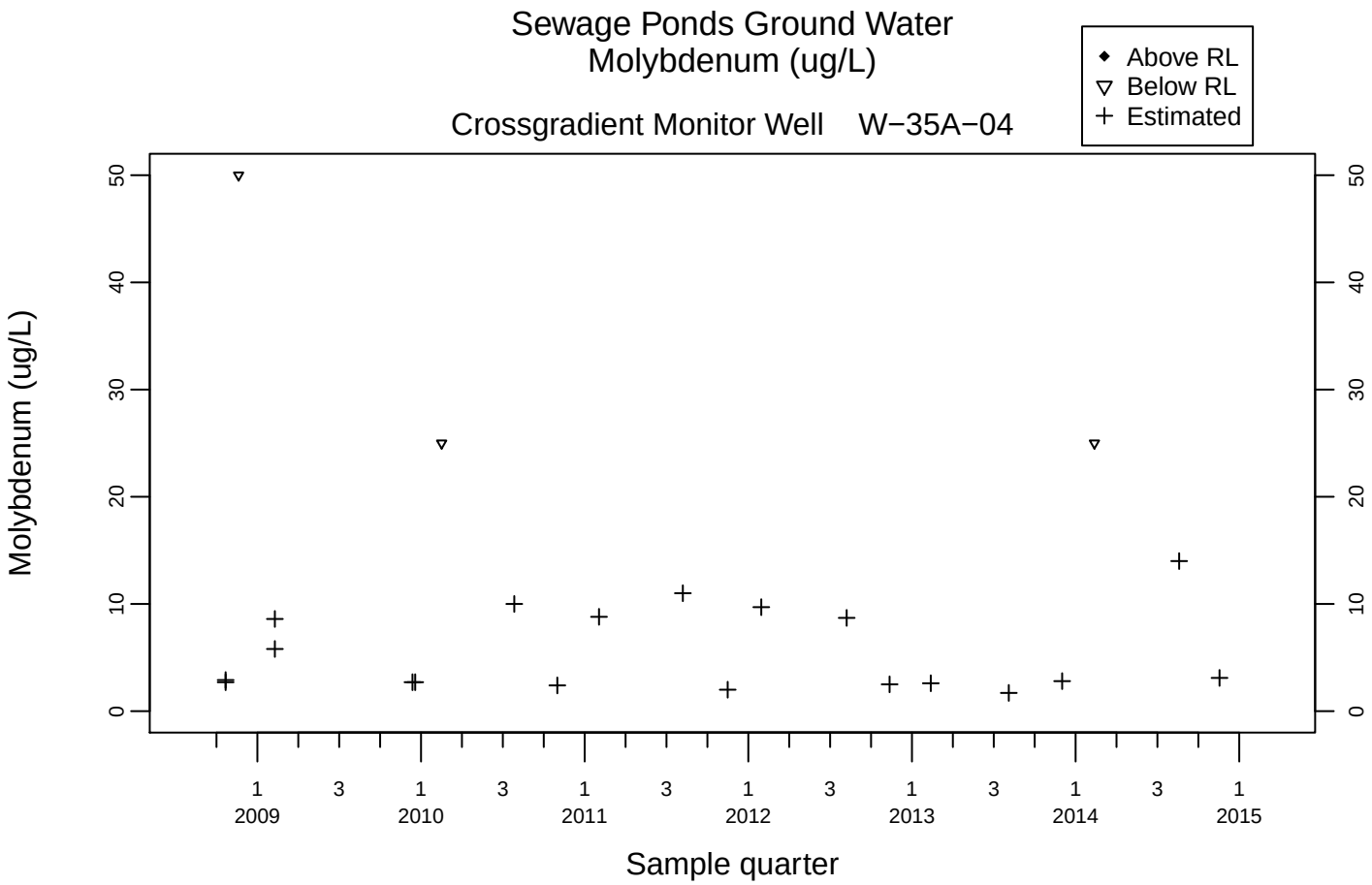

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−26R−05
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

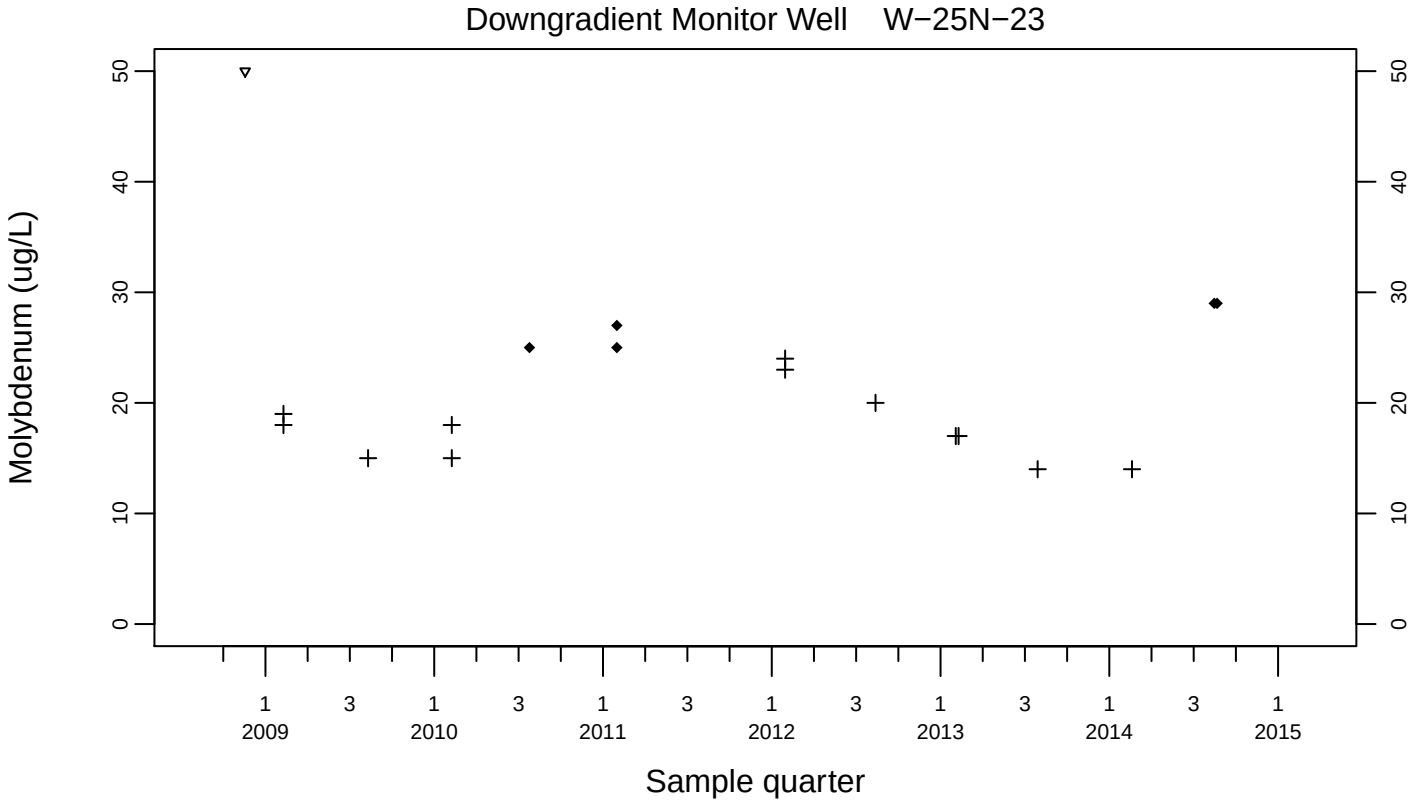

Downgradient Monitor Well W−26R−11
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

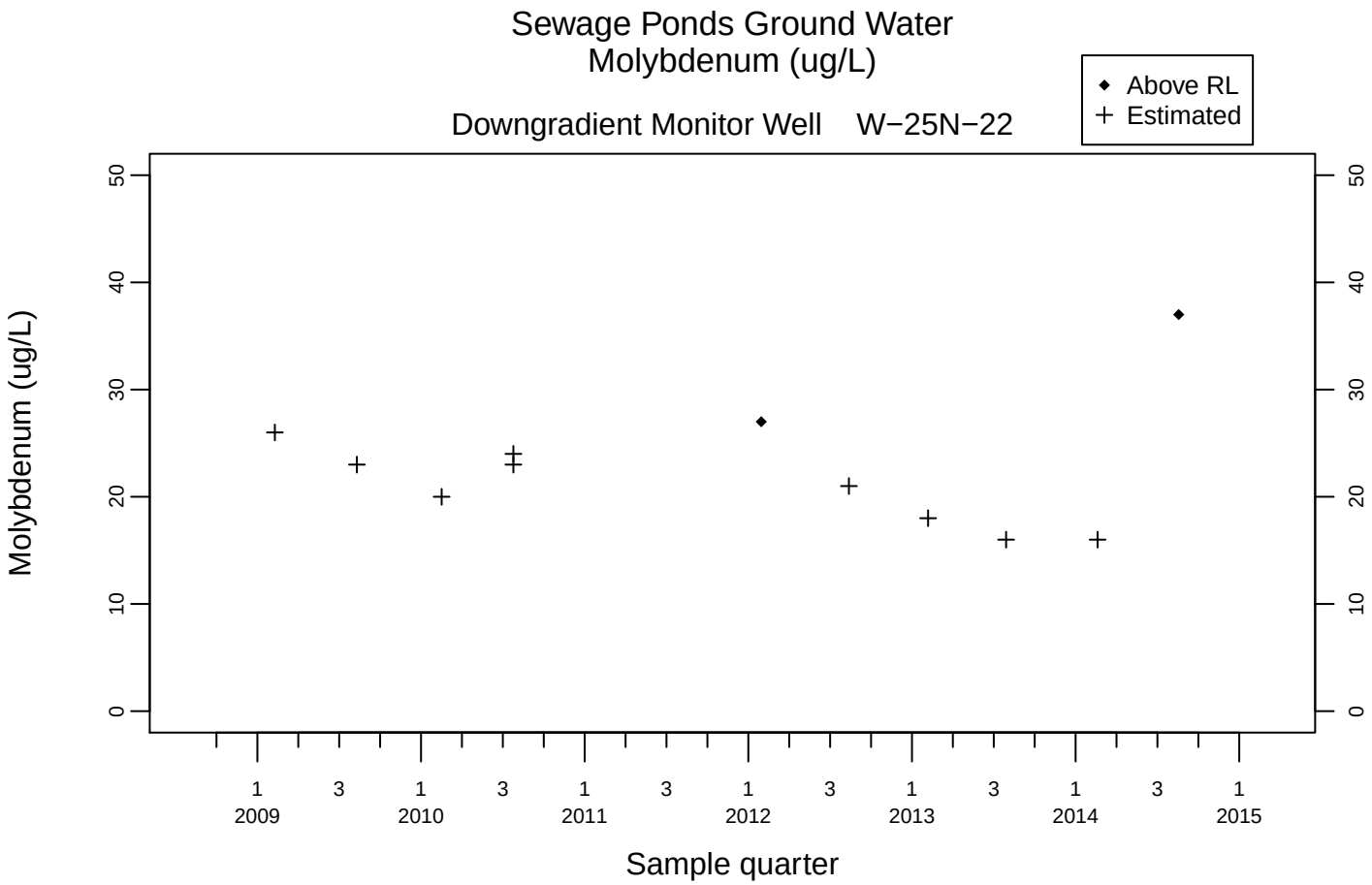

Sewage Ponds Ground Water
Mercury (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

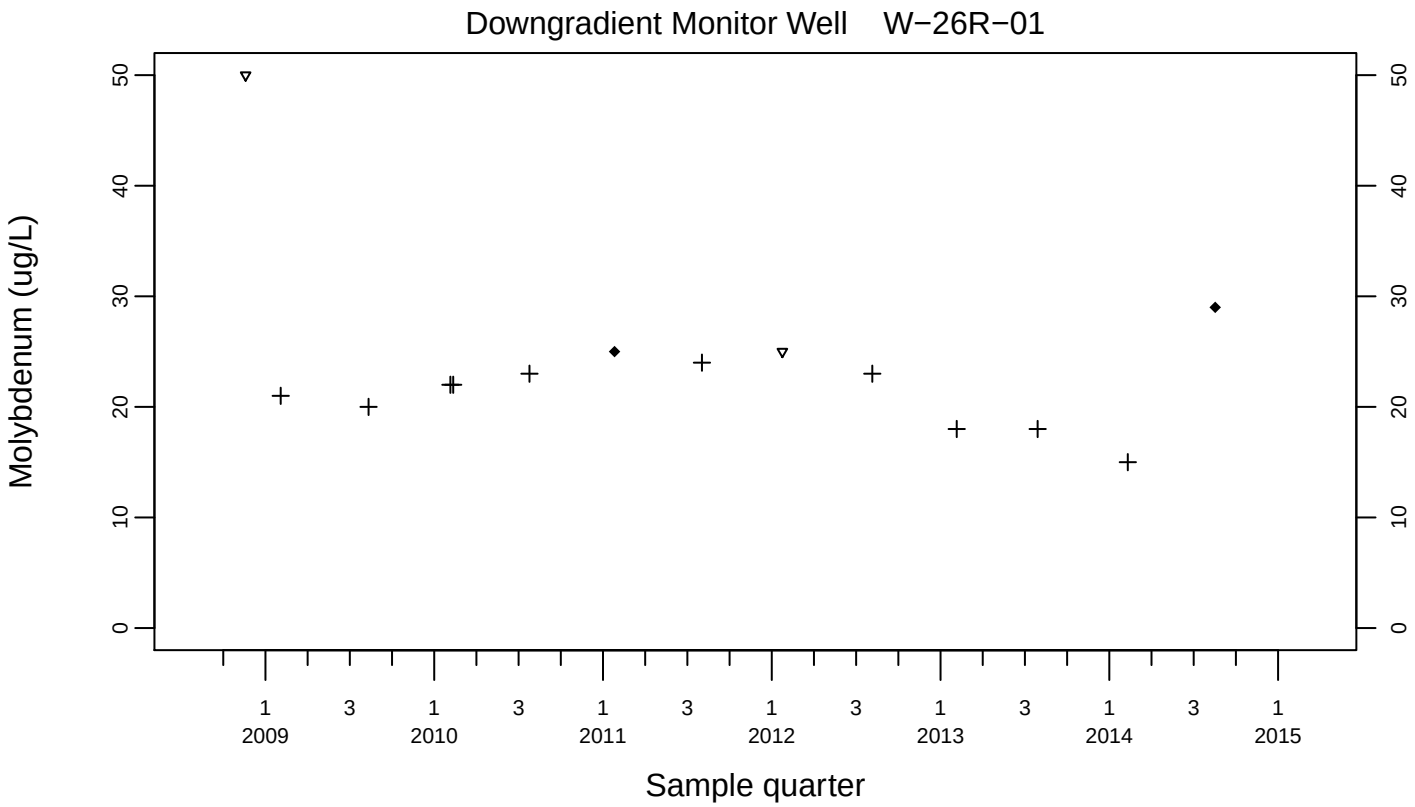

Sewage Ponds Ground Water
Molybdenum (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

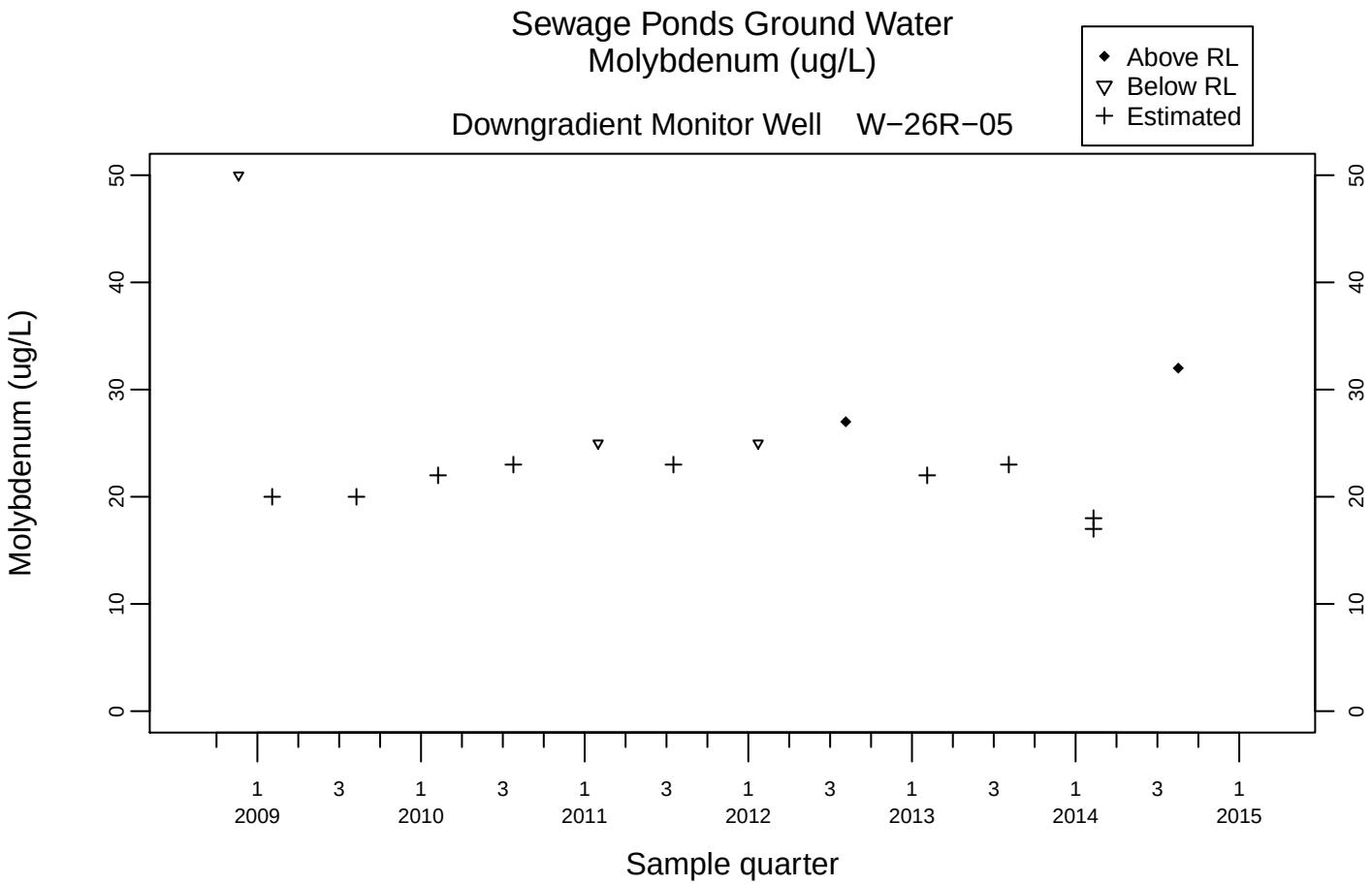

Upgradient Monitor Well W−7PS
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

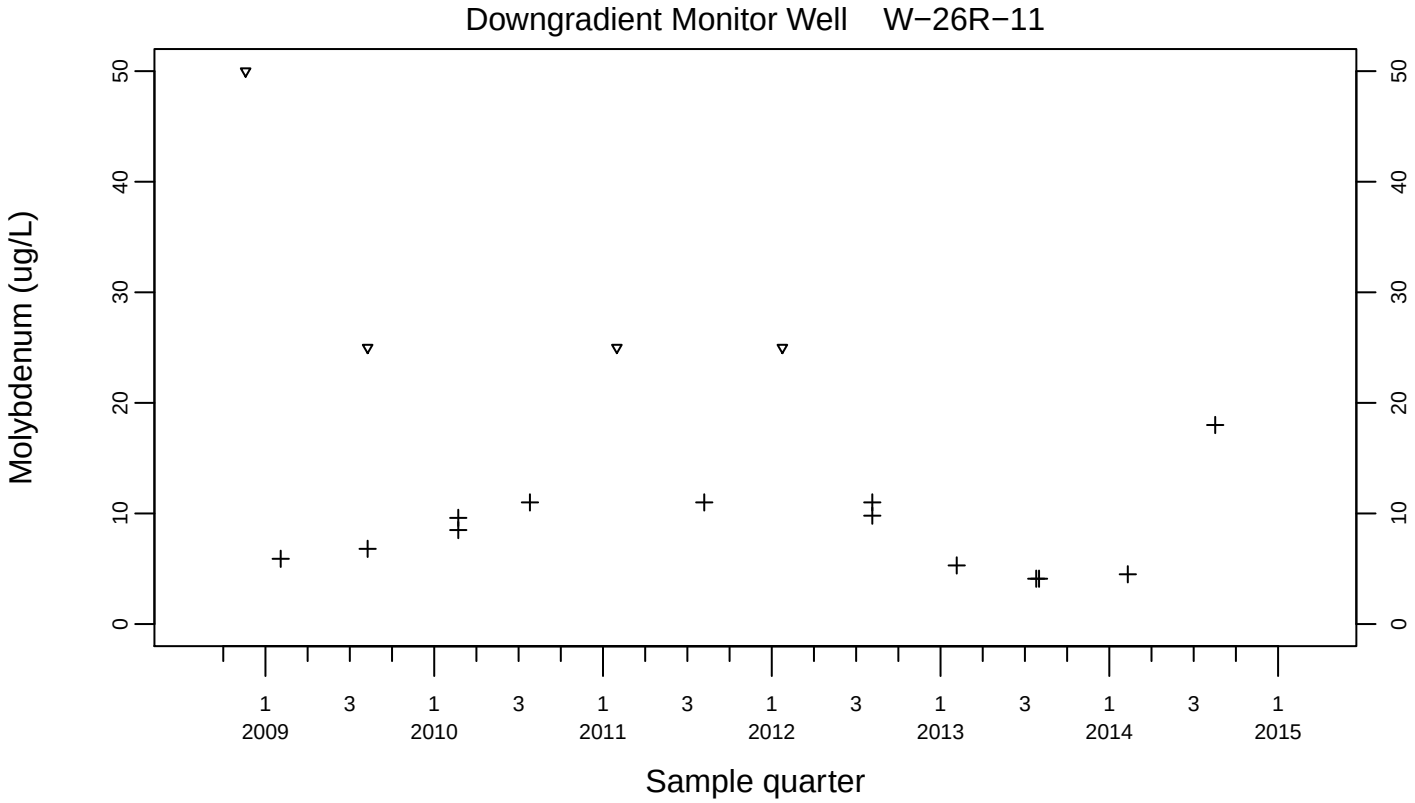

Sewage Ponds Ground Water
Molybdenum (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

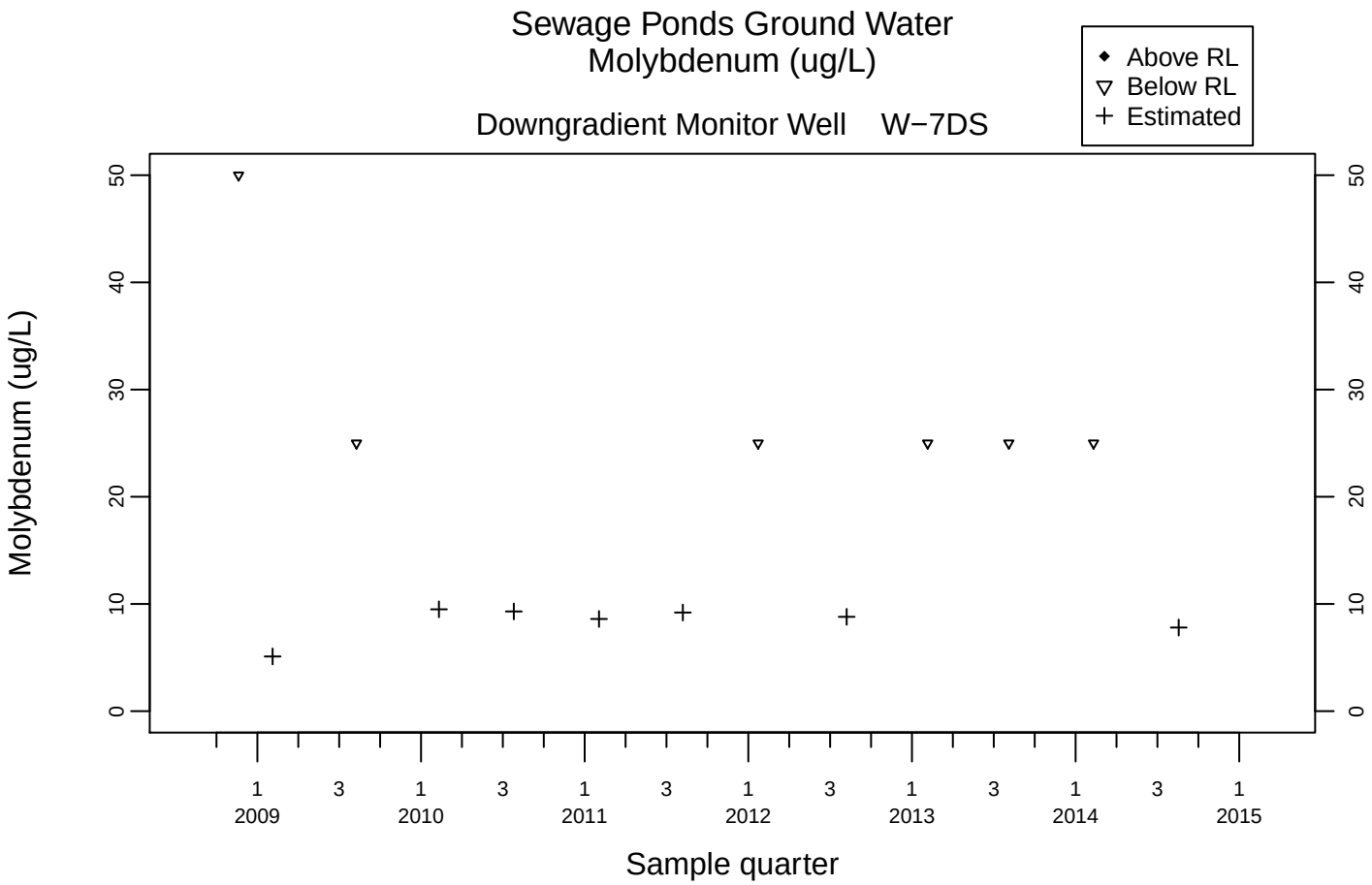

Downgradient Monitor Well W−25N−23
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

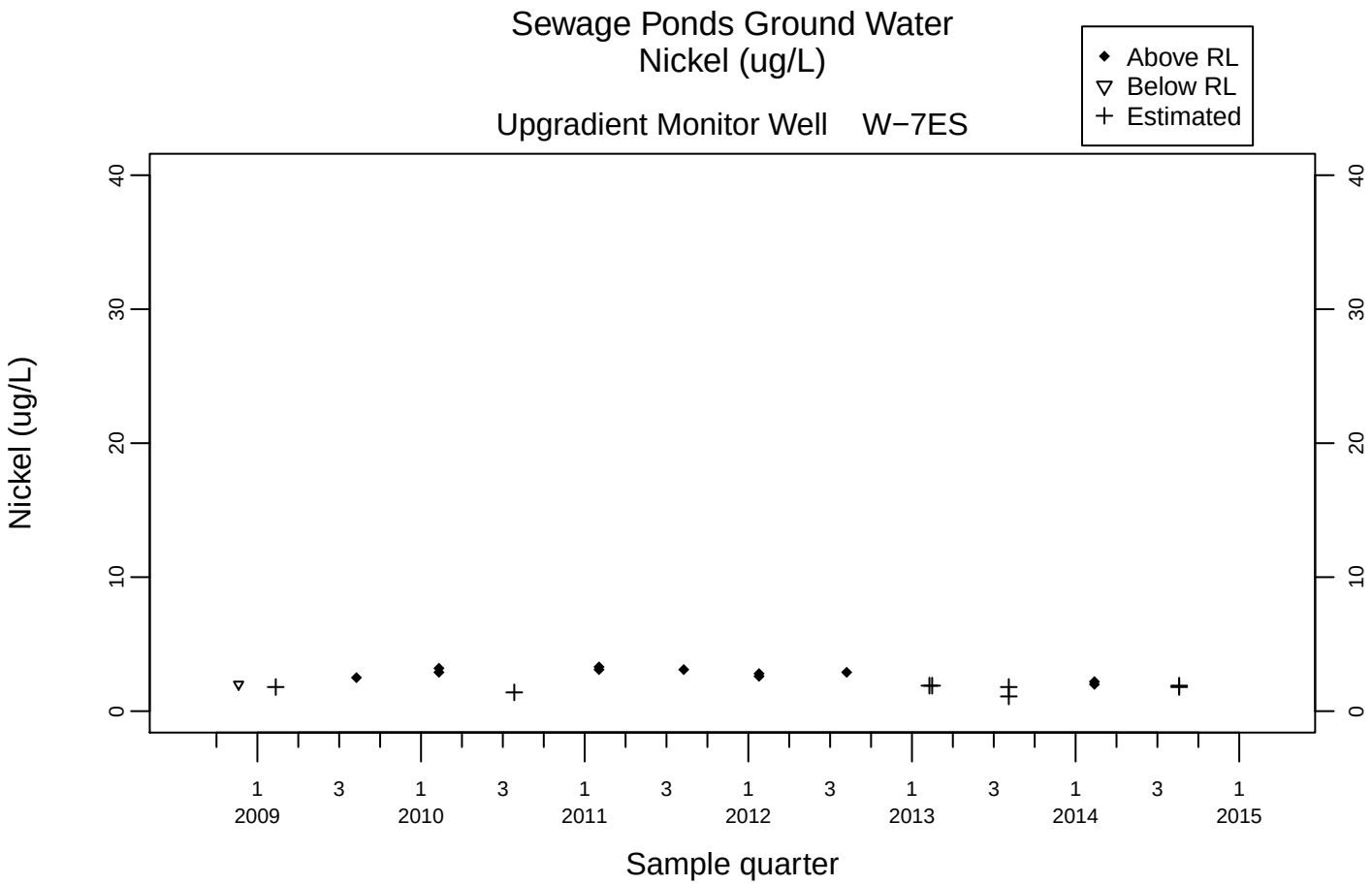

Sewage Ponds Ground Water
Molybdenum (ug/L)
Above RL
Estimated
Downgradient Monitor Well W−25N−22
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

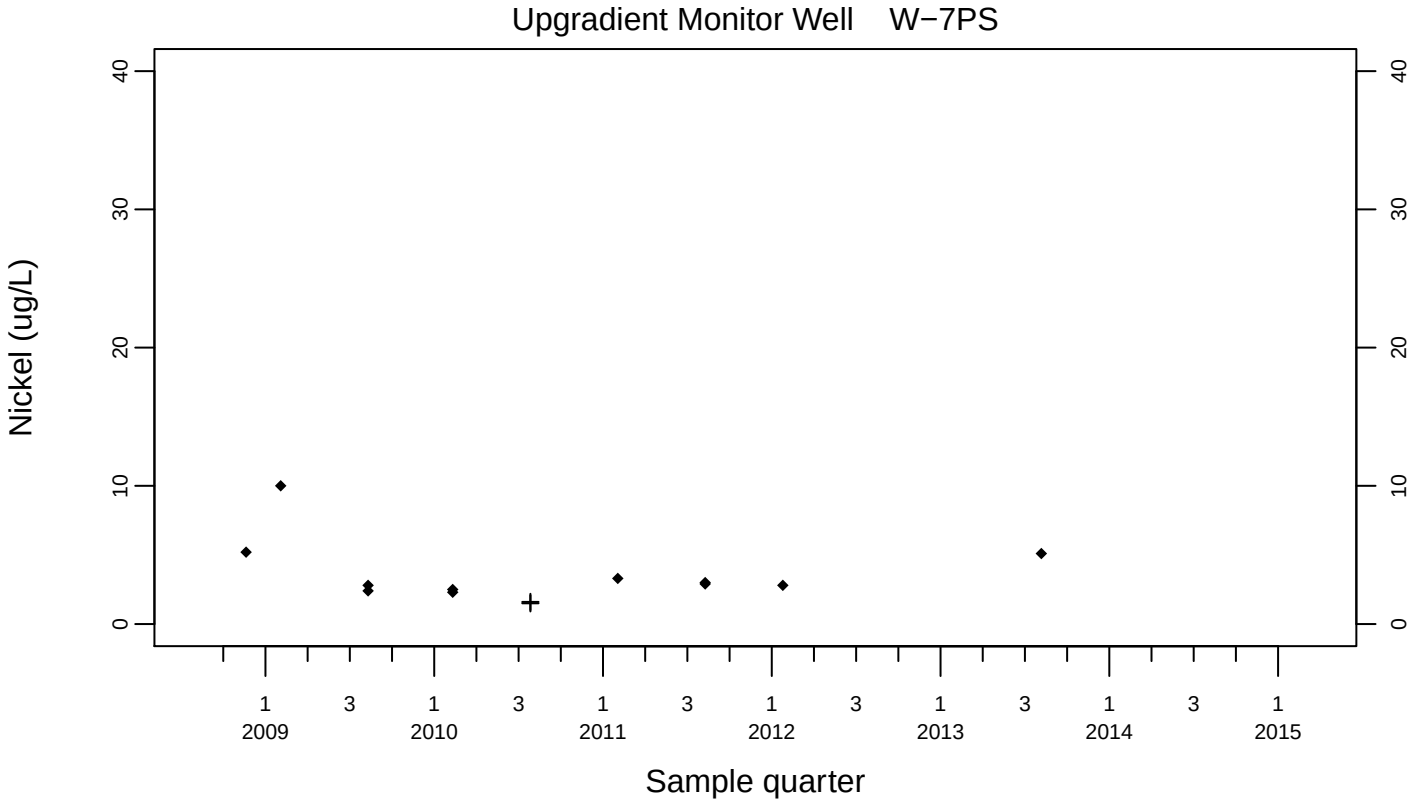

Downgradient Monitor Well W−26R−01
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

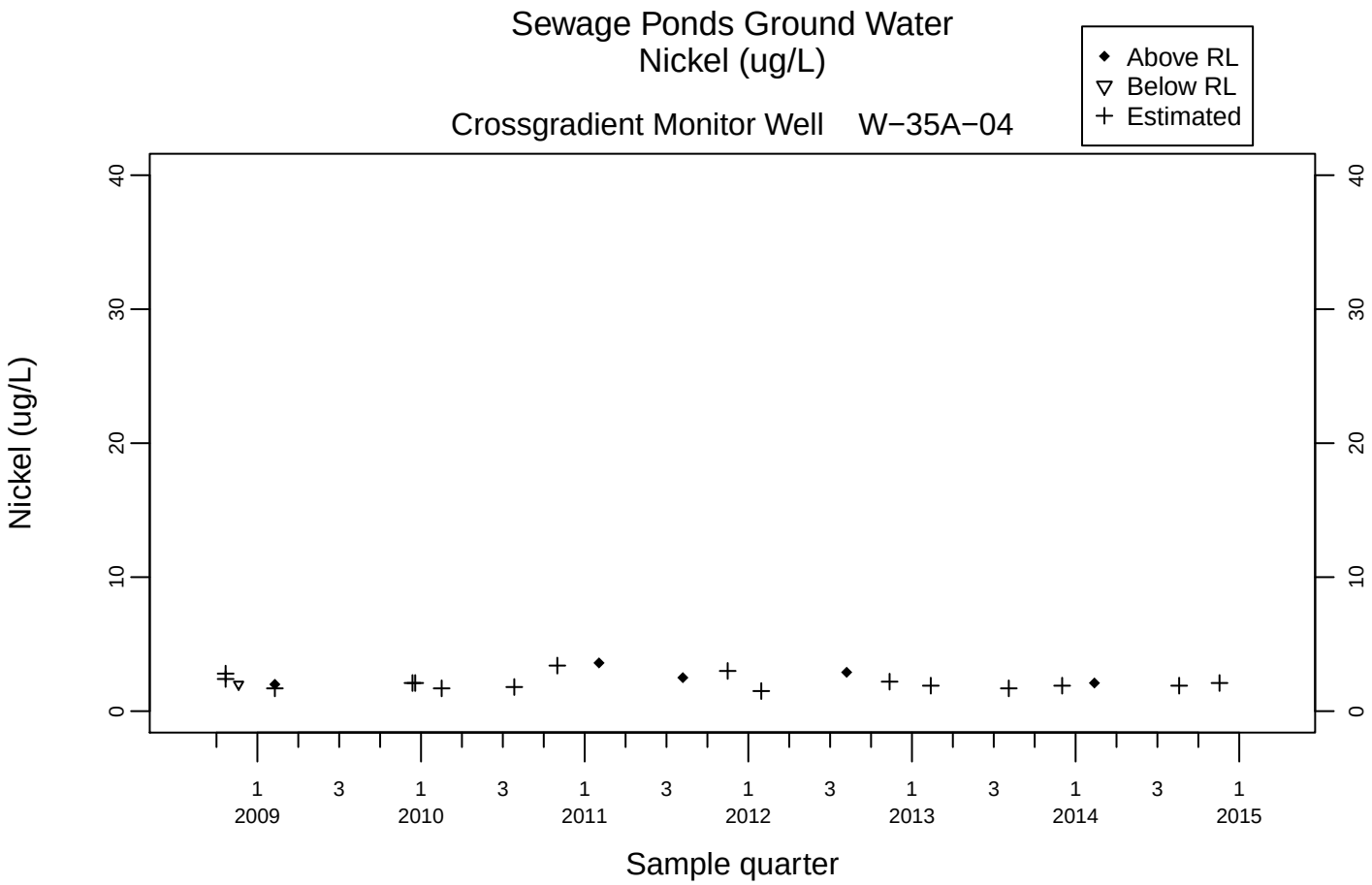

Sewage Ponds Ground Water
Molybdenum (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

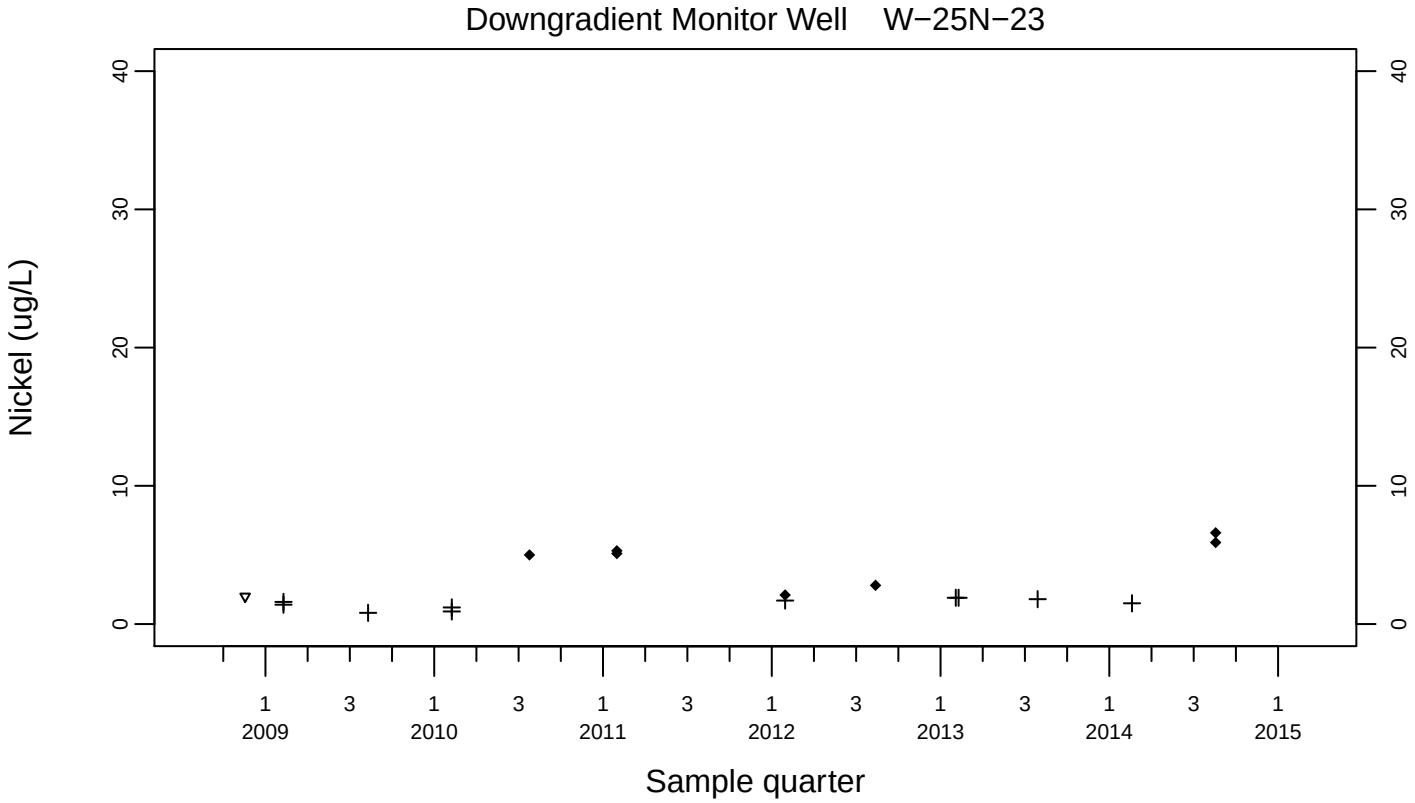

Downgradient Monitor Well W−26R−11
Molybdenum (ug/L)
0
10
20
30
40
50
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

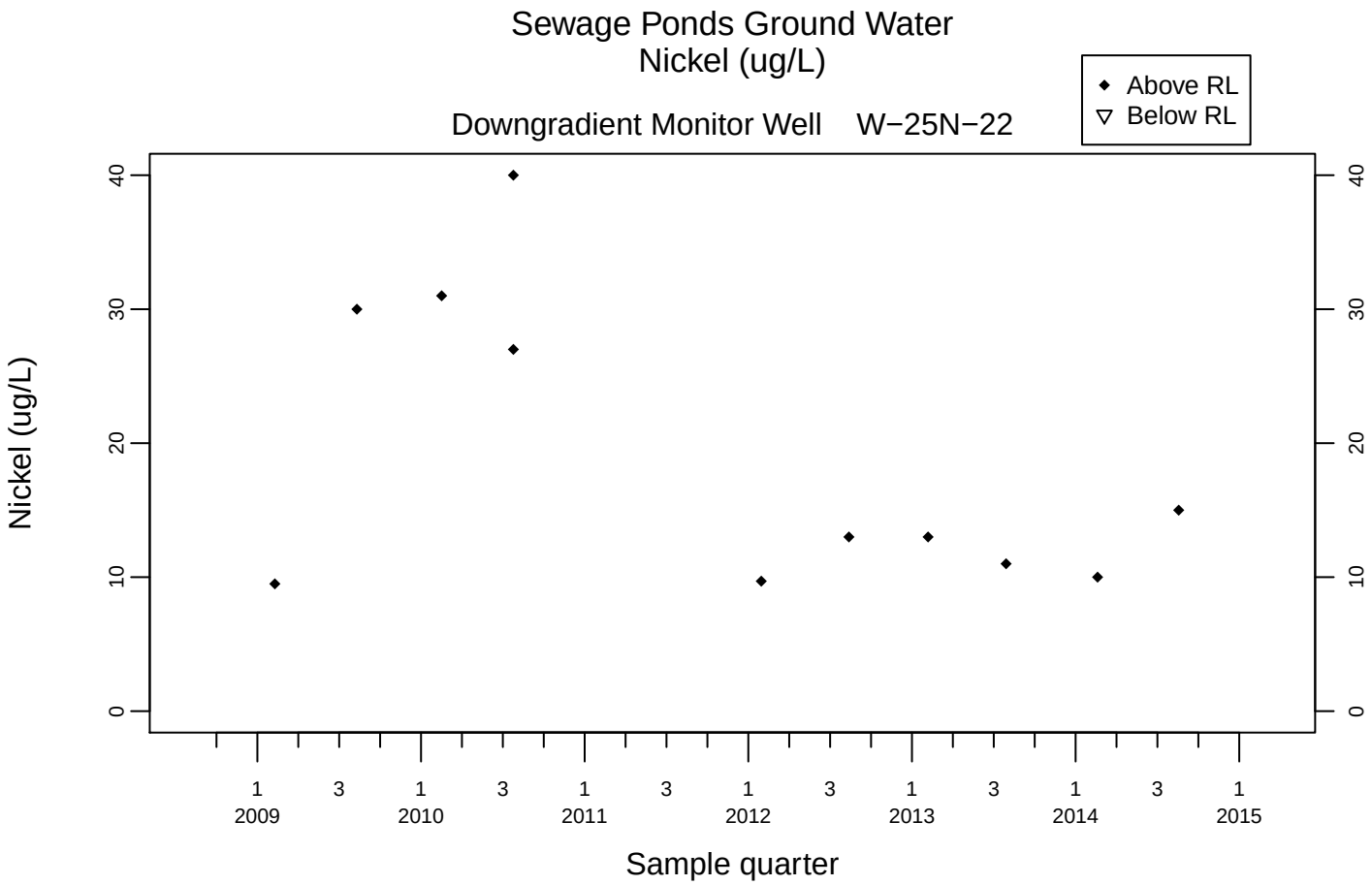

Sewage Ponds Ground Water
Molybdenum (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Molybdenum (ug/L)
0
10
20
30
40
50
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

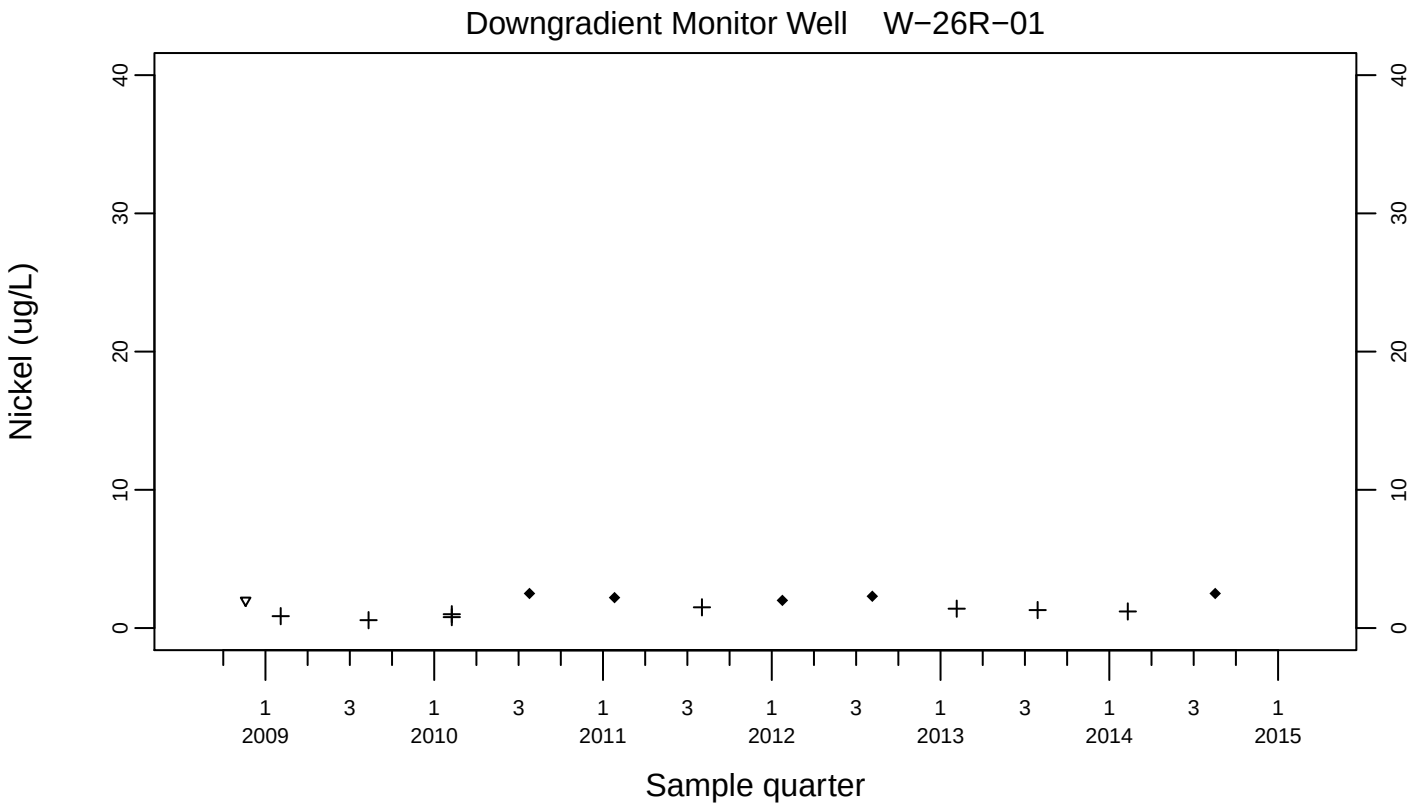

Sewage Ponds Ground Water
Nickel (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

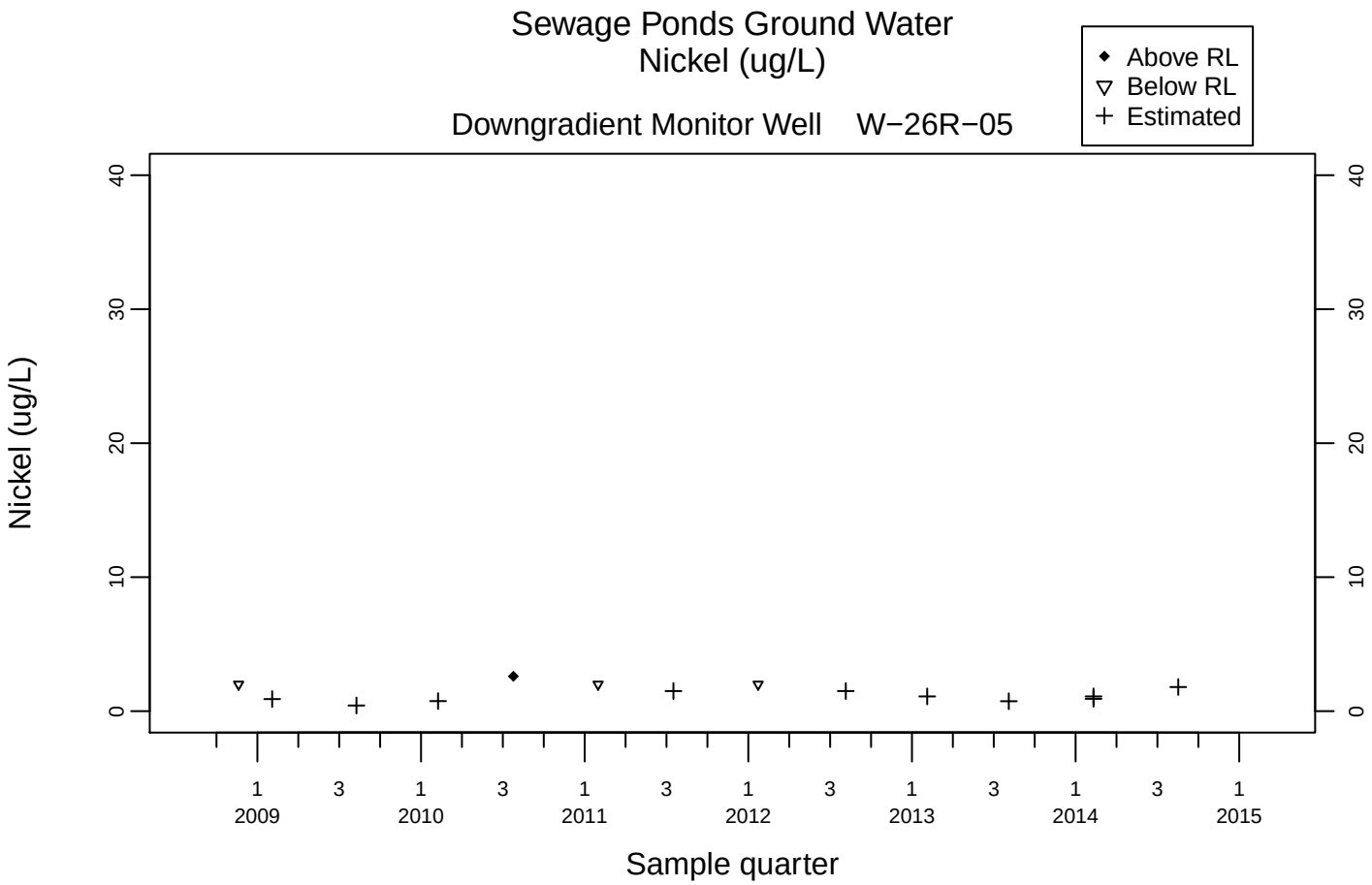

Upgradient Monitor Well W−7PS
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

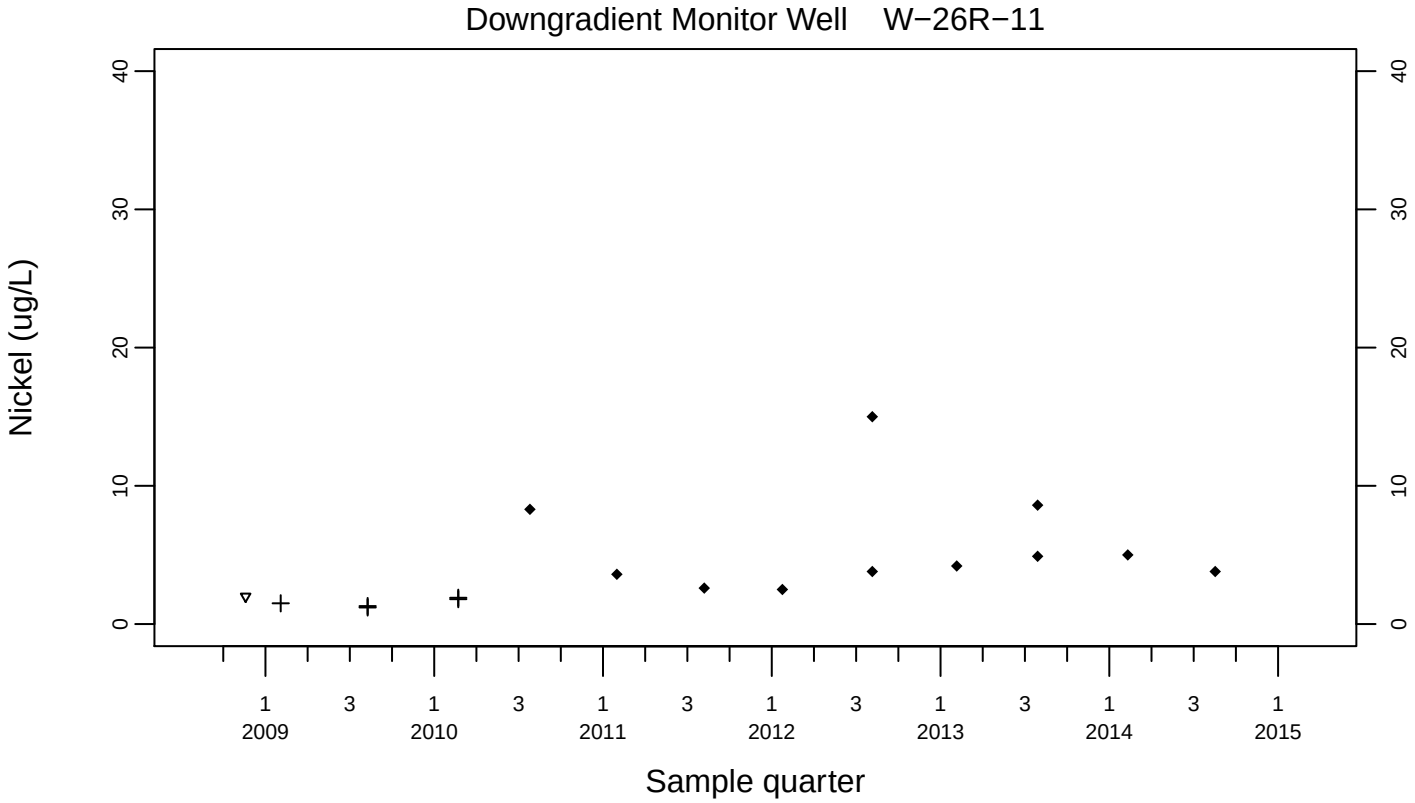

Sewage Ponds Ground Water
Nickel (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

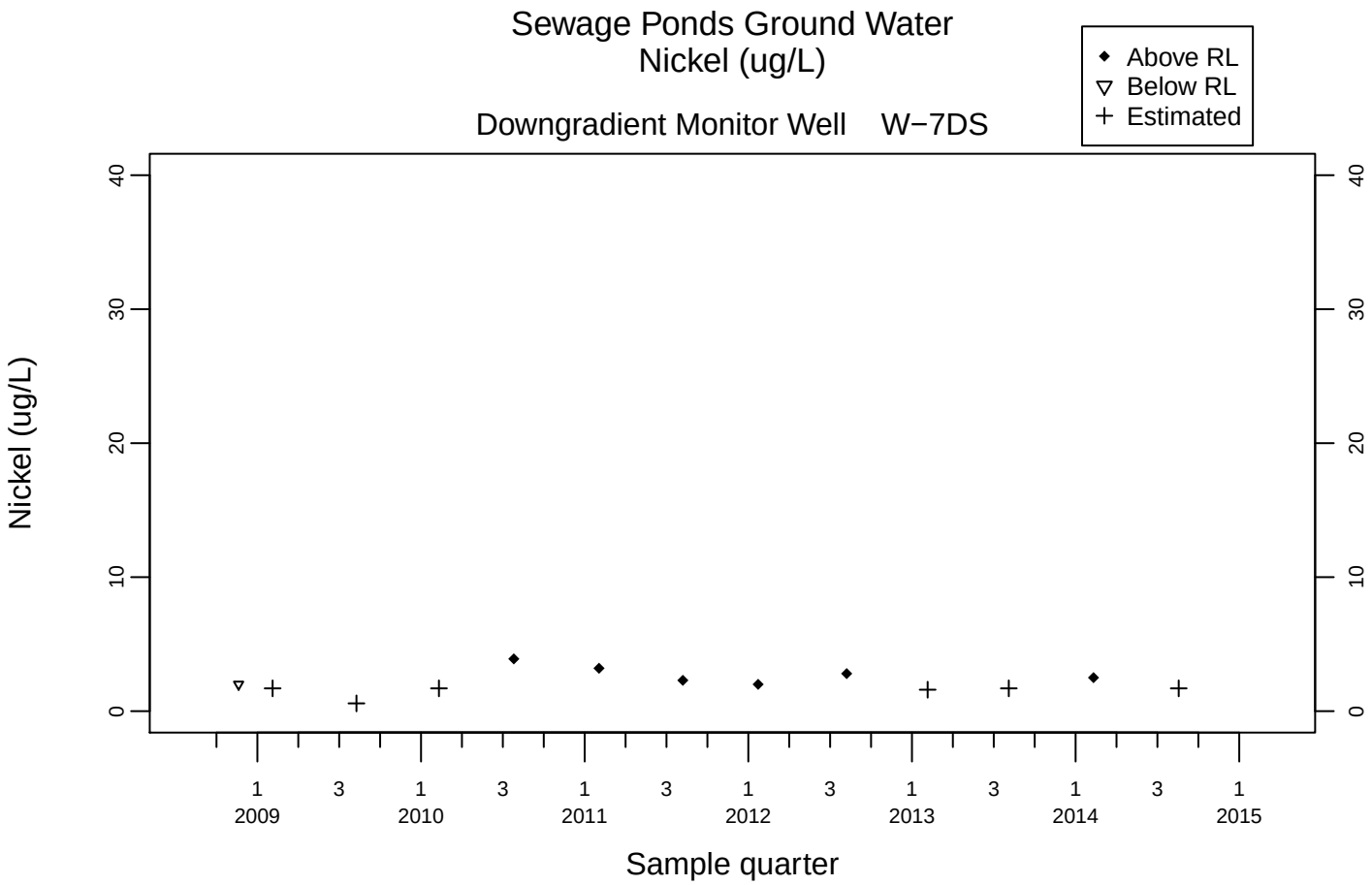

Downgradient Monitor Well W−25N−23
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

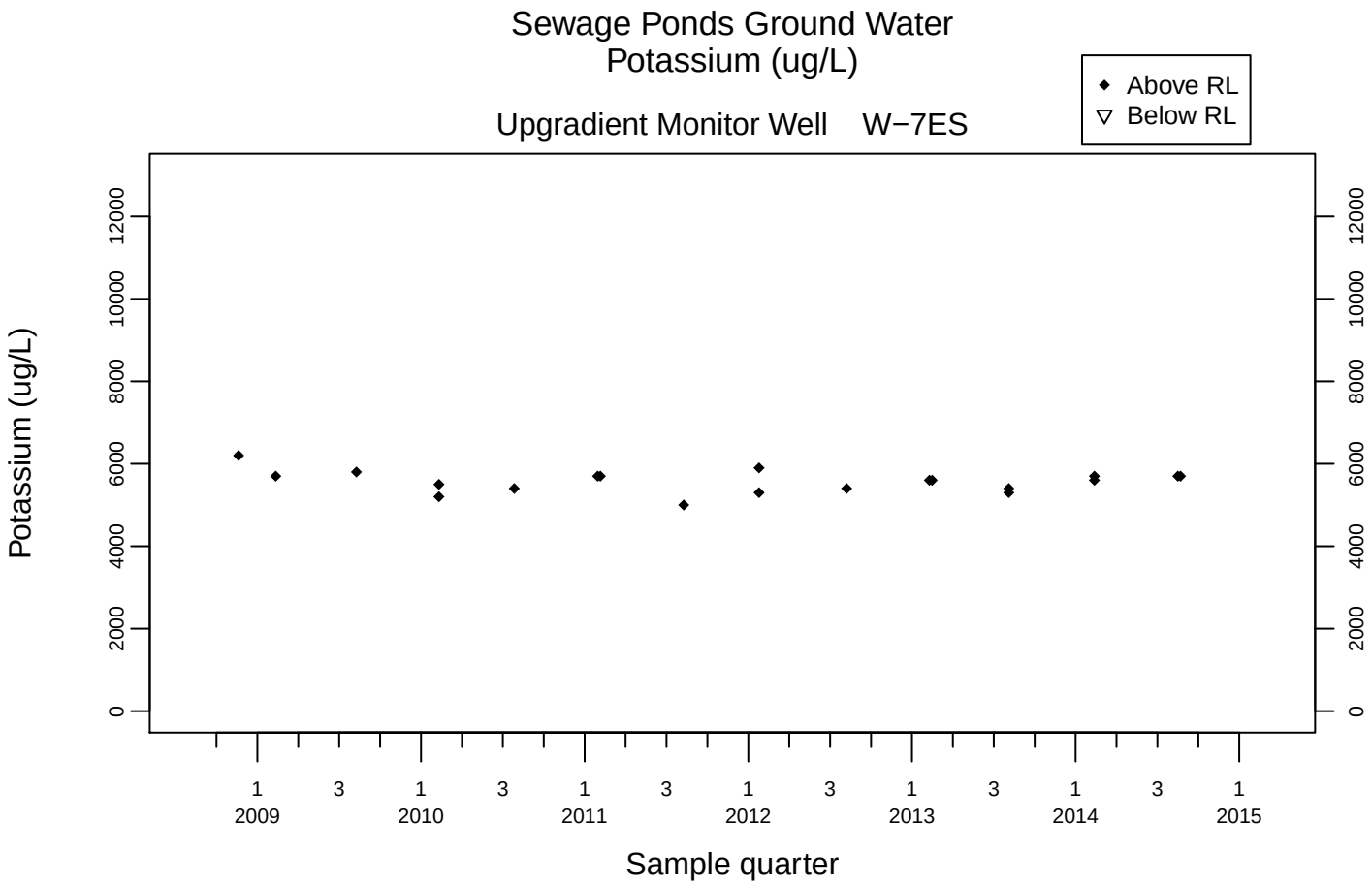

Sewage Ponds Ground Water
Nickel (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

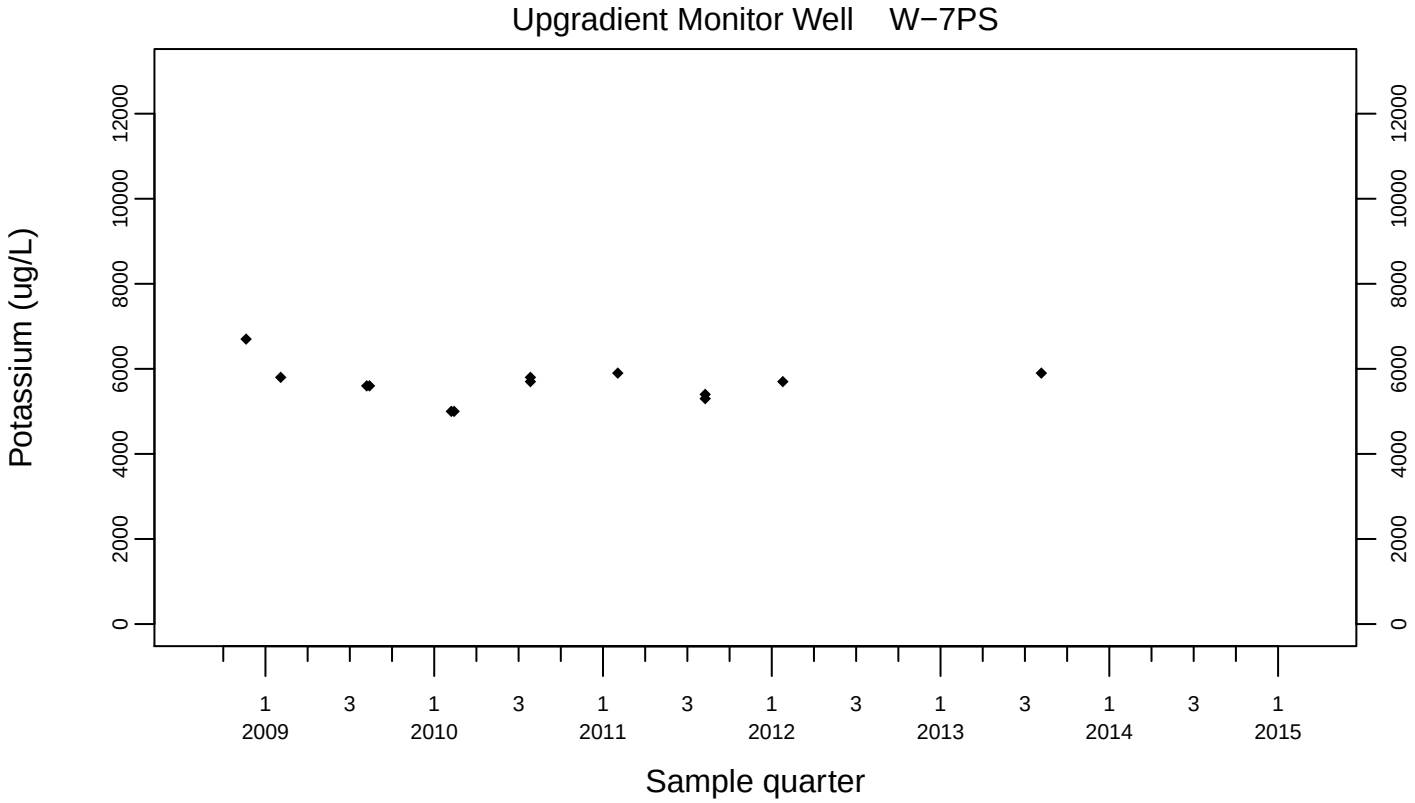

Downgradient Monitor Well W−26R−01
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

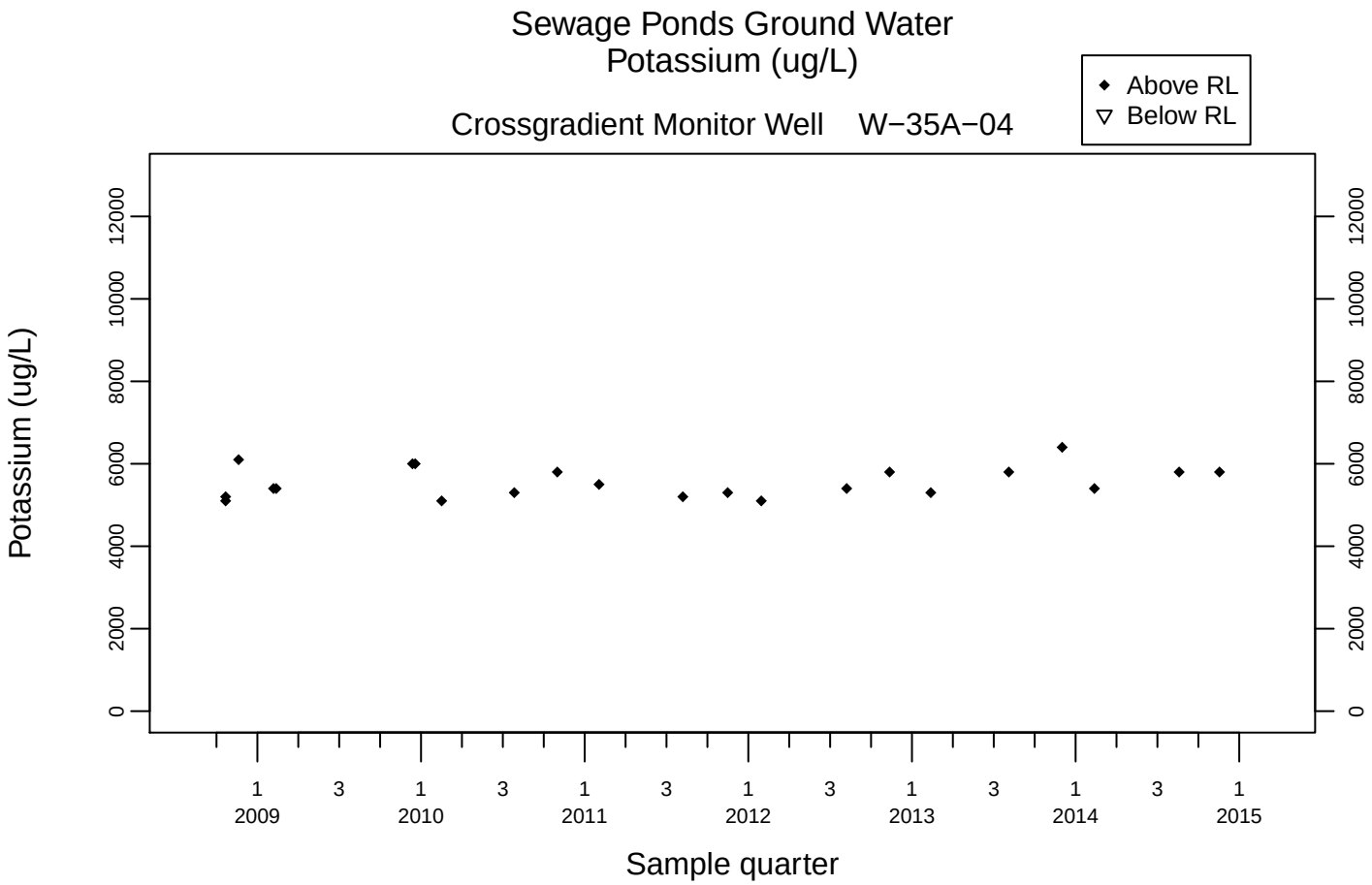

Sewage Ponds Ground Water
Nickel (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−26R−05
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

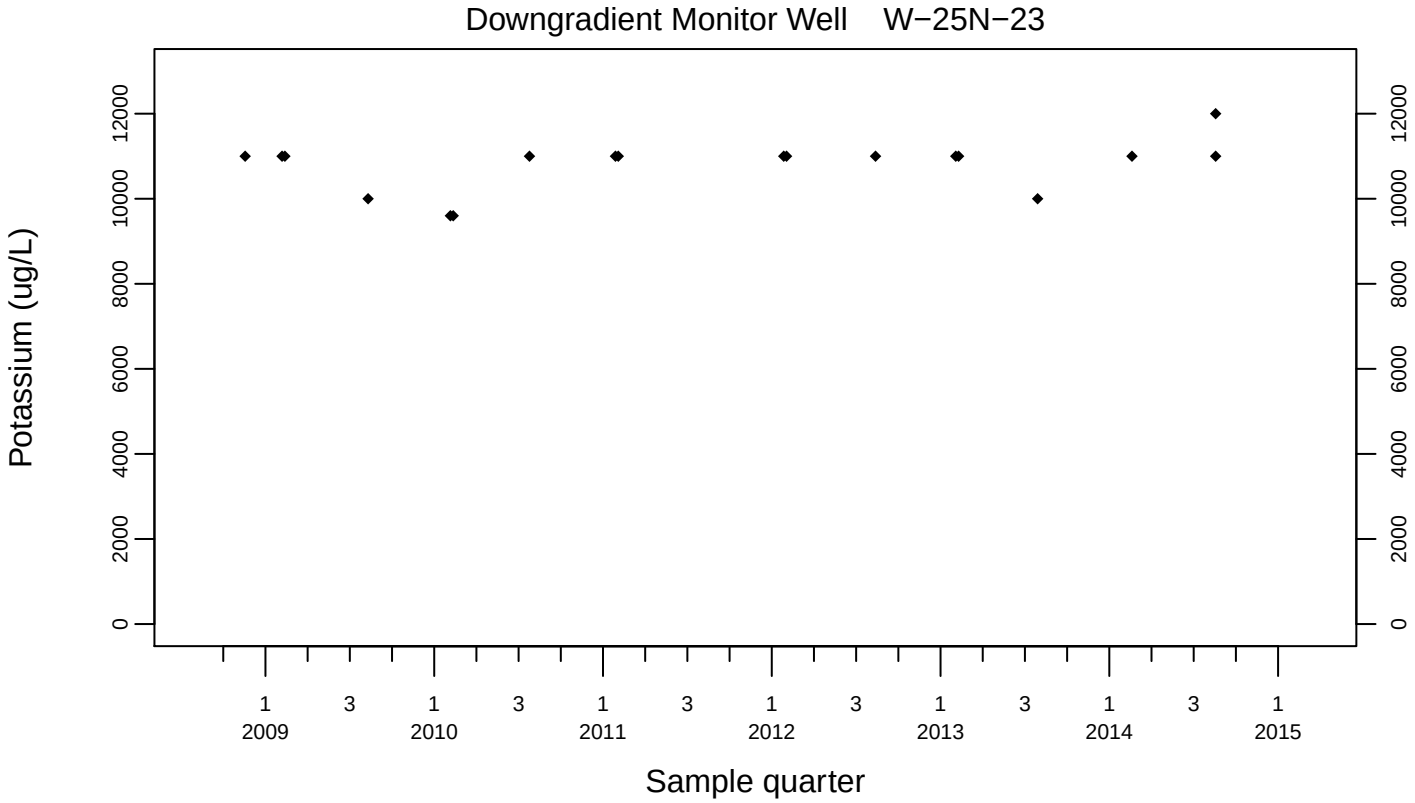

Downgradient Monitor Well W−26R−11
Nickel (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

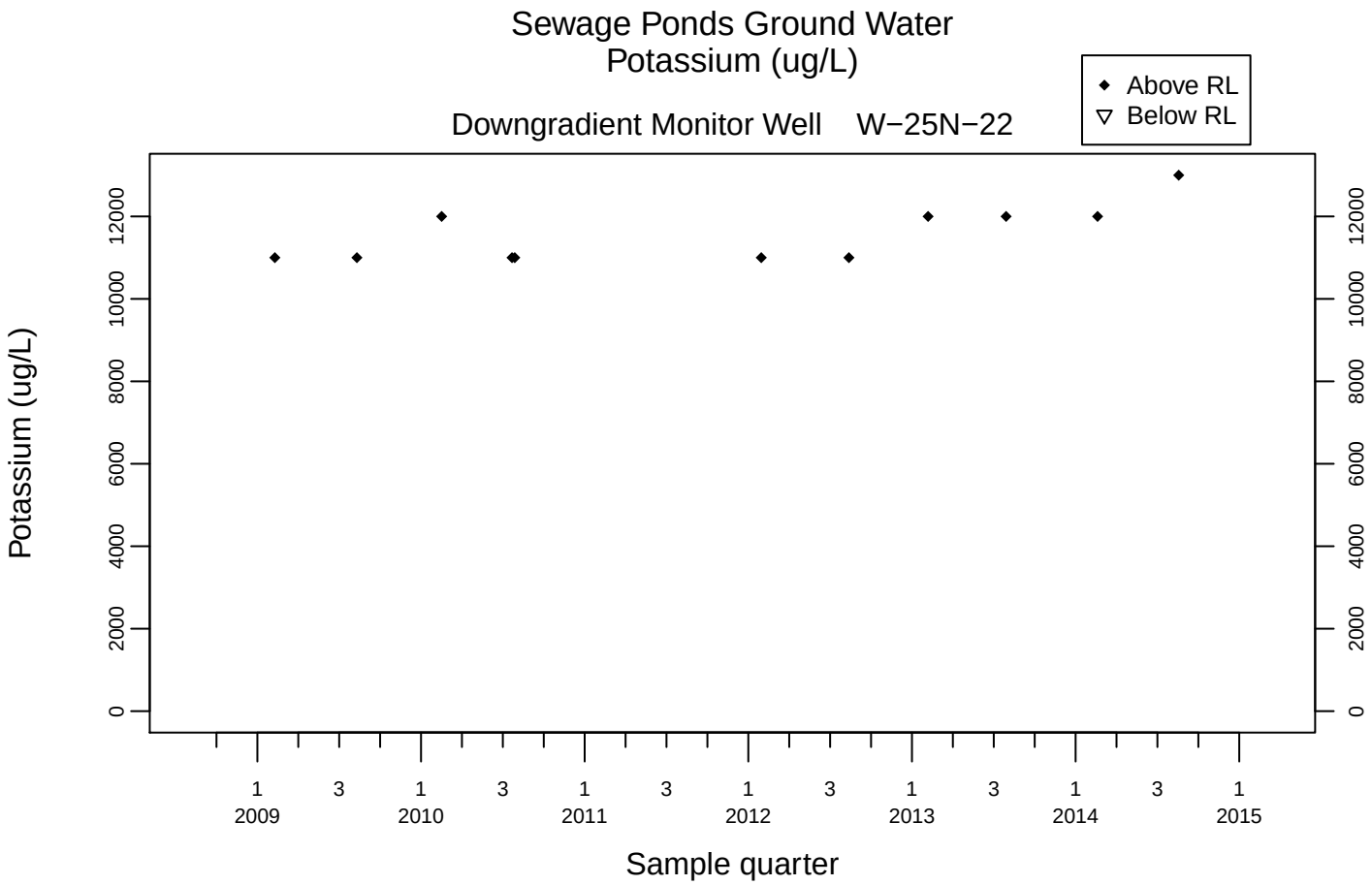

Sewage Ponds Ground Water
Nickel (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

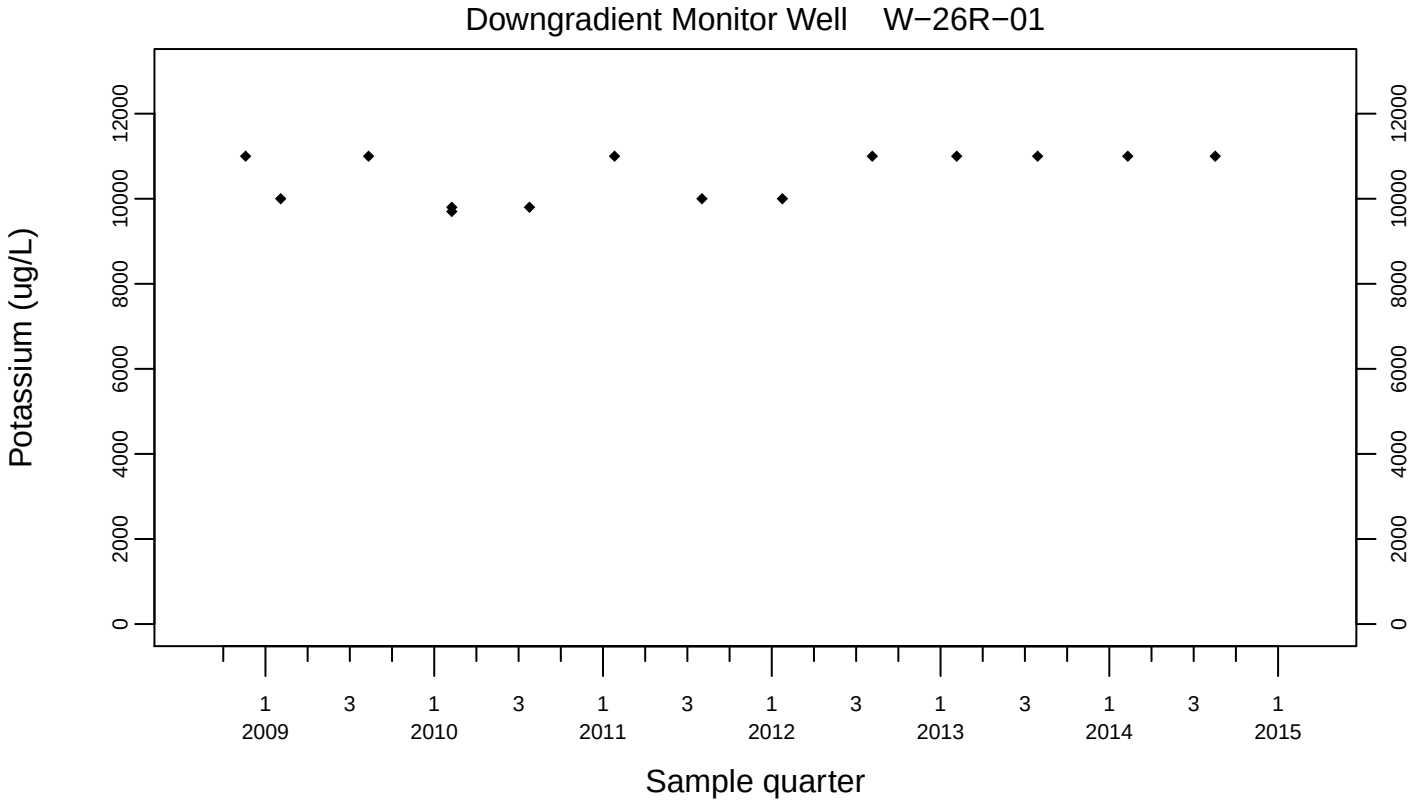

Sewage Ponds Ground Water
Potassium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

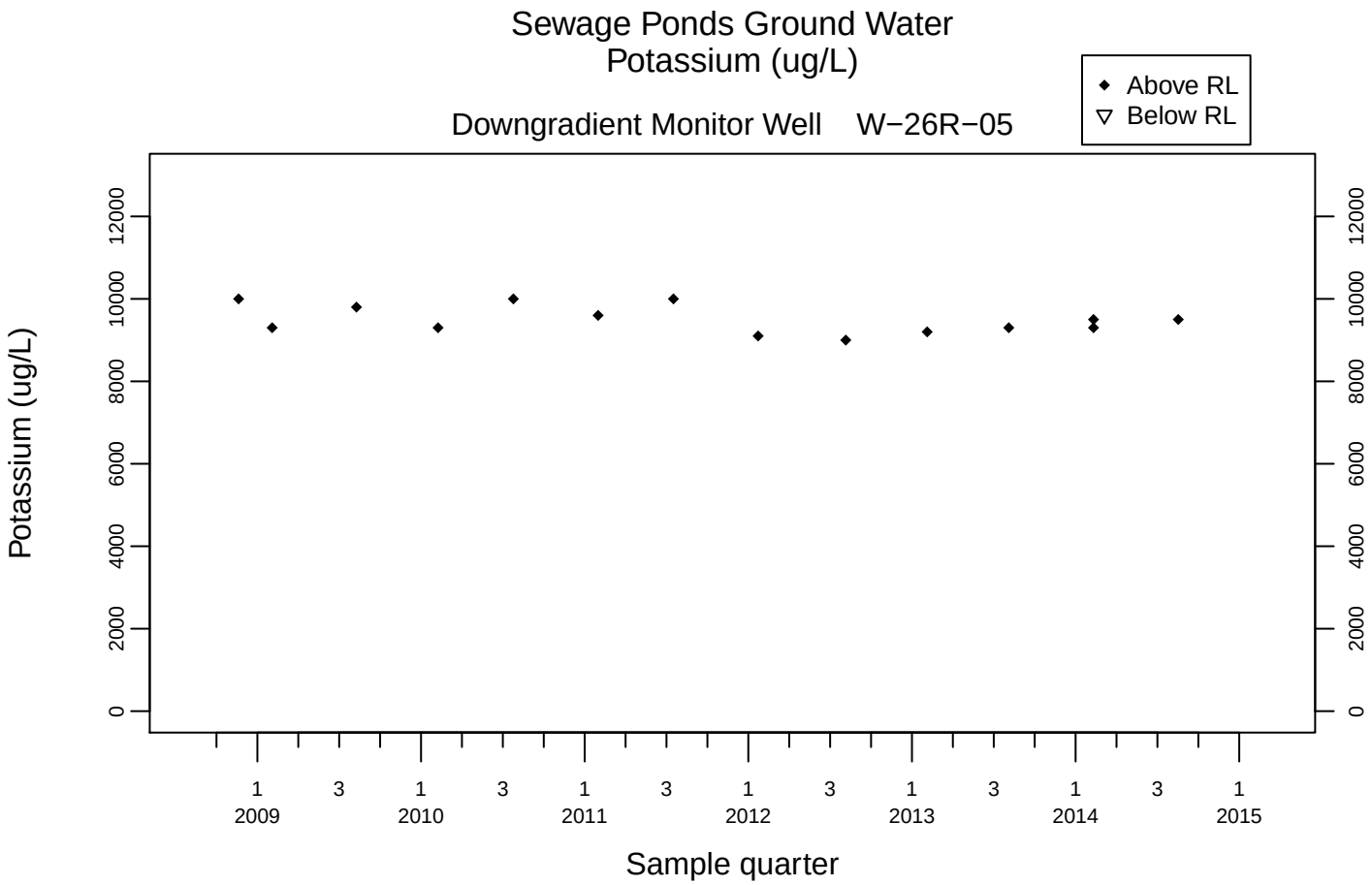

Upgradient Monitor Well W−7PS
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

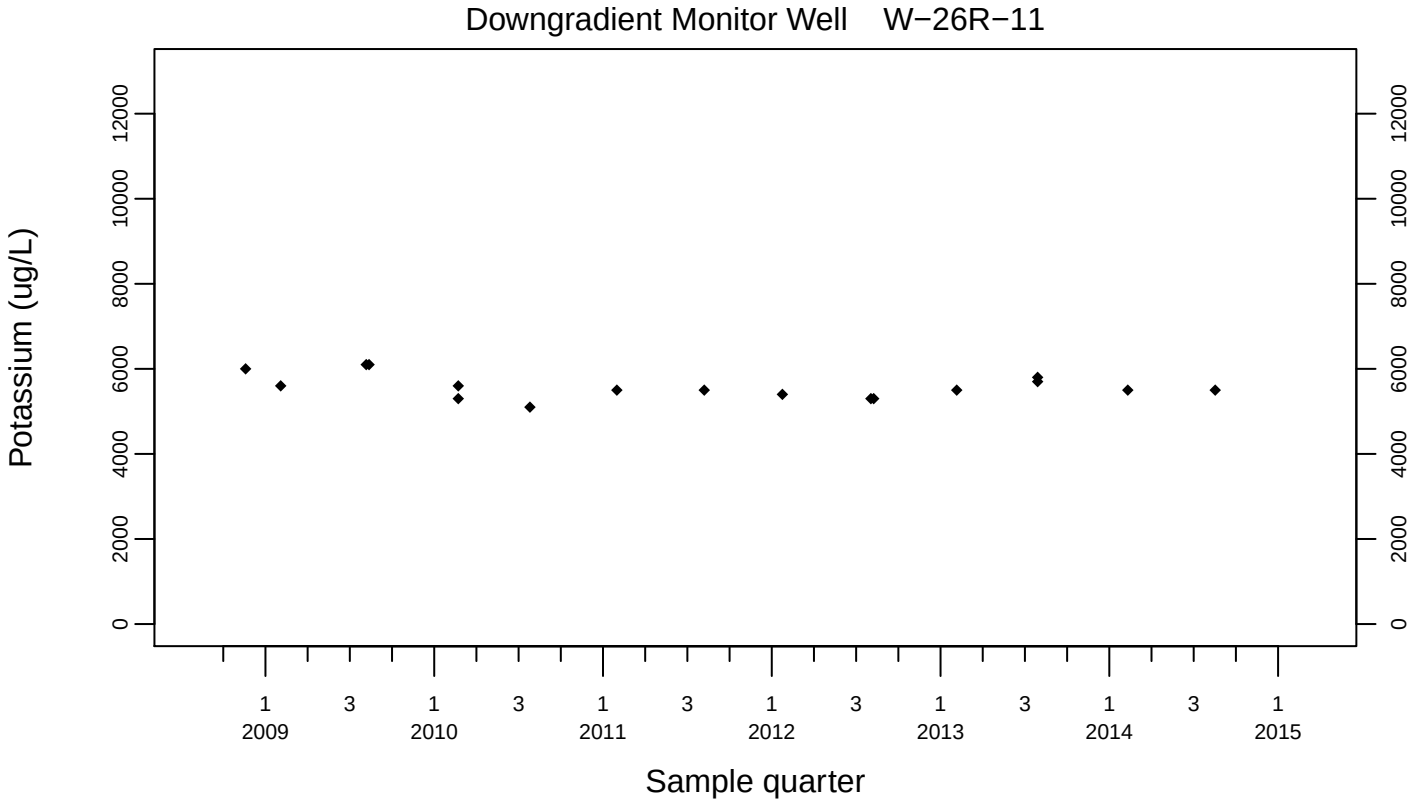

Sewage Ponds Ground Water
Potassium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

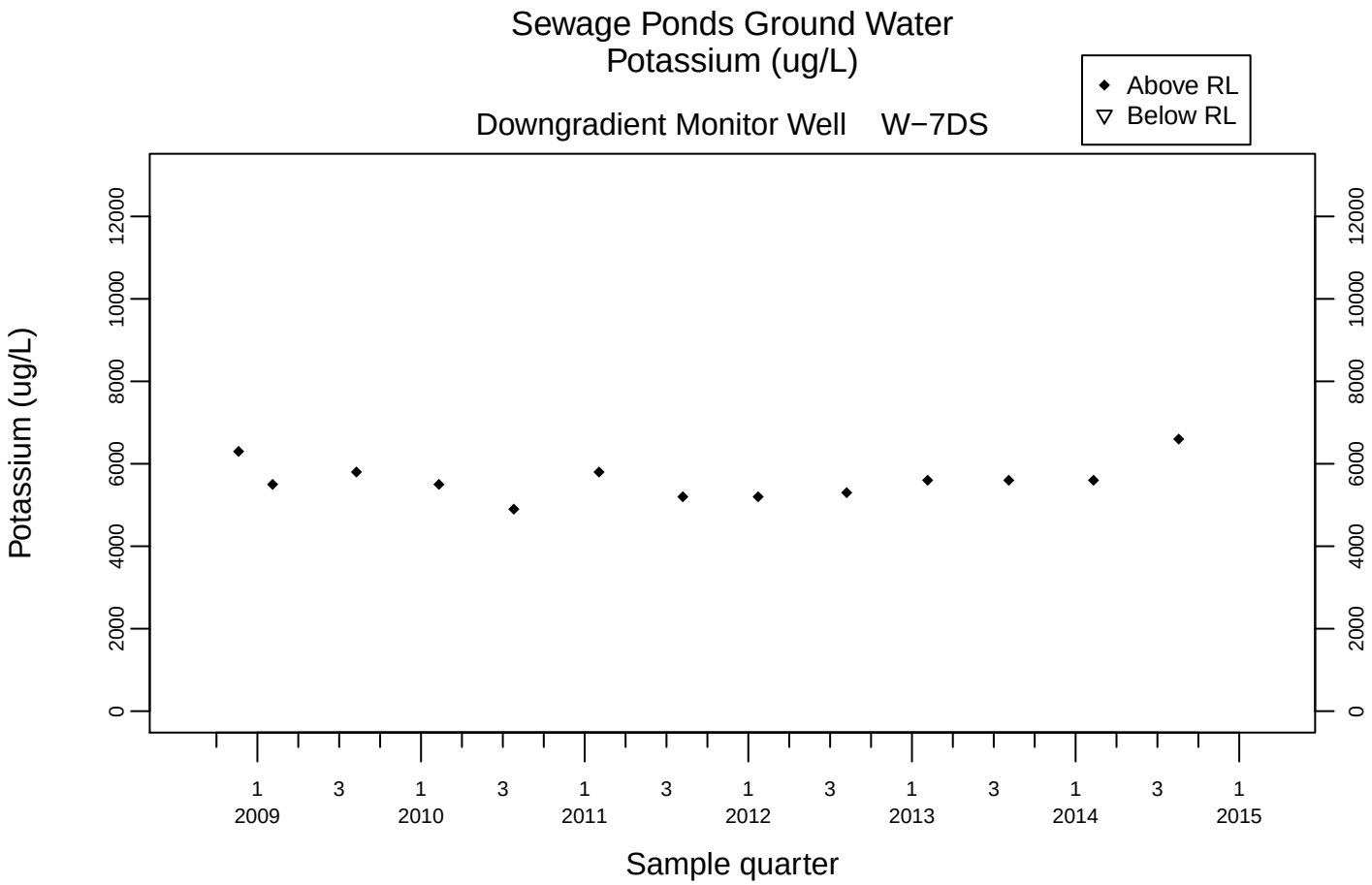

Downgradient Monitor Well W−25N−23
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

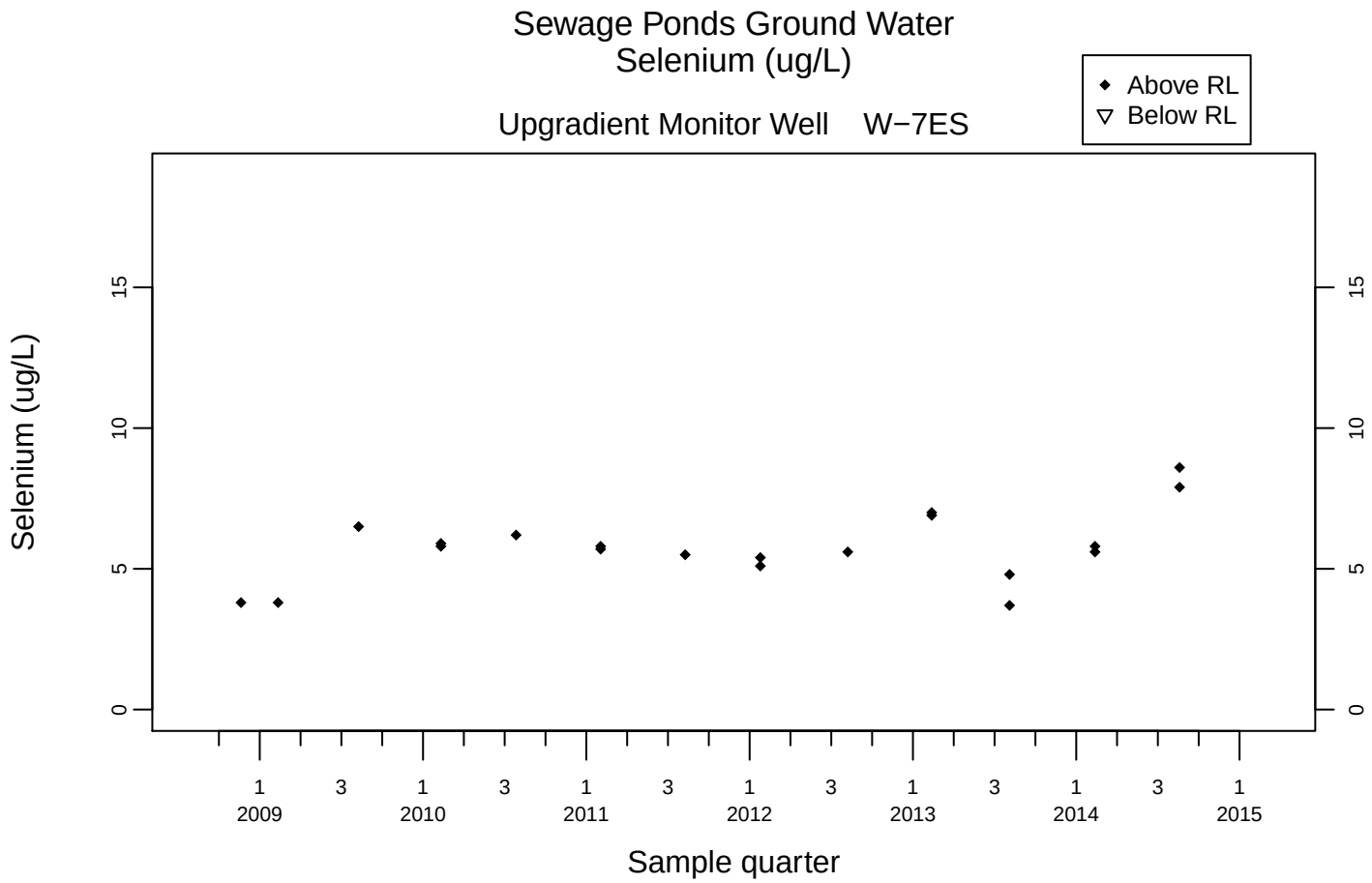

Sewage Ponds Ground Water
Potassium (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

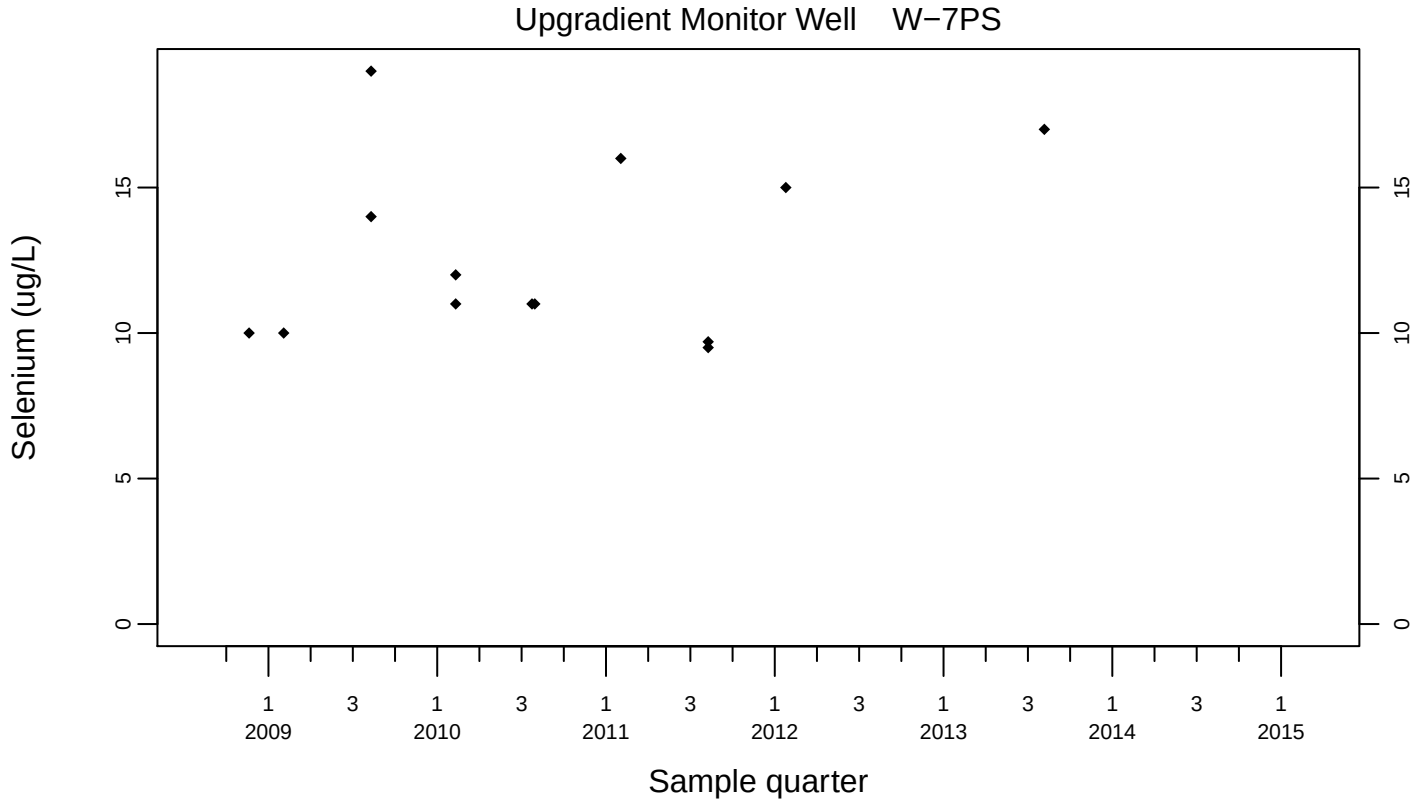

Downgradient Monitor Well W−26R−01
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

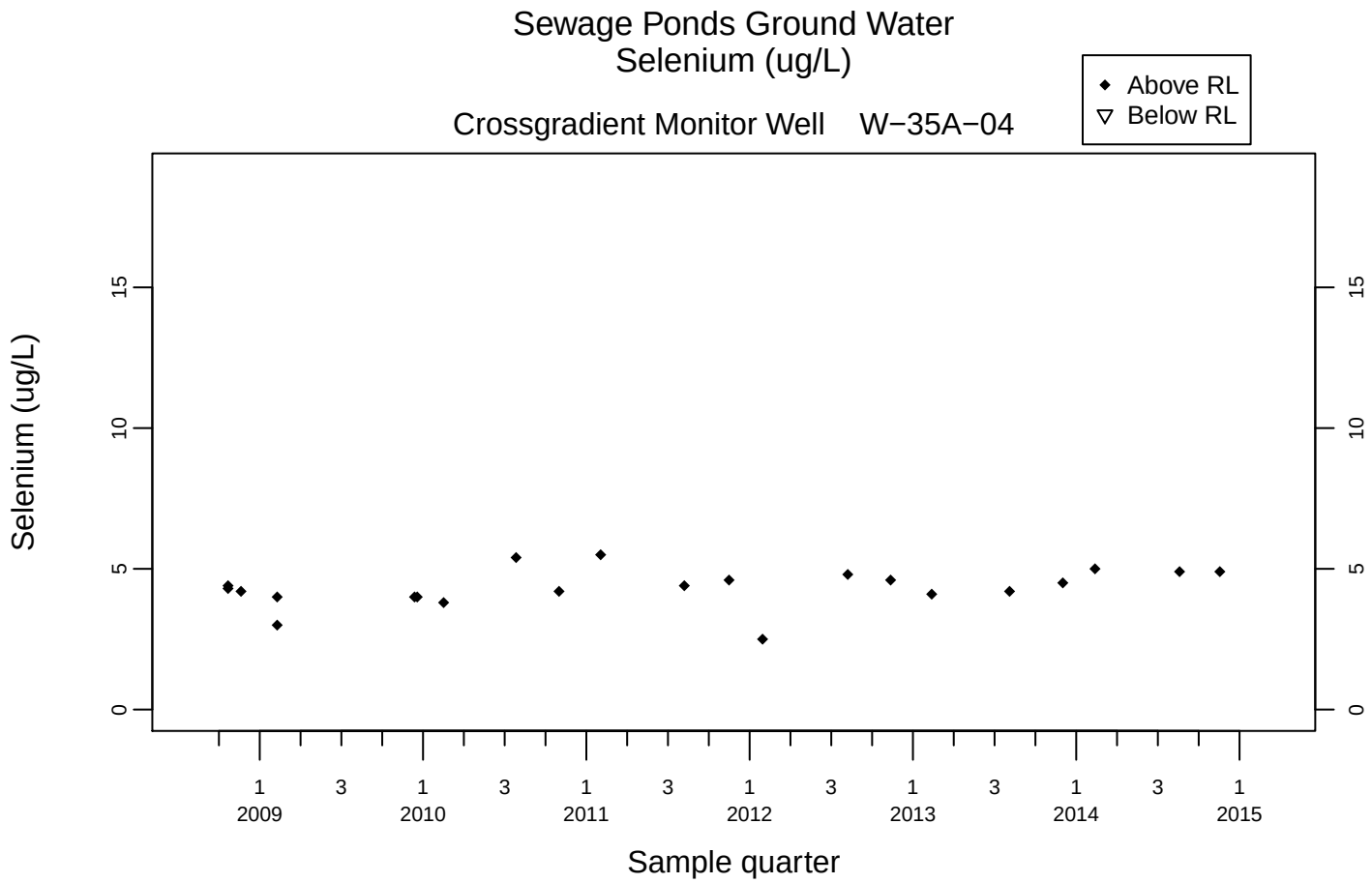

Sewage Ponds Ground Water
Potassium (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

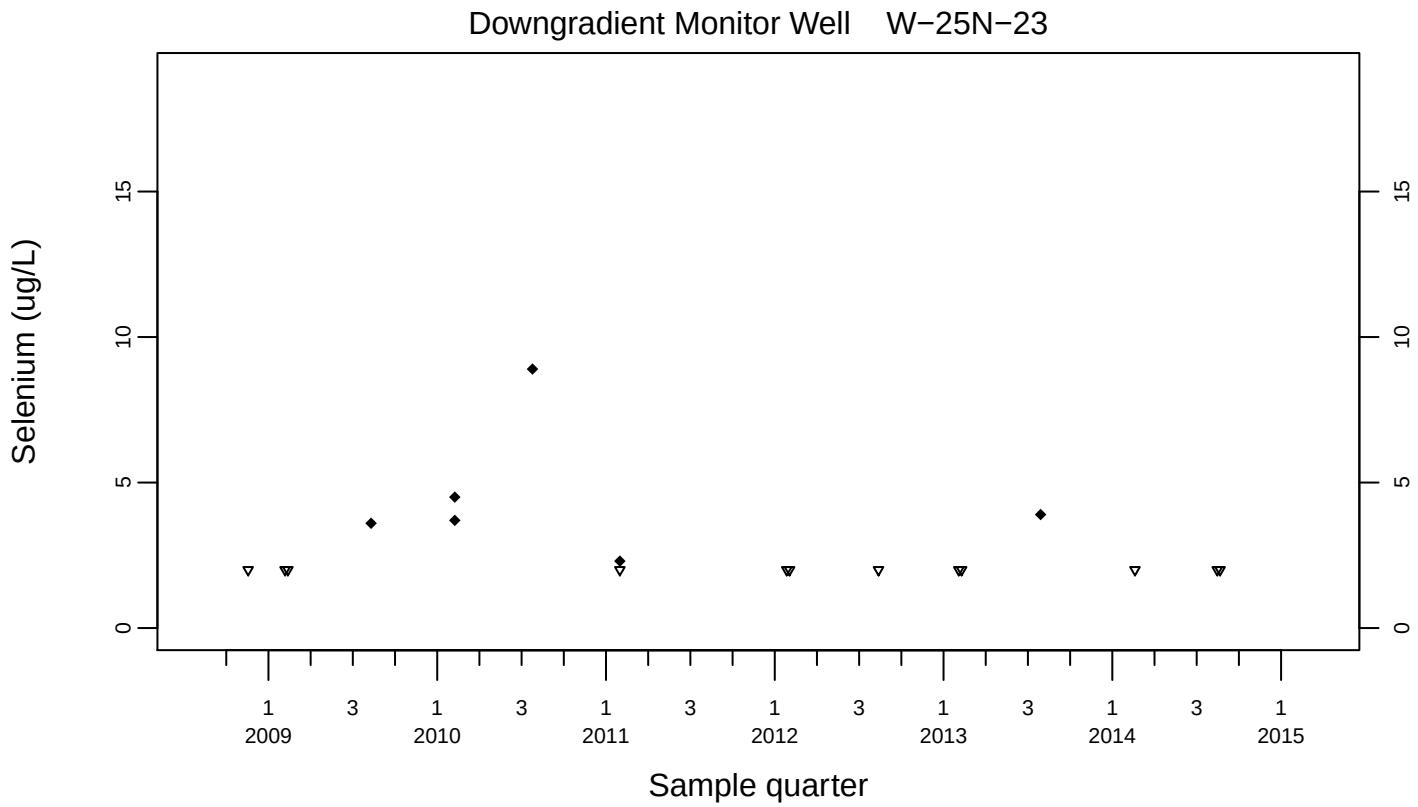

Downgradient Monitor Well W−26R−11
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

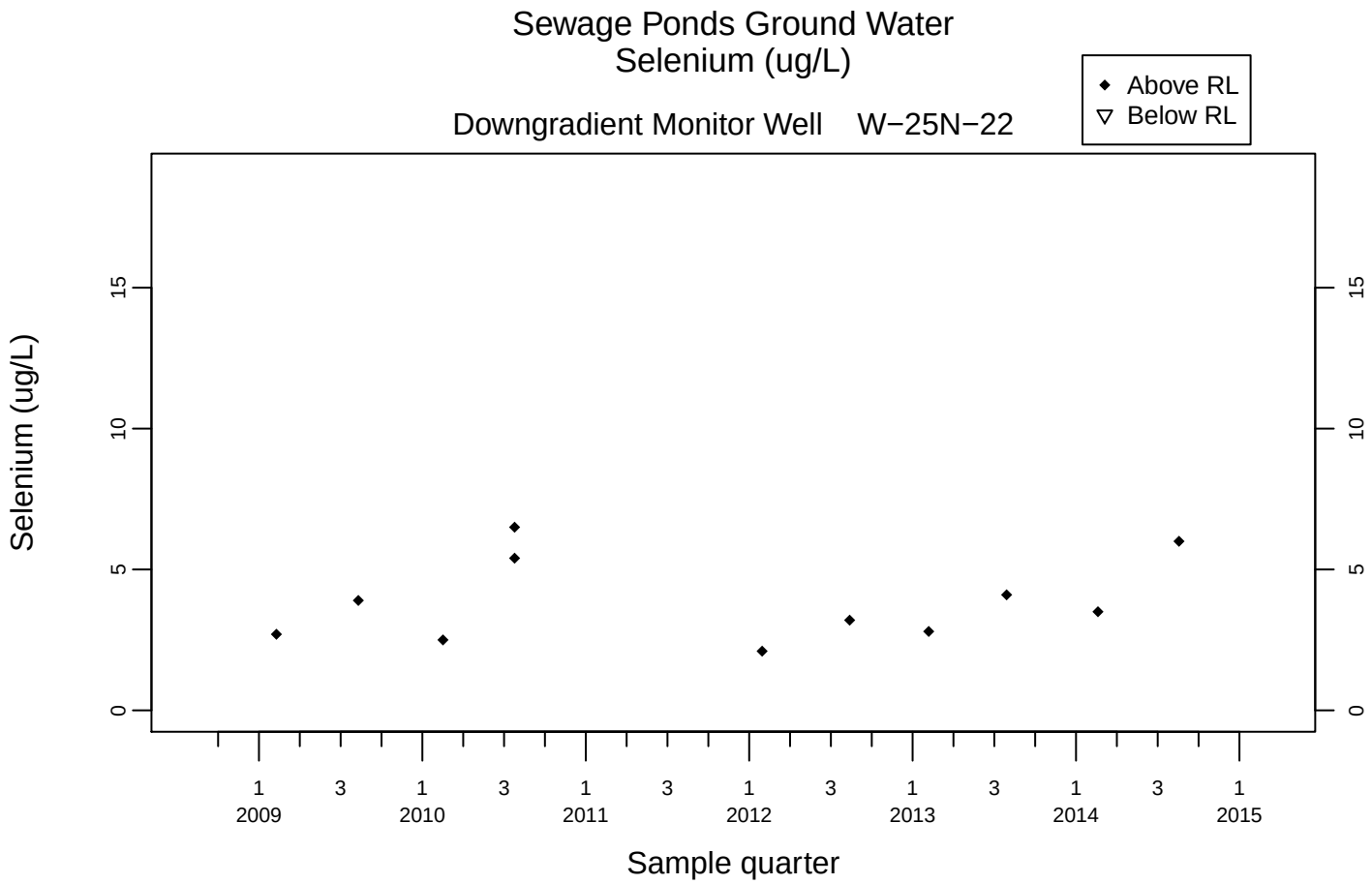

Sewage Ponds Ground Water
Potassium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

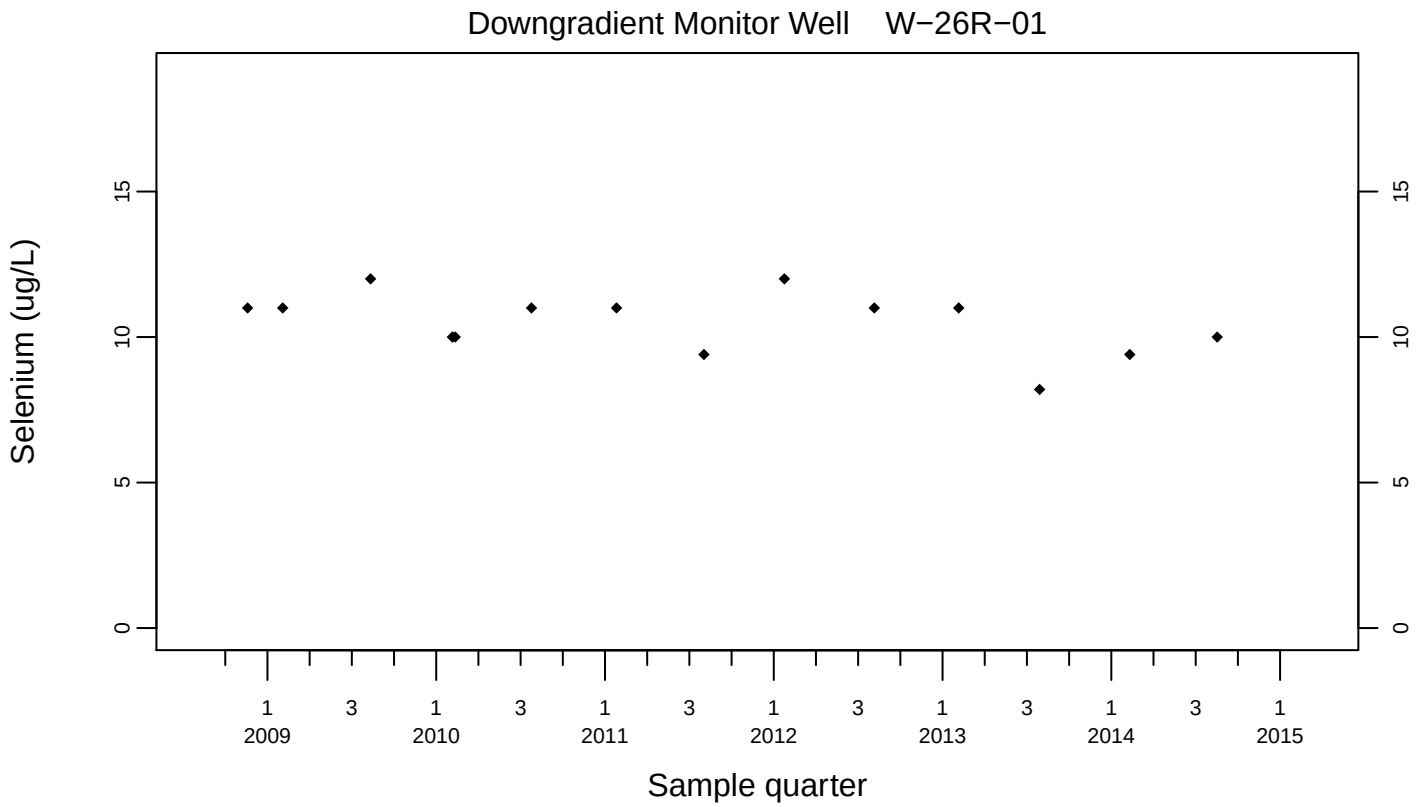

Sewage Ponds Ground Water
Selenium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

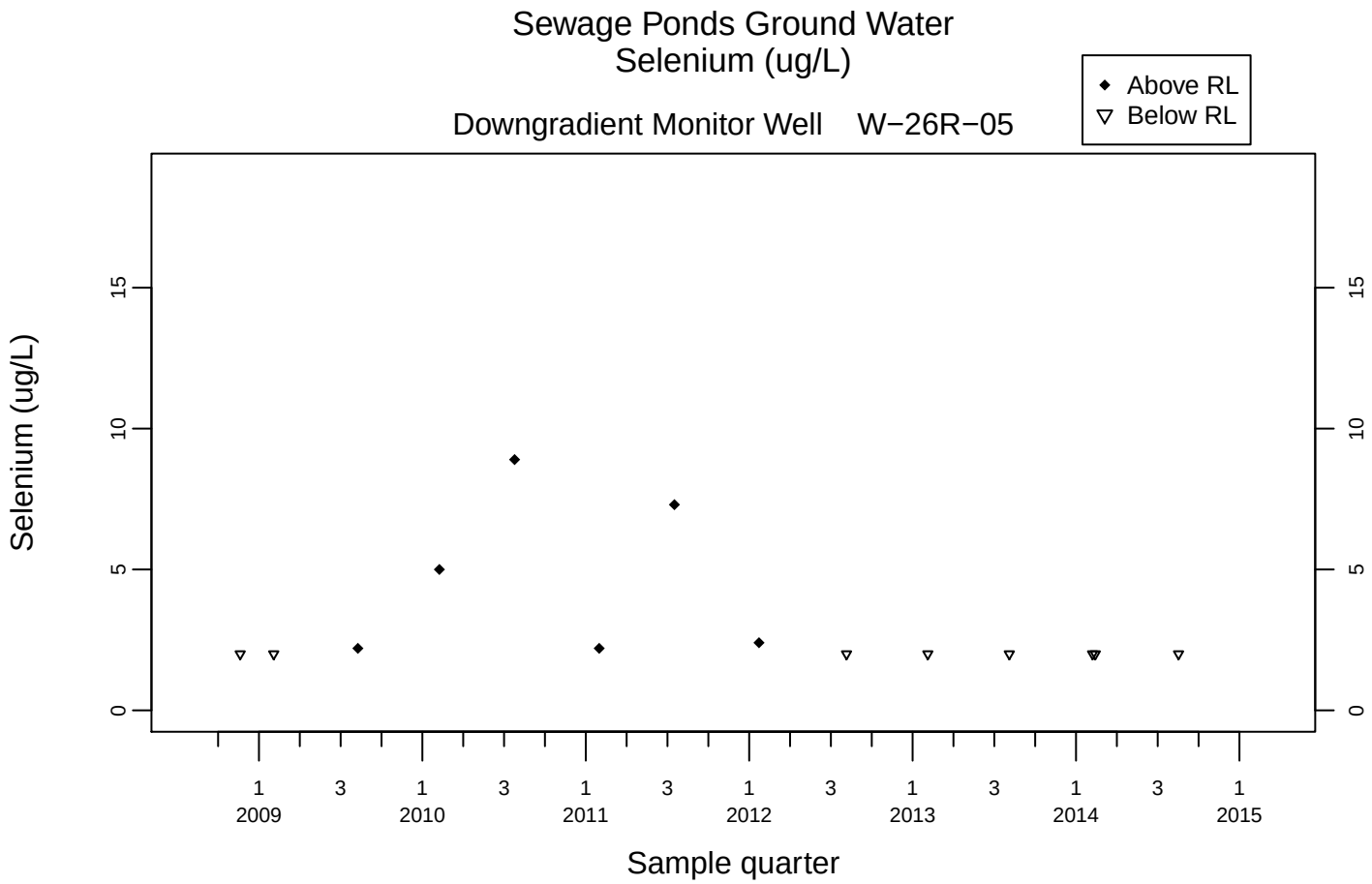

Upgradient Monitor Well W−7PS
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

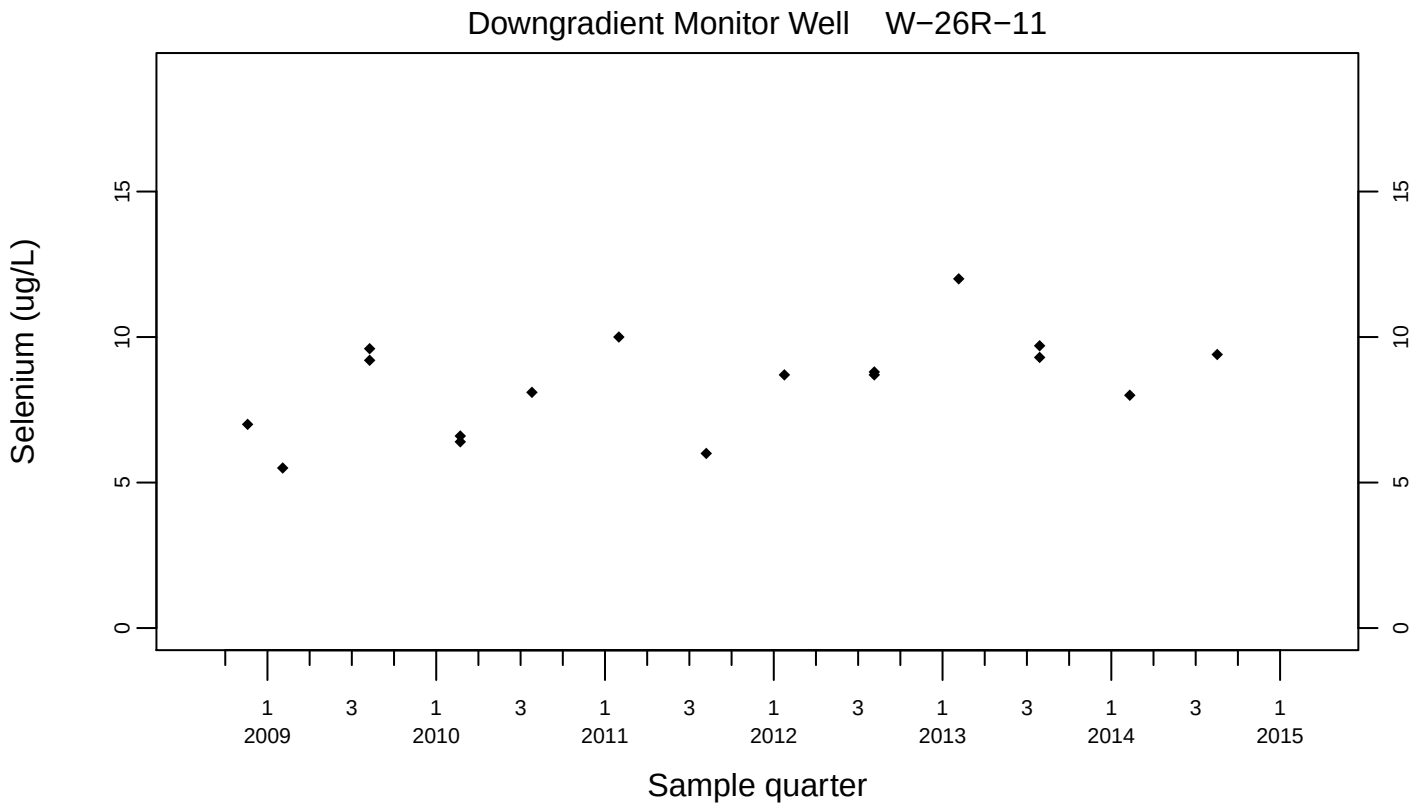

Sewage Ponds Ground Water
Selenium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

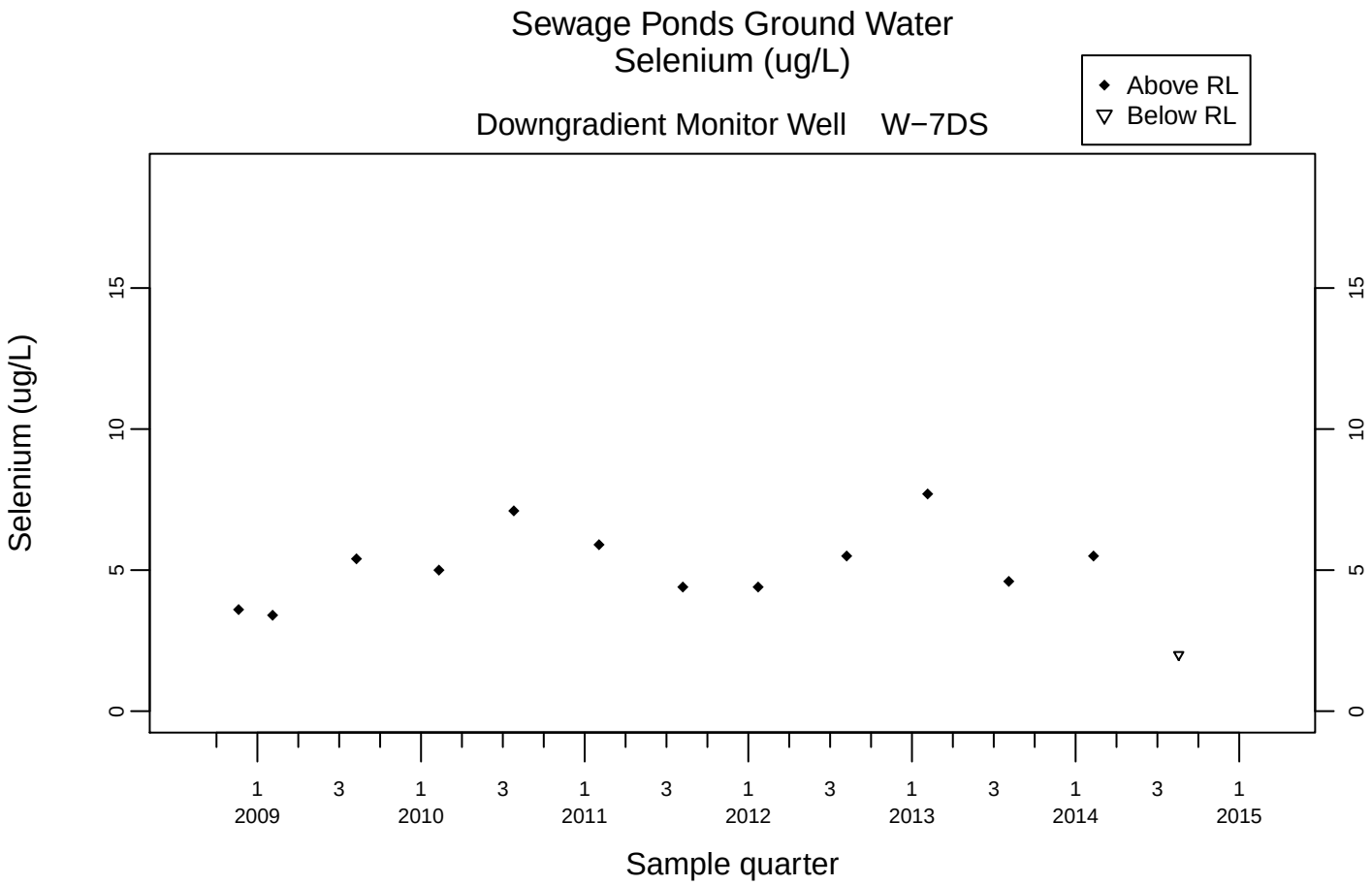

Downgradient Monitor Well W−25N−23
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

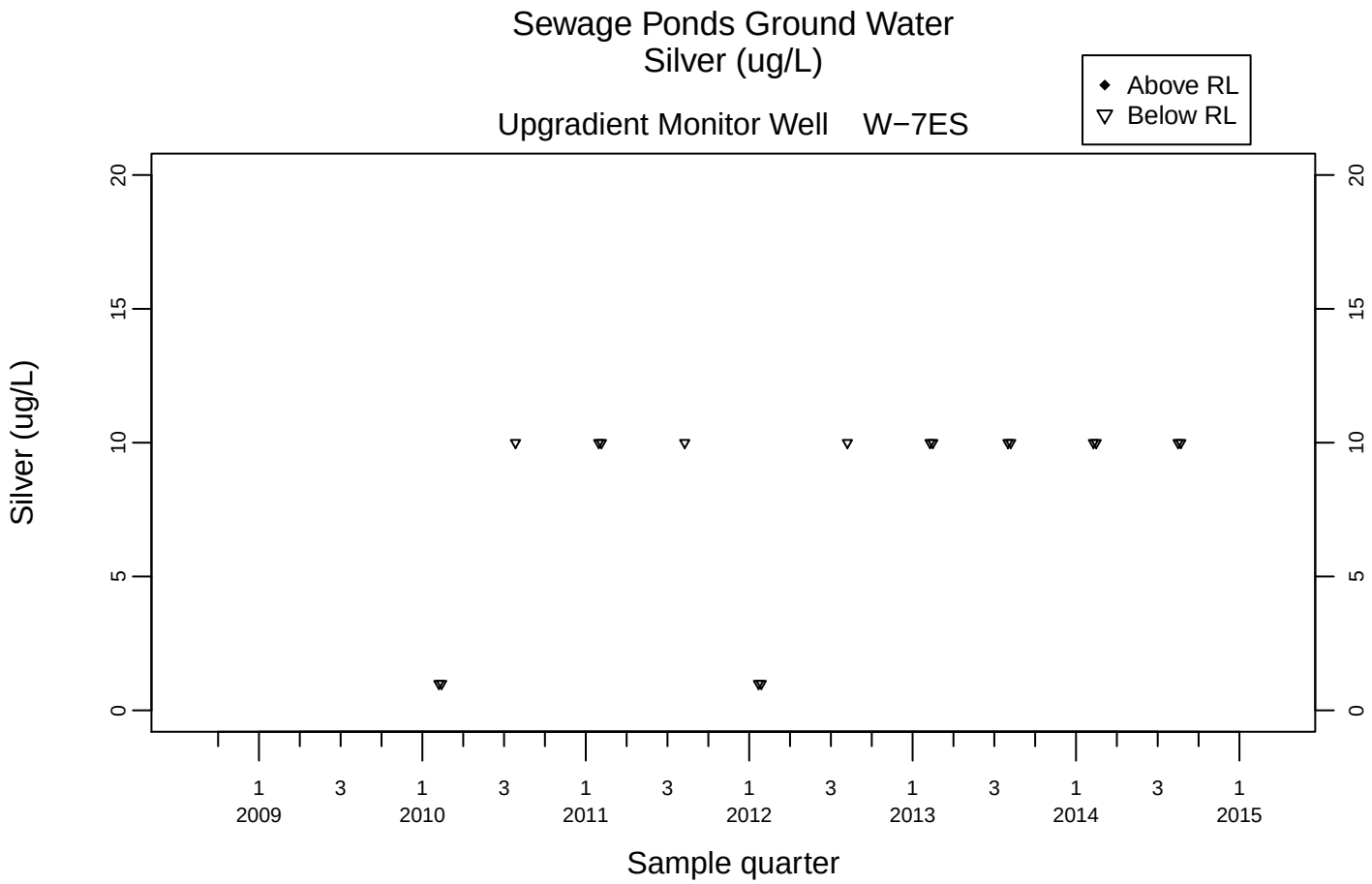

Sewage Ponds Ground Water
Selenium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

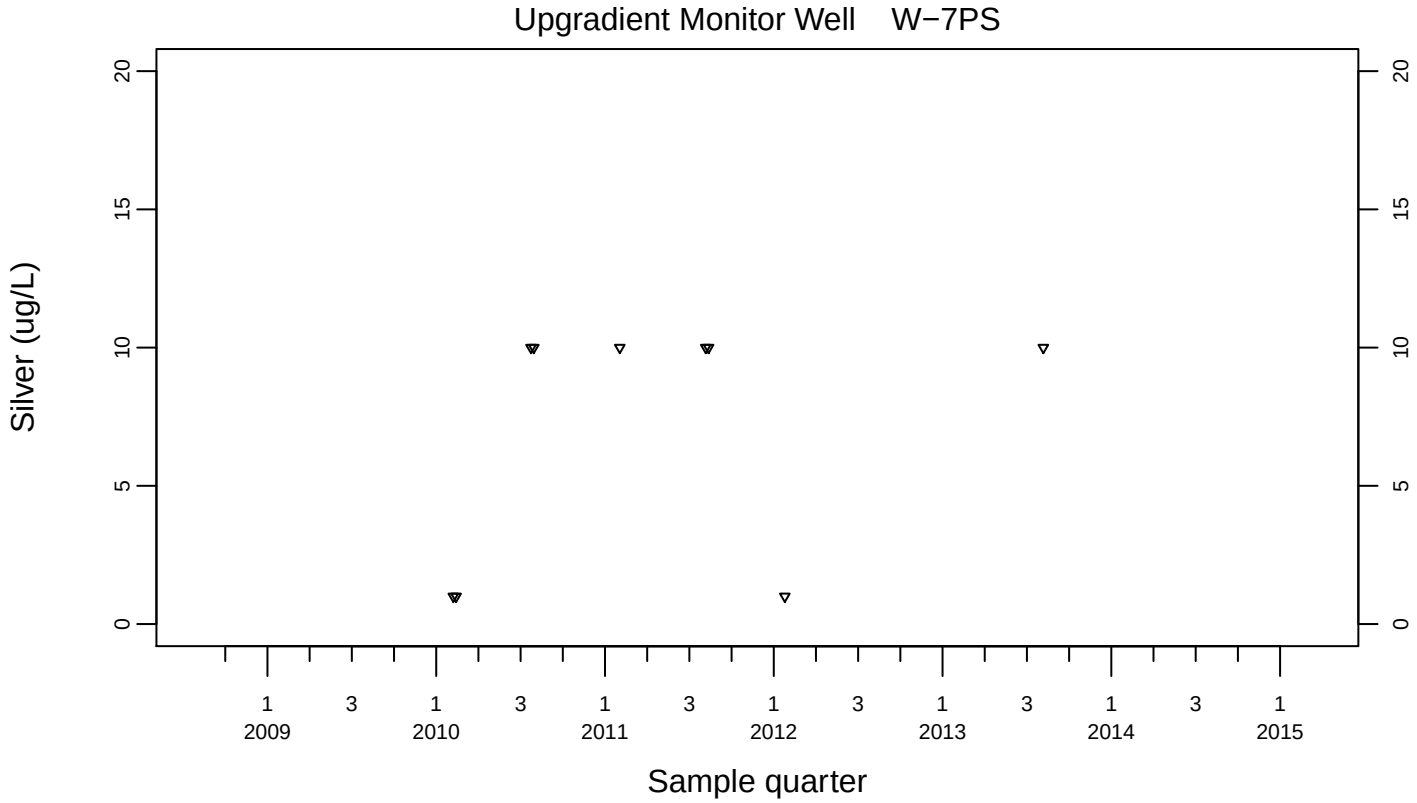

Downgradient Monitor Well W−26R−01
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

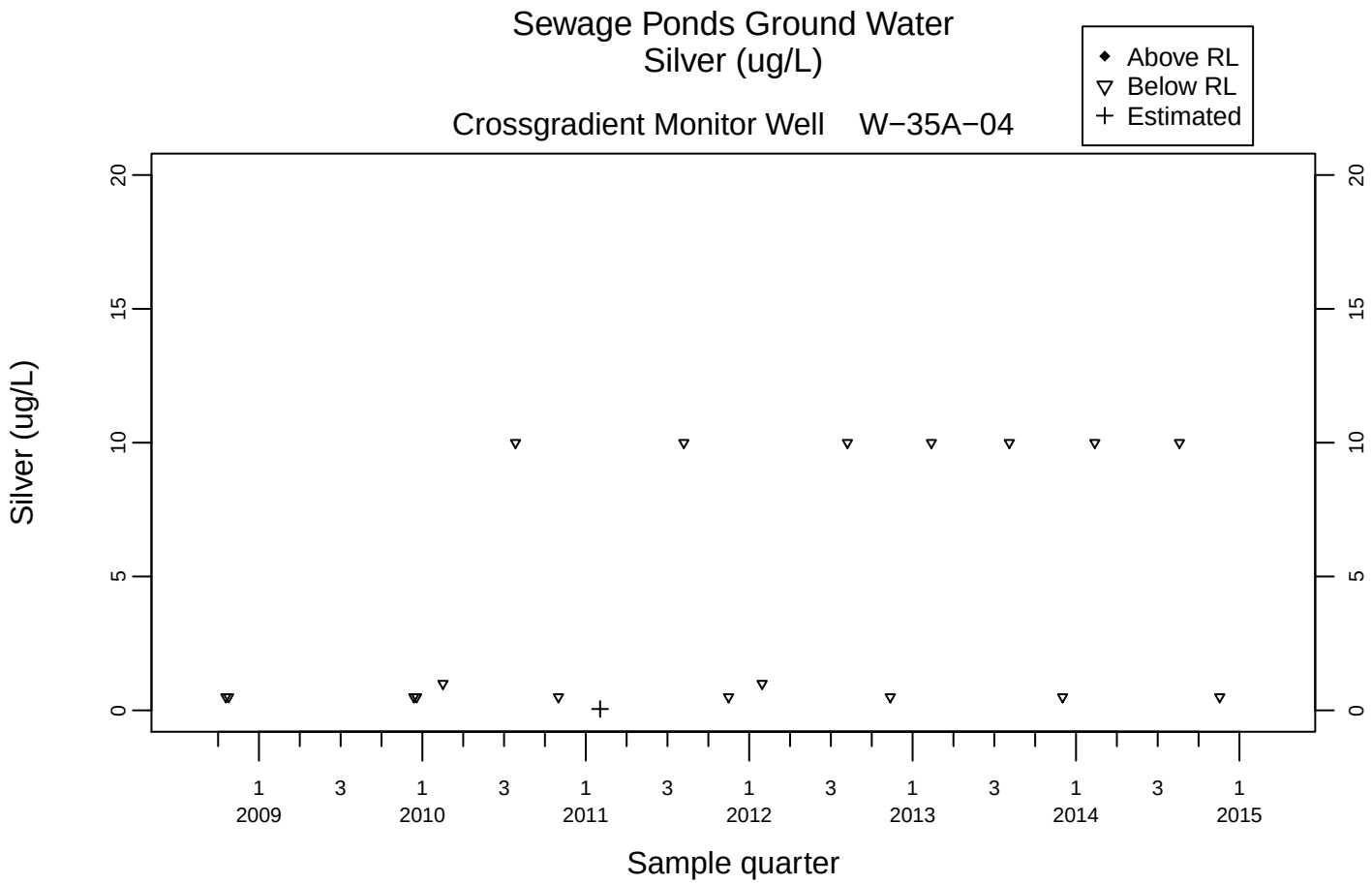

Sewage Ponds Ground Water
Selenium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

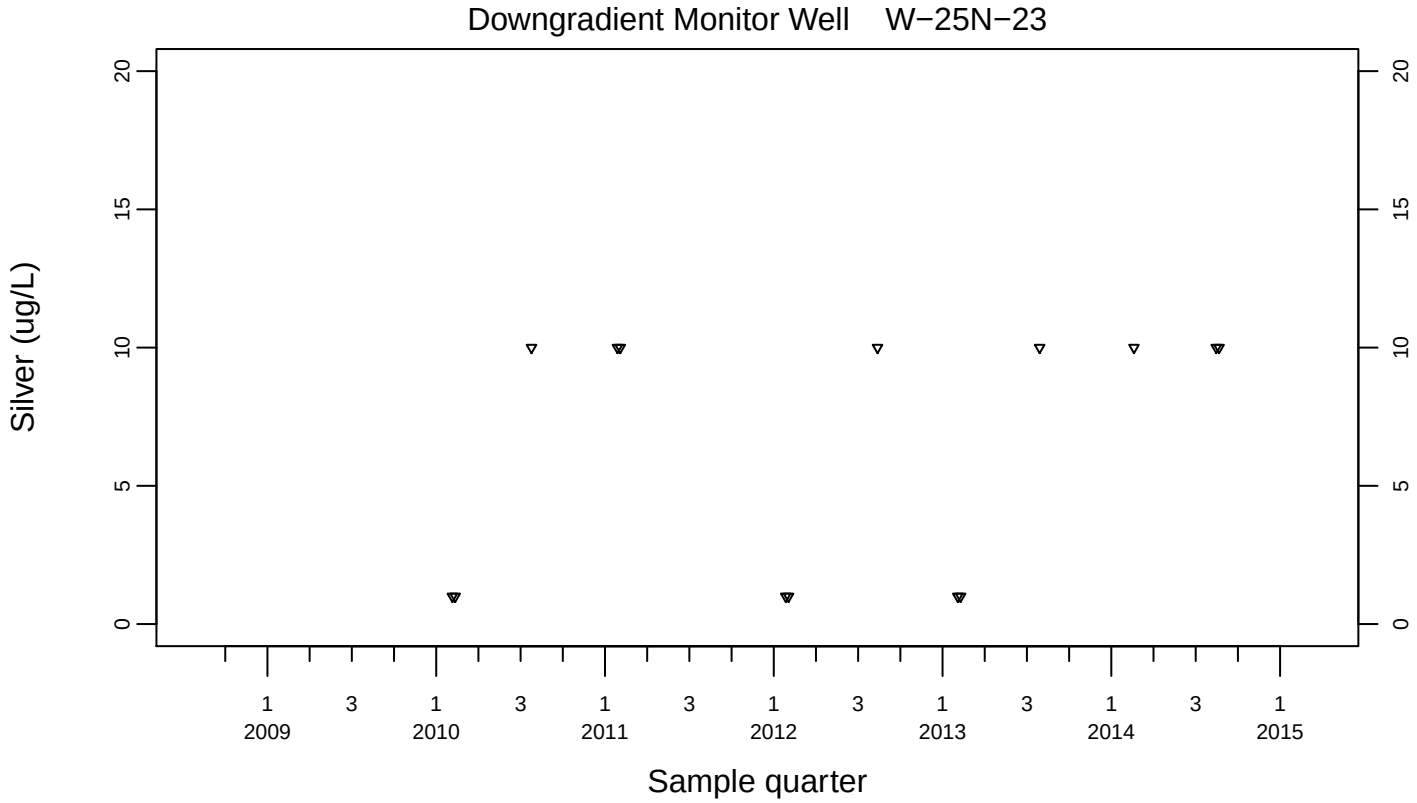

Downgradient Monitor Well W−26R−11
Selenium (ug/L)
0
5
10
15
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

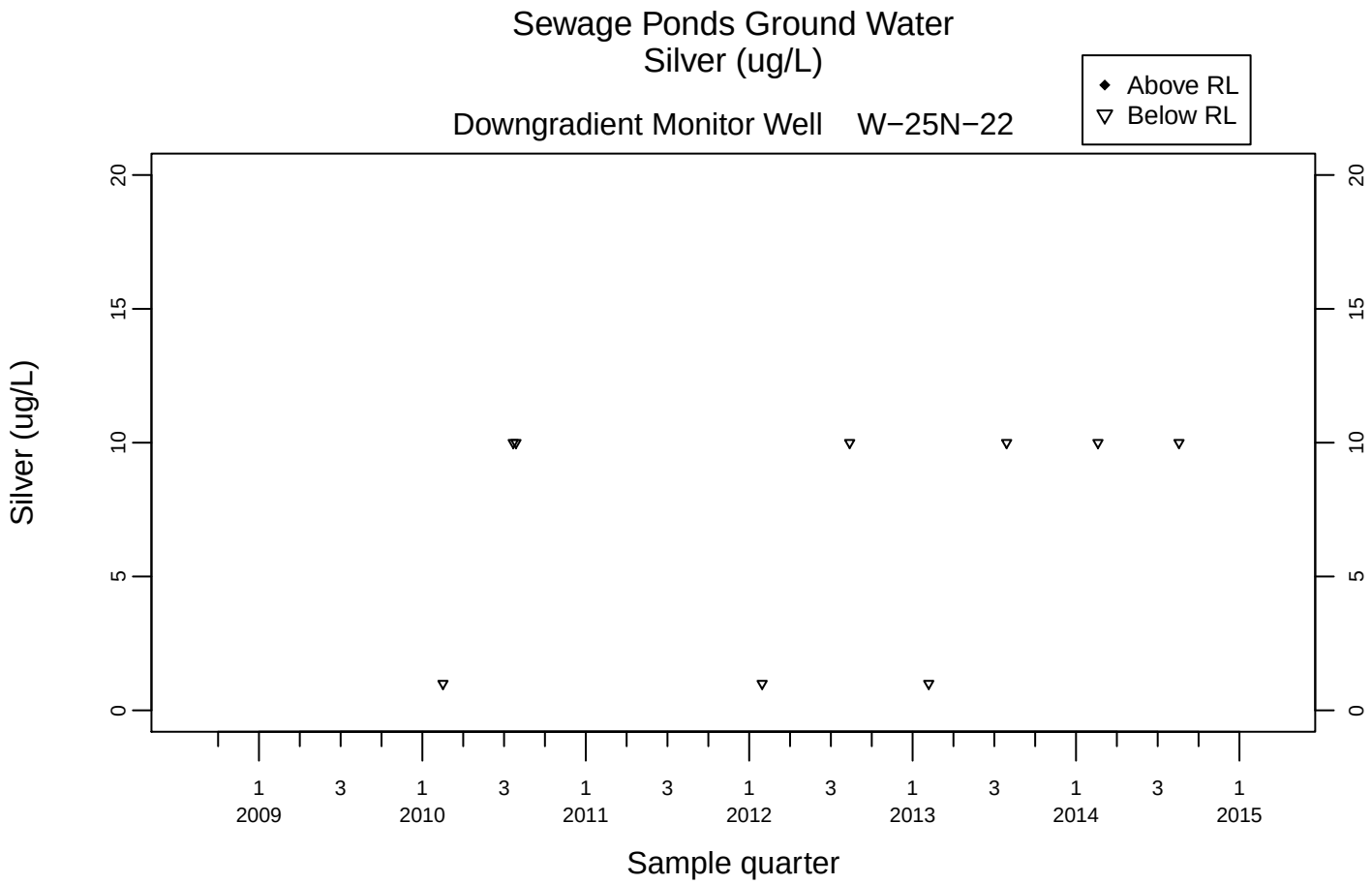

Sewage Ponds Ground Water
Selenium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Selenium (ug/L)
0
5
10
15
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

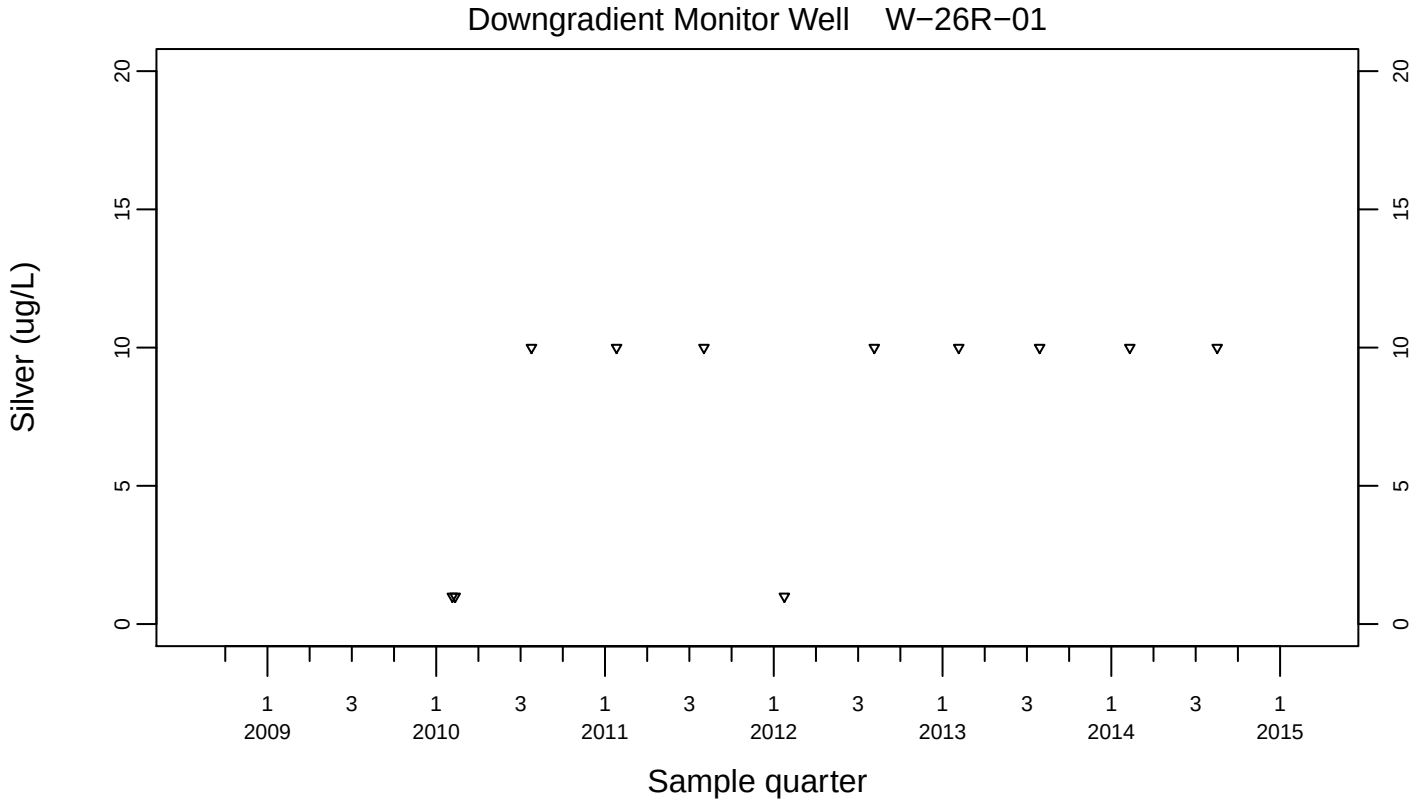

Sewage Ponds Ground Water
Silver (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

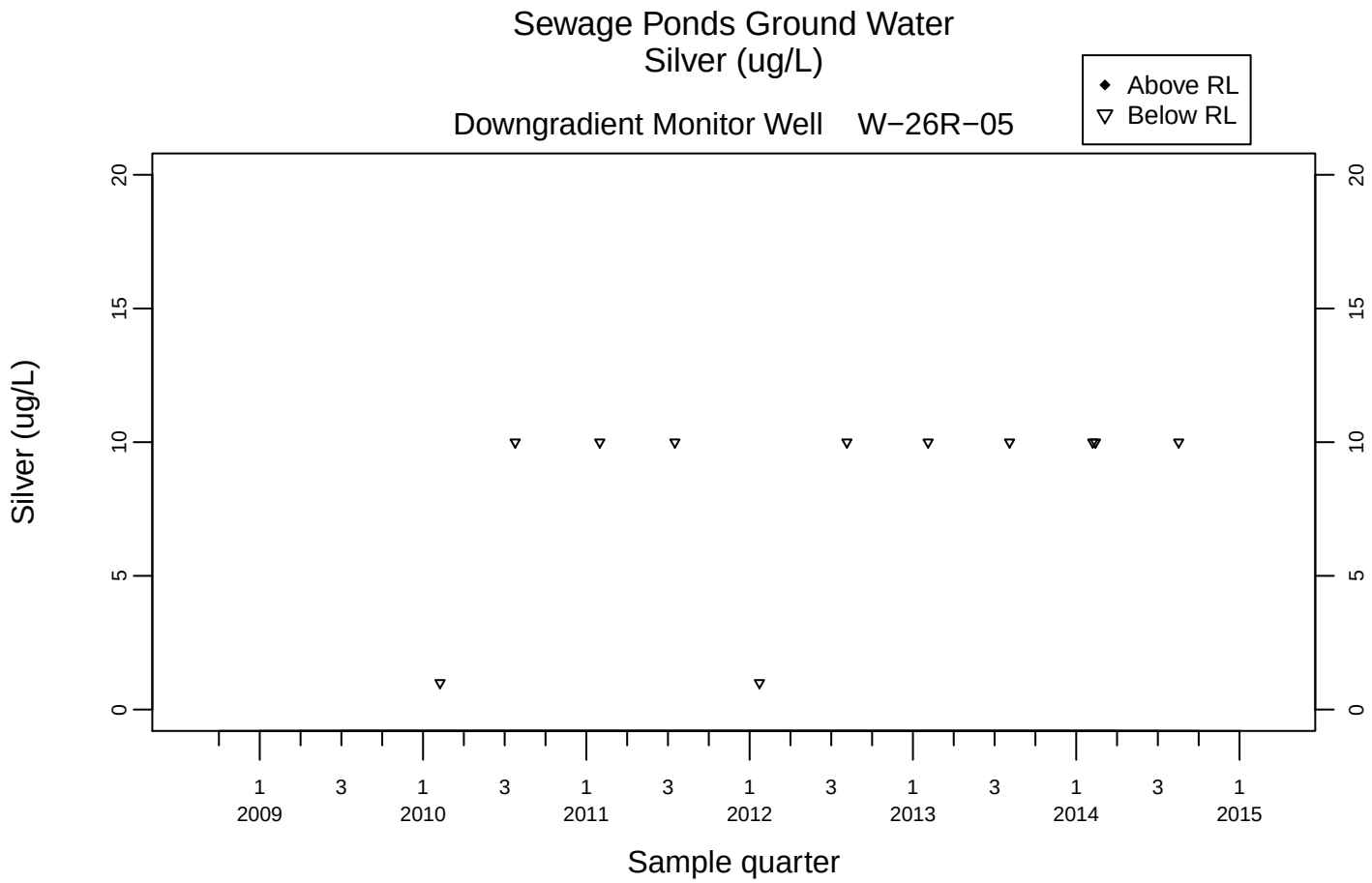

Upgradient Monitor Well W−7PS
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

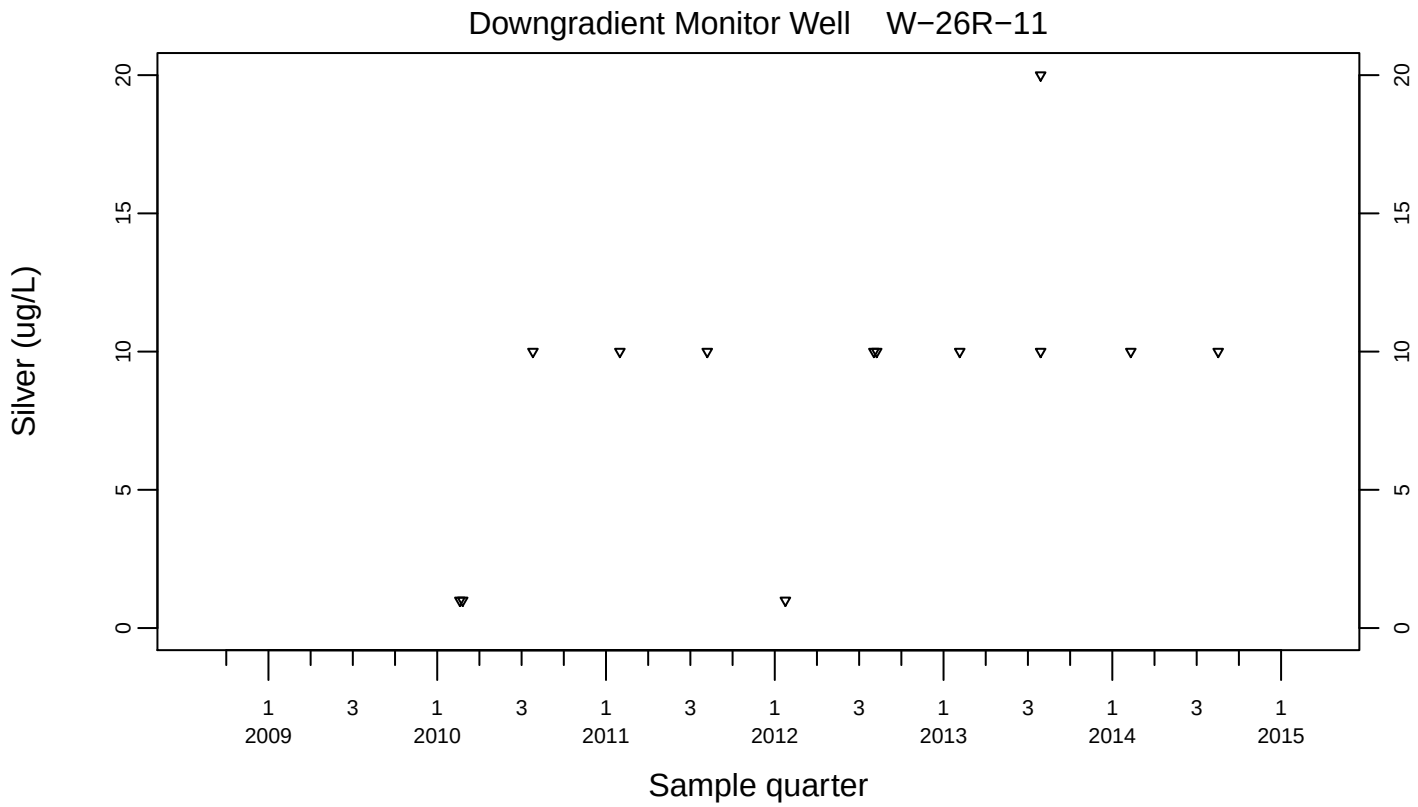

Sewage Ponds Ground Water
Silver (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

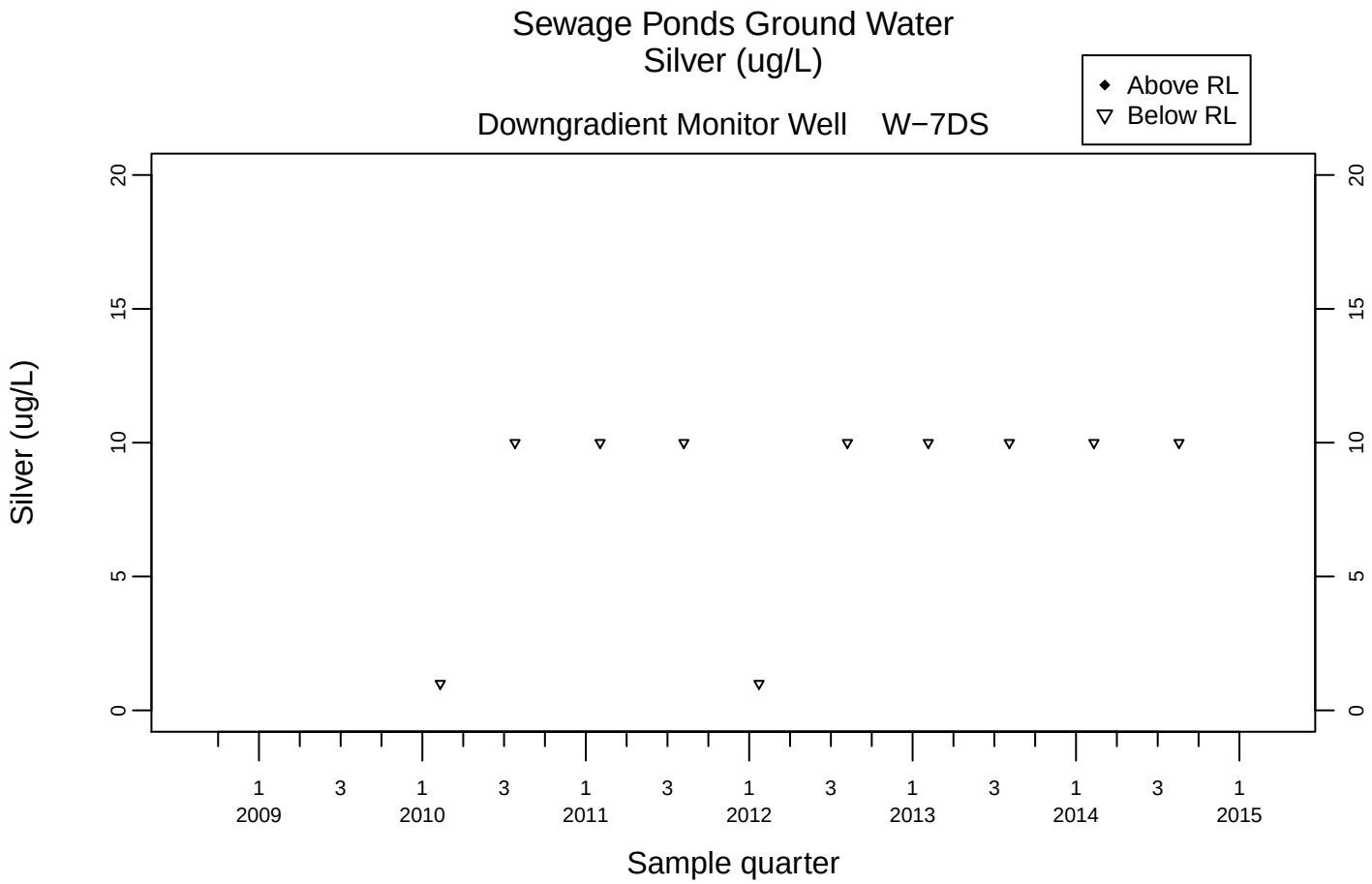

Downgradient Monitor Well W−25N−23
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

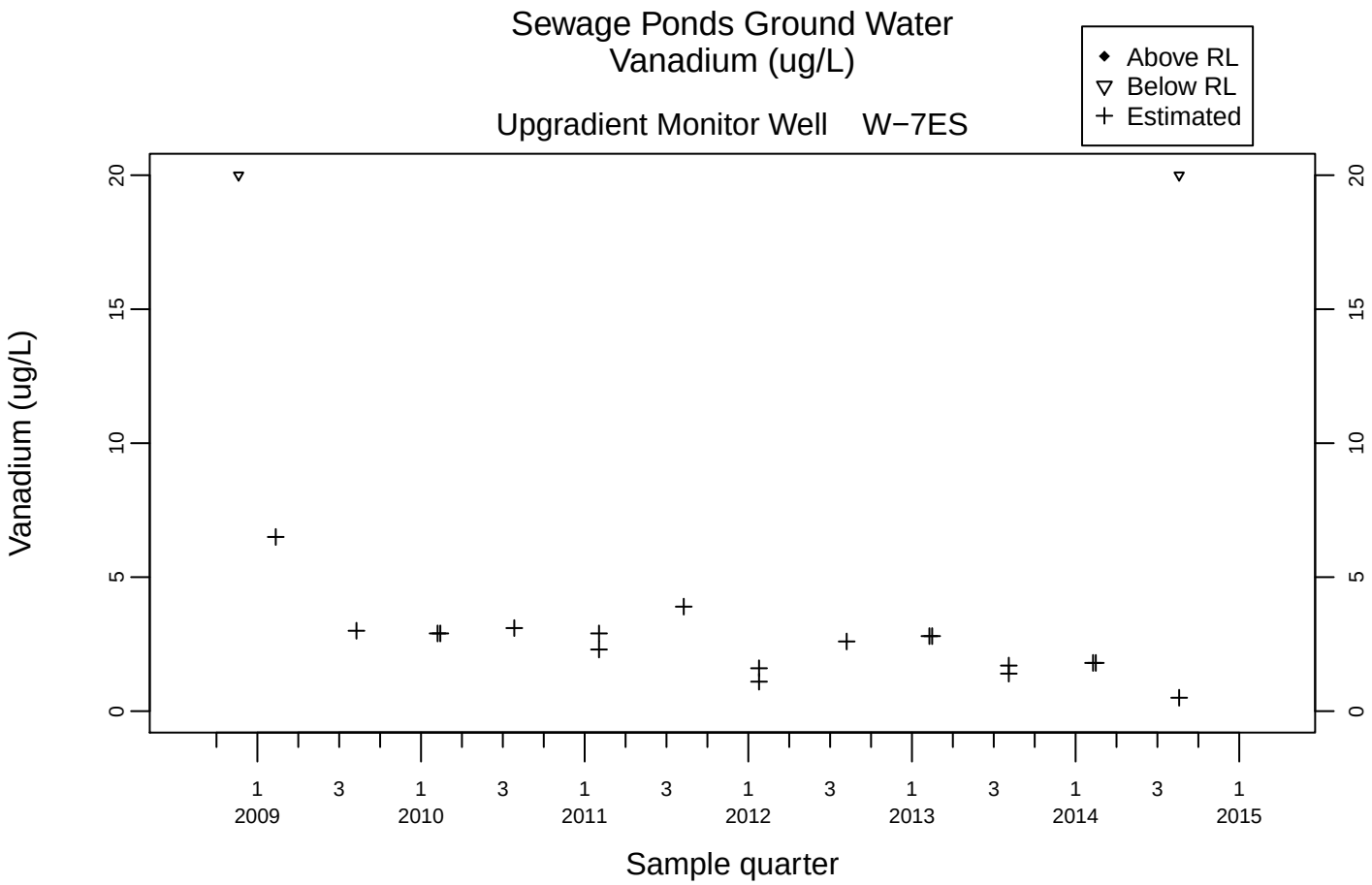

Sewage Ponds Ground Water
Silver (ug/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

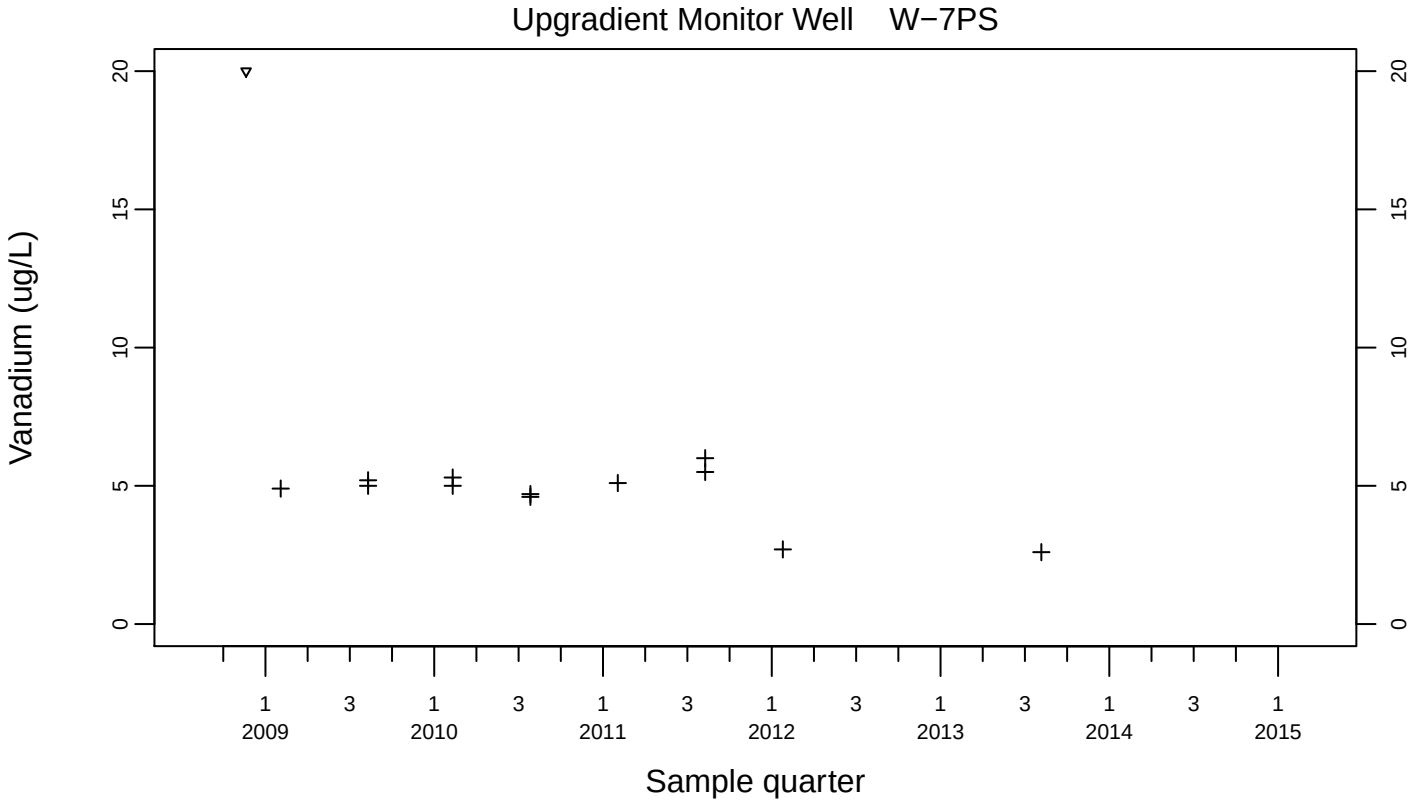

Downgradient Monitor Well W−26R−01
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

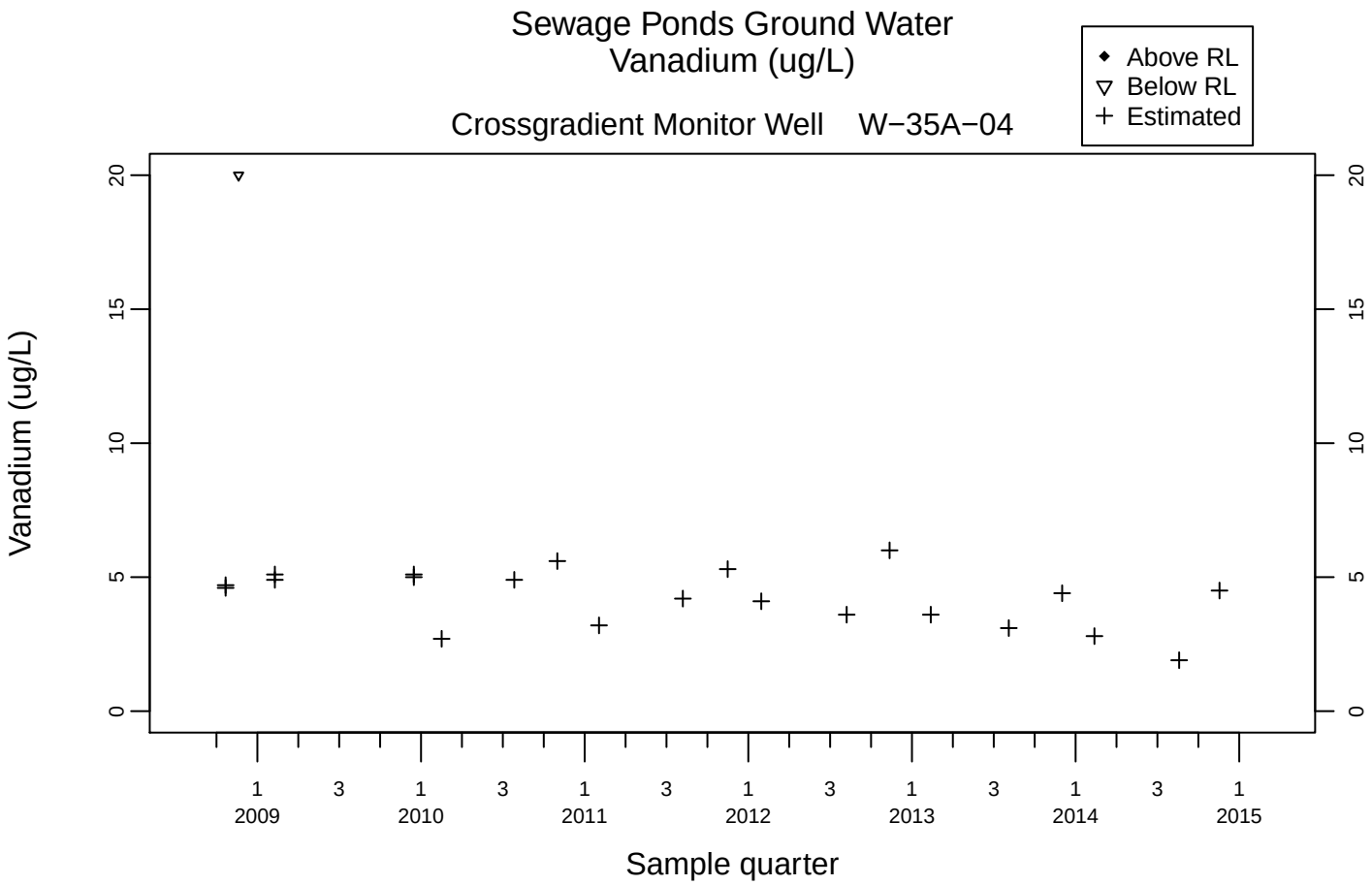

Sewage Ponds Ground Water
Silver (ug/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

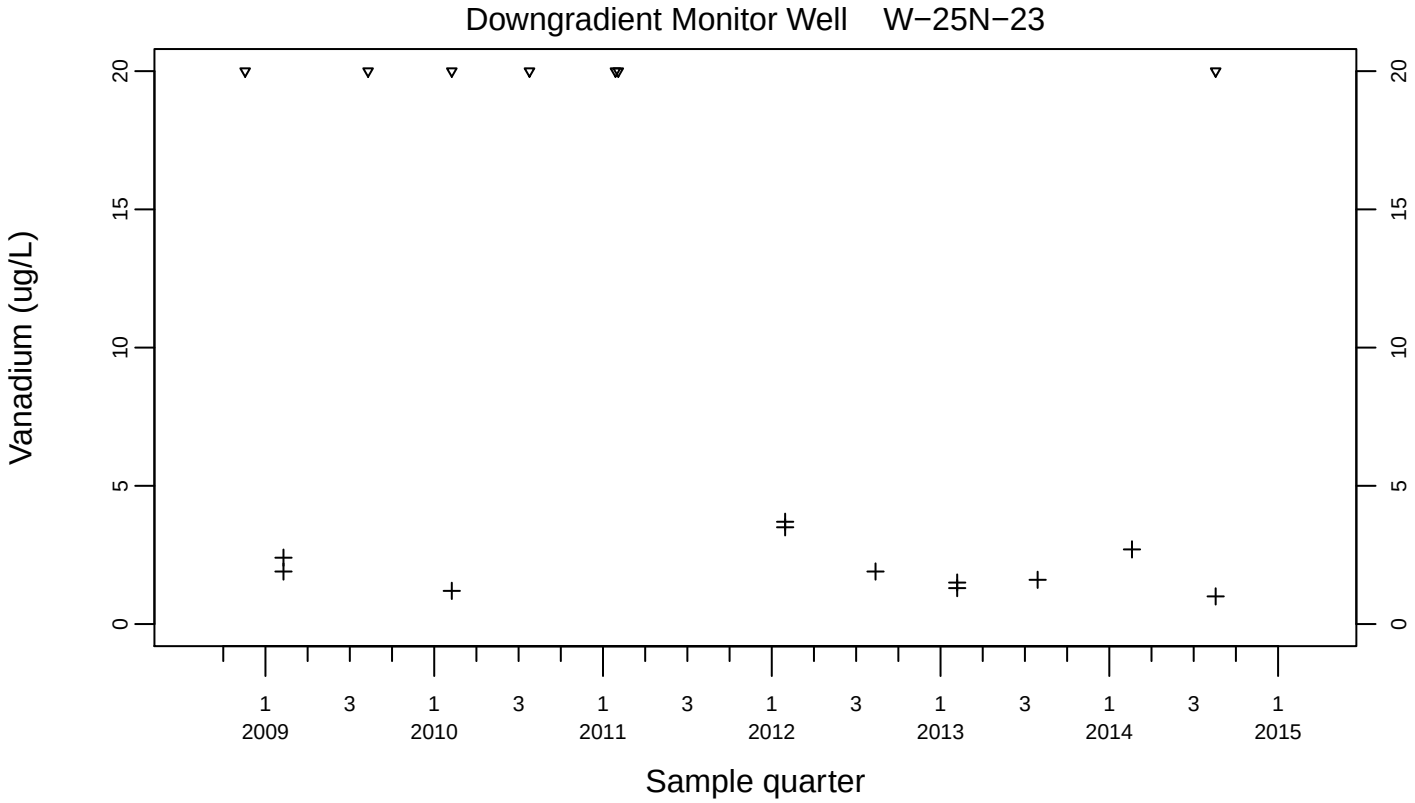

Downgradient Monitor Well W−26R−11
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

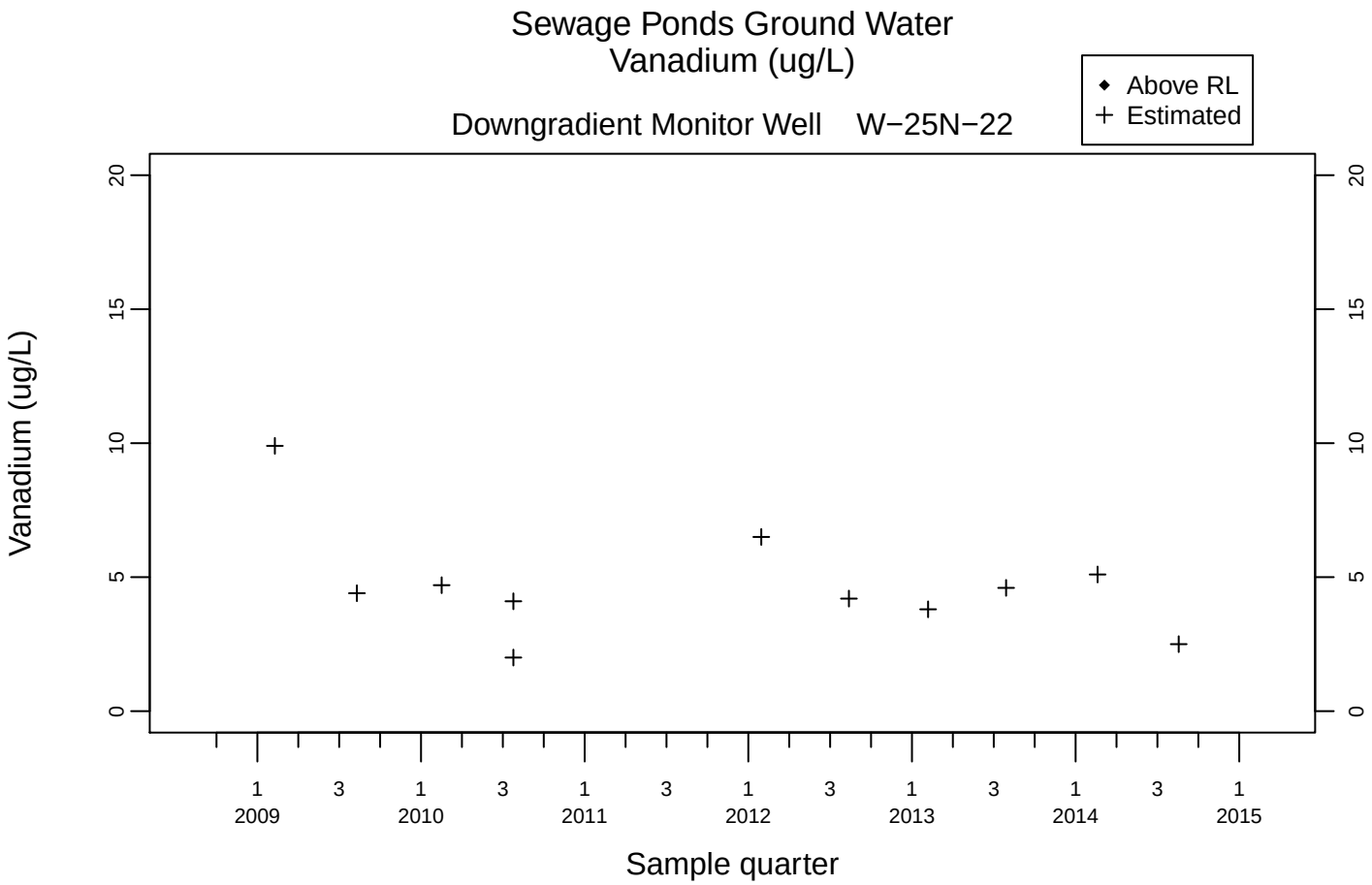

Sewage Ponds Ground Water
Silver (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Silver (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

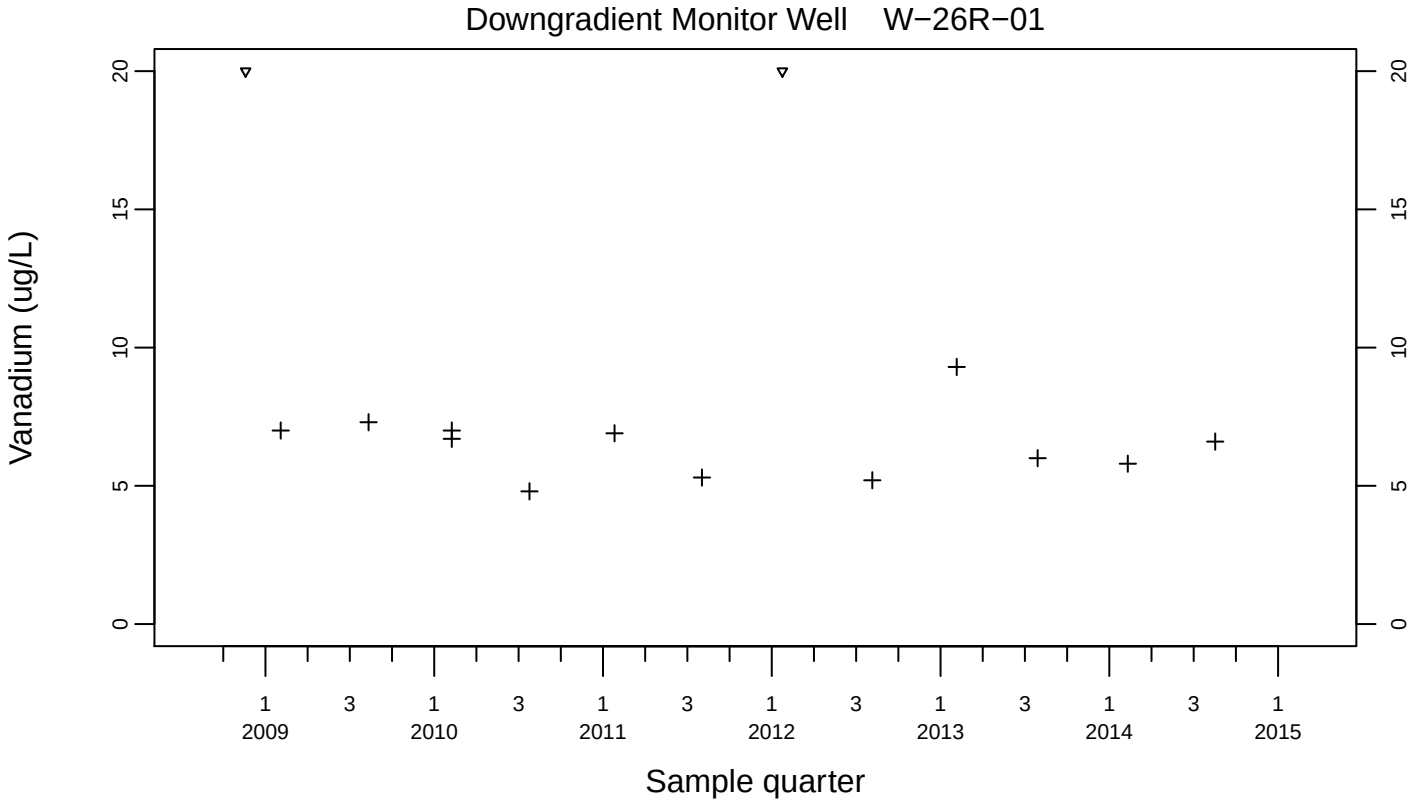

Sewage Ponds Ground Water
Vanadium (ug/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

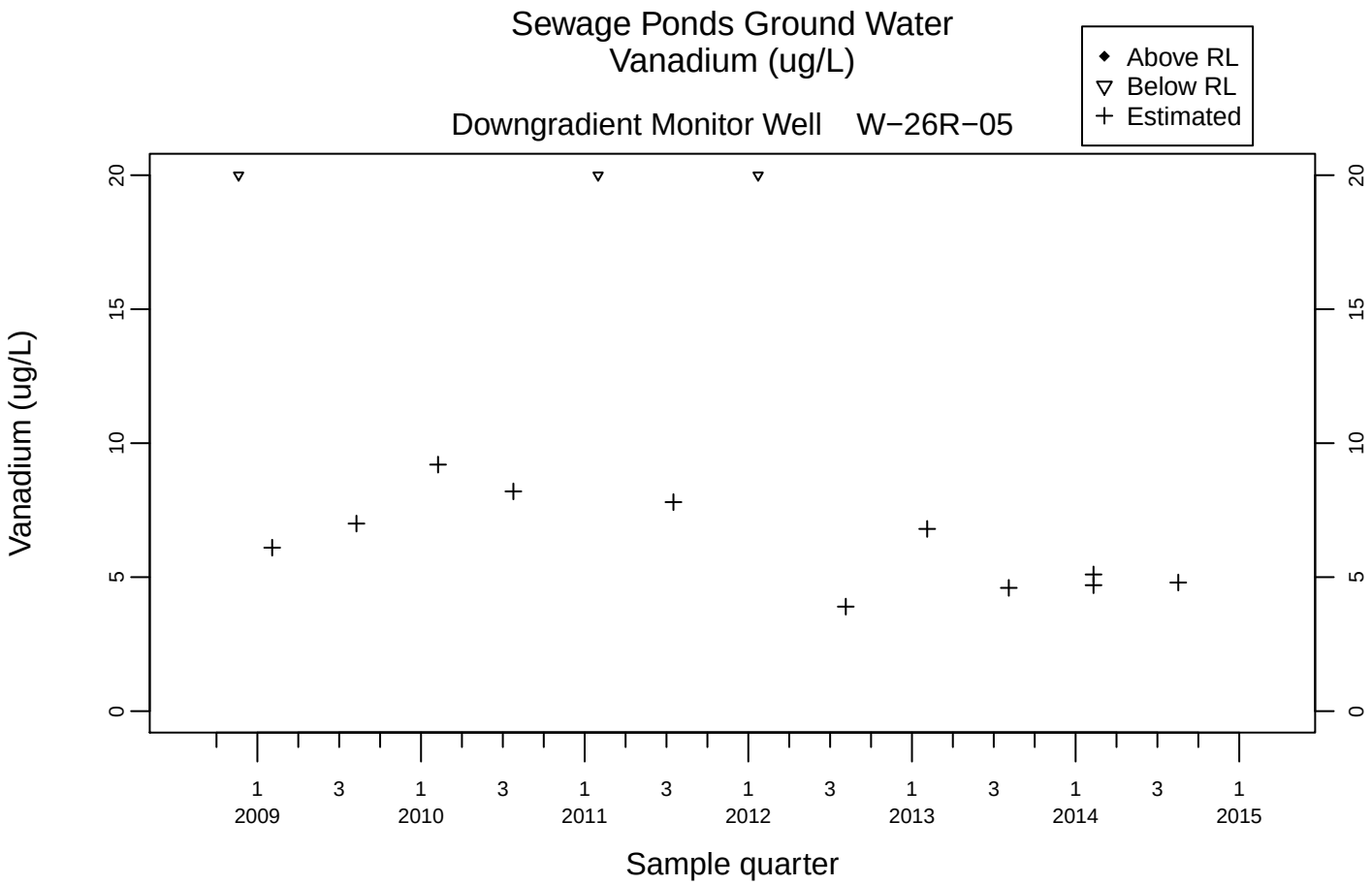

Upgradient Monitor Well W−7PS
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

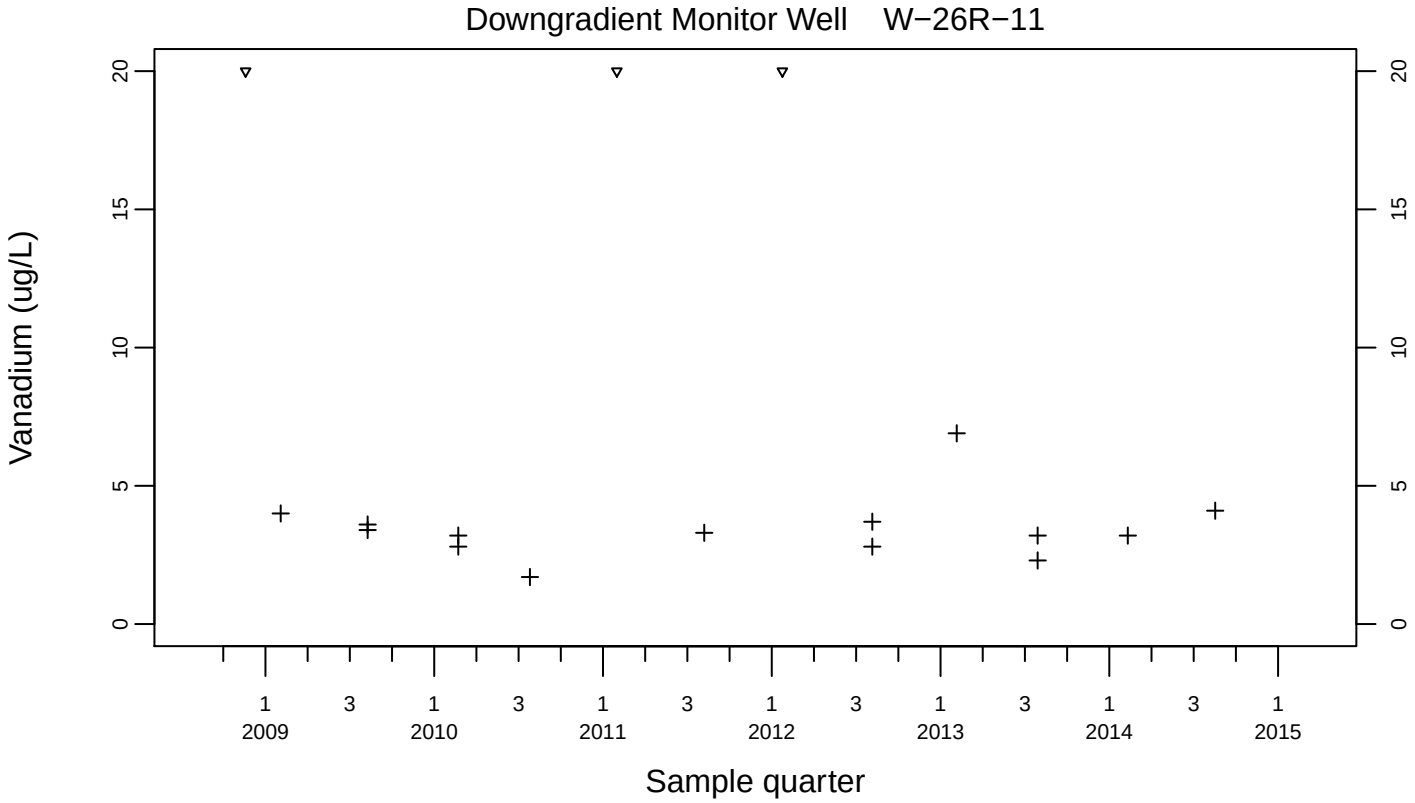

Sewage Ponds Ground Water
Vanadium (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

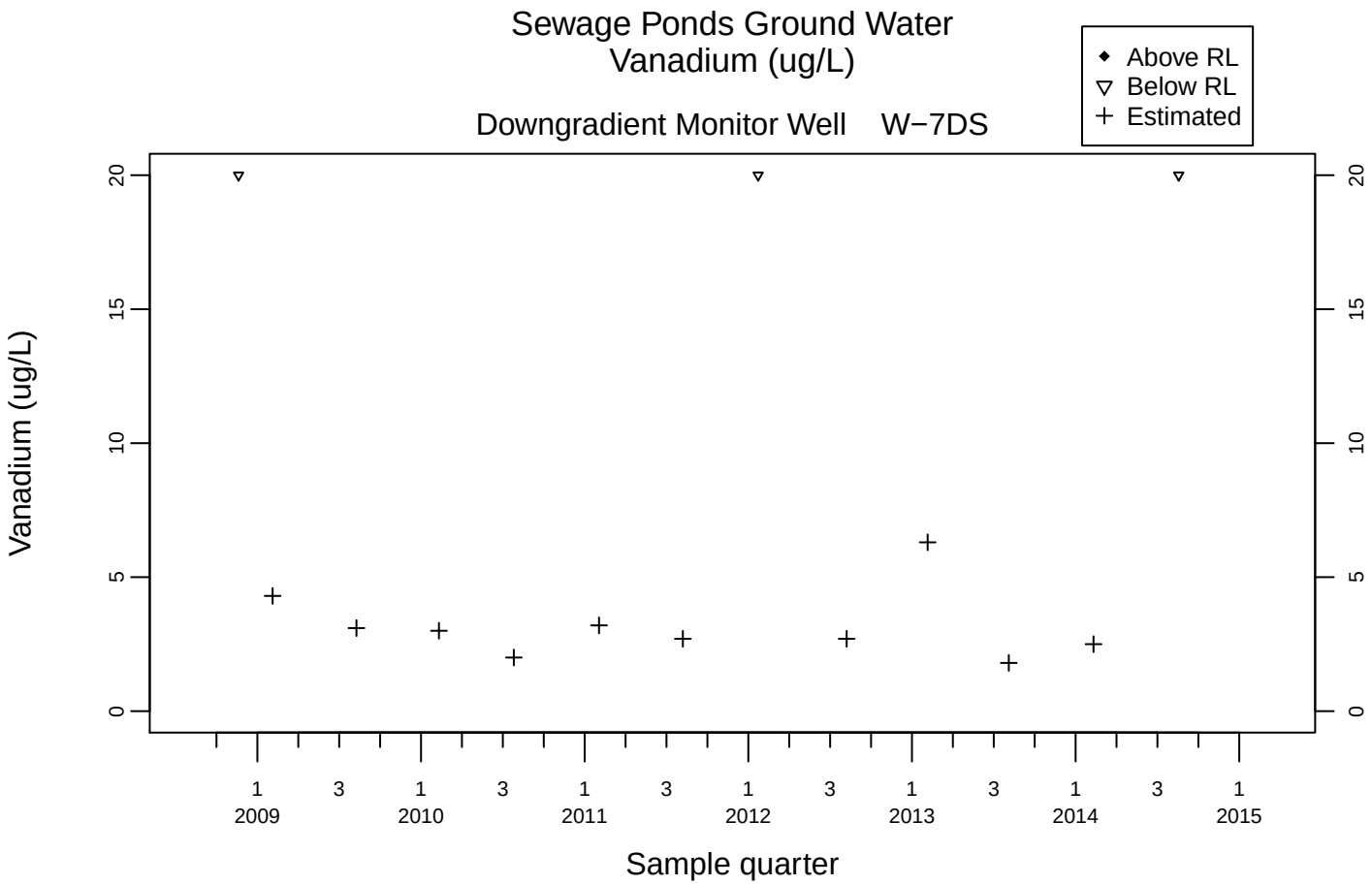

Downgradient Monitor Well W−25N−23
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

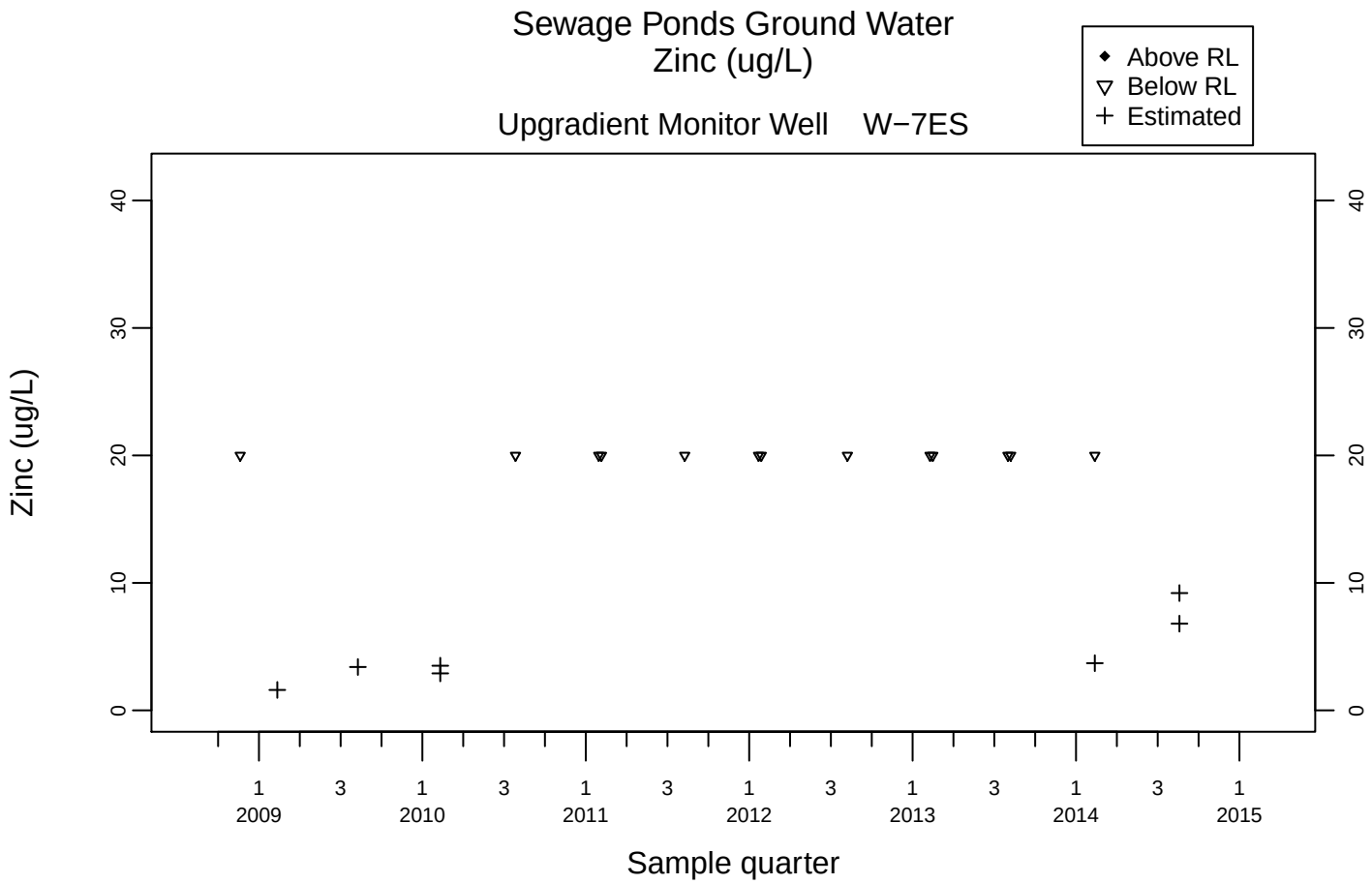

Sewage Ponds Ground Water
Vanadium (ug/L)
Above RL
Estimated
Downgradient Monitor Well W−25N−22
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

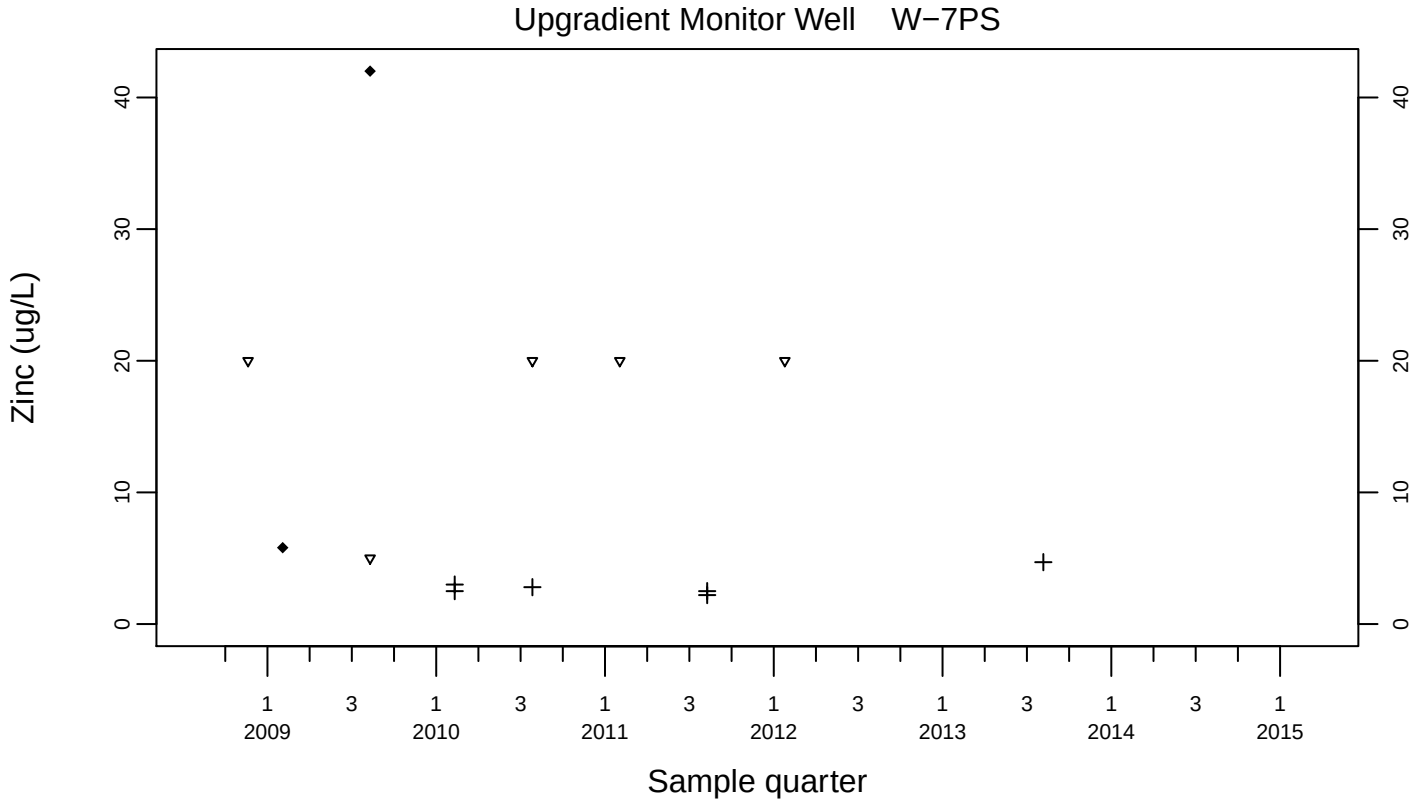

Downgradient Monitor Well W−26R−01
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

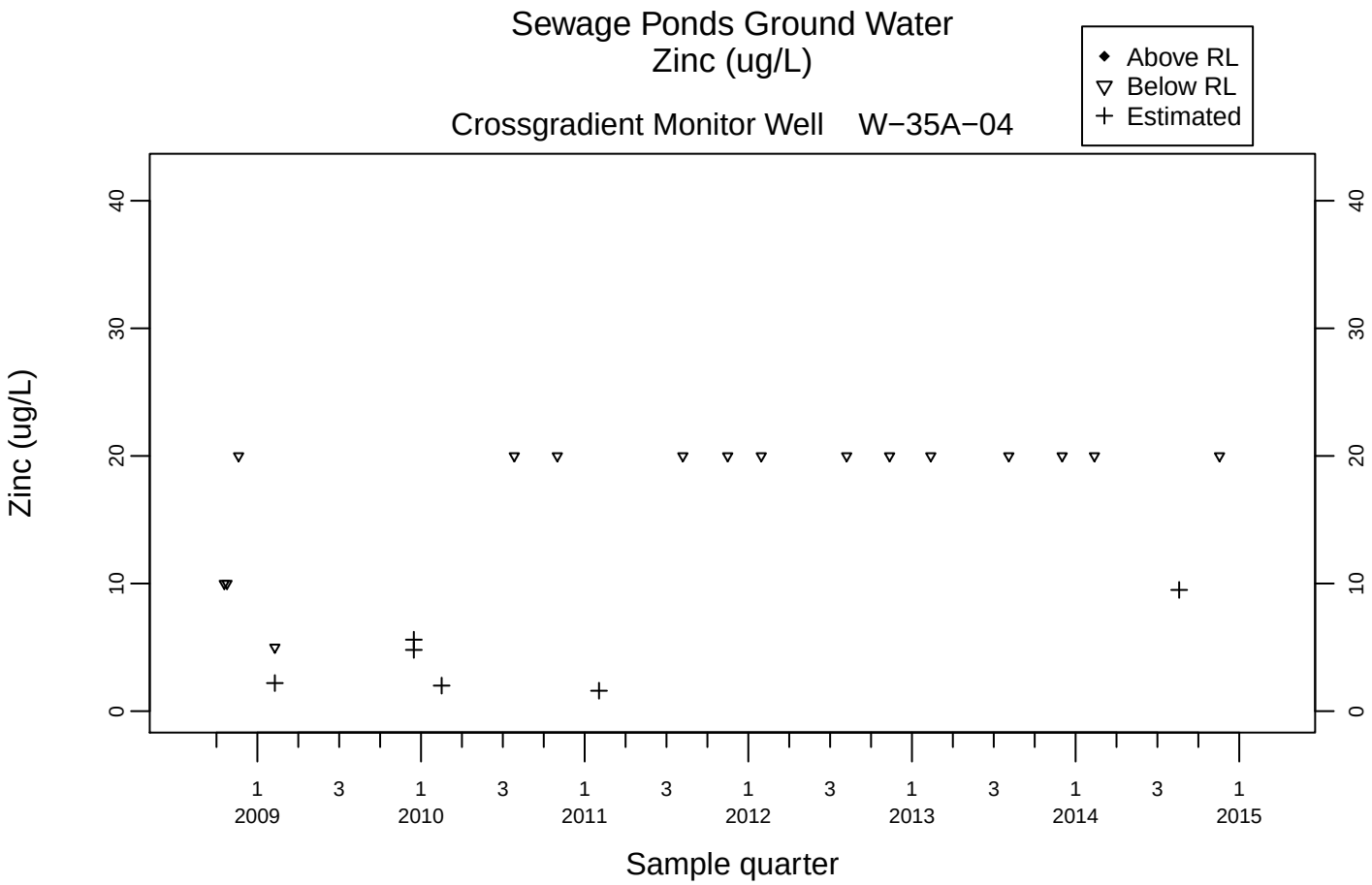

Sewage Ponds Ground Water
Vanadium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W−26R−05
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

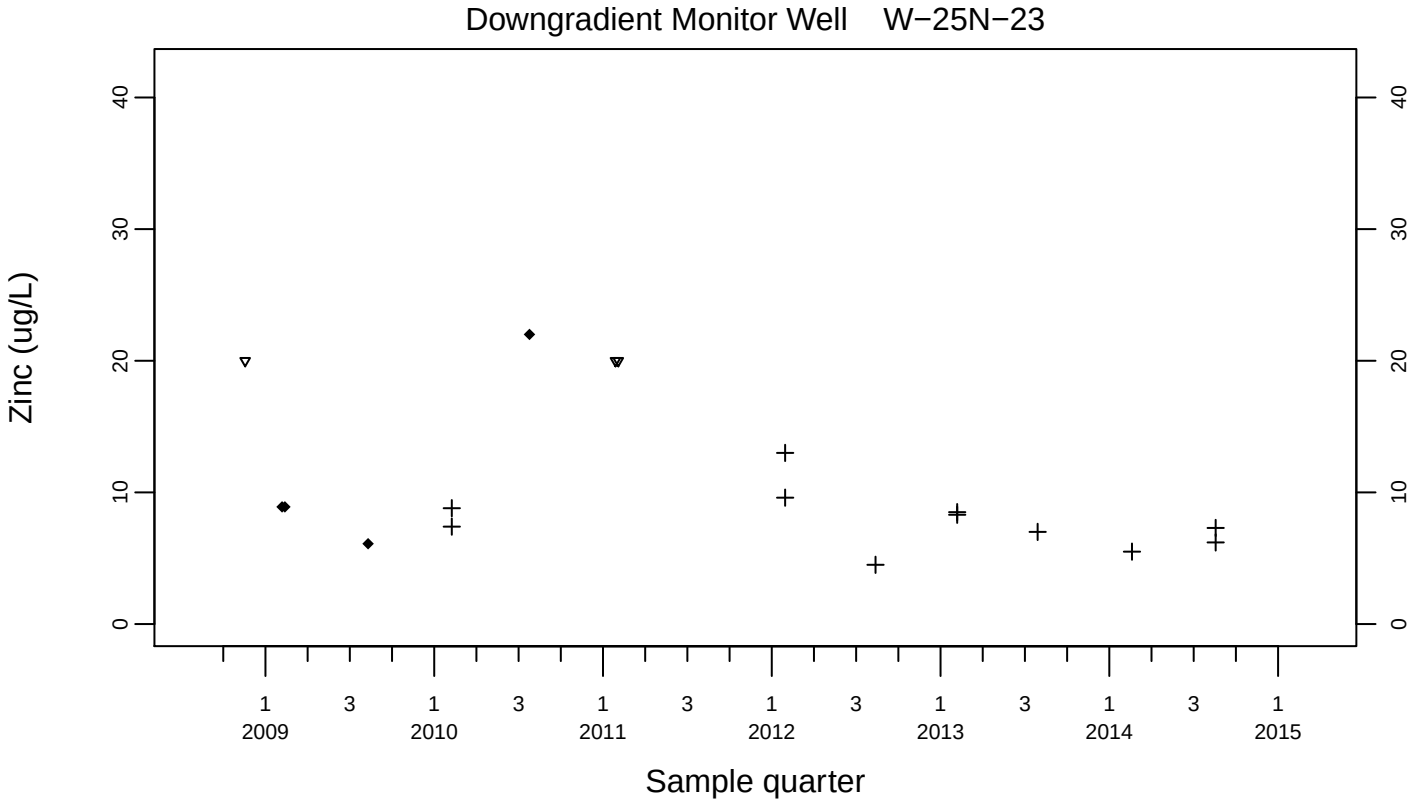

Downgradient Monitor Well W−26R−11
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

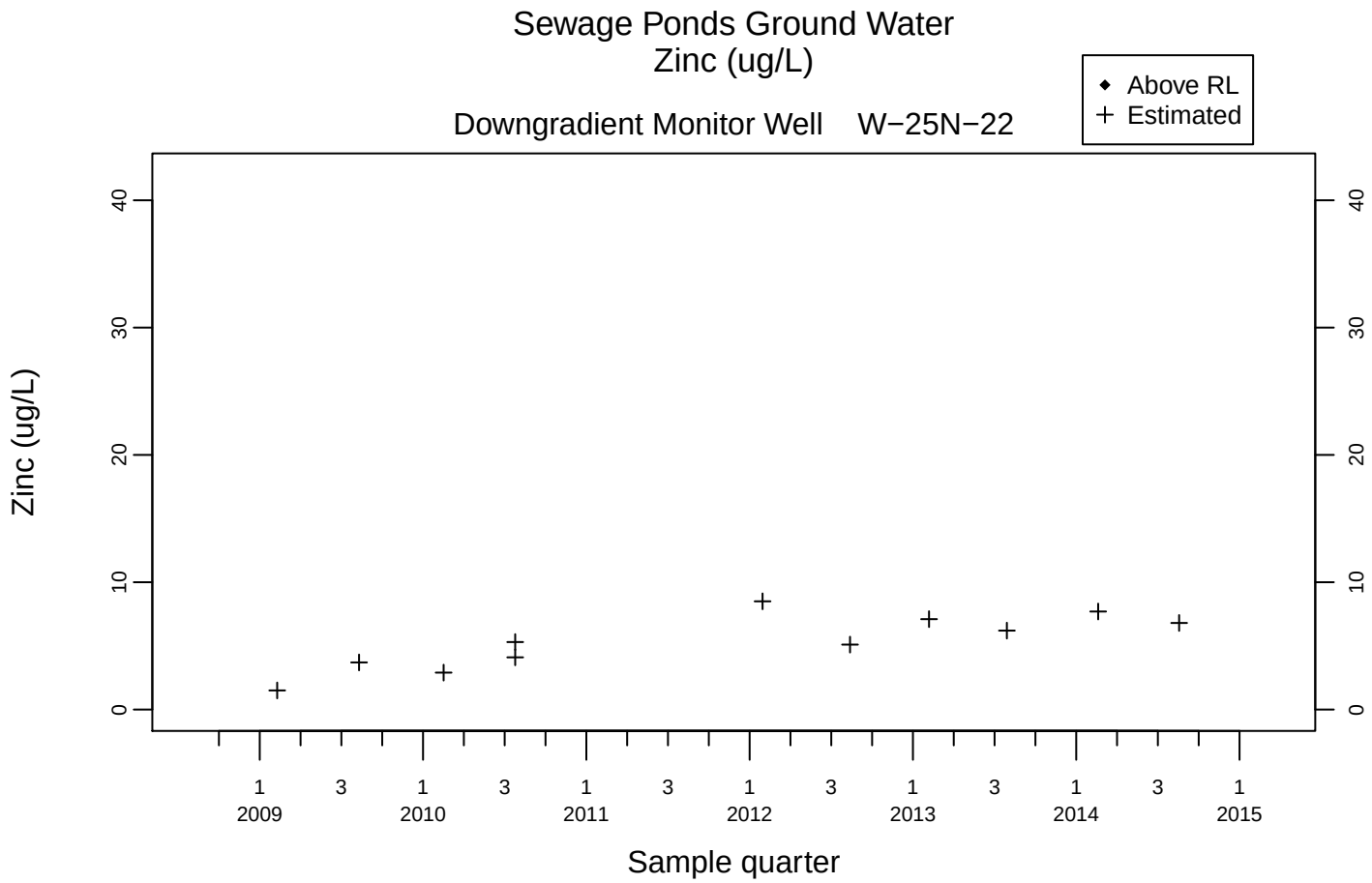

Sewage Ponds Ground Water
Vanadium (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

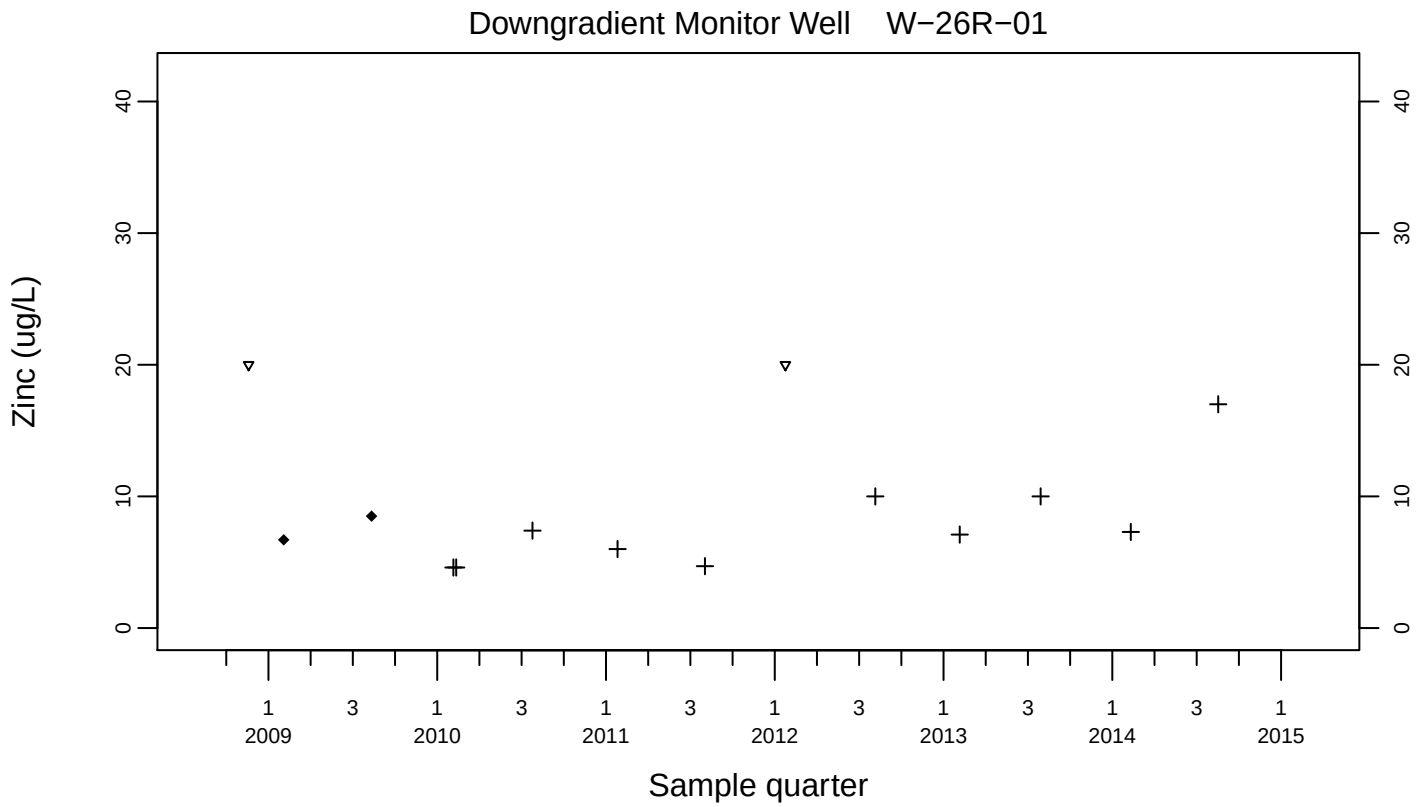

Sewage Ponds Ground Water
Zinc (ug/L)
Above RL
Below RL
Estimated
Upgradient Monitor Well W−7ES
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

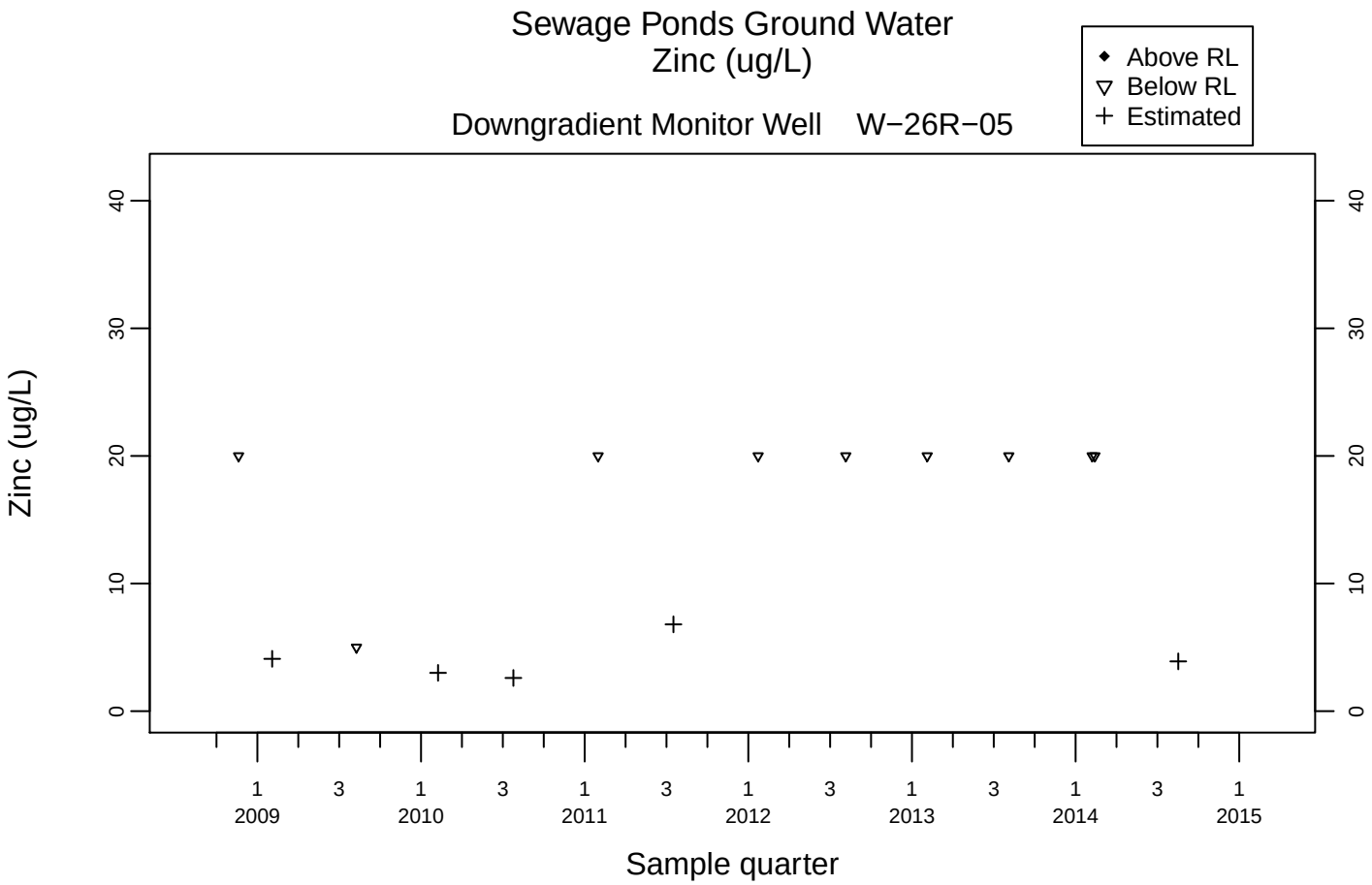

Upgradient Monitor Well W−7PS
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

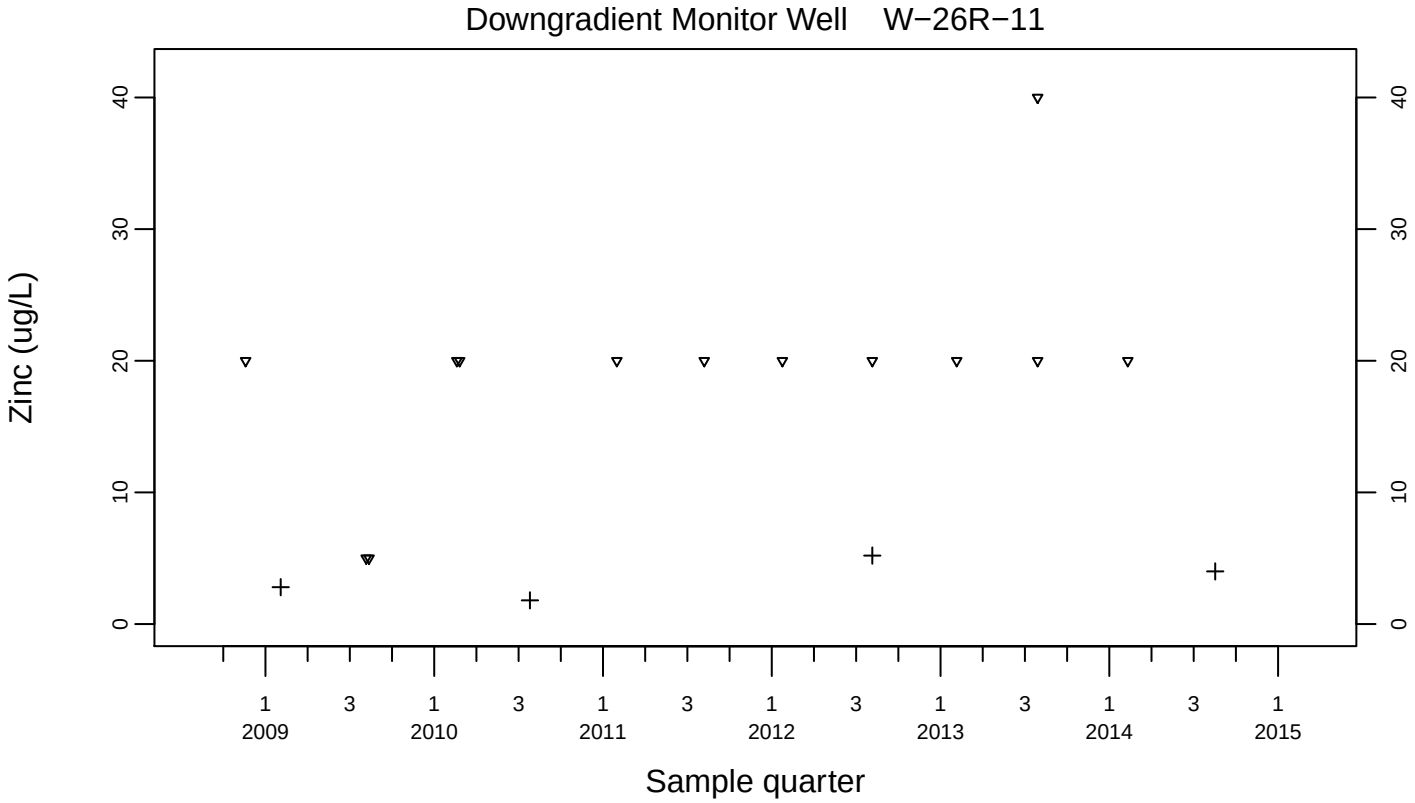

Sewage Ponds Ground Water
Zinc (ug/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Estimated
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

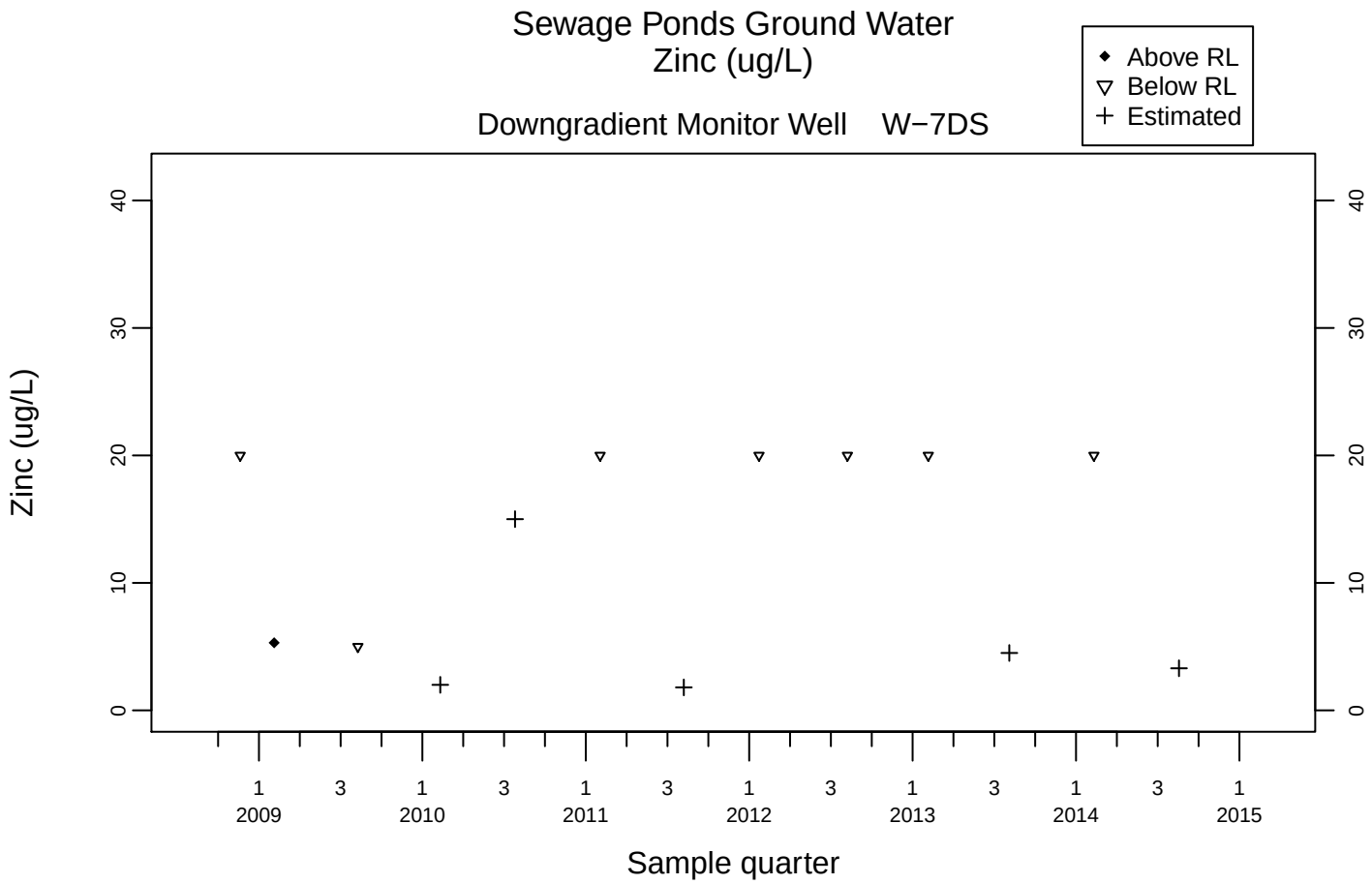

Downgradient Monitor Well W−25N−23
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

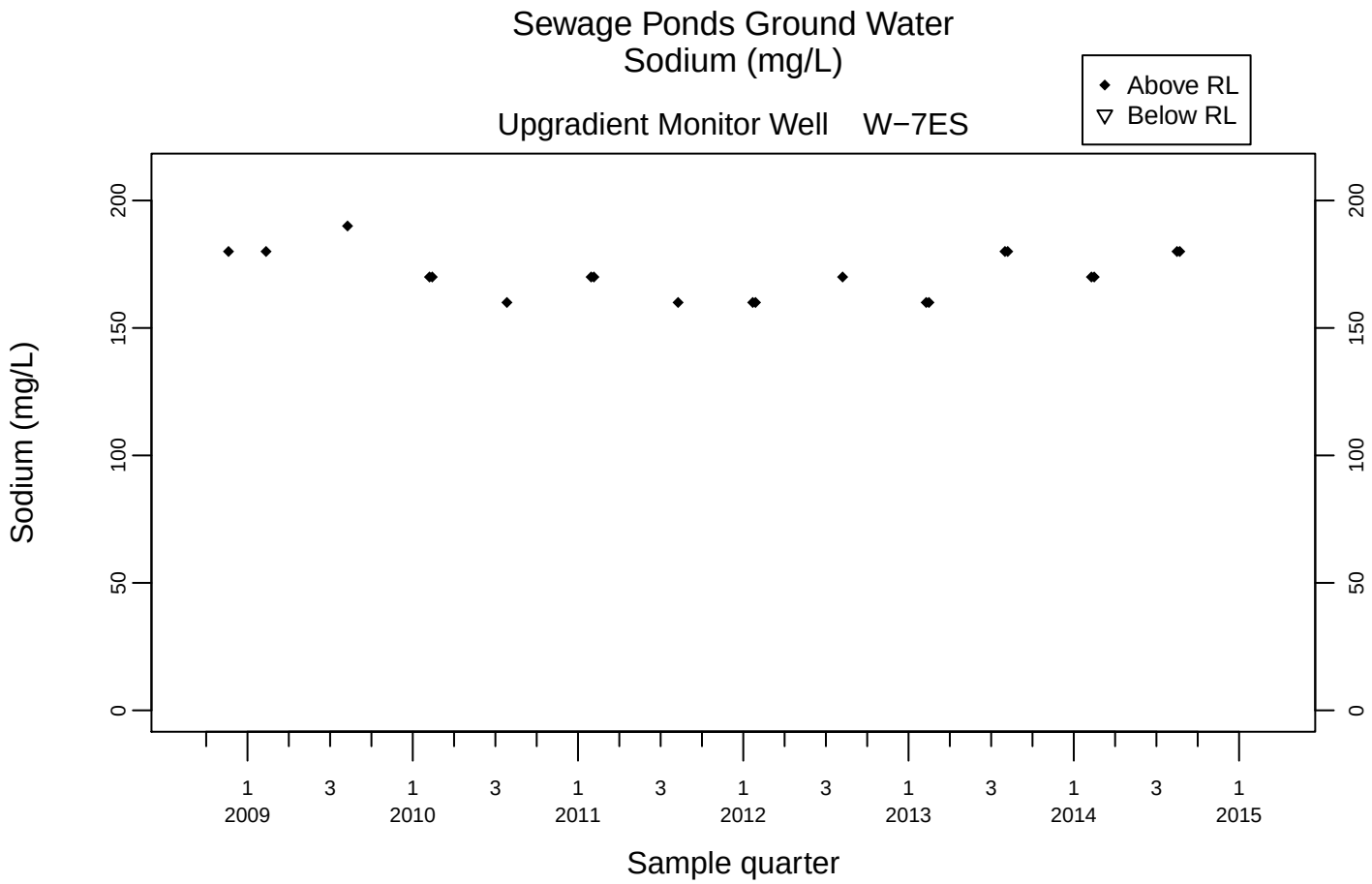

Sewage Ponds Ground Water
Zinc (ug/L)
Above RL
Estimated
Downgradient Monitor Well W−25N−22
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

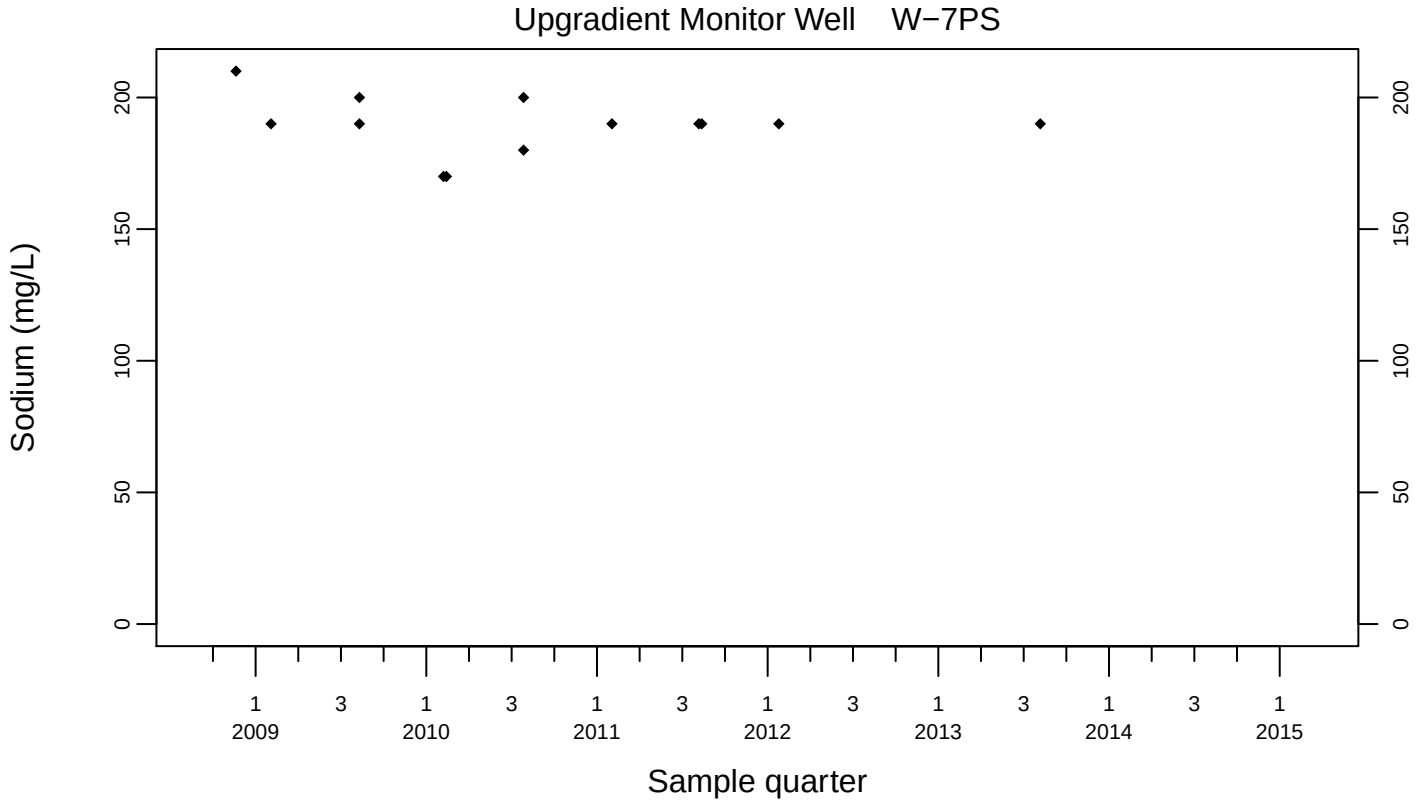

Downgradient Monitor Well W−26R−01
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

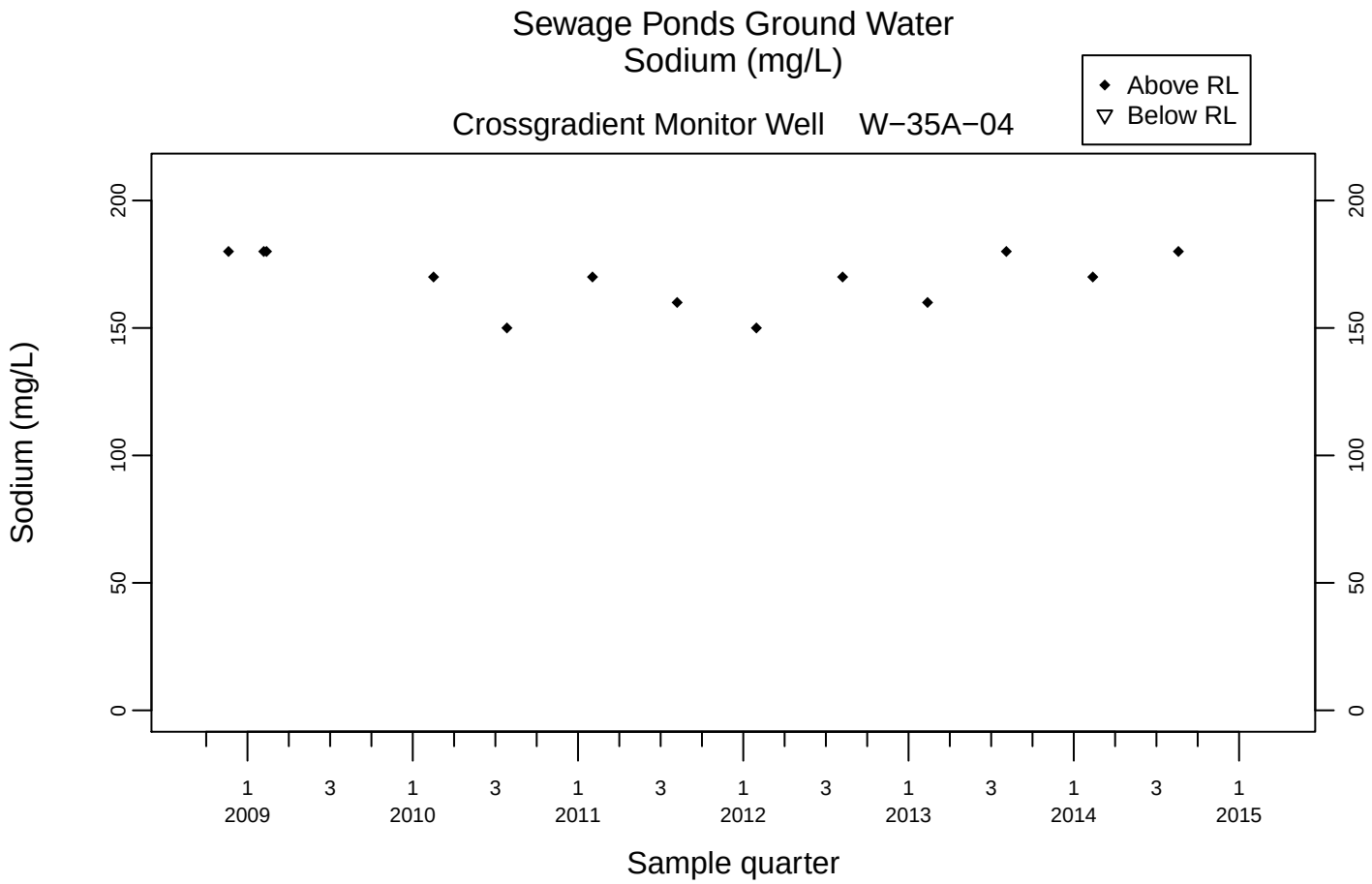

Sewage Ponds Ground Water
Zinc (ug/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Estimated
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

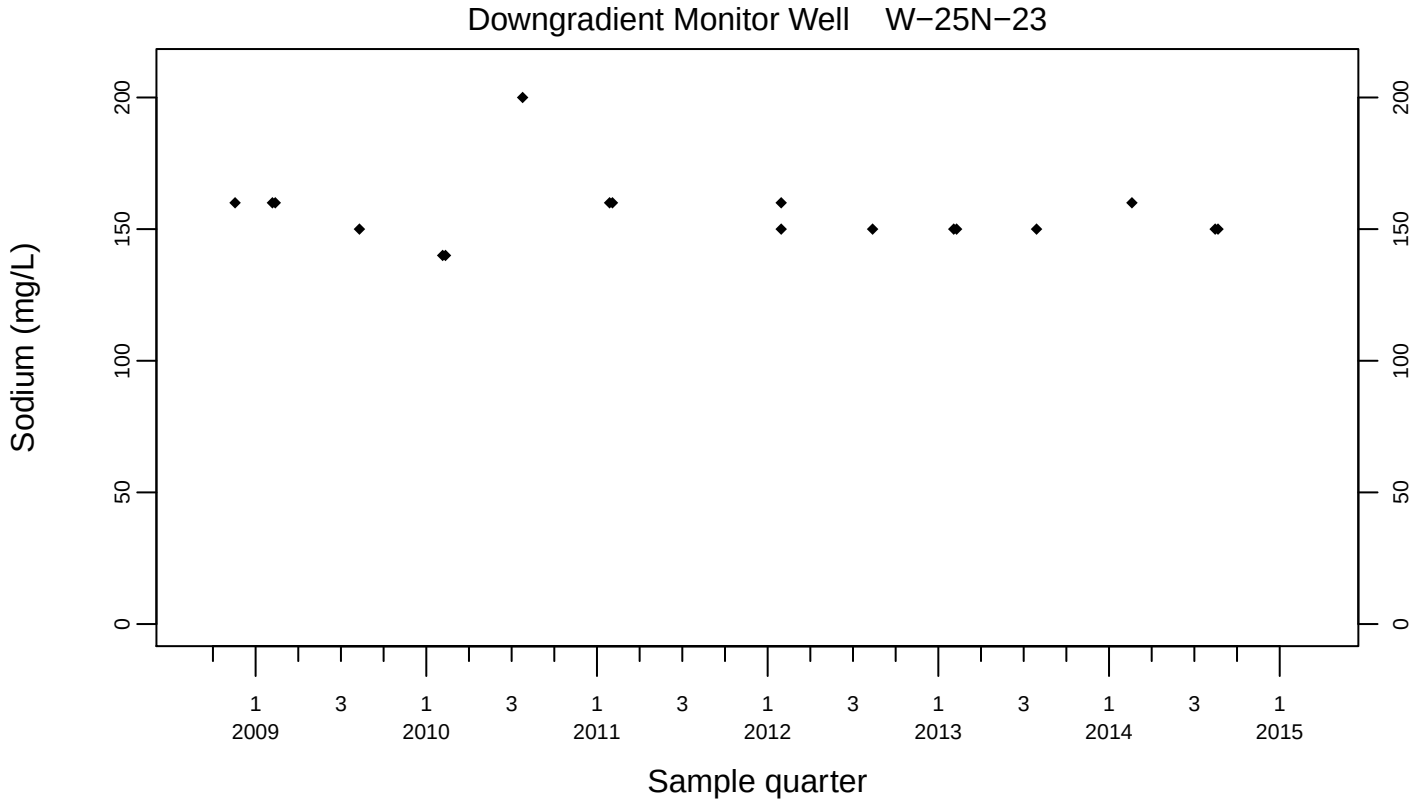

Downgradient Monitor Well W−26R−11
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

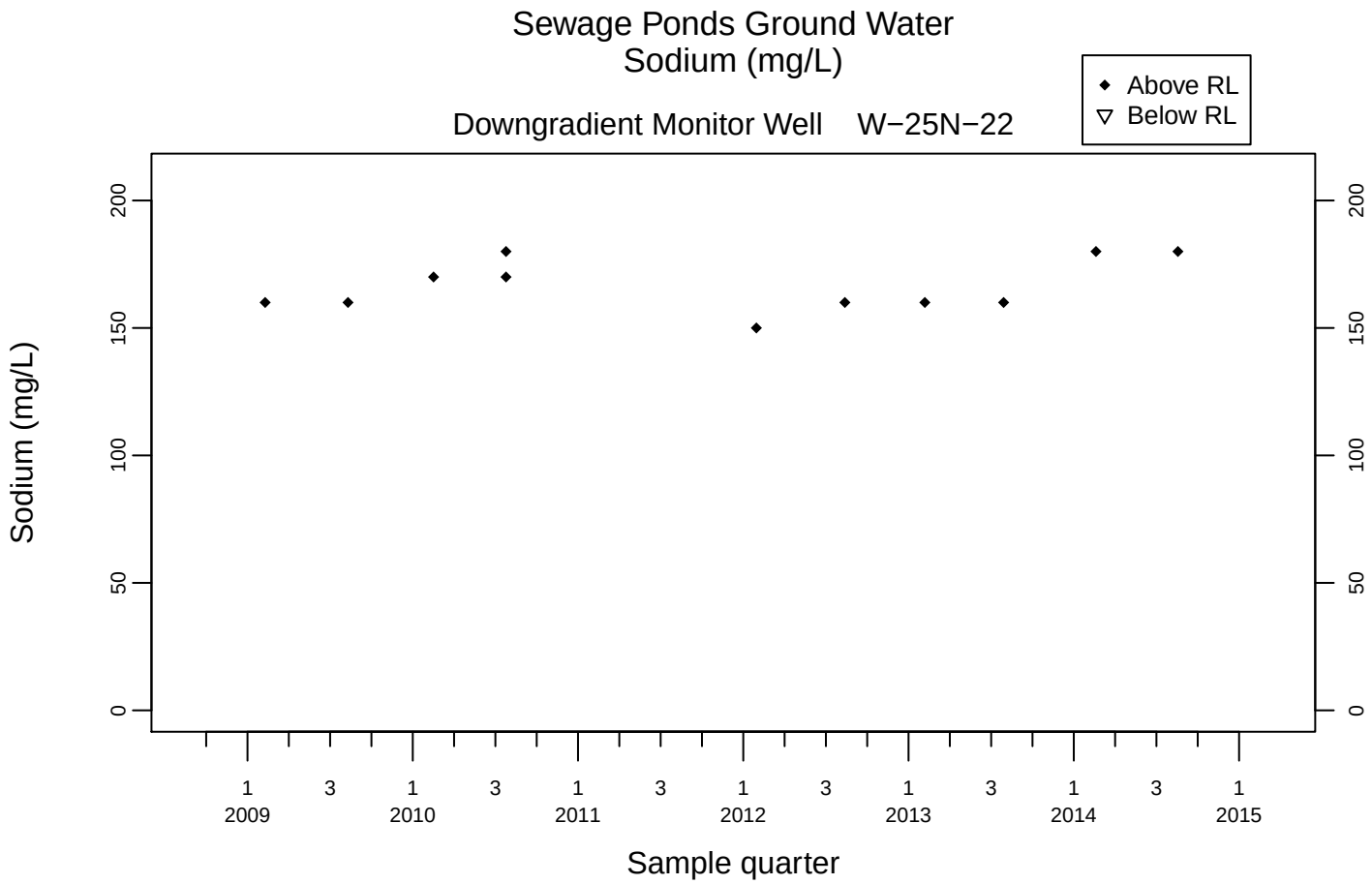

Sewage Ponds Ground Water
Zinc (ug/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Estimated
Zinc (ug/L)
0
10
20
30
40
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

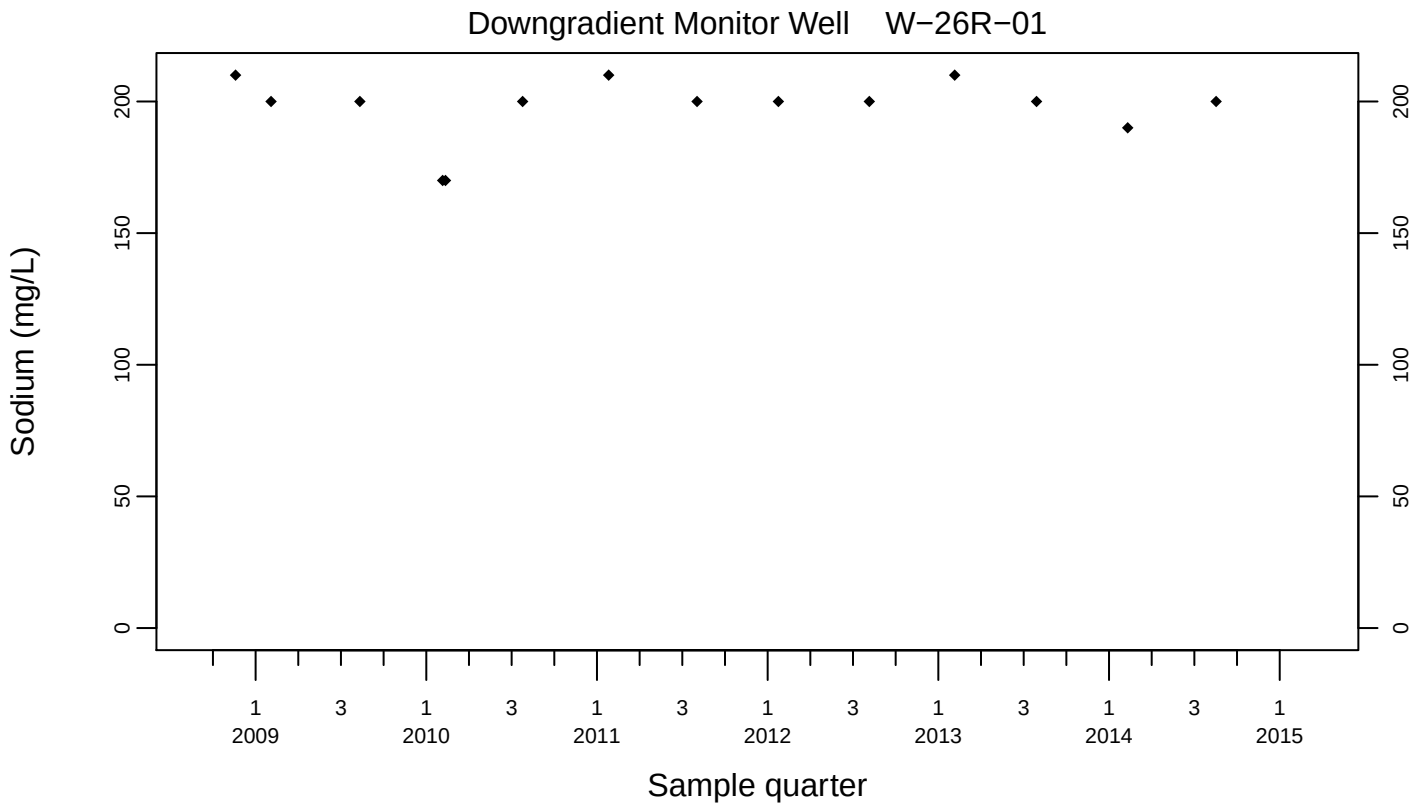

Sewage Ponds Ground Water
Sodium (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

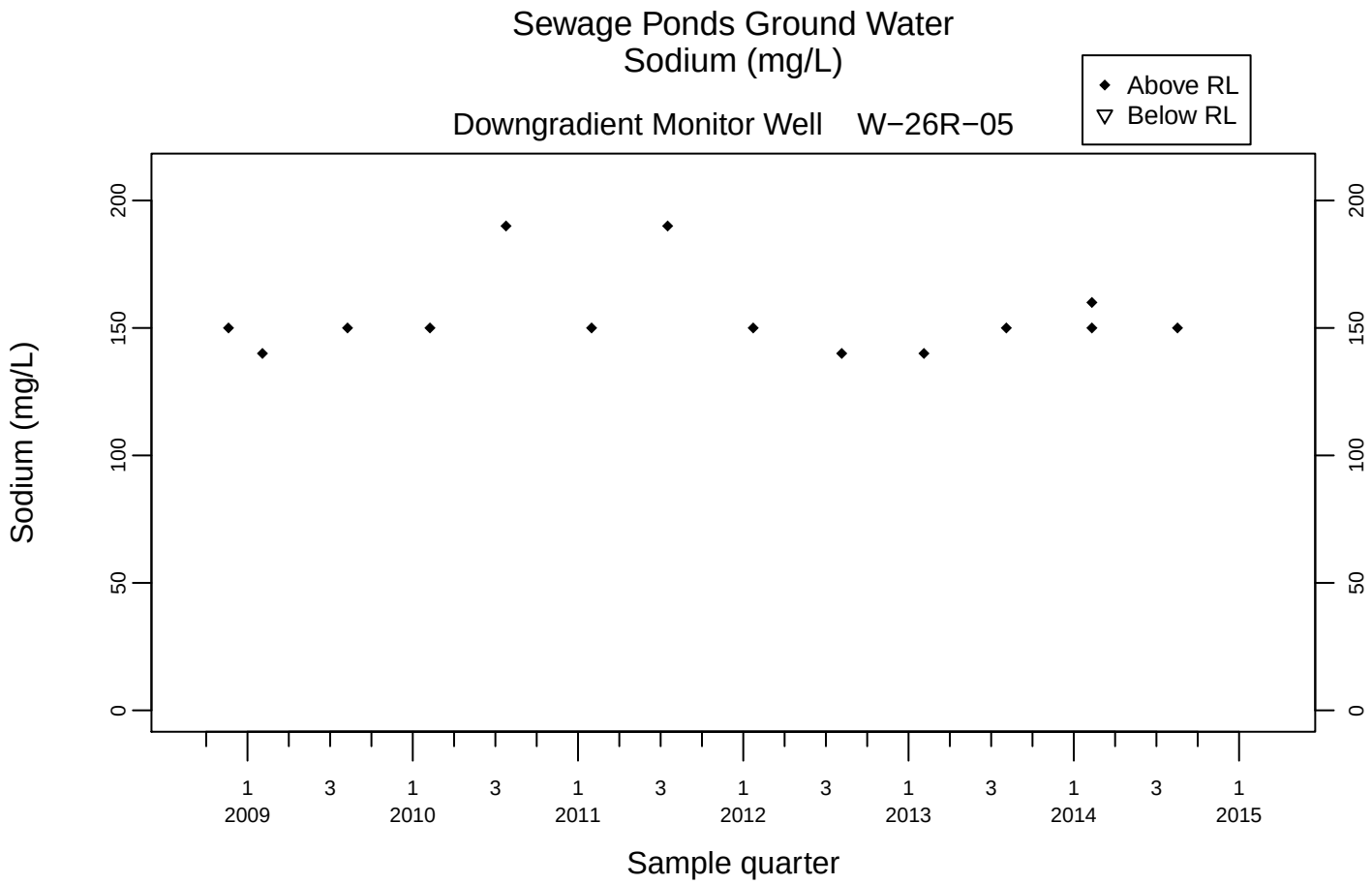

Upgradient Monitor Well W−7PS
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

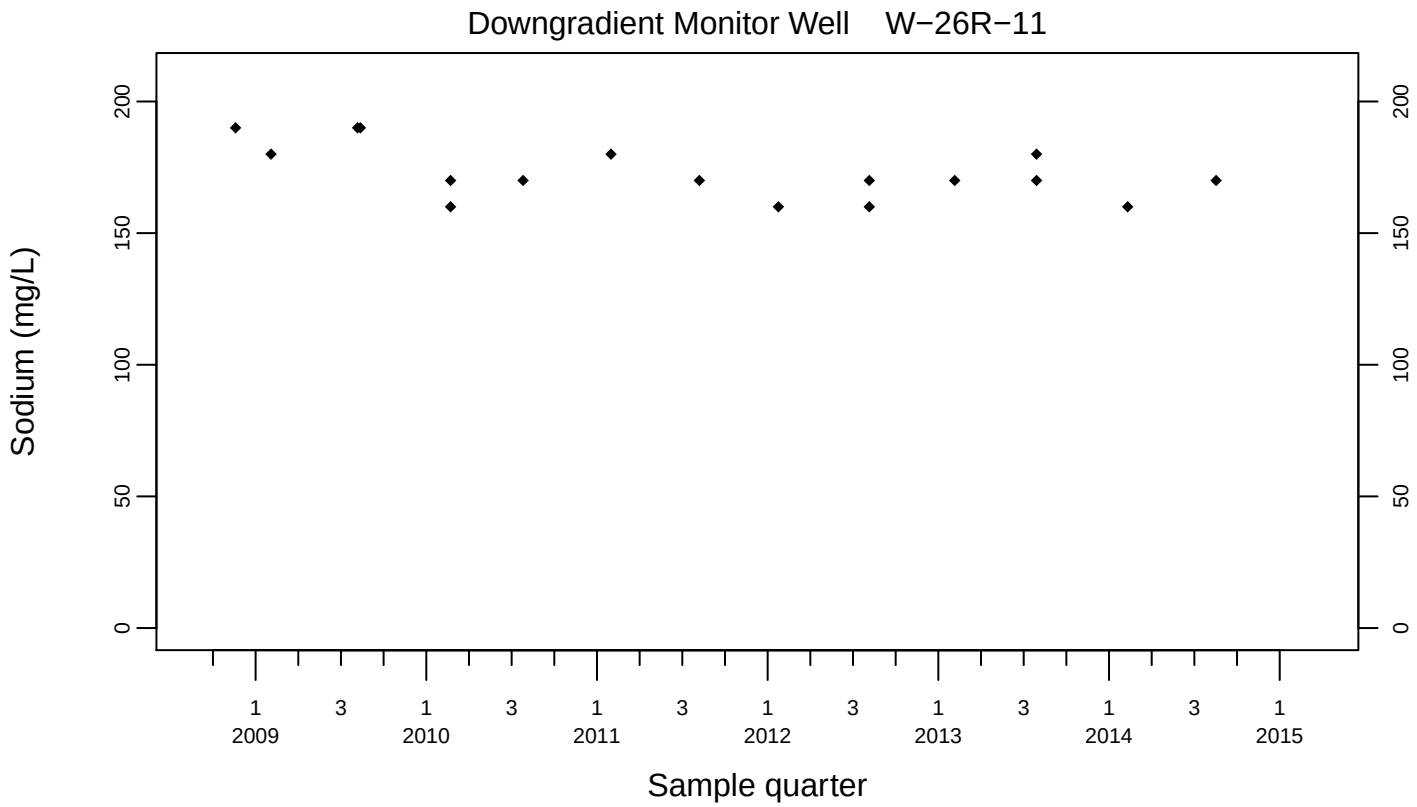

Sewage Ponds Ground Water
Sodium (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

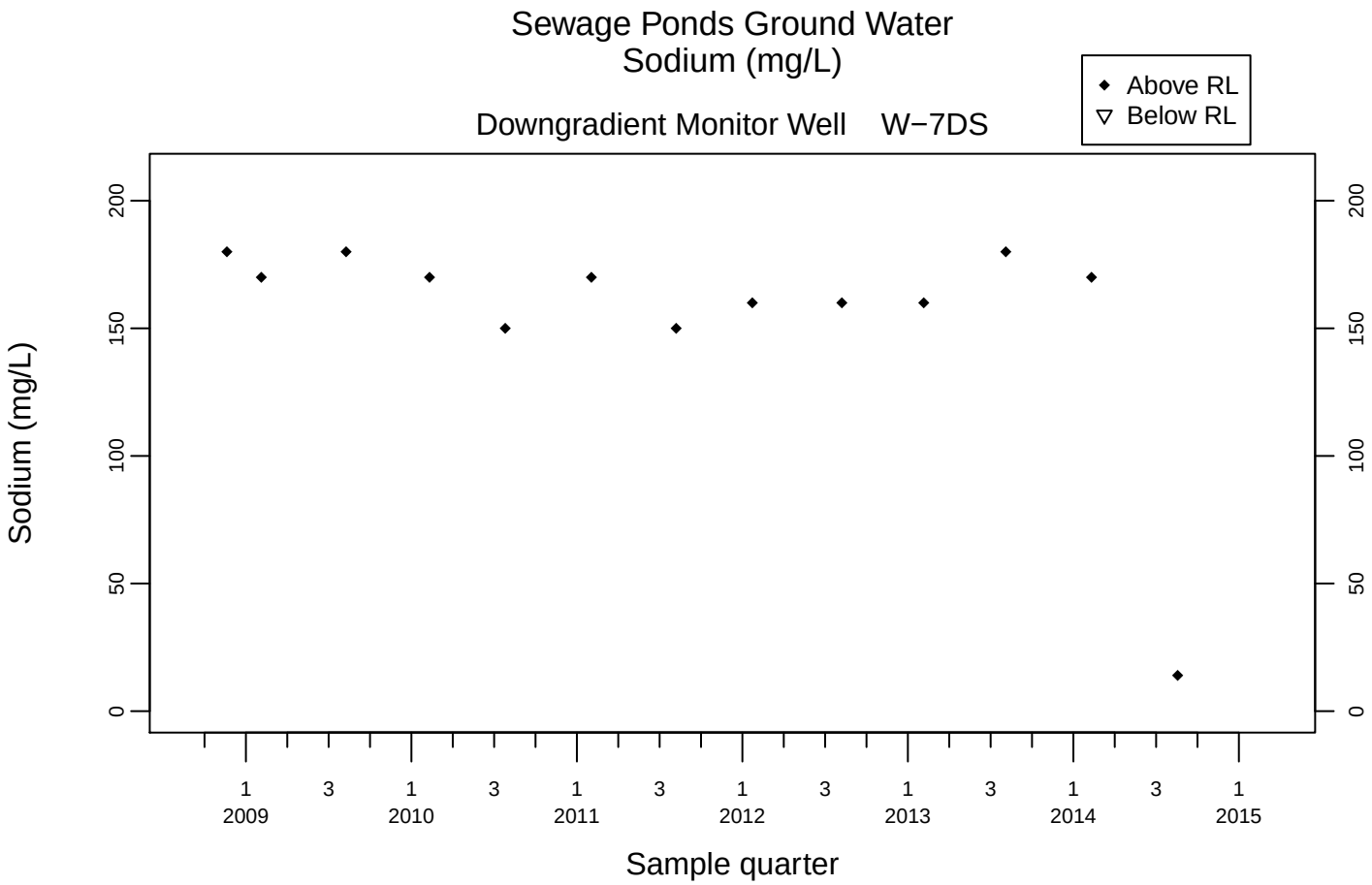

Downgradient Monitor Well W−25N−23
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

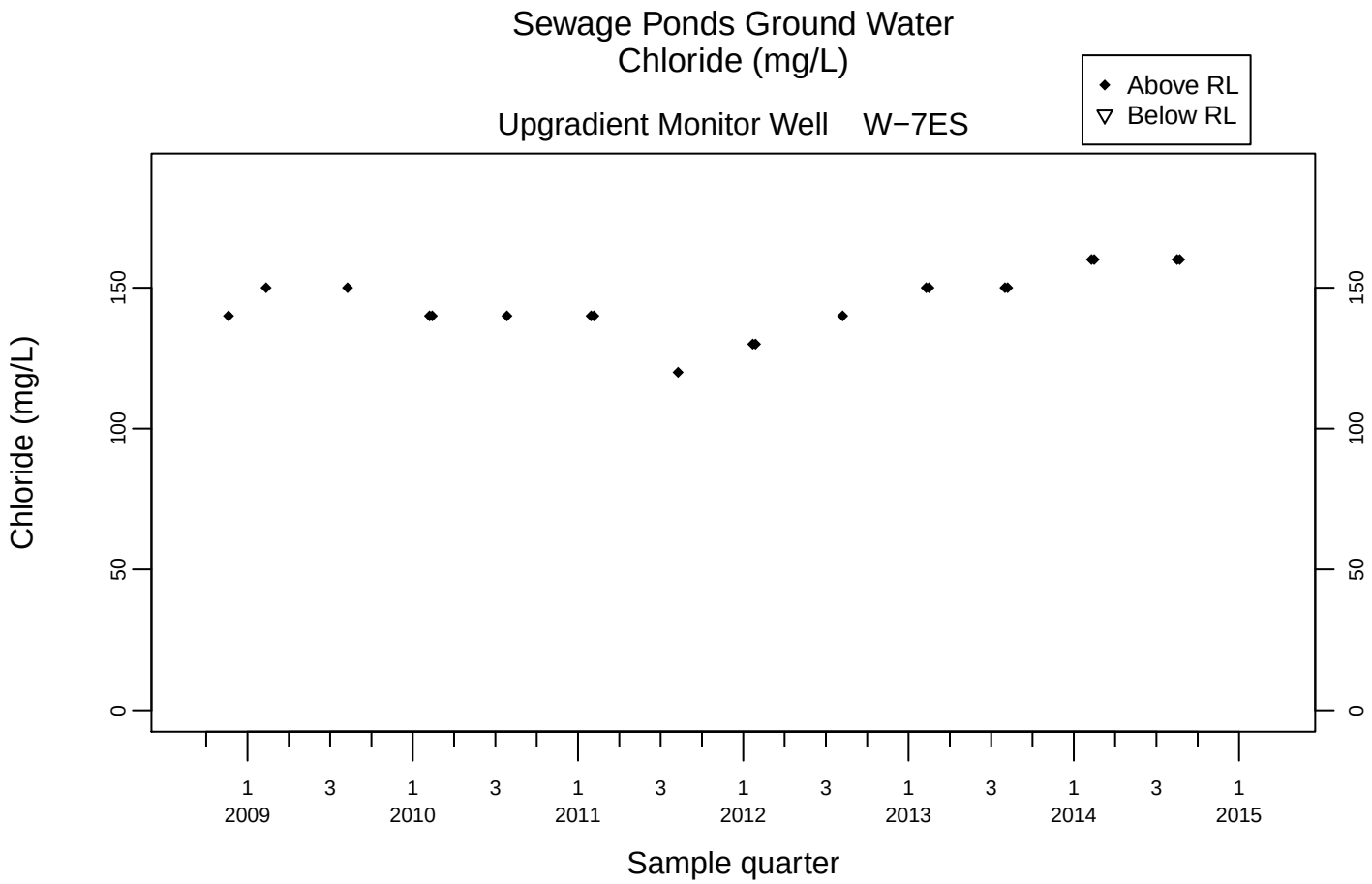

Sewage Ponds Ground Water
Sodium (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

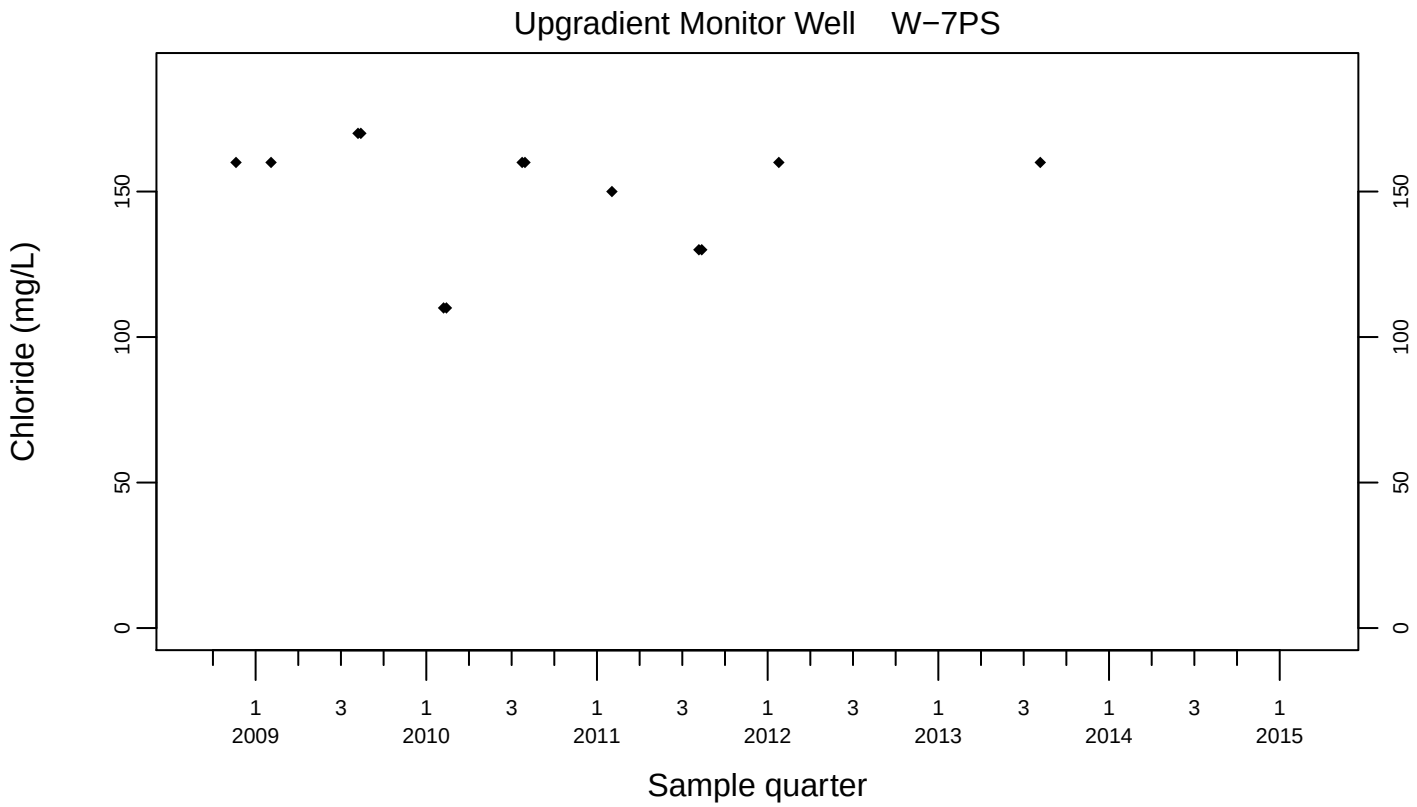

Downgradient Monitor Well W−26R−01
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

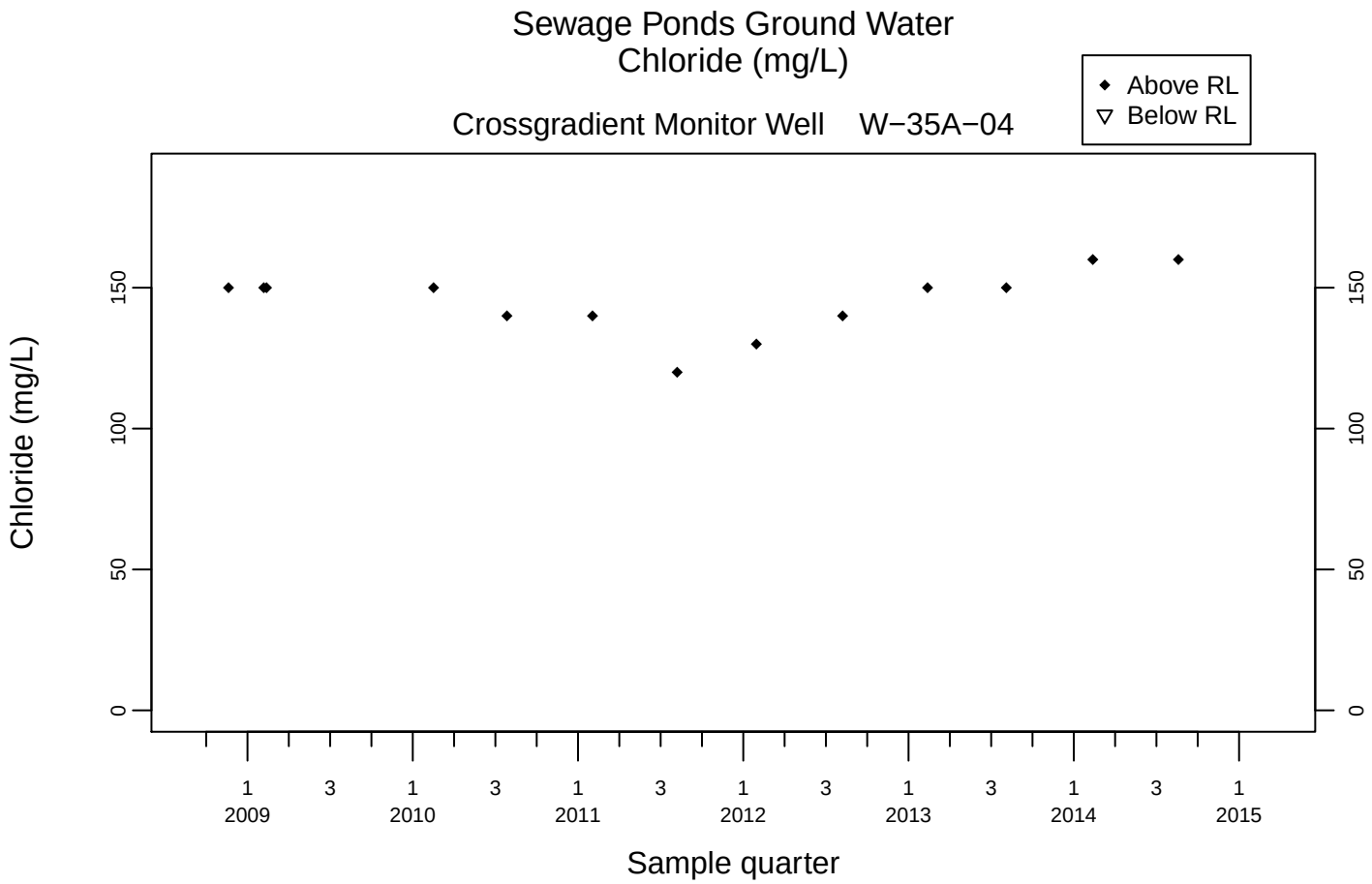

Sewage Ponds Ground Water
Sodium (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

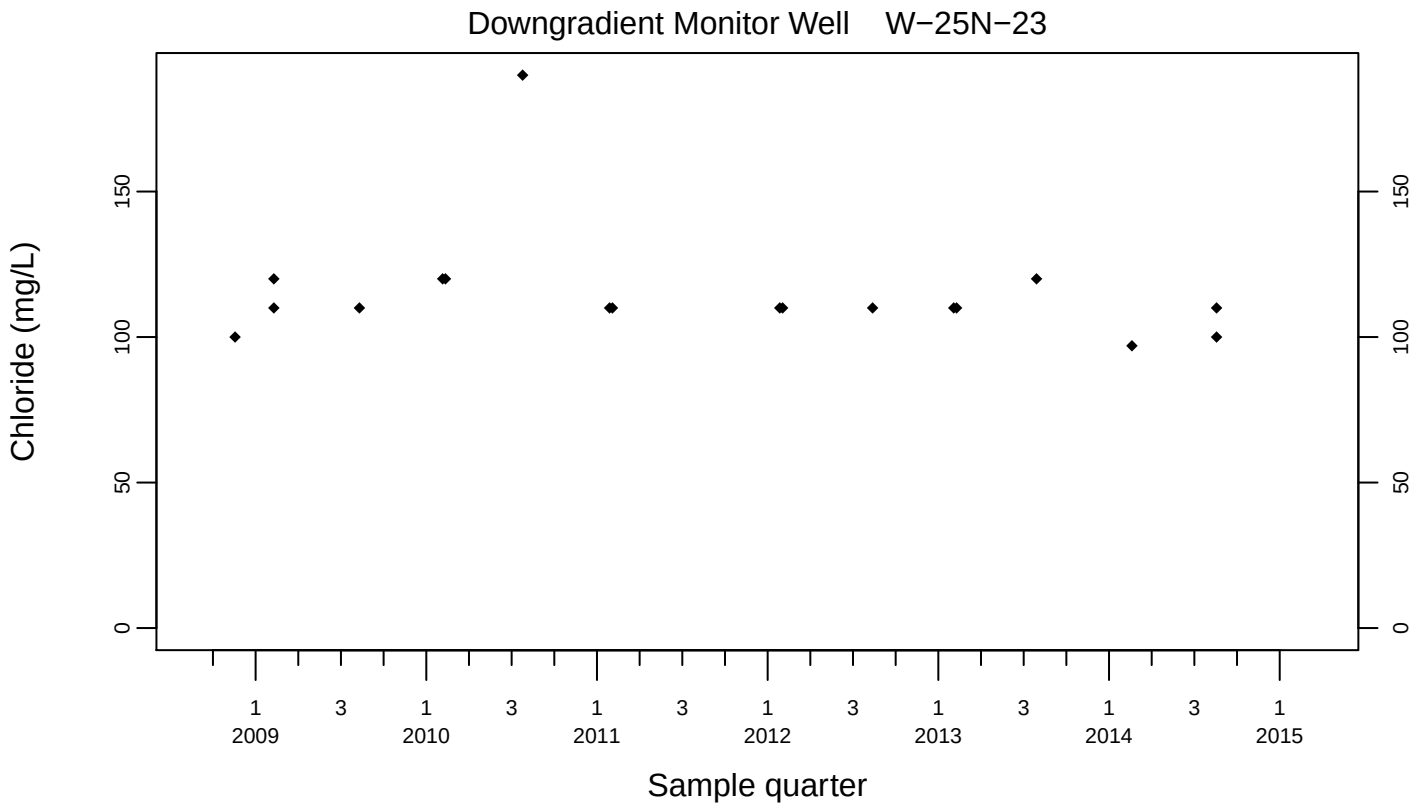

Downgradient Monitor Well W−26R−11
Sodium (mg/L)
0
50
100
150
200
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

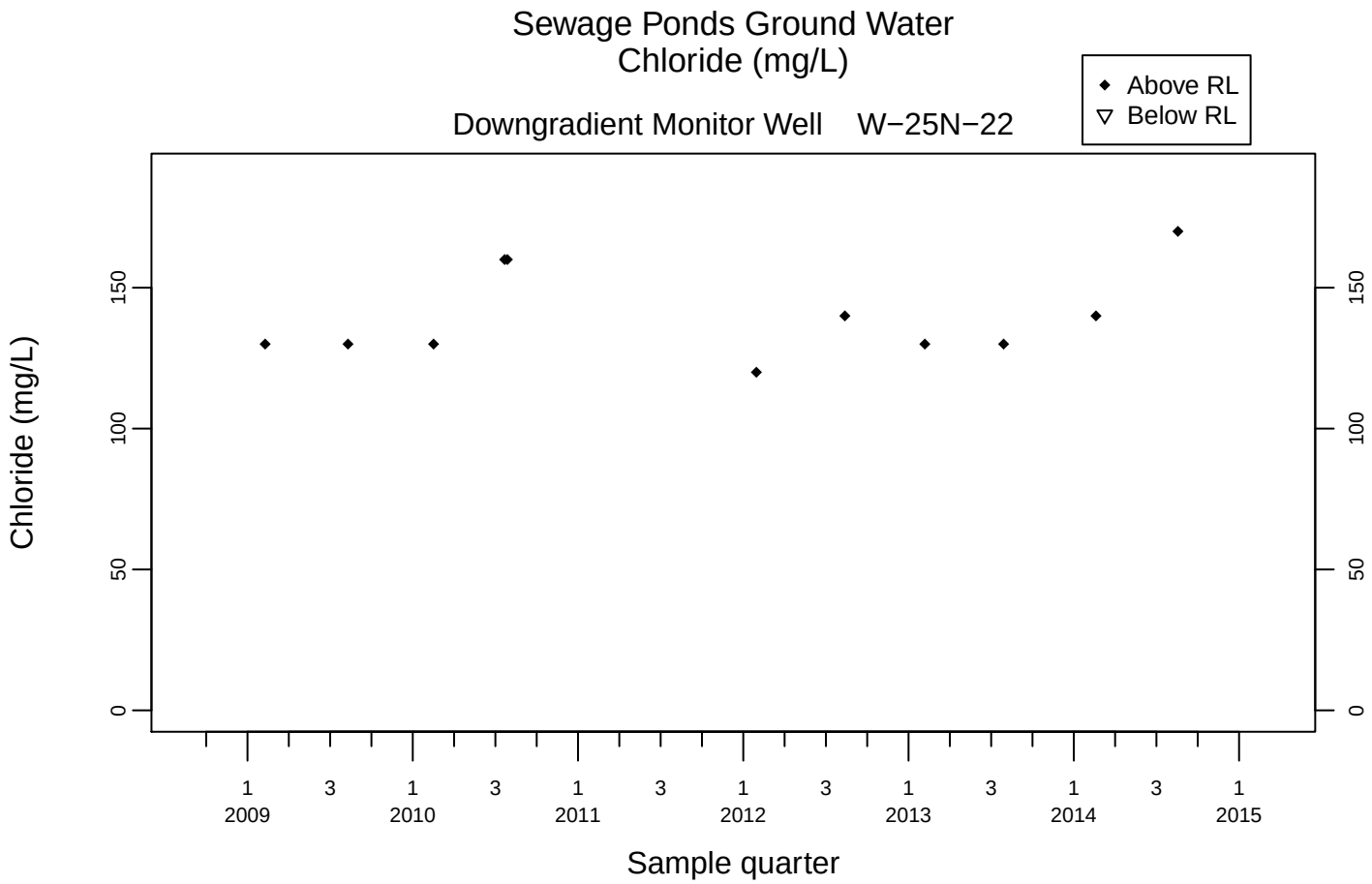

Sewage Ponds Ground Water
Sodium (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Sodium (mg/L)
0
50
100
150
200
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

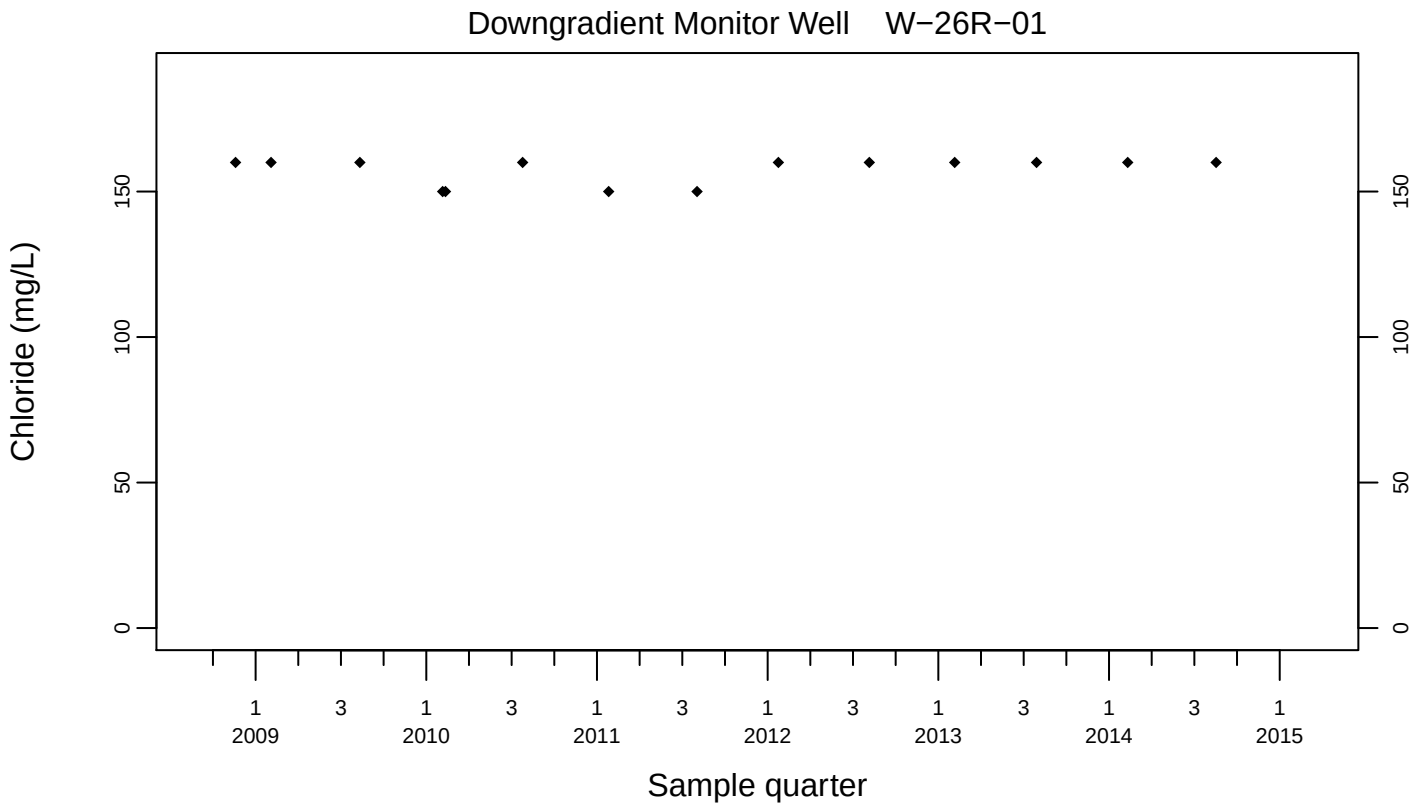

Sewage Ponds Ground Water
Chloride (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

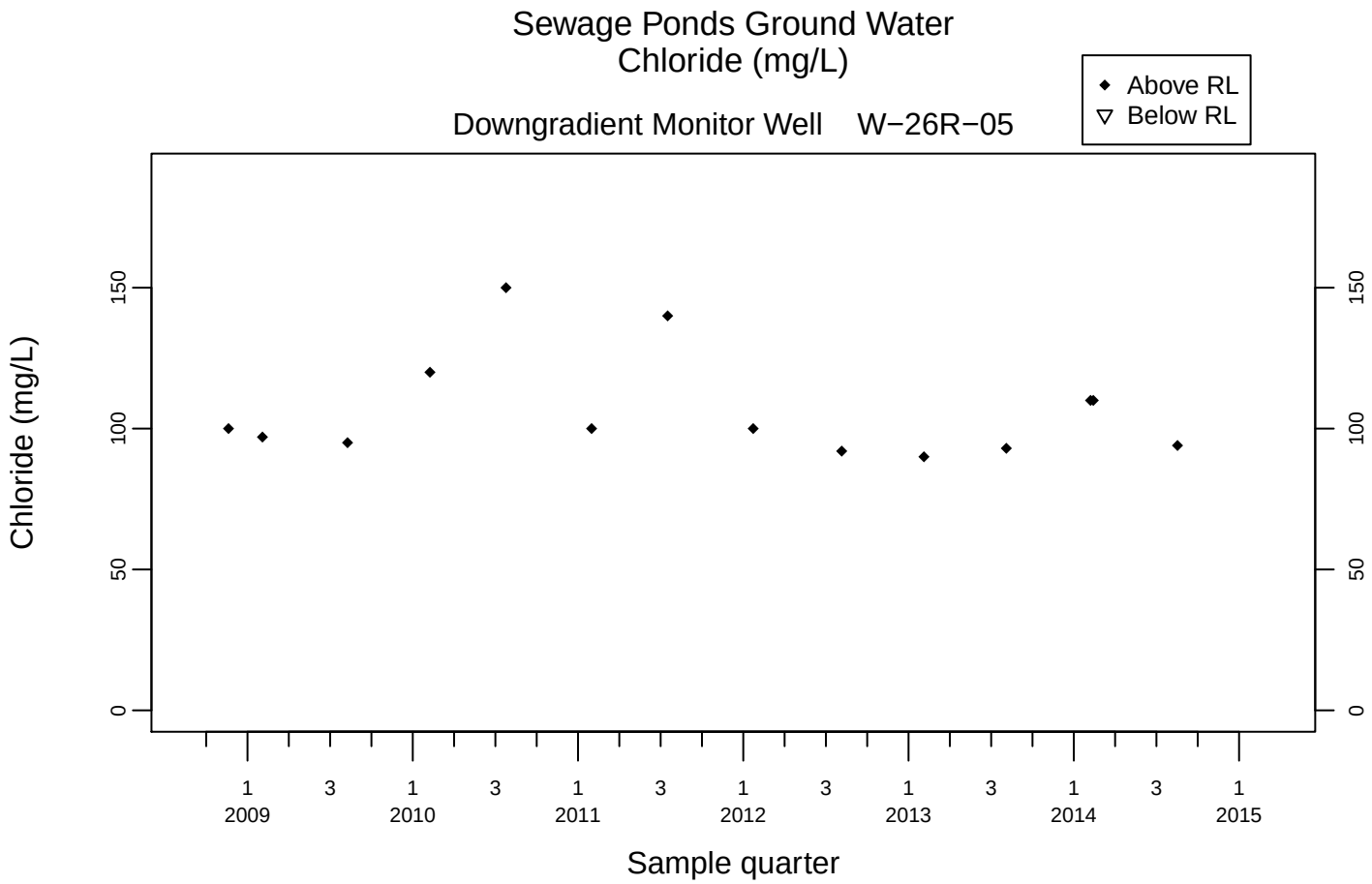

Upgradient Monitor Well W−7PS
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

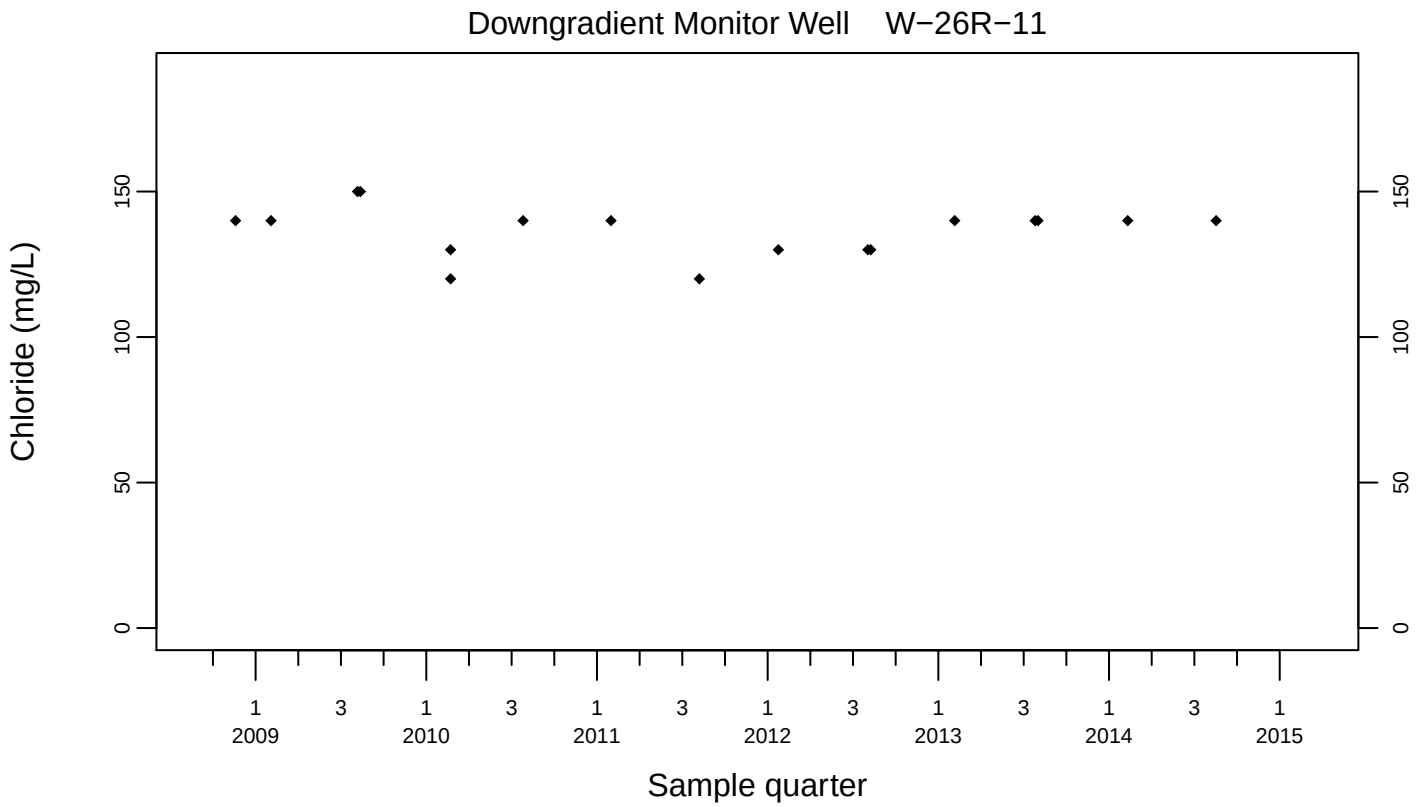

Sewage Ponds Ground Water
Chloride (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

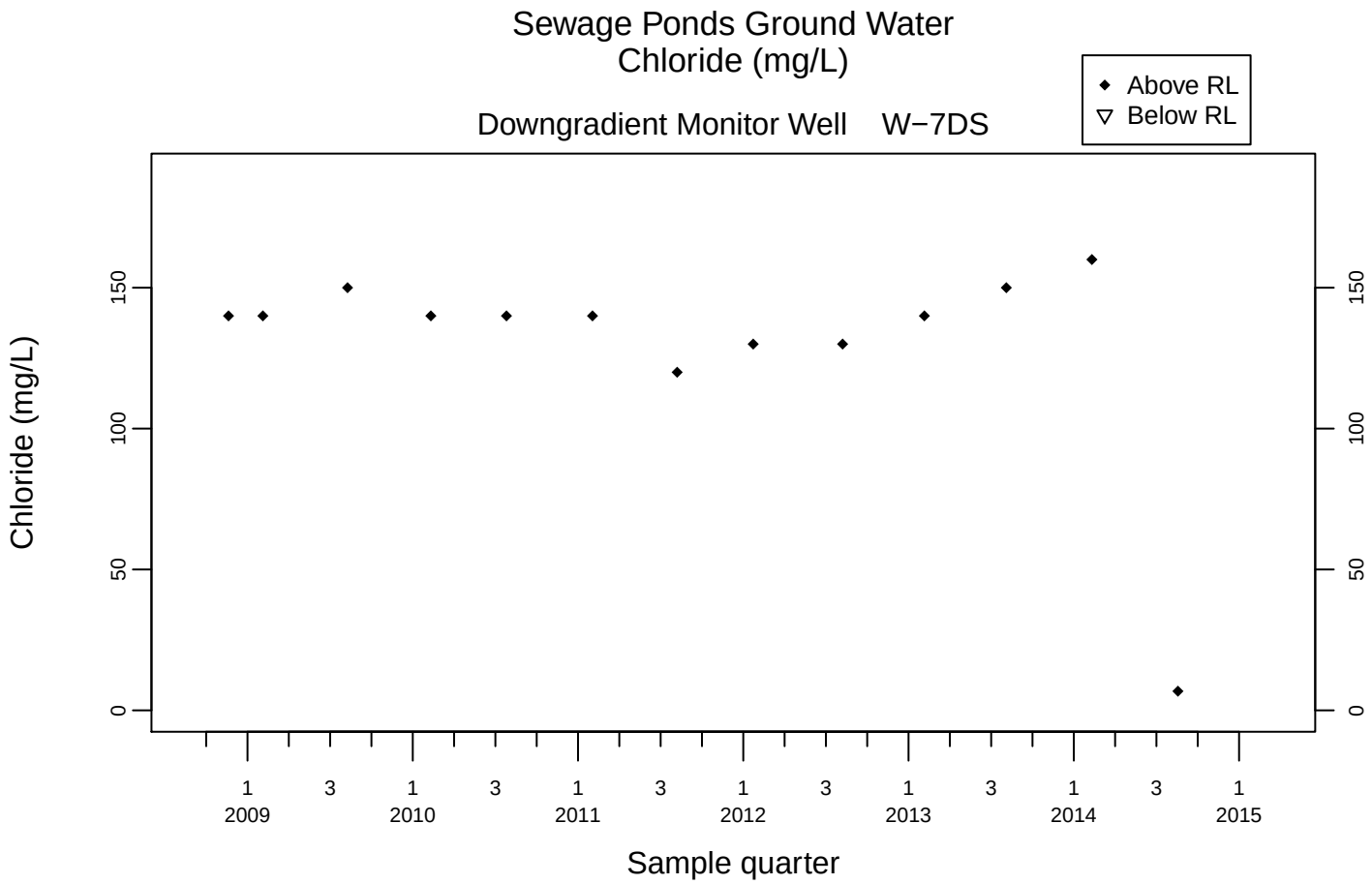

Downgradient Monitor Well W−25N−23
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

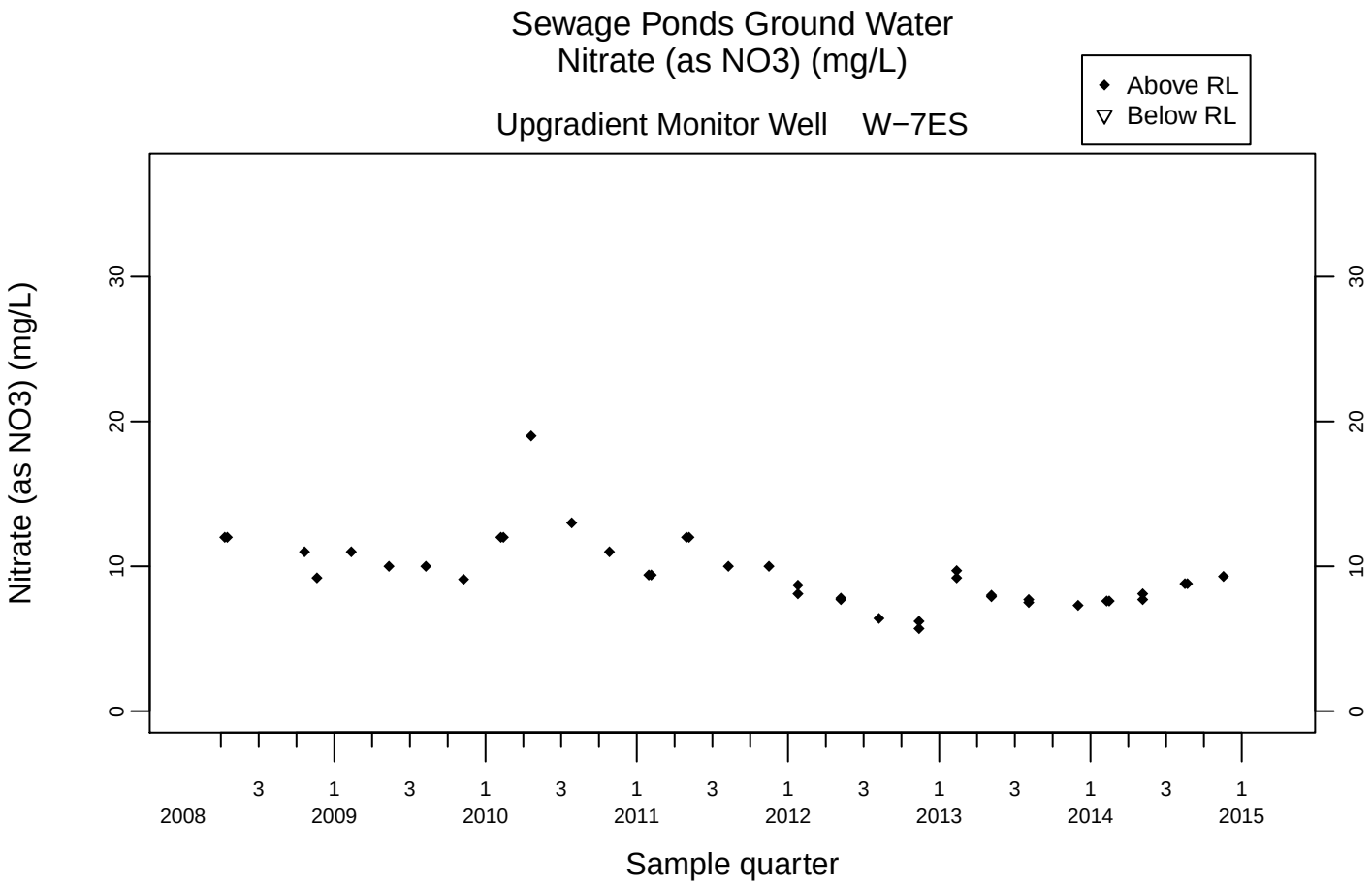

Sewage Ponds Ground Water
Chloride (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

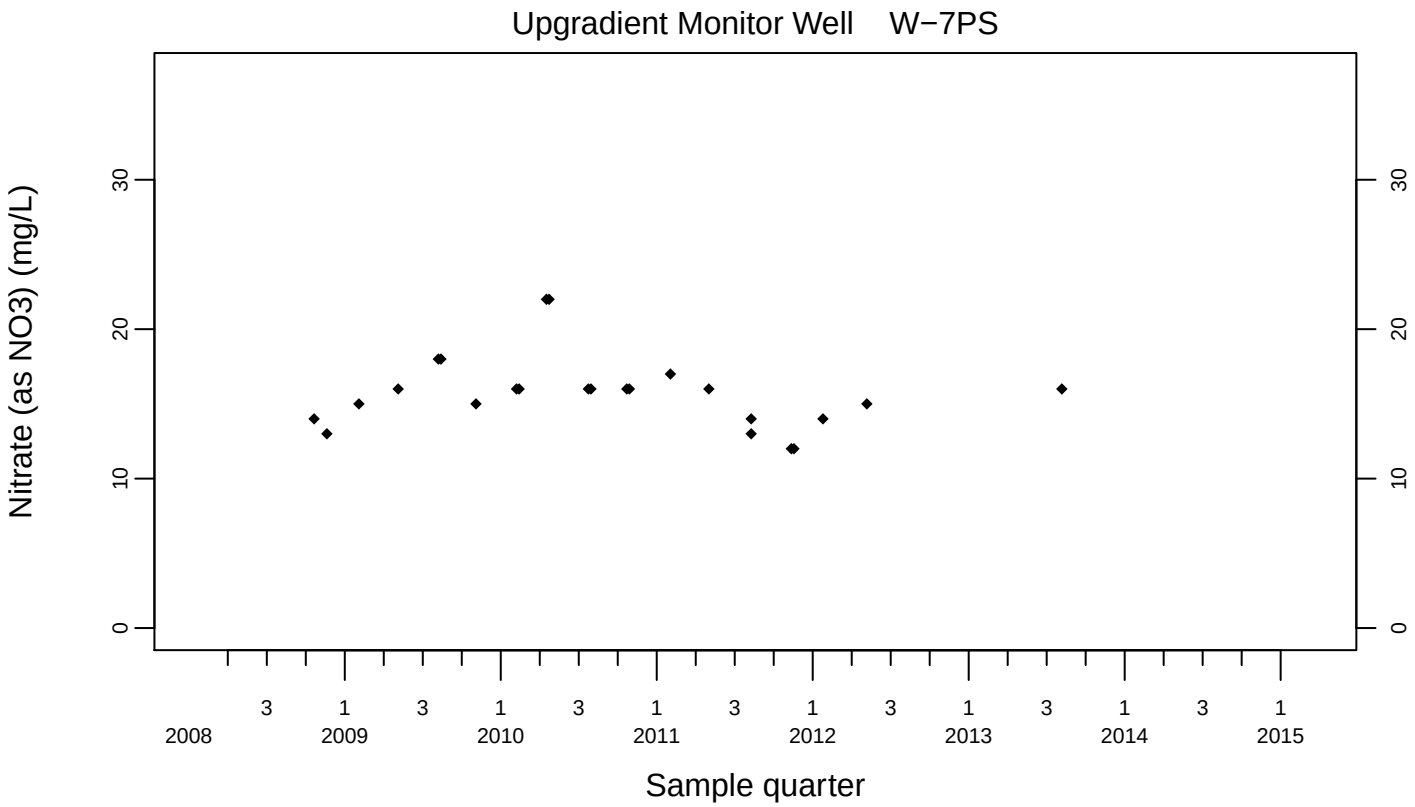

Downgradient Monitor Well W−26R−01
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

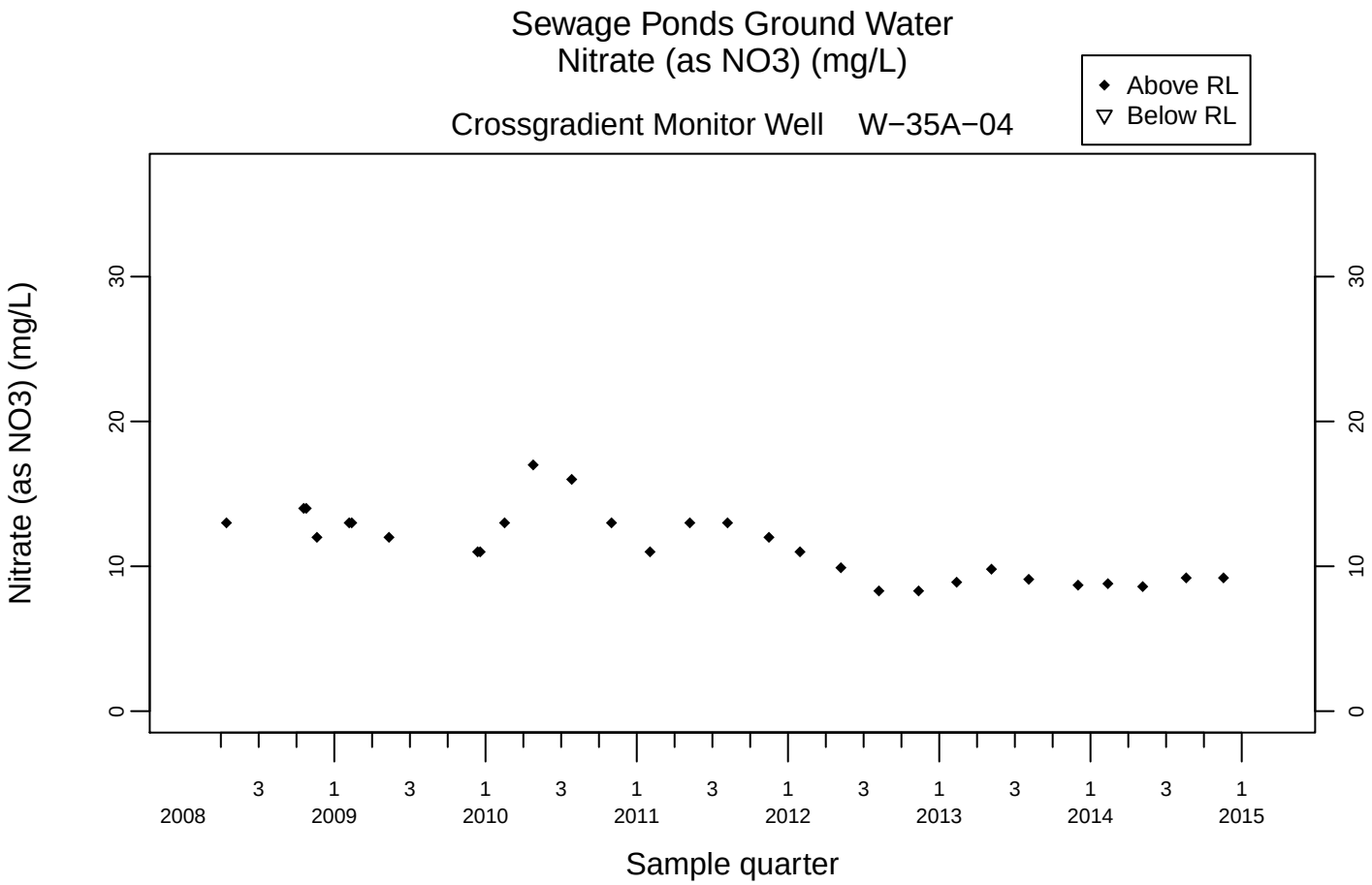

Sewage Ponds Ground Water
Chloride (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

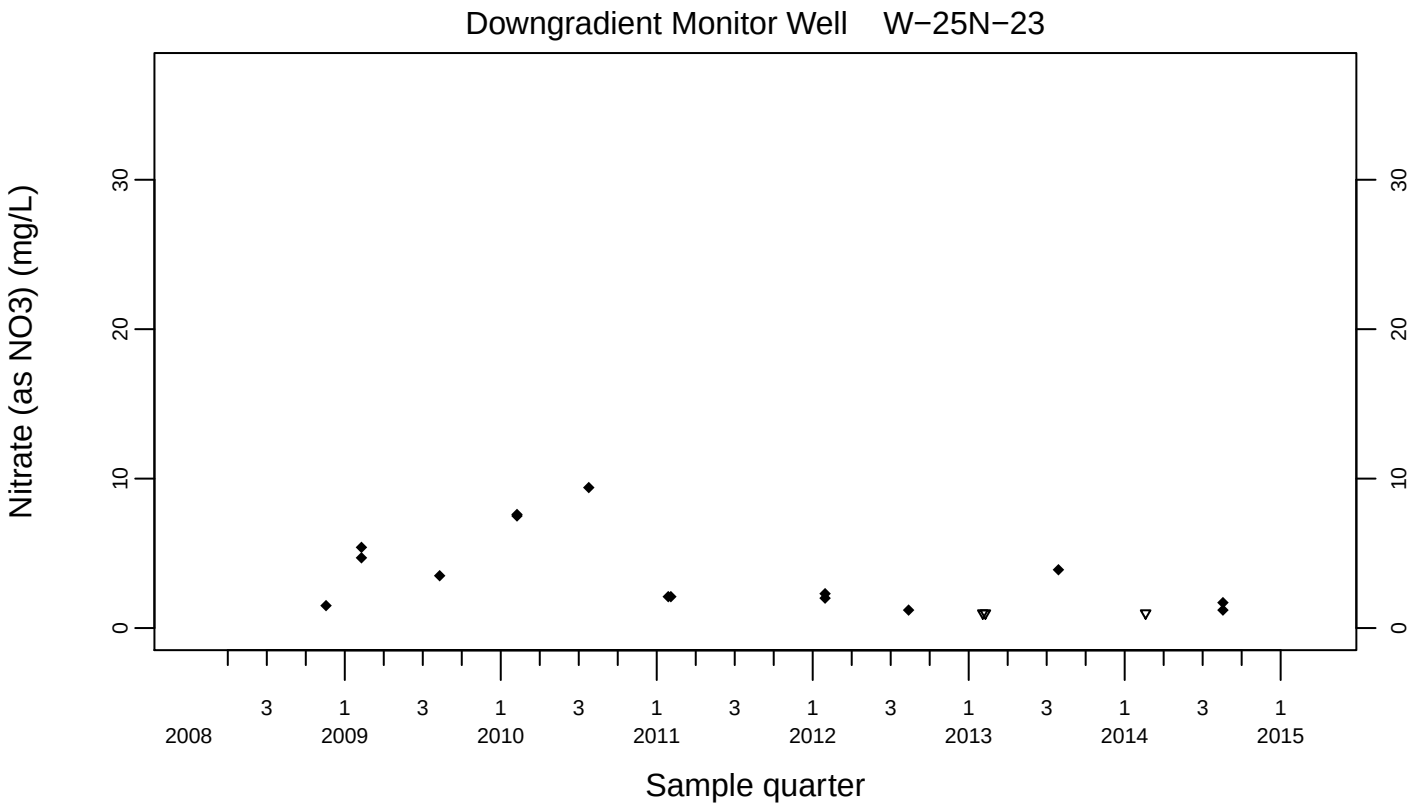

Downgradient Monitor Well W−26R−11
Chloride (mg/L)
0
50
100
150
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

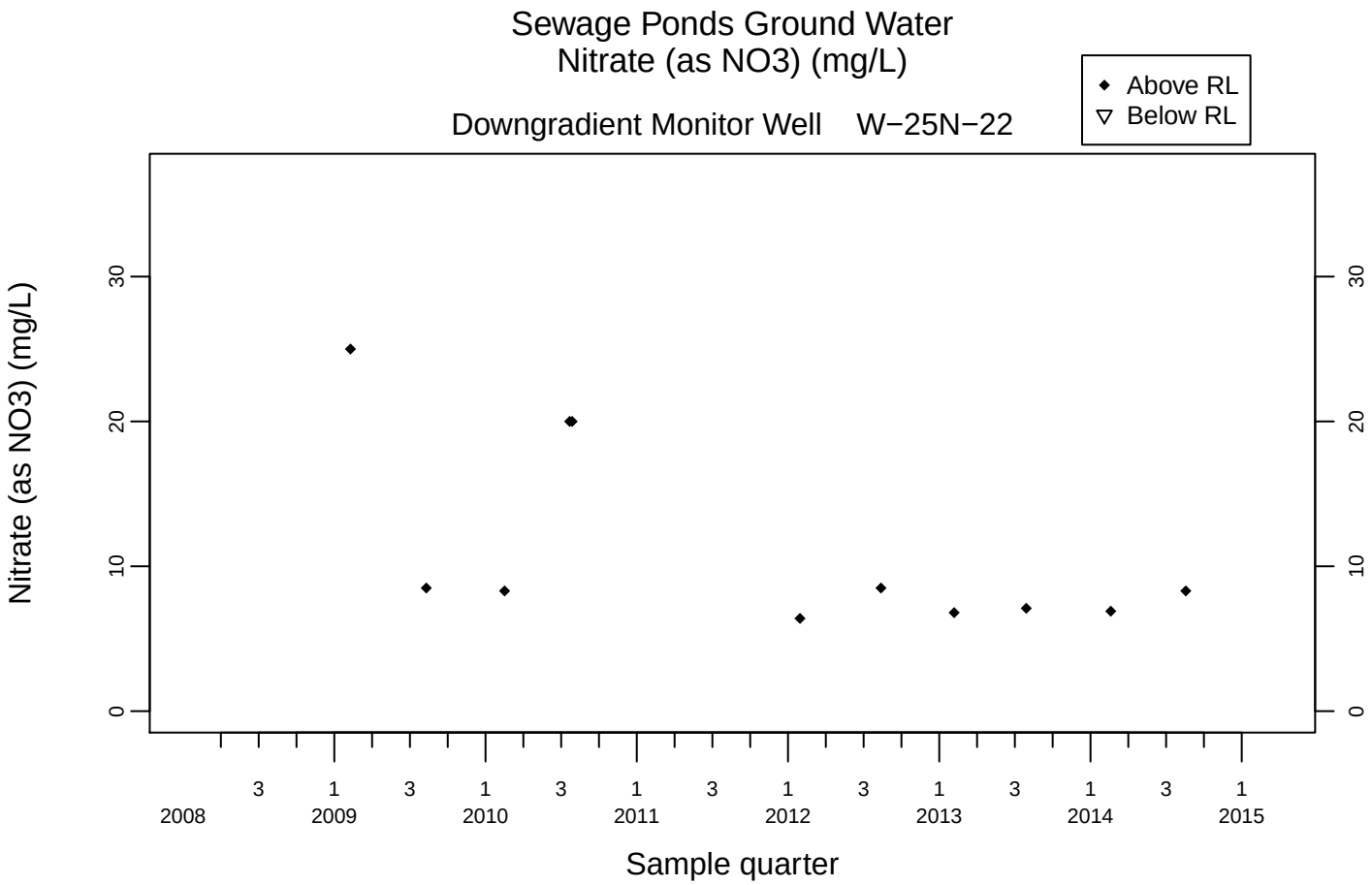

Sewage Ponds Ground Water
Chloride (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

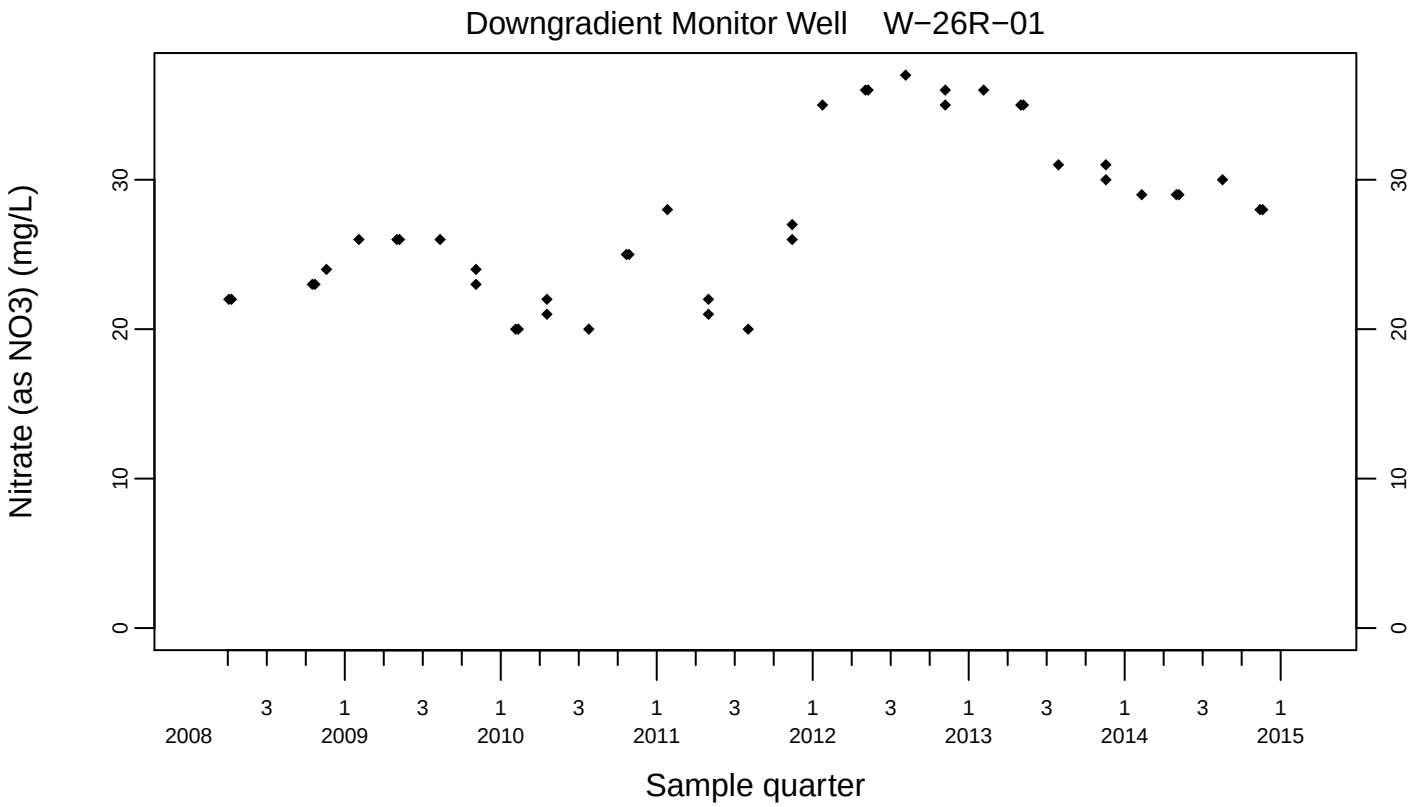

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

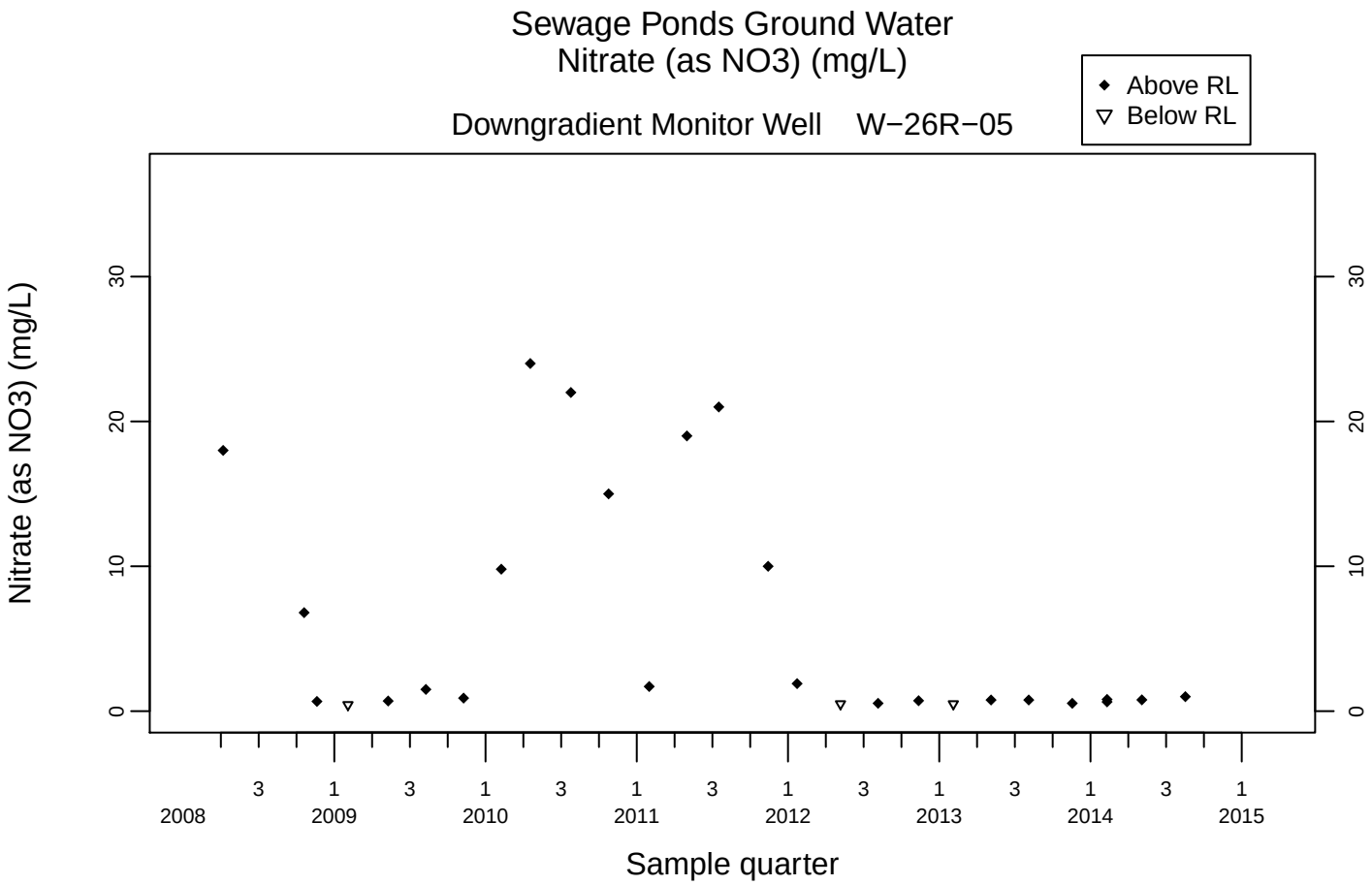

Upgradient Monitor Well W−7PS
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

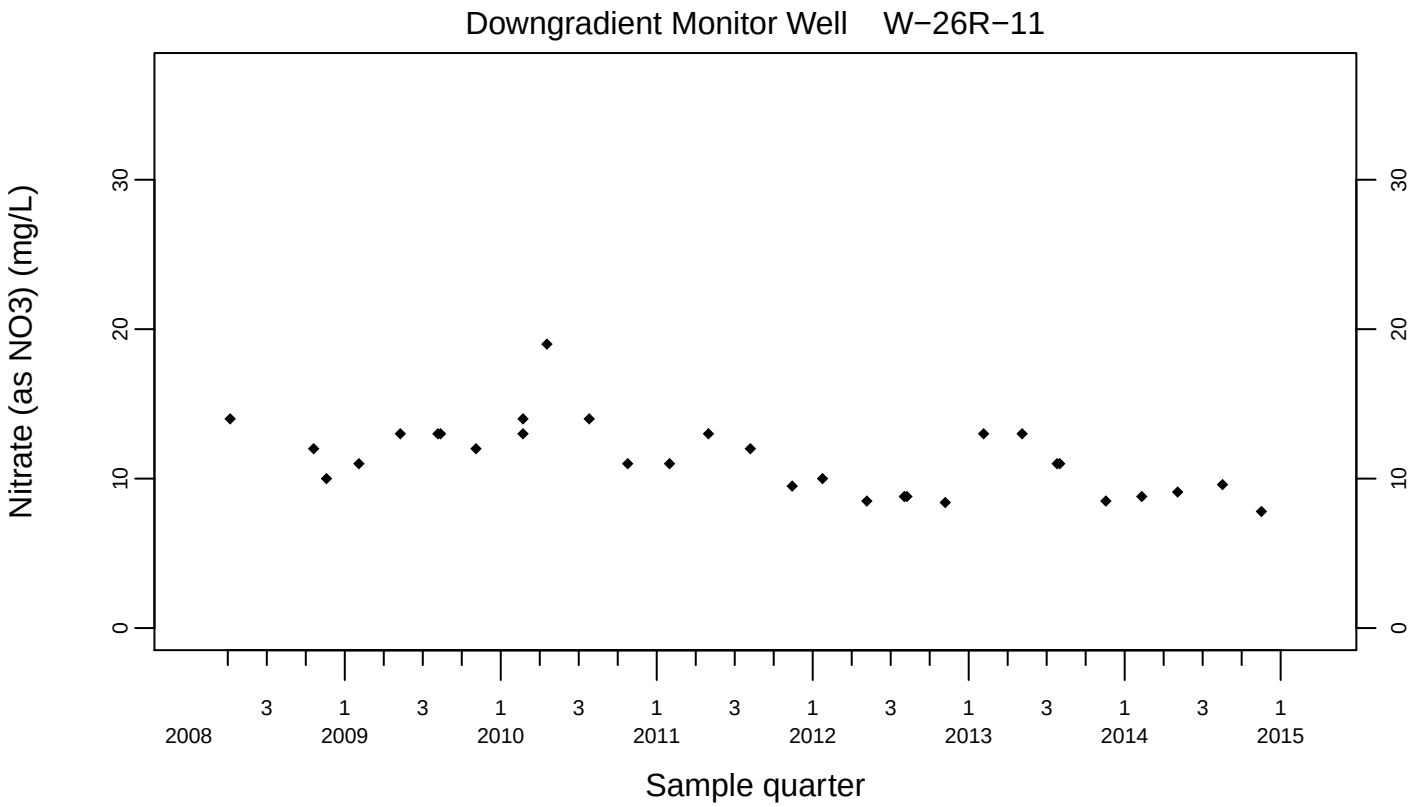

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

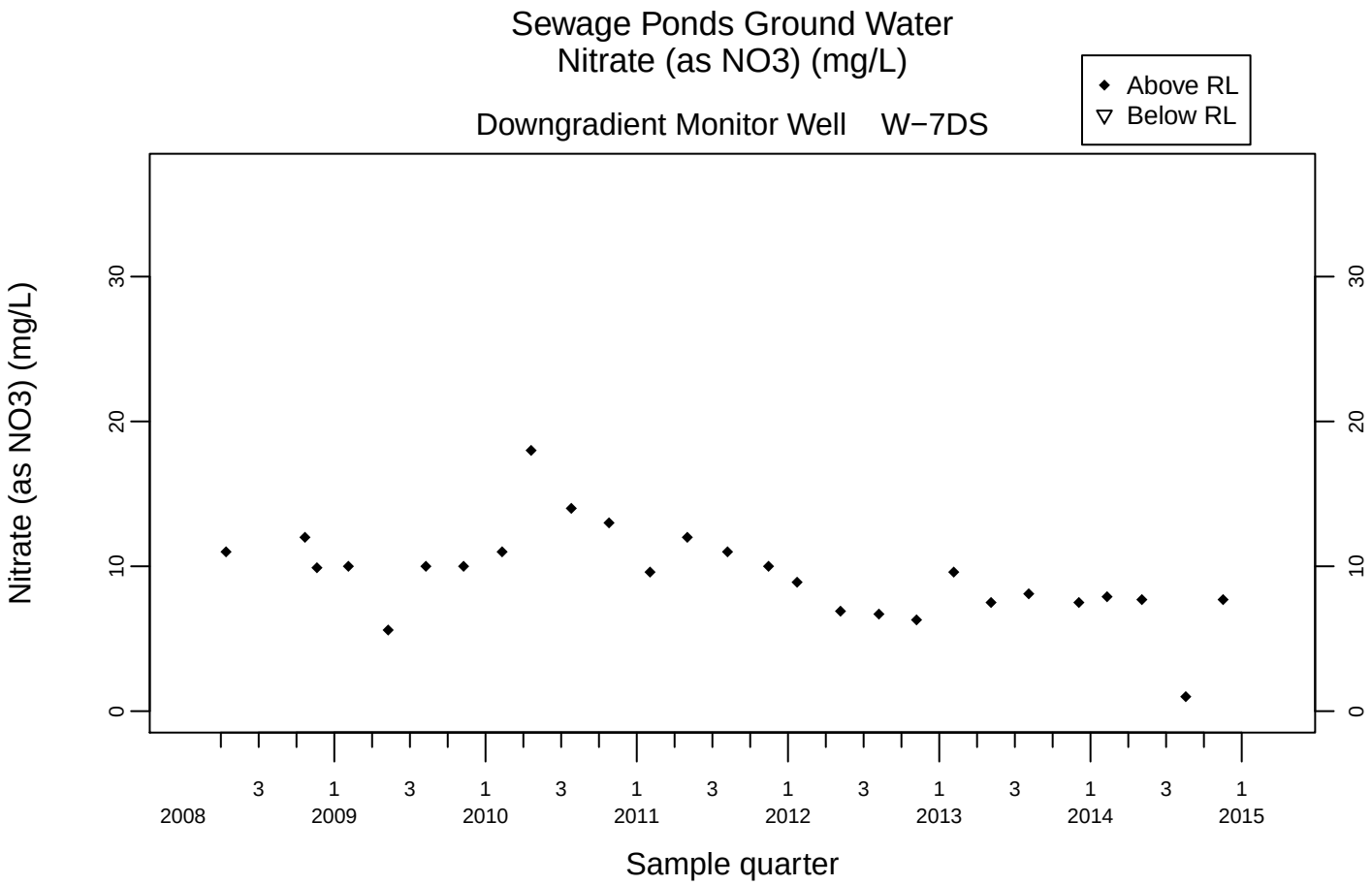

Downgradient Monitor Well W−25N−23
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

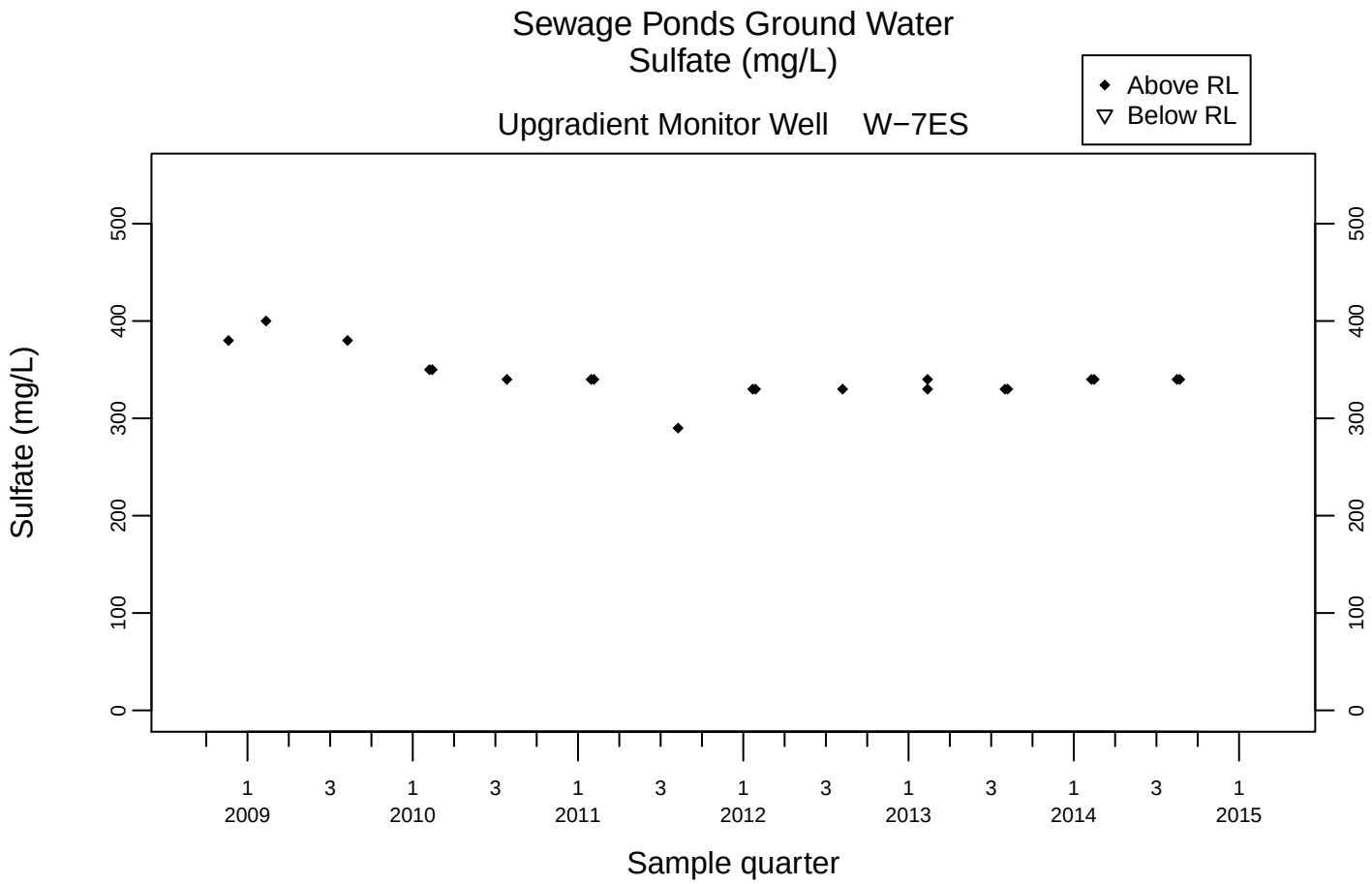

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

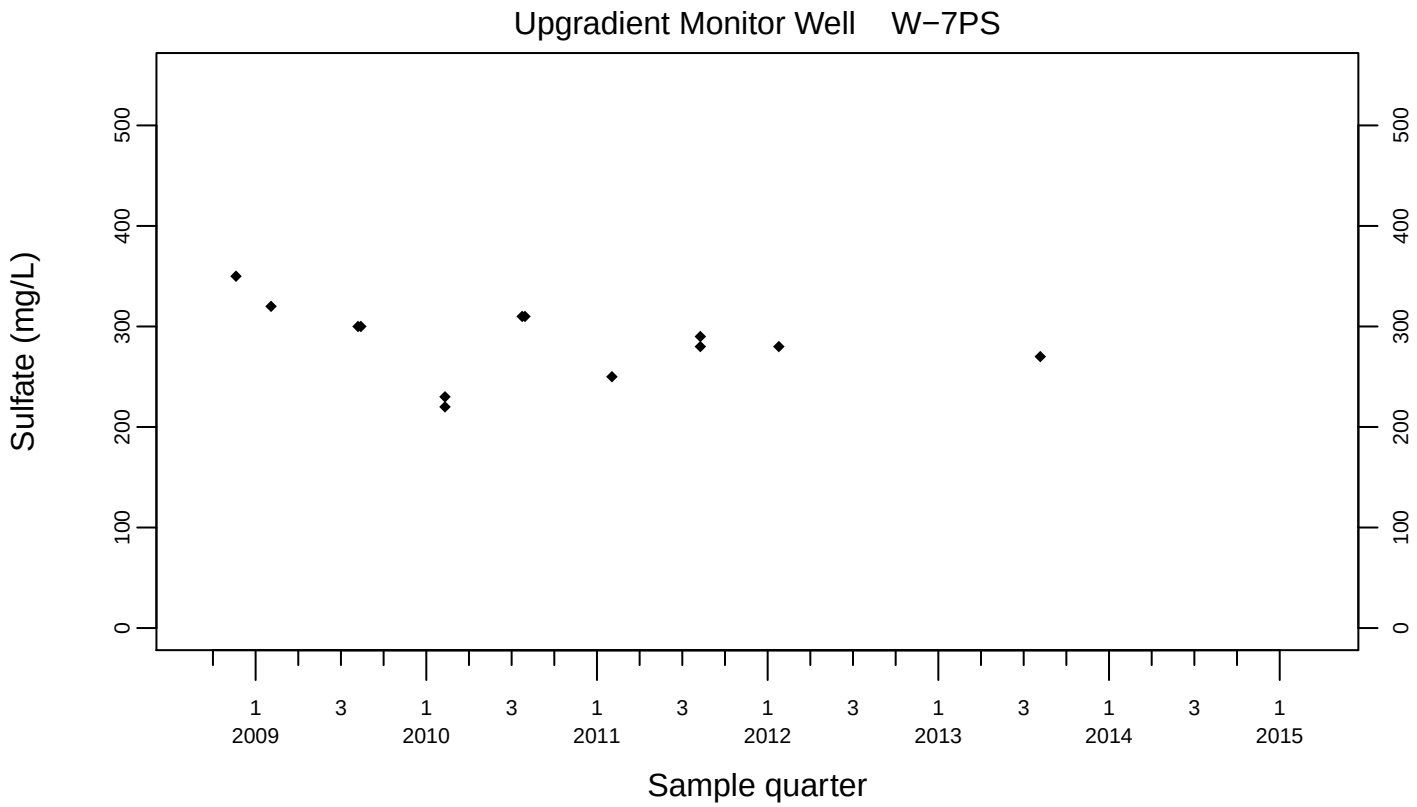

Downgradient Monitor Well W−26R−01
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

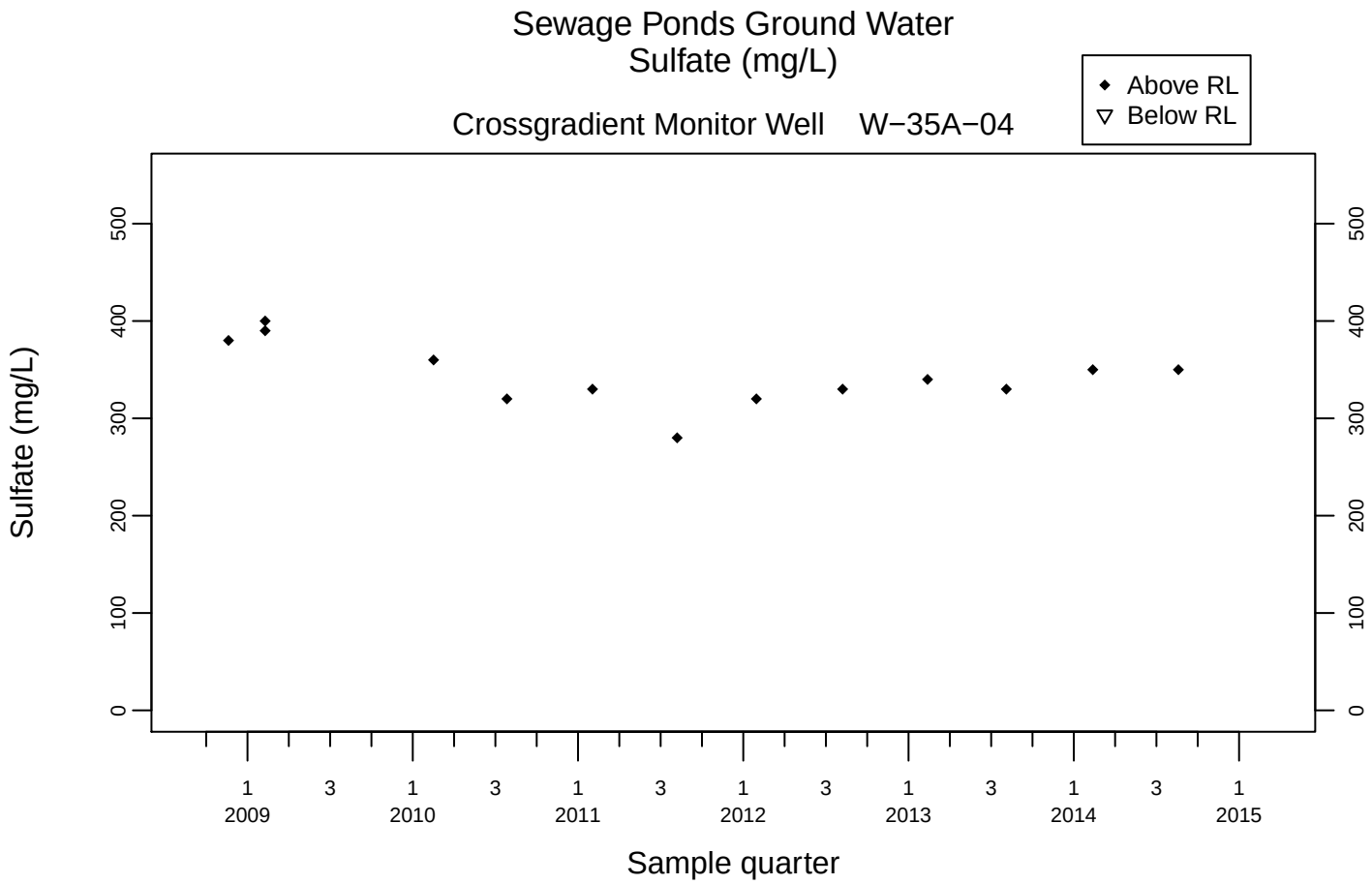

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

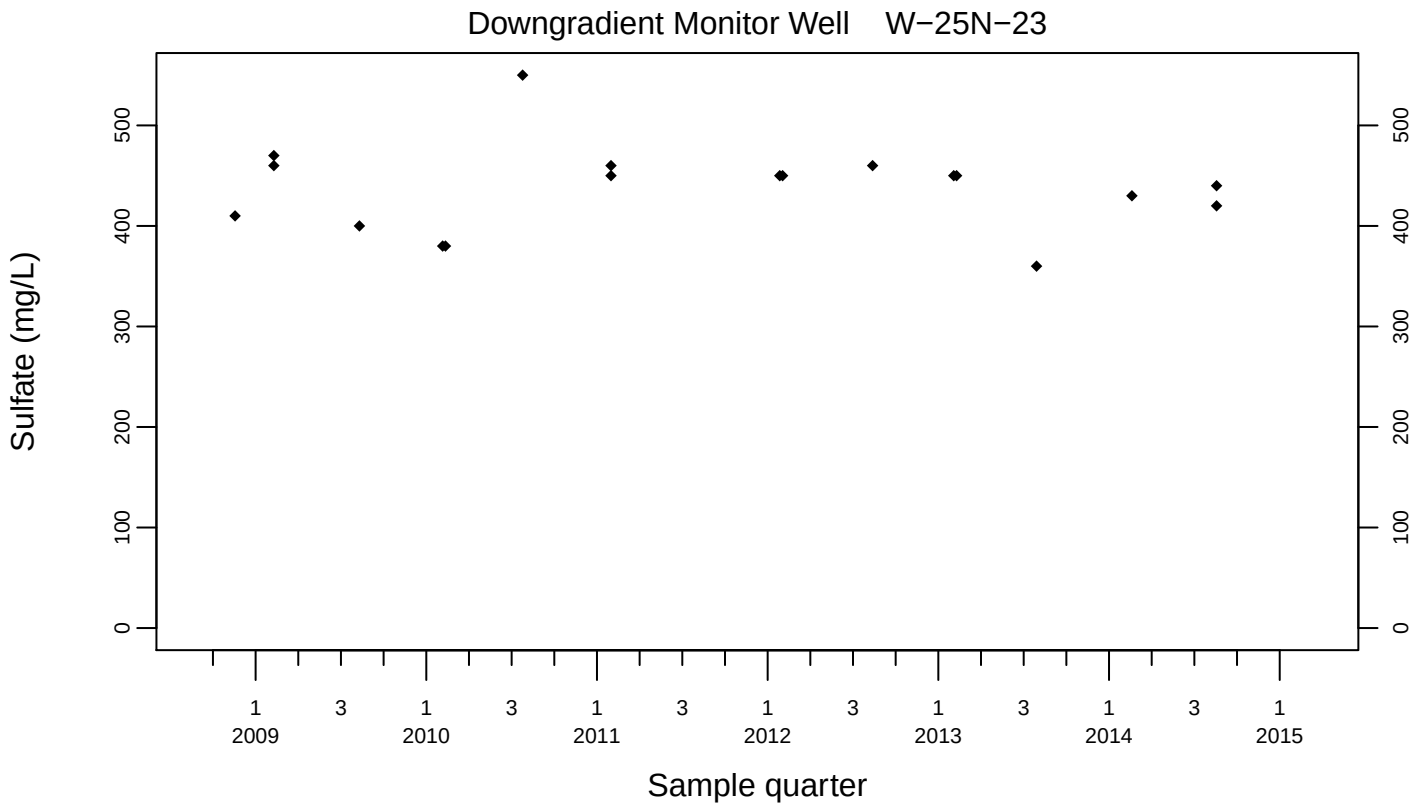

Downgradient Monitor Well W−26R−11
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

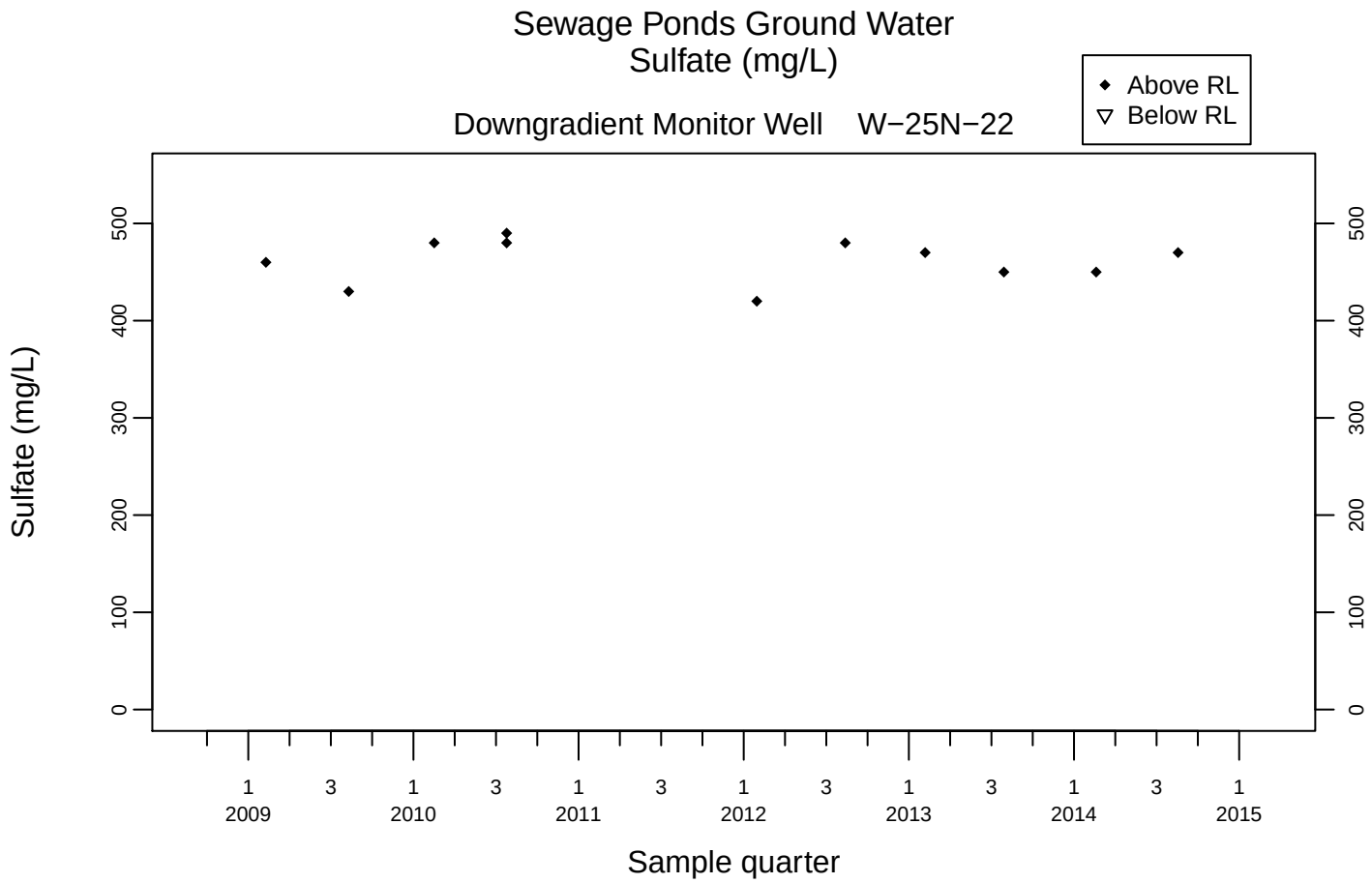

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Nitrate (as NO3) (mg/L)
0
10
20
30
3
1
2008
2009
2010
2011
2012
2013
2014
2015
Sample quarter

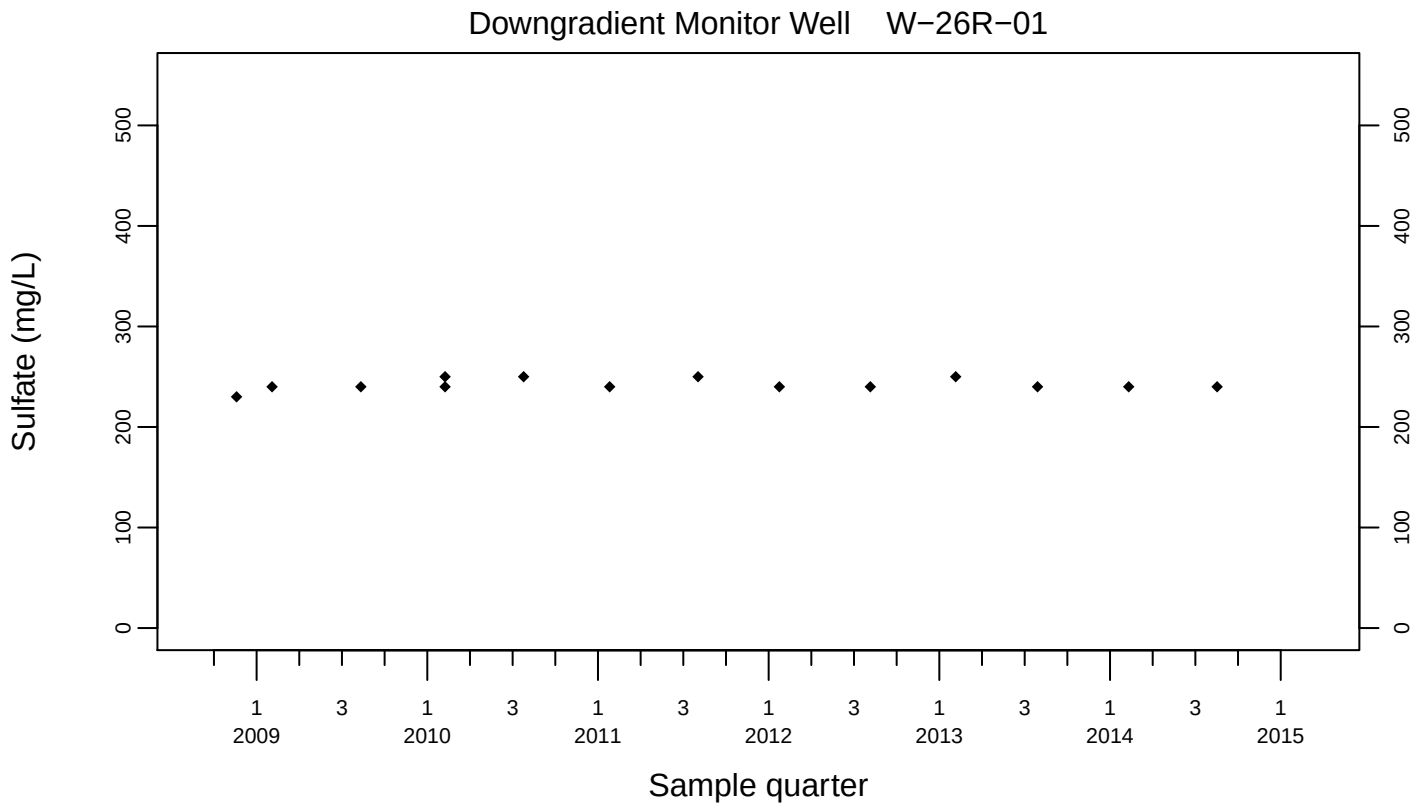

Sewage Ponds Ground Water
Sulfate (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

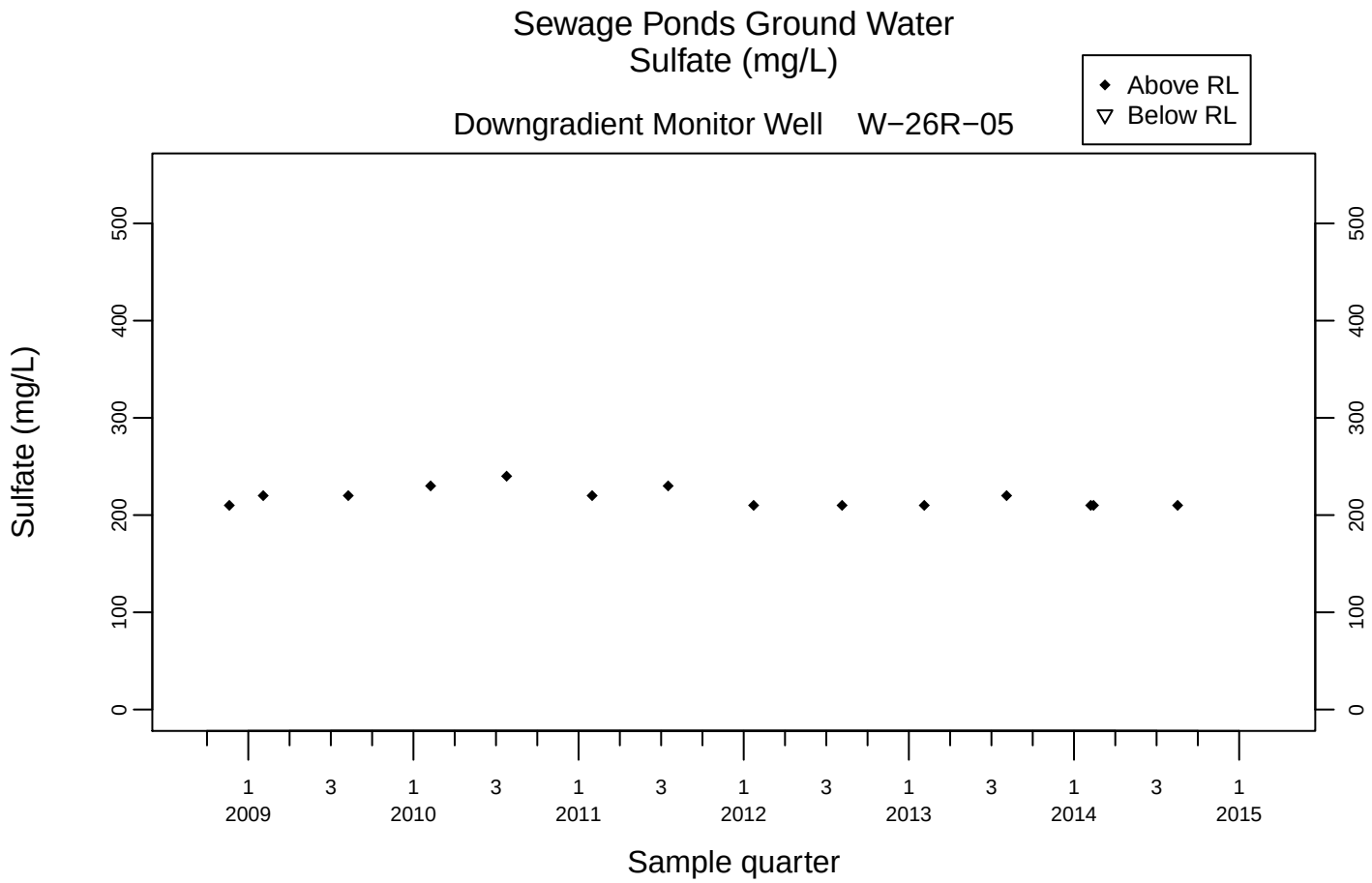

Upgradient Monitor Well W−7PS
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

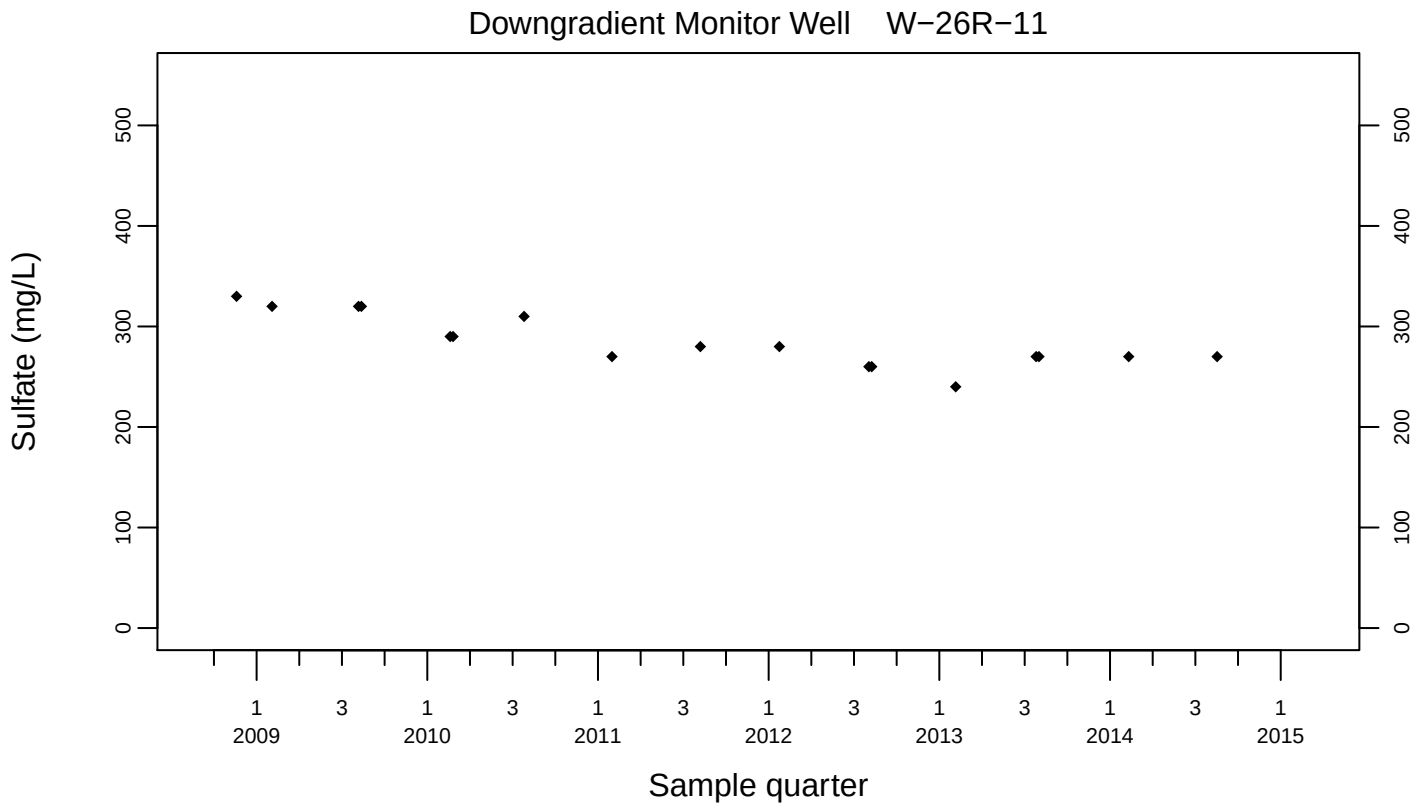

Sewage Ponds Ground Water
Sulfate (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

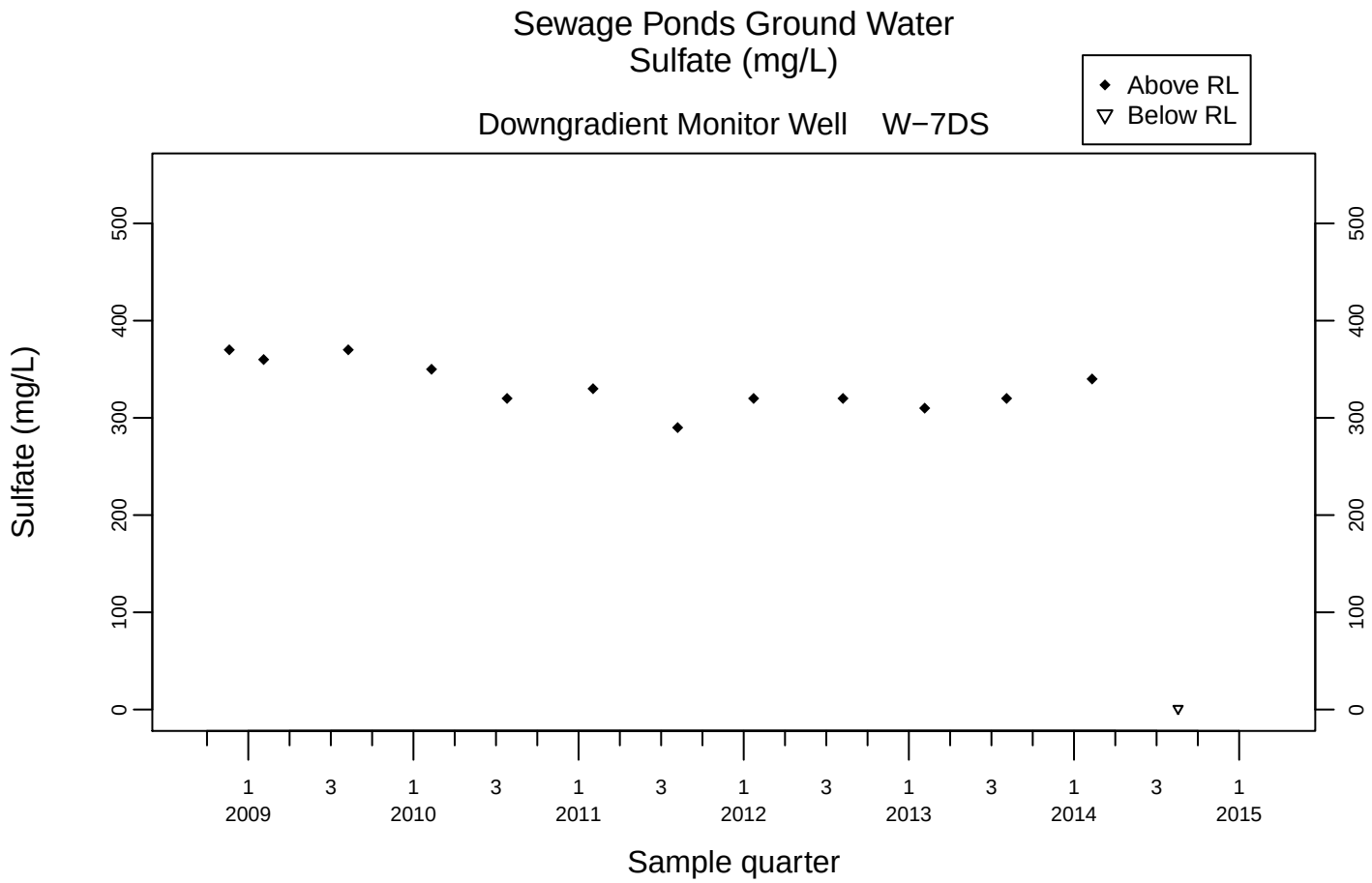

Downgradient Monitor Well W−25N−23
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

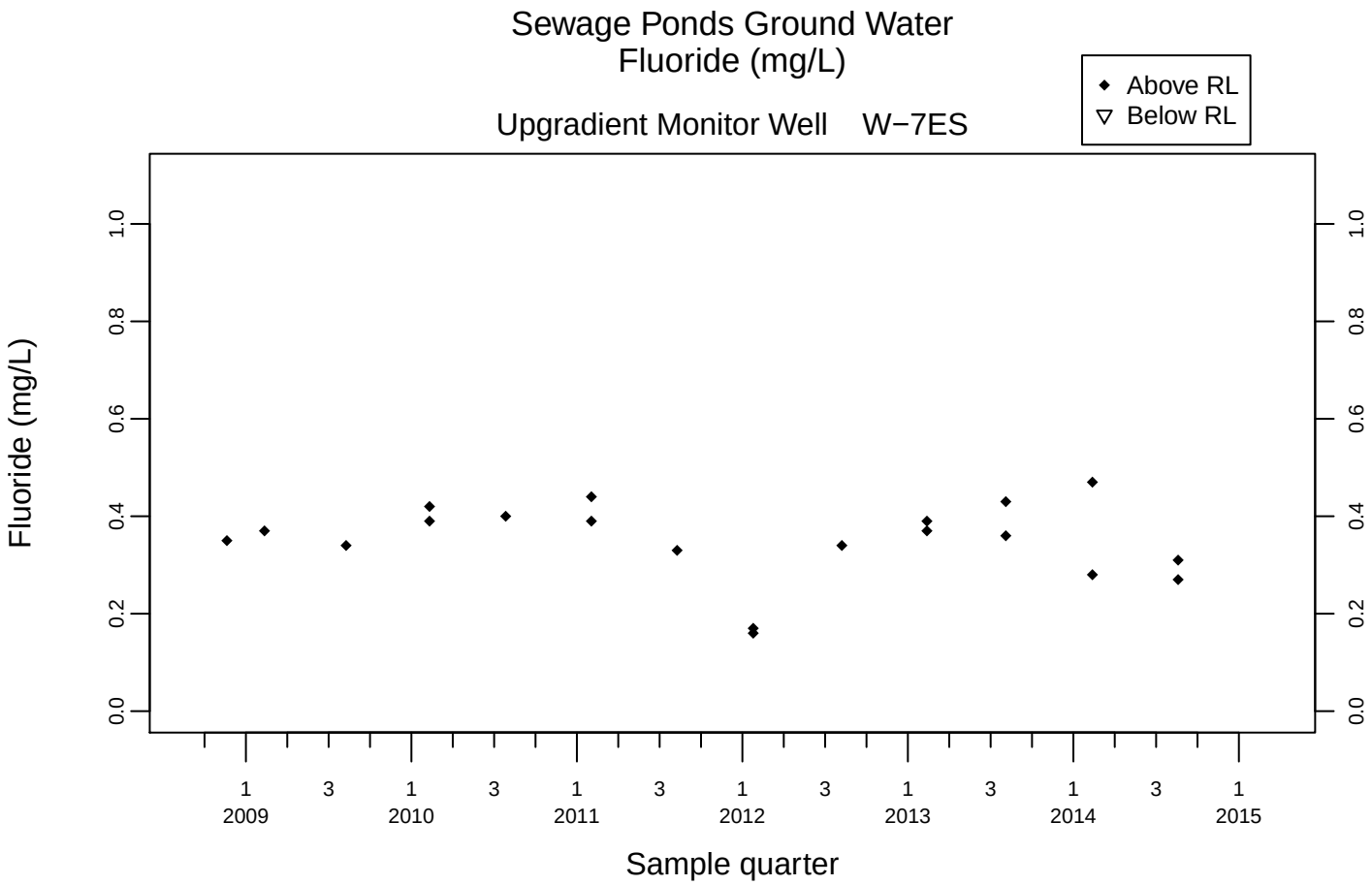

Sewage Ponds Ground Water
Sulfate (mg/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

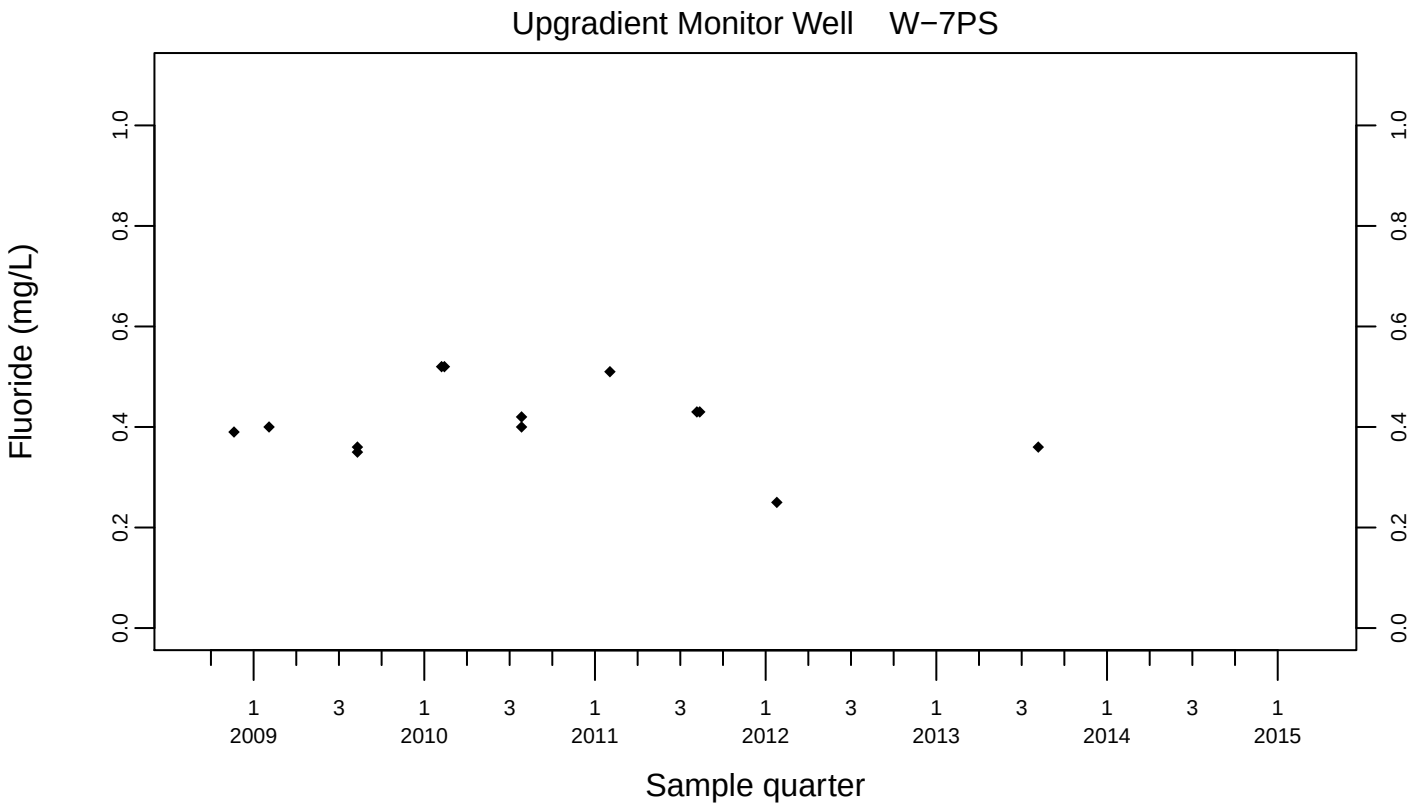

Downgradient Monitor Well W−26R−01
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

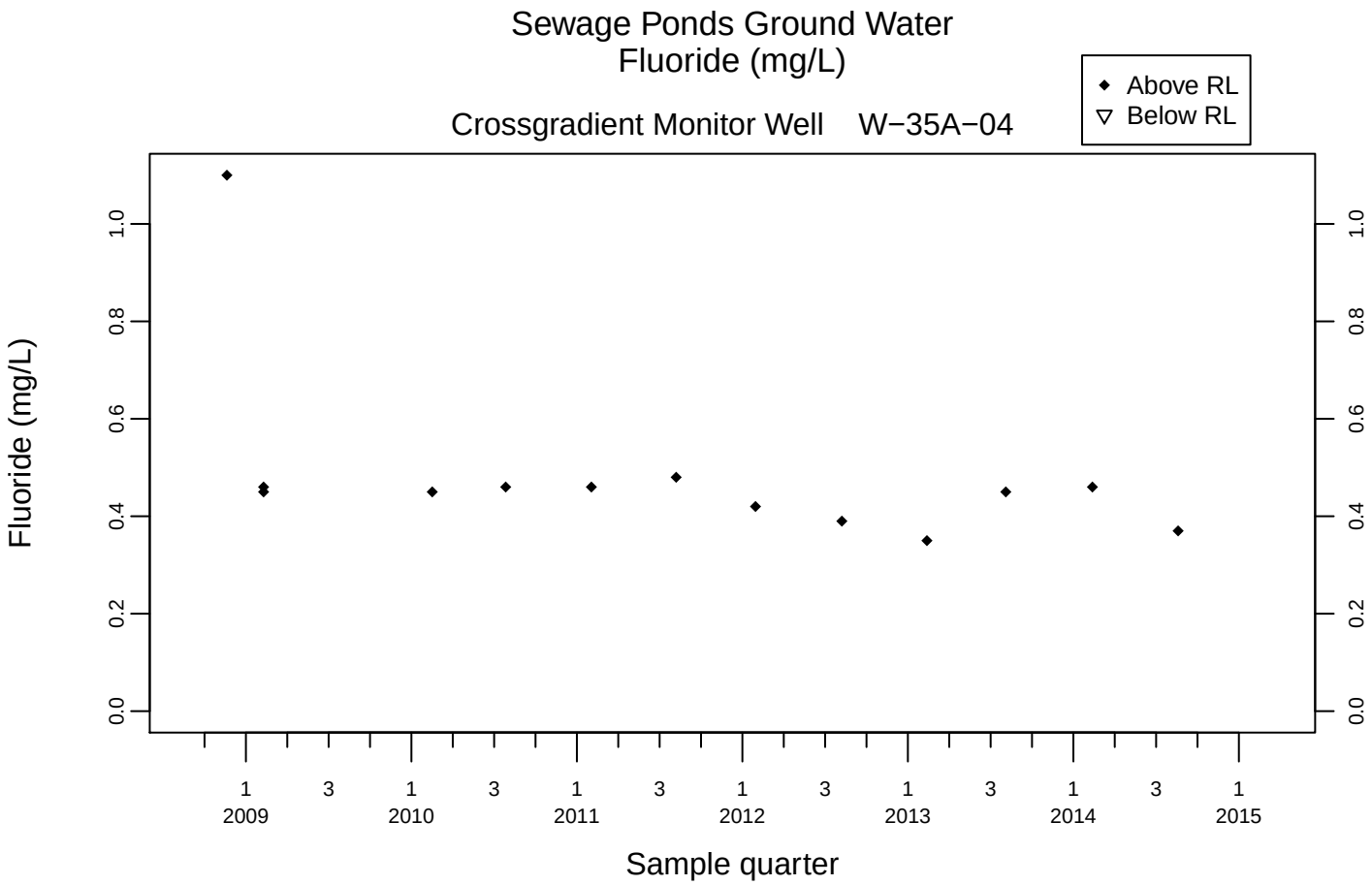

Sewage Ponds Ground Water
Sulfate (mg/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

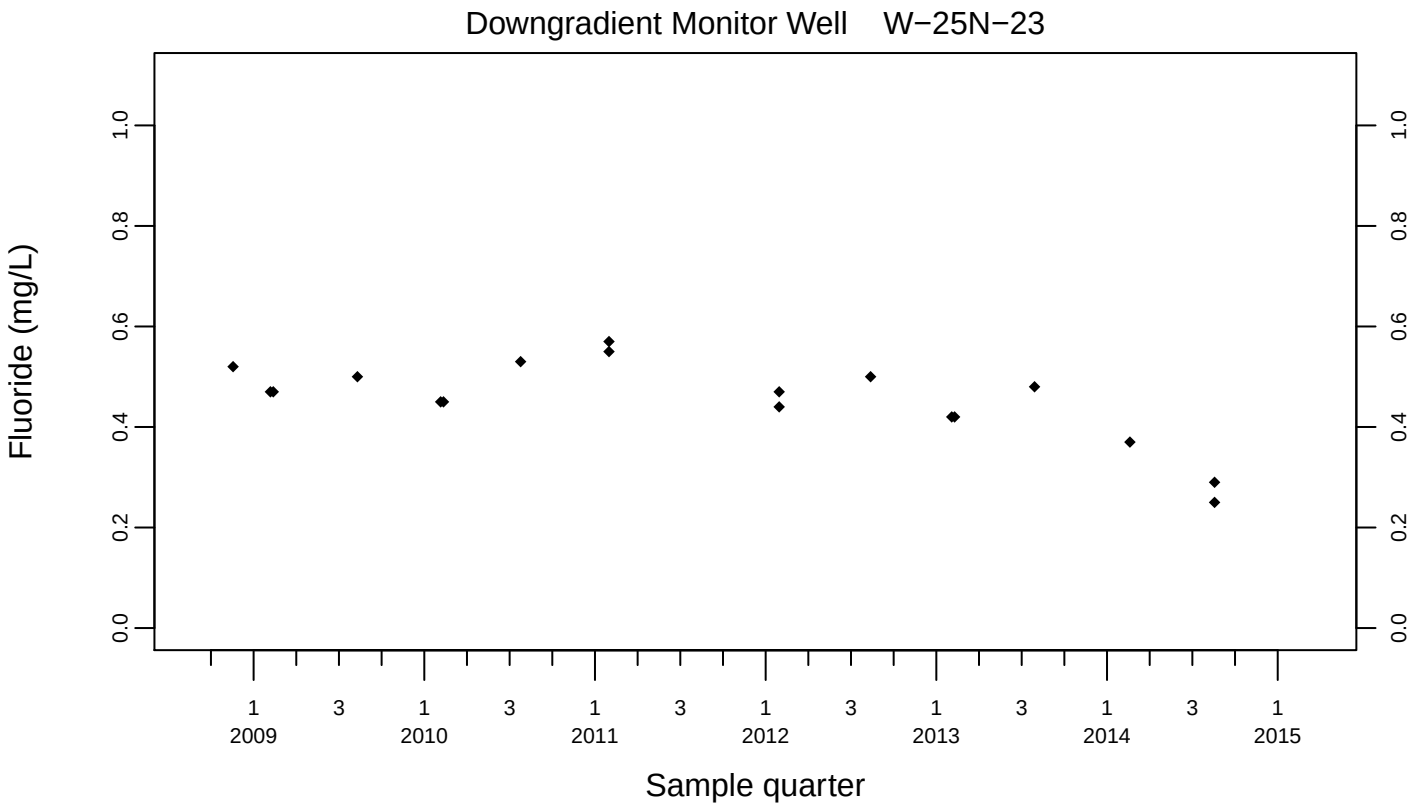

Downgradient Monitor Well W−26R−11
Sulfate (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

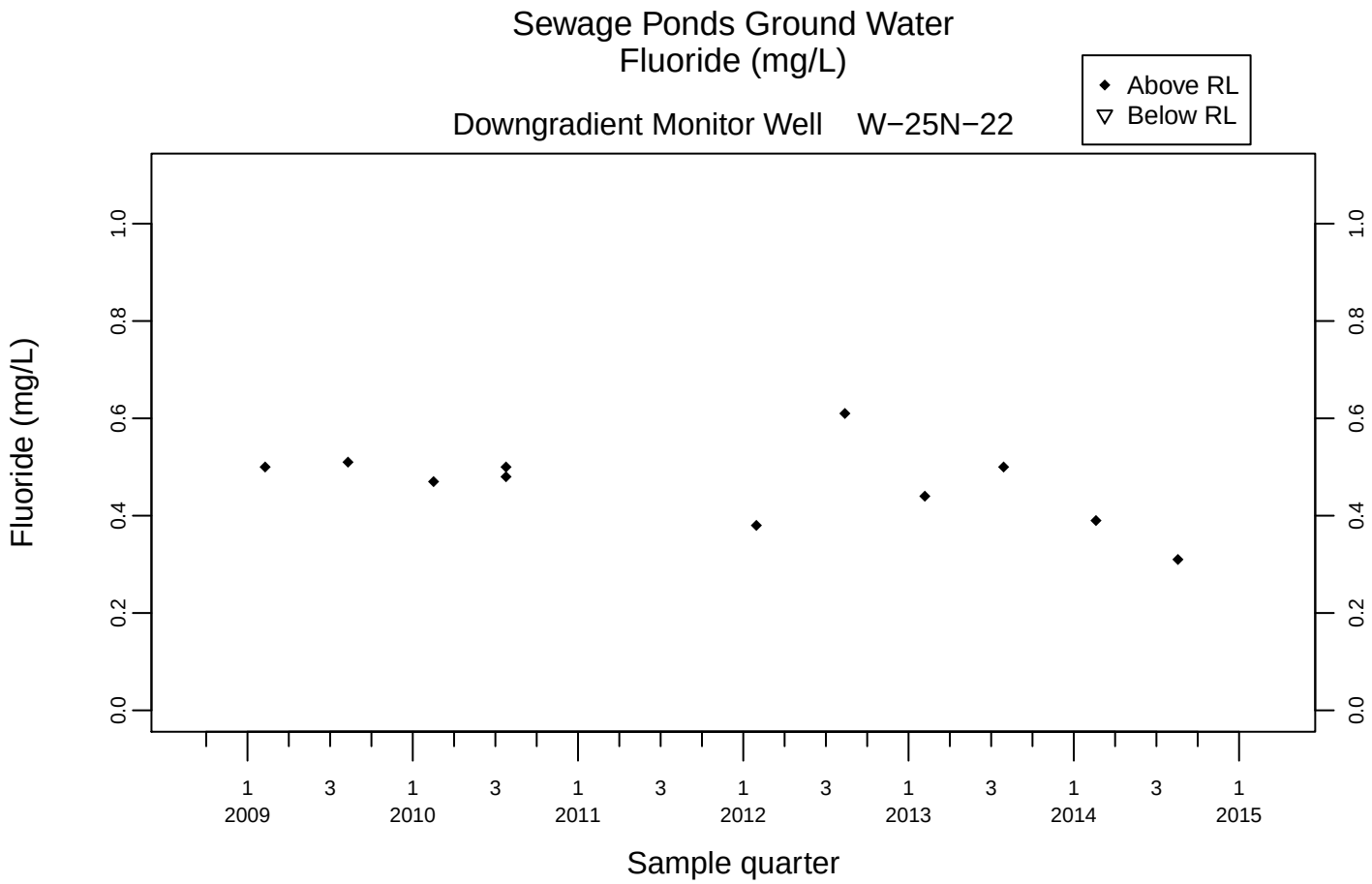

Sewage Ponds Ground Water
Sulfate (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

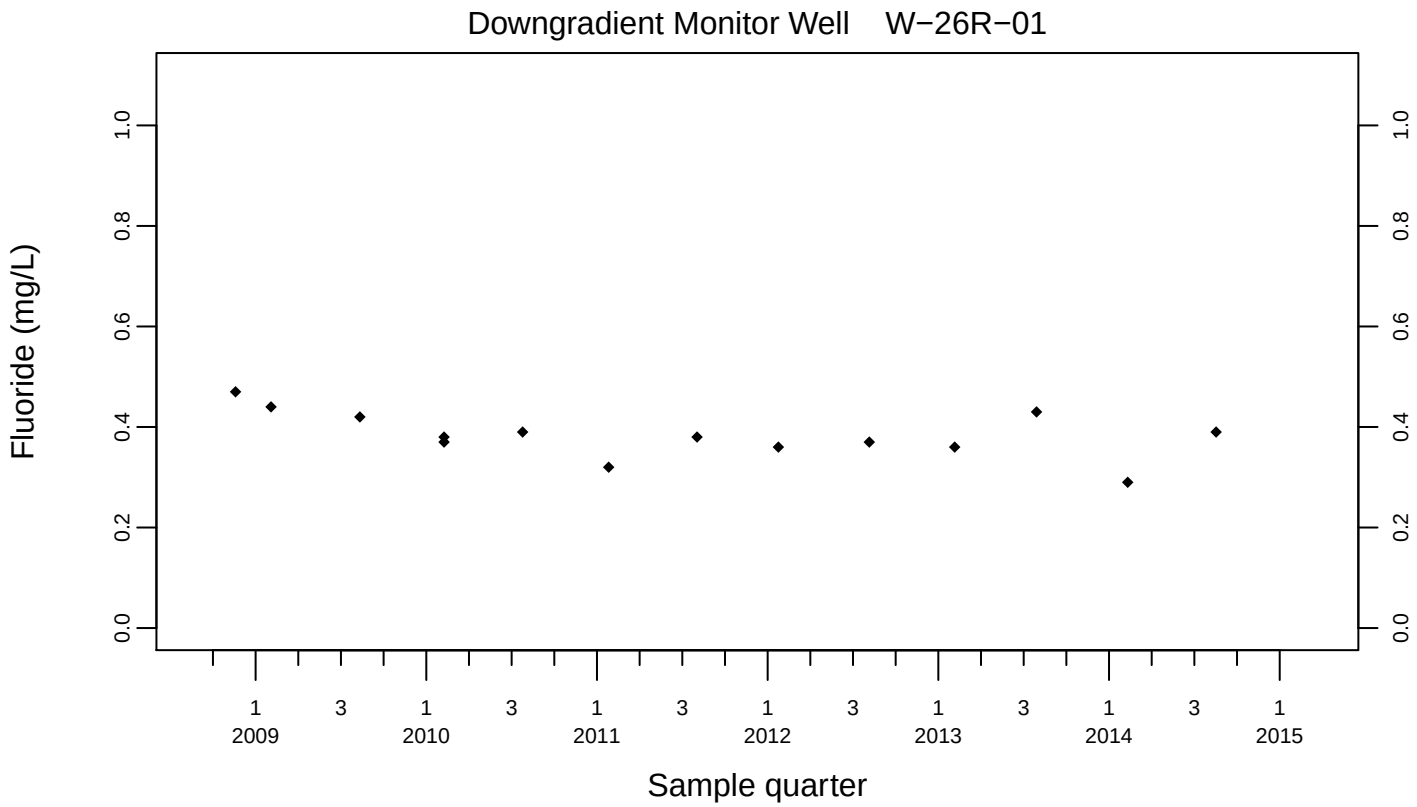

Sewage Ponds Ground Water
Fluoride (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

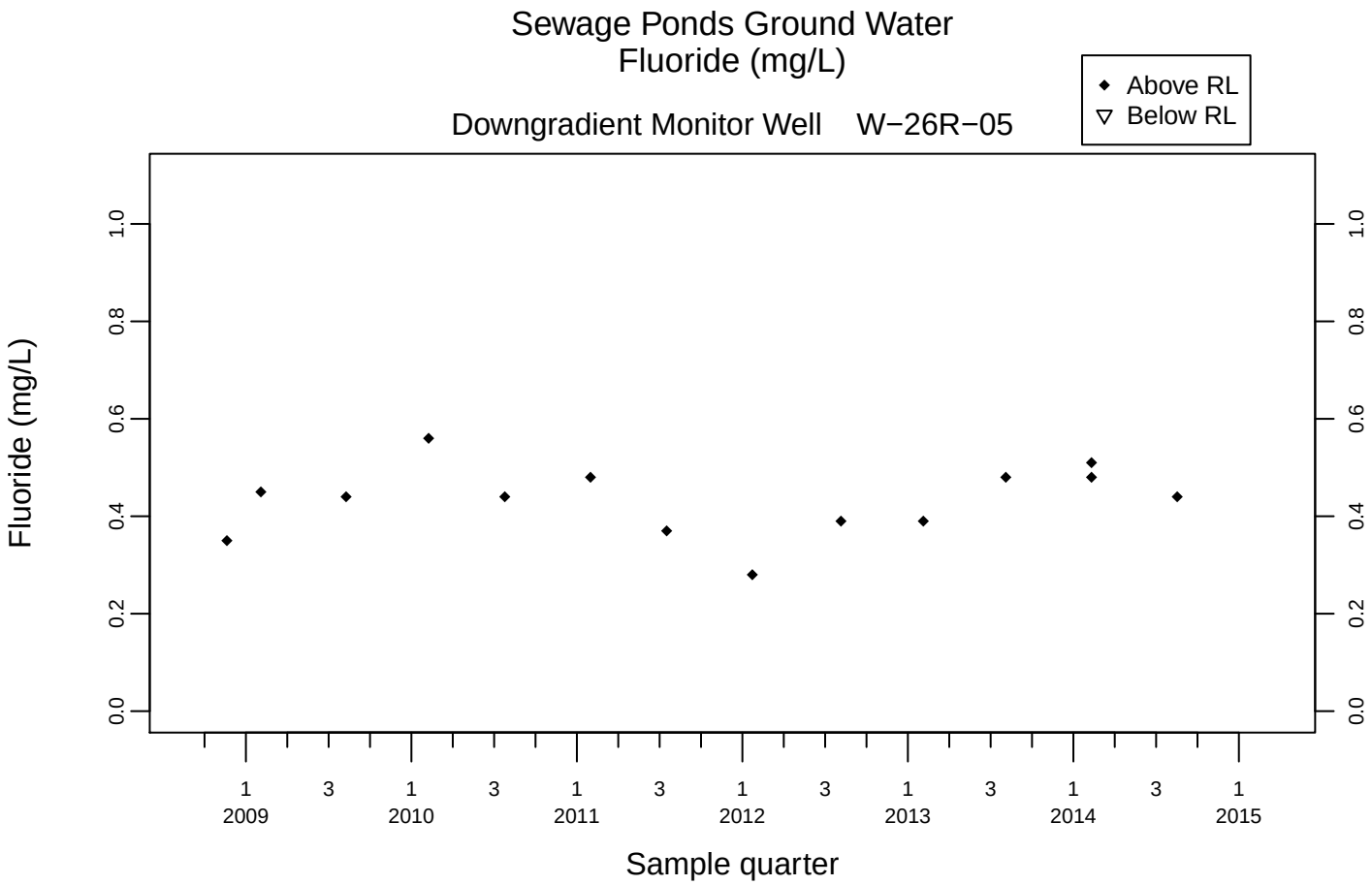

Upgradient Monitor Well W−7PS
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

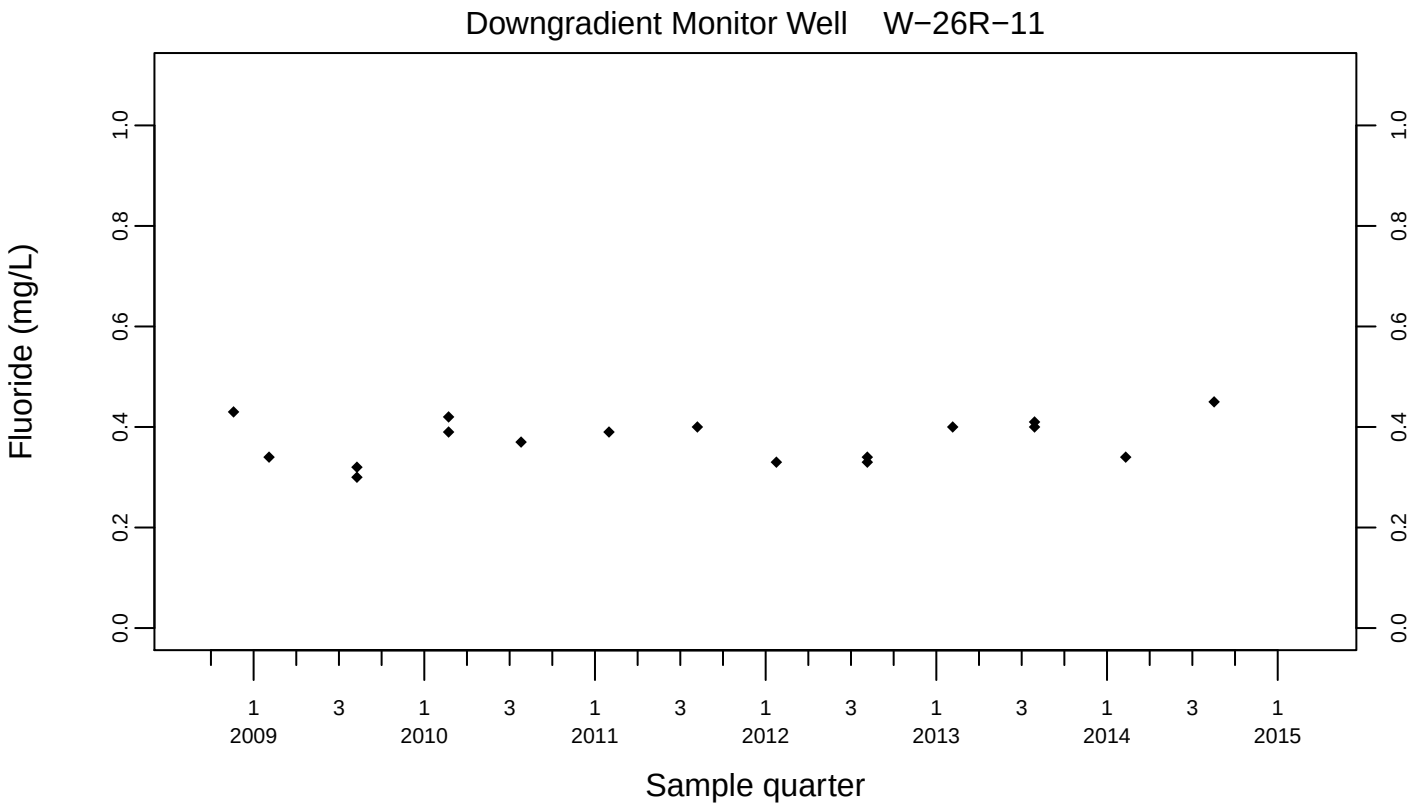

Sewage Ponds Ground Water
Fluoride (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

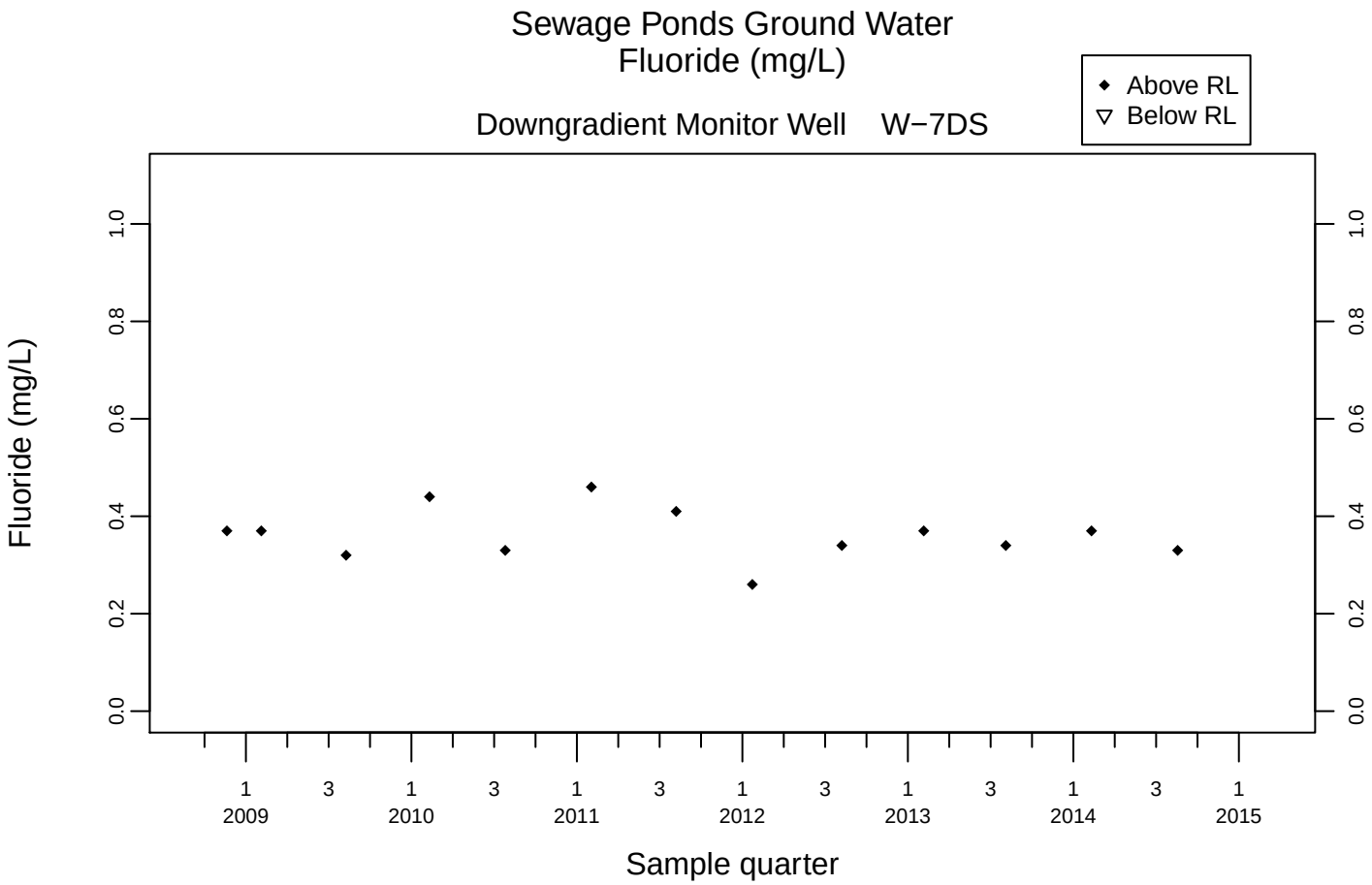

Downgradient Monitor Well W−25N−23
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

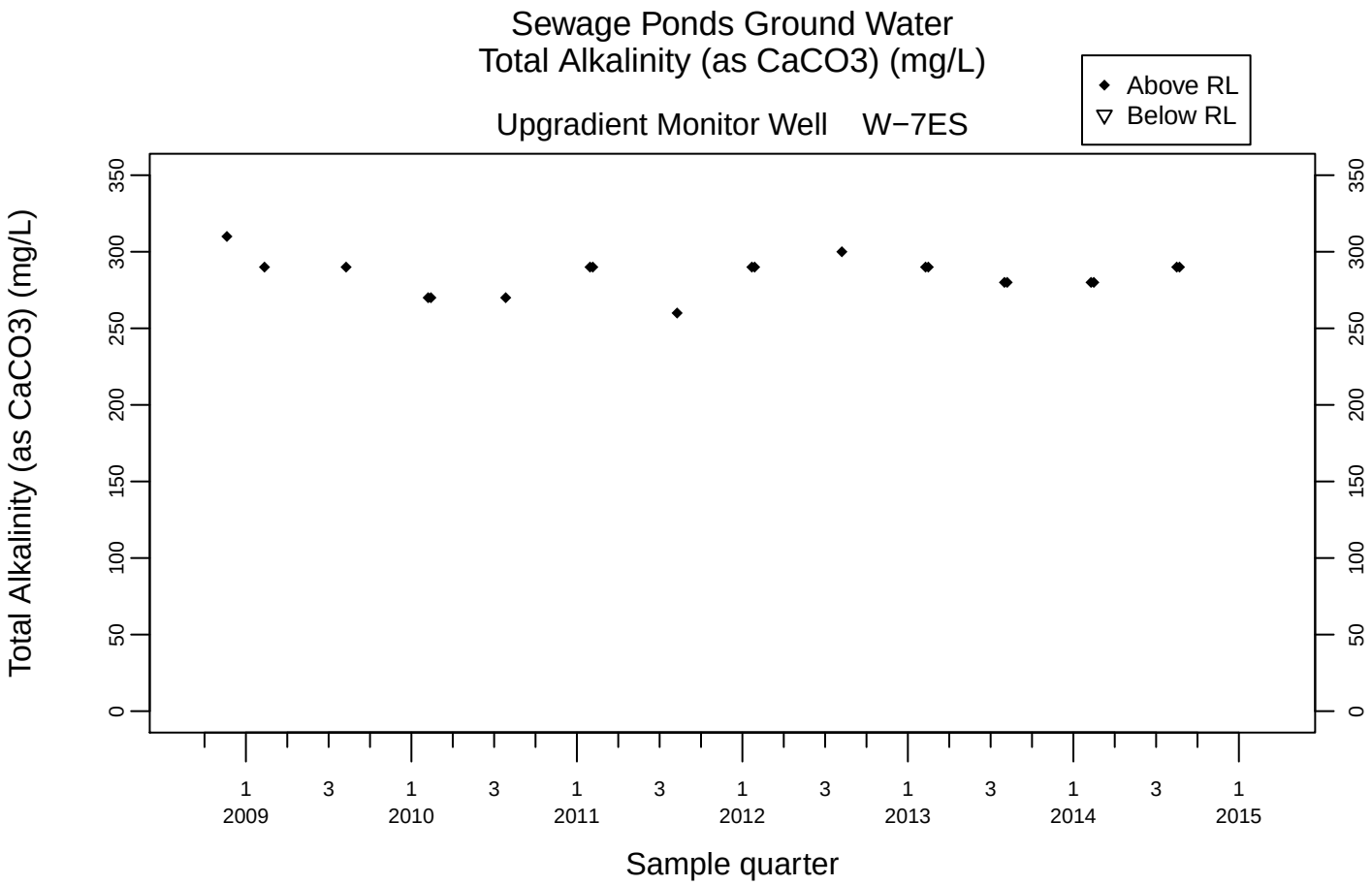

Sewage Ponds Ground Water
Fluoride (mg/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

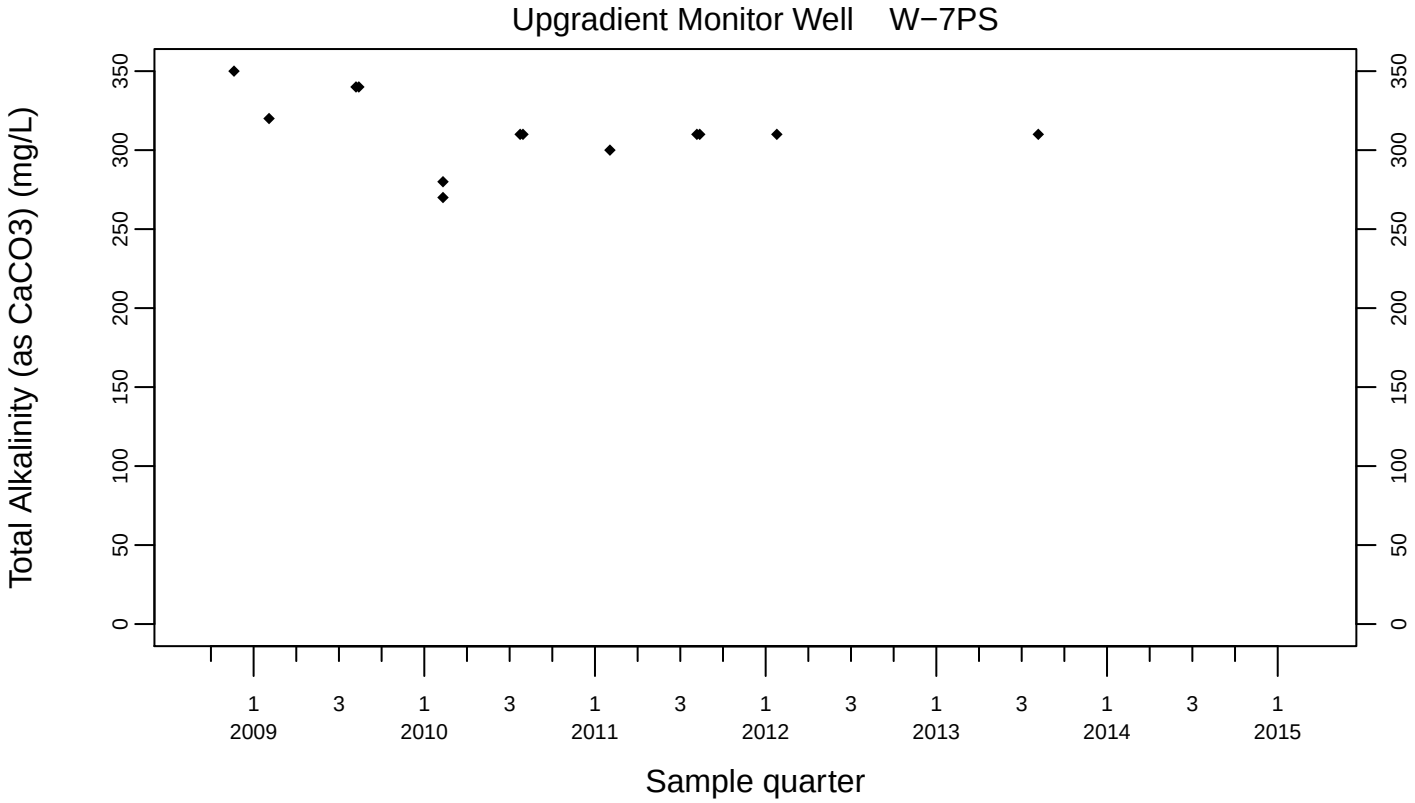

Downgradient Monitor Well W−26R−01
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

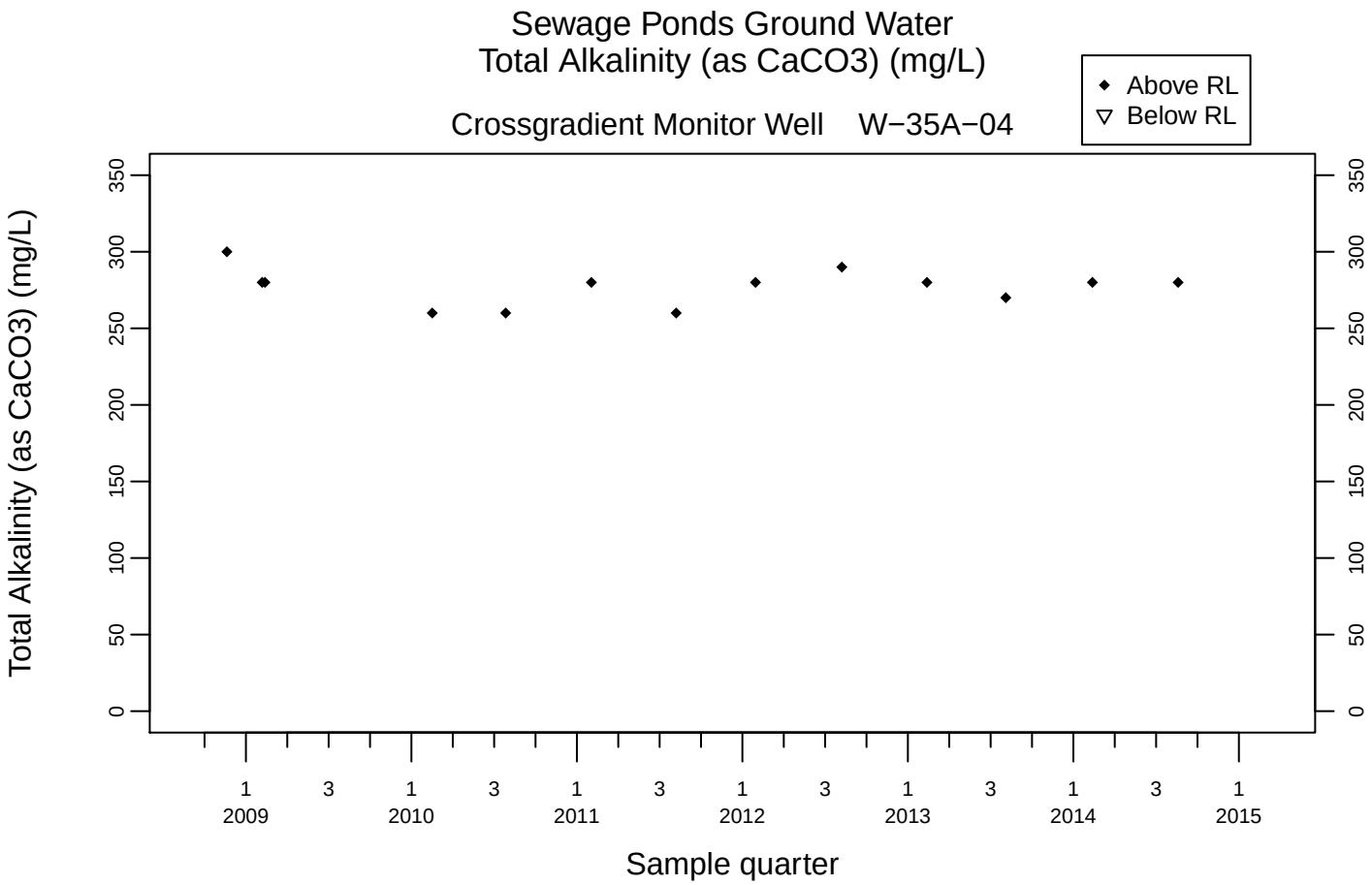

Sewage Ponds Ground Water
Fluoride (mg/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

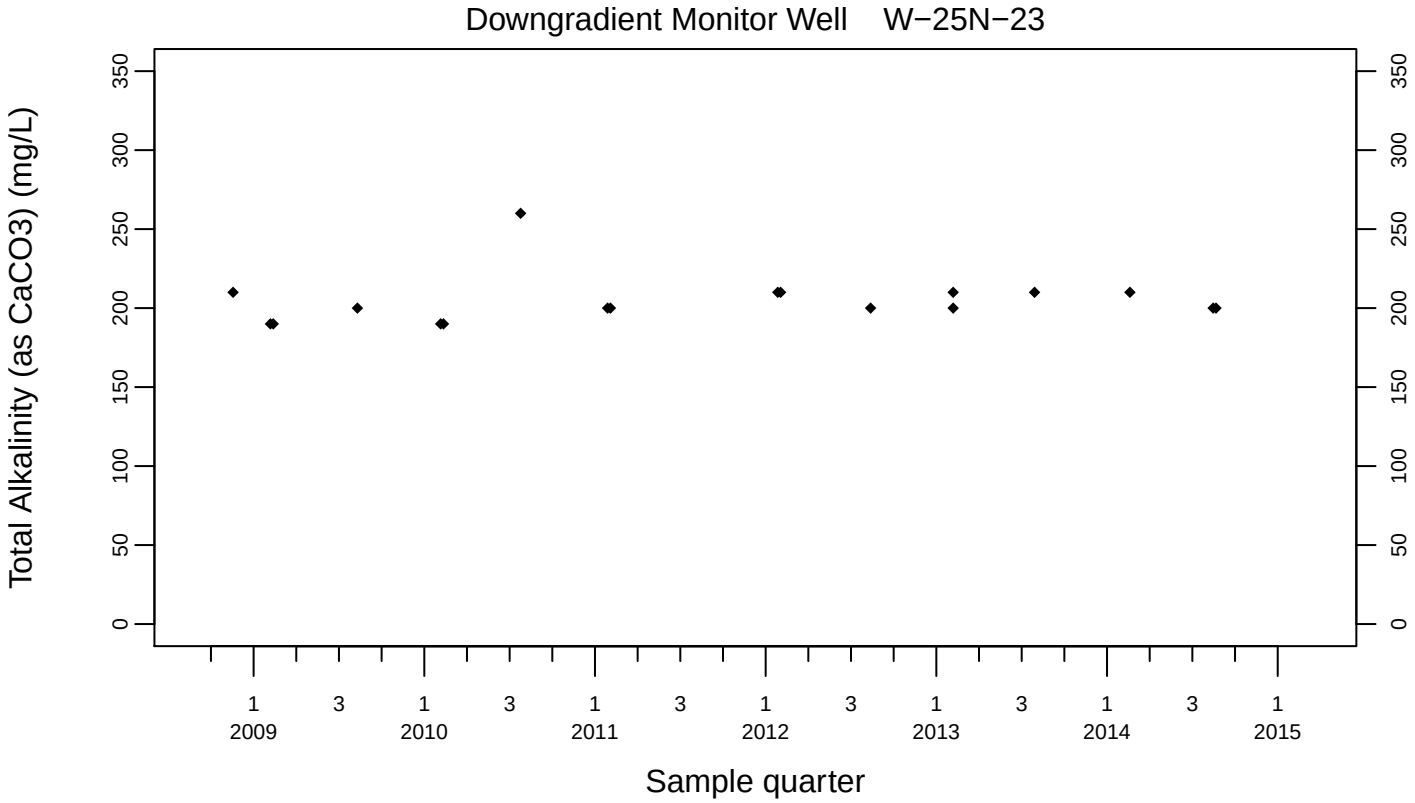

Downgradient Monitor Well W−26R−11
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

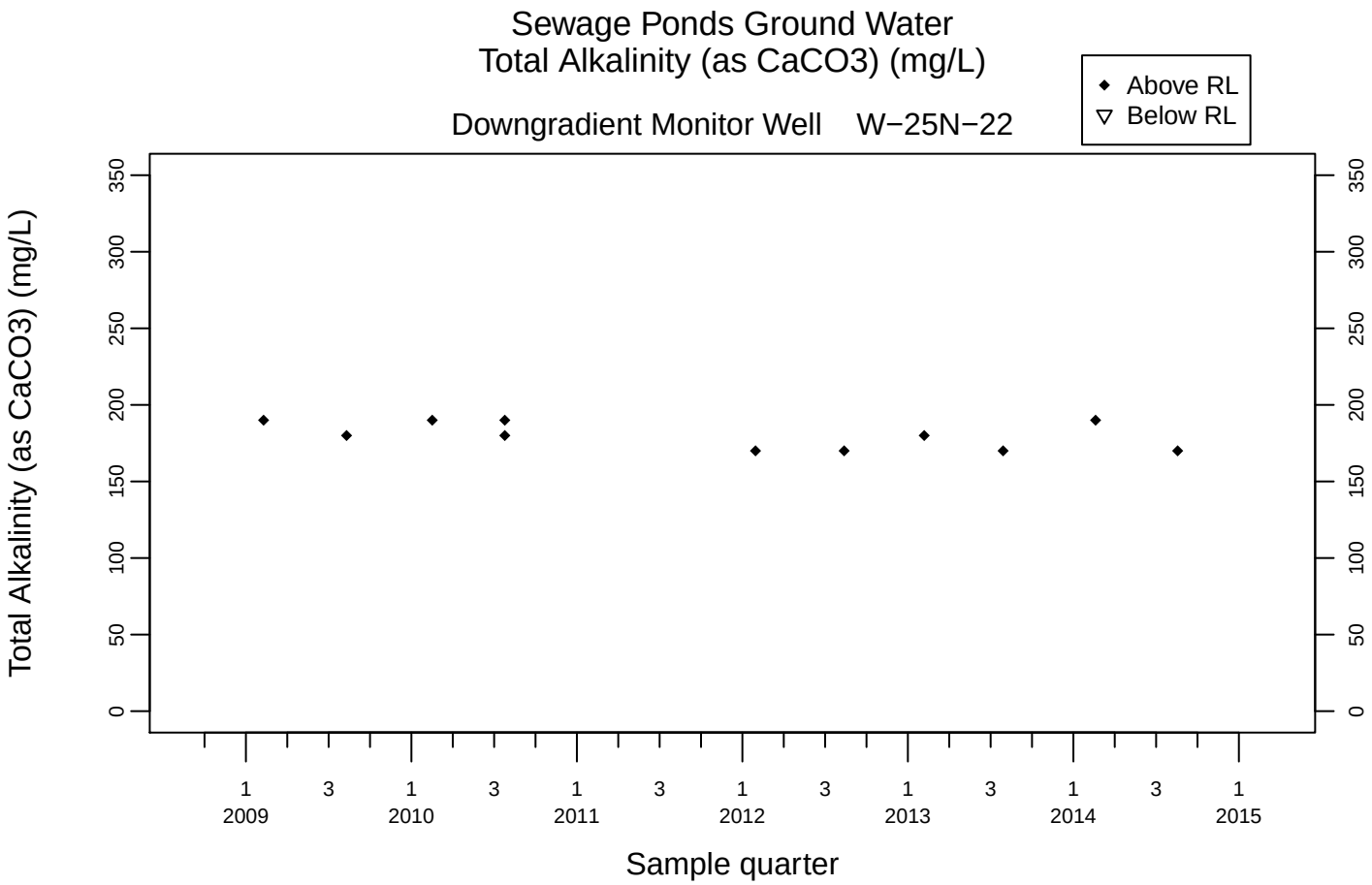

Sewage Ponds Ground Water
Fluoride (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Fluoride (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1
2009
3
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
Sample quarter

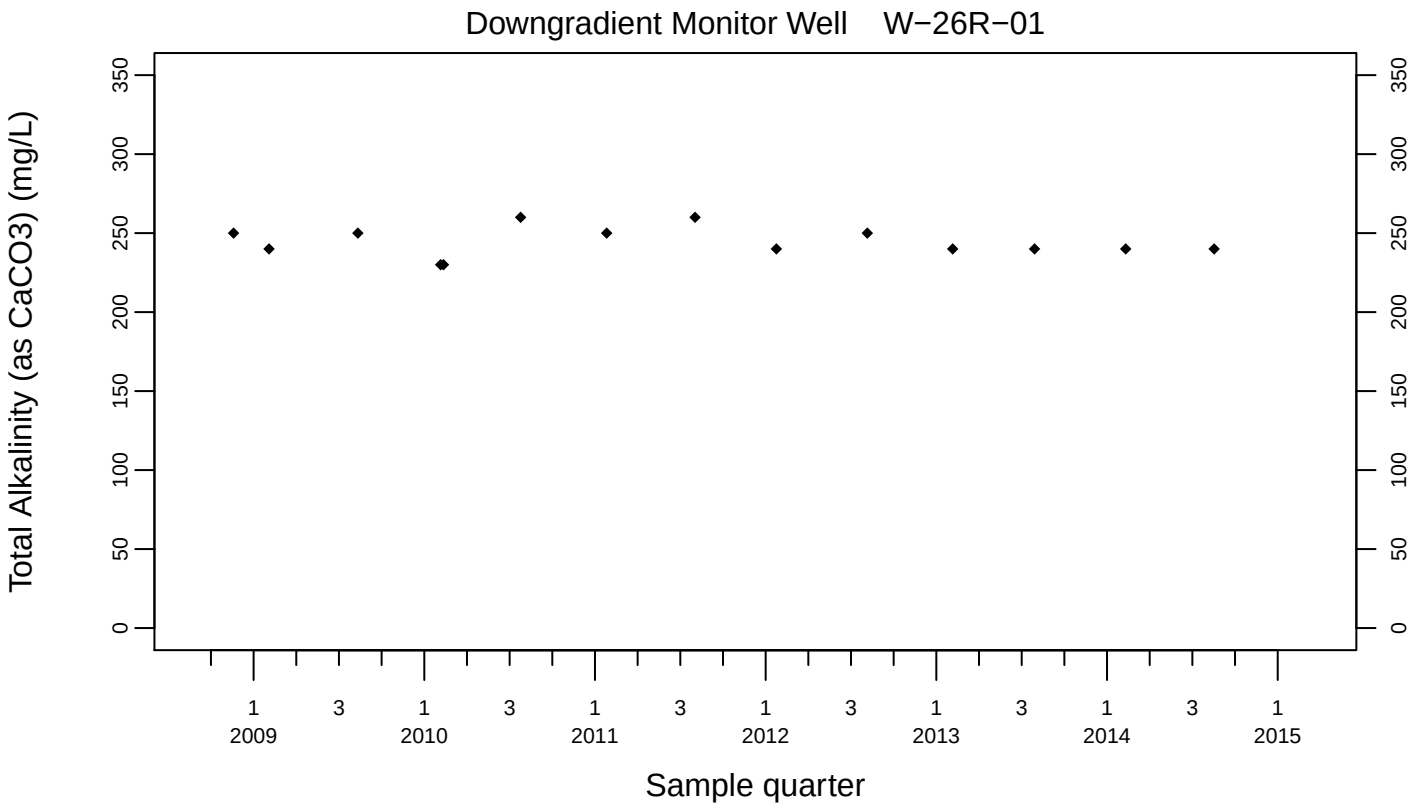

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

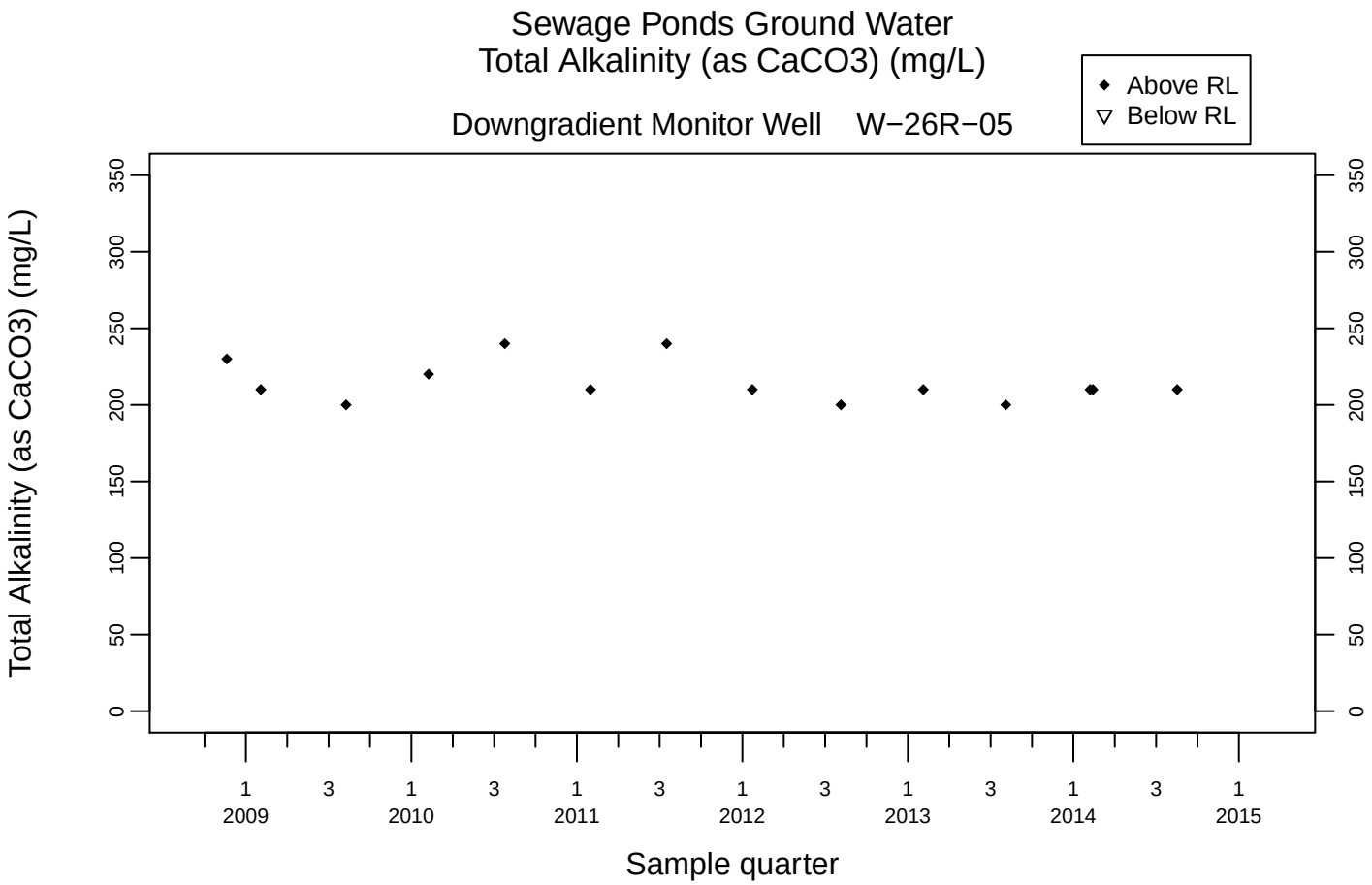

Upgradient Monitor Well W−7PS
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

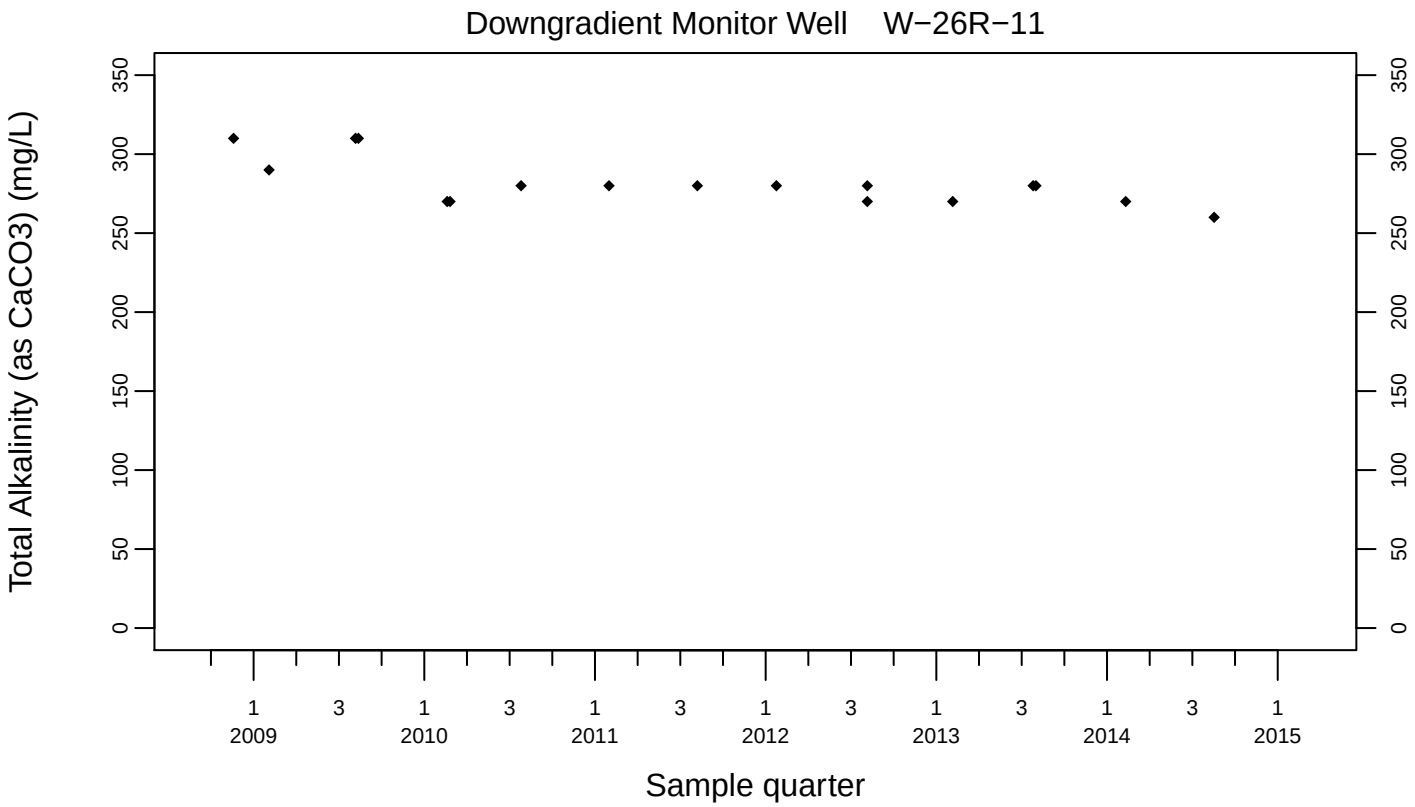

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

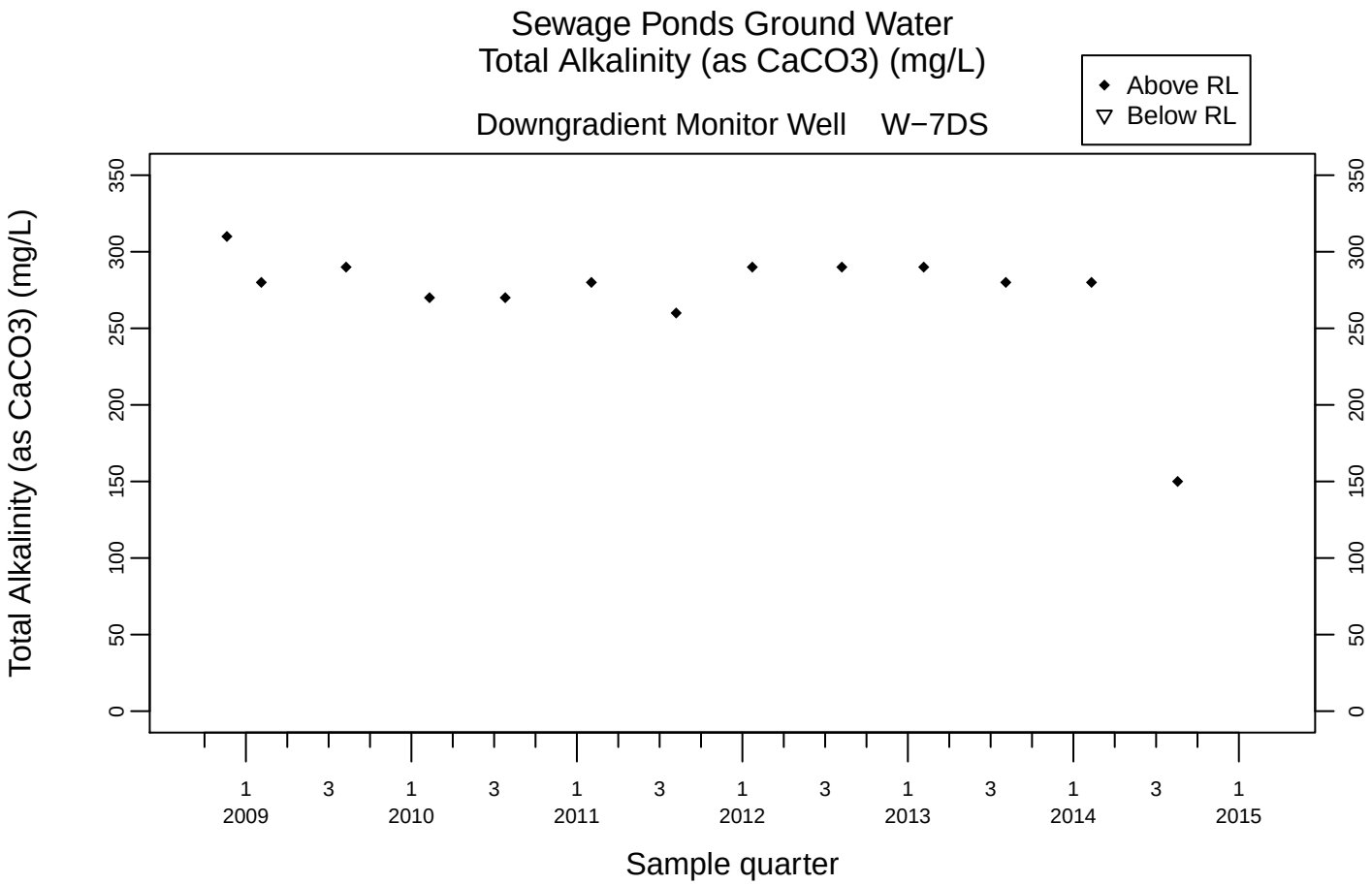

Downgradient Monitor Well W−25N−23
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

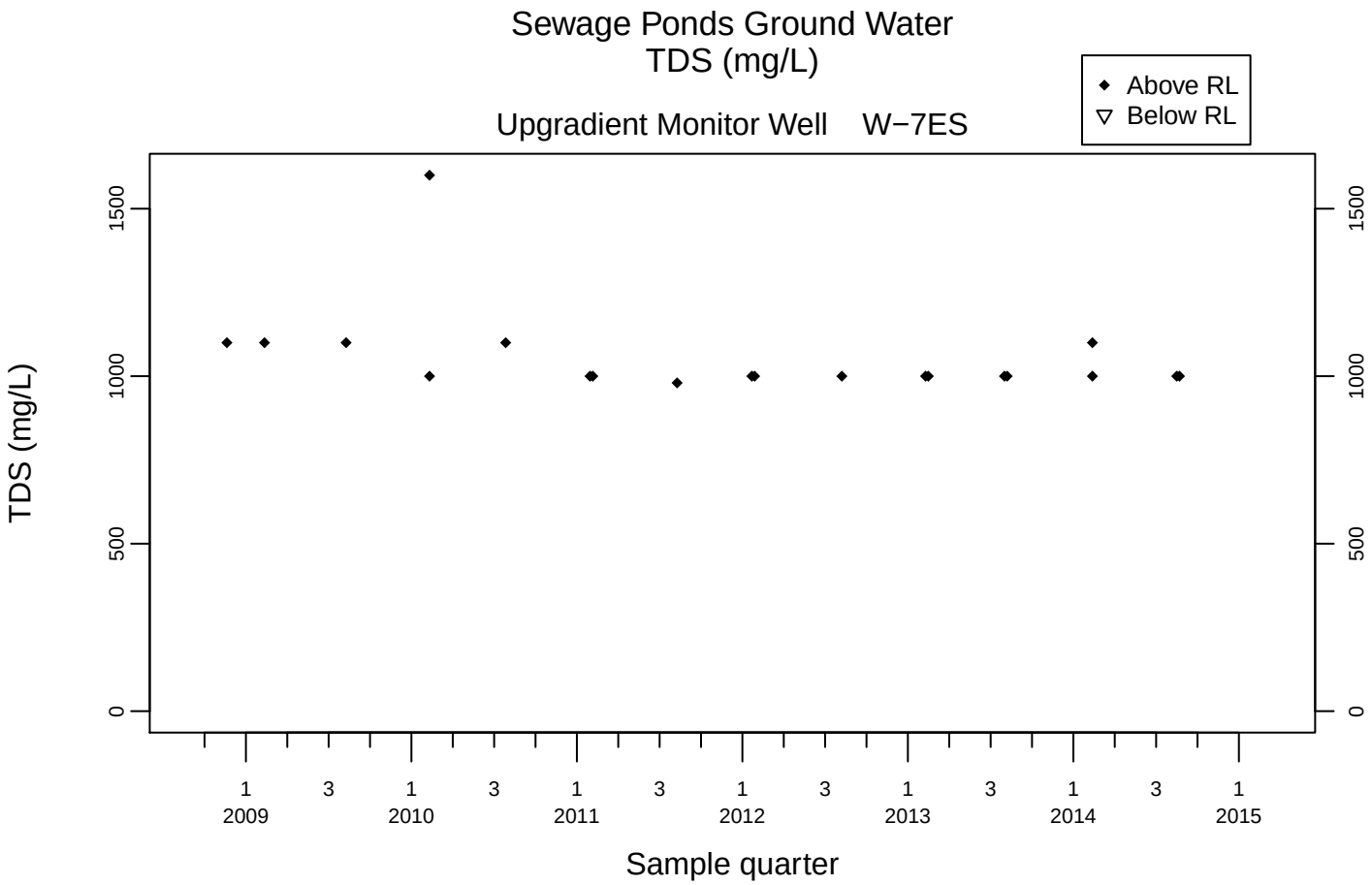

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

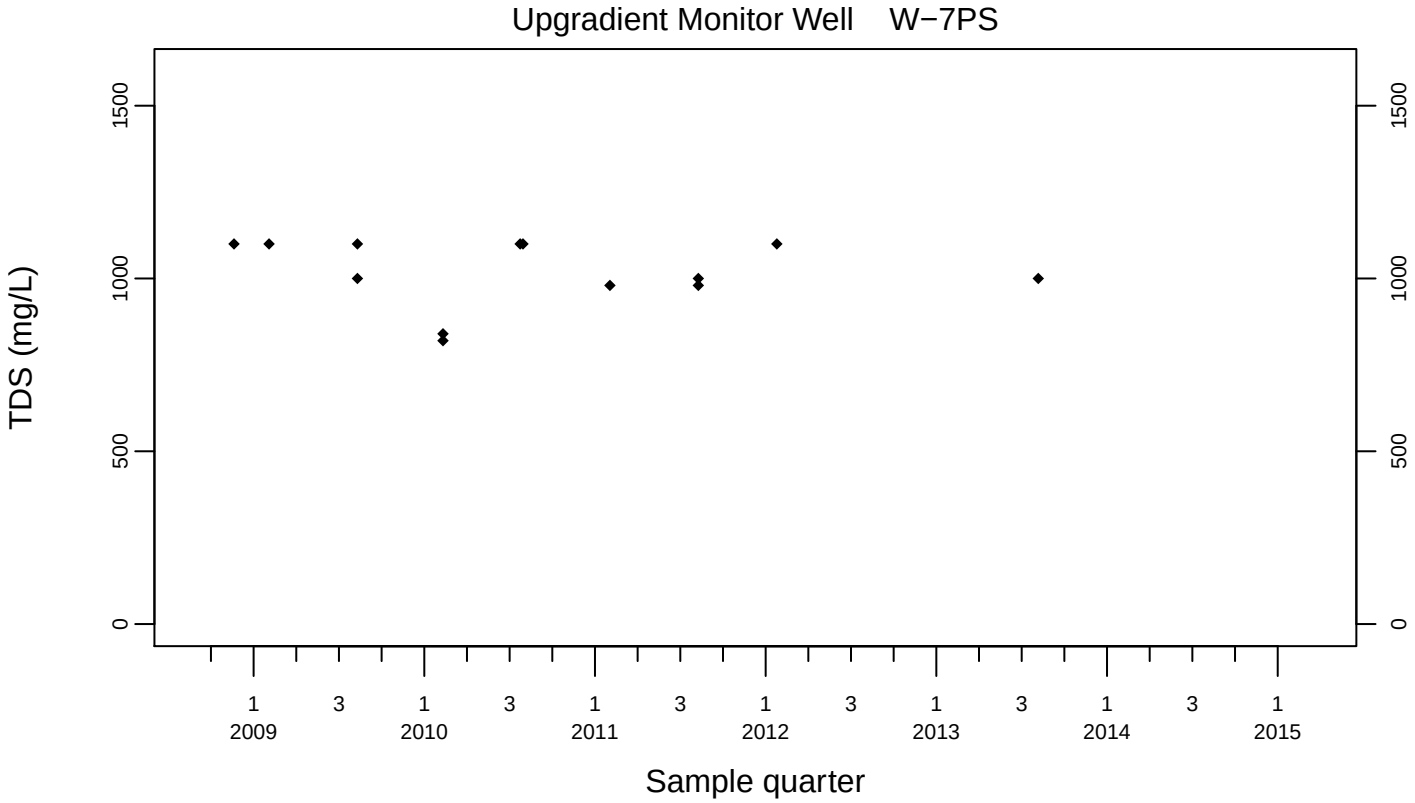

Downgradient Monitor Well W−26R−01
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

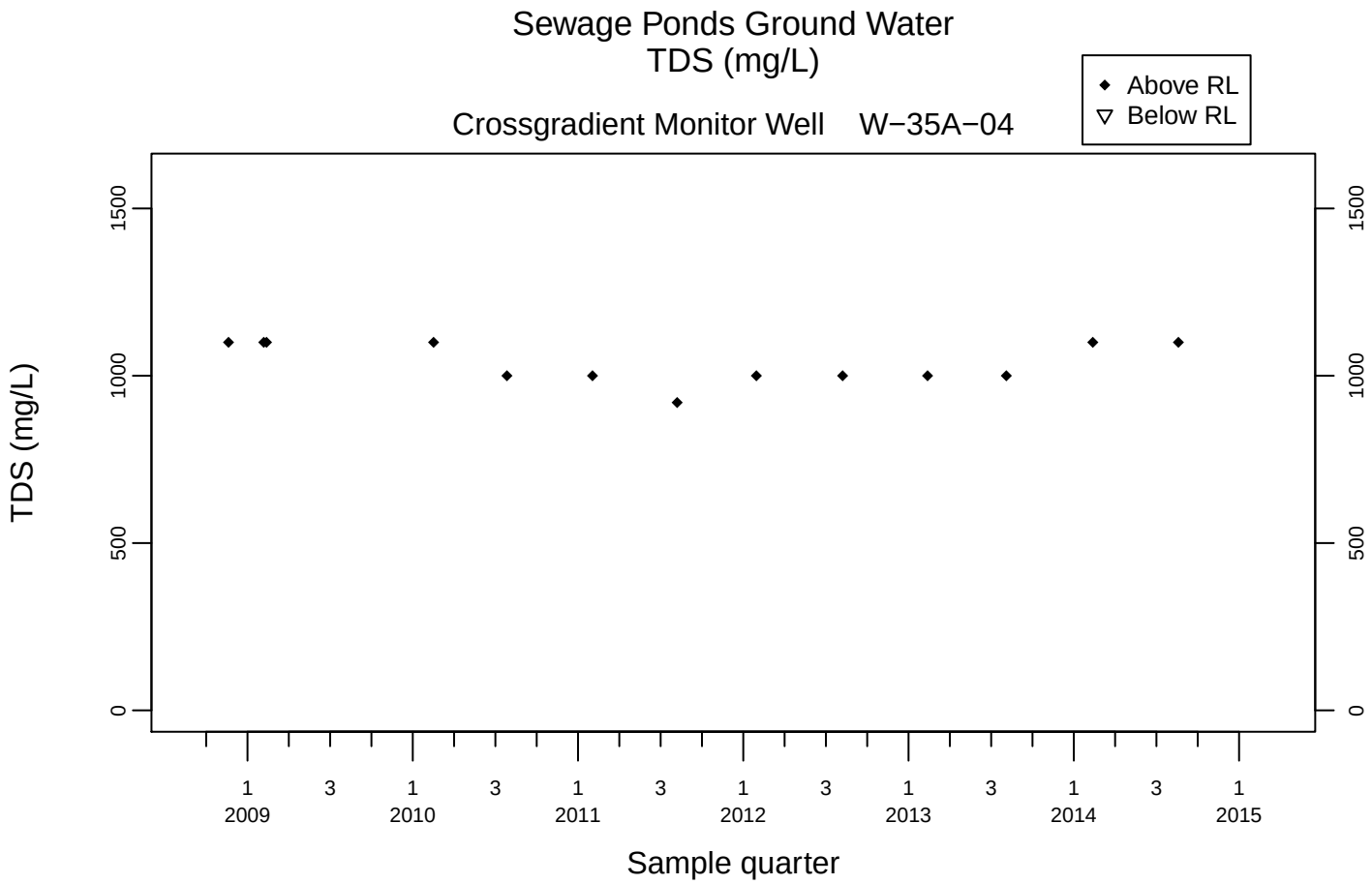

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

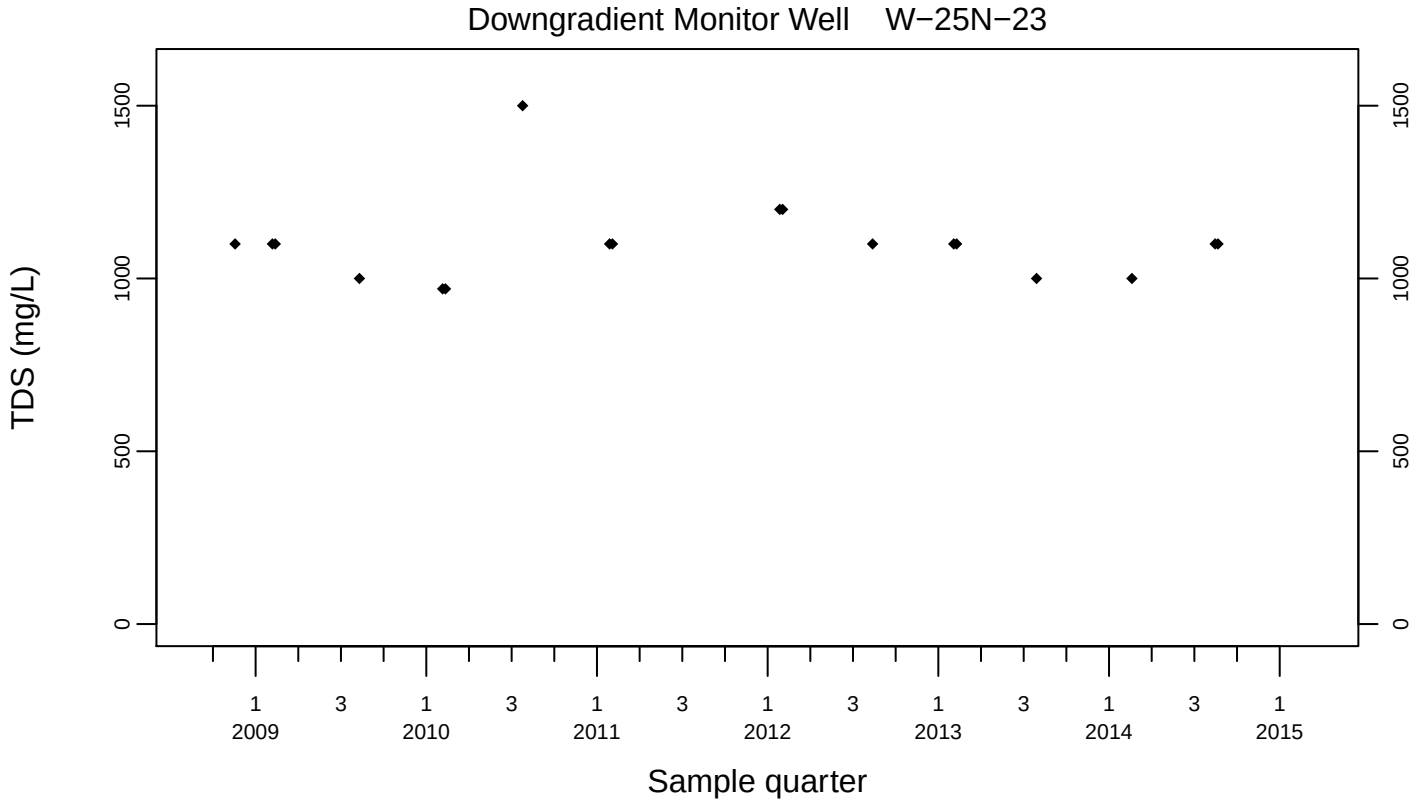

Downgradient Monitor Well W−26R−11
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

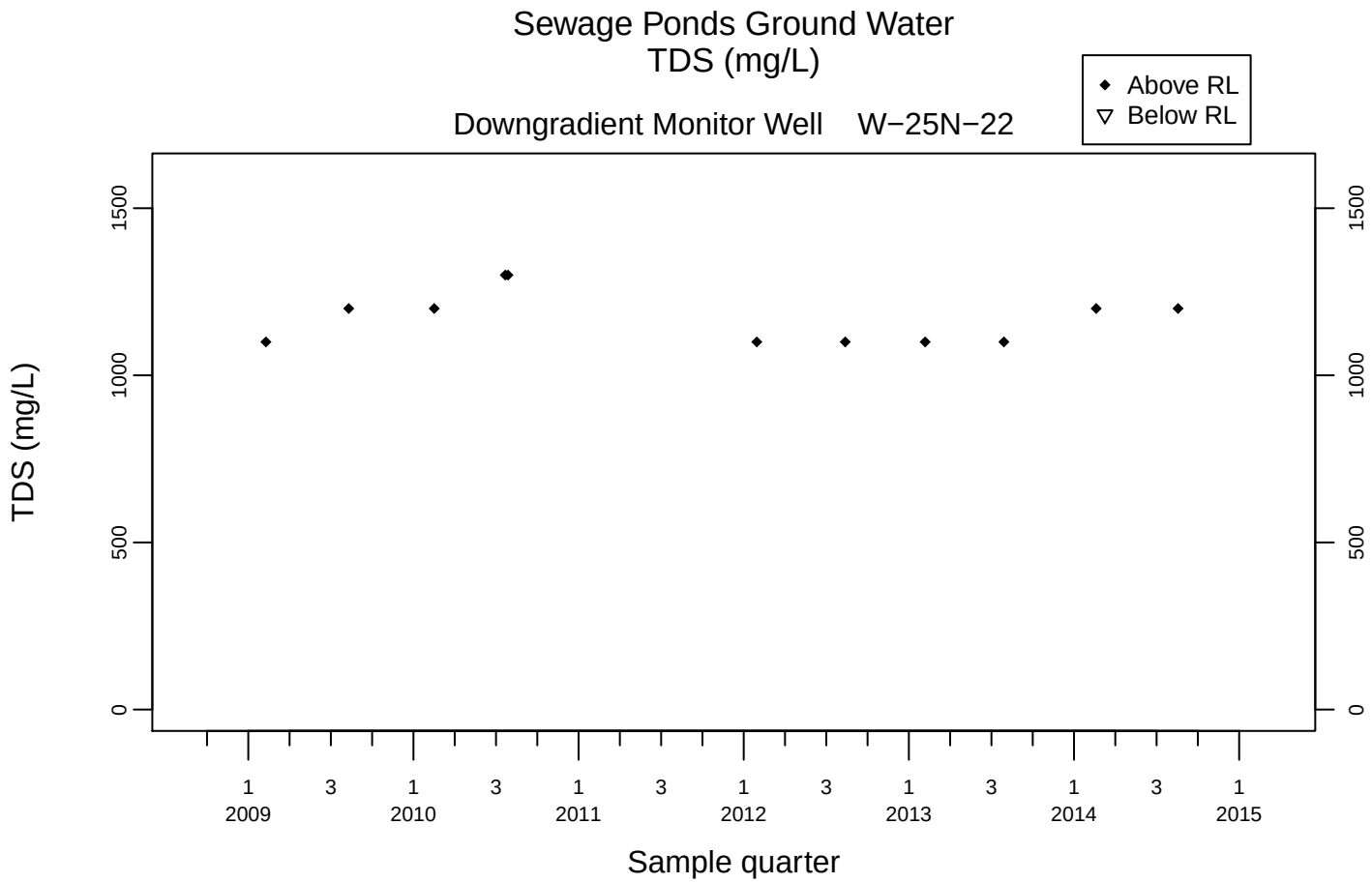

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1
3
2009
2010
2011
2012
2013
2014
2015
Sample quarter

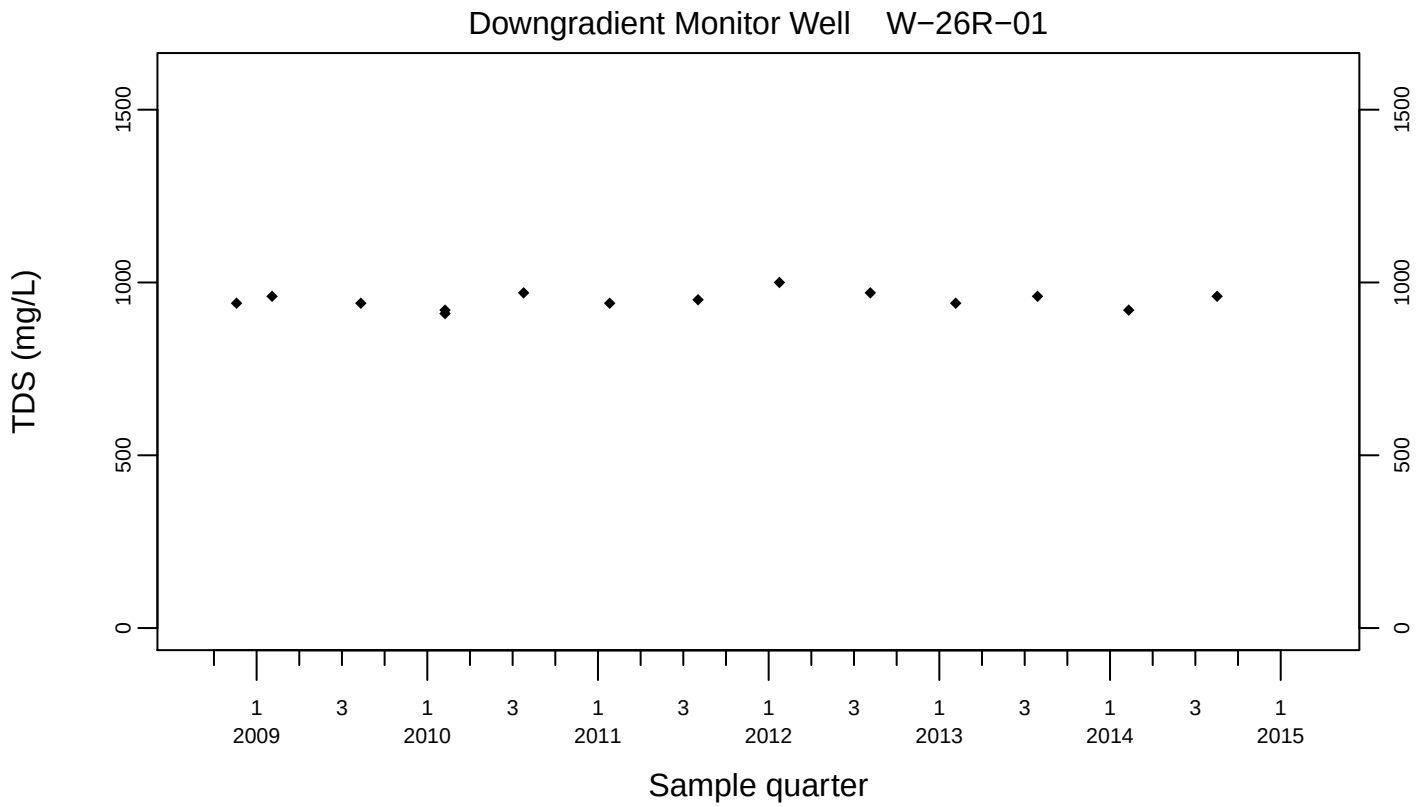

Sewage Ponds Ground Water
TDS (mg/L)
Above RL
Below RL
Upgradient Monitor Well W−7ES
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

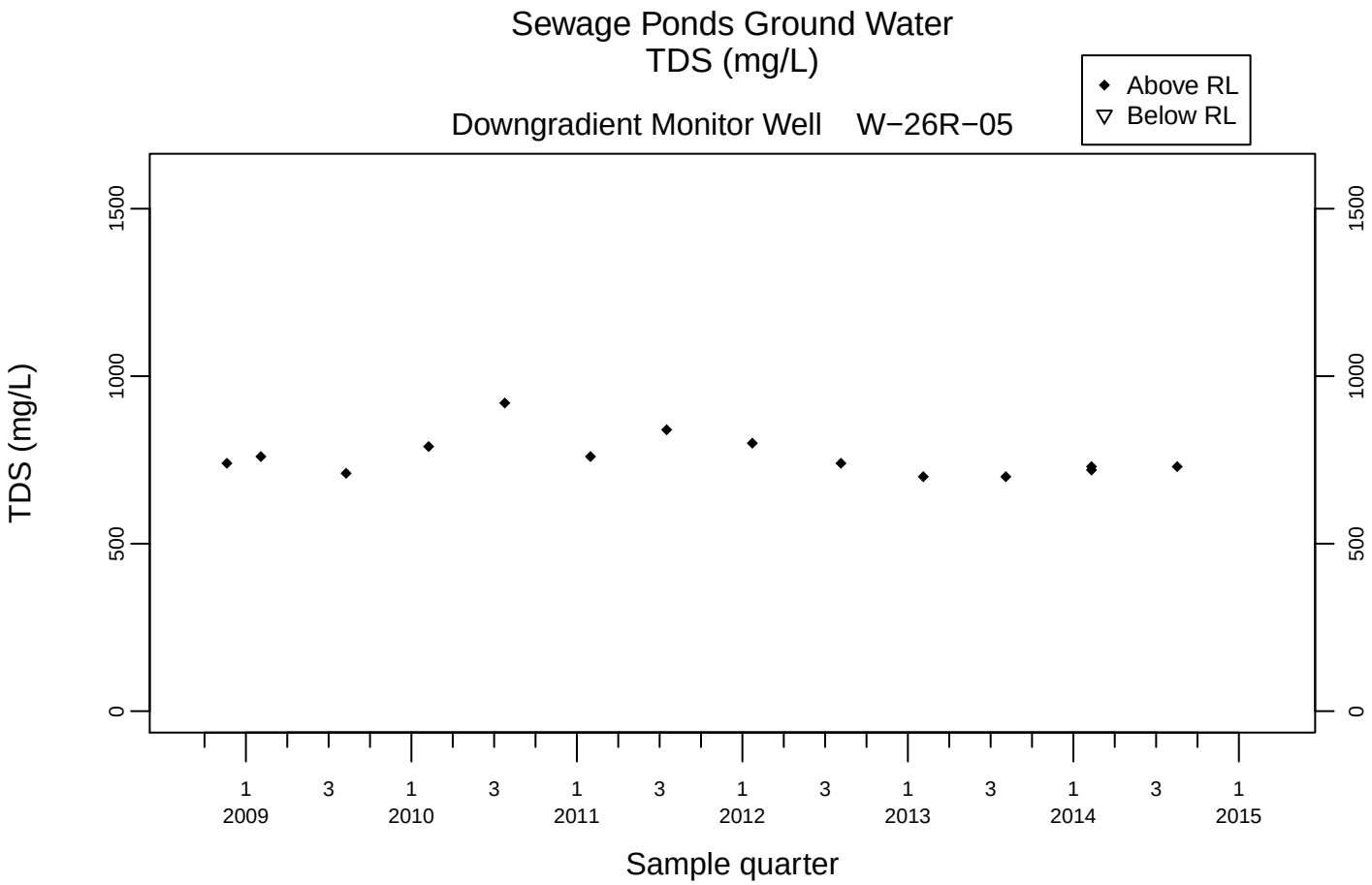

Upgradient Monitor Well W−7PS
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

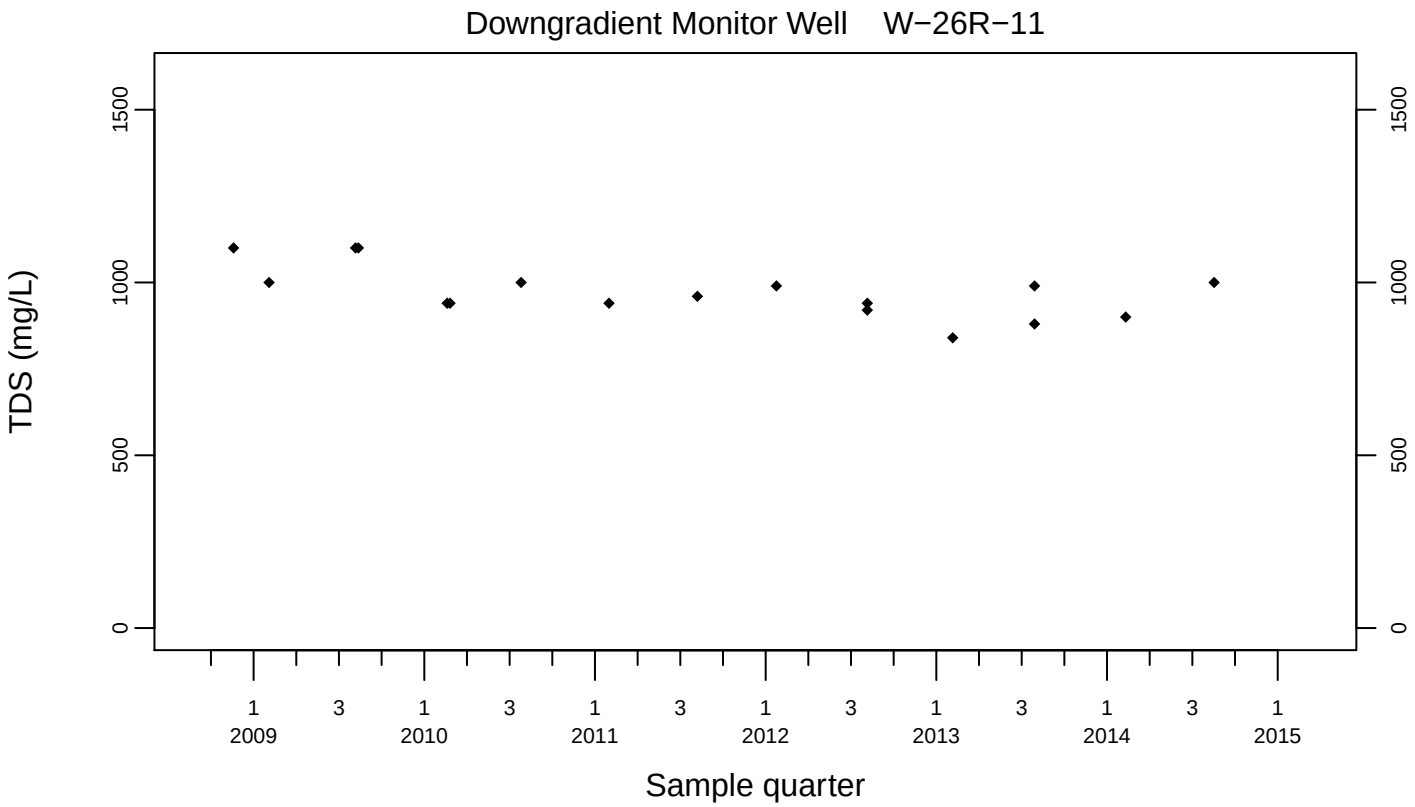

Sewage Ponds Ground Water
TDS (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

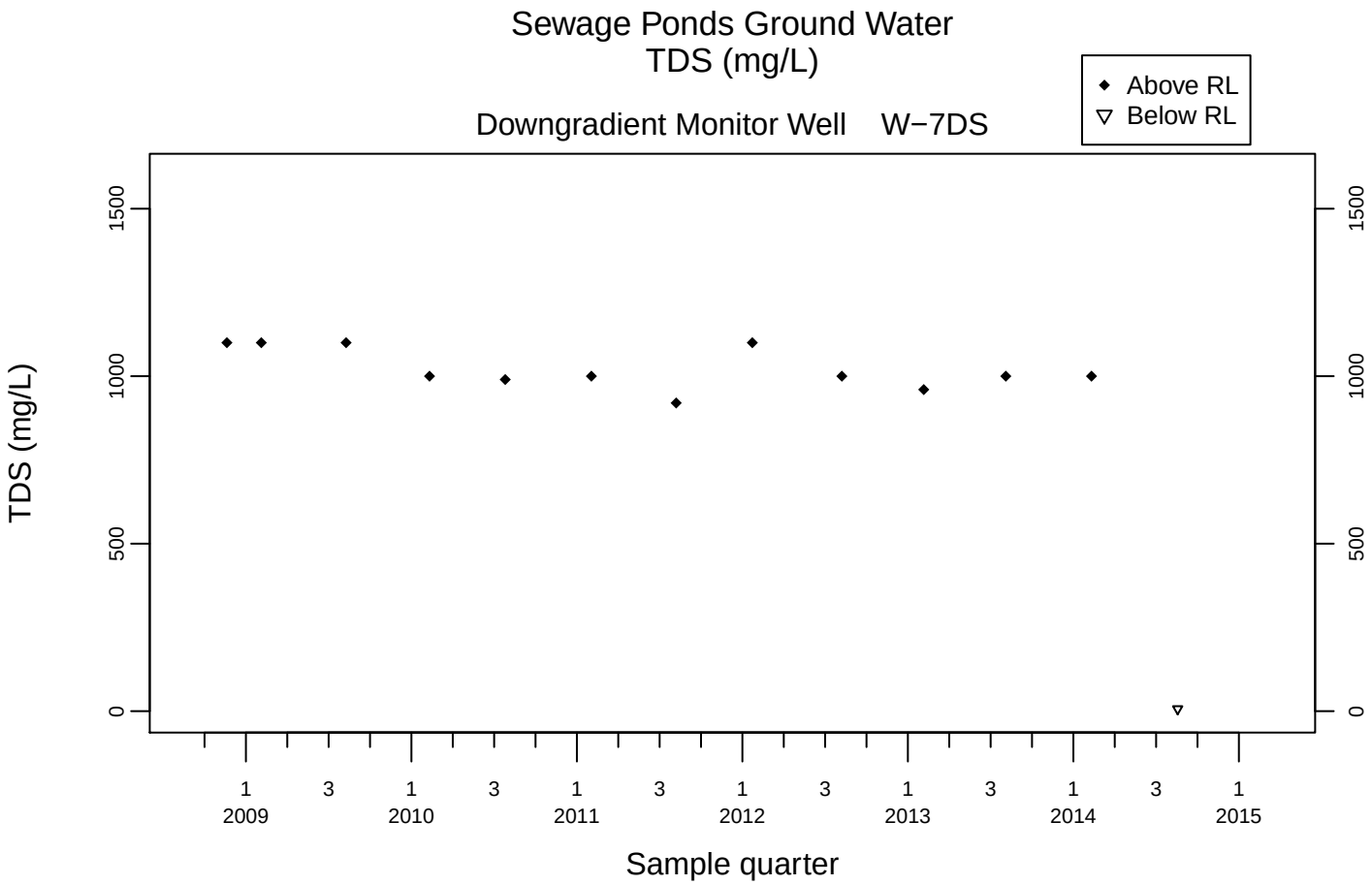

Downgradient Monitor Well W−25N−23
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

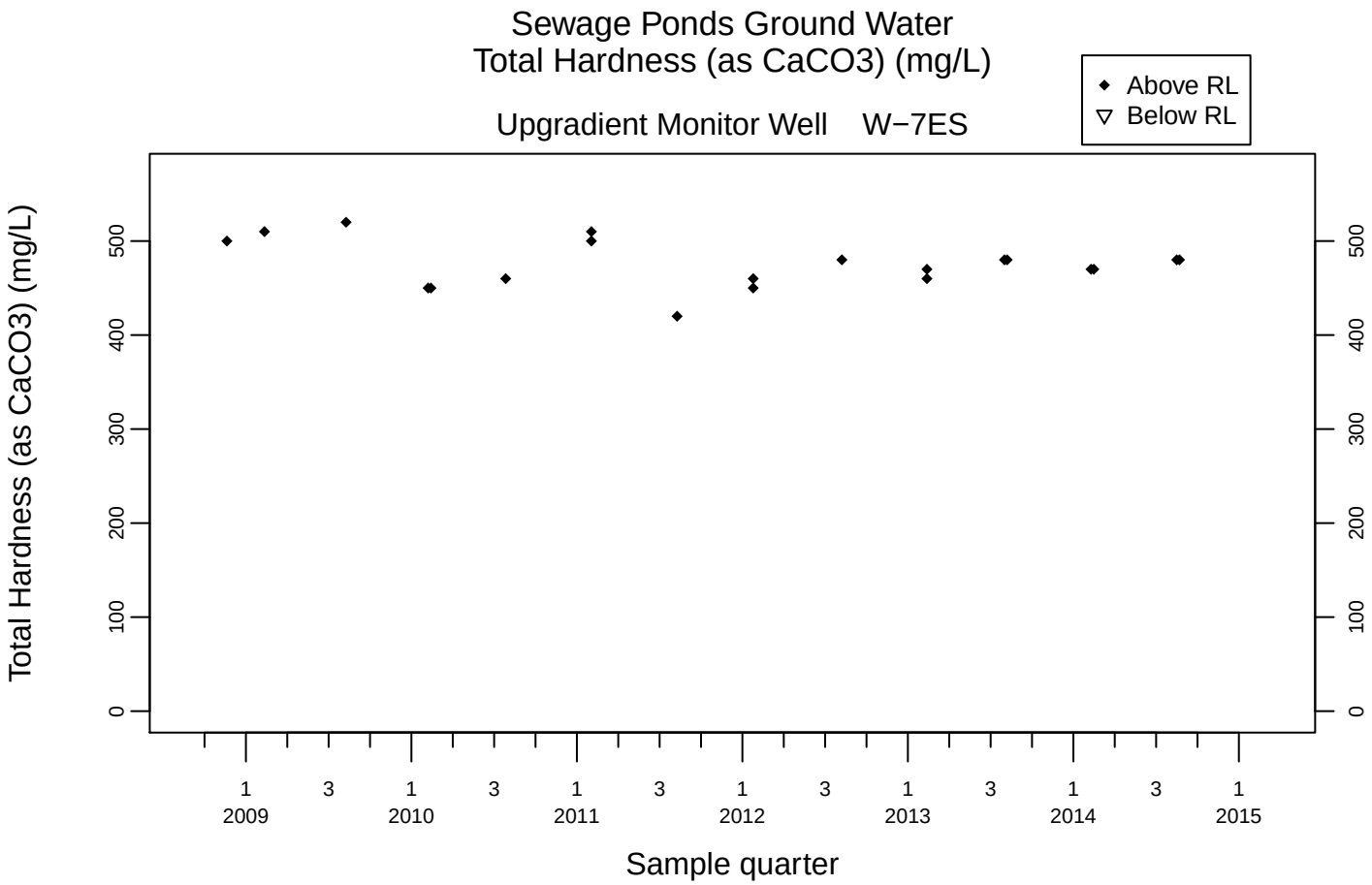

Sewage Ponds Ground Water
TDS (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−25N−22
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

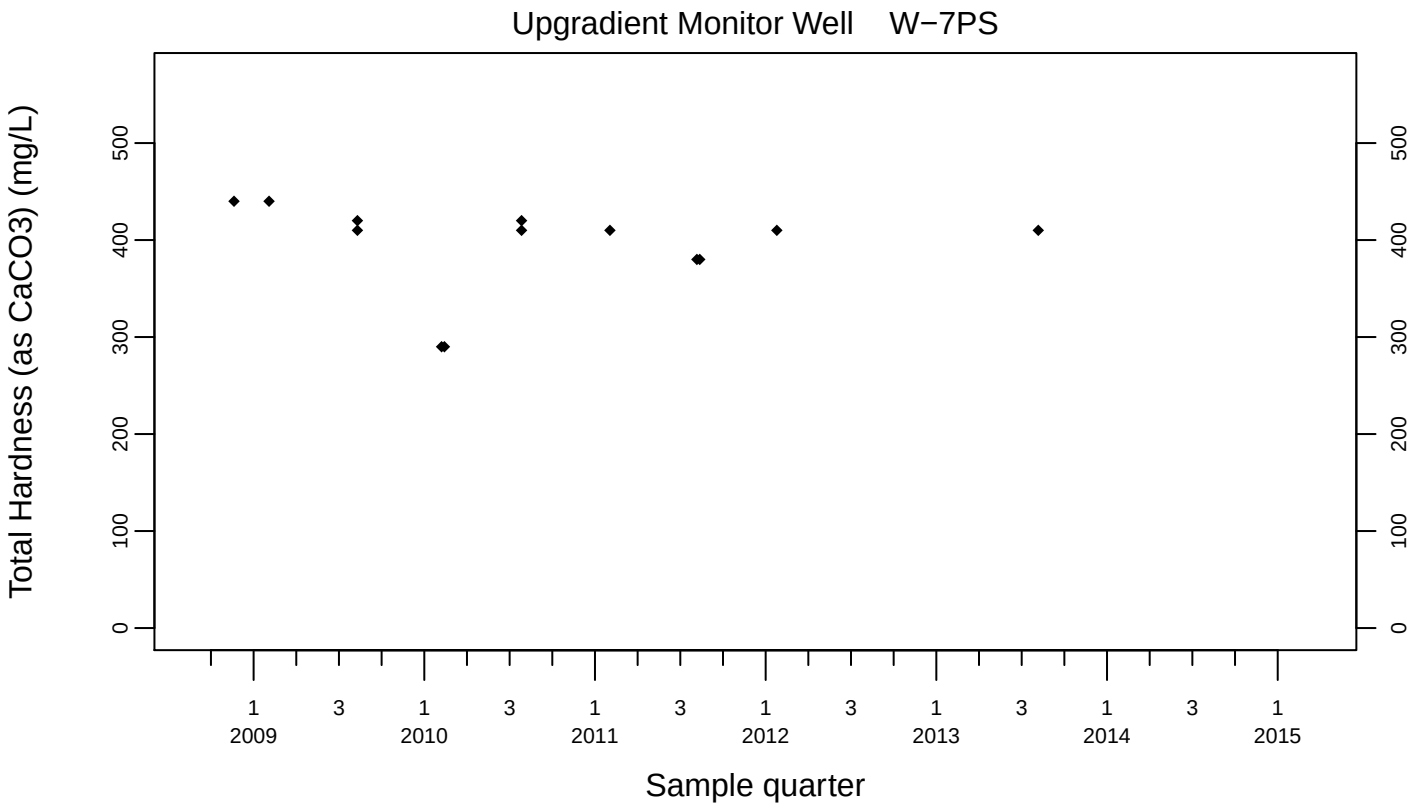

Downgradient Monitor Well W−26R−01
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

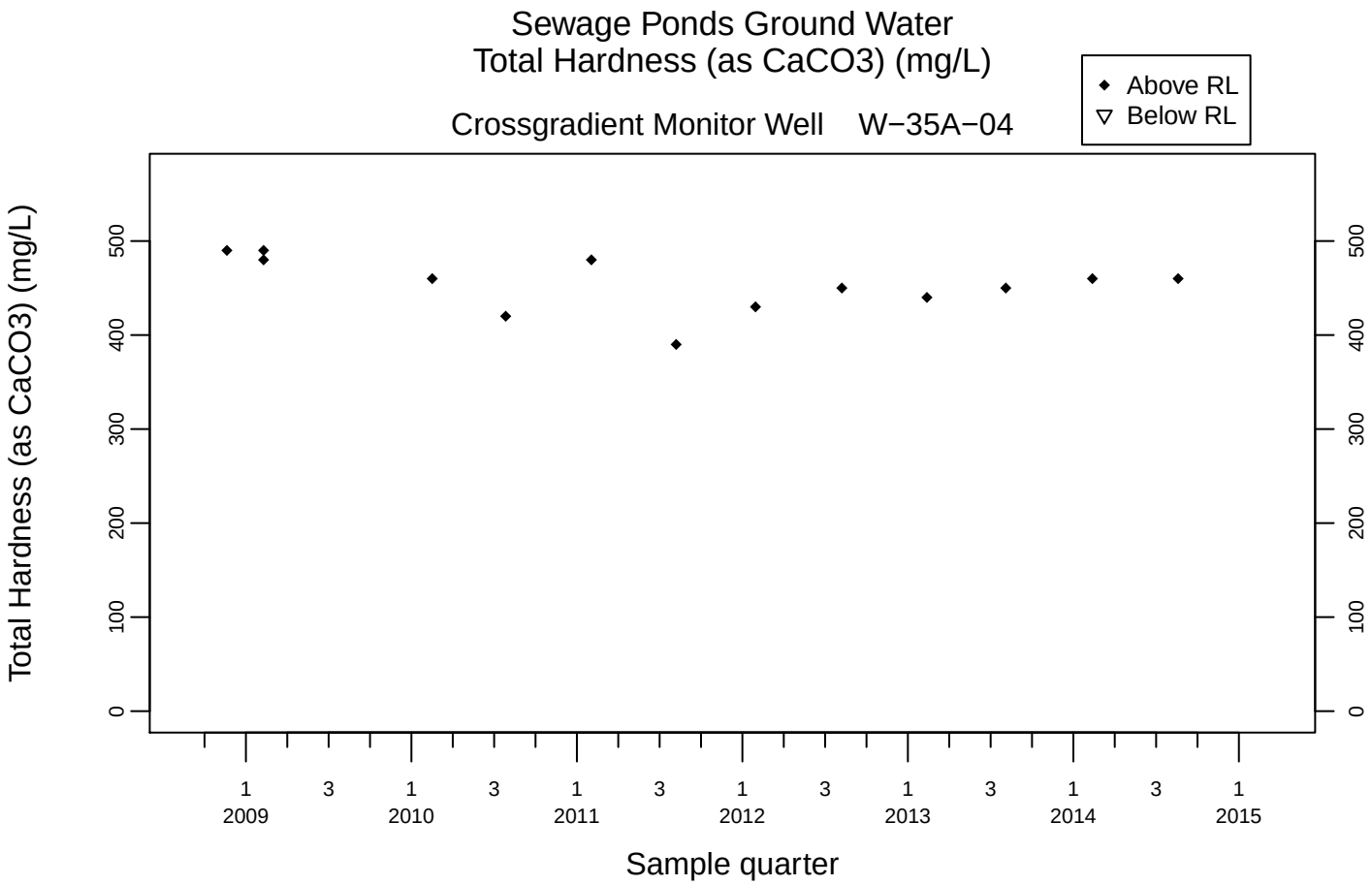

Sewage Ponds Ground Water
TDS (mg/L)
Above RL
Below RL
Downgradient Monitor Well W−26R−05
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

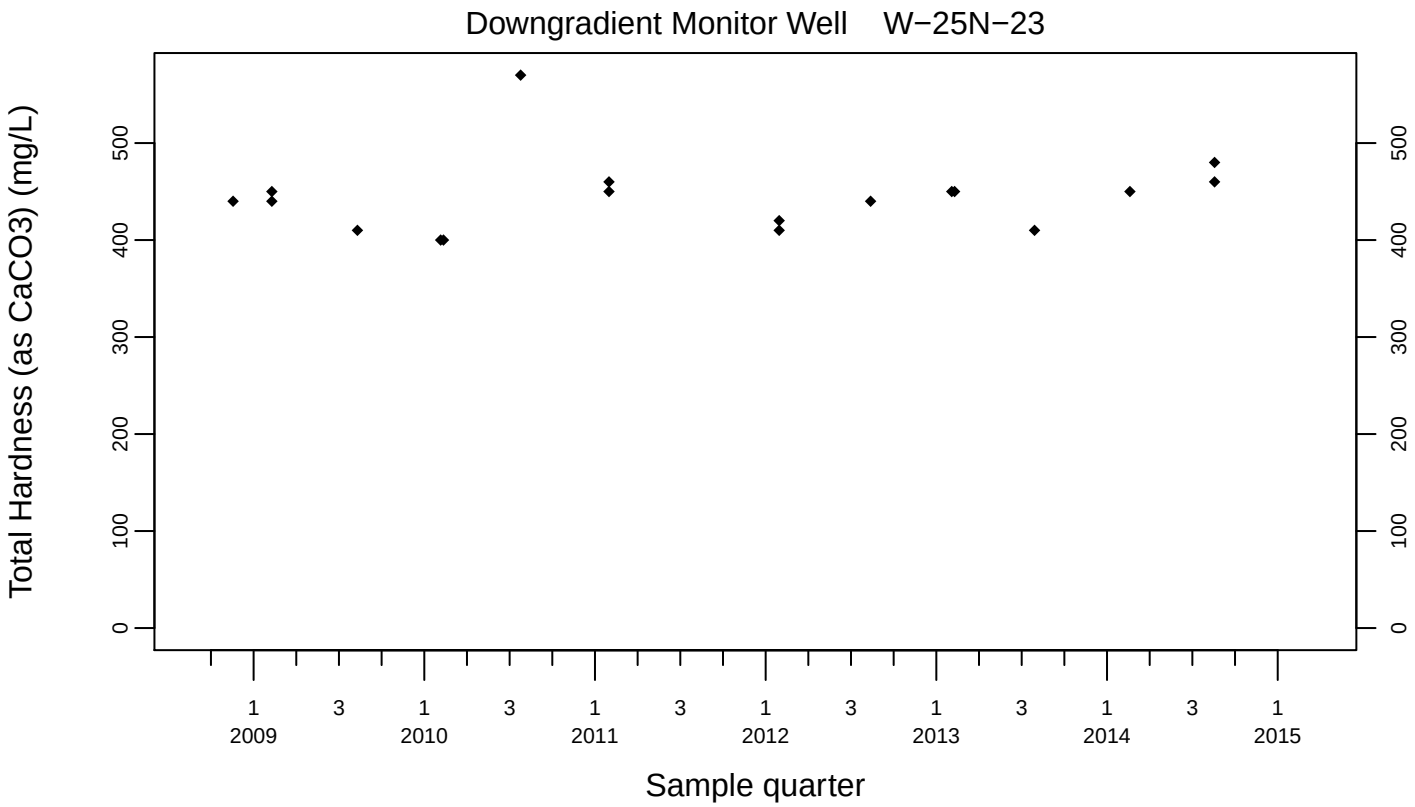

Downgradient Monitor Well W−26R−11
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

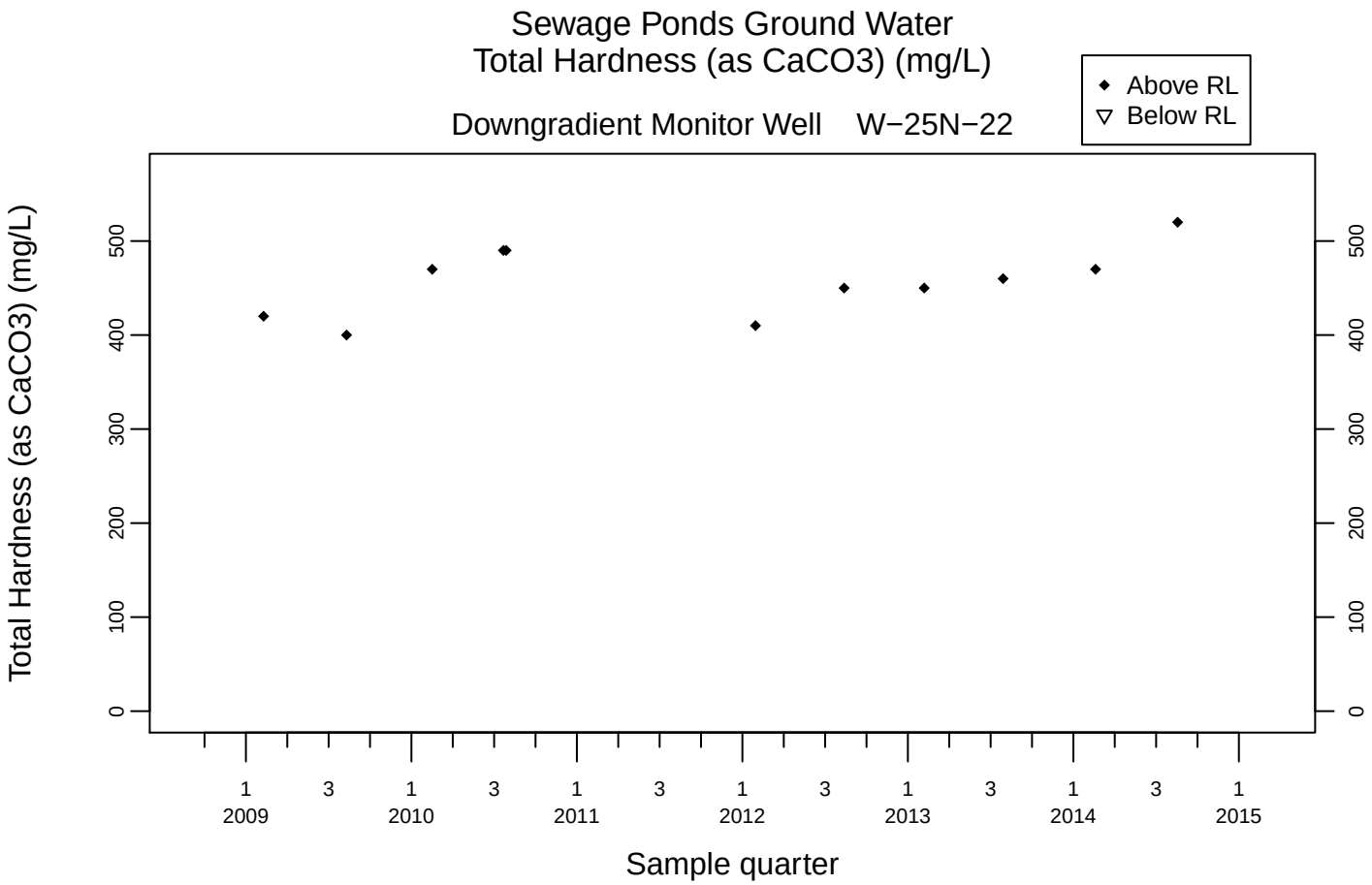

Sewage Ponds Ground Water
TDS (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

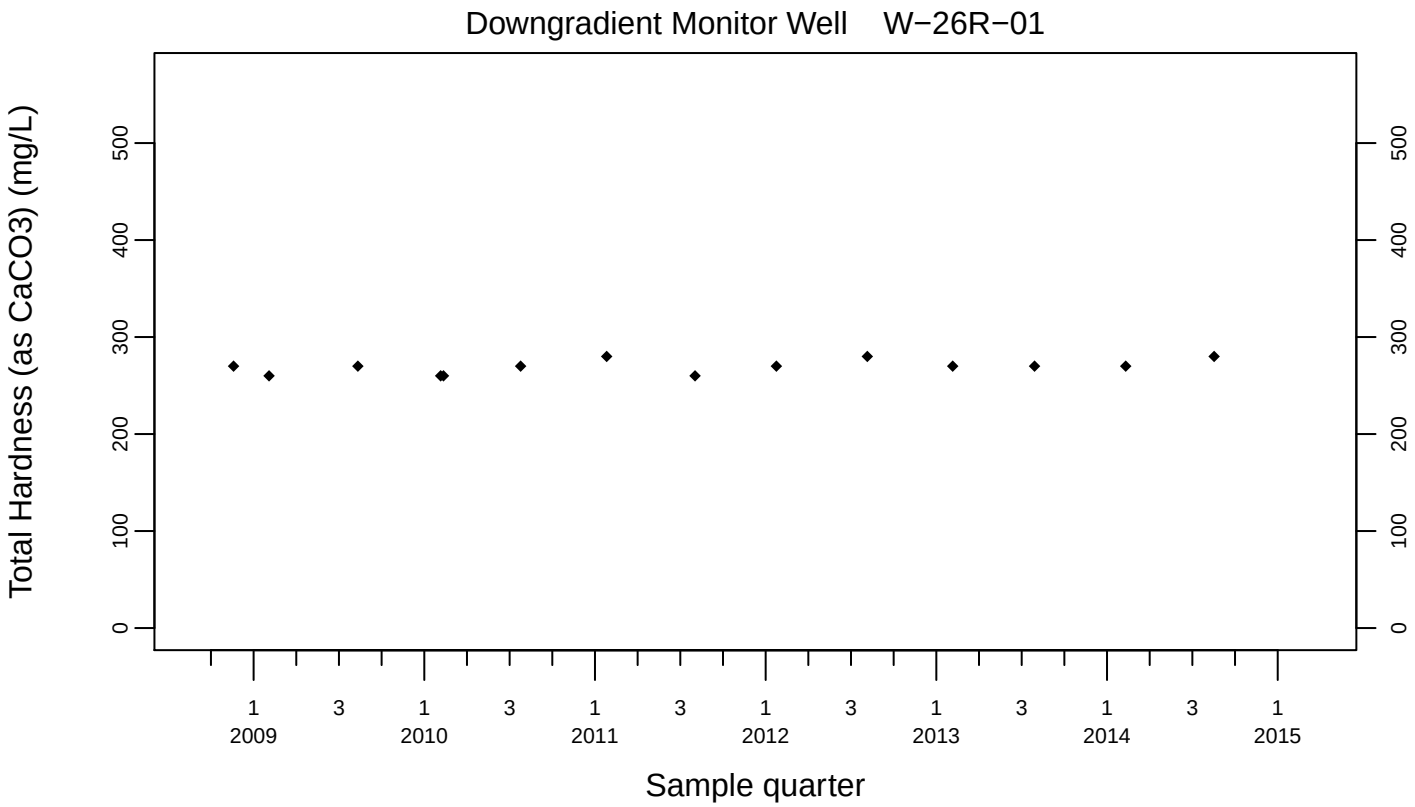

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

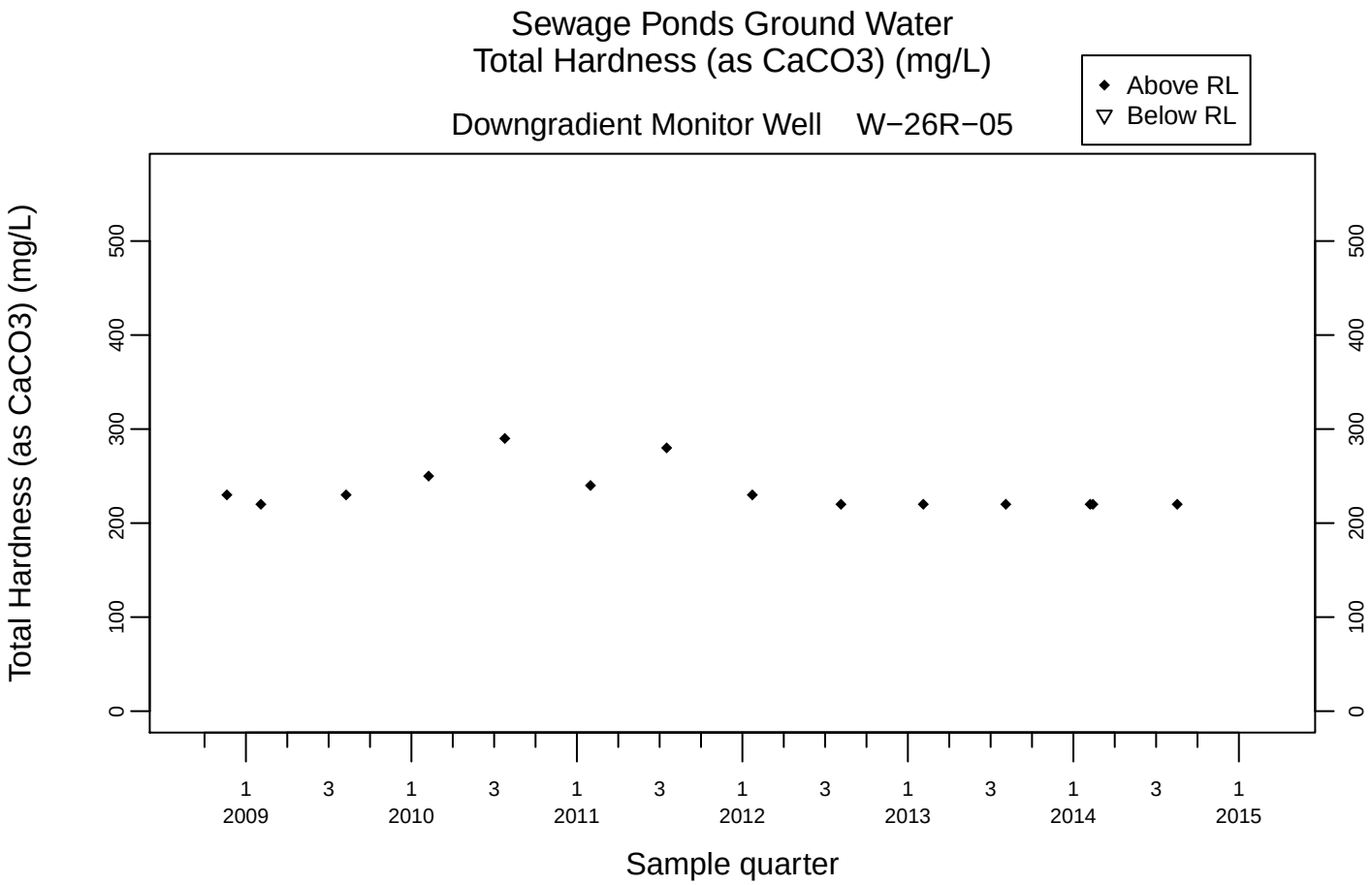

Upgradient Monitor Well W−7PS
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

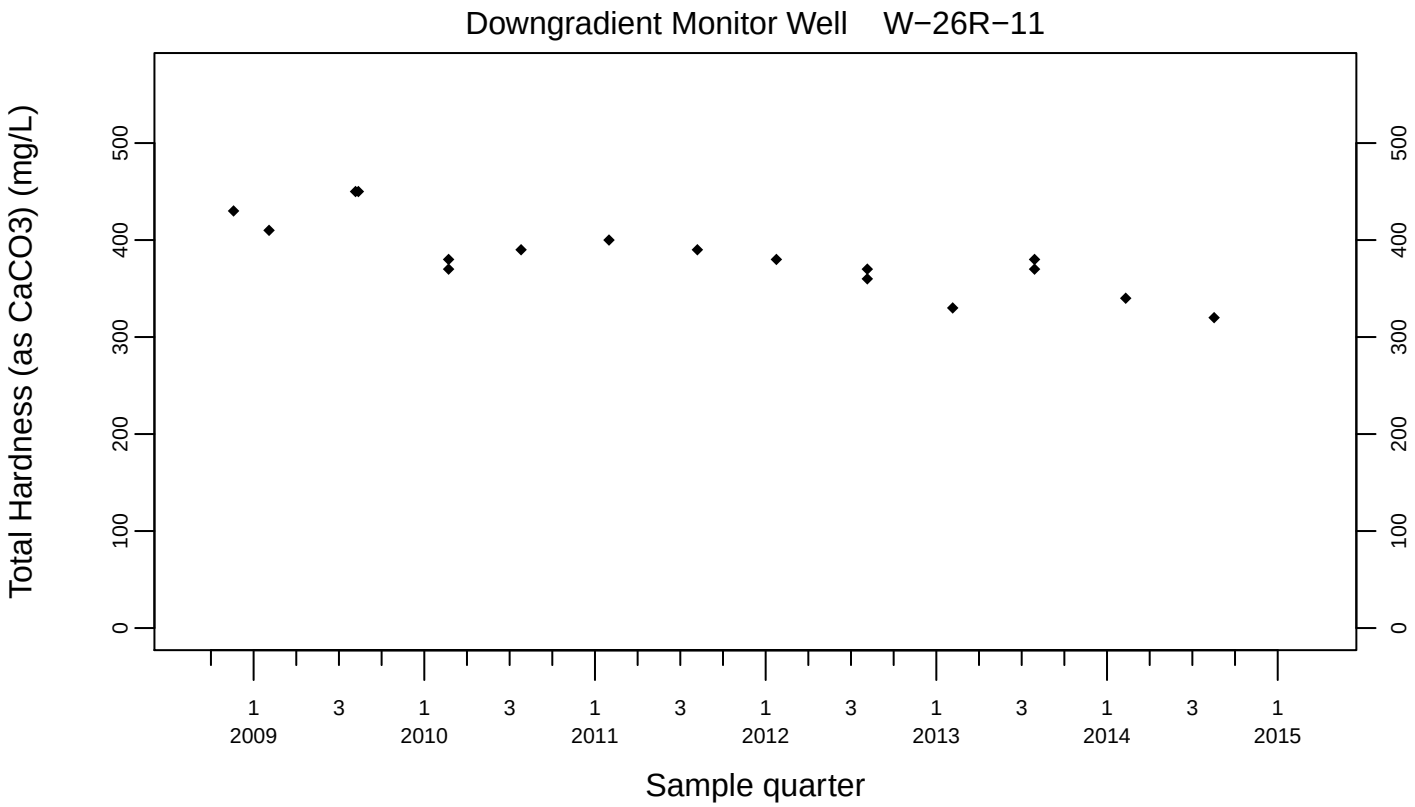

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

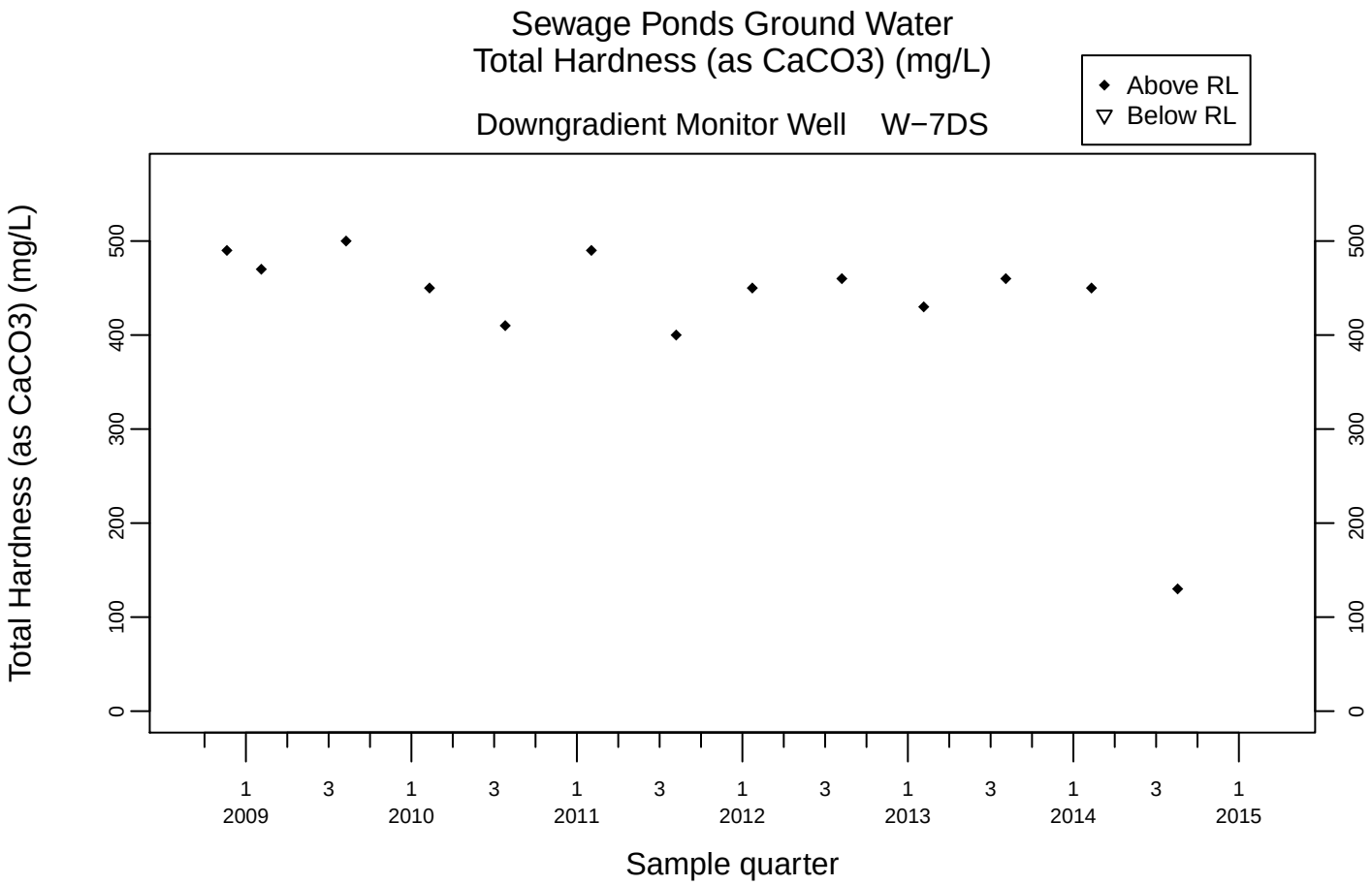

Downgradient Monitor Well W−25N−23
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

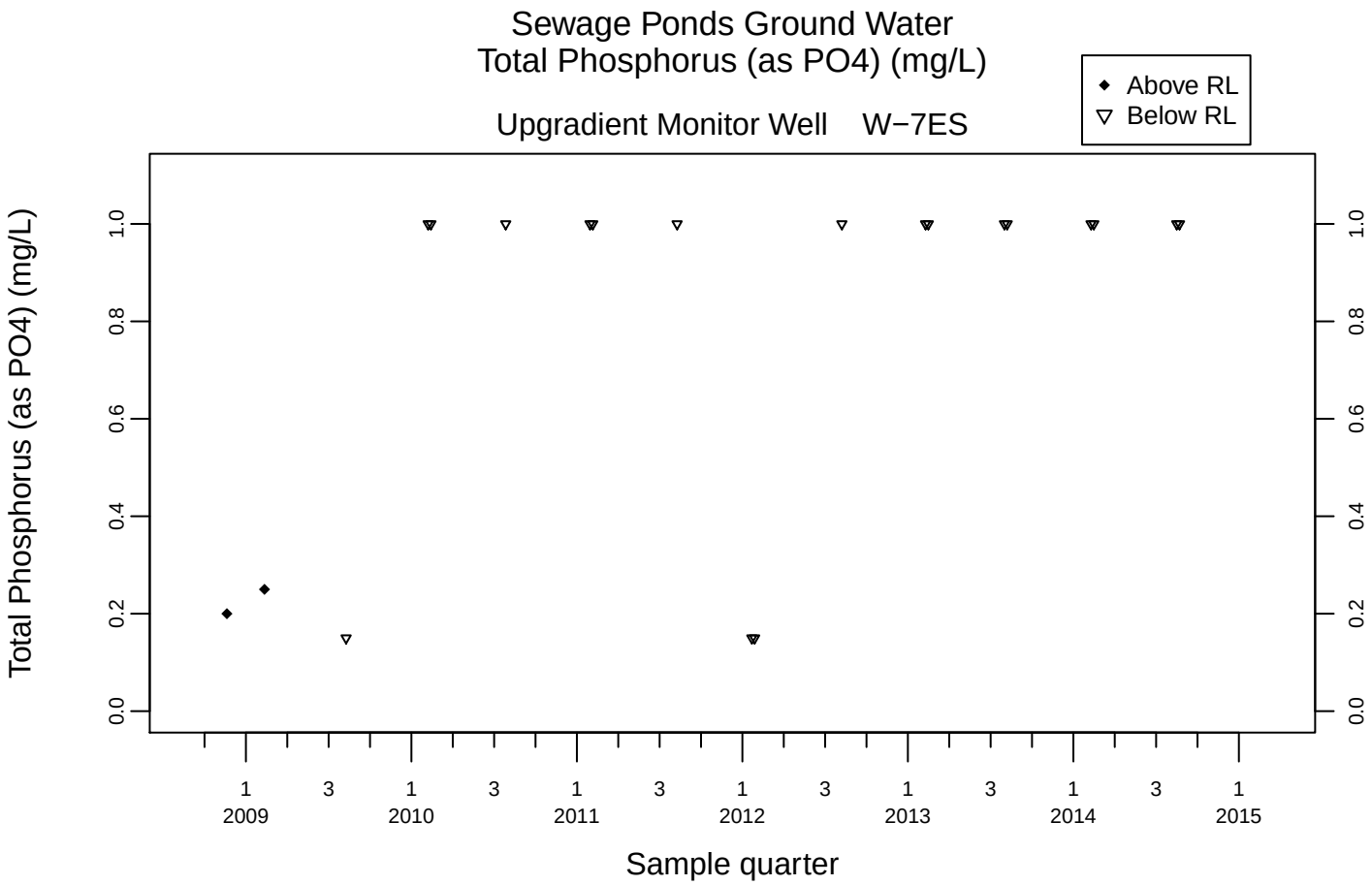

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

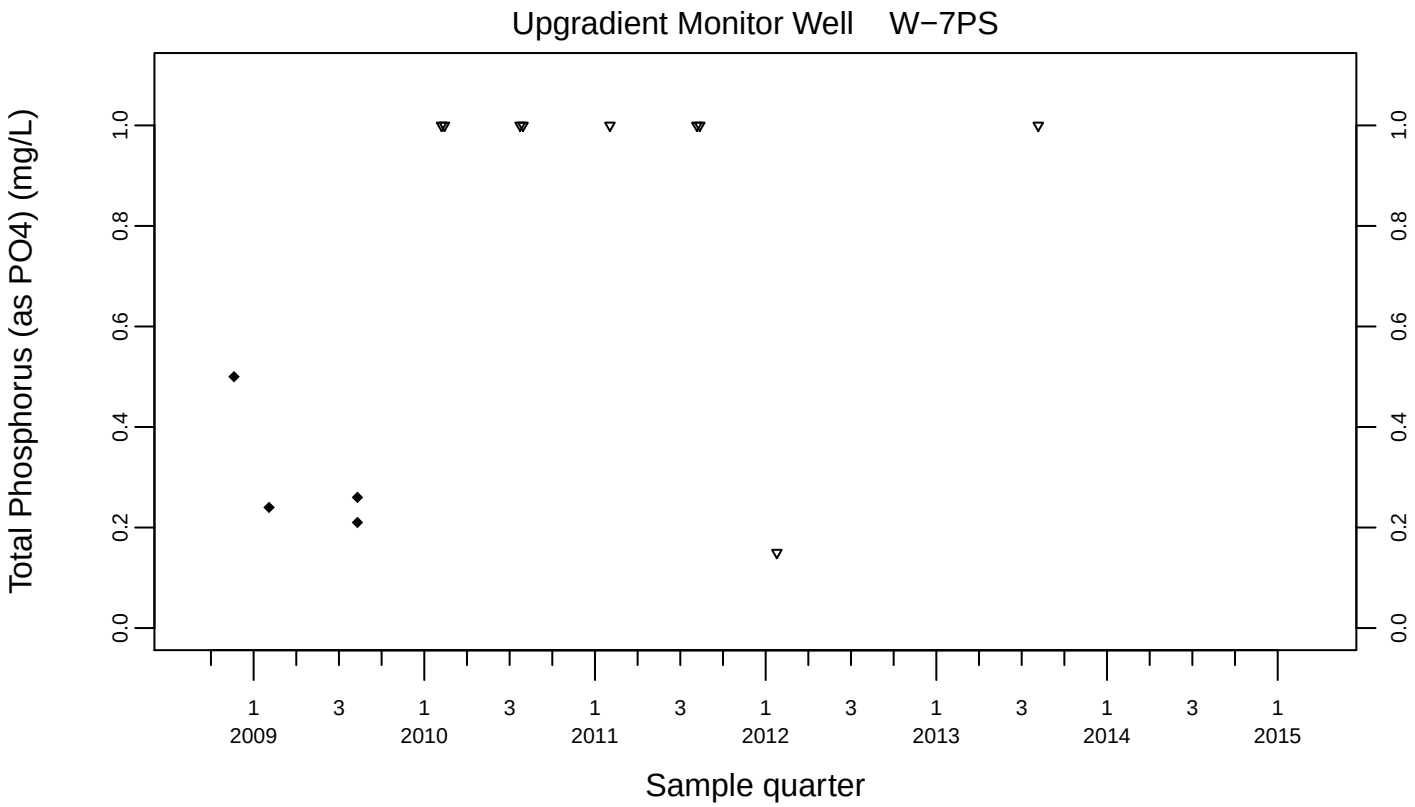

Downgradient Monitor Well W−26R−01
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

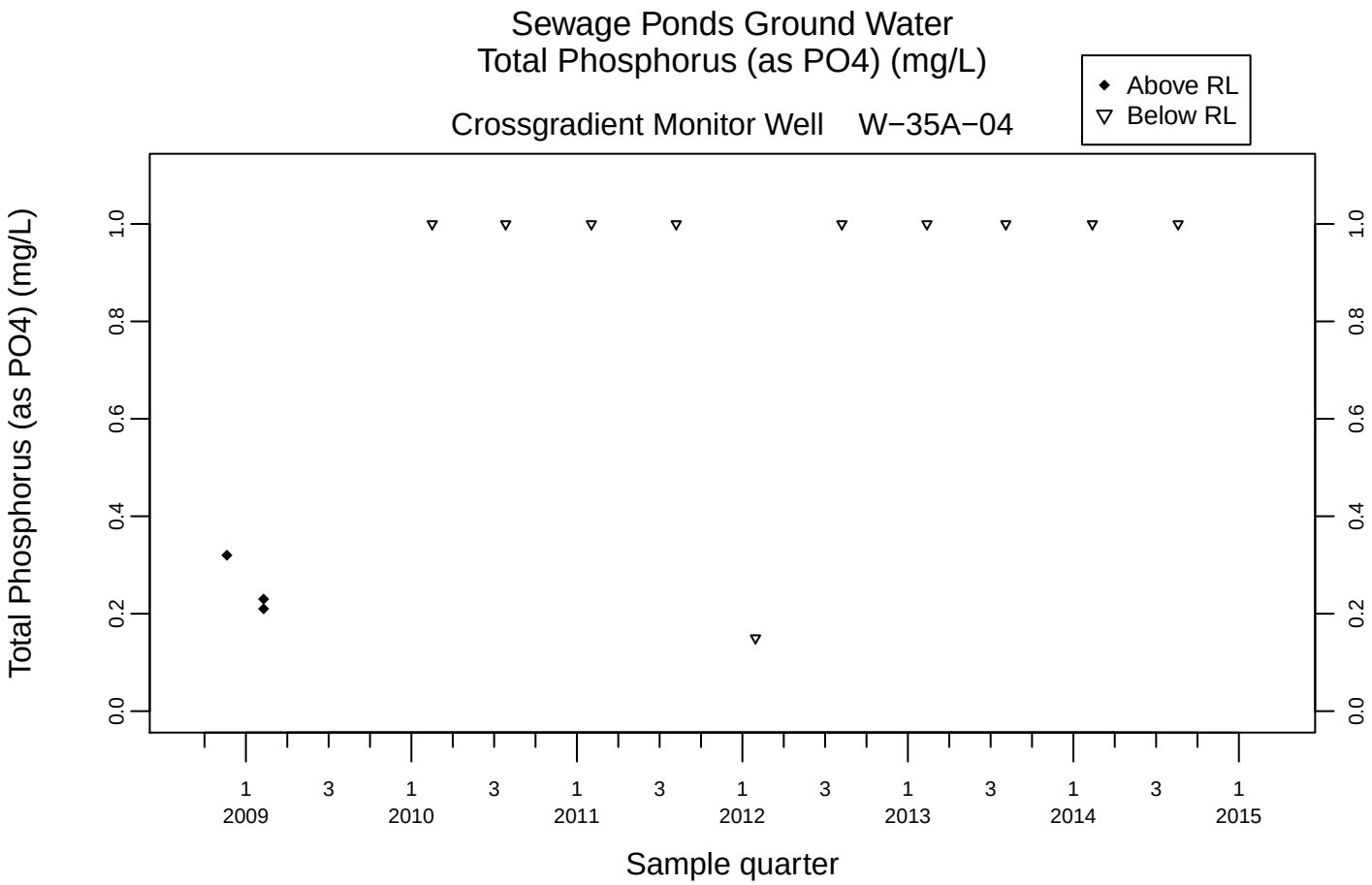

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

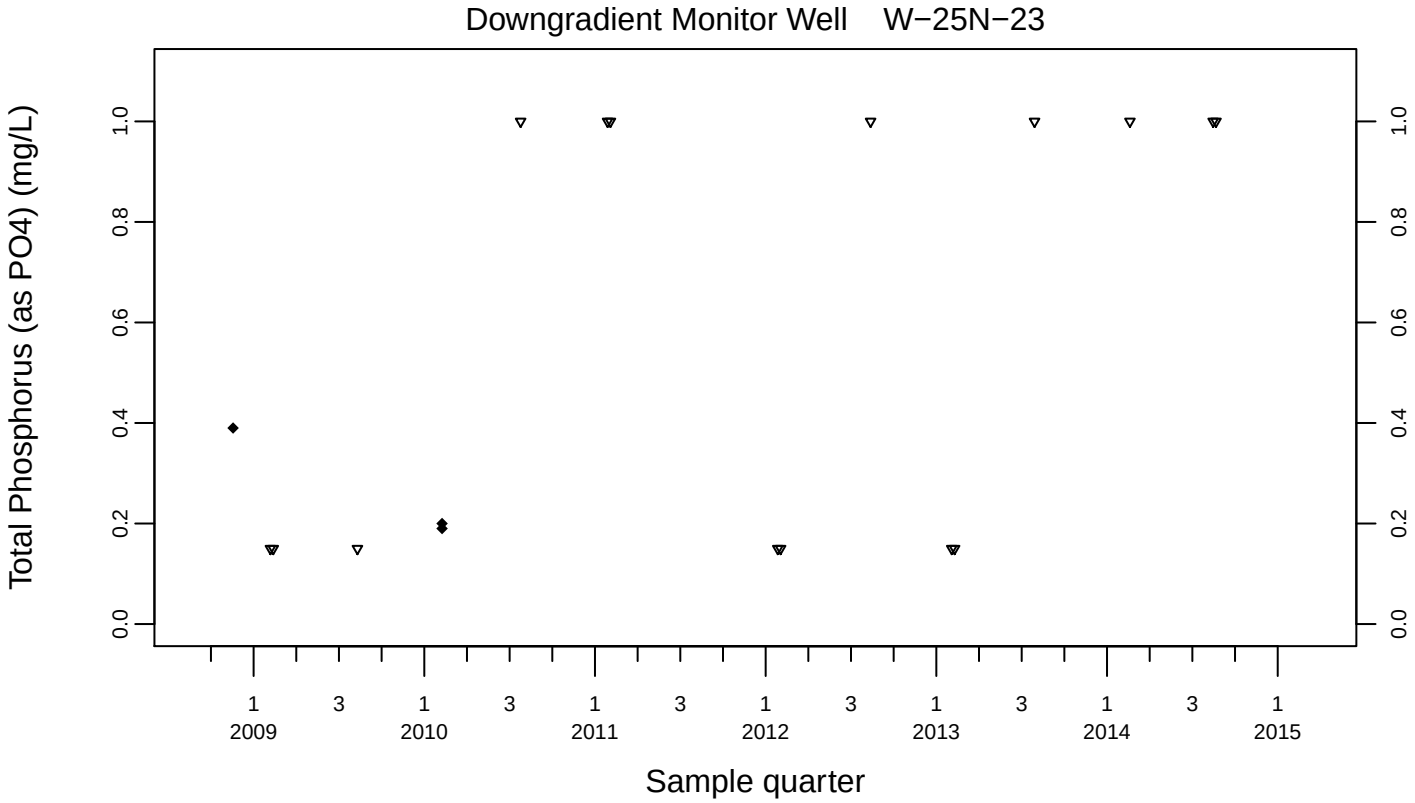

Downgradient Monitor Well W−26R−11
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

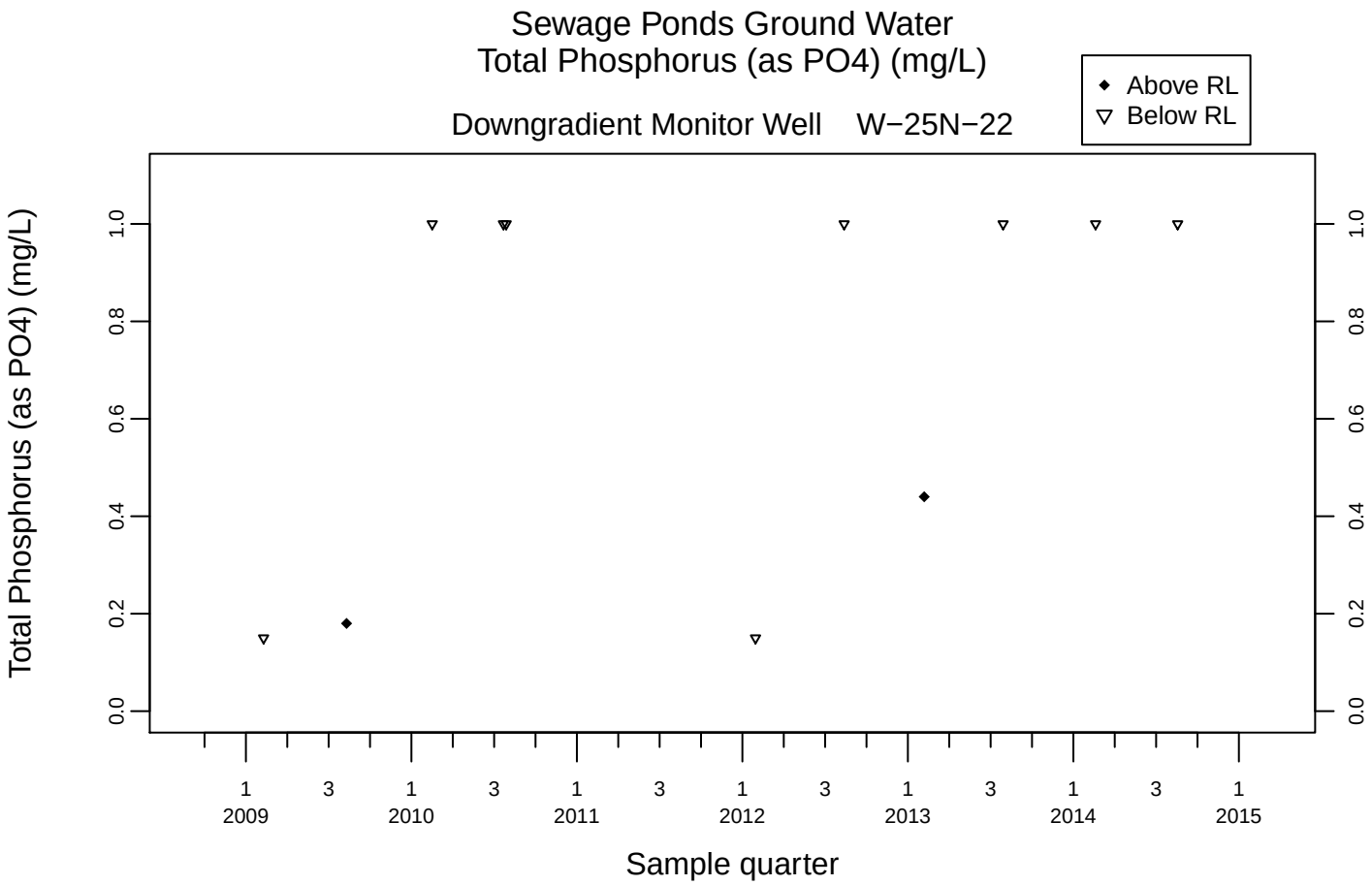

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

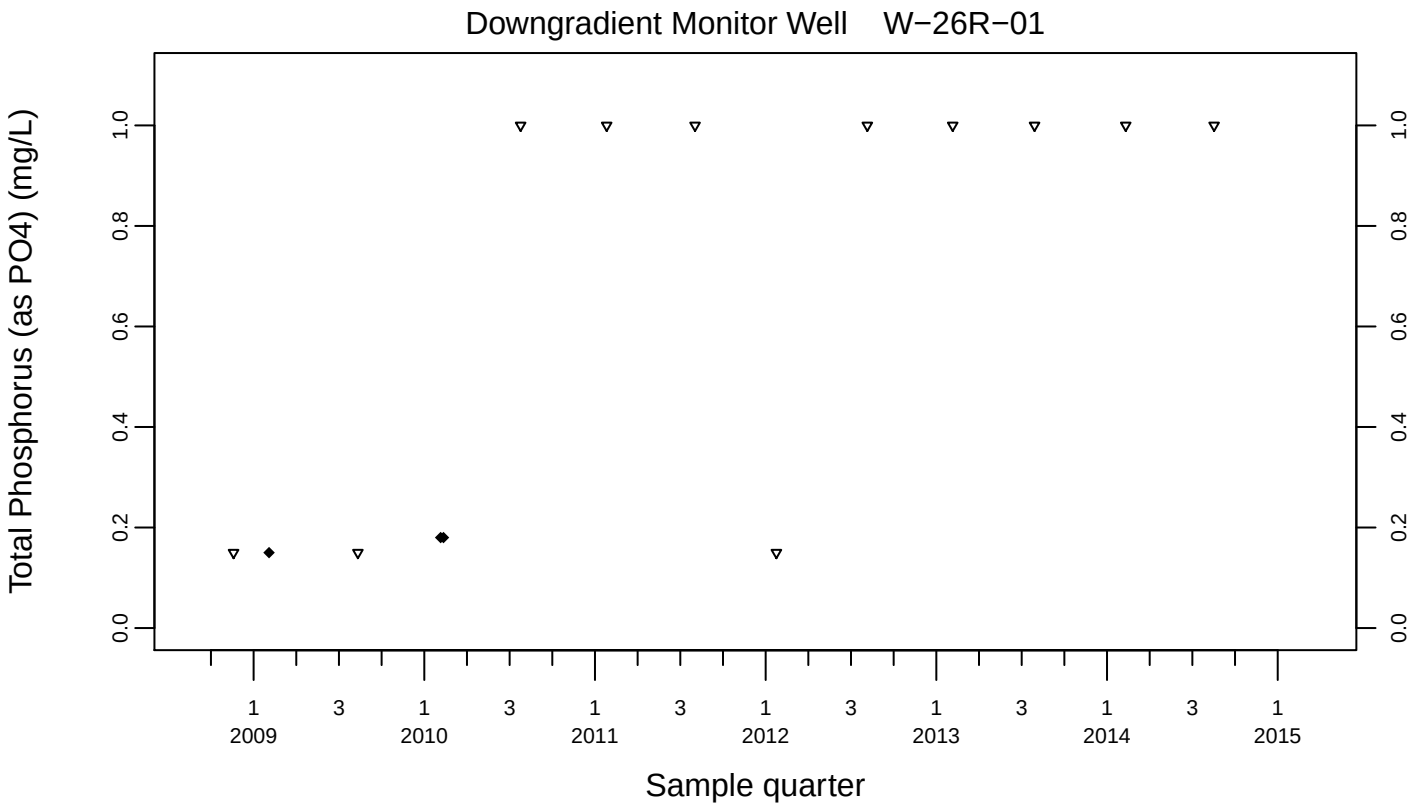

Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Upgradient Monitor Well W−7ES
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

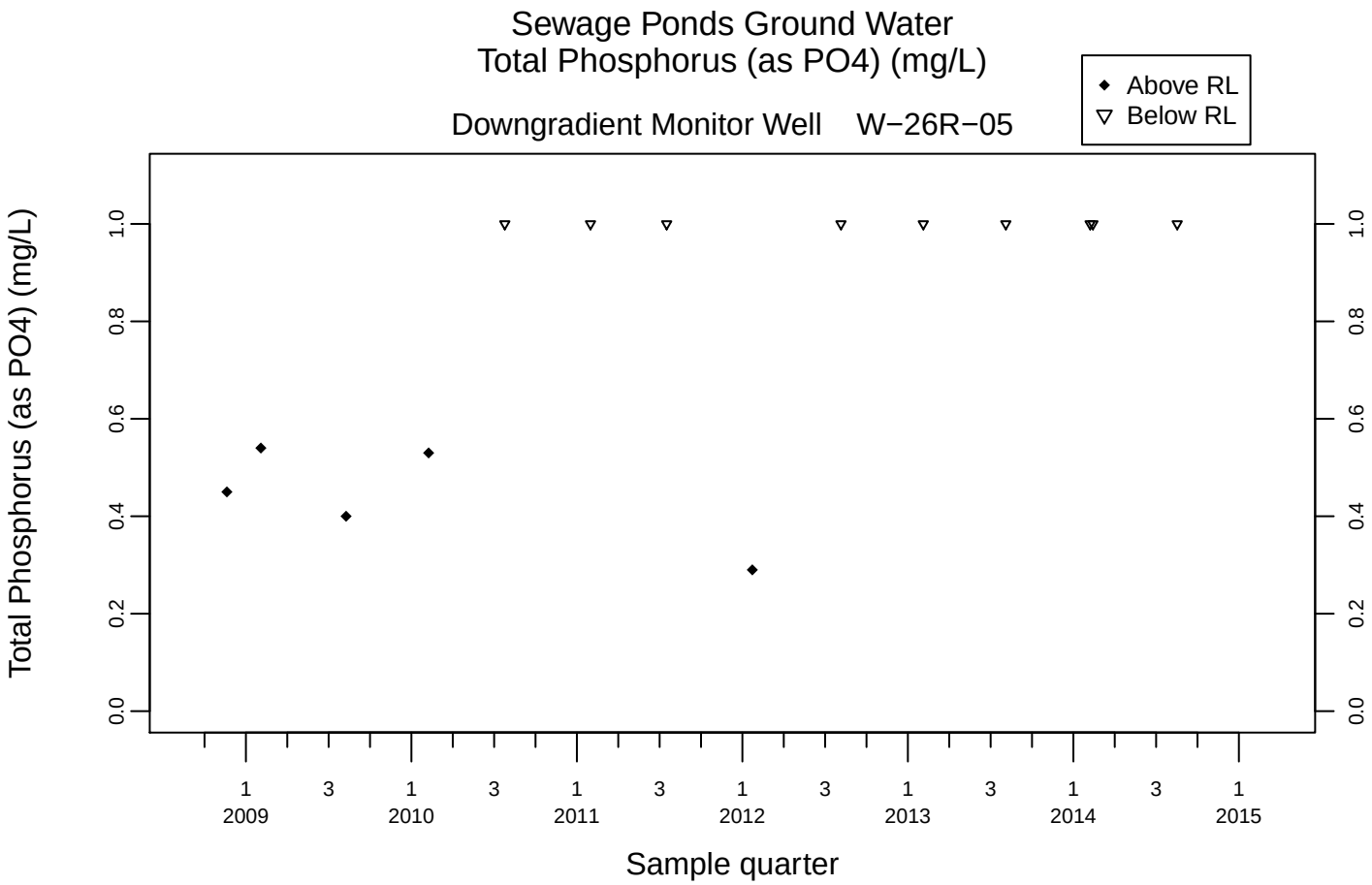

Upgradient Monitor Well W−7PS
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

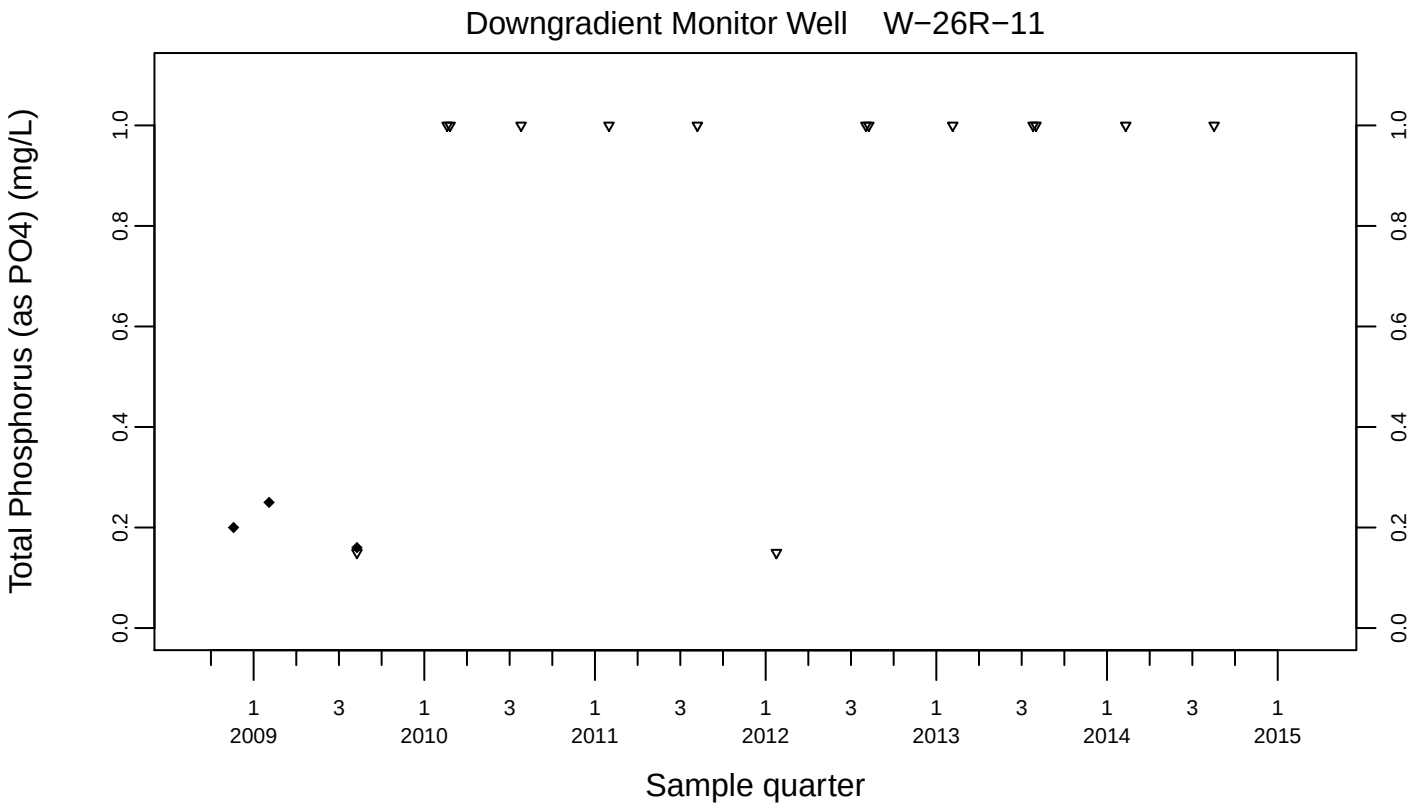

Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Crossgradient Monitor Well W−35A−04
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

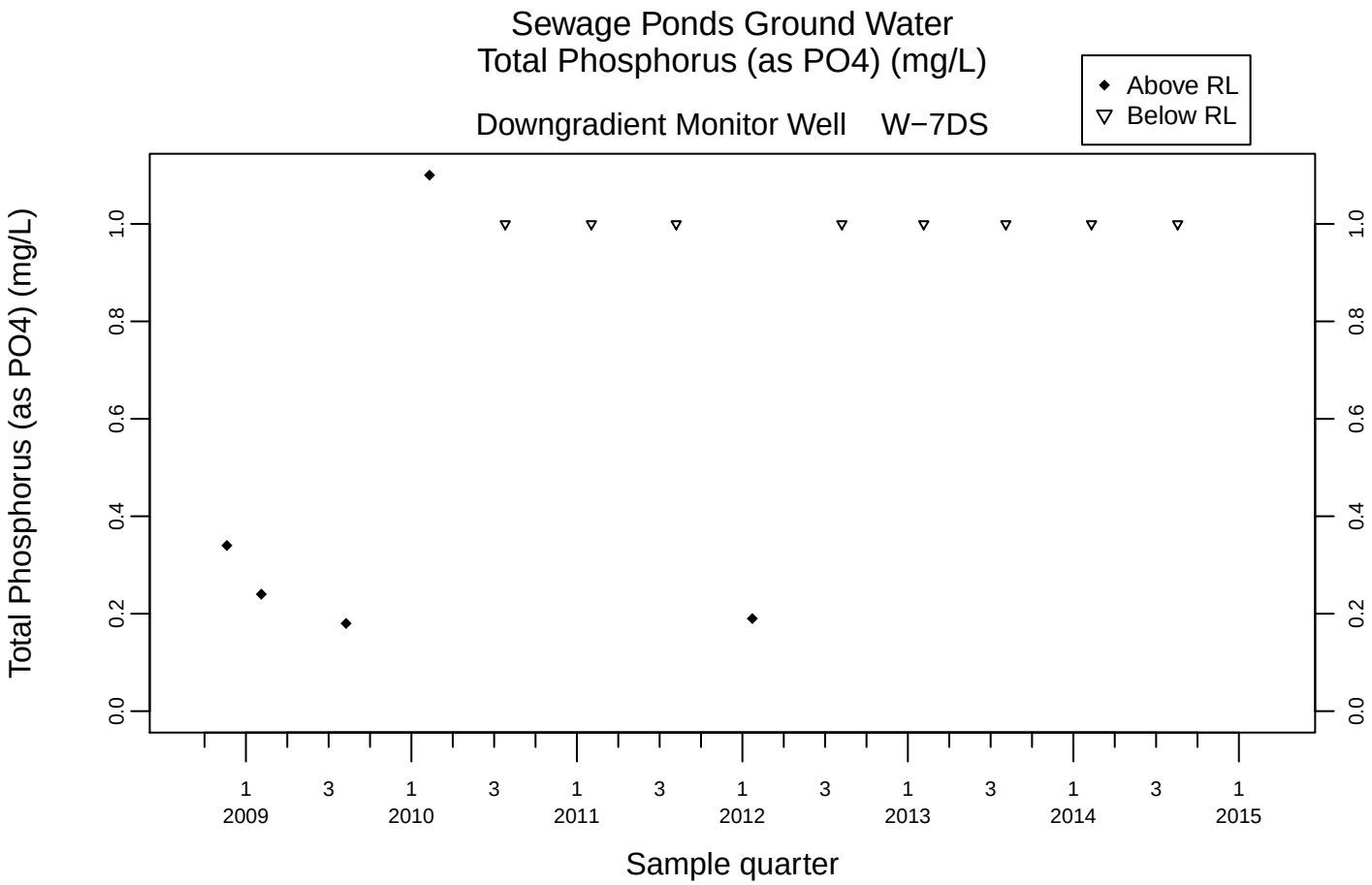

Downgradient Monitor Well W−25N−23
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter


Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Downgradient Monitor Well W−25N−22
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter


Downgradient Monitor Well W−26R−01
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter


Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Downgradient Monitor Well W−26R−05
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter


Downgradient Monitor Well W−26R−11
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter


Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Downgradient Monitor Well W−7DS
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1 2009
3
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
Sample quarter

Appendix B

Cooling Tower Network

Cooling Tower Blowdown Effluent Monitoring Network with Discharges to Percolation Pits (Bldgs. 801, 812, 817A, 825, 826, 827A, and 851) and Cooling Tower Percolation Pit Inspection Forms

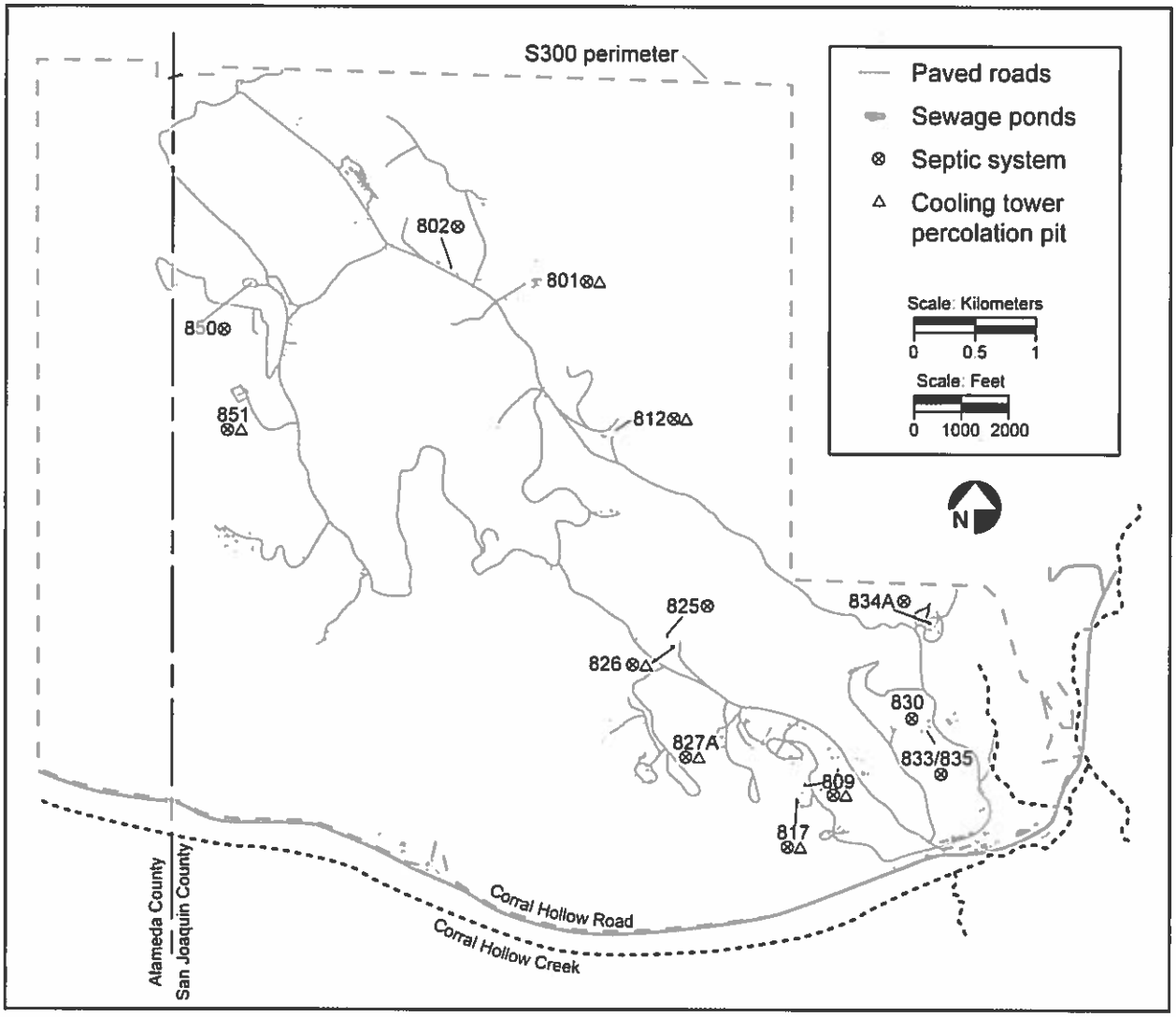


Figure B.1. Location of Site 300 cooling towers.

Table B-1. Site 300 cooling tower wastewater monitoring network second semester 2014 anions data summary.

Building/Location	Date	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Bromide (mg/L)
3-801ACT01-TW	May 13	460	190	0.66	360	0.59	0.46
3-801ACT01-TW	Oct 15	610	260	3.7	460	0.64	0.85
3-817ACT01-TW	May 13	1300	430	<2.5	930	1.2	1.4
3-817ACT01-TW	Oct 15	450	180	2.9	350	0.53	0.79
3-825ACT01-TW	May 13	510	160	0.75	340	0.53	0.73
3-825ACT01-TW	Oct 15	230	89	<1	170	0.25	0.36
3-826FCT01-TW	May 13	1000	420	<2.5	830	1.3	1.6
3-826FCT01-TW	Oct 15	260	100	0.92	200	0.30	0.31
3-827ACT01-TW	May 13	1300	560	2.6	1100	1.8	1.9
3-827ACT01-TW	Oct 15	830	320	3.8	640	0.81	1.1
3-851BFCT03-TW	May 13	270	110	0.51	210	0.31	0.31
3-851BFCT03-TW	Oct 21	1400	530	8.7	970	1.7	<1

Table B–2. Site 300 cooling tower wastewater monitoring network second semester 2014 metals analysis data summary.

Analyte (µg/L)	Month	3-801ACT01-TW	3-817ACT01-TW	3-825ACT01-TW	3-826FCT01-TW	3-827ACT01-TW	3-851BFCT03-TW
Aluminum	Q2	<50	<50	<50	<50	58	<50
	Q4	<50	<50	<50	<50	<100	<250
Arsenic	Q2	<2	2.9	<2	<10	<10	<10
	Q4	<2	<2	<2	<2	<2	<4
Barium	Q2	<25	71	27	<120	<120	<120
	Q4	35	<25	<25	<25	26	<50
Boron	Q2	1900	3700	1600	3700	5300	1100
	Q4	2500	1800	900	1000	3200	5200
Cadmium	Q2	<50	<50	<50	<250	<250	<250
	Q4	<50	<50	<50	<50	<50	<100
Calcium	Q2	21000	13000	8700	21000	37000	15000
	Q4	36000	15000	9400	13000	25000	42000
Chromium	Q2	3.1	2.6	<1	1.4	1.6	<1
	Q4	<1	<1	<1	<1	<1	4.2
Hex-Chromium	Q2	<1	<1	<1	<1	<1	<1
	Q4	<1	<1	<1	<1	<1	3.7
Copper	Q2	3.5	240	280	39	20	<5
	Q4	5.9	38	9.8	3.1	8.0	6.6
Iron	Q2	120	970	260	500	290	150
	Q4	<100	180	<100	<100	<200	740
Lead	Q2	<5	12	9.6	<25	<25	<25
	Q4	<5	<5	<5	<5	<5	<10
Magnesium	Q2	<500	1700	640	850	540	<500
	Q4	<500	<500	<500	<500	<1000	<2500
Manganese	Q2	<30	91	<30	<30	<30	<30
	Q4	<30	<30	<30	<30	<60	<150
Mercury	Q2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Q4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum	Q2	36	85	32	78	110	<25
	Q4	50	37	<25	<25	66	<120
Nickel	Q2	<2	<2	<2	<10	<10	<10
	Q4	<2	<2	<2	<2	<2	<4

Table B–2. Site 300 cooling tower wastewater monitoring network second semester 2014 metals analysis data summary.

Potassium	**Q2**	**17000**	**34000**	**14000**	**30000**	**49000**	**10000**
	Q4	**25000**	**19000**	**8500**	**11000**	**32000**	**53000**
Selenium	**Q2**	**<2**	**4.3**	**<2**	**<10**	**<10**	**<10**
	Q4	**<2**	**<2**	**<2**	**<2**	**<2**	**<4**
Silver	**Q2**	**<1**	**<1**	**<1**	**<5**	**<5**	**<5**
	Q4	**<1**	**<1**	**<1**	**<1**	**<1**	**<2**
Vanadium	**Q2**	**<20**	**<20**	**<20**	**<100**	**<100**	**<100**
	Q4	**<20**	**<20**	**<20**	**<20**	**<20**	**<40**
Zinc	**Q2**	**<20**	**2500**	**1800**	**120**	**120**	**<100**
	Q4	**<20**	**53**	**<20**	**<20**	**<20**	**<40**

Table B-3. Site 300 cooling tower wastewater monitoring network second semester/annual 2014 physical characteristics data summary.

Location	Well	Date	pH	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
B-801	3-801ACT01-TW	May 13	9.0	2140	440	1600	52	0.27
B-801	3-801ACT01-TW	Oct 15	9.1	2660	570	2100	90	0.73
B-817	3-817ACT01-TW	May 13	9.2	5070	1200	4200	39	120
B-817	3-817ACT01-TW	Oct 15	9.1	2050	430	1500	40	1.3
B-825	3-825ACT01-TW	May 13	9.0	2130	500	1600	24	54
B-825	3-825ACT01-TW	Oct 15	8.7	1090	220	760	25	0.50
B-826	3-826FCT01-TW	May 13	9.2	4340	930	3300	57	35
B-826	3-826FCT01-TW	Oct 15	8.9	1250	280	890	33	0.44
B-827	3-827ACT01-TW	May 13	9.4	5740	1300	4200	94	14
B-827	3-827ACT01-TW	Oct 15	9.4	3580	810	2800	64	1.6
B-851	3-851BFCT03-TW	May 13	8.9	1300	280	920	38	2.2
851	3-851BFCT03-TW	Oct 21	9.4	5400	1200	3600	110	0.90

Table B-4. Site 300 cooling tower wastewater monitoring network 2014 QA data summary.

Constituent	Units	3-817ACT01-TW	3-817ACT01-TW	3-827ACT01-TW	3-827ACT01-TW
		May 13	May 13	Oct 15	Oct 15
		Routine	Duplicate	Routine	Duplicate
pH	Units	9.2	9.2	9.4	9.4
Specific Conductance	µmhos/cm	5070	5090	3580	3600
Aluminum	µg/L	<50	<50	<100	<100
Arsenic	µg/L	2.9	3.0	<2	<2
Barium	µg/L	71	73	26	28
Boron	µg/L	3700	3600	3200	3300
Cadmium	µg/L	<50	<50	<50	<50
Calcium	µg/L	13000	12000	25000	25000
Chromium	µg/L	2.6	2.4	<1	<1
Hexavalent Chromium	µg/L	<1	<1	<1	<1
Copper	µg/L	240	240	8.0	7.3
Iron	µg/L	970	950	<200	<200
Lead	µg/L	12	13	<5	<5
Magnesium	µg/L	1700	1700	<1000	<1000
Manganese	µg/L	91	89	<60	<60
Mercury	µg/L	<0.2	<0.2	<0.2	<0.2
Molybdenum	µg/L	85	84	66	74
Nickel	µg/L	<2	<2	<2	<2
Potassium	µg/L	34000	33000	32000	33000
Selenium	µg/L	4.3	3.9	<2	<2
Silver	µg/L	<1	<1	<1	<1
Vanadium	µg/L	<20	<20	<20	<20
Zinc	µg/L	2500	2500	<20	<20
Sodium	mg/L	1300	1300	830	870

ESH-EFA-WQ-15-7606 – TK/RB:ld

Table B-4. Site 300 cooling tower wastewater monitoring network 2014 QA data summary.

Sulfate	mg/L	930	930	640	660
Fluoride	mg/L	1.2	1.3	0.81	0.96
Bromide	mg/L	1.4	2.0	1.1	0.78
Total Alkalinity (as CaCO3)	mg/L	1200	1200	810	810
Total dissolved solids (TDS)	mg/L	4200	4100	2800	2700
Total Hardness (as CaCO3)	mg/L	39	38	64	65
Total Phosphorus (as PO4)	mg/L	120	130	1.6	1.2

FIELD TRACKING FORM

Semi-Annual SITE 300 Cooling Towers

Special Instructions:
Should be sampled in early April and October.
See back of form for additional access information

LAB	CoC#	Ship It #
BC Labs	54826	189742

pH meter calibrated on: 10/21/14
Specific Conductance meter calibrated on: 10/21/14

Sample Date: 10/21/14

Location Indentifier	Location DUP taken -year/quarter	Sample Time	Initials	Field Measurments		BC Labs				Comments
				pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 500mL Poly	S3WETCHEM 1000mL Poly	E300.0/BR 250ml Poly	
3-801ACT01-TW	2012/2nd									
3-817ACT01-TW	2014/2nd									
3-825ACT01-TW	2013/2nd									
3-826FCT01-TW	2013/4th									
3-827ACT01-TW	2014/4TH									
3-851BFCT03-TW	2011/4th	0940	KB	9.47	4.72ms	✓	✓	✓	✓	
Duplicate of 3-827ACT01-TW										
3-B9900-01-TW										

☑ Copy to Analyst, Rick Blake.

Rev. 5-15-14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64826
Document Control #: 64826
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.05.04
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-851BFCT03-01-TW	10/21/2014 09:40	TW	P	1	COOLTOWER	E300.0	BR	
3-851BFCT03-01-TW	10/21/2014 09:40	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-851BFCT03-01-TW	10/21/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-851BFCT03-01-TW	10/21/2014 09:40	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-851BFCT03-01-TW	10/21/2014 09:40	TW	P	1	COOLTOWER	S3WETCHEM	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [signature]	LLNL/EFA	10/21/2014		2			
2				3			
3				4			
4				5			

FIELD TRACKING FORM

Semi-Annual SITE 300 Cooling Towers

Special Instructions:
Should be sampled in early April and October.
See back of form for additional access information

LAB	CoC#	Ship It #
BC Labs	64755	189548

pH meter calibrated on: 10/15/14
Specific Conductance meter calibrated on: 10/15/14

Sample Date: 10/15/14

Location Indentifier	Location DUP taken -year/quarter	Sample Time	Initials	Field Measurments		BC Labs				Comments
				pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 500mL Poly	S3WETCHEM 1000mL Poly	E300.0/BR 250ml Poly	
3-801ACT01-TW	2012/2nd	1000	KB	9.16	2.57 ms	/	/	/	/	
3-817ACT01-TW	2014/2nd	0845	KB	9.26	1673 us	/	/	/	/	
3-825ACT01-TW	2013/2nd	0900	KB	9.02	950 us	/	/	/	/	
3-826FCT01-TW	2013/4th	0910	KB	9.10	1083 us	/	/	/	/	
3-827ACT01-TW	2014/4TH	0930	KB	9.23	3.34 ms	/	/	/	/	851 Cooling Tower is Running but no Flow at Sample port no Sample collected
3-851BFCT03-TW	2011/4th	1020	KB							
Duplicate of 3-827ACT01-TW										
3-B9900-01-TW		0930	KB			/	/	/	/	

☑ Copy to Analyst, Rick Blake.

Rev. 5-15-14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64755
Document Control #: 64755
Requester/LLNL Analyst: R. Blake
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PCI Project #: 39355
PCI Task #: 1.03.02.07.05.04
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-801ACT01-01-TW	10/15/2014 10:00	TW	P	1	COOLTOWER	E300.0	BR	
3-801ACT01-01-TW	10/15/2014 10:00	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-801ACT01-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-801ACT01-01-TW	10/15/2014 10:00	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-801ACT01-01-TW	10/15/2014 10:00	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-817ACT01-01-TW	10/15/2014 08:45	TW	P	1	COOLTOWER	E300.0	BR	
3-817ACT01-01-TW	10/15/2014 08:45	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-817ACT01-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-817ACT01-01-TW	10/15/2014 08:45	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-817ACT01-01-TW	10/15/2014 08:45	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-825ACT01-01-TW	10/15/2014 09:00	TW	P	1	COOLTOWER	E300.0	BR	
3-825ACT01-01-TW	10/15/2014 09:00	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-825ACT01-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-825ACT01-01-TW	10/15/2014 09:00	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-825ACT01-01-TW	10/15/2014 09:00	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-826FCT01-01-TW	10/15/2014 09:10	TW	P	1	COOLTOWER	E300.0	BR	
3-826FCT01-01-TW	10/15/2014 09:10	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-826FCT01-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-826FCT01-01-TW	10/15/2014 09:10	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-826FCT01-01-TW	10/15/2014 09:10	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-827ACT01-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	E300.0	BR	
3-827ACT01-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-827ACT01-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-827ACT01-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-827ACT01-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-B9900-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	E300.0	BR	
3-B9900-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3ANIONS	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [signature]	LLNL/EFA	10/15/2014		2			
2				3			
3				4			
4				5			

Revision Printed: 07/30/2014/13/01/54

Signature Order - 1: Sampler, 2: Courier, 3: Lab, 4: Analyst, 5: DMT

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64755
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Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B9900-01-TW	10/15/2014 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-B9900-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-B9900-01-TW	10/15/2014 09:30	TW	P	1	COOLTOWER	S3WETCHEM	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [signature]	LLNL/EFA	10/15/2014		2			
2				3			
3				4			
4				5			

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-15-14 Inspector D LANSRUM Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 7/15/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-15-14 Inspector D. Lanoie Building Number 817-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 7/15/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-16-14 Inspector D. Lanneau Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 7/16/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-3-14 Inspector D. Laubram Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made		

Supervisor's Signature _____ Date 8/3/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-3-14 Inspector D. LAUDRAN Building Number 827-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/3/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-3-14 Inspector D Lauream Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/3/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-3-14 Inspector O. LANDRUM Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 9/3/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-3-14 Inspector D. LANDRUM Building Number 817-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 9/3/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-4-14 Inspector D. LANDRUM Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 9/4/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-4-14 Inspector D. Langham Building Number 827-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 9/4/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-4-14 Inspector D Larsen Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 9/4/14

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-8-14 Inspector D. Jackrum Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/8/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-8-14 Inspector D. Lauzum Building Number 817-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/8/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-8-14 Inspector D. LAUDERMA Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items

	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made		

Supervisor's Signature _____ Date 10/8/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-9-14 Inspector D. Lawson Building Number 827-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/9/14

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-5-14 Inspector D. Hansen Building Number 827-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 11/5/14

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-5-14 Inspector D. Larsen Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 11/5/14

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-5-14 Inspector D. LANDRUM Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/5/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-5-14 Inspector D. LAVORUN Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	Cooling Tower
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/5/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-5-14 Inspector D. LAUBRUM Building Number 817-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/5/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-6-14 Inspector D. LANDRUM Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/6/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-6-14 Inspector D. LANDRUM Building Number 827-A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/6/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-6-14 Inspector D. Lawson Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), EPD.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/~~No~~	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/~~No~~	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/~~No~~	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/~~No~~	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/6/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Appendix C

Mechanical Room Network

Mechanical Equipment Discharge Effluent Monitoring for Buildings 806B and 827A, 827C, 827D, and 827E Mechanical Equipment Room Percolation Pit Inspection Forms

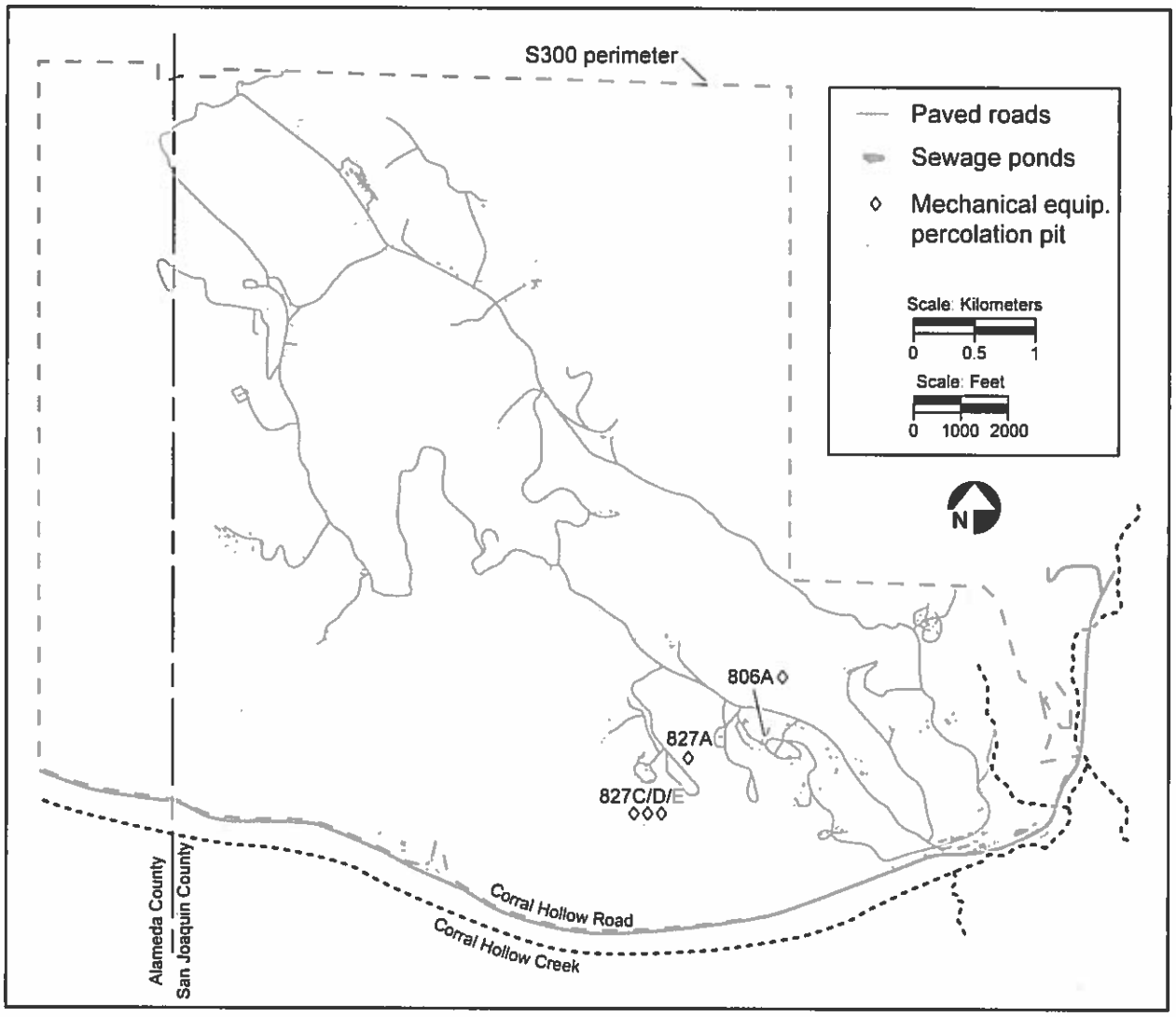

Figure C-1. Location of mechanical equipment wastewater percolation pits.

Table C-1. Site 300 mechanical equipment discharge effluent monitoring second semester 2014 anions data summary.

Well	Date	Sodium mg/L	Chloride mg/L	Nitrate (as NO3) mg/L	Sulfate mg/L	Fluoride mg/L
3-B806B-OW	May 8	220	88	<0.5	180	0.28
3-B806B-OW	May 8 DUP	230	88	<0.5	180	0.25
3-B806B-OW	Oct 9	220	86	<1	170	0.21
3-B827C-OW	May 8	380	300	<1	170	0.24
3-B827C-OW	Oct 7	370	120	<1	230	0.44
3-B827D-OW	May 7	380	130	0.55	320	0.17
3-B827D-OW	Oct 6	270	110	1.2	190	0.31
3-B827E-OW	May 7	240	96	<0.5	190	0.31
3-B827E-OW	Oct 6	310	120	1.4	230	0.34

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2014 metals data summary.

Analyte	Date	3-B806B-OW	3-B827A-OW	3-B827C-OW	3-B827C-OW DUP	3-B827D-OW
Aluminum (µg/L)	May 7	-	-	-	<50	<50
	May 8	<50	<50	<50	-	-
	Oct 6	-	-	-	110	<50
	Oct 7	-	-	<50	-	-
	Oct 9	<50	-	-	-	-
Arsenic (µg/L)	May 7	-	-	-	<2	<2
	May 8	<2	<4	<2	-	-
	Oct 6	-	-	-	<2	<2
	Oct 7	-	-	<2	-	-
	Oct 9	<2	-	-	-	-
Barium (µg/L)	May 7	-	-	-	<25	<25
	May 8	<25	<50	<25	-	-
	Oct 6	-	-	-	<25	<25
	Oct 7	-	-	<25	-	-
	Oct 9	<25	-	-	-	-
Boron (µg/L)	May 7	-	-	-	1500	1000
	May 8	890	930	930	-	-
	Oct 6	-	-	-	1100	1200
	Oct 7	-	-	1400	-	-
	Oct 9	960	-	-	-	-
Cadmium (µg/L)	May 7	-	-	-	<50	<50
	May 8	<50	<100	<50	-	-
	Oct 6	-	-	-	<50	<50
	Oct 7	-	-	<50	-	-
	Oct 9	<50	-	-	-	-
Calcium (µg/L)	May 7	-	-	-	15000	9800
	May 8	7500	7800	1900	-	-

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2014 metals data summary.

Analyte	Date	3-B806B-OW	3-B827A-OW	3-B827C-OW	3-B827C-OW DUP	3-B827D-OW
	Oct 6	-	-	-	2200	12000
	Oct 7	-	-	540	-	-
	Oct 9	8900	-	-	-	-
Chromium (µg/L)	May 7	-	-	-	<1	<1
	May 8	<1	<1	<1	-	-
	Oct 6	-	-	-	1.1	<1
	Oct 7	-	-	<1	-	-
	Oct 9	<1	-	-	-	-
Chromium (VI) (µg/L)	May 7	-	-	-	<1	<1
	May 8	<1	<1	<1	-	-
	Oct 6	-	-	-	<1	<1
	Oct 7	-	-	<1	-	-
	Oct 9	<1	-	-	-	-
Copper (µg/L)	May 7	-	-	-	83	40
	May 8	28	30	21	-	-
	Oct 6	-	-	-	36	9.5
	Oct 7	-	-	39	-	-
	Oct 9	26	-	-	-	-
Iron (µg/L)	May 7	-	-	-	570	600
	May 8	<100	<100	340	-	-
	Oct 6	-	-	-	690	110
	Oct 7	-	-	2600	-	-
	Oct 9	<100	-	-	-	-
Lead (µg/L)	May 7	-	-	-	<5	<5
	May 8	<5	<10	<5	-	-
	Oct 6	-	-	-	<5	<5
	Oct 7	-	-	<5	-	-

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2014 metals data summary.

Analyte	Date	3-B806B-OW	3-B827A-OW	3-B827C-OW	3-B827C-OW DUP	3-B827D-OW
	Oct 9	<5	-	-	-	-
Magnesium (µg/L)	May 7	-	-	-	<500	<500
	May 8	<500	<500	<500	-	-
	Oct 6	-	-	-	<500	<500
	Oct 7	-	-	<500	-	-
	Oct 9	<500	-	-	-	-
Manganese (µg/L)	May 7	-	-	-	<30	<30
	May 8	<30	<30	<30	-	-
	Oct 6	-	-	-	<30	<30
	Oct 7	-	-	<30	-	-
	Oct 9	<30	-	-	-	-
Mercury (µg/L)	May 7	-	-	-	<0.2	<0.2
	May 8	<0.2	<0.2	<0.2	-	-
	Oct 6	-	-	-	<0.2	<0.2
	Oct 7	-	-	<0.2	-	-
	Oct 9	<0.2	-	-	-	-
Molybdenum (µg/L)	May 7	-	-	-	30	<25
	May 8	<25	<25	<25	-	-
	Oct 6	-	-	-	<25	<25
	Oct 7	-	-	27	-	-
	Oct 9	<25	-	-	-	-
Nickel (µg/L)	May 7	-	-	-	<2	<2
	May 8	<2	<4	<2	-	-
	Oct 6	-	-	-	<2	<2
	Oct 7	-	-	<2	-	-
	Oct 9	<2	-	-	-	-
Potassium (µg/L)	May 7	-	-	-	58000	12000
	May 8	8100	8500	6500	-	-

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2014 metals data summary.

Analyte	Date	3-B806B-OW	3-B827A-OW	3-B827C-OW	3-B827C-OW DUP	3-B827D-OW
	Oct 6	-	-	-	32000	13000
	Oct 7	-	-	6400	-	-
	Oct 9	8400	-	-	-	-
Selenium (µg/L)	May 7	-	-	-	<2	<2
	May 8	<2	<4	<2	-	-
	Oct 6	-	-	-	<2	<2
	Oct 7	-	-	<2	-	-
	Oct 9	<2	-	-	-	-
Silver (µg/L)	May 7	-	-	-	<1	<1
	May 8	<10	<20	<10	-	-
	Oct 6	-	-	-	<10	<10
	Oct 7	-	-	<1	-	-
	Oct 9	<1	-	-	-	-
Vanadium (µg/L)	May 7	-	-	-	<20	<20
	May 8	<20	<40	<20	-	-
	Oct 6	-	-	-	<20	<20
	Oct 7	-	-	<20	-	-
	Oct 9	<20	-	-	-	-
Zinc (µg/L)	May 7	-	-	-	27	16
	May 8	<20	<40	<20	-	-
	Oct 6	-	-	-	<20	<20
	Oct 7	-	-	<20	-	-
	Oct 9	<20	-	-	-	-

Note:
– = Sampling not required, sampling was performed for that analyte on a different date.

Table C-3. Site 300 mechanical equipment discharge effluent monitoring 2014 physical data.

Well	Date	pH (Units)	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
3-B806B-OW	May 8	8.6	1120	210	720	20	0.15
3-B806B-OW	May 8 DUP	8.5	1060	210	700	21	<0.15
3-B806B-OW	Oct 9	8.6	1070	220	810	24	<0.15
3-B827C-OW	May 8	8.9	1760	240	1100	5.2	0.23
3-B827C-OW	Oct 7	9.6	1630	380	1000	1.4	0.76
3-B827D-OW	May 7	10.4	1970	380	1200	38	15
3-B827D-OW	Oct 6	9.0	1330	290	880	6.1	4.5
3-B827E-OW	May 7	9.0	1210	240	820	25	1.1
3-B827E-OW	Oct 6	9.3	1440	300	940	30	2.8

FIELD TRACKING FORM

Semi-Annual Site 300 Mechanical Equipment Room/Percolation Pit Discharge

Special Instructions: Should be sampled in early April and October.
See back of form for additional access information
** For 3-CT-PERC-01-OW Contact FPOC; Off-road travel

LAB	CoC#	Ship It #
BC Labs CtPerc	64688	169213
BE06	64710	189342

pH meter calibrated on: 10/7 & 10/9
Specific Conductance meter calibrated on: 10/7 & 10/9

Sample Date: 10/7/14 & 10/9/14

			Field Meas		BC Labs				Comments
Location Indentifier	Sample Time	Initials	pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	S3WETCHEM 1000mL Poly		
3-CT-PERC-01-OW**	1410	KB	9.15	1538 uS	1	1	1		827C Started at 0740. 76 130 ml Samples collected over a 6 Hour Time frame. Approx 6 Liters collected
3-B827C-01-OW	1355	KB	9.23	1320 uS	1	1	1		
3-B827D-01-OW				~~1538 uS~~	~~1~~	~~1~~	~~1~~	~~KB~~	CT-perc Started at 0750. 77 130 ml Samples collected over a 6 Hour Time Frame Approx 6 Liters collected
3-B827E-01-OW									
3-B806B-01-OW 10/9	1445	KB	8.71	922 uS	1	1	1		B06 Started at 0745. 86, 130 ml Samples collected over a 7 Hour Time frame. Approx 9 Liters collected
Duplicate of 3-CT-PERC-01-OW									
3-B9900-OW	1410	KB			1	1	1		

☑ Copy to Analyst, Rick Blake.

Revised 3/18/14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64710
Document Control #: 64710
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.05.04
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: MECHEQUIPMNTRMS
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B806B-01-OW	10/09/2014 14:45	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B806B-01-OW	10/09/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B806B-01-OW	10/09/2014 14:45	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B806B-01-OW	10/09/2014 14:45	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	

	Relinquished Signature	Company	Date	Time		Received Signature	Company	Date	Time
1	[illegible]	LLNL/EFA	10/9/2014	1530	2	[illegible]	BCLAB	10-9-14	1630
2					3				
3					4				
4					5				

Revision Printed: 07/30/2014/13/01/54

Signature Order - 1: Sampler, 2: Courier, 3: Lab, 4: Analyst, 5: DMT

FIELD TRACKING FORM

Semi-Annual Site 300 Mechanical Equipment Room/Percolation Pit Discharge

Special Instructions: Should be sampled in early April and October.
See back of form for additional access information
** For 3-CT-PERC-01-OW Contact FPOC; Off-road travel

LAB	CoC#	Ship It #
BC Labs	64688	169213

pH meter calibrated on: 10/7
Specific Conductance meter calibrated on: 10/7

Sample Date: 10/7/14

			Field Meas		BC Labs				Comments
Location Indentifier	Sample Time	Initials	pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	S3WETCHEM 1000mL Poly		B27C Started at 0740.76 130 ml Samples collected over a 6 Hour time frame. Approx 6 Liters collected CT-PERC Started at 0750.77 130 ml Samples collected over a 6 Hour time frame Approx 6 Liters collected
3-CT-PERC-01-OW**	1410	KB	9.15	1538 µS	1	1	1		
3-B827C-01-OW	1355	KB	9.23	1320 µS	1	1	1		
3-B827D-01-OW				~~1538 µS~~	~~1~~	~~1~~	~~1~~	KB	
3-B827E-01-OW									
3-B806B-01-OW									
Duplicate of 3-CT-PERC-01-OW									
3-B9900-OW	1410				1	1	1		

☑ Copy to Analyst, Rick Blake.

Revised 3/18/14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64688
Document Control #: 64688
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.05.04
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: MECHEQUIPMNTRMS
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B827C-01-OW	10/07/2014 13:55	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827C-01-OW	10/07/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827C-01-OW	10/07/2014 13:55	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827C-01-OW	10/07/2014 13:55	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B9900-01-OW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B9900-01-TW	10/07/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B9900-01-TW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B9900-01-TW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-CT-PERC-01-OW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-CT-PERC-01-OW	10/07/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-CT-PERC-01-OW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-CT-PERC-01-OW	10/07/2014 14:10	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [signature]	LLNL/EFA	10/7/2014	1520	2 [signature]	BC LAB	10-7-14	1630
2				3			
3				4			
4				5			

Revision Printed: 07/30/2014/13/01/54

Signature Order - 1: Sampler, 2: Courier, 3: Lab, 4: Analyst, 5: DMT

FIELD TRACKING FORM

Semi-Annual Site 300 Mechanical Equipment Room/Percolation Pit Discharge

Special Instructions: Should be sampled in early April and October.
See back of form for additional access information
** For 3-CT-PERC-01-OW Contact FPOC; Off-road travel

LAB	CoC#	Ship It #
BC Labs	64653	189168

pH meter calibrated on: 10/6

Specific Conductance meter calibrated on: 10/6

Sample Date: 10/6/14

			Field Meas		BC Labs				Comments
Location Indentifier	Sample Time	Initials	pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	S3WETCHEM 1000mL Poly		827E Started at 0735. 76, 130m1 Samples collected over an 6 Hour Time Frame. Approx 8 Liters Collected 827D Started at 0745. 78, 130m Samples collected over an 6 Hour time frame. Approx 4 Liters Collected
3-CT-PERC-01-OW**									
3-B827C-01-OW									
3-B827D-01-OW	1410	AS	9.17	1142 uS	1	1	1		
3-B827E-01-OW	1350	AS	9.43	1165 uS	1	1	1		
3-B806B-01-OW									
Duplicate of 3-CT-PERC-01-OW									
3-B9900-OW									

☑ Copy to Analyst, Rick Blake.

Revised 3/18/14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 64653
Document Control #: 64653
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39355
PCI Task #: 1.03.02.07.05.04
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: MECHEQUIPMNTRMS
LLNL Acct #: 3297-47
Release #: UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B827D-01-OW	10/04/2014 14:10	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827D-01-OW	10/04/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827D-01-OW	10/04/2014 14:10	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827D-01-OW	10/04/2014 14:10	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B827E-01-OW	10/04/2014 13:50	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827E-01-OW	10/04/2014 00:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827E-01-OW	10/04/2014 13:50	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827E-01-OW	10/04/2014 13:50	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 [illegible]	LLNL/EFA	10/6/2014		2 Tony Bogan	BCLAB	10-6-14	1630
2				3			
3				4			
4				5			

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7·1·14 Inspector Patrick J. Gallagher Building Number 827A - CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made		

Supervisor's Signature [signature] Date 7/1/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7·1·14 Inspector Patrick J. Gallagher Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 7/1/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7·1·14 Inspector Patrick J. Gallagher Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 7/1/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7·1·14 Inspector Patrick J. Gallagher Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 7/1/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7/29/2014 Inspector MARK KRAUHS Building Number 806 B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates 7/29/14 Date 7/28/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-5-14 Inspector Patrick J. Gallagher Building Number 827A-CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/6/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8.5.14 Inspector Patrick J. Gallagher Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/6/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8·5·14 Inspector Patrick J. Gallagher Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/6/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8·5·14 Inspector Patrick J. Gallagher Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/6/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/26/2014 Inspector Mark Krauts Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 8/26/14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9/3/14 Inspector Nicole Grimsley Building Number 827A-CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 9-3-14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9/3/14 Inspector Nicole Grimsley Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 9-3-14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9/3/14 Inspector Nicole Grimsley Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. McLaughlin Date 9-3-14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9/3/14 Inspector Nicole Grimsley Building Number 827 E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
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4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 9-3-14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9/29/2014 Inspector MARK KRAUHS Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Baste Date 9/29/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/8/14 Inspector Nicole Grimsley Building Number 827A-CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10-8-14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/8/14 Inspector Nicole Grimsley Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10-8-14

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W

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/8/14 Inspector Nicole Grimsley Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10-8-14

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/29/14 Inspector TODD WEST Building Number 806 B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 10/30/14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

WL 11/3/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/5/14 Inspector Nicole Grimsley Building Number 827A-CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. McLaughlin Date 11.5.14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/5/14 Inspector Nicole Grimsley Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 11-5-14

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WChet 4/5/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/5/14 Inspector Nicole Grimsley Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 11-5-14

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

11/5/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/5/14 Inspector Nicole Grimsley Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 11-5-14

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[signature] 11/5/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/3/14 Inspector Nicole Grimsley Building Number 827A-CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 12·3·14

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12/3/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/3/14 Inspector Nicole Grimsley Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 12·3·14

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12/3

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/3/14 Inspector Nicole Grimsley Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12·3·14

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[signature] 12/3/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/3/14 Inspector Nicole Grimsley Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made		

Supervisor's Signature [signature] Date 12-3-14

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[signature] 12/3/14

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-1-14 Inspector TODD WEST Building Number 806

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Allen Grayson, WAMA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	~~Yes~~/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 12/1/14

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Environmental Functional Area, **Lawrence Livermore National Laboratory**
P.O. Box 808, L-627, Livermore, California 94551