Olympus Technical Services, Inc.

July 11, 2024

William Bergum
Montana Department of Environmental Quality
PO Box 200901
Helena, MT 59620-0901

Re: Groundwater Monitoring Work Plan
Town Pump Conrad, 215 North Main Street, Conrad, Montana
Facility ID# 37-08692; Release# 1277; WPID# 34872; Olympus WO# A1537

Dear Mr. Bergum:

Olympus Technical Services Inc. (Olympus) is presenting this groundwater monitoring work plan for additional environmental investigation at the above referenced facility (Site) on behalf of Town Pump of Conrad, Montana. This work plan is presented in response to a request by the Montana Department of Environmental Quality (DEQ), in a letter dated June 4, 2024, for additional groundwater monitoring at the Facility.

Release History

In July 1992, 2,300 cubic yards of petroleum-impacted soil and two abandoned underground storage tanks (USTs) were discovered and removed from the Site following a release (#1277) reported during the installation of new fuel pumps. Soil samples were collected from the walls and floor of the excavation and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX). Analyte concentrations in several samples exceeded Montana Department of Health and Environmental Services (now the Montana Department of Environmental Quality - DEQ) action levels for contaminated soils, prompting the need for further action at the Site. Olympus (then Olympus Environmental, Inc.) conducted a subsurface investigation in December 1992. A total of five borings were drilled to evaluate the lateral extent of Site contamination. Some soil samples from the borings exceeded their respective action levels for BTEX. Two groundwater monitoring wells were constructed. At the time of construction, groundwater samples collected from one well (the other well was dry at the time of installation) showed no measurable concentrations of hydrocarbon analytes. Wells were monitored until 1994 when the Site was recommended for closure based on low BTEX levels in the groundwater which posed no threat to human health or the environment. The Site was not closed at that time.

During tank installation activities at the Site on September 14, 1999, approximately 3,800 gallons of groundwater contaminated with an unknown source of diesel fuel flowed from an adjacent UST basin into the excavation area (release #3808). Contaminated water was removed from the pit, the pit was backfilled, and the new UST basin was relocated.

A remedial investigation was requested by DEQ, at which point Town Pump contracted Integrated Geosciences Inc. (IGI) to perform environmental consulting services. Eight soil borings were drilled at the Site and four borings were subsequently completed as monitoring wells. Groundwater samples contained low concentrations of petroleum hydrocarbons; however,

no soil samples had hydrocarbon constituents that exceeded DEQ Tier 1 Subsurface Soil Risk Based Screening Levels (RBSLs). Release # 3808 was closed by DEQ in October of 2003.

IGI continued to conduct groundwater monitoring for release #1277 until 2005, when Town Pump contracted Olympus to provide Site environmental consulting services.

On March 23, 2005, a 32-gallon surface release (#4394) of diesel occurred at the Site. Groundwater monitoring was conducted in 2006 at well M6. Based on the non-detect results from the sampling event, release #4394 was submitted for closure. Release #4394 was officially closed by DEQ in October of 2011.

Olympus conducted groundwater monitoring at the Site in May of 2012. During the investigation, Olympus personnel discovered that two wells were destroyed (M-2 and MW-5) and three wells (MW-1, MW-3, and MW-4) were unable to be located. VPH and EPH analyte concentrations for both of the wells that were sampled were less than laboratory reporting limits.

In response to a request for closure, DEQ issued a Denial of Closure and Request for Additional Corrective Action in a letter dated January 31, 2014. The scope of work requested by DEQ included properly abandoning well M-2 and advancing one soil boring directly adjacent to the location of well M-2, sampling the boring at the zone of maximum detected contamination, completing the boring as a monitoring well, and sampling the groundwater in the new well for field parameters and VPH and EPH.

Based on the results of the 2014 investigation and Olympus' recommendations, DEQ issued a work plan request for additional groundwater monitoring. Field activities took place in December 2014 and May 2015. Petroleum analyte concentrations in monitoring well MW-2R during both monitoring events were the highest measured at the Site. Olympus recommended continued semi-annual groundwater monitoring at the Site to further evaluate petroleum contamination trends.

Groundwater monitoring was conducted under high and low groundwater conditions in 2019 and 2021. Benzene and C5-C8 aliphatics impacts were above the human health standard (HHS) and risk-based screening level (RBSL), respectively, in well MW-2R.

In October 2023, seven monitoring wells were installed at the Site to attempt to delineate the extent of petroleum impacts in soil at the Site. Soil exceeded the leaching to groundwater RBSLs for benzene, ethylbenzene, and C9-C10 aromatics in borings MW-7, MW-8, and MW-9 located in the vicinity of MW-2R. C5-C8 aliphatics and C9-C12 aliphatics exceeded the direct contact construction soil RBSLs in samples collected from borings MW-7 and MW-8, but all samples were below Tier 2 direct contact construction RBSLs. MW-1, which had not been located since 2012, was located during the soil boring investigation, assessed for damage, and redeveloped.

In a letter dated June 4, 2024, DEQ requested semiannual groundwater monitoring for the newly installed wells at the Site. This work plan presents a detailed scope of work and cost estimate for groundwater monitoring at the Site.

Site Conditions

Figure 1 is a regional topographic map showing the location of the Site within the town of Conrad. Conrad, and the Site, is underlain by the Kevin Member of the Marias River Formation.

This upper cretaceous formation is characterized by medium-dark-gray to brownish gray, calcareous, fissile shale (Lopez, 2002.) The Pondera ditch runs directly adjacent to the Site. According to Site investigations for release #1277 performed by Olympus Environmental Inc., "the presence or absence of water in the Pondera Ditch, located at the south end of the Site, appears to play an important role in controlling the water table elevation. In spring and summer, when the ditch contains water, the clay overburden becomes fully saturated and charges thin, laterally- discontinuous lenses of sand or fill material. The overburden at the Site consists of a thick, homogenous unit of dark brown silty clay. These soils, when partially saturated by either infiltration of rainwater or recharge from the Pondera Ditch, will produce small volumes of water; however, they are characterized by a very low permeability and specific yield," (Olympus Environmental Inc., 1994). Historically, the depth to groundwater has been measured as low as 2.41 feet below ground surface (BGS) and groundwater flow has been to the southeast. When Ponderosa Ditch contains water groundwater flow has been recorded to the north.

Scope of Work

Groundwater Monitoring

Two groundwater monitoring events will be conducted at the Site during seasonal high and low groundwater conditions (October/November 2024 and May/June 2025). Groundwater monitoring will include the measurement of static water levels (SWLs) and the collection of groundwater samples from all nine Site wells (MW-1, MW-2R, MW-6, MW-7, MW-8, MW-9, MW-10, MW-13, and MW-14) for laboratory analysis, as well as one field duplicate. SWLs will be measured using an electronic water level probe to develop a groundwater potentiometric map of the Site.

The first groundwater monitoring event will include sampling intrinsic biodegradation indicators (IBIs) in all monitoring wells. The second groundwater monitoring event will include sampling IBIs for wells with VPH or EPH exceedances detected during the first monitoring event. The analytical results will be submitted to DEQ following receipt of the laboratory reports after each monitoring event; in an interim data submittal following the first event and a groundwater monitoring report following the second event.

Groundwater samples will be collected from Site monitoring wells in accordance with Olympus' standard operating procedures for low flow sampling. Groundwater will be purged from wells using a peristaltic pump operating in general accordance with DEQ groundwater Sampling Guidance. Groundwater parameters of dissolved oxygen (DO), specific conductivity (SC), temperature, pH, oxidation reduction potential (ORP) and turbidity will be measured during purging, and measurements will be recorded on groundwater sample information forms which will be included in a summary report. Upon parameter stabilization, groundwater samples will be collected into laboratory-supplied containers, preserved, stored on ice, and submitted under chain-of-custody procedure to Energy Laboratories (Energy) in Helena, Montana, for analysis of volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) screen. Groundwater samples with EPH screen concentrations that exceed 1,000 micrograms per liter may be further analyzed for EPH fractions based on a review of the analytical data. IBIs consisting of sulfates, nitrate/nitrites, dissolved ferrous iron, and methane will be analyzed during each groundwater monitoring event. IBI samples will be shipped overnight from Great Falls to the laboratory after the first day of sampling each event to ensure all samples are received and processed within the hold time.

Quality assurance/quality control (QA/QC) procedures will be followed for the provision of reliable, accurate, and defensible data. QA/QC samples will be collected into laboratory supplied containers, stored on ice, and submitted to Energy under chain-of-custody procedure. One duplicate groundwater sample will be collected to test for precision related to sampling methods. The QA/QC sample will be analyzed for VPH and EPH screen.

Release Closure Plan

A Release Closure Plan (RCP) was developed for the Site in 2019 and updated in 2023. The RCP includes discussion and results of investigative, post-investigative, and corrective action work to date. The RCP will be updated to reflect current Site conditions following groundwater monitoring. The Site summary, remedial investigation results, conceptual Site model and evaluation of exposure pathways, evaluation of cleanup alternatives and costs for compliance monitoring will be re-evaluated and updated as appropriate.

Interim Data Submittal

An interim data submittal (IDS) will be prepared following the first groundwater monitoring event. The interim data submittal will be prepared in accordance with the DEQ *Montana Groundwater Monitoring Work Plan and Report Guidance for Petroleum Releases,* and will include tabulated analytical results, figures showing the results, potentiometric maps of the groundwater surface, and the laboratory analytical report with a data validation summary. The IDS will be submitted within 60 Days of receipt of the laboratory analytical report.

Groundwater Monitoring Report

Olympus will present the results for the groundwater monitoring events in one Groundwater Monitoring Report. The summary report will include a site history, discussion of the groundwater monitoring results, site maps, tabulated analytical data, groundwater sample information forms, analytical laboratory reports, data validation summary, time trend graphs, and conclusions and recommendations based on the monitoring results.

Cost Estimate

Work Plan development, mobilization, groundwater monitoring and sample collection, and reporting will be invoiced at unit cost rates approved by the Petroleum Tank Release Compensation Board (PTRCB). Project management will be invoiced on a time and materials basis. A unit cost worksheet for groundwater monitoring is attached to this work plan.

Schedule

Site work will commence upon approval of the scope of work by DEQ and obligation of funds by the PTRCB. Olympus anticipates that Site work will commence in October 2024. Please contact me at 406-443-3087 should you have any questions regarding the work plan or the project.

Sincerely,

Olympus Technical Services, Inc.

Diane Tackett, PG

Project Geologist

Attachments:
Figure 1: Site Topographic Map
Figure 2: Site Aerial Map
Groundwater Monitoring Unit Cost Work Sheet

cc: Paul Townsend, Town Pump, P.O. Box 6000, Butte, MT 59702

Attachments

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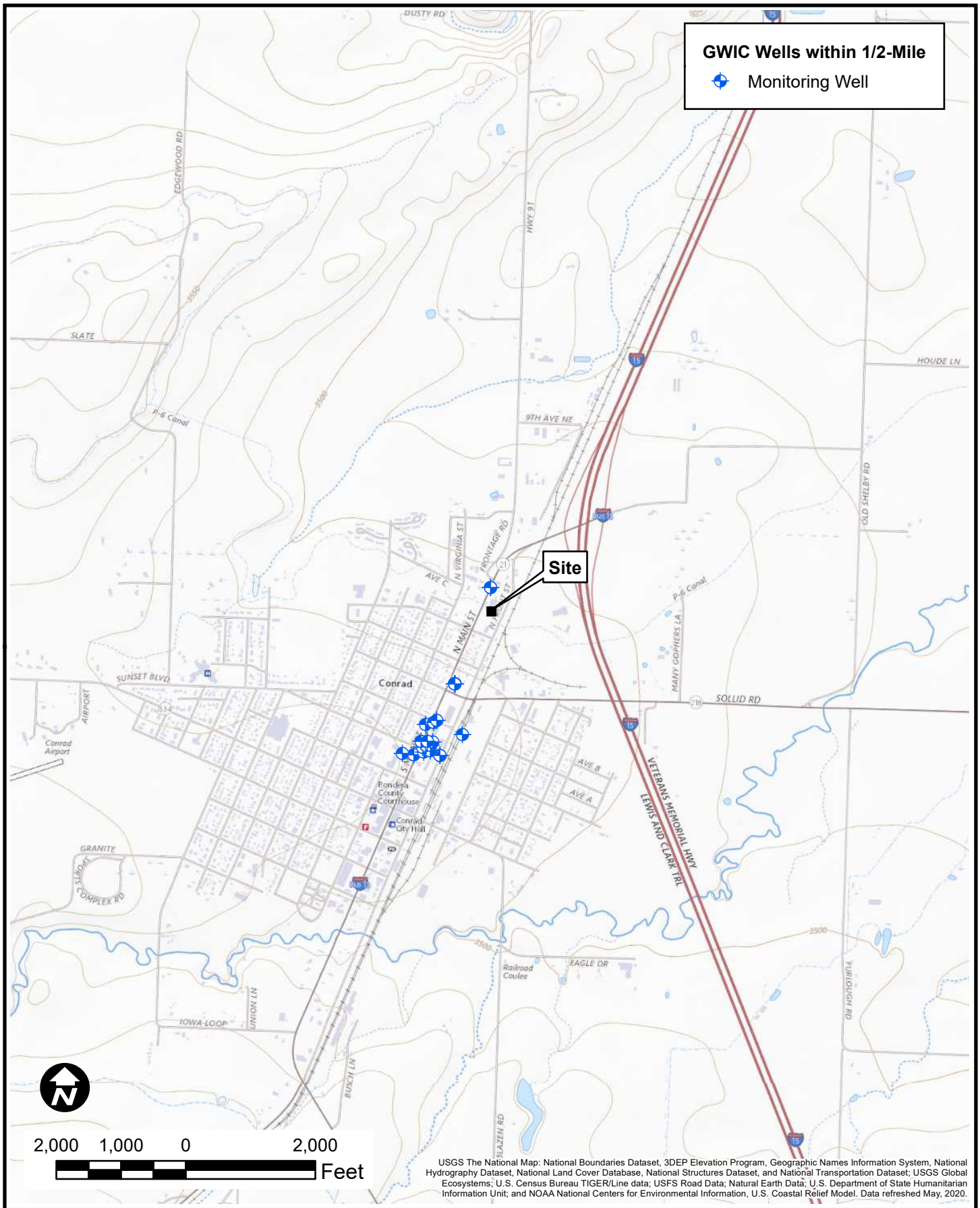
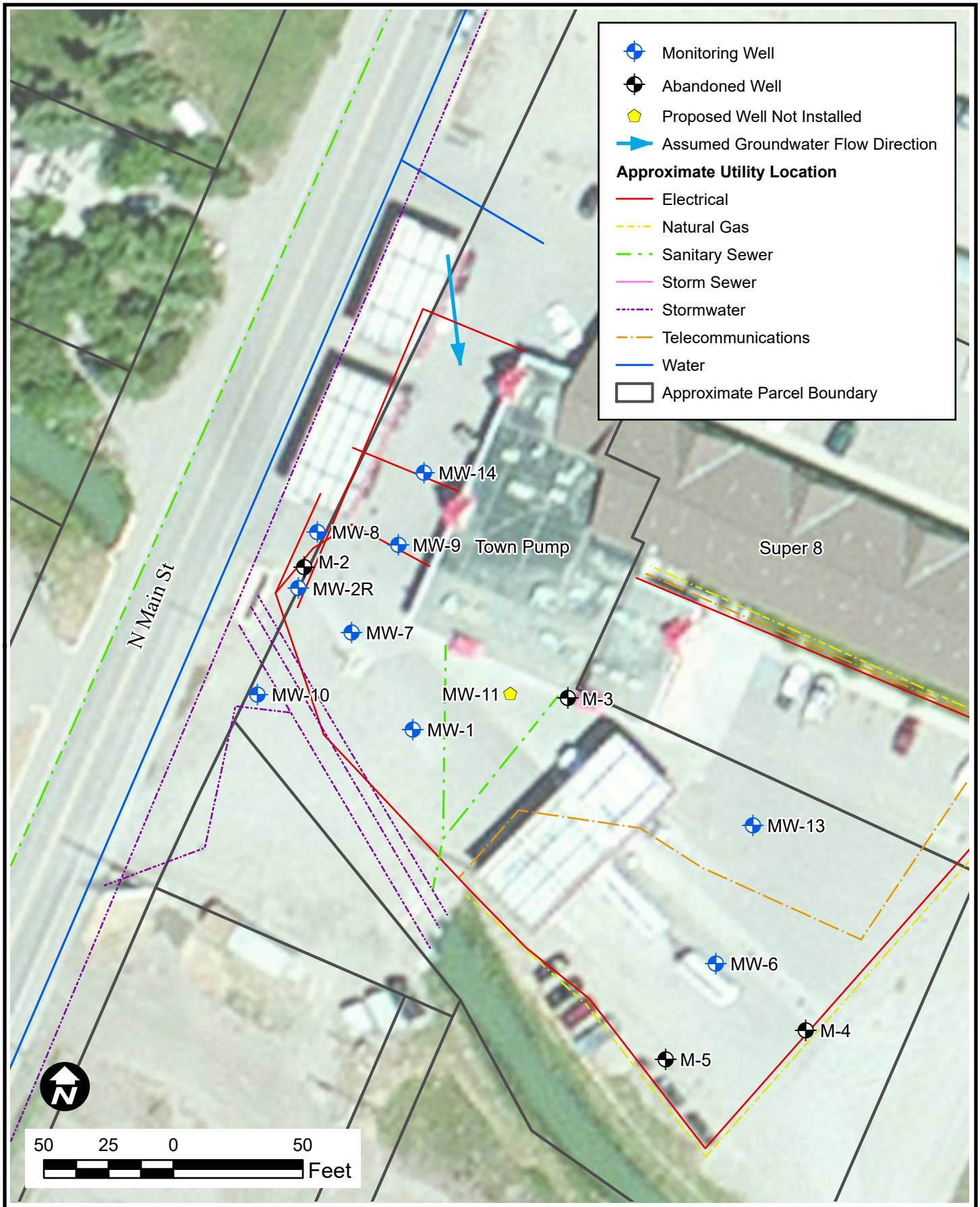


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.

Olympus Technical Services, Inc.	Site Topographic Map Town Pump Conrad, Montana	FIGURE 1

A1537_Topo.mxd



Olympus Technical Services, Inc.

Site Aerial
Town Pump
Conrad, Montana

FIGURE 2

A1537_SiteAerial.mxd

Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community