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5. CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Based on a review of results from the June 2023 site visit and the August 2023 groundwater sampling and inspection event, the following conclusions can made:

- No evidence of unauthorized site activity or land use was found.

- Monitoring well MW-103 is still damaged; MW-111S and MW-111I were not accessible nor located.

- Based on available data, groundwater elevations and flow direction are consistent with historical findings.

- There were no observed SVOC exceedances. MW-102I was the only monitoring well to have any VOC concentrations (*cis*-1,2-dichloroethylene) exceed applicable SCGs. Metal concentrations of arsenic, iron, lead, magnesium, and manganese in several wells exceed applicable SCGs but are consistent or lower than historical results and likely reflect background concentrations. No or low detections of VOC/SVOC concentrations in groundwater suggest that the remedy was successful in removing any further contaminant sources from the area and reducing the availability of contaminants to be leached into groundwater.

- PFOA/PFOS concentrations exceed applicable Human Health criteria in two wells, MW-101 and MW-115S, located in the East Landfill Cell. Compared to the 2022 sampling event and 2022 PRR, the same number of wells had detections of PFOA and PFOS, with similar exceedance levels.

- ICs continue to be protective of human health and the environment.

5.2 RECOMMENDATIONS

Based on the observed condition of the Site from the June 2023 site visit, and the results of the August 2023 groundwater sampling and inspection event, the following actions are recommended for the Town of Carroll Landfill Site:

- Annual site inspections should continue to verify the ICs and ECs are in-place and effective. A site inspection report should also be completed following the inspection event. Severe weather event inspections (and associated reports) should be completed as needed.

- Further effort should be given to locating missing monitoring wells, confirming if they are viable for sampling or were destroyed, and determining if restoration is viable.

- If accessibility to MW-111S and MW-111I continues to pose safety risk, consider implementing an alternative access point to by-pass crossing bodies of water. If an alternative access point is not viable, MW-118 and MW-112 provides sufficient information for the northwest and north ends of the landfill in place of those wells.

- Due to difficulty locating in the past; MW-13 should remain flagged to make it easier to find during future events at the Site. Field efforts to remove obstruction or evaluate the condition of the well below ground surface should be made.

- Annual sampling events should continue to be performed according to the SMP (EEEG 2020b) to monitor the remediation of the site contaminants and PFAS.

6. FUTURE SITE ACTIVITIES

Based on the recommendations in Section 5, the following site management activities will be completed during the next PRR reporting period (May 2023 to May 2024):

- Site inspections – Annual (planned for March 2024)
- Severe Weather Event Inspection, as needed
- Groundwater – Annual (planned for March 2024)
- PRR – Annual (planned for August 2024)
- Coordination with future new owner, ESG Energy Holdings, LLC, to ensure site management and field activities continue.

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7. REFERENCES

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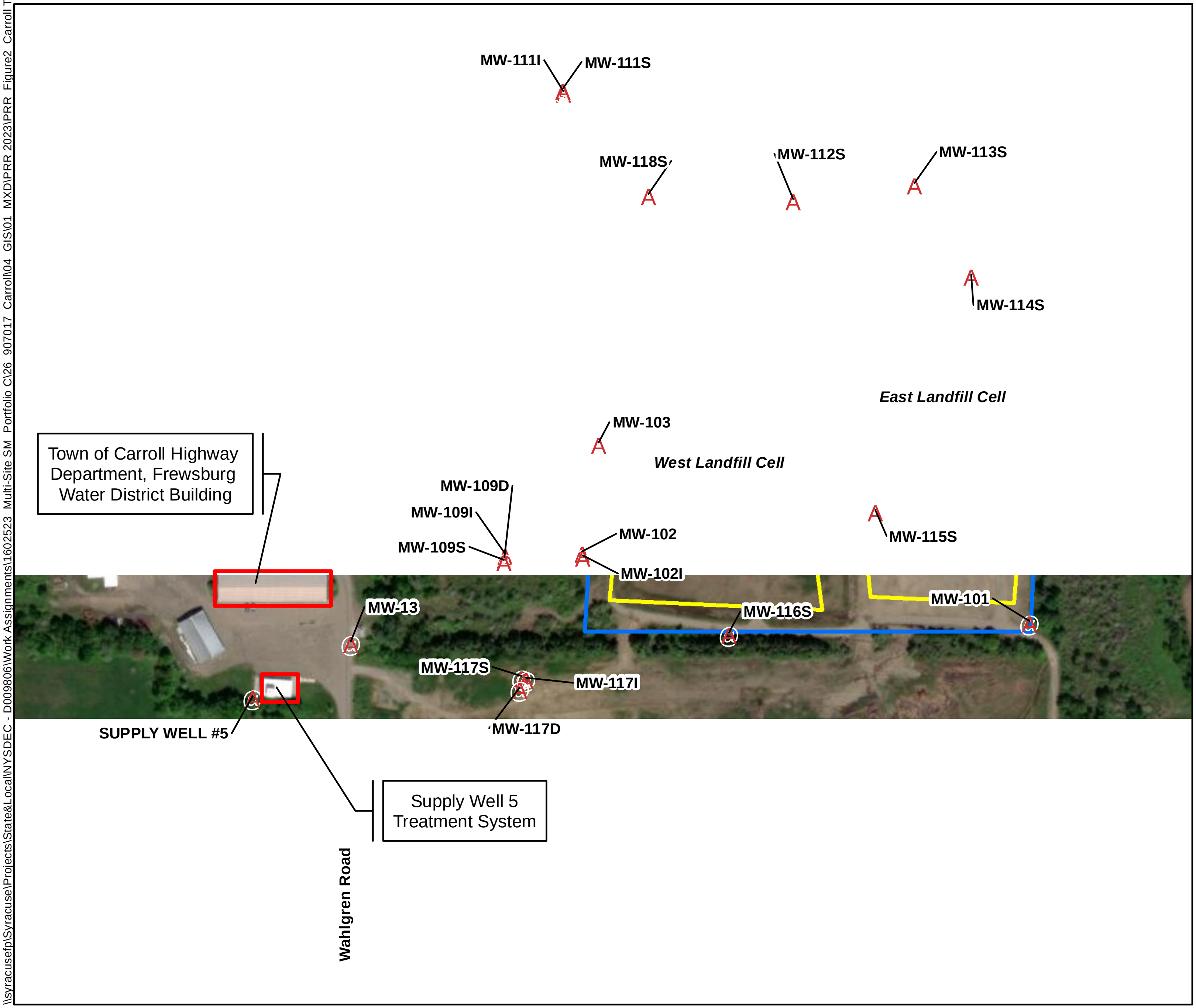
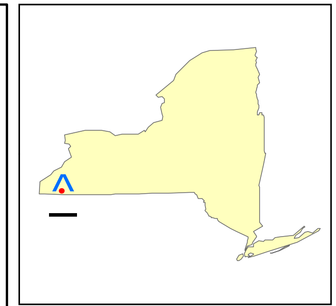


VICINITY MAP



Legend

- Site Boundary (Former Landfill Area)
- Landfill Cells
- Monitoring Well

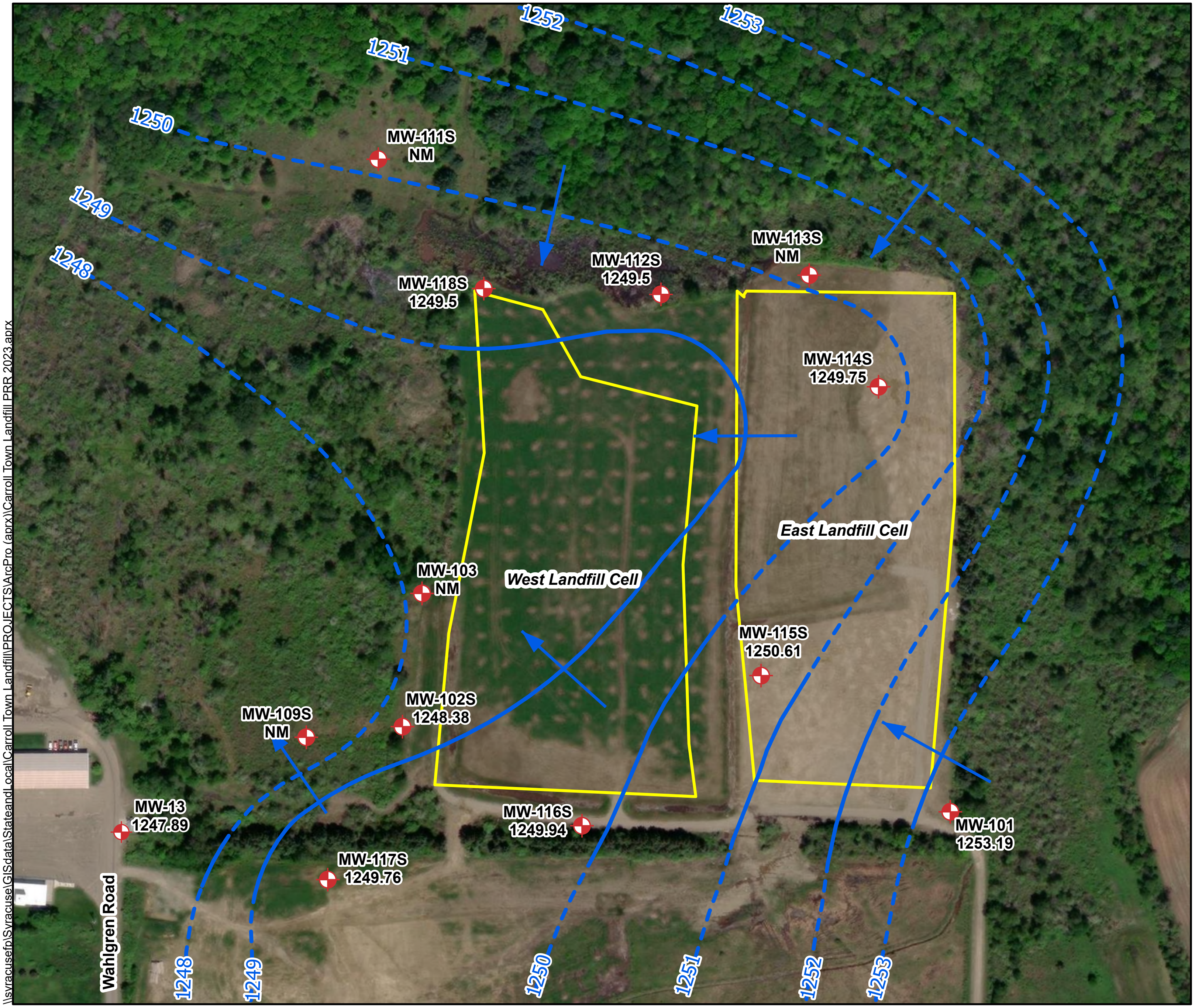
0 100 200 400 600

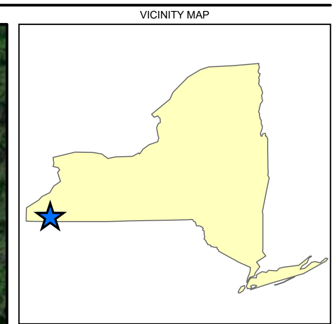
Feet

1 inch = 320 feet

Map Date: 10/15/2023
Projection: UTM, NAD 83, Zone 18N

Figure 2
Site Layout
Periodic Review Report
Carroll Town Landfill
Carroll, Chautauqua County, New York





Landfill Cells

Shallow Monitoring Well

(1249.5) Groundwater Elevation at Well

Shallow Groundwater Contours

Estimated Shallow Groundwater Contour

Groundwater Flow Direction

Note:

Elevation values are reported in feet above mean sea level

NM= Not Measured. Refer to Table 1 of the Periodic Review Report for Details

Groundwater Elevation Contour Interval = 1.0 ft

N

0 125 250 500

Feet

1:3,133

Map Date: 6/5/2024

Projection: UTM, NAD 83, Zone 18N

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Figure 3

Shallow Groundwater Contours (August 2023)

Periodic Review Report

Carroll Town Landfill

Carroll, Chautauqua County, New York

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Appendix A

Institutional Control/Engineering Control Certification Form

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Appendix B

Daily Field Reports

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Appendix C

Field Log

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Appendix D

Site Inspection Report

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Appendix E

Groundwater Sampling Purge Forms

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Appendix F

Laboratory Analytical Report

Appendix G

Data Validation Report

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