

Milwaukee River Basin Bacteria TMDL Study Drainage Memo

Final Inventory and Map of Possible Sources Impacting the WisDOT TS4 for the Entire Milwaukee River Watershed

Prepared for:



WisDOT

4822 Madison Yards Way
P.O. Box 7965
Madison, WI 53707-7965

Prepared by:

AECOM

Lu Chen
Emma Connell, EIT

Reviewed by:
John Voorhees

AECOM
1555 N River Center Dr,
Milwaukee, WI 53212

aecom.com

September 2025
WisDOT Project Number 0656-50-08
AECOM Project Number 60755445

Table of Contents

Study Overview.....	2
1. GIS Map Development.....	2
2. Desktop Analysis.....	7
3. Field Investigation	8
4. Conclusion	8
Appendix 1: WPDES Permit No. WI-S066800-2, Section 3.5.....	10
Appendix 2: Blank Inspection Form	11
Appendix 3: Pilot Study Maps	13
Appendix 4: Desktop Analysis Spreadsheets	16
Appendix 5: Completed Investigation Forms	40
Appendix 5a: Pilot Study Completed Investigation Forms.....	41
Appendix 5b: Final Project Completed Investigation Forms	115
Appendix 6: Cost Analysis.....	116

Study Overview

The Wisconsin Department of Transportation (WisDOT) is required by WDNR WPDES General Permit No. WI-S066800-2, Transportation Separate Storm Sewer System (TS4) Permit Section 3.5.1 (see **Appendix 1**), to create a map and inventory of possible bacteria (fecal coliform and E. coli) sources in the Milwaukee River Total Maximum Daily Load (TMDL) watershed that drain to or are adjacent to WisDOT owned highways, excluding connecting highways. Further, the TS4 requires WisDOT to develop a bacteria elimination plan if sources are found.

WisDOT is using a step-by-step approach to meet these requirements. WisDOT's first step was to direct AECOM, using MC 0697-03-34, WO 02, to develop a process and tools to identify possible bacteria sources in the Milwaukee River watershed as a pilot study. The Pilot Study area included 80 of the 314 miles (approximately one-quarter) of WisDOT owned highways within the watershed area. The Pilot Study included tracking the time and effort to perform the work.

Upon successful completion of the Pilot Study, AECOM analyzed and inventoried the remaining 234 miles of highway in the spring of 2025. In this report, the remaining miles of the analysis will be referred to as the "Final Project". The procedures developed during the Pilot Study and then used for the Final Project are the following:

1. Develop a GIS map of the Milwaukee River TMDL watershed showing WisDOT roadways.
2. Perform a desktop analysis to locate possible bacteria sources.
3. Develop a spreadsheet inventory of these possible bacteria sources.
4. Perform a field investigation of the selected possible bacteria sources, using the investigation form to document findings (see **Appendix 2**).
5. List the level of effort and costs to do the work.
6. Report the findings.

1. GIS Map Development

The GIS maps included in this study were created using ArcGIS Pro version 3.2.0. The maps show the Milwaukee River TMDL watershed limits, WisDOT highways, some location elements, portions of highways classified into rural, suburban and urban studied in the pilot, and potential bacteria sources needing field investigation.

The maps from the Pilot Study were updated during the summer of 2025 to include the additional 234 miles in the Final Project. The maps showing just the highway sections studied during the Pilot Study are in **Appendix 3**.

The steps below were taken to select the 80 miles for the Pilot Study, to capture a snapshot of the variety of highway types in the watershed area.

1. Select highway segments in rural, suburban and urban areas.
2. Keep as many segments as possible contiguous to make the desktop analysis and site selection process more efficient and reduce travel time for field investigations.
3. Add unique highway sections such as those through small towns and by any Concentrated Animal Feeding Operations (CAFOs)

Table 1: Breakdown of miles studied in the Pilot Study and Final Project.

	Pilot Study (80 miles)	Final Project (234 miles)	Total Mileage
Rural	28.6	125.6	154.2
Suburban	26.9	59.3	86.2
Urban	24.1	49.8	73.9
Total	79.6	234.7	314.3

Figure 1. Highway types within the Milwaukee River TMDL watershed drainage basin.

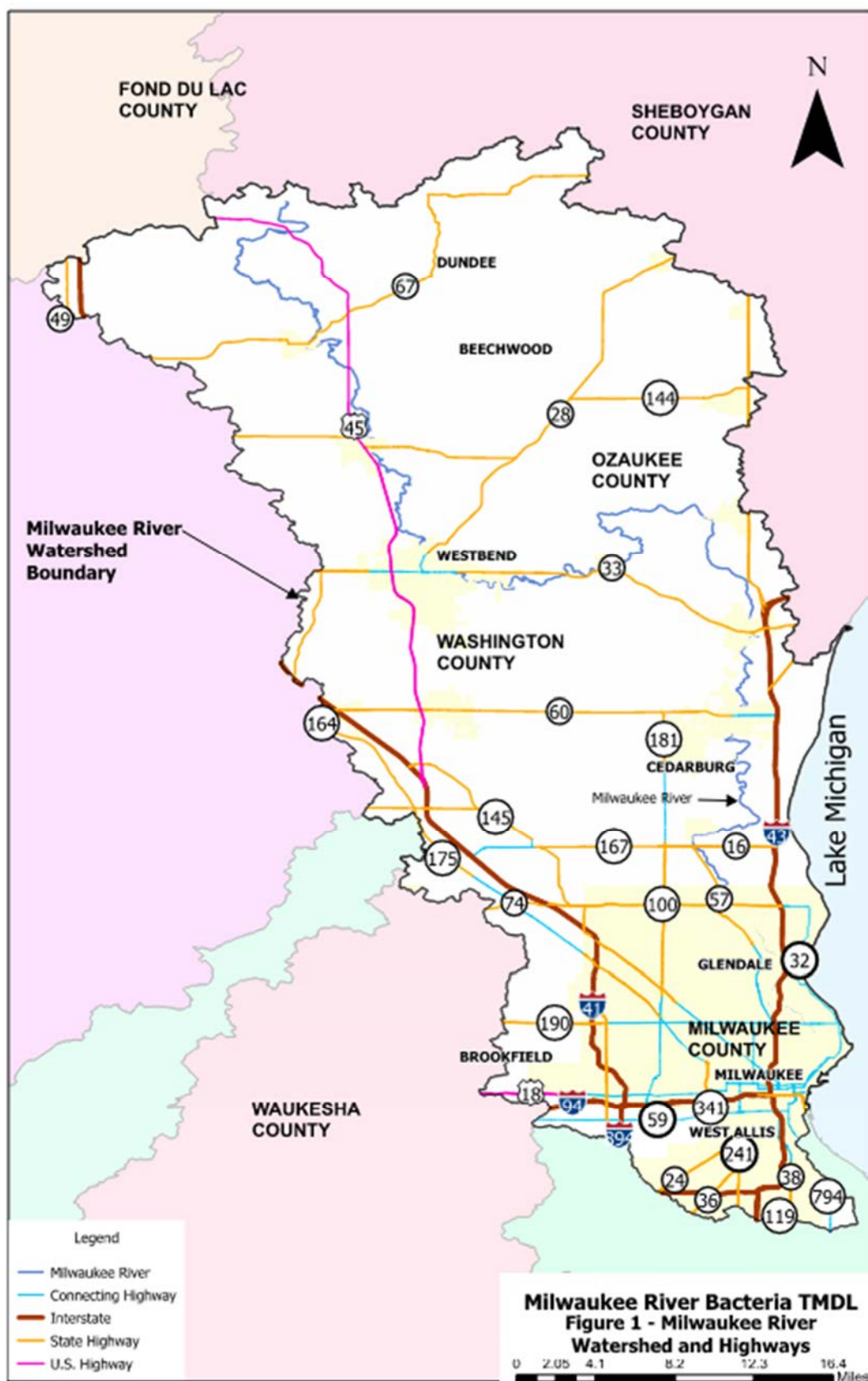


Figure 2. Milwaukee River TMDL drainage basin showing the roadway classifications and all the possible bacteria sources identified during the desktop analysis.

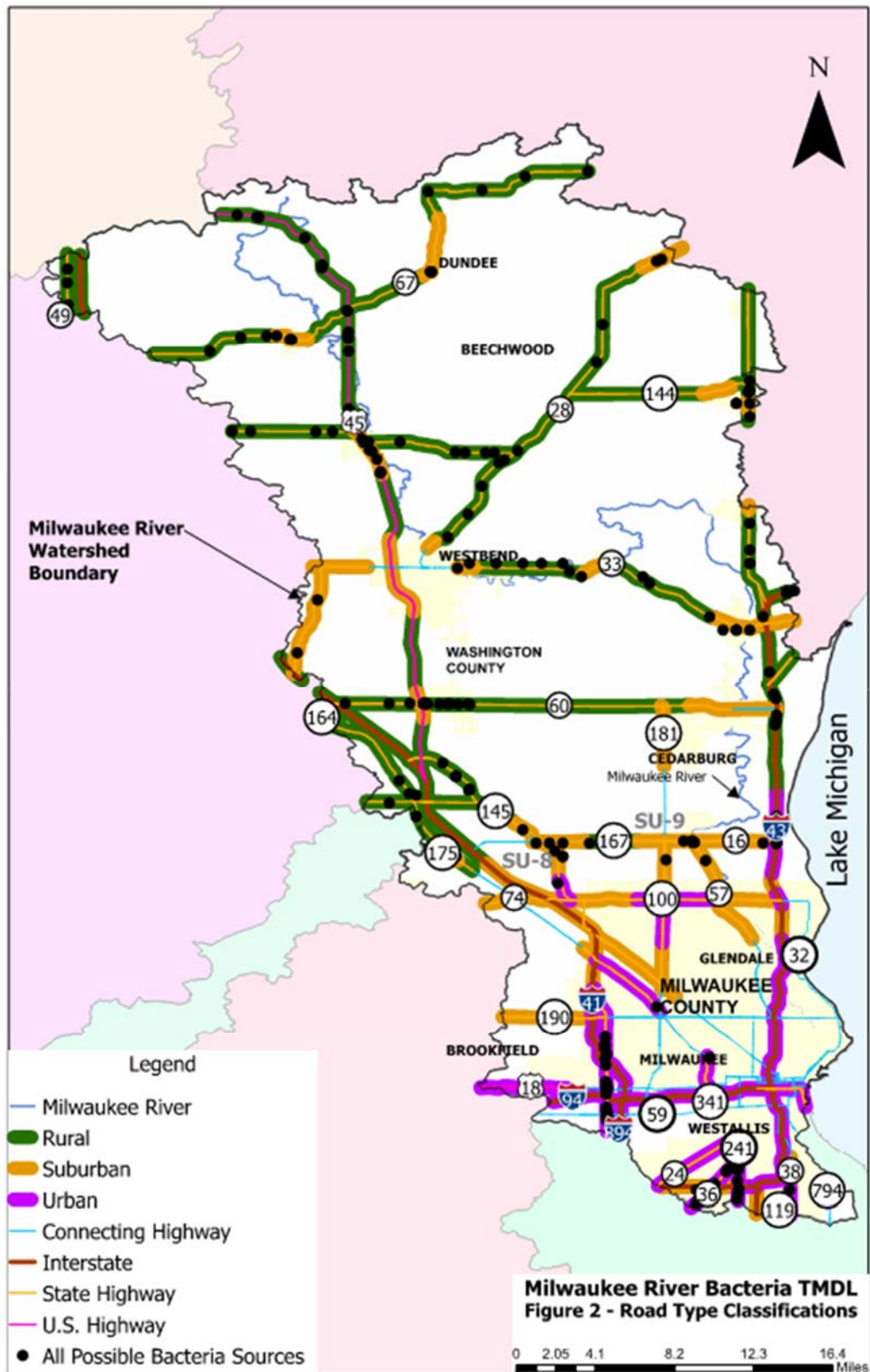
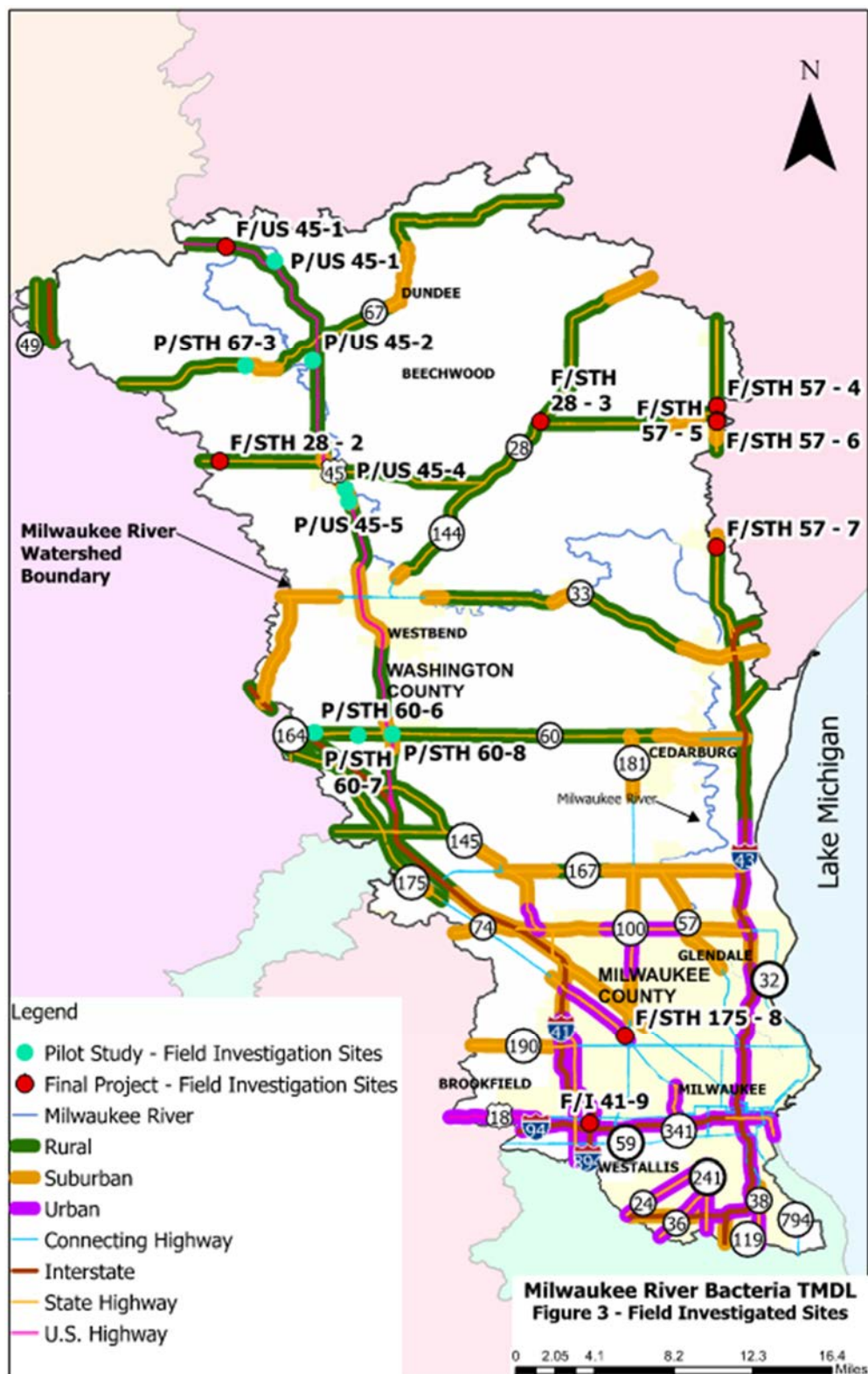


Figure 3. Field investigation sites labeled with the highway name (i.e. U.S. Highway 45 is US-45) along with the corresponding I.D. number. These labels correspond to the labels in **Appendix 4c**.



2. Desktop Analysis

A desktop mapping and viewing analysis was conducted to locate possible bacteria sources along WisDOT owned highways. Using Google Maps aerial imagery and street view options, AECOM searched for any areas found in the possible bacteria sources list shown below that were adjacent to the highway. If a possible bacteria source was identified, it was cataloged in the spreadsheet inventory. Further investigation was done using Google Street View and topographic maps to determine if the site drained to the highway right-of-way (ROW). If the site did drain to the highway ROW, it was flagged for field investigation.

Possible Bacteria Sources

- Sanitary sewer overflow locations
- Livestock housed or raised adjacent to the highway right-of-way
- Manure storage sites
- Zoos
- Kennels
- Animal breeders
- Pet stores
- Dog training facilities
- Waste hauling
- Storage and transfer facilities
- Areas that attract congregations of nuisance urban birds and wildlife
- Known or suspected properties with inadequate food or organic waste handling or storage
- Composting sites or facilities
- CAFOs and barns immediately adjacent to the highway
- Urban parks
- Wet detention ponds
- The Milwaukee County Zoo
- Dead animal transfer locations
- Known or suspected areas with improper human sanitation use
- Fast food restaurants
- Any other sources that the permittee of the DNR has reason to believe are discharging bacteria to the highway right-of-way (none were forwarded to WisDOT by the DNR).

Develop Spreadsheet Inventory

The desktop analysis spreadsheet used in the Pilot Study was amended with Final Project data. The spreadsheet inventory for the entire watershed can be found in **Appendix 4**. **Appendix 4a** is a summary of the desktop Google Street View analysis broken down by the type of watershed subarea (rural, suburban, and urban). This distinction was kept while doing the Final Project so that the same spreadsheets and GIS model developed during the Pilot Project could be used. The categories were developed as a way to create efficiencies in the desktop and field analyses. To distinguish between the portions of highway analyzed during the Pilot Study versus the Final Project, the “Segment Number” column is preceded by either a ‘P’ for Pilot or ‘F’ for Final.

Appendix 4a contains additional information such as the start location of the analysis, the miles analyzed, and the time it took to analyze this segment of highway in this spreadsheet tab. The cost analysis was developed using the data in this table.

Appendix 4b includes every identified possible bacteria source within the watershed area except for the sites that were investigated out in the field, along with detailed information such as coordinates, type of source, and screenshots from street view. The same format as described above was used in the “ID” column to distinguish between the possible bacteria locations identified during the Pilot Study and those during the Final Project. Following discussion and review with WisDOT, 17 locations required field investigations (**Appendix 4c**). Eight locations were identified during the Pilot Study and nine during the analysis of the remaining miles. The 17 possible bacteria locations are noted in **Appendix 4a** as well.

3. Field Investigation

On October 8, 2024, AECOM staff and the WisDOT BTS-ESS Statewide Stormwater Quality Engineer completed a field investigation of the eight possible bacteria sources identified in the Pilot Study. Two additional field days were performed by two AECOM staff to investigate the 9 possible bacteria sources identified in during the Final Project desktop analysis. The first field day was on July 16, 2025, and the second was on August 6, 2025. Each site review was conducted visually and only from the public ROW, avoiding any entry onto private properties. Observational assessments focused on whether if the surrounding area drained to the highway ROW and if it did, where possible bacteria sources may be on the site (i.e. dog play areas, grease traps, etc.). Photos of the site and ROW area were taken and an investigation form completed for each site.

The investigation form (**Appendix 2**) described the possible bacteria site, where the bacteria source is located and if it drains to the ROW. It includes space for site photos as well.

During this investigation, no indicators of bacterial contamination were identified across the 18 sites. Each investigation took approximately 22 minutes per site, not including driving time. The completed investigation forms are in **Appendix 5**.

4. Conclusion

This study successfully fulfills the requirements outlined in the WDNR WPDES TS4 Permit Section 3.5.1 by developing a comprehensive map and inventory of potential bacteria sources along WisDOT-owned highways within the Milwaukee River TMDL watershed. Utilizing a phased approach, WisDOT and AECOM completed a detailed Pilot Study covering 80 miles of highway, followed by an analysis of the remaining 234 miles. The methodology included GIS mapping, a desktop screening of potential bacteria sources, and targeted field investigations.

The cost analysis describing the level of effort for both the Pilot Study and the Final Project is in **Appendix 6**.

A total of 17 potential bacteria source sites were identified and investigated—eight from the Pilot Study and nine from the Final Project. Field investigations, conducted from the public right-of-way, found no observable indicators of bacteria contamination at any of the sites. The sites either had sufficient grassed areas that acted as a filter strip for any bacteria before getting to the ROW, or that the possible sources of bacteria (e.g. animal walking areas) were well maintained and there was no evidence of bacteria from the site draining to the ROW. This indicates that, despite extensive mapping and desktop reviews identifying numerous potential sources, none were found to be actively contributing bacteria to the highway stormwater systems at the time of the visual inspections.

Overall, this project establishes a replicable process for identifying and evaluating bacteria sources along transportation corridors.

With no confirmed bacteria contributions found, no elimination plan is currently required. However, the tools, procedures and findings developed through this study position WisDOT to meet any similar future permit obligations efficiently.

Appendix 1: WPDES Permit No. WI-S066800-2, Section 3.5

TMDL Compliance and Implementation for Bacteria Waste Load Allocations (WLA).

3.5 TMDL Compliance and Implementation for Bacteria WLAs. This section applies to TMDL reachsheds with a bacteria WLA specified in the Milwaukee River Basin TMDL Final Report dated March 19, 2018. DOT shall comply with the following: By September 30, 2026, the DOT shall develop and submit to the Department an inventory of bacteria sources and a map indicating the locations of the possible sources of fecal coliform and *E. coli* entering its TS4. The inventory shall be in a tabular format and include a label code, the name of the source, the physical address or location description of the source, and the ownership of the source (i.e. public or private). The map shall be to scale, identify all streets within the TS4, and indicate the locations of the sources using the label codes. The DOT shall consider the variation in flow conditions in its identification of possible sources. The inventory and map shall include the following possible sources of bacteria such as:

- Sanitary sewer overflow locations.
- Livestock housed or raised adjacent to the TS4 permitted area and discharging to the TS4, but not including household pets.
- Zoos, kennels, animal breeders, pet stores, and dog training facilities.
- Waste hauling, storage, and transfer facilities.
- Areas that attract congregations of nuisance urban birds and wildlife.
- Known or suspected properties with inadequate food or organic waste handling or storage.
- Composting sites or facilities.
- Known or suspected areas with improper human sanitation use.
- Any other source that the permittee or the Department has a reason to believe is discharging bacteria to the TS4.

3.5.2. By September 30, 2027, the DOT shall collaborate with adjacent municipalities to submit to the Department a proposed bacteria source elimination plan. The plan shall consist of a strategy and prioritization scheme to eliminate each source of bacteria identified under section 3.5.1. The plan shall include:

- A copy of the evidence provided to the adjacent MS4.
- How DOT is collaborating with the MS4 containing the source to eliminate it.
- If appropriate, add filter strips or other green infrastructure practice to break the flow path and intercept the bacteria sources.
- What education was provided to the owner of the source area and how it was provided.

Note: While the TMDL allocations in the Milwaukee River Basin TMDL are expressed only in terms of fecal coliform, both fecal coliform and *E. coli* have been listed as sources of recreational use impairments that the TMDL was completed to address.

Appendix 2: Blank Inspection Form

2025 WisDOT Milwaukee River TMDL Study
Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town:	County:	WisDOT Highway Name:	
Site Name:		Address:	
Field Investigation Location*:	Review date:	Weather:	
Reviewers:	Arrived:	Left:	
Reviewer Firm/Region:	Site Owner:		
Possible Source Type:			

**Reference Location Map*

Inspection Note: Aerial imagery of site

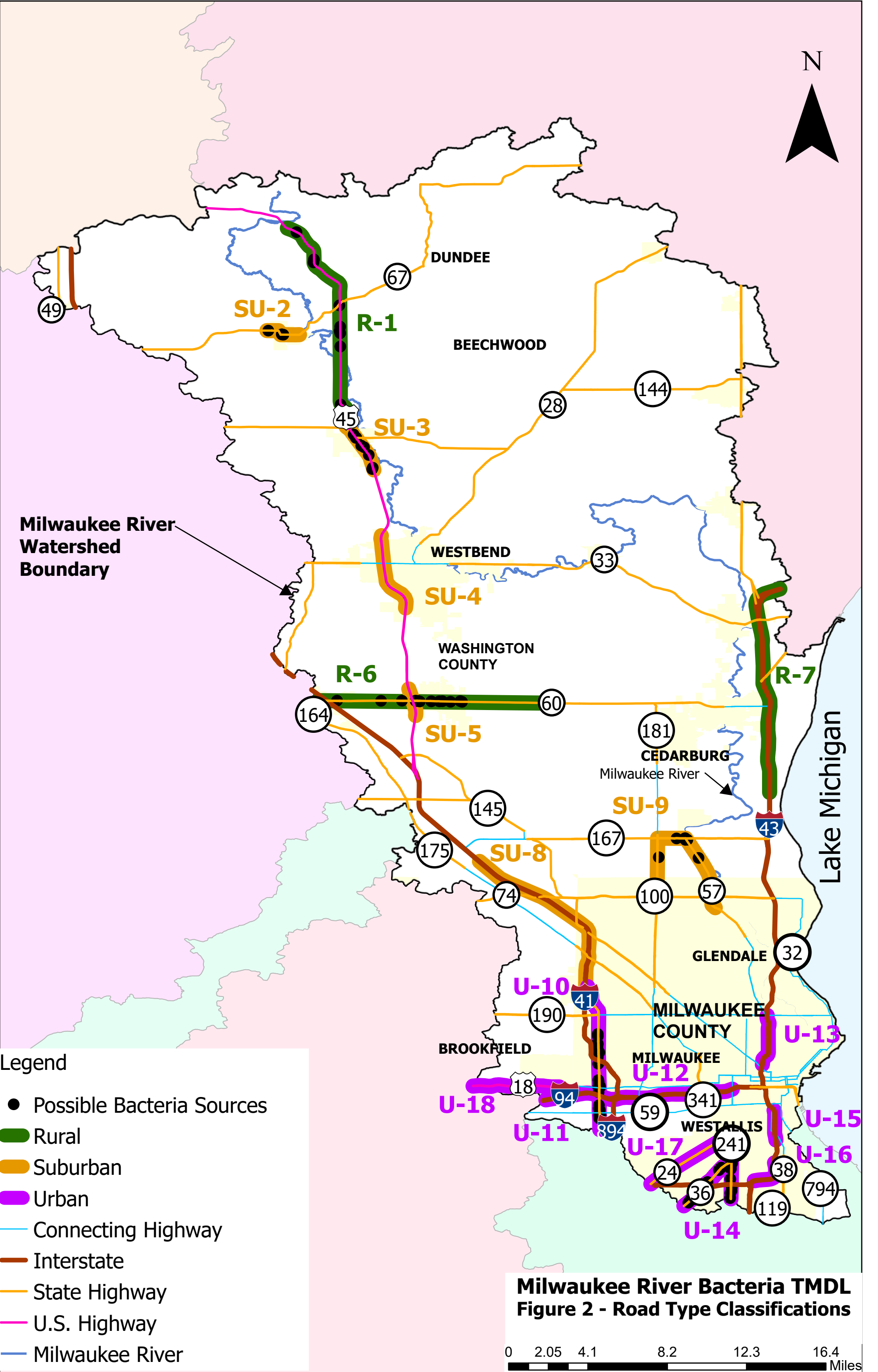
Part B: Field Investigation Results

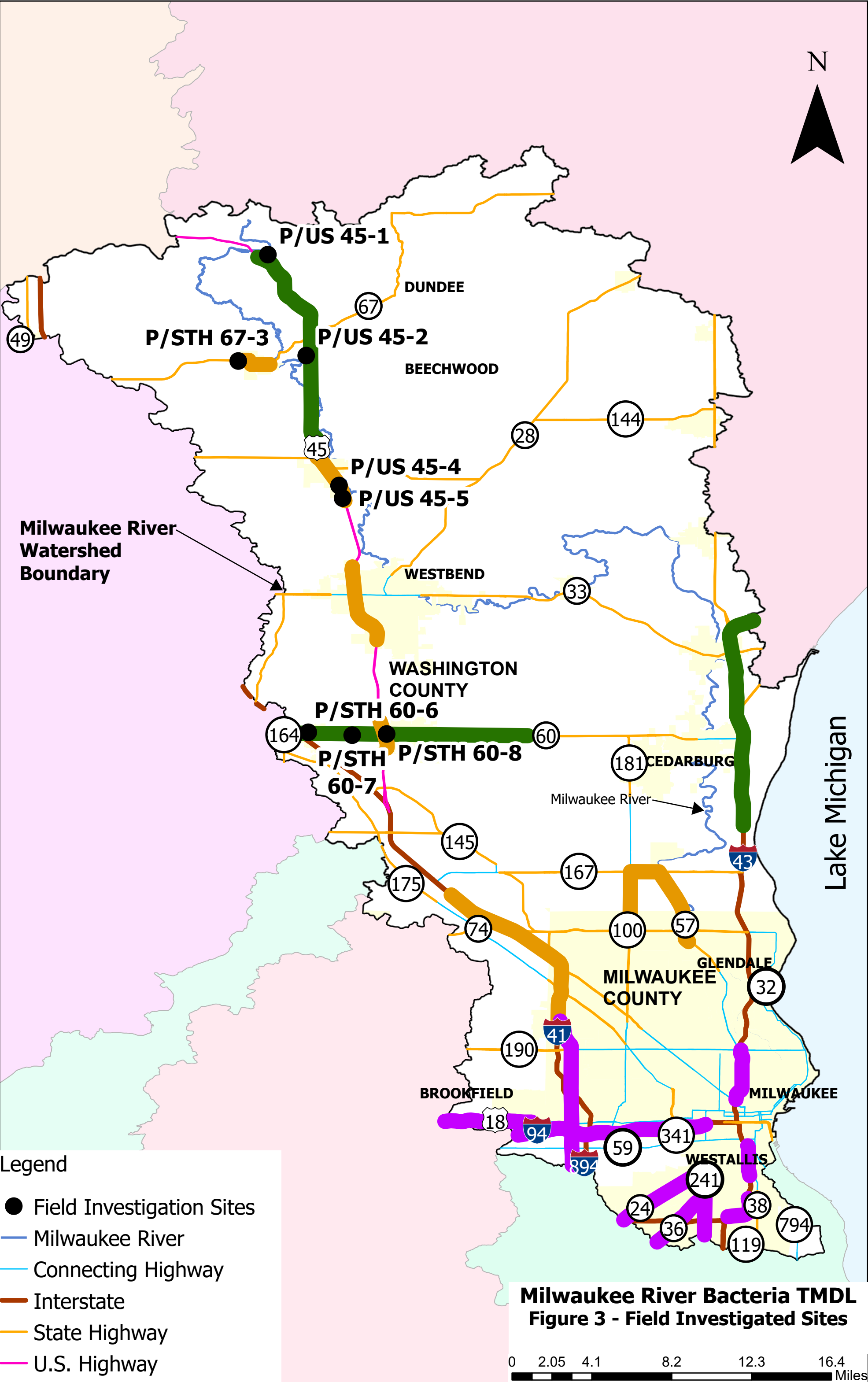
Field Investigation Questions	Comments
Investigation Location?	
Field Evidence of Bacteria?	

ADDITIONAL COMMENTS:

Photos:

Appendix 3: Pilot Study Maps





Appendix 4: Desktop Analysis Spreadsheets

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
11/18/2024	1	P/R-1	US Highway 45	US Highway	US 45 & 3938-3816 County Rd W	Google Maps	Rural	0.32	26	Possible bacteria source identified - US 45-1
	2	P/R-1	US Highway 45	US Highway	43.673095, -88.270547	Google Maps	Rural	0.33	21	-
	3	P/R-1	US Highway 45	US Highway	43.669565, -88.268019	Google Maps	Rural	0.43	30	-
	4	P/R-1	US Highway 45	US Highway	Mitchell Rd 43.666649, -88.266030	Google Maps	Rural	0.30	17	-
	5	P/R-1	US Highway 45	US Highway	Schultz Family Farms N3132 US-45, Eden, WI 53019	Google Maps	Rural	0.45	22	-
	6	P/R-1	US Highway 45	US Highway	43.650352, -88.259693	Google Maps	Rural	0.33	21	-
	7	P/R-1	US Highway 45	US Highway	Dave's Auto & Truck N2935 US-45, Campbellsport, WI 53010	Google Maps	Rural	0.49	32	-
	8	P/R-1	US Highway 45	US Highway	Woodland Dr 43.644852, -88.253117	Google Maps	Rural	0.36	26	-
	9	P/R-1	US Highway 45	US Highway	Happy Hollow Rd 43.637673, -88.243214	Google Maps	Rural	0.51	24	-
	10	P/R-1	US Highway 45	US Highway	43.636121, -88.241360	Google Maps	Rural	0.36	22	-
	11	P/R-1	US Highway 45	US Highway	Valley Hydro Excavation LLC N 2496, N2496 US-45, Campbellsport, WI 53010	Google Maps	Rural	0.35	19	-
	12	P/R-1	US Highway 45	US Highway	43.623319, -88.240980	Google Maps	Rural	0.32	35	-
	13	P/R-1	US Highway 45	US Highway	Lovers Rd & Jim Plantz Concrete Contractor	Google Maps	Rural	0.38	26	-
	14	P/R-1	US Highway 45	US Highway	OHenrys Service N1776 US-45, Campbellsport, WI 53010	Google Maps	Rural	0.35	29	Possible bacteria source identified - US 45-2
	15	P/R-1	US Highway 45	US Highway	Sunset Dr 43.601289, -88.240646	Google Maps	Rural	0.41	26	-
	16	P/R-1	US Highway 45	US Highway	43.593914, -88.240612	Google Maps	Rural	0.36	22	-
	17	P/R-1	US Highway 45	US Highway	43.589232, -88.240598	Google Maps	Rural	0.39	28	-
	18	P/R-1	US Highway 45	US Highway	Gutrie Ln, 43.579337, -88.240582	Google Maps	Rural	0.38	24	-
	19	P/R-1	US Highway 45	US Highway	Haven Dr & Christy Ln 43.572110, -88.240546	Google Maps	Rural	0.42	21	-
	20	P/R-1	US Highway 45	US Highway	Auburn Ashford Dr 43.564818, -88.240525	Google Maps	Rural	0.37	25	-
	21	P/R-1	US Highway 45	US Highway	Old Bridge Rd, 43.557505, -88.240597	Google Maps	Rural	0.34	22	-
	22	P/R-1	US Highway 45	US Highway	Sandy Rd 43.550218, -88.240709	Google Maps	Rural	0.42	28	-
	23	P/R-1	US Highway 45	US Highway	43.544671, -88.238424	Google Maps	Rural	0.38	21	-
	24	P/R-1	US Highway 45	US Highway	Co Hwy V 43.532524, -88.236068	Google Maps	Rural	0.37	29	-
	25	P/R-6	State Highway 60	State Highway	43.324522, -88.257033	Google Maps	Rural	0.49	31	-
	26	P/R-6	State Highway 60	State Highway	Tillie Lake Veterinary Clinic 2015 American Eagle Dr, Slinger, WI 53086	Google Maps	Rural	0.34	24	Possible bacteria source identified - STH 60-6
	27	P/R-6	State Highway 60	State Highway	43.324479, -88.225335	Google Maps	Rural	0.34	22	-
	28	P/R-6	State Highway 60	State Highway	Scenic Rd 43.324507, -88.221458	Google Maps	Rural	0.38	25	-
	29	P/R-6	State Highway 60	State Highway	Pet Resort 3473 WI-60 Trunk, Jackson, WI 53037	Google Maps	Rural	0.33	23	Possible bacteria source identified - STH 60-7
	30	P/R-6	State Highway 60	State Highway	Lily Rd 43.324552, -88.206940	Google Maps	Rural	0.35	24	-
	31	P/R-6	State Highway 60	State Highway	S Mayfield Rd 43.324535, -88.202120	Google Maps	Rural	0.30	20	-
	32	P/R-6	State Highway 60	State Highway	John's A-1 Auto Body 43.324487, -88.194546	Google Maps	Rural	0.33	21	-
	33	P/R-6	State Highway 60	State Highway	Tillie Rd 43.324471, -88.190800	Google Maps	Rural	0.36	27	-
	34	P/R-6	State Highway 60	State Highway	Pharmacial Way 43.324507, -88.184384	Google Maps	Rural	0.34	21	-
	35	P/R-6	State Highway 60	State Highway	Pharmacial Way 43.324342, -88.184384	Google Maps	Rural	0.32	10	-
	36	P/R-6	State Highway 60	State Highway	Pharmacial Way 43.324299, -88.183708	Google Maps	Rural	0.35	21	Possible bacteria source identified - STH 60-8
	37	P/R-6	State Highway 60	State Highway	3747-3731 Co Hwy P 43.324516, -88.183236	Google Maps	Rural	0.43	29	-
	38	P/R-6	State Highway 60	State Highway	43.324248, -88.173066	Google Maps	Rural	0.42	34	-
	39	P/R-6	State Highway 60	State Highway	43.324091, -88.169392	Google Maps	Rural	0.39	30	-
	40	P/R-6	State Highway 60	State Highway	S Center St 43.324006, -88.166592	Google Maps	Rural	0.34	20	-
	41	P/R-6	State Highway 60	State Highway	Jackson Dr 43.323917, -88.162135	Google Maps	Rural	0.38	27	-
	42	P/R-6	State Highway 60	State Highway	Ridgeway Rd 43.323759, -88.155322	Google Maps	Rural	0.35	29	-
	43	P/R-6	State Highway 60	State Highway	Eagle Dr 43.323645, -88.149649	Google Maps	Rural	0.40	30	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas

Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
	44	P/R-6	State Highway 60	State Highway	Maple Rd 43.323526, -88.142322	Google Maps	Rural	0.56	35	-
	45	P/R-6	State Highway 60	State Highway	Division Rd 43.323265, -88.122831	Google Maps	Rural	0.44	25	-
	46	P/R-6	State Highway 60	State Highway	Johnson Ln 43.323199, -88.117514	Google Maps	Rural	0.42	27	-
	47	P/R-6	State Highway 60	State Highway	Center Rd 43.323139, -88.112561	Google Maps	Rural	0.38	29	-
	48	P/R-6	State Highway 60	State Highway	Lusan Dr 43.323050, -88.106258	Google Maps	Rural	0.46	29	-
	49	P/R-6	State Highway 60	State Highway	Church Rd 43.322991, -88.102617	Google Maps	Rural	0.60	36	-
	50	P/R-6	State Highway 60	State Highway	Brianwood Dr 43.322734, -88.086632	Google Maps	Rural	0.40	20	-
	51	P/R-6	State Highway 60	State Highway	County Dr 43.322647, -88.082847	Google Maps	Rural	0.44	30	-
	52	P/R-7	Interstate 43	Interstate	43.407938, -87.912368	Google Maps	Rural	0.36	25	-
	53	P/R-7	Interstate 43	Interstate	Co Hwy B 43.411539, -87.890783	Google Maps	Rural	0.45	33	-
	54	P/R-7	Interstate 43	Interstate	43.409387, -87.906476	Google Maps	Rural	0.38	24	-
	55	P/R-7	Interstate 43	Interstate	43.408031, -87.912087	Google Maps	Rural	0.40	22	-
	56	P/R-7	Interstate 43	Interstate	43.405506, -87.920654	Google Maps	Rural	0.47	34	-
	57	P/R-7	Interstate 43	Interstate	43.401633, -87.928022	Google Maps	Rural	0.45	23	-
	58	P/R-7	Interstate 43	Interstate	43.388752, -87.928841	Google Maps	Rural	0.75	35	-
	59	P/R-7	Interstate 43	Interstate	43.375724, -87.926430	Google Maps	Rural	0.63	33	-
	60	P/R-7	Interstate 43	Interstate	E Sauk Rd 43.368321, -87.925578	Google Maps	Rural	0.61	27	-
	61	P/R-7	Interstate 43	Interstate	E Sauk Rd 43.368321, -87.925579	Google Maps	Rural	0.49	22	-
	62	P/R-7	Interstate 43	Interstate	43.353146, -87.925195	Google Maps	Rural	0.47	25	-
	63	P/R-7	Interstate 43	Interstate	43.344555, -87.925037	Google Maps	Rural	0.51	29	-
	64	P/R-7	Interstate 43	Interstate	43.334466, -87.923981	Google Maps	Rural	0.42	18	-
	65	P/R-7	Interstate 43	Interstate	Arrowhead Rd 43.331342, -87.922045	Google Maps	Rural	0.45	29	-
	66	P/R-7	Interstate 43	Interstate	43.328154, -87.920505	Google Maps	Rural	0.48	28	-
	67	P/R-7	Interstate 43	Interstate	43.315675, -87.919912	Google Maps	Rural	0.35	27	-
	68	P/R-7	Interstate 43	Interstate	43.311660, -87.920333	Google Maps	Rural	0.45	30	-
	69	P/R-7	Interstate 43	Interstate	Lakefield Rd 43.296644, -87.920758	Google Maps	Rural	0.43	19	-
	70	F/R-3	State Highway 67	State Highway	43.587103, -88.386385	Google Maps	Rural	0.55	35	-
	71	F/R-4	State Highway 67	State Highway	43.587039, -88.375643	Google Maps	Rural	0.38	24	-
	72	F/R-4	State Highway 67	State Highway	43.587081, -88.368115	Google Maps	Rural	0.41	27	Restaurant
	73	F/R-4	State Highway 67	State Highway	43.587047, -88.360665	Google Maps	Rural	0.54	33	-
	74	F/R-4	State Highway 67	State Highway	43.587152, -88.350031	Google Maps	Rural	0.37	23	-
	75	F/R-4	State Highway 67	State Highway	43.589084, -88.344465 (Unnamed farm, silage/manure found)	Google Maps	Rural	0.38	26	
	76	F/R-4	State Highway 67	State Highway	43.593837, -88.339887	Google Maps	Rural	0.55	34	-
	77	F/R-4	State Highway 67	State Highway	43.599175, -88.332672	Google Maps	Rural	0.57	34	-
	78	F/R-4	State Highway 67	State Highway	43.599915, -88.321346 (Unnamed farm. Possible animal manure found)	Google Maps	Rural	0.43	30	
	79	F/R-4	State Highway 67	State Highway	End: 43.601190, -88.301854 (Sartori Theisen Family Farm, Retention Pond near by. Standing water from pond)	Google Maps	Rural	0.63	39	
	80	F/R-5	State Highway 67	State Highway	43.599175, -88.269367	Google Maps	Rural	0.34	24	-
	81	F/R-5	State Highway 67	State Highway	43.605708, -88.264290	Google Maps	Rural	0.38	26	-
	82	F/R-5	State Highway 67	State Highway	43.608080, -88.258419	Google Maps	Rural	0.35	26	-
	83	F/R-5	State Highway 67	State Highway	43.612085, -88.254245	Google Maps	Rural	0.49	29	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
4/11/2025	84	F/R-5	State Highway 67	State Highway	43.615504, -88.246905	Google Maps	Rural	0.41	26	-
	85	F/R-5	State Highway 67	State Highway	43.620159, -88.241838	Google Maps	Rural	0.51	33	Restaurant
	86	F/R-5	State Highway 67	State Highway	43.624578, -88.234936	Google Maps	Rural	0.44	31	-
	87	F/R-5	State Highway 67	State Highway	43.626280, -88.226339	Google Maps	Rural	0.34	25	-
	88	F/R-5	State Highway 67	State Highway	43.628522, -88.220589	Google Maps	Rural	0.44	29	-
	89	F/R-5	State Highway 67	State Highway	43.632558, -88.213924	Google Maps	Rural	0.45	29	-
	90	F/R-5	State Highway 67	State Highway	43.635944, -88.206243	Google Maps	Rural	0.47	31	-
	91	F/R-5	State Highway 67	State Highway	43.641080, -88.200008	Google Maps	Rural	0.58	36	-
	92	F/R-5	State Highway 67	State Highway	43.643911, -88.189620	Google Maps	Rural	0.28	20	-
	93	F/R-7	State Highway 67	State Highway	43.689228, -88.173488	Google Maps	Rural	0.42	24	-
	94	F/R-7	State Highway 67	State Highway	43.694340, -88.175861	Google Maps	Rural	0.48	29	-
	95	F/R-7	State Highway 67	State Highway	43.700576, -88.179752	Google Maps	Rural	0.43	25	-
	96	F/R-7	State Highway 67	State Highway	43.709289, -88.180860 (Unnamed farm. Couldnot see ditch that can capture water from the farm)	Google Maps	Rural	0.39	25	
	97	F/R-7	State Highway 67	State Highway	43.710431, -88.178154	Google Maps	Rural	0.51	32	-
	98	F/R-7	State Highway 67	State Highway	43.710639, -88.168078	Google Maps	Rural	0.47	29	-
	99	F/R-7	State Highway 67	State Highway	43.709010, -88.159301	Google Maps	Rural	0.44	25	-
	100	F/R-7	State Highway 67	State Highway	43.710373, -88.150746	Google Maps	Rural	0.50	30	-
	101	F/R-7	State Highway 67	State Highway	43.710493, -88.140570	Google Maps	Rural	0.48	28	Restaurant
	102	F/R-7	State Highway 67	State Highway	43.710511, -88.130866	Google Maps	Rural	0.45	26	-
	103	F/R-7	State Highway 67	State Highway	43.710683, -88.121876	Google Maps	Rural	0.42	22	-
	104	F/R-7	State Highway 67	State Highway	43.715918, -88.118151	Google Maps	Rural	0.42	24	-
	105	F/R-7	State Highway 67	State Highway	43.719122, -88.110940	Google Maps	Rural	0.19	12	-
	106	F/R-7	State Highway 67	State Highway	43.720768, -88.108204 (JBK International Horse Boarding. Couldnot see ditch that can capture water from the horse boarding, could not identify the cross culvert)	Google Maps	Rural	0.38	27	
	107	F/R-7	State Highway 67	State Highway	43.724072, -88.102129	Google Maps	Rural	0.48	27	-
	108	F/R-7	State Highway 67	State Highway	43.724113, -88.092605	Google Maps	Rural	0.42	23	-
	109	F/R-7	State Highway 67	State Highway	43.724228, -88.084240	Google Maps	Rural	0.48	28	-
	110	F/R-7	State Highway 67	State Highway	End in: 43.724622, -88.061297 (Goesser Dairy, CAFO)	Google Maps	Rural	0.72	45	
4/16/2025	111	F/R-1	State Highway 175	State Highway	43.662566, -88.451366	Google Maps	Rural	0.59	32	-
	112	F/R-1	State Highway 175	State Highway	43.653556, -88.451275	Google Maps	Rural	0.47	28	Restaurant, Ehlert Welding (equipment and dumpster close to the ROW) 
	113	F/R-1	State Highway 175	State Highway	43.648068, -88.451251	Google Maps	Rural	0.46	27	-
	114	F/R-1	State Highway 175	State Highway	43.640863, -88.451228 Chicken farm, No evidence of potential bacteria sources	Google Maps	Rural	0.56	33	
	115	F/R-1	State Highway 175	State Highway	43.649413, -88.451259	Google Maps	Rural	0.58	36	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
	116	F/R-1	State Highway 175	State Highway	43.624383, -88.45066 Unnamed farm, No evidence of potential bacteria sources	Google Maps	Rural	0.26	25	
	117	F/R-2	Interstate 41	Interstate	43.661562, -88.441479	Google Maps	Rural	0.61	35	-
	118	F/R-2	Interstate 41	Interstate	43.652942, -88.441745	Google Maps	Rural	0.45	26	-
	119	F/R-2	Interstate 41	Interstate	43.646438, -88.441671	Google Maps	Rural	0.67	38	-
	120	F/R-2	Interstate 41	Interstate	43.636656, -88.441373	Google Maps	Rural	0.43	24	-
4/17/2025	122	F/R-3	US Highway 45	US Highway	43.692338, -88.335627	Google Maps	Rural	0.58	34	-
	123	F/R-3	US Highway 45	US Highway	43.691777, -88.323893 W3317 US-45, Eden, WI 53019	Google Maps	Rural	0.75	43	
	124	F/R-3	US Highway 45	US Highway	43.690330, -88.309203 Unnamed farm in construction	Google Maps	Rural	0.19	16	
	125	F/R-4	US Highway 45	US Highway	W3043 US-45, Eden, WI 53019	Google Maps	Rural	0.15	15	
	126	F/R-3	US Highway 45	US Highway	43.689232, -88.302398	Google Maps	Rural	0.72	42	-
	127	F/R-3	US Highway 45	US Highway	43.686000, -88.288354	Google Maps	Rural	0.47	26	-
	128	F/R-3	US Highway 45	US Highway	43.680824, -88.283587	Google Maps	Rural	0.36	21	-
	129	F/R-8	State Highway 28	State Highway	43.529178, -88.327763 5761 WI-28, Allenton, WI 53002	Google Maps	Rural	0.69	37	
	130	F/R-8	State Highway 28	State Highway	43.529061, -88.313921 5545 WI-28, Allenton, WI 53002 (CAFO)	Google Maps	Rural	0.55	34	
	131	F/R-8	State Highway 28	State Highway	43.529104, -88.302928	Google Maps	Rural	0.54	30	-
	132	F/R-8	State Highway 28	State Highway	43.528980, -88.292531	Google Maps	Rural	0.56	32	-
	133	F/R-8	State Highway 28	State Highway	43.528976, -88.281248	Google Maps	Rural	0.51	29	-
	134	F/R-8	State Highway 28	State Highway	43.528857, -88.271047 (Unnamed farm, No evidence of potential bacteria sources)	Google Maps	Rural	0.50	35	
	135	F/R-8	State Highway 28	State Highway	43.528815, -88.261066	Google Maps	Rural	0.42	26	-
4/18/2025	136	F/R-8	State Highway 28	State Highway	43.528755, -88.252565 (Unnamed farm, No evidence of potential bacteria sources)	Google Maps	Rural	0.54	34	
	137	F/R-8	State Highway 28	State Highway	43.528606, -88.241838	Google Maps	Rural	0.33	21	-
	138	F/R-10	State Highway 28	State Highway	43.520954, -88.213938	Google Maps	Rural	0.41	28	-
	139	F/R-10	State Highway 28	State Highway	43.521137, -88.205868 (3327 WI-28, Kewaskum, WI 53040 Horses, possible manure)	Google Maps	Rural	0.37	26	
	140	F/R-10	State Highway 28	State Highway	43.521161, -88.198172	Google Maps	Rural	0.58	35	-
	141	F/R-10	State Highway 28	State Highway	43.518943, -88.184787	Google Maps	Rural	0.73	41	-
	142	F/R-10	State Highway 28	State Highway	43.516080, -88.170841	Google Maps	Rural	0.35	25	-
	143	F/R-10	State Highway 28	State Highway	43.513414, -88.165027	Google Maps	Rural	0.47	31	Restaurant
	144	F/R-10	State Highway 28	State Highway	43.513190, -88.156481	Google Maps	Rural	0.33	25	-
	145	F/R-10	State Highway 28	State Highway	43.513111, -88.153148 (Unnamed farm, far from ROW)	Google Maps	Rural	0.33	28	
	146	F/R-10	State Highway 28	State Highway	43.513035, -88.149117	Google Maps	Rural	0.38	24	-
	147	F/R-10	State Highway 28	State Highway	43.512975, -88.145495	Google Maps	Rural	0.38	22	-
	148	F/R-10	State Highway 28	State Highway	43.512934, -88.137915 Unnamed farm, far from ROW	Google Maps	Rural	0.33	25	

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
4/21/2025	149	F/R-10	State Highway 28	State Highway	43.512875, -88.131211 Unnamed farm, uncleaned fenced area	Google Maps	Rural	0.33	26	
	150	F/R-10	State Highway 28	State Highway	43.512862, -88.131264	Google Maps	Rural	0.42	30	-
	151	F/R-10	State Highway 28	State Highway	43.512782, -88.122716	Google Maps	Rural	0.35	21	-
	152	F/R-11	Interstate 41	Interstate	43.359518, -88.291398	Google Maps	Rural	0.35	22	-
	153	F/R-11	Interstate 41	Interstate	43.355039, -88.288352	Google Maps	Rural	0.34	24	-
	154	F/R-12	Interstate 41	Interstate	43.346905, -88.281257	Google Maps	Rural	0.37	26	-
4/23/2025	155	F/R-16	State Highway 144	State Highway	43.455416, -88.161907	Google Maps	Rural	0.54	31	-
	156	F/R-16	State Highway 144	State Highway	43.462043, -88.156200	Google Maps	Rural	0.42	27	-
	157	F/R-16	State Highway 144	State Highway	43.466861, -88.150978 Unnamed farm, far from ROW. No evidence of potential bacteria sources	Google Maps	Rural	0.43	29	
	158	F/R-16	State Highway 144	State Highway	43.471779, -88.145814	Google Maps	Rural	0.39	26	-
	159	F/R-16	State Highway 144	State Highway	43.476494, -88.141685	Google Maps	Rural	0.25	18	-
	160	F/R-18	State Highway 144	State Highway	43.498834, -88.135173	Google Maps	Rural	0.58	31	-
	161	F/R-18	State Highway 144	State Highway	43.505412, -88.128040	Google Maps	Rural	0.26	19	
	162	F/R-18	State Highway 144	State Highway	43.507618, -88.123770 Looks like a farm but no animal identified, deep slope to ROW, need to discuss w/ Emma	Google Maps	Rural	0.54	30	
	163	F/R-18	State Highway 144	State Highway	43.512571, -88.115514 Unnamed farm, far from ROW. No evidence of potential bacteria sources	Google Maps	Rural	0.52	29	
	164	F/R-18	State Highway 144	State Highway	43.519682, -88.109116 Unnamed farm, far from ROW. No evidence of potential bacteria sources	Google Maps	Rural	0.62	38	
4/24/2025	165	F/R-18	State Highway 144	State Highway	43.524584, -88.100467	Google Maps	Rural	0.24	17	-
	166	F/R-18	State Highway 144	State Highway	43.527289, -88.097662	Google Maps	Rural	0.46	28	-
	167	F/R-18	State Highway 144	State Highway	43.536286, -88.092040	Google Maps	Rural	0.28	18	-
	168	F/R-18	State Highway 144	State Highway	43.539648, -88.088644	Google Maps	Rural	0.41	23	-
	169	F/R-18	State Highway 144	State Highway	43.543953, -88.083336	Google Maps	Rural	0.74	37	-
	170	F/R-18	State Highway 144	State Highway	43.553163, -88.077155	Google Maps	Rural	0.40	22	-
	171	F/R-19	State Highway 28	State Highway	43.558837, -88.073293 2025 Bird view is showing some cows, but 2024 street view is showing the farm is under construction. No evidence of potential bacteria sources. Discuss with Emma	Google Maps	Rural	0.44	26	
	172	F/R-19	State Highway 28	State Highway	43.563871, -88.068953	Google Maps	Rural	0.62	31	-
	173	F/R-19	State Highway 28	State Highway	43.571521, -88.062541	Google Maps	Rural	0.59	30	-
	174	F/R-19	State Highway 28	State Highway	43.578766, -88.056517 Unnamed farm, far from ROW	Google Maps	Rural	0.58	31	
	175	F/R-19	State Highway 28	State Highway	43.586040, -88.050683	Google Maps	Rural	0.15	8	-
4/25/2025	176	F/R-21	State Highway 28	State Highway	43.600192, -88.050276	Google Maps	Rural	0.55	29	-
	177	F/R-21	State Highway 28	State Highway	43.608143, -88.050157 Unnamed farm, No evidence of potential bacteria sources	Google Maps	Rural	0.52	27	
	178	F/R-21	State Highway 28	State Highway	43.615708, -88.050139	Google Maps	Rural	0.57	30	-
	179	F/R-21	State Highway 28	State Highway	43.623972, -88.050024	Google Maps	Rural	0.45	22	-
	180	F/R-21	State Highway 28	State Highway	43.630511, -88.049917	Google Maps	Rural	0.45	21	-
	181	F/R-21	State Highway 28	State Highway	43.636825, -88.048981	Google Maps	Rural	0.69	35	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
	182	F/R-21	State Highway 28	State Highway	43.640850, -88.040718	Google Maps	Rural	0.73	40	-
	183	F/R-21	State Highway 28	State Highway	43.645996, -88.028964	Google Maps	Rural	0.68	33	-
4/28/2025	184	F/R-18	State Highway 144	State Highway	43.556901, -88.074742 (Silage identified on top of the slope, Potentially draining to ROW, check with Emma)	Google Maps	Rural	0.64	31	
	185	F/R-18	State Highway 144	State Highway	43.556891, -88.061765 (Farm, No evidence of potential bacteria sources)	Google Maps	Rural	0.53	27	
	186	F/R-18	State Highway 144	State Highway	43.556872, -88.051164 (Farm, far from ROW, No evidence of potential bacteria sources)	Google Maps	Rural	0.30	19	
	187	F/R-18	State Highway 144	State Highway	43.556882, -88.045243 (Farm, far from ROW, No evidence of potential bacteria sources)	Google Maps	Rural	0.50	26	
	188	F/R-18	State Highway 144	State Highway	43.556934, -88.035234	Google Maps	Rural	0.38	20	-
	189	F/R-18	State Highway 144	State Highway	43.557007, -88.027784	Google Maps	Rural	0.41	22	Restaurant
	190	F/R-18	State Highway 144	State Highway	43.557100, -88.019536	Google Maps	Rural	0.56	26	-
	191	F/R-18	State Highway 144	State Highway	43.557164, -88.008270	Google Maps	Rural	0.74	38	
	192	F/R-18	State Highway 144	State Highway	43.557242, -87.993873	Google Maps	Rural	0.64	33	-
	193	F/R-18	State Highway 144	State Highway	43.557258, -87.981055	Google Maps	Rural	0.30	18	-
	194	F/R-24	State Highway 144	State Highway	43.562108, -87.954297	Google Maps	Rural	0.60	34	-
4/29/2025	195	F/R-25	State Highway 57	State Highway	43.635891, -87.941015	Google Maps	Rural	0.63	35	-
	196	F/R-25	State Highway 57	State Highway	43.626797, -87.941022	Google Maps	Rural	0.41	23	-
	197	F/R-25	State Highway 57	State Highway	43.620829, -87.941068	Google Maps	Rural	0.34	19	-
	198	F/R-25	State Highway 57	State Highway	43.615891, -87.941027	Google Maps	Rural	0.78	37	-
	199	F/R-25	State Highway 57	State Highway	43.604644, -87.940978	Google Maps	Rural	0.48	25	-
	200	F/R-25	State Highway 57	State Highway	43.597634, -87.940969	Google Maps	Rural	0.26	17	-
	201	F/R-25	State Highway 57	State Highway	43.593803, -87.940943	Google Maps	Rural	0.49	26	Restaurant
	202	F/R-25	State Highway 57	State Highway	43.586737, -87.940941	Google Maps	Rural	0.75	36	-
5/7/2025	203	F/R-25	State Highway 57	State Highway	43.575876, -87.940872	Google Maps	Rural	0.26	15	-
	204	F/R-25	State Highway 57	State Highway	43.5690773, -87.9410938	Google Maps	Rural	1.00	72	Several dumpsters near ROW, Outlet Pipe to Ditch/ROW
	205	F/R-25	State Highway 57	State Highway	43.5454953, -87.9412905	Google Maps	Rural	0.60	32	Dumpster on Impervious
	206	F/R-25	State Highway 57	State Highway	43.4702205, -87.9407155	Google Maps	Rural	1.00	29	Dumpster
5/8/2025	207	F/R-25	State Highway 57	State Highway	43.4557070, -87.9405666	Google Maps	Rural	2.04	54	Dumpster, Portable Toilets
	208	F/R-25	State Highway 57	State Highway	43.4261293, -87.9410388	Google Maps	Rural	1.98	51	-
	209	F/R-26	Interstate 43	Interstate	43.2874360, -87.9208918	Google Maps	Rural	2.18	57	-
5/15/2025	210	F/R-32	State Highway 60	State Highway	43.3226362, -88.0798842	Google Maps	Rural	3.54	135	-
5/20/2025	211	F/R-33	State Highway 167	State Highway	43.2213424, -88.0639210	Google Maps	Rural	2.03	29	Farm Field by Shallow Swale, Barn
	212	F/R-34	State Highway 175	State Highway	43.1994665, -88.1475321	Google Maps	Rural	0.78	12	Dumpster on Impervious
	213	F/R-34	State Highway 175	State Highway	43.2140672, -88.1714852	Google Maps	Rural	2.79	33	-
	214	F/R-35	Interstate 41	Interstate	43.2630679, -88.1924899	Google Maps	Rural	4.87	50	Farm Field by Shallow Swale
	215	F/R-35	Interstate 41	Interstate	43.2022961, -88.1343680	Google Maps	Rural	4.20	47	-
	216	F/R-35	Interstate 41	Interstate	43.2507388, -88.1778129	Google Maps	Rural	5.35	72	-
	217	F/R-35	Interstate 41	Interstate	43.3160689, -88.2517141	Google Maps	Rural	1.07	11	-
	218	F/R-36	State Highway 33	State Highway	43.3245657, -88.2508949	Google Maps	Rural	0.81	7	-
	219	F/R-36	State Highway 33	State Highway	43.3892416, -87.9667519	Google Maps	Rural	4.70	73	Dumpster, Portable Toilets
	220	F/R-36	State Highway 33	State Highway	43.4231883, -88.0637972	Google Maps	Rural	4.18	78	Dumpsters, Mulch and Topsoil Piles, Wet Detention Pond, Standing Water, Garden Center, Landscaping Supplies, Portable Toilet

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Rural Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
5/21/2025	221	F/R-37	State Highway 167	State Highway	43.2510897, -88.2271806	Google Maps	Rural	2.29	18	Wet Detention Pond
	222	F/R-38	State Highway 145	State Highway	43.2507461, -88.1817173	Google Maps	Rural	1.96	23	-
	223	F/R-38	State Highway 145	State Highway	43.2355770, 88.1167380	Google Maps	Rural	1.66	39	Livestock Area
	224	F/R-38	State Highway 145	State Highway	43.2500693, -88.1429566	Google Maps	Rural	1.97	89	Dumpsters, Grazing Animals, Fields with Shallow Swale
	225	F/R-38	State Highway 145	State Highway	43.2736412, -88.1625111	Google Maps	Rural	1.95	34	Portable Toilet, Field with Shallow Swale
	226	F/R-39	U.S. Highway 45	U.S. Highway	43.2721683, -88.1848756	Google Maps	Rural	2.86	33	-
	227	F/R-39	U.S. Highway 45	U.S. Highway	43.3332037, -88.18942421	Google Maps	Rural	2.61	29	-
	228	F/R-40	State Highway 32	State Highway	43.4478298, -88.2099143	Google Maps	Rural	3.50	39	-
	229	F/R-41	State Highway 32	State Highway	43.3392102, -87.9260454	Google Maps	Rural	1.72	21	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Suburban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
11/18/2024	1	P/SU-3	US Highway 45	US Highway	43.532071, -88.236230	Google Maps	Suburban	0.38	22	-
	2	P/SU-3	US Highway 45	US Highway	43.528458, -88.235106	Google Maps	Suburban	0.45	27	-
	3	P/SU-3	US Highway 45	US Highway	43.521078, -88.228967	Google Maps	Suburban	0.42	23	-
	4	P/SU-3	US Highway 45	US Highway	43.513882, -88.223724	Google Maps	Suburban	0.56	38	-
	5	P/SU-3	US Highway 45	US Highway	43.506529, -88.218330	Google Maps	Suburban	0.63	35	Possible bacteria source identified - US 45-5
	6	P/SU-3	US Highway 45	US Highway	43.448584, -88.209398	Google Maps	Suburban	0.57	10	Possible bacteria source identified - US 45-4
	7	P/SU-4	US Highway 45	US Highway	43.443507, -88.209834	Google Maps	Suburban	0.39	12	-
	8	P/SU-4	US Highway 45	US Highway	43.432580, -88.208738	Google Maps	Suburban	0.45	25	-
	9	P/SU-4	US Highway 45	US Highway	43.427383, -88.208277	Google Maps	Suburban	0.44	23	-
	10	P/SU-4	US Highway 45	US Highway	43.421085, -88.207334	Google Maps	Suburban	0.56	29	-
	11	P/SU-4	US Highway 45	US Highway	43.412806, -88.205722	Google Maps	Suburban	0.55	28	-
	12	P/SU-4	US Highway 45	US Highway	43.408029, -88.201224	Google Maps	Suburban	0.55	21	-
	13	P/SU-4	US Highway 45	US Highway	43.403371, -88.194032	Google Maps	Suburban	0.37	19	-
	14	P/SU-4	US Highway 45	US Highway	43.397760, -88.191214	Google Maps	Suburban	0.43	21	-
	15	P/SU-4	US Highway 45	US Highway	43.393995, -88.191522	Google Maps	Suburban	0.38	19	-
	16	P/SU-5	US Highway 45	US Highway	43.332399, -88.189313	Google Maps	Suburban	0.43	20	-
	17	P/SU-5	US Highway 45	US Highway	43.324369, -88.186437	Google Maps	Suburban	0.46	25	-
	18	P/SU-5	US Highway 45	US Highway	43.309579, -88.184830	Google Maps	Suburban	0.49	23	-
	19	P/SU-2	State Highway 67	State Highway	N Baumann St 43.601140, -88.295406	Google Maps	Suburban	0.36	21	Possible bacteria source identified - STH 67-3
	20	P/SU-2	State Highway 67	State Highway	N Railroad St 43.601086, -88.289284	Google Maps	Suburban	0.45	26	-
	21	P/SU-2	State Highway 67	State Highway	N Fond Du Lac Ave 43.601076, -88.286972	Google Maps	Suburban	0.42	28	-
	22	P/SU-2	State Highway 67	State Highway	S Fond Du Lac Ave 43.598131, -88.285200	Google Maps	Suburban	0.42	25	-
	23	P/SU-2	State Highway 67	State Highway	S Helena St 43.598017, -88.276561	Google Maps	Suburban	0.41	21	-
	24	P/SU-2	State Highway 67	State Highway	S Jenny St 43.597997, -88.274442	Google Maps	Suburban	0.38	20	-
	25	P/SU-8	State Highway 41	State Highway	43.204381, -88.136649	Google Maps	Suburban	0.85	38	-
	26	P/SU-8	State Highway 41	State Highway	43.192540, -88.122417	Google Maps	Suburban	0.49	25	-
	27	P/SU-8	State Highway 41	State Highway	43.187803, -88.113338	Google Maps	Suburban	0.65	36	-
	28	P/SU-8	State Highway 41	State Highway	43.181536, -88.098987	Google Maps	Suburban	0.44	26	-
	29	P/SU-8	State Highway 41	State Highway	43.176358, -88.087492	Google Maps	Suburban	0.46	18	-
	30	P/SU-8	State Highway 41	State Highway	43.173100, -88.082131	Google Maps	Suburban	0.72	39	-
	31	P/SU-8	State Highway 41	State Highway	43.160267, -88.064065	Google Maps	Suburban	0.49	28	-
	32	P/SU-8	State Highway 41	State Highway	43.146899, -88.054698	Google Maps	Suburban	0.41	27	-
	33	P/SU-8	State Highway 41	State Highway	43.126479, -88.056599	Google Maps	Suburban	0.55	30	-
	34	SU-9	Interstate 181	Interstate	43.170786, -88.004446	Google Maps	Suburban	0.43	31	-
	35	P/SU-9	Interstate 181	Interstate	43.177771, -88.005319	Google Maps	Suburban	0.40	24	-
	36	P/SU-9	Interstate 181	Interstate	43.180816, -88.004218	Google Maps	Suburban	0.42	25	-
	37	P/SU-9	Interstate 181	Interstate	43.192558, -88.003678	Google Maps	Suburban	0.52	21	-
	38	P/SU-9	Interstate 181	Interstate	43.201945, -88.003905	Google Maps	Suburban	0.67	35	-
	39	P/SU-9	Interstate 181	Interstate	43.207120, -88.003593	Google Maps	Suburban	0.42	27	-
	40	P/SU-9	Interstate 181	Interstate	43.218300, -88.003550	Google Maps	Suburban	0.63	31	-
	41	P/SU-9	Interstate 167	Interstate	43.221621, -88.003530	Google Maps	Suburban	0.51	30	-
	42	P/SU-9	Interstate 167	Interstate	43.221559, -87.993914	Google Maps	Suburban	0.45	23	-
	43	P/SU-9	Interstate 167	Interstate	43.221565, -87.989645	Google Maps	Suburban	0.48	25	-
	44	P/SU-9	Interstate 57	Interstate	43.221509, -87.982662	Google Maps	Suburban	0.69	37	-
	45	P/SU-9	Interstate 57	Interstate	43.217223, -87.979983	Google Maps	Suburban	0.56	31	-
	46	P/SU-9	Interstate 57	Interstate	43.214460, -87.978081	Google Maps	Suburban	0.57	31	-
	47	P/SU-9	Interstate 57	Interstate	43.209467, -87.974604	Google Maps	Suburban	0.39	24	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Suburban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
	48	P/SU-9	Interstate 57	Interstate	43.204764, -87.971294	Google Maps	Suburban	0.40	20	-
	49	P/SU-9	Interstate 57	Interstate	43.198495, -87.967482	Google Maps	Suburban	0.42	23	-
	50	P/SU-9	Interstate 57	Interstate	43.192488, -87.964561	Google Maps	Suburban	0.51	35	-
	51	P/SU-9	Interstate 57	Interstate	43.182794, -87.963358	Google Maps	Suburban	0.43	22	-
	52	P/SU-9	Interstate 57	Interstate	43.178395, -87.961662	Google Maps	Suburban	0.34	23	-
	53	P/SU-9	Interstate 57	Interstate	43.171991, -87.963156	Google Maps	Suburban	0.38	24	-
4/11/2025	54	F/SU-6	State Highway 67	State Highway	43.646271, -88.184959	Google Maps	Suburban	0.35	23	-
	55	F/SU-6	State Highway 67	State Highway	43.649192, -88.179350	Google Maps	Suburban	0.18	20	3 Restaurants
	56	F/SU-6	State Highway 67	State Highway	43.651132, -88.178507	Google Maps	Suburban	0.51	33	-
	57	F/SU-6	State Highway 67	State Highway	43.658139, -88.175686	Google Maps	Suburban	0.43	25	-
	58	F/SU-6	State Highway 67	State Highway	43.664057, -88.175318	Google Maps	Suburban	0.44	26	-
	59	F/SU-6	State Highway 67	State Highway	43.670256, -88.175299	Google Maps	Suburban	0.42	25	-
	60	F/SU-6	State Highway 67	State Highway	43.676244, -88.174481	Google Maps	Suburban	0.44	25	-
	61	F/SU-6	State Highway 67	State Highway	43.682570, -88.172409	Google Maps	Suburban	0.48	28	-
	62	F/SU-6	State Highway 67	State Highway	43.688507, -88.172777	Google Maps	Suburban	0.35	24	-
4/18/2025	63	F/SU-9	State Highway 28	State Highway	43.521042, -88.228919	Google Maps	Suburban	0.33	28	Restaurants
	64	F/SU-9	State Highway 28	State Highway	43.520930, -88.222238	Google Maps	Suburban	0.39	33	Restaurants
4/21/2025	65	F/SU-13	State Highway 144	State Highway	43.348234, -88.281975	Google Maps	Suburban	0.38	21	-
	66	F/SU-13	State Highway 144	State Highway	43.353515, -88.280633	Google Maps	Suburban	0.46	25	-
	67	F/SU-13	State Highway 144	State Highway	43.360183, -88.280517	Google Maps	Suburban	0.21	15	-
	68	F/SU-13	State Highway 144	State Highway	43.362917, -88.279029 (Dog breeder, no bacteria found)	Google Maps	Suburban	0.36	25	
	69	F/SU-13	State Highway 144	State Highway	43.367920, -88.277981	Google Maps	Suburban	0.49	28	-
	70	F/SU-13	State Highway 144	State Highway	43.374582, -88.275432	Google Maps	Suburban	0.39	23	-
	71	F/SU-13	State Highway 144	State Highway	43.379945, -88.272931	Google Maps	Suburban	0.46	26	-
	72	F/SU-13	State Highway 144	State Highway	43.385721, -88.268616	Google Maps	Suburban	0.38	22	-
4/22/2025	73	F/SU-13	State Highway 144	State Highway	43.391230, -88.266167	Google Maps	Suburban	0.51	29	-
	74	F/SU-13	State Highway 144	State Highway	43.398457, -88.266565	Google Maps	Suburban	0.32	19	-
	75	F/SU-13	State Highway 144	State Highway	43.402600, -88.263887	Google Maps	Suburban	0.62	38	Restauant
	76	F/SU-13	State Highway 144	State Highway	43.411247, -88.260981	Google Maps	Suburban	0.63	32	-
	77	F/SU-13	State Highway 144	State Highway	43.420299, -88.261162	Google Maps	Suburban	0.50	26	-
	78	F/SU-14	State Highway 33	State Highway	43.427498, -88.267407	Google Maps	Rural	0.65	36	-
	79	F/SU-14	State Highway 33	State Highway	43.427396, -88.254434	Google Maps	Rural	0.66	33	-
	80	F/SU-14	State Highway 33	State Highway	43.427326, -88.243266	Google Maps	Suburban	0.41	23	-
	81	F/SU-14	State Highway 33	State Highway	43.427288, -88.234987	Google Maps	Suburban	0.45	23	-
	82	F/SU-15	State Highway 144	State Highway	43.441377, -88.181369	Google Maps	Suburban	0.37	20	-
	83	F/SU-15	State Highway 144	State Highway	43.445549, -88.176978	Google Maps	Suburban	0.42	24	-
	84	F/SU-15	State Highway 144	State Highway	43.448538, -88.170089	Google Maps	Suburban	0.23	12	-
	85	F/SU-15	State Highway 144	State Highway	43.449891, -88.166299	Google Maps	Suburban	0.45	25	restaurant
4/23/2025	86	F/SU-17	State Highway 144	State Highway	43.480091, -88.140798	Google Maps	Suburban	0.51	26	-
	87	F/SU-17	State Highway 144	State Highway	43.488016, -88.140800 Looks like a farm, no animal identified, no bacteria found	Google Maps	Suburban	0.38	23	
	88	F/SU-17	State Highway 144	State Highway	43.489596, -88.140720	Google Maps	Suburban	0.42	20	-
	89	F/SU-17	State Highway 144	State Highway	43.495092, -88.138952	Google Maps	Suburban	0.33	18	-
	90	F/SU-20	State Highway 28	State Highway	43.588253, -88.050506	Google Maps	Suburban	0.30	17	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Suburban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
4/24/2025	91	F/SU-20	State Highway 28	State Highway	43.592640, -88.050376	Google Maps	Suburban	0.24	14	-
	92	F/SU-20	State Highway 28	State Highway	43.596185, -88.050340	Google Maps	Suburban	0.28	16	-
4/25/2025	93	F/SU-22	State Highway 28	State Highway	43.652922, -88.019345	Google Maps	Suburban	0.55	28	-
	94	F/SU-22	State Highway 28	State Highway	43.657048, -88.009789	Google Maps	Suburban	0.22	10	restaurant
	95	F/SU-22	State Highway 28	State Highway	43.658659, -88.006011	Google Maps	Suburban	0.42	21	restaurant
	96	F/SU-22	State Highway 28	State Highway	43.662253, -87.999545	Google Maps	Rural	0.26	12	
4/28/2025	97	F/SU-23	State Highway 144	State Highway	43.557302, -87.974955	Google Maps	Suburban	0.70	37	-
	98	F/SU-23	State Highway 144	State Highway	43.559717, -87.961662	Google Maps	Suburban	0.52	26	-
5/7/2025	99	F/SU-24	State Highway 57	State Highway	43.5539985, -87.9418941	Google Maps	Rural	0.60	37	Barns upstream of ROW
	100	F/SU-24	State Highway 57	State Highway	43.4734823, 87.9407527	Google Maps	Suburban	0.22	27	-
5/8/2025	101	F/SU-25	Interstate 43	Interstate	43.2138389, -87.9209442	Google Maps	Suburban	0.13	12	-
	102	F/SU-25	Interstate 43	Interstate	43.1820654, -87.9199531	Google Maps	Suburban	1.00	36	-
5/9/2025	103	F/SU-26	Interstate 43	Interstate	43.1735839, -87.9159500	Google Maps	Suburban	1.78	57	-
	104	F/SU-26	Interstate 43	Interstate	43.1380970, -87.9138599	Google Maps	Suburban	0.33	13	-
	105	F/SU-26	Interstate 43	Interstate	43.1094602, -87.9173175	Google Maps	Suburban	0.37	21	-
5/15/2025	106	F/SU-27	State Highway 190	State Highway	43.0900801, 88.1205094	Google Maps	Suburban	0.54	22	-
5/16/2025	107	F/SU-28	State Highway 60	State Highway	43.3228654, -87.9848518	Google Maps	Suburban	2.56	110	-
	108	F/SU-29	Interstate 43	Interstate	42.9621186, -88.0057519	Google Maps	Suburban	1.89	35	Solid Waste Drop-off Site
	109	F/SU-29	Interstate 43	Interstate	42.9616457, -87.9686790	Google Maps	Suburban	1.03	18	-
	110	F/SU-30	State Highway 119	Interstate	42.9633036, -87.9341945	Google Maps	Suburban	1.46	16	-
5/19/2025	111	F/SU-31	Interstate Highway 794	State Highway	42.9606612, -87.9096517	Google Maps	Suburban	1.65	33	-
	112	F/SU-32	State Highway 145	State Highway	43.1324839, -88.0550820	Google Maps	Suburban	0.81	9	-
5/20/2025	113	F/SU-33	State Highway 181	State Highway	43.1049524, -87.9953054	Google Maps	Suburban	4.39	30	-
	114	F/SU-33	State Highway 181	State Highway	43.1103349, -88.0060722	Google Maps	Suburban	2.42	28	Dumpster, Landscaping Supplies
	115	F/SU-34	State Highway 57	State Highway	43.1482026, -87.9380146	Google Maps	Suburban	1.91	31	-
	116	F/SU-34	State Highway 74	State Highway	43.1749258, -88.1381704	Google Maps	Suburban	2.49	43	-
	117	F/SU-46	State Highway 167	State Highway	43.1920351, -88.0828471	Google Maps	Suburban	2.34	26	Wet Detention Ponds, Dumpsters, Greenhouse
	118	F/SU-47	State Highway 167	State Highway	43.2210801, -88.1010766	Google Maps	Suburban	1.63	22	Wet Detention Pond, Dumspter
	119	F/SU-48	State Highway 175	State Highway	43.2217118, -88.0235171	Google Maps	Suburban	1.01	19	-
	120	F/SU-49	State Highway 175	State Highway	43.2070984, -88.1587244	Google Maps	Suburban	0.82	17	-
	121	F/SU-50	State Highway 175	State Highway	43.2509490, -88.1911736	Google Maps	Suburban	1.16	24	-
	122	F/SU-51	State Highway 33	State Highway	43.3869863, -87.9064070	Google Maps	Suburban	1.12	8	-
	123	F/SU-52	State Highway 33	State Highway	43.3850064, -87.9282119	Google Maps	Suburban	2.12	25	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Suburban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
5/21/2025	124	F/SU-53	State Highway 33	State Highway	43.4288040, -88.0409856	Google Maps	Suburban	1.32	14	-
	125	F/SU-54	State Highway 167	State Highway	43.4267337, -88.1462015	Google Maps	Suburban	0.64	9	Lanscaping materials and piles, dumpster
	126	F/SU-55	State Highway 145	State Highway	43.2271729, -88.1032717	Google Maps	Suburban	0.89	13	-
	127	F/SU-56	U.S. Highway 45	State Highway	43.2776460, -88.0040864	Google Maps	Rural	3.13	37	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Urban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
11/18/2024	23	P/U-10	State Highway 100	State Highway	43.110798, -88.055578	Google Maps	Urban	0.45	22	-
	24	P/U-10	State Highway 100	State Highway	43.104749, -88.052782	Google Maps	Urban	0.39	18	-
	25	P/U-10	State Highway 100	State Highway	43.096936, -88.051072	Google Maps	Urban	0.38	17	-
	26	P/U-10	State Highway 100	State Highway	43.089567, -88.047600	Google Maps	Urban	0.42	21	-
	27	P/U-10	State Highway 100	State Highway	43.085680, -88.047612	Google Maps	Urban	0.34	15	-
	28	P/U-10	State Highway 100	State Highway	43.082129, -88.047634	Google Maps	Urban	0.41	21	-
	29	P/U-10	State Highway 100	State Highway	43.074766, -88.047803	Google Maps	Urban	0.50	27	-
	30	P/U-10	State Highway 100	State Highway	43.067419, -88.047665	Google Maps	Urban	0.51	25	-
	31	P/U-10	State Highway 100	State Highway	43.059885, -88.047545	Google Maps	Urban	0.57	20	-
	32	P/U-10	State Highway 100	State Highway	43.055323, -88.047462	Google Maps	Urban	0.43	19	-
	33	P/U-10	State Highway 100	State Highway	43.045538, -88.047059	Google Maps	Urban	0.70	30	-
	34	P/U-10	State Highway 100	State Highway	43.034925, -88.046968	Google Maps	Urban	0.45	19	-
	35	P/U-10	State Highway 100	State Highway	43.027927, -88.047295	Google Maps	Urban	0.78	32	-
	36	P/U-10	State Highway 100	State Highway	43.016329, -88.046786	Google Maps	Urban	0.58	20	-
	37	P/U-10	State Highway 100	State Highway	43.009890, -88.046571	Google Maps	Urban	0.57	20	-
	57	P/U-11	Interstate 94	Interstate	43.025536, -88.089483	Google Maps	Urban	0.97	28	-
	58	P/U-12	Interstate 94	Interstate	43.027962, -88.031976	Google Maps	Urban	0.84	27	-
	59	P/U-12	Interstate 94	Interstate	43.030453, -87.994076	Google Maps	Urban	0.88	24	-
	60	P/U-12	Interstate 94	Interstate	43.033143, -87.966166	Google Maps	Urban	1.24	32	-
	61	P/U-12	Interstate 94	Interstate	43.034608, -87.947165	Google Maps	Urban	0.92	29	-
	15	P/U-18	US Highway 18	US Highway	43.036589, -88.141480	Google Maps	Urban	0.23	16	-
	16	P/U-18	US Highway 18	US Highway	43.036852, -88.136904	Google Maps	Urban	0.27	20	-
	17	P/U-18	US Highway 18	US Highway	43.036557, -88.131309	Google Maps	Urban	0.22	15	-
	18	P/U-18	US Highway 18	US Highway	43.036594, -88.127099	Google Maps	Urban	0.32	21	-
	19	P/U-18	US Highway 18	US Highway	43.037215, -88.120669	Google Maps	Urban	0.31	20	-
	20	P/U-18	US Highway 18	US Highway	43.036413, -88.114363	Google Maps	Urban	0.38	25	-
	21	P/U-18	US Highway 18	US Highway	43.036139, -88.106654	Google Maps	Urban	0.22	17	-
	22	P/U-18	US Highway 18	US Highway	43.035940, -88.078277	Google Maps	Urban	0.26	21	-
	49	P/U-13	Interstate 43	Interstate	43.089845, -87.921841	Google Maps	Urban	0.26	18	-
	50	P/U-13	Interstate 43	Interstate	43.085930, -87.921553	Google Maps	Urban	0.29	19	-
	51	P/U-13	Interstate 43	Interstate	43.057689, -87.924116	Google Maps	Urban	0.21	15	-
	52	P/U-13	Interstate 43	Interstate	43.054852, -87.925152	Google Maps	Urban	0.23	16	-
	53	P/U-13	Interstate 43	Interstate	43.017736, -87.916494	Google Maps	Urban	0.26	18	-
	54	P/U-13	Interstate 43	Interstate	43.000009, -87.916119	Google Maps	Urban	0.21	15	-
	55	P/U-13	Interstate 43	Interstate	42.979424, -87.916406	Google Maps	Urban	0.23	17	-
	56	P/U-13	Interstate 43	Interstate	42.975366, -87.915694	Google Maps	Urban	0.22	16	-
	62	P/U-13	Interstate 94	Interstate	43.089660, -87.921875	Google Maps	Urban	0.69	21	-
	63	P/U-13	Interstate 94	Interstate	43.077610, -87.920827	Google Maps	Urban	0.86	23	-
	64	P/U-13	Interstate 94	Interstate	43.057687, -87.924193	Google Maps	Urban	0.84	22	-
	38	P/U-14	State Highway 36	State Highway	42.946992, -87.983551	Google Maps	Urban	0.42	22	-
	39	P/U-14	State Highway 36	State Highway	42.949369, -87.980755	Google Maps	Urban	0.58	23	-
	40	P/U-14	State Highway 36	State Highway	42.951368, -87.978627	Google Maps	Urban	0.76	29	-
	41	P/U-14	State Highway 36	State Highway	42.959956, -87.969420	Google Maps	Urban	0.49	19	-
	42	P/U-14	State Highway 36	State Highway	42.964865, -87.965570	Google Maps	Urban	0.47	17	-
	43	P/U-14	State Highway 36	State Highway	42.973688, -87.957389	Google Maps	Urban	0.54	24	-
	44	P/U-14	State Highway 36	State Highway	42.975499, -87.955636	Google Maps	Urban	0.45	22	-
	45	P/U-14	State Highway 241	State Highway	42.978269, -87.948513	Google Maps	Urban	0.58	22	-
	46	P/U-14	State Highway 241	State Highway	42.974035, -87.948596	Google Maps	Urban	0.48	29	-
	47	P/U-14	State Highway 241	State Highway	42.966791, -87.948717	Google Maps	Urban	0.43	25	-
	48	P/U-14	State Highway 241	State Highway	42.960618, -87.948815	Google Maps	Urban	0.46	25	-

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4a - Desktop Analysis Logs for Urban Drainage Areas										
Date	Highway Segment No. Analyzed	Segment Number	Highway Name	Type of Highway	Start Location	GIS Source	Subarea	Miles	Desktop Analysis Time (Minutes)	Notes
	10	P/U-15	US Highway 38	US Highway	42.977911, -87.909548	Google Maps	Urban	0.28	19	-
	11	P/U-15	US Highway 38	US Highway	42.973767, -87.909599	Google Maps	Urban	0.50	31	-
	12	P/U-15	US Highway 38	US Highway	42.966477, -87.909679	Google Maps	Urban	0.50	30	-
	13	P/U-15	US Highway 38	US Highway	42.959151, -87.909788	Google Maps	Urban	1.15	42	-
	14	P/U-15	US Highway 38	US Highway	42.968002, -87.948749	Google Maps	Urban	0.28	18	-
	65	P/U-15	Interstate 94	Interstate	43.019216, -87.917391	Google Maps	Urban	0.75	19	-
	66	P/U-15	Interstate 94	Interstate	42.996446, -87.915363	Google Maps	Urban	0.93	26	-
	67	P/U-16	Interstate 94	Interstate	42.979433, -87.916373	Google Maps	Urban	0.79	22	-
	68	P/U-16	Interstate 94	Interstate	42.964995, -87.933120	Google Maps	Urban	1.19	34	-
	69	P/U-17	US Highway 24	US Highway	43.000524, -87.948448	Google Maps	Urban	0.45	25	-
	70	P/U-17	US Highway 24	US Highway	42.996286, -87.955531	Google Maps	Urban	0.25	18	-
	71	P/U-17	US Highway 24	US Highway	42.993260, -87.960855	Google Maps	Urban	0.54	34	-
	72	P/U-17	US Highway 24	US Highway	42.988399, -87.969098	Google Maps	Urban	0.41	23	-
	73	P/U-17	US Highway 24	US Highway	42.986041, -87.972701	Google Maps	Urban	0.52	35	-
	74	P/U-17	US Highway 24	US Highway	42.981061, -87.980855	Google Maps	Urban	0.47	24	-
	75	P/U-17	US Highway 24	US Highway	42.973838, -87.992704	Google Maps	Urban	0.35	20	-
	76	P/U-17	US Highway 24	US Highway	42.970289, -87.998149	Google Maps	Urban	0.28	18	-
	77	P/U-17	US Highway 24	US Highway	42.966506, -88.004238	Google Maps	Urban	0.24	16	-
5/8/2025	1	F/U-19	Interstate 43	Interstate	43.2559379, -87.9198847	Google Maps	Urban	2.40	63	Wet Detention Pond near ROW
	2	F/U-19	Interstate 43	Interstate	43.2212456, -87.9215394	Google Maps	Urban	0.51	14	-
	3	F/U-19	Interstate 43	Interstate	43.1976102, -87.9233029	Google Maps	Urban	1.11	27	-
	4	F/U-19	Interstate 43	Interstate	43.1820864, -87.9200025	Google Maps	Urban	0.62	14	-
5/9/2025	5	F/U-19	Interstate 43	Interstate	43.1478196, -87.9160028	Google Maps	Urban	0.68	18	-
	6	F/U-19	Interstate 43	Interstate	43.1336076, -87.9135288	Google Maps	Urban	1.72	36	-
	7	F/U-19	Interstate 43	Interstate	43.1041049, -87.9181115	Google Maps	Urban	1.07	47	-
	8	F/U-19	Interstate 43	Interstate	42.9961659, -87.9151445	Google Maps	Urban	1.20	50	-
	9	F/U-19	Interstate 43	Interstate	43.0526547, -87.9253274	Google Maps	Urban	2.49	103	-
	10	F/U-20	Interstate 894	Interstate	43.0291409, -88.0472597	Google Maps	Urban	0.90	32	-
5/15/2025	11	F/U-21	Interstate 41	Interstate	43.0264979, -88.0354097	Google Maps	Urban	1.66	63	-
	12	F/U-21	Interstate 41	Interstate	43.0265713, -88.0355165	Google Maps	Urban	2.30	75	-
	13	F/U-22	State Highway 190	Interstate	43.0556111, -88.0476295	Google Maps	Urban	4.02	84	-
	14	F/U-22	State Highway 190	State Highway	43.0900708, -88.1248489	Google Maps	Urban	0.21	13	-
	15	F/U-23	State Highway 60	State Highway	43.0898158, -88.1098947	Google Maps	Urban	2.62	64	Garden Center
5/16/2025	16	F/U-24	Interstate 43	State Highway	43.3202882, -87.9351593	Google Maps	Urban	0.78	42	-
	17	F/U-25	Interstate 94	Interstate	42.9628856, -87.9485599	Google Maps	Urban	0.97	14	-
5/19/2025	18	F/U-26	State Highway 38	State Highway	42.9430900, -87.9222786	Google Maps	Urban	0.69	15	-
	19	F/U-26	State Highway 38	State Highway	42.9414716, -87.9094288	Google Maps	Urban	1.32	27	Dumpsters on Impervious
	20	F/U-27	Interstate 794	Interstate	42.9610257, -87.8817981	Google Maps	Urban	0.78	12	-
	21	F/U-28	Interstate 94	Interstate	43.0355536, -87.9240375	Google Maps	Urban	2.06	14	-
	22	F/U-29	State Highway 341	Interstate	43.0341575, -87.9477865	Google Maps	Urban	1.23	22	-
	23	F/U-30	State Highway 175	State Highway	43.0206339, -87.9700290	Google Maps	Urban	0.86	13	Wet Detention Pond near ROW
	24	F/U-30	State Highway 175	State Highway	43.0328749, -87.9702374	Google Maps	Urban	1.91	32	Dumpsters on Impervious
	25	F/U-30	State Highway 175	State Highway	43.0937594, -88.0071662	Google Maps	Urban	3.64	116	Dumpsters, Food Truck, Landscaping Supplies on Impervious
5/20/2025	26	F/U-31	State Highway 181	State Highway	43.1454236, -88.0054676	Google Maps	Urban	1.75	19	Large Garden Center

*Only sites with possible issues to be resolved with WisDOT stormwater engineer include pictures from Google Street View

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
P/1	US Highway 45	43.52	-88.23	1526 Fond Du Lac Ave, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/2	US Highway 45	43.52	-88.23	102 Main St, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/3	US Highway 45	43.52	-88.23	1273 Fond Du Lac Ave, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/4	US Highway 45	43.52	-88.23	109 Main St, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/5	US Highway 45	43.52	-88.22	1041 Fond Du Lac Ave, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/6	US Highway 45	43.513990	-88.22	1010 Fond Du Lac Ave, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/7	US Highway 45	43.497640	-88.22	102 Badger Rd #45, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/8	State Highway 67	43.60	-88.28	116 E Main St, Campbellsport, WI 53010	Fond du Lac	Village of Campbellsport	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/9	State Highway 67	43.60	-88.28	128 E Main St, Campbellsport, WI 53010	Fond du Lac	Village of Campbellsport	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/10	State Highway 67	43.60	-88.28	153 E Main St, Campbellsport, WI 53010	Fond du Lac	Village of Campbellsport	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/11	Interstate 181	43.21	-88.00	7520 W Donges Bay Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/12	Interstate 167	43.221530	-87.99	6411 W Mequon Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/13	Interstate 57	43.221744	-87.98	5900 W Mequon Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/14	Interstate 57	43.220560	-87.98	11120 N Cedarburg Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/15	Interstate 57	43.22	-87.98	6005 W Mequon Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/16	Interstate 57	43.21	-87.97	10365 N Cedarburg Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/17	Interstate 57	43.19	-87.97	4327 W Schroeder Dr, Brown Deer, WI 53223	Milwaukee	Village of Brown Deer	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/18	Interstate 57	43.18	-87.96	9133 N Deerwood Dr, Brown Deer, WI 53223	Milwaukee	Village of Brown Deer	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/19	US Highway 45	43.65	-88.26	N3104 US-45, Campbellsport, WI 53010	Fond du Lac	Town of Osceola	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/20	US Highway 45	43.62	-88.24	N 2245 US-45, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/21	US Highway 45	43.60	-88.24	N1690 US-45, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/22	US Highway 45	43.55	-88.24	192 US-45, Kewaskum, WI 53040	Fond du Lac	Town of Auburn	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/23	State Highway 60	43.32	-88.18	N168W21991 Main St, Jackson, WI 53037	Washington	Village of Jackson	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
P/24	State Highway 60	43.32	-88.17	W213 N16770, Glen Brooke Dr, Jackson, WI 53037	Washington	Village of Jackson	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/25	State Highway 60	43.32	-88.16	N168W20594 Main St, Jackson, WI 53037	Washington	Village of Jackson	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/26	State Highway 60	43.32	-88.16	N168W20101 Main St, Jackson, WI 53037	Washington	Village of Jackson	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/27	State Highway 60	43.32	-88.15	N168w19490 Main St, Jackson, WI 53037	Washington	Town of Jackson	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/28	State Highway 100	43.08	-88.05	3131 N Mayfair Rd, Wauwatosa, WI 53222	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/29	State Highway 100	43.07	-88.05	3041 N Mayfair Rd, Wauwatosa, WI 53222	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/30	State Highway 100	43.07	-88.05	2751 N Mayfair Rd, Wauwatosa, WI 53222	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/31	State Highway 100	43.07	-88.05	2711 N Mayfair Rd, Wauwatosa, WI 53222	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/32	State Highway 100	43.07	-88.05	2635 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/33	State Highway 100	43.06	-88.05	2350 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/34	State Highway 100	43.06	-88.05	2201 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/35	State Highway 100	43.05	-88.05	1701 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/36	State Highway 100	43.04	-88.05	869 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/37	State Highway 100	43.04	-88.05	817 N Mayfair Rd, Milwaukee, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/38	State Highway 100	43.04	-88.05	725 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/39	State Highway 100	43.04	-88.05	510 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/40	State Highway 100	43.04	-88.05	418 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/41	State Highway 100	43.04	-88.05	10842 W Bluemound Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/42	State Highway 100	43.03	-88.05	151 N Mayfair Rd, Wauwatosa, WI 53226	Milwaukee	City of Wauwatosa	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/43	State Highway 100	43.02	-88.05	837 S 108th St, Milwaukee, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/44	State Highway 100	43.02	-88.05	1117 S 108th St, Milwaukee, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/45	State Highway 100	43.02	-88.05	1234 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/46	State Highway 100	43.02	-88.05	1427 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
P/47	State Highway 100	43.01	-88.05	1500 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/48	State Highway 100	43.01	-88.05	1507 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/49	State Highway 100	43.01	-88.05	1550 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/50	State Highway 100	43.01	-88.05	1657 S 108th St, West Allis, WI 53214	Milwaukee	City of West Allis	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/51	State Highway 36	42.95	-87.98	5235 W Loomis Rd, Greendale, WI 53129	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/52	State Highway 36	42.95	-87.98	5110 W Loomis Rd, Greendale, WI 53129	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/53	State Highway 36	42.95	-87.98	5045 W Loomis Rd, Milwaukee, WI 53220	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/54	State Highway 36	42.96	-87.97	4306 W Layton Ave, Greenfield, WI 53220	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/55	State Highway 36	42.96	-87.97	4060 W Loomis Rd, Milwaukee, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/56	State Highway 36	42.97	-87.96	3400 W Loomis Rd, Milwaukee, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/57	State Highway 36	42.97	-87.96	3374 W Loomis Rd, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Vet	Google Maps	N/A			Unlikely bacteria source
P/58	State Highway 36	42.98	-87.96	3322 W Loomis Rd, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/59	State Highway 241	42.98	-87.95	3606 S 27th St, Milwaukee, WI 53221	Milwaukee	Town of Lake	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/60	State Highway 241	42.98	-87.95	3657 S 27th St, Milwaukee, WI 53221	Milwaukee	Town of Lake	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/61	State Highway 241	42.98	-87.95	3801 S 27th St, Milwaukee, WI 53221	Milwaukee	Town of Lake	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/62	State Highway 241	42.97	-87.95	3871 S 27th St, Milwaukee, WI 53221	Milwaukee	Town of Lake	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/63	State Highway 241	42.97	-87.95	4275 S 27th St, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/64	State Highway 241	42.96	-87.95	4624 S 27th St, Milwaukee, WI 53221	Milwaukee	City of Milwaukee	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/65	State Highway 241	42.96	-87.95	4756 S 27th St, Milwaukee, WI 53221	Milwaukee	City of Milwaukee	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/66	State Highway 241	42.96	-87.95	4841 S 27th St, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/67	State Highway 241	42.95	-87.95	5051 S 27th St, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/68	State Highway 241	42.95	-87.95	5077 S 27th St, Greenfield, WI 53221	Milwaukee	City of Greenfield	Urban	Restaurant	Google Maps	N/A			Unlikely bacteria source
P/69	US Highway 45	43.65	-88.26	-	Fond du Lac	Town of Osceola	Rural	Propan storage tank	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
P/70	US Highway 45	43.60	-88.24	W1728 Sunset Dr, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Storage	Google Maps	N/A			Unlikely bacteria source
P/71	US Highway 45	43.59	-88.24	W1782 Co Rd Y, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
P/72	State Highway 60	43.32	-88.19	3160 WI-60 Trunk, Jackson, WI 53037	Washington	Town of Polk	Rural	Auto Body	Google Maps	N/A			Unlikely bacteria source
P/73	State Highway 60	43.32	-88.18	N168W22224 Main St, Jackson, WI 53037	Washington	Town of Jackson	Rural	Gas Station	Google Maps	N/A			Unlikely bacteria source
P/74	State Highway 60	43.32	-88.18	N168w22225 Main St, Jackson, WI 53037	Washington	Town of Jackson	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/75	State Highway 60	43.32	-88.18	-	Washington	Town of Jackson	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/76	State Highway 60	43.32	-88.17	-	Washington	Town of Jackson	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/77	State Highway 60	43.32	-88.15	W194N16774 Eagle Dr, Jackson, WI 53037	Washington	Town of Jackson	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/78	Interstate 43	43.41	-87.91	-	Ozaukee	Town of Port Washington	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/79	Interstate 43	43.41	-87.91	-	Ozaukee	Town of Port Washington	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/80	Interstate 43	43.41	-87.91	-	Ozaukee	Town of Port Washington	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/81	Interstate 43	43.35	-87.93	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/82	Interstate 43	43.33	-87.92	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/83	Interstate 43	43.33	-87.92	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/84	Interstate 43	43.32	-87.92	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/85	Interstate 43	43.31	-87.92	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
P/86	Interstate 43	43.31	-87.92	-	Ozaukee	Town of Grafton	Rural	Sanitary Sewer Overflow	Google Maps	N/A			Unlikely bacteria source
F/87	State Highway 67	43.59	-88.34	W3799 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Ashford	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/88	State Highway 67	43.60	-88.32	W3315 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Ashford	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/89	State Highway 67	43.60	-88.30	W2925 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Ashford	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/90	State Highway 67	43.72	-88.06	W7325 WI-67, Plymouth, WI 53073	Sheboygan	Town of Greenbush	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/91	State Highway 175	43.65	-88.45	N3041 WI-175, Byron, WI 53006	Fond du Lac	Town of Byron	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/92	State Highway 67	43.62	-88.24	N 2245 US-45, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
F/93	State Highway 67	43.71	-88.14	W8902 WI-67, Plymouth, WI 53073	Sheboygan	Town of Mitchell	Rural	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/94	State Highway 67	43.65	-88.18	N 3040, N3040 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Osceola	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/95	State Highway 67	43.65	-88.18	N3054 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Osceola	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/96	State Highway 67	43.65	-88.18	N3055 WI-67, Campbellsport, WI 53010	Fond du Lac	Town of Osceola	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/97	State Highway 67	43.71	-88.18	W534 Co Rd B, St Cloud, WI 53079	Fond du Lac	Town of Osceola	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/98	State Highway 67	43.72	-88.11	-	Sheboygan	Town of Greenbush	Rural	Horse boarding	Google Maps	N/A			Unlikely bacteria source
F/99	State Highway 175	43.64	-88.45	N2764 WI-175, Brownsville, WI 53006	Fond du Lac	Town of Byron	Rural	Chicken farm	Google Maps	N/A			Unlikely bacteria source
F/100	State Highway 175	43.62	-88.45	N11915 WI-175, Brownsville, WI 53006	Dodge	Town of Lomira	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/101	US Highway 45	43.69	-88.32	W3317 US-45, Eden, WI 53019	Fond du Lac	Town of Eden	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/102	State Highway 28	43.53	-88.33	5761 WI-28, Allenton, WI 53002	Washington	Town of Wayne	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/103	State Highway 28	43.53	-88.31	5545 WI-28, Allenton, WI 53002	Washington	Town of Wayne	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/104	State Highway 28	43.53	-88.27	4595 WI-28, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/105	State Highway 28	43.53	-88.25	4358 WI-28, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/106	State Highway 28	43.52	-88.20	3327 WI-28, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/107	State Highway 28	43.51	-88.16	8906 Forest View Rd, Kewaskum, WI 53040	Washington	Town of Farmington	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/108	State Highway 28	43.51	-88.15	2342 WI-28, Kewaskum, WI 53040	Washington	Town of Farmington	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/109	State Highway 28	43.51	-88.14	2050 WI-28, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/110	State Highway 28	43.51	-88.13	1916 WI-28, Kewaskum, WI 53040	Washington	Town of Kewaskum	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/111	State Highway 28	43.52	-88.23	102 Main St, Kewaskum, WI 53040	Washington	Town of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/112	State Highway 28	43.52	-88.23	137 Main St, Kewaskum, WI 53040	Washington	Town of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/113	State Highway 28	43.52	-88.23	143 Main St, Kewaskum, WI 53040	Washington	Town of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/114	State Highway 28	43.52	-88.23	250 Main St, Kewaskum, WI 53040	Washington	Town of Kewaskum	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/115	State Highway 144	43.47	-88.15	7602 State Hwy 144, West Bend, WI 53090	Washington	Town of Farmington	Rural	Farm	Google Maps	N/A			Unlikely bacteria source

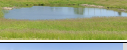
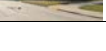
Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
F/116	State Highway 144	43.36	-88.28	4736 State Hwy 144, Slinger, WI 53086	Washington	Town of Polk	Suburban	Breeder	Google Maps	N/A			Unlikely bacteria source
F/117	State Highway 144	43.40	-88.26	5802 State Hwy 144, West Bend, WI 53095	Washington	Town of West Bend	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/118	State Highway 144	43.45	-88.17	7138 State Hwy 144, West Bend, WI 53090	Washington	Town of Barton	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/119	State Highway 144	43.51	-88.13	8721 State Hwy 144, Kewaskum, WI 53040	Washington	Town of Farmington	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/120	State Highway 144	43.51	-88.12	8772 State Hwy 144, Kewaskum, WI 53040	Washington	Town of Farmington	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/121	State Highway 144	43.51	-88.11	1546 Highland Dr, Kewaskum, WI 53040	Washington	Town of Farmington	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/122	State Highway 28	43.58	-88.05	N1159 WI-28, Adell, WI 53001	Sheboygan	Town of Scott	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/123	State Highway 28	43.61	-88.05	N1954 WI-28, Adell, WI 53001	Sheboygan	Town of Scott	Rural	Farm	Google Maps	N/A			Unlikely bacteria source
F/124	State Highway 28	43.66	-88.01	302 Madison Ave, Cascade, WI 53011	Sheboygan	Village of Cascade	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/125	State Highway 28	43.66	-88.01	507 Madison Ave, Cascade, WI 53011	Sheboygan	Village of Cascade	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/126	State Highway 57	43.57	-87.94	N851 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/127	State Highway 57	43.56	-87.94	N577 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/128	State Highway 57	43.56	-87.94	N547 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/129	State Highway 57	43.56	-87.94	535 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/130	State Highway 57	43.55	-87.95	N480 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Pump House	Google Maps	N/A			Unlikely bacteria source
F/131	State Highway 57	43.55	-87.95	N480 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Outlet Pipe to Ditch/ROW	Google Maps	N/A			Unlikely bacteria source
F/132	State Highway 57	43.55	-87.94	N371 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Barn Upstream of ROW	Google Maps	N/A			Unlikely bacteria source
F/133	State Highway 57	43.54	-87.94	N7277 WI-57, Random Lake, WI 53075	Ozaukee	Village of Random Lake	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/134	State Highway 57	43.38	-87.95	5133 WI-57, Fredonia, WI 53021	Ozaukee	Town of Fredonia	Rural	Livestock	Google Maps	N/A			Unlikely bacteria source
F/135	State Highway 57	43.46	-87.94	N4964, Fredonia, WI, 53021	Ozaukee	Town of Fredonia	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/136	State Highway 57	43.43	-87.94	4249 WI-57, Fredonia, WI, 53021	Ozaukee	Town of Fredonia	Rural	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/137	State Highway 57	43.43	-87.94	4177 WI-57, Fredonia, WI 53021	Ozaukee	Town of Fredonia	Rural	Portable Toilet	Google Maps	N/A			Unlikely bacteria source
F/138	State Highway 57	43.44	-87.94	1488 Hawthorne Dr, Fredonia, WI 53021	Ozaukee	Town of Fredonia	Rural	Mulch Pile	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
F/139	Interstate 43	43.24	-87.92	12080 Corporate Pkwy, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/140	Interstate 43	43.23	-87.92	11558 N Port Washington Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/141	Interstate 43	43.23	-87.92	11430 N Port Washington Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/142	Interstate 43	43.22	-87.92	1222 W Venture Ct, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/143	Interstate 43	43.22	-87.92	11250 N Port Washington Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/144	Interstate 43	43.22	-87.92	11150 N Port Washington Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Restaurant	Google Maps	N/A			Unlikely bacteria source
F/145	State Highway 190			14845 W Capitol Dr, Brookfield, WI 53005	Waukesha	City of Brookfield	Urban	Garden Supply Store	Google Maps	N/A			Unlikely bacteria source
F/146	Interstate 41	42.96	-87.98	4551 S 52nd St, Greenfield, WI 53220	Milwaukee	City of Greenfield	Suburban	Solid Waste Drop-Off Site	Google Maps	N/A			Unlikely bacteria source
F/147	State Highway 38	42.95	-87.91	4984 S Howell Ave, Milwaukee, WI 53207	Milwaukee	City of Milwaukee	Urban	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/148	State Highway 38	42.96	-87.91	4800 S Howell Ave, Milwaukee, WI 53207	Milwaukee	City of Milwaukee	Urban	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/149	State Highway 175	43.03	-87.97	Menomonee Valley Pond	Milwaukee	City of Milwaukee	Urban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/150	State Highway 175	43.06	-87.97	4527 W Lisbon Ave, Milwaukee, WI 53208	Milwaukee	City of Milwaukee	Urban	Dumpsters	Google Maps	N/A			Unlikely bacteria source
F/151	State Highway 175			7690 W Appleton Ave, Milwaukee, WI 53222	Milwaukee	City of Milwaukee	Urban	Dumpster and Trash	Google Maps	N/A			Unlikely bacteria source
F/152	State Highway 175	43.10	-88.01	7800 W Appleton Ave, Milwaukee, WI 53222	Milwaukee	City of Milwaukee	Urban	Uncovered Garbage	Google Maps	N/A			Unlikely bacteria source
F/153	State Highway 175			7870 W Appleton Ave, Milwaukee, WI 53218	Milwaukee	City of Milwaukee	Urban	Uncovered Garbage	Google Maps	N/A			Unlikely bacteria source
F/154	State Highway 175			8310 W Appleton Ave, Milwaukee, WI 53218	Milwaukee	City of Milwaukee	Urban	Grill	Google Maps	N/A			Unlikely bacteria source
F/155	State Highway 175			8054 W Appleton Ave, Milwaukee, WI 53218	Milwaukee	City of Milwaukee	Urban	Dumpster	Google Maps	N/A			Unlikely bacteria source
F/156	State Highway 175			8334 W Appleton Ave, Milwaukee, WI 53218	Milwaukee	City of Milwaukee	Urban	Uncovered Garbage	Google Maps	N/A			Unlikely bacteria source
F/157	State Highway 175			8730w W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/158	State Highway 175			4X5H+W9 Milwaukee, Wisconsin	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/159	State Highway 175			8862 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Food Truck	Google Maps	N/A			Unlikely bacteria source
F/160	State Highway 175			8950 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/161	State Highway 175			9130 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation													
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Google Aerial Map View	Decision
F/162	State Highway 175			9150 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Landscaping Materials on Impervious	Google Maps	N/A			Unlikely bacteria source
F/163	State Highway 175			9246 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpsters on Impervious	Google Maps	N/A			Unlikely bacteria source
F/164	State Highway 175			9746 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/165	State Highway 175			8057 W Appleton Ave, Milwaukee, WI 53218	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/166	State Highway 175			9717 W Appleton Ave, Milwaukee, WI 53225	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/167	State Highway 181			6800 N 76th St, Milwaukee, WI 53223	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/168	State Highway 181			6940, 7000 N 76th St, Milwaukee, WI 53223	Milwaukee	City of Milwaukee	Urban	Landscaping Supplies on Impervious	Google Maps	N/A			Unlikely bacteria source
F/169	State Highway 181			7777 N 76th St, Milwaukee, WI 53223	Milwaukee	City of Milwaukee	Urban	Garden Center (14-acres)	Google Maps	N/A			Unlikely bacteria source
F/170	State Highway 100			9025 W Brown Deer Rd, Milwaukee, WI 53224	Milwaukee	City of Milwaukee	Urban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/171	State Highway 145	43.19	-88.08	W140N9670 Knollcrest Cir, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/172	State Highway 145	43.21	-88.08	W140N10455 Fond du Lac Ave, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/173	State Highway 145	43.21	-88.08	W140N10565 Fond du Lac Ave, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/174	State Highway 145	43.21	-88.09	N108W14290 Bel Aire Ln, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/175	State Highway 145	43.22	-88.09	W147N11100 Fond du Lac Ave, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Greenhouse	Google Maps	N/A			Unlikely bacteria source
F/176	State Highway 145	43.22	-88.10	N112W14934 Mequon Rd, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/177	State Highway 145	43.22	-88.08	W140N11187 Country Aire Dr, Cedarburg, WI 53012	Ozaukee	City of Cedarburg	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/178	State Highway 167	43.22	-88.06	11807 W Mequon Rd, Mequon, WI 53097	Ozaukee	City of Mequon	Rural	Barn	Google Maps	N/A			Unlikely bacteria source
F/179	State Highway 167	43.22	-88.05	11401 W Mequon Rd, Mequon, WI 53097	Ozaukee	City of Mequon	Rural	Farm Field	Google Maps	N/A			Unlikely bacteria source
F/180	State Highway 57	43.22	-87.93	1665 W Mequon Rd, Mequon, WI 53092	Ozaukee	City of Mequon	Suburban	Wet Detention Pond	Google Maps	N/A			Unlikely bacteria source
F/181	State Highway 175	43.21	-88.16	W198N10390 Appleton Ave, Germantown, WI 53022	Washington	Village of Germantown	Rural	Dumpster on Impervious	Google Maps	N/A			Unlikely bacteria source
F/182	State Highway 175	43.21	-88.17	W210 N 10738, W210N10738 Appleton Ave, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Tree Nursery, Mulch, and Topsoil	Google Maps	N/A			Unlikely bacteria source
F/183	State Highway 175	43.24	-88.19	1412 WI-175, Hubertus, WI 53033	Washington	Village of Hubertus	Rural	Livestock close to ROW	Google Maps	N/A			Unlikely bacteria source

Appendix 4b - All Possible Bacteria Sites that were Determined to Not Need an Investigation														
ID	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots		Google Aerial Map View	Decision
F/184	State Highway 175	43.26	-88.19	1860 WI-175, Richfield, WI 53076	Washington	Village of Richfield	Suburban	Dumpster on Impervious	Google Maps	N/A				Unlikely bacteria source
F/185	State Highway 175	43.26	-88.20	1925 WI-175, Richfield, WI 53076	Washington	Village of Richfield	Suburban	Dumpster on Impervious	Google Maps	N/A				Unlikely bacteria source
F/186	State Highway 175	43.27	-88.20	2104 WI-175, Richfield, WI 53076	Washington	Village of Richfield	Rural	Farm Field	Google Maps	N/A				Unlikely bacteria source
F/187	State Highway 33	43.39	-87.93	750 E Green Bay Ave, Saukville, WI 53080	Ozaukee	Village of Saukville	Rural	Wet Detention Pond	Google Maps	N/A				Unlikely bacteria source
F/188	State Highway 33	43.38	-87.94	639 E Green Bay Ave, Saukville, WI 53080	Ozaukee	Village of Saukville	Suburban	Portable Toilets	Google Maps	N/A				Unlikely bacteria source
F/189	State Highway 33	43.38	-87.95	550 W Dekora St, Saukville, WI 53080	Ozaukee	Village of Saukville	Suburban	Silo/Barn (If in use)	Google Maps	N/A				Unlikely bacteria source
F/190	State Highway 33	43.38	-87.96	1863 WI-33, Saukville, WI 53080	Ozaukee	Village of Saukville	Suburban	Dumpsters on Impervious	Google Maps	N/A				Unlikely bacteria source
F/191	State Highway 33	43.39	-87.97	1990 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Farmer's Market and Field	Google Maps	N/A				Unlikely bacteria source
F/192	State Highway 33	43.42	-88.02	Across from 3031 WI-33, Saukville, WI 53080	Washington	Village of Saukville	Rural	Dumpster	Google Maps	N/A				Unlikely bacteria source
F/193	State Highway 33	43.42	-88.02	3031 WI-33, Saukville, WI 53080	Washington	Village of Saukville	Rural	Portable Toilet Services	Google Maps	N/A				Unlikely bacteria source
F/194	State Highway 33	43.42	-88.07	613 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Dumpster	Google Maps	N/A				Unlikely bacteria source
F/195	State Highway 33	43.42	-88.08	771 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Portable Toilet?	Google Maps	N/A				Unlikely bacteria source
F/196	State Highway 33	43.43	-88.08	CWGC+R7 West Bend, Wisconsin	Washington	City of West Bend	Rural	Mulch and Topsoil Piles	Google Maps	N/A				Unlikely bacteria source
F/197	State Highway 33	43.43	-88.10	1241 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Wet Detention Pond	Google Maps	N/A				Unlikely bacteria source
F/198	State Highway 33	43.43	-88.11	1401 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Field with Standing Water	Google Maps	N/A				Unlikely bacteria source
F/199	State Highway 33	43.43	-88.13	1848 WI-33, West Bend, WI 53095	Washington	City of West Bend	Rural	Garden Center/Plant Nursery	Google Maps	N/A				Unlikely bacteria source
F/200	State Highway 33	43.43	-88.15	2261 E Washington St, West Bend, WI 53095	Washington	City of West Bend	Rural	Topsoil and Mulch Piles	Google Maps	N/A				Unlikely bacteria source
F/201	State Highway 33	43.43	-88.16	1519 E Washington St, West Bend, WI 53095	Washington	City of West Bend	Suburban	Dumpster	Google Maps	N/A				Unlikely bacteria source
F/202	State Highway 167	43.25	-88.21	3468 WI-167, Richfield, WI 53076	Washington	Village of Richfield	Rural	Wet Detention Pond	Google Maps	N/A				Unlikely bacteria source
F/203	State Highway 145	43.23	-88.11	N116W15970 Main St, Germantown, WI 53022	Washington	Village of Germantown	Suburban	Food and Beverage Manufacturer	Google Maps	N/A				Unlikely bacteria source
F/204	State Highway 145	43.25	-88.14	W184N12633 Fond du Lac Ave, Germantown, WI 53022	Washington	Village of Germantown	Rural	Livestock Area	Google Maps	N/A				Unlikely bacteria source
F/205	State Highway 145	43.26	-88.15	N132W19179 Rockfield Rd, Richfield, WI 53076	Washington	Village of Richfield	Rural	Dumpsters	Google Maps	N/A				Unlikely bacteria source

Appendix 4c - Possible Bacteria Sites Included in the Field Investigation

ID	Field Investigation Location	Highway Name	Lat	Long	Address/Location	County	City/Village/Town	Rural/Urban/Suburban	Type of Bacteria Source	GIS Source (Google Earth, County/Municipal GIS, WisDOT DOTView)	Date of Field Verification	Google Street View Screen Shots	Notes	Google Aerial Map View	Decision
1	P/US 45-1	US Highway 45	43.67	-88.27	N3832 County Rd W, Eden, WI 53019	Fond du Lac	Town of Osceola	Rural	CAFO	Google Maps	10/8/2024		Appears standing water could be runoff from the CAFO		Unlikely Bacteria Source
2	P/US 45-2	US Highway 45	43.60	-88.24	N1776 US-45, Campbellsport, WI 53010	Fond du Lac	Town of Auburn	Rural	Truck repair	Google Maps	10/8/2024		Appears standing water could be runoff from the truck repair shop		Unlikely Bacteria Source
3	P/STH 67-3	State Highway 67	43.60	-88.29	W2796 WI-67, Campbellsport, WI 53010	Fond du Lac	Village of Campbellsport	Suburban	Veterinary Clinic	Google Maps	10/8/2024		Appears standing water could be runoff from the vet clinic		Unlikely Bacteria Source
4	P/US 45-4	US Highway 45	43.51	-88.22	8715 Fond Du Lac Ave, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Farm	Google Maps	10/8/2024		Potential runoff to ROW from the small farm		Unlikely Bacteria Source
5	P/US 45-5	US Highway 45	43.50	-88.22	500 Trading Post Ln, Kewaskum, WI 53040	Washington and Fond du Lac	Village of Kewaskum	Suburban	Pet Store	Google Maps	10/8/2024		Appears standing water could be runoff from the pet store		Unlikely Bacteria Source
6	P/STH 60-6	State Highway 60	43.32	-88.24	2015 American Eagle Dr, Stinger, WI 53086	Washington	Village of Stinger	Rural	Veterinary Clinic	Google Maps	10/8/2024		Drainage from vet clinic appears to drain towards ROW		Unlikely Bacteria Source
7	P/STH 60-7	State Highway 60	43.32	-88.21	3473 WI-60 Trunk, Jackson, WI 53037	Washington	Town of Polk	Rural	Pet Resort	Google Maps	10/8/2024		Appears standing water could be runoff from the pet resort		Unlikely Bacteria Source
8	P/STH 60-8	State Highway 60	43.32	-88.18	1 Pharmacal Way, Jackson, WI 53037	Washington	Town of Jackson	Rural	Restaurant	Google Maps	10/8/2024		Appears standing water could be runoff from the pharmaceutical company		Unlikely Bacteria Source
9	F/US 45-1	US Highway 45	43.69	-88.31	W3043 US-45, Eden, WI 53019	Fond du Lac	Village of Eden	Rural	Farm under construction	Google Maps	7/16/2025		Possible Bacteria Source		Unlikely Bacteria Source
10	F/US 45-1	US Highway 45	43.69	-88.31	W3043 US-45, Eden, WI 53019	Fond du Lac	Village of Eden	Rural	Farm	Google Maps	7/16/2025		Possible Bacteria Source		Unlikely Bacteria Source
11	F/STH 28 - 2	State Highway 28	43.53	-88.31	5545 WI-28, Allenton, WI 53002	Washington	Town of Addison	Rural	CAFO	Google Maps	7/16/2025		Possible Bacteria Source		Unlikely Bacteria Source
12	F/STH 28 - 3	State Highway 28	43.56	-88.07	N530 WI-28, Random Lake, WI 53075	Sheboygan	Town of Scott	Rural	Farm under construction	Google Maps	7/16/2025		Possible Bacteria Source		Unlikely Bacteria Source
13	F/STH 57 - 4	State Highway 57	43.57	-87.94	N851 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source
14	F/STH 57 - 5	State Highway 57	43.56	-87.94	N547 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source
15	F/STH 57 - 6	State Highway 57	43.56	-87.94	535 WI-57, Random Lake, WI 53075	Sheboygan	Village of Random Lake	Rural	Dumpster	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source
16	F/STH 57 - 7	State Highway 57	43.46	-87.94	5133 WI-57, Fredonia, WI 53021	Ozaukee	Town of Fredonia	Rural	Farm	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source
17	F/STH 175 - 8	State Highway 175	43.10	-88.01	7800 W Appleton Ave, Milwaukee, WI 53222	Milwaukee	City of Milwaukee	Urban	Dumpster	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source
18	F/I 41-9	Interstate 41	43.03	-88.04	10001 W Bluemound Rd, Milwaukee, WI 53226	Milwaukee	City of Milwaukee	Urban	Zoo	Google Maps	8/6/2025		Possible Bacteria Source		Unlikely Bacteria Source

Appendix 5: Completed Investigation Forms

Appendix 5a: Pilot Study Completed Investigation Forms

WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Osceola	County: Fond du Lac	WisDOT Highway Name: US 45
Site Name: 2nd Look Holsteins (CAFO)	Address: N3832 County Rd W, Eden, WI 53019	
Field Investigation Location*: US 45-1	Review date: 10/8/24	Weather: 59°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 11:19am	Left: 11:32am
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a Confined Animal Feeding Operation (CAFO)		

**Reference Location Map*



Source Location: LAT: 43.674702°, LNGT: -88.273318°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	US 45 roadside ditch drainage ditch adjacent to the intersection of US45 & CTHW that receives runoff from the CAFO
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- This site is a CAFO.
- Drainage path uncertain once it gets to USH 45

Photos:



Likely drainage path from CAFO site to highway



Another possible drainage path through the field

WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Auburn	County: Fond du Lac	WisDOT Highway Name: US 45
Site Name: OHenry's Service	Address: N1776 US-45, Campbellsport, WI 53010	
Field Investigation Location*: US 45-2	Review date: 10/8/24	Weather: 61°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 11:59am	Left: 12:10pm
Reviewer Firm/Region: AECOM	Site Owner: Private (OHenry's Service)	
Possible Source Type: This site is an auto repair shop		

**Reference Location Map*



Source Location: LAT: 43.604034°, LNGT: -88.24069°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	US 45 roadside ditches that receives drainage from the O'Henry's Service flows eastward and collects in a natural low area
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:







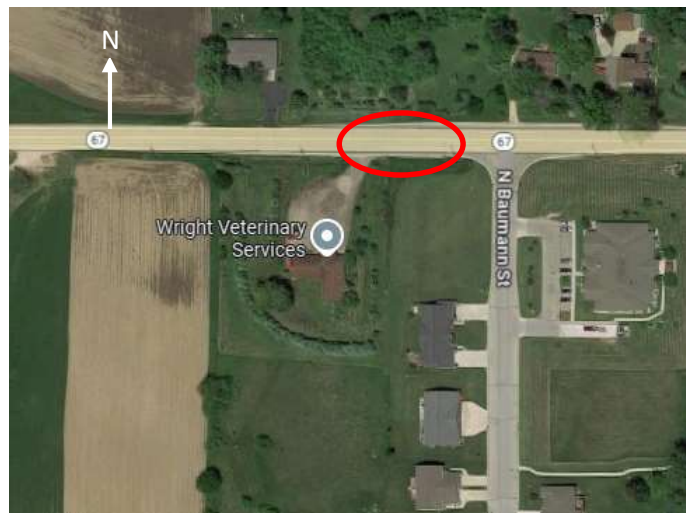
WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Campbellsport	County: Fond du Lac	WisDOT Highway Name: STH 67
Site Name: Wright Veterinary Services	Address: W2796 WI-67, Campbellsport, WI 53010	
Field Investigation Location*: STH 67-3	Review date: 10/8/24	Weather: 59°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 11:44am	Left: 11:47am
Reviewer Firm/Region: AECOM	Site Owner: Private (Wright Veterinary Services)	
Possible Source Type: This site is a veterinary clinic		

**Reference Location Map*



Source Location: LAT: 43.601115°, LNGT: -88.294385°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	STH 67 ROW area that receives drainage from Wright Veterinary Clinic flows eastward into a vegetated buffer area before passing beneath STH 67 to the north
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:



Drainage towards vegetated buffered area



Covered dumpsters

WisDOT Milwaukee River TMDL Study
Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Kewaskum	County: Washington and Fond du Lac	WisDOT Highway Name: US 45
Site Name: Unnamed farm	Address: 8715 Fond Du Lac Ave, Kewaskum, WI 53040	
Field Investigation Location*: US 45-4	Review date: 10/8/24	Weather: 62°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 12:26pm	Left: 12:30pm
Reviewer Firm/Region: AECOM	Site Owner: Private (Unnamed farm)	
Possible Source Type: This site is a farm		

**Reference Location Map*



Source Location: LAT: 43.508148°, LNGT: -88.219337°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	US 45 roadside ditch that collects drainage from a farmyard near US 45. The manure is in an enclosed barnyard located outside of the ROW.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:



Drainage towards vegetated ditch



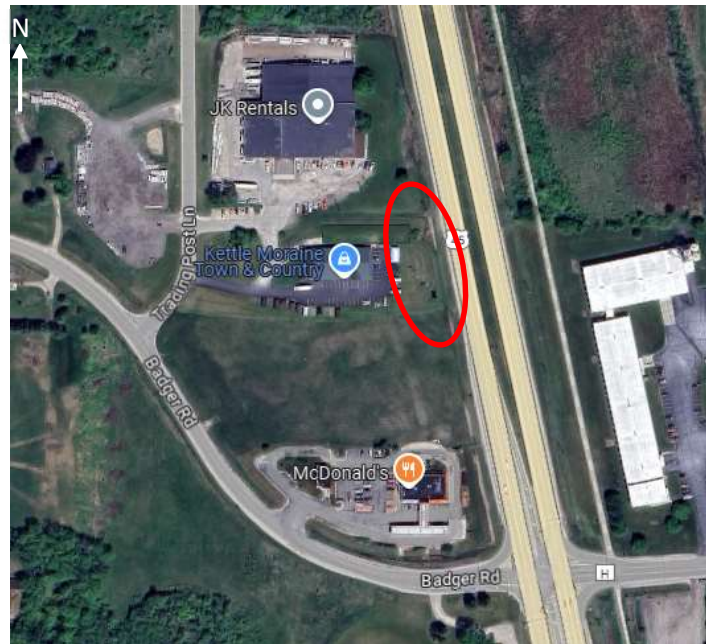
WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Kewaskum	County: Washington and Fond du Lac		WisDOT Highway Name: US 45
Site Name: Kettle Moraine Town & Country	Address: 500 Trading Post Ln, Kewaskum, WI 53040		
Field Investigation Location*: US 45-5	Review date: 10/8/24	Weather: 62°F Sunny	
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 12:36pm	Left: 12:47pm	
Reviewer Firm/Region: AECOM	Site Owner: Private (Kettle Moraine Town & Country)		
Possible Source Type: This site is a pet store			

**Reference Location Map*



Source Location: LAT: 43.498641°, LNGT: -88.216362°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	US 45 roadside ditch that receives drainage from Kettle Moraine Town & Country flows toward a wide grass buffer and into a drainage swale, with a well-maintained grassy pet area nearby and dense grass along the fence.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:





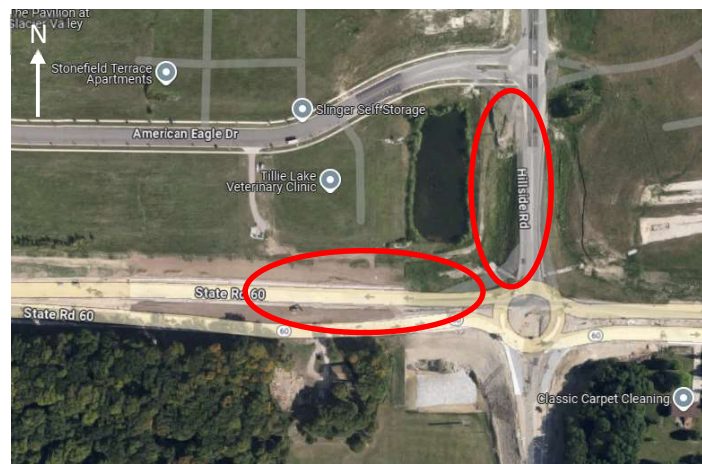
WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Slinger	County: Washington	WisDOT Highway Name: STH 60
Site Name: Tilie Lake Veterinary Clinic	Address: 2015 American Eagle Dr, Slinger, WI 53086	
Field Investigation Location*: STH 60-6	Review date: 10/8/24	Weather: 53°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 9:50am	Left: 10:00am
Reviewer Firm/Region: AECOM	Site Owner: Private (Tilie Lake Veterinary Clinic)	
Possible Source Type: This site is a veterinary clinic		

**Reference Location Map*



Source Location: LAT: 43.324507°, LNGT: -88.243066°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	STH 60 roadside ditch west of the detention pond west of Tilie Lake Veterinary Clinic receives drainage from the clinic, while a vegetated buffer to the north collects runoff from the southern area.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:





Covered dumpsters



Fenced areas

WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Polk	County: Washington	WisDOT Highway Name: STH 60
Site Name: Cedar Creek Pet Resort	Address: 3473 WI-60 Trunk, Jackson, WI 53037	
Field Investigation Location*: STH 60-7	Review date: 10/8/24	Weather: 55°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrived: 10:08am	Left: 10:15am
Reviewer Firm/Region: AECOM	Site Owner: Private (Cedar Creek Pet Resort)	
Possible Source Type: This site is a pet resort		

**Reference Location Map*



Source Location: LAT: 43.324392°, LNGT: -88.210159°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	STH 60 vegetated buffer area north of Cedar Creek Pet Resort receives drainage from the facility before it enters STH 60 ROW.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:





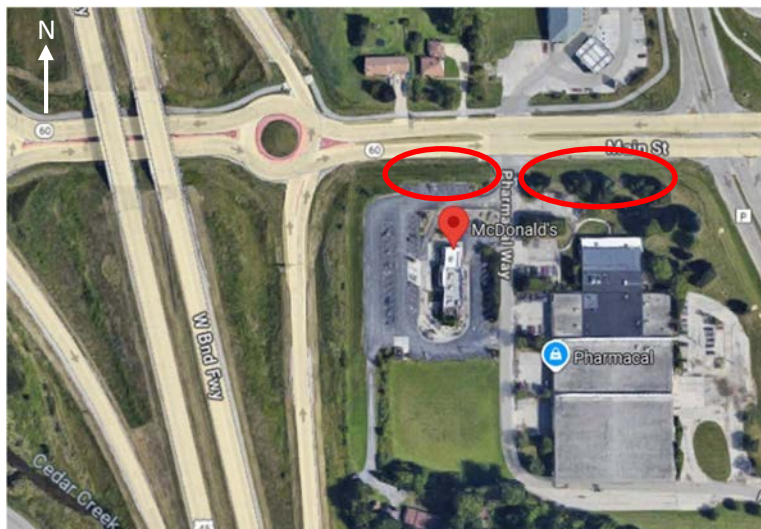
WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Jackson	County: Washington	WisDOT Highway Name: STH 60
Description: McDonald’s & Pharmaca	Address: 1 Pharmaca Way, Jackson, WI 53037	
Field Investigation Location*: STH 60-8	Review date: 10/8/24	Weather: 55°F Sunny
Reviewers: Lu Chen/ Emma Connell/ Rachel Clark/ John Voorhees/ Hans Hallanger	Arrive: 10:21am	Left: 10:35am
Reviewer Firm/Region: AECOM	Site Owner: Private (McDonald’s & Pharmaca)	
Possible Source Type: Pharmaceutical manufacturer and fast-food restaurant located off STH 60.		

**Reference Location Map*



Source Location: LAT: 43.324341°, LNGT: -88.184697°

○ Inspection areas

Part B: Field Investigation Results

Assessment	Comments
Investigation Location?	STH 60 roadside ditch drainage ditch off the STH 60 that receives runoff from the McDonald's and Pharmaca.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS: None

Photos:







Appendix 5b: Final Project Completed Investigation Forms

2025 WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Eden	County: Fond du Lac	WisDOT Highway Name: US 45
Site Name: Unnamed Farm	Address: W3043 US-45, Eden, WI 53019	
Field Investigation Location*: US 45-1	Review date: 7/16/2025	Weather: 81°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 11:11 AM	Left: 11:20 AM
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a farm.		

**Reference Location Map*

Inspection Note:

Check the culvert located within the vegetated buffer and the one across the road. The adjacent farm may be draining into this culvert, with potential sheet flow crossing the road.



Source Location: LAT: 43.690330°, LNGT: -88.309203°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	US 45 roadside ditch that receives drainage from the farm flows northwest to farmland before passing beneath US 45 to the southwest.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- Manure smell because of cows
- No evident bacteria present

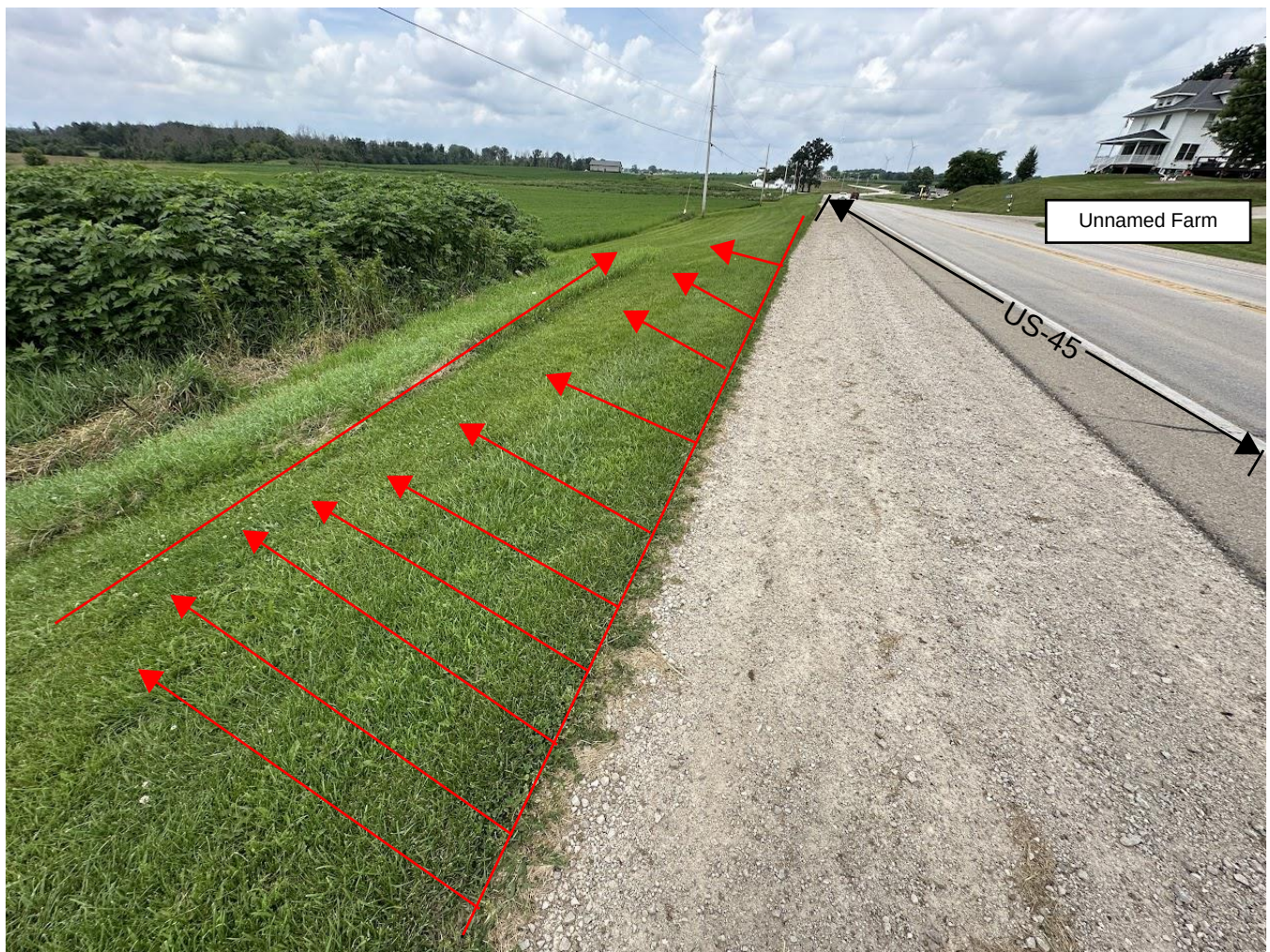
Photos:



Surface drainage is directed toward the US-45 roadside ditch. Flow is conveyed northwest through the ditch system.



Location is situated northwest of unnamed. Drainage continues to flow northwest along US-45 roadside ditch.



Runoff from the farm is conveyed through the cross culvert and directed northwest along the roadside ditch



This site has been identified as a potential agricultural development area. Inspection indicates no presence of livestock or harmful bacteria. Agricultural development area is located ~500' northwest of unnamed

2025 WisDOT Milwaukee River TMDL Study Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Addison	County: Washington	WisDOT Highway Name: STH 28	
Site Name: Beck Dairy Farms LLC		Address: 5545 WI-28, Allenton, WI 53002	
Field Investigation Location*: STH 28 - 2		Review date: 07/16/2025	Weather: 81°F
Reviewers: Lu Chen, Rachel Clark,		Arrived: 10:38 AM	Left: 10:48 AM
Reviewer Firm/Region: AECOM		Site Owner: Private	
Possible Source Type: This site is a CAFO.			

**Reference Location Map*



Source Location: LAT: 43.529061°, LNGT: -88.313921°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	STH 28 roadside ditches that receive drainage from Beck Dairy Farm flow eastward and westward, and collect in downstream farmlands.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- No evidence of bacteria was found on both sides of STH 28
- The grass swale/ditch seemed to be in good condition
- This site is a CAFO

Photos:

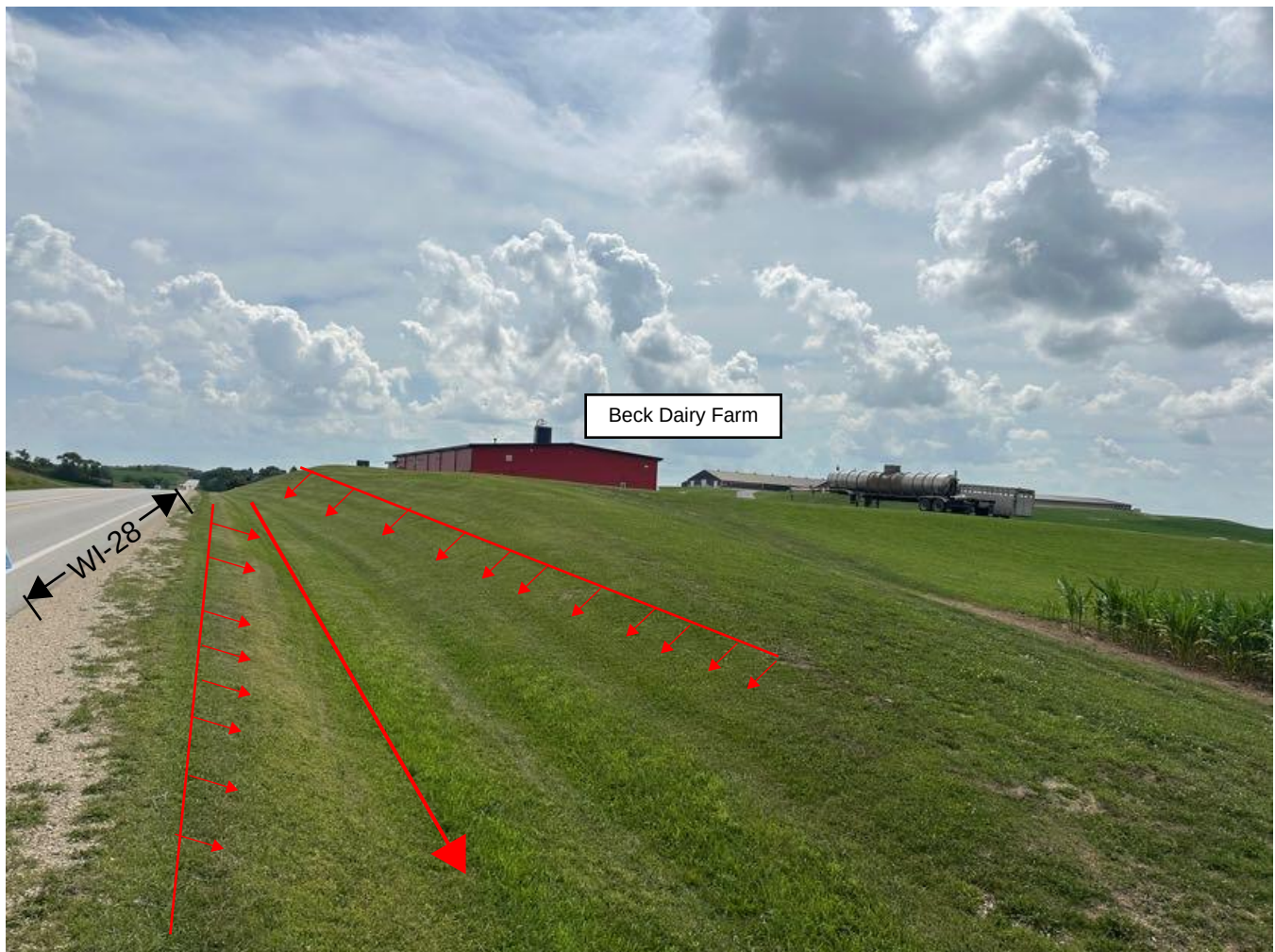
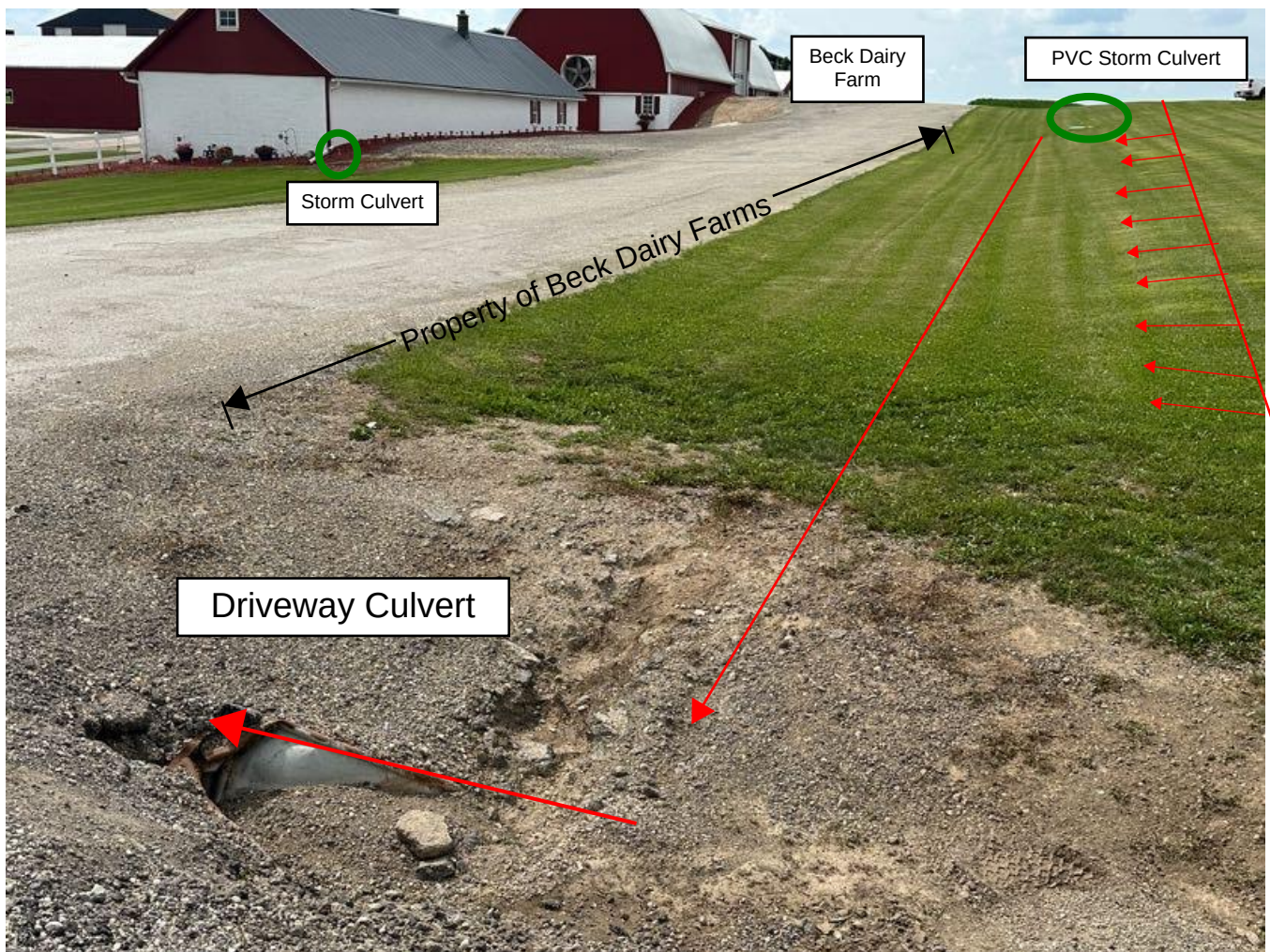
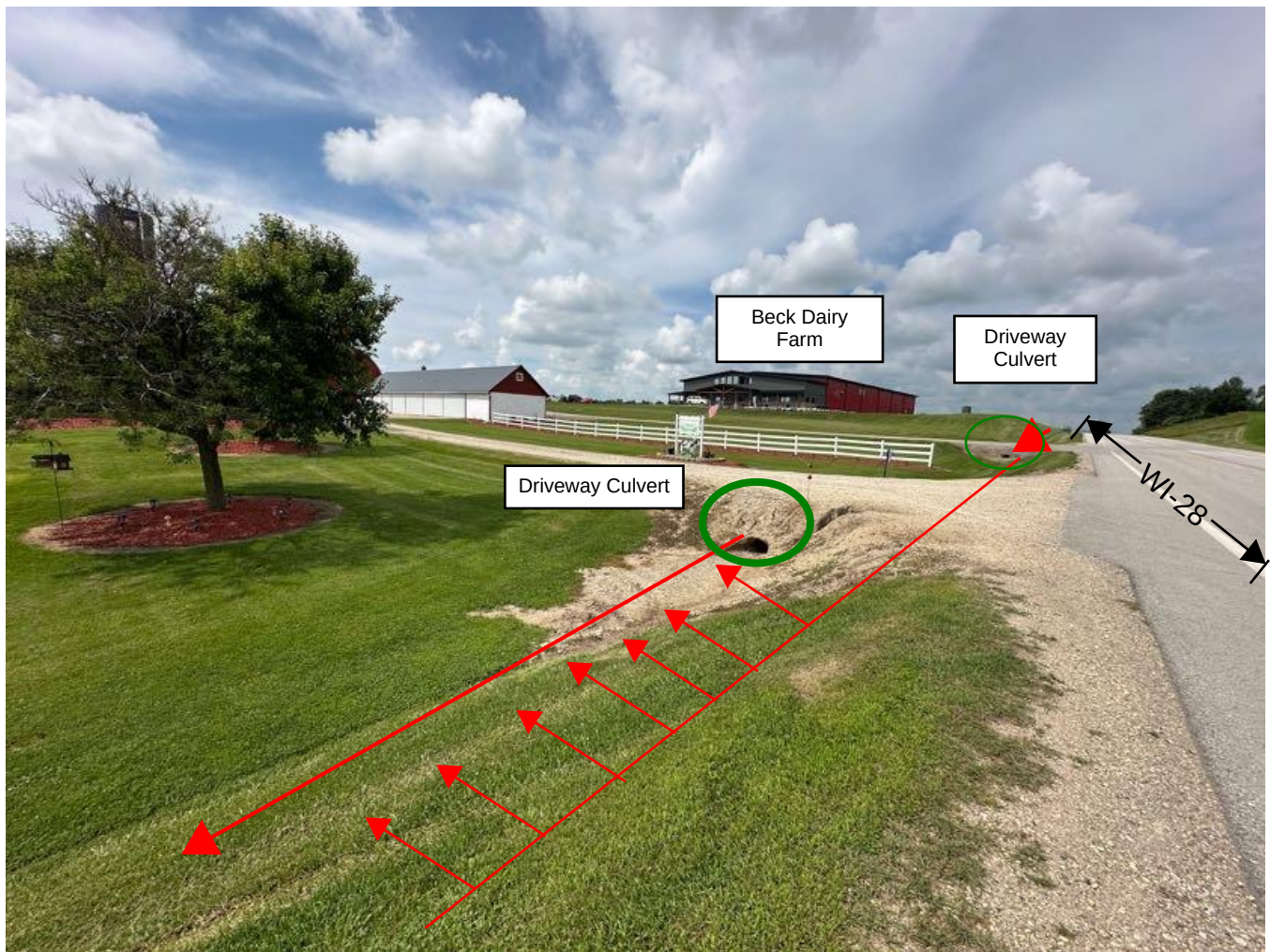


Photo was taken west of Beck Dairy Farm and the associated CAFO. Because the facility is situated on elevated ground, surface water drains in both directions. Image depicts the west drainage pathway, where flow is conveyed downslope into a well-maintained roadside ditch.



Storm water infrastructure on the east side of Beck Dairy Farm includes both a storm culvert and a PVC storm culvert. Surface runoff flows downslope into the ditch and is conveyed eastward away from the facility through the driveway culvert.



Driveway culverts and roadside ditches direct surface runoff eastward, carrying drainage along WI-28 and away from the facility. Photo was taken east of Beck Dairy farm

2025 WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Scott	County: Sheboygan	WisDOT Highway Name: STH 28
Site Name: Unnamed farm	Address: N530 WI-28, Random Lake, WI 53075	
Field Investigation Location*: STH 28-3	Review date: 7/16/2025	Weather: 81°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 11:46AM	Left: 11:56AM
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a farm.		

**Reference Location Map*



Source Location: LAT: 43.558837°, LNGT: -88.073293°

○ Inspection areas

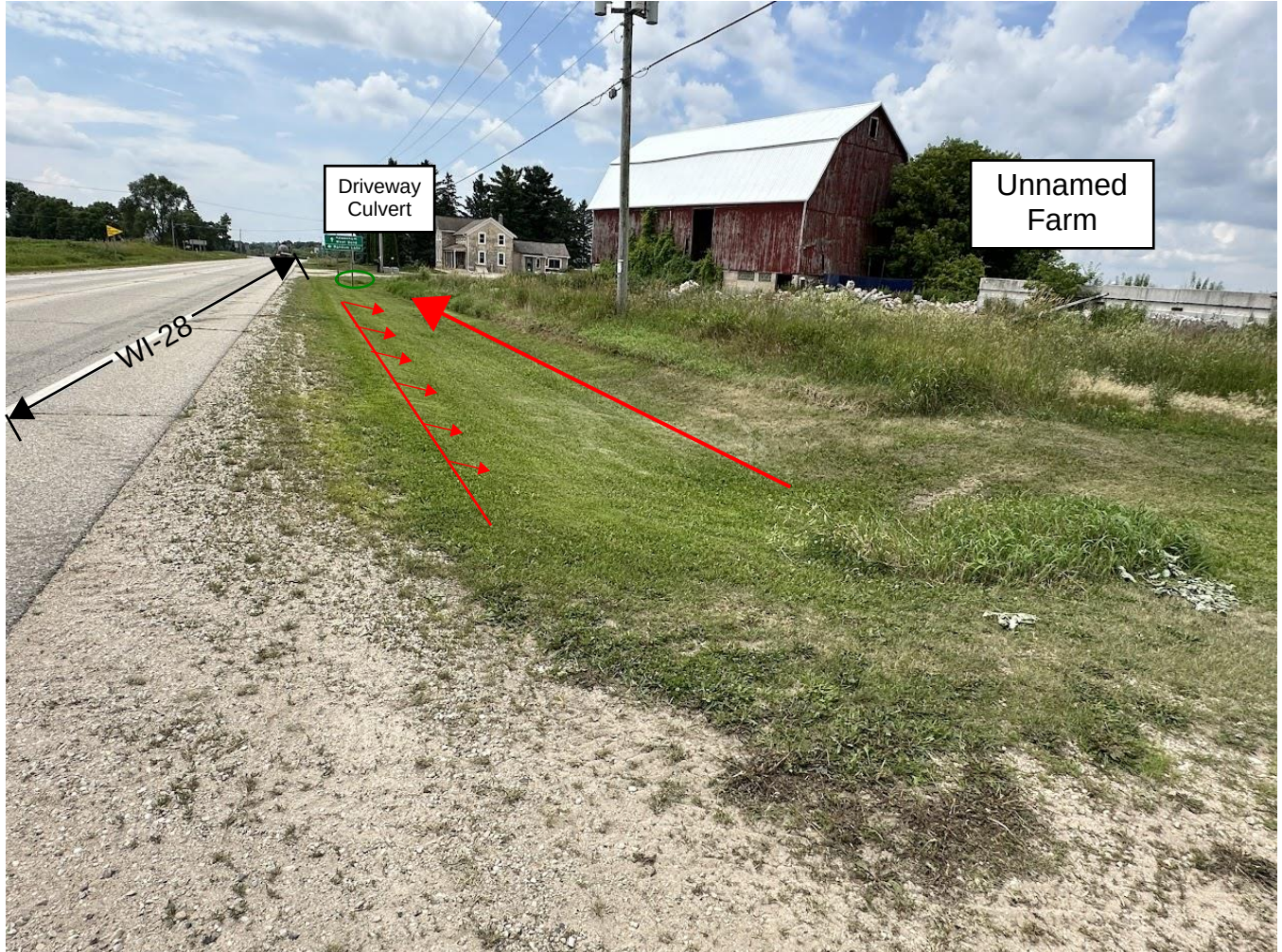
Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	Inspected farm appeared inactive, with no livestock present at the time of inspection. Surface runoff from the farm and adjacent roadway drains into the WI-28 roadside ditch, where it is conveyed southwest downstream. Silage was temporarily stored on east side of site next to Lone Pine Rd across STH 28.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- Strong odor of manure was detected and was noticeable from within the vehicle
- Silage was well wrapped and temporarily stored

Photos:



Runoff along WI-28 flows eastward through the roadside ditch adjacent to the unnamed farm, providing conveyance away from the site toward downstream features. This photo was taken northeast of the unnamed farm, facing southwest.



Silage located across WI-28 and northeast of the unnamed farm. Silage appeared to be well maintained. Roadside runoff collects into WI-28 roadside ditch which runs southwest downstream.

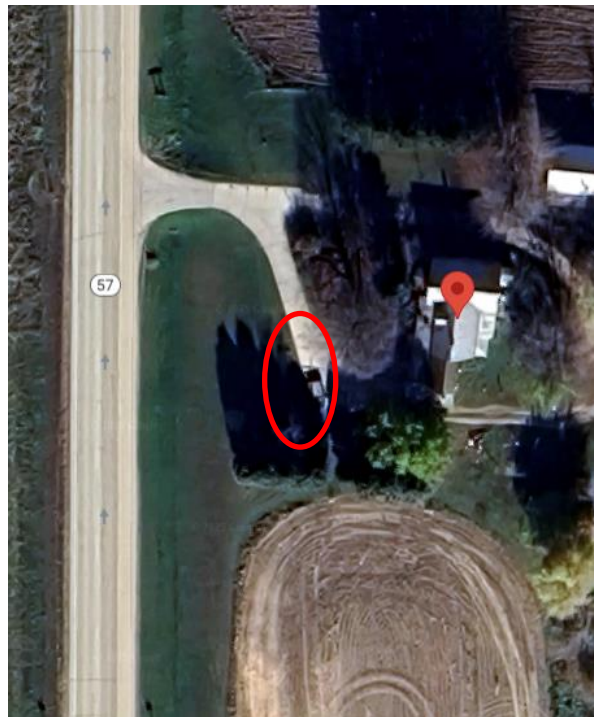
2025 WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Random Lake	County: Sheboygan	WisDOT Highway Name: STH 57
Site Name: Unnamed Property	Address: N851 WI-57, Random Lake, WI 53075	
Field Investigation Location*: STH 57-4	Review date: 8/6/2025	Weather: 77°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 10:45am	Left: 10:48pm
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a private house.		

**Reference Location Map*



Source Location: LAT: 43.570211°, LNGT: -87.940856°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	A dumpster was observed west of the house, situated on the property. Surface runoff is directed into a well-maintained roadside ditch, where flow continues downstream to the north. Driveway Culvert in this location has the capacity to capture drainage from the dumpster area, providing additional conveyance beneath the roadway.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- No bacteria or grease was found

Photos:



Photo taken north of N851, facing south. Flow is directed through the driveway culvert and downstream along WI-57, with drainage continuing north of the site.

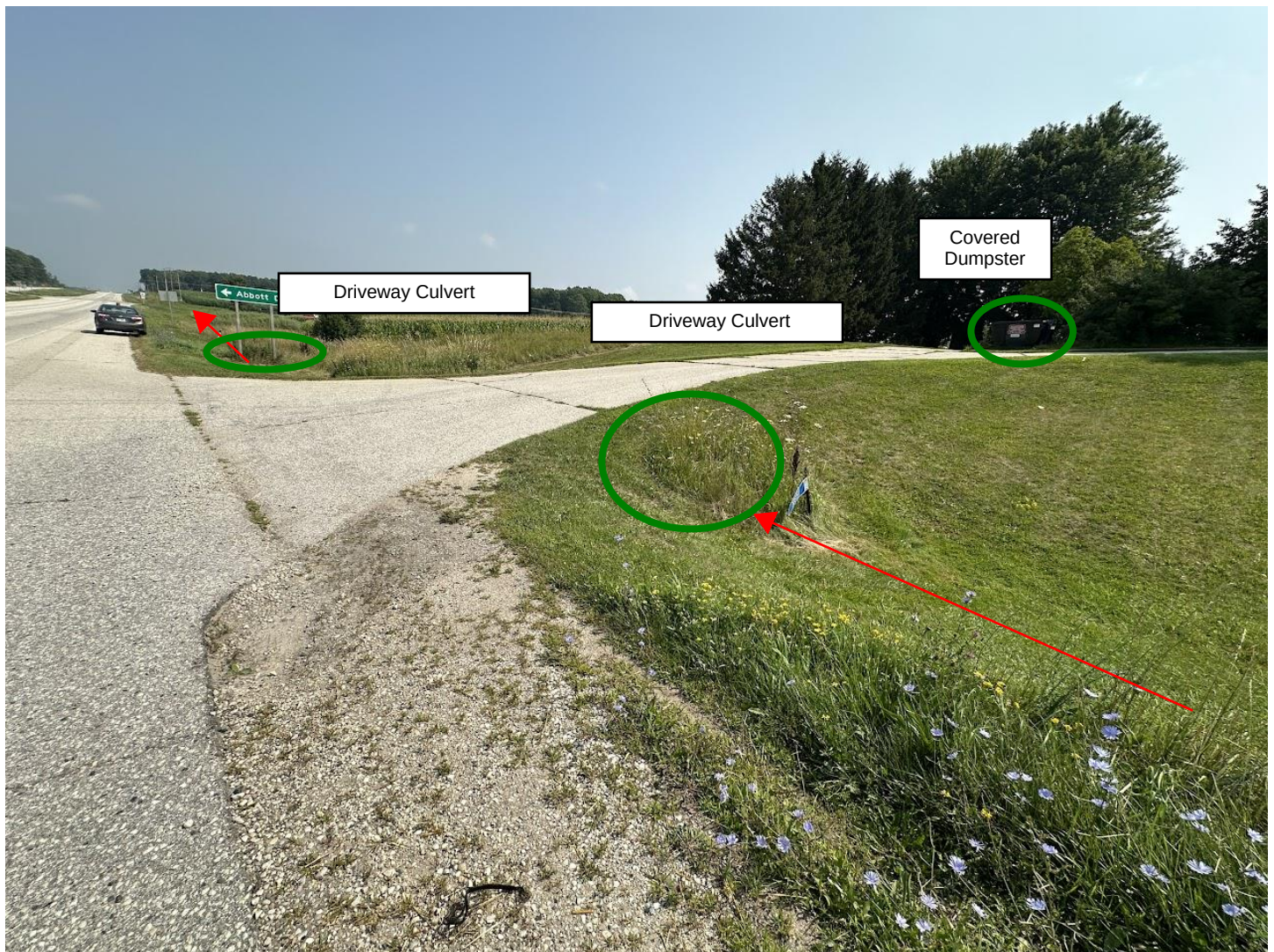


Photo taken ~75' north of site. Driveway culverts direct runoff into the roadside ditch, with flow continuing north along the ditch line.

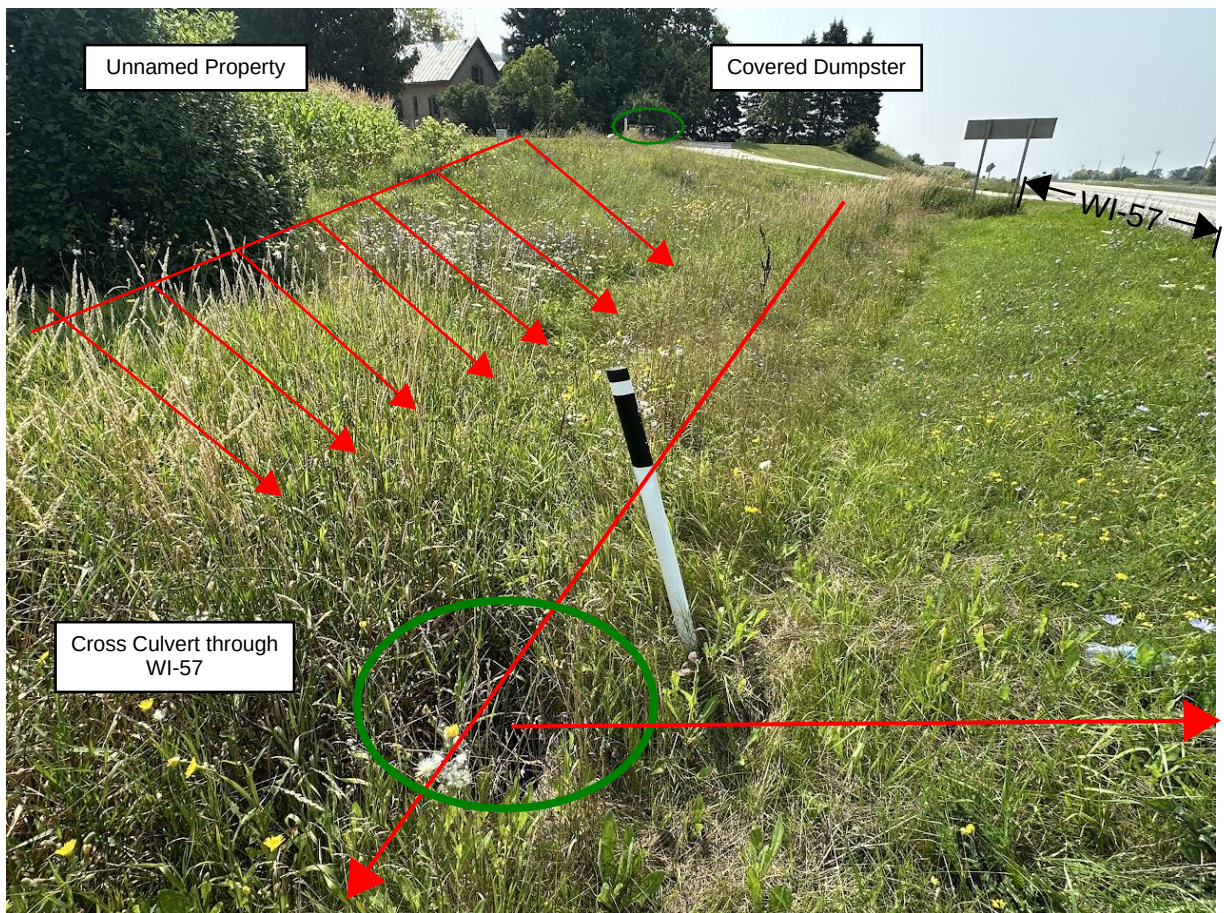
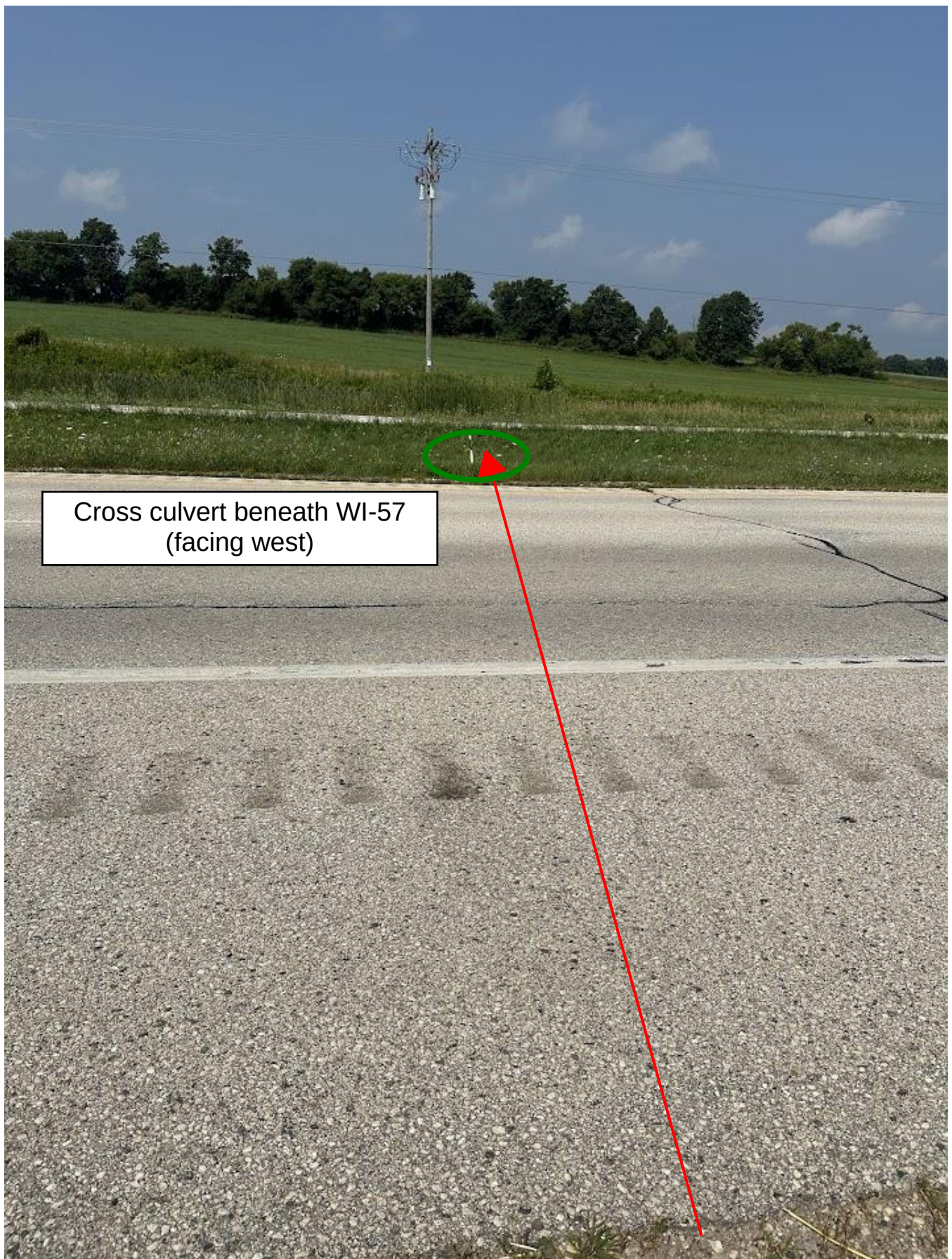


Photo taken north of the site. Runoff enters the cross culvert, which conveys flow beneath WI-57, while the downstream ditch continues to carry flow northward. Both drainage paths function simultaneously to direct runoff away from the site.



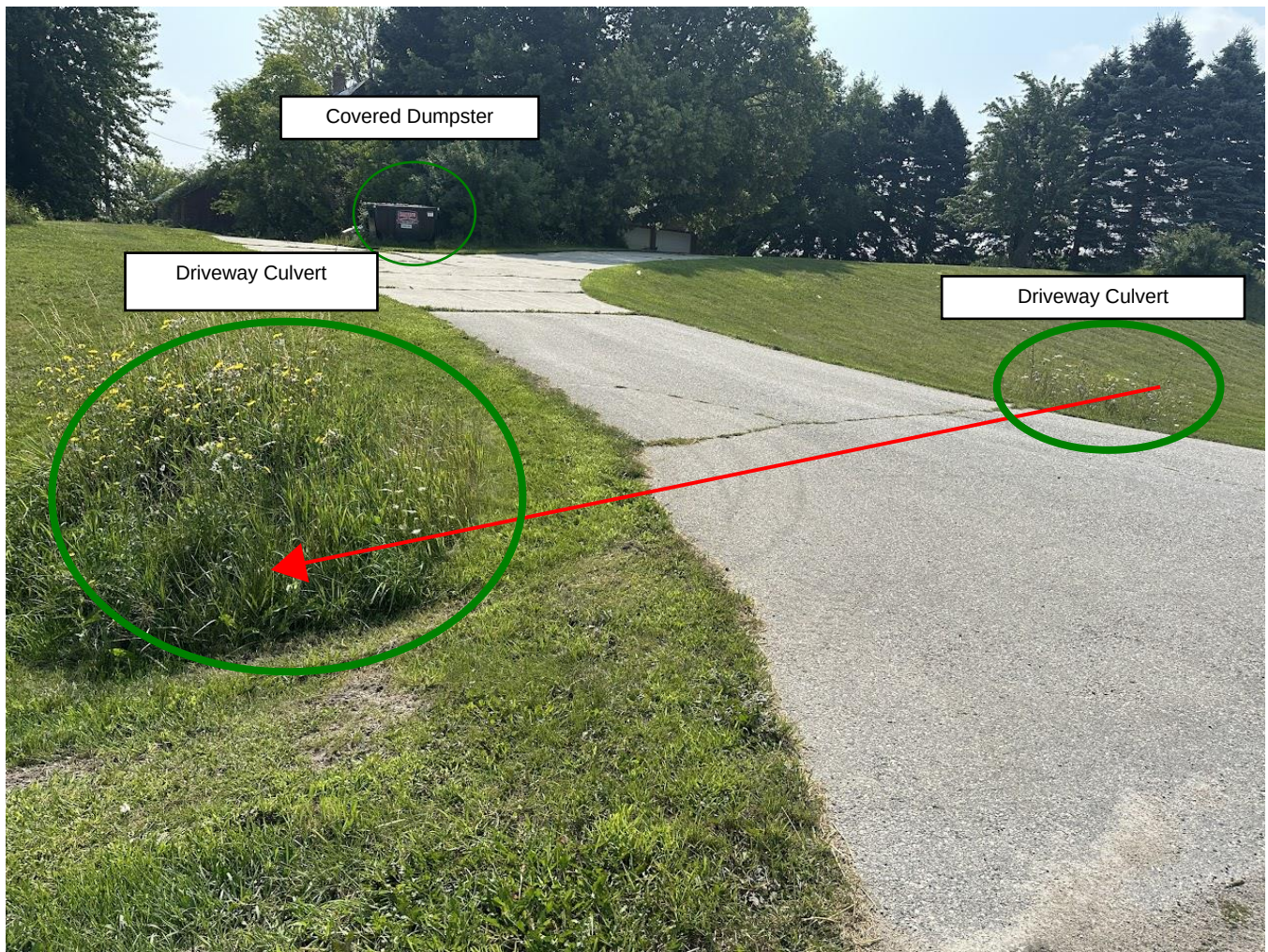


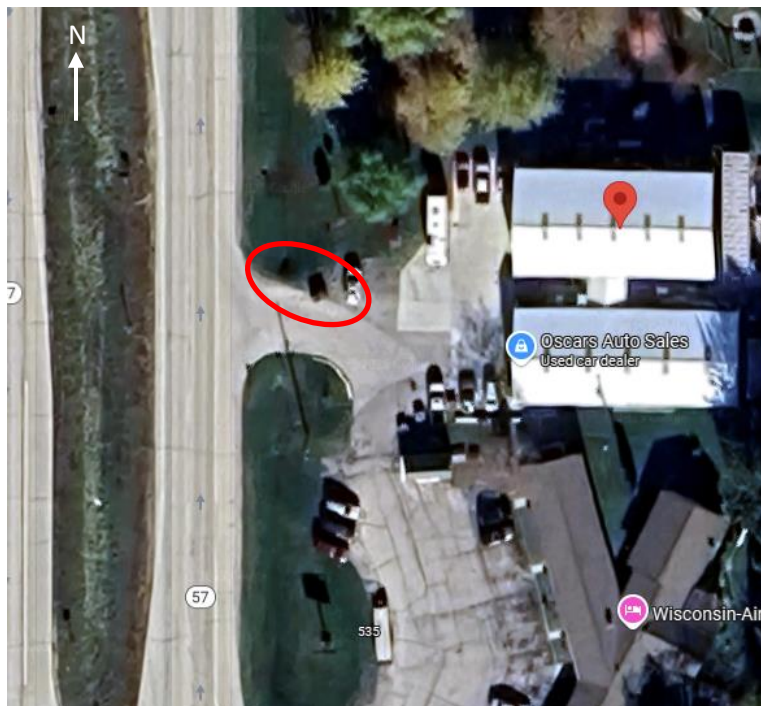
Photo taken north of the site. Driveway culverts convey runoff beneath the driveway, directing flow into the roadside ditch where it continues northward downstream.

2025 WisDOT Milwaukee River TMDL Study
Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Random Lake	County: Sheboygan	WisDOT Highway Name: STH 57
Site Name: Oscars Auto Sales	Address: N547 WI-57, Random Lake, WI 53075	
Field Investigation Location*: STH 57 - 5	Review date: 8/6/2025	Weather: 78°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 10:55am	Left: 11:00am
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a private Auto Sales store with a dumpster outside the building.		

**Reference Location Map*



Source Location: LAT: 43.559505°, LNGT: -87.940944°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	Dumpster was located ~40' west of Oscars Auto Sales northmost building but was still on the property. Runoff collects in a well maintained ditch located ~50' west of northmost building. Runoff conveys flow downstream north of Oscar Auto sales. are 2 storm culverts. Two storm culverts were identified at this location: one downstream culvert that conveys flow northward, and one cross culvert that conveys flow westward across WI-57.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

Photos:

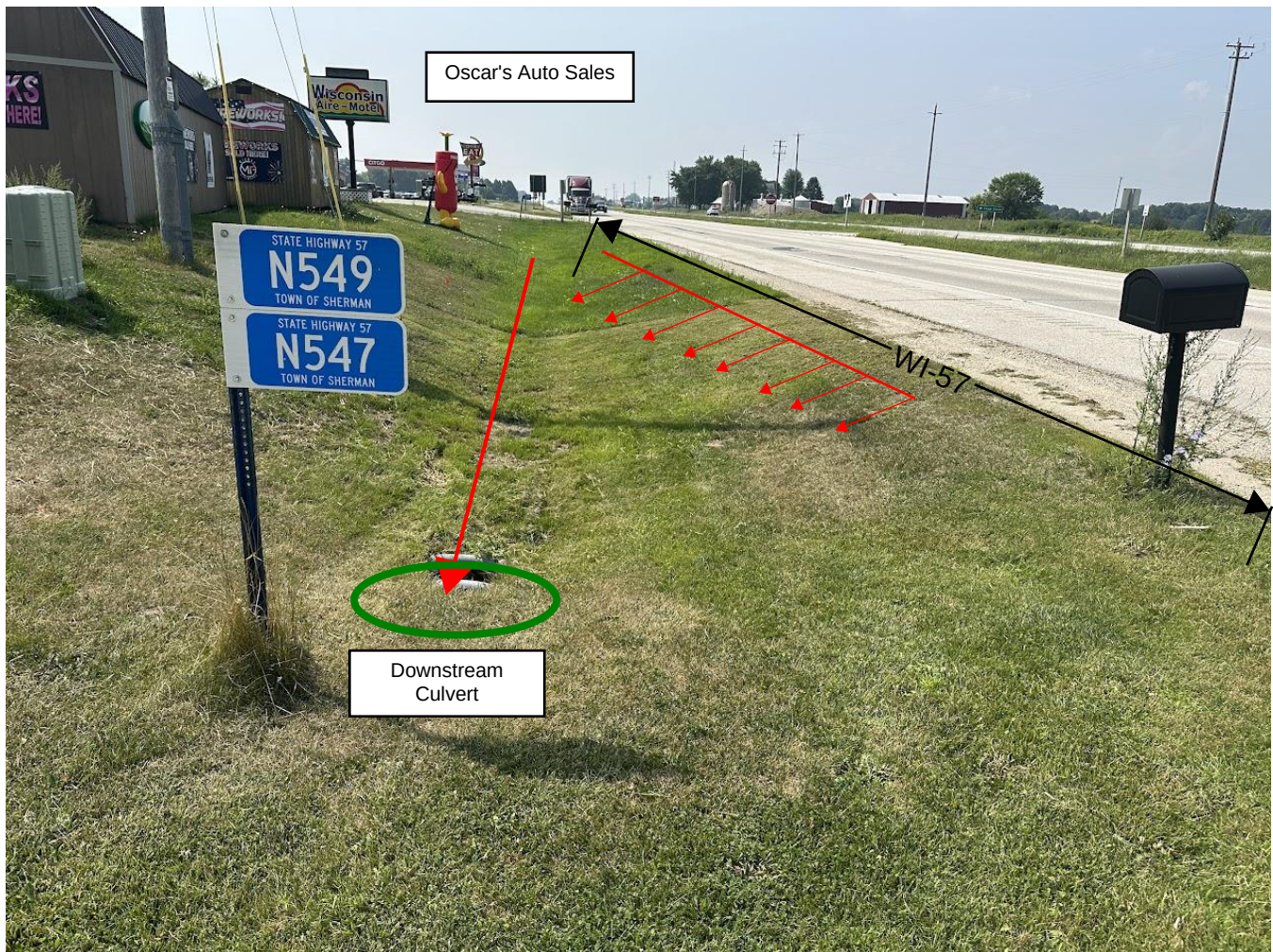


Photo taken facing south. Runoff is conveyed northward along WI-57, collecting in the downstream culvert for continued drainage.

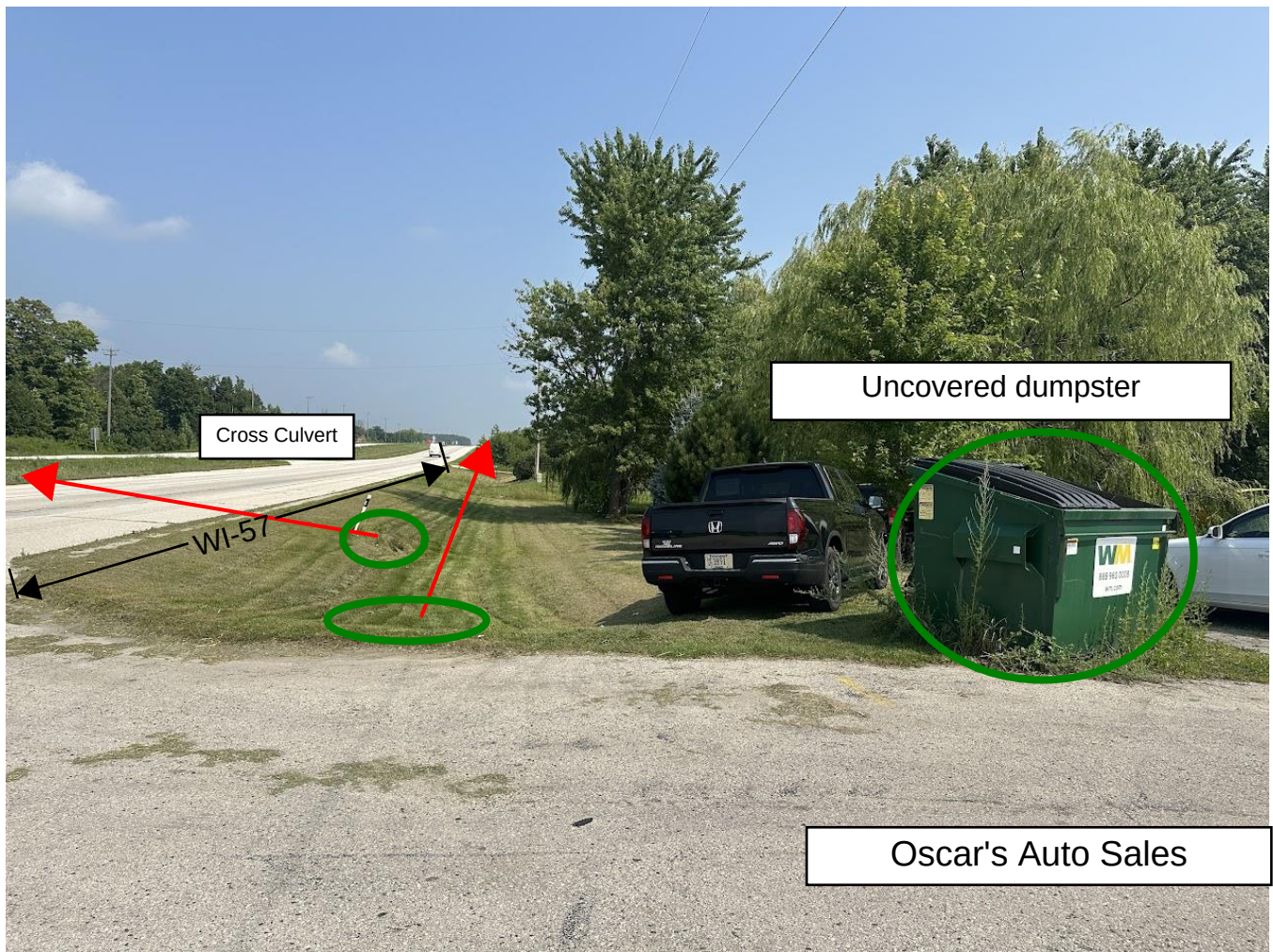


Photo oriented north. Runoff is conveyed through a downstream culvert and a cross-road culvert, directing flow northward along WI-57. Location is adjacent to Oscar's Auto Sales.



Uncovered dumpsters and trash cans observed at Oscar's Auto Shop. Surface flow from this area drains toward the roadside ditch, with no evidence of bacteria or grease entering the flow path.

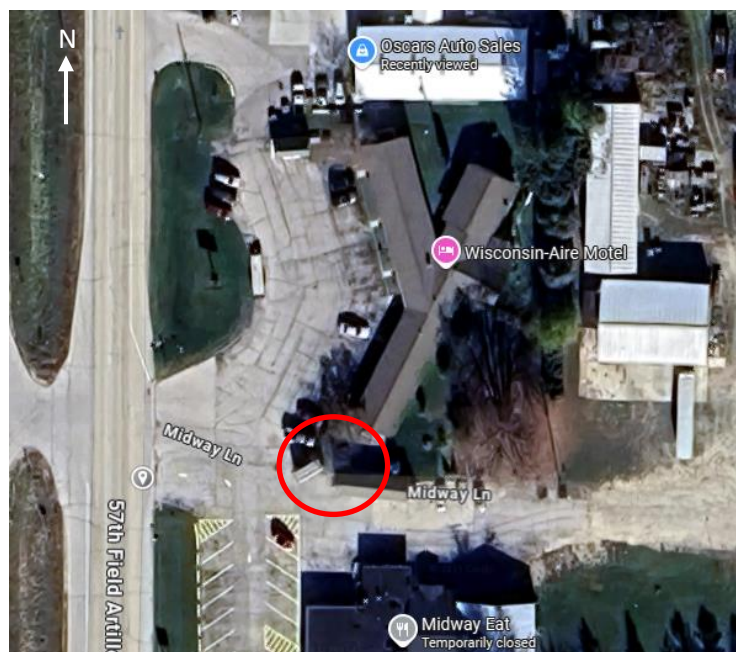
2025 WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Village of Random Lake	County: Sheboygan	WisDOT Highway Name: STH 57
Site Name: Wisconsin-Aire Motel	Address: 535 WI-57, Random Lake, WI 53075	
Field Investigation Location*: STH 57-6	Review date: 8/6/2025	Weather: 78°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 10:53am	Left: 10:55am
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a motel with a dumpster outside the building.		

**Reference Location Map*



Source Location: LAT: 43.558767°, LNGT: -87.940922°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	The investigation site is located next to the Wisconsin Aire Motel. Surface runoff flows from south to north, collecting in the roadside ditch and continuing into a downstream culvert. This drainage system connects with the flow path near Oscar's Auto Sales. For additional details, see the inspection form for N547 WI-57.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- No bacterial presence was evident on site and at the dumpster.

Photos:

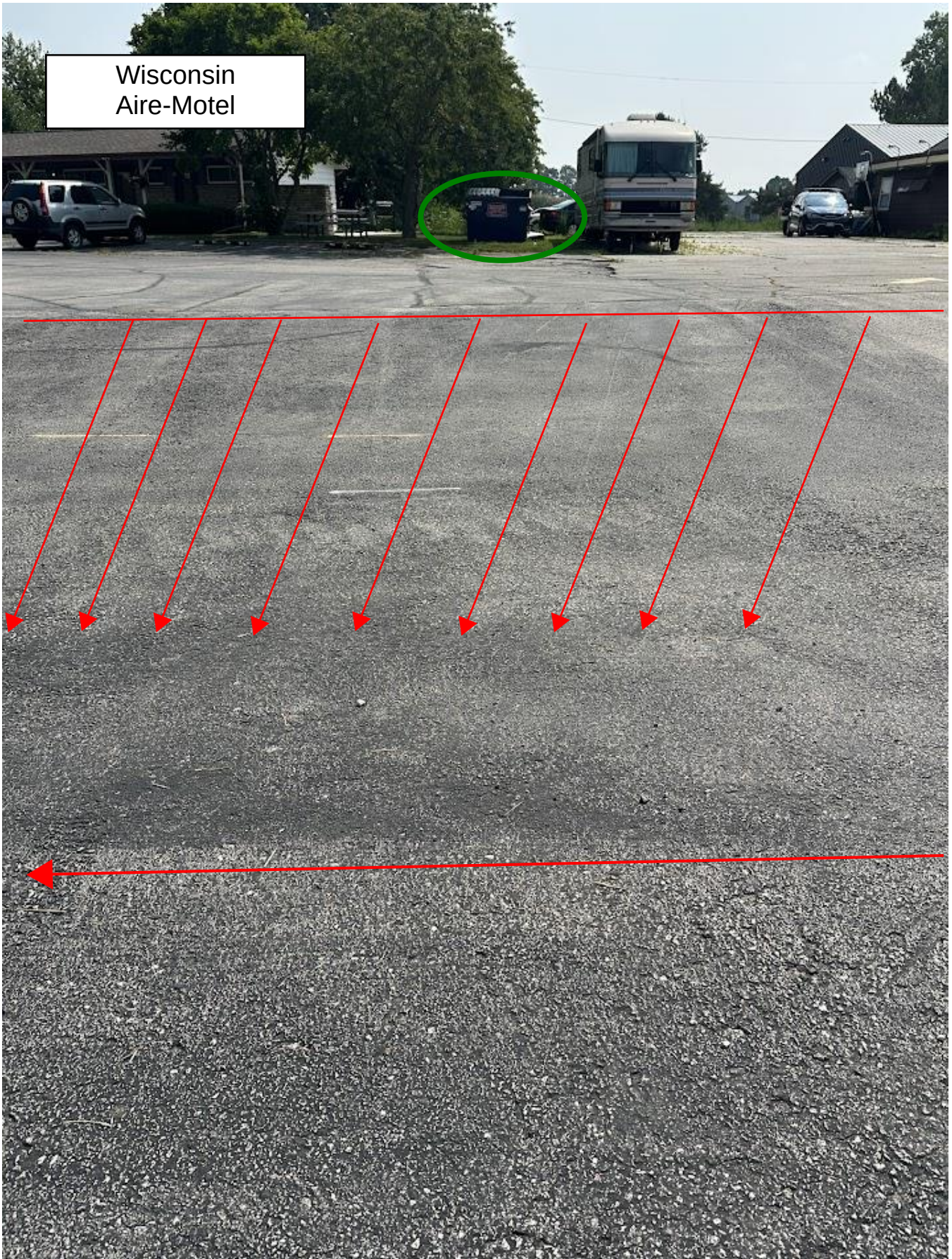


Photo taken facing south next to the Wisconsin Aire-Motel. Surface runoff flows across the lot and into the roadside ditch along WI-57. No evidence of bacteria or grease was observed in the drainage path from the uncovered dumpster. Surface runoff continues downstream from south to north.



Photo taken facing north next to the Wisconsin Aire-Motel. Runoff is conveyed through the downstream culvert, with a portion of the flow diverted west into the cross culvert along WI-57.

Wisconsin
Aire-Motel



2025 WisDOT Milwaukee River TMDL Study
Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Town of Fredonia	County: Ozaukee	WisDOT Highway Name: STH 57
Site Name: Unnamed farm	Address: 5133 WI-57, Fredonia, WI 53021	
Field Investigation Location*: STH 57-7	Review date: 8/6/2025	Weather: 78°F
Reviewers: Rachel Clark, Lu Chen	Arrived: 11:08am	Left: 11:14am
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a farm.		

**Reference Location Map*



Source Location: LAT: 43.464782°, LNGT: -87.940956°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	The investigation site was a drainage ditch located east of the unnamed farm. Surface runoff from the farm discharges into the ditch, where it is conveyed northward. Flow continues downstream through the ditch in a south-to-north direction
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

- Ditch is well maintained

Photos:

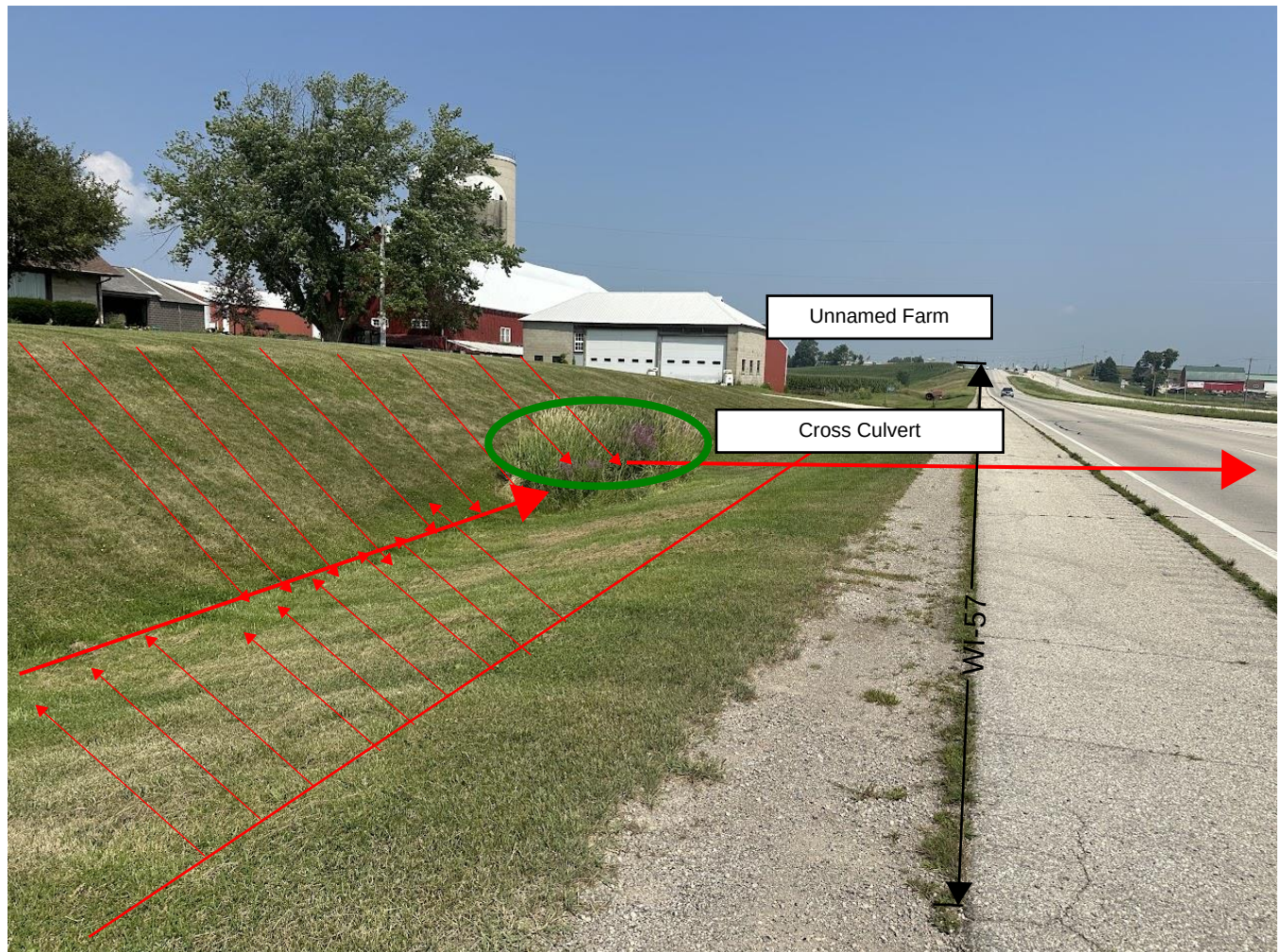


Photo taken south of the unnamed farm. Runoff from the farm collects into the roadside ditch and flows north downstream. A portion of the runoff also enters the cross culvert, which conveys flow west to east beneath WI-57.



Photo taken next to the unnamed farm. Runoff from the farm collects in the roadside ditch and flows downstream from south to north along WI-57. Upon inspection ditch appeared to be well-maintained



Photo taken north of the unnamed farm on the same side of WI-57. Runoff collects into the roadside ditch and flows downstream from south to north.

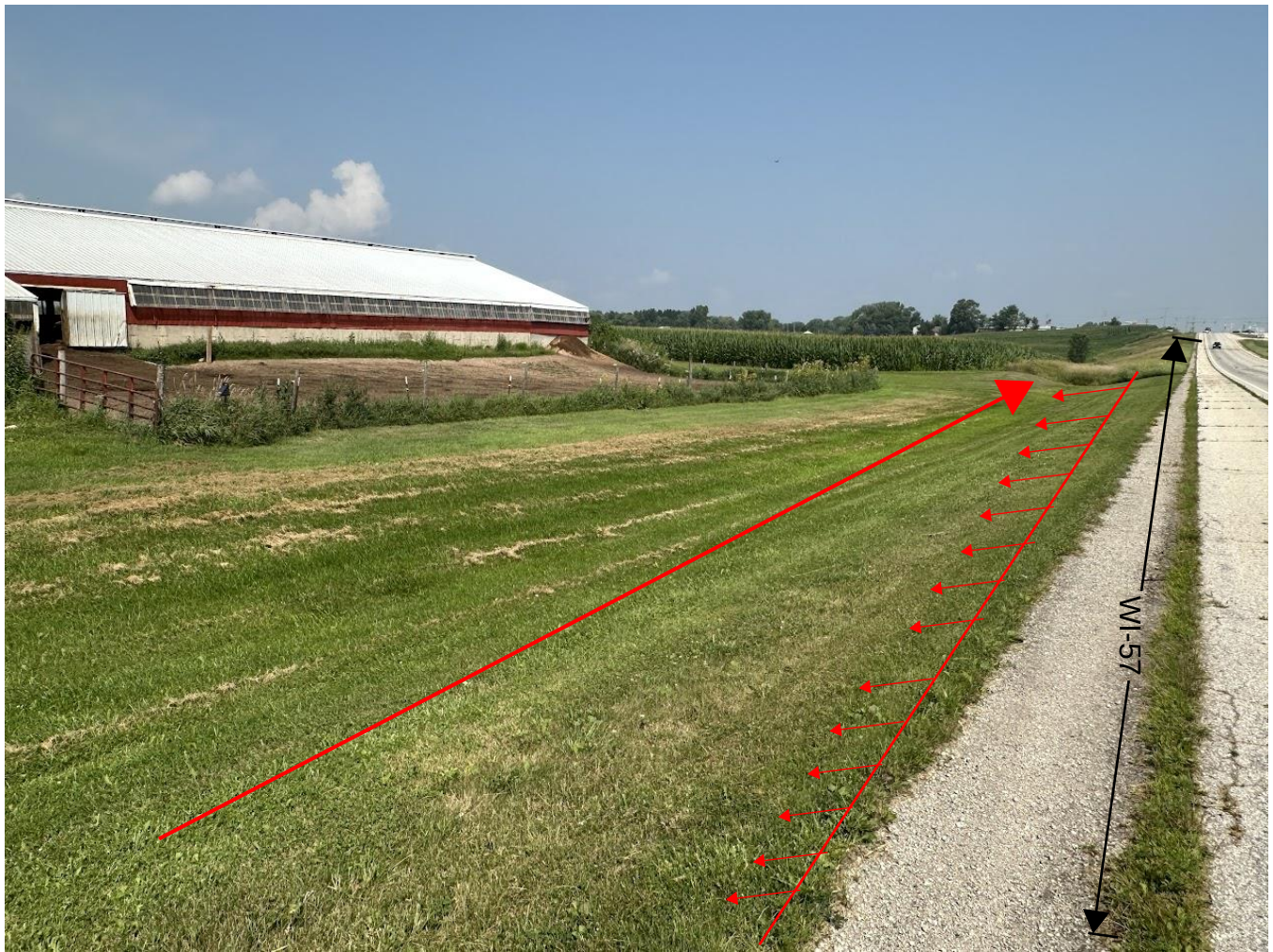


Photo taken adjacent to the unnamed farm along WI-57. Runoff collects into the roadside ditch and flows downstream from south to north.

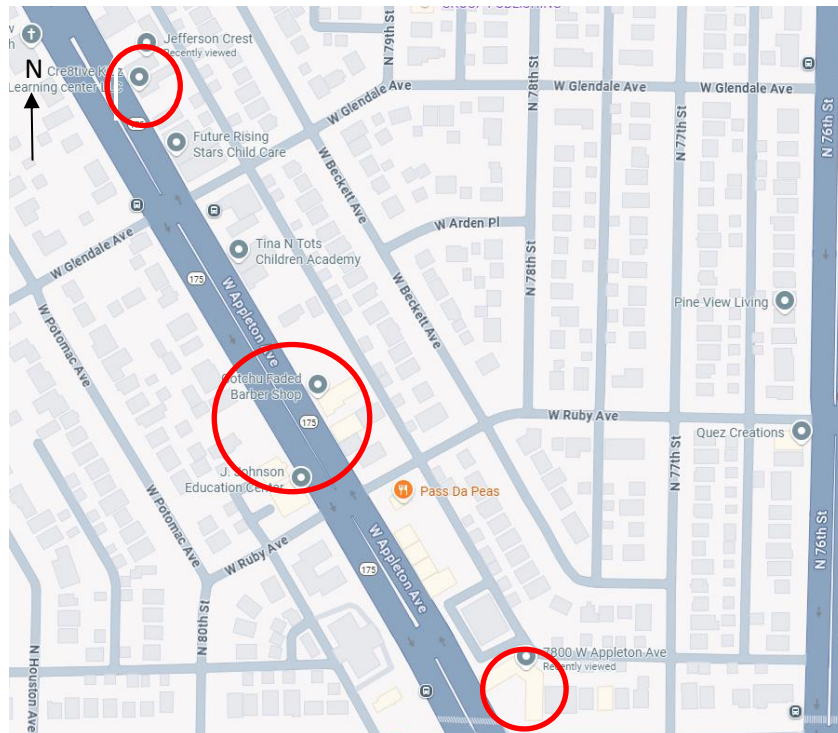
2025 WisDOT Milwaukee River TMDL Study

Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Milwaukee	County: Milwaukee	WisDOT Highway Name: STH 175
Site Name: Urban Dumpster Locations		Address: From 8040 W Appleton Ave, Milwaukee, 53218 to 7800 W Appleton Ave, Milwaukee, WI 53222
Field Investigation Location*: STH 175-8	Review date: 8/6/2025	Weather: 82°F
Reviewers: Lu Chen, Rachel Clark	Arrived: 12:20pm	Left: 12:29pm
Reviewer Firm/Region: AECOM	Site Owner: Private	
Possible Source Type: This site is a convenient store with a dumpster outside the building.		

**Reference Location Map*



Source Location: LAT: 43.097478°, LNGT: -88.009878°

○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	The investigation included multiple locations along WI- 175 indicated by circled areas above. Dumpsters and/or potential runoff sources were observed adjacent to commercial properties. The direction of surface water flow at this site was difficult to determine, as the surrounding land is relatively flat. No observable drainage inlets or defined flow paths were identified during the inspection.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

Photos:



Dumpster outside of H&I Food. Photo was taken facing west.



An uncovered dumpster was observed in the parking lot of Ark of the New Covenant Church. The photo was taken facing northeast. The dumpster is located west of Jefferson Crest Villa. No evidence of bacteria or grease was observed at the time of inspection.



A covered dumpster was located at the intersection of West Congress Street and West Appleton Street, approximately 250 feet from H&I Food. The photo was taken facing southwest. No bacteria or grease was found upon inspection.



The photo was taken outside 7937 WI-175, showing covered dumpsters located in front of the property. The photo orientation is facing southwest. No bacteria or grease found upon inspection.



Covered Dumpsters

The photo was taken outside 7937 WI-175, showing covered dumpsters located in front of the property. The photo orientation is facing southwest. No bacteria or grease found upon inspection.



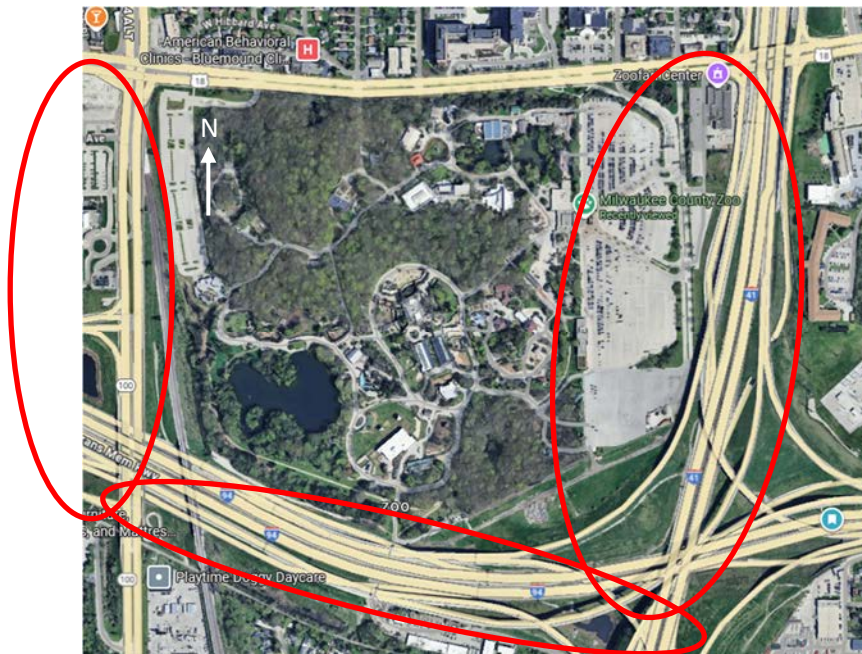
Covered dumpsters were located behind the parking lot of 7864 W Appleton Avenue. The photo was taken facing east. No evidence of bacteria or grease was observed during inspection.

2025 WisDOT Milwaukee River TMDL Study Possible Bacteria Source Field Investigation Review Form

Part A: Possible Bacteria Source Site Information

City/Village/Town: Milwaukee	County: Milwaukee	WisDOT Highway Name: I-94 and I-4, WI-100	
Site Name: Milwaukee County Zoo		Address: 10001 W Bluemound Rd, Milwaukee WI, 53226	
Field Investigation Location*: F/I 41-9	Review date: 8/6/2025	Weather: 84°F	
Reviewers: Lu Chen, Rachel Clark	Arrived: 2:05pm	Left: 3:02pm	
Reviewer Firm/Region: AECOM	Site Owner: Public Zoo Operated by Milwaukee County		
Possible Source Type: This site is a zoo.			

**Reference Location Map*



Source Location: LAT: 43.0348° N, LNGT: 88.0373° W

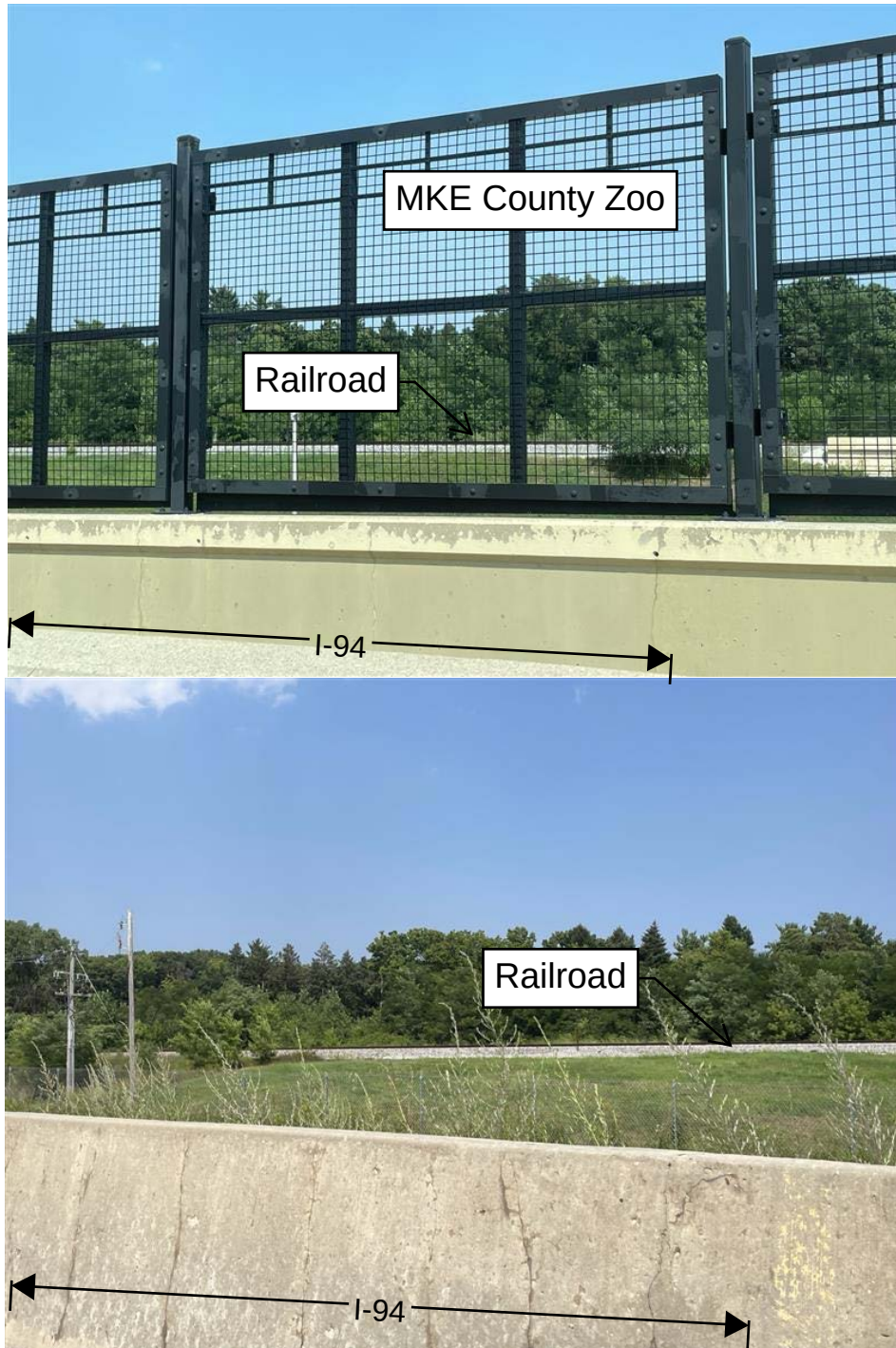
○ Inspection areas

Part B: Field Investigation Results

Field Investigation Questions	Comments
Investigation Location?	Drainage east side of the site flows eastward through the parking lot and captured by a ditch adjacent to US 41. Drainage south side of the site flows southward to a vegetated low area beneath the I 94. Drainage west side of the site flows westward to the ditch adjacent to the railway between STH 100 and the parking lot.
Field Evidence of Bacteria?	No

ADDITIONAL COMMENTS:

Photos:

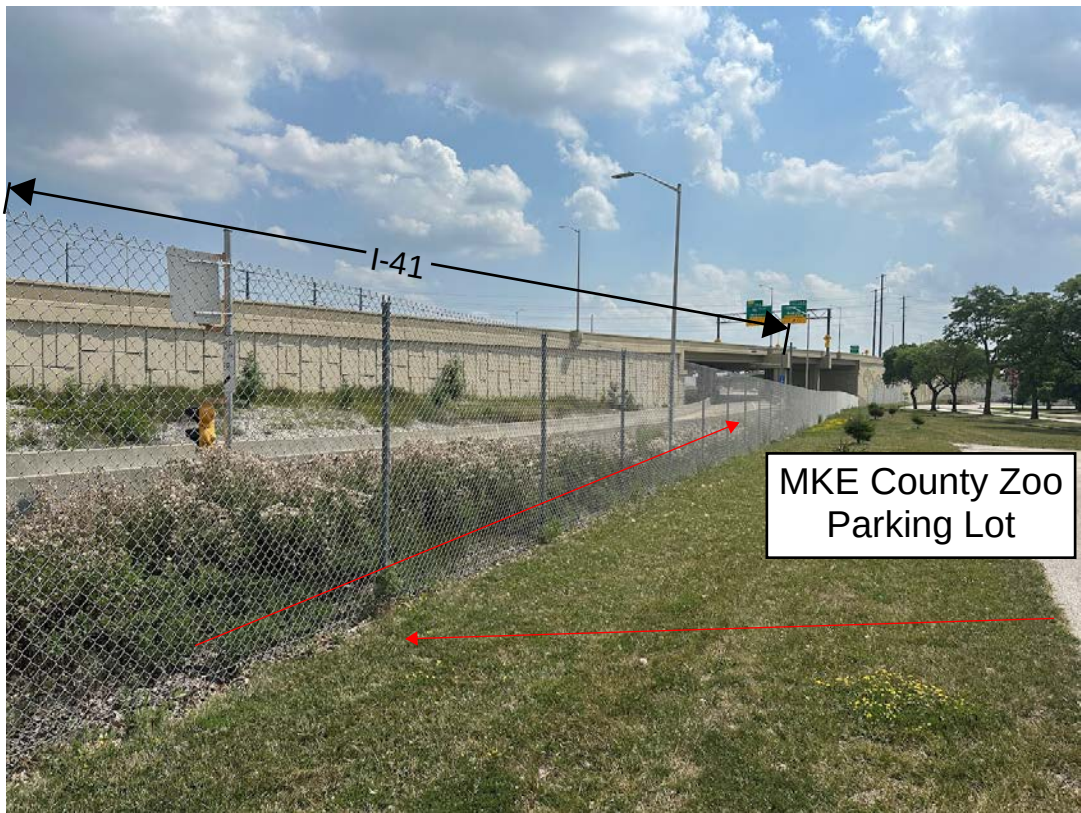


Railroad between the site and I-94. Ditch between railroad and the site collect the drainage from the zoo.



Railroad between the site and I-94. Ditch between railroad and the site collect the drainage from the site.



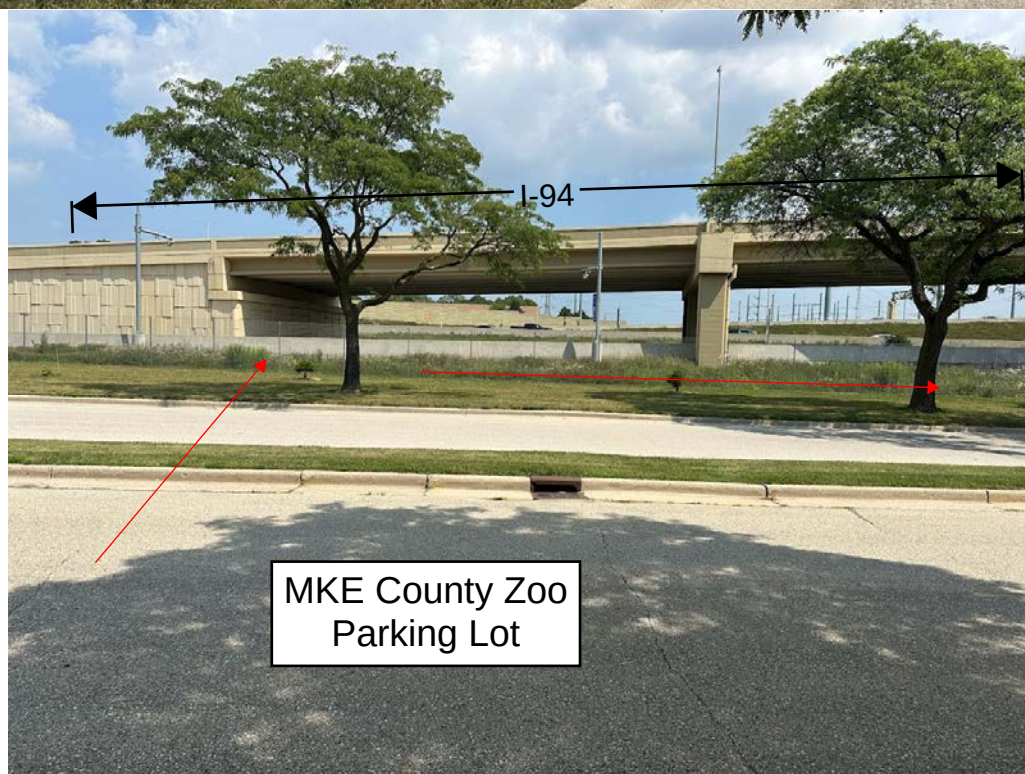




Ditch between the site and I-94 collects the drainage from the site and flows to a vegetated low area beneath the I 94.



Ditch between the site and STH 100 collects the drainage from the site.





Equipments on the southeast corner of the site. No bacteria evidence found.

Appendix 6: Cost Analysis

The cost estimates for both the Pilot Study (80 miles) and the Final Project (remaining 234 miles) were broken down into similar steps. Each estimate includes raw hourly rates for two inspectors and one engineer responsible for completing the reports, along with applicable overhead and fixed fees. Direct costs encompass total mileage and meals for the inspectors. The final cost for the Pilot Study was approximately \$527 per mile, totaling \$42,191 for 80 miles. In contrast, the cost for evaluating the remaining 234 miles was approximately \$207 per mile, totaling \$48,460 reflecting efficiencies gained through the experience from the Pilot Study applied to the desktop analysis, GIS modeling, and report preparation.

Table 2: Cost analysis of Pilot Study and Final Project

No.	Task	Pilot Study - Time Spent (hours)	Pilot Study - Cost	Final Project - Time Spent (hours)	Final Project - Cost	Total Hours	Total Cost
1	GIS Mapping	20	\$1,900	25	\$1,100	45	\$3,000
2	Desktop Analysis	67	\$5,490	130	\$10,660	197	\$16,150
3	Field Investigation	16	\$1,310	32	\$2,620	48	\$3,930
4	Document preparation & Report/Memo	90	\$7,380	50 (1)	\$4,100	140 (1)	\$11,480
5	Meeting & Discussion	9	\$780	9	\$780	18	\$1,560
6	Direct Costs	Travel Mileage/Lunch 2x	\$170	Travel Mileage/Lunch 2x	\$340	Travel Mileage/Lunch	\$510
7	Overhead Costs (125.5%)		\$21,380		\$24,600		\$45,980
8	Fixed Fee (8.25%)		\$3,170		\$3,650		\$6,820
9	Project Management	5.5	\$611	5.25 (1)	\$604	10.75 (1)	\$1,215
	Totals (including project management)		\$42,191		\$48,454 (1)		\$90,651 (1)

(1) Estimate prior to Final Project final billing

Table 3 is the weighted average of the Pilot Study and the Final Project cost analyses combined for an estimate of the cost to inspect bacteria as described in this report for another watershed area. The hours and cost were calculated using a weighted average, the Pilot Project being 25% of the total and Final Project the remaining 75% of the highway miles in the Milwaukee River watershed. Note that the total weighted average cost will not equal the sum of the totals from Table 2 and so was not included in Table 3.

Table 3: Weighted Average of Combined Pilot Study and Final Project Costs

No.	Task	Weighted Average Time Spent (hours)	Weighted Average Cost
1	GIS setup	24	\$1,310
2	Desktop Analysis (185 miles)	114	\$9,350
3	Field Investigation (10 Sites)	28	\$2,290
4	Document preparation & Report/Memo	60	\$4,940
5	Meeting & Discussion	9	\$780
6	Direct Costs	Travel Mileage/Lunch 2x	\$300
7	Overhead Costs (125.5%)		\$23,780
8	Fixed Fee (8.25%)		\$3,530
9	Project Management	5	\$610

Table 4 summarizes the cost per mile calculations for the Pilot Study, the Final Project and the weighted average of the two analyses.

Table 4: Break down of cost per mile.

Project	Cost per Mile
Pilot Study	\$527
Final Project	\$207
Weighted Average	\$290