

TMDL Implementation Tracking Matrix: Millersburg, Oregon STATUS UPDATED FOR 2019-2024, Rev. 2022 – 2022 Report

Millersburg has legal authority over land use on 2,850 acres within the City Limits. The Willamette River forms the western boundary of the City between river-mile 115.5 and 117.75 for approximately 2.25 miles. The City is implementing its MS4 Phase 2 Permit throughout its entire jurisdiction in order to also meet the NPS load allocations (LA) for the Mercury TMDL.

POLLUTANT <i>Pollutants Addressed by the TMDL.</i>	POLLUTANT SOURCES	STRATEGY <i>What Millersburg is doing and will do to reduce pollution from this source.</i>	ACTIONS <i>Specific Implementation Measures.</i>	BENCHMARKS <i>Intermediate indicators of progress.</i>	TIMELINE <i>Beginning and completion dates.</i>	MEASURE <i>Demonstrate implementation or completion of the strategy.</i>	PROGRAM FUNDING	STATUS – 2022 Report
1.0 TEMPERATURE	A. Solar Radiation	Maintain existing riparian plantings and shading vegetation.	Update Land Use Development Code to include more provisions for riparian vegetation protection, including greater setbacks for drainage ways. Code enforcement of riparian and vegetative protections. When doing drainage way maintenance/brush removal activities, remove only obstructions to the flow. Protect trees and larger vegetation outside the active channel which provide shading and grass/vegetation within the channel which does not obstruct flow.	Compare aerial photographs at periodic intervals to determine the state of and changes to riparian areas. Visually inspect Crooks Creek main channel and its two northern tributaries within City limits.	Continue to enforce City's current Development Code (1984 & 2006) until revised code is adopted; ongoing Current code revision is underway with adoption anticipated in 2019. Begin enforcement upon adoption of new code. Visual inspection of Crooks Creek and tributaries annually. Aerial photo analysis annually or as new open source aerial photos become available.	Yearly review of standards compliance. Report on visual inspection of Crooks Creek and tributaries. Annual progress of code revision.	General Fund/ Stormwater Fund	Code revision complete. Codes were enforced through land use reviews, grading, and stormwater permits. Received one complaint regarding removal of vegetation in a residential backyard along Crooks Creek. Report included as Attachment 1. Visual inspection of Crooks Creek and tributaries conducted. No significant changes to riparian plantings and shading vegetation.
		Perform public outreach and education on riparian regulations and the benefits of riparian plantings and shading vegetation on private property.	Public outreach and education through posting materials to City website and/or fliers on benefits of riparian plantings and shading. Provide guidance to private property owners when requested.	Distribute or post outreach materials minimum of once per year.	Years 1-5: Outreach materials reviewed annually and updated if needed. Years 1-5: Maintain up-to-date website Years 1-5: Perform a minimum of one outreach event and one flyer/ mailing each year.	Track and document outreach and education events, mailings, postings and other efforts; annual review.	General Fund/ Stormwater Fund	Continued to host website page for stormwater, which includes TMDL reports, Stormwater Master Plan, and flyers for residents, businesses, and industries. Table at annual Millersburg Celebration event in September 2022 included stormwater information and staff available to answer questions.
		Maintain existing shading vegetation in riparian areas on City-owned property.	Monitor health of existing vegetation in riparian areas on City-owned property.	Visually inspect trees annually. Engage arborist if conditions of concern exist.	Visual inspection by City staff annually. Evaluation by arborist as needed, minimum every 5 years.	Report on annual visual inspection and arborist evaluation, as applicable. Report on implementation of arborist recommendations.	General Fund/ Stormwater Fund	Annual visual inspection of trees conducted. Trees within riparian areas generally have not changed. Some ivy present, will continue to monitor.
	B. Impervious Surface Runoff	Minimize new paving and roof areas, as practicable to reduce stormwater temperature increases.	Enforce maximum ground coverage standards per Land Use Development Code Zones and Zoning Regulations.	Monitor subdivision and building site plans. Track approved variances	Ongoing; annual review	Track and document compliance review of new development, approved variances, violations and enforcement actions.	General Fund/ Planning and Development	New development was constructed in compliance with ground coverage standards. No variances were approved and no enforcement actions were taken. There were multiple occurrences of staff discussing lot coverage standards with property owners when applying for or considering building permits for additional

								structures. Permits for additional structures not issued if lot coverage requirements would be exceeded.
	C. Industrial Storm Water Discharges	Ensure regulations for industrial storm water are communicated to new industries.	Inform applicants of 1200-Z and 1200-C permit requirements and direct them to contact DEQ. Notify DEQ of any reported complaints regarding industrial stormwater discharges.	Track notification to new applicants. Track any notifications to DEQ.	Ongoing; annual review.	Yearly review of compliance in notifying new applicants of 1200-C and 1200-Z requirements. Report any complaint notifications to DEQ	General Fund/ Planning and Development	No new industries started operation in the city in 2022. Several expressed interest in available properties and were made aware of 1200-C and 1200-Z requirements. In 2022, no industrial stormwater complaints were received by the City.
2.0 BACTERIA	A. Septic Systems (approximately 4% of the City's dwellings are on individual septic systems)	Contact Linn County Environmental Health about reported concerns with existing septic systems. Ensure system conversion to municipal sewer system is required for new or redevelopment per the Development Code.	Continue expansion of municipal sewer system to serve all areas of the City. Enforce septic system conversion to municipal sewer system when required by Development Code.	Monitor septic system conversion to municipal sewer system & document sewer system extensions	Ongoing; annual review	Report number of septic systems converted to municipal sewer system each year. Report expansions to municipal sewer system Track complaints/ concerns City reports to Linn County	Sewer Fund	No septic systems converted to municipal sewer system in 2022. Municipal sewer system expanded into new residential developments. No expansion of sewer system to unserved areas not associated with new development in 2022. The City received no septic system complaints in 2022.
	B. Pet and animal waste	Continue to supply pet waste pickup stations. Enforce farm animal regulations.	City is providing waste collection stations at City Parks. Code enforcement of farm animal raising.	Monitor usage of waste collection stations and farm animal compliance with City Code.	Ongoing; annual review	Track approximate costs of maintaining and restocking dog waste stations. Track responses to complaints regarding animal waste, violations and follow-up actions	General Fund/ Parks	Approximately \$500.00 was spent on restocking dog waste stations. No complaints received regarding animal waste.
	C. Garbage spills	Encourage waste collection companies to cover waste bins during transit. Encourage adopt-a-road program within the City.	Enforce current traffic code requiring covered loads. Encourage and support adopt-a-road program by posting information on how to get started to the City web site and referring interested groups to Linn County for county roads. Provide supplies and equipment to adopt-a-road groups.	Monitor roadside debris accumulations through use of maintenance weekly checklists. Track number and type of supplies (bags, gloves) and equipment (vests, trash pick up tools) provided to adopt-a-road groups.	Ongoing; annual review	Provide example maintenance checklists annually. Report on roadside debris observed and removed and any enforcement actions. Report on roads adopted and supplies provided by City, including costs, to adopt-a-road groups.	Streets Fund	Example maintenance checklist attached (Attachment 2). No significant roadside debris observed or removed outside of routine trash pick-up. Adopt-a-road group cleaned up Old Salem Road every other month in 2022. City provided trash pick-up devices, bags, and reflective vests.
3.0 MERCURY	A. Erosion and sedimentation containing mercury from existing background sources and introduced deposits from air and industries.	Strategy: Pollution Prevention and Good Housekeeping for Municipal Operations	Actions: Reduce discharge of mercury-related pollutants, such as sediment, through the stormwater conveyance system. Conduct municipal operation and maintenance activities in a manner that reduces the discharge of pollutants to protect water quality.	Benchmarks: See Phase 2 MS4 General Permit, Schedule A.3.f.	Timeline: See Phase 2 MS4 General Permit, Schedule A.3.f.i	Measure: See Phase 2 MS4 General Permit Schedule A.3.f	Funding: General Fund/ Stormwater Fund	Maintenance of the storm sewer system is conducted by contract. City has SOPs for applicable activities to reduce pollution in runoff from municipal activities. One City facility has a Runoff Control Plan.
		Public Education and Outreach	Conduct ongoing education and outreach program to inform the public about the impacts of stormwater discharges on	See Phase 2 MS4 General Permit, Schedule A.3.a	See Phase 2 MS4 General Permit, Schedule A.3.a.i	See Phase 2 MS4 General Permit, Schedule A.3.a	Funding: General Fund/ Stormwater	Materials posted on Millersburg website, available at Millersburg Celebration. Stormwater also discussed in City council

			waterbodies and steps they can take to reduce mercury-related pollutants in stormwater runoff.				Fund	meetings.
		Public Involvement and Participation	Implement public involvement and participation program that provides opportunities for the public to effectively participate in the development of stormwater control measures.	See Phase 2 MS4 General Permit, Schedule A.3.b	See Phase 2 MS4 General Permit, Schedule A.3.b.i	See Phase 2 MS4 General Permit, Schedule A.3.b	Funding: General Fund/ Stormwater Fund	Millersburg is active in informing the public, businesses and City Council about the MS4 Permit and its requirements, as well as how waterways can be protected by eliminating polluted discharges. The City has a complaint/reporting system in place on its website that can be accessed 24/7.
		Illicit Discharge Detection and Elimination	Implement and enforce a program to detect and eliminate illicit discharges into the stormwater conveyance system.	See Phase 2 MS4 General Permit, Schedule A.3.c	See Phase 2 MS4 General Permit, Schedule A.3.c.i	See Phase 2 MS4 General Permit, Schedule A.3.c	Funding: General Fund/ Stormwater Fund	Outfalls are identified and added to GIS; ordinance is in place to prohibit non-stormwater discharges, dry weather screening is being conducted, and investigating complaints received. IDDE Manual in process.
		Construction Site Runoff Control	Refer Projects to DEQ to obtain NPDES 1200-C permit for construction projects that disturb one or more acres (or that disturb less than one acre if it is part of a "common plan of development or sale" disturbing one or more acres).	See Phase 2 MS4 General Permit, Schedule A.3.d.iii	See Phase 2 MS4 General Permit, Schedule A.3.d.i	See Phase 2 MS4 General Permit, Schedule A.3.d.iii	Funding: General Fund/ Stormwater Fund	Projects are referred to DEQ and copies of 1200-C permits required for developments are in files.
			Require construction site operators to complete and implement an Erosion and Sediment Control Plan for construction sites that disturb 10,000 square feet or more and are not already covered by a 1200-C permit	See Phase 2 MS4 General Permit, Schedule A.3.d.iv	See Phase 2 MS4 General Permit, Schedule A.3.d.i	See Phase 2 MS4 General Permit, Schedule A.3.d.iv	Funding: General Fund/ Stormwater Fund	City has ordinance in place and existing erosion and sediment control permit requirements. An Erosion Prevention and Sediment Control (EPSC) Manual has been developed that contains details on addressing permit requirements. Inspections are conducted.
			Require erosion controls, sediment controls, and waste materials management controls to be used and maintained at all qualifying construction projects from initial clearing through final stabilization.	See Phase 2 MS4 General Permit, Schedule A.3.d.ii	See Phase 2 MS4 General Permit, Schedule A.3.d.i	See Phase 2 MS4 General Permit, Schedule A.3.d.ii	Funding: General Fund/ Stormwater Fund	
			Develop, implement, and maintain a written escalating enforcement and response procedure.	See Phase 2 MS4 General Permit, Schedule A.3.d.vii	See Phase 2 MS4 General Permit, Schedule A.3.d.i	See Phase 2 MS4 General Permit, Schedule A.3.d.vii	Funding: General Fund/ Stormwater Fund	Currently under development, to be completed within MS4 Phase II General permit compliance term (no later than Feb 28, 2024)
			Track implementation of construction site runoff program required activities.	See Phase 2 MS4 General Permit, Schedule A.3.d.ix	See Phase 2 MS4 General Permit, Schedule A.3.d.i	See Phase 2 MS4 General Permit, Schedule A.3.d.ix	Funding: General Fund/ Stormwater Fund	Tracking is currently being done in compliance with MS4 Phase II General Permit.
			Post-Construction Site Runoff for New Development and Redevelopment	Develop, implement, and enforce a program to reduce discharges of pollutants and control post-construction stormwater runoff from new development and	See Phase 2 MS4 General Permit, Schedule A.3.e	See Phase 2 MS4 General Permit, Schedule A.3.e.i	See Phase 2 MS4 General Permit, Schedule A.3.e	Funding: General Fund/ Stormwater Fund

			redevelopment project sites.					their compliance with the code and standards.
4.0 INTERRELATED FACTORS	A. Stormwater Discharge, a contributing source factor for all three Identified Pollutants.	Provide stormwater detention and treatment.	Enforce existing regulations & perform regular maintenance inspections of existing public facilities. Complete and adopt engineering standards, including post-construction stormwater detention and water quality.	Monitor effectiveness of existing regulations and maintenance program. Include design standards which require stormwater treatment in addition to detention.	Ongoing enforcement of existing standards Adoption of post-construction stormwater quality engineering standards by end of 2019. Include requirement for maintenance agreements of private SW facilities in engineering standards.	Maintain records of stormwater calculations and reports in development files. Track maintenance of facilities Provide documentation that post construction stormwater quality engineering design standards are in the process of or have been adopted.	General Fund/ Stormwater Fund	Records of stormwater calcs and reports are kept in development files. Public detention facilities maintenance tracked in maintenance records. Engineering standards, including post construction stormwater quality were adopted at the end of 2019 (see previous report).
		Adopt the Millersburg Stormwater Master Plan and begin implementation of selected capital projects.	Begin implementation of selected capital projects recommended in the Stormwater Master Plan.	Incorporate stormwater projects into the City's Capital Improvements Program	Master Plan adopted in 2018. Plan and budget for projects beginning in FY 2019-2020.	Implementation of selected projects.	General Fund/ Stormwater Fund	Evaluation of selected projects is ongoing. Based on recent stormwater infrastructure performance during significant rainfall events, projects have been put on hold. This is primarily due to a better maintenance regime.
	B. Disposal & Recycling	Prevent hazardous waste & illegal discharges and encourage recycling.	Work with waste disposal provider (Republic Services) to provide information to the public on disposal regulations and recycling. Support Hazardous Waste collection days. Advertise on City reader board and website.	Regular review of agreement with Republic Services to insure services continue to meet the needs of the community.	Periodic and on-going. Franchise agreement is reviewed every five years, evaluation of services annually.	Maintain record of any reported illegal discharges and enforcement actions. Report on Actions.	General Fund	One business (Ti Squared) self-reported a release of sodium hydroxide to Oregon DEQ and copied the City. Documents are included as Attachment 3. No other reported hazardous waste or illegal discharges in 2022.
		Illicit Discharge, Detection and Elimination	Monitor ditches during dry weather. Dry weather screening - inspect 20% of outfalls annually. Provide reporting/complaint information on City website, including phone number and complaint form.	Track dry weather ditch monitoring and dry weather outfall screening.	Year 1: Establish dry weather screening program. Provide complaint reporting information on website. Year 2: Begin dry weather monitoring/screening, continue ongoing.	Provide maintenance checklists documenting ditch monitoring. Report on dry weather outfall screening. Track responses to complaints.	General Fund/ Stormwater Fund	Tracking of dry weather ditch monitoring was removed from maintenance checklists. Instead, dry weather ditch monitoring was conducted by staff throughout the summer during routine inspections and maintenance staff are instructed to report on any unexpected water in ditches. Dry weather outfall screening report attached (Attachment 4).
	C. Information Program for Clean Water Act and potential pollutants	Implement outreach and education activities for new local industries and the general public.	Post information or links to City website. Educate new industries about protection of stormwater.	Develop a stormwater flyer for general public, post to website, and make available at City Hall. Develop a stormwater flyer for industry and give to new industries at time of permits.	Develop stormwater flyers and post by 12/31/2019.	Annual communication of information to public and report to council. Provide flyers with annual report.	General Fund/ Stormwater Fund	Stormwater flyers posted to City Website, made available at City Hall, and sent out with water bills once annually. Flyers attached (Attachments 5 and 6).

	D. Funding	Provide funding for planning and implementation of needed programs to address pollution.	Seek funding sources, including considering creation of a stormwater utility and fee.	Prepare a working list of potential funding sources.	Ongoing; annual review	Achieve funding to implement planning and implementation of needed programs	General Fund/ Stormwater Fund	Funding was allocated in FY 2021-22 City budget from the City's general fund. City may consider a stormwater utility and fee in the future if it becomes necessary.
	E. Intergovernmental Cooperation	Achieve economies and expanded informational base through cooperative associations.	Contact local and statewide organizations addressing environmental issues. Expand participation in Oregon ACWA.	Attend stormwater information sharing events. Participate with other agencies in local collaboration groups.	Ongoing; annual review	Report on events attended and participation in local collaboration groups.	General Fund/ Stormwater Fund	Ongoing participation in ACWA, attended ACWA stormwater summit in May 2022.
	F. City Council Support for water quality efforts	Ensure City Council is aware of TMDL requirements, TMDL Implementation Plan, and city-wide efforts to improve water quality.	City Council meeting overview and acknowledgement of TMDL Plan, Annual Report, and Five Year Review.	Revised Matrix presented to City Council; Annual City Council meeting minutes.	Ongoing; annual review	Annual meeting with City Council about TMDL responsibilities, progress, funding needs, etc.	General Fund/ Stormwater Fund	During budget meetings in the spring of 2022, stormwater fund functions and funding were reviewed.
	G. Staff Training and Good Housekeeping	Implement recommendations of Stormwater Master Plan for stormwater system maintenance.	Establish a stormwater system maintenance program per the recommendations of the Stormwater Master Plan.	Program and fund stormwater system maintenance activities: street sweeping, inlet inspection, system cleaning.	Year 1-2: Establish program. Year 3-5: Implement maintenance program recommendations.	Report on maintenance activities.	General Fund/ Stormwater Fund	Monthly street sweeping contracted and conducted. Maintain on-call contract for stormwater services. Cleaned and TV'd stormwater system in Woods Estates (Evergreen and Deciduous Streets). Removed trash and debris from grated outlet at detention basin.
		Annual staff training.	One staff member participate in one training event per year and give presentation to other staff, as applicable.	Participation in one training event annually.	Training - annually, ongoing.	Documentation of training event attended and materials presented to other staff, as applicable.	General Fund/ Stormwater Fund	Attended ACWA stormwater summit in May 2022. Presentation of materials to other staff not applicable (Millersburg has no other staff this material is applicable to).
	H. Public Involvement	Provide opportunities for public involvement.	Include public outreach events in master plan processes and provide public comment periods for adoption of master plans. Allow for public comments on stormwater related topics at council meetings.	Provide materials for public review ahead of meetings by posting on website.	Ongoing; annual review	Report on public outreach activities conducted and comments received.	General Fund	In every council meeting, there are two opportunities for public comment on all topics, including stormwater.

Stormwater Complaint

Complaint Number: COM-22-36-SW

Date Complaint Received: 8/26/2022

Name and Contact Info: Confidential complaint received by DEQ and referred to City

Location of Alleged Violation: 3360 NE Lauren Avenue

Complaint/Concern:

Crooks Creek runs through this portion and in the section behind this particular home, the creek had been completely decimated of vegetation where nothing but exposed sediment with signs of erosion and algae could be seen. The homes to the East and West sides of the property, the stream section directly behind those homes, had a substantial amount of established vegetation. This section is clearly out of the ordinary and the water quality is likely being impacted."

Staff Responding: Janelle Booth

Date Investigation Initiated: 8/26/2022

Outcome of Investigation:

Property owner had eliminated vegetation by spraying during dry period to reduce maintenance. Educated property owner on requirement to keep creek banks vegetated.

Corrective Actions Taken: Due to time of year, mitigation/remedy will be to re-establish vegetation in the fall and monitor progress. Property owner followed up that they were moving and would not be present in the fall to complete this work. They said they had seeded the area to re-establish grass.

Responsible Party: Jim and Connie Lepin

Status of Enforcement Procedures When Necessary: N/A

Date of Corrective Action: September 2022



WEEKLY MAINTENANCE CHECKLIST

Week of: _____

Initial when complete

Millersburg Park:

- _____ Restroom floors – mop or hose down, squeegee to ensure dry when done
- _____ Shelter floor - Clean/hose down
- _____ Sweep/blow hard surfaces including walkways and parking lots
- _____ Mow grass, including ball fields (March/April – October)
- _____ Blow grass clippings off paths and sidewalks following each mowing
- _____ Clean BBQs (March/April – October)
- _____ Leaf removal (November - March)
- _____ Blow leaves/debris off paths and sidewalks/collect leaves
- _____ Remove fallen branches
- _____ Empty waste receptacles and place new liners
- _____ Restock dog bag stations
- _____ Check shelter for birds or insects, nests, droppings, webs, etc. Clean as needed
- _____ Rake volleyball court, remove debris or hazards (March/April – October)
- _____ Clean out BBQs as needed (March/April – October)

Acorn Park:

- _____ Walk grounds, inspect for maintenance needs and safety issues (note any deficiencies below and on issues/deficiencies list)
-
- _____ Pick up trash
 - _____ Check waste receptacles, empty and place new liners as needed
 - _____ Restock dog bag stations
 - _____ Remove fallen branches
 - _____ Mow grass (March/April – October)
 - _____ Blow grass clippings off paths and sidewalks following each mowing
 - _____ Leaf removal (November - March)
 - _____ Blow leaves/debris off hard surfaces and collect leaves

City Hall Grounds:

_____ Walk grounds, inspect for maintenance needs and safety issues (note any deficiencies below and on issues/deficiencies list)

_____ Pick up trash

_____ Empty exterior waste receptacles and place new liners

_____ Mow every other week (March/April – October)

Road Rights-of-Way:

_____ Drive arterials and collectors (Old Salem Road, Conser Road, Millersburg Drive, Alexander, Woods Road, Morningstar Road) inspect for maintenance needs and safety issues (note any deficiencies below and on issues/deficiencies list)

_____ During dry weather, is water present in ditches? If so, note location(s) _____

_____ Pick up trash and/or note where additional trash removal is needed

_____ Vegetation removal – cut vegetation and spray one road each week May through October per right-of-way maintenance schedule

Road/ROW name: _____

Stormwater Detention Basins:

_____ Mow and pick up trash at one detention basin each week May through October per detention basin maintenance schedule

Detention basin name: _____

During dry weather, is water present in detention basin or exiting outfall? _____

Fire Station Grounds:

_____ Mow grass in field (once a month March/April – October)

Equipment:

_____ Check mower blades, change if needed (March/April – October)

_____ Checks on large equipment (mowers, tractor, Kubota), record in Equipment Maintenance Logs



State of Oregon Department of Environmental Quality

Industrial Stormwater Permits

Tier 1 Report Form

Instructions: Fill out this form if stormwater sampling results show an exceedance of any statewide benchmark(s) or sector specific benchmark(s) identified in the permit assignment letter. If you need additional space to answer the questions below, please attach additional sheet(s). The form must be filled out within 30 days of receiving analytical results. If no changes to the SWPCP are required or for benchmark exceedances, please retain this form onsite.

Date Form Prepared: 6/30/2022

Facility Name: Ti Squared Technologies File Number #: _____

County: Linn SIC Code(s): 3369

Prepared By: Jeremy Smith Phone Number: 541.367.2929

Email Address: jsmith@tisquaredtech.com

Form is being filled out in response to:

Statewide Benchmark Exceedance (list pollutants and benchmark concentrations):

Sector Specific Benchmark Exceedance (list pollutants and benchmark concentrations):

Date Sampling Occurred: 5/23/2022

Date Lab Results Received: N/A

Describe the result(s) of the investigation of the elevated pollutant levels:

Equipment failure released approximately 50 gallons of 25% sodium hydroxide (caustic) into stormwater drain. Elevated pH levels were detected in the on-site stormwater conveyance temporarily. Discharge stopped within 2 hours of discovery and the water recovery was completed within 7 hours. pH benchmark lone parameter affected. Weather conditions dry for prior week of failure. pH levels normal and as expected in downstream conveyance system.

Describe the corrective action(s) you will take to address the benchmark exceedence(s):

Replaced failed tubing and provided double wall deflection. Installed check dam / swale of diatomaceous earth encased in Rip-Rap rock to prevent erosion.

Date corrective action(s) completed or expected to be completed: 5/24/2022

Are SWPCP revisions necessary?

Yes

No

If "Yes", please describe revisions below:

As part of Tier 1 corrective action, did you complete industrial-specific checklists? Yes No

Please submit a revised SWPCP to DEQ or agent, including a schedule for implementing the control measures if required..



DEQ Spill/Release Report

June 22, 2022

OERS # 2022-1175

NWFF Job # 4268-22

Ti Squared Technologies
3900 Western Way NE
Albany, or 97321

Release Location
3900 Western Way NE
Albany
Linn County
Oregon

1. General Information:

- a. Company/Individual Name: **Ti Squared Technologies -- Attn: Jeremy Smith**
- b. Address: **3900 Western Way NE, Albany, OR 97321**
- c. Company Contact Person: **Jeremy Smith**
- d. Phone Number(s): **360-523-8987**
- e. Report prepared by: **Ross McMakin -- NWFF Environmental**
Phone **541-929-4884**
- f. Specific on-site location of the release (and address if different from above):
Retention pond located on SE section of Ti Squared property

2. Release Information:

- a. Date/Time Release started: **Release initially observed 5/23/22 - 0800 hours**
Date/Time stopped: **05/23/22 - 0954 hours**
- b. Release was reported to (specify Date/Time/Name of Person contacted where applicable):
ODEQ
OERS **5/23/22 - 1042 hours**
NRC
Other (describe):
- c. Person(s) reporting release: **Jeremy Smith - Ti Squared Technologies**
- d. Name, quantity and physical state (gas, liquid, solid or semi-solid) of material(s) released:
Approximately 50-gallons of 25% concentration sodium hydroxide
- e. The release affected:
Air **No**
Ground Water **No**
Surface Water **Yes**
Soil **No**
Sediment **No**
- f. Name and distance to nearest surface water body(s), even if unaffected (include locations of creeks, streams, rivers and ditches that discharge to surface water on maps):
Approximately 100' east to unnamed drainage ditch

Has the release reached the surface water identified above?: **Yes**
Could the release potentially reach the surface water identified above?
Explain: **Elevated pH levels were detected (up to 9.64) in the ditch temporarily. Discharge from outflow shut off at 0954 hours and pH normalized.**
- g. Depth to nearest aquifer/groundwater: **Unknown**
Is nearest aquifer/groundwater potable (drinkable)? **Unknown**
Has the release reached the nearest aquifer/groundwater? **No**
Explain: **The release was contained to surface waters and recovered within 7 hours.**
- h. Release or potential release to the air occurred? **No**
Explain: **Cleanup has been completed.**
- i. Was there a threat to public safety? **No**
- j. Is there potential for future releases? **No**
Explain: **Cleanup has been completed. The part that failed, causing the release has been identified and repaired.**

- k. Describe other effects/impacts from release (emergency evacuation, fish kills, etc.):
None
- l. Describe how the release occurred. Include details such as the release source, cause, contributing weather factors, activities occurring prior to or during the release, dates and times of various activities, first responders involved in containment activities, etc.:

3. Site Information

- a. Adjacent land uses include (check all that apply and depict on site maps):
- | | | | |
|------------------|---|------------------|---|
| Residential | X | Heavy Industrial | |
| Commercial | X | Agricultural | X |
| Light Industrial | X | Other | |
- b. What is the population density surrounding the site: 300/m²
- c. Is the release area secured by fencing or other means? Cleanup complete
- d. Soil types (check all that apply):
- | | |
|---------|--------------------|
| Alluvia | Silt |
| Bedrock | Silty Loam |
| Clay | Artificial Surface |
| Sandy | |
- e. Describe site topography: Flat

4. Cleanup Information:

- a. Was site cleanup performed? Yes
If No, explain:
- b. Who performed the site cleanup?
- | | |
|---------------------|--------------------------------|
| Company Name: | NWFF Environmental |
| Address: | PO Box 188 Philomath, OR 97370 |
| Cleanup Supervisor: | Ross McMakin |
| Phone Number(s): | 541-929-4884 |
- c. Has all contamination been removed from the site? Yes
If No, explain:
- d. Estimated volume of contaminated soil removed: None
- e. Estimated volume of contaminated soil left in place: None
- f. Was a hazardous waste determination made for cleanup materials? N/A
- g. Based on the determination, are the cleanup materials hazardous wastes? N/A
If Yes, list all waste codes:
- h. Was contaminated soil or water disposed of at an off-site location?
- | | |
|-------------------|-----|
| Facility Name: | N/A |
| Address: | |
| Facility Contact: | |
| Phone Number(s): | |

- i. Is contaminated soil or water being stored and/or treated on-site? **Yes**
 If yes, please describe the material(s), storage and/or treatment area, and methods utilized (attach additional sheets if necessary):
Impacted water is being treated on site under City of Albany Permit #3369-02 - Industrial Wastewater Discharge Permit City of Albany.
- j. Describe cleanup activities including what actions were taken, dates and times actions were initiated and completed, volumes of contaminated materials that were removed, etc. (attach additional sheets or contractor reports if necessary or more convenient):
See attached.

5. Sampling Information:

- a. Were samples of contaminated soil collected? **N/A**
- b. Were samples of contaminated water collected? **N/A**
- c. Were samples collected to show that all contamination had been removed? **N/A**
- d. Describe sampling activities, results and discuss rationale for sampling methods:
N/A

6. Additional Information

- a. Provide a description or plan outlining the list of actions to be taken to prevent future releases from occurring.
The part that failed, causing the release has been identified and repaired.

7. Spill Report Checklist

*** to be included with final report**

I certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this submittal are true, accurate and complete.	
Signature: <u> <i>Ross McMakin</i> </u>	Date: <u> 6/22/22 </u>

5/23/2022 – Sodium Hydroxide 25% solution tubing failure

08:00 – Aware of tubing failure

08:30 – Chemical absorbant booms deployed

08:35 – Stormwater pond pH = 12.87 (outflow 1)

08:45 – Discharge opening blocked by chemical absorbents

09:32 – Downstream sample pH = 9.64 (discharge 1)

09:54 – Discharge stopped completely from Outflow 1

10:04 – Started pumping stormwater pond water into onsite storage for neutralization and discharge to POTW/sewer connection covered by permit # 3369-02 – Industrial Wastewater Discharge Permit City of Albany.

10:35 - Contacted NWFF

10:42 – Notified DEQ OERS – OERS# 2022-1175

10:50 – NWFF on-site

12:10 – Outflow 3 pH = 6.71

12:27 – Outflow 1 pH = 9.90

12:33 – OSP on-site (Michael Walberg – Trooper Fish and Wildlife Division)

14:00 – Earthen berm (Solid-a-Sorb® Diatomaceous Earth Absorbent) installed segregating outflow 1 from stormwater detention pond and neutralizing potential outflow

14:24 – Outflow 3 pH = 6.72

14:25 – Outflow 2 pH = 7.37

14:26 – Outflow 1 pH = 8.65

14:28 – Discharge 1 pH = 7.23

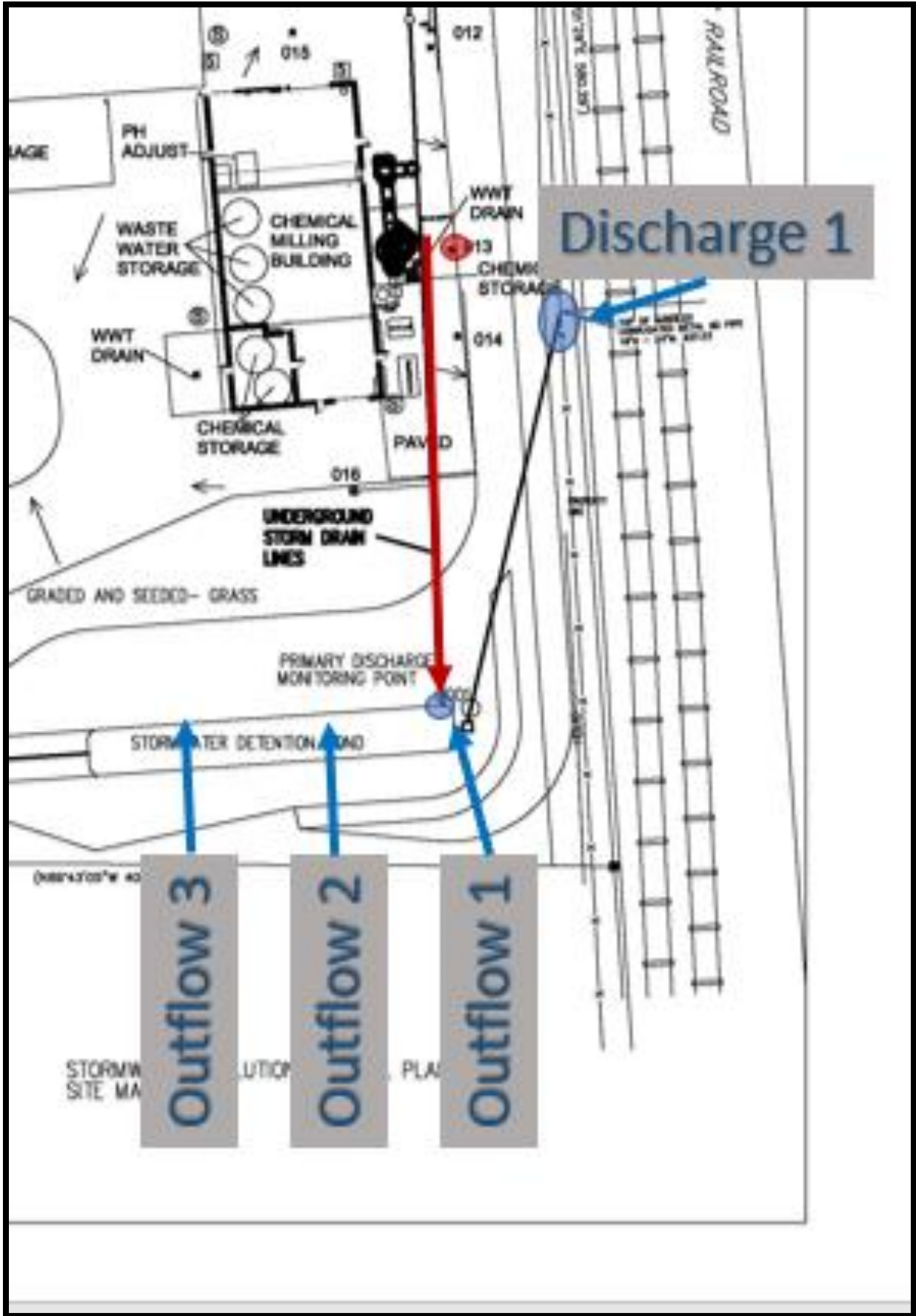
14:45 – Opened Discharge

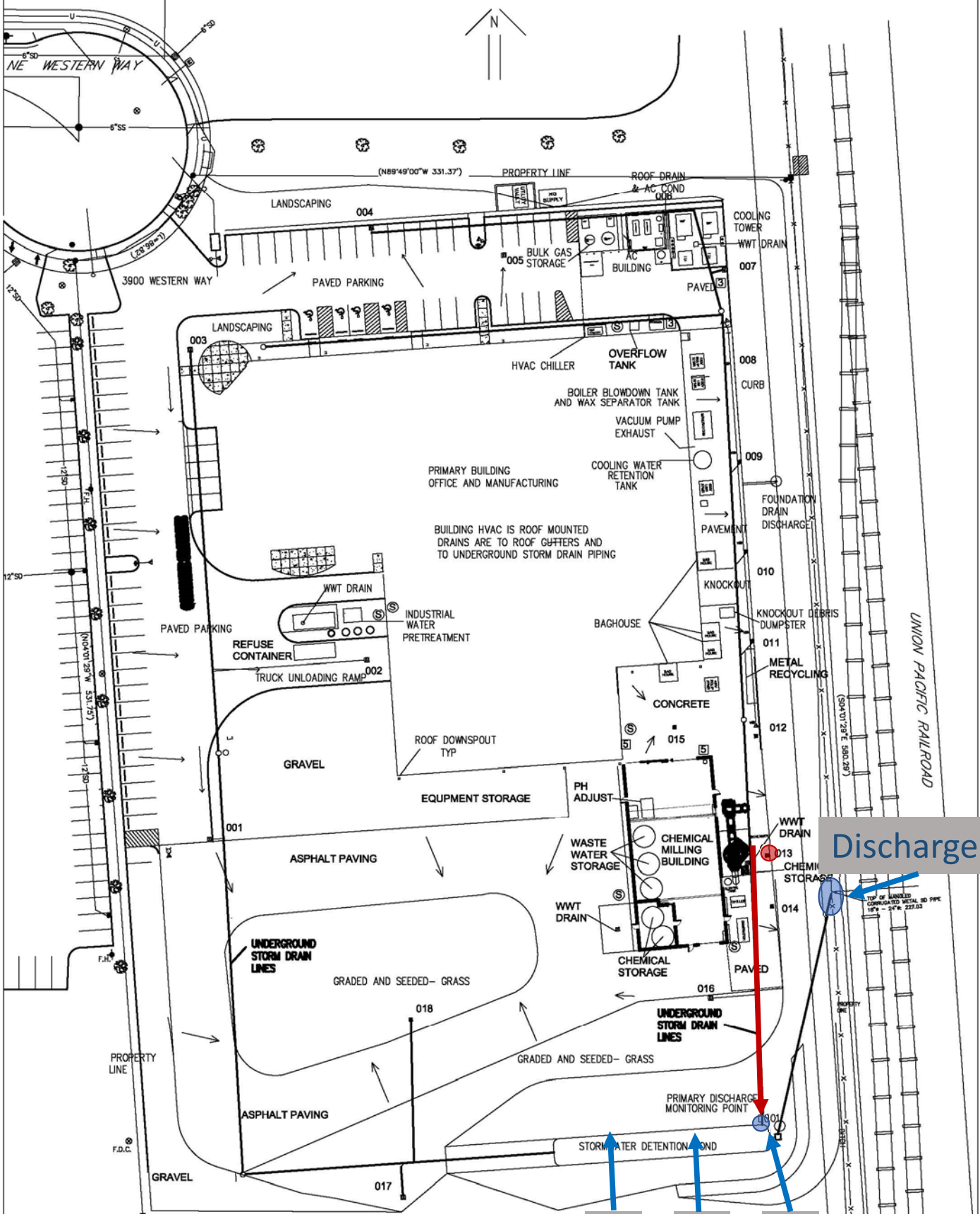
15:15 – NWFF off-site

16:00 – Contacted Kendra Girard (DEQ)

5/24/2022 NWFF – Installed 45 square foot rock lining in area adjacent to outflow 1 for water filtration and to encase the Diatomaceous Earth Berm.

5/31/2022 Ti Squared - Sampled Stormwater Outflow following the next stormwater event if available.





Discharge 1

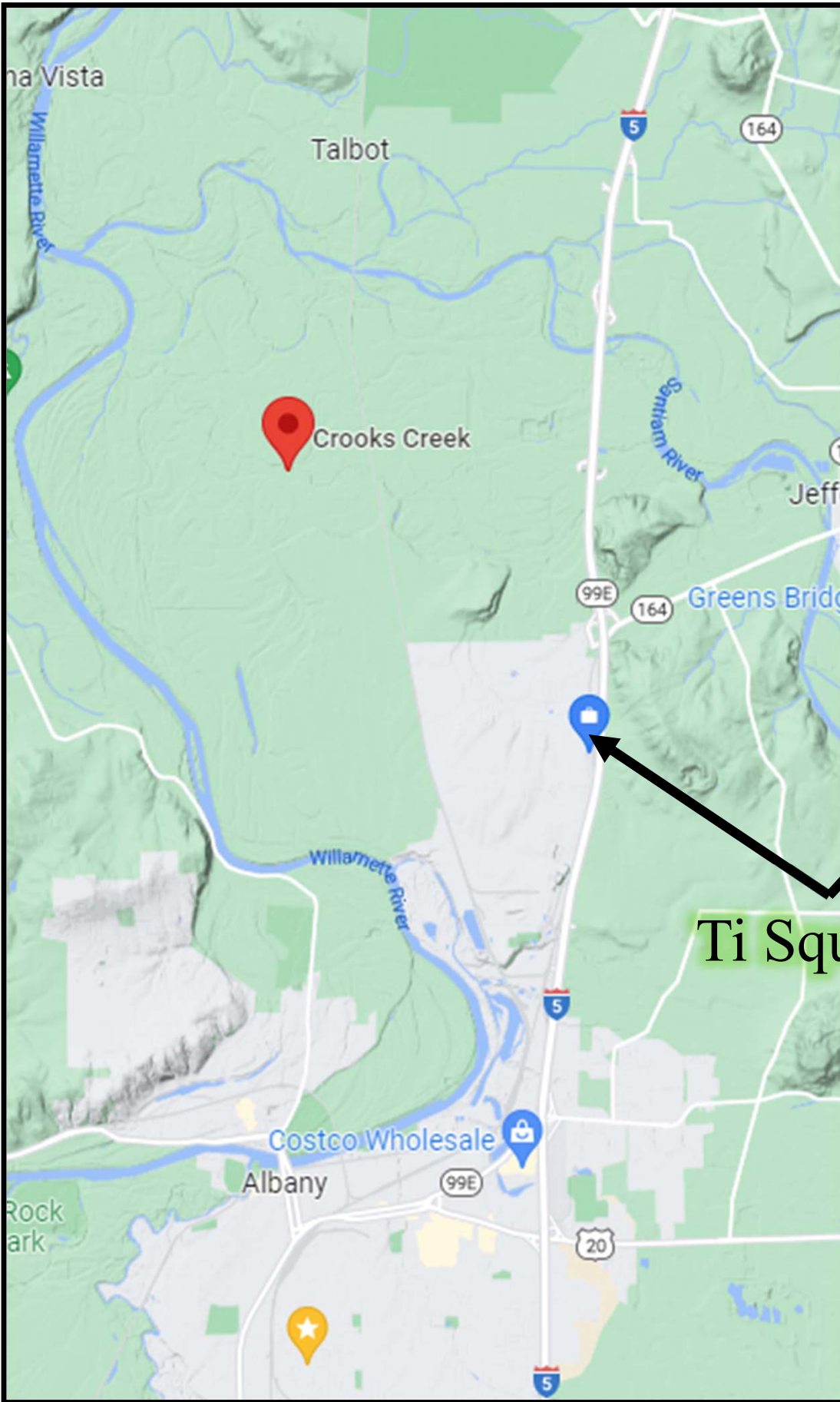
Outflow 3
 Outflow 2
 Outflow 1

- KEY
- Ⓢ SPILL KIT
 - Ⓜ WASTE WATER TOTE
 - Ⓟ RECYCLE METAL STORAGE
 - ▨ STORM DRAIN
 - Ⓛ CONTAINMENT SHED
 - FENCE

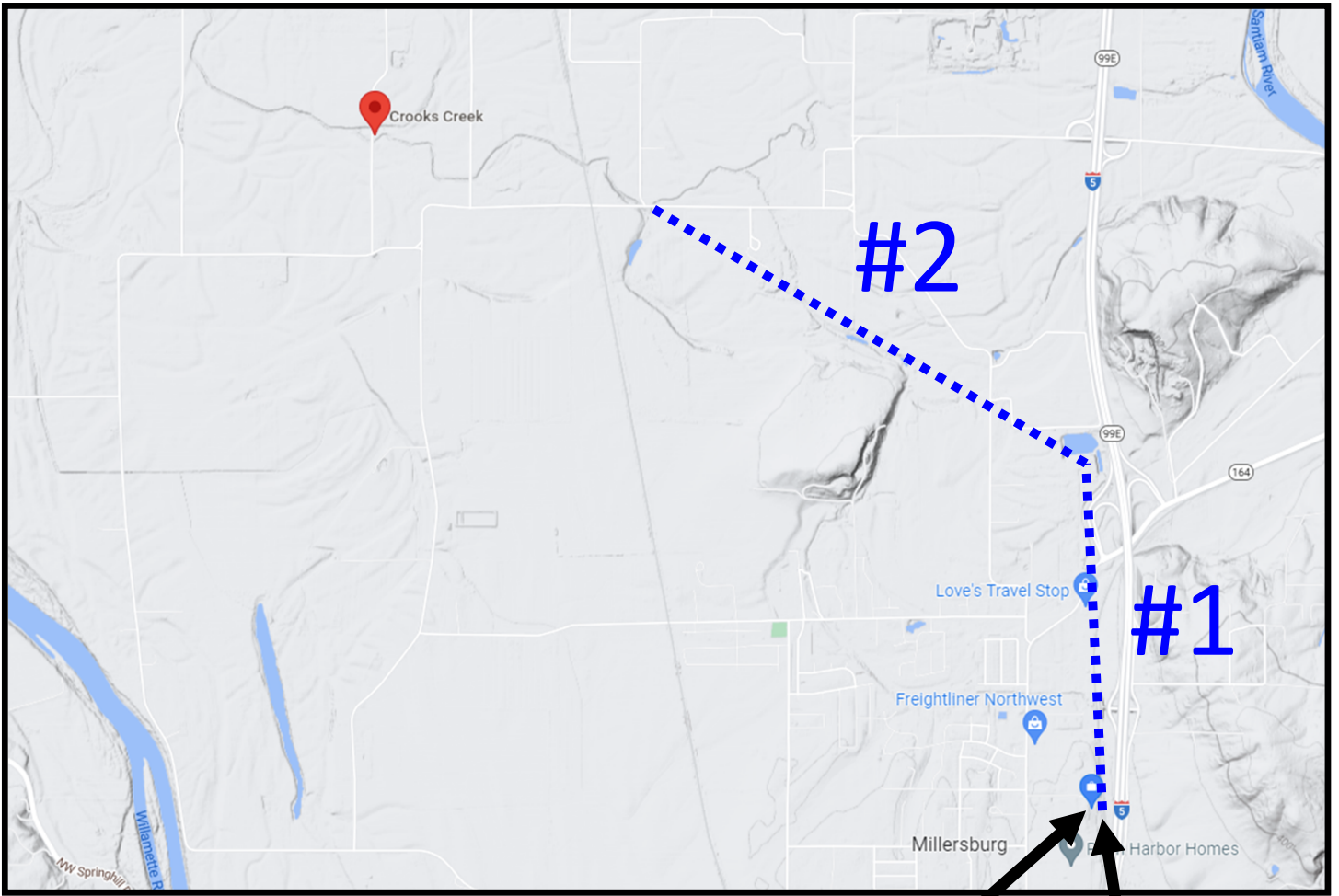
TI SQUARED TECHNOLOGIES
 3900 WESTERN WAY
 LINN COUNTY, MILLERSBURG, OR

STORMWATER DETENTION POND
 SOLUTION PLAN

TYPE OF UNPAVED CORRODATED METAL 60 PIPE
 18" - 24" - 227.03



Ti Squared

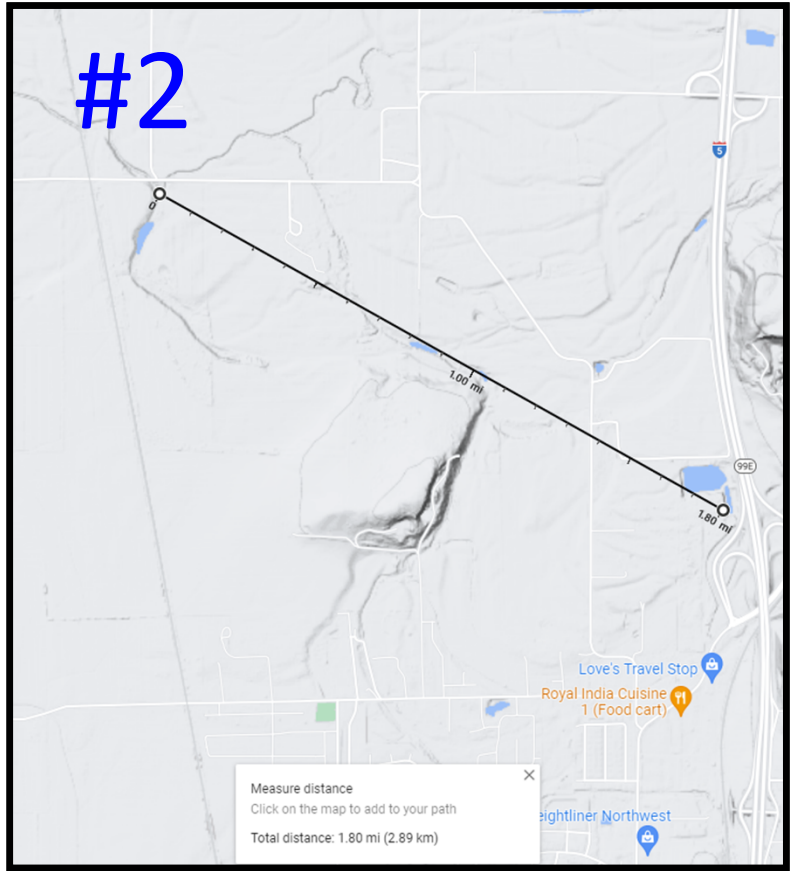
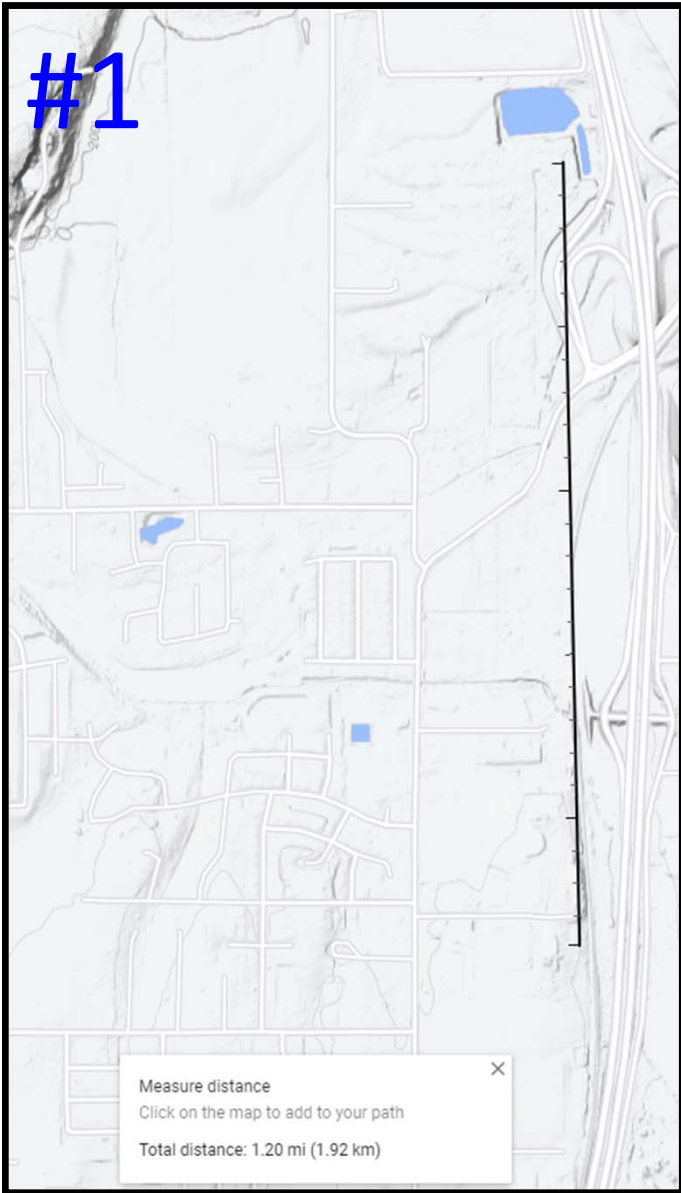


Ti Squared

Un named ditch

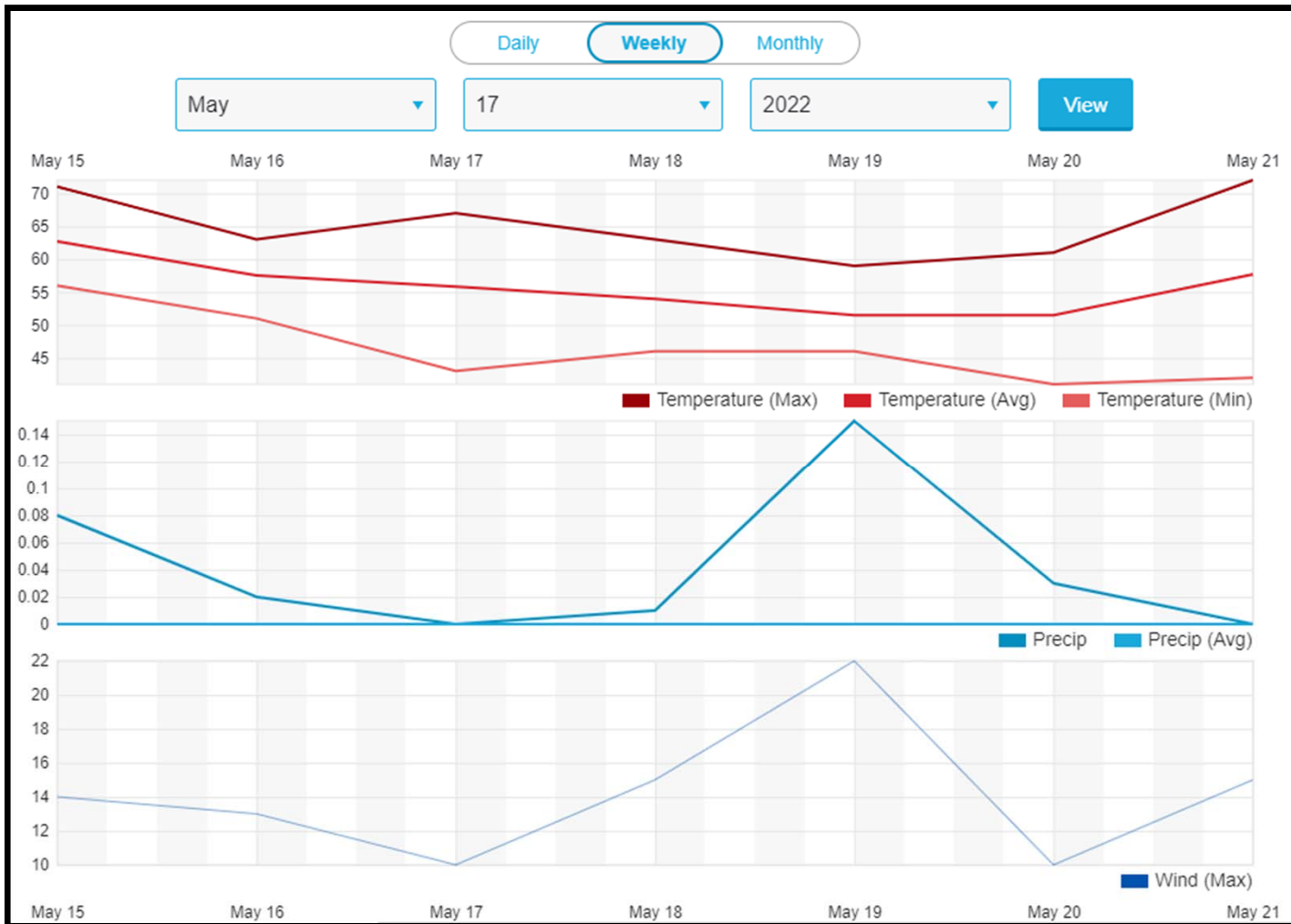
#1 – 1.20 miles

#2 – 1.80 miles

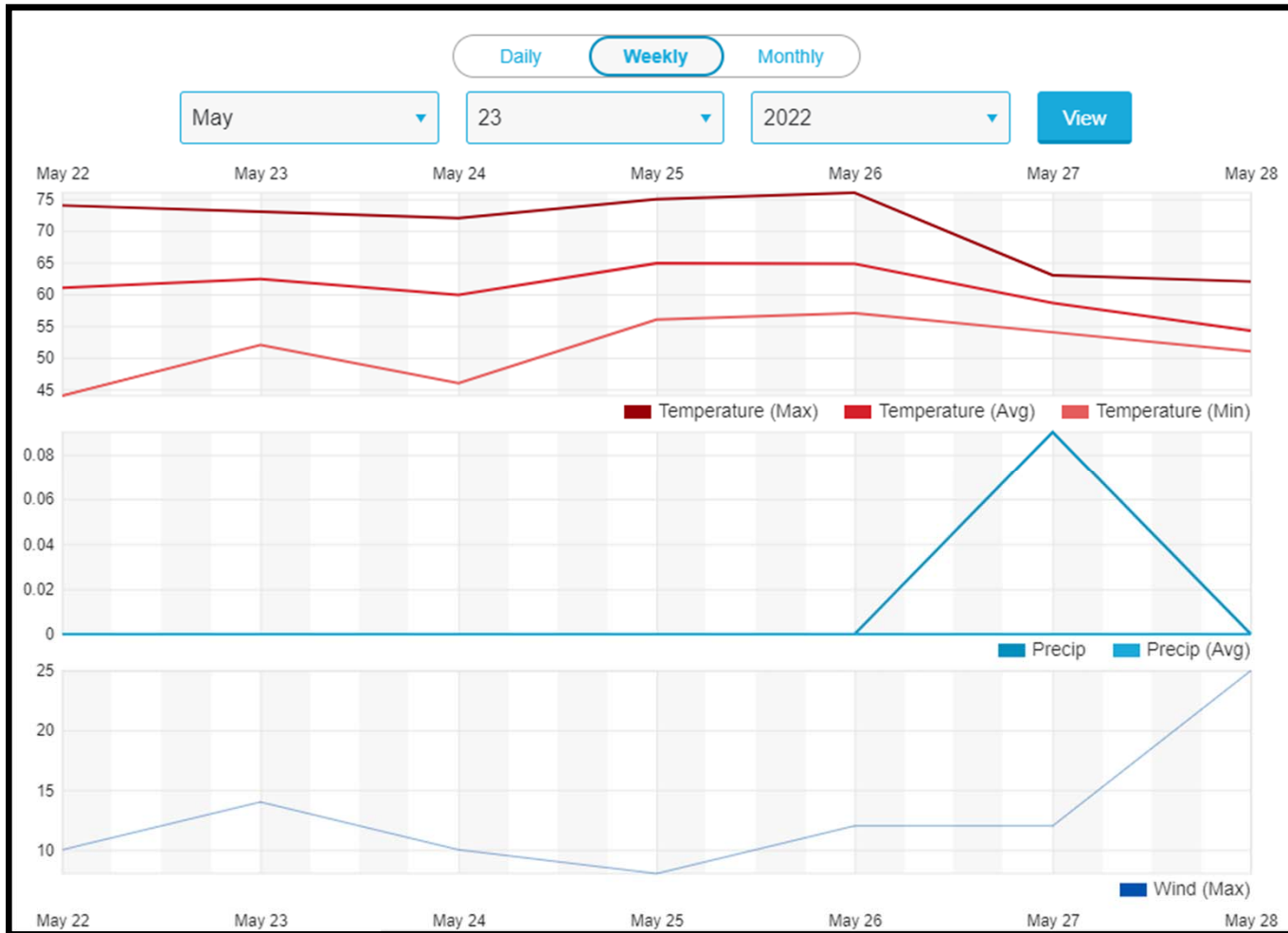


Spray pattern on-site.





<https://www.wunderground.com/history/daily/us/or/albany>



<https://www.wunderground.com/history/daily/us/or/albany>

Last Updated 9/19/2022

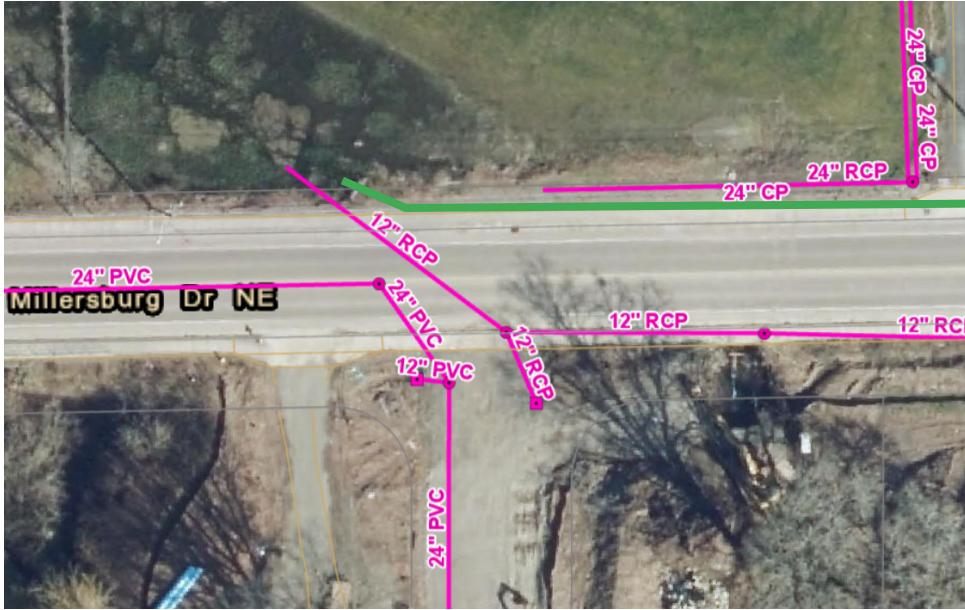
Total number of MS4 Outfalls: 9
 Number MS4 inspected in 2022: 5
 % MS4 inspected in 2022: 56%

Stormwater Outfall Check								
Previous Inspection Date	Inspection Date	Inspector Initials	Outfall ID	Description	MS4 Outfall	Receiving water body	Status	Field Notes:
	9/20/2022	JB	00-05224	Box culvert pass through of offsite drainage along Millersburg Drive	Y	Crooks Creek Trib	Dry	Dry at inlet and outlet
9/1/2021			03-00530	Becker Ridge East Detention Basin Outfall	Y	Crooks Creek		
9/17/2021	9/20/2022	JB	05-00400	Hoffman Estates Detention Basin Outfall	Y	Crooks Creek Trib	Dry	Dry at detention basin.
8/31/2021			07-00210	Morningstar Subdivision Detention Basin outfall	Y	Crooks Creek		
			10-01280	Sweetwater Detention Basin (wet pond) Outfall	Y	Crooks Creek		
8/31/2021	9/19/2022	JB	16-00130	Becker Ridge North and West Detention Basins Outfall	Y	Crooks Creek	Dry	Dry at upstream manhole. Outfall pipe end buried in brush.
8/31/2021	9/19/2022	JB	16-00140	Millersburg Drive, north side discharge to Crooks Creek	Y	Crooks Creek	Dry	Dry at Contech Stormwater vault.
			36-00810	Millersburg Drive, street drainage outfall adjacent to box culvert outlet	Y	Crooks Creek Trib		
8/31/2021	9/19/2022	JB	36-00000	West Valley Estates Detention Basin Outfall - located on south side of Millersburg Drive at east end of bridge over Crooks Creek	Y	Crooks Creek	Dry	No flow at flap gate. Flap gate to be replaced this fall or next spring.

00-05224

City of Millersburg

Aerial View



Access Notes

Slightly northwest of intersection between
Millersburg Dr. NE and NE Saunter St.

Property Owner - Allen and Linda Westbrook

List of Inspections

9/20/2022 - Dry at inlet and outlet

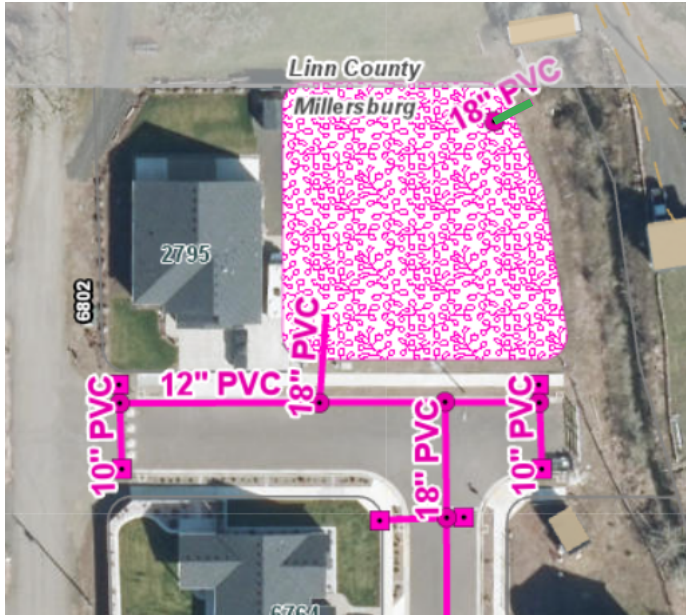
Outlet Photograph



05-00400

City of Millersburg

Aerial View



Access Notes

Slightly northeast of detention basin just north of the intersection between NE Shayla Dr. and NE Noel Ln.

Property Owner - Robert Hoffman

List of Inspections

09/17/2021 - Dry

09/20/2022 - Dry at detention basin

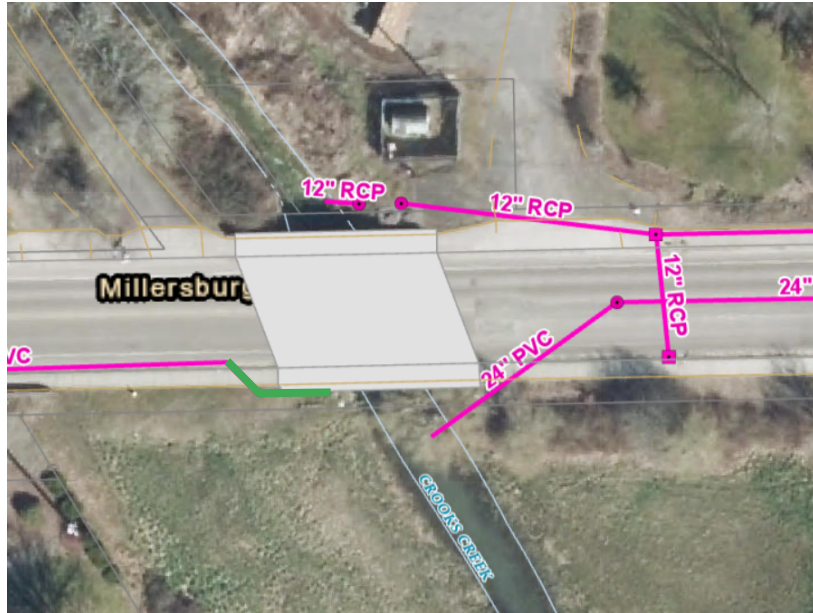
Outlet Photograph



16-00130

City of Millersburg

Aerial View



Outlet Photograph



Access Notes

Slightly southwest of bridge on Millersburg Dr.

Property Owner - David and Valerie Phelps

List of Inspections

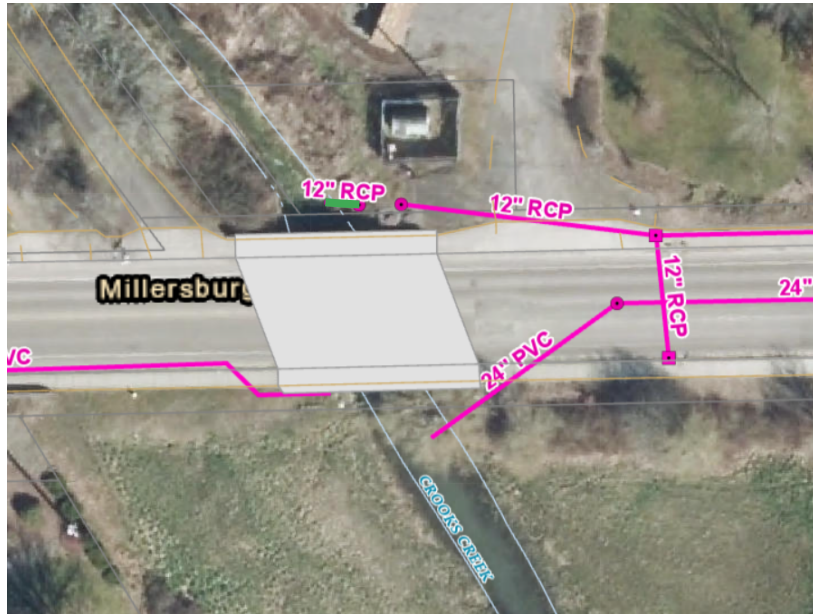
08/31/2021 - Dry

09/19/2022 - Dry at upstream manhole. Outfall pipe end buried in brush.

16-00140

City of Millersburg

Aerial View



Outlet Photograph



Access Notes

Slightly north of bridge on Millersburg Dr.

Property Owner - City of Millersburg

List of Inspections

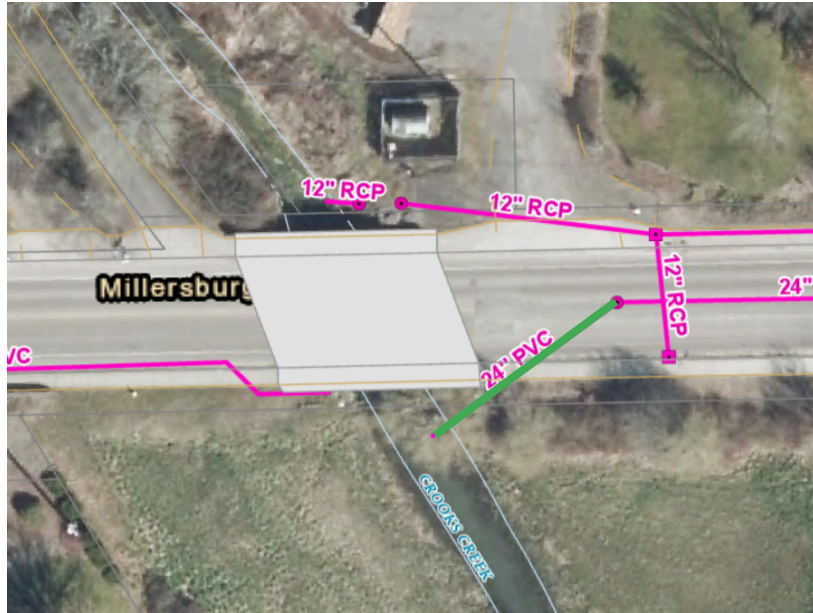
08/31/2021 - Dry

09/19/2022 - Dry at Contech stormwater vault

36-00000

City of Millersburg

Aerial View



Access Notes

Slightly southeast of bridge on Millersburg Dr.

Property Owner - David and Valerie Phelps

List of Inspections

08/31/2021 - Dry

09/19/2022 - No flow at outlet flap gate. Flap gate to be replaced this fall or next spring

Outlet Photograph



What is stormwater and how does it impact me?

Stormwater is generated from water that falls from the sky, including rain, hail, and snow.

In a natural, undeveloped landscape, most stormwater soaks into the ground to be stored or filtered before it reaches natural waterways. In a city, most stormwater falls onto impervious surfaces (surfaces that do not absorb water) such as roads, driveways, sidewalks, rooftops, or parking lots, and it is not soaked up by the ground. This water flows across these surfaces as runoff.

Most stormwater flows from private property to a stormwater inlet in the street where it enters a pipe and is carried to the nearest waterway. The network of stormwater pipes is completely separate from the sanitary sewer system. Unlike the sanitary sewer system, which conveys wastewater to a treatment facility, the stormwater system conveys *untreated* runoff directly to our waterways.

Stormwater Quality – Keep it Clean!

As runoff flows across the ground, it picks up pollutants that you can see (debris, dirt, and grease) and others that can't be seen (fertilizers and detergents). There is a lot you can do to help keep our waterways clean.

For example:

- Use a commercial car wash to minimize the amount of dirty, soapy water flowing into the stormwater system.
- Check your vehicles and equipment for leaks and spills.
- Clean up spilled fluids with an absorbent material and don't rinse the spills into a nearby storm drain.
- Recycle used oil and other fluids; do not dump these chemicals down the storm drain.
- Use pesticides and fertilizers sparingly.
- Sweep up yard debris instead of hosing down areas.
- Don't overwater your lawn.



Used with permission of City of Wilmington, NC Stormwater Services: Heal Our Waterways

Whatever you keep out of the storm drain, you keep out of our streams. More ideas can be found at https://www3.epa.gov/npdes/pubs/solution_to_pollution.pdf

Runoff Volume – Reducing Impacts on Yourself and Others

Stormwater runoff can cause problems for you or your neighbors if not appropriately handled. Altering drainage patterns or increasing the impervious surface area on your property can create stormwater problems, including localized flooding. Increased runoff can also cause erosion and sedimentation (when solids in water settle) by sweeping away and displacing soil. Reducing or minimizing the amount of paved area and increasing the amount of vegetated area in your yard can help increase infiltration and reduce runoff.





Partnering with business and industry to maintain quality small-town atmosphere.

What Is Stormwater Runoff and What Are Its Impacts?

Stormwater runoff is water from rain or snowmelt that does not immediately infiltrate into the ground and flows over or through natural or man-made storage or conveyance systems. When undeveloped areas are converted to land uses with impervious surfaces such as buildings, parking lots, and roads, the natural hydrology of the land is altered and can result in increased surface runoff rates, volumes, and pollutant loads.

Stormwater runoff picks up industrial pollutants and typically discharges them directly into nearby waterbodies or indirectly via storm sewer systems. Runoff from areas where industrial activities occur can contain toxic pollutants (e.g., heavy metals and organic chemicals) and other pollutants such as trash, debris, and oil and grease, when facility practices allow exposure of industrial materials to stormwater. This increased flow and pollutant load can impair waterbodies, degrade biological habitats, pollute drinking water sources, and cause flooding and hydrologic changes to the receiving water, such as channel erosion.

Industrial facilities typically perform a portion of their activities in outdoor areas exposed to the elements. This may include activities such as material storage and handling, vehicle fueling and maintenance, and shipping and receiving, all of which can result in pollutants being exposed to precipitation and capable of being carried off in stormwater runoff. Also, facilities may have performed industrial activities outdoors in the past and materials from those activities still remain exposed to precipitation. In addition, accidental spills and leaks, improper waste disposal, and illicit connections to storm sewers may also lead to exposure of pollutants to stormwater.¹

Six Types of Activities that have Potential to be Pollutants in Stormwater

1. Loading and Unloading Operations

Loading and unloading operations can include pumping of liquids or gases from tankers to

storage facilities, pneumatic transfer of dry chemicals, transfer by mechanical conveyor systems, or transfer of bags, boxes, drums or other containers by forklift or other material handling equipment. Material spills or losses in these areas can accumulate and be washed away during a storm.

2. Outdoor Storage

Outdoor storage activities include storage of fuels, raw materials, by-products, intermediate products, final products, and process residuals. Materials may be stored in containers, on platforms or pads, in bins, boxes or silos, or as piles. Storage areas that are exposed to rainfall and/or runoff can contribute pollutants to stormwater when solid materials wash off or materials dissolve into solution.

3. Outdoor Process Activities

Although many manufacturing activities are performed indoors, some activities, such as timber processing, rock crushing, and concrete mixing, occur outdoors. Outdoor processing activities can result in liquid spillage and losses of material solids, which makes associated pollutants available for discharge in runoff.

4. Dust or Particulate Generating Processes

Dust or particulate generating processes include industrial activities with stack emissions or process dusts that settle on surfaces. Some industries, such as mines, cement manufacturing, and refractories, also generate significant levels of dust that can be mobilized in stormwater runoff.

5. Illicit Connections and Non-Stormwater Discharges

Illicit connections of process wastes or other pollutants to stormwater collection systems, instead of to sanitary sewers, can be a significant source of stormwater pollution. Non-stormwater discharges include any discharge from the facility that is not generated by rainfall runoff (for example, wash water from industrial processes). With few exceptions, these non-stormwater discharges are prohibited.

¹From "Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators," by Environmental Protection Agency, 2009, EPA 833-B-09-002

²From "Best Management Practices For Industrial Storm Water Pollution Control," by Sacramento Stormwater Management Program.

6. Waste Management

Waste management practices include everything from landfills to waste piles to trash containment. All industrial facilities conduct some type of waste management at their site, much of it outdoors, which must be controlled to prevent pollutant discharges in stormwater.¹

Stormwater Pollution Prevention

1. Prevent water from contacting working areas

Shipping areas, outdoor equipment, material storage areas, vehicle maintenance spaces, and working areas of all sorts are subject to contamination with raw materials, process liquids, grease, oily wastes, vehicle fluids, heavy metals, and miscellaneous potential pollutants. If you prevent stormwater, wash water, or water from other sources from contacting areas exposed to pollutants, you will be less likely to discharge pollutants into your storm drains.

- Keep rainfall from directly contacting working areas, by installing roofs, placing structures, or moving industrial operations indoors.
- Prevent run-on stormwater from contacting industrial areas, indoors or out by using properly designed berms or grading. Run-on is water that flows across the industrial area. It picks up pollutants as it flows.
- Avoid practices where you use water that later enters the storm drains. For instance, washing in outdoor areas. Most of these practices, including many that were acceptable in the past, are now considered to be "illegal dumping" of non-storm water to the storm drain.

2. Keep pollutants off surfaces that come into contact with water.

Evaluate your site carefully to identify all areas that are contacted by storm water, wash water, cooling water that is otherwise unpolluted, or other water that is allowed to be discharged to the storm drain. Then take special care to keep pollutants off these surfaces. That means controlling minor leaks and spills that you might otherwise overlook, and taking a close look at your operating routines and equipment to determine whether any substances are exposed to storm water that do not need to be.

3. Manage stormwater before it is discharged to the storm drain.

If you can't avoid adding pollutants to stormwater, you may need to remove pollutants to meet water quality requirements before discharge. Stormwater control regulations consider treatment as a last resort and emphasize source control options because they are usually less costly and more effective in the long run.²

Stormwater Millersburg Permit Requirements

Federal and state storm water regulations now require many kinds of industrial facilities to take steps to prevent stormwater pollution.² Below is a list of permits that may be required in the City of Millersburg.

- City of Millersburg Grading permit
- City of Millersburg Post Construction Stormwater Quality permit
- City of Millersburg Erosion Control permit
- NPDES 1200-C permit



¹From "Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators," by Environmental Protection Agency, 2009, EPA 833-B-09-002

²From "Best Management Practices For Industrial Storm Water Pollution Control," by Sacramento Stormwater Management Program.