TMDL Implementation Tracking Matrix: Millersburg, Oregon STATUS UPDATED FOR 2023-2028, Rev. 12/8/2023 – 2024 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</i> <i>Addressed by the</i> <i>TMDL.</i>	POLLUTANT SOURCES	STRATEGY What Millersburg is doing and will do to reduce pollution form this source.	ACTIONS Specific Implementation Measures.	BENCHMARKS Intermediate indicators of progress.	TIMELINE Beginning and completion dates.	MEASURE Demonstrate implementation or completion of the strategy.	PROGRAM FUNDING	STATUS – <mark>2024 Report</mark>
1.0 TEMPERATURE		Maintain existing riparian plantings and shading vegetation.	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.	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. Report on any code enforcement actions related to riparian vegetation.	General Fund/ Stormwater Fund	Codes were enforced through land use reviews, grading, and stormwater permits. Visual inspection of Crooks Creek and tributaries conducted. No significant changes to riparian plantings and shading vegetation.
	A. Solar Radiation	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.	Outreach materials reviewed annually and updated if needed. Maintain up-to-date website, review at least annually. Perform a minimum of one outreach event or one flver/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. Flyers mailed with utility bills in the fall of 2023.
		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.	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.
		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. Review lot coverage for building permits submitted.	Ongoing; annual review	Track and document compliance review of new development, 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.
	B. Impervious Surface Runoff							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 stormwater are communicated to new industries.	Inform applicants of 1200-Z and 1200-C permit requirements and direct them to contact DEQ.	Ensure notification to new applicants by providing notes on city permit forms, land use approvals	Ongoing; annual review.	Yearly review of permit applications for compliance in notifying new applicants of 1200-C and 1200-Z	General Fund/ Planning and Development	Several new and expanding industries received land use approval and began working on permit applications. They were

				comments, etc.		requirements.		all made aware of 1200-C and
			Notify DEQ of any reported					1200-Z requirements.
			complaints regarding industrial	Track any notifications to		Report any complaint		
			stormwater discharges.	DEQ.		notifications to DEQ		complaints were received by
								the City during this reporting
								year.
		Contact Linn County	Continue expansion of	Monitor septic system	Ongoing; annual review	Report number of septic	Sewer Fund	No septic systems converted to
		Environmental Health about	municipal sewer system to	conversion to municipal		systems converted to		municipal sewer system in
	A. Septic Systems	reported concerns with existing	serve all areas of the city.	sewer system & document		municipal sewer system		reporting year.
		seplic systems.	Enforce sentic system	sewer system extensions		each year.		No municipal sewer system
	(approximately 4% of	Ensure system conversion to	conversion to municipal sewer			Report expansions to		expansions in reporting year.
	the City's dwellings are	municipal sewer system is	system when required by			municipal sewer system		
	on individual septic	required for new or	Development Code.					The City received no septic
	systems)	redevelopment per the				Track complaints/ concerns		system complaints in reporting
		Development Code.				City reports to Linn County		year.
		Continue to supply pet waste	City is providing waste	Monitor usage of waste	Ongoing: annual review	Track approximate costs of	General	Approximately \$500.00 was
		pickup stations.	collection stations at City Parks	collection stations and	0 0,	maintaining and restocking	Fund/ Parks	spent on restocking dog waste
			and at other City-owned open	farm animal compliance		dog waste stations.		stations.
	B. Pet and animal	Enforce farm animal regulations.	space.	with City Code.				No complete received
	waste		Code enforcement of farm			complaints regarding		regarding animal waste
2.0			animal raising.			animal waste, violations,		regarding animal waste.
BACTERIA						and follow-up actions		
		Encourage waste collection	Enforce current traffic code	Respond to road/roadside	Ongoing; annual review	Report on roadside debris	Streets Fund	Example maintenance checklist
		companies to cover waste bins	requiring covered loads.	debris complaints and		observed and removed and		attached (Attachment 1). No
		during transit.	Encourage and support adapt	remove debris during		any enforcement actions.		significant roadside debris
		Encourage adopt-a-road program	a-road program by posting	activities and on an as-		Report on roads adopted		routine trash nick-up
		within the City.	information on how to get	needed basis.		and supplies provided by		
		,	started to the City website and			City, including costs, to		Adopt-a-road group cleaned up
			referring interested groups to	Ensure street sweeping		adopt-a-road groups.		Old Salem Road every other
	C. Garbage spills		Linn County for county roads.	activities are happening on		Depart on street sweeping		month in reporting year. City
			equipment to adopt-a-road	regular schedule.		activities		provided trash pick-up devices,
			aroups.	Track number and type of		activities.		bags, and reliective vests.
			3	supplies (bags, gloves)				
			Monthly street sweeping of all	and equipment (vests,				
			City streets, twice-a-month	trash pick-up tools)				
			sweeping of Old Salem Road.	groups				
		Strategy: Pollution Prevention	Actions: Reduce discharge of	Benchmarks: See Phase 2	Timeline: See Phase 2	Measure: See Phase 2	Funding:	Maintenance of the storm
		and Good Housekeeping for	mercury-related pollutants,	MS4 General Permit,	MS4 General Permit,	MS4 General Permit	General	sewer system is conducted by
		Municipal Operations	such as sediment, through the	Schedule A.3.f	Schedule A.3.f.i	Schedule A.3.f	Fund/	contract. City has SOPs for
			stormwater conveyance				Stormwater	applicable activities to reduce
	A Frosion and		operation and maintenance				Fund	municipal activities One City
	sedimentation		activities in a manner that					facility has a Runoff Control
3.0	containing mercury		reduces the discharge of					Plan.
MERCURY	from existing		pollutants to protect water					
	and introduced deposits	Public Education and Outreach	quality.	See Phase 2 MS/ Ceneral	See Phase 2 MS4 Conorol	See Phase 2 MS/ Ceneral	Funding	Materials posted on Millersburg
	from air and industries.		outreach program to inform the	Permit, Schedule A.3.a	Permit, Schedule A.3.a.i	Permit, Schedule A.3.a	General	website, available at City Hall.
			public about the impacts of	,	,	,	Fund/	Stormwater also discussed in
			stormwater discharges on				Stormwater	City council meetings.
			waterbodies and steps they can				Fund	
			nollutants in stormwater runoff					
			ponutante in stornwater runoll.		1			

	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 are in GIS; ordinance is in place to prohibit non-stormwater discharges, dry weather screening is being conducted, and investigating complaints received. IDDE Manual is complete.
	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 erosion and sediment control permit requirements. An Erosion Prevention and Sediment Control (EPSC) Manual is in place that contains details on addressing permit requirements. Inspections are
		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	conducted.
		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	Written escalating enforcement and response procedure was completed and is included in the City's Stormwater Management Plan (SWMP).
		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 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 redevelopment project sites.	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	The City has an ordinance in place and post-construction requirements in the City's Engineering Standards and SWMP. All applicable projects will be evaluated for their compliance with the code and standards.

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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. Update engineering standards to comply with MS4 permit requirements for retention and water quality treatment.	Monitor effectiveness of existing regulations and maintenance program. Update engineering standards to require retention in addition to stormwater treatment and detention.	Ongoing enforcement of existing standards Revision of post- construction stormwater quality engineering standards by Feb 28, 2024 for compliance with MS4 Phase II General Permit.	Maintain records of stormwater calculations and reports in development files. Track maintenance of facilities. Provide updated engineering standards for post construction stormwater quality on Millersburg website.	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 are posted on Millersburg website.
	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 ensure 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	No reported hazardous waste or illegal discharges in reporting year.
		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.	Investigate source of any flow found in ditches during dry weather for IDDE. Track dry weather outfall inspection/screening.	Dry weather ditch monitoring – ongoing. Inspect at least 20% of outfalls annually.	Report on any flow found in ditches during dry weather and outcome of any investigations. Report on dry weather outfall screening. Track responses to complaints.	General Fund/ Stormwater Fund	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 2).
	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.	Review stormwater flyer for general public, post to website, and make available at City Hall. Review stormwater flyer for industry and give to new industries at time of permits.	Review flyers annually and ensure they are posted on City website.	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 3 and 4).
	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 2023-24 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 2024.
	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 2024, stormwater fund functions and funding were reviewed.

	G. Staff Training and Good Housekeeping	Implement requirements of MS4 Phase II General Permit for stormwater system maintenance.	Establish a stormwater system maintenance program per the MS4 Permit.	Program and fund stormwater system maintenance activities: street sweeping, inlet inspection, system cleaning.	Establish and begin implementing program by Feb 28 ,2024 in accordance with the MS4 Phase II General Permit.	Report on maintenance activities.	General Fund/ Stormwater Fund	Monthly street sweeping contracted and conducted. Maintain on-call contract for stormwater services.
		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 2024. 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. Maintain publicly accessibly website.	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.



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:

<u> Mow</u> 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

Last Updated 8/4/2023

Total number of MS4 Outfalls:	9
Number MS4 inspected in 2023:	9
% MS4 inspected in 2023:	100%

	Stormwater Outfall Check								
Previous									
Inspection		Inspector							
Date	Inspection Date	Initials	Outfall ID	Description	MS4 Outfall	Receiving water body	Status	Field Notes:	
9/20/2022	8/4/2023	RM	00-05224	Box culvert pass through of offsite drainage along Millersburg Drive	Y	Crooks Creek Trib	Dry	Dry at outlet	
								Minor flow of water, determined	
9/1/2021	8/2/2023	JB/RM	03-00530	Becker Ridge East Detention Basin Outfall	Y	Crooks Creek	Wet	to be groundwater from spring	
9/20/2022	8/2/2023	JB/RM	05-00400	Hoffman Estates Detention Basin Outfall	Y	Crooks Creek Trib	Dry	Dry at outlet	
8/31/2021	8/2/2023	JB/RM	07-00210	Morningstar Subdivision Detention Basin outfall	Y	Crooks Creek	Dry	No flow at outlet	
	8/2/2023	JB/RM	10-01280	Sweetwater Detention Basin (wet pond) Outfall	Y	Crooks Creek	Wet	Minor flow of water from wet pond	
9/19/2022	8/2/2023	JB/RM	16-00130	Becker Ridge North and West Detention Basins Outfall	Y	Crooks Creek	Dry	Dry at outlet	
								Dry at Contech Stormwater vault	
9/19/2022	8/2/2023	JB/RM	16-00140	Millersburg Drive, north side discharge to Crooks Creek	Y	Crooks Creek	Dry	and outlet	
	8/4/2023	JB/RM	36-00810	Millersburg Drive, street drainage outfall adjacent to box culvert outlet	Y	Crooks Creek Trib	Dry	Dry at outlet	
				West Valley Estates Detention Basin Outfall - located on south side of				No flow at flap gate. Flap gate to	
9/19/2022	8/2/2023	RM	36-01310	Millersburg Drive at east end of bridge over Crooks Creek	Y	Crooks Creek	Dry	be replaced this fall or next spring.	

00-05224

Box Culvert Pass Through Drainage Outlet

Aerial View



Outlet Photograph



Access Notes

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

Property Owner - Duane and Hong Liner 541-829-9491 call prior to accessing site

List of Inspections

9/20/2022 - Dry at inlet and outlet

8/4/2023 - Dry at outlet

03-00530

Becker Ridge East Detention Basin Outfall

Aerial View



Outlet Photograph



Access Notes

Northwest of detention pond that is located off of NE Tuscan Ln. between NE Mesa Ct. and NE Sonora Dr.

Property Owner - Hayden Irish

Access from top of detention basin berm

List of Inspections

08/31/2021 - Minor flow of water (presence of water potentially due to residential water leak from damaged back flow device, recheck at later date).

09/01/2021 - Re-investigated source of water flowing through the outlet and determined that it was due to a known spring entering storm drain system in Tuscan Loop.

08/02/2023 - Minor flow of water due to known spring in Tuscan Loop. Water had no sheen, color, or odor.



Hoffman Estates Detention Basin Outfall

Aerial View



Access Notes

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

Property Owner - City of Millersburg

List of Inspections

09/17/2021 - Dry

09/20/2022 - Dry at detention basin

8/4/2023 - Dry



07-00210 Morningstar Estates Outfall

Aerial View



Outlet Photograph



Access Notes

South of the intersection of NE Lauren Ave. and NE Rosemarie St. Accessed via path located just south of Crooks Creek along Old Salem Road.

Structure with flap gate is located to the north, outlet pipe to creek is 8".

Property Owner - Walter and Lorraine Weathers

List of Inspections

08/31/2021 - Dry 8/2/2023 - Dry (no flow)

10-01280 City of Millersburg

Aerial View



Access Notes

Slightly northwest of detention basin north of NE Siltcoos Ct. Accessed via path north of Siltcoos Ct.

Property Owner - City of Millersburg

List of Inspections

8/2/2023 - Minor flow of water from wet pond. Water had no sheen, color, or odor.



16-00130

Becker Ridge North Detention Basin Outfall

Aerial View



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.

8/2/2023 - Dry



16-00140 Contech Stormwater Vault Outlet

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

8/2/2023 - Dry at Contech stormwater vault and at pipe outlet

36-00810 Millersburg Drive Outfall

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

8/4/2023 - Dry at outlet



36-01310 West Valley Estates Outfall

Aerial View



Outlet Photograph



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.

8/2/2023 - Dry

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.



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

- 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.

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.



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 manmade 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