PORTAGE COUNTY HEALTH DISTRICT

STORM WATER PROGRAM

2025 ILLICIT DISCHARGE DETECTION AND ELIMINATION ANNUAL REPORT

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Introduction

The Portage County Board of Commissioners (BOC) contracts with the Portage County Combined General Health District (PCHD) to implement Minimum Control Measure (MCM) #3 – Illicit Discharge Detection and Elimination (IDDE) – for the Portage County Storm Water District. MCM #3 is one of six minimum control measures that regulated communities must develop, submit, and implement as part of a Storm Water Management Program (SWMP) in compliance with the Environmental Protection Agency's (OEPA) National Pollutant Discharge Elimination System (NPDES) Phase II Small Municipal Separate Storm Sewer Systems (Small MS4) general permit requirements. PCHD utilizes stormwater Best Management Practices (BMPs) to minimize the adverse effects of contaminated stormwater discharges on state waters, ensuring compliance with OEPA regulations and promoting sustainable water quality. PCHD is pleased to present the 2025 Annual IDDE Report, outlining the action plan, implementation activities, and accomplishments of the Storm Water Program.

2025 Illicit Discharge Detection & Elimination (IDDE) Activities

Portage County Health District's 2025 Storm Water IDDE activities were guided by, but not limited to, the scope of services outlined in the contractual agreement between PCHD and the Portage County Board of Commissioners (BOC) for stormwater services. The primary goal of PCHD's IDDE activities is to eliminate any discharge into the storm drain system that is not composed entirely of stormwater, except for those permitted under the OEPA NPDES program and firefighting activities.

2025 Portage County IDDE Achievements

To advance IDDE objectives in townships and villages within the Storm Water District, PCHD enhanced the Storm Water Management Plan, working toward sustainable water quality. Strengthening collaboration with key partners, including the Portage County Board of Commissioners (BOC), Portage County Engineer's Office (PCEO), Soil and Water Conservation District (SWCD), Portage County Water Resources Department (PCWR), Portage County Planning Commission (PCPC), Northeast Ohio Four County Regional Planning and Development Organization (NEFCO), and local governments was crucial to achieving the following stormwater program's 2025 goals:

- Completed 195 outfall verifications and dry weather screening inspections with 37 in the MS4 and 158 in non-MS4 areas of the storm water district.
- Received $150,000.00 of 2025 WPCLF funds and successfully administered all 2024 and part of 2025 funding, assisting 6 low-to-moderate income homeowners with HSTS improvement.
- Replaced 125 household sewage treatment systems (HSTSs) to eliminate wastewater pollutants from faulty HSTS in the Portage County Stormwater District. 15 additional faulty HSTS were replaced in Aurora and Streetsboro.
- Mapped all 2025 HSTS replacements, repairs, and sewer connections in the Stormwater District.
- Updated the storm water system maps of townships and villages.

- Expanded information on the above-mentioned summary of PCHD's 2025 storm water achievements is detailed below.

Portage County IDDE Protocol

Illicit discharges to an MS4 storm drain system are unauthorized discharges not entirely composed of stormwater, except as permitted by NPDES. These discharges introduce pollutants into the surface and groundwater, making detection and elimination challenging. They can be accidental, intermittent, or continuous, originating from homes, businesses, and industries. Common examples include sewage, gray water, car wash residues, and illegal dumping of oil or paint.

The Portage County Storm Water Management Program (SWMP) guides PCHD in implementing an effective IDDE program per OEPA's NPDES permit to prevent illicit discharges, PCHD achieves this through trained staff and key activities, including maintaining an illicit discharge database, investigating HSTS nuisance complaints, managing HSTS operation and maintenance, conducting voluntary and point-of-sale HSTS evaluations, and performing dry weather outfall screenings.

Suspected Illicit Discharge Database

The PCHD suspected illicit discharge database is a digital collection of potential and confirmed illicit discharge data, including non-stormwater sources, primarily focusing on failing HSTS. It is reviewed, updated, and evaluated annually, serving as a vital resource for HSTS information search and enforcement.

- Class 1 Aeration Sewage Treatment System & NPDES inspections when homeowner fails to provide the required operation and maintenance service agreement.
- Investigation upon receipt of a written nuisance compliance in accordance with Ohio Revised Code (ORC) 3718.011 and OAC 3701-29-23.
- Identification during a voluntary Point-of-Sale real estate inspection; and
- Storm water outfall dry weather screening inspection.

HSTS identified through any of the processes above that need further assessment are evaluated to determine whether the system is causing a public health nuisance in accordance with Ohio Revised Code 3718.011. When an HSTS is determined to be causing public health nuisance, PCHD works with homeowners and partner agencies to eliminate the nuisances and prevent wastewater pollutants from entering the waters of the states.

2025 Storm Water District Management IDDE Activities

The IDDE activities aim to prevent illegal discharges from wastewater and non-stormwater sources into Portage County MS4 drainage systems. Measures implemented to achieve the storm water IDDE include training staff, participating in stakeholder meetings, and mapping systems. Field activities include verification, dry weather screening, and inspections.

Training

Sam Mellott and Leah Luli attended the annual Ohio Stormwater Conference May 7-9, 2025. Additionally, Justin Rechichar and Will Duck regularly attended ERTAC meetings. Becky Lehman and Justin Rechichar regularly attend NEFCO meetings.

Completed IDDE Performance Standards Activities

The Portage County Storm Water District program covers MS4 Phase II regulated and non-MS4 unregulated communities. In 2025, PCHD utilized storm water system GIS maps in conjunction with field inspections for IDDE activities, dry weather screening 195 outfall points in the MS4 and non-MS4 communities, excluding Aurora, Kent, Ravenna, and Streetsboro cities which manage their own storm water programs. Table 1 summarizes the IDDE program performance standards achieved during the year, followed by a summary of storm sewer system mapping updates.

Table 1: 2025 IDDE Performance Standards Activities Summary

IDDE Performance Standards Activities	**MS4**	**Non-MS4**
Total number of outfalls (identified and stored in database before 2025)	204	1892
Number of outfalls dry weather screened	37	158
Number of outfalls with dry-weather flows identified	21	55
Number of outfalls where illicit discharges were Identified via dry-weather screening or other methods	1	3
Number of outfalls where illicit discharges were eliminated	0	2
Number of illicit discharges identified through other methods	23	21
Illicit discharges identified through other methods eliminated	9	17
Existing illicit discharges identified and yet to be eliminated	254	8
Details of the identified illicit discharges yet to be eliminated:		
○ Located in Chinn Allotment and Foxwood Estate in Ravenna Twp (MS4 areas)	250	

o Located in Brimfield, Franklin, Rootstown, and Suffield Townships (MS4 areas).	4	
o Located in Deerfield, Edinburg, Randolph, Rootstown, and Shalersville (non-MS4 areas)	0	8
o An Estimate of volume (gpd = number of bedrooms*120) polluted wastewater to be eliminated	100,608	1152
o The source and the type (continuous/intermittent/one-time)	HSTS and continuous illicit discharge	HSTS and continuous illicit
o Types of pollutants believed to be present	Total suspended solids (TSS), biological oxygen demand (BOD5), phosphorus, nitrogen, and ammonia	TSS, BOD, phosphorus, nitrogen, ammonia
o The receiving surface water of pollutants	Plum Creek, Fish Creek.	Plum, Fish, Breakneck, and West Brach
o An estimated schedule for elimination of 259 illicit discharges in Chinn Allotment (stipulated by nuisance declaration issued by OEPA)	3 years	1 year
o The remaining 3 are expected to be eliminated within	1 year	1 year

Storm Water System Map Updates

Portage County Storm Water District utilizes GIS mapping software and GPS technology to maintain comprehensive storm sewer system maps, supporting IDDE and other stormwater best management practices. In October 2025, PCHD requested program partners to report any pertinent changes in stormwater features or locations. Based on their responses and PCHD field inspections, the maps were updated accordingly. The updated maps are shown in Figures 2-7 below:

Figure 1: Portage County Storm Water District Watershed and Waterbody Map showing surface water and watersheds receiving discharges from storm water drainage system and MS4 areas.

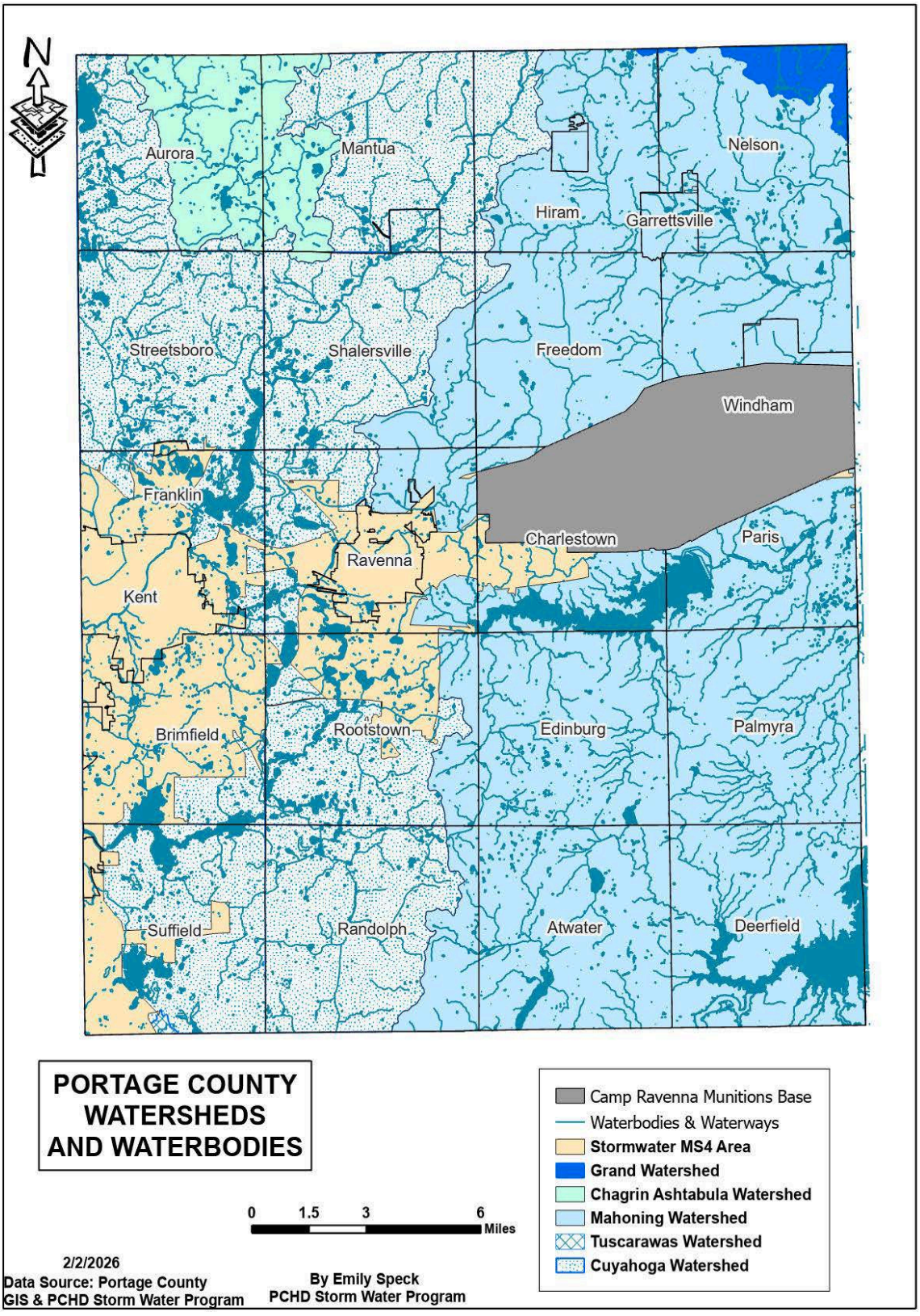


Figure 2: Portage County Storm Water District Map depicting outfall points, surface water, and watersheds receiving stormwater flows from those outfall points.

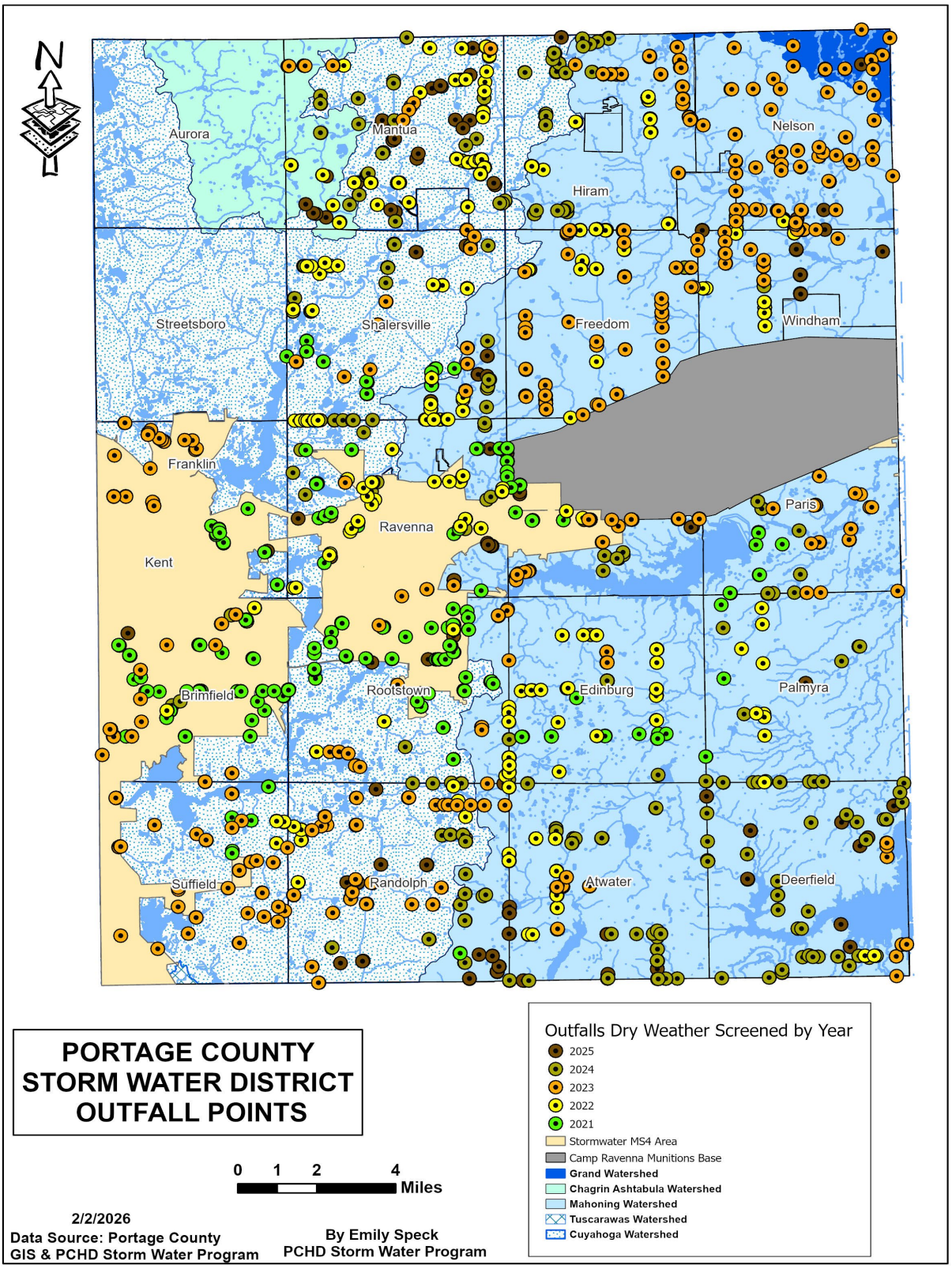


Figure 3: Portage County Storm Water District Discharging Household Sewage Treatment System (HSTS) Map depicting discharging HSTS, surface water, and receiving watersheds.

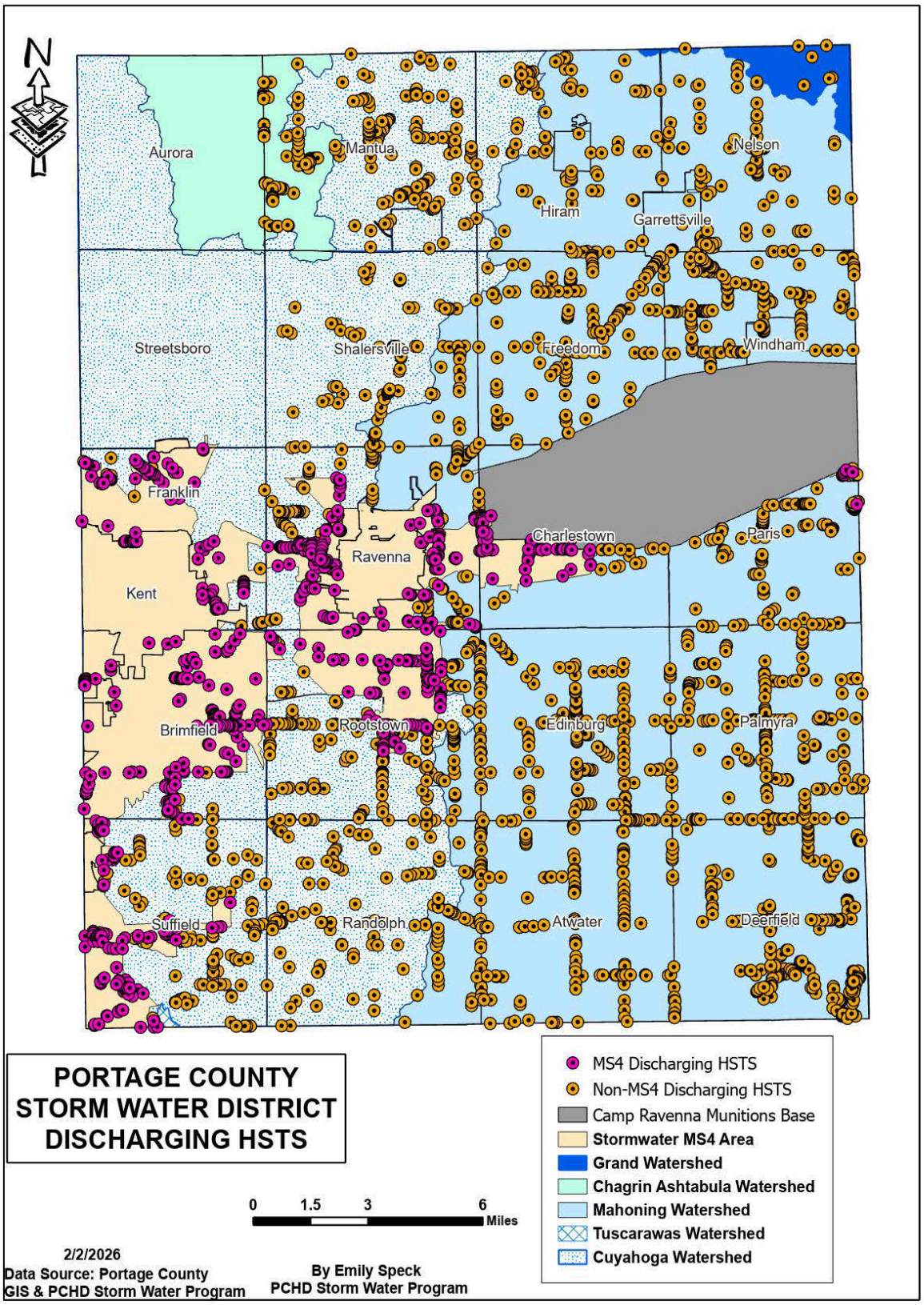


Figure 4: Portage County Storm Water District Catch Basins Map displaying location of catch basin, surface water, and receiving watersheds.

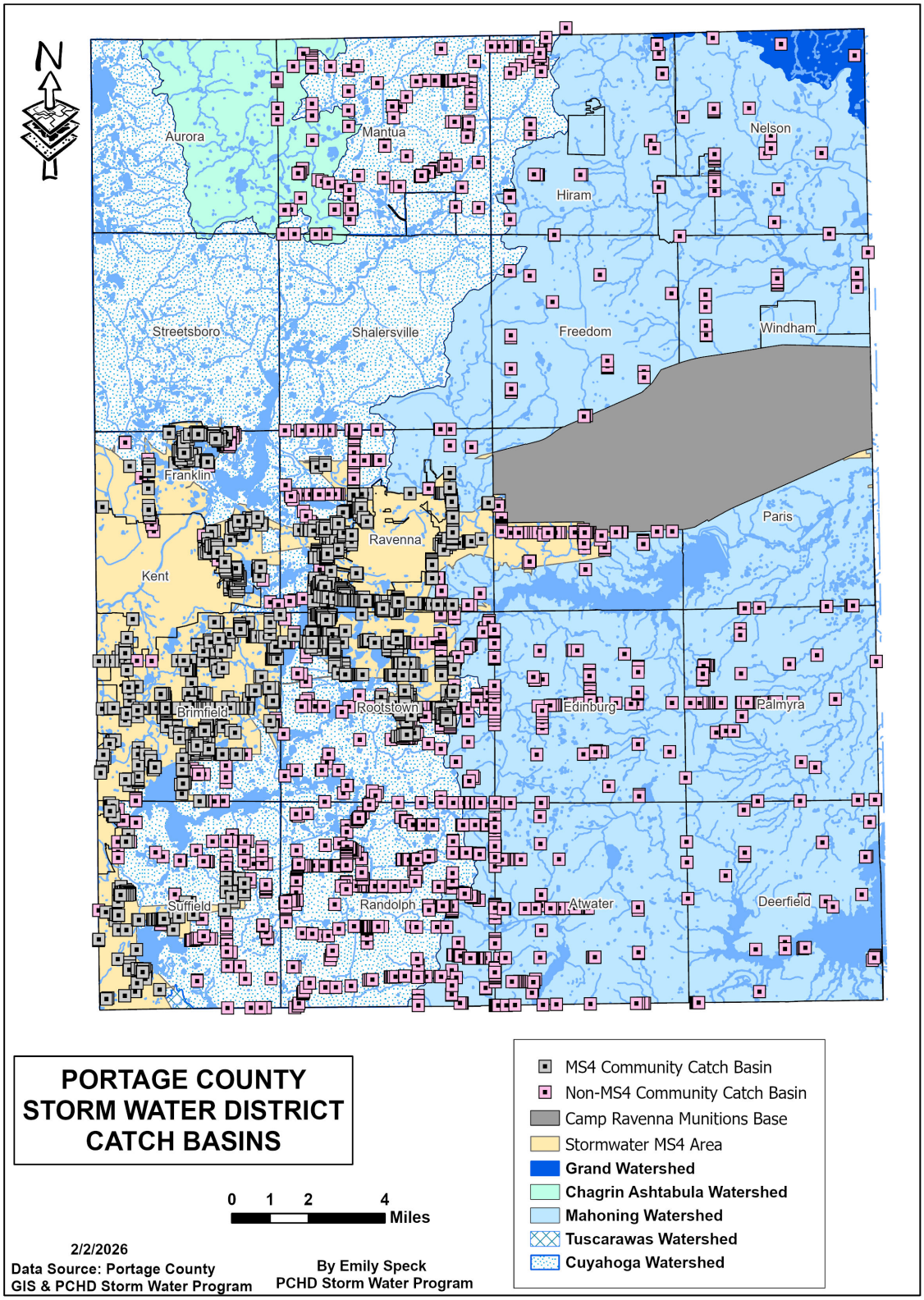


Figure 5: Portage County Storm Water District Pipe Inlet and Outlet Map showing storm drain inlet outlet pipes, surface waters, and receiving watersheds.

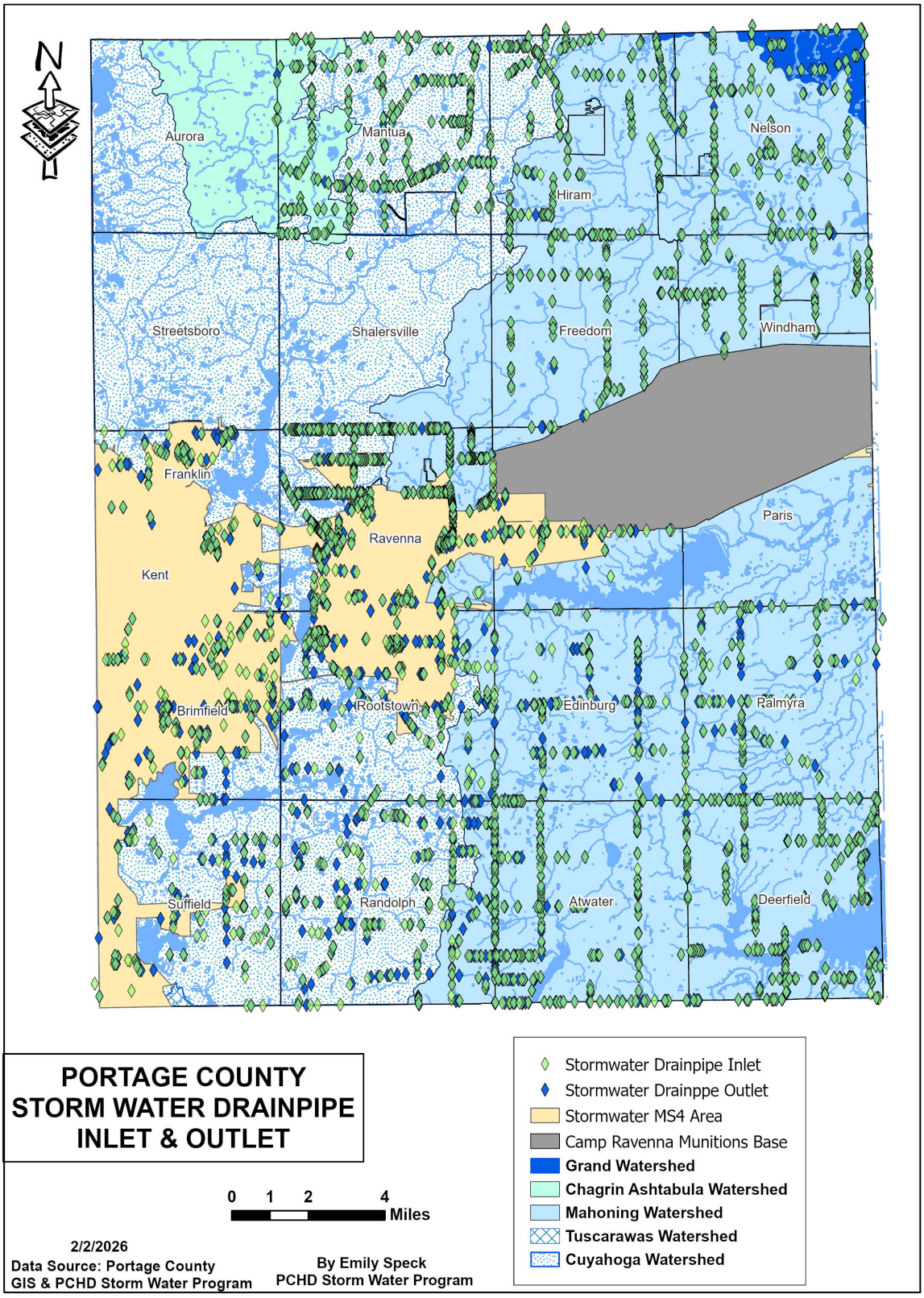
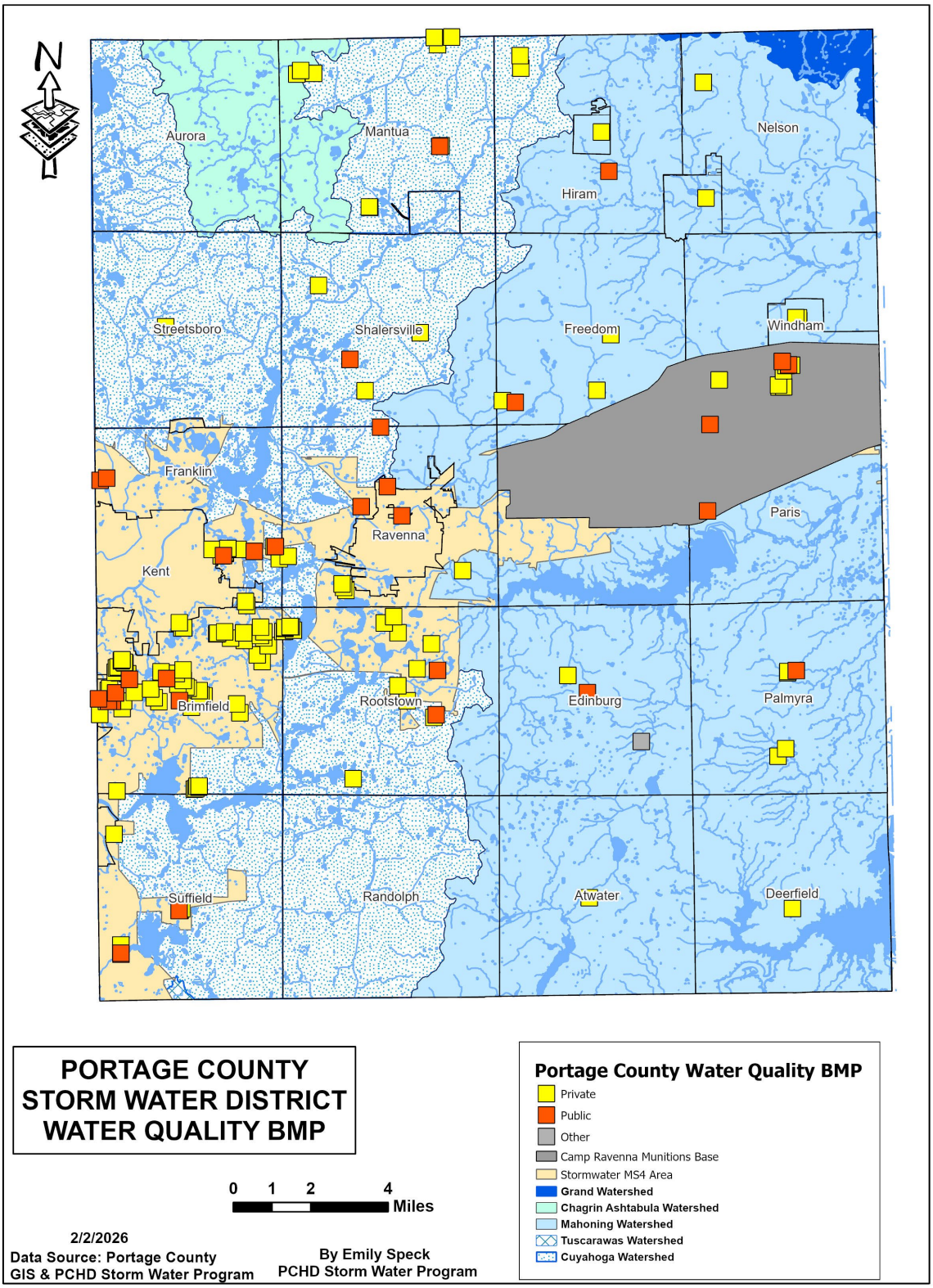


Figure 6: Portage County Storm Water District Water Quality BMP Map showing flood control facilities (retention and detention ponds), public and private post construction water quality BMPs, surface water and receiving watersheds.



Total Maximum Daily Load (TMDL)

The Total Maximum Daily Load (TMDL) program under the USEPA Clean Water Act (CWA) Section 303(d) aims to identify and restore impaired surface waters in the United States. TMDL calculates the maximum pollutant load a waterbody can receive while meeting water quality standards. If a waterbody is impaired, states must take corrective actions, including addressing illicit discharges linked to TMDL.

The Ohio EPA (OEPA) requires MS4 Phase II permit holders to incorporate TMDL within six minimum control measures, addressing both point source ("waste load allocation") and nonpoint source ("load allocation") pollution. OEPA compiles and submits a biennial list of impaired waters to USEPA.

Ohio's TMDL goal is to achieve full attainment of biological and chemical water quality standards, removing impaired waters from the 303(d) list. Governor Mike DeWine's H2Ohio initiative supports these efforts by reducing nutrient and runoff pollution. In response, PCHD employs illicit discharge detection and elimination (IDDE) best management practices (BMPs) to mitigate TMDL issues from HSTS discharges of TSS, BOD5, phosphorus, nitrogen, and ammonia.

Portage County has five watersheds: Chagrin, Cuyahoga, Grand, Mahoning, and Tuscarawas, though only the Cuyahoga and Tuscarawas watersheds cover MS4 areas. OEPA's Watershed Action Plan categorizes watersheds as attainment, partial attainment, or non-attainment, identifying key pollution concerns. A brief review of Portage County MS4 area watersheds shows the following results:

- **Partial Attainment:** The Breakneck, Potter, Plum, Fish, and Tinkers Creeks (Cuyahoga River tributaries); The Tuscarawas River headwaters; In non-MS4 areas, the Chagrin, Grand, and Mahoning watersheds contain the West Branch and Eagle Creek (Mahoning River tributaries), both in partial attainment.
- **Nonattainment:** Wahoo Ditch (Cuyahoga River tributary); Deer Creek (Mahoning River tributary, with only 2 of 10 tested sites in full attainment; Upper Aurora Branch of Chagrin Falls River (Chagrin Ashtabula watershed).
- **Attainment:** Grand River (Grand watershed), despite high E. coli from livestock runoff.

OEPA suspects the nonattainment is primarily due to illicit discharges and failing HSTS. Notwithstanding the high E. coli from livestock runoff, the Grand River of the Grand watershed is designated as attainment.

IDDE: Nutrients Elimination to Achieve TMDL

In 2025, 125 HSTS illicit discharges were replaced, repaird, or connected to public sanitary sewer in the the Portage County Storm Water District. Some of these illicit discharges were previously identified through IDDE, nuisance complaints, voluntary replacement, and POS HSTS inspections, but were corrected in 2025. The HSTS improvements resulted in the elimination of pollutants from entering into the storm water system and the waters of the state.

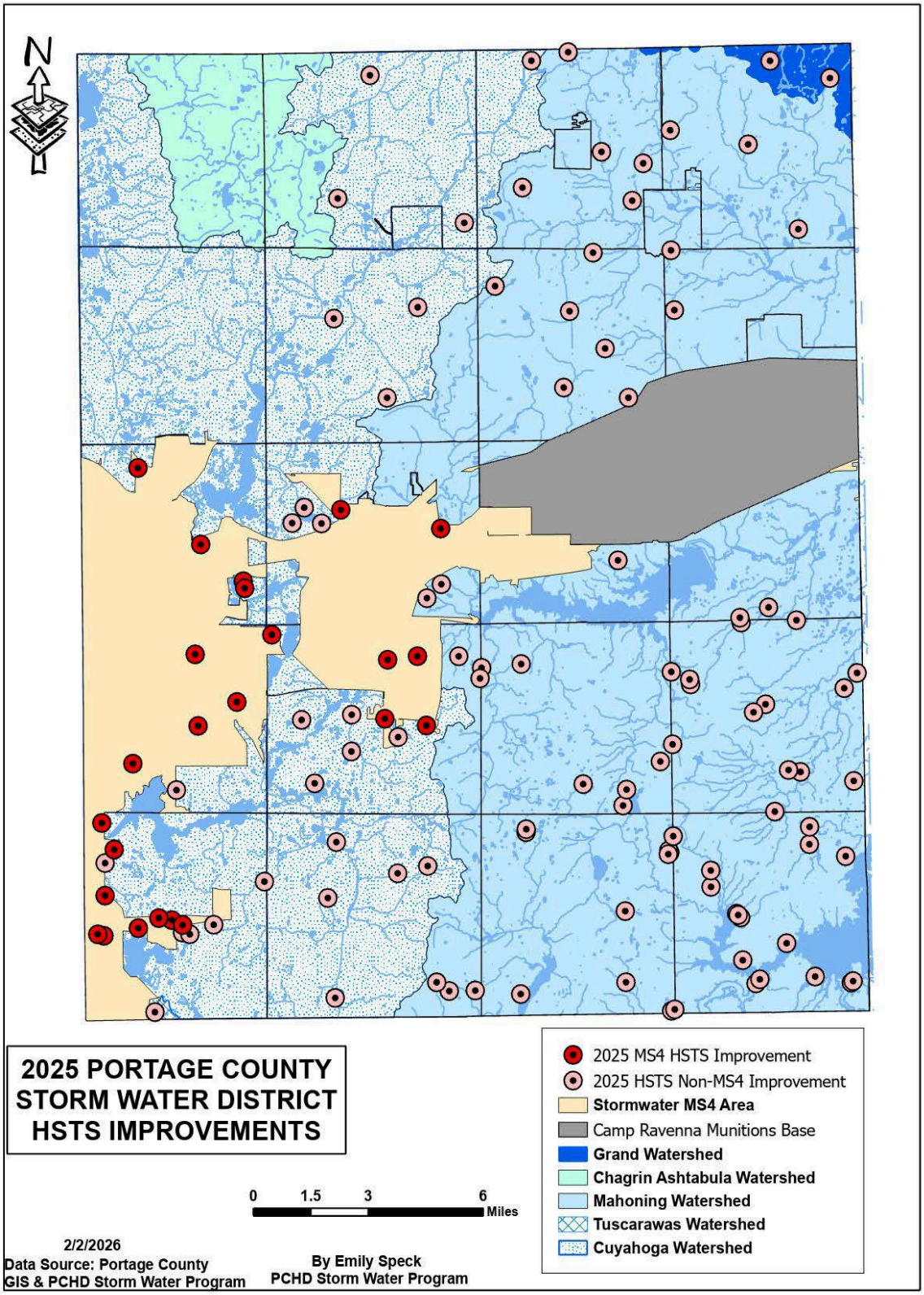
To estimate the amount of pollutants removed, PCHD used the county auditor's website to identify the homes involved with combined bedrooms of 386. Based on water usage of 120 gallons a day per bedroom in accordance with the Ohio Administrative Code (OAC) Chapter 3701-29 Sewage treatment (STS) Rules, it is estimated that 125 HSTSs will adequately treat 46,320 (5386*120) gallons of wastewater per day. Using Excel spreadsheeet module for a gross estimate of sediment and nutrient load reductions, it is projected that the elimination will lead to the removal of nutrients from the Storm Water District. Table 2 below summarizes the total suspended (TSS) solids, biological oxygen demand (BOD), phosphorous, nitrogen, and ammonia prevented from entering the waters of the state per year in the MS4 and non-MS4 watersheds.

Table 2: IDDE and Estimated Nutrients Pollution Removed

Estimated Daily Wastewater Treatment and Annual Nutrient Reduction from 2024 HSTS Improvements in MS4 and Non-MS4 Areas.			
Homes and HSTS Data in 2023	**MS4**	**Non-MS4**	**Total**
Number of Homes (HSTS)	24	101	125
Total Number of Bedrooms	76	310	386
Total Gallons of Wastewater Generated Per Day	9,120	47,280	46,320
Total Number of Nutrients in pounds (lbs) Eliminated Per Year			
TSS	1,997.3	8146.8	244.1
BOD5	3894.7	15886.3	19,781
Phosphorous	416.1	1697.3	2113.4
Nitrogen	1098.5	4480.7	5,579.2
Ammonia	832.2	3394.5	4,226.7

As Table 2 illustrates, elimination of HSTS illicit discharges demonstrates a significant amount of nutrients removed from storm water systems. This is a positive step to reduce pollution of surface water and waterways to achieve sustainable water quality for human consumption, aquatic life and recreational activities. Figure 8 below shows a map of illicit discharges eliminated from Portage County Storm Water District watersheds.

Figure 7: Portage County Storm Water District HSTS Improvement Map showing illicit discharging HSTS Replacements and repairs in the Storm Water District in 2025.



Facility Planning and Prioritization

Priority Area Facility Planning Activities

In 2025, the PCHD Storm Water Program continued to collaborate with the Portage County Water Resources (PCWR), Northeast Ohio Four County Regional Planning and Development Organization (NEFCO), and other partner agencies to:

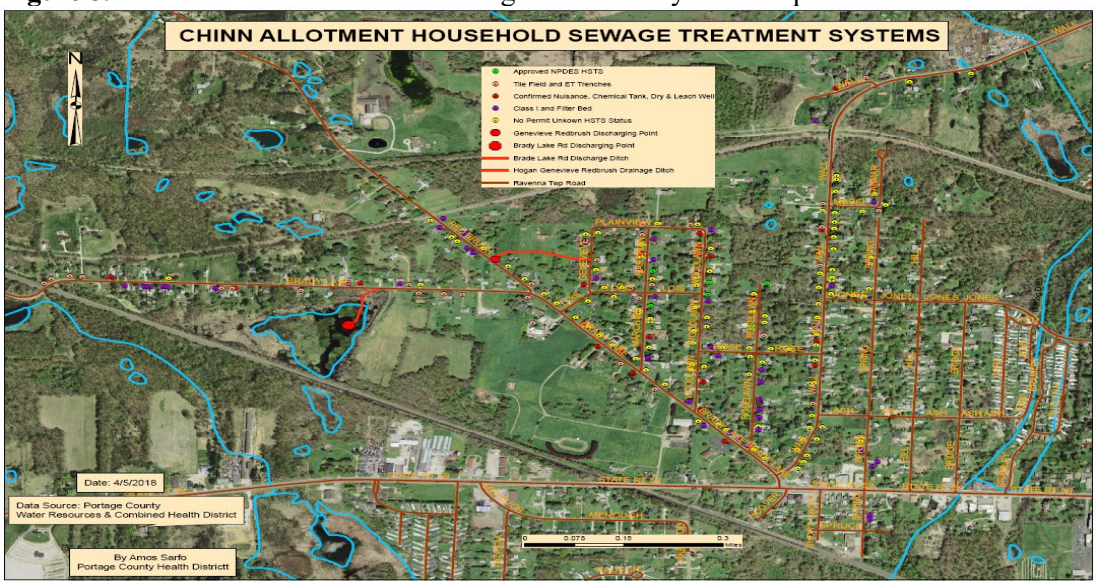
- Identify potential areas within the Storm Water District that may have high concentrations of failing HSTSs due to age and small lot sizes;
- Prioritize current sanitary sewer projects in the county;
- Identify and prioritize funding and economic impacts for STS repairs and/or replacement or sanitary sewer projects; and
- Revise, update, and confirm Portage County locations with available and accessible public sanitary sewers.

These proactive area-wide planning activities focus attention on public investments in wastewater treatment facilities and elimination of point source water pollution aimed at achieving preventable surface water contamination and sustainable water quality. The storm water partner agencies continue to collaborate and address issues concerning areas of highly concentrated illicit discharging household sewage treatment systems identified previously as described below:

- Chinn Allotment, Ravenna Township

As noted in previous reports, PCHD identified about 250 homes with failing HSTS in Chin Allotment, declared them a public health nuisance, and OEPA mandated their connection to public sewers. PCWR (managing the sewer connection project for the county commissioners) along with OEPA, PCHD, and PCE, have worked diligently to keep the project on track, with construction set for 2025. Figure 9 shows an HSTS map of the location.

Figure 8: Chinn Allotment Household Sewage Treatment Systems Map



Stakeholders' Meetings

As members of the Portage County Storm Water Task Force and Steering Committee, the PCHD Health Commissioner, Director of Environmental Health, and Storm Water Program Supervisor attend quarterly meetings to discuss pertinent issues with the Storm Water District's stakeholders. PCHD presents summaries of storm water activities including inspections, dry weather screening, dye testing, office/field consultations, GIS and data search, notices of violation issued for replacement/repairs, court appearances, and field/office research.

Financial Assistance for Illicit Discharges Elimination

Financial Assistance for HSTS Improvement

PCHD is mindful of the substantial cost involved in HSTS repairs, replacements or connections to public sanitary sewer and the financial burdens to eliminate illicit discharge. Therefore, the Storm Water Program seeks new funding sources to broaden the base of the financial assistance to help homeowners and continues to collaborate with the Portage County Board of Commissioners (BOD), Regional Planning Commission (RPC), Engineers Office (PCEO), Soil and Water Conservation District (SWCD), Water resources Department (PCWR), and Neighborhood Development Services (NDS) to manage and implement current financial assistance programs such as:

1. Water Pollution Control Loan Fund (WPCLF) HSTS Improvement Program
2. Portage County Treasurer Home Improvement Program
3. RPC HSTS Repair or Replacement Program
4. NDS Home Rehabilitation Program
5. USDA Home Repair Program

Available financial support to qualified applicants is disbursed on first-come, first-served basis.

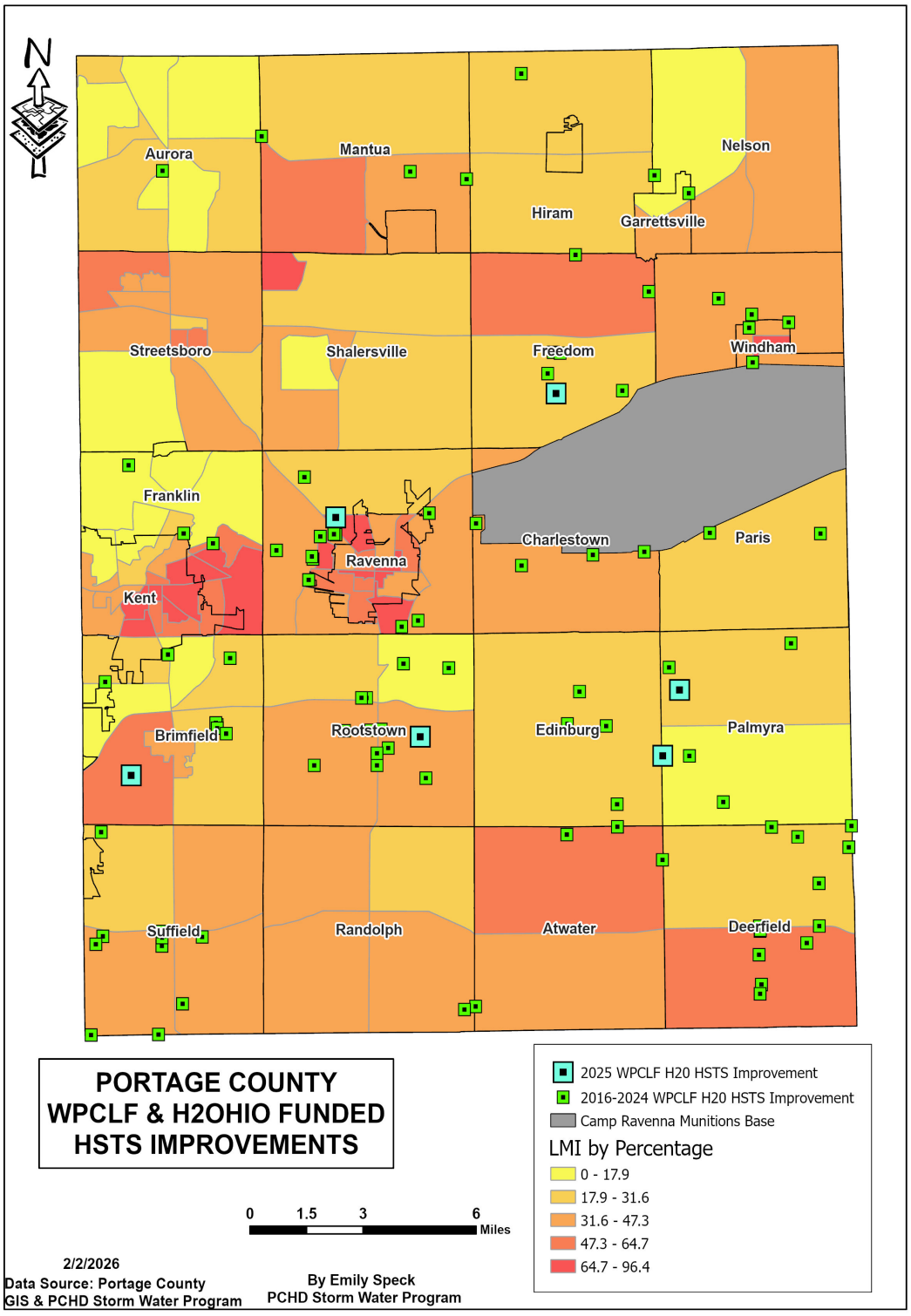
Water Pollution Control Loan Fund (WPCLF) and H2Ohio Program

In 2025, PCHD applied and received Ohio Environmental Protection Agency (OEPA) Water Pollution Control Loan Fund (WPCLF) for HSTS improvement in the county. WPCLF is a principal forgiveness fund to assist low to moderate income qualifying homeowners who meet the guidelines for HSTS improvement financial support on a first come first serve basis. PCHD Storm Water Program has applied for and received over $2 million for HSTS improvement total funding from 2016 to 2025. The distribution of OEPA WPCLF and H2Ohio funding awarded to PCHD between 2016 and 2025 are:

- Received $300,000 of 2016 WPCLF funds
- Received $300,000 of 2017 WPCLF funds
- Received $200,000 of 2018 WPCLF funds
- Received $150,000 of 2019 WPCLF funds
- Received $150,000 of 2020 WPCLF funds
- Received $150,000 of 2021 WPCLF funds
- Received $150,000 of 2022 WPCLF funds
- Received $167,000 of 2022 H2Ohio funds
- Received $150,000 of 2023 WPCLF funds
- Received $150,00 of 2024 WPCLF funds
- Received $150,000 of 2025 WPCLF funds

Over the years, the OEPA WPCLF Program has offered financial assistance to 126 low to moderate income homeowners, including six homeowners who received assistance in 2025. Figure 11 below shows a map of WPCLF and H2Ohio funded HSTS improvements in Portage County between 2016 and 2025, and showcases areas of low to moderate income by census block groups. Furthermore, OEPA has awarded an additional $150,000 to PCHD for the 2026 funding year to be disbursed within 18 months.

Figure 9: Portage County WPCLF & H2Ohio Funded HSTS Replacements Map



Storm Water Education and Community Outreach Activities

Community Outreach

In 2025, the PCHD Storm Water Program, in collaboration with SWCD and with support from the Engineer's Office, provided education and outreach to enhance public understanding of stormwater management, gain support, and increase compliance with OEPA NPDES Phase II Small MS4 permit requirements. Under the guidance of PCHD health education division, PCHD and SWCD used these initiatives to promote stormwater awareness, pollution prevention, and best management practices among the public, businesses, and staff. A key achievement was the development of educational videos, now available on our **YouTube channel: Portage County Health District**. Below is a summary of key activities and materials developed throughout the year.

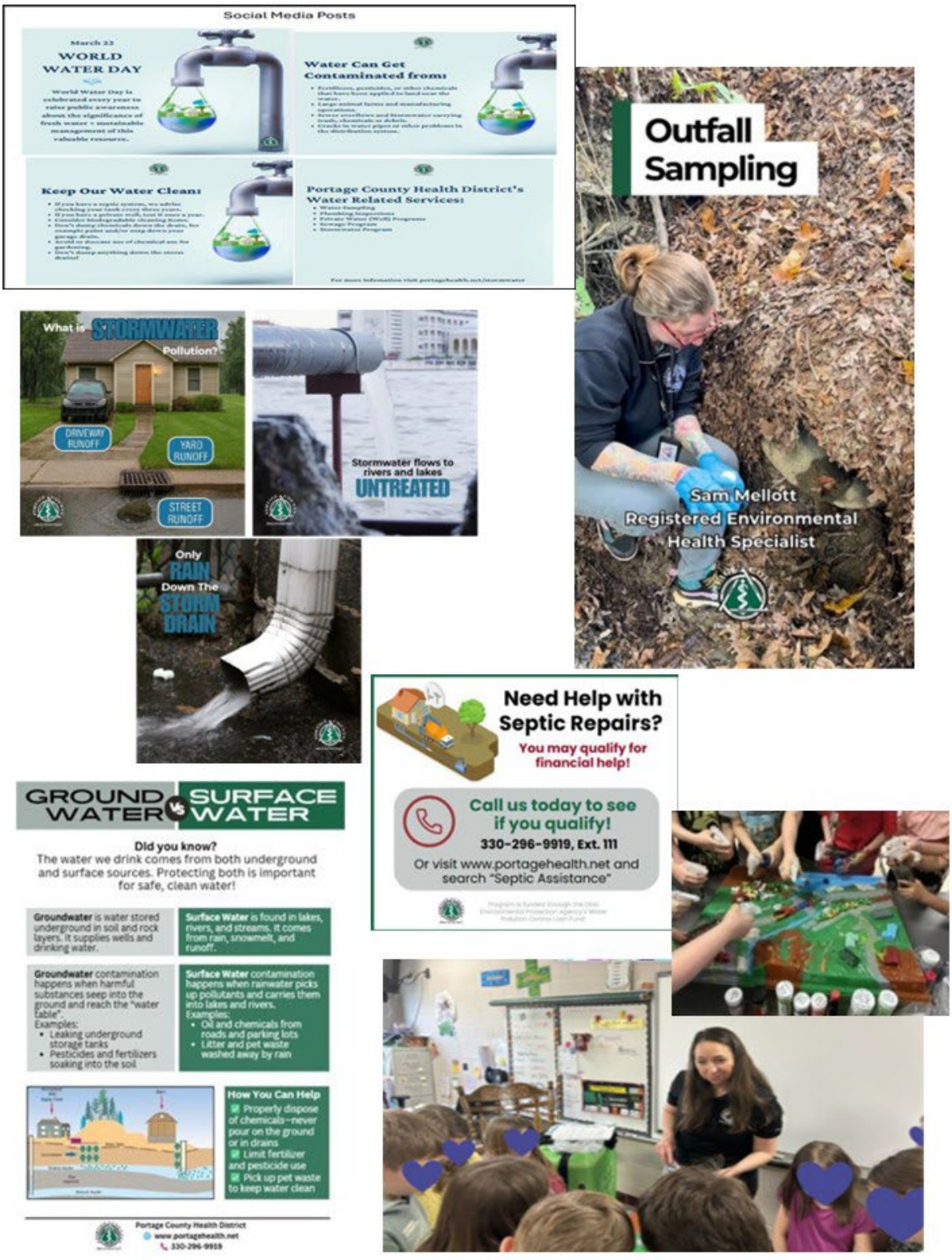
Educational Content and Public Outreach

- **Winter Salt Awareness**: Created a public awareness video and six social media posts for Winter Salt Awareness Week.
- **Stormwater Awareness**: Developed and produced educational videos to increase public understanding of stormwater systems, septic system function, pollution prevention, and water quality protection.
- **Stormwater Education in Schools, Youth Programs, and other Public Community Outreach Events:** A total of 15 stormwater education sessions were conducted with students, including second grade classrooms and summer camp programs.
- Continuous collaboration in regional stormwater education and outreach efforts through involvement with Northeast Oho Public Infrastructure Consortium (NEOPipe).

Stormwater Education Topics provided in 2025

- **Educational Videos**: Video demonstrations include Stormwater Outfall Inspections and Sampling, Septic System component function, how to find leaks
- **Homeowner Assistance**: Developed and distributed educational graphics and outreach materials regarding stormwater flow pathways, and Groundwater vs. Surface water

Figure 10: Community Outreach and Education Examples



Conclusion

In 2025, PCHD Storm water Program successfully implemented the Municipal Small Storm Water System (MS4) program IDDE in the Storm Water District of Portage County. By collaborating with our county partners,125 illicit discharges were eliminated and thus a substantial reduction of pollutants from the watersheds in Portage County.

The Storm Water Program exemplifies Portage County and PCHD's commitment to identifying, detecting, and eliminating illicit discharges while preventing surface and groundwater pollution within our water watersheds. These efforts are strengthened through collaboration with the Portage County Engineer's office, Soil and Water Conservation District, and our Township partners.