HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT

# PROTECTING WATER QUALITY WITH GREEN INFRASTRUCTURE INNOVATION

Hamilton County Soil & Water Conservation District

FLLOWPA
FINGER LAKES - LAKE ONTARIO WATERSHED PROTECTION ALLIANCE

FLLOWPA Full Board Meeting
May 24, 2022

# THANK YOU!

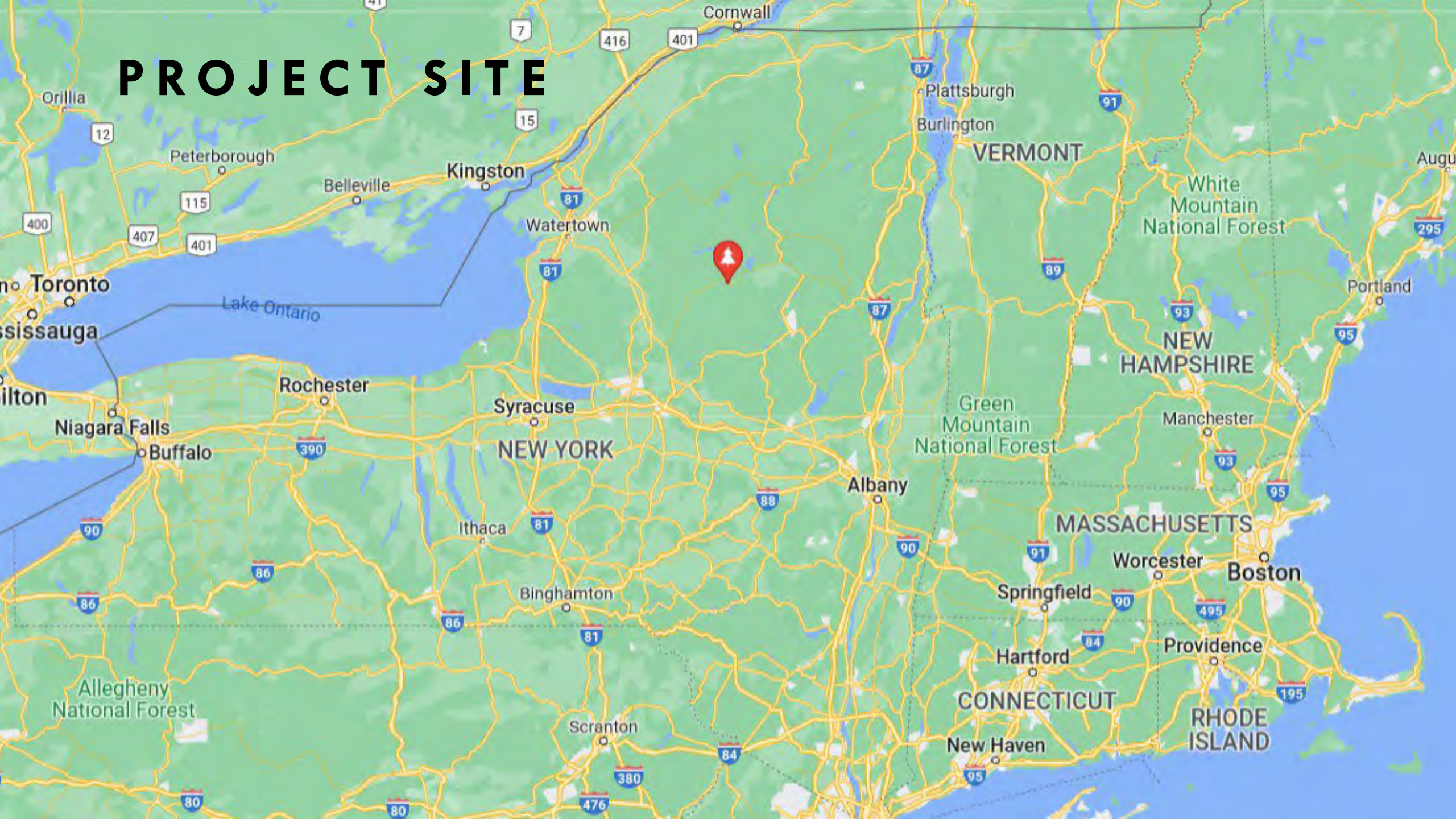
- Kristy LaManche, FLLOWPA Program Coordinator
- FLLOWPA board members
- Partners

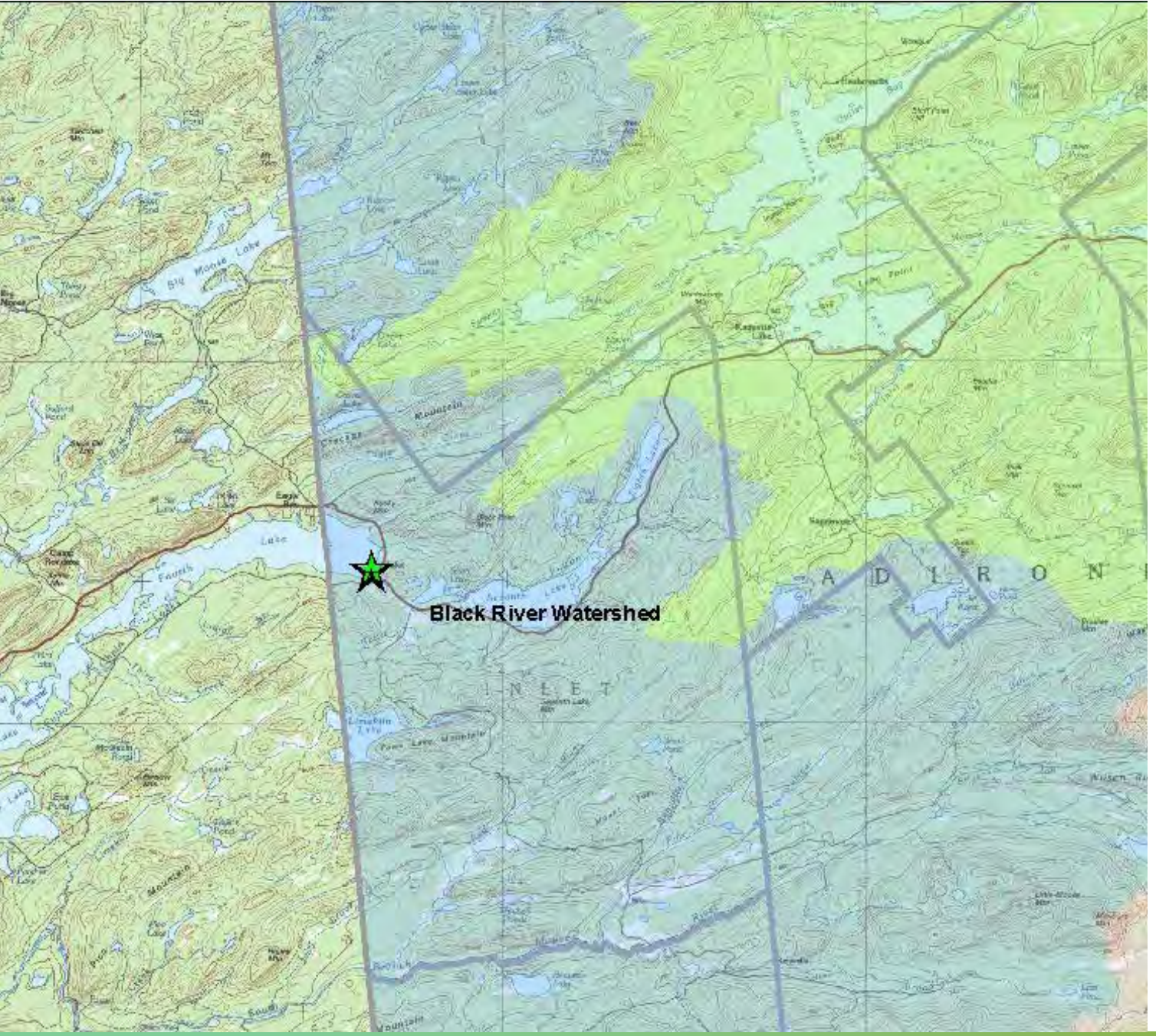
# HELLO! I'M CAITLIN STEWART, AND I'M GLAD YOU ARE HERE TODAY!


# PURPOSE

- Overview of the GI project at Inlet's Arrowhead Park
- Show how this project protects water quality in the Black River watershed

# PROJECT SITE






# INTRODUCTION

- GI captures stormwater runoff, prevents flooding, decreases pollutants
- Educational opportunity
- Consult with partners
- TRUEGRID® PRO PLUS® permeable pavers
  - 100% permeable
  - water detention under surface
  - stormwater management

## ENVIRONMENTAL ISSUE

- Stormwater runoff
  - Landscape, parking area
  - Puddles
  - Flows directly into channel
- Stormwater runoff carries pollutants
- Infiltrates into True Grid pavers instead of discharging into channel


PROJECT SITE
Fourth Lake
Fern Park
Inlet Community Church
Arrowhead Park
Inlet Public Library
Inlet Town
Building Codes
Fifth Lake
St Anthony of
Paduas Church

# PARTNERS

- Warren County SWCD
- TOI Highway Department
- TOI Parks and Rec
- Hamilton County SWCD




# FUNDING

- Finger Lakes – Lake Ontario Watershed Protection Alliance funds – staff salaries
- State Aid Part B project funds
- Town of Inlet Highway Department – remaining funds for project materials
- Town of Inlet Highway Department of Parks and Rec - in kind services of staff and equipment

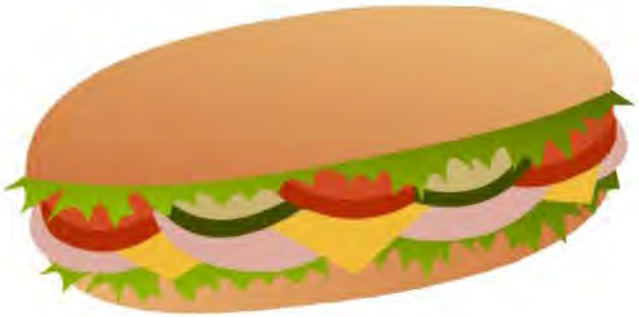
# GI INSTALLATION

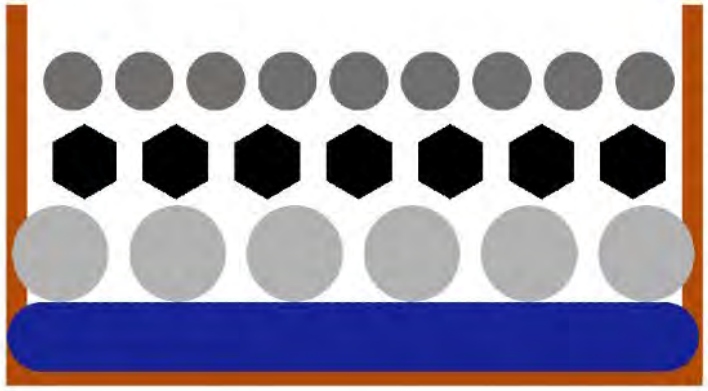
- Step 1: survey property and look for areas that would benefit from green infrastructure
- Step 2: remove impervious surfaces by excavating the landscape to desired depth
- Step 3: lay down the geotextile fabric liner to act as a barrier between subsoil and rocks
- Step 4: place uniform stone ¾-inch diameter on top of liner and tamp down (load-bearing)
- Step 5: install TRUEGRID® PRO PLUS® permeable pavers on top of rock base
- Step 6: place uniform stone ½-inch diameter on top pavers and tamp down (load-bearing)





# GI INNOVATION





1/2 - inch diameter stone

TRUEGRID® PRO PLUS® permeable pavers

3/4 - inch diameter stone

Geotextile fabric liner

# FIELD NOTES

- Same sized rocks = limit compaction, increased void space
  - Max. stormwater and flood infiltration during a storm event
- TRUEGRID® pavers = 40% - 60% void space
  - fills with water during a storm event
- Fabric = water percolates into subsoil
- Fabric placed on walls and base or walls only depending on site.
  - Size project per drainage area when fabric is needed on bottom

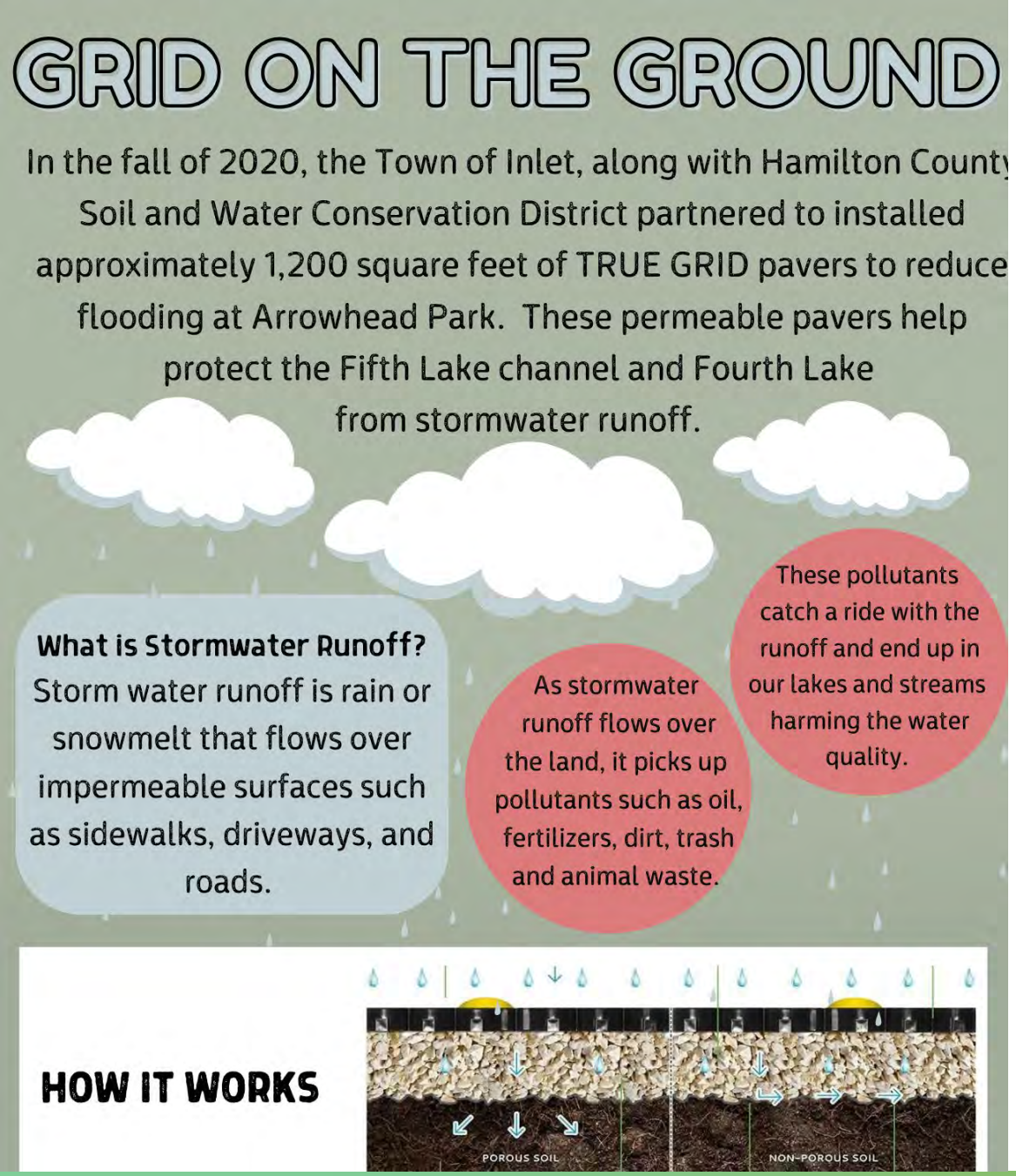
# FIELD NOTES

- Open pore space collects a large volume of water without an issue
- Reservoir
- Maintenance
  - Hardly any
  - Immune to wear, tear, weathering, degradation
  - Silt / sediment decay passes through
  - Rake / carefully blow leaves and garbage
  - Hose / carefully power wash sediment through system
  - Snowplow with truck mounted blade 1” from surface

| Budget Summary | | |
|---|---|---|
| Expenditure Category | Source | Amount |
| Personnel services for HCSWCD | FLLOWPA | $1,259.04 |
| Gravel and stone | Town of Inlet Highway Department | $1,282.01 |
| TRUEGRID® PRO PLUS® permeable pavers – half pallet | Part B | $6,000 |
| Total | | $8,541.05 |

# TANGIBLE OUTCOMES PART 1

- 1,200 ft2 of TRUEGRID® pavers
- 100% runoff from 0.25 ac of impervious surface during a 1.5” storm event
- = 7,100 g H2O infiltrated, NOT runoff




# TANGIBLE OUTCOMES PART 2

- Decreased flooding at Arrowhead Park, including the Town of Inlet's municipal parking lot and building facility
- Maintains the integrity of water quality in the surrounding surface waters
- Educational poster

# ASK ME QUESTIONS

Working to manage and promote the wise use of
natural resources in Hamilton County
since 1965

Hamilton County
Soil & Water
Conservation District

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## Partners

Tom Bielli, *District Conservationist, NRCS*
Ryan Cunningham,
*Associate Environmental Analyst, SWCC*

This project was made possible by FLLOWPA

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