PROTECTING WATER QUALITY WITH GREEN INFRASTRUCTURE INNOVATION

Hamilton County Soil & Water Conservation District

FLOWPA 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
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
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
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<th>Expenditure Category</th>
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<td>Personnel services for HCSWCD</td>
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<td>Gravel and stone</td>
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<td>Part B</td>
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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
In the fall of 2020, the Town of Inlet, along with Hamilton County Soil and Water Conservation District partnered to installed approximately 1,200 square feet of TRUE GRID pavers to reduce flooding at Arrowhead Park. These permeable pavers help protect the Fifth Lake channel and Fourth Lake from stormwater runoff.

**What is Stormwater Runoff?**
Storm water runoff is rain or snowmelt that flows over impermeable surfaces such as sidewalks, driveways, and roads.

**How It Works**
![Diagram showing water flow through permeable pavers]

**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
THANK YOU!