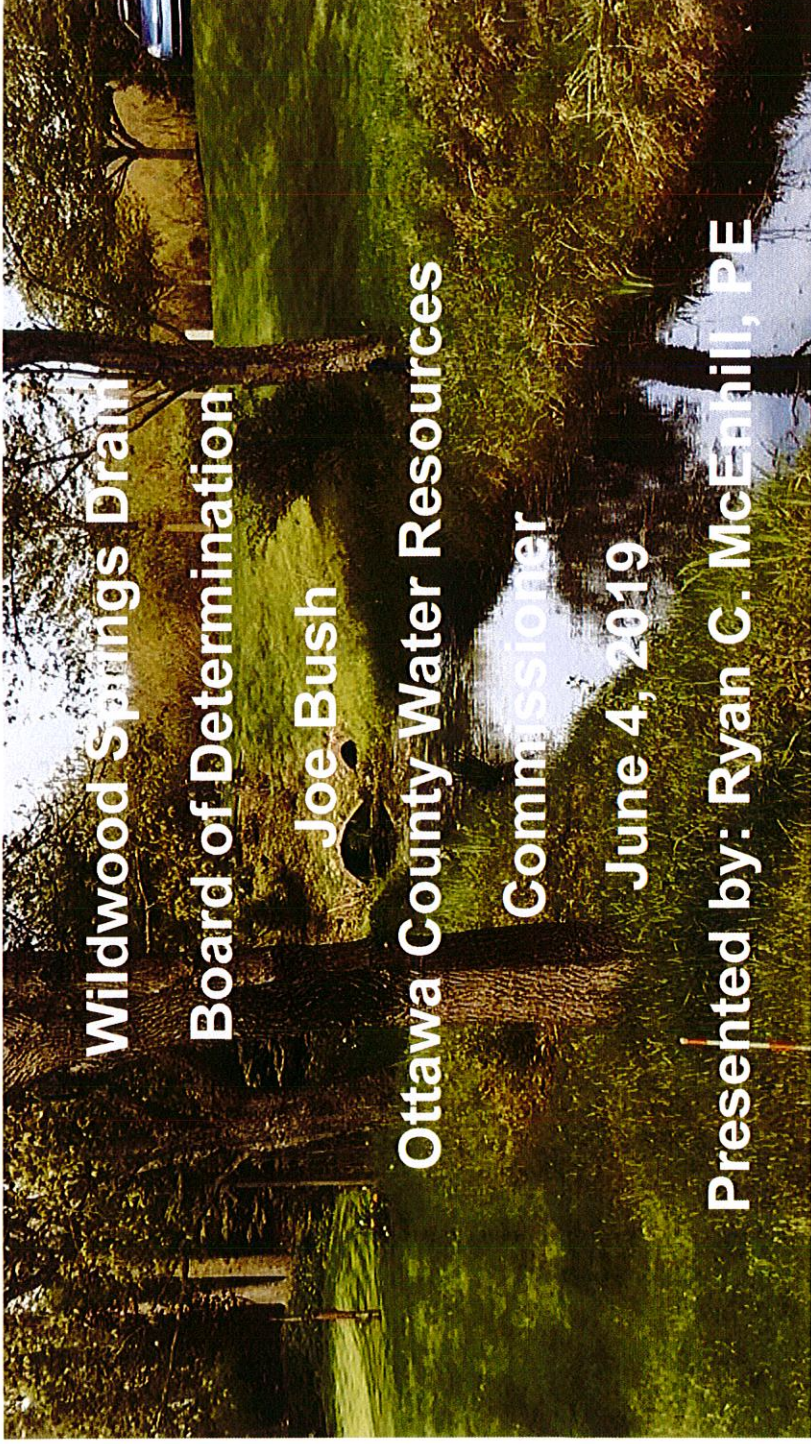


# Wildwood Springs Drain Preliminary Engineering Summary



Ottawa County  
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Wildwood Springs Drain  
Board of Determination

Joe Bush

Ottawa County Water Resources

Commissioner

June 4, 2019

Presented by: Ryan C. McEahil, PE

# Wildwood Springs Drain Preliminary Engineering Summary



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## BOARD OF DETERMINATION OVERVIEW

- **Petition** filed by Spring Lake Township to Establish Drainage District and provide maintenance and improvements
- **Michigan Drain Code** requires a Board of Determination meeting
- **Board** composed of 3 disinterested members outside of Township affected
- Determine project **necessity** based on public health, welfare and convenience after hearing testimony





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# Wildwood Springs Drain Preliminary Engineering Summary

## PRELIMINARY WORK PERFORMED:

- Review the plat maps and history of the subdivision drainage at the OCWRC's Office
- Review and Research existing record information (GIS, aerial photographs, topographic info, previous design drawings, etc.)
- Evaluate existing drainage easements granted in plat documents
- Determine the lands drained ("Drainage District") by the Wildwood Springs Drain
- Inspection of the drainage and watercourses within the Consolidated Wildwood Springs Drain
- Provide an **independent and unbiased** assessment of the storm water conditions within the Drainage District
- Compile all analyses and report on those findings at the Board of Determination



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# Wildwood Springs Drain Preliminary Engineering Summary

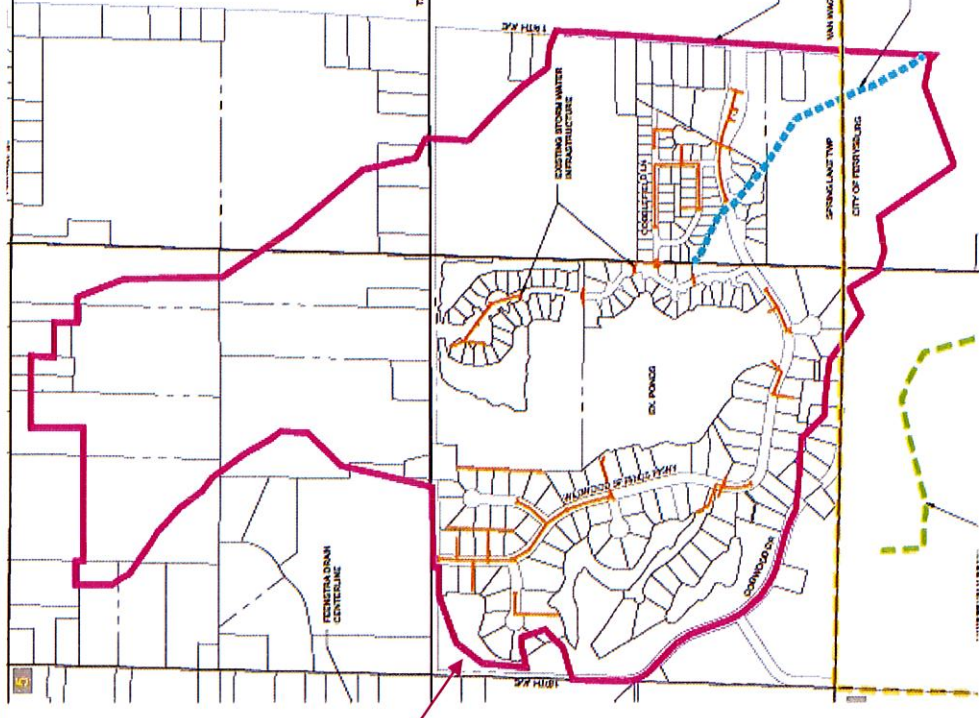
## DISTRICT BOUNDARY OVERVIEW:

### DISTRICT BOUNDARIES:

How Determined:

- Topographic Maps
- Ottawa Co. GIS
- Culvert Review
- Site Inspections

Proposed Drainage  
District Boundary



### Drainage District Boundary Information

- Proposed Consolidated Drainage District Boundary = 313 Acres
  - Spring Lake Twp. = 297 Acres
  - City of Ferrysburg = 16 Acres

# Wildwood Springs Drain Preliminary Engineering Summary



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## ORPHAN DRAIN SYSTEM:

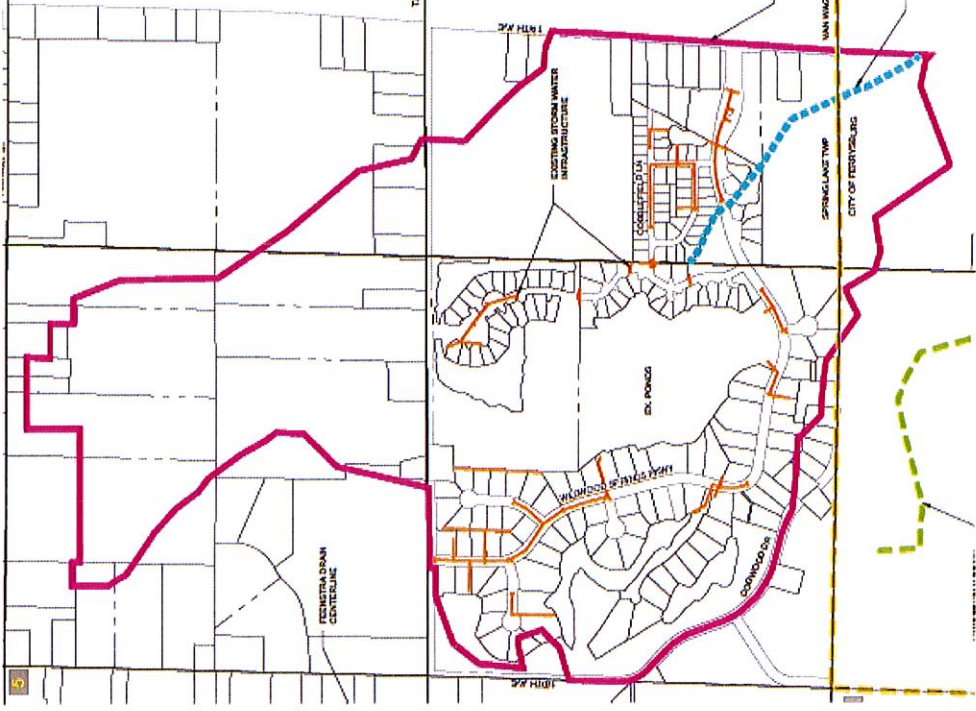
**WHAT IS THE DIFFERENCE BETWEEN A COUNTY DRAIN AND A PRIVATE (ORPHAN) DRAIN?**

**County** – An existing drain on which the County Drain Commissioner legally maintains & oversees any improvements.

**Private** – Drains not under the jurisdiction of the Drain Commissioner. Private landowners, Subdivision Associations, Township, etc. must maintain or improve.

Only the final phase of Wildwood Springs Subdivision was established as County Drain.

The remaining phases of Wildwood Springs, The Cottages, and Parsons Walk Subdivisions are considered private (orphan) systems currently



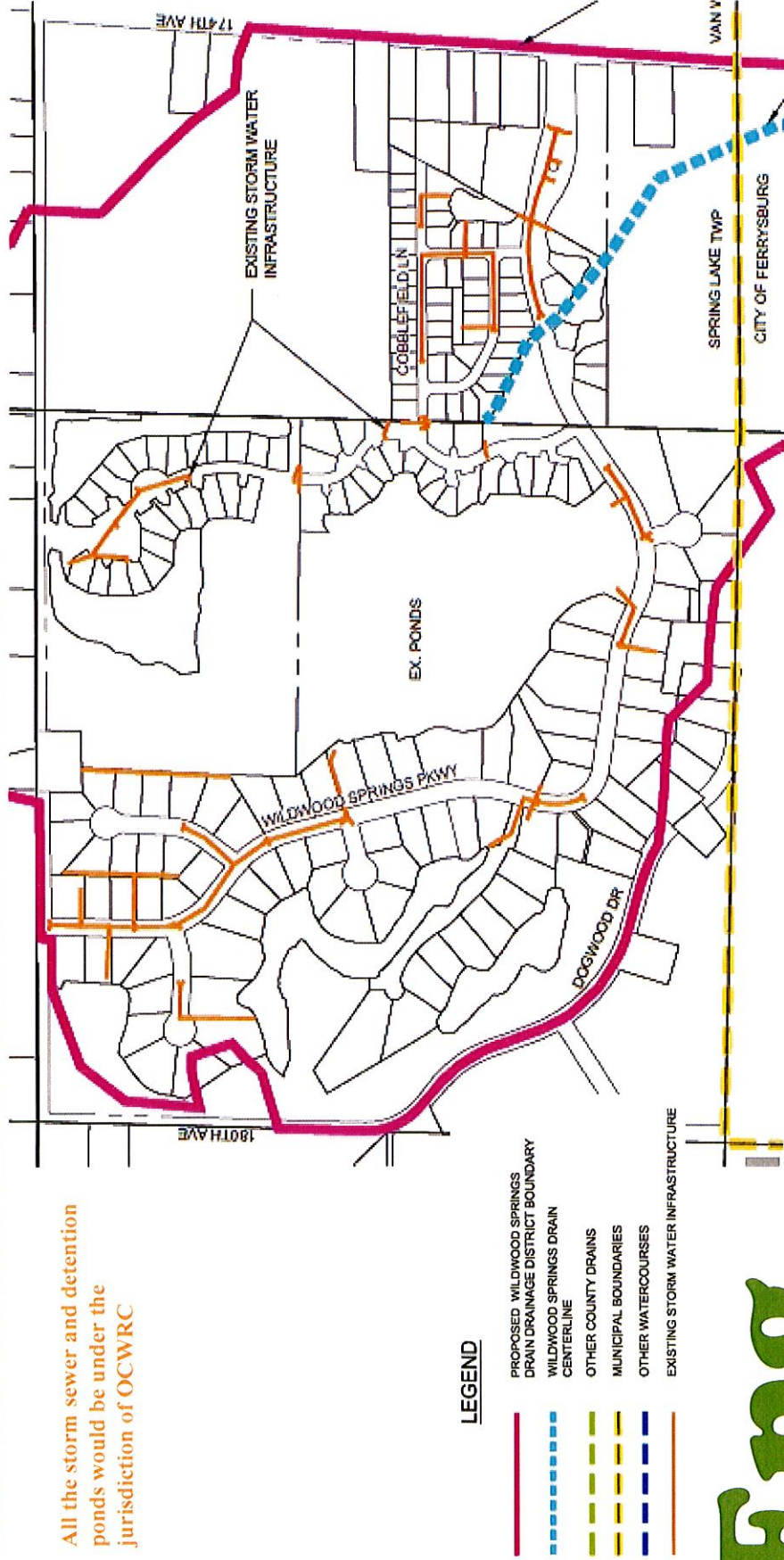


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# Wildwood Springs Drain Preliminary Engineering Summary

## EXISTING DRAINAGE CONDITIONS OVERVIEW

All the storm sewer and detention ponds would be under the jurisdiction of OCWRC



### LEGEND

- PROPOSED WILDWOOD SPRINGS DRAIN DRAINAGE DISTRICT BOUNDARY
- WILDWOOD SPRINGS DRAIN CENTERLINE
- OTHER COUNTY DRAINS
- MUNICIPAL BOUNDARIES
- OTHER WATERCOURSES
- EXISTING STORM WATER INFRASTRUCTURE

**Eng.**  
Engineering & Surveying

# Wildwood Springs Drain Preliminary Engineering Summary

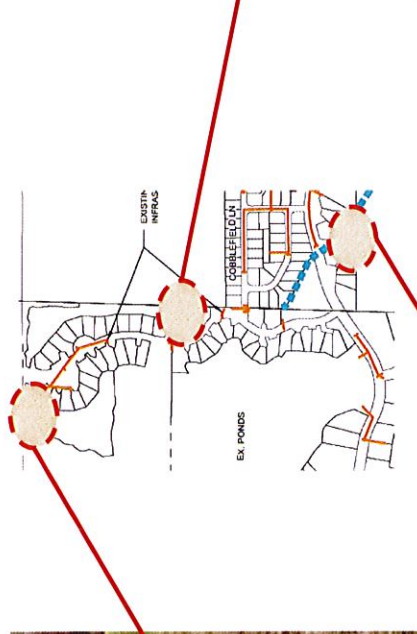


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## EXISTING DRAINAGE CONDITIONS OVERVIEW



Sediment accumulation &  
algae growth



Stagnant water and algae growth in  
the creek east of Lost Creek Lane.



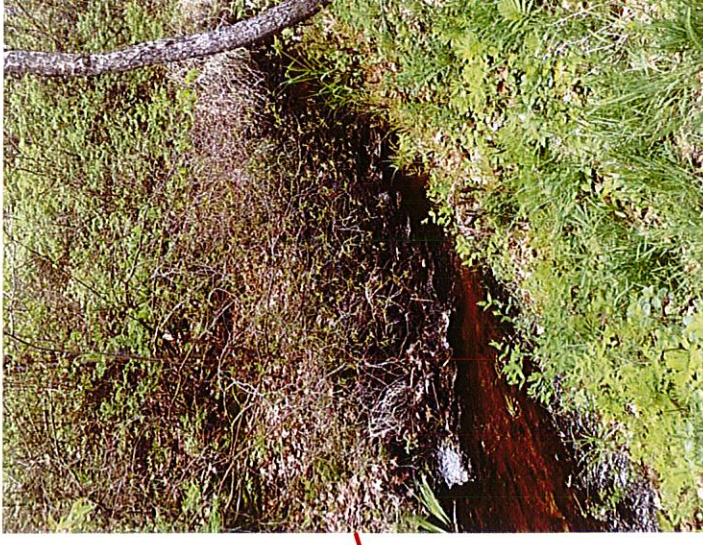
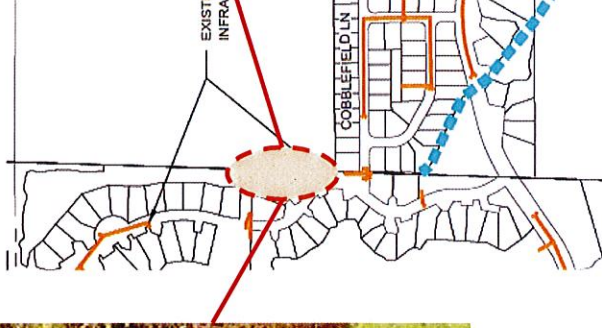
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# Wildwood Springs Drain Preliminary Engineering Summary

## EXISTING DRAINAGE CONDITIONS OVERVIEW



Photos represent the creek just north of Cobblefield Lane which is narrowly defined and heavily vegetated throughout.



Narrow flow channel with vegetation restricting flow





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# Wildwood Springs Drain Preliminary Engineering Summary



The culverts in the top and right picture have restricted the flow in the creek completely leading to standstill water.

## EXISTING DRAINAGE CONDITIONS OVERVIEW

Logs are clogging the channels and allowing sediment and debris to build up.





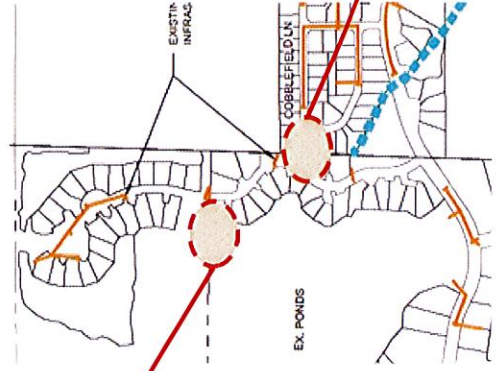
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# Wildwood Springs Drain Preliminary Engineering Summary

## EXISTING DRAINAGE CONDITIONS OVERVIEW



No established drainage channel to allow proper flow just west of Lost Creek Lane.



Overgrown trees and vegetation at the culvert south of Cobble field Lane.



# Wildwood Springs Drain Preliminary Engineering Summary



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## NEXT STEPS

- Public Testimony
- Board to Determine Necessity of Petition
- If project found not necessary:
  - Project ends
- If project found necessary:
  - Evaluate scope of project and design alternatives
  - Scope Meeting to discuss design with property owners and municipalities
  - Finalize Design (obtain easements and permits, if necessary, and prepare bid plans)

