

# Schwemer Drain Preliminary Engineering Summary

A photograph of a grassy area next to a road. The foreground is filled with tall green grasses and some purple flowers. A paved road with a yellow center line runs along the right side of the image. In the background, there is a dense line of green trees under a clear blue sky.

Schwemer Drain  
Board of Determination  
Muskegon County Drain  
Commissioner  
June 17, 2020

# Schwemer Drain Preliminary Engineering Summary



## BOARD OF DETERMINATION OVERVIEW

- **Petition** filed by (11) freeholders in the District to locate, establish, and construct a Drain
- **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



# Schwemer Drain

## Preliminary Engineering Summary



### PRELIMINARY WORK PERFORMED:

- Review the history of drainage within the area of concern at the MCDC's office. Schwemer Drain Chapter 3 Application to Layout and Designate a Drainage District occurred in 2015.
- Review and Research existing record information (GIS, aerial photographs, topographic info, previous design drawings, etc.)
- Review 2015 petition and investigation report.
- Field inspection of the drainage, watercourses, and potential extensions within the Schwemer Drain Drainage District.
- 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.

# Schwemer Drain Preliminary Engineering Summary



## DISTRICT BOUNDARY OVERVIEW:

### District Boundaries:

#### How Determined:

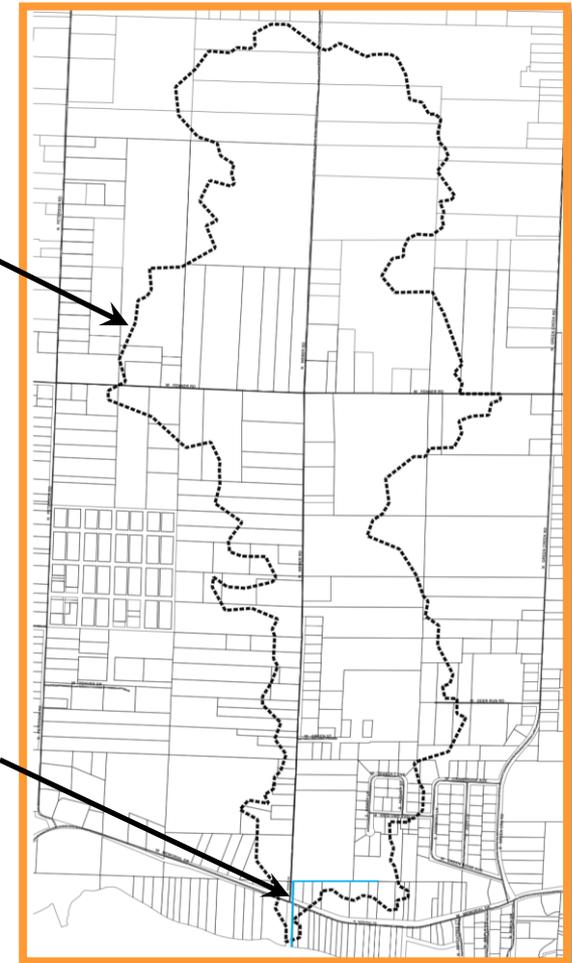
- Topographic Maps
- Muskegon County GIS
- Culvert, Storm Sewer, and Runoff Review
- Site Inspections

### Drainage District Boundary Information:

- Existing Drainage District Boundary = 473 Acres +/-
- Resides entirely in Laketon Township

Schwemer Drainage  
District Boundary  
(2015)

Schwemer Drain  
Tentative Route &  
Course (2015)

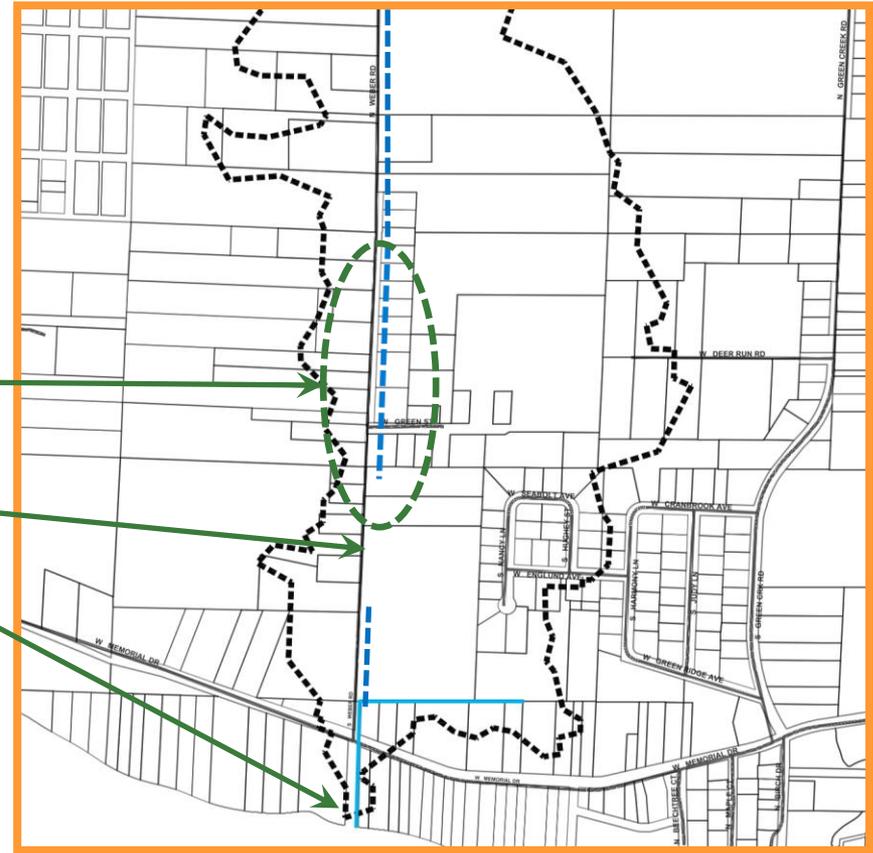


# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW

- Large contributing area and inadequate conveyance system
- Culvert restrictions and sizing issues
- Significant flooding
- Critical gap in infrastructure
- Lack of adequate outlet to Muskegon Lake



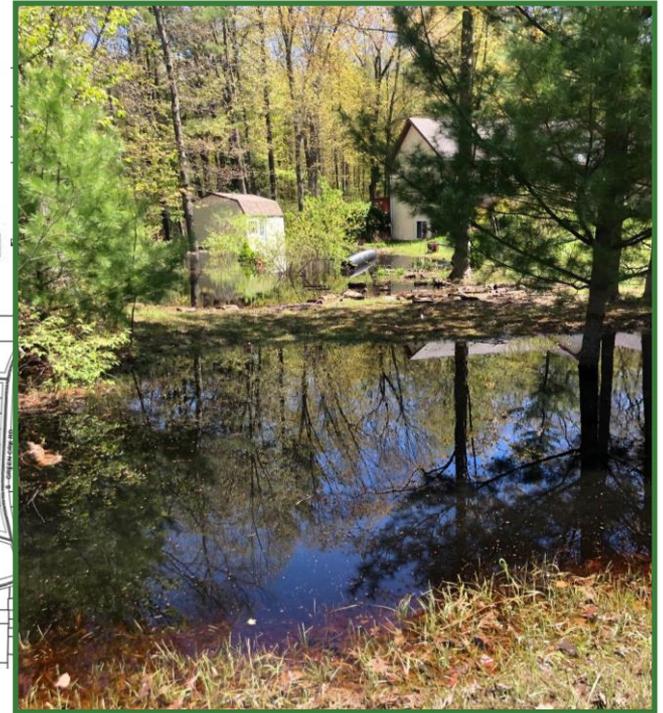
# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW



Standing water across Weber Road and in front of 105 N Weber Road

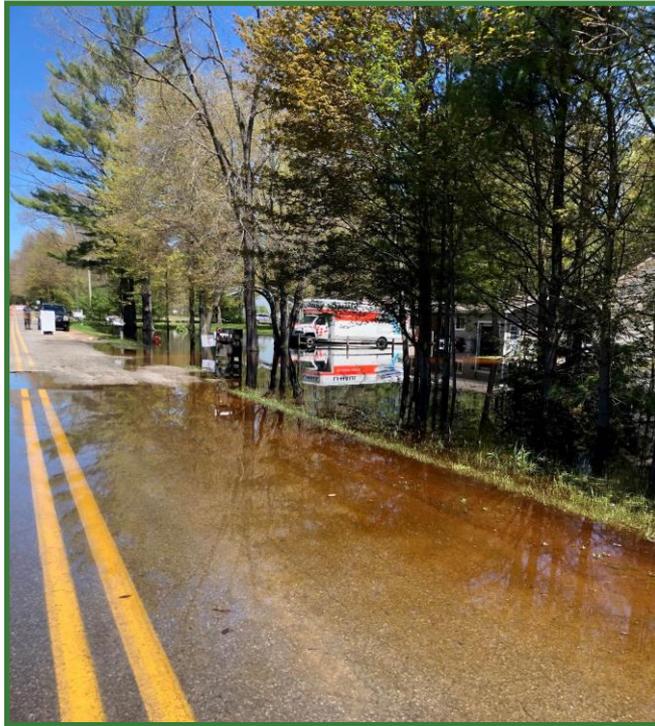


Standing water in front of 78 N Weber Road

# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW



Standing water across Weber Road and in front of 108 and 116 N Weber Road



Standing water in front and sides of yard at 108 N Weber Road

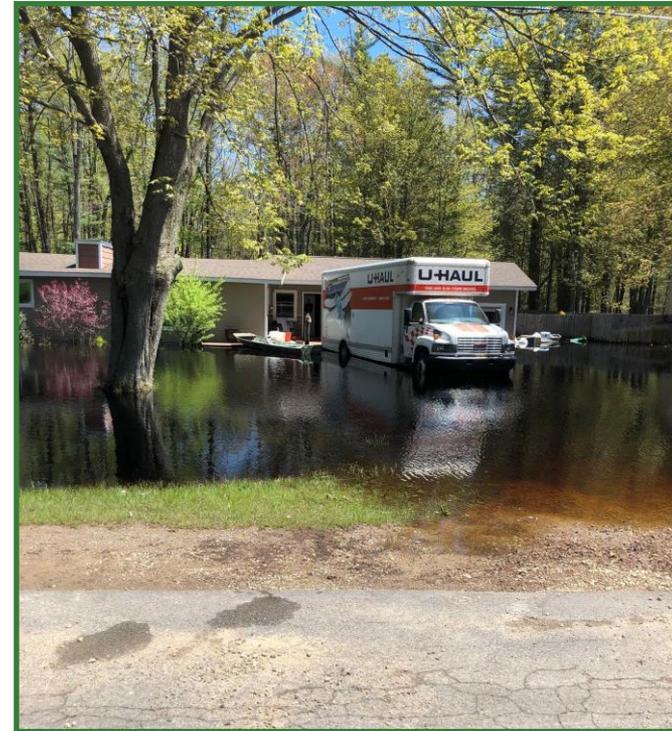
# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW



Standing water in front of 131 N Weber Road



Floodwaters encompass the home at 116 N Weber Road

# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW



Road ditch and culverts end, leading to gaps in infrastructure, flooding, and property damage

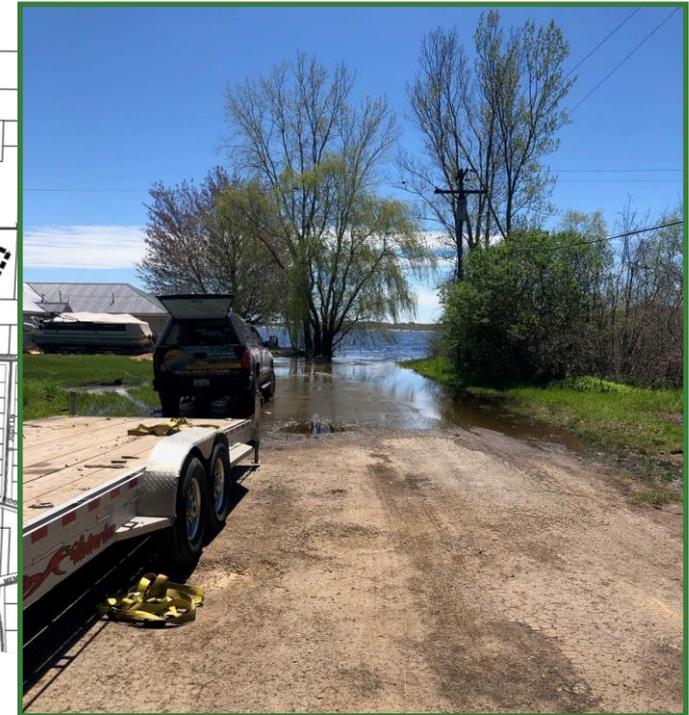


Standing water in front of and within the garage of 34 S Weber Road. A sand embankment was temporarily constructed around the home.

# Schwemer Drain Preliminary Engineering Summary



## EXISTING DRAINAGE CONDITIONS OVERVIEW



End of the open drain flooding across 3145 Memorial Drive

Standing water across driveway to 3145 Memorial Drive

# Schwemer Drain

## Preliminary Engineering Summary



### EXISTING DRAINAGE CONDITIONS OVERVIEW



Standing water between 97 and 105 N Weber Road

#### Summary:

- **Widespread drainage and flooding issues along Weber Road.**
- **Lack of adequate storm water infrastructure and properly designed conveyance systems to alleviate drainage issues along Weber Road.**
- **Lack of adequate outlet to Muskegon Lake.**

# Schwemer Drain Preliminary Engineering Summary



## 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)

