

# MICHIGAN DRAIN CODE

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# CHAPTER 22 OVERVIEW

# Compounding Effect

- Aging infrastructure
- Record rain events
- Rising Great Lakes and groundwater levels
- Continuing development
- Loss of wetlands

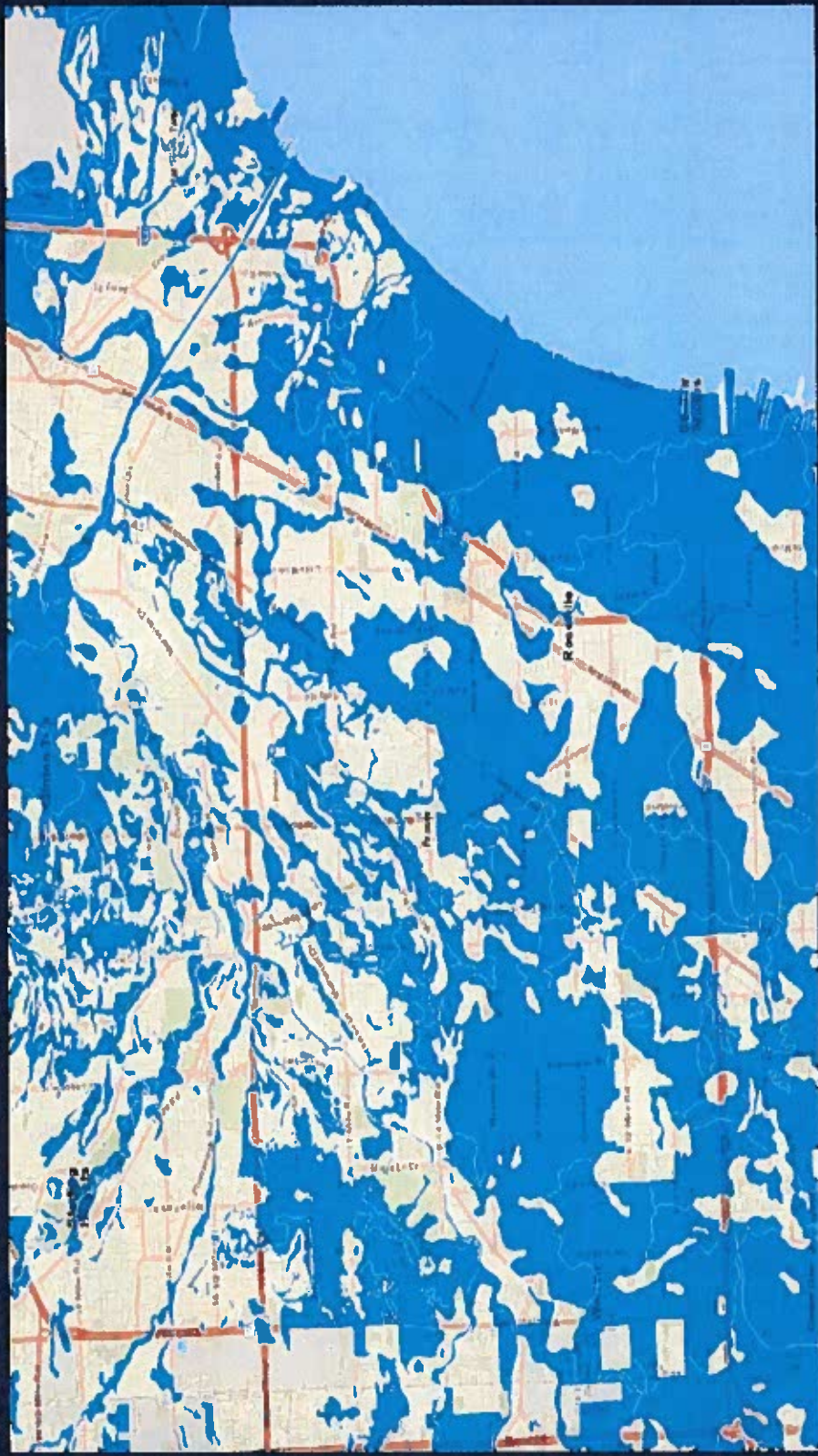


# Hydric Soils-Lansing/East Lansing





# Hydric Soils-Macomb County



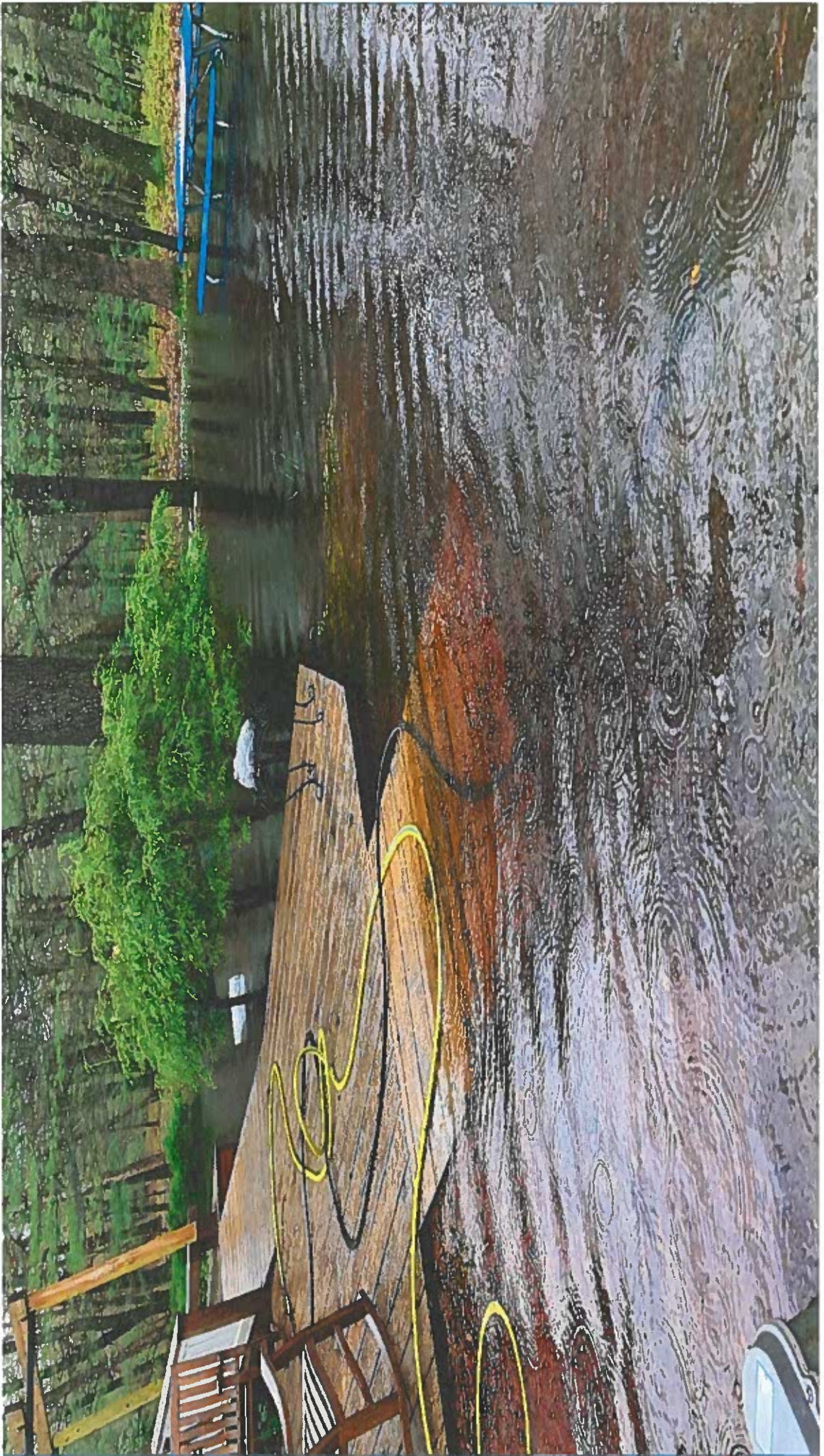




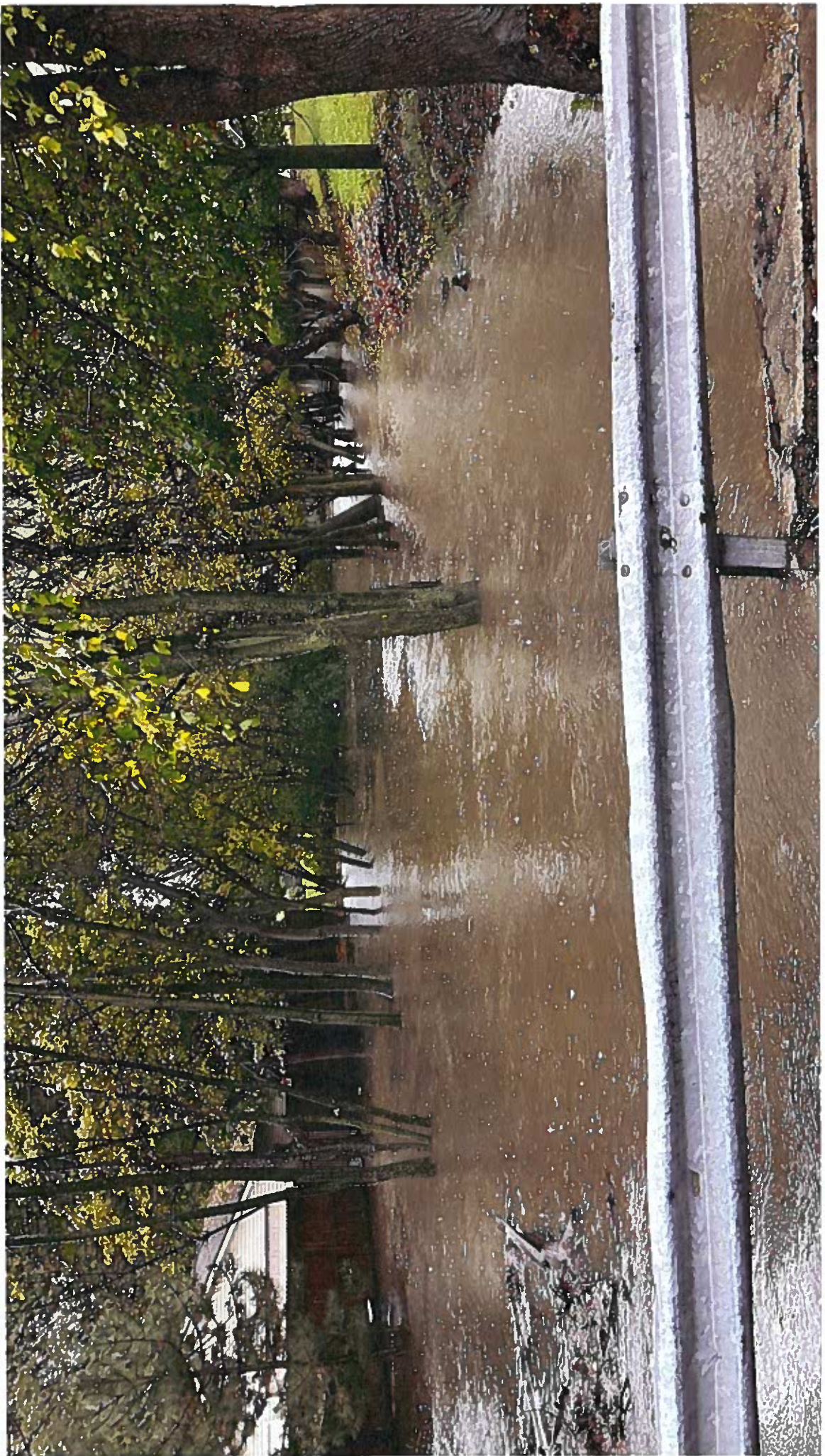




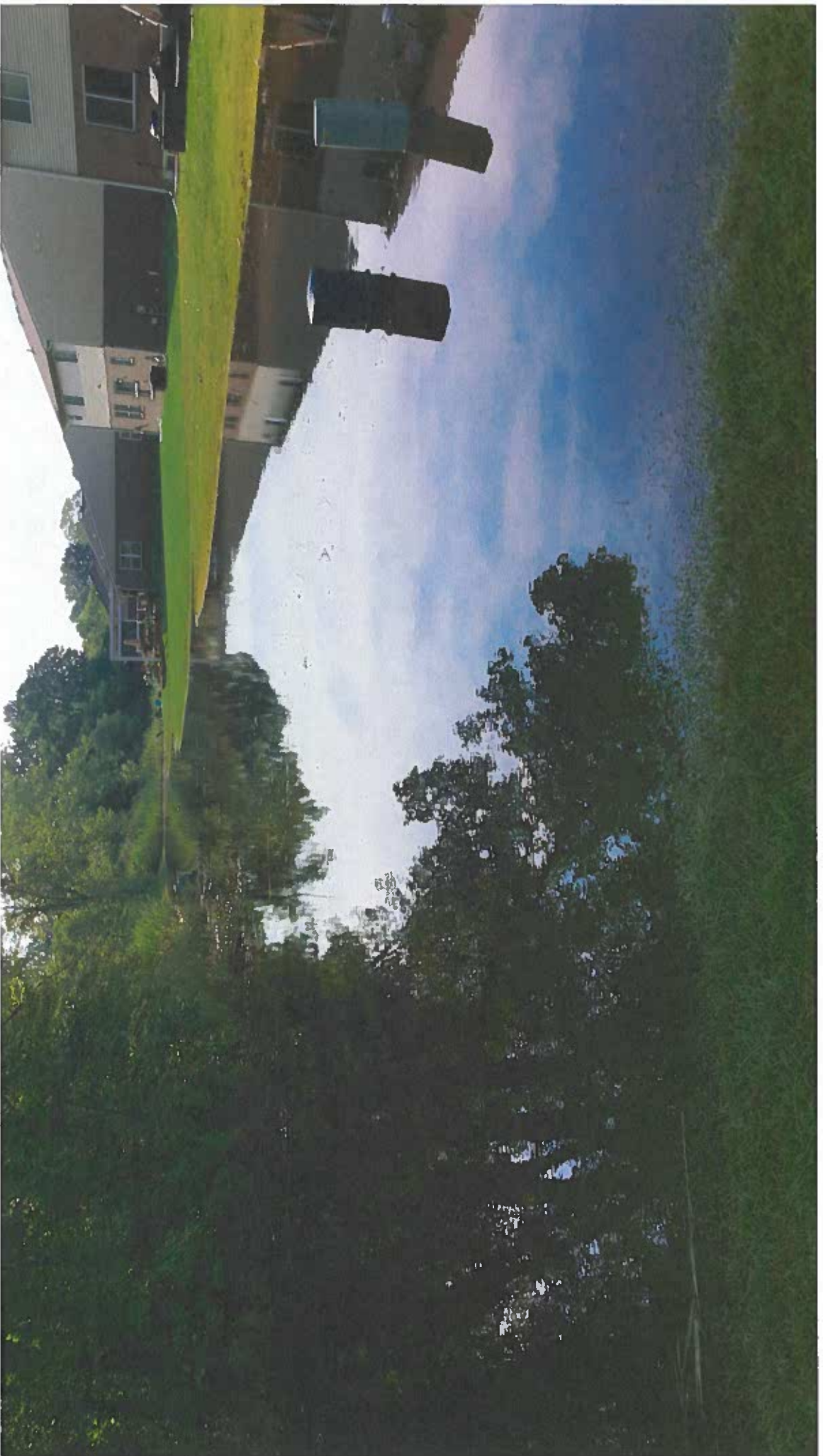


















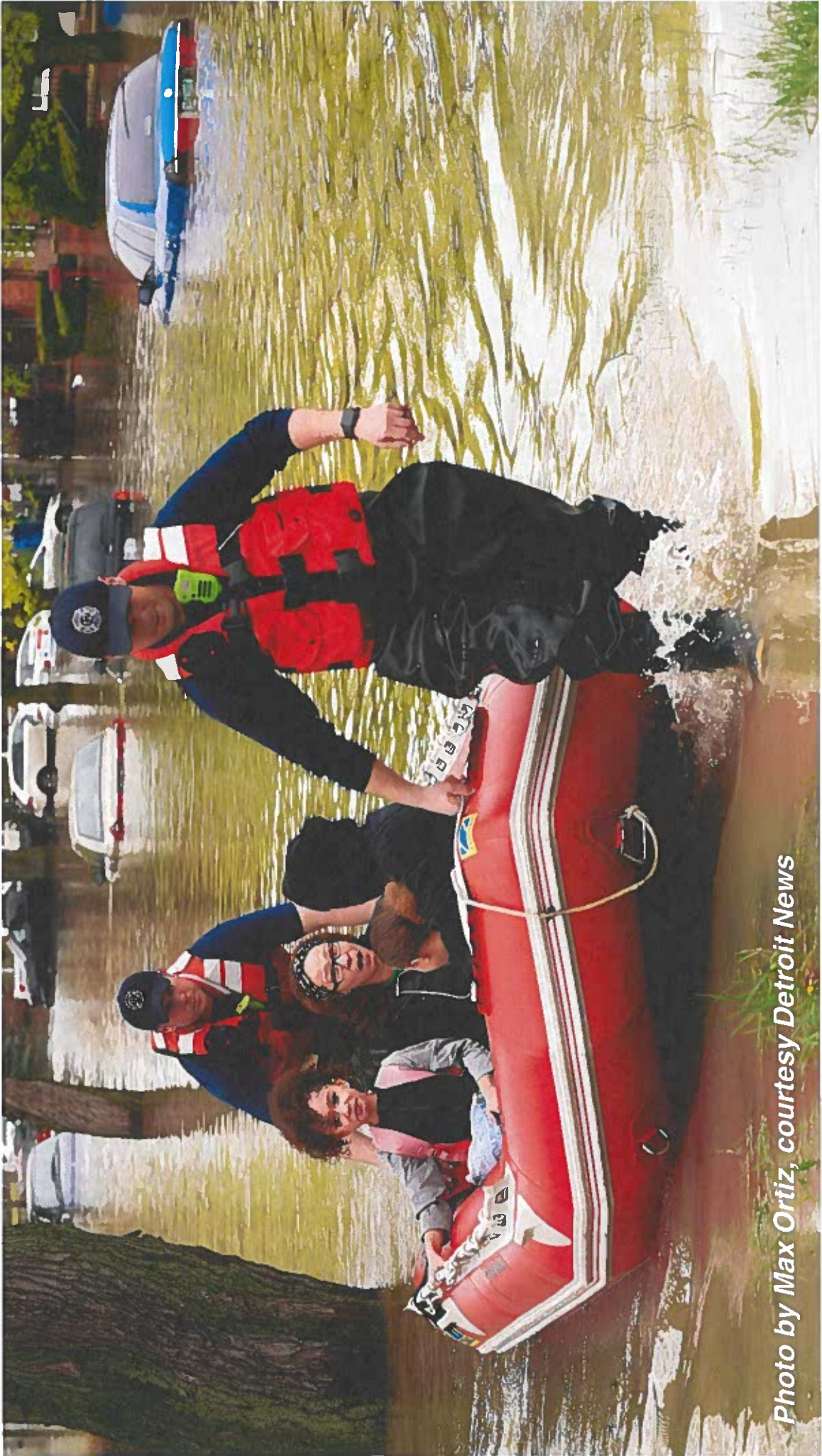
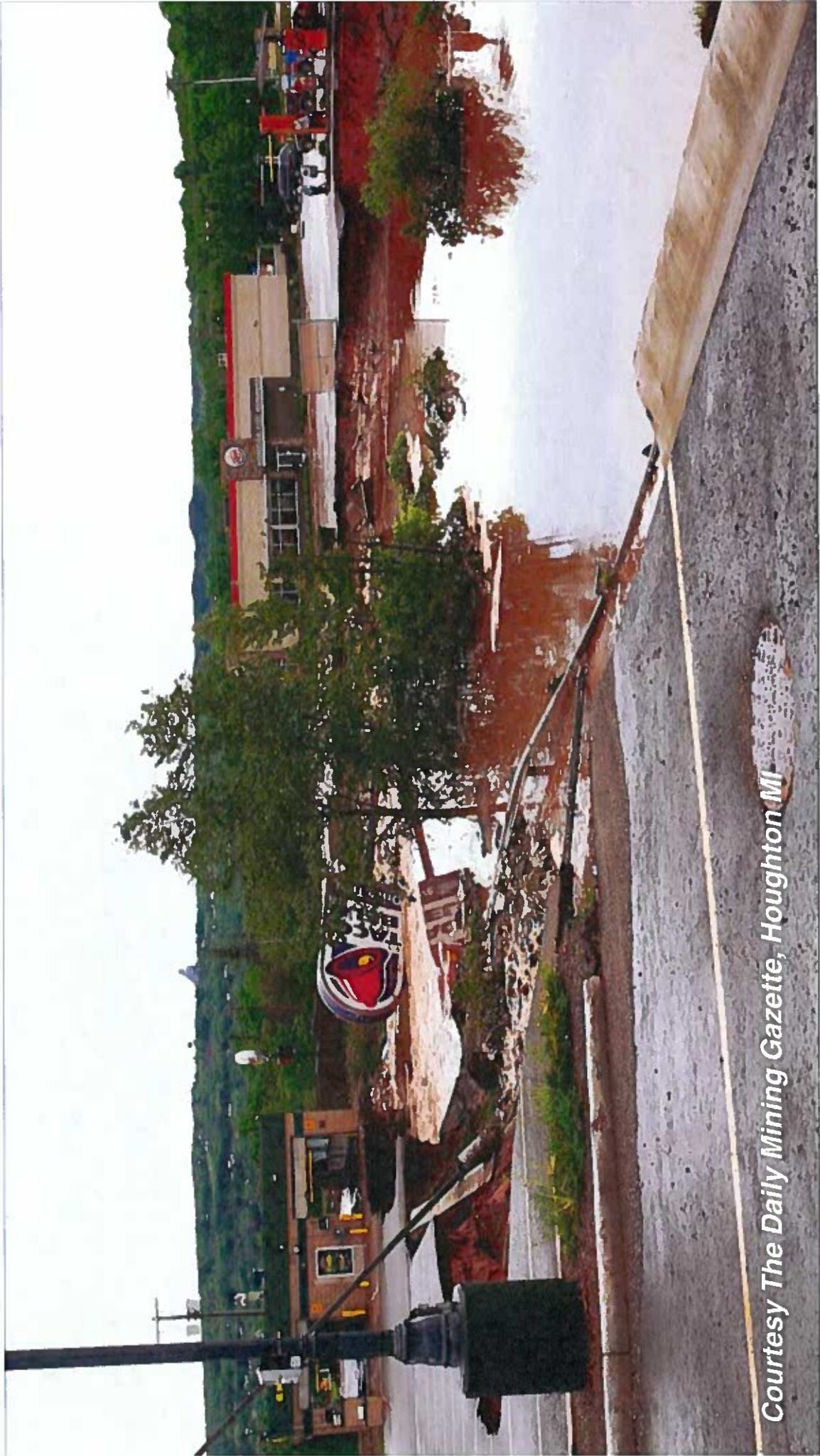


Photo by Max Ortiz, courtesy Detroit News





Courtesy The Daily Mining Gazette, Houghton MI









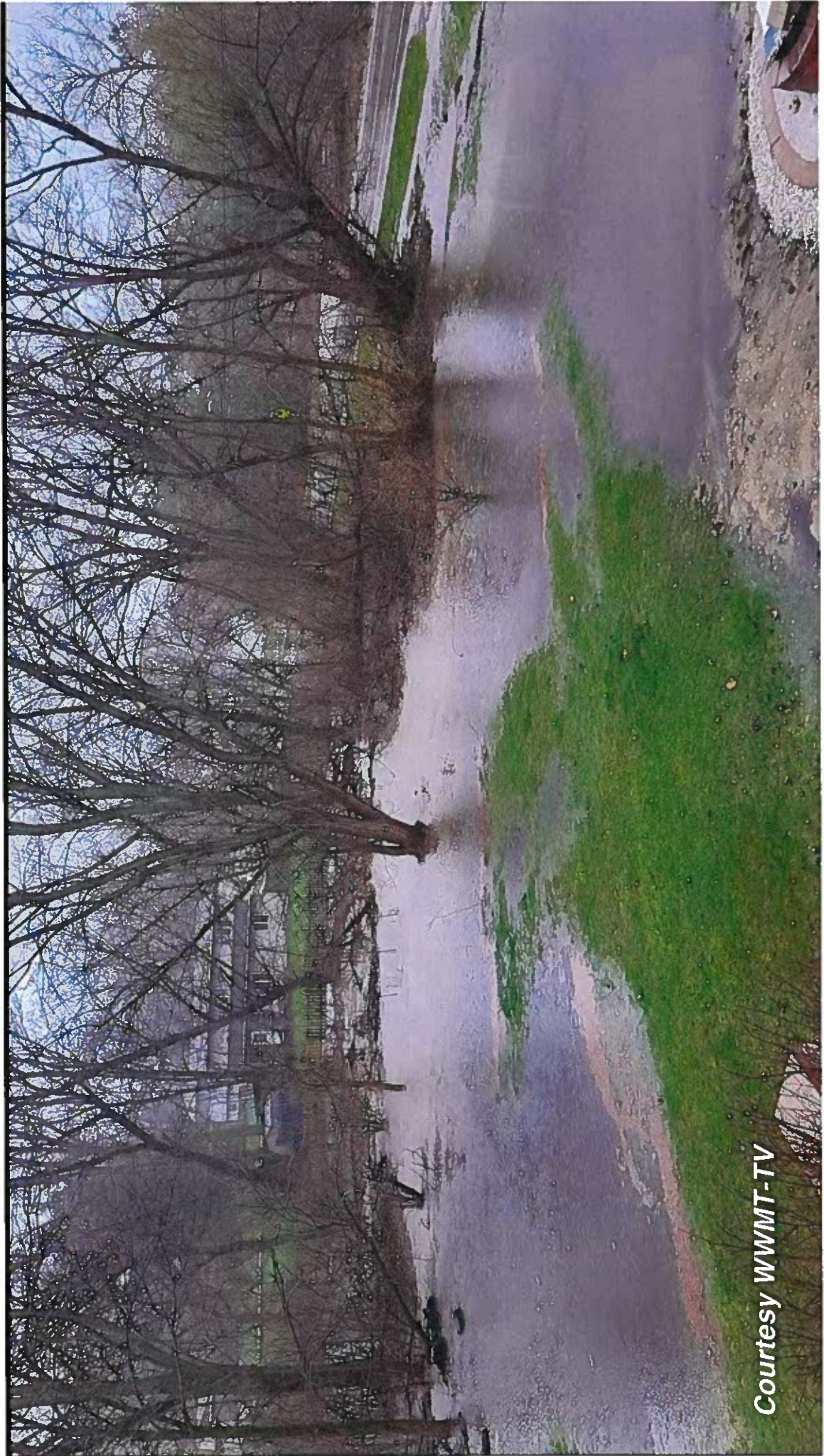
Photo by Olivia Fellows, courtesy Pioneer Newspaper Big Rapids





Courtesy The State News





Courtesy WWMT-TV







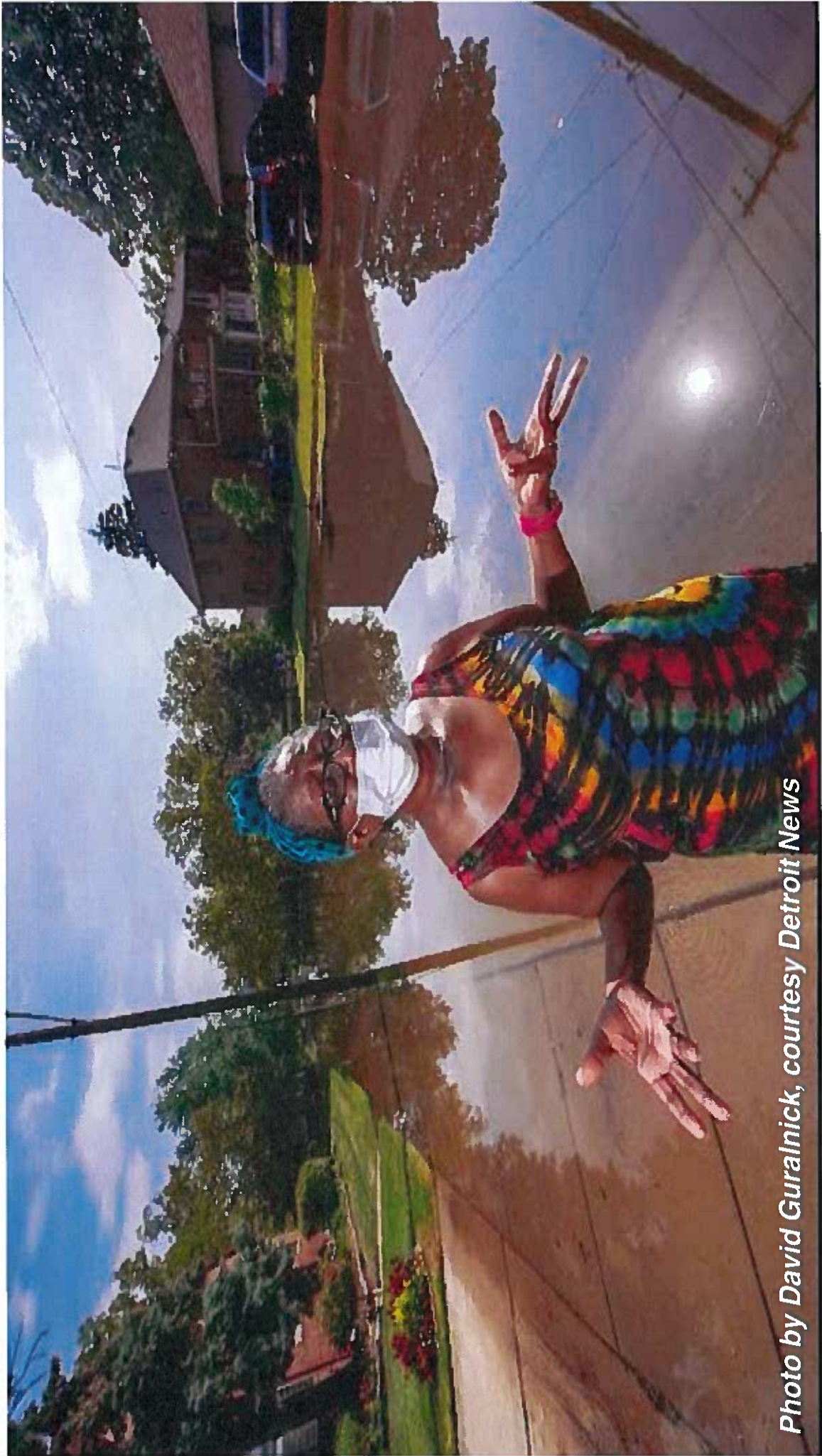


Photo by David Guralnick, courtesy Detroit News



# Drain Code Challenges

- Cost of drain improvements
- Permitting
- Inability to perform work on something that is not established as a drain



# Best Management Practices

## EXAMPLES

- Regional detention basins
- Rain gardens
- Roadside Infiltration
- Buffer strips



# Regional Detention





# Regional Detention



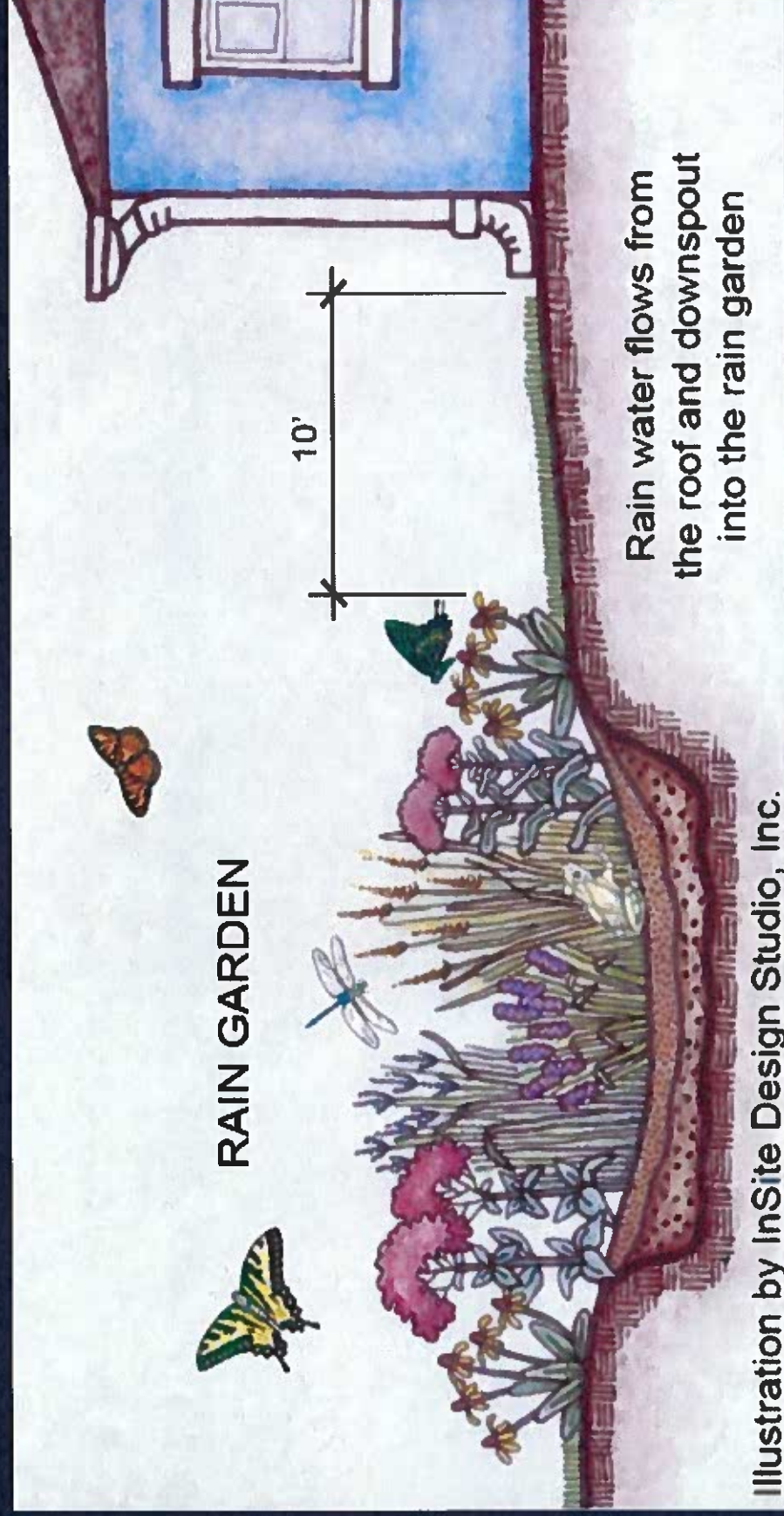


# Buffer Strips





# Rain Gardens



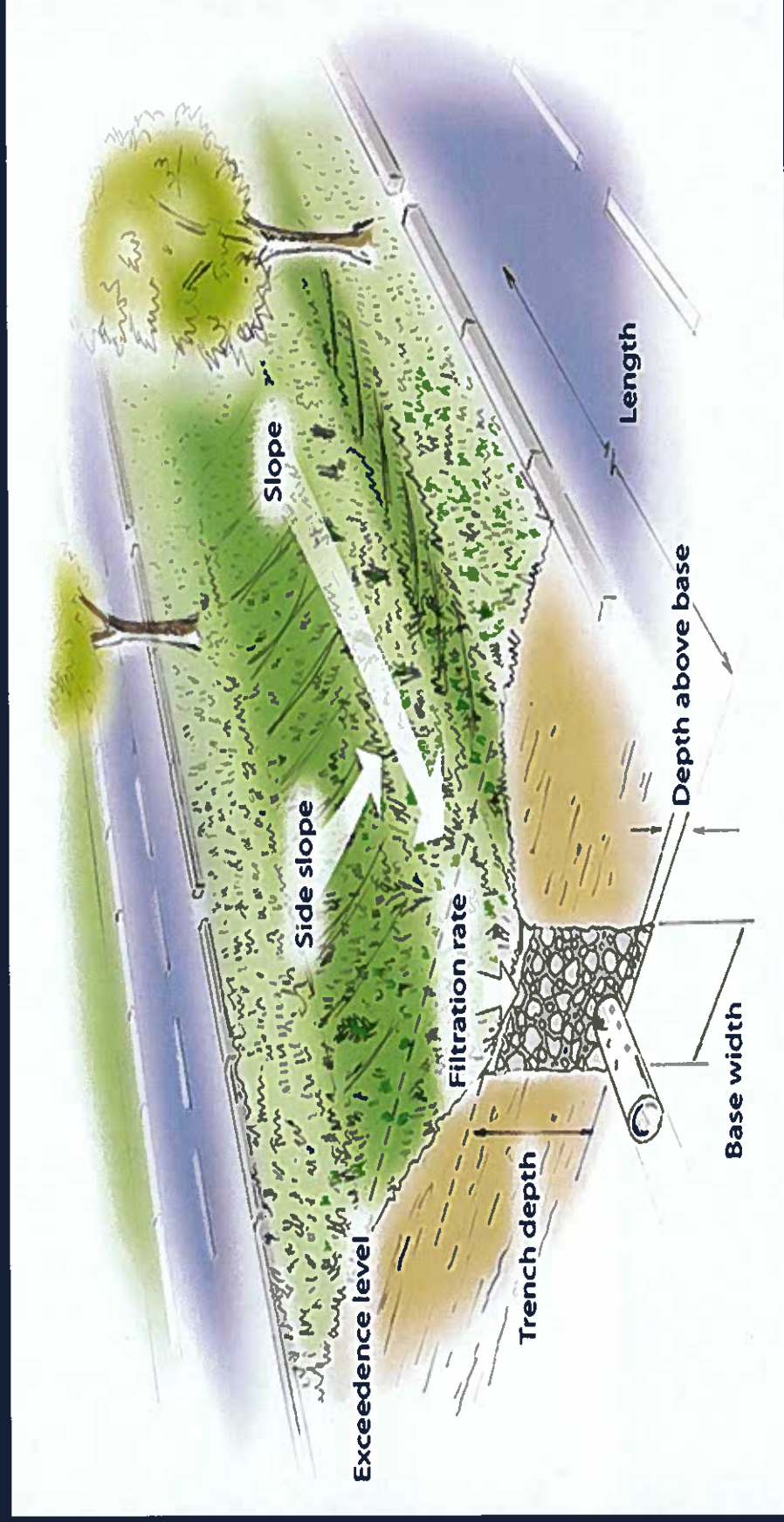


# Rain Gardens





# Roadside Infiltration





# Roadside Infiltration





# Renovating Existing Detention





# Property Owner Education



## 7 Tips to Keep Water Clean

### 2. Fertilize Sparingly and Carefully

Storm drains, found in our streets and our yards empty into our lakes and streams. So, when we fertilize our lawn we could also be fertilizing our lakes and streams. While fertilizer is good for our lawn, unfortunately it's bad for our water. Fertilizer in our lakes and streams causes algae to grow. This can cause large algal blooms in form, using up oxygen that fish need to survive. With a majority of the 1.5 million homes in Southeast Michigan fertilizing their lawn, all of us need to be aware of the impacts of our lawn care practices.

#### What can you do?

##### Do this

Select an organic or slow release fertilizer. Check the label. A slow release fertilizer has at least half of the nitrogen in water insoluble form. These fertilizers gradually release nitrogen to plant roots. This provides a steady supply of plant nutrients over an extended period of time. Because you need less fertilizer, you will save time and money.

##### Buy low

Select a fertilizer with low or no phosphorus. Most lawns already contain enough phosphorus. Excess phosphorus is the primary culprit of algal blooms in our lakes. The State's Healthy Lawns and Gardens Technical Committee has developed a list of [Recommended Fertilizers](#).

##### Mow high

Make your lawn cheaper and easier to maintain by mowing high (three inches is recommended). Tall grass promotes root growth and shades out weeds. Let short clips fall back on the lawn. Clippings recycle nitrogen back into the soil, so fertilizer can be reduced by 25 percent or more.

## WATERFRONT WISDOM — HEALTHY HABIT #1: MINIMIZE STORM WATER RUNOFF FROM YOUR PROPERTY

**CHALLENGE:** Excessive aquatic plant growth and algal blooms obstruct water clarity, deplete oxygen, and lower water quality. Stormwater runoff from lawns, driveways, roofs, and other areas can contribute to these problems.

**CAUSE:** Improvements to land use, such as additional lawn, driveway, roof, and other impervious surfaces, can increase runoff from your property and reduce infiltration of water into the ground.

**SOLUTION:** ADDRESS RUNOFF BEFORE IT LEAVES YOUR PROPERTY. BETTER YET, KEEP WATER ON YOUR PROPERTY FOR USE IN AREAS SUCH AS YOUR GARDEN.

### WHAT YOU CAN DO

Collect rainwater in your yard. Use rainwater in garden areas, such as a rain garden, or use a rain barrel for later use in the garden. Rain gardens are growing in popularity because they allow rainwater to infiltrate the soil instead of runoff allowing clean water to infiltrate and replenish groundwater supplies.



### HARVEST THE RAIN

**WATER:** Install a rain barrel which will collect runoff from rooftops when it rains or direct downspouts into garden areas. It's free water for use in the garden!

**BE NATURAL:** Plant and maintain a buffer of native vegetation (preferably Michigan native plant species) around the perimeter of your property and especially near the water to help filter runoff and provide added filtration. Native plant species are adapted to local soils, climate and environmental conditions. Native plants have extensive root

systems that slow water runoff, help infiltrate water back into the ground, minimize erosion, and filter pollutants from runoff before leaving your property.



### MINIMIZE IMPERVIOUS SURFACES

Use porous landscaping materials, such as light-colored mulch, to reduce runoff. Use permeable paving materials where water can infiltrate around and through the materials.



FOR MORE INFORMATION, GO TO [WWW.DNR.GOV/REPAIRAN](http://WWW.DNR.GOV/REPAIRAN)



# Assisting with Stormwater Ordinances





# Proposed Legislation: Key Points

- Intended to take “pressure” off drains by storing/managing water in the entire watershed
- Drafted to complement (not replace) other chapters of Drain Code
- More involvement from local units in decision-making process, especially in intra-county watersheds
- Increased planning by local units with ordinances/reviews





# First Step: Petition

- Section 552(2)
- 50 property owners in district
- 2 public corporations subject to assessment





# Boards with District in One County (Intra-county)

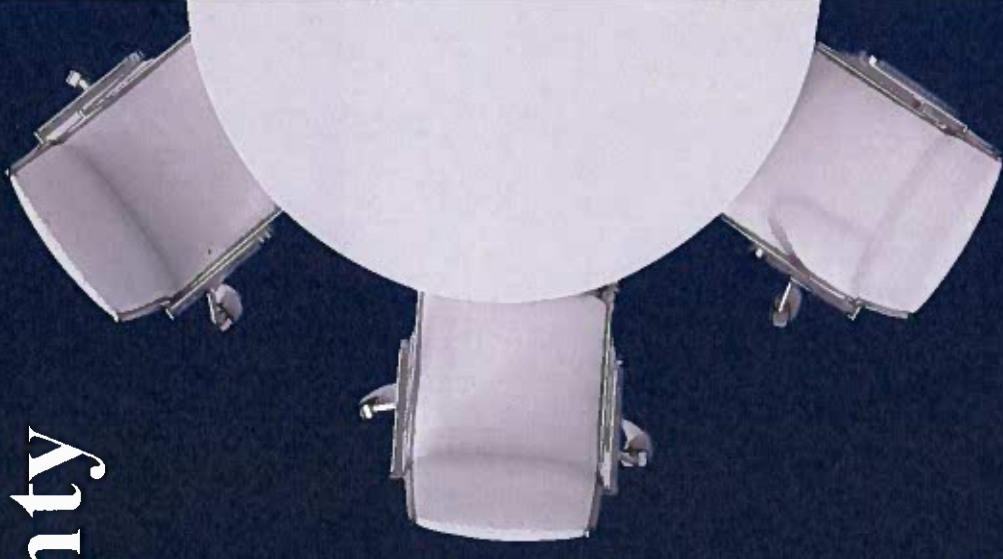


- Section 553(1)(a)
- Drain Commissioner (Chair)
- 1 member of each municipality in district
- If only 1 municipality involved, then municipality selects 2 members



# Commission/Intercounty

- Section 553(3)
- Board for necessity decisions
- MDARD (Chair)
- Drain Commissioner from each county
- County Board Chair from each county
- County Board Finance Chair from each county
- If 2 counties involved, 7-member board
- No Commission with intra-county drains





# Intercounty Boards

- Section 553(1)(b)
- Administers District (except necessity decisions)
- MDARD (Chair)
- Drain Commissioner of each county in District
- For certain counties with a population over 1 million, the Board also includes an appointee by each drain commissioner that is an elected official for 2-year terms (Section 553(1)(c))





# Second Step: Necessity Hearing

- Section 558
- Determine necessity of a water management program for the “public health, safety or welfare”
- Determine the boundaries of the water management district (notices sent based on tentative district)
- Determines municipalities subject to assessment at-large for benefits to public health





# Third Step: Develop a Proposed Plan

## Section 560

- Retain necessary qualified personnel
- Provides analysis and recommendations based on specific needs in watershed
- Advisory committees
- May utilize/consider existing plans for district area





# Plan Requirements



- Section 551(o)
- Recommendation for program activities
- Estimates of costs for each activity



# Comments on Proposed Plan

- Plan must be posted on internet in every affected county for at least 30 days
- Board shall consider the comments
- Board may make modifications to the proposed plan





# Plan Approval/Rejection

- Section 560(3)
- Board can:
  - Approve the plan
  - Modify and approve the plan
  - Reject the plan





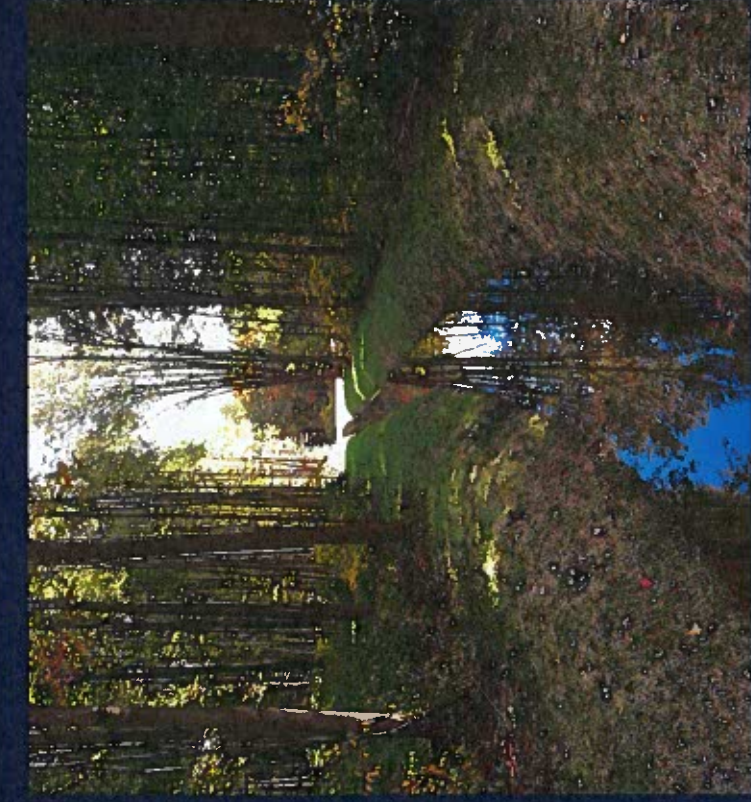
# Plan Approval/Rejection



- If rejected:
  - The petition is dismissed
  - Costs are assessed to the water management district
  - No new petition for 1 year



# Types of Allowable Activities



- Section 551(a)
- Stormwater management activities may include (but not limited to):
  - Stormwater reviews and ordinance drafting
  - Public education re: stormwater
  - Stormwater control facilities, infrastructure or equipment



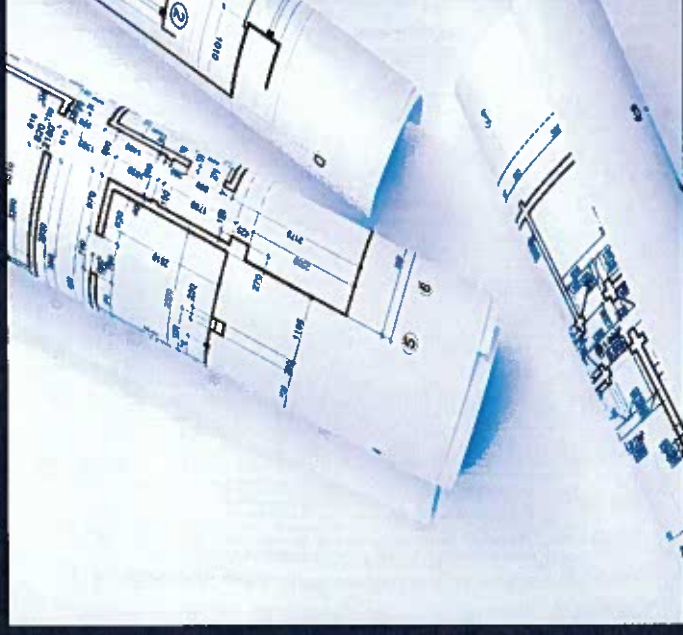
## Next Step: Adoption of Program and Selection of Activities

- Section 561b
- Order adopting Program shall describe 1 or more activities to be performed
- Program activities shall be consistent with water management plan
- Order includes apportionment between counties, if intercounty



# Next Step: Bids/Computation of Costs

- Section 562
- Bid shall be taken for construction portion of program activities
- Advertise for bids on county website(s)
- Computation of Costs (Section 573)





# Next Step: Apportionment of Benefits



- Computation of Costs (Section 573) Section 563
- Apportionments to same entities as in Chapter 4/6



# Apportionment – Benefits Derived

- Apportionment across the water management district must equal 100%
- Based on benefits derived

<u>Entity</u>	<u>Benefit Derived</u>
Townships, Cities, Villages	Public health and municipal streets
MDOT	State highways
Counties and Road Commissions	County roads
Property Owners	Lands owned in district



## “Benefit” defined in Section 551(c):

*“advantage to public corporations, the inhabitants of public corporations, or property that results from a water management program, including, but not limited to, a benefit as a result of contribution of stormwater, or a benefit from the elimination of water conditions that jeopardize the public health, safety or welfare.”*



# Day of Review of Apportionments

- Section 564
- Notice
- Computation of Costs must be available
- Same process for appeals as Chapters 4/6



# Assessments



- Up to 30-years (Section 569)
- Assessment placed on winter property taxes
- No assessments when no costs incurred



# Program Continuation/Maintenance

- Board continues with operation/maintenance of activities
- Must post annual report on status of program
- Assessments based on historic apportionment unless new Day of Review



# Additional Activities/Changes to Plan

- Additional activities in Plan require petition
- Amendments to Plan require petition
- Improvements to existing infrastructure, etc., requires petition
- Program infrastructure, etc., may be relinquished





# QUESTIONS?

