
OTTAWA COUNTY 'SHED' TALKS

Ottawa County Water Quality Forum | 2019



OUTLINE

BEN JORDAN

Bass River/Deer Creek Watersheds
Crockery Creek Watershed
Sand Creek Watershed
Pigeon River Watershed

GERRY KONING

Rush Creek Watershed

KELLY GOWARD

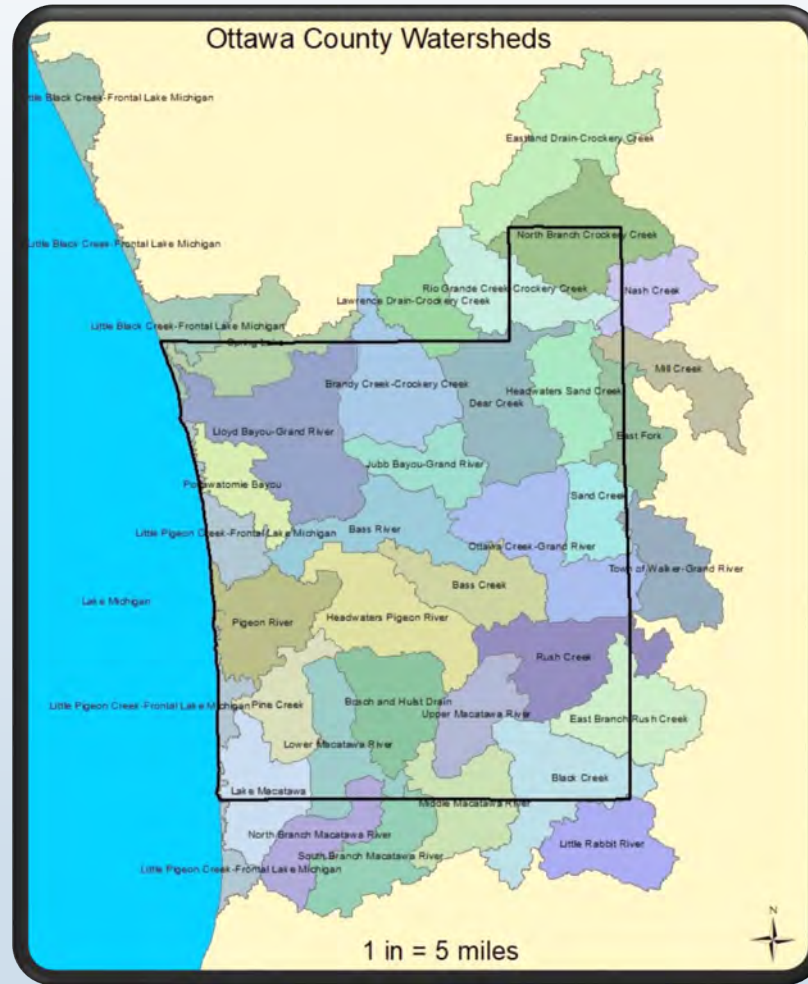
Macatawa Watershed

Watershed Projects

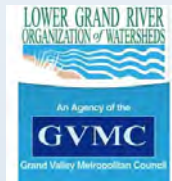
Benjamin Jordan

Watershed Coordinator - Ottawa Conservation District





Ottawa County
Where You Belong.

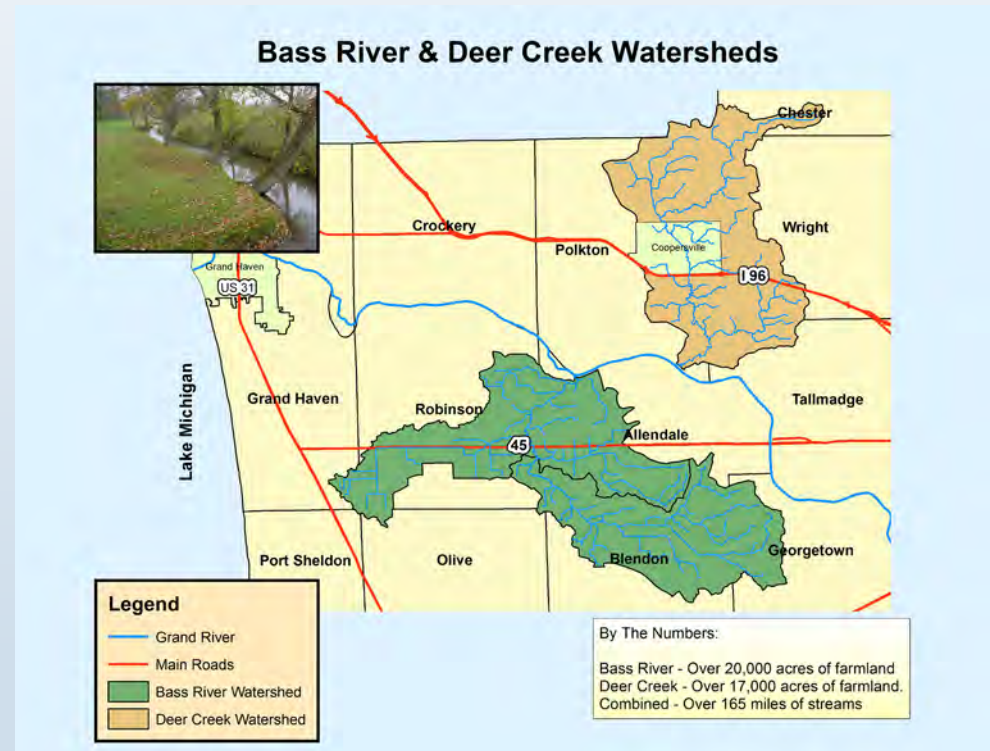


MA
ME
EE Macatawa Area Coordinating Council
A Cooperative Effort Among Units of Government

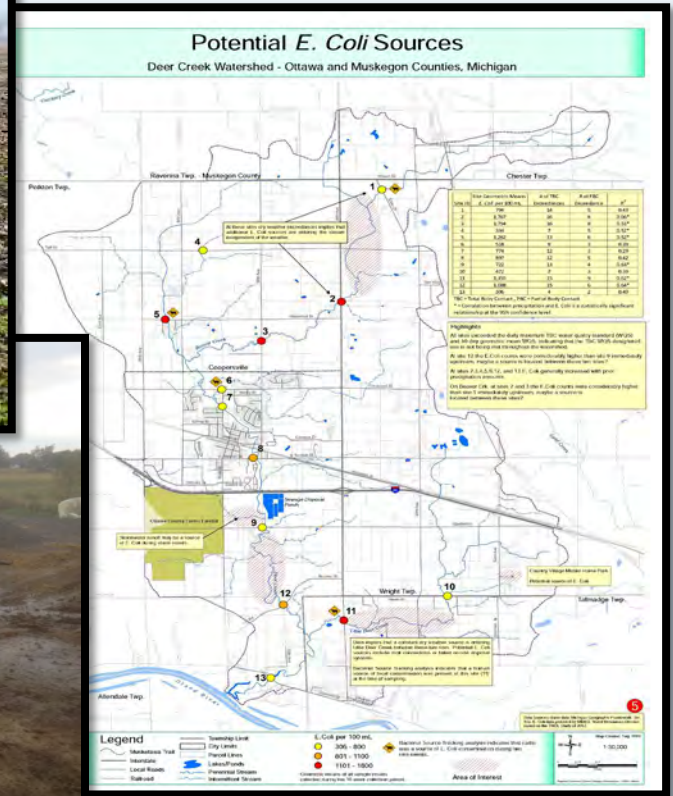


BRDC Restoration Project

- TMDLS for and E.coli and impairment for sediment/nutrients
- 319 Grant Funding from Michigan EGLE to address pollutant loading
- Multiple “phases” of the BRDC project, which will continue until 2021
- Phase 3 agreement was signed in Feb 2019 - total grant amount of \$1,224,424



BRDC Restoration Project





BRDC Restoration Project

BMPs Implemented

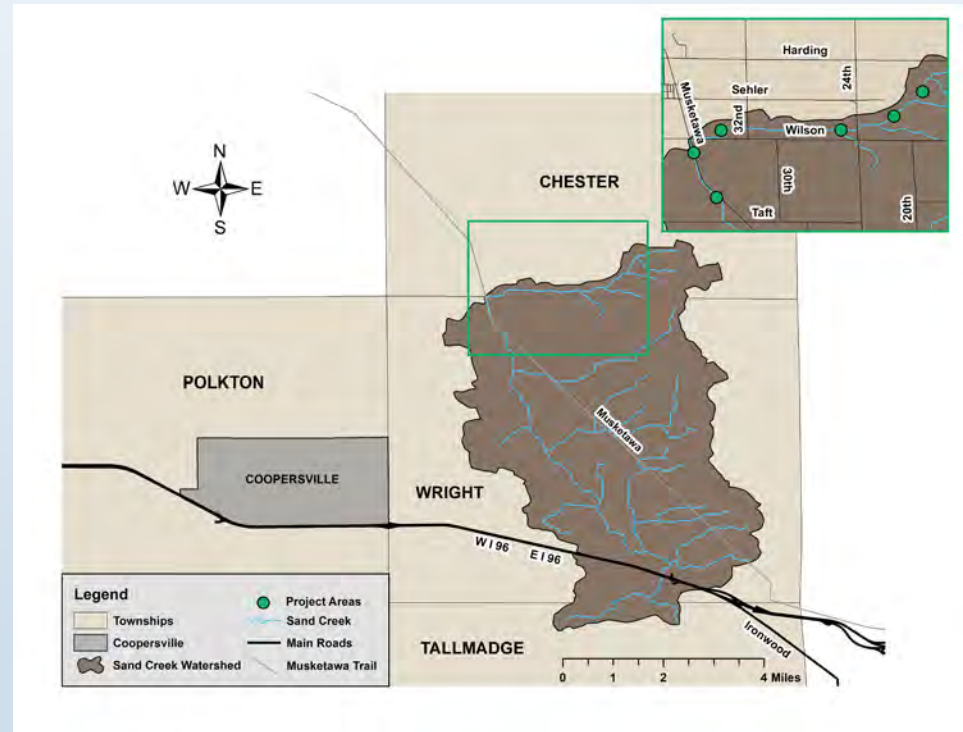
- Over 3000 acres of cover crops
- 40 septic systems replaced
- Other BMPs including:
 - Livestock fencing
 - Manure storage
 - Grassed waterway
 - Reduced tillage
- Around \$365,000 in cost share given to landowners

Load Reduction Estimates

- Reduction estimates found using STEPL and the SSIE
- 630 tons of sediment
- 3200 lbs. of Phosphorus
- 13,300 lbs. of nitrogen

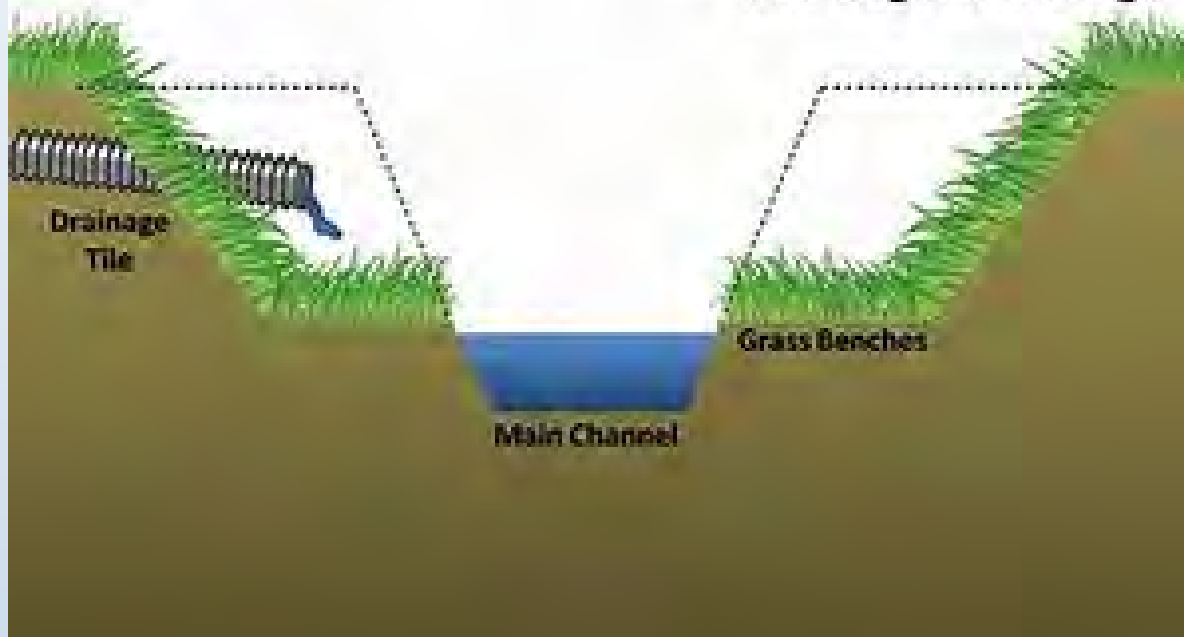
Sand Creek Restoration Project

- The OCWR was awarded a 319 Grant for the Sand Creek Watershed in 2017 - approximately \$600,000
- The project focuses on the upper 9 miles (also designated as county drain).
- 6 project areas for implementation - mostly two stage ditching, grade control, wetland enhancement.





Two-Stage Ditch Design



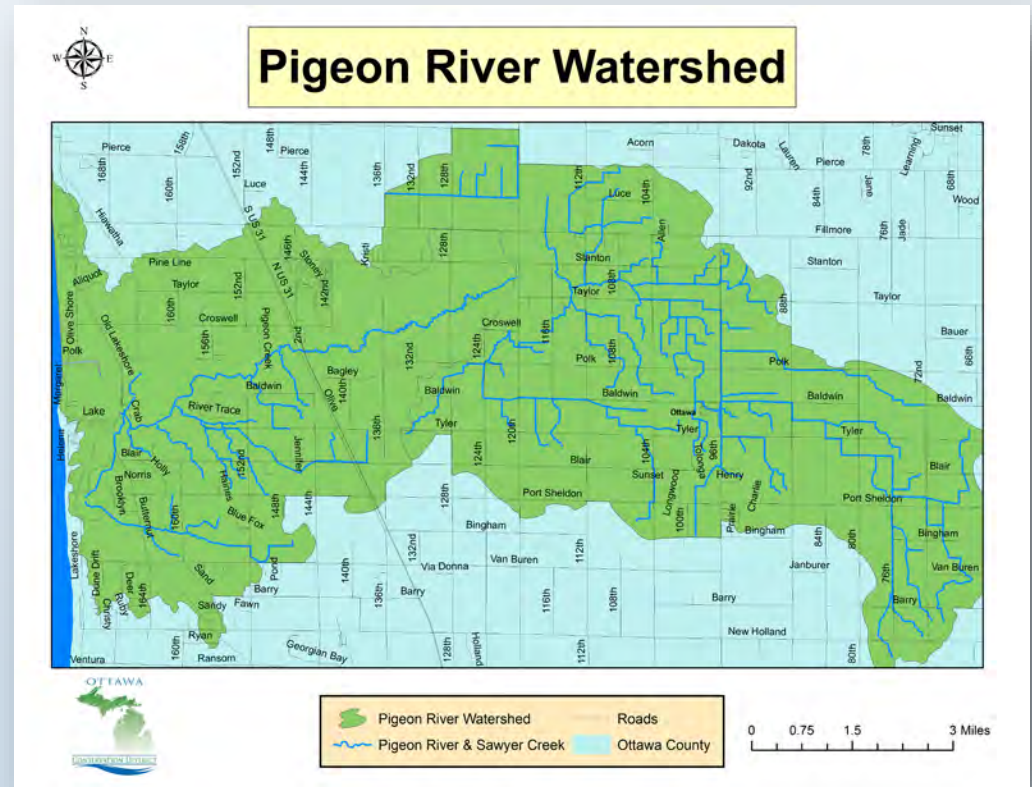
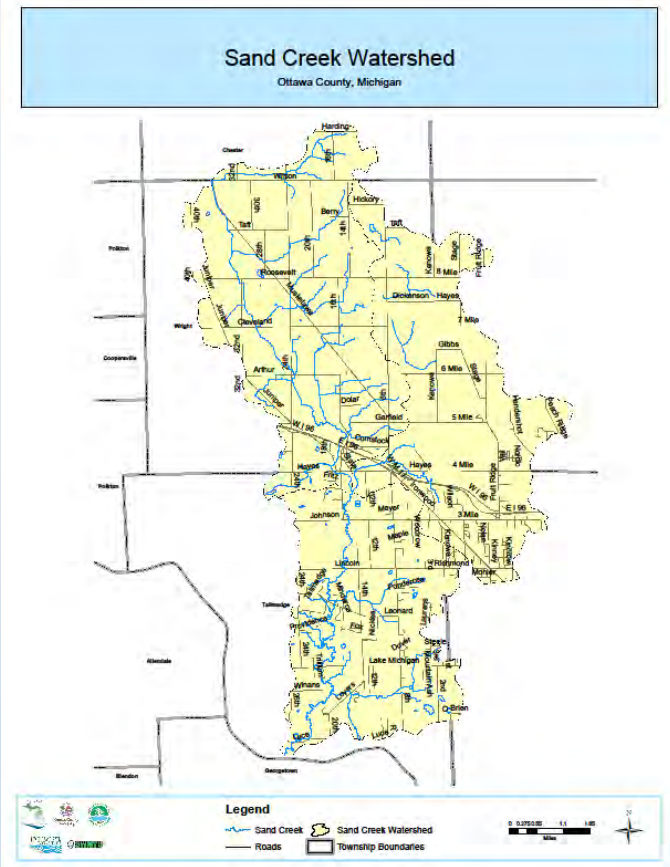
Sand Creek Restoration Project

OCD's Role

- Outreach and landowner coordination
- Informational materials, events, meetings, etc.
- Cost share for agricultural BMPs to reduce erosion/runoff



Road Stream Crossing Inventories



Road Stream Crossing Inventories

- The OCD is receiving funding from the Great Lakes Fisheries Trust to conduct inventories on the Pigeon River and Sand Creek
- Identifying perched, damaged, or undersized culverts
- Assessing current habitat conditions and possible restoration sites





Future Plans

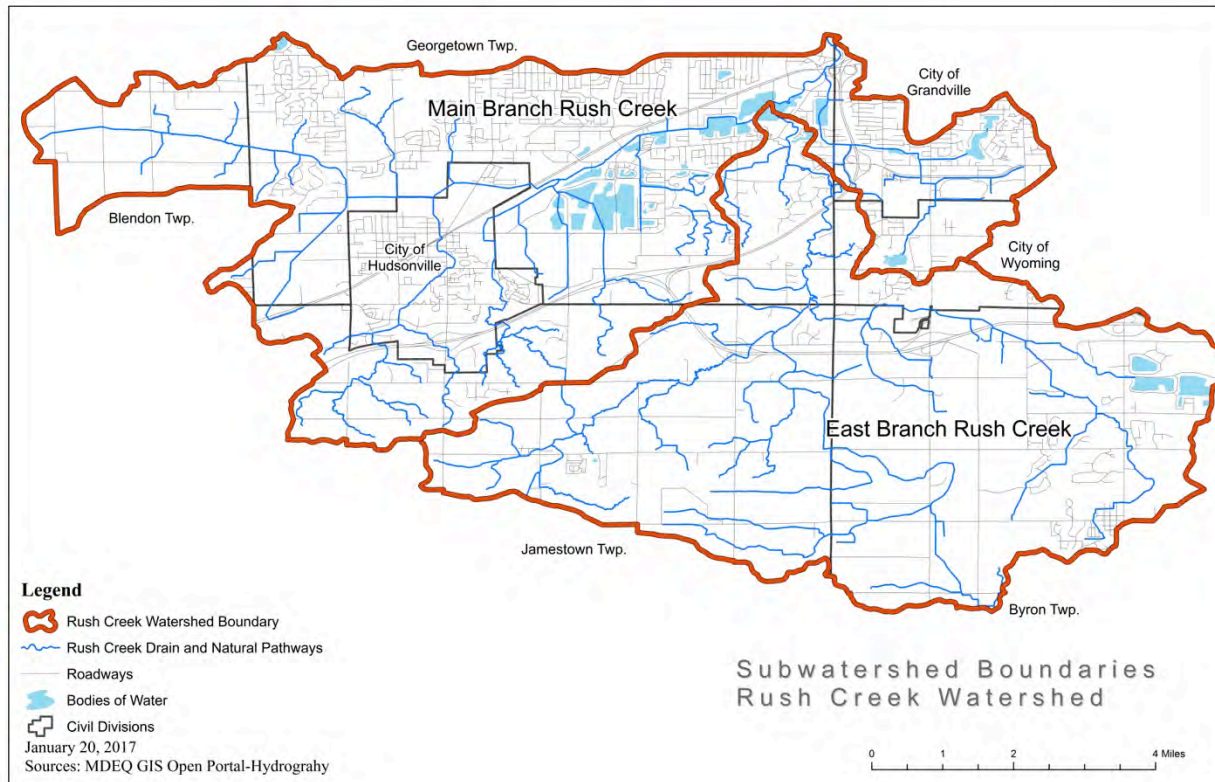
Pigeon River WMP

- The OCD was awarded a 319 grant to write a management plan for the Pigeon River Watershed
- OCD will be working with partners to conduct an inventory including
 - Habitat conditions
 - Fish and macroinvertebrate surveys
 - Water quality risks and potential BMPs
- Future 319 funding (implementation) requires an approved WMP

Crockery Creek

- Citizen led “Crockery Creek Advisory Board” formed in October of 2019
- OCD has met with the Crockery Lake Association about potential BMPs
- OCD is building toward a future 319 proposal for the Crockery Creek Watershed
- Next Advisory Board meeting is scheduled for Jan 28, 2020.

Rush Creek Watershed Management Plan





Things to know about this watershed:

- **It drains an area of approximately 59 square miles in Kent and Ottawa Counties**
- **52% of the water ways are designated as county drains**
- **The area was 16% developed in 1992, 51% developed in 2011**
- **This area had a population of 59,547 people in 2016**

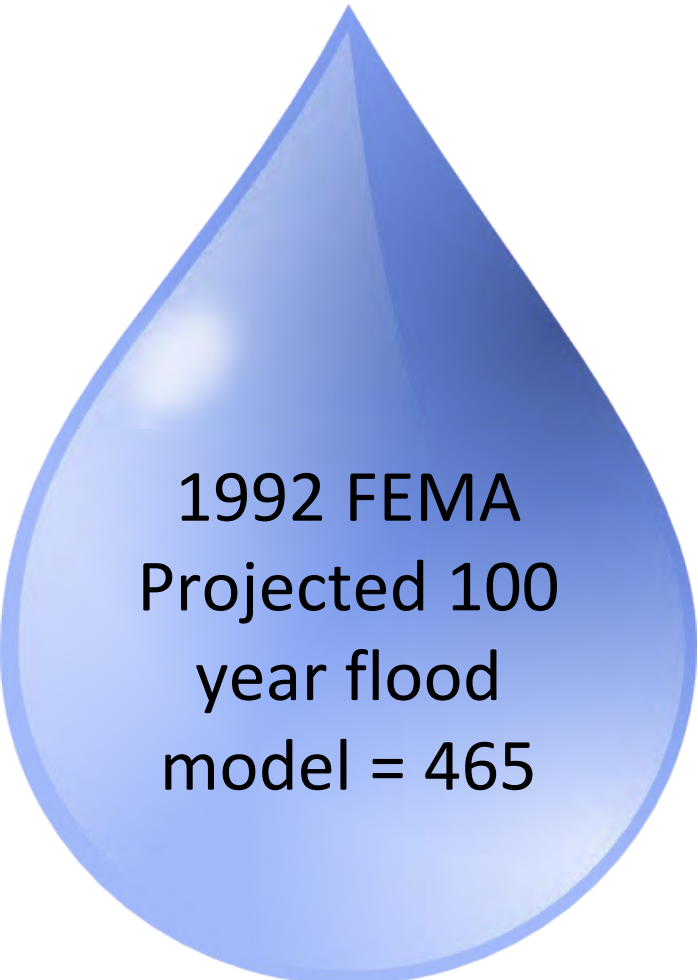
Watershed Pollution Reduction Goals - Ranked

- Reduce peak discharge
- Reduce *E.coli* concentrations
- Reduce Total Suspended Sediment concentrations
- Reduce water temperature in East Branch subwatershed
- Reduce nutrient loading
- Reduce pesticide concentrations reaching surface waters




Reduce Peak Discharge

Huizenga Drain (Kenowa Creek) Discharge in ft³/sec



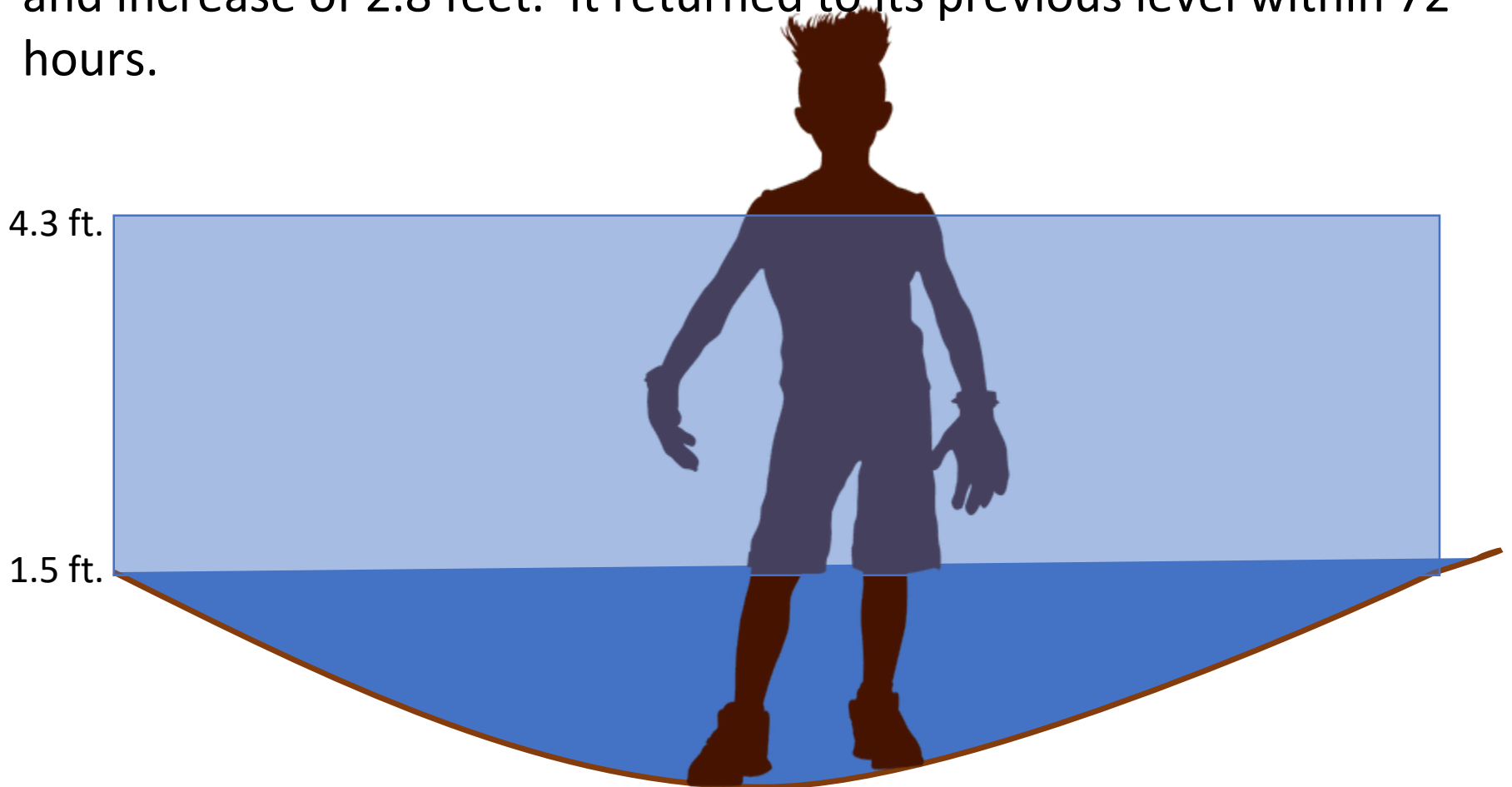
1992 FEMA
Projected 100
year flood
model = 465



2013 FEMA
recalculation for
100 year flood
event = 950

A 12 hour rain event was recorded to have dropped 1.21 inches of rain at the intersection of 12th Ave. in Jenison. The creek here is normally about 1.5 feet deep.

24 hours after the rain event started the creek peaked at 4.3 feet, and increase of 2.8 feet. It returned to its previous level within 72 hours.



Reduce E.coli

E.coli findings in the Rush
Creek Watershed

Front



Reduce Sediment

- Approximately 2,194 tons of sediment per year enter Rush Creek from overland erosion in the East Branch and 1,264 tons per year from the Main Branch, based on HIT modeling
- This is the equivalent of 3,557 cubic yards, or enough to fill 355 full size dump trucks!



Preservation and Restoration Goals

1) Review and adopt needed Post Construction Controls Stormwater Ordinances and County development rules in all urbanized and non-urbanized areas.

2) Protect and preserve existing wetlands and restore historic wetlands by means such as two-stage ditches and installation of appropriate wetland vegetation and green infrastructures.



Preservation and Restoration Goals

3) Require homes with access to sanitary sewer to connect, and for all others develop and implement a septic system I/E campaign that includes incentives for better management and includes developing a septic ordinance in Kent County. Investigate sanitary sewer expansion in areas of high-density septic systems.

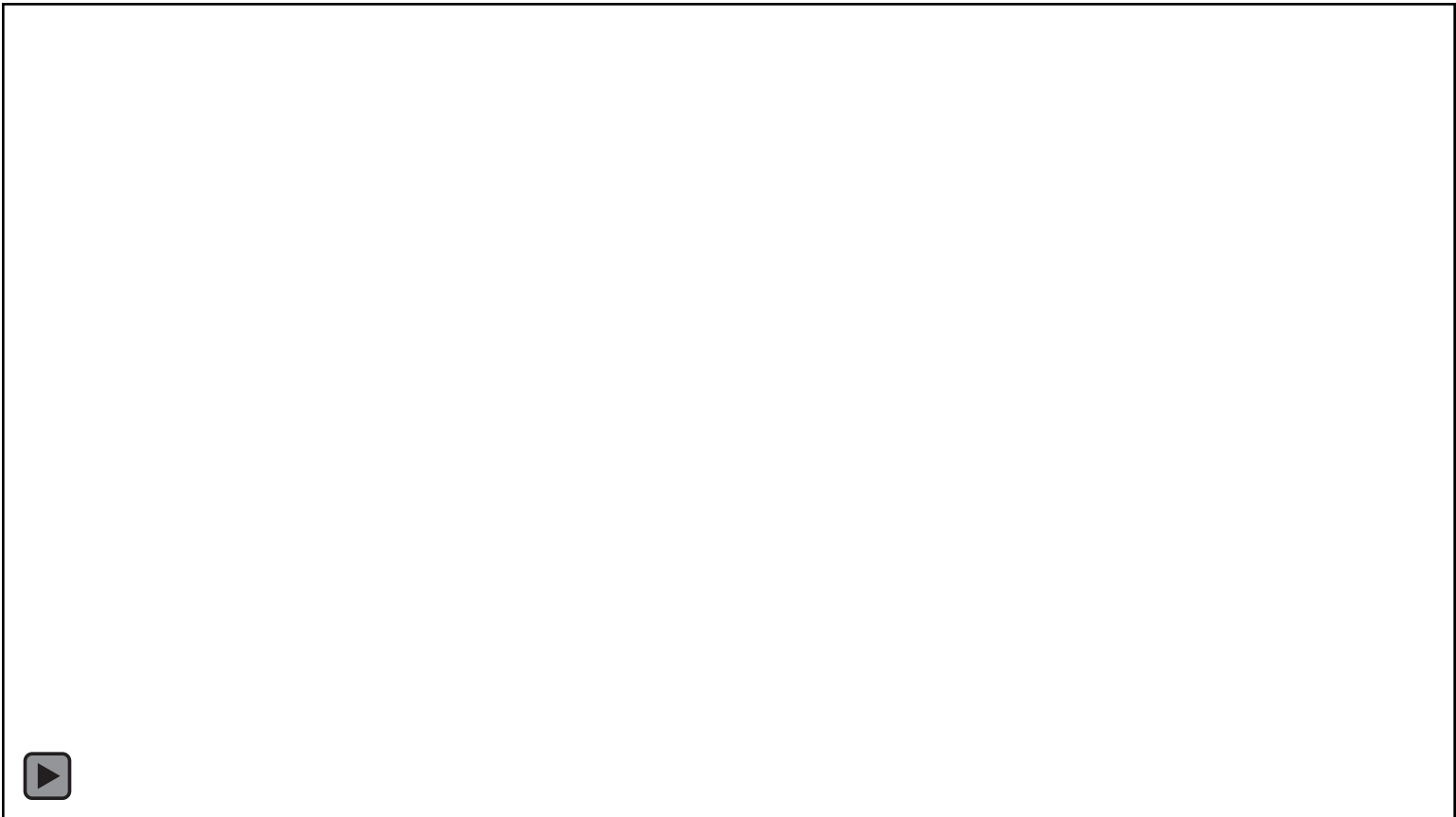
4) Hold meetings with farmers, including muck farmers, hobby farmers, and greenhouse operators, to encourage BMP adoption and provide assistance if needed.

Preservation and Restoration Goals

- 5) Develop and encourage BMPs for bank stabilization, expanded riparian zones, and Road and Stream Crossing inventory and street sweeping.
- 6) Encourage improved management of developed land, lawns, and turf grass.
- 7) Advertise an illicit discharge reporting system.
- 8) Manage Rush Creek to facilitate its use for kayaking.

Rush Creek – Changing Culture

Rush Creek is not merely a drain. Rush Creek is a natural wonder and resource!

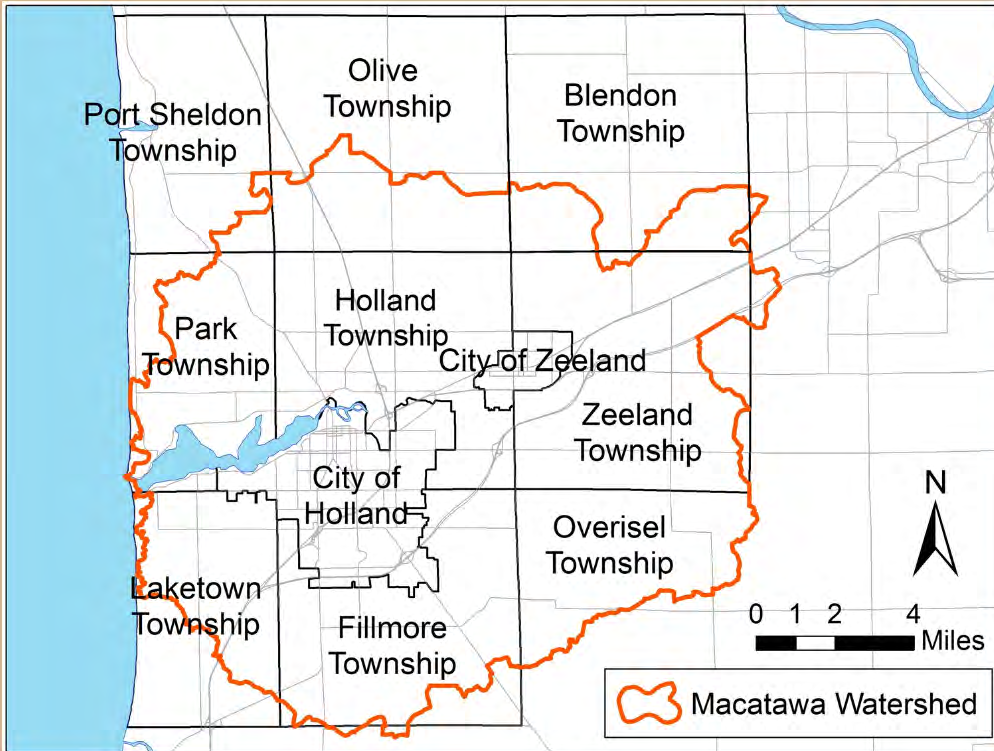


Rush Creek is a natural wonder worth saving.



MACATAWA WATERSHED

OVERVIEW



- 175 square miles in SW Ottawa and NW Allegan Counties
- 46% agriculture, 33% urban
- Too much sediment and phosphorus
- Projected started at the MACC in 1996
- December 5: Annual Meeting

2019 HIGHLIGHTS



OUTREACH & EDUCATION

12 community events
4 community presentations



VOLUNTEERS

river cleanups
macroinvertebrate monitoring
road-stream crossing inventories
storm drain stenciling

2019 HIGHLIGHTS



STORMWATER MANAGEMENT

county and city development rules
employee training

Making the Case for Green Infrastructure



AGRICULTURAL PROGRAM

GLRI: cover crops and grassed waterways
GLC: two-stage channel restoration

2019 HIGHLIGHTS



STREAMBANK RESTORATION

GLC grant

Noordeloos Creek in Zeeland Township



PROJECT CLARITY

agricultural BMPs

Macatawa Water Festival

streambank restoration - Peter's Creek

QUESTIONS?

BEN JORDAN

benjamin.jordan@macd.org

GERRY KONING

pastorgerry@trinity-crc.org

KELLY GOWARD

kgoward@the-macc.org

