

Department of Engineering

CITY OF MIDDLEBURG HEIGHTS

15700 Bagley Road • Middleburg Heights, Ohio 44130

Matthew J. Castelli
Mayor

Michael Mackay
City Engineer



MEMO

TO: Mayor Castelli
Council

CC: Jim Herron
Richard Halishak
Kim Kerber

FROM: Michael Mackay

DATE: February 8, 2021

RE: 2020 FLOODING INVESTIGATION

The following is an update of the City's plan of action in connection with the three recent rainfalls (March 29, May 15 and September 7, 2020) that resulted in flooding in the City.

1.0 INDIVIDUAL HOME DIAGNOSTICS (Due to COVID-19 restrictions and weather conditions there are no updates to the home diagnostics.)

Mackay Engineering is maintaining a spreadsheet and a file for each homeowner that has reported flooding to the City. Our current spreadsheet has about 164 homeowners who have reported flooding from these past three storms. Each resident that has reported flooding to the City (and for whom we have a telephone number) has been called by Rick Halishak, our resident flooding specialist, and he is meeting with the residents to discuss their flooding issues and make recommendations to the homeowners. Due to COVID-19, in-home visits have been suspended but outside visits with residents will resume this week.

Approximately 100 residents have been visited by Rick Halishak to date. Additionally Rick Halishak has made site visits with City personnel involving issues that affect an additional approximately twelve residents. Additionally several residents have been removed from the list, at their request, and several residents have not responded to several requests for information. Each resident that has been visited will be provided with a flooding investigation report that will detail the advice provided to the homeowner.

2.0 LOCALIZED FLOOD AREAS

Mackay has been working with R2O on the four chronic flooding areas discussed below. R2O has studied these areas utilizing the sanitary sewer modeling that is now available to the City from NEORS.

The City administration met with R2O and decided to begin planning and to determine possible funding sources for the following projects. The project priorities will be

MH 2020 Flooding Investigation 011121

established after some additional planning and a determination of how each project will be financed.

Newton/Elmdale – begin planning and determine possible funding sources.

Indian Creek – Our OPWC application for funding Indian Creek did not score high enough to receive funding. We are discussing this with the administration and are considering reapplying this year and are also considering applying for funding from NEORS.

Elderdale/Farnum – determine possible funding sources.

The Old Pleasant Valley/Shawnee area will be studied as part of the design of Big Creek Parkway Basin No. 2. We feel the installation of this detention basin should benefit this area and the design of this basin will help us to determine the extent of the benefit. Additionally, the rear yard sewer was recently cleaned by the County.

3.0 BIG CREEK PARKWAY DETENTION BASINS

The City has closed on the acquisition for the properties needed for Basin No. 3 and we are in the planning and design phase for the basin. The acquisitions necessary for Basin Nos. 1 and 2 are continuing.

4.0 ADDITIONAL FLOODING AREAS

The following areas of general surface flooding have also been investigated by Mackay and the City.

4.1 Revere Circle

The City provided the residents with permission from CEI to install swales to protect their homes from the water drainage off the CEI property.

4.2 Ragall Parkway

The City presented to several residents on Ragall Parkway a similar solution (i.e. rear yard swales) to water drainage off the CEI property.

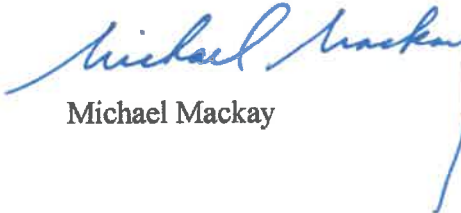
4.3 Craigmere

- a) The City is investigating whether it is feasible to add another outlet from the Craigmere area to the existing ditch near the railroad tracks.
- b) The City will also investigate whether to reinstall a catch basin that was removed nearly 20 years ago.

4.4 Grant

The City will continue to monitor and clean the flow restrictors that were installed on the catch basins in this area. The City will also request the County to film and clean any sewers in this area that are not functioning properly.

- 4.5 Fry Road
Two areas need swales/ditches installed or cleaned in order to provide better yard drainage. The City will need to obtain permission from the landowners prior to any work.
- 4.6 Bagley Road
The City will have the County film and clean pipes that are draining rear yards and which do not appear to be functioning properly since the Bagley Road widening.
- 4.7 Pine Valley Apartments
The City has granted permission to the apartment owners to extend the earthen berm along Baldwin Creek.
- 4.8 First Avenue
The City is working with the City of Berea and is preparing plans to install a secondary storm sewer outlet for the area of First Avenue which floods during large rain events.
- 4.9 City Hall Park Detention Basin
Mackay has started the design of a detention basin at City Hall which will protect adjoining residents along Big Creek Parkway from storm water runoff from the City park.



Michael Mackay

/pmb

Department of Engineering
CITY OF MIDDLEBURG HEIGHTS

15700 Bagley Road • Middleburg Heights, Ohio 44130

Matthew J. Castelli
Mayor

Michael Mackay
City Engineer



**MIDDLEBURG HEIGHTS
FLOODING ISSUES
FEBRUARY 8, 2021**

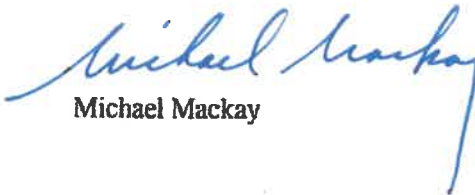
Localized Flooding Areas – The City administration has decided to begin planning and to determine possible funding sources for the following projects:
Newton/Elmdale – begin planning and determine possible funding sources.
Indian Creek – funding was not approved by OPWC. The administration is considering whether to reapply this year and also to procure funding through NEORS.
Elderdale/Farnum – determine possible funding sources.

Old Pleasant Valley/Shawnee. - The County has cleaned the rear yard storm sewer. Additionally, the construction of Big Creek Detention Basin No. 2 should also improve the flow through this sewer.

City Hall Detention – We are in the process of designing a small detention basin at City Hall to intercept water flowing towards Big Creek Parkway residents. We are finalizing the design of the detention basin and will be bidding the project in the near future.

Big Creek Detention Basins – Currently performing surveying and engineering for Basin No. 3.
- Continue to pursue acquisition of land for Basin Nos. 1 and 2.
Preliminary schedule for Basin No. 3 is attached.

First Avenue – We are currently designing a secondary/overflow 8” storm sewer to be installed on First Avenue. The City is obtaining necessary easements and expect the project to be bid in the near future.


Michael Mackay

CITY OF MIDDLEBURG HEIGHTS
 BIG CREEK / PEARL BASINS
 (ABRAMS CREEK BASIN '3')
 PRELIMINARY SCHEDULE

TASK	NOV. 2020	DEC. 2020	JAN. 2021	FEB. 2021	MAR. 2021	APR. 2021	MAY 2021	JUN. 2021	JUL. 2021	AUG. 2021	SEP. 2021	OCT. 2021	NOV. 2021	DEC. 2021
BASIN '3' PROPERTIES ACQUIRED														
BASIN '3' FIELD WORK														
BASIN '3' 30% DESIGN														
BASIN '3' 30% REVIEW NEORSD														
BASIN '3' 90% DESIGN														
BASIN '3' 90% REVIEW NEORSD														
BASIN '3' BIDDING & AWARD														
BASIN '3' CONSTRUCTION'														
BASIN '3' WETLANDS - ADD'L LAND														
BASIN '3' NATIONWIDE PERMIT														
BAT SURVEY														