

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: August 10, 2020

RE: 2020 FLOODING INVESTIGATION

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

1.0 INDIVIDUAL 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 134 homeowners who have reported flooding from these past two 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. There are several residents for whom we do not have correct telephone numbers and we are working to find these telephone numbers.

Approximately 36 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. Each resident 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 listed below. R2O is studying these areas utilizing the sanitary sewer and storm water modeling that is now available to the City from NEORS. R2O is finalizing conceptual alternatives for three of the areas and the Old Pleasant Valley/Shawnee area requires additional analysis. These conceptual alternatives will be reviewed with the City within the next couple of weeks. Mackay will then work with R2O and the City to develop conceptual cost estimates for

each of the proposed alternatives. We had a working session with R2O on Friday, July 31, 2020 to review results of the modeling and the following solutions were reviewed.

- 2.1 Old Pleasant Valley/Shawnee – Additional field information and modeling is needed for this area. The rear yard storm sewers are inadequate and the solution will likely be some type of rear yard storm water detention. We are also reviewing with the City our recommendation for an emergency overflow swale to be installed for the two houses at the north end of Shawnee.
- 2.2 Indian Creek/Gerald Drive – The modeling indicates the problems in this area are related to sanitary sewer capacity. Inflow and infiltration ratios are within expected tolerances. The recommendations for this area are likely to be replacement sanitary sewers or the addition of a sanitary trunk sewer.
- 2.3 Newton/Elmdale/Bellmeadow - The modeling indicates the problems in this area are related to sanitary sewer capacity. Inflow and infiltration ratios are within expected tolerances. The recommendations for this area are likely to be replacement sanitary sewers or the addition of a sanitary trunk sewer.
- 2.4 Elderdale/Farnum – The modeling indicates the problems in this area are related to sanitary sewer capacity. Inflow and infiltration rates are within expected tolerances. The recommendation for this area is likely to be a sanitary relief sewer. R2O is also reviewing the possibility of diverting sanitary sewer from Pearl Road to a different trunk sewer tie-in point, which will reduce the load on the sewer in the Elderdale/Farnum area.

3.0 BIG CREEK PARKWAY DETENTION BASINS

The City is in the process of talking with the landowners about land acquisition in the areas where the detention basins are currently planned.

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.


Michael Mackay

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