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: June 5, 2020

RE: 2020 FLOODING INVESTIGATION

The following is an outline 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 compiling and will maintain a spreadsheet and a file for each homeowner that has reported flooding to the City. Our current spreadsheet has about 125 homeowners who have reported flooding from these past two storms. Each resident that has reported flooding to the City is being called by Rich Halishak, our resident flooding specialist, and he is meeting with the residents to discuss their flooding issues and he is making recommendations to the homeowners.

Individual homeowners are being encouraged to install safeguards to their homes to protect against surcharging sewer mains [e.g. improve sump pumps/install back-ups; disconnect downspouts; eliminate/protect sanitary drains from sanitary main back-ups (backflow preventers 1 or 2, stand pipes, grinder pumps, seal drains); eliminate cross connections.]

2.0 LOCALIZED FLOOD AREAS

Mackay maintains and updates a map showing the location of homeowners that reported flooding to the City. Based on this map, we have determined the following areas within the City have had several house basements that flooded. The City has hired R2O to work with Mackay in determining solutions to these chronic flooding areas. R2O is an engineering firm with expertise in flooding, hydraulics and infrastructure. R2O will use existing data from Mackay, and the hydraulic modeling that is now available from NEORSD to study and make recommendations for the following chronic basement flooding areas. R2O will use an approximate hydraulic analysis to determine conceptual alternatives (e.g. detention, inflow/infiltration redirection and/or sewer system

reconstruction) for bringing the four chronic flooding areas to higher levels of service during intense rainfalls.

2.1 Old Pleasant Valley/Shawnee

2.2 Indian Creek/Gerald Drive

2.3 Newton/Elmdale/Bellmeadow

2.4 Elmdale/Farnum

3.0 BIG CREEK PARKWAY DETENTION BASINS

The City has entered into an agreement with NEORSD to construct three large detention basins in the Big Creek Parkway area between Smith Road and Bagley Road . This is a project estimated at about $5.5 million dollars. 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 will also be investigated by Mackay.

4.1 Revere Circle
Rear yard flooding from the CEI easement.

4.2 Craigmere/Grant area
Yard and street flooding. ODOT has cleaned out a culvert under I-71 that may have contributed to the surface flooding. The City will also investigate whether water is flowing to this area from the City park and whether a detention basin on the City park area will help alleviate the flooding.

Michael Mackay

/pmb

STREETS COMMITTEE AGENDA

JUNE 8, 2020

6:30 P.M.

AGENDA ITEMS:

- SOUTHLAND REDEVELOPMENT
- PEARL AND SPRAGUE ROAD UPDATE
- 2020 STREETS PROGRAM
- FLOODING UPDATE
- OTHER ISSUES THAT MAY REQUIRE DISCUSSION