

Regional Flood Mitigation Meeting

21 October 2020

6:00 PM

There were 26 attendees and 20 panelists.

Organizations Represented:

- Congressman Schneider
- Senator Morrison
- Representative Morgan
- Municipalities:
 - City of Highland Park
 - City of Lake Forest
 - Village of Deerfield
 - Village of Glencoe
 - Village of Lake Bluff
- Lake County Commissioner Paul Frank & Stormwater Management Commission Representatives
- East Skokie Drainage District
- Army Corps of Engineers

Mayor Rotering welcomed everyone and provided a summary of the agenda.

Legislative Reports

Congressman Schneider's District Director Greg Claus provided the following update:

- Based on requests from Highland Park, Congressman Schneider has been working to include Lake County in Section 219 of the Water Resources Development Act (WRDA) Sec. 219 designates specific geographic areas – like counties – as eligible for assistance from the Army Corps on environmental infrastructure projects that address specific challenges, such as flood mitigation or stormwater management. Inclusion in Sec. 219 is not a panacea for any community's water issues because, as with most Army Corps projects, there is a required nonfederal funding match, typically of 25% of the project's cost. As with all other Army Corps projects, anything under Sec. 219 would also be subject to a cost-benefit analysis greater than 1:1 in order to proceed—in other words, the proposed project would need to mitigate damage such that its mitigation benefits outweigh the overall cost of the project.
- Securing Sec. 219 status for Lake County has been attempted in the past. Then-Senator Obama tried to include Lake County in the 2006 WRDA bill, but that bill was never enacted. And no community has been added to Sec. 219 authority since 2007. Even once a community secures Sec. 219 status, there is still a long, separate process towards securing federal appropriations—funds that would still be subject to the cost-benefit analysis and local match.
- Earlier this year, once the 2020 WRDA cycle began to consider Member requests, Congressman Schneider testified before the Water Resources Subcommittee advocating for Lake County to be designated a Sec. 219 community. Congressman Schneider also offered an amendment when the bill was on the floor to include Lake County as a Sec. 219 community. However, largely as a result of the COVID-19 pandemic, the bill was passed by suspension—a faster mechanism for moving legislation that does not allow for the consideration of amendments. The bill now awaits Senate consideration.
- Congressman Schneider has raised Sec. 219 in several of his meetings with the regional leadership of the Army Corps, and will continue to advocate for Lake County's inclusion in upcoming WRDA

cycles. Because most of the baseline for a given year's WRDA bill is derived from the Army Corps' Chief's Report, we will continue to engage with the Army Corps leadership to encourage their inclusion of the proposal – however, given the past cost-benefit analysis of projects, that will remain a challenge.

- Beyond our work on Sec. 219, Congressman Schneider has worked to support Gov. Pritzker's requests to address the significant coastal erosion experienced by Highland Park and other lake shore communities. He has also joined letters with the Great Lakes Task Force supporting greater investment in coastal resiliency efforts.
- Congressman Schneider has also long advocated for more robust funding in a variety of appropriations accounts that would help the community, including an Army Corps Great Lakes Coastal Resiliency Study, expansion of NOAA coastal resiliency grants, increased funding for the Great Lakes Restoration Initiative, supporting funding for EPA Combined Sewer Overflow grants, and FEMA pre-disaster mitigation grants.
- Congressman Schneider has also testified before the Select Committee on the Climate Crisis to highlight the local impact we are seeing from climate change, including more precipitation in the region and the need for greater federal investment to address these challenges.
- They will continue to advocate for Highland Park and other IL-10 communities in the face of increasing water-related challenges.

Senator Morrison

Senator Morrison reported she was able to secure \$5M from the State to purchase homes as part of the Home Buy-Out program. These homes would be designated by the SMC subject to meeting certain criteria. The funding is not yet readily available, but is anticipated to be appropriated as funds are available from the State.

Representative Morgan

Representative Morgan recognized the leadership efforts from all parties to address the important issue of flooding. As Senator Morrison noted, \$5M was able to be earmarked for Highland Park for flood mitigation. On the House side, all Lake County representatives requested regional funding and they were able to secure \$122M in capital commitment for stormwater management. Those funds will be advanced in the coming years. The funding will aid in the ability to fund the County's stormwater plan. Representative Morgan has been working diligently, and will continue to do so, to reinforce that these funds are a priority.

Municipal Reports – City of Highland Park

Ramesh Kanapareddy, Director of Public Works shared that the City of Highland Park is located along nearly five miles of Lake Michigan with two rivers running through the City, Skokie River and Middle Fork River. Throughout the years, the City has experienced substantial flooding in low level areas near the two rivers, especially after receiving heavy rainfall. When the area is inundated with significant rain in a short period of time, the City's storm sewers and the Skokie and Middle Fork Rivers do not have time to recede and the surrounding low lying areas are flooded. The continuous rain causes the rivers to overflow and impacting the nearby residents. All low lying areas were developed prior to adoption of FEMA and City Floodplain Ordinances that prohibits construction of new houses in floodways. As a result of frequent flooding, the City has made stormwater management a top priority. The City has increased its investment in its infrastructure and also has a robust maintenance program to ensure storm sewers are functioning and free of debris.

In an effort to assist with flood mitigation, City has also partnered with various agencies such as Army Corps of Engineers (ACOE), Illinois Department of Natural Resources (IDNR), Illinois Emergency Management Agency (IEMA), Lake County Stormwater Management Commission (SMC), East Skokie Drainage District (ESDD), West Skokie Drainage District (WSDD), Lake County Union No. 1 Middle Fork Drainage District (Union 1 DD), and surrounding municipal entities. In October 2019 and April 2020, City hosted regional flood meetings inviting federal, state, and local legislators along with representatives of above-mentioned partnering agencies. The meetings were well attended by residents and provided information on the efforts by various agencies to address regional flooding.

The City, on its own, has also worked on various initiatives in reducing flood impacts to our residents. City's efforts include both regional effort in partnership with various entities and local efforts to improve stormwater management including flood mitigation efforts.

Listed below are several City efforts to reduce flooding:

1. City of Highland Park regularly contributes to flood mitigation efforts, including working with Lake County SMC to coordinate buyouts on some of the impacted flood prone homes. As of October 2020, Lake County SMC identified eight properties to be demolished as part of FEMA or IDNR Flood Buy Out Program. Upon demolition and restoration of property to grassy areas, the properties will have a restrictive covenant on them to ensure no future homes are built on these properties. City will be the ultimate owners of these Buy Out lots.
2. Over the past two years, City has installed on backflow preventers on specific storm sewer improvement projects. The backflow preventers is an additional measure to upsizing the storm sewers for added protection during low rainfall events. So far, City installed backflow preventers on few storm sewer structures on Tanglewood Ct and Taylor Ave as part of infrastructure improvements. City is scheduled to install additional backflow preventers in the Highlands neighborhood on Trail Way and North Ave. Both these streets are in floodplain areas as such backflow preventers will not eliminate flooding of areas but will provide relief on low rainfall events to keep the streets dry by blocking the water to surcharge.
3. City is currently working with ACOE to develop a Targeted Area study for addressing flood mitigation outcomes on four specific areas within the City of Highland Park. The study will result in providing a number of potential non-structural solutions to address flooding in specific areas of the study. ACOE Expanded Study on Skokie River and Middle Fork River- In 2019, ACOE completed a preliminary study to develop a cost benefit scenario on the impacts of flooding in the two river watersheds. The preliminary study was a major effort initiated by the Mayor of City of Highland Park. The study was funded by City, SMC, ESDD, and neighboring municipalities of Lake Forest and Deerfield. The preliminary study concluded that ACOE did not meet the cost benefit ratio to move the study to next stage, a comprehensive feasibility study.
4. In 2018, City updated its storm sewer master plan to develop a 10-yr prioritized list of upsizing storm sewers. The updated plan took into account the new revised updated Bulletin 70 rainfall (Bulletin 75) totals, which is yet to be approved. The revised Bulletin 75 rainfall totals is an increase of approximately 30% in rainfall total over previously issued Bulletin 70.

5. Over the next 10 years, City of Highland Park budgeted over \$24 million in implementing stormwater management related projects. The projects including upgrading of existing storm sewer to meet the new Bulletin 75 rainfall totals.
6. City has a voluntary lateral service cost share program to address residential flooding especially basement flooding. Over the years more than 25 property owners have taken advantage of this program to alleviate or minimize basement flooding. The program pays up to \$1,250 or 20% of sanitary sewer related costs that will minimize flood risks to individual single family homes.
7. City of Highland Park is partnering with SMC to cost share on stormwater improvement projects. SMC received DCEO grant in 2020 for flood mitigation measures. SMC requested Lake County municipalities to submit soon-to-be constructed projects that addresses flooding or stormwater related upgrades. City submitted the Highlands Neighborhood Backflow Preventer project for consideration by SMC. If approved by SMC and DCEO, City will execute an agreement approving the cost share projects.
8. ESDD is performing routine maintenance on Skokie River by clearing debris falling into the channel to improve the channel flow. City of Highland Park enhanced the debris cleaning efforts by removing additional debris off the banks of the river by Central-Taylor-Perennial-Hillary neighborhood. This clearing effect has improved the channel flow in this neighborhood. City plans to continue the clearing work in the future to further improve the flow conditions at this location.
9. The Ravine 3 Ecological Restoration is one great example of a project City of Highland Park has undertaken to improve stormwater management. The ravine restoration focuses on stabilizing and restoring impacted ravine toes and stream banks with native seed mix, tree plantings and shrub vegetation. In order to ensure continuous protection from erosion and provide continuous water quality improvements, the project area will undergo continued monitoring and maintenance.
10. City is currently working with Army Corps and Park District of Highland Park (PDHP) on Ravine 10 Ecological Restoration project to improve the stormwater flow in the ravine and provide ecological benefits to the stream favoring flora and fauna.
11. ACOE Section 219 General Environmental Infrastructure Authority for Lake County – SMC in partnership with ACOE and Congressman Schneider’s office have been working to include Lake County as an agency that could receive federal assistance under Section 219 Program. The Section 219 Program allows the Secretary to provide assistance to non-Federal interests for carrying out water-related environmental infrastructure and resource protection and development projects including construction for water-related infrastructure and resource protection and development.
12. ESDD is embarking on a mile-long Skokie River bank stabilization project in Lake Forest. This project began in 2020 with an anticipated completion in 2021. City of Highland Park requested ESDD to extend the bank stabilization work into City limits. ESDD will be providing information to SMC regarding their proposed plans to improve their drainage system through Highland Park. City will coordinate the efforts of the new study within City of Highland Park between the ESDD and SMC.

13. PDHP applied for grants to stabilize the banks at the Highland Park Country Club (HPCC). The proposed work is in line with the agreement signed between City and PDHP to designate portions of HPCC for stormwater storage. City is working with PDHP to provide letters of support, review plans and provide engineering support on this flood mitigation project.
14. City working with SMC and Union No 1 Middle Fork Drainage District to clear debris off the Middle Fork River. Some of the debris has been accumulated over the years, and a plan is put in place for Union No 1 Middle Fork to budget the removal in their capital program. And work with ACOE on permitting approvals.
15. City also received notice of a \$5 million DCEO grant for flood mitigation efforts. The grant will be administered by IDNR and will entail funding for the Buy Out Program. City will work with SMC, who has generated a list of eligible properties, on prioritizing the list and coordinate with IDNR and DCEO on using the funding.

Municipal Reports – City of Lake Forest

No report

Municipal Reports – Village of Deerfield

Village wide stormwater management plan. Flow monitors are included in the storm system. The consultant is almost complete with their modeling. The goal of the Plan is to develop a long-range plan for improving target areas and improve stormwater management throughout the community. The Village has been fortunate that they have not been impacted severely with structure flooding.

The Village also participate in the ACOE study in the past and hope to have a regional solution for some of the flooding along the Middle Fork.

Municipal Reports – Village of Glencoe

Like everyone in the region, storms have created a backlog of challenges. The Village continues to implement local improvements. The work and leadership of SMC is appreciated within the North Branch and Lake Michigan watersheds

Municipal Reports – Village of Lake Bluff

No report

Lake County Stormwater Management Commission (SMC) Report

Mike Warner, provided the following overview of the SMC.

- SMC has a commitment to solving the problem - the number one mission of the SMC is flood damage mitigation and they utilize many approaches to address that problem. In Highland Park, the SMC are putting forth an unprecedented level of effort in many areas that we will describe.
- State-funded DCEO flood mitigation funding. They have developed, approved, and forwarded to the State, an initial list of projects, with one of those being Highland Park backflow prevention system upgrades in Trailways neighborhood. The other project on the list is the Burr Oak storm sewer project in Lake Forest, which is in the Lake Michigan watershed.
- Strawberry condominiums/Route 41 Area in a phased approach – construction is underway with both storm sewer and storage capacity upgrades

Kurt Woolford, Chief Engineer, shared the following:

- Public-private partnerships flood mitigation efforts with local property owners, businesses, and local, state, and federal agencies:
- Dady Slough wetland storage area. Route 120, north of WXLC Radio Station. Water level lowered to provide additional flood storage. Additional analysis for future improvements currently underway.
- P&G daylighting. South of Pulaski Avenue/Greenbelt FP. Complete. Daylighting projects take stormwater out of the pipe and into vegetated channels. Reversing 100-year old practices.
- ComEd daylighting. North of MLK. Complete.
- Jaime properties. South of MLK. Phased approach. Future phases are planned.
- Strawberry – flood p
- Route 41-Naval Station Great Lakes Drainage Improvements: Monthly coordination meetings with stakeholders. SMC-IDOT-NSGL-North Chicago IGA was signed by all parties. The consulting engineer has been hired and has obtained existing study and field data. Will perform hydraulic modeling to evaluate alternatives. The Navy and SMC require that there will be no negative downstream impacts. Scope includes: a new pipe from Route 41 to Skokie River, removal of an abandoned crossing on the Skokie River (within NSGL), and upsizing of Alabama avenue (NSLG). Anticipated hydraulic study to be completed by the end of the year.

Ashley Strelcheck, Water Resource Professional provided updates pertaining to the ESDD and PDHP projects, and updates on the North Branch Chicago River and Lake Michigan watershed-based plan.

- ESDD is currently in the project implementation phase of a joint SMC/ESDD/IEPA project, working specifically on the downstream half of the project.
- They are utilizing a combination of gabion baskets, and bank shaping with stone toe and log toe protection. SMC has been inspecting the project for erosion protection and working with the ESDD frequently.
- In the next few weeks, V3 Companies will shift the project to the northern half of the project to being stabilization efforts. ESDD has partnered with SMC on a project stabilizing 5,075 linear feet (both east and west banks) of the Skokie River in Lake Forest between Old Elm and Westleigh Road, immediately upstream of the City of Highland Park.
- This streambank stabilization project is benefitting a highly eroded area of the Skokie River and is the first step to reducing sedimentation at this project and for downstream areas (including Highland Park).
- Currently some sections of the project are severely eroded, by stabilizing this section of the stream, the project can stop the source of the erosion and sedimentation. Note: Dredging is expensive and is considered a second step. Stopping the source of the sedimentation is the first step or you will continuously need to dredge.
- ESDD, the City of Highland Park and SMC are coordinating to clear obstructions from the channel and culverts to help reduce flooding. Initial work will benefit the Taylor-Hillary area along the Skokie River, the City
- PDHP: A portion of the Country Club Conversation Project (now called The Preserves of Highland Park) is part of an Illinois EPA Section 319 grant – north pond shoreline stabilization and riparian buffer, and vegetated swales. PDHP just hosted a pre-construction meeting where SMC was involved. Some invasive species control measures have been implemented but to date, no permitted construction has begun.

Watershed plan status and results expected:

- NBCR & LM WBP update: SMC is currently working with communities in the NBCR and LM watersheds to gage action plan recommendations (projects/programs) to put into the watershed plans as high

priority projects. This is important for potential grant opportunities in the future. The final version of the watershed-based plans are expected to be completed by spring 2021. After the completion of the watershed-based plans SMC will seek adoption from Lake County and then the watershed stakeholders.

Sharon Osterby, Water Resource Professional provided the following updates:

- SMC has been awarded \$3.2M of state and federal funding for the voluntary acquisition of 8 properties in Highland Park since October 2019.
- Funding for the Highland Park buyouts represents 44% of the total funding SMC has received since October 2019.
- To date 5 properties have been acquired and the remaining 3 properties to be acquired over the next several months.
- Asbestos abatement is required for 2 of the 5 properties acquired. Abatement was completed for 1 property Oct. 15th and the second will be completed in the next month during demolition.
- Permitting and utility disconnection is wrapping up this week and demolition for the 5 properties will begin in the next week or week after.
- Additionally, there are another 19 Highland Park properties that have filled out a statement of interest with an estimated project cost of \$9.7M under consideration for a buyout.
- These properties are then prioritized based on the state and federal program requirements and the availability of funding.
- SMC will continue to pursue funding for the voluntary buyout of property, which can take several years.

East Skokie Drainage District Report

Commissioner Todd Needleman reported that the project referenced in Lake Forest is two years in the making. It also provides aid downstream in Highland Park. They will continue to focus on areas throughout the drainage areas, where particular concerns have been experienced. Once the Lake Forest has been completed, the district will try to formulate a blue print for the next 20-years of planning. They will continue to coordinate with the city engineers in Highland Park and others to build-out the working blue-print to guide future activities.

Army Corps of Engineers Report

David F. Bucaro, P.E., Chief, Project Management Section of United States Army Corps of Engineers, Chicago District provided the following information.

July 2019 PAS Study Findings

- Study area is heavily developed = challenge to implement structural solutions
- Two potential reservoirs were found to be ineffective in reducing flood stages; costs likely to outweigh benefits
- USACE recommended nonstructural alternatives be considered for implementation by non-federal interests (structure elevation, structure relocation, buyouts, flood proofing, implementation of a flood warning system, and floodplain regulation)

City of Highland Park presented goals and asked for solutions to reduce flood risk for 4 targeted areas

PROPOSED 2020-21 PAS STUDY: IDENTIFY SPECIFIC NON-STRUCTURAL ALTERNATIVES FOR CITY OF HIGHLAND PARK TO CONSIDER FOR IMPLEMENTATION

- Host workshop with City of Highland Park to develop FRM alternatives (up to 1 alternative per targeted area)
- Conduct H&H evaluation of alternative effectiveness and potential adverse hydraulic impacts
 - Utilize H&H models from July 2019 PAS Study with updated Bulletin 70 data
 - Alternatives would be analyzed individually, the results would not necessarily account for cumulative impacts
- Provide project definition and range of parametric costs for each alternative
- Develop report summarizing study scope, methods and findings
- Estimated Study Duration: 12-15 months
- Estimated Study Costs = \$110,000 (50/50 cost share)

PUBLIC QUESTIONS & ANSWERS

Question: Bob, we have heard anecdotally that some surrounding cities have already been able to claim part of the \$122M, is there any discussion on how HP can request a part of this funding upfront? Thank you for your great help and dedication Bob and Julie!

Legislators and Lake County SMC have sought funding as soon as possible documenting need for Highland Park and throughout the County. Approximately 19 properties in Highland Park have submitted their statement of interest to be considered for the buy-out program. Funding will be disbursed directly to SMC for County-wide use. Project areas are ranked based on various prioritization levels. Eight projects have been identified for the first phase of implementation of this program. The eight projects include projects in Highland Park and Lake Forest. The City project, Highlands area backflow preventer project, has been submitted to SMC.

Question: What was the timing of the SMC projects?

Kurt Woolford (SMC) responded that all are in various stages. Some are complete, some are under construction, and some are submitted for grant funding. Additional information can be obtained from SMC's website at www.lakecountyil.gov/stormwater.

Question: When a home-buy out is done, who then takes ownership of the land? Is that land then replanted with native plants?

The City will eventually own the parcel. Yes, the Buy-out does include native planting. Impervious surfaces cannot be placed on the land. The land can also be used for flood storage provided an outlet is available to drain, minimizing standing water on the parcel.

Question: Are we putting in place any flood level monitoring across the city? My understanding between 635 and 641 the banks are overflowing. Monitoring equipment at more locations may help with tracking events.

The City monitors water levels with every rain event. The City uses data received from USGS flood gauges located in our rivers. In addition the City monitors the data from these gauges to provide us with alerts so we can be better prepared to respond to upcoming flooding events. Individuals can also sign up to flood level reports via the following USGS link: <https://waterdata.usgs.gov/il/nwis/rt>.

Question: When are the Highland back flow preventers scheduled to be installed?

The City is working with LCSMC on this initiative under the DCEO Grant. This is the first round of projects that SMC submitted for funding. Preliminary analysis is complete and the City is moving forward with the design so we will be shovel ready when approval for funding is granted. The project is budgeted for 2021 completion.

Question: Can someone please explain how the topographic wetness index plays into the overall stormwater management for an area.

Topographic Wetness Index (TWI) are useful but don't capture all areas of flooding and lowlands. This is a state product and is a useful layer that can be viewed on Lake County's GIS website. Floodplain maps are useful but don't capture all area of flooding and lowlands. The TWI provides information on the existing soil conditions and is used if there is a lot of drainage (poorly drained areas) that could benefit for more storage and improvements. The TWI helps to identify with the design of stormwater systems including the location of outlets. The TWI is a good design tool, but not a regulatory product.

Question: I live off Trailway in HP. Last week the gas company was checking the storm sewer and the representative told me the cameras could only be 20 feet. Are you aware when the storm sewers are closed?

Yes, the gas company will typically notify City if they notice any issues with our storm sewers. They or others are not allowed to televise City infrastructure without permission. The Highlands area outfalls and storm sewers are routinely cleaned. City did inspect the storm sewers and the outfalls the next day and all pipes are flowing and functional.

Question: When will the new updated rainfall data be available and when will HP post its own new base flood levels on its map?

The LCSMC web site has details on the updated Bulletin 70 rainfall totals (Bulletin 75). The flood maps are managed by FEMA and it takes years to complete. City floodplain maps are available on City website, www.cityhpil.com.

Question: When you speak of upgrading storm sewers, does that mean replacing existing storm sewers with large diameter sewers? If so, how widely through the area will such upgrades be done?

Yes. As noted above, the new storm sewers installed by City to replace existing sewers or storm sewers installed by a development are required to design the sewers using Bulletin 75 rainfall totals. City storm sewers are designed for a 10-yr rain event. In 2018, City updated its Storm Sewer Master Plan that identified and prioritized the upgrades to existing storm sewer systems. These projects are budgeted in the 10-yr capital improvement program.

Question: Do we have any projections for the positive impact of the Preserve (rec center golf course) i.e., millions of gallons of storage capacity and at what flood level, vs the rest of the city?

The 2018 Army Corps Study looked into potential scenarios for adding storage at the Highland Park Country Club golf course parcels (now called The Preserve). The study concluded that this site alone cannot provide any flood relief to upstream and downstream properties. Additional storage basins along the watershed is required to address localized flooding in Highland Park. The work and initiatives undertaken in the last five years by the City and the government partners has improved the low-lying flooding concerns but work is still to be done. Additional details on the 2018 Army Corps study along with flood prevention tips for the homeowners can be found at City website, www.cityhpil.com/flooding

The City thanked all residents for joining the meeting and for the great questions this evening. If individuals have questions for the City of Highland Park or any government partner, you may email cityhp@cityhpil.com and follow-up will be conducted. Also, the audio recording of this meeting will be placed on the City's website.

Special thanks to all the government partners for your leadership, work and support on this important topic that impacts all of our communities.

The City will coordinate a follow-up Regional Flood Meeting in April 2021. Details to follow. In addition, a copy of tonight's meeting minutes and recording is available on the City website at www.cityhpil.com/flooding.