

USACE Responses to Questions Submitted by Riverside residents in advance of the June 7, 2018, Village of Riverside Board of Trustees meeting.

Groveland Avenue Levee
Village of Riverside
Questions and Answers

- The modeling presented on 04/05/2018 at the Village Board meeting showed ponding developing in our street. It is still unclear how the water gets there. The U.S. Army Corps of Engineers (USACE) went back to look at the road flooding and have determined that the model connected the one-dimension portion of the model to the two-dimensional model in behind a high point in the terrain. After the connection elevation was adjusted to better represent the transition between the one-dimensional and two-dimensional areas for the 2013 model simulation, the area showed no flooding in the streets during 2013 flood stage, but it came very close to reaching the elevation that would have resulted in street flooding.
- Homeowners are very troubled at the thought of flood water inundating Maplewood's sanitary (combined) sewer and the potential for flood water and effluent backing into their homes. *This matter will have to be addressed by the Village of Riverside.*
- Are inadequate sewers compounding the effect of river flooding on Maplewood Road? *This matter will have to be addressed by the Village of Riverside.*
- Why isn't the tie-back portion of the levee considered a hazard for homes (on the 'wet' side) if home insurance companies do? *Our modeling indicates that there will be no impact to the homes on the "wet" side of the tie-back portion of the levee. This means that it poses no hazard for the homes on that side of the levee. These homes are also elevated to levels higher than the proposed top of levee elevation. Home insurance companies have their own policies. If it is in relation to flooding potential the requirement for flood insurance is based on FEMA flood maps, and the modeling indicates that the flood maps will not change for the homes on Maplewood.*
- What recourse do Maplewood Road homeowners have if the model is not accurate and the levee exacerbates the flooding? What form of guarantees are in place if this happens? *All models have sources of uncertainty. The Corps of Engineers is utilizing standard practices and best available information to reduce the uncertainty of models results. Additional reviews, like the one performed by Burke Engineering, will be performed throughout Preconstruction Engineering and Design (PED) to ensure the best practices are followed.*
- Will residents be compensated for lowered home appraisal values due to their location and proximity to the levee? *We have no indication that home appraisal values will be negatively impacted by the construction of this levee. It seems reasonable that homes protected by a levee would have a higher home value given the reduction in potential for flooding than in their current state. This higher home value would also benefit other homes in the area by raising overall home values in relation to one another. This cannot be guaranteed due to market uncertainty and other home value factors outside of USACE control. The project process involves paying for access to and the land needed for construction and that is all.*
- Please explain why the levee could not be built at a lower height. *The levee needs to be built at a height that provides the greatest protection possible. Our standards require that we build a levee that includes freeboard and the current design takes into consideration the design standards that are developed for all levees across the United States to provide the necessary*

protection at an acceptable level of risk.

- Please explain why the levee would need to be extended east beyond Hauser Jr. High for Groveland area residents to be taken off the floodplain. *A levee must tie-in to high ground at an elevation that is +3' above the 100-year flood elevation (1% chance of annual exceedance) to meet the FEMA requirement for certification (See page 24 of https://www.fema.gov/media-library-data/1524085432002-e9d771ca450758832f64f8e4f1ff2779/Levee_Guidance_Feb_2018.pdf or 44 CFR 65.10(b)(1)(i)). We currently do not think that we can achieve that requirement and are unsure of how far the tie-back would have to go to get to that level. When we first looked at it we ran into private property across the street and stopped because we would be going across a street and were unsure how far we would have to go to get to the correct height. Crossing a street and the other factor of increasing the height of the entire project added too much to the cost of the project such that it would most likely no longer be economically justified. Thus, this was not pursued further at the time. There is also a process where a levee can be certified for a lower amount of freeboard, but we are not sure that will work for this location. But it will be considered in the Preconstruction Engineering and Design phase for further study. It is possible that this process will be successful and they could be taken out of the floodplain. But, our current information indicates that they will not be removed from the floodplain and that will be our base assumption going into the project.*
- When was the last Environmental Impact Statement performed? *The Upper Des Plaines River and Tributaries study was completed with an Environmental Assessment, and the Finding of No Significant Impact (FONSI) was signed on 7 January 2016. An EIS was not required.*
- Why does this project not address the Forest Avenue Bridge, which acts like a dam at flood stage? *We have never heard that Forest Avenue Bridge acts like a dam at flood stage and the modeling does not indicate that Forest Avenue Bridge has a significant negative impact on water levels.*
- Since the BNSF trestle straightening would result in a one-foot drop in the river level, can funding be put toward this improvement? Can BNSF be approached again, please? *The final report for the Upper Des Plaines River and Tributaries did not include this as a project that was cost beneficial and is not authorized by Congress. The study process found that the benefits from that project were not as great as originally thought and did not remove people from the floodplain or prevent flooding. For that reason it was not proposed as a possible project for authorization and USACE no longer has the authority to consider it for a project. A new study would have to be started and cost shared with a nonfederal entity to look at the possibility of that project moving forward.*
- Will you be incorporating the new Cook County Survey LIDAR data developed in March 2018? *This could be done during the Preconstruction Engineering and Design (PED) phase.*
- Will you ensure the accuracy of LIDAR or any other data by performing a physical survey of the neighborhoods directly impacted by Des Plaines River flooding? *PED work will include surveys and verification of current conditions.*
- As the river is a flowing body, why doesn't the modeling show turbulence as river water is

dammed against the Park Place (tie-back) levee? *The water would be expected to be essentially ineffective, or not flowing up against the tieback.*

- What other USACE projects are happening upstream on the Des Plaines River that could adversely affect flooding downstream, in our community? *The DP II report recommends three other floodwalls and two reservoirs upstream. As with the Groveland Avenue levee project they are required to be constructed in a way that does not cause upstream or downstream impacts to neighboring communities. The floodwalls are to be built in conjunction with the reservoirs that provide compensatory storage for the areas that will have a reduced risk of flooding.*
- Please provide a slower time-lapsed video that clearly indicates the specific location (geographic elevation) of the river water on Maplewood Road as correlates to the flood stage (datum reading). As well as time-lapsed, in hours. *We could possibly work on a slower time lapse video if it is going to be helpful but please note that the current videos can be viewed more slowly and at better resolution as independent videos (not imbedded in a PowerPoint). The Maplewood Road issue was addressed in an earlier question and that answer still applies. We are willing to work with the community on producing products to help explain what is happening.*
- What was the geographic elevation of the flood water modeled in ACOE 04/05/2018 presentation? *~615.3' NAVD8*
- Did modeling presented at the Village Board meeting on 04/05/2018 include the 2013 flood data? In what tangible way is the plan presenting 04/05/2018 different from the plan the Village rejected in 2013? *The modeling from 4/05/2018 does include the 2013 flood data. We were able to get a model run that mimics the flood of 2013 and the presentation will show pictures of how accurately the modeling depicts what happened on the ground in the April 2013 flood. The plan for this work has not changed from 2013 except for the request that we consider a flood wall along Park Place rather than a road raise. It is our understanding that the Village needed more time to consider the plan in 2013 and USACE has worked with the Village extensively since 2015 to bring them the necessary knowledge to be more comfortable with the proposed plan.*
- Does the Please provide images of the modeling results that have better clarity. A scale key would be useful. Better resolution images (without trees in the way) would be useful. *I think the new information from 2013 will be a great help and we will try to provide information as much as possible. But some information (such as without trees) may not be available. We can display information on different backgrounds. But again that will take further work that is currently not possible without moving into the PED phase of work. Please download pictures from the website directly as they are high quality images that can be zoomed and examined closely.*
- Is USACE using a one-dimensional modeling? What are the specific inputs that went into the computer modeling? *This model is a one-dimensional, two-dimensional integrated model as was noted on 4/05/2018. Specific inputs can be provided should someone desire to look at them, and were provided to the village engineer for their analysis.*
- May we obtain a copy of the USACE report/proposal reviewed by Burke Engineering? *Burke reviewed the modeling and there was no accompanying report. The original DP II report can be downloaded from the USACE website (<https://www.lrc.usace.army.mil/Missions/Civil->*

Works-Projects/Des-Plaines-River-Phase-II/Feasibility-Report/).

- We have photos and videos that demonstrate the river water traveling over land to some houses on Maplewood Road. Will the modeling be re-worked to take this information into account, as Jeff Zuercher indicated at the April board meeting? *We can look at including additional data as appropriate.*

- On April 3, 2018, after the first spring thunderstorms that hit the Chicago area, the Des Plaines River spiked more than 4' from its reading the day before. The most northerly station reading along the Des Plaines was O'Hare, which recorded 2.3 inches in 24 hours. Does the modeling take precipitation over time into account? What is the time lapse in hours? *The model is based on a specific event totaling 8.8 inches of precipitation. More details can be provided should someone want to take a look at them.*