

THE REPORT OF THE PARK RIDGE FLOOD CONTROL TASK FORCE

April 2010



TASK FORCE STATEMENT

Flooding has caused significant financial loss to both the City and Residents over the past years. Flood damage prevention and mitigation has been an important topic for the City for decades.

The intent of this report is to provide an overview of the flood exposures in the City and to discuss the challenges and opportunities in flood prevention and mitigation. There are no magic bullets listed in this report. What this report will accomplish is to help begin the process of real change needed to mitigate the significant impact flooding presents to the City and Residents.

The report presents the Task Force goals and discusses potential solutions to flood prevention. There are infrastructure challenges that will require both money and time to improve, but there are short-term and low-cost solutions that we can implement now that can mitigate the impact of flooding.

Implementing the solutions to the flooding exposures in the City are the responsibility of the City, local governmental agencies, and the Park Ridge homeowners. There is not one group that holds the responsibility in finding solutions to flooding issues. With commitment from all involved, we will find real solutions to our flooding concerns.

The Park Ridge Flood Control Task Force is pleased to present our report to the City.



This report is presented to help identify solutions to help prevent and mitigate flooding within Park Ridge.

**Park Ridge Flood Task Force
Final Report
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Executive Summary

The Park Ridge Flood Control Task Force (“Task Force”) created this report to discuss the factors that affect flooding within the City and to provide recommendations to find solutions to the flooding exposures. The report also intends to initiate and promote discussion of this issue within the City Council, Park Ridge government, and Park Ridge homeowners and business owners.

The breadth of the issues surrounding flooding in Park Ridge is large and the issues are complicated. Once issues surface, several more appear alongside and the complexity grows. Management of the issues and priorities to solutions is continuous and requires leadership and continual management. The Task Force believes an important chapter in the history of flood management in Park Ridge occurred when Mayor Schmidt decided to create the Task Force. The Task Force, working with the City Staff, can keep flooding issues alive and provide the leadership within the ranks of the community for flood management.

This report lists 39 recommendations (all are summarized in the following page) and discusses the reason or background for each recommendation. The recommendations originate from one of five goals the Task Force created in July 2009.

A theme in this report is the solution to flooding rests with everyone in the community. Understanding causes and variables associated with flooding will help prevent and mitigate future flooding. Working together in the community will also provide solutions, alleviate damage, and help citizens who are severely affected by flood damage.

Task Force members welcome any comments or suggestions you may have. We hope you find this report informative and helpful in your flood prevention efforts.

Listing of Recommendations (Abbreviated)

Recommendation G1- 1: To create awareness of flooding causes and educate residents on how to prevent flood damage to their homes, the City sponsor and conduct educational workshops for residents.

Recommendation G1-2: All documents listed in the Appendix, including others related or cross-referenced to flooding are placed on the Park Ridge website under the “Flood Mitigation” link.

Recommendation G1-3: Educate residents on the benefits of low impact development green initiatives that decrease impervious surfaces to minimize run-off volume and to provide natural detention and drainage of storm water run-off.

Recommendation G1-4: City should encourage residents to follow storm water runoff best management practices (BMPs).

Recommendation G1-5: To prevent water seepage and other property damage, educate homeowners not to disturb natural water flow through their properties.

Recommendation G1-6: Provide schools with suggested educational curriculum and resources for junior high students to promote lifelong awareness of flood mitigation/storm water management best practices.

Recommendation G1-7: Dedicate drainage easements and record the easements with new developments for the purposes of conveying storm water across private property.

Recommendation G1-8: The City should host a downspout disconnect day to reduce the amount of storm water entering the combined sewers.

Recommendation G1-9: The City should host a rain barrel-painting contest – to promote awareness of the use and purpose of rain barrels.

Recommendation G1-10: The City should host debris and obstructing cleaning day.

Recommendation G1-11: Provide awareness materials/sessions that educate homeowners of the usage of water resources (such as showers and toilets) during heavy rains and flooding.

Recommendation G2/3-1: The City should increase and evaluate the activities to prevent overland flooding. These activities include the maintenance of streets, inlet cleaning, sewer cleaning and digital recordings of sewers

** Legend Note: “G” refers to the goal; the number immediately after G is the goal number and the last number is the goal number for that particular goal section*

Recommendation G2/3-2: Identify areas where there are inadequate inlet spacing and grate capacity so additional inlets at the street returns and more efficient grate designs (vane grates) can be installed to alleviate the possibility of overland flooding.

Recommendation G2/3-3: To eliminate blocked flood routes, existing flood routes should be identified and protected from any future obstructions.

Recommendation G2/3-4: New construction flood routes should be protected with drainage easements that preserve the use of this property for the purposes of conveyance of flooding.

Recommendation G2/3-5: Overland flood routes should be evaluated to identify building structure low openings (i.e. window wells) and tops of foundations for possible flood damage.

Recommendation G2/3-6: Solutions to prevent overland flooding at reverse slope driveways should be investigated.

Recommendation G2/3-7: An evaluation of the existing freeboard provided along the path that runs along the west side of Talcott/ Riverside Drive and along the existing County Forest Preserve path should be provided to ensure that a minimum of 3 feet of freeboard (desirably 5 feet) exists above the 100-year high-water elevation of the Des Plaines River.

Recommendation G2/3-8: Consideration should be given to replacing the existing flap gate system across the flood wall that protects areas upstream including the Boardwalk and Park Place Condominiums with an equivalent size Tide flex rubber check valve system which is a maintenance free check valve system being used in lieu of the traditional mechanical flap gate system.

Recommendation G2/3-9: An evaluation should be provided of the low opening of the access opening for the underground Sibley Lift Station facility, which is located on Cook County Forest Preserve District property just west of Riverside Drive at Sibley adjacent to the Des Plaines River.

Recommendation G2/3-10: Routine inspections of the Dempster Street floodwall should be conducted to ensure that continued flood protection is provided for the intended residents south of Dempster Street.

Recommendation G2/3-11: An engineering review of the existing inlet system located at the Mayfield Estates Subdivision should be conducted by the City of Park Ridge for the provision of additional inlet capacity needed to convey the flows from this upstream area into the PRPC pump system.

Recommendation G2/3-12: Future opportunities should be investigated including possibly working with IDOT to pick up and convey flows from Prairie Creek in a separate large diameter storm sewer draining to the west along Ballard Road into Farmer Creek with an ultimate discharge to the Des Plaines River

Recommendation G2/3-13: To prevent sewer back-ups, homeowners need to inspect and maintain the sewer lines running from their home to the street main.

Recommendation G2/3-14: The City should explore opportunities to install “rainblockers” in the existing catch basins on certain streets where feasible. *These systems must not be installed in areas vulnerable to overland flooding.*

Recommendation G2/3-15: The City should explore opportunities that are feasible to collaborate with developers within the City to incorporate and provide additional storm water management features that may help alleviate area flooding.

Recommendation G2/3-16: Battery Backup sump pumps should be installed by residents who have basements with drain tiles that utilize sump pump systems to ensure pumping continues in spite of power failure.

Recommendation G2/3-17: City management continue their discussions with Commonwealth Edison concerning future equipment upgrades and repairs within the City to minimize power outages and to provide continuous reliable service especially during times of critical necessity during and after storm events.

Recommendation G2/3-18: Routine pump and float maintenance and replacement should be performed by property owners to reduce the possibility of pump failure.

Recommendation G2/3-19: Higher capacity or even redundant pump systems should be considered in these high ground water areas.

Recommendation G2/3-20: Preventing groundwater seepage, homeowners should follow any one or a combination of seven activities.

Recommendation G2/3-21: Conduct a survey study of residents as to why they do or do not participate in flood data requests requested by the City.

Recommendation G2/3-22: Obtain flood related information in real-time on a continuous basis.

Recommendation G2/3-23: Results from the upcoming citywide sewer study should be incorporated into the flood database.

Recommendation G2/3-24: Evaluate the current Emergency Operations Plan (EOP) and the resources available to the Community Emergency Response Team (CERT) to

determine if additional revisions to the plan and/or resources are needed to assure thorough response to flood emergencies.

Recommendation G2/3-25: To provide additional resources during emergencies at minimal cost to the City, the Park Ridge Flood Brigade should be established consisting of volunteer citizens from each ward who will be the contacts in flood emergencies for delivery of information and supplies.

Recommendation G2/3-26: Promoting the recommendations listed in this report needs to continue after the report is published. The Park Ridge Flood Task Force should remain active indefinitely or at least until a working flood management system unique to Park Ridge is established.

Recommendation G2/3-27: City management of Park Ridge should understand the local impact of future expansion of the MWRGDC system and the hydraulic performance of the Des Plaines River stages and collection system owned by the MWRGDC district, state, or other governmental agencies. A representative of the City Council should be appointed as the storm water management liaison.

Recommendation G2/3-28: The city of Park Ridge should consider joining the Community Rating System (CRS) administered by the Federal Emergency Management Agency (FEMA).

Recommendation G4-1: The recommendations of the analysis of how the City of Park Ridge's storm water and combined flow regulations compared with other communities should be implemented within the next 12 months.

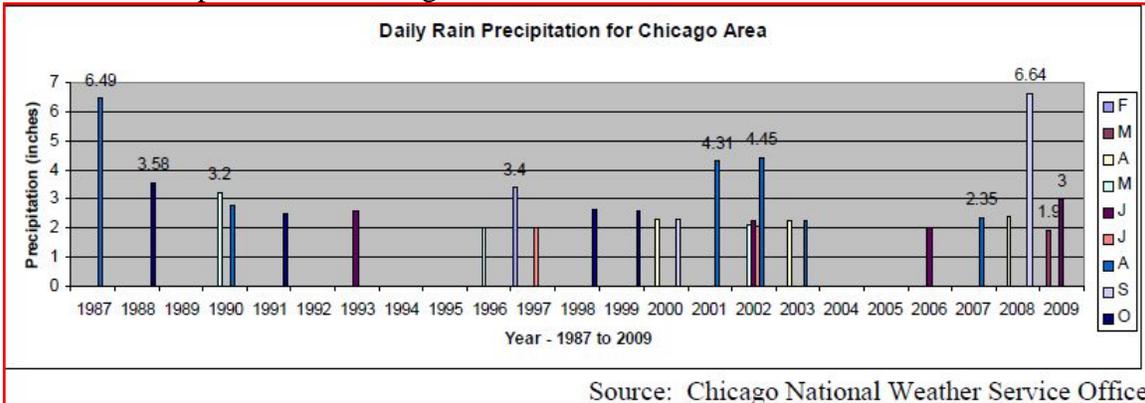
Recommendation G5-1: The City should consider providing an incentive program to homeowners to install flood protection devices.

**Park Ridge Flood Control Task Force
Report to the City Council
April 2010**

Subsequent to the September 2008 storm where over 9 inches of rain fell in Park Ridge within 48 hours, and from citizen concern about future flooding, Mayor David Schmidt established the Park Ridge Flood Control Task Force. The initial meeting for the Task Force occurred on June 17, 2009.

The September 2008 rain was extraordinary in scope and severity. Some experts estimate that there is a 1% chance of comparable flooding occurring each year. Although the likelihood of similar rains happening in the near future may be low, it can not be ruled out to occur again in any year – whether it is 20 years from now or next year. On June 19, 2009, a total of 2.5 inches of rain fell most of the morning and into the early afternoon. The rain was very intense over a short period of time.

Table 1 – Precipitation for Chicago



Arguments regarding the validity of flooding estimates are numerous and sometimes emotional. However, the impact of this flood provides insight on how to improve the overall flood mitigation plan for Park Ridge. The September storm also re-opened concern that there needs to be a more aggressive flood management system for Park Ridge and the need to seek and provide solutions to the flooding issues. Residents who ordinarily are not impacted by “normal” rainfall or even from heavy rains experienced significant damage to their homes and the city’s resources reached their limit during the September flood. The city and the residents should learn from the experience and implement contingency plans to mitigate similar flooding that will undoubtedly occur again.

There are nine members of the Task Force, all Park Ridge citizens who were appointed by the mayor and who are all volunteers and are not members of Park Ridge government. Four members of Park Ridge staff have assisted the Task Force members as consultants and experts.

Task Force Members

Residents

Lou Arrigoni
Dan Carroll
Gale Fabisch
John Humm
Kim Jones
Pat Lofthouse
Bob Mack
Joe Saccomanno - Chairman
Steve Tolan

City Staff

Sarah Mitchell – City Engineer
Susan Tedeschi – Public Works
Wayne Zingsheim – Director of Public Works
Brian Weide - Superintendent of Public Works

Mission of the Park Ridge Flood Task Force

To listen, learn from and to lead the Park Ridge community in understanding area flooding issues and to develop an appropriate variety of flood control mitigation measures that would reduce homeowner flood risk. These measures will be presented to the City Council, city staff and the residents of Park Ridge for consideration and appropriate implementation

Goals

To accomplish the mission, the Task Force generated five goals:

1. Develop a program to educate residents on the city sewer system and how to mitigate private property issues.
2. Review existing sewer system and analyze various type of flooding to better understand the scope of the problem and the various causes for flooding
3. Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources.
4. Review current City ordinances, practices and policies and make recommendations for change as needed.
5. Seek and explore funding opportunities for flood mitigation, both for City and residents.

Preliminary Report to the City Council

On December 14, 2009, the Task Force presented their preliminary report to the City Council. The purpose of presenting the preliminary report was to provide the City Council with an overview of the Task Force findings, obtain input from the council members, and provide a rough estimate of costs associated with recommendations in order to compose the preliminary 2010-11 budget.

Appendix A provides the summary of the preliminary findings presented to the City Council.

Review of Goals

The goals of the Task Force were to find solutions and recommendations to help prevent and mitigate flood exposures and risks within the community. Very quickly, Task Force members soon found that there were numerous variables and complexities within the scope of problems introduced to the Task Force. Simply stated, there are no quick solutions to the risk of flooding for Park Ridge residents – the solution rests with the homeowner and the City and regional authorities (e.g. Metropolitan Water Reclamation District of Chicago - MWRDGC) – each have their own responsibilities and each must determine their own solutions. The City should not be held solely responsible and accountable for finding solutions, but should work in tandem with other stakeholders within the community. Needed long-term solutions for effective flood management will require tens of millions of dollars and decades to solve – the sewer infrastructure in Park Ridge is old and does not meet current design standards in terms of materials and conveyance.

The individual homeowner's responsibility is to understand the particular and unique flood risks to prevent flooding within their homes. Each house and each neighborhood may have unique conditions and situations that expose their home to flooding. Some areas in Park Ridge have little or no flood risks. Other areas exist under the threat of flooding, especially during heavier than normal rains. The individual homeowner is responsible to understand their risk of flooding.

The City's responsibility is to provide at least the basic maintenance of the current sewer system and to implement a long-term plan that prioritizes the solutions to the infrastructure deficiencies that will help *mitigate* flooding resulting from rainfalls greater than 10 year storms and to help *prevent* flooding resulting from rainfalls less than 10 year or less storms. The City should also assist homeowner's in flood prevention practices.

It is important to understand that all storm water facilities have their own limits of capacity, and each swale, ditch, sewer, etc., at times, may be exceeded during an event and no person or property is ever truly free of the risk of flooding.

Christopher B. Burke Study

In early 2009, the City Council approved a contract to perform a flood study for six areas in Park Ridge. Christopher B. Burke Engineering, Ltd was chosen to conduct the study. On October 28, 2009, Burke Engineering provided their final report to the Flood Task Force and the City Council.

The summary of the Burke study are found in Appendix B.

The Task Force has studied the results and will incorporate and cite any of the Burke recommendations in this report. *Technical Observations of the Burke Report* provides the Task Forces' observations of the report and is listed in the Appendix C.

Discussion of Goals

Goal 1: *Develop a program to educate residents on the city sewer system and how to mitigate private property issues.*

Although the City of Park Ridge must be responsible for the solutions to the large infrastructure problems that are contributing to flooding, Property Owners are personally responsible for understanding and taking action to prevent flooding within their control. The following recommendations are being presented for the promotion of flood mitigation.

Many homeowners do not understand that in areas of combined sewers, it is to their benefit that the storm water stored in their street is not in the combined storm sewer system because this would most likely cause basement flooding. This information may also encourage some residents not to park vehicles in low areas during substantial rains.

Recommendation G1-1: The City sponsor and conduct educational workshops for residents including information pertaining to:

- a) Property owner's responsibilities
- b) The impact and magnitude of the flooding exposure
- c) Counteracting common myths surrounding flooding
- d) Reporting flooding problems
- e) Four types of flooding
- f) Four ways to protect your home from sewer backup
- g) Dry flood proofing
- h) Sandbagging around reverse sloped driveways
- i) Installing driveway berms
- j) Replacing windows with glass blocks
- k) Applying commercial sealant to exterior walls
- l) Drain tiles and pumps
- m) French drains
- n) Yard drainage basin

- o) Basement protection berms
- p) Wet flood proofing
- q) Backup generators
- r) Communicating with utility companies
- s) Raising sidewalks where feasible
- t) Rain barrels
- u) Sewer drain maintenance/Roding

Recommendation G1-2: All documents listed in the Appendix, including others related or cross-referenced to flooding are placed on the Park Ridge website under the “Flood Mitigation” link.

Recommendation G1-3: Educate residents on the benefits of low impact development green initiatives that decrease impervious surfaces to minimize run-off volume and to provide natural detention and drainage of storm water run-off by:

- a) Installing flood control measures, such as overhead sewers, gate valves, pumps, etc.
- b) Replacing existing asphalt tile roofs with roof gardens. Require that new government buildings install garden roofs and allow new developers decreased impact fees if green roofs are installed
- c) Replacing and installing asphalt and concrete driveways, parking lots and alleys with porous pavers.
- d) Examining ordinances of other communities that prohibit fill and provide maximums for pervious surfaces

Recommendation G1-4: City should encourage residents to follow best management practices (BMPs): Residents’ management of their own properties can make a significant difference in decreasing the amount of storm water runoff that contributes to flooding. This includes both properties located in flood-prone areas and properties located in steep areas that experience little or no flooding but that contribute substantial runoff to lower-lying homes. Homeowners should take actions to reduce runoff on their property by: increasing on-site storm water storage with rain barrels, rain gardens, vegetated swales and/or drywells; reducing impervious surfaces; and utilizing pervious concrete, asphalt, or pavers for paths, driveways, and/or patios.

Recommendation G1-5: Educate homeowners not to disturb natural water flow through their properties. Front, side, and back yards typically utilize overland drainage. The water flows from the home, toward the front or back yards and eventually across four or five lots until it reaches an outfall location. This outfall location could be a sewer, detention/retention structure, or a natural low area. Over the years, property owners have installed landscaping, fences, etc. that impede the overland flow of storm water causing soggy areas and standing water on their property or the property of neighbors during heavy rain events. Homeowners must be cognizant that the placement of wood piles, gardens, etc. in their yard should be done carefully as to not negatively impact the natural water flow in the area.

Recommendation G1-6: Provide schools with suggested educational curriculum and resources for junior high students to promote lifelong awareness of flood mitigation/storm water management best practices.

Recommendation G1-7: Dedicate drainage easements and record the easements with new developments for the purposes of conveying stormwater across private property. The easement should be provided for all overland flood routes and enclosed drainage systems to allow unencumbered maintenance access and positive drainage conveyance. Restrictions should be placed on the easements that would limit the use of this easement property. Landscaping features, wood piles, construction of sheds or other yard structures should be restricted within these easement areas to ensure the perpetual and effective use of this property for drainage conveyance.

Recommendation G1-8: The City should host a downspout disconnect day. On average during a heavy rain, homes that have downspouts and sump pumps connected to a sanitary sewer can add 1,000 gallons per hour to the wastewater flow, which is the normal flow from over 60 homes.

Recommendation G1-9: The City should host a rain barrel painting contest – to promote awareness of the use and purpose of rain barrels.

Recommendation G1-10: The City should host debris and obstructing cleaning day.

Recommendation G1-11: Provide awareness materials/sessions that educate homeowners of the usage of water resources during heavy rains and flooding.

Goal 2: *Review existing sewer system and analyze various type of flooding to better understand the scope of the problem and the various causes for flooding*

Goal 3: *Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources.*

Discussion

The sub-committee teams for these two goals joined together to research goals and produce recommendations. For this reason, both of these goals are discussed together in the following paragraphs.

The sub-committee analyzed various types of flooding from data obtained by the City from the September 2008 and June 2009 floods. Causes of flooding included:

- Surface water and yard/street flooding/overland flooding
- Combined sewer back-up from drain
- Ground water seepage
- Ground water from sump pit
- Overbank flooding

Flood Causes

The data obtained in September 2008 and June 2009 indicates that the primary cause of flooding was sewer back-up from drain(s). Data from responding residents indicated 75% of the calls for the September rain experienced sewer back-up and for June 66% experienced sewer back-up.

Not surprisingly, yard flooding and surface water entering the house were more common in September (43%) than during the June rains (6%). In September, 74% of the respondents experienced yard flooding versus 30% of the respondents in June.

A relatively low percentage of residents who reported flooding experienced ground water from seepage and ground water from the sump pit.

Please note that most residents for both months suffered flood damage from multiple sources of water. For example, a resident could have experienced flood damage from both sewer back-up and from ground water seepage.

During heavy rains, storm water fills the combined sewers at a rate greater than the sewer system could remove thus causing sewer back-ups (sewer capacity was exceeded) and yard flooding (water pooling at low lying areas). The capacity of the sewer system was surcharged and could not be relieved until the rains and Des Plaines River level subsided.

Street flooding was severe in certain areas, caused heavy flooding in low-lying areas, and caused heavy damage to several homes.

Appendix E provides information regarding the damage costs of the flooding.

Understanding solutions to flooding is to understand the variables that cause the flooding.

Flood Variables

1. Intensity of rainfall
2. Topography
3. Impervious surfaces
4. Capacity – Sewer size
5. Inlet capacity
6. Maintenance of sewers (power flushing, power rodding, and DVD camera inspection)
7. Homeowner Activities
8. House water management system design and flood preventative measures
9. City response measures
10. MWRDGC/County/State flood control measures and water management activities
11. Levee failure

All these variables determine the frequency and severity of flooding within the community. The frequency of flooding is controlled by local and regional governmental agencies and by the homeowner. The severity of the flooding is heavily determined by the intensity of the rainfall. Trying to protect a city from a 100 year flood is cost prohibitive. A more cost effective goal is to design combined sewers for 10-year storms. However, the impact of heavy storms can be mitigated by the activities of both the homeowner and the local government. Rainfall intensity obviously impacts all types of flooding.

The one factor that cannot readily be changed concerns the overall design of the city sewer system. The combined sewer design installed in Park Ridge has proven ineffective in most municipalities that have such a system. Current housing density and increased population pose an increased burden on the combined sewer system designed in the distant past. Large homes (“knock-downs” replacing smaller homes) that were constructed in the last twenty years have had a large impact on the combined sewer system and the ability to convey the flows being pumped from the foundation drainage systems of these homes with basements and efficient tile drainage systems. Some homes have multiple pumps. Large basements displace the ground water storage and with the pumps used to drain the foundations, there is larger base flow into the combined sewer system. The efficiencies of modern drainage in homes (storm waters) have increased the flow rate of storm water into the sewer system as compared to the original designs made in the mid-1900s.

The sanitary flow rate is estimated to be less per capita in comparison to older home designs. This is attributed to more efficient toilets (using less water) and having fewer occupants in each household.

Surface waters – street/yard flooding

Surface flooding or pooling of water is usually caused by the overcapacity of sewers not being able to take in more rainwater and the rainwater then fills the streets at low-lying areas. The major causes of surface water pooling relates to topographical attributes, the capacity of local sewers, and the intensity of the rainfall. If excessive rainwater is not directed to retention sites or stored until it can be efficiently released into the storm sewers, surface flooding will occur. Other causes of the surface water pooling are blocked sewer lines and blocked drainage grates.

House flooding due to surface water usually occurs when the rainwater rises to a level where it enters the home through doors, driveways, window wells, etc. Severe house flooding can occur in these situations (2 ft. plus of flooding within the home).

Areas affected by surface flooding may have smaller sewer lines and be located in low areas. By combining the use of topographical maps, sewer maps and by capturing survey data, these areas can be identified.

Overland Flooding

Overland flooding is caused by several reasons, including

- blocked inlets,
- inadequate inlet spacing and grate capacity
- blocked overland flood routes
- street system surcharge
- Des Plaines River and Prairie-Farmers creek overbank and backwater flooding.

Blocked Inlets and Sewers

Most typically this type of flooding is local and occurs as a result of a blocked inlets and sewers in the street.

Recommendation G2/3-1: Activities to prevent overland flooding can include additional maintenance efforts such as street cleaning and inlet cleaning during times of seasonally heavy leaf and other tree litter. Routine sewer cleaning and digital/DVD recording will also help identify problem areas and is a proactive measure to prevent flooding.

Inadequate Inlet Spacing and Grate Capacity

Overland flooding also occurs in areas along streets where there is inadequate inlet capacity due to poor grate design or the spacing between inlets is too great to handle the amount of runoff draining through the street curb and gutter system. Oftentimes, runoff from an adjacent street which drains onto a side street exceeds the capacity of the gutter

system. This can result in storm water to overtop the gutter and enter onto adjacent driveways and run along sidewalks on neighboring property.

Recommendation G2/3-2: Identify areas where there are inadequate inlet spacing and grate capacity are present. Providing additional inlets at the street returns, and providing more efficient grate designs (vane grates) can alleviate this problem from occurring.

Blocked Overland Flood Routes

Recommendation G2/3-3: Existing flood routes should be identified and protected where possible. Landscaping and other backyard or side yard amenities such as solid fences, sheds, wood piles, yard furniture, statues etc. should not be allowed to block the path of existing flood routes.

Recommendation G2/3-4: New construction flood routes should be protected with drainage easements that preserve the use of this property for the purposes of conveyance of flooding. A thorough review of existing and proposed low openings (i.e. window wells and stair wells) as well as tops of foundations should be evaluated when considering flood routes and drainage paths for new developments.

Street System Sewer System Surcharge

As rainfall intensity increases with larger storm events and as the existing sewer system capacity is exceeded, sewerage will eventually surcharge through the low lying drainage structures and will cause the heavy sewer cover lids to be popped off under pressure. Water leaking out of these low lying manholes and drainage structures should be evaluated for consideration of future relief sewer projects.

Recommendation G2/3-5: Overland flood routes should be evaluated to identify building structure low openings (i.e. window wells) and tops of foundations for possible flood damage. Damage can occur during surcharging of the outlet control structure. The outlet control structure is either part of the City's existing relief sewer system or other detention systems. Outlet control structures should include overflow weir systems to bypass the upstream flows that exceed the capacity of the existing relief sewer or other City detention systems.

Reverse slope driveways throughout Park Ridge should be evaluated for possible protection from overland flooding which occurred in both September 2008 and June 2009 storms.

Recommendation G2/3-6: Solutions to prevent overland flooding at reverse slope driveways may involve various solutions such as an elevated "speed bump style" rise in the driveway, mechanical gates, sidewalk raising, and aqua dam or other bladders used to prevent overland flow from entering the low opening of these properties. Other options to prevent flooding can involve separation of the combined sewer system with a separate storm sewer. For example, along Northwest Highway, relief can involve separation of the combined sewer system along Northwest Highway with a separate storm sewer outlet

to Farmers Creek upstream of Levee 50. This should be investigated and discussed as a possible regional project with MWRDGC's ongoing Des Plaines River watershed study.

Des Plaines River/ Prairie -Farmers Creek Overbank and Mayfield Estates overland flooding

This type of overland flooding involves Private property, City structures and MWRDGC infrastructure that is adjacent to the existing floodplain of these existing waterways.

Appendix G provides details regarding the Mayfield Estates flood control structures.

Des Plaines River overbank floodwaters are held back by an existing floodwall that runs along the west side of Talcott/ Riverside Drive and along the existing County Forest Preserve path. This existing wall and the associated flap gate system should be inspected routinely for maintenance needs and certified by the Illinois Department of Natural Resources Offices of Water Resources.

Recommendation G2/3-7: An evaluation of the existing freeboard provided along the existing floodwall that runs along the west side of Talcott/ Riverside Drive and along the existing County Forest Preserve path to ensure that a minimum of 3 feet of freeboard (desirably 5 feet) exists above the 100-year high-water elevation of the Des Plaines River.

Recommendation G2/3-8: Consideration should be given to replacing the existing flap gate system across the flood wall that protects areas upstream including the Boardwalk and Park Place Condominiums with an equivalent size Tide flex rubber check valve system which is a maintenance free check valve system being used in lieu of the traditional mechanical flap gate system.

Recommendation G2/3-9: An evaluation should be provided of the low opening of the access opening for the underground Sibley Lift Station facility which is located on Cook County Forest Preserve District property just west of Riverside Drive at Sibley adjacent to the Des Plaines River. A minimum of 3 feet (desireably 5 feet) of freeboard should be provided above the 100 year high-water elevation to protect this critical City infrastructure. Additional grading to provide a ring berm, utilizing impervious clay material around this low opening, to ensure the necessary freeboard protection should be provided if found necessary.

Levee 50 provides protection for portions of Park Ridge that would otherwise be subjected to Des Plaines River backwater flooding that occurs along Farmer and Prairie Creeks. The floodwall constructed along Dempster Street near the Mayfield Estates subdivision provides additional protection to this area by preventing the occurrence of overland flooding resulting from storms that exceed the conveyance capacity of the existing Prairie Farmer Creek waterway that crosses Dempster Street west of Potter Road.

Recommendation G2/3-10: Routine inspections of the Dempster Street floodwall should be conducted to ensure that continued flood protection is provided for the

intended residents south of Dempster Street. In addition, a permanent Tideflex check valve system should be installed on the outlet sewer system crossing the Dempster Street floodwall.

This check valve system would close automatically as needed to provide the necessary backwater flood protection without any maintenance action being provided as is currently required by the Park Ridge Public Works Department. It should be noted, that during large storm events when the existing check valve is closed, there is no gravity flow of storm water through this outlet sewer and pumping is needed to dewater this area upstream of the Dempster Flood Wall. A field inspection of the western portion of this subdivision revealed that there is currently very limited inlet capacity present, which is needed to convey the storm water runoff from the Mayfield Estates Subdivision into the existing Park Ridge Point Condominiums (PRPC) storm water lift station. This inlet system was observed to be both undersized and obstructed with landscaping debris and other yard ornaments.

Recommendation G2/3-11: An engineering review of the existing inlet system located at the Mayfield Estates Subdivision should be conducted by the City of Park Ridge for the provision of additional inlet capacity needed to convey the flows from this upstream area into the PRPC pump system. A review of the maintenance schedule and a complete inspection of the existing privately maintained PRPC pump stations and detention pond system should also be conducted by the City for any needed action by the Homeowners Association and possibly the City. Recommendations in the Burke Report to increase the capacity of these two PRPC pump stations should be coupled with increased inlet capacity improvements.

Areas along Advocate Lutheran General Hospital Health Care facilities north of Dempster are also impacted by Prairie Creek, which drains along Ballard Road west of Greenwood Avenue.

Recommendation G2/3-12: Future opportunities should be investigated, including a project that would involve a downstream diversion of peak flows from Prairie Creek. This project would involve working with IDOT to pick up and convey peak flows from Prairie Creek west of Greenwood in a separate storm sewer draining to the west along IDOT's Ballard Road for an ultimate discharge into the Prairie- Farmers Creek confluence location near Lyman Avenue just south of Ballard Road.. By constructing this sewer, flood damage could be reduced providing significant benefits to areas of both Unincorporated Maine Township as well as areas within City of Park Ridge, including the Advocate Lutheran General Hospital Care facilities.

Possible difficulties anticipated with this proposal are coordination with IDOT roadway construction schedules, utility conflicts, crossing the newly constructed box culvert storm sewer constructed along Potter Road possibly utilizing a junction structure or siphon below this sewer, and securing the necessary easements for the outfall structure. This is a large regional project that should also be considered by MWRDGC as part of their ongoing Des Plaines River watershed study improvements, which is considering possible

projects along Prairie and Farmers Creeks as well as the mainstream of the Des Plaines River.

Table 2 - Surface Water Flooding Summary

Variable	High Impact	Medium Impact	Low Impact	No Impact
Topography	X			
Impervious Surfaces		X		
Capacity – Sewer Size	X			
Inlet Capacity	X			
Maintenance of Sewers	X			
Homeowner Activities		X		
House Site Design	X			
City Response		X		
County/State Flood Control			X	
Levee Failure	X			

To prevent damage from surface water, the homeowner can install water barriers, such as sandbags, flood walls, and other active and passive barriers to prevent water from entering their house. This can be expensive – passive barriers start at \$50,000 for installation. Raising sidewalks is possible but in many instances impractical, especially in low lying areas.

Active barriers (e.g. sandbags) can be effective, but the homeowner must be at home to prevent flooding. Vehicles that pass the home during the flood can cause waves and allow water to enter the dwelling, thus making the barrier less effective.

Data capturing methods will identify areas in the city where there are surface flooding exposures. Site surveys throughout the city, reviewing topographical maps, and studying sewer maps will identify exposed areas and help prioritize flood mitigation measures.

Sewer back-up

Sewer back up flooding is recorded to be the most common type of flood damage to Park Ridge homes. The causes of the flooding vary from tree root blocked sewers, broken sewers (which forces water back into the homes) or from sump pump failure.

In the sewer arrangements for a typical house with a basement, the sanitary sewer line drains toilet waste, laundry tubs, and (sometimes) the basement floor drain to the sanitary sewer main in the street.

Clean storm water and groundwater are handled by downspouts, footing drains, and sump pumps.

Often basement flooding is caused by sanitary and storm water drain lines entering the same sewer. Some houses have the downspouts, footing drain, and/or the sump pump connected to the sanitary sewer service. During a heavy rain, storm water rushing off the roof, then into the gutters, then rapidly enters the sanitary sewers, causing backups into one house and overloading the main lines, contributing to backups in other houses.

Sewer backups can also be caused by events not related to storms or flooding. Individual service lines can be plugged by grease, waste, tree roots, children's toys, breaks in the pipe, or saturated ground. Proper maintenance can prevent most problems. The sewer mains can also be plugged by the same causes as well as vandalism, storm debris, construction debris or illegal placement of items in manholes. These problems can be fixed by the resident, a licensed and bonded plumber or the City depending on where the stoppage occurs.

Recommendation G2/3-13: To prevent sewer back-ups, homeowners need to inspect and maintain the sewer lines running from their home to the street main. The resident must check first if the sewer lines on the property are broken, clogged with roots or debris, or directly connected to the downspouts or footing drain sump pump. If the resident flushes a toilet while the shower and washing machine are draining and water backs up into the basement, this indicates that the lines cannot carry a large volume of water. If this is the cause of the flooded basement, the problem can be fixed with relative ease.

Under dry weather conditions, a clogged sewer line is almost impossible to detect by a resident. During dry weather, water consumption may be too low to detect tree root blockages or a broken sewer pipe. It is best to hire a licensed and bonded plumber to inspect the sewer lines from the house to the street, perhaps every year or two. Property owners are responsible for the sewer from the house to the City's manhole in the street.

Homeowners should disconnect the gutter downspouts and sump pump outlet pipe (rain and ground water are relatively clean and do not need sewage plant treatment). City Code does not allow direct connections to the sewer systems from downspouts, sump pumps, etc. Plumbers can run a camera inside the sewer and digital/DVD record the sewer from the inside to eliminate the guesswork. If needed rod out the line or repair the break. Consider repairing a broken clay pipe with cast iron pipe or conduit. Even small cracks in the sewer may allow infiltration of rainwater from saturated soil into the sewers. This infiltrated water reduces the sewer capacity for house waste and storm water.

If the home's line is functioning properly and maintained, the problem may be that the City sewer system cannot handle the high volume of water that comes with heavy rain or flooding. Older communities, such as Park Ridge, installed combined sewers which carry storm and sanitary flows. It was considered cost effective to construct one combined sewer rather than a separate sanitary sewer and a separate storm sewer. It was commonly understood that the sewer system was designed to use house basements as a temporary relief to overflowing sewers. This was through the use of floor drains which

protected basement floors and walls from increased pressure. Older homes have floor drains and were not constructed with drain tiles and sump pump systems.

With the exception of low-lying areas and areas where overland flooding is at risk, temporarily storing water in the street until the rains subsides can be an effective method of preventing sewer back-ups.

Recommendation G2/3-14: The City should explore opportunities to install “rainblockers” in the existing catch basins on certain streets where feasible. *These systems must not be installed in areas vulnerable to overland flooding.* The purpose of these low-cost systems is to restrict the flow of water entering the City combined sewer system and temporarily store the water in the street to minimize or eliminate basement backup flooding to adjacent buildings. A thorough review of the low openings and tops of foundations of adjacent buildings is needed as well as a review of overland flood routes to ensure that this installation would not cause overland flooding. The use of this system would not be considered in areas of downward sloping driveways. Other neighboring communities with combined sewers systems have successfully used these flow restrictors including Evanston, Skokie and the City of Chicago, which received grant money from Illinois Emergency Management Agency (IEMA) for this purpose.

Recommendation G2/3-15: The City should explore opportunities that are feasible to collaborate with developers within the City to incorporate and provide additional storm water management features, including additional detention storage, as part of future developments. Locations including the open space areas along the west side of Greenwood Avenue north of Busse Highway and along Northwest Highway east of Greenwood Avenue may provide opportunities for this City-private partnerships that may help alleviate area flooding.

Table 3 - Sewer Back up Summary

Variable	High Impact	Medium Impact	Low Impact	No Impact
Topography			X	
Impervious Surfaces			X	
Capacity – Sewer Size		X		
Inlet Capacity		X		
Maintenance of Sewers		X		
Homeowner Activities	X			
House Site Design			X	
City Response			X	
County/State Flood Control			X	
Levee Failure			X	

Flooding due to Sump Pump Failure

Sump pump failure, due to both mechanical and electrical system breakdown is a common cause of flooding leading to property damage both during and after a storm event.

Electrical Failure

A back up natural gas power system should be explored for installation with the Sibley lift station and other City Pump systems. The dependency on Commonwealth Edison to provide continued electrical service, even with connection to another secondary electrical power grid is prone to fail especially during storm events where wind and lightning damage can cause failure to the electric service system.

Most sump pump systems operate on utility electrical or battery current. Failure of the electrical system can occur for various reasons. Loss of power due to damaged power lines during storms from wind and tree damage often occurs in Park Ridge. However, City records based on resident complaints indicates that there are specific areas in Park Ridge where failure of the electrical service is a common occurrence that is experienced for causes unrelated to storm damage. In these areas, the electrical infrastructure is old and in need of replacement.

Recommendation G2/3-16: Battery Backup sump pumps should be installed by residents who have basements with drain tiles that utilize sump pump systems to ensure pumping continues in spite of power failure.

Although battery backup systems can provide much needed dependable pumping operations during and after critical storm events with power failure, their use is limited due to the life of the battery - especially during extended power loss. Other types of power back up such as natural gas and gasoline powered generators can also be used to provide power to sump pumps.

Recommendation G2/3-17: City management continue their discussions with Commonwealth Edison concerning future equipment upgrades and repairs within the City to minimize power outages and to provide continuous reliable service especially during times of critical necessity during and after storm events.

Mechanical failure

Mechanical failure can also occur on pumps due to the float switch getting hung up on debris in the sump well or an internal failure of this switch which occurs over time.

Recommendation G2/3-18: Routine pump and float maintenance and replacement should be performed by property owners to reduce the possibility of pump failure.

Pump capacity can also be exceeded during large storm events. In areas of known high ground water tables, especially in areas near open water the sump pump system capacity can be exceeded causing typically clean ground water to back up through the sump pits and onto the low lying basement areas.

Recommendation G2/3-19: Higher capacity or even redundant pump systems should be considered in these high ground water areas.

Ground Water Seepage

Ground water seepage is caused by a variety of reasons, most common are:

- Improper grading of land surrounding the house
- Improper drainage from the gutters
- Cracks in the foundation walls
- Cracks/openings in windows and doors
- Gaps found in service holes (e.g. electrical/gas lines)
- Lack of drain tiles along the foundation wall
- Substandard window wells

When rains are heavy and prolonged, the ground becomes supersaturated and water will pool and hydraulic pressure will increase, sometimes allowing water to enter through cracks or other gaps.

Table 4 - Ground Water Seepage Summary

Variable	High Impact	Medium Impact	Low Impact	No Impact
Topography	X			
Impervious Surfaces		X		
Capacity – Sewer Size		X		
Inlet Capacity		X		
Maintenance of Sewers		X		
Homeowner Activities	X			
House Site Design	X			
City Response			X	
County/State Flood Control			X	
Levee Failure			X	

Recommendation G2/3-20: To prevent groundwater seepage, homeowners should:

- Assure proper grading surrounding the house to channel water away from foundation walls
- Assure gutter downspouts are directed away from foundation walls

- Clean gutter downspouts to assure proper roof drainage
- Seal any foundational cracks and windows/doors
- Install drain tiles to remove water from the foundation
- Prevent water channeling obstructions surrounding house property (e.g. fences that stop the flow of water to the streets).
- Install glass block windows where/when appropriate

Flood Database

The database used by the Flood Task Force included survey information obtained after the September 2008 and June 2009 floods. Residents were asked to complete a survey and forward the results to the City. City employees entered the data into a spreadsheet file. Further refinements were made to the data by Task Force members, such as adding additional columns (e.g. Ward location) in the database to help focus on areas of concern.

The City also provided the Task Force with maps that summarized the areas where flooding occurred during the September and June storms. A basic topographical map was also provided to the Task Force.

As mentioned in the Burke report and from basic analysis of the flood data, it is apparent that many residents who experience flood damage did not respond to the surveys requested by the City. As in any database used for decision making, it is very important that as much information as possible is entered into a database – the amount of information will help validate decisions. The following recommendations are presented to help capture the needed data for flood mitigation projects:

Recommendation G2/3-21: Survey residents as to why they do not participate in flood data requests. This should be conducted by a qualified consultant who can effectively capture reasons for non-participation. Based on the survey results, the City should send communications to homeowners on the importance of completing survey requests.

Recommendation G2/3-22: Obtain flood related information in real-time on a continuous basis. Either an online form should be completed or the homeowners should be interviewed after any type of flood. The flood data will be captured in a database and continually updated and monitored for trends and to help prioritize flood related projects.

Recommendation G2/3-23: Results from the citywide sewer study should be incorporated into the flood database.

Reporting Flood Problems

When municipalities have more data, they are more readily able to track the problems to find solutions and to qualify for grant funding. Park Ridge has created a form to encourage and assist residents with the reporting of their flooding.

During and after a flood, residents are expected to report their problems to the Public Works Department. Residents may make a verbal report by calling the Director at 847-318-5228 or by filling out and sending in the attached Flood Assessment Form to Park Ridge City Hall at 505 Butler Place 60068.

The Village of Niles publishes a more comprehensive reporting form to encourage residents to report their flooding problems. It may be helpful to answer these questions first before submitting the Park Ridge form.

Both forms are attached in the Appendix.

Other Long-Term Solutions

A primary goal of the Task Force is to provide solutions for flood management and a mitigation system that will long survive the existence of the current Task Force. Flood prevention is complex and requires the coordination of the efforts of the City, county and state agencies. Time volunteered by citizens within the community also contributes to the overall success of flood prevention and mitigation efforts.

Recording data and “lessons learned” from past flooding events are essential to improving current response and mitigation efforts. The response to the September 2008 rains were recorded and summarized in the Park Ridge published document titled “2008 Flood Report,” which can be found on the City of Park Ridge internet site. There is no doubt that City workers responded promptly and worked long hours during and after the storm.

For the promotion of more effective and efficient response to emergency, specifically flood events, there needs to be evaluations of current response systems and improvements in assuring that more information is provided to City officials during an event. Some areas of Park Ridge were not evaluated or provided any response by the City during the September 2008 floods. Not all areas of Park Ridge were provided emergency services and homeowners, some of whom were trying to respond to their flooding, were left to their own devices to perform emergency services such as blocking off streets to traffic. This should not occur again during the next 100-year rainfall.

Recommendation G2/3-24: Evaluate the current Emergency Operations Plan (EOP) and the resources available to the Community Emergency Response Team (CERT) to determine if additional revisions to the plan and/or resources are needed to assure thorough response to flood emergencies. This evaluation should be performed by Park Ridge Flood Task Force members working with City officials.

Recommendation G2/3-25: To provide additional resources during emergencies at minimal cost to the City, the Park Ridge Flood Brigade should be established consisting of volunteer citizens from each ward who will be the contacts in flood emergencies for delivery of information and supplies. This group will proactively collaborate with the City to assist with flood prevention and mitigation techniques.

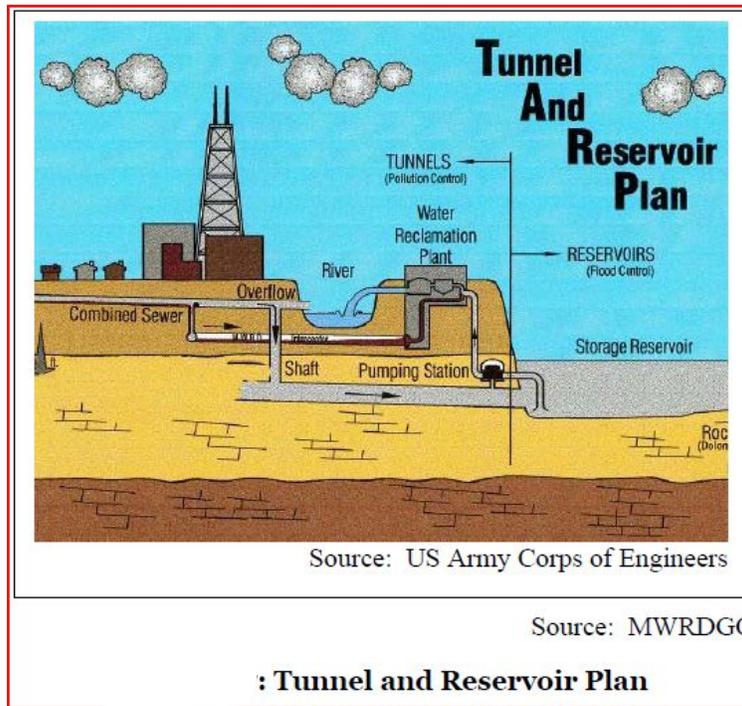
Recommendation G2/3-26: Promoting the recommendations listed in this report needs to continue after the report is published. The Park Ridge Flood Task Force should remain active indefinitely or at least until a working flood management system unique to Park Ridge is established.

There are also regional and county government activities that have an impact on the severity of flooding within the City. Having elected officials and City management involved in the developments of these activities will assist Park Ridge in planning for flood prevention and mitigation goals.

Recommendation G2/3-27: City management of Park Ridge should understand the local impact of future expansion of the MWRGDC system and the hydraulic performance of the Des Plaines River stages and collection system owned by the MWRGDC district, state, or other governmental agencies. There should also be a strong understanding of what the local impact of the new levee 50 and levee 37 will be on potential river levels. The MWRGDC system improvements, including the planned implementation of McCook Reservoir in 2015, should be incorporated into strategies for local system protection of system flood mitigation. A representative of the City Council should be appointed as the storm water management liaison.

Until the McCook reservoir is completed, Park Ridge risks repeated filling of the deep tunnel with an area wide 100 year storm. This results in an overflow discharge as a CSO event into the Des Plaines River. The illustration below illustrates how this major reservoir will give the MWRGDC time to process the excess flood water and not have to use the deep tunnel as a hold area.

Table 5 – Tunnel/Reservoir Plan



Recommendation G2/3-28: The city of Park Ridge should consider joining the Community Rating System (CRS) administered by the Federal Emergency Management Agency (FEMA). Adoption of this program would require staff effort to document and assemble information required for acceptance into this program.

The benefit for Park Ridge is not just the savings residents would realize in their flood insurance, but rather in the improved flood management structure that it would force the community to apply. The CRS would be a forced discipline of flood mitigation practices that would be applied over a period of time. It gives our city a standard to shoot for. Appendix E provides more information regarding the CRS.

Goal 4: Review current City ordinances, practices and policies and make recommendations for change as needed.

The intent of reviewing current city ordinances, practices and policies is to provide recommended modifications that will control run off from new development and construction. These modified measures will control the impact of storm water events, thus eliminating and reducing effects on adjoining properties throughout the city.

Recommendation G4-1:

The Task Force conducted a detailed analysis of how the City of Park Ridge's storm water and combined flow regulations compared with other communities either directly with the communities hard copy regulation(s) or the summarized comparison provided by the overall regulatory agency, MWRDGC. Our findings are listed as the following recommendation:

1. CITY CODE ARTICLE 11 PUBLIC SERVICES, CHAPTER 3 STORMWATER MANAGEMENT.
 - a. 11-3-2. Modify "RECONSTRUCTION" remove "to the extent of 50% of its present value".
 - b. 11-3-2. Modify "DEVELOPMENT" from "1 acre" to "1/2 acre".
 - c. 11-3-6.6 and all. Modify "RELEASE RATES" from ".15 cfs per acre" to ".10 cfs per acre" for 100 – year discharge.
 - d. 11-3-9 and 20-7-1. Modify "FEE IN LIEU OF DETENTION" from "\$25.00 per cubic foot" to "\$30.00 per cubic foot".

2. CITY CODE ARTICLE 20 ADMINISTRATIVE PROCEDURE, CHAPTER 7 PUBLIC WORKS FEES.
 - a. As noted in 1d.
 - b. 20-7-1 "STORM WATER DETENTION FEE" remove "however, such fee shall not exceed five percent (5%) of the construction cost of the development as determined by the Director of Public Works".

3. CITY CODE ARTICLE 15 BUILDING REGULATIONS, CHAPTER 8 LAND GRADES.
 - a. 15-8-3 "AREA DRAIN" add "shall be restricted to the sanitary sewer as approved by the City Engineer".

4. A GUIDE TO FLOODED BASEMENTS.
 - a. Develop a more user friendly version (like Skokie) and a one page check list of bullet point items that can be undertaken.

5. YARD DRAINAGE – GENERAL INFORMATION.
 - a. Develop a more user friendly version and a one page check list of bullet point items that can be undertaken.

6. RESIDENT STORMWATER CONTROL (BUILDING DIVISION).
 - a. As noted in 4 above.
 - b. Combine with 4 above and develop one user friendly version.

7. COUNCIL POLICY # 8, DRAINAGE PROBLEMS ON PRIVATE PROPERTY.
 - a. Item 2 Landscape or Grade Alterations add “and shall be restricted to the sanitary sewer as approved by the City Engineer”.
 - b. Item 3 Existing Drainage on Private Property, develop a bullet point check list of what items can be undertaken.

Modifications noted above provide strong storm water mitigation regulation control measures applicable to future Park Ridge development. These measures are critical to the long range success of storm water management control.

It is recommended that these findings be implemented within the next year.

Data used to formulate these recommendations are cited in Appendix D.

Table 6 - Watershed Management Ordinance - WMO (development and redevelopment)

	Current MWRD Regulations (SPO)	Draft WMO
Thresholds	5-Acre Nonresidential 10-acre Residential	3-Acre nonresidential 5-Acre nonresidential
Combined Sewer Areas	Detention not required	Detention required
Release Rate	3-Year Undeveloped	0.15 cfs/acre
2-Yr Release Rate	None	0.04 cfs/acre (discharging to waterways)
Rainfall Data	Technical Paper 40 (1961) 100 Yr, 24-hr = 6.00”	ISWS Bulletin 70 (1989) 100 Yr., 24 hr = 7.58”
Detention Volume Methodology	Modified Rationale	Hydrograph

Detention volume approved through enforcement of the SPO from 1972 through 2008 is 22,600 acre-feet or 7.38 billion gallons

Ref: Metropolitan Water Reclamation District of Greater Chicago, Presentation to “Watershed Management Ordinance Study Session – Lower Des Plaines River Watershed”, November 2009 DRAFT

The above table provides a summary of Draft Watershed Management Ordinance changes involving detention being considered by the Metropolitan Water Reclamation District of Greater Chicago.

Goal 5: *Seek and explore funding opportunities for flood mitigation, both for City and residents.*

Funding for Flood Mitigation

The funding needs for the City and its residents are both short-term and long term. For this discussion, short-term will be defined as one year or less and long-term will be defined as greater than one year. In both cases, the financing of these needs will have to come from the current City Sewer budget, additional fees, and bond issuance.

Short-term needs are a sewer televising system, general maintenance, a new sewer truck, and a city-wide sewer study. The sewer televising system is needed to help the City identify critical sewer problems that need to be addressed immediately and identify future improvements. General maintenance includes cleaning the sewer inlets and outlets, routing clogged lines, and cleaning the Sibley Lift Station. To help in the general maintenance, the City should add a new Vactor Truck, which will increase the amount of sewer lines that can be cleaned in a given year. The sewer survey is needed to determine the current sewer system capacity and identify critical repairs. The approximate costs of these needs are as follows:

- Video sewer system – \$86,000
- General Maintenance - \$100,000
- Vactor Truck - \$306,000
- City-wide Sewer Study - \$400,000

Funding for these short-term needs will come from the current City Budget and a separate monthly sewer fee. The approximate revenue from these funding sources is the following:

- City Budget already includes maintenance & video - \$186,000
- Separate monthly sewer fee - \$ 540,000 (\$3*15,000*12) annually*

*On April 19, 2010, the City Council approved a new sewer fee of \$1.22 for every 1,000 gallons of water used in lieu of approving the \$3 a month sewer charge. The revenue from this fee will be used to purchase the Vactor Truck, Citywide sewer study, purchase sewer televising equipment, the cost of a Water Department employee, and the design of a water storage basin.

All of these funds should be allocated to the Sewer Enterprise Fund and used to address the City's short-term needs. This funding should enable the City to meet its short-term needs and enable it to use any excess to support the City's long-term sewer needs.

Incentives

Recommendation G5-1: The City should consider providing an incentive program to homeowners to install flood protection devices. It is important to understand the

economic advantages of providing an incentive for residents to provide their own flood control systems (e.g. overhead sewers and check valve system with pump). The benefits are that 100-year protection can be achieved. The Burke report recognizes the advantages of providing individual flood control as opposed to the City providing a larger global solution for the St James area portion of their report. They correctly estimated the cost of providing the individual flood control systems being \$10,000 per home. A modest incentive program would save the City money by reducing the cost of post flood damage cleanup and inspection. Only one project, Park Ridge Country Club had a cost per flood-proofed home of less than \$10,000 per home. The incentive program could also be extended to new developments to encourage the use Best Management Practices such as the recent successful redevelopment of the Lutheran General Hospital that is LEED certified.

It should also be noted that neighboring communities are successfully managing an incentive program as part of their flood mitigation plans (i.e. Burke Report Appendix 11).

Incentive program need to be properly administered and monitored to assure the funding is exclusively used for flood controls and that the controls are not replacing existing controls.

Long-term needs are for upgrading the entire sewer system. This includes new sewer lining of existing system and additional retention ponds as suggested by the Burke Report. The lining of the system will cost approximately \$275,000 per mile and the retention ponds will cost in excess of \$6,000,000. In order to pay for these costly upgrades, the City can issue bonds or apply for low interest loans. For example, the lining (for the entire City sewer system) will cost approximately \$36,000,000 (275,000*132 miles). Lining will not be needed throughout the system – the City Sewer Study will identify areas that would need the lining. The City should use any excess funds in the Enterprise Fund to assist in the servicing of any bond issuance.

Water Pollution Control Loan Program may provide low interest loans with maturities less than twenty years. Loan applicants for financial assistance, during any federal fiscal year commencing October 1, must file a new pre-application annually on or before the preceding March 31. Once the Illinois EPA has determined priorities for awarding loan fund assistance to projects, a loan applicant must complete a loan application before the Agency can offer a loan. Some of the key elements of a loan application that must be submitted by the applicant and approved by the Illinois EPA include: (1) a facilities plan; (2) design plans and specifications; (3) a user charge system and sewer use ordinance, and a dedicated source of revenue for repayment of the loan; and (4) a summary of the bids received on the project, along with a recommendation to award a contract to the low responsive, responsible bidder.

The City should continue an open dialogue with our State and Federal representatives to ensure the City is eligible for any future funding.

In early March, Mayor Schmidt and Economic Development Director Kim Uhlig visited Washington, D.C. to investigate opportunities for federal funding of flood control projects. Their meetings with Congressman Jan Schakowsky, the Environmental Protection Agency, and the Federal Emergency Management Agency resulted in positive opportunities for the City. It is too early in the discussions to definitely know the funding support from the federal government; however, there are now requests within the federal government for \$2.5 million dollars for flood related support for Park Ridge.

APPENDIX A
PRELIMINARY REPORT TO THE CITY COUNCIL (12/14/09)



CITY OF PARK RIDGE

505 BUTLER PLACE
PARK RIDGE, IL 60068
TEL: 847/ 318-5200
FAX: 847/ 318-5300
TDD:847/ 318-5252
URL:<http://www.parkridge.us>

THE CITY OF PARK RIDGE FLOOD ADVISORY TASK FORCE

PRELIMINARY REPORT TO THE CITY COUNCIL December 14, 2009

Mission:

To listen, learn from and to lead the Park Ridge community in understanding area flooding issues and to develop an appropriate variety of flood control mitigation measures that would reduce homeowner flood risk. These measures will be presented to the City Council, city staff and the residents of Park Ridge for consideration and appropriate implementation.

Our Mission:

THE CITY OF PARK RIDGE IS COMMITTED TO PROVIDING EXCELLENCE IN CITY SERVICES IN ORDER TO UPHOLD A HIGH QUALITY OF LIFE,
SO OUR COMMUNITY REMAINS A WONDERFUL PLACE TO LIVE AND WORK.

The Flood Advisory Task Force is comprised of nine residents, appointed by the Mayor, who have worked together to develop this preliminary report.

TASK FORCE MEMBERS

Joseph Saccomanno, Gale Fabisch, Bob Mack and Steve Tolan, Lou Arrigoni, Daniel Carroll, John Humm, Kim Jones and Patricia Lofthouse

CITY STAFF

Wayne Zingsheim, Sarah Mitchell, Brian Wiebe, and Susan Tedeschi

SUMMARY OF PRELIMINARY FINDINGS

- Increase maintenance and sewer inspections by developing a yearly sewer inspection program. Purchase vactor truck, inspection camera system and additional rodding equipment. Hire two additional employees to perform these duties. - \$500,000 estimate
- Modify and revise existing Ordinances to reduce the release rate, increase fee in lieu of detention, eliminate the 5% maximum of construction cost limit, and apply to all construction / development half acre or more. - No cost
- Increase property owner's education and awareness of stormwater management issues via booklets, website, seminars and workshops. - \$10,000 estimate
- Fund above recommendations thru a \$3 per month flood mitigation surcharge for each property owner. This revenue shall be deposited in the Sewer Enterprise fund. Continue to pursue long-term funding thru grants and low interest loans. Develop an incentive program to encourage property owners to install approved stormwater control measures.
- Develop a yearly sewer lining/replacement program based on inspection of sewers and critical infrastructure systems. - \$1,000,000 estimate
- Expand data gathering by using GIS system, surveys and other data gathering methods. - \$50,000 estimate
- Undertake a citywide sewer study. - \$400,000 estimate
- Improve sewer conveyance to a ten-year storm (2.1" of rain in 1 hour). – TBD based on citywide sewer study
- Develop and maintain a long-term citywide hazard mitigation program notification and information system. - TBD
- Create and expand dialogue with Commonwealth Edison regarding improvements and notifications. – No cost

- Combine the recommendations of the Burke Study with the citywide sewer study to determine citywide priorities. Pursue agreements with the Park Ridge Park District and Country Club. – TBD and no cost

GOALS AND SPECIFIC DETAILS

A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues (Mr. Arrigoni and Mr. Humm)

- To increase property owner's education and awareness on stormwater management issues.
- To provide information on stormwater management via website, print, and seminars.
- To inform property owners of the city's sewer infrastructure limitations.
- To educate homeowners in individual stormwater management to mitigate flooding.
- To publish the best water mitigation actions of local, regional and national governmental bodies.

B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding (Mr. Tolan and Mr. Fabisch)

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources (Mr. Mack and Mrs. Lofthouse)

Types of flooding: sewer backup, overland flooding, seepage/foundation problems resulting in groundwater infiltration, mechanical/electrical deficiencies/failures.

WHAT PROPERTY OWNERS CAN DO

Provide short-term homeowner solutions to flooding:

- Disconnect and redirect downspouts away from foundation
- Clean and televisive private sewer service line - \$300
- Purchase and install rain barrels - \$40
- Maintain and inspect existing sump pump and float system
- Install battery backup sump pump - \$1,400
- Remove overland flow path obstructions
- Seal foundation cracks - \$300 per crack
- Common sense solutions, i.e. limit water usage during flood
- File complaints against utility companies for power failures

Provide mid-term homeowner solutions to flooding:

- Install rain gardens
- Inspect low openings, raise/extend window wells
- Where needed, install glass block windows in basements
- Where possible, incorporate native plantings in landscaping
- Replace asphalt surfaces with pavers
- Purchase portable backup generator system - \$500
- Install wet wells or French drain sewer systems

Provide long-term homeowner solutions to flooding:

- Install overhead sewer – \$10,000
- Install flood control system backflow prevention and pump
- Install permanent natural gas backup generator system -\$7,000
- Re-grade property, provide berming as needed – varies
- Purchase Aqua Dam or install mechanical gate for down slope drives

WHAT THE CITY CAN DO

Provide short-term City solutions to flooding:

- Evaluate existing City sewer system, clean and televise sewers - \$1.50 - \$2 per foot
 1. Purchase sewer vactor and camera system - \$400,000
 2. Hire and train staff as needed to operate system - \$150,000
 3. Use sewer lining contract to provide lining services for sewers that have drainage or infiltration problems.
 4. Power cleaning and rodding of local sewers
- Inspect, maintain and repair critical infrastructure as needed
 1. Pump Station systems
 2. Flap gate systems and other backwater prevention systems - \$5,000
 3. Flood walls
 4. Overland flow paths
- Expand City flood database GIS system
 1. Obtain and document flood damage costs from FEMA
- Expand dialogue with Commonwealth Edison regarding power outages
 1. Customer service and capital improvements
- Incorporate modifications to City Ordinances
- Develop citywide Flood Mitigation Incentive Program
 1. Purchase and loan pumps to residents
 2. Provide drainage system design services
 3. Provide rebates
 4. Provide tax credits
- Participation in MWRDGC Watershed Council
 1. Lower Des Plaines River Watershed Council
 2. Combined Sewer District Council
- Educate residents on Municipal Codes via print and website
- Consolidate flood information on City website
- Develop citywide volunteer organization to provide hazard mitigation and emergency services for the city and residents

Provide mid-term City solutions to flooding:

- Evaluate capacity of existing sewer system
 1. Possible engineering study
 2. City review of flooding incidents
- Develop and implement Sewer Lining Program as needed
- Construct relief sewers per sewer system evaluation
- Examine each unpaved alley as possible detention site

- Where feasible, raise sidewalks and curbs for down sloping drives
- Explore opportunities to incorporate best management practices into city infrastructure

Provide long-term City solutions to flooding:

- Implement capital flood control projects
 1. Explore and develop opportunities for flood control projects
 2. Prioritize capital projects based on cost/benefit
 3. Burke Study projects
 4. Secure funding for design and construction of projects
 5. Secure needed right-of-way and land owner agreements
- Develop a partnership with future developments in Park Ridge
 1. Expand detention storage opportunities
- Partner with IDOT roadway improvements
 1. Explore sewer separation opportunities
 2. Relief sewers
- Establish a Flood Management System to provide continued long-term solutions

C. Review current City Ordinances, practices and policies and make recommendations for change as needed (Mr. Saccomanno and Ms. Jones)

Revise the Municipal Code as follows:

- Article 11- Public Services, Chapter 3 - Stormwater Management
 1. Section 2, Reconstruction - remove “to the extent of 50% of its present value.”
 2. Section 2, Development – change “1 acre” to ½ acre.
 3. Section 6.5, Release Rates – change from “.15 cfs per acre” to .10 cfs per acre for 100-year discharge.
 4. Section 9, Fee in Lieu of Detention – (also in 20-7-1) change from “\$25 per cubic foot” to \$30 per cubic foot.
- Article 20- Administrative Procedure, Chapter 7 - Public Works Fees
 1. Section 1, Stormwater Detention Fee – (also in 11-3-9) change from “\$25 per cubic foot” to \$30 per cubic foot.
 2. Section 1, Stormwater Detention Fee – remove “however, such fee shall not exceed five percent (5%) of the construction cost of the development as determined by the Director of Public Works.”
- Article 15 – Building Regulations, Chapter 8 – Land Grades, Section 3, Area Drain
 1. Add “shall be restricted to the sanitary sewer as approved by the City Engineer.”

D. Seek and explore funding opportunities for flood mitigation, both for City and residents (Mr. Carroll)

Currently there is no state or federal funding available for sewer projects. However the City of Park Ridge can raise its own capital by doing the following:

- Each household and business pay a \$3 per month sewer surcharge to fund short term maintenance projects such as purchasing a vacuum truck, video equipment and general maintenance.
- Apply to the Illinois Water Pollution Control Loan Program in order to provide the city and residents with low interest loans that mature in less than twenty years.
- Explore the issuance of bonds to cover long term projects such as sewer lining and constructing retention areas per the Burke study.
- Continue to pursue long-term funding solutions.

APPENDIX B
CHRISTOPHER B. BURKE ENGINEERING
CITY OF PARK RIDGE – FLOOD STUDY FINAL REPORT (OCTOBER 2009)

JOURNAL OF THE PROCEEDINGS OF THE WORKSHOP MEETING OF THE CITY COUNCIL

**CITY OF PARK RIDGE
505 BUTLER PLACE
PARK RIDGE, ILLINOIS**

November 2, 2009

- I. Mayor David Schmidt called the meeting to order at 6:34 p.m.
- II. City Clerk Henneman read the roll call and the following Elected Officials indicated their presence at the meeting: Ald. Sweeney, DiPietro, Bach (6:37 p.m.), Allegretti, Ryan, Carey and Wsol and Mayor Schmidt.
There was a quorum.

The following staff members were also present:

Aggie Stempniak, Public Information Coordinator; Cathy Doczekalski, Assistant to the City Manager; Sarah Mitchell, City Engineer; Wayne Zingsheim, Public Works Director, Juliana Maller, Deputy City Manager; Cheryl Peterson, Deputy City Clerk; James Hock, City Manager, Carrie Davis, Community Preservation & Development Director and Linda Lazzara, Assistant Finance Director

- III. Mayor Schmidt turned the meeting over to Thomas Burke and Travis Perry who represented Christopher B. Burke Engineering, Ltd (CBBEL). They were hired by the City to perform a flood study. The need was based on severe flooding that occurred during the September 2008 rainfall event in which the City received 8.1 inches of rainfall in a 38-hour period. The study area included St. James Place, Northwest Park, Country Club, Overhill Avenue, Burton Avenue and Mayfield. The primary goals of the study were to determine the extent of the flooding damage, establish possible causes for flooding and provide potential solutions to reduce the risk of future flooding.

The analysis of flooding was discussed. CBBEL determined the main reason for the flooding was due to excessive rainfall and not the result of insufficient maintenance or substandard development. Commonly misunderstood facts about flooding were revealed and truths explained. The presentation and report summarized the flood study results in addition to presenting concept level solutions. Drainage solutions and recommendations were also provided for each study area including conceptual construction costs.

Lastly, cost estimates and prioritization were broken down according to flood reduction benefit and also by cost.

Council members were given an opportunity to ask various questions regarding the report. However, due to time constraints, Ald. Bach inquired if Mr. Burke and Mr. Perry could return to address additional questions from the Aldermen and residents of the community. Mr. Burke agreed to arrange a date with Mr. Saccomanno (Chairman of Flood Control Task Force). Public notice of the meeting date and time would be provided.

- IV. The meeting adjourned at 7:43 p.m.

Cheryl L. Peterson, Deputy City Clerk

Attest:

David F. Schmidt, Mayor

Betty W. Henneman, City Clerk

Park Ridge Flood Study Final Report

for the



City of Park Ridge

by

**Christopher B. Burke Engineering, Ltd
(CBBEL)**

Purpose of the Meeting

- Present the results of the Flood Study to the Flood Control Task Force, City Council members
- Describe areas of flooding and possible causes of flooding
- Present recommendations
- Discuss cost estimates and prioritization

Recent Flooding

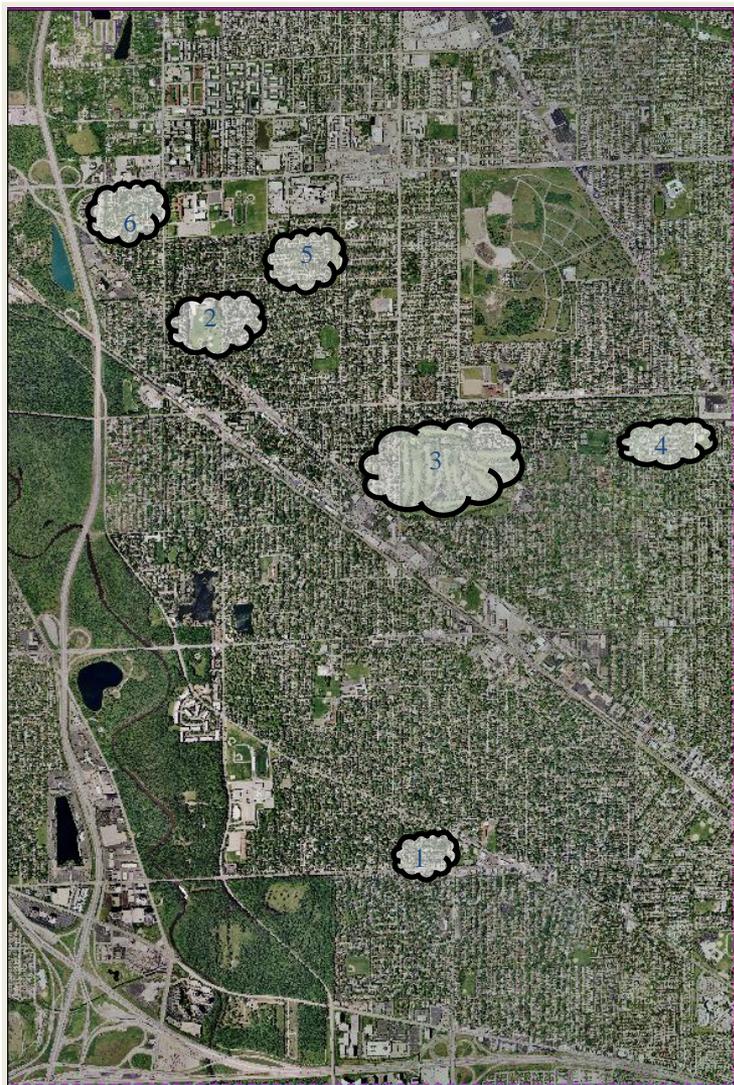
September 13-14, 2008



Recent Flooding

- September 13-14, 2008 – 8.13” recorded at Public Works rainfall gauge
 - News outlets report as much as 9.95” in surrounding communities
 - O'Hare USGS Gauge – 7.74” over 38 hours
- Average September rainfall = 3.3 inches
- 100-year 24-hour rainfall depth = 7.58 inches
- June 19, 2009 – 2.2” in early morning hours
- June 19, 2009 – 2.1” in late morning - evening hours

Specific Flooding Locations



1. St. James Place
2. Northwest Park
3. Country Club
4. Overhill Avenue
5. Burton Lane
6. Mayfield Drive

Analysis of Flooding

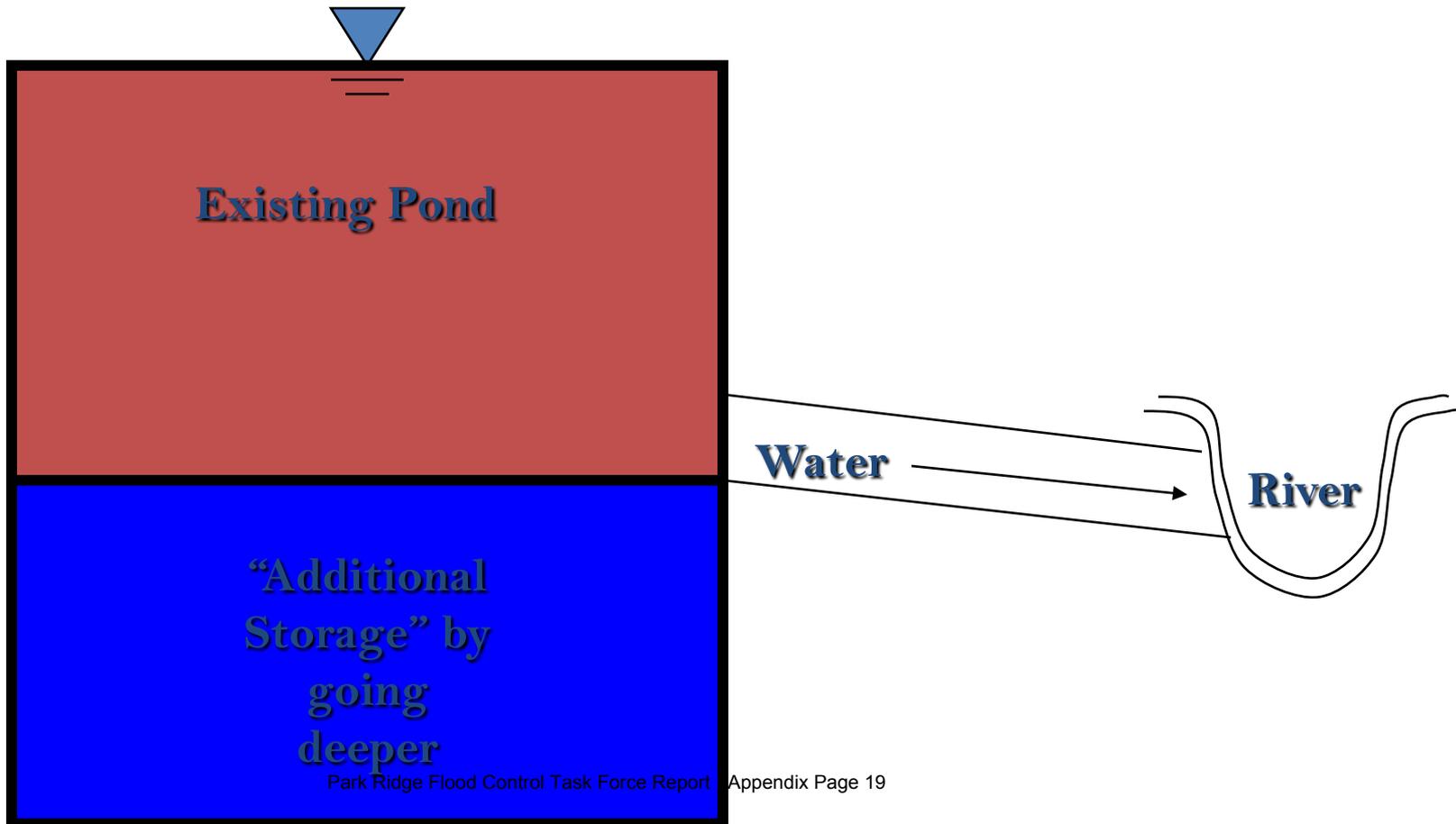
Flooding Analysis

- September 2008 flooding caused by excessive rainfall
- Above average yearly rainfalls in 2006-2008 have led to high groundwater elevations
- Subdivisions built over last several decades
- Met regulations and stormwater requirements at time of construction – prior to modern standards
- Systems receive regular maintenance by City Public Works
- Flooding is not the result of insufficient maintenance or substandard development
- All residents should be encouraged to flood-proof homes

Commonly Misunderstood Facts About Flooding

- Digging ponds deeper will help solve problem
- Flood-proofing impacts downstream properties
- Send the problem downstream
- Stop the standing water in the street
- The solution is to add more inlets
- The “evil” gatekeeper
- Breaking watersheds
- Influence of areas not hydraulically connected
- Other local, state and federal agencies have money to take care of problem
- “Deep Tunnel Project” should solve problem

“Deeper” Ponds

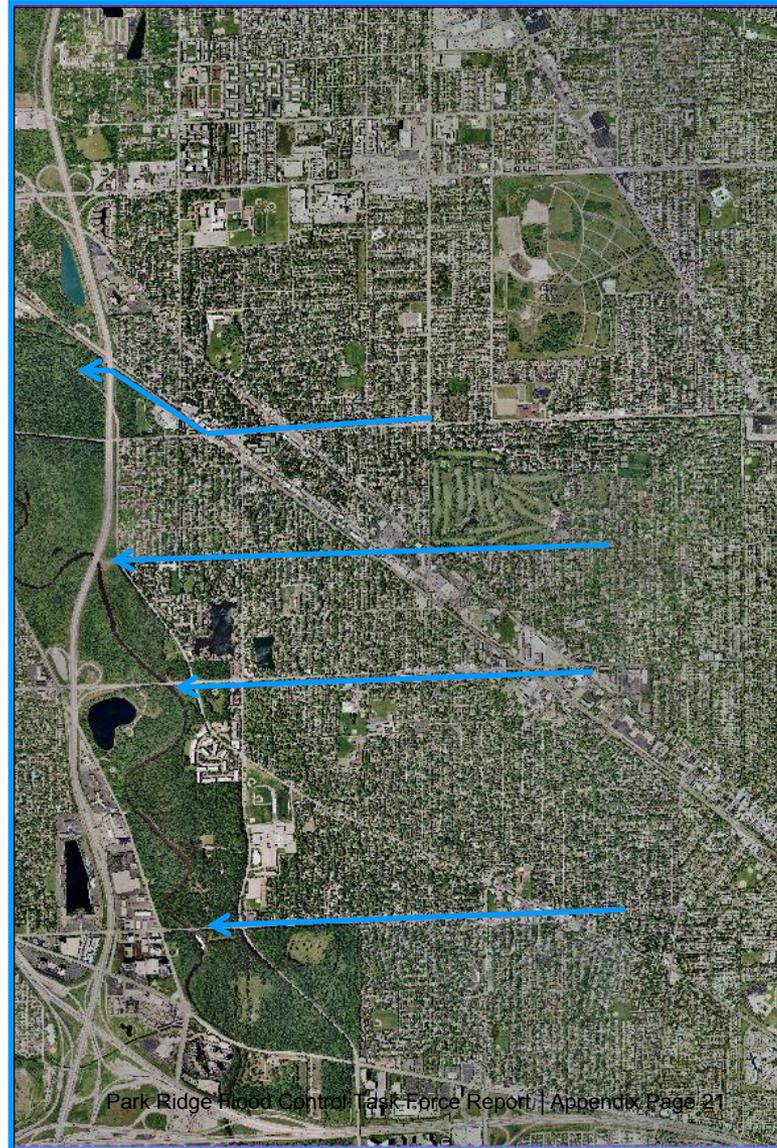


Commonly Misunderstood Facts About Flooding

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“Deep Tunnel Project”

**MWRD
Interceptors and
CSOs Locations**



Trunkline Sewers

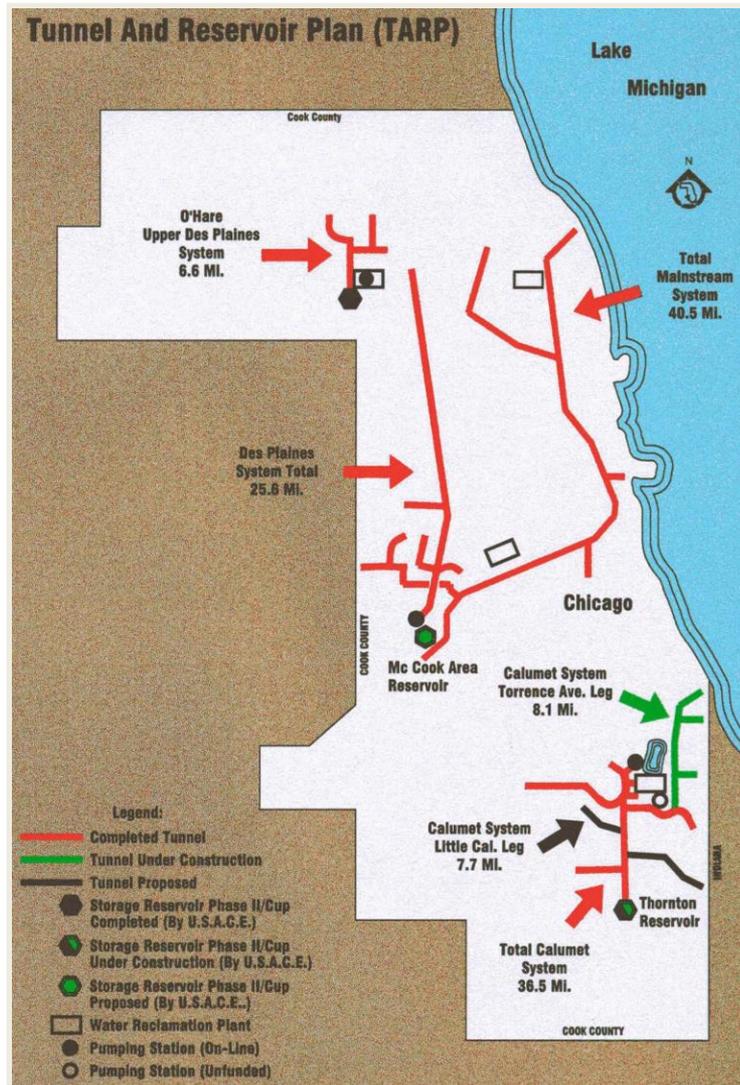
Glenview Ave

Sibley Ave (TARP)

Touhy Ave

Devon Ave

Tunnel And Reservoir Project (TARP)



- MWRDGC project to reduce Combined Sewer Overflows (CSO) to waterways
- Connection at Sibley Pumping Station
- Finite capacity to accept flows like all sewers
 - 1" runoff today
 - 2" after McCook Reservoir comes online in 2015

Tools Used

- Site Visits by CBBEL Staff
- High water marks reported by residents and City Staff
- City of Park Ridge sewer atlas
- City of Park Ridge GIS mapping information
- City of Park Ridge relief sewer maps and plans
- City of Park Ridge 1-ft topographic mapping
- City of Park Ridge 2008 Flood Report and maps
- September 2008 Flood Questionnaires
- June 2009 Flood Calls

Tools Used (cont.)

- City of Park Ridge Basement Backup Log
- Cook County aerial topographic mapping
- 1996 Harza Flood Control/Sewer System Analysis Studies – Hard Copy Only, no models
- 1979 Tornrose, Campbell & Associates Existing Sewer Systems Study – Hard Copy
- USGS topographic maps
- Historical aerial photographs

Considerations For Improvements

- Retrofits must be MWRDGC permittable
 - Combined System
- Must be compliant with State and Federal regulations
- Flood-proofing of residential structures
- Alternatives involving existing stormwater facilities and publicly owned property

Types of Projects

- Flood-proofing of existing residential structures
 - Raising curbs and sidewalks for reverse slope driveways
 - Raising window wells or installing glass blocks
 - Restoring overland flow routes in side/rear yards
 - Relocating sump pump and downspout discharge
 - Upgrading sump pumps
 - Flood control systems
- Construction of relief sewers
- Upsizing or modification of existing sewers
- Create floodwater storage
- Combination of the above

St. James Place Study Area



September 2008 Storm Event



- General tributary area bound by Talcott, Cumberland, Devon and Greenwood
- All reports of sewer backup
- 3 questionnaires
- 6 emails
- June 09 – 7 calls

Flooding Analysis



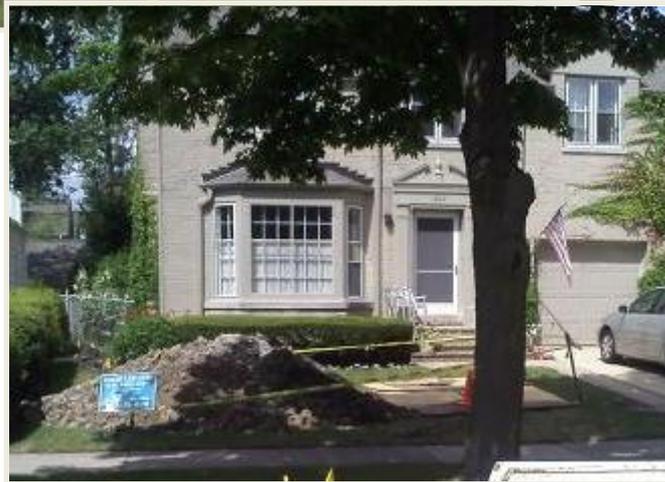
- 18 acres tributary area
- Flow east to west
- Single 18" RCP on Chester - Capacity
- Overland flow from Arthur and St. James to Chester
- All to trunk sewer under Devon
- Likely more residents that haven't reported

St. James Place

Possible Drainage Solutions

- Upsize sewers or install relief sewers
 - Multiple layouts under St. James and Chester
- Create additional storage
 - Various sites
- Flood-proofing of individual homes
 - Flood Control Systems – Check valves, overhead sewers

St. James Place Recommendations

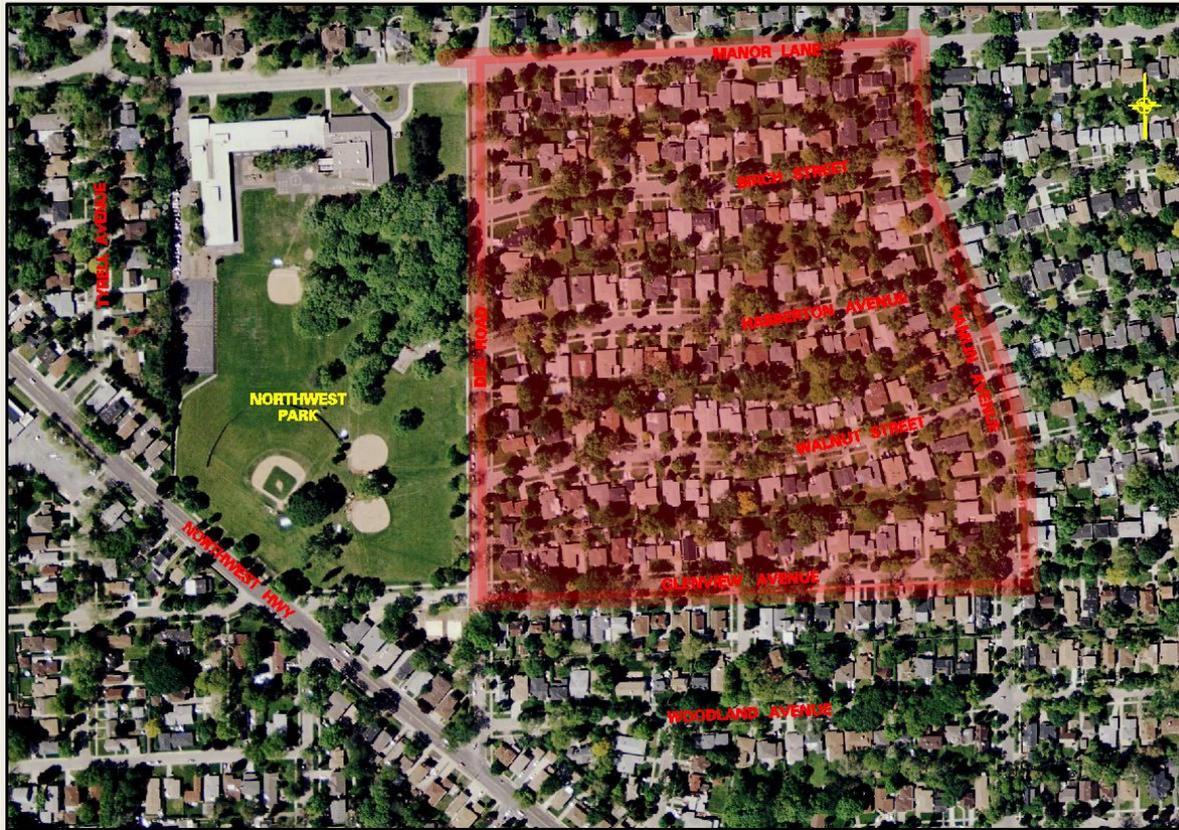


- Flood-proofing of individual residences by homeowners
 - Flood control systems
 - Cost - \$10,000 per house
- 11 permit applications for flood control systems received
 - ✓ 5 completed
 - ☐ 6 outstanding

Northwest Park Study Area



September 2008 Storm Event



- 43 Questionnaires Received
 - 4 Seepage
 - 10 Sewer backup
 - 1 Floor drain
 - 11 Basement/Garage doors
 - 4 Patio door
 - 5 Window well
 - 8 No damage reported
- Extensive street and yard flooding

Flood Analysis

- Reverse slope driveways
- Overland flow swales
- Flat topography
- Pipe capacity



Possible Drainage Improvements



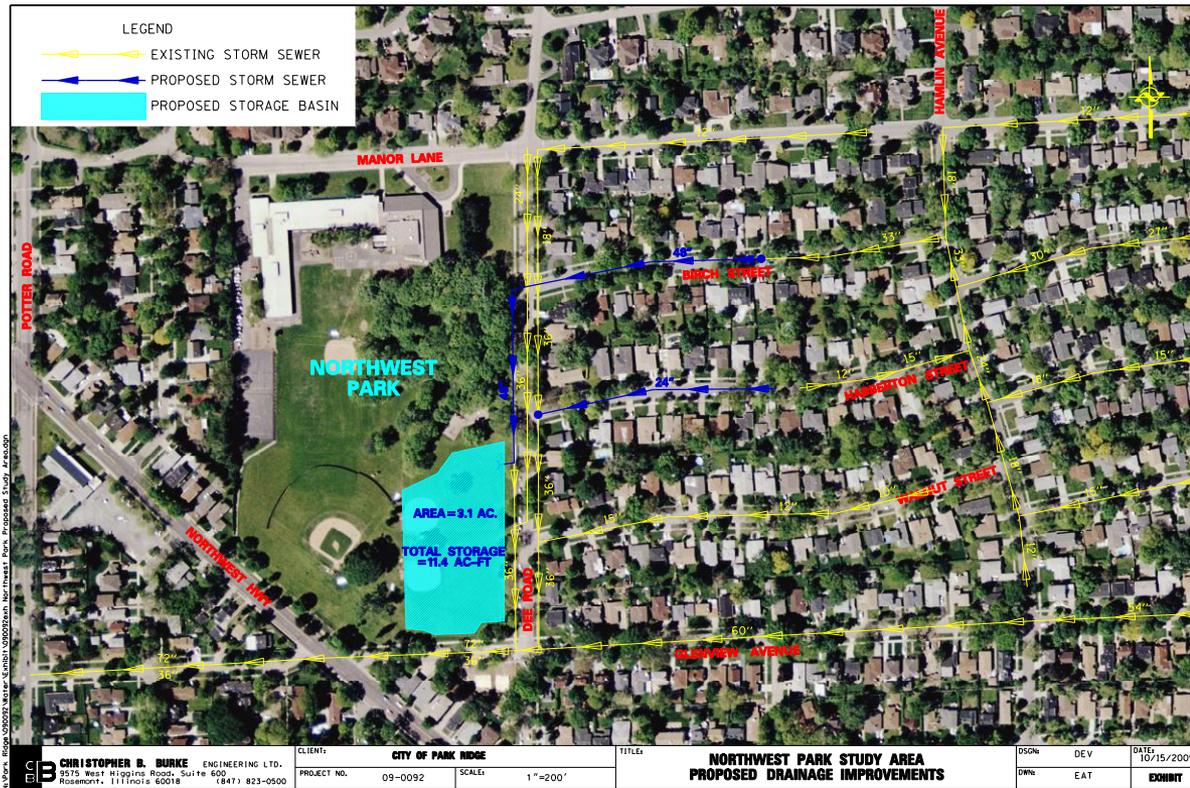
- Increase the elevation of curbs and sidewalks
- Separating Birch and Hamlin St.
- Construct relief sewers
- Storage at Northwest Park

Northwest Park Recommendations



- Storage basin at Northwest Park
- Open space could be maintained
- Utilized in larger storms
- Low flow events maintain existing outlet

Northwest Park Recommendations



- Above ground
- Relief sewers to basin
- Lateral pipes needed to reach flooding areas
- Resident and Park District cooperation needed
- Met with Park District Board
 - Open to concept
 - Design concerns
- Cost - \$1.9 M
- Below ground approx. \$5-6 M

Park Ridge Country Club Study Area



September 2008 Storm Event



- 20 Questionnaires
 - 8 Seepage or sump pump
 - 10 Sewer backup
 - 2 Overland
- 3 subbasins
- All contribute overland flow to Greenwood
- Limited pipe capacity

June 19, 2009 Storm Event

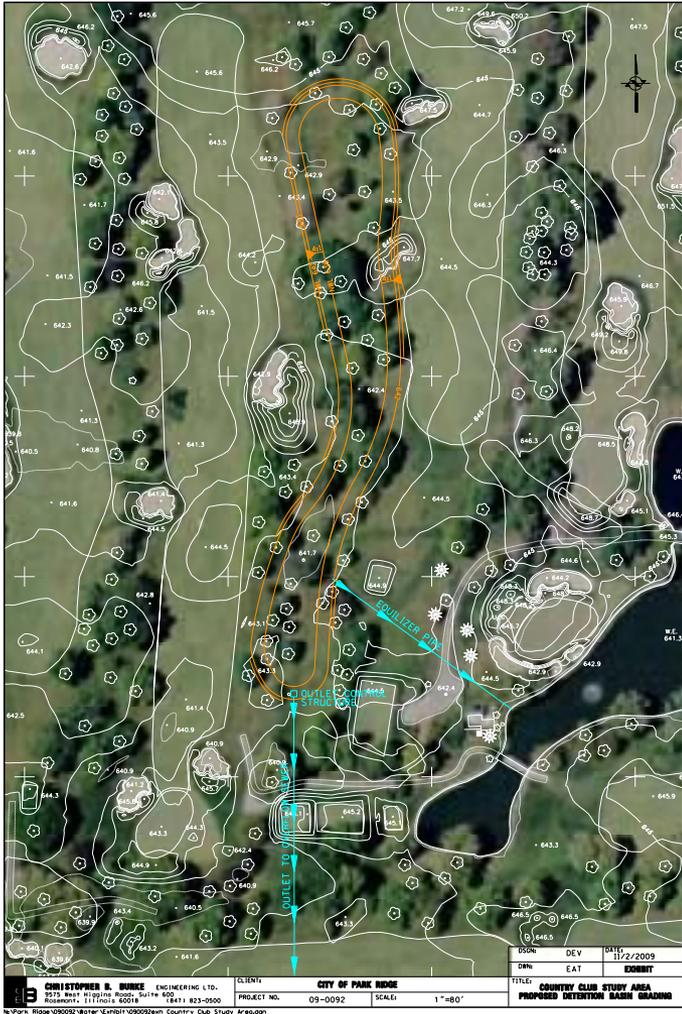


Possible Drainage Improvements



- Separate sewers
 - Complex system to separate effectively
- Construct relief sewers or add pipe storage
 - Underground storage expensive and disruptive
- Construct berm
 - Berm does not solve problem
 - Keep ex trib area
- Evaluate storage on Country Club

Country Club Recommendations



- Proposed 4-5 ac-ft storage basin
- Existing low area
- Not significant impact to Country Club layout
- Provide storage for residents and irrigation for Country Club
- Reduction of undetained area to Greenwood system from 24 to 11 acres
- Cost - \$590,000
- Met with members of PRCC Board
 - Additional design and approvals needed
 - Seeking commitments from City
 - Timing
 - Funding





Burton Lane Study Area

September 2008 Storm Event



- 6 Questionnaires
 - 1 Window well
 - 3 Seepage and Sump pit
 - 2 Sanitary Sewer Backup

Burton Lane Drainage Analysis



- Extremely flat topography
- Sags in streets create bowls
- Nonexistent or blocked overland flow routes
- Pipe capacity

September 13-14, 2008 Storm Event



Park Ridge Flood Control Task Force Report | Appendix Page 46

June 19, 2009 Storm Event

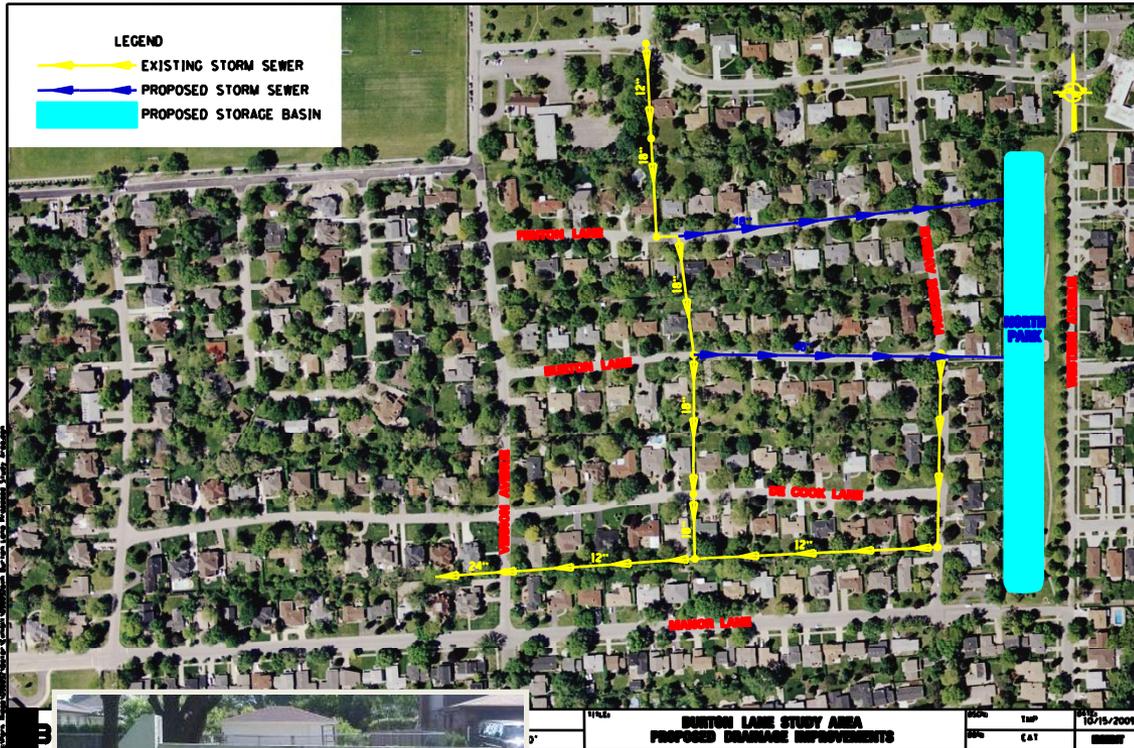


Possible Drainage Improvements



- Raise curbs and sidewalks for homes with overland flow
- Construct relief sewers
 - Relief sewers alone do not provide significant reduction
- Underground storage not feasible
- Evaluate combination of storage and sewers

Burton Lane Recommendations



- 8-10 ac-ft above ground storage
- Maintain low flow to existing system
- Dry bottom basin still usable open space
- 42” RCP on Fenton and Burton
- Reductions of 1-3 ft
- Need additional cross pipes
- Resident and Park District cooperation needed
- Met with Park District Board
 - Open to concept
 - Design concerns
- Cost – \$2.1 M
- Underground - \$4-5 M

Overhill Avenue Study Area



Overhill Ave Drainage Analysis



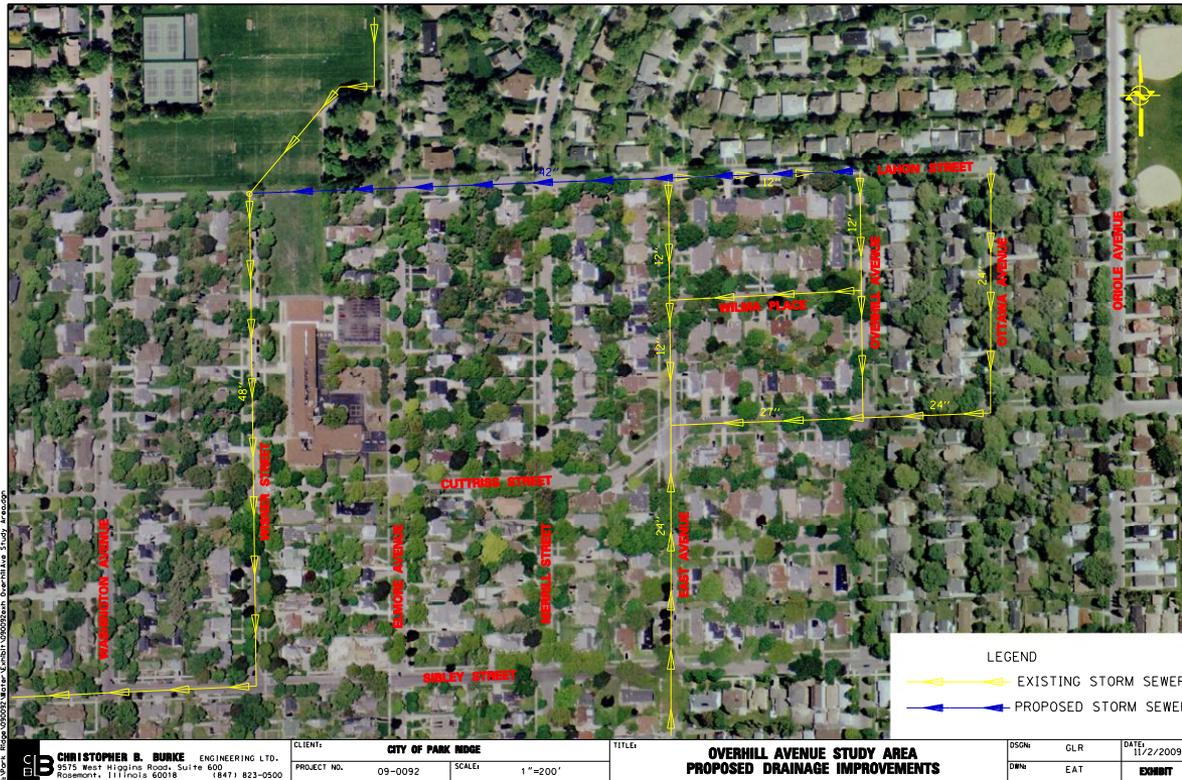
- 7 Questionnaires
 - 3 Seepage
 - 4 Window wells
- Capacity of existing pipes
- Significant overland flow and street ponding
- Flow from surrounding areas
- Sag creates bowl effect
- Existing relief sewer at Lahon and Overhill

Possible Drainage Solutions



- Raise sidewalks and curbs for homes with reverse slope driveways
- Separate or modify existing sewer system
- Create storage
- Construct new relief sewer

Overhill Avenue Recommendations

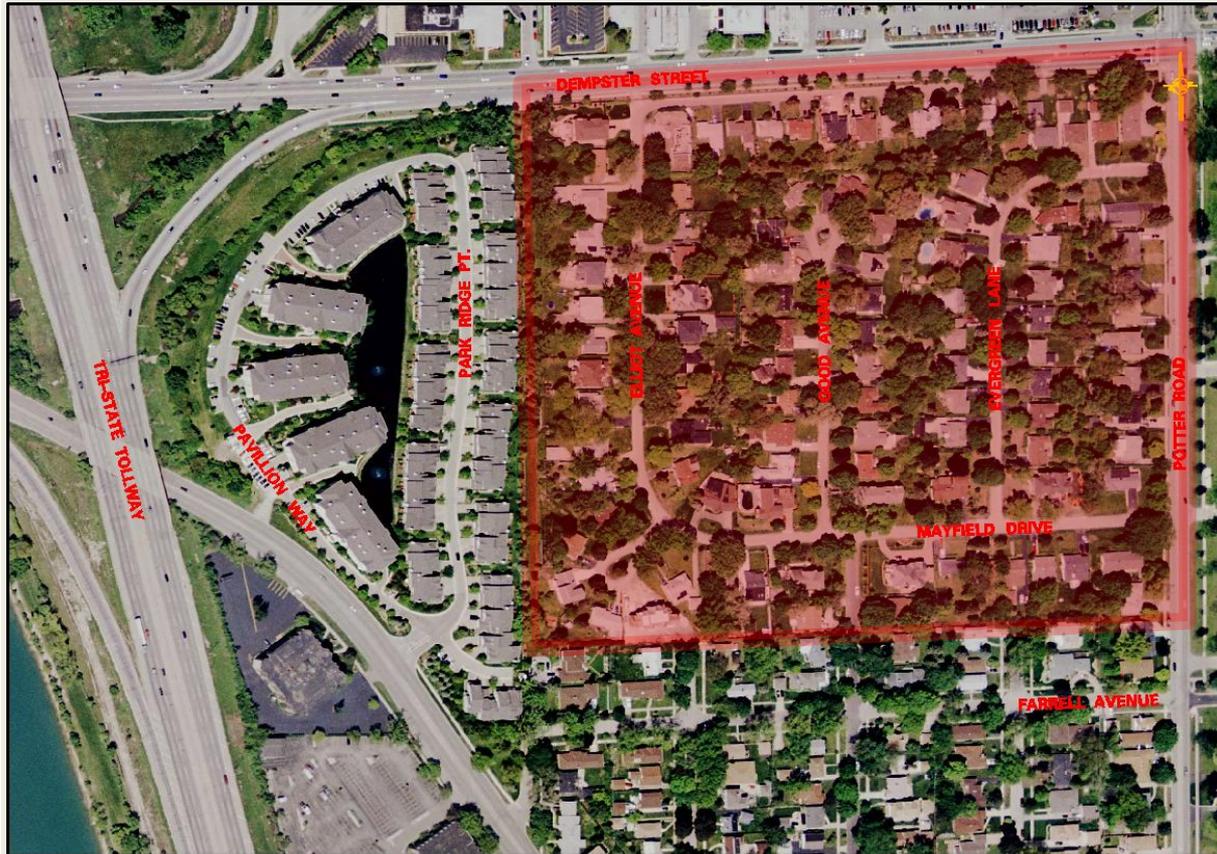


- Construct a new 42" to existing trunkline sewer on Wisner
- Work in conjunction with existing relief
- Significant reductions in street ponding
- Conceptual analysis indicates Wisner sewer appears capable of handling flows
- Cost - \$600,000

Mayfield Estates Study Area



September 2008 Storm Event



- 3 Questionnaires
- Historically low lying
- Some areas 3-4 ft below Prairie Creek BFE
- Gravity outlet to Dempster St sewer that surcharges and must be closed with valve
- Floodwall protects from Prairie Creek backflow
- Limited pumping capacity at other outlet to Parkway Pointe Basin

Mayfield Estates Drainage Analysis



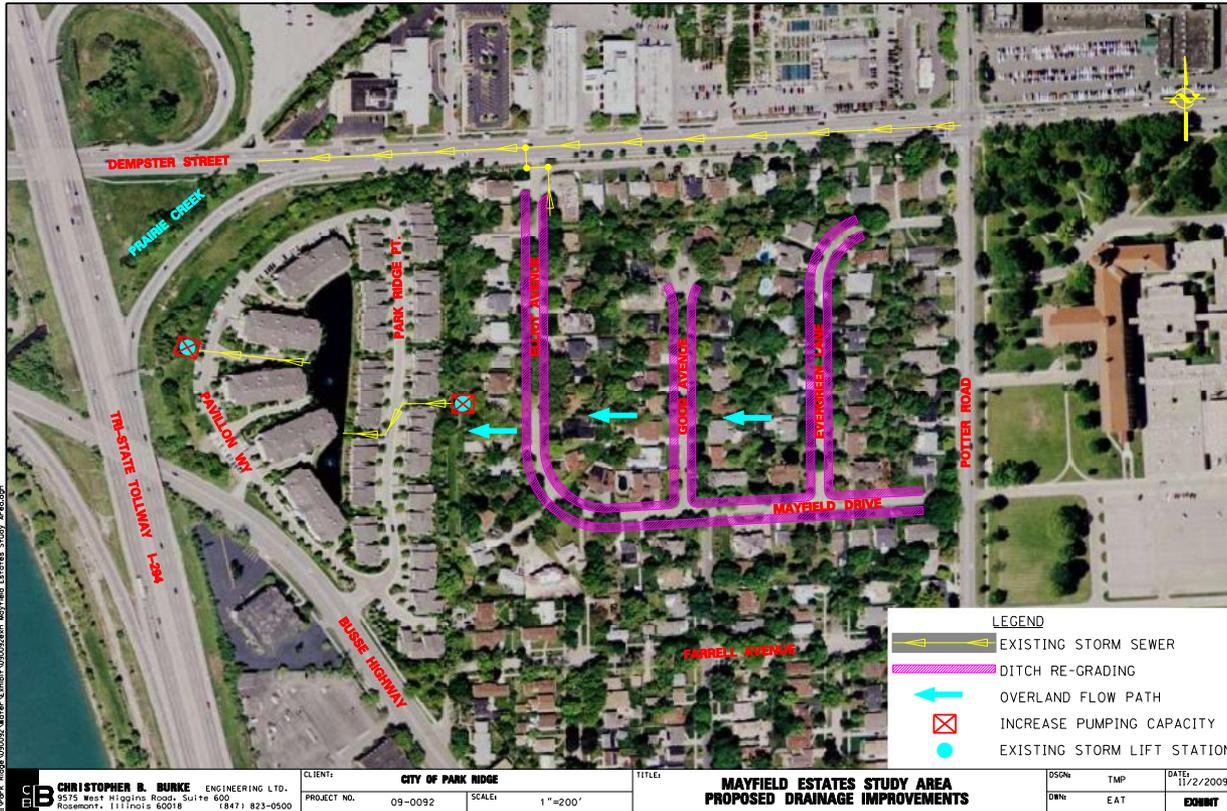
- Rural cross section
 - No curb and gutter
- Nonexistent or blocked overland flow routes
- Ditches and driveways culverts
 - Modified, filled, missing
- Very flat topography

Possible Drainage Solutions



- Create storage
 - Little open space available for storage
- Construct relief sewers
- Re-establish ditch and culvert overland system
- Create overland flow paths
- Increase lift station capacity

Mayfield Estates Recommendations



- Re-establish roadside ditches and driveway culverts
- Create defined overland flow swales
- Increase capacity of lift stations
- Cost - \$940,000

City-wide Recommendations

- Flood-proofing of residential structures by homeowners
 - Flood control systems – Overhead, check valves
 - Window wells – Glass block, raise
 - Downspouts and sump pumps – Extend from homes
 - Handout
- Raise curbs and sidewalk elevations for homes with reverse slope driveways and low entry elevations for homes that received overland flow
 - Consider eliminating those that cannot be raised
- Consider public information campaign to raise awareness
- Information on grant programs included in Final Report

Homeowner Handout

Tips on Flood Prevention for Homeowners

- Overhead sewers, ejector pumps, and in minor cases standpipes, can help reduce flood issues related to sanitary sewer backup.
- Clean gutters and install gutter covers to prevent clogging.
- Redefine and clear swales throughout yard to allow an appropriate drainage way for storm water runoff.
- Verify existing sump pump outlet is not draining into a sanitary sewer system. Connections to sanitary systems are illegal and often contribute to additional flooding problems.
- Verify existing sump pump and outlet pipe have sufficient capacity for discharging during intense storm events.
- Provide a relief outlet for the sump pump outside of the house that is a safe distance from the foundation in case of surcharge, frozen outlet pipe, or other blockage.
- Install a backup source of power for sump pump in case of electrical power failure.
- Extend downspouts away from the foundation approximately 5-10 feet.
- Repair foundation cracks throughout basement to prevent seepage.
- Raise the low-entry elevation of window wells and/or install drains in the window wells and connect them to the sump pump system.
- Install glass block windows in place of basement windows (except escape window) to prevent water inflow or infiltration.
- Install drain tile system to collect excess runoff, any remaining seepage or any infiltration resulting from hydrostatic pressure.

The recommendations provided above may not eliminate flooding or flood damage within the residence, however, if installed correctly they should effectively reduce the risk of flooding. It should also be noted that any of the recommendations may be implemented individually, however, many suggestions may be used in conjunction with one another to provide a greater impact in helping to reduce the risk of future flood damage.

Cost Estimates and Prioritization

Rank	Study Area	Flooded In Previous Events	Number of Homes with Reduced Flooding Risk ³	Number of Homes Flooded By Overland Flow	Number of Homes Flooded By Reverse Slope Driveway	Number of Homes Flooded By Sanitary Surcharge	Recommendation	Conceptual Level Cost Estimate ¹
By Cost	St.James Place	Yes	11	0	0	11	Flood Control Systems Residents ²	\$110,000
							TOTAL	\$110,000
	Park Ridge Country Club	Yes	83	11	3	10	Increase the storage capacity on the golf course	\$590,760
							TOTAL	\$590,760
	Overhill Avenue	Yes	32	4	1	4	Construct a new relief sewer	\$595,440
							TOTAL	\$595,440
	Mayfield Estates	Yes	65	2	0	1	Upgrade the pump evacuation system for increased discharge	\$337,000
							Regrade roadside ditches and replace driveway culverts	\$395,000
							Establish defined overland flow paths	\$204,000
							TOTAL	\$936,000
	Northwest Park	Yes	144	12	6	28	Construct a storage basin in Northwest Park	\$1,872,720
							TOTAL	\$1,872,720
	Burton Lane	Yes	67	1	0	4	Create a storage basin at North Park	\$2,082,240
							TOTAL	\$2,082,240
							Grand Total	\$6,187,160

Cost Estimates and Prioritization

Rank	Study Area	Flooded In Previous Events	Number of Homes with Reduced Flooding Risk ³	Number of Homes Flooded By Overland Flow	Number of Homes Flooded By Reverse Slope Driveway	Number of Homes Flooded By Sanitary Surcharge	Recommendation	Conceptual Level Cost Estimate ¹
By Flood Reduction Benefit	Northwest Park	Yes	144	12	6	28	Construct a storage basin in Northwest Park	\$1,872,720
							TOTAL	\$1,872,720
	Park Ridge Country Club	Yes	83	11	3	10	Increase the storage capacity on the golf course	\$590,760
							TOTAL	\$590,760
	Burton Lane	Yes	70	1	0	4	Create a storage basin at North Park	\$2,082,240
							TOTAL	\$2,082,240
	Mayfield Estates	Yes	65	2	0	1	Upgrade the pump evacuation system for increased discharge	\$337,000
							Regrade roadside ditches and replace driveway culverts	\$395,000
							Establish defined overland flow paths	\$204,000
							TOTAL	\$936,000
	Overhill Avenue	Yes	32	4	1	4	Construct a new relief sewer	\$595,440
							TOTAL	\$595,440
	St. James Place	Yes	11	0	0	11	Flood Control Systems Residents ²	\$110,000
							TOTAL	\$110,000
							Grand Total	\$6,187,160

Cost Estimates and Prioritization

- Prioritized by number of homes with reduced risk of future flooding
- Potential Funding sources
 - Special Service Area
 - Stormwater Utility Fees
 - Bonding
 - Grants
 - Hazard Mitigation Grant Program

Thank you

Questions or comments?

APPENDIX C TECHNICAL OBSERVATIONS OF THE BURKE REPORT

The following discussion is the technical observations of the October 2009 report titled “City of Park Ridge Flood Study Final Report” submitted by Christopher B. Burke Engineering, LTD. These observations are made only as comments to benefit the community and do not diminish the quality or thoroughness of the report itself.

Prioritization of projects is questioned. It appears that the projects in the Burke Report are prioritized based on total number of homes flood proofed regardless of cost. If one divides the cost of the proposed projects by the estimated number of homes with reduced flooding, the prioritization becomes as follows:

1. Park Ridge Country Club	\$590,760/ 83 homes reduced flooding = \$ 7K/ Home
2. St James Place*	\$110,000/ 10 homes reduced flooding = \$10k/Home
3. Northwest Park	\$1,872,720/ 144 homes reduced flooding \$13K/ Home
4. Mayfield Estates	\$337,000/65 homes reduced flooding = \$14.4 K/Home
5. Overhill	\$595,440/32 homes reduced flooding = \$18.6K/ Home
6. Burton Lane	\$2,082,240/70 homes reduced flooding = \$29K/ Home

* This project involves homeowner’s solutions for the 10 homes.

Without consideration of the additional benefits gained, including the flood proofing of Greenwood Avenue, the Park Ridge Country Club project provides the best return for the City’s investment with minimal dollars spent.

Constructing flood storage upstream of Greenwood Avenue is essential to minimizing the flooding which occurs along Greenwood Avenue, a major north-south arterial which provides critical access for emergency services, including police, fire and ambulance services for the City. Providing flood storage in the Park Ridge Golf Course also minimizes residential overland flooding to areas downstream of Greenwood Avenue without requiring any costly separation of sanitary/ storm combined sewer systems (which is required in the Burton Lane and Northwest Park plans). The Park Ridge Country Club plan should be given strong consideration by the City given its proposed local residential flood reduction and critical roadway flood reduction benefits.

The Burton Lane proposal at a cost of \$29,000 per home is highly questioned. Depending on the type of flooding, such as basement backup, it may be more economically justified to have Park Ridge pay for individual flood control systems for each of the 70 homes affected at an estimated cost of \$10,000 per home. This would be about a third of the cost of the proposed project involving a detention basin at Burton Lane

The proposed concept plan in the Burke report for both Burton Lane and Northwest Park involve placing the proposed detention basins downstream of the homes they are intended to protect from flooding. To fully utilize the proposed detention systems

under this design, it appears that additional sewer separation, inlet capacity and conveyance are all needed to provide the necessary 100 year flood protection, which is the stated goal in the Burke report. The additional cost of providing these additional drainage measures along the affected street reconstruction will impact City prioritization of these projects.

The Mayfield Estates Subdivision recommendations include increasing the pump capacity of the existing privately owned and maintained pump evacuation system for the Park Ridge Point Condominiums. Any pump improvements should also include an increased inlet capacity system sufficient sized to convey the upstream tributary flood flows from the Mayfield Estates Subdivision.

APPENDIX D
BACKGROUND INFORMATION FOR THE REVIEW OF CITY ORDINANCES
GOAL 5

The following data/city codes were reviewed for the recommendations listed for Goal 5.

1. City of Park Ridge City Code Article 11 Public Services, Chapter 3 Storm Water Management.
2. City of Park Ridge City Code Article 20 Administration Procedure, Chapter 7 Public Works Fee.
3. City of Park Ridge City Code Article 15 Building Regulations, Chapter 8, Land Grades.
4. City of Park Ridge A Guide to Flooded Basements.
5. City of Park Ridge Yard Drainage – General Information.
6. City of Park Ridge Resident Storm Water Control (Building Division).
7. City of Park Ridge Council Policy #8, Drainage Problems on Private Property.
8. City of Park Ridge – Tips on Flood Prevention for Homeowners.
9. Village of Skokie Storm Water Runoff Control Program.
10. Village of Skokie Flood Control Program.
11. City of Arlington Heights Prevent Basement Backup and Reimbursement For Overhead Sewers Program.
12. City of Des Plaines Flood Rebate Program.
13. Village of River Forest Program to Protect Basements – Property Owner Assistance.
14. Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) – Municipalities and Townships Totally or Partially Within MWRDGC Boundaries (draft ordinance).
15. MWRDGC – Community Residential Storm Water Management Survey.

Items 14 and 15 above encompassed all communities within the jurisdiction of the MWRDGC. Items that were included and specified for all communities in these documents were as follows:

- Detention Requirements - which included release rates and restrictor size.
- Floodplain Requirements - which included compensatory storage and freeboard.
- Depressional Storage requirements.
- Water Quality Requirements.
- Wetland Requirements.
- Watershed and type of system.
- Questions with community responses for how each community controls, monitors and enforces storm water and combined flow issues.

APPENDIX E: JOINING THE COMMUNITY RATING SYSTEM

The Community Rating System (CRS) is a program administered by the Federal Emergency Management Agency (FEMA). It provides lower insurance premiums under the National Flood Insurance Program. The premium reduction is in relation to the rating of the community, similar to the classifications used for fire insurance. For example, a Class 1 provides a 45% premium reduction. A Class 10 provides no reduction.

The CRS Class is based on the floodplain management activities a community implements. In many cases, these are activities already implemented by the community, the state, or a regional agency. The more activities implemented, the better the CRS class.

Benefits of the CRS class rating system:

Money spent relating to flood mitigation and prevention stays in the community instead of being spent on insurance premiums. Every time residents pay their insurance premiums, they are reminded that the community is working to protect them from flood losses, even during dry years. The activities credited by the CRS provide direct benefits to the community, including:

- Enhanced public safety,
- Reduction in damage to property and public infrastructure,
- Avoidance of economic disruption and losses,
- Reduction of human suffering, and
- Protection of the environment.
- Local flood programs will be better organized and more formal.
- The community can evaluate the effectiveness of its flood program against a nationally recognized benchmark.
- Technical assistance in designing and implementing some activities is available at no charge.
- The community will have an added incentive to maintain its flood programs over the years.
- The public information activities will build a knowledgeable constituency interested in supporting and improving flood protection measures.

Requirements of joining the CRS to the local government:

- The community must have a successful Community Assistance Visit.
- The community must designate a CRS Coordinator who prepares the application papers and works with FEMA and the Insurance Services Office (ISO) during the verification visit.
- Each year the community must recertify that it is continuing to implement its activities. It must provide copies of relevant materials (e.g., permit records).
- The community must maintain elevation certificates, permit records, and old Flood Insurance Rate Maps forever.

- The community must maintain other records of its activities for five years, or until the next ISO verification visit, whichever comes sooner.

FEMA Flood Policies currently in effect in Park Ridge

- Current number flood insurance policies – 95
- The policies cover approximately \$24.5 million in property values.
- Number of flood insurance claims since 1978 – 49 (four of the properties had repeated claims)
- Payouts from FEMA: \$1.1 million
- Average cost of an annual premium in Park Ridge - \$410 (83 of our 95 policies are outside the floodplain)
- Average cost of an annual premium for the two properties in the 100-year floodplain - \$1,278
- The other 10 policy-holders are in the 500-year zone with an average annual premium cost of \$862
- Annual premiums paid from Park Ridge residents to the National Flood Insurance Fund - \$38,919.
- Average premium for those outside the floodplain \$334

If Park Ridge were a Class 8 CRS Community (which any Chicago land community should be able to achieve), savings for the floodplain residents will be approximately \$128 per year on their premium.

The data presented in this Appendix does not include the 535 residence that applied for and got FEMA disaster grants for 1.2 million in the 08 flood. If you have flood insurance you are not able to get a disaster grant. .

APPENDIX F: STUDY OF THE PARK RIDGE FLOOD STRUCTURE - LEVEES

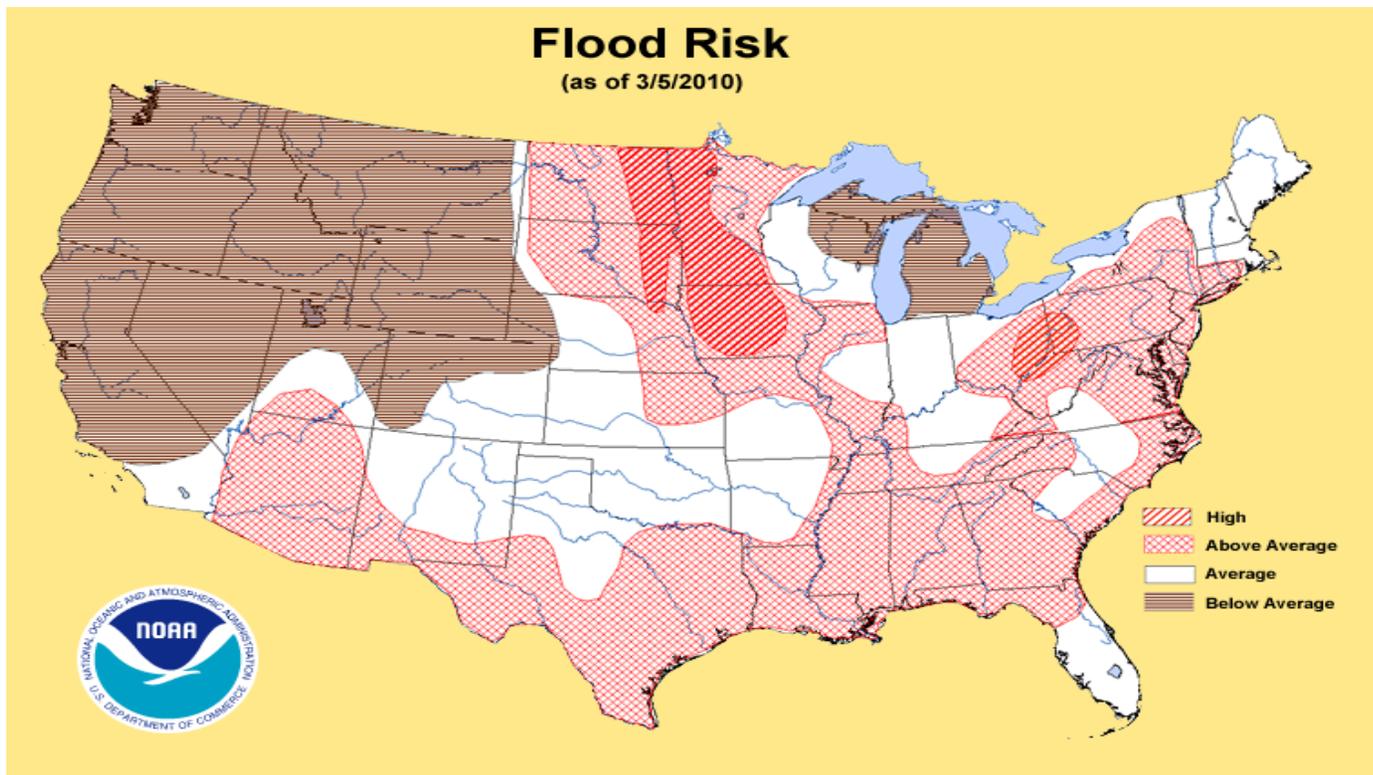
Park Ridge Flood Mitigation Structures

Structures between
Oakton and Touhy
March 12, 2010

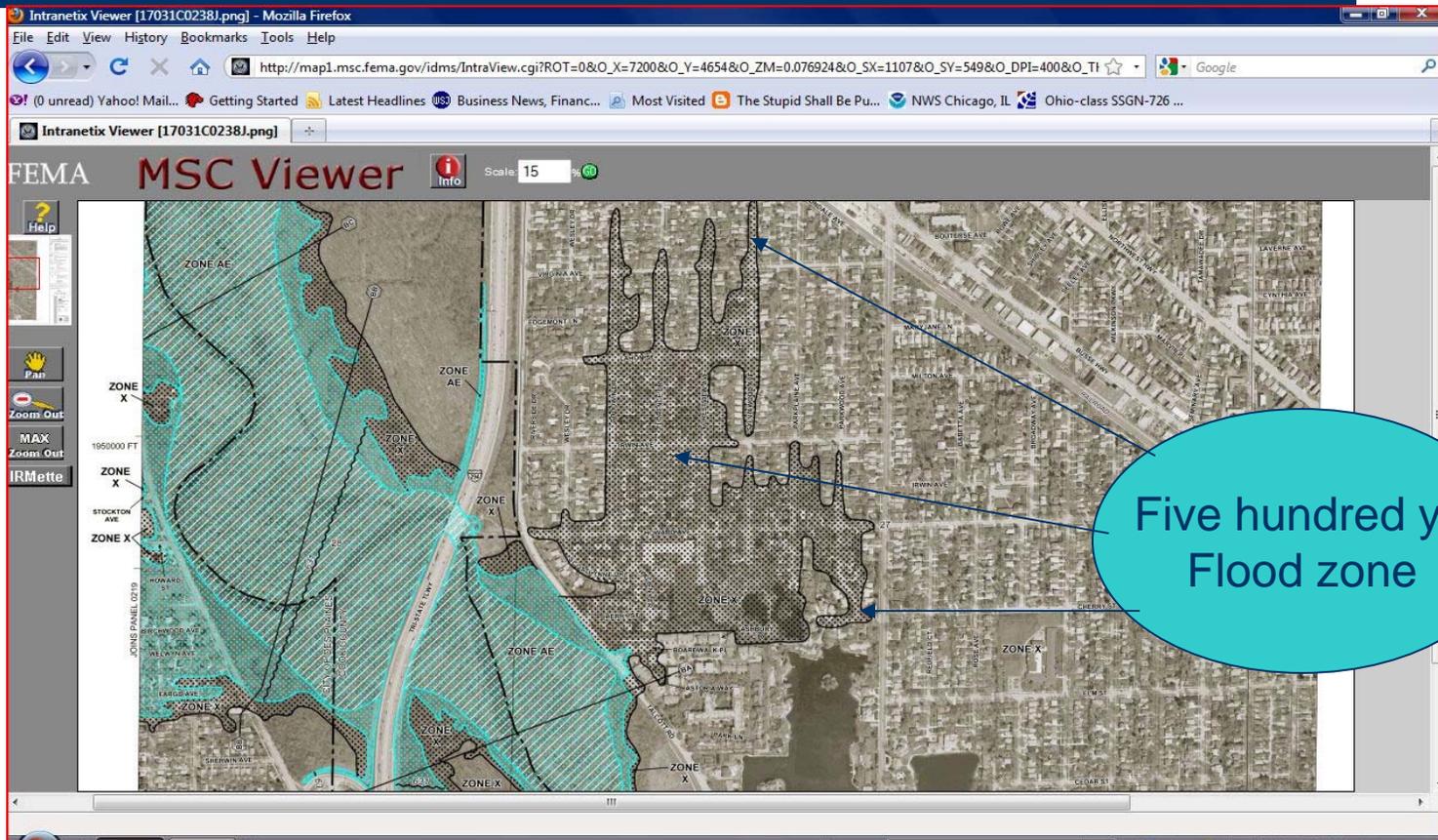
Levee Questions:

- Does this Levee provide 100 year flood protection?
- Has Levee been inspected and certified within the last 3 years?
- Does the Sibley Avenue lift station have adequate Flood freeboard?
- Should the Sibley Maintenance Entry be restricted too Official Vehicles only?
- Are we prepared to sandbag where levee deficiencies are apparent?
- Vegetation growth is not allowed on Levee's!
- Lift Station and Levee Protects major area of PR from Flooding
- Failure of either we repeat 1987 Floods

National Flood Risk Map of US



Levee on Talcott Rd. at Sibley protects from 100 year events.



Levee at Sibley Ave. Looking North



Levee at Sibley Avenue looking South



Entry to Sibley Avenue Lift Station



Entry to Lift Station Control Room with 6 inches of Flood Freeboard



Sibley Lift Station looking East



Flood Gauge March 12 Noon 623.75



Sibley Ave gauge
At 630 feet

With no Barriers unlimited dumping



Sign protection for Deep Tunnel



Stream drain exit at Park Lane



Second culvert drain at Park Lane



Levee at Park Lane looking North



Levee at Park Lane looking North



Levee up close



Vegetation Growth on Levee



Tree growth on levee

More vegetation Growth on Levee



Vegetation Growth along Entire length of Levee



Sunk portion of Levee—20 foot break or is the curb the levee?



Flood of 1987 when no lift station and no levee on Talcott Road.

- For more than 7 days water was over the sidewalk. Many homes on Sibley avenue were evacuated.



APPENDIX G: MAYFIELD ESTATES DISCUSSION

Mayfield Estates and Park Ridge Pointe Flood Control Structures

Pumping Stations, Pond Retention,
Overland Flood Routes, and Flood
Walls Serving the Area

Questions

- Can additional inlet capacity in the easement be provided to adequately convey the tributary upstream flows from the Mayfield Estates Subdivision. Flows currently drain to the west and into the Park Ridge Pointe Condominiums (PRPC) drainage system that includes two storm water lift stations and a detention pond?
- Current inlet capacity to the west drainage Easement is very limited and appears to be a cause of flooding for this area especially when the flood gate is closed at Dempster Street.

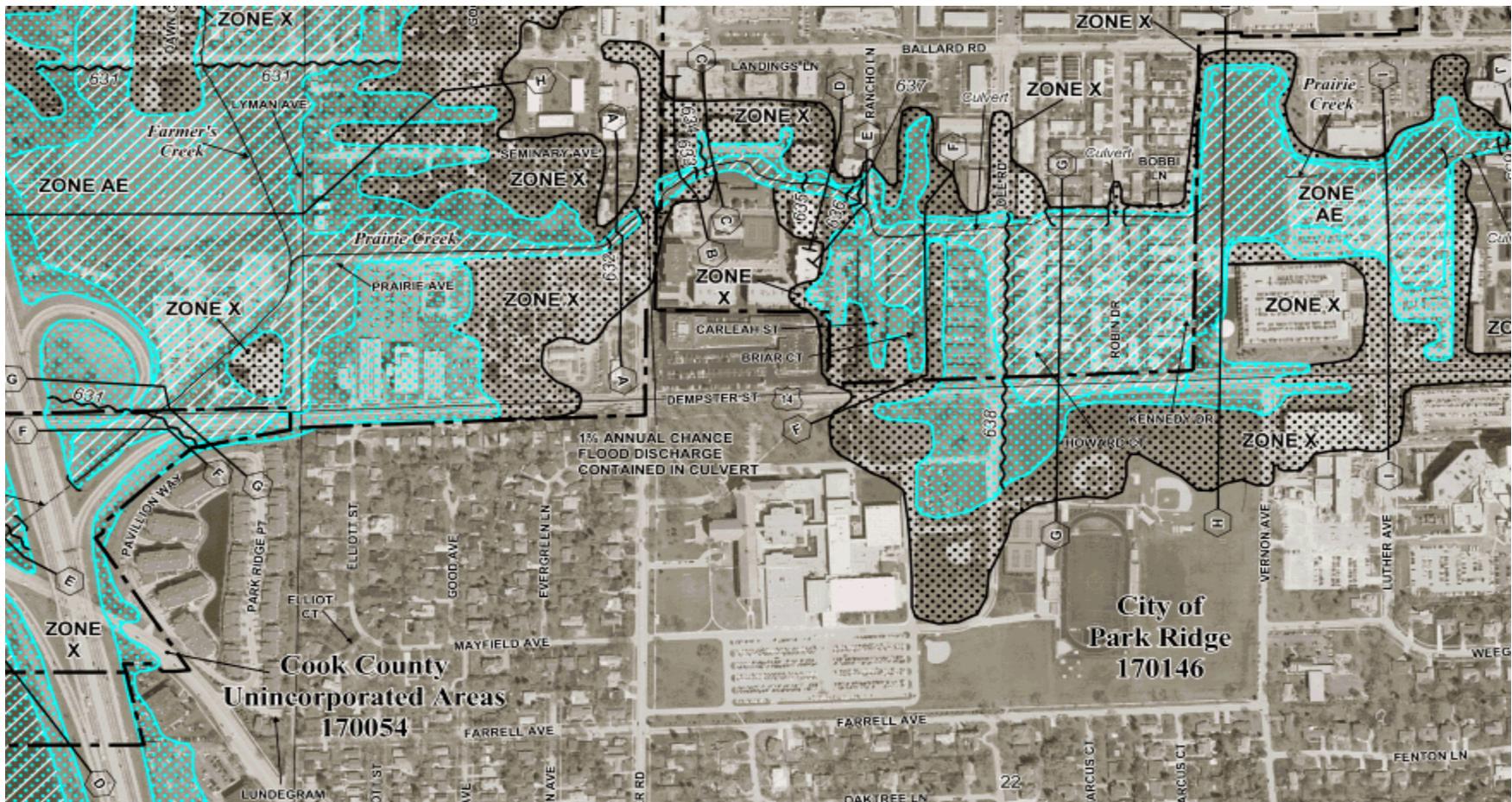
Questions (cont'd)

- Is there a comprehensive maintenance program in place for the two storm water pump stations and detention facility?
- Is there a sufficient funding mechanism in place by the PRPC Homeowners Association for the perpetual maintenance and future replacement this system. In the event of that the Homeowners Association fails to properly maintain this system, is there a mechanism in place (i.e.. bond or insurance policy) that the City could use to fund the necessary repairs or replacement of this system?

Questions (cont'd)

- A review is needed of the MWRDGC permit, which was most likely issued for the PRPC Development and which would stipulate that Park Ridge is ultimately responsible in the event that the homeowners association fails to adequately maintain the drainage system (including pumps and detention pond system).

100 year FEMA flood inundation map



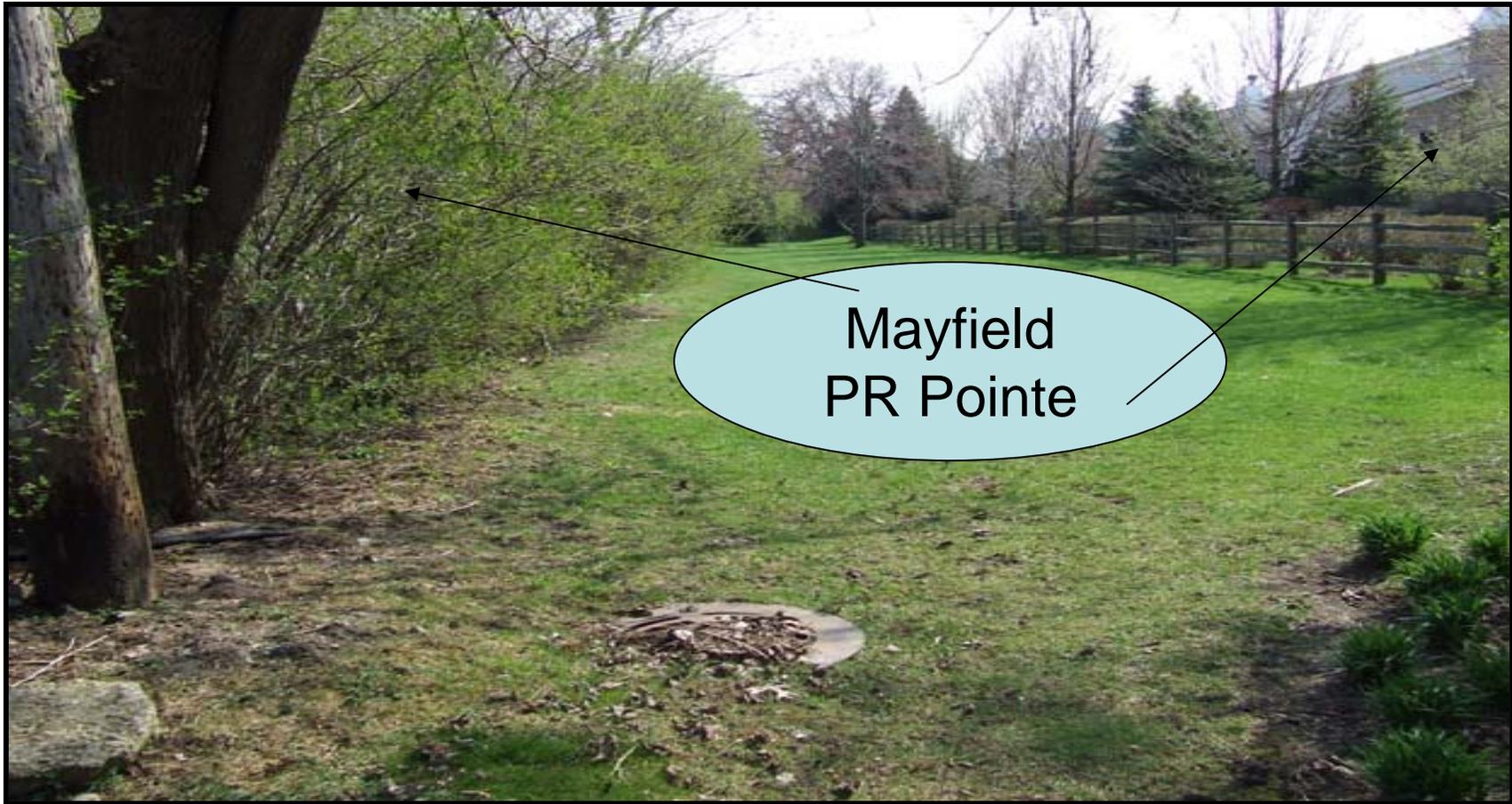
Flood Wall along Dempster



Overland drainage to PR Easement



Park Ridge Easement



Storm water pump to PRPC pond



Mayfield Estates Sewer Lift Station



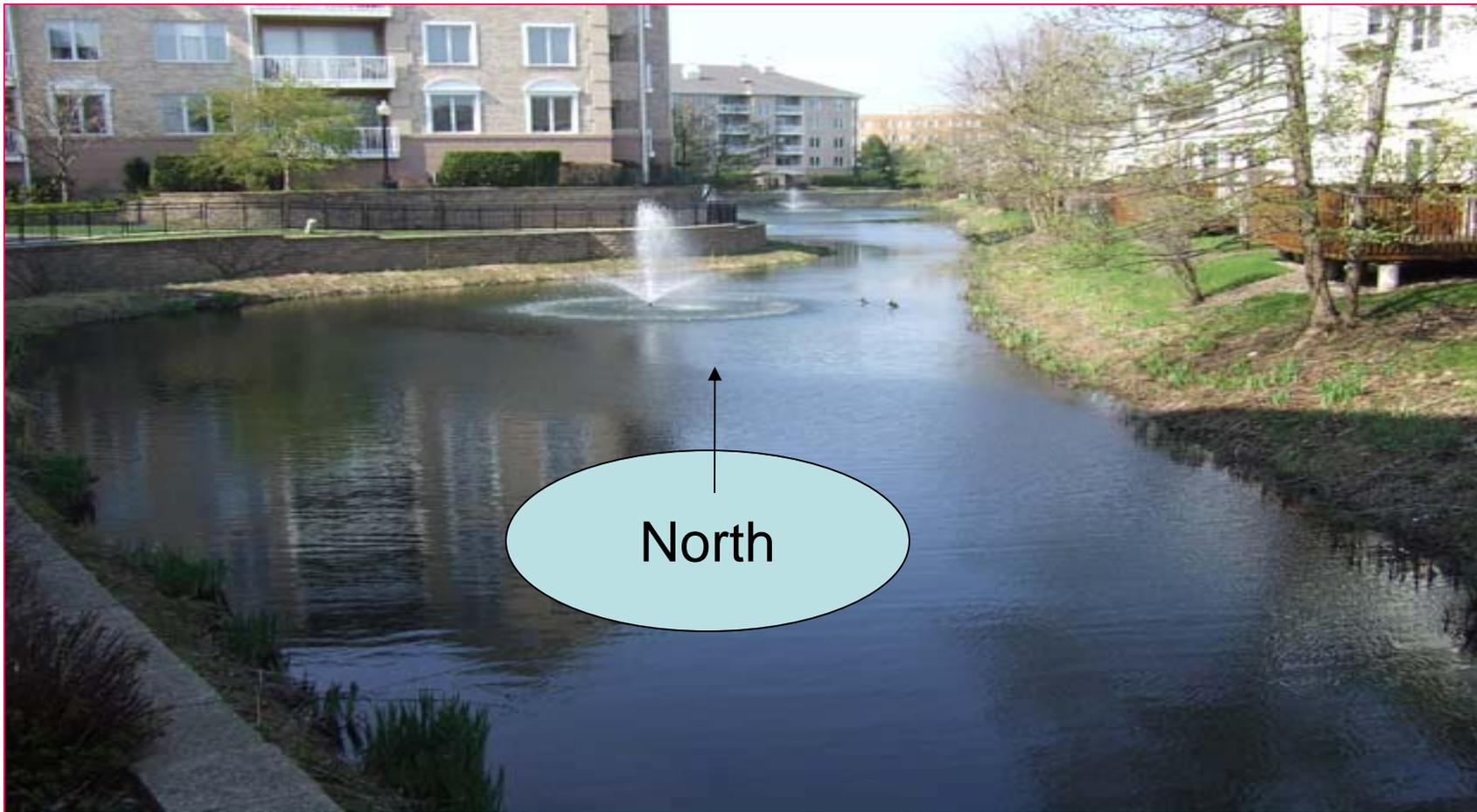
Park Ridge Mayfield Estates Easement



PRPC pond lift station to Farmers Creek



PRPC Pond/Lake



Pond/Lake along board walk



Pond/Lake from North End



ISSUES

- Can more capacity to handle overland water in the Easement be developed?
- Is a satisfactory maintenance program in place for the Condo pond lift station?
- Is the manual over the flood wall pumping acceptable to the MSWMA?
- Can more conveyance to the Easement be provided for Mayfield Estates
- Pictures showing culvert half buried and catch basin covered with debris are representative of the problems in this area. This contributes to the flooding which include the lack of adequate conveyance and the lack of adequate inlet capacity necessary for the conveyance of flows to the PRPC drainage system.

ISSUES

- The Burke report mentions increasing the pump capacity which may be necessary but adequate conveyance is needed to get the water to the Easement area.
- Improved overland flow through increased inlet capacity might be needed to take advantage of the PRPC pump system to Farmers Creek.

APPENDIX H: MEETING MINUTES



CITY OF PARK RIDGE

505 BUTLER PLACE
PARK RIDGE, IL 60068
TEL: 847/ 318-5200
FAX: 847/ 318-5300
TDD: 847/ 318-5252
www.parkridge.us

MINUTES

Revised

FLOOD CONTROL TASK FORCE CITY OF PARK RIDGE, ILLINOIS

PARK RIDGE CITY HALL
COUNCIL CHAMBERS
505 BUTLER PLACE
PARK RIDGE, IL 60068

Wednesday, June 17, 2009, 6:00 p.m.

MEMBERS PRESENT: Joe Saccomanno
Lou Arrigoni
Daniel Carroll
Gale Fabisch
John Humm
Kim Jones
Patricia Lofthouse
Bob Mack
Steve Tolan

ELECTED OFFICIALS PRESENT: Mayor Schmidt
Alderman Bach
Alderman Wsol

STAFF PRESENT: Wayne Zingsheim, Director
Sarah Mitchell, City Engineer
Susan Tedeschi

1. INTRODUCTION OF TASK FORCE MEMBERS

Mr. Saccomanno thanked the members of the Task Force for volunteering. He introduced the elected officials and staff present. He detailed the reasons for establishing the task force, noting that the citizens are a valuable resource.

Members introduced themselves as follows:

- Daniel Carroll – 5 year resident, has flooded twice, wants to improve the sewer system
- Bob Mack – 20-year resident, civil engineer in stormwater management, works for Cook County Highway Department, has flooded a few times, now has overhead sewers
- John Humm – 42-year resident, 20 years in banking, looking for long term solutions
- Steve Tolan – 44-year resident, risk manager for a corporation, has flooded, looking for long term solutions
- Patricia Lofthouse – 23-year resident, has flooded five times in two homes, librarian, concerns with flooding and emergency management
- Joe Saccomanno – 29-year resident, civil engineer, two of three homes have flooded, worked for the City for 18 years, wants to focus on long and short term priorities and identify potential solutions for various types of flooding
- Kim Jones – longtime resident, former Third Ward Alderman, flooded last year, looking for creative solutions
- Gale Fabisch – professional engineer, has worked with MWRD, interested in preventative maintenance
- Lou Arrigoni – 16-year resident, civil engineer in municipal arena, looking for a long range plan and implementation

2. ESTABLISHMENT OF MISSION

It was agreed that the mission would be established after the goals of the Task Force had been developed.

Mr. Saccomanno recommended that the Task Force plan on presenting a preliminary report to the City Council in Fall 2009. The group would meet every two weeks for 4-5 months, and then every 3 months after that. The members concurred.

3. DEVELOPMENT OF GOALS

a. Goals of Task Force

The following goals were recommended. Staff was asked to refine them for review by the Task Force at the next meeting:

1. Develop a community awareness and education program as to what the sewer system is and how to mitigate problems.
2. Know scope of problems and various causes of flooding.
3. Mechanism for City to track residents reporting flooding, communication to residents, look at each type of flooding and why it happens along with mechanisms to solve the problem.
4. Know available resources.
5. Review past experiences and their impact.
6. Prioritize issues.
7. Review Ordinances, polices and practices that are in place, look at existing infrastructure and capacity, review what neighboring communities are doing, look at maintenance of the Des Plaines River.
8. Seek and explore funding opportunities for flood mitigation.
9. Long-term, worst case scenarios.

Mr. Saccomanno noted that after the Committee's goals have been established, representatives from MWRD and the IEPA. would be asked to speak at a meeting.

b. Meeting Schedule

The Task Force agreed to meet every other Wednesday at 6 p.m. and that the meetings should not last longer than 90 minutes. Due to the July holiday and vacation schedules, the next meeting was scheduled for July 15, 2009.

c. Members Roles

To be determined after mission and goals are finalized.

4. OVERVIEW OF CITY'S SEWER SYSTEM

Director Zingsheim gave a brief overview of the City's sewer system.

5. RESIDENT INPUT

- Alderman Bach asked that the Task Force take over the sewer study that Christopher Burke, the city's consultants, was currently doing. The members concurred that they were not willing to undertake something of that magnitude.

He recommended that the Task Force review the preliminary results of the Burke study and asked for a timeline for a final report to the City Council. He also asked that a cost be provided for each Task Force recommendation.

- Mr. Areen spoke on requiring new development to have on site detention.
- Mrs. Tobias requested visual aids of the worst areas and noted that 7 p.m. is a more convenient meeting time.
- Mr. Wykowski commented on the effects of raised elevations in new construction on neighborhood flooding.
- Residents suggested realistic dimensions and incentives for homeowners.

6. ADJOURNMENT

The meeting adjourned at 7:34 p.m.

NEXT MEETING – Wednesday, July 15, 2009 at 6:00 p.m., in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

Revised

FLOOD CONTROL TASK FORCE

Wednesday, July 15, 2009

6:00 p.m. Meeting

Council Chambers

Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll
Gale Fabisch, John Humm, Kim Jones,
Patricia Lofthouse, Bob Mack, and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: Aldermen DiPietro and Wsol

STAFF PRESENT: W. Zingsheim, S. Mitchell, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM JUNE 17, 2009

The minutes of the June 17 meeting were approved with the following revisions:

- Mr. Mack works for the Cook County Highway Department
- Mr. Tolan works for a corporation

II. DEVELOPMENT OF GOALS

a. Approval of Goals

Mr. Saccomanno read the following goals and asked the Task Force to review them for discussion and approval at the next meeting.

1. Develop a program to educate residents on the city sewer system and how to mitigate private property issues
2. Review existing sewer system to better understand the scope of the problem and the various causes for flooding
3. Prioritize issues and problem areas
4. Review current City Ordinances, practices and policies and make recommendations for change as needed
5. Seek and explore funding opportunities for flood mitigation, both for City and residents

6. Submit short and long term plans to the City Council for approval and implementation
7. Further development of program to track flooding calls

b. How to Achieve Established Goals

No discussion.

c. Members Roles

No discussion.

III. ESTABLISHMENT OF MISSION

Mr. Saccomanno proposed the following draft mission statement. He asked that the Task Force review it for discussion at the next meeting.

City of Park Ridge Mayor's Task Force on Flooding
Draft Mission Statement

To listen, learn from and to lead the Park Ridge community in understanding area flooding issues and to develop an appropriate variety of flood control mitigation measures that would reduce homeowner flood risk. These measures will be presented to the City Council, city staff and the residents of Park Ridge for consideration and appropriate implementation.

IV. NEW BUSINESS

A. Flood Relief Action Plan

Director Zingsheim detailed the map developed from the emails and phone calls received as a result of the June 19 rain event. He reviewed City Manager Hock's flood action plan noting the following:

- In fiscal year 2009/2010, \$100,000 from the Sewer Fund has been allocated for the cleaning and televising of sewers.
- Staff will meet with Commonwealth Edison to review areas of frequent power failures and ask for concrete plans on physical improvements to the power grid.
- Development of long term plan for an ongoing maintenance program for sewer lines.
- Council to focus on whether we can and should implement all of the plan solutions
- Bonding vs. pay-as-you-go, grants and other revenue sources, process for implementation.

Director Zingsheim spoke of staff's recommendation to purchase a flusher / root cutter truck (approximately \$310,000) and a televising device (approximately \$75,000). These would allow staff to perform this work more cost effectively and faster than outsourcing. With two (2) employees dedicated to this equipment, the city could be completed on a two-year cycle.

Discussion ensued on a proactive maintenance plans, street sweeping and the responsibility for sewer maintenance.

Director Zingsheim read Alderman Wsol's proposal for a flood rebate program from the draft City Council Minutes of July 6, 2009. He noted that this proposal had not yet been approved by the City Council.

"Move the City Council immediately adopt a Flood Rebate Program. This program will allow for flood rebates to owners of "existing" single family homes up to a maximum of a \$2,500.00 rebate based on 25% of the actual cost of the verifiable construction of flood mitigation/prevention projects performed on a single-family residence, dating back to January 1, 2008. Only existing single-family homes (and townhouses) will be eligible whether owner occupied or not. Landlords may apply. All new construction is required to meet all appropriate building codes and is specifically excluded from this program. Projects covered by the program will include improvements for: overhead sewers; backwater valves in basements or yards; lift stations in yards; glass block basement windows in cases where a home is subject to flooding through window wells; drain tile with sump pumps; backup battery sump pumps; emergency generators for flood control systems, "French drains" which can demonstrate their effectiveness at retaining significant rainwater that causes home flooding and sump pump connections to storm sewers. The types of projects not covered include maintenance items such as normal plumbing repairs, sump pump replacements, valve replacements, sewer clean-outs and repairs. Funding for this program will be from General Fund property tax reserves in an amount of \$420,000 through April 30, 2010."

Discussion ensued on the merits of a rebate program with questions arising on what would qualify and if the program would be retroactive. It was noted by several members that this should be part of a comprehensive plan of both short and long term goals.

The Task Force reached a consensus to explore an incentive program.

Mr. Saccomanno asked staff to develop a rebate program. Director Zingsheim stated that, while staff will provide input, the development of such a program should come from the Task Force itself. Discussion ensued on whose responsibility it was to develop such a program. No conclusion was reached.

It was noted that if Alderman Wsol's proposed \$420,000 was retroactive, it would not cover rebates to the approximately 174 permits that had been issued since January 2008.

The Task Force reached consensus to recommend to the City Council an incentive program as outlined by Alderman Wsol, with further information and details to be supplied later.

NOTE: At the July 29, 2009 meeting, the Task Force concurred that while the discussion on an incentive program was good, any actions or recommendations from the Task Force should be delayed until a comprehensive plan is developed and the details have been analyzed.

The Task Force reached consensus to recommend to the City Council that an increased sewer maintenance program be implemented immediately.

NOTE: At the July 29, 2009 meeting, Director Zingsheim stated that the Public Works Department has already implemented an increased sewer maintenance program.

B. Emails

Mr. Saccomanno stated that the emails sent to the City regarding flooding that occurred as a result of the June 19 rain event have been divided up amongst the Task Force members for them to read. A discussion of these emails will be held at the next meeting.

V. RESIDENT INPUT

Numerous residents spoke on a variety of issues including the following:

- The use of yard drains and the need for an Ordinance for French drains
- Adequate staffing for an improved sewer maintenance program
- Surveying of entire community
- Sibley/Dee area should be looked at by the city's consultant
- What will happen if all of the neighbors get flood control and one does not?
- The need for residents to be able to track work orders, communication back from city
- Bigger issue is to be able to move water
- Issues regarding rear yard flooding
- Building reservoirs under parks
- Commonwealth Edison service issues and resulting power outages
- Lowering the grade of the streets
- Issues with run off from the Country Club
- Mandatory retention for new construction
- Compensatory water storage for Levee 637
- Quick action being needed
- Street and yard flooding
- Chicago not having these problems
- Inability to sell home as a result of flooding
- Raising taxes to help ease flooding problems
- Change Zoning Ordinance on downspouts
- The need for both short and long term solutions
- Need for citywide infrastructure improvements
- Health, safety and welfare issues
- Better communication to residents

VI. ADJOURNMENT

The meeting adjourned at 8:30 p.m.

**NEXT MEETINGS – Wednesday, July 29, 2009 at 5:30 p.m., in the City Hall Council Chambers
Wednesday, August 19, 2009 at 6 p.m. in the City Hall Council Chambers**



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, August 19, 2009

6 p.m. Meeting

Council Chambers

Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Daniel Carroll, John Humm, Kim Jones, Patricia Lofthouse and Steve Tolan

MEMBERS ABSENT: Lou Arrigoni, Gale Fabisch and Bob Mack

ALDERMEN PRESENT: Aldermen DiPietro, Sweeney and Wsol

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM JULY 29, 2009

The minutes of the July 29, 2009 meeting were approved.

II. DEVELOPMENT OF GOALS

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues. – Mr. Arrigoni and Mr. Humm**

Mr. Humm stated that they had discussed the development of a website that would include current flood information, programs, project status, disaster information, and contact information. They have also discussed conducting presentations in the community and media events.

- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding. – Mr. Tolan and Mr. Fabisch**

Mr. Tolan stated that they had begun creating a database from flood calls and are gathering information on sewer sizes. He noted that there was a lot of information to review.

- C. Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce**

and eliminate flood damage effectively and efficiently, using all available resources.
– Mr. Mack and Mrs. Lofthouse

Mrs. Lofthouse stated that they had begun a preliminary analysis of the information from the current database. They would be developing a questionnaire for residents to download, complete and return to City Hall on flooding events.

D. Review current City Ordinances, practices and policies and make recommendations for change as needed. – Mr. Saccomanno and Ms. Jones

Mr. Saccomanno stated that they had reviewed the information provided to them by staff and would be comparing it to other communities.

E. Seek and explore funding opportunities for flood mitigation, both for City and residents. – Mr. Carroll

Mr. Carroll stated that he was investigating state and federal funding sources for capital and residential improvements. He had reviewed sewer grant programs in Barrington, Glen Ellyn, Lombard and Addison. He noted that 3 of the 4 communities budget for the program, with established limits. Glen Ellyn also has a separate \$3 per month sewer tax to fund the programs.

Mr. Saccomanno reminded the members to document their recommendations for the Task Force's final report. He asked the members if, after four meetings, they felt that the Task Force's direction was appropriate.

Mr. Humm responded that there was a need to stay to a structured movement and maintain a sense of urgency.

Mr. Saccomanno noted that there were a lot of variables, with a need to look at all of the variables and reasons for flooding and to prioritize them.

Mr. Tolan stated that there was a need to look at both the frequency and severity of the flooding.

The Task Force discussed flyers that were being distributed in the community on flood control devices and a rebate program. The members noted that their role was purely advisory.

Mr. Saccomanno stated that Mr. Fabisch would be the Task Force's liaison with the Park Ridge Park District.

III. NEW BUSINESS

A. Presentation by the Northwest Municipal Conference

Christopher Staron, of the Northwest Municipal Conference (NWMC), presented a report to the Task Force on the Upper Des Plaines River Advisory Committee. A copy of this report is attached.

Mr. Saccomanno asked if the Cook County Forest Preserve District had allowed other municipalities to use their land for water storage. Mr. Staron replied that the Forest Preserve District finds that thus does not mesh with their goals and objectives.

Mr. Saccomanno asked if the NWMC has models ordinances or policies that the city could review. Mr. Staron replied that they did. Director Zingsheim noted that staff had this information.

Mr. Saccomanno asked if the NWMC provided funding or grants for localized floodwater management or guidelines for getting grant money from other agencies. Mr. Staron replied that the NWMC provides no grant monies, they just assist the municipalities. NWMC also does not have any guidelines for the municipalities. He noted that there are no current MWRD projects that would impact Park Ridge.

Mr. Saccomanno asked staff to explore how the lowering of the Des Plaines River will affect Park Ridge. Director Zingsheim replied that the city's outfalls go directly to the Des Plaines River. When the river rises and covers the outfalls, the removal of stormwater from the streets is slowed.

Mr. Talon noted that the goal of the Upper Des Plaines River Advisory Committee Phase 1 projects is to reduce the economic impact of flooding by 25%. He does not believe that they will reach that goal.

Mrs. Lofthouse asked Mr. Staron to supply copies of the Village of Skokie's flood abatement plan.

Mr. Humm and Mr. Carroll asked Mr. Staron to provide them with an estimate of Levee 50's lowering of the Des Plaines River.

IV. RESIDENT INPUT

Several residents spoke on a variety of issues including the following:

- Thanking city crews for cleaning inlets on Prairie Avenue.
- Concerns about the new Frances relief sewer's potential impact on Glenlake
- Staffing cuts impact on sewer maintenance. Director Zingsheim noted that some services would be affected, but not sewer maintenance.

V. ADJOURNMENT

The meeting adjourned at 7:40 p.m.

NEXT MEETINGS – Wednesday, September 2, 2009 at 6 p.m. in the City Hall Council Chambers



Upper Des Plaines River Advisory Committee

Park Ridge Flood Control Task Force

August 19, 2009

Christopher Staron
Northwest Municipal Conference

Presentation Outline

- Northwest Municipal Conference Role in Stormwater Management
- Upper Des Plaines Phase I Study and Projects
- Upper Des Plaines Phase II Study

Northwest Municipal Conference Role

- Metropolitan Water Reclamation District of Greater Chicago (MWRDGC)
 - Watershed Planning Councils
 - Poplar Creek and Upper Salt Creek
 - North Branch of the Chicago River
 - Lower Des Plaines River
- Upper Des Plaines River and Tributaries Advisory Committee
 - Forum for municipal leaders, legislators and stormwater agency staff
 - Army Corps of Engineers Upper Des Plaines River Phase I and II

History: Upper Des Plaines River Phase I

- Damaging Floods on Des Plaines River: 14 between 1938 and 1987
- 1986 and 1987 Floods: Damage Exceeding \$100 million
- September 1986 Flood Impact:
 - 10,000 Dwellings (Residential)
 - 263 Business and Industrial Sites
 - 15,000 Residents Evacuated
 - Severe Impacts to Transportation Network

Upper Des Plaines River Phase I Feasibility Study

- Interest in Federal Government Involvement via the Army Corps of Engineers
- 1989 – Reconnaissance Report
- 1996 – Draft Feasibility Report
 - 16 Tentative Projects
- 1999 – Final Feasibility Report
 - 6 projects authorized under the Water Resources Development Act of 1999, Section 101(6)(10)

Phase I Feasibility Report

- Roughly \$25 million in annual average damages (estimated 2004 dollars)



Phase I Project Selection

- Army Corps of Engineers determined hydraulic and economic impacts of alternatives
- Final Feasibility Report
 - Recommend projects with largest net economic benefit and favorable benefit cost ratio



6 Phase I Projects

- Levee 50 (Rand Park Levee)
- Levee 37 (Mount Prospect/Prospect Heights Levee)
- Big Bend Lake Expansion
- Buffalo Creek Reservoir Expansion
- Van Patten Woods Lateral Storage Area
- North Fork Mill Creek Dam Modification



Levee 50 (Rand Park Levee)

- Final Phase of Project 95% Complete
- Completion date extended to December 31, 2009



Levee 37 (Mount Prospect/Prospect Heights Levee)

- Currently under construction
 - Palatine Road:
 - May 2009 – Construction began
 - Fall 2009 – Scheduled completion
 - Main Floodwall
 - April 2009 – Construction began
 - Fall 2011 – Scheduled completion
 - Flow Improvements (Restoration)
 - March 31, 2009 – Contract awarded
 - Summer 2009 – Work began



Levee 37 Compensatory Storage

- Compensatory storage requirement
- Compensatory storage site
 - Buffalo Creek Reservoir
 - Heritage Park in Wheeling



Big Bend Lake Expansion

- November 2008 – 75% Plans and Specifications
- Completion of the 100% design set of Plans and Specifications is on hold pending resolution of cost issues resulting from offsite disposal of excavated material.
- Army Corps of Engineers – Wants to begin construction in June 2010



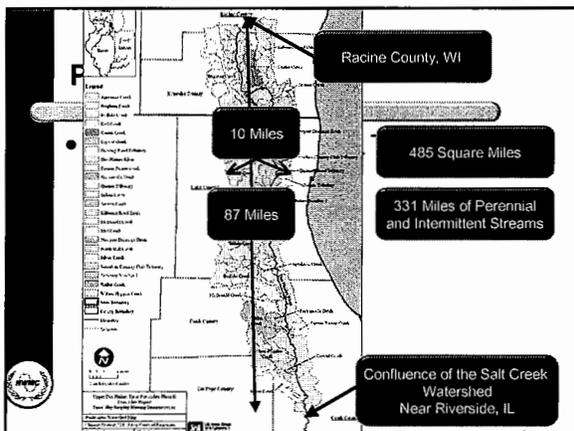
Remaining Phase I Projects

- North Fork Mill Creek Dam Modification, Buffalo Creek Reservoir Expansion and Van Patten Woods Lateral Storage Area
 - A limited re-evaluation report is planned to develop and analyze new alternatives to minimize flood damages in Lake County



Upper Des Plaines Phase II Study

- Continuation and Extension of Phase I
 - Authorized in Water Resources Development Act of 1999, Section 419
- Objectives
 - Further Reduce Main Stem Flooding
 - Reduce Tributary Flooding
 - Environmental Restoration of Degraded Ecosystem within River Basin
- Secondary Objectives
 - Improve Water Quality
 - Enhance Recreational Opportunities



Phase II Study Status

- Milestones
 - September 2007 Feasibility Scoping Meeting
 - June 2009 Baseline Economic Analysis Report
 - July 2009 In-Progress Review Meeting
 - October 2010 Draft Feasibility Study and Environmental Impact Statement
 - August 2011 Final Feasibility Study and Environmental Impact Statement



Potential Storage Sites

- Identified 196
- Eliminated 98 (so far)
- Kept 73 (so far)



Questions





CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, September 2, 2009
6 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Kim Jones, Patricia Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: Aldermen DiPietro, Wsol

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM AUGUST 19, 2009

The minutes of the August 19, 2009 meeting were approved.

II. DEVELOPMENT OF GOALS

Mr. Saccomanno reminded the members of the Task Force to document their recommendations for the final report.

A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues. – Mr. Arrigoni and Mr. Humm

Mr. Arrigoni stated that they are looking at developing a depository for flooding information similar to Des Plaines and Skokie, setting up an information station at the public library, and having representatives at the Farmer's Market to answer questions informally.

Mr. Humm asked what it would take to get the city's website more interactive. Director Zingsheim replied that he would ask Aggie Stempniak, the city's Information Coordinator, to attend the next meeting to answer these questions. He also suggested that there be more press on what the city is doing.

B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding. – Mr. Tolan and Mr. Fabisch

Mr. Tolan stated that he was currently analyzing the data that has been provided and is looking for trends, and correlating the data by address and sewer size. He noted that residents should be better educated on what they can do, as well as develop ways for the city to mitigate flooding.

It was decided that Goals B and C would share data and be merged together.

Mr. Fabisch noted that sewer size and age were being looked at as well. He explained the effectiveness of rain barrels and gave a website for purchase thru MWRD (www.mwrdd.org/irj/portal/anonymous/Home).

- C. Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources.**
– Mr. Mack and Mrs. Lofthouse

Mrs. Lofthouse stated that they are looking at short and long term solutions. She noted that the Village of Skokie's plan is a model that we can learn from.

Mr. Saccomanno stated that he would ask someone from Skokie to speak to the group.

Mr. Mack stated that they were developing a list of short-term mitigation solutions. He noted that the city should look at opportunities to partner with developers and other agencies.

- D. Review current City Ordinances, practices and policies and make recommendations for change as needed.** – Mr. Saccomanno and Ms. Jones

Ms. Jones stated that they were reviewing the city's current ordinances and will be looking at ordinances from other municipalities to make recommendations for improvement.

- E. Seek and explore funding opportunities for flood mitigation, both for City and residents.** – Mr. Carroll

Mr. Carroll stated that he has found that other municipalities are self-funding their improvements. He recommended increasing the sewer enterprise fund by setting up a separate fee of \$3/month/household with monies going to long-term solutions. He noted that he has found no grant monies available.

III. NEW BUSINESS

- A.** At the request of the Task Force, Director Zingsheim will schedule a tour for September 12 at 11 a.m.
- B.** Mr. Saccomanno stated that the Task Force would discuss the format of the report at the next meeting and that he would develop an outline. He encouraged them to begin writing down their thoughts, as the report will be written in mid October.

- C. Alderman DiPietro commented that the matter of billboards has been sent to the Planning and Zoning Committee for review with the rebate program being discussed at the Finance and Budget Committee. He noted that both programs are a long way from being adopted.

IV. RESIDENT INPUT

A resident spoke on the effectiveness of above and below ground rain barrels.

V. ADJOURNMENT

The meeting adjourned at 7:21 p.m.

NEXT MEETINGS – Wednesday, September 16, 2009 at 6 p.m. in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

**Wednesday, September 16, 2009
6 p.m. Meeting
Council Chambers
Park Ridge City Hall**

MEMBERS PRESENT: Joe Saccomanno, Gale Fabisch, John Humm, Kim Jones, Patricia Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: Lou Arrigoni and Daniel Carroll

ALDERMEN PRESENT: Aldermen Wsol, Sweeney

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM SEPTEMBER 2, 2009

The minutes of the September 2, 2009 meeting were approved.

II. DEVELOPMENT OF GOALS

A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues. – Mr. Arrigoni and Mr. Humm

No discussion.

B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding. – Mr. Tolan and Mr. Fabisch

C. Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources. – Mr. Mack and Mrs. Lofthouse

As these goals have been combined, members are working together on assembling data.

D. Review current City Ordinances, practices and policies and make recommendations for change as needed. – Mr. Saccomanno and Ms. Jones

Mr. Saccomanno stated that they are continuing to gather information from other communities.

E. Seek and explore funding opportunities for flood mitigation, both for City and residents. – Mr. Carroll

No Discussion.

III. NEW BUSINESS

Mr. Saccomanno stated that Mayor Schmidt asked that the Task Force be notified that he was attending a Metropolitan Water Reclamation District (MWRD) meeting this evening.

The Task Force thanked Director Zingsheim, City Engineer Mitchell, and Water Supervisor Roycroft for the September 12 tour of the Sibley Lift Station and various other locations.

A. Presentation by Erik Cook, Village of Skokie

Erik Cook, Civil Engineer for the Village of Skokie, detailed Skokie's storm water runoff control program. Construction began in 1985 and was completed in 1999 and cost \$80 million. Projects were funded with low interest IEPA loans and bonds; taxes were not raised. Skokie offers no financing or rebate programs to residents for private property improvements.

Their program includes berms, restrictors, and planned ponding of water in streets; sewers are designed for a ten (10) year storm. They do not have an alley paving program, most alleys are stone unless adjacent to commercial property. They have a sewer lining program that lines 1000' - 2000' per year. They have three (3) rain gauges and five (5) flow meters spread throughout the community, generating reports a storm event. Retention areas have been placed at one (1) school and at the Skokie Park District.

He noted that during a severe storm event, such as the one in September 2008, the village still receives basement back up calls.

Discussion ensued on various aspect of Skokie's program.

Mr. Saccomanno thanked Mr. Cook for his presentation.

B. Overview of the City's Website

Aggie Stempniak, the City's Information Coordinator, gave a brief overview of the updating of the city's website. The reorganization is aimed to make the website more user friendly and interactive.

The Task Force recommended the following:

- Data be archived
- Search capability
- Separate icon on homepage for stormwater management link
- Interactive forms

C. Development of Final Report

Mr. Saccomanno reminded the members of the Task Force to document their recommendations for the final report. He presented a draft outline to the members, asking them to review it for discussion at the next meeting.

Mr. Humm asked that the report include staff's recommendations. Director Zingsheim stated that he would prepare a list that would include sewer lining and televising (miles), new vacator/flusher truck, maintenance of Sibley pumps and associated costs.

Mr. Tolan and Mr. Fabisch will help Mr. Saccomanno prepare the final report.

IV. RESIDENT INPUT

None.

V. ADJOURNMENT

The meeting adjourned at 7:16 p.m.

NEXT MEETINGS – Wednesday, September 30, 2009 at 6 p.m. in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, September 30, 2009
6 p.m. Meeting
Council Chambers
Park Ridge City Hall

- MEMBERS PRESENT:** Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Patricia Lofthouse and Steve Tolan
- MEMBERS ABSENT:** Kim Jones and Bob Mack
- ALDERMEN PRESENT:** None
- STAFF PRESENT:** S. Mitchell, B. Wiebe, J. Roycroft and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM SEPTEMBER 16, 2009

The minutes of the September 16, 2009 meeting were approved.

II. DEVELOPMENT OF GOALS

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues. – Mr. Arrigoni and Mr. Humm**

No discussion.

- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding. – Mr. Tolan and Mr. Fabisch**

Mr. Tolan stated that they were continuing to analyze data.

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources. – Mr. Mack and Mrs. Lofthouse

No discussion.

C. Review current City Ordinances, practices and policies and make recommendations for change as needed. – Mr. Saccomanno and Ms. Jones

Mr. Saccomanno stated that they have compared the city's ordinances to other municipalities in Cook, Lake and DuPage counties. They have found Park Ridge's to be equal to, or more stringent than, comparable communities.

He asked City Engineer Mitchell where detention has been installed as part of these policies. City Engineer Mitchell replied that detention has been installed in the following areas:

- Uptown Redevelopment – Meacham cul de sac (1) & Meacham Parking Lot (2)
- Bredemann Parking Lot
- Brickton Place
- Public Works Service Center

D. Seek and explore funding opportunities for flood mitigation, both for City and residents. – Mr. Carroll

Mr. Carroll reported that there were no new developments. He noted that the Task Force should consider recommending increasing the monthly sewer surcharge by \$3 per residence.

Superintendent Wiebe suggested charging impact fees for new construction.

III. NEW BUSINESS

A. Development of Final Report

The Task Force agreed to the format of the report, as recommended by Mr. Saccomanno.

Discussion ensued on where the Task Force has been, what they have found and where they see it going.

Mr. Tolan commented on the enormity of the issue, the many variables involved and the need to educate the homeowner as to why we flood and how to prevent it. He feels that it is the Task Force's mission to help the city prioritize and improve maintenance.

Mr. Fabisch stated that the Task Force needs to inform the citizenry of flood related issues. He stressed the importance of maintenance programs.

Mr. Humm stated that it was critical to have the mechanisms in place to prevent overland flooding. He requested that staff arrange another Saturday tour to visit the six sites identified by the Burke study (with a topographical map), the Mayfield Lift Station, and the Carol/Crain Lift Station.

City Engineer Mitchell stated that staff would arrange a tour for Saturday, October 17.

Mr. Arrigoni stated that it was important for residents to understand that it isn't just the sewers that are causing flooding.

City Engineer Mitchell will provide copies of Bulletin 70 to the Task Force.

The Task Force agreed to have the draft report completed by mid November. They will begin discussing actual sections of the report at the next meeting.

- B.** Mr. Saccomanno stated that he would ask Mayor Schmidt for a report on his last meeting with MWRD.

IV. RESIDENT INPUT

Paul Swanson, 1700 Good, asked if the city was inspecting for downspout connections. City Engineer Mitchell replied that there was a program in the early 1970's for this. She noted that this was the responsibility of the Building Department, and that this could be a recommendation made by the Task Force.

V. ADJOURNMENT

The meeting adjourned at 6:51 p.m.

NEXT MEETINGS – Wednesday, October 14, 2009 at 6 p.m. in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, October 14, 2009
6 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Gale Fabisch, Bob Mack and Steve Tolan

MEMBERS ABSENT: Lou Arrigoni, Daniel Carroll, John Humm, Kim Jones and Patricia Lofthouse

ALDERMEN PRESENT: Alderman Bach

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM SEPTEMBER 16, 2009

As there was not a quorum, approval of the September 16, 2009 minutes was deferred.

II. DEVELOPMENT OF GOALS

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues.** – Mr. Arrigoni and Mr. Humm

No discussion.

- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding.**
– Mr. Tolan and Mr. Fabisch

Mr. Tolan stated that they had met with staff and have developed six variables to evaluate flooding. They are now developing a list of short, medium and long-term solutions.

Discussion ensued on the IDNR's Bulletin 70, and what level of storm protection should the city provide.

Mr. Saccomanno stated that it was civil engineering practice to design to a ten-year storm. He felt that the Task Force should concur on whether the city should provide conveyance and detention for a ten-year storm. He asked that this matter be placed on the next agenda.

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources.

– Mr. Mack and Mrs. Lofthouse

Mr. Mack stated that they are working to develop a narrative of solutions and are continuing to evaluate the city's infrastructure.

C. Review current City Ordinances, practices and policies and make recommendations for change as needed. – Mr. Saccomanno and Ms. Jones

Mr. Saccomanno stated that they have compared the city's ordinances to other municipalities in Cook, Lake and DuPage counties. They have found Park Ridge's to be equal to, or more stringent than, comparable communities.

D. Seek and explore funding opportunities for flood mitigation, both for City and residents. – Mr. Carroll

No discussion.

III. NEW BUSINESS

A. Development of Final Report

No discussion.

B. Report on Mayor Schmidt's meeting with MWRD

Mr. Saccomanno stated that Mayor Schmidt had reported that his meeting with MWRD was not worthwhile from a stormwater management standpoint. It focused more on the Chicago River and IEPA issues.

C. The Task Force agreed to cancel the tour scheduled for Saturday, October 17. Staff will contact the Task Force to arrange a tour for either October 24 or 31, at 10 a.m.

D. City Engineer Mitchell stated that Christopher B. Burke Engineering would be presenting their final report to the City Council at a workshop, tentatively scheduled for November 2, at 6:30 p.m. They are currently finalizing the last two study areas and will be meeting with the Park Board on October 15.

The Task Force asked for a copy of the Burke report and stated that they would also attend the workshop.

E. Alderman Bach stated that for the purpose of preparing for the 2010/2011 budget, the City Council will begin discussing possible areas to be studied next for flooding.

F. Mr. Saccomanno and Mr. Mack suggested that staff invite a representative from MWRD to the next meeting to discuss their plans and possible funding opportunities

IV. RESIDENT INPUT

Brett Popper, 2010 Birch, stated that he hoped that, by studying other areas of the community, the focus did not shift off the first six areas.

Paul Swanson, 1700 Good, emphasized the need to conduct the tour during daylight hours.

Dave Areen, 722 North Lincoln, recommended the 'Door Dam' for downward sloping drives.

V. ADJOURNMENT

The meeting adjourned at 7:05 p.m.

NEXT MEETINGS – Wednesday, October 28, 2009 at 6 p.m. in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, November 4, 2009
6 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Kim Jones, Patricia Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: Mayor Schmidt

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM SEPTEMBER 30 AND OCTOBER 14, 2009

The minutes of the September 30 and October 14, 2009 meetings were approved.

II. DEVELOPMENT OF GOALS

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues.** – Mr. Arrigoni and Mr. Humm

No discussion.

- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding.**
– Mr. Tolan and Mr. Fabisch

No discussion.

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources.
– Mr. Mack and Mrs. Lofthouse

No discussion.

C. Review current City Ordinances, practices and policies and make recommendations for change as needed. – Mr. Saccomanno and Ms. Jones

No discussion.

D. Seek and explore funding opportunities for flood mitigation, both for City and residents. – Mr. Carroll

No discussion.

III. NEW BUSINESS

A. Review of Burke Report

Mr. Tolan – questioned prioritization and feasibility of projects given City’s budget; feels the Greenwood project would benefit the most residents as it is a major north/south thoroughfare; found the October 31 tour to be beneficial.

Mr. Mack – found these six areas to be a good starting point; would like to know level of protection Burke’s recommendations would provide.

Ms. Lofthouse – found the recommendations for homeowners beneficial.

Ms. Jones- found the site visit to be beneficial; the Greenwood project would benefit the most residents.

Mr. Saccomanno – wrestling with the total cost of \$6.1 million to mitigate 500-600 homes; questioned if this money could be used to benefit more residents; looking for best benefit / cost ratio; need to identify health, safety and welfare issues.

Mr. Humm – need to look forward twenty years; questioned level of protection offered by Burke’s recommendations.

Mr. Fabisch – found tour to be very useful; need to look at areas not addressed by Burke study.

Mr. Carroll – Burke’s study did not address the maintenance of the system, though it was not part of their scope of work; some data may be flawed as not all residents reported flooding; may need to conduct a more comprehensive resident survey.

Mr. Arrigoni – questioned the level of protection offered by Burke’s recommendations; need to plan for the future.

The Task Force agreed to meet at 5:30 p.m. on November 18. Representatives from Christopher B. Burke Engineering will be present to answer questions on the flood study. Committee and City Council members are to send questions in advance to staff. Burke Engineering will then respond to each question in writing.

B. Conveyance and Detention for ten year storm

Mr. Saccomanno stated that the number of year storm for conveyance and detention is key to the discussions, noting that ten years is common practice for the industry.

Mr. Mack stated that ten years was common for low flow and 100 years for overland flow. He questioned how the water would get to the detention ponds that Burke was recommending.

The Task Force agreed not to make a decision on this matter until Burke Engineering attends a meeting.

C. Development of Final Report

The Task Force agreed to make a bullet point presentation to the City Council detailing the mission, goals, preliminary findings for each goal, what we are doing, and where we are going. They would then take questions from the City Council.

Discussion ensued as to when this presentation should occur. It was agreed that each sub committee would bring their bullet points to the November 18 meeting. They would then schedule a meeting to prepare for the presentation and decide on when the Council presentation should be held.

Mr. Tolan stated that there should be a consensus for an overall conclusion before the Council presentation.

D. MWRD Public Meeting for Watershed Management Ordinance

Mr. Saccomanno stated that the Metropolitan Water Reclamation District (MWRD) was holding a public meeting on the Cook County Watershed Management Ordinance (WMO) at Maine West High School at 7 p.m. on November 18. Several members of the Task Force expressed interest in attending.

IV. RESIDENT INPUT

Dave Areen, 722 North Lincoln, commented on the need for the Greenwood/ Lahan area to be a priority.

George Kirkland, 1909 Des Plaines, commented on the run off from the Country Club and overall benefits of the Greenwood project to the city.

Mayor Schmidt thanked the Task Force for their time, noting that the price tag for the Burke recommendations would probably be more than \$6 million.

V. ADJOURNMENT

The meeting adjourned at 7:23 p.m.

NEXT MEETINGS – Wednesday, November 18, 2009 at 5:30 p.m. in the City Hall Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, November 18, 2009
5:30 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Lou Arrigoni, Daniel Carroll, Gale Fabisch (arr. 5:45), John Humm, Kim Jones, and Bob Mack

MEMBERS ABSENT: Joe Saccomanno, Patricia Lofthouse, and Steve Tolan

ALDERMEN PRESENT: Alderman Sweeney

STAFF PRESENT: W. Zingsheim, S. Mitchell, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM NOVEMBER 4, 2009

The minutes of the November 4, 2009 meeting were approved.

II. NEW BUSINESS

Mr. Humm stated that the Village of Niles had completed their Stormwater Commission Report, noting that he found it to be a very thorough report.

A. Christopher B. Burke Flood Study – Questions and Answers

Q. Explain the importance of sewer maintenance.

A. Lack of maintenance decreases sewer capacity.

Q. With a combined system, how will the proposed detention basins not pose a health hazard?

A. The proposed detention basins would be designed to collect runoff from the streets, thus being clean water. Only the proposed new sewers would be tied into these basins, they would not be connected to the existing combined sewer system.

Q. How important is sewer lining?

A. It costs approximately \$40 per foot to line a 12” sewer. It is a cost effective means to control infiltration.

Q. What level of protection would these proposed improvements provide?

A. Streets with trunk sewers leading to detention basins, such as Northwest Park, would have protection based on the September 2008 storm.

Q. *How big would the Northwest Park detention basin be?*

A. It would allow for 11-12 acres of detention,

B. Conveyance and Detention for ten year storm

No discussion.

C. Scheduling of Future meetings and Presentation to City Council

The Task Force agreed to schedule meetings on December 2 and 9 at 6 p.m.

The Task Force discussed how the Burke report would be integrated into their report. Mr. Fabisch recommended that there be three sections:

- Community education
- Short term solutions, to be incorporated into the budget
- Long term goals

III. RESIDENT INPUT

Paul Swanson, 1700 Good, inquired as to how upgrading the Mayfield Pump Station would affect Mayfield Estates. Mr. Perry replied that the pump system would be specifically for Mayfield Estates. Mr. Mack noted that the inlet capacity would need to be increased as well.

Dave Areen, 732 North Lincoln, noted safety issues when Greenwood Avenue is closed due to flooding.

IV. ADJOURNMENT

The meeting adjourned at 6:10 p.m.

**NEXT MEETINGS – Wednesday, December 2, 2009 at 6 p.m. in the Mayor’s Conference Room
Wednesday, December 9, 2009 at 6 p.m. in the Council Chambers**



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

**Wednesday, December 2, 2009
6:00 p.m. Meeting
Mayor's Conference Room
Park Ridge City Hall**

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Kim Jones, Pat Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: None

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM NOVEMBER 18, 2009

The minutes of the November 18, 2009 meeting were approved.

II. GOALS – DEVELOPMENT / RESOLUTION

The Task Force agreed to meet on December 9 to finalize the bullet point preliminary report to be presented to the City Council on December 14. They agreed that Mr. Saccomanno would make the presentation, with other members available for follow up questions and answers.

The Task Force reviewed their preliminary bullet point items for the presentation. Final drafts should be emailed to staff for review at the December 9 meeting.

A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues (Mr. Arrigoni and Mr. Humm)

B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding (Mr. Tolan and Mr. Fabisch)

**Develop and expand existing flood database by date, location, type and cause.
Document flood damage costs associated with these incidents, both private and public.
Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources** (Mr. Mack and Mrs. Lofthouse)

- C. Review current City Ordinances, practices and policies and make recommendations for change as needed** (Mr. Saccomanno and Ms. Jones)
- D. Seek and explore funding opportunities for flood mitigation, both for City and residents** (Mr. Carroll)

III. NEW BUSINESS

A. Review of MWRD Public Meeting for Watershed Management Ordinance

Mr. Mack gave an overview of the new MWRD Watershed Management Ordinance.

IV. RESIDENT INPUT

Dean Scimeca, 208 Stanley, detailed flooding issues at his home. He questioned what the city would be doing to alleviate these issues in the short term. City Engineer Mitchell stated that she would meet with him to discuss the matter further.

V. ADJOURNMENT

The meeting adjourned at 7:55 p.m.

**NEXT MEETINGS – Wednesday, December 9, 2009 at 6 p.m. in the Mayor’s Conference Room
Monday, December 14, 2009 at 6:30 p.m. in the Council Chambers**



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, December 9, 2009
6:00 p.m. Meeting
Mayor's Conference Room
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Kim Jones, Pat Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: Alderman Sweeney

STAFF PRESENT: W. Zingsheim, S. Mitchell, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM DECEMBER 2, 2009

The minutes of the December 2, 2009 meeting were approved.

II. GOALS – DEVELOPMENT / RESOLUTION

The Task Force reviewed a draft of the preliminary report to be presented to the City Council on December 14.

A copy of the final preliminary report is attached.

III. NEW BUSINESS

None.

IV. RESIDENT INPUT

Craig Schiller, 131 South Lincoln, detailed flooding issues at his home.

Mary Oelkers, 135 South Lincoln, detailed flooding issues at her home. She experiences yard flooding, seepage, and overland flooding.

V. ADJOURNMENT

The meeting adjourned at 7:58 p.m.

NEXT MEETINGS – Monday, December 14, 2009 at 6:30 p.m. in the Council Chambers

**THE CITY OF PARK RIDGE
FLOOD ADVISORY TASK FORCE**

**PRELIMINARY REPORT TO THE CITY COUNCIL
December 14, 2009**

Mission:

To listen, learn from and to lead the Park Ridge community in understanding area flooding issues and to develop an appropriate variety of flood control mitigation measures that would reduce homeowner flood risk. These measures will be presented to the City Council, city staff and the residents of Park Ridge for consideration and appropriate implementation.

The Flood Advisory Task Force is comprised of nine residents, appointed by the Mayor, who have worked together to develop this preliminary report.

TASK FORCE MEMBERS

Joseph Saccomanno, Gale Fabisch, Bob Mack and Steve Tolan, Lou Arrigoni, Daniel Carroll, John Humm, Kim Jones and Patricia Lofthouse

CITY STAFF

Wayne Zingsheim, Sarah Mitchell, Brian Wiebe, and Susan Tedeschi

SUMMARY OF PRELIMINARY FINDINGS

- Increase maintenance and sewer inspections by developing a yearly sewer inspection program. Purchase vactor truck, inspection camera system and additional rodding equipment. Hire two additional employees to perform these duties. - \$500,000 estimate
- Modify and revise existing Ordinances to reduce the release rate, increase fee in lieu of detention, eliminate the 5% maximum of construction cost limit, and apply to all construction / development half acre or more. - No cost
- Increase property owner's education and awareness of stormwater management issues via booklets, website, seminars and workshops. - \$10,000 estimate
- Fund above recommendations thru a \$3 per month flood mitigation surcharge for each property owner. This revenue shall be deposited in the Sewer Enterprise fund. Continue to pursue long-term funding thru grants and low interest loans. Develop an incentive program to encourage property owners to install approved stormwater control measures.
- Develop a yearly sewer lining/replacement program based on inspection of sewers and critical infrastructure systems. - \$1,000,000 estimate
- Expand data gathering by using GIS system, surveys and other data gathering methods. - \$50,000 estimate
- Undertake a citywide sewer study. - \$400,000 estimate
- Improve sewer conveyance to a ten-year storm (2.1" of rain in 1 hour). – TBD based on citywide sewer study
- Develop and maintain a long-term citywide hazard mitigation program notification and information system. - TBD
- Create and expand dialogue with Commonwealth Edison regarding improvements and notifications. – No cost

- Combine the recommendations of the Burke Study with the citywide sewer study to determine citywide priorities. Pursue agreements with the Park Ridge Park District and Country Club. – TBD and no cost

GOALS AND SPECIFIC DETAILS

A. **Develop a program to educate residents on the city sewer system and how to mitigate private property issues** (Mr. Arrigoni and Mr. Humm)

- To increase property owner's education and awareness on stormwater management issues.
- To provide information on stormwater management via website, print, and seminars.
- To inform property owners of the city's sewer infrastructure limitations.
- To educate homeowners in individual stormwater management to mitigate flooding.
- To publish the best water mitigation actions of local, regional and national governmental bodies.

B. **Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding** (Mr. Tolan and Mr. Fabisch)

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources (Mr. Mack and Mrs. Lofthouse)

Types of flooding: sewer backup, overland flooding, seepage/foundation problems resulting in groundwater infiltration, mechanical/electrical deficiencies/failures.

WHAT PROPERTY OWNERS CAN DO

Provide short-term homeowner solutions to flooding:

- Disconnect and redirect downspouts away from foundation
- Clean and televiser private sewer service line - \$300
- Purchase and install rain barrels - \$40
- Maintain and inspect existing sump pump and float system
- Install battery backup sump pump - \$1,400
- Remove overland flow path obstructions
- Seal foundation cracks - \$300 per crack
- Common sense solutions, i.e. limit water usage during flood
- File complaints against utility companies for power failures

Provide mid-term homeowner solutions to flooding:

- Install rain gardens
- Inspect low openings, raise/extend window wells
- Where needed, install glass block windows in basements
- Where possible, incorporate native plantings in landscaping
- Replace asphalt surfaces with pavers
- Purchase portable backup generator system - \$500
- Install wet wells or French drain sewer systems

Provide long-term homeowner solutions to flooding:

- Install overhead sewer – \$10,000
- Install flood control system backflow prevention and pump
- Install permanent natural gas backup generator system -\$7,000
- Re-grade property, provide berming as needed – varies
- Purchase Aqua Dam or install mechanical gate for down slope drives

WHAT THE CITY CAN DO

Provide short-term City solutions to flooding:

- Evaluate existing City sewer system, clean and televise sewers - \$1.50 - \$2 per foot
 1. Purchase sewer vactor and camera system - \$400,000
 2. Hire and train staff as needed to operate system - \$150,000
 3. Use sewer lining contract to provide lining services for sewers that have drainage or infiltration problems.
 4. Power cleaning and rodding of local sewers
- Inspect, maintain and repair critical infrastructure as needed
 1. Pump Station systems
 2. Flap gate systems and other backwater prevention systems - \$5,000
 3. Flood walls
 4. Overland flow paths
- Expand City flood database GIS system
 1. Obtain and document flood damage costs from FEMA
- Expand dialogue with Commonwealth Edison regarding power outages
 1. Customer service and capital improvements
- Incorporate modifications to City Ordinances
- Develop citywide Flood Mitigation Incentive Program
 1. Purchase and loan pumps to residents
 2. Provide drainage system design services
 3. Provide rebates
 4. Provide tax credits
- Participation in MWRDGC Watershed Council
 1. Lower Des Plaines River Watershed Council
 2. Combined Sewer District Council
- Educate residents on Municipal Codes via print and website
- Consolidate flood information on City website
- Develop citywide volunteer organization to provide hazard mitigation and emergency services for the city and residents

Provide mid-term City solutions to flooding:

- Evaluate capacity of existing sewer system
 1. Possible engineering study

2. City review of flooding incidents

- Develop and implement Sewer Lining Program as needed
- Construct relief sewers per sewer system evaluation
- Examine each unpaved alley as possible detention site
- Where feasible, raise sidewalks and curbs for down sloping drives
- Explore opportunities to incorporate best management practices into city infrastructure

Provide long-term City solutions to flooding:

- Implement capital flood control projects
 1. Explore and develop opportunities for flood control projects
 2. Prioritize capital projects based on cost/benefit
 3. Burke Study projects
 4. Secure funding for design and construction of projects
 5. Secure needed right-of-way and land owner agreements
- Develop a partnership with future developments in Park Ridge
 1. Expand detention storage opportunities
- Partner with IDOT roadway improvements
 1. Explore sewer separation opportunities
 2. Relief sewers
- Establish a Flood Management System to provide continued long-term solutions

C. Review current City Ordinances, practices and policies and make recommendations for change as needed (Mr. Saccomanno and Ms. Jones)

Revise the Municipal Code as follows:

- Article 11- Public Services, Chapter 3 - Stormwater Management
 1. Section 2, Reconstruction - remove “to the extent of 50% of its present value.”
 2. Section 2, Development – change “1 acre” to ½ acre.
 3. Section 6.5, Release Rates – change from “.15 cfs per acre” to .10 cfs per acre for 100-year discharge.
 4. Section 9, Fee in Lieu of Detention – (also in 20-7-1) change from “\$25 per cubic foot” to \$30 per cubic foot.
- Article 20- Administrative Procedure, Chapter 7 - Public Works Fees
 1. Section 1, Stormwater Detention Fee – (also in 11-3-9) change from “\$25 per cubic foot” to \$30 per cubic foot.
 2. Section 1, Stormwater Detention Fee – remove “however, such fee shall not exceed five percent (5%) of the construction cost of the development as determined by the Director of Public Works.”
- Article 15 – Building Regulations, Chapter 8 – Land Grades, Section 3, Area Drain
 1. Add “shall be restricted to the sanitary sewer as approved by the City Engineer.”

D. Seek and explore funding opportunities for flood mitigation, both for City and residents (Mr. Carroll)

Currently there is no state or federal funding available for sewer projects. However the City of Park Ridge can raise its own capital by doing the following:

- Each household and business pay a \$3 per month sewer surcharge to fund short term maintenance projects such as purchasing a vactor truck, video equipment and general maintenance.
- Apply to the Illinois Water Pollution Control Loan Program in order to provide the city and residents with low interest loans that mature in less than twenty years.
- Explore the issuance of bonds to cover long term projects such as sewer lining and constructing retention areas per the Burke study.
- Continue to pursue long-term funding solutions.



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

**Wednesday, January 13, 2010
6:00 p.m. Meeting
Council Chambers
Park Ridge City Hall**

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Kim Jones, Pat Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: None

ALDERMEN PRESENT: None

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM DECEMBER 9, 2009

The minutes of the December 9, 2009 meeting were approved.

II. REVIEW OF QUESTIONS AND ANSWERS FROM PRELIMINARY REPORT

The Task Force agreed on scheduling a Council Workshop on Monday, January 25, 2010 at 6:30 p.m. prior to the Committee Meeting of the Whole. At this time, the Task Force will answer any questions that the Council may have on their preliminary report.

The Task Force then developed the following answers to questions that were submitted by Alderman Wsol.

- Increase maintenance and sewer inspections by developing a yearly sewer inspection program. Purchase vactor truck, inspection camera system and additional rodding equipment. Hire two additional employees to perform these duties. - \$500,000 estimate

What are the historical maintenance efforts the PW Department has performed for root cutting and flushing and what is the recommended goal?

Prior to staff reductions, the city flushed approximately 15% of the sewers each year, hitting the problem areas more often. In this manner, it took seven years to complete the entire city. With the purchase of a vactor truck and dedicating a two-man crew, the city would be completed in three years. Crews would also have the equipment to videotape any problem areas as they go along.

How did the Task Force determine a purchase recommendation was the most economical alternative?

Continued maintenance is a high priority. Purchasing the equipment allows for greater consistency and frequency of inspection and maintenance. It also gives the city the ability to react immediately to emergency situations.

- Modify and revise existing Ordinances to reduce the release rate, increase fee in lieu of detention, eliminate the 5% maximum of construction cost limit, and apply to all construction / development half acre or more. - No cost

What ordinance language did the Task Force discover is in place for other Communities?

A table from the Metropolitan Water Reclamation District (MWRD) that summarizes ordinances from around the area was used. The Task Force also looked at ordinances from several neighboring communities to base their recommendations on.

Are there any challenges to eliminating the “fee” option and simply requiring all development efforts address detention with engineering solutions?

This would be detrimental to development in areas that are built out, as is Park Ridge. The Council of Mayors is currently objecting to MWRD’s proposed ordinance that eliminates the fee in lieu of detention.

- Increase property owner’s education and awareness of stormwater management issues via booklets, website, seminars and workshops. - \$10,000 estimate

How is this different that what is already in place?

This is a recommendation to expand on what is already available by reaching out to the community. Seminars and workshops would be offered in order to make materials more easily accessible. Improvements in the website and print materials would bring the city up to the same standards as neighboring communities.

- Fund above recommendations thru a \$3 per month flood mitigation surcharge for each property owner. This revenue shall be deposited in the Sewer Enterprise fund. Continue to pursue long-term funding thru grants and low interest loans. Develop an incentive program to encourage property owners to install approved stormwater control measures.

At what point did the Task Force expect this annual tax would end?

This tax would continue indefinitely, as sewer maintenance needs to be ongoing. The proposed tax would be \$3 per month, or 10¢ per day, per property owner.

- Develop a yearly sewer lining/replacement program based on inspection of sewers and critical infrastructure systems. - \$1,000,000 estimate

How is this different from existing/past sewer lining capital improvements – e.g. is the expectation that the current lining program will be expanded above past spending levels or simply continued?

Staff has placed \$600,000 for relief sewers and \$300,000 for sewer lining in the proposed capital budget for 2010/2011. This would increase past levels.

- Expand data gathering by using GIS system, surveys and other data gathering methods. - \$50,000 estimate

How often is this expenditure/data gathering anticipated to be performed – e.g. one time \$50,000 expenditure or is the expectation this will be an annual budget expenditure?

There would be an initial expenditure of \$50,000, and a yearly cost associated with maintaining the system.

- Undertake a citywide sewer study. - \$400,000 estimate

What would the scope of this project include and what would it include/exclude? Would a citywide study include every street/alley?

It is anticipated that it will take one year to complete a citywide sewer study. The study would include all 132 miles of sewers, and 11.7 miles of relief sewers in streets and alleys.

- Develop and maintain a long-term citywide hazard mitigation program notification and information system. - TBD

How would this differ from the current program / services performed and implemented by the City Staff (Fire/Police/Public Works)?

This would go beyond the current level, with more accountability by establishing a flood mitigation system that addresses issues on an ongoing basis and ensure that the city has enough resources in the event of an emergency. It is recommended that a community wide volunteer group be performed to assist in emergencies and with resident notification.

Your recommendations do not mention relief sewer evaluation / and prioritization. How do other communities prioritize the placement/size and merits of “relief sewer” installation?

The Task Force’s recommends establishing the priority of projects based on the proposed sewer study. Other communities prioritize based on sewer studies and consultant recommendations.

Your recommendations include the development of a cost-sharing program for flood mitigation to include possible solutions such as backflow valves and overhead sewers. Are these more economical than relief sewers and in which cases are they not?

Further analysis needs to be done on the cost effectiveness. The reason behind a cost share program is to give residents the ability to protect themselves and offers a higher level of protection from a 100-year storm.

With such solutions (overhead sewers/back flow valves) how do we address the question of once these are installed where does the stormwater flow once forced out of currently flooding basements?

The Burke Study states that a typical residential structure that experiences two feet of stormwater in the basement is storing approximately 18,000 gallons of water. If the home were flood-proofed, it would result in approximately one-quarter inch rise in the water level of the street, a negligible amount.

Would creating more open space improve the impacts of stormwater – via smaller footprints of city sidewalks (is it worth investigating making sidewalks 6” to 12” smaller? Would it be beneficial to eliminate solid driveways – middle ribbon of open grass – require porous materials be used for alleys, driveways, sidewalks, etc.?)

These would all help over time, but the costs associated are not known. Green technology is not yet being done on a large residential scale. While the city can encourage green development, it ca not mandate it. It may be possible to add language to an ordinance that provides an incentive for green technology. The city is encouraged to use green technology as part of its projects.

In your research efforts did you find any information relevant to if a property development (of any size – multi-family and single family alterations) includes expansive stormwater detention have other Communities lessened the floor area ratio limits for land use?

There is no empirical data relating Floor area ratio (FAR) to increased floodwater runoff. The Task Force does not believe that the city’s FAR regulations are within their mission. However, runoff needs to be controlled on all properties.

III. DEVELOPMENT OF FINAL REPORT

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues** (Mr. Arrigoni and Mr. Humm)
- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding** (Mr. Tolan and Mr. Fabisch)

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources
(Mr. Mack and Mrs. Lofthouse)

- C. Review current City Ordinances, practices and policies and make recommendations for change as needed** (Mr. Saccomanno and Ms. Jones)
- D. Seek and explore funding opportunities for flood mitigation, both for City and residents**
(Mr. Carroll)

No discussion.

IV. NEW BUSINESS

Discussion ensued on the disconnection of sump pumps from the city sewers and enforcement options. Consideration will be given to this when writing the final report.

V. RESIDENT INPUT

Dave Areen, 732 North Lincoln Avenue, commented on the need to keep the Greenwood Area as a high priority.

VI. ADJOURNMENT

The meeting adjourned at 7:38 p.m.

NEXT MEETINGS – Council Workshop, Monday, January 25, 2010 at 6:30 p.m. in the Council Chambers
Wednesday, February 17, 2010 at 6:00 p.m. in the Council Chambers



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, February 17, 2010
6:00 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, Kim Jones, Pat Lofthouse, Bob Mack and Steve Tolan

MEMBERS ABSENT: John Humm

ALDERMEN PRESENT: None

STAFF PRESENT: W. Zingsheim, S. Mitchell, and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM JANUARY 13, 2010

The minutes of the January 13, 2010 meeting were approved.

II. DEVELOPMENT OF FINAL REPORT

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues** (Mr. Arrigoni and Mr. Humm)
- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding** (Mr. Tolan and Mr. Fabisch)

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources (Mr. Mack and Mrs. Lofthouse)

- C. Review current City Ordinances, practices and policies and make recommendations for change as needed** (Mr. Saccomanno and Ms. Jones)
- D. Seek and explore funding opportunities for flood mitigation, both for City and residents** (Mr. Carroll)

Mr. Tolan detailed the format for the final report that will include an introduction, outline, background, executive summary, goals, recommendations, and addendums. He noted that the addendums would include backgrounds of the Task Force members and various maps. The

recommendations would be broken down by short, medium and long term and would include timeframes.

After discussion, it was agreed that the groups would have their summaries and recommendations to Mr. Tolan by March 10. Their group would then compile a draft of the final report. This draft would be distributed to the Task Force on March 25, and would be reviewed at the March 31 meeting.

Mr. Saccomanno asked Director Zingsheim what the status was on sewer projects for the 2010/2011 capital budget. Director Zingsheim replied that several programs have been submitted as part of a five-year plan, but funding will depend on raising sewer user fees.

Discussion ensued on the prioritization of projects and whether the Burke Report's priority list would best serve the community.

III. NEW BUSINESS

Ms. Lofthouse asked that the Task Force review the materials on increasing green space that she had forwarded to them.

IV. RESIDENT INPUT

None.

V. ADJOURNMENT

The meeting adjourned at 7:02 p.m.

**NEXT MEETINGS – Wednesday, March 31, 2010 at 6:00 p.m. at the Public Works Service Center,
400 Busse Highway**



CITY OF PARK RIDGE

MINUTES

FLOOD CONTROL TASK FORCE

Wednesday, March 31 2010
6:00 p.m. Meeting
Council Chambers
Park Ridge City Hall

MEMBERS PRESENT: Joe Saccomanno, Lou Arrigoni, Daniel Carroll, Gale Fabisch, John Humm, Bob Mack and Steve Tolan

MEMBERS ABSENT: Kim Jones, Pat Lofthouse

ALDERMEN PRESENT: None

STAFF PRESENT: W. Zingsheim, S. Mitchell, B. Wiebe and S. Tedeschi

I. APPROVAL OF MEETING MINUTES FROM FEBRUARY 17, 2010

The minutes of the February 17, 2010 meeting were approved.

II. REVIEW OF FINAL REPORT

- A. Develop a program to educate residents on the city sewer system and how to mitigate private property issues** (Mr. Arrigoni and Mr. Humm)
- B. Review existing sewer system and analyze various types of flooding to better understand the scope of the problem and the various causes for flooding** (Mr. Tolan and Mr. Fabisch)

Develop and expand existing flood database by date, location, type and cause. Document flood damage costs associated with these incidents, both private and public. Formulate short and long-term plans, including various solutions to reduce and eliminate flood damage effectively and efficiently, using all available resources
(Mr. Mack and Mrs. Lofthouse)

- C. Review current City Ordinances, practices and policies and make recommendations for change as needed** (Mr. Saccomanno and Ms. Jones)
- D. Seek and explore funding opportunities for flood mitigation, both for City and residents**
(Mr. Carroll)

Mr. Saccomanno thanked Mr. Tolan and other committee members for their efforts in developing the final report.

The Task Force then reviewed a working draft of the report. Mr. Tolan noted areas requiring further detail and revision. After discussion, consensus was reached on the following topics:

- To include a one page Executive Summary.
- To include observations on the Burke Report in summary form.
- To support the funding for and conducting of a citywide sewer study in one year.
- The importance of conducting a citywide sewer study before issuing any bonds.

The Task Force agreed to have all further comments to Mr. Tolan by April 9.

III. NEW BUSINESS

A. Mr. Saccomanno stated that the City Council has asked that the Task Force prepare a draft question on the issuance of a bond for flood control, for referendum on the November 2010 ballot. The proposed question should include a dollar amount that would encompass all expenses.

The Task Force reached consensus not to craft a referendum question. Instead they offered parameters, noting that the citywide sewer study should be done first.

The parameters are as follows:

• Citywide Sewer Study	\$ 500,000 estimated
• Burke report projects	\$6,000,000 estimated
• Ten Year flow (1.5 miles est.)	\$4,000,000 estimated
• Maintain floodwall, raise vents, etc.	\$2,000,000 estimated
• Incentive Program (estimated 1,000 homes @ \$2,500 / home)	\$2,500,000 estimated
• Future (unspecified & other)	<u>\$5,000,000 estimated</u>
TOTAL	\$20,000,000

B. Mr. Humm detailed the National Flood Insurance Program’s (NFIP) Community Rating System (CRS) noting that it recognizes and encourages community floodplain management activities. Residents of member communities receive discounted flood insurance rates to reflect the reduction in flood risk resulting from community actions. He asked that the Task Force consider recommending that the city implement this program.

IV. RESIDENT INPUT

None.

V. ADJOURNMENT

The meeting adjourned at 7:50 p.m.

NEXT MEETINGS – Wednesday, April 14, 2010 at 6:00 p.m. at the Public Works Service Center

APPENDIX I: LINKS TO STORM WATER MITIGATION SITES

LINKS TO STORMWATER MITIGATION SITES FOR NEIGHBORING COMMUNITIES

Buffalo Grove

www.vbg.org/index.aspx?NID=416

Buffalo Grove is implementing a Villagewide Drainage Improvement Project under their Master Plan on a site-based basis. It includes a Flood Risk Reduction Assessment under Entire Drainage Study Document prepared by Christopher Burke & Associates.

Des Plaines

<http://desplaines.org/Services/FloodProtection/OverviewFloodProtection.asp>

The City of Des Plaines has consolidated their Flood Information into one website with hot links to Levee 50, the Rand Park Flood Control Project and their Flood Rebate Program.

Downers Grove

www.downers.us/page/view/201

The Village of Downers Grove hosts a Stormwater Master Plan 2006 that includes Recommendations for Maintenance with specific goals.

Glenview

www.glenview.il.us/departments/capital/swtaskforce/index.shtml

The Village of Glenview has an impressive Flood Control Plan including a Master Plan, a Flood Risk Reduction Program, and Quick-Win Projects.

Highland Park

www.cityhpil.com/ow/nip.html

The City of Highland Park has separate sanitary and storm sewers, unlike the City of Park Ridge that has a combined sewer system. Nevertheless, they have created helpful standards and a Master Plan Report using data from the past 30 years to create a 10 Year Proposed Capital Improvement Program. Their site also includes many links to grants for Federal and State Funding Alternatives.

Niles

www.vniles.com/Content/templates

This site is the homepage for the Niles Stormwater Commission. It includes their Stormwater Commission Report for the September 2008 Flood including updates through 2010.

Northbrook

www.northbrook.il.us/Government/Departments/Engineering/FloodP

The Village of Northbrook has comprehensive Floodplain Information including a Flood Preparation List that delineates specific stores to buy supplies.

Skokie

www.skokie.org/FEMAssistance.cfm

The Village of Skokie has information on their Flood Report for the September 2008 event including their comprehensive Flood Control Program.

LINKS TO STORMWATER MANAGEMENT ORGANIZATIONS

Chicago Metropolitan Agency for Planning (CMAP)

www.goto2040.org/ideazone/forum.aspx?id=850

DNR State of Illinois Floodplain Management

[http://dnr.state.il.us/owr/resman/Downloads/IL FPM Wuick Guide.pdf](http://dnr.state.il.us/owr/resman/Downloads/IL_FPM_Wuick_Guide.pdf)

FEMA Map Service Center

www.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?

Illinois Association for Floodplain and Stormwater Management

www.illinoisfloods.org

Metropolitan Water Reclamation District of Greater Chicago (MWRD)

www.mwrdd.org/

Upper Des Plaines River Ecosystem Partnership

www.upperdesplainesriver.org/index.htm