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Luann G. Welmer, Clerk-Treasurer

SPECIAL
CITY COUNCIL MEETING
CITY HALL
TUESDAY, NOVEMBER 12, 2013
6:00 O'CLOCK P.M.

I. Meeting Called to Order

A. Roll Call

II. Discussion Items

A. Flood Risk Management Plan Presentation
Presenter: Siavash Beik, Christopher B. Burke Engineering, LLC

III. Other Business

A. Adjournment

City Hall • 123 Washington Street • Columbus, Indiana 47201 • lwelmer@columbus.in.gov
812-376-2510 • Fax: 812-376-2651

City of Columbus – Bartholomew County
Planning Department

123 Washington Street
Columbus, Indiana 47201
Phone: (812) 376-2550
Fax: (812) 376-2643

MEMORANDUM

TO: Columbus City Council Members

FROM: Jeff Bergman, AICP

DATE: October 5, 2013

RE: Special City Council Meeting – November 12, 2013
(Flood Risk Management Plan Implementation Discussion)

As you all are aware the City of Columbus, with the assistance of Christopher Burke Engineering, has completed a comprehensive Flood Risk Management Plan for the City. Please recall that this document is intended to address all aspects of the flooding threat to the City, including initial risk assessment, responding to an actual flood event, and mitigating the threat from future flooding. We continue to receive overwhelmingly positive feedback on this Plan, from both local residents and State floodplain management and emergency response experts. Earlier this year, in recognition of our Plan, the City was presented with the "Excellence in Floodplain Management Award" from the Indiana Association for Floodplain and Stormwater Management.

The special City Council meeting on November 12 will feature a presentation by Siavash Beik, who directed our Flood Risk Management Plan project for Christopher Burke Engineering. Siavash will provide some brief background on the plan itself, but will focus the majority of the presentation on the options and recommendations for implementing the Plan. The Plan includes a number of recommendations, ranging from City policy changes, to equipment purchases, to flood mitigation construction projects. While some of these recommendations can be readily accomplished, many have a significant cost and will require funding.

To aid in your preparation for the meeting I have attached to this memo a copy of the Plan's Chapter 6 – Summary and Conclusions. This 13-page chapter includes a quick-reference table of Plan recommendations and implementation steps, an overview of funding options, and (beginning on page 12) a listing of the top 8 recommended implementation actions.

The entire Flood Risk Management Plan and its companion Flood Response and Recovery Plan are available on the Planning Department's portion of the City website under the heading of "Flood Hazard Information" (in the menu on the left side of the page), or at: http://www.columbus.in.gov/planning/flood/.

Please feel free to contact me with any questions you may have.

CHAPTER 6 SUMMARY AND CONCLUSIONS

6.1 INTRODUCTION

This Chapter presents a brief summary of activities performed as part of this Flood Risk Management Plan and presents a consolidated list of recommendations made throughout the report along with implementation steps necessary to implement the recommendations.

6.2 SUMMARY

The City of Columbus is located at the confluence of several streams. As such, the rainfall on 2,000 square miles drains through the City and, based on available data, creates a 1% annual chance of flooding on over 36 square miles of land, or one third, of the Columbus planning jurisdiction. Because of this extent of potential flooding, this Plan was developed to provide the City with a road map to manage flood risks.

A respected planning model that guides communities through emergency planning is the "Emergency Life Cycle", which consists of "Respond", "Recover", "Mitigate" and "Prepare" phases. This process is grounded in the belief that emergency planning in a community can and should constantly improve. Protocols can be established such that after each emergency event, real-time data is captured and the data is analyzed to determine how to reduce risk for the next emergency.

The City of Columbus Flood Risk Management Plan is organized around the Respond-Recover-Mitigate-Prepare framework. Organized within this framework, the Plan describes current flood risks, identifies flood forecasting resources, presents a Flood Response and Evacuation Plan, establishes protocols for post flood damage assessment and data collection, notes information sources for educating the public about flood safety, and uses multiple-component screening criteria to screen over 350 Considered Solutions for mitigation of identified existing floodprone areas down to almost 100 Possible Solutions, then 52 Promising Solutions and finally several Most Promising Solutions. These Most Promising solutions include levees along select

reaches of Haw Creek, Clifty Creek, Flatrock River, and Sloan Branch. Floodproofing and/or voluntary buyouts of structures in other areas were also among the Most Promising Solutions. The report also provides a road map of action steps for all phases of the Respond-Recover-Mitigate-Prepare Emergency Life Cycle including road replacements for the creation of flood-free routes, enhancement of flood forecasting tools, updating of hydrologic and hydraulic computer modeling, policy revisions to address future condition flood potential, and updates of the Plan. Implementation of these recommended actions will lead to a reduction in flood risk and constantly improving preparedness for the next emergency. Potential funding sources are described in Section 6.3. All of the recommendations noted in this Plan are summarized in Section 6.4.

6.3 FUNDING CONSIDERATIONS

This section provides a brief discussion of the funding sources that may potentially be utilized to assist in implementation of the promising mitigation solutions as well as other recommendations within this plan. It is important to note that the implementation of the recommendations is expected to be undertaken over several years as interest and urgency is generated and funding is obtained. Many of the potential funding sources listed below are experiencing a reduction in available funds and, as a result, funding has become increasingly competitive in nature. Therefore, when applying for funds it is important to show a diverse group of partners and funding sources with the ability to utilize one funding source to either leverage additional funds or to complement those funds for the same project. It is also greatly beneficial to show several enhancements with one action or objective. For example, funding for the completion of floodplain or watershed studies is shown to result in several benefits such as a more detailed identification of the risk area, a greater awareness of the risk to appropriate landowners, and more accurate information to be used to prevent future losses within those areas.

The list of potential funding sources below is not meant to be exhaustive; funding availability and priorities may change as agency priorities and funding changes.

Federal:

FEMA Cooperating Technical Partner (CTP) – a main objective and benefit of the CTP Program is leveraging available funding and local data to get more updated flood hazard maps out of limited resources. National mapping needs and partnering opportunities determine FEMA funding priorities. Federal funding is managed by the FEMA Regional Offices and provided through a cooperative agreement.

FEMA Flood Mitigation Assistance (FMA) Grant Program – provide funding to communities with approved Flood Mitigation Plans to implement measures to reduce flood losses. This program requires a 25% non-Federal cost share.

FEMA Hazard Mitigation Grant Program (HMGP) – provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. Funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage. This program requires a 25% non-Federal cost share.

FEMA Pre-Disaster Mitigation Program (PDMP) – provides funds for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. This program requires a 25% non-Federal cost share.

FEMA Repetitive Flood Claims (RFC) – these funds can be used to reduce flood damages to insured properties that have had one or more claims to the National Flood Insurance Program (NFIP). This program requires a 25% non-Federal cost share.

FEMA Severe Repetitive Loss Program (SRL) – provides funding to reduce or eliminate the long-term risk of flood damage to sever repetitive loss structures insured under the NFIP. This program requires a 25% non-Federal cost share.

HUD Sustainable Communities Regional Planning (SCRP) Grants – supports metropolitan and multi-jurisdictional planning efforts to integrate housing, land use, economic and workforce development, transportation and infrastructure investment to meet the challenges of economic competitiveness and revitalization,

social equity and access to opportunity, energy use and climate change, and public health and environmental impact.

Land and Water Conservation Fund (LWCF) – provides matching grants to State and local governments for the acquisition and development of public outdoor recreation areas and facilities. Funds have been widely used for land acquisition, open space/green space development, and similar projects that can reduce the impacts of flooding. The fund is administered through the National Park Service.

NOAA-NWS – National Oceanic and Atmospheric Administration (NOAA)'s National Weather Service (NWS) has awarded integrated Automated Flood Warning System (AFWS) grants to reduce the loss of life, property damage, and disruption of commerce from floods. Automated Flood Warning Systems are in use in numerous American communities to alert officials about flood threats, and for environmental monitoring, water resource management, fire risk assessment as well as homeland security. Each year, NOAA awards AFWS grants through a nationally competitive process.

US Army Corps of Engineers (USACE) Section 22 – Planning assistance from the USACE to States for studies and projects related to flood damage reduction, water supply, water conservation, environmental restoration, water quality, hydropower, erosion, navigation, fish and wildlife, cultural resources, and environmental resources. The federal allotment to each state is $500,000 annually to fund projects that are generally $20,000 to $150,000 each, but could be more. The cost-share is 50% federal and 50% non-federal.

State:

Community Development Block Grant (CDBG) – funds provided from the US Department of Housing and Urban Development (HUD) to States for a wide range of unique community development activities including but not limited to property acquisition, public services, planning activities, and development projects. These projects may include flood-related projects such as stream studies, floodplain management, infrastructure, and ordinance development. Federal funds are administered through the Indiana Office of Community and Rural Affairs (OCRA) and Indiana Housing and Community Development Authority (HCDA).

IDNR Division of Water: Water Resource Development Funds – these funds can be accessed if specifically included in the IDNR biennial budget and approved by the Indiana Legislature

Indiana Heritage Trust (IHT) – The purpose of the IHT is to acquire state interests in real property that are examples of outstanding natural resources and habitats or provide areas for conservation, recreation, protection or restoration of native biological diversity within the state of Indiana. IHT could serve as a cash or in-kind match for areas slated for acquisition that also provide a benefit to the goals of the IHT.

Indiana Transportation Enhancement (TE) Program – funds for transportation-related activities that are designed to strengthen the cultural, aesthetic, and environmental aspects of the transportation system. Funds are available for the implementation of a variety of non-traditional projects with examples ranging from acquisition of scenic easements, landscaping and scenic beautification, to the mitigation of water pollution from highway runoff.

USGS Indiana – can provide limited matching funds for operation and maintenance of stream gages as well as provide gage equipment as available

Local:

County Commissioners/City Council – can provide local cost-share match (in-kind and/or cash) required by many State and Federal grant programs. General operating funds would provide the resources necessary to sustain the day-to-day activities and pay for all administrative and operating expenses.

County Emergency Management Agency – can provide local cost-share match (in-kind and/or cash) required by many State and Federal grant programs

Developers – provide funding necessary to complete studies of downstream areas to ensure that new development will not adversely impact the stream or floodplain

Local Land Trusts – may provide funding or technical assistance with acquired lands in environmentally sensitive areas where water quality and natural resource protection will be enhanced.

Local Watershed Groups – can provide local cost-share match (in-kind and/or cash) required by many State and Federal grant programs

Soil and Water Conservation Districts (SWCDs) – can provide local cost-share match (in-kind and/or cash) required by many State and Federal grant programs

Stormwater Utility – A stormwater utility can be formed and user fees established to provide funds for drainage maintenance, capital improvements, and implementation of stormwater management permit programs. Of all of the available funding sources, this is the most flexible option while still allowing for the use of additional funding when applicable.

Other:

esri Grants – sponsors programs that help organizations serve society and better the environment using Geographic Information System (GIS) technology. esri-sponsored grants offer free software, hardware, and/or training programs

6.4 RECOMMENDATIONS AND IMPLEMENTATION STEPS

Recommendations from each of the chapters are summarized here along with prioritized implementation steps and some additional recommendations based on the Plan as a whole. The recommendations/ implementation steps have been organized into 7 categories: **Data** (NWS, USGS, City, and hydraulic modeling data needs), **Equipment, Projects-Structures** (mitigation projects for protecting structures), **Projects-Roadways** (projects for creating flood-free transportation corridors through the City), **Policy**, **Updates** (listing of personnel and data that will need to be updated as information changes), and **General** (recommendations that apply to the Plan as a whole). When applicable, a reference has been added at the end of each recommendation to indicate the location in the Plan of additional details regarding the recommendation.

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL
PRIORITY	RECOMMENDATION and IMPLEMENTATION STEPS					REFERENCE
	NWS Forecast Tools					
1	Coordinate with the Indianapolis Office of the National Weather Service (NWS) to request the addition of river forecast points and to provide assistance in making helpful additions to the NWS rainfall and river forecasting network by funding additional rainfall observers					Section 2.7, Recomm. 2a, 2b, 2c
2	Solicit volunteers in 8 specific areas for participation in the CoCoRaHs network of rainfall data collection					Section 2.7, Recomm. 4a
3	Inform the Indianapolis NWS office of areas/roads flooded in a given event so they can add the information to their web site identifying flooded areas expected at noted USGS gage heights					Section 3.3 Recomm. e
	USGS Gages					
1	Maintain current funding of current USGS stream gages					Section 2.7 Recomm. 3a
2	Investigate additional local resources for the funding of USGS stream gages					Section 2.7, Recomm. 3d
3	Contact the USGS to discuss City sponsorship of the Clifty Creek at Columbus stream gage and its relocation upstream to US 31, the addition of 5 new gages, and receiving notification if significant regional gage stations are losing funding					Section 2.7, Recomm. 3b, 3c, 3e, 3f
4	Download USGS inundation mapping to City computers as they become available					Section 2.7, Recomm. 4b
5	Work with USGS to investigate the possibility of expanding the limited depth mapping done by CBBEL or other future mapping into a library of static maps correlated to stream gages or creating additional inundation mapping					Section 2.7, Recomm. 5f
	City Post-Flood Education					
1	Add information about permitting requirements and processes to the materials that will be distributed immediately after a flood event					Section 3.3, Recomm b
2	Develop task checklists that can be provided to owners of damaged structures after a flood and other resources to describe the City permit process for rebuilding					Section 3.3, Recomm c, Section 5.5, Recomm a
3	Develop form letters and post flood data collection record keeping procedures for use as outlined by the post flood damage assessment and data collection protocol					Section 3.3, Recomm d, e
	Data Management					
1	Determine an appropriate repository for the Plan GIS files					
2	Develop a process for tracking and triggering changes to GIS files, FREP mapping, FREP procedures, and other elements of the Plan					Section 2.7, Recomm. 4c
	Update or Expand Available Hydraulic/Hydrologic Modeling					

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION STEPS	REFERENCE
1	Pursue more detailed hydraulic modeling of the interaction of Opossum Creek, Denios Creek, & Airport Tributary to assess potential impacts of development in the area & regulations that may be needed to prevent adverse impacts • Obtain needed engineering service • Add new or revised flood elevation data to the regulatory processes used for planning and building permits • Revise mapping, etc in the FREP or Plan if needed based on the model findings	Section 5.5 Recomm. B, Section 2.7, Recomm 1d, 5d
2	Pursue determination of flood elevations along the streams in the planning jurisdiction that do not yet have Base Flood Elevations determined • Prioritize stream reaches for analysis • Obtain needed engineering service • Add new or revised flood elevation data to the regulatory processes used for planning and building permits • Revise mapping, etc in the FREP or Plan if needed based on the model findings	Section 2.7 Recomm. 1b, Section 2.7, Recomm 1d, 5d
3	Update/correct the existing FIS modeling according to the priorities outlined in the Plan • Prioritize stream reaches for analysis • Obtain needed engineering services • Add new or revised flood elevation data to the regulatory processes used for planning and building permits • Revise mapping, etc in the FREP or Plan if needed based on the modeling results	Section 2.7 Recomm. 1a, Section 2.7, Recomm 1d, 5d
4	Pursue adding more detail data to the Haw Creek model in order to better define flood risks in the Sycamore Bend/Arrowood floodprone area	Section 4.10 Recomm. 5a

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
1	The Fire Department should obtain funding, purchase a boat, and compete the necessary training for water rescues	Section 2.7, Recomm. 5a
2	Investigate, select, and implement the use of digital resources such as handheld GPS data loggers or laptops for use in automatic updates to an Excel-based tracking system to replace paper maps and forms used in post flood damage assessments	Section 2.7, Recomm. 5e
3	The Street Department should supplement the County Highway sand bag supply with an adequate supply at the City garage and consider purchasing a sand bag machine and sand to expedite filling bags as part of the flood fight effort	Section 2.7, Recomm. 5g

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
	Projects - Levee	
1	Prioritize the following identified most promising solutions based on expected available funding and noted costs and benefits • proposed levee/floodwall along Clifty Creek to protect the Wehmeier subdivision ($1 M) • proposed levee/floodwall along Flatrock River to protect the Noblitt Falls subdivision and the Washington Street area between 12th & 18th Streets ($3.0 M & $1.5 M) • proposed levee/floodwalls along portions of Haw Creek to protect the Northbrook/Candlelight, Windsor Place/ Hilcrest, Everoad Park West/ Eastbrook, Everoad Park East, Midway, and 17th/ Keller areas, substituting floodproofing and voluntary buyouts for areas that must remain accessible to flood waters to prevent adverse impacts (Total of all segments = $ 11.7 M) • proposed levee/floodwall along Sloan branch to protect a portion of the Madison/ Grant/ Flintwood area ($350 K)	Section 4.10 Recomm. 1
2	For each selected solution: • Obtain necessary funding • Complete preliminary engineering report • Review benefits compared to potential cost of construction, permitting, and mitigation to determine whether the option should be pursued • Add a factor of safety of 1.0 foot to the 100-year flood elevation and 2.0 feet to the 500-year flood elevation as the basis for design of mitigation projects (above and beyond normal freeboard considerations) to account for increase in flood elevation due to expected future loss of floodplain storage along stream corridors in the upstream watershed unless floodplain storage compensation requirements are enacted for the entire watershed upstream of the project • Complete design and construction documents • Construct the project and maintain as directed in the operation and maintenance documents • Pursue revision of the FIRM to reflect levee if constructed and maintained per FEMA requirements	Section 4.10 Recomm 3b
	Projects - Floodproofing/Voluntary Buyouts	
1	Investigate funding options	
2	Select and prioritize areas from the Most Promising Solutions list for which floodproofing or voluntary buyout assistance will be provided by the City based on the Plan findings for • Front Door East and West (Driftwood River), • Mariah/ Reo Street, 10th & Central, Pleasant Grove (Haw Creek), • Riverside Drive North (Flatrock River), and • Eastridge Manor (Sloan Branch)	Section 4.10 Recomm. 1
3	Complete a prioritization plan for a voluntary buyout and/or floodproofing program to determine what type of mitigation action is the most appropriate for a given building (Note that the prioritization plan, the decision to floodproof versus buyout, and floodproofing design should be based on flood elevations with the added factor of safety noted under Recommendation 3b in Section 4.10 unless floodplain storage compensation requirements are enacted for the entire watershed upstream of the project)	N/A

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
4	Create outreach materials (such as floodproofing program guide and application form, voluntary buyout program guide and application form, etc) and conduct meetings or use other methods to inform homeowners in targeted areas of the potential options and requirements	N/A
5	Assemble supporting materials for funding grant application including elevations, past flood-related losses, acquisition and/or floodproofing costs	N/A
6	Secure mitigation funding from FEMA to acquire and/or floodproof buildings as listed in the prioritization plan	N/A
7	Use other identified funding sources to acquire and/or floodproof prioritized buildings	N/A
	Channel Maintenance	
1	Establish a maintenance program of checking for and removing debris in the stream channels (especially at bridges) before it accumulates to the point of increasing flood stages	Section 4.10 Recomm. 4a

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
1	Pursue road/bridge projects that will provide for flood-free access along the identified critical transportation routes US 31, SR 11, and SR 46. This includes: • US 31 crossing of Flatrock River, • US 31 and SR 46/ State Street crossings/approaches of Haw Creek, • SR 11 relocated between CR 200 S and SR 46 per City Thoroughfare Plan, and • SR 46 from the East Fork White River bridge through the I-65 interchange	Section 4.10 Recomm. 2a
2	Add a factor of safety of 1.0 foot to the 100-year flood elevation and 2.0 feet to the 500-year flood elevation as the basis for design of bridge/road replacement design (above and beyond normal freeboard considerations) to account for increase in flood elevation due to expected future loss of floodplain storage along stream corridors in the upstream watershed unless floodplain storage compensation requirements are enacted for the entire watershed upstream of the project	Section 4.10 Recomm 3b
3	Pursue creation of additional flood-free routes as opportunities arise and according to the priorities listed in the Plan and in conjunction with the City Thoroughfare Plan	Section 4.10, Recomm. 2b
4	Whenever a road/bridge project is considered, maximize the opportunity to create flood-free access or a reduction in flood elevations using the priorities listed in this Plan	Section 4.10, Recomm. 2b
5	Develop a system for tracking when stream crossings/approaches are replaced or raised	N/A
6	Provide data on changes to stream crossings/approaches to designated party with decision making responsibility regarding the need to revise affected Plan components	Section 2.7, Reomm. 4e
7	Revise modeling and/or depth mapping for the Plan and FREP as appropriate	Section 2.7, Reomm. 5d

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
1	Update and reorganize the Ordinance and Design Manual, using outside assistance if necessary, to improve effectiveness of the document and include revisions to require peak flow control measures, specify Curve numbers for post-development conditions, provide Unit Maximum Allowable Release Rates, adopt the SCS Type 2, 24-hour rainfall distribution for post-development flow hydrograph generation, require minimum pond emergency spillway sizes, adopt Channel Protection Volume retention, and include standards for Low Impact Design and green infrastructures	Section 4.10 Recomm. 3a
2	Update the applicable ordinances and policy statements throughout the City to add a factor of safety of 1.0 foot for the 100-year flood elevation and 2.0 feet for the 500-year elevation, above and beyond the normally required freeboard, anytime the regulatory flood elevation is used (such as for determining the flood protection grade for new structures to be placed in floodplain, determining bridge low chords or deck elevation, determining flood-free elevations, floodproofing elevations, or mitigation efforts such as levees) to account for the potential increases in flood elevations and floodplain extent as floodplain storage is reduced unless floodplain storage compensation requirements are enacted for the entire watershed upstream of any proposed project or building.	Section 4.10 Recomm 3b
3	Coordinate with other jurisdictions in the watersheds of Driftwood River, Flatrock River, Haw Creek, and Clifty Creek to establish regulations that will reduce the potential impacts of those jurisdictional policies on runoff through Columbus	Section 5.5 Recomm. c

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL

PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS	REFERENCE
1	Revisit the calculation of Community Rating System (CRS) points to see if any of the actions taken as a result of this Plan can change the community's classification and further reduce the flood insurance premiums for City property owners	N/A
2	As additional or revised hydraulic modeling is generated, consider generating new depth mapping for use in the Flood Response and Evacuation Plan	Section 2.7 Recomm. 1c
3	Develop a system for identifying changes in the data used in the Plan and any associated information in the FREP such as: FIS hydraulic models and associated depth mapping, completed mitigation projects, raised approaches or larger bridge openings impacting flood-free transport, and critical facilities data	Section 2.7, Recomm. 4d, 4e
4	Procure the needed services to make the Plan revisions when needed	N/A
5	Update the responsible parties for Plan components as changes occur	N/A
6	When Plan updates are completed, revisit the calculation of Community Rating System (CRS) points to determine if a change in classification is warranted and submit the necessary documentation for a change if warranted	N/A
7	The FREP Coordinator (EMA Director) should keep abreast of NWS and USGS flood forecast tools as they evolve	Section 2.7, Recomm. 5b
8	The Planning Department Floodplain Administrator should make sure the FREP is tested and updated to reflect changes in city permit processes or regulations or as use of the FREP and associated protocols shows the need for revisions/additions	Section 2.7, Recomm. 5c, Section 3.3 Recomm. A

DATA	EQUIPMENT	PROJECTS - STRUCTURES	PROJECTS - ROADWAYS	POLICY	UPDATES	GENERAL
PRIORITY	RECOMMENDATION and IMPLEMENTATION ITEMS					REFERENCE
1	Identify and assign the appropriate positions within the City that will be responsible for carrying out each of the Plan recommendations					N/A
2	Maintain coordination with the selected responsible positions within the following City Departments and other agencies regarding at least the items noted in parenthesis • USGS (stream gage network, inundation mapping) • NWS (forecast network data and tools) • EMA (FREP) • Funding sources • Indiana Department of Natural Resources – Division of Water (FIS study updates/additions) • FREP participants (revisions to the FREP) Building Department (code requirements for rebuilding after a flood) • Floodplain Administrator • Planning Department • Street Department (changes in flood-free routes or flood elevations as road elevations or bridge openings are changed) • Indiana Department of Transportation (changes in flood-free routes or flood elevations as road elevations or bridge openings are changed) • County Highway (changes in flood-free routes or flood elevations as road elevations or bridge openings are changed)					N/A

Recommendations above are listed in order of priority within each category or subcategory. Implementation of these recommendations can proceed as outlined and as selected priorities and available funding dictate. While all of the plan recommendations noted above in various categories should be considered for implementation, the following is a list of the overall top recommended actions to be taken by the City in the order listed:

1. Identify responsible party within the City for implementing each of the Plan recommendations.
2. Take immediate steps to prevent escalation of the existing extent of flooding problems and/or creation of additional flooding problems by addressing policy recommendations.
3. Identify appropriate funding source(s) for each recommendation using the funding considerations listed in Section 6.3. (Creation of a Stormwater Utility appears to be the most versatile and reliable funding source to implement or cost-share the implementation of this Plan's recommendations.)
4. Take the necessary steps to ensure preservation of current forecast tools (NWS tools, USGS gages).

5. Start the process of updating/expanding hydrologic and hydraulic studies to better identify risks and needs.
6. Prioritize buyout areas and work with Indiana Department of Homeland Security to secure available funding.
7. Prioritize levee projects and fund the Preliminary Engineering for the selected projects to evaluate the feasibility at each site. Proceed with funding, design, and construction of levee segments found feasible and preferable as compared to other options.
8. Set up systems for tracking Plan changes and update needs.