



CRS Floodplain Management Plan

Annual Report

2016

This report is a summary of the Floodplain Management Committee review of activities outlined in Step 8, of the Grand Prairie Floodplain Management Plan whose committee selected and specified those activities relative to the City's resources, hazards, and risk. The City of Grand Prairie strives for a balanced program including preventative activities both to keep its flood problems from getting worse, and also to protect future development from effects of flooding and other natural hazards.

1. Preventative

The Stormwater Department shall continue to evaluate the current NFIP Floodplain Ordinance and higher regulatory standards for development in flood hazard areas as it pertains to storm water management and future development.

- **Action:** The Stormwater Department evaluates proposed project compliance on a project-by-project basis according to current regulations that include higher regulatory standards in high risk or flood-prone areas.
- **Summary of Implementation:** The Stormwater Department participates in the Development Review Committee (DRC). The DRC reviews all proposed developments that require a special use permit, a zoning change, platting, etc. The Stormwater Department reviews all engineering plans submitted to the City for floodplain compliance. The Stormwater Department reviews all building permit applications for new buildings within the City.

The Stormwater Department oversees the floodplain permitting process. From January 1, 2016 through August 26, 2016, 55 floodplain development permits (FDP) and 2 Corridor Development Certificate (CDC) permits were issued. FEMA approved 5 Letters of Map Revision (LOMR).

No updates have been made to the Drainage Design Manual (DDM) since January 1, 2016. However, the most current DDM was uploaded to the City's website on January 14, 2016. The DDM will be updated in the next month or so to bring some of the technical areas into compliance with the current/new regulations for stormwater design practices.

No changes have been made to the City's Stormwater Management Program (SWMP), which is valid through 2018. The Best Management Practices (BMPs) within the SWMP were updated in 2016.

The Stormwater Utility Fee (SWU) is requesting approximately 10% increase for FY 2017 and a 5% increase per year for the following four years. This request is being considered as part of the FY 2017 budget.

- **Budget:** Operating funds

2. Property Protection

The City will continue to work with the CRS Program for Public Information Committee and Floodplain Management Committee to review outreach projects to educate the public, area businesses, and all citizens about flood risk.

City staff will continue to evaluate and recommend improvements, as needed, to the City-Wide Drainage Master Plan. The Stormwater Department will work with other City departments to fund projects and implement improvements.

The City will also comply with CRS program recertification to maintain, or improve, the existing Class 5 rating.

- **Action:** The Stormwater Department works with other City departments to implement CRS outreach programs. The Stormwater Department works with other City departments to make drainage system improvements, including system maintenance, planning, elimination of structural flooding, and reduction of stormwater pollutants carried by stormwater runoff into creeks and streams.
- **Summary of Implementation:** The Stormwater Department works with Public Works, Building Inspections, Planning and Development, Office of Emergency Management, Environmental Services, Communications & Marketing, Library, Engineering, Transportation, and Information Technology to implement the City's CRS program. Other departments may also be involved in CRS activities depending on the specific need.

The Stormwater Department reviews building permit applications for new buildings within the City. Those proposed improvements that are within 200 feet of the floodplain are required to obtain the appropriate floodplain permits prior to receiving building permits.

The City has one staff member who reviews all of the Stormwater Pollution Prevention Plans for construction projects as part of the City's Municipal Separate Storm Sewer System (MS4) program.

Mapping Activity Statement No. 2 (FEMA CTP Funding) is on track to be completed in September 2016.

The following CWDMPs were approved by City Council in August 2016: Dalworth Creek, Gopher Branch and Turner Branch, and Bear Creek and Dry Creek. These reports will be loaded onto the City's website.

In April 2016, City Council adopted Resolution 4812-2016 establishing a voluntary buyout program for houses impacted by creek erosion after specific criteria have been satisfied.

City crews continue to maintain and repair the open drainage system, including the recent Daisy Court erosion repair.

The Dalworth Creek Concrete Channel (Keith Heights) project is in progress. This project will repair failed weep holes. The design is complete. The survey was just submitted to the City. The actual repairs will begin later this year.

The following stormwater-related Capital Improvement Projects (CIP) are as follows:

- Marshall and Robinson @ Cottonwood Crk (in design)
- East Main Street at Railroad Bridge (under construction)
- Philips Storm Drain (in design)
- Great Southwest Parkway @ Prairie Creek (in design)
- Seeton Rd (Grand Peninsula to Day Miar) (in design)
- 20th St/Walnut Drainage Erosion (in design)

- Great Southwest Pkwy – I-20 to Lake Ridge (complete)
- Indian Hills Addition Improvements (being studied)
- Capetown – Denmark to Sweden (complete)
- Hot Spot Studies: Preliminary Neighborhood Flooding Study (in progress)
- Indian Hills Flooding Study (in progress)

Following the May/June 2015 flood events, the City began pursuing the FEMA Public Assistance (PA) Grant for three stormwater-related projects: Johnson Creek channel floor repair, Landfill Levee repair, and concrete channel repair southeast of Arkansas and Forum. FEMA is preparing the Project Worksheets for each of these projects. These projects are moving forward through the FEMA process.

The City is in the process of obtaining updated LiDAR (1 foot contour intervals). The LiDAR should be available soon.

- **Budget:** Operating Budget, Stormwater Utility fees

3. Natural Resource Protection

The City of Grand Prairie will continue to work with the University of North Texas to study and construct a wetland on property located between the City's landfill and the Trinity River. Mitigation efforts may include using standing vegetation and seed bank community structures in development of a natural and compensatory wetland.

- **Action:** No other activities are required to support natural resource protection at this time.
- **Summary of Implementation:** The planting is in a maintenance status now. The project planted some dam slope mixture in 2016. The third basin has been excavated.
- **Budget:** Staff time (Grants, Operating fees)

4. Emergency Services

Implement ongoing public education on warning systems and the actions that should be taken to prepare for hazards and disasters. Disaster related public education materials are available through the City's Public Information Office. Public education materials relating to emergency management are available from www.fema.gov, www.redcross.org, and www.ready.gov.

- **Action:** The City will continue to monitor and update emergency services as needed. Future work will include website refinements, software updates, and discharge versus stage rating curve development. The City recently upgraded its platform for monitoring its rain and stream gauges.
- **Summary of Implementation:**

Editorial updates have been made to portions of the Comprehensive Emergency Management Plan. No major changes have been made. Annexes have been added as specific equipment or services have been added.

The City is currently updating its Hazard Mitigation Action Plan (HMAP). The HMAP should be ready to submit to FEMA in December 2016.

The City recently added a third low-water flasher system, Riverside, to its flood warning and monitoring system. In May 2016, City staff developed the Multi-Year Program for Rain/Stream Gauge System that serves as a guide to expanding the current flood warning system.

Pending the FY 2017 budget approval, the Stormwater Department is interested in developing a flood forecasting system to provide more specific lead time for emergency responders to prepare for flood events at specific locations and to better answer the question, “If it rains X more inches, how high will the water get?”

The City plans to investigate potential software options for the existing rain/stream gauge system.

The City continues to work with UTA and the CASA Radar program to support the development of additional flood-warning tools.

- **Budget:** Operating Budget

5. Structural Projects

Based on discussions with the Floodplain Management Committee, the City continues to seek improvements to older areas of the City that are low-lying and areas of flat terrain that experience poor drainage and minor flooding. Areas include Sandra Lane and Beltline at Springdale Street, and Willow Bend Mobile Home Park and Fox Hollow Apartments. Another structural project for consideration is adding gates to low-water crossings.

- **Action:** Drainage issues have been minimized through additional flood control measures or repairs and improvements to existing flood control structures. City staff will continue to review alternatives to drainage issues in low-lying areas of the City. City staff will pursue possible FEMA grants and other funding sources in order to buyout flood-prone structures and install electronic gates at low-water crossings.
- **Summary of Implementation:** The Drainage Design Manual has not been updated this year. However, the manual will be updated in the next month or so to account for some changes in the technical approaches to some design applications.

City staff continues to respond to and investigate drainage, erosion and flooding calls.

Clearing and Grubbing/Earthwork permits are required prior to any dirt being moved on project sites.

The City submitted three Hazard Mitigation Grant Program (HMGP) grant applications in December 2015: flood gates/arms along Carrier Parkway, actuators for the gates at the Dorchester Levee and a permanent generator at the Dorchester Levee. The flood gates and the actuators have been forwarded to FEMA Headquarters for final approval. The City resubmitted the generator under another HMGP grant in July 2016.

The City has developed a multi-year plan to expand the rain/stream gauge system to include additional low water flashers and automated gates/arms over the next several years.

The City began a study of Indian Hills neighborhood in 2016 to look at potentially feasible options to reduce the flooding experienced during smaller storm events. The study is currently on hold awaiting the new LiDAR information.

The neighborhood hot spot study is investigating why specific areas flooded in May-June 2015. The results of this preliminary study will identify the potentially feasible solutions to reduce the flooding at these locations. This study is also on hold awaiting the new LiDAR information.

- **Budget:** Operating Budget, CIP funding, FEMA funding

6. Public Information and Flood Information Assistance

The Public Information Office provides public information on disaster related materials; the Stormwater Department provides comprehensive flood information to the public. The Emergency Management Department provides disaster preparedness information to residents. The Public Works Department guides residents on protecting the City's waterways from household pollutants and contaminated runoff.

- **Action:** Twenty-three community outreach activities have been identified for Year 2015-2016 under the CRS recertification.
- **Summary of Implementation:** The PPI plan calls for 23, not 24 outreach activities. The CRS Public Protection Plan Annual Report provides a detailed update on each of these activities.
- **Budget:** Operating Budget, Volunteer time/labor by the Program for Public Information and Floodplain Management Committees

Table 3 Action Items, Goals

Action Item 1: Reduce Flood Losses and Increase Policy Count

Total flood insurance policy count increased from 276 in 2015 to 295 as of June 30, 2016. The total insurance policy counts provided by FEMA did not match. When broken down by flood zone location, the count was 288. When broken down by type of policy (SF, 2-4 Family, on-residential, etc.), the count was 295. FEMA was unable to explain the difference in the totals they provided.

Action Item 2: Attend NFIP/CRS Users Group Meetings (City staff)

City staff attends the CRS Users Group meetings held at NCTCOG every other month.

Action Item 3: Establish City Disaster Response Team

The Office of Emergency Management has established the disaster response teams and activates them when needed.

Action Item 4: Ensure Flood Insurance Rate Maps (FIRMs) are Updated

In 2016, FEMA issued preliminary maps for some map panels in Dallas and Tarrant Counties of Grand Prairie. These maps have been uploaded into GIS on Stephanie's computer. The preliminary maps are considered along with the effective maps as property owners seek to develop the impacted properties.

Action Item 5: Acquire, Elevate, Relocate Structures in Floodprone Areas

In 2016, no structures were acquired, elevated or relocated by the City for flood-related reasons.

Two property owners applied for the Voluntary Buyout Program due to creek erosion in 2016. Only one of those properties met the criteria for consideration. That property is moving forward with the additional geotechnical investigations.

Action Item 6: Improve CRS Rating

As of September 26, 2016, FEMA had not informed the City of its CRS rating from the CRS review that began in November 2015.

Action Item 7: Design, Construct, Maintain Drainage Improvement Projects

Capital Improvements Projects (CIPs) are included in the City's annual budget and continue to move forward. The City's Drainage Crew works to relieve drainage and erosion issues reported to the City on a complaint-based approach.