



# Halff Associates

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11/02/01

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**AVO 19837**  
**September 4, 2001**

Mr. Gordon Scruggs  
Floodplain Administrator  
Engineering Department  
City of Grand Prairie  
P. O. Box 534045  
Grand Prairie, Texas 75053-4045

**RE: City of Grand Prairie, Texas, Flood Mitigation Plan**

Dear Mr. Scruggs:

Halff Associates, Inc., is pleased to present the Flood Mitigation Plan to the City of Grand Prairie. This plan is an attempt to improve mitigation activities within the hazard areas in the City's jurisdiction. I would personally like to thank the Engineering Department and the hard work of the Flood Mitigation Plan Advisory Committee. Their efforts and input into the plan will prove to be beneficial in mitigation accomplishments for the City of Grand Prairie.

If you have any questions, or need further assistance, please feel free to contact me at (817) 847-1422.

Sincerely,  
**HALFF ASSOCIATES, INC.**

Diane L. Calhoun, CFM  
Program Manager  
Floodplain Management/Flood Insurance

FORT WORTH • DALLAS • HOUSTON • McALLEN

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**CITY OF GRAND PRAIRIE**  
**FLOOD MITIGATION PLAN**

**PREPARED BY THE**  
**CITY OF GRAND PRAIRIE**  
**FLOOD MITIGATION PLAN ADVISORY COMMITTEE**

**Assisted**  
**by**  
**HALFF ASSOCIATES, INC.**

**September 4, 2001**

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# FLOOD MITIGATION PLAN

## Introduction

Grand Prairie lies on the Dallas-Tarrant County Lines in North Central Texas. The City is bounded on the South by unincorporated areas of Dallas and Tarrant Counties and the City of Venus, on the North by the Cities of Irving and Fort Worth, on the West by Arlington and Mansfield, and on the East by Dallas, Cedar Hill, and Midlothian. The City of Grand Prairie is approximately 5 miles wide and 25 miles long with an estimated population of 130,000 per North Central Texas Council of Government (NCTCOG).

Based on Federal Emergency Management Agency (FEMA) Repetitive Loss Records the City of Grand Prairie had 28 Buildings with 303 losses with a total of \$6,379,477 in flood insurance claims paid since 1978. The City has submitted FEMA Form AW-501 for correction because the City of Grand Prairie's current records indicated that the Repetitive Loss total is now 13. The City of Grand Prairie is classified as a Category C repetitive loss community, and current holds a Classification of 8 in the Community Rating System (CRS) Program. The City of Grand Prairie has 196 Flood Insurance Policies in Force, with \$30,951,300 in coverage.

This plan addresses all areas within the City of Grand Prairie and the extra territorial jurisdiction areas in Dallas, Ellis, Johnson, and Tarrant Counties. Reference documents for this plan include:

- City of Grand Prairie (County Wide) Flood Insurance Study and FIRMS
- City of Grand Prairie Floodplain Information – Cottonwood Creek Master Plan
- City of Grand Prairie Floodplain Information – Johnson Creek
- City of Grand Prairie Floodplain Information – Fish Creek Master Plan
- City of Grand Prairie Dalworth Creek Master Drainage Study
- City of Grand Prairie Capital Improvement Program (CIP) 2002 - 2008
- City of Grand Prairie Annual Repetitive Loss Plan
- City of Grand Prairie Unified Development Code Articles 14, Drainage, and Article 15, Floodplain Management
- Corridor Development Certificate Manual for Trinity River Corridor

## History of Grand Prairie's Flooding Problem

As described in the October 1, 1981, City of Grand Prairie Flood Insurance Study, most of the flood producing storms occur in the spring and fall. Most of the higher floods that have occurred in the general geographical region have resulted from prolonged or successive storms that project heavy rainfall during this period; however, severe flooding can be produced by intense local thunderstorms at any time.

The flood of May 1908 produced water-surface elevations 5 feet above the flood of May 1957 on the West Fork of the Trinity River; however, discharge estimates for this flood are not available. The flood of May 1957 produced a discharge of 59,200 cfs at the Grand Prairie gage and would have a recurrence interval of about once in 50 years based on present conditions. The flood of May 1949 produced a discharge of 62,000 cfs; however, this discharge measurement was affected by major levee breaks. Other large floods are known to have occurred in April 1942 and March 1945.

Large floods are known to have occurred on Johnson Creek and Cottonwood Creek in 1949, 1957, 1965, 1977, and 1979. Most of the damage caused by these floods occurred on Johnson Creek. The flood of March 1977 on Johnson Creek flooded above 70 homes and had an estimated recurrence interval of about once in 20 years. Major floods are known to have occurred on Mountain Creek in 1922, 1928, 1942, 1969 and 1976.

There are no documented damage estimates for these floods as they largely occurred during periods of little development within the region. More recent events, however, have resulted in some property damage and the loss of three lives. According to City staff, in May of 1989, three people drowned as a result of the creek overtopping roadways at these separate locations: West Freeway, North Great Southwest Parkway and Marshall Drive. A police report indicated that a man was killed when his vehicle went into the creek at West Freeway and was carried downstream to 100 yards east of South Carrier Parkway. No reports were available for the other two deaths. In addition, in June of 1993, over two feet of flooding was reported in a residence at 1134 S.E. 2<sup>nd</sup> Street. There is no record of the magnitude or exceedance probability (i.e., return frequency) of these storms.

City records indicate that the flooding source in the Dalworth Creek area, in the May Lane Storm Drain, just south of January Lane, received approximately 4.9 inches of rainfall within a 1 hour period in May 1995. A storm of this intensity is slightly greater than a 100-year frequency event. During the May 1995 flood, approximately five (5) residences on May Lane reported flooding in the homes and/or property.

The City of Grand Prairie has a limited history of flood problems and damages within the Fish Creek drainage basin. Flood damages are caused primarily by inadequate capacities of the existing channels and bridges. Existing development, subject to overbank flooding, is primarily residential but also includes some commercial and light industrial property. An estimated 30 buildings are within the limits of the 100-year floodplain, which covers about 1,040 acres.

Because of the previously undeveloped and rural nature of Fish Creek, only a limited amount of specific data is available regarding past floods. Several citizen complaints have been made regarding flooding within the watershed. Graphical representation of potential flooding areas along the Fisk Creek are found on Sheets F-1 to F-14 in the Fish Creek, North Fork of Fish Creek, Kirby Creek, Drainage Master Plan. These sheets show the delineation of the 100-year floodplain assuming existing channel and bridge conditions and future flood discharges, based on a fully urbanized watershed. The

delineation includes 19 buildings within its boundaries. Other potential flooding problems exist at the Woodcrest Country Club Golf Course along the lower reaches of Fish Creek. During a field inspection of the area, it was found that the golf cart bridges along Fish Creek were nearly or completely blocked with debris, thus limiting the flood carrying capacity of the stream.

In April to June 1989, heavy rains caused severe flooding in much of North Texas including the City of Grand Prairie. Carrier Parkway, Beltline Road, and Matthew Road were all overtopped during this flood. Additional information on the 1989 and 1990 floods in North Texas and in the Dallas-Fort Worth area may be obtained from the U.S. Army Corps of Engineers or the U.S. Geological Survey.

Rainfall for the winter of 1998 and 1999 was only slightly above average. There were some incidents of localized flooding due to short, intense storms. Residential flooding has occurred due to poor local drainage. As flooding and drainage complaints continued future project prioritization began. Investigation of previous flooding, especially 1998 – 1999, primarily related to improper lot grading by homebuilders in new subdivisions. To circumvent this problem, the city implemented a program that requires developers to certify that lot grading has been completed consistent with the lot grading and drainage plan for the subdivision prepared by a licensed engineer and approved by the city. This certification must be made before the home can be occupied. Investigation also proved that along with the drainage, and poor grading practices, flooding is occurring due to erosion. The result of these investigations, have been numerous multi-objective projects that provided flood protection and maximize the use of public land. Many floodprone structures have been removed from the floodplain by projects such as the Dorechester Levees, Johnson Creek Channelization, and the Dry Branch Channel Improvements. . Therefore reducing the repetitive loss count from 40 to 13.

The City of Grand Prairie enrolled in the Emergency Phase of the National Flood Insurance Program (NFIP), on October 1, 1971, and entered the Regular Phase of the NFIP Program on July 6, 1973. The City of Grand Prairie's first map published by FEMA was the Flood Insurance Rate Map (FIRM), dated July 6, 1973. FEMA has published the countywide Flood Insurance Rate Map for Dallas County, and Incorporated Areas including the entire City of Grand Prairie. The Dallas County FIRM was revised on August 23, 2001, and has been adopted by the City.

The City of Grand Prairie's City Council, established a storm water utility fee in October 1993. These fees are for maintenance, and to fund drainage projects. These fees were established to help resolve storm water related problems, construct drainage systems, and increase stream monitoring, permitting and pollution control. The fees generate approximately \$1.4 Million per year and the funds are spent to eliminate residential flooding, to eliminate or reduce non-residential flooding, to reduce street flooding, and to maintain existing drainage structures in the City. The seven-year plan 2002-2008 concentrates on the following areas:

Mountain Creek Bypass – Citizens Residing in Floodplain: Approx 200  
May Lane Storm Drainage – Flooding House: 3, Other: 2  
Carrier & Conover Storm Drain – Flooding House: 17, Other: 1  
Alsbaugh, Prairie, Matthew – Flooding House: 7, Other: 12  
Joe Pool Area Master Plan – Plan for developing area  
Robinson & Marshall Storm Drain – Flooding House: 5, Other: 0  
Cottonwood Storm Drainage Master Plan – Flooding House: 112  
Keith Heights – Dalworth Creek – Flooding House: 18 (total 26 in floodplain),  
Other: 6  
Holiday Hills Storm Drainage - Flooding House: 1, Other: 6

From 1990 to 2001 the City funded \$20.4 Million in capital drainage improvements and \$650,000 in maintenance of storm drains. These projects have reduced the risk of flooding on over 300 of the 650 flood prone structures located in Grand Prairie, including most of the repetitive loss structures. The majority of these projects were in areas where frequent flooding and/or high losses have occurred. The City of Grand Prairie is committed to regulating development in floodplains, and reducing the risk of flooding of existing structures and future development.



## 1. How This Plan Was Prepared (CRS Activity 511.a)

### 1.1 Organize to Prepare the Plan

On May 1, 2001, the City Council approved procedures for preparation of the Flood Mitigation Plan. On May 15, 2001, the City of Grand Prairie City Council approved and recognized the six citizens that participate in the Flood Mitigation Plan Advisory Committee. Copy of Minutes of Council Meetings are maintained in the City of Grand Prairie CRS Files.

On June 12, 2001, the City of Grand Prairie Flood Mitigation Plan Committee held its organizational meeting. The committee is composed of representatives from various City Departments dealing with planning, code enforcement, emergency operations, public works & engineering, parks and recreation, and environmental services. Committee members representing the public include, repetitive loss homeowner, flood prone business, lender, real estate, watershed councils, and concerned citizens. The Committee is assigned to oversee the activities of a consultant hired by the City to prepare the Plan. Committee members include:

Kathe Houke	Planning Department – <i>Planner in Charge</i>
Jim Johnson	Parks and Recreation Department
Gordon Scruggs	Public Works Department – <i>Committee Chair</i>
Rachel Stark	Environmental Services Depart – <i>Committee Vice-Chair</i>
Scott Mischnick	Representative of Homeowner Organization
Robert Nelson	Local Watershed Councils
Diane Sarabia	River Watcher/Adopt-a-Stream/Similar Organizations
Raye Shaw	Home Owner of Repetitive Loss Structure
Bill Sluder	Representative of Flood prone Business
Marshall Sutton	Land Developer/Real Estate Agents/Lenders

The Committee Meetings are conducted by the Chair, Gordon Scruggs, and direction provided by the Planner-in-Charge, Kathe Houke.

The Flood Mitigation Plan Committee, under the director of the Planner-in-Charge, is comprised of City employees from the Engineering and Public Works Department, Gordon Scruggs; Planning Department, Kathe Houke; Parks and Recreation Department, Jim Johnson; and Environmental Services Department, Rachel Stark. Building and Code Enforcement, including land use planning/zoning is within the Planning Department.

**1.2. Flood Mitigation Plan Schedule, Involve the Public, and Coordinate with Other Agencies (CRS Activity 511.a, 511.b, and 511.c)**

**The overall schedule of plan activities for the development, implementation, evaluation and adoption of the City of Grand Prairie Flood Mitigation Plan following CRS Activity 511.a through 511.j are as follows:**

June 10, 2001 – Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to review the schedule of activities for the Flood Mitigation Plan preparation. Schedule for upcoming meeting was adopted. Schedule is as follows:

Planning Meeting – Assess Hazard	June 12, 2001
Planning Meeting – Assess Program	June 26, 2001
Planning Meeting – Set Goals	July 10, 2001
Planning Meeting – Possible Activities	July 24, 2001
Draft Plan to City	August 6, 2001
Obtain Questionnaire Information	August 6, 2001
Planning Meeting – Review Questionnaire Info and Discuss Flood Map; Possible Activities; & Draft Plan for Public Meeting	August 7, 2001
Public Meeting	August 20, 2001
Planning Meeting – Adopt Plan	August 28, 2001
City Council Meeting	September 4 + - 18, 2001

Minutes from each Meeting are maintained in the City of Grand Prairie CRS Files.

June 12, 2001 - Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to review and assess the hazards.

June 26, 2001 – Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to review and assess the problem.

July 10, 2001 – Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to set goals to be placed in the plan. Discussed the Public Questionnaire and distribution.

July 12, 2001 – Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to finalize the Public Questionnaire and Plan Action Items.

July 24, 2001 – Meeting of the City of Grand Prairie Flood Mitigation Plan Advisory Committee to review the Flood Mitigation Plan Action Items for inclusion into the Plan. Distribution of the Public Questionnaire was made to 900 residents between July 19 and July 23, 2001, with 90% within the floodplain.

July 24, 2001, City of Grand Prairie Flood Mitigation Plan Advisory Committee approved the Capital Improvement Plan (CIP), 7-year Stormwater Drainage plan.

August 6, 2001 - Consultant submitted Draft Flood Mitigation Plan to City of Grand Prairie for review prior to submittal to the Flood Mitigation Plan Committee for review.

August 6, 2001 – Gordon Scruggs, PE, City Floodplain Manager and Planning Consultant Diane Calhoun, CFM, review questionnaires received from the public related to the Flood Mitigation Plan.

August 7, 2001 – Consultant submitted results of Questionnaire to the Flood Mitigation Plan Advisory Committee. Discussed “Other Agencies” to forward Draft Plan for review with comments.

August 14, 2001 – Forward “Draft Plan” to “Other Agencies,” to review with comments and recommendations requested by August 29, 2001. These agencies were requested to review common problems, development policies, mitigation services, inconsistencies and conflicts in policies, plans, programs, and regulations. They were also requested to review the community’s needs, goals, and plans for the area.

The other agencies include:

- TNRCC, Mike Howard, CFM
- North Central Texas Council of Governments, Jack Tidwell, CFM
- FEMA Region VI, Ross Richardson, Community Mitigation Branch
- U.S. Army Corps Of Engineers, Mr. Mike Danella, P.E.
- Trinity River Authority, Ms. Patricia Cleveland
- Texas Department of Public Safety, Emergency Management Service, Edward G. Klaus
- Jim L. Badgett, Fire Marshall
- Avion Village Mutual Ownership Corporation, Ms. Susan Shuffler
- Aware Neighborhood Association Inc., Nottingham Area  
Attention: Wolf Baumbach, President
- Burbank Garden Homeowners Association, Merolyn Snapp
- Country Club Park Homeowners Association, Betty Hasty, President
- Grand Prairie Prize Acres/Neighborhood Interest Groups, Bob Self
- Kirby Creek Homeowners Association, James E. Thomas, President
- Oak Hollow/Sheffield Village Neighborhood Association, Elizabeth Testerman
- Sherwood Village Mobile Home Community, Park Office Manager
- Two Worlds Resident Association, James Jones, President
- Westchester Homeowners Association, Lisa Barnes, President
- Whispering Oaks Public Improvements District (PID), Matt Segedy

August 20, 2001 – Public Meeting to present the City of Grand Prairie “Draft” Flood Mitigation Plan for public comment. List of attendees maintained in the City of Grand Prairie CRS Files.

To satisfy CRS requirements, at the end of the planning process and at least two weeks before submittal of the recommended plan to community's governing body, a meeting must be held to obtain public input on the draft plan.

August 21, 2001 – Briefing to City Council concerning the Public Meeting and the Draft Plan.

August 28, 2001 - City of Grand Prairie Flood Mitigation Plan Advisory Committee meeting to review comments from the public and finalize the plan for submittal to City Council. Comments received from:

- James R. Cummings, Environmental Services Director

August 31, 2001 - Consultant revised the Flood Mitigation Plan in preparation for the Plan adoption steps that include: submittal to the City of Grand Prairie Engineering Department; Public Meeting; and City Council Meeting.

September 4, 2001 – Submittal of Flood Mitigation Plan to the City of Grand Prairie's City Council for review and adoption of Plan.

September 5, 2001- City of Grand Prairie Flood Mitigation Plan Advisory Committee implemented the Plan as approved by City Council.

September 5, 2001 - City of Grand Prairie Flood Mitigation Plan Advisory Committee submits the adopted Flood Mitigation Plan to FEMA

The following activities are planned to occur after submittal of the Plan to FEMA:

January 1+/- 2002 – Target date for the City of Grand Prairie Flood Mitigation Plan Advisory Committee to respond to Plan review comments from FEMA and ISO.

April 1+/- 2002 – Target date for FEMA to designate the City of Grand Prairie as a CRS Class 7 Community and flood insurance premium reductions go into effect.

April 1+/-2002 – Target date for Flood Mitigation Plan Advisory Committee to evaluate 2003 Drainage Capital Improvement Projects.

October 15+/- 2002 – Target date for a Consultant meeting with the Flood Mitigation Plan Advisory Committee to evaluate the Plan and establish Plan maintenance milestones and requirements.

January 15+/- 2003 – Target date for the City of Grand Prairie Flood Mitigation Plan Advisory Committee to conduct the initial 6-month evaluation of the Flood Mitigation Plan and develop a list of recommended changes based on input from the public, other agencies and City Staff.

July 1+/- 2003 – Target date for the City of Grand Prairie Flood Mitigation Plan Advisory Committee to revise the Plan based on recommendations from the initial 6-month Plan evaluation.

May 2003+/- – Target date for the City of Grand Prairie to distribute a Community Outreach Brochure to all residents in Repetitive Loss Areas.

July 15+/- 2003 – Target date for the City of Grand Prairie Flood Mitigation Plan Advisory Committee to conduct the first annual evaluation of the City of Grand Prairie Flood Mitigation Plan and develop a list of recommended changes based on input from the public, other agencies and City Staff.

October 1+/- 2003 – Target date for the first annual submittal of CRS documentation to FEMA/ISO to maintain or improve the City of Grand Prairie CRS classification.

### **1.3. Public Meeting**

On August 12 and August 19, 2001, a notice was placed in the Arlington Star Telegram, that there would be a public meeting to discuss the Flood Mitigation Plan. The Public Meeting was held on August 20, 2001, in the City of Grand Prairie Library conference room at the Grand Prairie Main Library, 901 Conover, beginning at 7:00 pm. The Flood Mitigation Plan was approved by the City Council during the regular City Council Meeting On September 4, 2001. Copy of Public Notice and list of attendees are in Attachment A.

### **1.4. Flood Mitigation Plan Questionnaire**

A Flood Mitigation Plan Questionnaire requesting input was distributed to 900 Grand Prairie residents between July 19 and 23, 2001. Questionnaires were mailed to all residents within the delineated floodplain, repetitive loss addresses, those known areas subject to flooding that are located in areas outside the delineated floodplain, and residences near the floodplain. Out of 900 Questionnaire, 153 responses were returned to the City. Results from the Questionnaire along with a Chart are provided in Attachment A. Copies of Questionnaires are maintained in the City of Grand Prairie CRS Files.

As funding and/or resources become available the City of Grand Prairie will address the problems and/or recommendations outlined in the responses of the Questionnaire.

### **1.5. Comments and recommendations from outside organizations**

On August 14, 2001, the Draft Flood Mitigation Plan was forwarded TNRCC, NCTCOG, FEMA, US Army Corps of Engineers, Trinity River Authority, Texas Department of Public Safety, Dallas Fire Marshall, Avion Village Mutual Ownership Corporation, Aware Neighborhood Association, Inc., Burbank Garden Homeowners Association, Country Club Park Homeowners Association, Grand prairie Prize Acres/Neighborhood Interest Groups, Kirby Creek Homeowners Association, Oak Hollow/Sheffield Village

Neighborhood Association, Sherwood Village Mobile Home Community, Two Worlds Resident Association, Westchester Homeowners Association, and Whispering Oaks Public Information District. Comments and recommendations were requested for incorporation into the Flood Mitigation Plan. The agencies were required to review for common problems, development policies, mitigation services, inconsistencies and conflicts of policies, plans programs, and regulations. Comments received have been incorporated into the plan in the appropriate subjects.

The following agencies provided comments:

- James R. Cummings, Environmental Services, City of Grand Prairie

The following packets were returned without notation of a forwarding address:

- Westchester Homeowners Association

### **1.6. Flood Mitigation Plan Advisory Committee**

The Flood Mitigation Plan Advisory Committee is comprised of 10 members. Six members of the committee represent the public as follows:

Ms. Raye Shaw – Home Owner – Repetitive Loss  
Structure  
Mr. Scott Mischnick – Representative of Homeowner  
Organizations  
Mr. Robert Nelson – Director on Local Wasteshed Council.  
Ms. Diane Sarabia – River Watcher/Adopt a Stream  
and other related Associations  
Bill Sluder – Flood prone Business  
Marshall Sutton – Land Developer/Real Estate/Lenders

### **1.7. Coordinate with other Agencies.**

On January 30 and 31, 2001, the following agencies were contacted prior to the beginning of the planning stages of the Flood Mitigation Plan. Input into the plan and recommendations were discussed.

Mr. Robert Barker, City of Arlington, Department of Engineering, January 30, 2001  
Mr. Donald Holzwarth, P.E., Director of Public Works, Dallas County, January 31, 2001  
Ms. Renee Lamb, County Engineer, Tarrant County, January 31, 2001  
Mr. Jim Cooper, Director of Public Works, Ellis County, January 31, 2001  
Judge Roger Harmon, Johnson County, January 31, 2001  
Mr. Jack Tidwell, North Central Texas Council of Governments, January 31, 2001  
Ms. Patricia Cleveland, Trinity River Authority, January 31, 2001  
Mr. Elston Eckhardt, P.E., U.S. Army Corps Of Engineers, January 31, 2001

### **1.8. Meetings with Other Agencies to review common problems.**

The City of Grand Prairie met with the following agencies to discuss the development of the Flood Mitigation Plan and to discuss the common hazards that affect the surrounding communities:

Ellis County, Texas	August 28, 2001
City of Cedar Hill, Texas	August 30, 2001
Texas Department of Transportation	August 30, 2001
City of Midlothian	September 12, 2001

### **1.9. Establishing Goals.**

On July 10, 2001, the Flood Mitigation Plan Advisory Committee met to discuss and outlined a plan to establish goals. In addition, discussed the Public Questionnaire to be distributed. On July 24, 2001, the Flood Mitigation Plan Advisory Committee met and established and finalized the goals and objectives for the City of Grand Prairie with regard to the current flooding conditions. The following goals were established:

#### **Goals:**

- Reduce the number of repetitive loss structures and flood damage to other existing residential buildings through Capital Improvement Project (CIPs) that employ a combination of buyouts and structural improvements.
- Reduce the impact of increased flood flows from development in existing downstream buildings and streambed erosion.
- Acquire floodplain when economically feasible and encourage open space in developments
- Conduct a restudy – update FIRMs and Master Plans
- Create GIS Planning Tool for City and ETJ that includes:
  - Drainage Problems
  - Erosion Problems
  - Open Space
  - Special Flood Hazard Area
  - Undeveloped Land
  - Water Quality Monitoring Policy

**Other Considerations:** Other considerations have been established for planning purposes. As the Primary Goals are accomplished, the Flood Mitigation Plan Advisory Committee will review and consider action for the following:

- Keep City owned floodplain in natural state to ensure water quality and conserve existing flora and fauna.
- Encourage the reduction of runoff through better design
- Add certain trees to floodplain where practical

- Purchase flood insurance for needy residents that own and live in flood-prone homes
- Notify citizens that flood insurance is available
- Increase the flood policy base (outreach program to insurance companies)
- Review the Floodplain Management Ordinance – Improve, Revise, etc. (i.e., High Standards)
- Ensure that residents are given adequate warning of floods
- Ensure real estate disclosure of flooding to all potential property owners
- Make public information available on flooding problems and hazards throughout the city

#### **1.10. Distribution of Draft Action Plan.**

On August 14, 2001, Consultant submitted the initial Draft of the Flood Mitigation Plan to “Other Agencies” for review with comments and recommendations requested by August 29, 2001. These agencies were requested to review common problems, development policies, mitigation services, inconsistencies and conflicts in policies, plans, programs, and regulations. They were also requested to review the community’s needs, goals, and plans for the area.

The other agencies include:

- TNRCC, Mike Howard, CFM
- North Central Texas Council of Governments, Jack Tidwell, CFM
- FEMA Region VI, Ross Richardson, Community Mitigation Branch
- U.S. Army Corps Of Engineers, Mr. Mike Danella, P.E.
- Trinity River Authority, Ms. Patricia Cleveland
- Texas Department of Public Safety, Emergency Management Service, Edward G. Klaus
- Jim L. Badgett, Fire Marshall
- Avion Village Mutual Ownership Corporation, Ms. Susan Shuffler
- Aware Neighborhood Association Inc., Nottingham Area  
Attention: Wolf Baumbach, President
- Burbank Garden Homeowners Association, Merolyn Snapp
- Country Club Park Homeowners Association, Betty Hasty, President
- Grand Prairie Prize Acres/Neighborhood Interest Groups, Bob Self
- Kirby Creek Homeowners Association, James E. Thomas, President
- Oak Hollow/Sheffield Village Neighborhood Association, Elizabeth Testerman
- Sherwood Village Mobile Home Community, Park Office Manager
- Two Worlds Resident Association, James Jones, President
- Westchester Homeowners Association, Lisa Barnes, President
- Whispering Oaks Public Improvements District (PID), Matt Segedy



## **2. Assess the Hazard (CRS Activity 511.d.)**

### **2.1. Map of known flood prone areas.**

A digital map has been developed which identifies the known flood prone areas as delineated by FEMA; Repetitive Loss Structures; Structures and/or properties that are outside the delineated 100-year floodplain and are subject to flooding; Erosion problem areas; road closures due to flooding; low water crossings where flood risks are possible. A CD Rom with the GIS information has been incorporated into the City of Grand Prairie Map Information. Map is also located in Attachment A.

The flood hazards for the City of Grand Prairie are included in the Flood Insurance Study for Dallas County and Incorporated Areas, dated August 23, 2001. The floodplains for the City of Grand Prairie have been identified and revised on the effective Flood Insurance Rate Map (FIRM) dated August 23, 2001.

In addition, the following reports, and/or studies were reviewed by the Flood Mitigation Plan Advisory Committee to be included in the determination of the "known flood hazards":

- Floodplain Information Cottonwood Creek, Grand Prairie and Arlington, dated March 1969
- Floodplain Information Fish Creek, Grand Prairie and Arlington, dated November 1971
- Floodplain Information Johnson Creek, Arlington and Grand Prairie
- *The Fish Creek, North Fork of Fish Creek, and Kirby Creek Master Drainage Plan*, dated May 1990
- *The Cottonwood Creek Drainage Master Plan*, dated April 1995,
- *The Dalworth Creek Master Drainage Study*, dated November 1996,

The Federal Insurance Administration (FIA) provided a Repetitive Loss List of properties located in the City of Grand Prairie. This list was evaluated by the Flood Mitigation Plan Advisory Committee to develop the goals and objectives of this Plan. A repetitive Loss Property is a property that has received two or more paid flood insurance loss claims that exceed \$1,000.00. Repetitive Loss Report and supporting data are maintained in the CRS Files.

The City of Grand Prairie CRS Application and submittal of the City's Annual Repetitive Loss Plan Progress Report dated October 1999 indicated that the list for 1998-1999 Repetitive Loss, identified forty (40) locations, of which two were duplicates. Of those 40, 14 have been removed from the 100-year floodplain by structural or drainage improvement projects. An additional 19 will be removed from the 100-year floodplain by projects that are currently under construction or FEMA review, via a Letter of Map Revision (LOMR).

Since 1989, there have been several flooding events on Dalworth Creek. In 1996 the City prepared a Master Drainage Plan to eliminate the source of flooding and utilize the drainage recommendations outlined in the Master Plan.

## **2.2. Known Hazards.**

The City of Grand Prairie is located near the West Fork Trinity River and subject to flooding from extreme flood events. Major streams located within the City of Grand Prairie include: Bear Creek, Dry Branch, Johnson Creek, Mountain Creek, Cottonwood Creek, South Fork of Cottonwood Creek, Fish Creek, Prairie Creek, Kirby Creek and 6 other tributaries.

Flood velocities and depth of flooding are obtained in the Flood Insurance Study for Dallas County and Incorporated Areas, dated August 23, 2001. The Flood Insurance Rate Maps and Flood Insurance Study are in digital format and maintained in the CRS Files.

In the most recent flooding events, in 1990, 1991, and 1998, floodwaters inundated the Riverside Golf Course, which is located within the floodplain and floodway of the West Fork Trinity River. The flood heights in that area did not exceed the 100-year base flood elevation; however, no flood damage occurred to structures.

## **2.3. Flood Events.**

Most of the flood producing storms that occur in the Grand Prairie area are experienced in the spring and fall. Most of the higher floods that have occurred in the general geographical region have resulted from prolonged or successive storms that produce heavy rainfall during this period; however, severe flooding can be produced by intense local thunderstorms at any time.

The flood of May 1908 produced water-surface elevations 5 feet above the flood of May 1957 on the West Fork of the Trinity River; however, discharge estimates for this flood are not available. The flood of May 1, 1957 produced a discharge of 59,200 cfs at the Grand Prairie gage and would have a recurrence interval of about once in 50 years based on present conditions. The flood of May 1949 produced a discharge of 62,000 cfs; however, this discharge measurement was affected by major levee breaks. Other large floods are known to have occurred in April 1942 and March 1945.

Large floods are known to have occurred on Johnson Creek and Cottonwood Creek in 1949, 1957, 1965, 1977 and 1979. Most of the damage caused by these floods occurred on Johnson Creek. The flood of March 1977 on Johnson Creek flooded approximately 70 homes and had an estimated recurrence interval of about once in 20 years. Major floods are known to have occurred on Mountain Creek in 1922, 1928, 1942, 1969, and 1976.

In April to June 1989, heavy rains caused severe flooding in much of North Texas including the City of Grand Prairie. Carrier Parkway, Beltline Road, and Matthew Road were all overtopped during this flood. Additional information on the 1989 and 1990 floods in North Texas and in the Dallas-Fort Worth area may be obtained from the U.S. Army Corps of Engineers or the U.S. Geological Survey.

Rainfall for the winter of 1998 and 1999 was only slightly above average. There were some incidents of localized flooding due to short, intense storms. Residential flooding occurred due to poor local drainage.

#### **2.4. Erosion Hazards**

The primary erosion problems occur along Kirby Creek. Additional erosion problems are at the bridge crossings along the West Fork. The area around Joe Pool Lake is now beginning to develop and the City is concerned with the steep sloped streams that drain into Joe Pool Lake. With that concern, the City is proposing to adopt Open Channel Design Guidelines, to minimize the possible problems as this area develops. The proposed plan guidelines state, "...Channels shall include engineered structures, outlet structures, and if applicable, drop structures with erosion control. All inlets, outlets, and drops with velocities that exceed 6 fps shall have downstream erosion control. If the velocity is less than 6 fps and flow is supercritical at outlets and drops, a hydraulic jump will occur downstream and erosion control should be provided the full length of the jump and as needed downstream for oscillating jumps." Copy of the "Draft Special Flood Hazard Area Guidelines" is maintained in the City of Grand Prairie CRS Files.

The 7-12 Year Capital Improvement Plan has outlined funding procedures for the erosion concerns on Kirby Creek. Residents experience ponding in the streets, and erosion along the creek bed in the Forest Oak area. The first phase of the project will be to conduct an engineering study on the most cost-effective solution that meets the city's goals of maintaining open green-space.

### **3. Assess the Problem (CRS Activity 511.e.)**

#### **3.1. Discussion of the number and type of buildings subject to the hazards.**

The City of Grand Prairie currently has 196 flood insurance policies in force with \$30,951,300 in coverage. Based on Federal Emergency Management Agency (FEMA) Repetitive Loss records the City of Grand Prairie had 28 Buildings with 303 losses with a total of \$6,379,477 in flood insurance claims paid since 1978.

The Stormwater Projects List identifies 175 addresses that are subject to flooding. The list identifies the problem and the possible solution. The City of Grand Prairie through Master Drainage Plans, grants, and higher standard planning has reduced the risk of flooding and/or removed structures from the floodplain. Those projects addressed on the Stormwater Project List identify if the Project has been completed and partial completion. Information maintained in the CRS Files.

The Army Corps of Engineers Federal 205 Project for the City of Grand Prairie Reach of Johnson Creek removed 75 homes from the identified floodplain.

The Nottingham Drainage Improvements just completed has removed 9 homes from the identified floodplain.

Cypress/Sunnyvale and King Richard Area Drainage Improvements should reduce or eliminate the flooding and drainage problems (depending on the intensity associated with any given storm) for 8 structures.

Dorchester Levee Project – approved by FEMA, removed 23 structures from the floodplain.

Dry Branch - 205 Project – A total of 107 structures were subject to damage at or above finished floors within the flooding limits of Dry Branch. Thirty-Eight (38) structures were removed from the floodplain.

#### **3.2. Structures that have received flood insurance claims.**

In addition to the repetitive loss structures as described in the CRS Repetitive Loss Report, October 1999, information has been request from FEMA identifying those structures that have had at least one claim paid under the NFIP. According to the data dated June 30, 2001, NFIP Policies in force for the City of Grand Prairie is registered at 194. Of those 194 Policies in Force, 35 policies indicate that only one claim has been paid under an NFIP Claim since 1978. The June 30, 2001, report also indicates that 43 structures have a NFIP flood policies in force, but no claim for losses has been recorded. Report has been placed in Attachment A.

The City of Grand Prairie has developed a database that contains information from property owner's information and/or complaints of flooding. Properties (i.e., homes, garages, flood water in streets, street closing, etc.) that have been inundated with floodwaters, has been recorded and posted on a map developed and referenced in Section 2, "Map of known flood prone areas."

### 3.3. Plan and Procedures for Warning and Evacuation

The City of Grand Prairie's Fire Department has recently revised their Emergency Plan. This plan includes procedures for warning and evacuation of residents. The Plan is maintained at each Fire Station within the City of Grand Prairie and within the CRS Files at the City of Grand Prairie.

### 3.4. Critical Facilities

Reports and Studies developed concerning locations and risks to critical facilities, indicate that although the City of Grand Prairie has about 300 structures and/or areas that are subject to flooding and/or erosion, and local drainage, that the critical structures within the jurisdiction of Grand Prairie, are not located within a flood zone nor subject to flooding.

<u>Type of Facility</u>	<u>Number</u>	<u>Within Floodplain</u>
Nursing Homes:	3	NO
Hospitals	1	NO
Fire Stations	9	NO
Police Station	1	NO
City Buildings	14	NO
Schools	30	NO

Names and addresses for above-mentioned facilities are maintained in the City of Grand Prairie CRS Files.

### 3.5. Wetlands, Riparian Areas, and Sensitive Areas

The City of Grand Prairie has a volunteer water-monitoring program, Texas Watch, as one of their main stormwater education programs. ESD provides the sampling kits, purchased through TRA, for volunteers who have made it through the training. Stormwater education from a compliance standpoint, also takes place through the City's quarterly Pretreatment meetings held with permitted industries and occasionally representatives from auto-body and salvage yards. A quarterly newsletter is also mailed out to all permitted industries as well as salvage yards and auto body shops and covers a large range of environmental topics including Phase II, new regulations, etc. Within the next year, the City of Grand Prairie will also have it's own stormwater ordinance to bring into line with Phase II regulations.

The Water Quality Division samples dozens of sites each month as part of their Stormwater sampling program. Additionally, they have a stormwater stenciling program for storm drain inlets around the City. The City has replaced old paint stencils with durable color markers decorated with a graphic fish ("cool fish"---with sunglasses) and the words, "Protect our water? Don't Dump."

The City of Grand Prairie has a household hazardous waste program, which is another major part of keeping the City of Grand Prairie's waterways clean. The City of Grand Prairie has a contract with the Environmental Collection Center, which allows them to have two local collections serving up to 50 carloads as well as year-round use of the ECC at 6400 Bridge St., in Ft. Worth for Grand Prairie residents. Through both collections and the ECC, the City of Grand Prairie residents can drop off all types of household hazardous waste including used oil, batteries, paint, cleaning chemicals, pesticides, pool chemicals, and just about everything else at no cost. At local collection areas, the City of Grand Prairie provide hand out materials on proper disposal of waste as well as environmentally-friendly household chemical alternatives.

Last year Water Quality participated with Neighborhood Revitalization to educate teenagers on water sampling and benthic invertebrates.

Environmental Services will be hosting the 10th Annual Trinity River Awareness Day (also know as Trinity Trash Bash) on September 15, 2001, at Mountain Creek Lake Park. This annual clean-up event draws hundreds of school age children and has provided an excellent forum for stormwater and a variety of environmental topics.

ESD also purchases "Major Rivers, " a water quality/wetland curriculum for all 4th graders in GPISD each year.

Solid Waste has recycling and it's attendant education programs, which have always been considered a major part of litter prevention.

### **3.6. Capital Improvement Projects (CIP)**

By approval of the City Council, the City of Grand Prairie approved a Storm Water Utility Fund (SWUT) in 1990. The approval of the SWUT established fees for maintenance and capital drainage projects. These fees were established to help resolve storm water related problems, construct drainage systems, and increase stream monitoring, permitting and pollution control. These fees generate approximately \$1.4 Million per year and the funds are spent to eliminate residential flooding, to eliminate or reduce non-residential flooding, to reduce street flooding, and to maintain existing drainage structures in the City. The Stormwater Utility Fees are as follows:

<u>MAINTENANCE</u>	<u>CIP</u>
1994	1994 \$621,000.00
1995	1995 \$546,000.00
1996 \$64,077.90	1996 \$820,000.00
1997 \$125,769.51	1997 \$851,051.00
1998 \$159,143.67	1998 \$860,000.00
1999 \$71,928.55	1999 \$910,000.00
2000 \$36,712.16	2000\$1,081,034.00
2001 \$194,288.11	2001\$1,100,000.00
<hr/>	<hr/>
\$651,919.90	\$5,622,085.00

Revenue Documentation Form and Fee Charge Comparison maintained in the City of Grand Prairie CRS Files.

### **3.7. Impact of Flooding**

The impact of flooding within the community is considerable less than 10 years ago due to the extensive effort the City of Grand Prairie has made in improvements, drainage projects, removal of structures from flood risk, and the purchase of three repetitive loss structures. The Stormwater Utility Fees that are planned for funding of future drainage project will reduce the risk of repetitive loss and damage to the structures that remain in the identified floodplains.

#### **4. Goals (CRS Activity 511.f)**

##### **4.1. Goals Established**

On July 10, 2001, the Flood Mitigation Plan Advisory Committee developed the goals for the Flood Mitigation Plan. In addition, discussed the Public Questionnaire to be distributed. On July 24, 2001, the Flood Mitigation Plan Advisory Committee met and finalized the goals and objectives for the City of Grand Prairie with regard to the current flooding conditions. In addition, concern was expressed with the future development that will be occurring around Joe Pool Lake and areas in the ETJ. The following goals were established:

##### **Goals:**

- Reduce the number of repetitive loss structures and flood damage to other existing residential buildings through Capital Improvement Project (CIPs) that employ a combination of buyouts and structural improvements.
- Reduce the impact of increased flood flows from development in existing downstream buildings and streambed erosion.
- Acquire floodplain when economically feasible and encourage open space in developments
- Conduct a restudy – update FIRMs and Master Plans
- Create GIS Planning Tool for City and ETJ that includes:
  - Drainage Problems
  - Erosion Problems
  - Open Space
  - Special Flood Hazard Area
  - Undeveloped Land
  - Water Quality Monitoring Policy

**Other Considerations:** Other considerations have been established for planning purposes. As the Primary Goals are accomplished, the Flood Mitigation Plan Advisory Committee will review and consider action for the following:

- Keep City owned floodplain in natural state to ensure water quality
- Encourage the reduction of runoff through better design
- Add certain trees to floodplain where practical
- Purchase flood insurance for needy residents that own and live in flood-prone homes
- Notify citizens that flood insurance is available
- Increase the flood policy base (outreach program to insurance companies)
- Review the Floodplain Management Ordinance – Improve, Revise, etc. (i.e., High Standards)
- Ensure that residents are given adequate warning of floods
- Ensure real estate disclosure of flooding to all potential property owners
- Make public information available on flooding problems and hazards throughout the city



## 5. Review of possible activities (CRS Activities 511.g.)

### 5.1. Preventive Activities (CRS Activity 511.g.1)

**Open Space Preservation** – The City will continue to encourage that property within the floodplain be dedicated to the City through platting.

Since the City Code allows a natural channel in-lieu of a closed conduit or concrete channel with the Public Works Director's approval, the City should develop a policy for natural channel design that enhances and preserves open space.

**Floodplain Regulations** – The City of Grand Prairie has adopted more restrictive measures beyond the NFIP minimum regulations. The City requires that the lowest floor of the structure be elevated to the higher of not less than one (1) foot above the base flood elevation (taking into account the effects of future full development) or two feet above the FEMA base flood elevation.

The maximum flow velocity in earthen streams and channels is 6 fps per City Code. This requirement is referred to as the "maximum velocity requirement". The requirement applies to within, upstream, and downstream of the project and is evaluated for the 100-year flood by comparing pre- and post-project velocities. Pre-project velocities are evaluated using pre-project topography and assuming that the project site is undeveloped and the undeveloped portion of the upstream watershed is 50 percent developed (it is acceptable to assume that the upstream watershed is fully developed). Post-project velocities are evaluated using post-project topography and adjusting the pre-project runoff to account for post project conditions at the project site. This requirement includes the analysis of increased velocities caused by increased runoff from the project site and increased flow rates caused by the increased impervious area for the project and reduced flood storage within floodplain areas. It is recommended that the City require a detailed engineering analysis for each proposed project.

City Code specifies that drainage easements shall be of sufficient size to take into account any additional width to accommodate future bank erosion as determined by engineering slope stability calculations. It is recommended that the City begin requiring a demonstration of compliance with this requirement in the form of a report from the design engineer certifying that ample area remains for future meandering and erosion or that engineered design measures will mitigate future meandering or erosion to the limits of the proposed easements.

**Stormwater Management** – Stormwater management is primarily through two articles of the City's Code, that is Article 14, Drainage, and Article 15, Floodplain Management. These codes specify that the Public Works Director has final approval on certain issues such as hydrograph analysis, headloss computational procedures, etc. It is recommended that guidelines be developed and issued by the City to facilitate approval of construction plans for development projects. It is also recommended that these Articles of the Code be updated over the next two years.

**Drainage System Maintenance** – The City currently has two full-time drainage inspection and maintenance crews and spends over \$300,000 annually on maintenance of storm drains. The City needs to continue this program and develop a system to better document the work conducted each year.

### **5.2. Property Protection (CRS Activity 511.g.2)**

**Relocation/Acquisition** – The City of Grand Prairie has bought out one house in the Cottonwood Creek floodplain and is buying out four houses in the Dalworth Creek floodplain in 2002. The City is also proposing to buyout about 12 more houses in the Dalworth Creek floodplain over the next five years.

**Building Elevation** – The City of Grand Prairie has adopted more restrictive measures beyond the NFIP minimum regulations. The City requires that the lowest floor of the structure be elevated to the higher of not less than one (1) foot above the base flood elevation (taking into account the effects of future full development) or two feet above the FEMA base flood elevation.

**Floodproofing** - For non-residential structures, the City of Grand Prairie has adopted more restrictive measures beyond the NFIP minimum regulations. The City requires that the lowest floor of the structure be elevated to the higher of not less than one (1) foot above the base flood elevation (taking into account the effects of future full development) or two feet above the FEMA base flood elevation, or together with attendant utility and sanitary facilities, be designed so that below two (2) feet above the base flood level the structure is water tight with walls substantially impermeable to the passage of water and with structural components having the capability or resisting hydrostatic and hydrodynamics loads and effects of buoyancy.

**Sewer Backup Protection** – Under City Code any structures in the floodplain must have sanitary sewer backup protection.

**Insurance** – The City of Grand Prairie provides an annual mail-out to all insurance agents with information concerning the National Flood Insurance Program (NFIP). The City is in the planning stages of developing an Insurance Agents/Lenders Workshop. The City will be sponsoring a Workshop for the Regional Representative of the NFIP with 4 hours of training the Insurance Agents and 4 hours training for Lenders.

### **5.3. Natural resource Protection (CRS Activity 511.g.3)**

**Wetlands Protection** – The City's Code requires that projects be in compliance with Section 404 of the Clean Water Act. Engineers or environmental scientists are required to submit either a copy of the 404 permit or certification that Section 404 is not applicable to the site prior to issuance of permits.

**Erosion and Sediment Control** – Under current Code the discharge of sediment is a water quality violation. The City also requires per Article 14, Drainage, that erosion control plans be submitted with all construction plans and prior to issuance of permits. It is also required per City Code that prior to issuance of a permit that sites that are subject to EPA Stormwater Regulations submit a copy of their Notice of Intent (NOI). It is recommended that the City develop and adopt Code that specifically addresses erosion and sedimentation control with an enforcement program.

The City's maintenance program includes inspection and cleaning of culverts.

It is proposed that structural erosion control be implemented at Arbor Creek along Dogwood in 2002.

The 7-12 Year Capital Improvement Plan, has outlined funding procedures for the erosion concerns on Kirby Creek. Residents experience ponding in the streets, and erosion along the creek bed in the Forest Oak area. The first phase of the project will be to conduct an engineering study on the most cost-effective solution that meets the city's goals of maintaining open green-space.

**Best Management Practices** – The City has adopted BMPs as specified per the North Central Council of Governments (NCTCOG). Specified use of NCTCOG BMPs or other engineered practices is required on all erosion control plans submitted for City approval.

#### **5.4. Emergency Services (CRS Activity 511.g.4.)**

**Flood Warning** – TXU operates the Mountain Creek Dam. In the event of release of water, TXU notifies the Fire and Police Departments in Grand Prairie of the amount of water to be released and time of release. The Fire Department notifies and evacuates people in the Jefferson/Main Street area.

The Flood Section of the City of Grand Prairie, maintain consistent observation of storm activity on the Internet. City stays in telephone contact with the National Weather Service's (NWS) River Forecast Center. The NWS keeps the City informed of the projected flood crest elevation and time of crest for the West Fork Trinity River.

It is recommended that the City develop a computer program that will project road closures and structural flooding based on flood crest elevation data obtained from the NWS. This information can be forwarded to the Street Department's drainage crews and they can evacuate people and be prepared for road closures and detours. It is also recommended that the City purchased weather radios.

**Flood Response** - Emergency response and/or disaster response plan is maintained at the Fire Department Emergency Operations Center, 201 NW 2<sup>nd</sup> Street, Suite 200, and copy of floodplain portion within the City's CRS Files. It is recommended that this plan be reviewed and, if needed, be updated.

**Critical Facilities Protection** – The City of Grand Prairie does not have any critical facilities within the identified 100-year floodplain.

**Health and Safety Maintenance** – Emergency response and/or disaster response plan is maintained at the Fire Department Emergency Operations Center, 201 NW 2<sup>nd</sup> Street, Suite 200, and copy of floodplain portion within the City's CRS Files.

### **5.5. Structural Projects (CRS Activity 511.g.5)**

**Reservoirs** – There are two reservoirs within the City, Joe Pool Lake and Mountain Creek Lake. Joe Pool Lake is a Corps of Engineers design and operated facility. It is a multi-purpose project, including flood control. According to the Corps of Engineers, the 100-year discharge from the lake is insignificant compared to the downstream flows resulting from Fish Creek and Cottonwood Creek.

Mountain Creek Lake was constructed in the 1930's and is operated by TXU. Its purpose is solely as a source of cooling water for TXU's gas fired power plant. Since the construction of Joe Pool Lake, Mountain Creek Lake has a greater influence on the attenuation of flood waves as they pass through the lake. Consequently, with the construction of Joe Pool Lake in 1984 flooding downstream of Mountain Creek Lake has been limited primarily to instances when the backwater on the West Fork Trinity River was in flood stage.

No new reservoirs are proposed for the City.

**Levees** – In the City of Grand Prairie Floodplain Management Ordinance, Section 5, Provision for Flood Hazard Reduction, Item XV.5.4 Levee Systems and Flood Relief Channels, by reference has adopted the levee policy as issued by FEMA. The requirement as states that the owner of the levee must submit a manual of operation and maintenance to the City for review and approval.

There are two levees three levees within the City. Two are operated by the City and one is operated by the Grand Prairie Municipal Utility District (GPMUD). The City operates the Dorchester Levee and the City Landfill levee. Since the area behind the landfill levee is being filled, it is a temporary levee. It is operated and maintained by the Solid Waste Division of the Environmental Services Department. The Floodplain Administrated conducts annual inspections with the Landfill Manager. This landfill levee has been approved by FEMA with a Conditional Letter of Map Revision (CLOMR) and will be required to acquire a Letter of Map Revision (LOMR) when the landfill is completed.

The Dorchester Levee is operated by the Water Utilities Division of the Public Works Department. It is a permanent flood control structure that was constructed by the City to remove 26 houses from the floodplain. The structure, operation, and maintenance have been approved by FEMA and the Corps of Engineers.

The GPMUD Levee was constructed as part of a development project to recover a portion of the West Fork Trinity River floodplain. This levee is operated and maintained by the GPMUD. The structure, operation, and maintenance have been approved by FEMA.

No new levees are proposed for the City.

**Diversions/Channel Modifications/Storm Sewers** – The City has constructed several large channel modifications to reduce flooding, including the Johnson Creek Channelization and Dry Branch Channel Improvements. Dallas County Flood Control District No. 1 has also channelized Bear Creek from Rock Island Road to Shady Grove Road as part of a floodplain reclamation project that extends in to the City of Irving.

The Mountain Creek Bypass Channel is a proposed flood relief channel to reduce flooding at a mobile home park and industrial area. The Keith Heights-Dalworth Creek Downstream Carrier is a combination house buyout and channel modification project to remove 23 homes from the floodplain.

The May Lane Storm Drainage, Carrier & Conover Storm Drain, Alspaugh-Prairie-Matthew, Robinson & Marshall Storm Drain, and Holiday Hills Storm Drainage are storm sewer projects proposed to reduce flooding in 39 homes. These projects are proposed to be completed over the next seven years.

#### **5.6. Public Information (CRS Activity 511.g.6)**

**Map Information** – The City of Grand Prairie has developed the GIS system for the August 23, 2001 Flood Insurance Rate Maps (FIRMs). The system is in the development and testing stages. Once the City personnel have worked through any problems, it will be released for public information and use. Map information is available at the Engineering Division or public library.

**Outreach Projects** – The City conducts an annual mail-out (with utility bills) of a flood information brochure. The City also gives lectures and provides videos on floodplain management to public organizations, municipal judge and prosecutor, planning and zoning, and City Council.

**Real Estate Disclosure** – The City of Grand Prairie has a working relationship with the local Real Estate Industry in providing educational Workshops on Floodplain Management Regulations, Flood Insurance availability, current projects throughout the community. It is a violation of City Code and State law to not notify a potential buyer that a home has flooded or is in the floodplain.

**Library** - The Flood Mitigation Plan, Flood Insurance Study, Flood Insurance Rate Maps, Repetitive Loss criteria and other City and FEMA documents are maintained in the Library for public reference.

**Technical Assistance** - The City of Grand Prairie currently accommodates homeowners, when requested, by conducting a site observation and providing advice on home flooding and drainage problems. The City also sizes and installs driveway culverts with headwalls for all residential homes free of charge (homeowners must pay for materials). The City provides floodplain information to homeowners, insurance agents, engineers, surveyors, and lending institutions for no charge.

**Environmental Education** - The City of Grand Prairie has a volunteer water-monitoring program, Texas Watch, as one of their main stormwater education programs. ESD provides the sampling kits, purchased through TRA, for volunteers who have made it through the training. Stormwater education from a compliance standpoint, also takes place through the City's quarterly Pretreatment meetings held with permitted industries and occasionally representatives from auto-body and salvage yards. A quarterly newsletter is also mailed out to all permitted industries as well as salvage yards and auto body shops and covers a large range of environmental topics including Phase II, new regulations, etc. Within the next year, the City of Grand Prairie will also have it's own stormwater ordinance to bring into line with Phase II regulations.

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Last year Water Quality participated with Neighborhood Revitalization to educate teenagers on water sampling and benthic invertebrates.

Environmental Services will be hosting the 10th Annual Trinity River Awareness Day (also know as Trinity Trash Bash) on September 15, 2001, at Mountain Creek Lake Park. This annual clean-up event draws hundreds of school age children and has provided an excellent forum for stormwater and a variety of environmental topics.

ESD also purchases "Major Rivers, " a water quality/wetland curriculum for all 4th graders in GPISD each year.

Solid Waste has recycling and it's attendant education programs, which have always been considered a major part of litter prevention.

## **6. Draft an Action Plan (CRS Activity 511.h.)**

The City of Grand Prairie Flood Mitigation Advisory Committee developed five action items to be implemented as part of the Flood Mitigation Plan. The following five action items address all six (6) categories identified in CRS Activity 511.g.

**Action Item #1 – Reduce the number of repetitive loss structures and flood damage to other existing residential buildings through Capital Improvement Project (CIPs) that employ a combination of buyouts and structural improvements. (CRS Activity 511.g.2. and 511.g.5.)**

The following actions are proposed to address this goal.

- 1. Mountain Creek Bypass Channel** – This project is located about 2,800-feet west of the Mountain Creek channel and will extend from Main Street north to the existing ditch paralleling the railroad and will consist of an earthen channel. The channel will convey flood flows from the old Mountain Creek channel to the new Mountain Creek channel. The flow within the old Mountain Creek channel was blocked by the construction, within the County, of a drag racing facility. This is an older area of town that includes a mobile home park with about 200 residents and a number of businesses. The mobile homes flood in about a 5-year frequency flood.
- 2. May Lane Storm Drainage** – This project is located south and west of the May Lane/NW 23<sup>rd</sup> Street intersection. The project includes replacement of the existing storm drain conduits with larger conduits and the addition of inlets on May Lane and Terry Lynn. Three houses flood in this area in short duration low intensity rainfall events.
- 3. Carrier and Conover Storm Drainage (SD)** – This project is located from the Carrier Conover intersection south to the existing 84” storm drain and west to Bank of America. The project includes replacement of the existing storm drain conduits with larger conduits and the addition of inlets on Carrier and Conover. There are a total of 17 homes east of Carrier that flood. The police station is located at this intersection and that needs access to Carrier during flood events.



4. **Alspaugh, Prairie, Matthew** – This project is located along Prairie from Sandra south to Alspaugh Creek and west to Matthew Road. It involves the construction of a closed conduit-open channel storm drain from Sandra south along Prairie to Alspaugh Creek, an intercepting channel for the Matthew Road drainage to the west and re-grading the ditches and replacing driveway culverts along portions of Sandra and Alspaugh. This project will not protect the neighborhood from the 100-year flood, but will serve as an interim measure until the construction of a closed conduit drainage system with Camp Wisdom and the extension of Sandra to Camp Wisdom. Seven houses flood in this area and most of the homes on Alspaugh are islands after only short duration high intensity rainfall events.
5. **Robinson and Marshall Storm Drains (SD)** – This project includes the replacement of storm drains adequate to convey the 100-year flood under Robinson and Marshall at the South Fork of Cottonwood Creek. There are five homes and three apartment complexes within the floodplain. (Although the apartment complexes will not be removed from the floodplain because they are too far upstream, the project may reduce the frequency of these structures flooding.) With the construction of State Highway (SH) 161 to the west, improvement of these streets is necessary. Also, there is a fire station north on the hill overlooking the South Fork that needs emergency access east on Marshall and south on Robinson during flood events.
6. **Dalworth Downstream (D/S) Carrier** – This project extends along Dalworth Creek from Carrier to Blackburn. It involves the buyout of homes in the Keith Heights area combined with construction of a parallel earthen channel and additional culverts at road crossings. This project will impact 18 houses that have flooded and four road crossings that flood (i.e., Carrier, Blackburn, Turner, and 9<sup>th</sup> Street). There are a total of 26 homes in the 100-year floodplain.
7. **Dalworth Area Storm Drainage (SD)** – This encompasses portions of the Continental Estates, Westover Ridge, Holiday Hills, and Rogway Terrace subdivisions within the Dalworth Creek watershed. Specific streets for storm drainage improvement include Denmark, Halifax, and Tripoli. The project will include replacing inadequate storm drain conduits and installation of additional inlets. A total of 18 houses are reported to have flooded in this area. All of the flooding is caused by localized street drainage.
8. **Miscellaneous Drainage Projects** – These projects will be selected annually based on the goals in this mitigation plan. Specific projects proposed for 2002 include construction of erosion control along Arbor Creek, Phase 1 of the Citywide Floodplain Study, and the West Shady Grove drainage extension. The City is conducting the Citywide Floodplain Study as Cooperating Technical Partners (CTPs) with FEMA.

9. **Maintenance Projects** - Over half of the projects identified as part of the 1993 Storm Water Utility Project list have been completed (see list in Appendix A). The City will continue to address these and other projects as funding becomes available.
10. **Johnson Creek Channelization** - The final phase of the LOMR for Johnson Creek involves constructing improved drainage systems and fill placement. The project is now structurally complete, and when approved by FEMA, the 8 homes remaining in the 100-year floodplain will be removed. This project will be completed in 2002.
11. **7 Year CIP** - The following projects are within the 7-12 year CIP. This CIP is preliminary and will be reviewed and finalized with funding in an updated plan prior to implementation.

Kirby Creek Area Storm Drain Master Plan – Analysis of storm drainage facilities needed to reduce flooding in the basin.  
Shady Grove / High Prairie Drainage – Improvements to the existing undersized drainage system.  
Great Southwest Parkway Prairie Creek – Replace the existing culvert crossing to facilitate north-south emergency traffic in a 100-year flood.  
Beltline Corridor Drainage Master Plan – Interior storm drainage master plan to accompany the floodplain master plan for the same area.  
Kirby Creek Enhancements – Erosion protection and mitigation project.  
Gopher Creek Bypass – Bypass culvert system to maintain near 100-year flood capacity on Belt Line Road at the creek crossing.

**Budget:** \$14 Million for the City of Grand Prairie Capital Improvement Plan projects over 7-years. Partial funding of \$7 million will come from 2001 Bond Program. The remainder of the funding will be from the Stormwater Utility Fund, including an addition \$1.5 Million for maintenance projects. If the citizens do not approve the Bond Program in the November election, the schedule to complete the Plan will be amended. The 7-12 CIP will be reviewed, updated and funded in 2008 with an updated Flood Mitigation Plan.

**Goal:** The City of Grand Prairie will design and construct stormwater improvement projects within the 7-year period, except the 7-12 year CIP that will be completed in the 7-12 year time frame.

**Action Item #2: Reduce the impact of increased flood flows from development in existing downstream buildings and streambed erosion. (CRS Activity 511.g.1.)**

The following actions are proposed to address this goal.

1. **Erosion Control** – Install erosion control on the north bank of Arbor Creek along Dogwood.
2. **Maximum Velocity Requirement** – The Engineering Division will begin requiring a more detailed analysis to evaluate compliance with this requirement. The evaluation will include any increases in velocity due to increased flows caused by loss of valley storage or site development.
3. **Flooding Impacts** – The Engineering Division will begin requiring a more detailed analysis to evaluate compliance with this requirement. The evaluation will include any increases in flood elevations upstream due to site backwater effects or downstream due to increased flows caused by loss of valley storage or site development.
4. **Limits of Drainage Easements** - The Engineering Division will begin requiring a more detailed analysis to evaluate compliance with this requirement. The evaluation will include certification from the design engineer that ample area remains for future meandering and erosion or that engineered design measures will mitigate future meandering or erosion to the limits of the proposed easements.
5. **Floodplain and Drainage Regulations** – Update these codes through the Floodplain Management Advisory Committee. In the interim, issue guidelines to facilitate approval of development construction plans per City Code to address detention design, hydrologic analysis, special flood hazard areas, outfall design, and storm drain design.
6. **Stormwater Management/ BMPs** – Development regulation specifically addressing erosion and sediment control at construction sites through the Floodplain Management Advisory Committee.

**Budget:** Action 1, Erosion Control, to be conducted as maintenance with Stormwater Utility Funds. Staff time included in current operations budget for other actions.

**Goal:** Action 1 will be constructed in 2002. Actions 2, 3, and 4 will be implemented in October 2001. Item Action 5 will be completed by October 2003, including issuing the guidelines by March 2002 and adopting the revised regulations by October 2003. Adoption of the regulation for Action 6 will be completed by March 2004.

**Action Item #3: Acquire Floodplain when economically feasible and encourage open space in development. (CRS Activity 511.g.1., and 511.g.3)**

The following actions are proposed to address this goal.

1. **Dalworth Downstream (D/S) Carrier** – This action is discussed in detail under Action Item #1. It will include purchasing as many as 17 homes and reclaiming the land for floodplain use. Once the houses are purchased, the land will be excavated and vegetated to provide valley storage along this highly urbanized stream, reducing flooding in the area. Property acquisitions will allow construction of additional culverts at road crossings and an overflow channel parallel to the existing channel to contain the design flood and remove additional homes from the floodplain.
2. **Natural Channel Design** – The City will establish guidelines for natural channel design, in lieu of using closed conduits or concrete channels.
3. **Open Space Development** – The City will continue to encourage floodplain areas remain natural and be dedicated to the City.
4. **Floodplain Acquisition** – The City will continue to encourage that property in the floodplain be donated to the City in the platting process. The Engineering Division is working with the Planning Department to identify flood-prone properties for possible future purchase as floodplain right-of-way or as wetlands and wildlife mitigation areas. Either of these methods assures that the City will maintain control of the use of these lands, and that they will continue to function in their natural capacity.

**Budget:** Action 1 is discussed under Action Item #1. Staff time included in current operations budget for the remaining actions.

**Goal:** Action 1 is discussed in Action Item #1. The other actions will be on going activities at the City and will be document for CRS.

**Action Item #4: Conduct a Restudy to update the City of Grand Prairie Flood Insurance Study and Master Plans. (CRS Activity 511.g.1., and 511.g.2)**

The following actions are proposed to address this goal.

1. **Joe Pool Area Master Plan** – This project includes the watersheds for Mountain Creek the tributaries upstream of the Joe Pool Lake dam. It will provide a master plan for drainage within this developing watershed area including the City's ETJ. Since the area drains in to Joe Pool Lake (a source of drinking water) and is characterized by steep sloped streams, one focus of the plan will be on the control of erosion and sedimentation. Currently, the area is primarily rural with one large development, the Lakeridge Addition. Although several structures are in or near the floodplain, there are no known structures that flood within this area.
2. **Cottonwood Storm Drain (SD) Master Plan** – This plan will address the needed storm drainage system upgrades within the Cottonwood Creek watershed. This watershed encompasses an older area of the City that is characterized by less than adequate storm drainage. There are 112 houses that flood within this watershed. The master plan will be a guide in selecting future storm drainage projects to minimize flooding in the City.
3. **Mountain Creek Bypass Channel** – This action is discussed in detail under Action Item #1. It will include re-studying Mountain Creek downstream of Mountain Creek Lake dam.
4. **Dalworth Downstream (D/S) Carrier** – This action is discussed in detail under Action Item #1. It will include re-studying Dalworth Creek downstream of Carrier.
5. **CTP Projects** - The City of Grand Prairie has become a Cooperative Technical Partner (CTP) community to keep maps current and update others. City Staff has worked closely with FEMA helping to facilitate the latest DFIRM prepared for Dallas County. In the last 6 years, restudies have been completed on Dalworth Creek, and the entire Fish Creek watershed and the entire Cottonwood Creek watershed. A restudy is proposed for the downstream portion of Mountain Creek, including the addition of a bypass channel. The Alspaugh Branch study will be extended upstream, and the A Zones for Hollings Branch and Soap Creek will be studied by detailed methods under the CTP program

**Budget:** Actions 1 and 2 will be funded through the Stormwater Utility Fund at a cost of \$300,000. Funding for Actions 3 and 4 is discussed under Action Item #1. Many of the tasks for completing the CTP projects have been completed by the City over the last five years including re-mapping the West Fork Trinity River, completing new topographic surveying of the City, installation of GPS monuments, studies on Hollings Branch and Soap Creek watershed for fully developed conditions. The new CTP projects are to be funded through FEMA funds and staff time included in current operations budget. Grand Prairie is preparing a request for a \$100,000 grant from FEMA for restudies to be completed in 2002.

**Goal:** Restudies to begin in 2002, complete by 2007.

**Action Item #5: Create GIS Planning Tool for City and ETJ that includes:**

- **Drainage Problems**
- **Erosion Problems**
- **Open Space**
- **Special Flood Hazard Area**
- **Undeveloped Land**
- **Water Quality Monitoring Policy**  
(CRS Activity 511.g.6.)

The following actions are proposed to address this goal.

1. The City of Grand Prairie Engineering Department will continue to work with the consultant to establish the basis for the project. In addition, the Engineering Division will work with the Information Technology Department and the Development Department to include any additional requirements that the Flood Mitigation Plan Advisory Committee has established. This will be the primary tool used by the Planning Department and the Engineering Division to track the progress of the Flood Mitigation Plan, and to advise the public of the flood hazards that exist on any property within the City of Grand Prairie. The tool can also be used for planning purposes to show areas that have specific development problems and to help direct future development through zoning. Once in a GIS format, accurate measurements of open space, rights-of-way, and Special Flood Hazard Areas can be made quickly. Future additions can make much of this information available to the general public through limited queries made from home over the Internet. Part of this work is completed and only needs to be incorporated in to the City's GIS system. This work includes storm drain mapping, DFIRM floodplains, complete topographic map in 2' contour intervals, and mapping of houses with recorded flooding and houses with repetitive losses.

**Budget:** Staff time included in current operations budget.

**Goal:** Begin planning in 2002; funding from 2003-2005, with completion in 2005.

**Action Item #6: Other Activities. (CRS Activity 511.g.1., and 511.g.2)**

1. **Insurance** – Conduct a Workshop for the Regional Representative of the NFIP with 4 hours of training the Insurance Agents and 4 hours training for Lenders.
2. **Maintenance** – Work with the Street Division to develop a better system of documenting maintenance as it is conducted.
3. **Flood Preparedness** – Develop a computer program that will project flooding structures and streets based on flood crest data acquired from the NWS. This information will be forwarded to the Street Division so that they can evacuate people and be prepared in advance for road closures.
4. **Flood Response** – Review the City's Emergency Response Plan as it pertains to flooding and update or revise as necessary.

**Budget:** Staff time included in current operations budget.

**Goal:** Complete Actions 1 and 2 in 2002 and Actions 3 and 4 by October 2003.

## **7. Adopt the Plan (CRS Activity 511.i)**

On August 20, 2001, upon completion of the Public Meeting, review of Plan Questionnaire submitted by the public, completion of other agency coordination and review, and the public meeting held at the end of the planning process, the City of Grand Prairie submitted the Flood Mitigation Plan to City Council for approval. The City Council approval and plan adoption should be completed by September 4, 2001.



**8. Implementation, Evaluation, and Revision of Plan. (CRS Activity 511.j.)**

**8.1. Procedures for Implementing, Evaluating, and Revising Plan.**


June 26, 2001, the Flood Mitigation Plan Advisory Committee agreed to remain as an Official Planning Committee. The procedures for implementing the plan, evaluation and revising the plan has been outlined in the Schedule of Events, 511.c.5. Committee members will be the same as outlined in 511.a.1.


**8.2. Implementation, Evaluation and Revision of the Plan (CRS Activity 511.j)**

The implementation, evaluation and revision procedures are described and scheduled in CRS Section 511.b and 511.c listed above.

The City of Grand Prairie Flood Mitigation Plan Advisory Committee will monitor implementation of the Plan and conduct semi-annual reviews to evaluate the effectiveness of the Plan as scheduled in CRS Section 511.b and 511.c listed above. Upon completion of the Plan Review, the Committee will prepare the Semi-annual Plan Review Report that will result in a revision to the Plan based on input from the public, other agencies and City Staff. The City of Grand Prairie Flood Mitigation Plan will be resubmitted to City Council for approval only when required by FEMA to meet CRS requirements.

**The City of Grand Prairie Flood Mitigation Plan is hereby approved by the City of Grand Prairie Flood Mitigation Plan Advisory Committee on August 28, 2001.**

  
**Gordon Scruggs, CFM**  
**Floodplain Administrator**  
**CRS Coordinator**

  
**Kathe Houke**  
**Planner in Charge**

# **513 CREDIT DOCUMENTATION**

## Flood Mitigation Plan

City of Grand Prairie, Texas

## 513 Credit Points

City of Grand Prairie's plan was prepared using the following process:

	<u>Item Score</u>	<u>Step Total</u>
a. Organize to prepare the plan:		
1. Direction to Planning Committee by Planner-in-Charge	2	
2. Planning Committee had 4 City Depart Staff:	6	
3. Process formally approved by City Council	2	<u>10</u>
b. Involve the public		
1. Public meeting at the end of the planning process	2	
2. Public meetings held at the beginning of the planning process:	8	
3. Public information activities encourage input:	4	
4. Questionnaires ask the public for information:	4	
5. Recommendations are solicited from advisory groups	4	
6. Planning committee includes the public:	26	<u>48</u>
c. Coordinate with other agencies		
1. Key agencies contacted at the beginning of the planning	3	
2. Meetings held with key agencies:	10	
3. Planner-in-Charge reviewed community's needs	3	
4. Draft action plan send to agencies for comment	2	<u>18</u>
d. Assess the hazard		
1. The plan includes a map and hazards description:	5	
2. The plan describes other natural hazards:	5	<u>10</u>
e. Assess the problem		
1. Number and types of buildings subject to the hazards:	2	
2. Review of flood insurance claims:	5	
3. Description of the impact of flooding	6	
4. Warning and evacuating residents and visitors:	3	
5. Critical facilities:	4	
6. Natural and beneficial functions:	4	
7. Development, redevelopment and population trends:	5	
8. Summary of the impact of flooding on the community:	6	<u>35</u>
f. Set goals:	2	<u>2</u>

g. Review possible activities		
1. Preventive activities	5	
2. Property protection activities	5	
3. Natural resource protection activities	5	
4. Emergency services activities	5	
5. Structural projects	5	
6. Public information activities	5	<u>30</u>
h. Draft and action plan		
1. Recommendations for activities from six of the six categories:	40	<u>40</u>
i. Adopt the plan (Required)	2	<u>2</u>
j. Implement, evaluate, and revise		
1. Procedures for monitoring and recommending plan revisions:	2	
2. Same planning committee does evaluation:	8	<u>10</u>
Add the step totals for lines a through j above	FMP =	<u>205</u>
k. Habitat conservation plan	HCP =	<u>0</u>
512 Impact Adjustment:		
a. Option 1: rFMP = 1.0		
b. Option 2: rFMP = 0.25		
513 Credit Calculation:		
a. FMP = 205		
b. FMP 205 x rFMP 1.0	cFMP =	205
HCP	HCP =	<u>0</u>
c510 = value above rounded to the nearest whole number	c510 =	<u>205</u>

# APPENDIX A

- ▶ **Map of Known Flood Hazard Areas**
- ▶ **Public Notice – List of Attendees**
- ▶ **Results/Chart from Questionnaire**
- ▶ **7-12 Year Capital Improvement Plan Schedule**
- ▶ **Comments From Other Agencies**
- ▶ **Insurance Claims Information**



GRANTS MANAGEMENT

January 9, 2002

Mr. Gilbert Ward  
Research & Planning Fund  
Grants Management Division  
Texas Water Development Board  
P.O. Box 13231  
1700 N. Congress Avenue  
Austin, TX 78711-3231

**RE: CITY COUNCIL APPROVAL OF FLOOD MITIGATION PLAN**

Dear Mr. Ward:

Please find attached a copy of the City Council Resolution that adopts and approves the Flood Mitigation Plan developed in part using grant funds awarded through your office.

Please do not hesitate to call me at (972) 237-8157 if you should need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to be "Clair Davis", written in a cursive style.

Clair Davis, E.I.T., N.C.F.M.  
Assistant Floodplain Administrator

Enc.: City Council Resolution

CC: File PW-20: D:\JOB\FMP\_Grant\TWDB\_Notify\_receipt04.doc

CITY OF GRAND PRAIRIE, TEXAS

RESOLUTION NO. 3768

COMMUNITY DEVELOPMENT  
MANAGEMENT

**A RESOLUTION OF THE CITY OF GRAND PRAIRIE, TEXAS TO ACCEPT THE FLOOD MITIGATION PLAN AS THE PLANNING AND GUIDANCE DOCUMENT FOR FLOOD MITIGATION WITHIN THE CITY.**

WHEREAS, on 09-04-2001 the City Council met to discussed and accepted the Flood Mitigation Plan as the planning and guidance document for flood mitigation within the City and its extraterritorial jurisdiction; and

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF GRAND PRAIRIE, TEXAS THAT:

SECTION I

The City Council of the City of Grand Prairie, Texas adopts the Flood Mitigation Plan as the planning and guidance document for flood mitigation within the City and its extraterritorial jurisdiction.

SECTION II


This City Council met on September 4, 2001 at 7:30 p.m. in the City Council Chambers of the City Municipal Complex, located at 317 College Street in Grand Prairie, Texas.

SECTION III

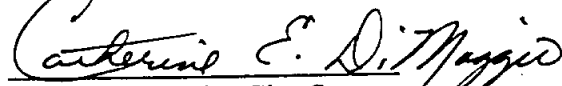
This resolution shall take effect from and after the date of its passage.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF GRAND PRAIRIE, TEXAS ON THIS 4<sup>TH</sup> DAY OF SEPTEMBER, 2001.


APPROVED:

  
Charles England, Mayor

ATTEST:

  
Cathy DiMaggio, City Secretary

APPROVED AS TO FORM:

  
Don Postell, City Attorney



# CITY COUNCIL AGENDA REQUEST

September 4, 2001

Requested Agenda Date:

<input type="checkbox"/> Briefing _____	<input type="checkbox"/> Presentation _____	<input checked="" type="checkbox"/> Consent <u>X</u>
<input type="checkbox"/> Individual _____	<input type="checkbox"/> Administrative Report _____	<input type="checkbox"/> Public Hearing _____
Department Manager <u><i>R. McCall</i></u>	Date: <u>August 24, 2001</u>	

**SUBJECT: Adoption of Resolution Accepting the Flood Mitigation Plan as the Planning and Guidance Document for Flood Mitigation within the City of Grand Prairie**

**RECOMMENDED ACTION:** Adopt a resolution accepting the Flood Mitigation Plan, as recommended by the Floodplain Management Advisory Committee. The plan will be used for planning and guidance in the selection of Stormwater Capital Improvement Projects (CIPs).

1. City Attorney's Office _____	Contract _____	Resolution _____	Ordinance _____
2. Budget Office _____			
Operating Budget		Capital Improvement Budget	
Budgeted:	\$ _____	Fiscal Impact Form Attached _____	
Expenditure	\$ _____		
Difference	\$ _____		
Remarks:			
3. Finance (for grant-related items) _____			
4. Board / Commission Review Complete (if	Yes _____	No _____ applicable)	
5. City Council Committee Review Complete (if applicable)	Yes _____	No _____	
6. City Manager's Office Approved _____	Return to Department _____		
Remarks:			





TEM #

# CITY COUNCIL COMMUNICATION

**MEETING DATE:** September 4, 2001

**SUBJECT:** Adoption of Resolution Accepting the Flood Mitigation Plan as the Planning and Guidance Document for Flood Mitigation within the City of Grand Prairie

**PRESENTER:** Ron McCuller

## RECOMMENDED ACTION:

Adopt a resolution accepting the Flood Mitigation Plan, as recommended by the Floodplain Management Advisory Committee. The plan will be used for planning and guidance in the selection of Stormwater Capital Improvement Projects (CIPs).

## ANALYSIS:

As you know, the citizens of Grand Prairie that own homes in the floodplain receive a 10 percent discount on flood insurance because of the City's regulations, enforcement program, and floodplain capital projects program. To continue this discount, and possibly increase the discount to 15 percent, the City must adopt a Flood Mitigation Plan by October 1, 2001.

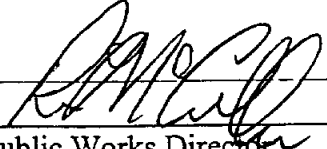
Adoption of this plan will also maintain the City's ability to compete for federal Flood Mitigation Assistance (FMA) grants through the Texas Water Development Board and, if needed, make the City eligible for special grants after any federal disasters in this area. (Note that since Houston just recently approved a Flood Mitigation Plan, it is receiving millions of dollars in special grants and federal funding, in addition to disaster relief, for the recent flooding disaster.) The City has been accepted for FMA grants including the Bluegrass Slope Repair on Fish Creek (\$280,000 in 2000), Keith Heights Phase I Home Buyouts (\$300,000 in 2001), and Flood Mitigation Plan preparation (\$32,000 in 2001).

The plan was prepared by a consultant under the direction of the Floodplain Management Advisory Committee. The committee was comprised of six citizens (as approved by Council) and four City staff members. Public comments, from a public meeting and questionnaires, have been incorporated in to the document.

The City's primary goals include reducing residential flooding with capital projects, reduce the impact of development on downstream flooding and erosion through more rigorous Code enforcement, acquire floodplain when economically feasible, continue to update the City's flood studies, and continue to enhance the GIS planning tools for drainage related issues. The projects in the 2002-2008 Drainage Capital Improvement Program (CIP) are proposed to achieve the City's primary goals.

**FINANCIAL CONSIDERATION:**

At this time there are no definite financial considerations for this project, other than the proposed 2002-2008 Drainage Capital Improvement Program (CIP). The CIP is to be funded through the Stormwater Utility Fund and Bond program. These funding sources will be approved by Council with the FY02 budget and approval of the bond program in the November election. In the event the drainage bond program is not passed by the voters, it will be necessary to modify the projects and schedule within the plan.



Public Works Director

August 24, 2001

Date

Deputy City Manager

August 24, 2001

Date

Fiscal Impact Summary Attached?

Yes [  ]

No [  ]

# **APPENDIX A**

## **MAP OF KNOWN FLOOD HAZARD AREAS**

# **APPENDIX A**

## **PUBLIC NOTICE LIST OF ATTENDEES**

## NOTICE OF PUBLIC MEETING

You are hereby notified that the City of Grand Prairie will hold a public meeting for the purpose of obtaining public input on the draft Flood Mitigation Plan. The plan will be available for review after 8:00 a.m., Friday, August 17, 2001 at the Public Works Department, Development Center, 206 West Church Street. Considering the effects of this plan and in turn making its recommendation to the City Council, the City of Grand Prairie **Public Works Department will hold the public meeting on Monday, August 20, 2001 at 7:00 p.m. in the Library Conference Room at the Grand Prairie Main Library, 901 Conover.** For further information on the above case, contact the City of Grand Prairie Department of Public Works at (972) 237-8154.

Publish:            Sunday, August 12, 2001  
                         Sunday, August 19, 2001

# FLOOD PLAIN MANAGEMENT PLAN

PUBLIC MEETING 8/20/01

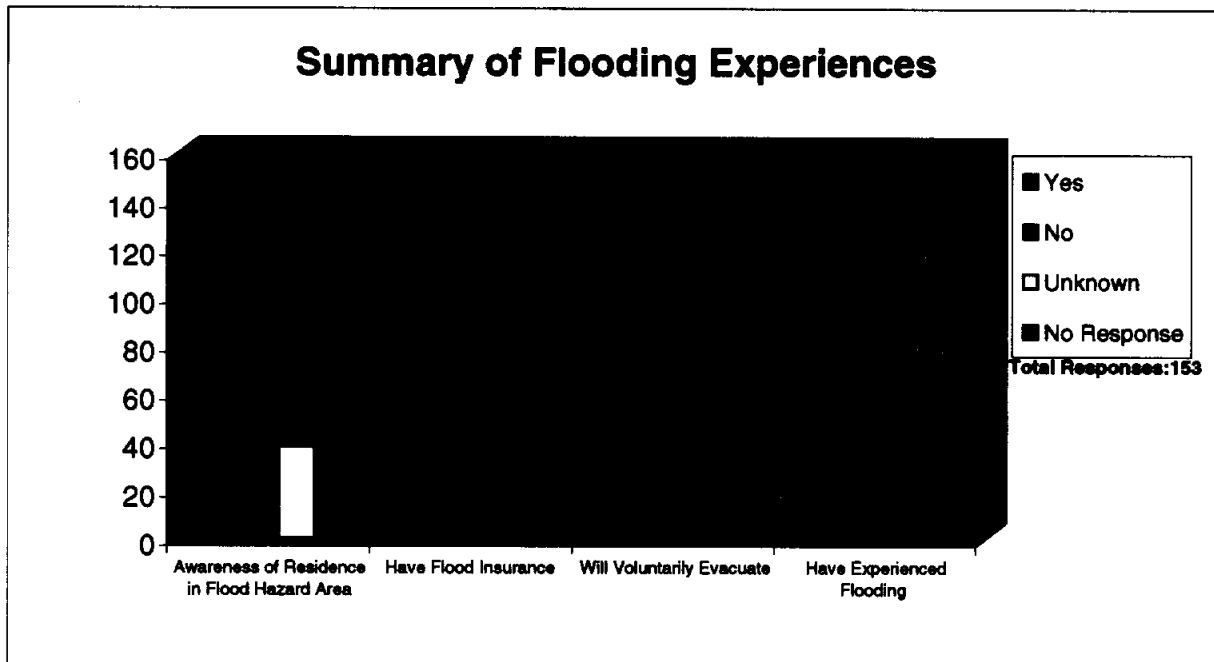
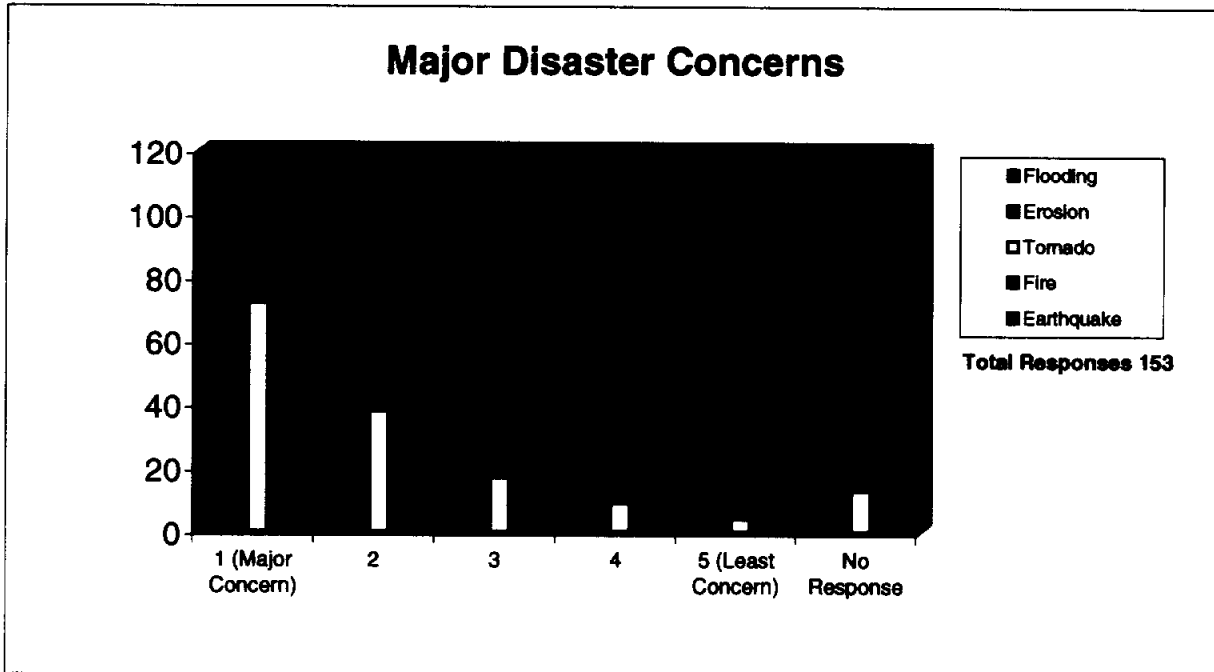
<u>NAME</u>	<u>ORG / ADDRESS</u>	<u>PHONE</u>
CLAIR DAVIS	CGP / Floodplain Admin.	972-237-8157
ROBIN KHAVARI	" / ENGINEERING	(972) 237-8145
RON McCuller	Co of GP / Pub. Wks	(972) 237-8061
BILL SKUDER	HANSON	972-262-1571
RAYE Shaw	Home Owner	972-262-0643
Rene M. Nelson	Flood Control Dist	972 399 0026
CE Sweeney	City	972/237 8137
Quana Colton	Half Assoc.	817/847-1422
Carrie Furlong	Half Assoc.	817.1847-1422
Erin Atkinson	Half Assoc.	817-847-1422
Rachet Slack	City of GP	972 237 8082

# **APPENDIX A**

## **RESULTS & CHART FROM QUESTIONNAIRE**

**City of Grand Prairie  
Flood Mitigation Plan  
September 4, 2001**

**Citizen Survey Responses**





**Table 1**

Summary of Experience with Floods in Grand Prairie

Questionnaire Response	Awareness of Residence in Flood Hazard Area	Have Flood Insurance	Will Voluntarily Evacuate	Have Experienced Flooding
Yes	48	30	141	17
No	65	117	6	129
Unknown	38	0	0	1
No Response	4	6	6	6
<b>Total</b>	<b>153</b>	<b>153</b>	<b>153</b>	<b>153</b>

30 % of the respondents live in a Flood Hazard Area

19 % of the respondents have flood insurance.

93 % of the respondents would voluntarily evacuate during a declared disaster event if requested by local authorities.

Only 11% of the respondents have experienced a flood in their home.

**Table 2**

**Ranking of Major Disaster Concerns**

<b>Rank</b>	<b>Flooding</b>	<b>Erosion</b>	<b>Tornado</b>	<b>Fire</b>	<b>Earthquake</b>
<b>1 (Major Concern)</b>	36	10	72	35	7
<b>2</b>	26	24	38	49	0
<b>3</b>	38	27	17	41	3
<b>4</b>	34	50	9	14	18
<b>5 (Least Concern)</b>	11	29	4	2	110
<b>No Response</b>	8	13	13	12	15
<b>Total</b>	153	153	153	153	153

Tornado received the highest number of "major concern" votes, with twice as many votes as any other disaster.

Earthquake received the highest number of "least concern" votes with over three times as many as any other dis

### **Recommendations by Respondents**

#### **General Comments**

- You all are doing a fine job.
- Advise each household if they are in a floodplain area.
- Keep residents informed, when city changes the floodplain classification so that the residents can get the flood hazard insurance.
- Be proactive. Visit, call, mail designated flood hazard area homeowners with needed information.
- Prompt notification of changes that affect flood insurance requirements. Recent work near IH-30 and Seventh Street may remove my house from plan. Please help.
- Publish a map of the floodplain.
- Publish survey map showing by color or shading those areas that are or may be inundated or suffer water damage due to high water and heavy rains.
- More public information about flood hazard areas.
- Need to send information on where the floodplain is.
- It would be helpful to have information about flood areas within the city
- Come out and re-measure the land behind our home. Old owners told me it floods and the new construction could make our homes flood.
- We live on a creek, do not want woods cut down and drainage ditch put in. Watch water change direction in creek.
- Improve water drainage on streets.
- Regular cleaning of creeks and run-off areas.
- To open and clear out ditch beyond property so water can run out.
- This area has a 100-year floodplain. In past years, I mowed grass back to the creek. In recent years, more and more streets and home have been built around here. Consequently, we have more erosion of the property. It would be better if the city could have a more controlled flow of the water.

- Water has seeped under the doors in some floods.
- What is the rating of my area?
- Please come look at our property, which is wrongly designated floodplain.
- Categorize each home along the floodplain as related to potential flooding.
- Just tell the people the predictable danger they are in pertaining to flooding. Please watch the new areas being built with regard to the impact of their run-off.
- Is anything in place to help those whose home flood due to city workers rupturing lines or accidents of any kind that would cause damage?
- A tiny piece of our lot is in the floodplain, yet we are required to carry insurance by our mortgage company. I would like another survey of our lot, our house is pier and beam, and is set back on the lot. We could *never* flood.
- Please fix the erosion problem behind my house and my neighbors houses. The repairs that you did several years ago are failing.
- Plan, plan, plan ahead – expend any necessary expenses for contingency plans and prevention measures.
- Boats and helicopters would be essential in a major flood. Actually, weather resulting from a hurricane could cause a major flood in this region. Education plan, and training is essential. Perfect Storm situation would be holding the bag. Not out of the realm, it could happen here.
- Clear out the brush and cut the high grass in the “green belt” area located on Hwy. 360 and Kingwood. That area has not been maintained since 1997.
- Stop letting developers build in the floodplain. My yard would still have 24 more trees if the council had listened to us years ago.
- To be notified by the plan, the city, or someone as to whether flooding is a possibility in my home and to be able to buy insurance. To have an exit plan out of Coronado Woods if flooding occurs.
- Better communication of flood hazard areas.
- Stop Bill Strong and Southland Cemetery from dumping in floodplain.

- Clean up crews along waterways so as to keep water moving faster. Stop erosion around roots to save huge trees over fifty years old.
- Fix the flooding that occurs in my back yard from the creek and to fix the open drain that collects the street water that runs in my back yard. It stops up and overflows into my yard, then I wouldn't need flood insurance. It is expensive.
- Initiate improved drainage plans in populated areas.
- Build a nice park for families that live around the area. Build tennis courts.
- Make flood zone parks like City of Tulsa, OK. We need more drainage.
- Please take into consideration the effect of heavy rains on Grand Prairie Country Club, formerly Woodcrest, when you do not open the gates at Mountain Creek. Please consider opening them sooner.
- I just moved to this address, am I in a floodplain?
- Enforce the code preventing neighbors from diverting and obstructing water onto another's property. Specifically 2126 Westfield Drive.

#### **Cottonwood Creek**

- Maintain Cottonwood Creek to insure adequate run-off. Consider adequate drainage when developing adjacent land.
- Clean out Cottonwood Creek (McFall's Park) for Carrier Pkwy. east to Southeast 14<sup>th</sup>. Channel and concrete creek from southeast 3<sup>rd</sup> street to Beltline Road. This would make a nice linear park for biking, jogging and walking. Colgate Park is in this area, if cleaned up and maintained it would be a great park! Most people don't even know it is a park due to overgrowth of weeds and fallen trees. There is a lot of wild life in this area also!
- Something has got to be done with the flooding problem caused by Cottonwood Creek putting my parking lot under water – Fox Hollow Apartments, Skyline Properties.

#### **Fish Creek**

- No more construction of homes and jogging trails along Fish Creek in Grand Prairie and Arlington.
- Fish Creek needs to be dug out to decrease the water level. Years of debris collecting endanger the homes and land in its surroundings. Beautifying this creek would be a plus. Thank you for your concerns

- It seems to us that as Grand Prairie and the I-20 corridor become more built up and covered in concrete, we have put too much pressure on Fish Creek to be our main sewer drain. If you don't believe, come look out our back window next time we have a two-inch rain. You're letting the builders get away with murder. A proper drainage plan is part of the cost of building.
- Remove all concrete debris from the creek, which is causing damming. Widen the creek in certain vicinities to allow for proper flow since you have allowed for the shopping centers to direct all runoff into Fish Creek. Excessive drain off from the shopping centers has uprooted numerous trees of ours along with neighbor's fences, creating extensive, unjustified hours of labor for the clean up and disposal.
- Water has risen 10-15 feet from my fence line on Fish Creek behind my house. I am concerned of flooding with heavy downpour due to trash flowing in the creek may occlude the flow.
- Live in Fish Creek area but not in floodplain that I know of. Greenbelt is getting pretty trashy. Lots more concrete around to promote runoff
- Quit allowing development where the run off from rain flows into Fish Creek.

#### **Johnson Creek**

- Please limit the number of new homes and commercial building being done in the area around flood prone areas – such as Johnson Creek!
- I live in Johnson Creek and I am not pleased with the work done to widen it. It has done a wonderful job in taking care of the water no matter how heavy the rains have been.
- Our problem has been solved, we live on Johnson Creek
- Once a creek project is over, don't change the boundaries of the floodplain and allow building because you think the problem is fixed. We live on Johnson Creek and on May 5, 1995, a storm passed through that filled the creek within one foot of the top. I know that the project was not finished yet, but it had been dug as deep and wide as it was going to be and 30 more minutes of rain would have flooded.

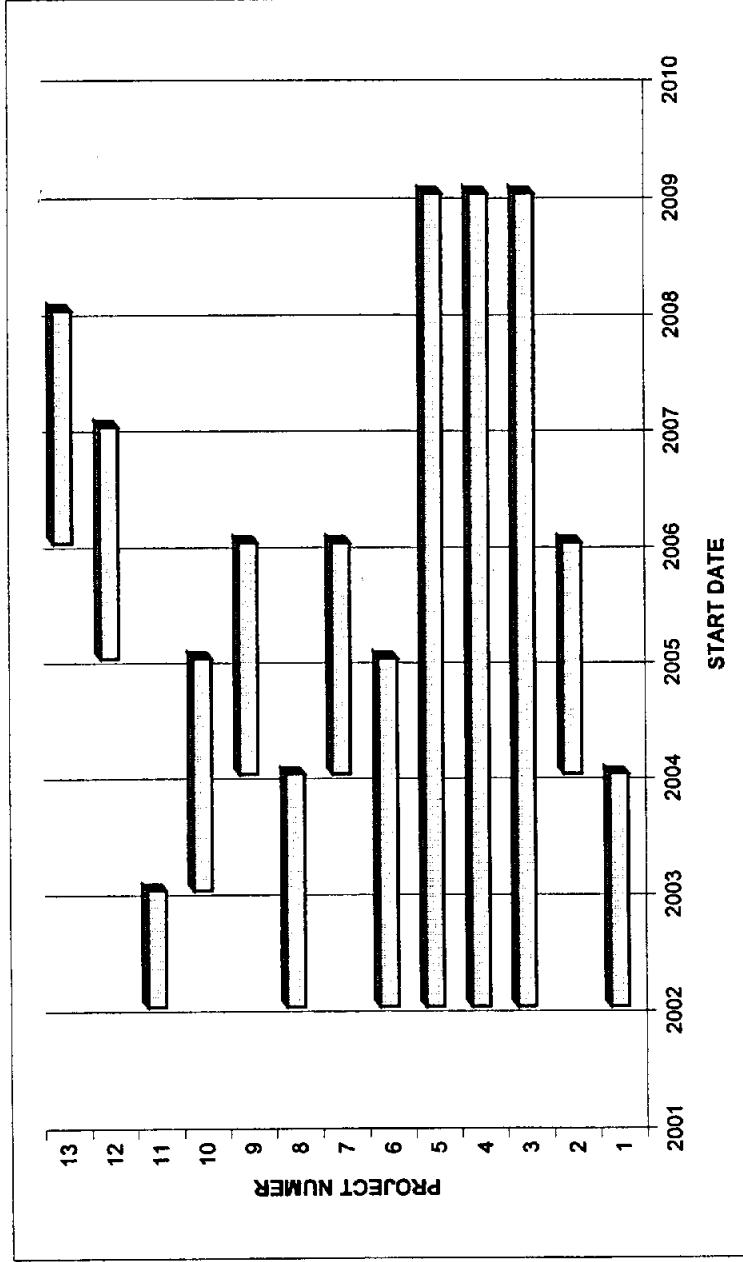
#### **Kirby Creek**

- Have more (concern) control over the creeks that feed into the lakes...Keep up / maintain and beautify the creeks that flow through the city....they are so (unkempt) that the water backs up when it rains causing erosion. Specifically Kirby Creek.
- Looking at Kirby Creek's erosion of the banks, my land is headed to the creek.

# **APPENDIX A**

## **7 YEAR CAPITAL IMPROVEMENT PLAN SCHEDULE**

# 7 YR. CAPITAL IMPROVEMENT PLAN SCHEDULE



Project Number / Project Name
1 Carrier & Conover Storm Drain
2 Alsbaugh/Prairie/Matthew
3 Dalworth D/S Carrier
4 Dalworth Area SD
5 Miscellaneous Drainage Projects
6 Mountain Creek Bypass
7 May Lane Storm Drainage
8 Joe Pool Area Master Plan
9 Robinson & Marshall Storm Drain
10 Cottonwood Storm Drain Master Plan
11 Keith Heights Buyout
12 Holiday Hills Storm Drainage #2
13 Holiday Hills Storm Drainage #3



# **APPENDIX A**

## **COMMENTS FROM OTHER AGENCIES**

To: Gordon Scruggs, Floodplain Administrator  
From: James R. Cummings, Environmental Services Director  
Date: August 27, 2001  
Subject: Draft Floodplain Management Plan

The City of Grand Prairie Environmental Services Department obtained a copy of the August 14, 2001 Draft Floodplain Management Plan. After a complete review of the plan we are submitting the following comments for consideration.

Part 1.9, *Establishing Goals and Objectives* and 4.1, *Goals Established*. The first item in the secondary goals section, keep City owned floodplain in a natural state, could be better stated by adding "and conserve existing flora and fauna". Another secondary goal to "Review the Floodplain Management Ordinance", is not addressed anywhere. See section 3.5 comments below.

Part 2.3, *Flood Events*, does not include the flood of 1990 and 1991. However, the 1990 flood is mentioned earlier on page 6 of the introduction.

Part 2.4, *Erosion Hazards*, lists Kirby Creek as an erosion hazard. Additional stream restoration projects on Kirby Creek, Cottonwood Creek, and Fish Creek, though not in the capital improvement program, should be considered when sources of funding are available. The Trinity-Brazos District of the Nature Conservancy of Texas has funds available for such stream restoration projects. It should be included that any engineering studies, which consider stream restoration, will make an additional effort to include research of alternative funding for such projects.

Part 3.5, *Assess the Problem: Wetlands, Riparian Areas, and Sensitive Areas*, should perhaps be re-titled Citywide Water Quality Monitoring and Education Efforts. It is our recommendation that Part 3.5 be completely rewritten. Currently, Part 3.5 is duplicated in Part 5.6, *Environmental Education*. Instead, Part 3.5 can include provisions to identify wetlands and sensitive areas. These areas can be identified using the GIS Planning Tool in cooperation with future ESD GIS tools. The City of Grand Prairie's Floodplain staff and ESD may then prioritize environmental concerns and address additional goals. Please refer to the final primary goal on page 22, "Create GIS Planning Tool for City and ETJ that includes: Drainage problems, Erosion problems, Open space, Special flood hazard area, Undeveloped land, and Water quality monitoring policy."

Part 5, *Review of Possible Activities: Natural Resource Protection* is extremely brief. This section should, at a minimum, address the current citywide effort to review all practices to improve water quality and fulfill the EPA Phase II [Pollution Prevention and Good Housekeeping for Municipal Operations] requirement.

The subsection of 5.3, *Wetlands Protection*, should include statements that address the goal mentioned earlier, to "conserve existing flora and fauna." Additionally, it could be stated that research and perhaps Environmental Site Assessments of such areas would be completed when necessary. The Environmental Services Department (ESD) should be consulted on all city projects and recommendations concerning wetlands and sensitive areas. This consultation would give ESD an opportunity to cooperate and advise other departments and the public on environmental issues.

The subsection, *Erosion and Sediment Control*, is unclear. It should be stated here that the City plans to increase sediment pollution prevention efforts through construction storm water regulatory inspection requirements and implementation of erosion control BMP's.

The final subsection, *Best Management Practices*, should include measures to revise the floodplain ordinance and dissolve portions of the ordinance that interfere with the ability to recommend and implement environmentally preferred BMP's. Remember that it is a secondary goal of the Floodplain Management Plan to "Improve and Revise the Floodplain Management Ordinance."

Thank you for the opportunity to comment on the draft plan in detail. If you have any questions please contact Environmental Specialist and Floodplain Management Committee Vice-Chair, Rachel Stark at 972-237-8082.

# **APPENDIX A**

## **INSURANCE CLAIM INFORMATION**

Data as of 06/30/2001

State : Texas

Community : 485472 - Grand Prairrie, City Of

	1-4 Family	Small Bus	Other Res	All Others
PIF :	172	0	0	22
Coverage :	22,853,900	0	0	7,820,500
Losses :	285	7	3	8
Payments :	6,200,444	149,601	3,449	61,824
Adj. Pay. :	129,827	3,130	313	2,909
CWOPs :	42			

	Emergency	Regular
PIF :	0	194
Coverage :	0	30,674,400

*Policies in force*

	PIF	Losses
A-Zone :	95	227
V-Zone :	0	0
B,C,X Zone:	99	73
A Numbered:	85	205
AH Zone :	0	0
AO Zone :	0	0
A99 Zone :	0	0
AR Zone :	0	0
V Numbered:	0	0
D Zone :	0	0
Mob. Home :	0	0
BFE LT 0 :	0	0
Pre-firm :	106	
Post-firm :	88	
Sub Dmg :	23	

Total Prem:	90,518
Non-SFHA :	38,172
SFHA :	52,346

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 Click on the 'CLM' to see detail information about that claim.  
 Click on the 'MAP' to jump to the Microsoft Expedia site and view a map.  
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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number	
	POB 210188	DALLAS	TX	75211	0188	485472	1979/01/24	99999	1
	2106 BISHOP ST	GR PRAIRIE	TX	75050	2107	485472	1979/04/16	99999	1
	1814 -16 ROBINSON RD	GRAN PRAIRIE	TX	99999		485472	1981/02/23	99999	2
	1906 BISHOP ST	GRAND PAIRIE	TX	75050	2103	485472	1988/12/04	25143	0
	1821 BEAUMONT	GRAND PIERCE	TX	75051		485472	1978/08/17	99999	1
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1980/10/31	99999	1
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1981/10/31	99999	1
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1988/10/31	15458	4
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1988/10/31	15458	4
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1989/10/31	15458	4
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1990/10/31	15458	4
	1830 ESQUIRE PL	GRAND PR	TX	75050	6314	485472	1991/10/31	15458	4
	2201 RAVENWOOD	GRAND PR	TX	75050	2138	485472	1989/04/23	99999	1
	2429 SHERWOOD	GRAND PRAINE	TX	75050		485472	1978/05/25	99999	1
	1910 BISHOP ST	GRAND PRAIRE	TX	75050	2103	485472	1989/03/17	25143	0
	1910 BISHOP ST	GRAND PRAIRE	TX	75050	2103	485472	1990/03/17	25143	0
	2410 POSTBRIDGE RD	GRAND PRAIRE	TX	75050	2124	485472	1978/05/26	99999	1
1629 E MAIN		GRAND PRAIRIE	TX	75050		485472	1992/01/05	99999	2

728 SURREY	CR	GRAND PRAIRIE	TX	75050		485472	1991/05/14	99999	2
2226 IVANHOE	CR	GRAND PRAIRIE	TX	75050		485472	1989/04/14	99999	1
	10 INGLEWOOD DR # 17	GRAND PRAIRIE	TX	75051		485472	1998/01/17	25658	6
	10 INGLEWOOD DR # 17	GRAND PRAIRIE	TX	75051		485472	1998/01/17	25658	6
	1013 NW 8TH ST	GRAND PRAIRIE	TX	75050	3410	485472	2001/02/05	10111	2
	105 N CARRIER PW	GRAND PRAIRIE	TX	75050		485472	1980/09/14	99999	1
	1102-1104 COLLEGE ST	GRAND PRAIRIE	TX	75050		485472	1990/03/11	99999	2
	1206 HILLSIDE DRIVE	GRAND PRAIRIE	TX	75051	3203	485472	1989/04/08	15458	4
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050		485472	1981/06/08	99999	2
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050		485472	1981/06/08	99999	2
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050		485472	1984/06/08	99999	2
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050	3273	485472	1988/06/08	99999	2
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050	3273	485472	1994/06/08	99999	2
	1506 W RIDGE DR	GRAND PRAIRIE	TX	75050	3273	485472	1994/06/08	99999	2
	1602 KNIGHT CIRCLE	GRAND PRAIRIE	TX	75050	2848	485472	1978/11/23	99999	1
	1602 KNIGHT CIRCLE	GRAND PRAIRIE	TX	75050	2848	485472	1980/11/23	99999	1
	1705 CANADIAN CIR	GRAND PRAIRIE	TX	75050	7061	485472	1995/04/04	25143	0
	1710 INGLEWOOD DR	GRAND PRAIRIE	TX	75051	3132	485472	2001/01/17	25658	6
	1722 SOUTHWEST	GRAND PRAIRIE	TX	99999		485472	1978/05/27	99999	1
	1722 SOUTHWEST	GRAND PRAIRIE	TX	99999		485472	1980/05/27	99999	1
	1805 ARMSTEAD AVE.	GRAND PRAIRIE	TX	75051		485472	1992/02/03	10111	2

1810 AUSTIN AVE	GRAND PRAIRIE	TX	75051	5515	485472	1989/01/28	99999	2
1810 AUSTIN AVE	GRAND PRAIRIE	TX	75051	5515	485472	1993/01/28	99999	2
1818 W MINSTER DR	GRAND PRAIRIE	TX	75050	6333	485472	1989/03/22	99999	2
1818 W MINSTER DR	GRAND PRAIRIE	TX	75050	6333	485472	1990/03/22	99999	2
1821 BEAUMONT	GRAND PRAIRIE	TX	75051		485472	1989/07/05	99999	2

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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff DV/ Claim DOL	Company Number
	1821 BEAUMONT ST	GRAND PRAIRIE	TX	75051	1318	485472	1993/07/05	25143
	1822 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6314	485472	1988/12/09	99999
	1822 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6314	485472	1989/12/09	99999
	1822 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6314	485472	1991/12/09	99999
	1822 WELLINGTON	GRAND PRAIRIE	TX	75051		485472	1980/05/30	99999
	1826 WELLINGTON	GRAND PRAIRIE	TX	75051		485472	1978/05/28	99999
	1829 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1981/11/04	99999
	1829 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1981/11/04	99999
	1829 ESQUIRE PLACE	GRAND PRAIRIE	TX	75050	6342	485472	1988/11/04	25658
	1829 ESQUIRE PLACE	GRAND PRAIRIE	TX	75050	6342	485472	1988/11/04	25658
	1829 ESQUIRE PLACE	GRAND PRAIRIE	TX	75050	6342	485472	1989/11/04	25658
	1829 ESQUIRE	GRAND						



PLACE	PRAIRIE	TX	75050	6342	485472	1991/11/04	25658	2
1833 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1981/11/07	99999	2
1833 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1988/10/16	99999	2
1833 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1988/10/16	99999	2
1833 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1989/10/16	99999	2
1833 ESQUIRE PL	GRAND PRAIRIE	TX	75050	6342	485472	1991/10/16	99999	2
1902 ROCK CRK	GRAND PRAIRIE	TX	75050		485472	1990/11/14	99999	2
1906 W MINISTER	GRAND PRAIRIE	TX	75050	6335	485472	1989/11/02	99999	2
1906 W MINISTER	GRAND PRAIRIE	TX	75050	6335	485472	1991/11/02	99999	2
1910 W MINISTER ST	GRAND PRAIRIE	TX	75050	6335	485472	1989/02/28	25143	0
1910 W MINISTER ST	GRAND PRAIRIE	TX	75050	6335	485472	1990/02/28	25143	0
1910 W MINISTER ST	GRAND PRAIRIE	TX	75050	6335	485472	1991/02/28	25143	0
1910 W MINISTER ST	GRAND PRAIRIE	TX	75050	6335	485472	1991/02/28	25143	0
1910 W MINISTER ST	GRAND PRAIRIE	TX	75050	6335	485472	1998/02/28	25143	0
1910 WESTMINISTER DR	GRAND PRAIRIE	TX	75050		485472	1982/02/28	99999	2
1913 BRIARWOOD	GRAND PRAIRIE	TX	75050		485472	1978/10/12	99999	1
1913 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1979/01/31	99999	1
1914 W MINSTER	GRAND PRAIRIE	TX	75050		485472	1989/05/23	99999	2
1914 W MINSTER	GRAND PRAIRIE	TX	75050		485472	1989/05/23	99999	2
1914 W MINSTER	GRAND PRAIRIE	TX	75050		485472	1991/05/23	99999	2
1914 W MINSTER	GRAND PRAIRIE	TX	75050		485472	1991/05/23	99999	2
1917	GRAND	TX	75050	6343	485472	1989/06/19	25143	0

	HAMPSHIRE ST	PRAIRIE								
	1917 HAMPSHIRE ST	GRAND PRAIRIE	TX	75050	6343	485472	1994/06/19	25143	0	
	2002 BISHOP ST	GRAND PRAIRIE	TX	75050	2105	485472	1988/05/22	25143	0	
	2006 BISHOP	GRAND PRAIRIE	TX	75050		485472	1988/10/03	02003	3	
	2006 BISHOP	GRAND PRAIRIE	TX	75050		485472	1989/10/03	02003	3	
	2009 W FLD	GRAND PRAIRIE	TX	75050	1754	485472	1988/09/14	99999	1	
	2009 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1978/09/04	99999	1	
	2010 BISHOP	GRAND PRAIRIE	TX	75050		485472	1988/09/01	99999	1	
	2010 DOGWOOD	GRAND PRAIRIE	TX	75050	2204	485472	1993/03/17	10111	2	
	2010 DOGWOOD	GRAND PRAIRIE	TX	75050	2204	485472	1995/03/17	10111	2	
	2010 DOGWOOD	GRAND PRAIRIE	TX	75050	2204	485472	1999/03/17	10111	2	
	2017 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1979/03/21	99999	1	

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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number
	2017 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1981/03/21	99999
	2017 WESTFIELD DR	GRAND PRAIRIE	TX	75050	1754	485472	1989/04/07	25143
	2025 WILDWOOD DRIVE	GRAND PRAIRIE	TX	75050	2245	485472	1991/11/20	15458
	2101 RAVEN WOOD	GRAND PRAIRIE	TX	75050		485472	1978/10/08	99999
	2101 RAVEN	GRAND						

	WOOD	PRAIRIE	TX	75050		485472	1988/11/13	99999	1
	2101 RAVEN WOOD	GRAND PRAIRIE	TX	75050		485472	1988/11/13	99999	1
	2101 RAVEN WOOD	GRAND PRAIRIE	TX	75050		485472	1989/11/13	99999	1
	2101 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2136	485472	1995/04/15	25143	0
	2102 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1978/10/05	99999	1
	2102 BISHOP DR	GRAND PRAIRIE	TX	75050	2107	485472	1988/10/05	37540	1
	2102 BISHOP DR	GRAND PRAIRIE	TX	75050	2107	485472	1989/10/05	37540	1
	2102 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1979/02/02	99999	1
	2102 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1980/02/02	99999	1
	2102 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1989/03/26	19232	0
	2102 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1989/03/26	19232	0
	2102 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1990/03/26	19232	0
	2102 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2135	485472	1995/03/26	25143	0
	2102 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1979/04/20	99999	1
	2102 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1989/01/18	25143	0
	2105 RAVENWOOD	GRAND PRAIRIE	TX	75050		485472	1979/04/14	99999	1
	2105 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2136	485472	1989/04/14	15458	4
	2105 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2136	485472	1990/04/14	15458	4
	2106 BISHOP DR	GRAND PRAIRIE	TX	75050	2107	485472	1989/11/07	23035	2
	2106 BISHOP ST	GRAND PRAIRIE	TX	75050	2107	485472	1988/11/07	25143	0
	2106	GRAND							

	RAVENWOOD	PRAIRIE	TX	75050		485472	1987/06/12	99999	2
	2106 RAVENWOOD	GRAND PRAIRIE	TX	75050	2135	485472	1989/06/17	99999	2
	2106 RAVENWOOD	GRAND PRAIRIE	TX	75050	2135	485472	1989/06/17	99999	2
	2106 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2135	485472	1979/04/15	99999	1
	2118 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1978/06/05	99999	1
	2118 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1978/08/27	99999	1
	2118 WESTFIELD DR	GRAND PRAIRIE	TX	75050	1755	485472	1988/06/05	99999	1
	2200 ROCK CREEK DR	GRAND PRAIRIE	TX	75050	2248	485472	1989/04/02	18325	
	2201 BISHOP ST	GRAND PRAIRIE	TX	75050	2110	485472	1989/05/14	25143	0
	2201 LOWER TARRANT RD	GRAND PRAIRIE	TX	75050	1814	485472	1989/12/29	25143	0
	2201 VEGA	GRAND PRAIRIE	TX	75050		485472	1988/11/05	99999	2
	2201 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1989/11/05	25143	0
	2202 BISHOP	GRAND PRAIRIE	TX	75050		485472	1979/02/15	99999	1
	2202 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1989/04/01	99999	2
	2202 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1990/04/01	99999	2
	2202 RAVENWOOD ST	GRAND PRAIRIE	TX	75050		485472	1978/07/02	99999	1
	2202 RAVENWOOD ST	GRAND PRAIRIE	TX	75050	2137	485472	1987/07/02	02003	0
	2202 RAVENWOOD ST	GRAND PRAIRIE	TX	75050	2137	485472	1987/07/02	02003	0
	2203 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1978/09/24	99999	1
	2203 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1988/11/25	99999	1

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 This report is limited to claims data only

Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number	
	2205 BISHOP	GRAND PRAIRIE	TX	75050		485472	1981/07/18	99999	1
	2205 BISHOP	GRAND PRAIRIE	TX	75050		485472	1988/07/18	99999	1
	2205 BISHOP	GRAND PRAIRIE	TX	75050		485472	1989/07/18	99999	1
	2205 BISHOP	GRAND PRAIRIE	TX	75050	2110	485472	1991/07/18	02003	8
	2205 BISHOP	GRAND PRAIRIE	TX	75050	2110	485472	1994/07/18	02003	8
	2205 BISHOP	GRAND PRAIRIE	TX	75050	2110	485472	1994/07/18	02003	8
	2205 BISHOP	GRAND PRAIRIE	TX	75050	2110	485472	1996/07/18	02003	8
	2205 BISHOP	GRAND PRAIRIE	TX	75050	2110	485472	2000/07/18	02003	0
	2205 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1979/04/24	99999	1
	2205 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2138	485472	1989/04/30	10111	5
	2205 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2138	485472	1989/04/30	35289	0
	2205 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1988/05/21	25143	0
	2205 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1978/06/22	99999	1
	2205 WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1988/05/29	99999	1
	2206 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1978/05/04	99999	1
	2206 BISHOP	GRAND							

	DR	PRAIRIE	TX	75050		485472	1988/05/07	19232	0
	2206 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1989/05/07	19232	0
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1979/03/16	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1979/03/16	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1980/03/16	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1982/03/16	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1982/03/16	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1983/04/06	99999	1
	2206 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1984/04/06	99999	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1989/04/06	37540	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1989/04/06	37540	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1990/04/06	37540	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1993/04/06	37540	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1994/04/06	37540	1
	2206 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1999/06/09	37540	1
	2206 RAVEN WOOD	GRAND PRAIRIE	TX	75050		485472	1988/07/07	25143	0
	2209 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1979/04/13	99999	1
	2209 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1988/04/13	15458	4
	2209 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1989/05/20	15458	4
	2210 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1989/01/23	02003	0
	2210 BISHOP DR	GRAND PRAIRIE	TX	75050		485472	1990/01/23	02003	0
	2210 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1992/07/25	25143	0

	2210 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1978/10/11	99999	1
	2211 ROCK CREEK DR	GRAND PRAIRIE	TX	75050	2247	485472	1992/04/02	25143	0
	2211 ROCK CREEK DR	GRAND PRAIRIE	TX	75050	2247	485472	1993/04/02	25143	0
	2211 ROCK CREEK DR	GRAND PRAIRIE	TX	75050	2247	485472	1995/04/02	25143	0
	2211 ROCK CREEK DR	GRAND PRAIRIE	TX	75050	2247	485472	1997/04/02	25143	0
	2213 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1979/04/20	99999	1
	2214 S WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1978/11/10	99999	1

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The records with a yellow background are associated with Claims data.  
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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number	
	2214 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1988/11/21	99999	2
	2214 WESTFIELD DR	GRAND PRAIRIE	TX	75050		485472	1989/11/21	99999	2
	2217 VEGA	GRAND PRAIRIE	TX	75050	1743	485472	1994/10/14	10111	0
	2217 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1979/04/16	99999	1
	2217 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1989/04/16	15458	4
	2218 IVANHOE	GRAND PRAIRIE	TX	75050		485472	1988/06/23	25143	0
	2218 VEGA ST	GRAND PRAIRIE	TX	75050	1742	485472	1979/04/27	99999	1
	2218 VEGA ST	GRAND PRAIRIE	TX	75050	1742	485472	1989/04/27	15458	4
	2221 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1993/05/14	25143	0
WILDWOOD									

OAKS ADDITION	2221 VEGAS ST LOT 7 BLK 5 OF	GRAND PRAIRIE	TX	75050	1743	485472	1989/03/01	25658	6
WILDWOOD OAKS ADDITION	2221 VEGAS ST LOT 7 BLK 5 OF	GRAND PRAIRIE	TX	75050	1743	485472	1989/03/01	25658	6
WILDWOOD OAKS ADDITION	2221 VEGAS ST LOT 7 BLK 5 OF	GRAND PRAIRIE	TX	75050	1743	485472	1993/03/01	25658	6
	2222 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1979/05/01	99999	1
	2225 VEGA	GRAND PRAIRIE	TX	75050		485472	1988/06/03	25143	0
	2225 VEGA	GRAND PRAIRIE	TX	75050		485472	1991/05/23	25143	0
	2226 IVANHOE CIR	GRAND PRAIRIE	TX	75050	2225	485472	1999/02/28	25143	0
	2226 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1979/04/14	99999	1
	2229 S WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1978/07/14	99999	1
	2229 S WESTFIELD	GRAND PRAIRIE	TX	75050		485472	1988/09/29	99999	1
	2229 VEGA	GRAND PRAIRIE	TX	75050		485472	1978/07/15	99999	1
	2229 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1989/02/28	25143	0
	2229 VEGA ST	GRAND PRAIRIE	TX	75050	1743	485472	1989/02/28	25143	0
	2230 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1978/09/01	99999	1
	2230 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1978/09/01	99999	1
	2230 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1980/09/01	99999	1
	2230 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1989/06/11	99999	2
	2230 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2137	485472	1986/05/07	25143	0
	2230 RAVENWOOD DR	GRAND PRAIRIE	TX	75050	2137	485472	1988/05/07	25143	0
	2230 RAVENWOOD	GRAND	TX	75050	2137	485472	1989/05/07	25143	0



DR	PRAIRIE								
2242 IVANHOE CR	GRAND PRAIRIE	TX	75050	2225	485472	1978/05/30	99999		1
2309 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1978/05/26	99999		1
2309 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1988/05/26	99999		1
2309 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1988/05/26	99999		1
2309 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1989/05/26	99999		1
2309 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1989/05/26	99999		1
2317 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1979/04/15	99999		1
2317 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1988/08/18	25143		0
2317 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2142	485472	1989/08/18	25143		0
2321 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1979/02/01	99999		1
2321 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1989/02/12	99999		1
2321 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1990/02/12	99999		1
2321 SW FLD DR	GRAND PRAIRIE	TX	75050		485472	1988/12/31	99999		2
2401 POSTBRIDGE	GRAND PRAIRIE	TX	75050		485472	1988/11/08	99999		2
2401 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1988/07/04	99999		2

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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number
	2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1978/05/29	99999

2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1984/05/29	99999	1
2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1988/05/29	15458	4
2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1988/05/29	15458	4
2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1988/05/29	15458	4
2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1991/05/29	15458	4
2402 DUNCAN PERRY RD	GRAND PRAIRIE	TX	75051		485472	1991/05/29	15458	4
2402 POST BRIDGE RD	GRAND PRAIRIE	TX	75050	2124	485472	1988/08/31	02003	0
2405 EGYPTIAN WAY	GRAND PRAIRIE	TX	75050	2151	485472	1995/04/11	15458	4
2405 POSTBRIDGE	GRAND PRAIRIE	TX	75050		485472	1989/08/15	19232	0
2405 SHERWOOD	GRAND PRAIRIE	TX	75050	2144	485472	1988/06/08	19232	0
2406 KINGSBRIDGE ST	GRAND PRAIRIE	TX	75050	2101	485472	1988/05/28	25143	0
2406 POSTBRIDGE	GRAND PRAIRIE	TX	75050	2124	485472	1989/05/05	02003	0
2406 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1989/05/13	99999	2
2409 POSTBRIDGE RD	GRAND PRAIRIE	TX	75050	2125	485472	1989/05/06	37540	2
2421 KINGBRIDGE	GRAND PRAIRIE	TX	75050		485472	1986/07/26	99999	1
2422 SHERWOOD DR	GRAND PRAIRIE	TX	75050	2143	485472	1989/02/22	99999	2
2438 KINGSBRIDGE DR	GRAND PRAIRIE	TX	75050		485472	1979/03/01	99999	1
2505 SHERWOOD	GRAND PRAIRIE	TX	75050		485472	1987/05/23	99999	1
2515 HUNTER FERRELL	GRAND PRAIRIE	TX	75050		485472	1991/01/28	99999	2
3 A GREENWOOD HILLS SOUTH	GRAND PRAIRIE	TX	75051		485472	1989/04/29	25143	0

	ADD								
	3 A GREENWOOD HILLS SOUTH ADD	GRAND PRAIRIE	TX	75051		485472	1995/04/29	25143	0
	303 SKYLINE	GRAND PRAIRIE	TX	75051		485472	1994/06/16	33162	0
	305 SKYLINE	GRAND PRAIRIE	TX	75051		485472	1994/06/16	33162	0
	307 SKYLINE	GRAND PRAIRIE	TX	75051		485472	1994/06/16	33162	0
	309 GRAMLEY DR	GRAND PRAIRIE	TX	75051		485472	1983/08/08	99999	2
	309 SKYLINE	GRAND PRAIRIE	TX	75051	2059	485472	1994/06/16	33162	0
	3517 POST OAK DR	GRAND PRAIRIE	TX	75050	6554	485472	1995/04/05	99999	2
	3717 NOVUS CT	GRAND PRAIRIE	TX	75052	7004	485472	1995/02/20	99999	2
	4013 E JEFFERSON	GRAND PRAIRIE	TX	75051		485472	1989/02/15	99999	2
R2 PECAN EST LOT 1	4025 VINYARD RD	GRAND PRAIRIE	TX	75052		485472	1991/05/01	15458	4
	425 MANANA	GRAND PRAIRIE	TX	75050		485472	1988/09/14	25658	1
	425 MANANA DR	GRAND PRAIRIE	TX	75050	6542	485472	1994/06/21	15458	4
	600 AVE J EAST	GRAND PRAIRIE	TX	75050		485472	1987/11/14	99999	1
	600 AVE J EAST	GRAND PRAIRIE	TX	75050		485472	1988/11/14	99999	1
	605 A 4TH E PW SAFARI	GRAND PRAIRIE	TX	75050		485472	1991/10/17	99999	2
605 E SAFARI B 2	605 E SAFARI B2	GRAND PRAIRIE	TX	75050		485472	1991/06/16	99999	2
	721 W TARRANT RD	GRAND PRAIRIE	TX	75050	3445	485472	1988/05/27	99999	2
	721 W TARRANT RD	GRAND PRAIRIE	TX	75050	3445	485472	1988/05/27	99999	2
	732 SURREY CIR	GRAND PRAIRIE	TX	75050	6323	485472	1989/05/24	99999	2
	732 SURREY CIR	GRAND PRAIRIE	TX	75050	6323	485472	1989/05/24	99999	2

	732 SURREY CIRCLE	GRAND PRAIRIE	TX	75050	6323	485472	1991/05/24	25143	0
	736 SURREY CIRCLE	GRAND PRAIRIE	TX	75050	6323	485472	1989/08/29	02003	2
	736 SURREY CIRCLE	GRAND PRAIRIE	TX	75050	6323	485472	1989/08/29	02003	2

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Address Line 1	Address Line 2	City	St Cd	Zip	+4	Comm Nbr	Pol Eff Dt/ Claim DOL	Company Number	
	736 SURREY CIRCLE	GRAND PRAIRIE	TX	75050	6323	485472	1991/08/29	02003	2
	736 SURREY CR	GRAND PRAIRIE	TX	75050	6323	485472	1989/05/14	25143	0
	736 SURREY CR	GRAND PRAIRIE	TX	75050	6323	485472	1989/05/14	25143	0
	802 HAMPSHIRE DR	GRAND PRAIRIE	TX	75050		485472	1988/09/16	99999	2
	802 HAMPSHIRE DR	GRAND PRAIRIE	TX	75050		485472	1988/09/16	99999	2
	802 HAMPSHIRE DR	GRAND PRAIRIE	TX	75050		485472	1989/09/16	99999	2
	802 HAMPSHIRE DR	GRAND PRAIRIE	TX	75050		485472	1991/09/16	99999	2
	808 COOK DRIVE	GRAND PRAIRIE	TX	75050	3425	485472	1990/03/14	19232	0
	808 COOK DRIVE	GRAND PRAIRIE	TX	75050	3425	485472	1991/03/14	19232	0
	813 E CORAL WAY	GRAND PRAIRIE	TX	75051	4154	485472	1989/03/02	25143	0
	813 E CORAL WAY	GRAND PRAIRIE	TX	75051	4154	485472	1991/03/02	25143	0
	822 TURNER BL	GRAND PRAIRIE	TX	75050	3454	485472	1994/06/12	99999	2
	829 TURNER BLVD	GRAND PRAIRIE	TX	75050	3455	485472	1995/01/14	19232	0
	830	GRAND							

	BLACKBURN	PRAIRIE	TX	75050		485472	1988/05/08	99999	2
	902 NW 19TH ST	GRAND PRAIRIE	TX	75050	3170	485472	1995/01/10	15458	4
	910 BRITISH	GRAND PRAIRIE	TX	75050		485472	1978/12/20	99999	1
	914 N CARRIER PKWY	GRAND PRAIRIE	TX	75050	3401	485472	1994/08/28	25143	0
	918 N CARRIER PKWY	GRAND PRAIRIE	TX	75050	3401	485472	1989/03/08	25143	0
	918 N CARRIER PKWY	GRAND PRAIRIE	TX	75050	3401	485472	1995/03/08	25143	0
	934 HAMPSHIRE	GRAND PRAIRIE	TX	75050		485472	1990/03/28	25143	0
	934 HAMPSHIRE	GRAND PRAIRIE	TX	75050		485472	1991/03/28	25143	0
	937 STRATFORD	GRAND PRAIRIE	TX	75051		485472	1981/01/06	99999	1
	945 NW 9TH ST	GRAND PRAIRIE	TX	75050	3412	485472	1994/08/31	25143	0
817 TURNER BLVD	BLOCK C KEITH HEIGHTS ADDN	GRAND PRAIRIE	TX	75050	3455	485472	1993/06/12	25143	0
817 TURNER BLVD	BLOCK C KEITH HEIGHTS ADDN	GRAND PRAIRIE	TX	75050	3455	485472	1994/06/12	25143	0
	LI BA GREENWOOD HL S	GRAND PRAIRIE	TX	75050		485472	1988/07/25	25143	0
	LI BA GREENWOOD HL S	GRAND PRAIRIE	TX	75050		485472	1994/07/25	25143	0
	LT 12 BLK 6 WILDWOOD OAKS	GRAND PRAIRIE	TX	75050		485472	1989/12/20	25143	0
	LT 2 BLK H DORCHESTER PLACE	GRAND PRAIRIE	TX	75050		485472	1990/02/07	25143	0
	LT 2 BLK H DORCHESTER PLACE	GRAND PRAIRIE	TX	75050		485472	1991/02/07	25143	0
2110 WESTFIELD	PO BOX 632	GRAND PRAIRIE	TX	75050		485472	1978/05/21	99999	1
	RT 2 BOX 324 R	GRAND PRAIRIE	TX	75052	9802	485472	1979/03/03	99999	1

	RT 2 BOX 324 R	GRAND PRAIRIE	TX	75052	9802	485472	1989/03/15	99999	1
	2102 BISHOP DR	GRAND PRAIRIE T	TX	75050	2107	485472	1999/12/21	10111	0
	2326 KING RICHARD DR	GRAND PRAIRIE T	TX	75050	2009	485472	1996/05/05	10111	0
	2326 KING RICHARD DR	GRAND PRAIRIE T	TX	75050	2009	485472	1999/05/05	10111	0
	LT 14 BLK G DORCHESTER PLACE	GRAND PRAIRIE	TX	75050		485472	1991/05/08	25143	0
	110 CEDAR DR	GRANDPRAIRIE	TX	75052	2507	485472	1989/03/07	99999	2
	818 BLACKBURN ST	GRANDPRAIRIE	TX	75050	3415	485472	1994/05/27	25143	0

Flood Mitigation Plan  
Grand Prairie, Tx.  
Contract No. 2001-001-035

The following map is not attached to this report. It is located in the official file and may be copied upon request.

Map No. 1 Halff Associates, Inc. 4001 Fossil Creek Boulevard, Fort Worth, Texas-AVO 19837-9-4-01

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