

# Flood Response Plan

City of Fort Worth, Texas

Version 1.0

1/30/2019

## Approval & Implementation

1/30/2019

The Flood Response Plan for the City of Fort Worth is hereby approved for implementation. This plan shall be reviewed and updated annually by the Transportation & Public Works Department/Stormwater Management Division and the Fort Worth Office of Emergency Management in coordination with other affected City departments/divisions and external partners as necessary.

This plan uses resources currently available to the City and does not obligate political jurisdictions outside the City limits.

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## **I. Authority**

This Flood Response Plan (FRP) was developed pursuant to requirements of the Flood Protection Grant received by the City of Fort Worth from the Texas Water Development Board (TWDB) through TWDB Grant No. 1600012041. The City has authority through Federal, State, and Local laws to perform flood emergency planning activities. These include:

### **A. Federal**

1. Robert T. Stafford Disaster Relief and Emergency Assistance Act
2. Emergency Planning and Community Right-To-Know Act
3. National Incident Management System
4. National Response Plan

### **B. State**

1. Government Code, Chapter 418, Emergency Management
2. Government Code, Chapter 433, State of Emergency
3. Government Code, Chapter 791, Inter-Local Cooperation Contracts
4. Health and Safety Code, Chapter 778, Emergency Management Assistance Compact
5. Administrative Code, Title 37, Part 1, Chapter 7, Division of Emergency Management

### **C. Local**

1. City Ordinance 11592, dated June 6, 1994, Emergency Management Ordinance
2. City Ordinance 16781-1-2006, dated January 19, 2016, Establishment of Stormwater Utility
3. Mutual-aid and inter-local agreements shown as Attachment 6 in the Basic Plan of the City's Emergency Management Plan
4. City Ordinance 10056, Floodplain Ordinance

## II. Explanation of Terms

### A. Definitions

**Emergency Operations Center (EOC):** The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., Federal, State, regional, tribal, city, county), or by some combination thereof. The EOC is managed through protocols for communicating with the incident site, obtaining resources, and applying appropriate resources to address the incident.

**Flash Flood:** A damaging and life-threatening, rapid rise of water into a normally dry area beginning within minutes to multiple hours of the causative event (e.g., intense rainfall, dam failure, ice jam). Ongoing flooding can have rapid intensification of severity of impacts in cases where excessive rainfall results in a rapid surge of rising flood waters. Flash flooding, such as dangerous small stream or urban flooding and dam or levee failures, requires immediate action to protect life and property. (Source: National Weather Service)

**High Water Warning System (HWWS):** A system of road side flashers that responds to road overtopping determined by water level sensors, and rain gauges maintained and operated by the City of Fort Worth's Stormwater Management Division, Transportation and Public Works.

**National Incident Management System (NIMS):** A flexible Incident Command approach applicable for any emergency across multiple jurisdictional levels and disciplines. The NIMS has a consistent national framework for preparing for, preventing, responding, and recovering to incidents. The main components of NIMS are: use of common terminology, "typing" of all resources by their capabilities, span of organizational control to no more than 7 levels, common understanding of the emergency situation, integrated communications, and accountability.

**Preparedness:** A continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response. Within the National Incident Management System, preparedness focuses on the following elements: planning; procedures and protocols; training and exercises; personnel qualification and certification; and equipment certification. Preparedness activities take place prior to storm events. Preparedness can also include outreach activities to informing the public about flood risks and prevention measures.

**Response:** The capabilities necessary to save lives, protect property and the environment, and meet basic human needs during and immediately after storm events. Since some storm events and associated flood threats can extend over multiple days, response may not be limited to a single day or duration of a single storm.

**Recovery:** The capabilities necessary to assist communities affected by an incident to return to pre-disaster conditions or as close to pre-disaster conditions as feasible.

## **B. Acronyms**

CFW	City of Fort Worth
CIP	Capital Improvement Program
EAP	Emergency Action Plan
FEMA	Federal Emergency Management Agency
FMP	Floodplain Management Plan of the City of Fort Worth
FRP	Flood Response Plan
EOC	Emergency Operations Center
HWWS	High Water Warning System
NIMS	National Incident Management System
NWS	National Weather Service
OEM	Fort Worth Office of Emergency Management
TRWD	Tarrant Regional Water District
TWDB	Texas Water Development Board
TPW	Fort Worth Transportation and Public Works Department
USACE	U.S. Army Corps of Engineers

### **III. Purpose and Plan Organization**

#### **A. Purpose**

The purpose of the City of Fort Worth (CFW) Flood Response Plan (FRP) is to identify flood threats to the City, describe flood preparedness efforts, and outline response to flood incidents. This plan compliments specific response procedures used by responding agencies. The Stormwater Division, Department of Transportation and Public Works (TPW) and the Fire Department Office of Emergency Management (OEM) have joint responsibility for this plan. This plan will be attached to the Local Mitigation Action Plan as required by the Texas Water Development Board in the Flood Protection Grant received by City of Fort Worth.

#### **B. Plan Organization**

This FRP plan is organized by flood hazard types which are: flash flooding, riverine and levee breach flooding, and flooding from dam breaches.

### **IV. Situation and Assumptions**

#### **A. Situation**

1. Fort Worth is subject to flooding that may result in casualties and/or damage to property. The most frequent flood hazard in Fort Worth is flash flooding. Riverine flooding and dam/levee failure are possible but considered unlikely due to good maintenance practices. The City has experienced 17 fatalities since 1986 due to vehicles entering high water at low-water roadway crossings.
2. One-Hundred year Federal Emergency Management Agency (FEMA) designated floodplains cover almost 50 square miles or 14% of the City's 353 square mile land area. There are 5,693 buildings located in the 100-year floodplain. Repetitive Loss Analysis from the 2016 Floodplain Management Plan (FMP) shows that of the 44 repetitive flood loss properties in the City, 11 are located within the 100-year floodplain. Drainage complaints from 2009-2015 show that 18% of flood related complaints are located within the floodplain while the rest are located in areas outside the floodplain. This is indicative of the role played by undersized storm drains within the City.

#### **B. Assumptions**

1. City resources will be sufficient to respond to most flood incidents. When additional resources are required the City will follow processes outlined in departmental procedures and/or the Fort Worth Emergency Management Plan. No new budgetary allocations are required by the City as result of this FRP.
2. The City of Fort Worth will continue to have approval and funding through the Mayor and City Council to conduct periodic planning, training, exercises, and purchase equipment to improve readiness and deal with flood emergencies.



3. This plan is based upon the concept that flood emergency functions performed by the TPW department parallel some of the normal day-to-day functions. To the extent possible, the same personnel and material resources used for day-to-day activities are employed during flood emergencies. Some routine functions that do not contribute directly to emergency response may be suspended for the duration of an emergency. The personnel, equipment, and supplies that would normally be required for those functions will be re-directed to accomplish the emergency tasks. When City resources are overwhelmed during a major disaster, outside assistance will be available in accordance with local, state and federal emergency procedures. Outside assistance may also be provided by voluntary groups and private organizations.
4. The City of Fort Worth Emergency Management Plan outlines emergency response organization and responsibilities based on an “all-hazards” approach.
5. There will be adequate lead time for the City Emergency Operations Center (EOC) to be activated for severe distress experienced by regional dams (Lake Benbrook, and Eagle Mountain-Lake Worth).

## **V. Mitigation and Recovery**

### **A. Mitigation**

The City has a proactive mitigation program that includes developing linear parks along flood-prone creeks, a capital improvement program (CIP) for storm water management, HWWS of road side flashers to warn drivers and emergency responders, development reviews to reduce downstream flooding, proactive flood plain management including enforcement of flood plain permitting, and creation of the Stormwater Management Utility. The Fort Worth section of the Tarrant County Multi-Jurisdictional Hazard Mitigation Action Plan has additional information.

### **B. Recovery**

Recovery procedures can be found in Annex J of the Fort Worth Emergency Management Plan.

## **VI. Flood Hazards, Preparedness, and Response**

### **A. Flash Flooding**

#### **Overview**

1. Flash flooding can occur almost anywhere in the City.
2. Creeks that are prone to flooding in Fort Worth include Bear Creek, Little Bear Creek, Big Fossil Creek, Marine Creek, Mary's Creek, Calloway Branch, Farmers Branch, Lebow Channel/Schwartz Creek, and Sycamore Creek.
3. Flood hazards for specific creeks vary considerably. The FEMA Flood Insurance Study (FIS) and the Open Channel studies conducted by the City may be consulted for specific information. A listing of City studies can be found in the FMP.

#### **Flash Flood Preparedness**

1. TPW/Stormwater has developed an Emergency Action Plan (EAP) entitled "Emergency Response Plan, Streets and Stormwater Operations" for response to flash flood incidents.
2. OEM, Fire, Police, and on-call TPW/Stormwater Field Operations staff monitor weather conditions.
3. TPW/Stormwater Field Operations and OEM monitor alarms received via text and email from the HWWS.
4. TPW/Stormwater Field Operations places barricades at overtopping HWWS crossings sites, as well as other known low-water crossings when flooding is likely.
5. Calls from citizens regarding storm water system maintenance follow-up are routed to the TPW Call Center and tracked via Accela service work orders.
6. TPW/Stormwater Field Operations personnel ensure availability of equipment for flood emergencies such as vacuum trucks ("vactor" trucks) and barricades.
7. Prior to flood incidents, TPW/Stormwater Field Operations inspects and removes debris from storm drains in drainage areas prone to flooding.
8. Stormwater Field Operations crews stabilize known erosive areas, replace missing manhole covers, and repair potholes as much as practicable prior to flood incidents.
9. To keep residents aware of flooding and threats from severe storms, educational material is sent to residents every 3 months as inserts in the water bills.

## **Flash Flood Response**

1. Flood response during emergencies may follow a recognizable build-up period during which local readiness actions increase with increasing flood threat. The readiness level is based upon the severity of flooding and the number of teams deployed. Level 4 is the least severe, and Level 1 is highest level during which the EOC is activated. Typically, field crews run pre-determined routes that have known flooding problems before and during flood incidents to determine severity of flooding.
2. OEM, Fire, and Police Departments will follow their departmental procedures for emergency response.
3. The Streets and Stormwater Field Operations section of TPW is responsible for TPW's initial monitoring and response to flooding emergencies. Crews in the section are activated on a rotating 24/7 schedule.
4. The Field Operations Superintendent escalates departmental resource requests for the most severe flooding in coordination with the TPW/Business Head and the TPW/Stormwater Assistant Director.
5. The OEM is kept updated with field conditions and may activate the EOC depending on flood severity.
6. The TPW Operations Command Center is activated during the most severe storm events (at Level 1). The TPW Business Support Head is responsible for directing this Center.
7. The TPW/Stormwater Assistant Director or designee reports to the EOC when activated.
8. Warning can be provided to the public by EOC via the media and/or emergency alert radios, City Outdoor Warning System sirens, and route alerting.
9. Additional information can be provided by use of NIXLE messaging and the media.

## **B. Riverine Flooding/Levee Breach**

### **Overview**

1. The Fort Worth levee system (floodway) is a Federal flood control project designed and constructed by the US Army Corp of Engineers (USACE) with Tarrant Regional Water District (TRWD) serving as the local sponsor responsible for on-going maintenance and operation. The floodway system is regularly inspected by USACE to ensure the project meets the original design level of protection.
2. Levees in the City are: Clear Fork Levee Loop, Water Works Levee, Overton Levee, North Main Levee, West Fork Levee Loop, Crestwood Levee, White Settlement Levee, Carswell Levee, Sump 6 Levee, and Brookside Levee.

### **Riverine Flood\Levee Breach Preparedness**

1. The TRWD Emergency Action Plan (EAP) is called “Emergency Action Plan, Fort Worth Floodway System, Tarrant County, Texas.”
2. TRWD provides training, coordination, and technical support to the City in preparation to flooding.
3. Updates to the TRWD EAPs are shared with the City.
4. The City participates in table top exercises hosted by the TRWD.

### **Riverine Flood\Levee Breach Response**

1. There are 3 levels of emergencies for the levees. These are: Level 1 when water is forecast to touch the levees, Level 2 when forecast at the Clear Fork gauge is at 22 feet depth and the Upper White Settlement Bridge gauge is at 49 feet depth, and Level 3 when boils are observed or levee overtopping is forecast.
2. The TRWD Floodway Superintendent or designee is responsible for initiating the Riverine/levee emergencies. TRWD takes on responsibility thereafter to coordinate with relevant agencies and to inform the City.
3. The OEM will be notified by the TWRD Director of Operations if any emergency level is reached.
4. The TRWD liaison will locate in the City’s EOC for Level 2 and 3 emergencies, or upon request.
5. Warning can be provided to the public by EAS via the media and/or emergency alert radios, City Outdoor Warning System sirens, and route alerting.
6. Additional information can be provided by use of NIXLE messaging and the media.

## **C. City Owned Dams**

### **Overview**

1. The City of Fort Worth owns the dams at the following lakes: Lake Como, Luther Lake, Lake Worth, Fosdic Lake, Willow Lake, Northside Drive Number 3, French Lake, Echo Lake, and Greenbriar Lake.
2. Ownership for Echo Lake dam (TX04558) has been transferred from Tarrant County to the City. The EAP was developed by Tarrant County.

3. There are a number of privately owned dams in the City including White Lake Dam, Bal Lake Dam, Seventeen Lakes with multiple dams, and Ridgley Country Club Estates Dam. Copies of EAPs submitted to the City are stored by Stormwater Management and OEM.

#### **City Dam Preparedness**

1. Emergency Action Plans (EAPs) for City Dams are included in a document entitled "Emergency Action Plans: Lake Como Dam (TX00777), Fosdic Lake Dam (TX04416), French Lake Dam (TX07106), Lake Greenbriar Dam (TX09625), Luther Lake Dam (TX00778), White Lake Dam (TX00783), Willow Creek Lake Dam (TX04796)." Please note that White Lake Dam is now privately owned.
2. While there has never been a recorded dam failure in Fort Worth, the TPW conducts dam safety assessments as required by relevant regulations.
3. The City inspects dams for issues such as seepage failure, embankment of foundation sliding, structural failure, or overtopping failure. The City Dams EAP should be consulted for more details for recognition of these failure modes.
4. Dam responsibilities for Lake Como, Luther Lake, and Willow Lake belong to the TPW Department.
5. Dam responsibilities for Greenbriar Lake Dam, Fosdic Lake Dam, and French Lake Dam belong to the Park and Recreation Department.

#### **City Dam Response**

1. The Emergency Management Coordinator has authority to implement and carry out all procedures in the City Dam EAPs.
2. OEM, Police Department, and Fire Department are responsible for performing notification and evacuation of residents.
3. The notification chart in each EAP should be used to notify the proper personnel and residents in the affected areas.
4. Warning can be provided to the public by EAS via the media and/or emergency alert radios, City Outdoor Warning System sirens, and route alerting.
5. Additional information can be provided by use of NIXLE messaging and the media.

### **D. Regional Dams (Lake Benbrook, Eagle Mountain-Lake Worth, Marine and Cement Creek)**

#### **Overview**

1. Regional dams of concern for Fort Worth are Eagle Mountain Reservoir and Lake Worth on the West Fork of the Trinity River, and Lake Benbrook located on the Clear Fork of the Trinity River. Lake Worth is a pass-through reservoir and considered as one unit with Eagle Mountain (Eagle Mountain-Lake Worth).
2. Lake Worth is City owned. The lake is formed by a rolled earth-fill dam 3,200 ft. long, with a 700-foot long ungated ogee-shaped concrete spillway near the center of the dam.
3. Eagle Mountain Reservoir is owned and operated by the TRWD.
4. Eagle Mountain Lake is a water supply reservoir on the West Fork Trinity River. The Eagle Mountain Dam is formed by two sections of rolled earth-fill separated by natural high ground, and total length of the dam is 4,800 feet. The original service spillway is located on the east end of the west dam section and consists of four 25-foot bays with a crest elevation of 649.1 feet MSL (three of which are equipped with vertical lift gates). The side-delivery spillway is located approximately 400 feet northeast of the original spillway and includes six 11.25-foot by 22-foot tall gates with a crest elevation of 636.65 feet MSL that discharge to a 25-foot box conduit. The emergency spillway is located in the natural ground between the two earth fill dam sections and consists of a 1,300-foot fuse plug that activates at elevation 676 feet MSL with a crest elevation of 670 feet MSL.
5. Lake Benbrook is owned and operated by the US Army Corp of Engineers (USACE).
6. Lake Benbrook is located in southwest Fort Worth, 15 river miles upstream from the confluence of the Clear Fork and the West Fork of the Trinity River.
7. The Lake Benbrook Dam consists of 3 main features: a compacted earth embankment 9,130 feet long, a 500-foot uncontrolled ogee shaped concrete gravity spillway with top width of 100 feet and crest elevation of 710.0 feet, and outlet works consisting of approach channel, reinforced concrete intake and control structure (6.5 x 13 foot Broome type gates), a service bridge, conduit, low-flow outlets, stilling basin, and outlet channel.
8. During flood events, debris may inhibit water flow through the Lake Benbrook emergency spillway resulting in road closures due to the danger of sudden debris release.
9. Marine Creek Lake is owned and maintained by TRWD. The dam is a 3,400 ft. earth-fill structure located in northwest Fort Worth on Marine Creek near Interstate Highway 820. The service spillway is morning glory style drop inlet structure with a diameter of 11 feet and crest elevation of 687 feet MSL. The emergency spillway is an 800-foot earth cut with an effective crest elevation of 715.2 feet MSL located approximately 500 feet from the east end of the dam.
10. Cement Creek Lake is owned and maintained by TRWD. The dam is a 2,250 ft. earth-fill structure located in northwest Fort Worth on Cement Creek south of Interstate Highway 820. The service spillway is morning glory style drop inlet structure with a diameter of 9.5 feet and crest elevation of 655 feet MSL. The emergency spillway is a 350-foot earth cut with an effective crest elevation of 695.5 feet MSL located at the western abutment of the dam.

### **Regional Dams Flood Preparedness**

1. Regional lake EAPs are provided to the City's OEM by TRWD and USACE.

2. Lake Benbrook EAP is developed and maintained by the USACE and is called “Benbrook Lake (TX00003, CWIS 001350), Clear Fork of Trinity River, Texas, Embankment, and Outlet Work and Spillway, Emergency Action Plan.”
3. The Eagle Mountain EAP is developed and maintained by TRWD and is called the “Eagle Mountain Lake Dam (TX00779) Emergency Action Plan.”
4. The Lake Worth EAP is maintained by the City’s Water Department. The EAP is titled, “Emergency Action Plan, Lake Worth Dam (TX00785).” Breach analysis in the Lake Worth EAP covers sunny day breach and flooding from a Probable Maximum Flood (PMF).
5. The Marine Creek Lake EAP is developed and maintained by TRWD and is called the “Marine Creek Dam (TX00784) Emergency Action Plan.”
6. The Cement Creek Lake EAP is developed and maintained by TRWD and is called the “Cement Creek Dam (TX04794) Emergency Action Plan.”
7. Lake Worth has a flood surcharge capacity of 24,000 acre-feet; flood easement at 606 feet, and top of the spillway is at 594 feet MSL. The conservation storage is 33,495 acre-feet.
8. The City participates in Lake Benbrook and Eagle Mountain-Lake Worth regional dam exercises.

**Lake Benbrook Flood Response**

1. The Lake Benbrook EAP lists roles and responsibilities for USACE ranging from the Commander to the Operations Project Manager. The responsibility for initiating notifications around the Lake property area belongs to the Lake Manager.
2. The USACE activation stages increase from “WATCH”, “ALERT,” “WARNING,” “SPILLWAY WARNING” through to “EMERGENCY.” These are defined as follows:
  - WATCH: Flood pool level is between 694.0 and 699.0 feet
  - ALERT: Flood pool level is between 699.0 and 705.0 feet
  - WARNING: Flood pool level is between 705.0 and 710.0 feet
  - SPILLWAY WARNING: Flood pool is greater than 710.0 feet
  - EMERGENCY: Flood pool level is above spillway and exceeds 724 feet.
3. Distress messages from the USACE are issued to downstream emergency management offices and the public using the National Weather Service (NWS) Emergency Alert System (EAS) and the media as the situation warrants.
4. The USACE District Commander or Chief of Emergency Management Operations can activate the USACE EOC.
5. The USACE uses a “Battle Rhythm” to include: coordination and control of deployment, data collection, and mobilization of crisis teams, daily briefings, and stakeholder briefings.

6. Downstream notification for City of Fort Worth is made to OEM and Stormwater Management.
7. Warning can be provided to the public by EAS via the media and/or emergency alert radios, City Outdoor Warning System sirens, and route alerting.
8. Additional information can be provided by use of NIXLE messaging and the media.

#### **Eagle Mountain-Lake Worth Flood Response**

1. The Reservoir Manager at Eagle Mountain Lake is responsible initiating and coordinating flood emergencies related to this lake.
2. OEM also monitors lake conditions in coordination with the Water Department and TRWD.
3. Eagle Mountain Lake release notification to the City is issued by the TRWD system monitor on duty or another representative of the TRWD Flood Team.
4. Emergency action procedures are initiated for Eagle Mountain Lake when a “watch” or more serious condition is reached. City will receive notification of this condition.
5. TRWD Engineering is mobilized for any of the emergency conditions.
6. The City’s Concept of Operation at Lake Worth is to inform residents living in the flood easement (there are 7 residences that are located in the flood easement) during releases from Eagle Mountain. This activity is coordinated between the TRWD, Water Department, and OEM.
7. Warning can be provided to the public by EAS via the media and/or emergency alert radios, City Outdoor Warning System sirens, and route alerting.
8. Additional information can be provided by use of NIXLE messaging and the media.



## **VII. Administration and Support**

This section of the plan covers general administrative requirements and support needs for flood emergencies by the City.

### **A. Agreements and Contracts**

1. TPW maintains a viable stockpile of equipment and materials and assigns duties to responsible staff, as described in the TPW Streets & Stormwater Operations Emergency Response Plan. Senior management within the TPW and Fire/OEM departments agree to jointly coordinate and monitor resource expenditures and anticipated needs.
2. When a flood emergency requires external resources the EOC will coordinate resource requests using established procedures.

### **B. Reports**

The OEM Duty Officer and the TPW Command Center closely monitor National Weather Service forecasts, Police and Fire response and TPW Call Center calls. With this information OEM will prepare and distribute timely briefing reports on actions underway to prepare for and respond to potential flood events and incidents.

### **C. Records**

1. To return normal departmental operations to the pre-incident level, City departments are required to establish administrative controls and maintain records for flood emergency operations in accordance with fiscal and standard cost accounting procedures. Such records may include activity logs, expenditures of supplies and equipment, and staff hours.
2. City departments are required to protect vital records.

### **D. Post-incident and Exercise Review**

OEM is responsible for organizing and conducting a critique after a flood emergency or exercise.

## **VIII. Plan Development and Maintenance**

This section establishes the policies and procedures for the review and update of the FRP.

1. The Director of the TPW department or designee and the Fire/OEM Emergency Management Coordinator or designee are responsible for reviewing and updating the plan annually.
2. Plan updates will address deficiencies identified from flood emergencies.

## Attachment 1: Agency Contacts by Flood Threat

**NOTE: EAPs should be consulted for a full list of contacts.**

<b>Flood Threat/Purpose</b>	<b>Department</b>	<b>Office Phone</b>	<b>24/7/365 Contact</b>
Any flood emergency	CFW Police CFW Police Non-Emergency		9-1-1 817-392-4222
Emergency Management	CFW Office of Emergency Management	817-392-6170	817-392-8866
Lake Worth Dam	CFW Water Department	817-392-6818	817-269-7256
Flash flooding	CFW, TPW/Stormwater, Asst. Director	817-392-7862	817-319-1259
Flash flooding	CFW, TPW/Stormwater, Field Ops, Superintendent	817-392-5196	817-944-3649
Lake Benbrook Dam	USACE Deputy Chief of Emergency Management	817-886-1444	817-886-1501
Eagle Mountain Lake, Cement and Marine Lake dams, and levees	TRWD Flood Center		817-720-4296

## Attachment 2: List of References

1. City of Fort Worth Emergency Management Plan. City of Fort Worth, Office Emergency Management.
2. Local Mitigation Action Plan, Tarrant County, Texas, June 2015. Available from the OEM website: [fortworthtexas.gov/emo](http://fortworthtexas.gov/emo).
3. City of Fort Worth Floodplain Management Plan, September 2015. Available from the Stormwater Management Website: [fortworthtexas.gov/stormwater](http://fortworthtexas.gov/stormwater).
4. Emergency Response Plan, Streets & Stormwater Operations, Transportation & Public Works, Fort Worth, April 2017, Field Operations Sections, Stormwater Management Division, City of Fort Worth.
5. Emergency Action Plan, Fort Worth Floodway System, Tarrant County, Texas, November 17, 2015, TRWD.
6. Emergency Action Plan: Lake Como Dam (TX00777), Fosdic Lake (TX04416), French Lake Dam (TX07106), Lake Greenbriar Dam (TX09625), Luther Lake Dam (TX00778), White Lake Dam (TX00783), Willow Creek Lake Dam (TX04796). January, 2012, Stormwater Management Division, TPW.
7. Eagle Mountain Lake Dam (TX00779), Emergency Action Plan, March, 2012. Engineering Division/Dam Safety Section, Tarrant Regional Water District (TRWD).
8. Emergency Action Plan, Lake Worth Dam (TX00785), July, 2016, City of Fort Worth Water Department.
9. Benbrook Lake (TX00003, CWIS 001350), Clear Fork of the Trinity River, Texas, Emergency Action Plan, August, 2017. Available from the USACE, Fort Worth District, Southwestern Division.
10. Marine Creek Dam (TX00784), Emergency Action Plan, March, 2012. Engineering Division/Dam Safety Section, Tarrant Regional Water District (TRWD).
11. Cement Creek Lake Dam (TX04794), Emergency Action Plan, March, 2012. Engineering Division/Dam Safety Section, Tarrant Regional Water District (TRWD).

### Attachment 3: Planning Meeting Documentation

Planning Meetings	Date	Description
1 <sup>st</sup> TWDB grant public meeting	March 23, 2017	TWDB staff, City of Fort Worth staff, partner agencies, residents
City of Fort Worth Internal Stakeholder Meeting	May 31, 2017	TPW and OEM staff
2 <sup>nd</sup> TWDB grant public meeting	Nov 1, 2017	TWDB staff, partner agencies, City of Fort Worth staff, residents
Meeting with TRWD	Nov 20, 2017	Meeting to discuss TRWD EAP for Eagle Mountain
Edits to Conceptual FRP	2/9/2018	Internal CFW meeting between SWM and OEM
Lake Benbrook EAP Exercise	2/21/2018	Flooding scenarios exercised for Lake Benbrook.
OEM severe weather outlook for May-June	3/21/2018	Severe weather seminar hosted by OEM

### Attachment 4: Table Top Exercises

Exercise Date	Participating Entities	Description
7/24/2018	CFW-OEM,CFW-Stormwater/TPW, CFW-Parks Dept, CFW-Public Information Office, CFW-TPW, CFW-Marshall, CFW-Police Dept, TRWD	Flood response plan review and exercise