

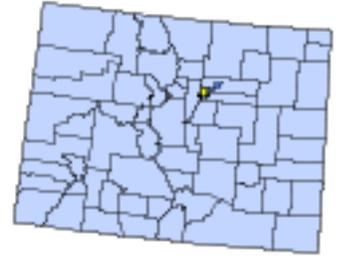


## Urban Drainage and Flood-Control District

### Full Mitigation Best Practice Story

#### *Denver County, Colorado*

**Denver, CO** -- On May 17, 1999, Denver's Urban Drainage and Flood Control District (UDFCD) became one of the first partners to sign an agreement with FEMA under the Cooperating Technical Communities (CTC) initiative (now Cooperating Technical Partners [CTP] initiative). As Scott Tucker, Executive Director of UDFCD, sees it, "The thrust of the [CTP initiative] is for us to work together to create and maintain accurate up-to-date flood hazard data for the 32 communities participating in the National Flood Insurance Program which are served by [UDFCD]."



The initial Partnership Agreement with FEMA set forth the basic intent of the cooperative effort. UDFCD and FEMA have signed two agreements covering mapping activities to be undertaken under the CTP initiative. The mapping activities undertaken to date are summarized below.

#### **Hydrologic and Hydraulic Data Preparation and Review**

UDFCD and FEMA have established the hydrologic and hydraulic (H&H) data parameters that UDFCD would use to conduct flood studies and that FEMA would accept. In addition, the major issue of the use of "future conditions hydrology" was resolved. Because of the continuing growth, local land-use decisions are based on the future urbanization conditions of the watersheds in the 32 communities served by UDFCD. For flood insurance purposes, FEMA must develop flood maps that present flood hazard information based on existing conditions hydrology. In their first mapping agreement, FEMA and UDFCD established the conditions under which future conditions hydrology can be used for flood hazard mapping. FEMA has started the process to change National Flood Insurance Program (NFIP) regulations to allow future conditions floodplains to be shown on FEMA flood maps.

#### **Survey of Local Digital Mapping Capabilities**

UDFCD also has initiated a survey of the digital mapping capabilities of the local governments in an effort to determine which communities are able and willing to provide digital base mapping to FEMA that could be used to produce Digital Flood Insurance Rate Maps (DFIRMs). The information collected during the UDFCD survey will be considered when FEMA and UDFCD jointly determine the order in which communities will receive digital flood insurance rate maps (DFIRMs). UDFCD also has taken on the responsibility of coordinating with the communities to ensure the digital mapping provided meets FEMA specifications. The use of local digital products has the advantage of being more easily updated as changes occur and more accurately portraying local field conditions.

#### **Preparation of Sample DFIRM**

Using a grant from FEMA, UDFCD prepared a sample DFIRM for a portion of Douglas County in accordance with FEMA specifications for DFIRMs. UDFCD combined flood hazard information from the UDFCD Flood Hazard Area Delineation Study for Willow Creek and digital base map information provided by Douglas County. Based on comments FEMA provided to UDFCD concerning the sample DFIRM, UDFCD has completed the conversion of the map panels for Willow Creek and is working toward digitally converting the map panels for the remaining portion of the county within UDFCD. UDFCD also developed guidelines for its contractors to use to ensure that future flood hazard studies will be compatible with FEMA DFIRM specifications. This activity will provide the basis for future cooperative efforts on DFIRM production in the communities served by UDFCD.

### Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region VIII**

State: **Colorado**

County: **Denver County**

City/Community: **Denver**

### Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Cooperative Technical Partner Activity; Flood Study Map Rollout/ Map Modernization; Floodplain Management**

Activity/Project Start Date: **05/1999**

Activity/Project End Date: **Ongoing**

Funding Source: **Cooperating Technical Partners (CTP)**

### Activity/Project Economic Analysis

Cost: **Amount Not Available**

Non FEMA Cost:

### Activity/Project Disaster Information

Mitigation Resulted From Federal  
Disaster? **Unknown**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

### Reference URLs

Reference URL 1: [http://www.fema.gov/plan/prevent/fhm/ctp\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/ctp_main.shtm)

Reference URL 2: [http://www.denvergov.org/jump\\_emergency.asp](http://www.denvergov.org/jump_emergency.asp)

## Main Points

- UDFCD and FEMA have established the hydrologic and hydraulic (H&H) data parameters that UDFCD would use to conduct flood studies and that FEMA would accept.
- UDFCD also has initiated a survey of the digital mapping capabilities of the local governments in an effort to determine which communities are able and willing to provide digital base mapping to FEMA that could be used to produce Digital Flood Insurance Rate Maps (DFIRMs).
- Using a grant from FEMA, UDFCD prepared a sample DFIRM for a portion of Douglas County in accordance with FEMA specifications for DFIRMs.