

## Colorado CTP Flood Map Modernization Project Colorado Water Conservation Board

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**ANDERSON CONSULTING ENGINEERS, INC.**  
Civil • Water Resources • Environmental

These on-going projects are being conducted by ACE for the CWCB as part of FEMA’s nationwide Map Modernization program, now called RiskMAP. The purpose of these projects is to convert the effective Flood Insurance Rate Maps (FIRMs) for various counties in Colorado to a digital format for the general use of all FEMA stakeholders. The counties included in this work are:

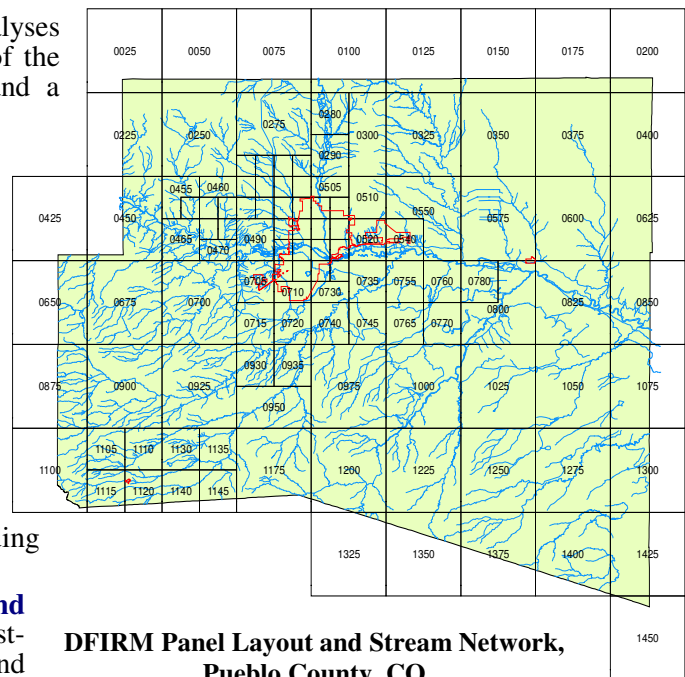
- Pueblo County – 104 Panels
- Montezuma County – 54 Panels
- Teller County – 37 Panels
- Archuleta County – 39 Panels
- La Plata County – 43 Panels
- El Paso County – 155 Panels
- Elbert County – 51 Panels
- Rio Grande County – 51 Panels
- Morgan County – 39 Panels

These projects include the following tasks:

- (a) **partnering** with FEMA, CWCB, and various local communities through meetings and outreach;
- (b) performing **field reconnaissance**, **field surveying** and preparing **topographic data** for use in studies;
- (c) conducting **hydrologic analyses using HEC-HMS, HEC-GeoHMS, Peakfq, and CWCB and USGS Regressions Equations** for several drainages basins throughout the State;
- (d) conducting **detailed hydraulic analyses using HEC-RAS and HEC-GeoRAS** and preparing floodplain/floodway mapping for over 70 miles of stream;
- (e) conducting **approximate level hydraulic analyses using HEC-RAS and HEC-GeoRAS** for over 950 miles of streams;
- (f) **automated floodplain mapping and redelineation** using ArcView® GIS along approximately 3,000 miles of stream statewide;
- (g) performing 2-dimensional hydraulic analyses and floodplain mapping using FLO-2D of the without-levee floodplains for 4 levees and a floodwall in Pueblo and El Paso counties;
- (h) assisting the City of Pueblo, the Arkansas River Conservancy District, and the City of Colorado Springs in the **levee accreditation (PAL)** process;
- (i) performing geotechnical, **hydrologic and hydraulic analyses** to **certify the Templeton Gap Levee** in Colorado Springs;
- (j) combining all existing and revised digital data into a **GIS-based DFIRM database**;
- (k) preparing the **Flood Insurance Studies (FISs)** for countywide studies including floodway data tables and flood profiles;
- (l) **coordinating closely with the CWCB and FEMA** and the communities during the post-preliminary processing and outreach and coordination phases of the projects;
- (m) preparing **final documents** during the public comment and appeals processes;

### *Project Highlights:*

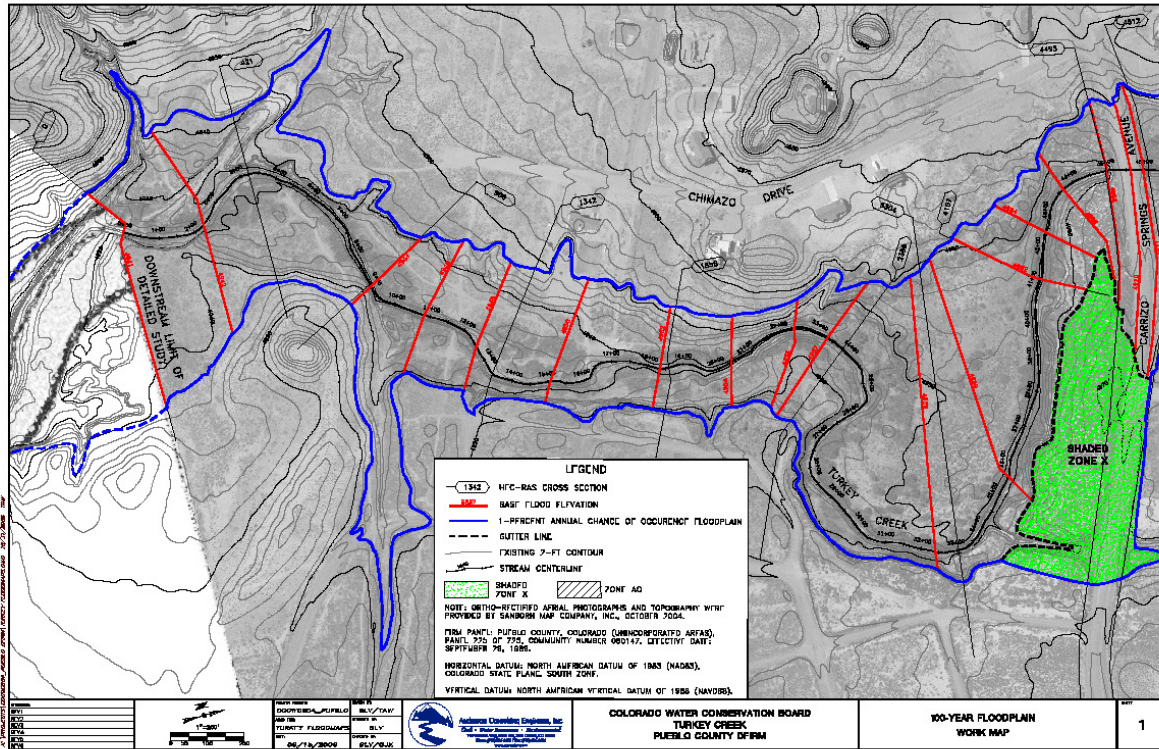
- **Hydrologic modeling**
- **Hydraulic modeling**
- **Surveying/topographic data preparation**
- **FIS report production**
- **MIP data entry**
- **Levee accreditation**



**DFIRM Panel Layout and Stream Network,  
Pueblo County, CO**

- (n) the **preparation of reports**, information and documentation required for the Technical Support Data Notebook (TSDN) for all hydrologic and hydraulic analyses; and
- (o) closely **tracking and controlling task costs** through the life of each Countywide DFIRM project.

All work completed for these projects is being conducted in accordance with the requirements identified in the Map Modernization Guidelines and Specifications for Flood Hazard Mapping Partners [FEMA, April 2003].



Turkey Creek Floodplain Work Map, Pueblo County, CO