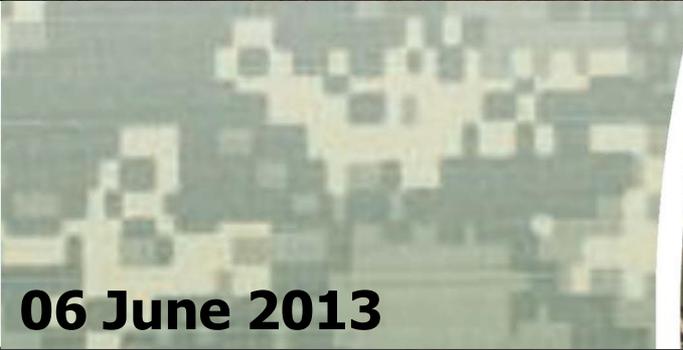
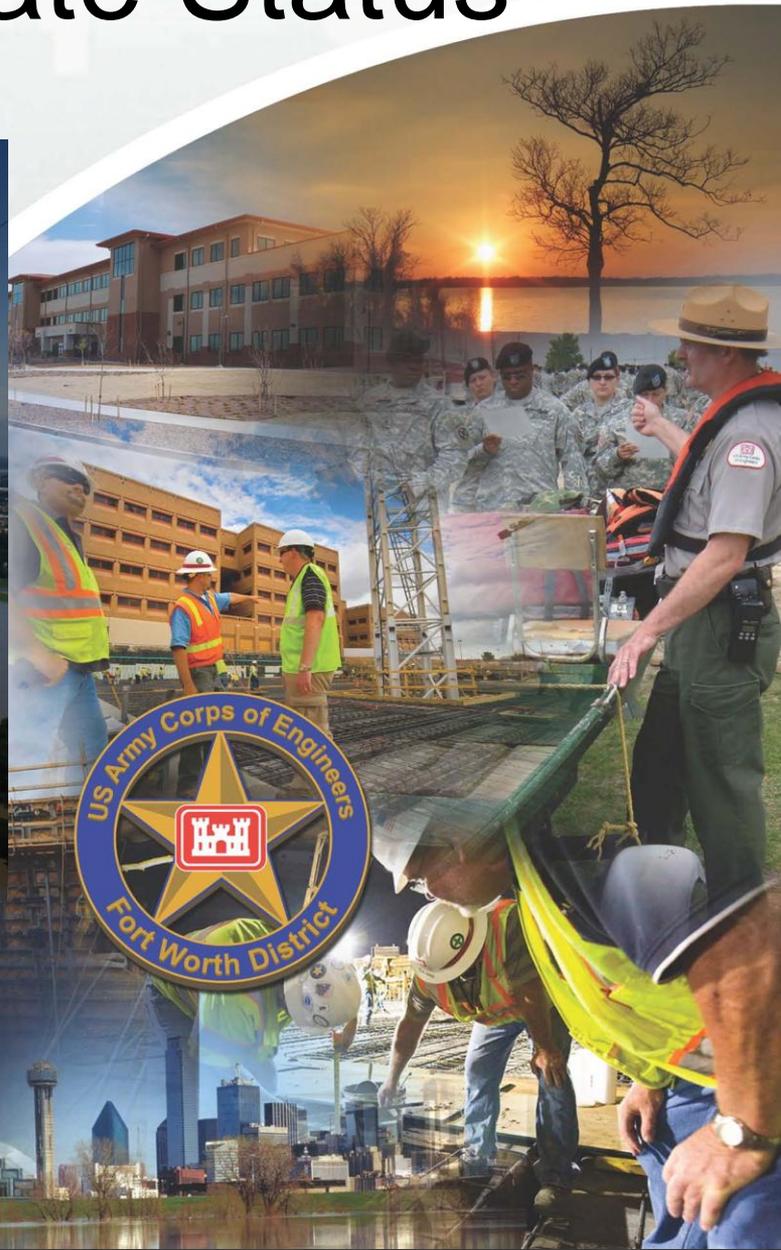


CDC Model Update Status



06 June 2013

CDC Update Study Overview

- Hydrology
 - ▶ Land use updates
 - ▶ Valley storage updates from river hydraulics
 - ▶ New storm reproductions and calibrations
 - Verify model parameters and storages
 - ▶ Examination of frequency curves and other verification methods
 - ▶ Conversion and comparison of HEC-1 to HMS
 - ▶ Design storms
- River Hydraulics
 - ▶ Incorporate constructed and permitted projects into river hydraulic models
 - ▶ Incorporate HEC-2 storage model into HEC-RAS model
 - ▶ Describe the impacts of constructed developments on WS elevations and storages
 - ▶ Provides storages for input into hydrology models



Internal Reviews

- Hydrology
 - ▶ Land use coverage, calculations, and resultant t_p
 - ▶ Routing, hydrograph timing
 - ▶ Rainfall – design storm and uniform
 - ▶ Runoff – TS Hermine calibration
- Hydraulics
 - ▶ Permitted and constructed projects
 - ▶ Split flow optimization
 - ▶ Junction methodology
 - ▶ Ineffective flow
 - ▶ Calculated water surface elevations



FMTF Reviews

- Models and Draft Report submitted for review in November 2012
- Received comments through March 2013
- Comment responses submitted in April 2013



External Vertical Team Reviews

(Upper Trinity and Denton Creek)

- Reviews performed by USACE subject matter experts (SME's)
 - ▶ Hydrology – Dr. David Williams, Ph.D., P.E.
 - ▶ Hydraulics – Michael Gee, Ph.D., PE
Hydrologic Engineering Center (HEC)
- Focused on:
 - ▶ critical issues
 - ▶ methodology



Hydrologic Review

- Status:
 - ▶ Comments received
 - ▶ Responses provided
 - ▶ Received concurrence on responses
- Primary focus:
 - ▶ Design storm methodology (established with the vertical team during the Dallas Floodway Feasibility Study)
 - ▶ Land use calculation methodology and resultant t_p values
- Model approved as submitted
 - ▶ No model changes required



Hydraulics Review

- Status:
 - ▶ Comments received
 - ▶ Responses provided
 - ▶ Received concurrence on responses
- Primary critical focus:
 - ▶ Bridge modeling approach
 - ▶ Split flow / junction modeling
 - ▶ Schematics
- Required minor model revisions and updates to the report



Final Submission

- Final Hydrology and Hydraulic models submitted to NCTCOG on 15 May 2013
- Final Report submitted concurrently
- Both Upper Trinity and Denton Creek



CDC Update Fact Sheet

- ROD – 1988
- CDC Program established 1991
- 4th Edition being revised
- Effective at limiting loss of valley storage
- Q's and WSE's increased due to U/S development
- Need for regional stormwater management
- Need to restudy urban curve methodology
 - ▶ Requires additional stream gages
- 01 January 2014 implementation
- Grandfathering of projects with active CDC application

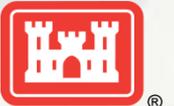


Moving Forward / Next Steps

- FMTF Acceptance
- Steering Committee Approval
- CDC manual Revisions
- 01 January 2014 implementation?
- Continued work in implementing regional stormwater management



Questions / Comments



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