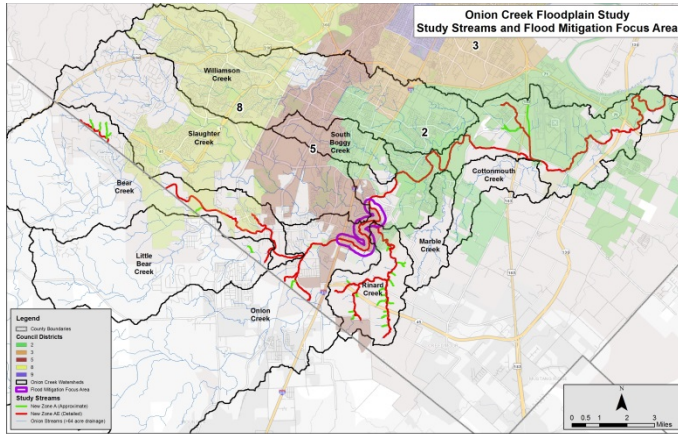


Onion Creek Floodplain Modeling and Mapping and Flood Mitigation Project

Watershed Engineering Division
CIP 6938.016

December 2015



Floodplain Modeling and Mapping

Study Streams:

- Onion Creek
- Bear Creek
- Little Bear
- Rinard Creek
- Various Tributaries

Council District(s):

- 2, 5, and 8

Floodplain Map Update Steps:

- Jun 2016 - COA Regulatory Maps
- ~Sep 2016 - FEMA Letter of Map Revision
- ~2018 - FEMA Physical Map Revision

Flood Hazard Mitigation

Focus of Study:

- IH-35 to Slaughter Ln.

Potential Mitigation Options:

- Regional Detention
- Channel Modifications
- Flood Walls / Levees
- Limited Buyouts

Project Background

In response to the 2013 Halloween Flood on Onion Creek, the City Council passed Resolution 20140515-028 directing the City Manager to, among other things, provide a report to Council regarding the needs associated with a study of feasible flood mitigation options within the Onion Creek floodplain outside of the William Cannon Drive and Pleasant Valley Road area. This study is a result of that initiative. In addition to the flood mitigation evaluation, update of the floodplains for Onion Creek and selected tributaries was included in the study.

Project Status and Next Steps

- Field survey was completed in October. A summary report for the survey effort will be completed by January 2016.
- Draft existing condition floodplain models have been completed and will be finalized by January 2016.
- The Project Team met with the Barton Springs / Edwards Aquifer Conservation District (BSEACD) and the Travis Area Recovery Group (TARG) on November 9 to discuss cooperative efforts to provide detention in the upper Onion Creek watershed.
- We have coordinated with our Engineering Contractor to accelerate portions of the project with the goal of providing a quicker evaluation of mitigation options.
 - Flood Mitigation analyses will begin in December based on the draft floodplain models. Feasibility-level mitigation analyses and results will be complete and summarized by February 2016.
 - More detailed evaluations of selected options along with a summary report will be completed in Fall 2016.

Project Team

Project Sponsor: Kevin Shunk, WPD (512) 974-9176

Project Manager: Karl McArthur, WPD (512) 974-9126

Project Engineer: Halff Associates, Inc.

Revised Onion Creek Study Project Schedule

TASK NAME	Start	Finish
NOTICE TO PROCEED	Apr-15	
Task 1: Project Management	Apr-15	Sep-16
Task 2: Data Search, Collection and Surveys	May-15	Jan-16
<i>Survey Completion</i>	Jun-15	Sep-15
<i>Documentation</i>	Nov-15	Jan-16
Task 3: Update of Hydrologic Model	Jun-15	May-16
<i>Model Development</i>	Jun-15	Mar-16
<i>Existing Condition Onion Creek Model (Excluding Rinard Updates)</i>	Jun-15	Dec-15
<i>Existing Condition Model (Complete)</i>	Jan-16	Mar-16
<i>Fully Developed Condition Model</i>	Dec-15	Mar-16
<i>Sensitivity Analysis (Land Use Impacts)</i>	Mar-16	Apr-16
<i>Documentation</i>	Mar-16	May-16
Task 4: Development of Hydraulic Models	Jun-15	Jun-16
<i>Model Development</i>	Jun-15	Mar-16
<i>Existing Condition Model (Excluding Rinard Streams)</i>	Jun-15	Jan-16
<i>Existing Condition Models (Complete)</i>	Jun-15	Apr-16
<i>Fully Developed Condition Models</i>	Dec-15	Mar-16
<i>Documentation</i>	Mar-16	Jun-16
Task 5: Floodplain Mapping and Profiling	Mar-16	Jun-16
Task 6: Flood Mitigation Analyses (<i>I-35 to East Slaughter Lane</i>)	Dec-15	Sep-16
<i>Feasibility Level Evaluation</i>	Dec-15	Feb-16
<i>Hydrologic Alternatives (Detention)</i>	Dec-15	Feb-16
<i>Hydraulic Alternatives (Channel Modifications, Flood Walls, etc.)</i>	Jan-16	Feb-16
<i>Preliminary Engineering Evaluation</i>	Mar-16	Sep-16
Task 7: Letter of Map Revision*	Jun-16	Sep-16
Task 8: Quality Assurance and Quality Control Procedures	Apr-15	Sep-16

*Letter of Map Revision will be submitted to FEMA in September 2016. The coordination time required with FEMA may vary.