Pecan Creek Update – Comanche County, OK

Coordination between OWRB and Comanche County has identified Pecan Creek as a high priority Phase 2 project. During recent Discovery Meetings the City and County shared concerns of historical flooding and development pressure in areas with limited flood risk identified.

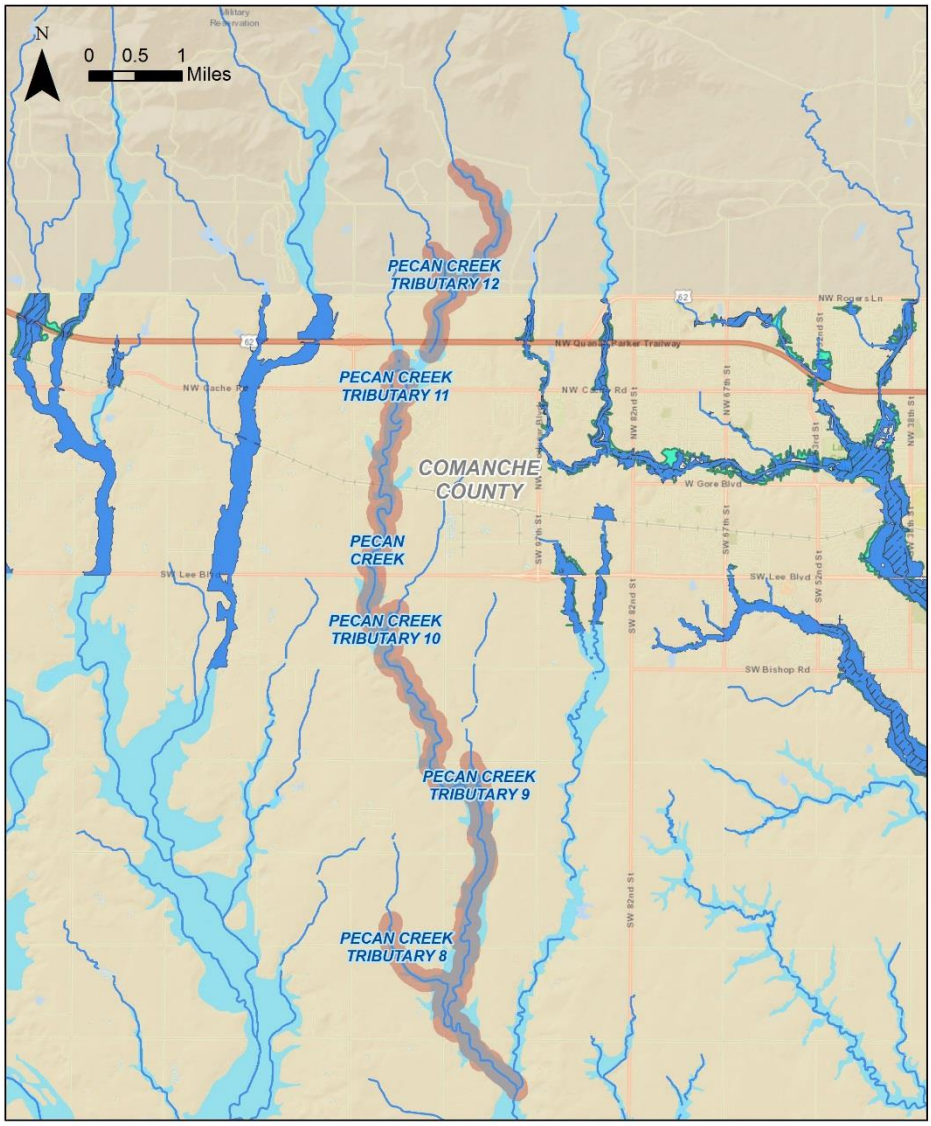
Who: OWRB (CTP), Comanche County

Request: FY 2019

Cost: $301,500

Target Completion Date: 12/31/2021

Leverage:



State of Oklahoma CTP Business Plan (FY 2019)

FIGURE C-2: PECAN CREEK, COMANCHE COUNTY

21.06 STUDY MILES

WEST CACHE WATERSHED

LEGEND

- Pecan Creek Study Extents
- DFIRM Streams
- FEMA Floodway
- FEMA Zone AE, Zone AO (100yr)
- FEMA Zone A (100yr)
- FEMA Zone X (500yr)

NVUE gain

Study Type	Effective (miles)		At Completion (miles)		Delta (miles)	
	Valid	Unk/Unv	Valid	Unk/Unv	Valid	Unk/Unv
Not Mapped						
Zone A	0.00	23.15			0.0	-23.15
Zone AE						
Zone AE w/FW						

Project Scope Elements & Units (QA/QC costs should be included)

Task	Y/N	Description	Quantity	Unit	Cost
Field Survey	Y	Data Collection from As-Built Drawings		Structures	0
		Field Data Recon – Invert & Structure (LDS)		Structures	
	Y	Field Data Collection – Stream Channel XS	**15**	XS	4,500
	Y	Field Data Collection – Floodplain XS	**30**	XS	15,000
	Y	Field Data Collection – Structure (Culvert)	**14**	Structures	7,000
	Y	Field Data Collection – Structure (Bridge)	**10**	Structures	8,000
Hydrology		Rural/Urban Regression w/ Gage Analysis		Sq. Miles	
		Rain-On Grid Analysis		Sq. Miles	
	Y	Rainfall Run-off Analysis (NRCS)	21.06	Sq. Miles	38,000
Hydraulics		1D Model Refinement – BLE to Limited Detail		Linear Miles	
		1D Model Refinement – BLE to Detailed		Linear Miles	
		1D Model Refinement – New Floodway		Linear Miles	
		1D Model Refinement – Refine Existing Floodway		Linear Miles	
		2D Model Refinement – BLE to Limited Detail		Linear Miles	
		2D Model Refinement – BLE to Detailed		Linear Miles	
		2D Model Refinement – Floodway Analysis		Linear Miles	
	Y	1D Model Preparation – Zone AE + Floodway	21.06	Linear Miles	85,000
Floodplain Mapping		Floodplain Preparation – 1% ONLY		Linear Miles	
	Y	Floodplain Preparation – 1% and 0.2%		Linear Miles	42,000
		Seamless Floodplain Boundary		County	
Flood Risk Datasets	Y	Changes Since Last FIRM		LUMP	2,500
		WSEL grid – 1% ONLY		Study Area	
		WSEL grid – 1% and 0.2% ONLY		Study Area	
	Y	WSEL grid – Multiple (all studied)		Study Area	5,000
		Flood Depth grid – 1% ONLY		Study Area	
		Flood Depth grid – 1% and 0.2% ONLY		Study Area	
	Y	Flood Depth grid – Multiple (all studied)		Study Area	5,000
		Freeboard grid – 1% ONLY		Study Area	
		Freeboard grid – 1% and 0.2% events		Study Area	
	Y	Percent Annual Chance Grid		Study Area	7,500
	Y	30 Year Chance Grid		Study Area	7,500
		Hazus (Composite) – BLE & Refined Study areas		Study Area	
	Y	Other Flood Risk Dataset - Flood Risk DB, FRR Mtg			30,000
Accessory Elements	Y	CNMS Submittal – Scoped Streams		LUMP	1,500
	Y	FIS Text Sections (Hydrology & Hydraulics)		County	500
		WSEL Profile (Partial) – 1% ONLY		Linear Miles	
	Y	WSEL Profile (Full) – 10%, 4%, 2%, 1%, and 0.2%	21.06	Linear Miles	7,500
	Y	Flood Risk Report – including Exhibits & Tables		Study Area	4,000
	Y	Flood Risk Map		Map	3,500
	Y	Project Management (Not to exceed 10% of total)		LUMP	27,500
				Total Project Cost	301,500

Additional Project Information

Study area is primarily in Comanche County but includes areas of Fort Sill US Army Post and City of Lawton. Study area has increasing commercial and residential development.