

Purgatory Creek Channel Improvement Project

City Council Project Update

May 21, 2019

SAN MARCOS



Lockwood, Andrews
& Newnam, Inc.
A LEO A DALY COMPANY

Discussion Tonight

SAN MARCOS

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Seeking City Council Concurrence on Project Direction

Agenda

- Project Purpose
- Project Elements
- Conceptual Design
- Cost
- Schedule

Project Purpose

- Primary Goal
 - Flood Mitigation
- Holistic Approach
 - Flood mitigation
 - Water quality
 - Public space improvements
- Integrate City's Master Plans
 - Comprehensive Plan – A River Runs Through Us (2013)
 - Stormwater Master Plan (2018)
 - Wastewater Master Plan (2014)
 - Transportation Master Plan (2018)
 - Parks, Recreation, and Open Spaces Master Plan (2018)

Project Status

- Conducted Preliminary Engineering
 - City Authorized
 - June 7, 2018
 - 1st Public Meeting
 - September 19, 2018
 - Engineering, environmental, ROW, etc.
 - Meetings
 - Preliminary Engineering Report (PER)
 - March 15, 2019
 - 2nd Public Meeting
 - April 23, 2019

Project Area/Phasing

Phase 2 – Conceptual Review

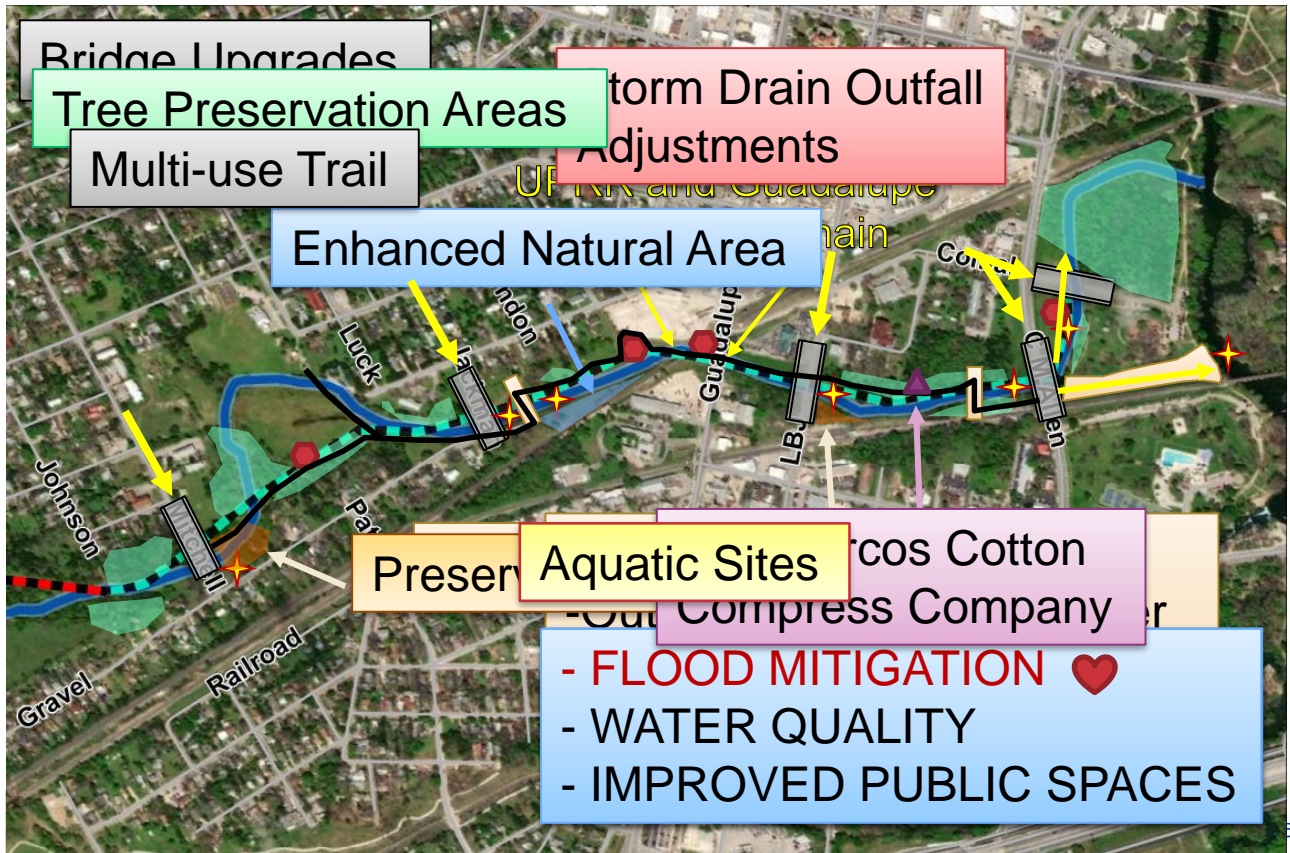
Phase 2

Phase 1 – Preliminary Engineering Focus

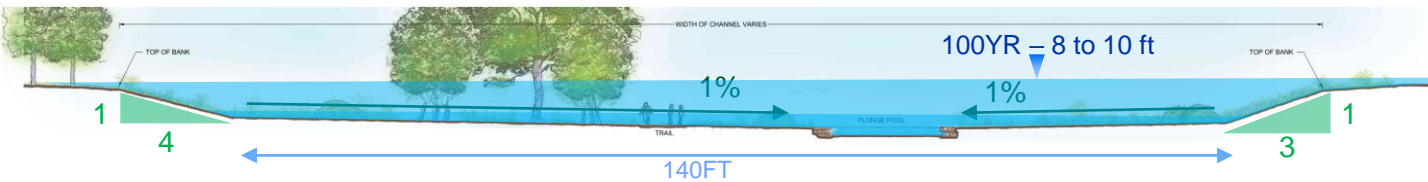
Phase 1

- ➡ Phase 1 – Johnson Avenue to San Marcos River
- ➡ Phase 2 – Wonder World Drive to Johnson Avenue

Phase 1 Project Overview



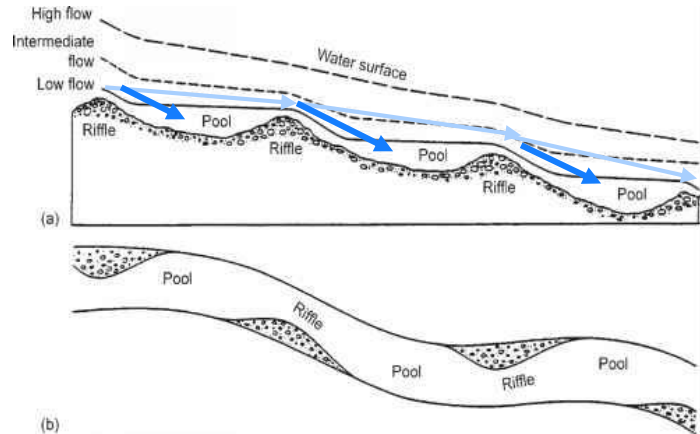
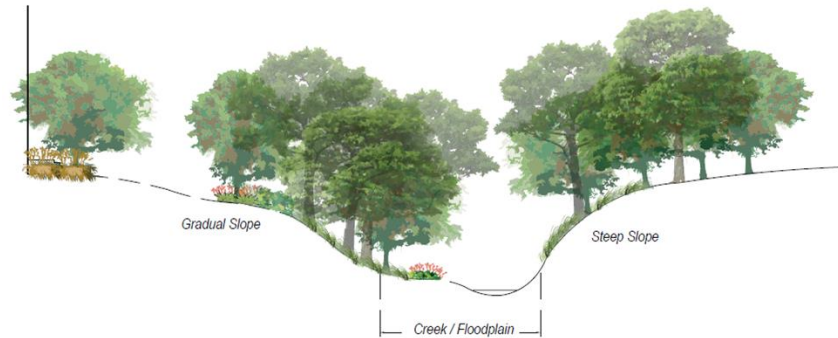
Channel Cross-Section



- 140 ft bottom width
- Channel side slopes varies (3:1 to 4:1)
- Limited vertical walls
- 1% Channel bottom cross slope
- Low and high-level flood benches

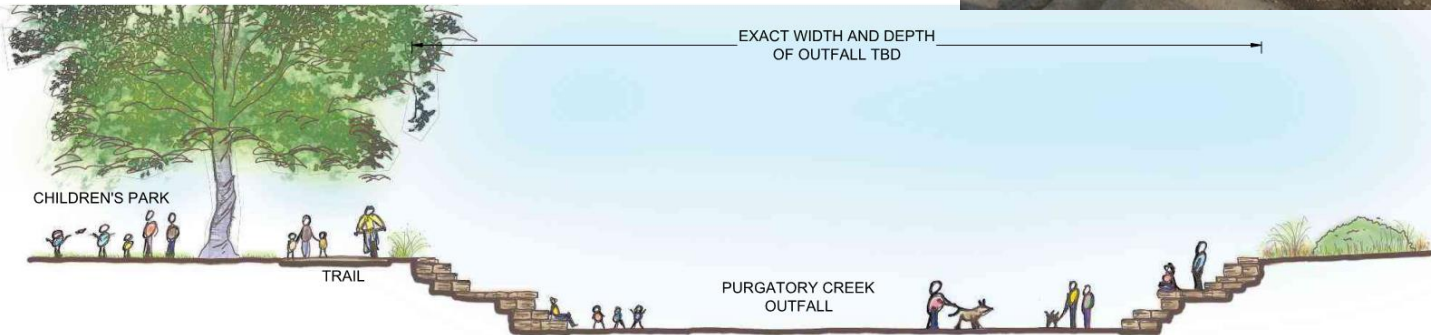
Natural Channel Design

- ➔ Riparian grow zones
- ➔ Pool Riffle Run Sequences



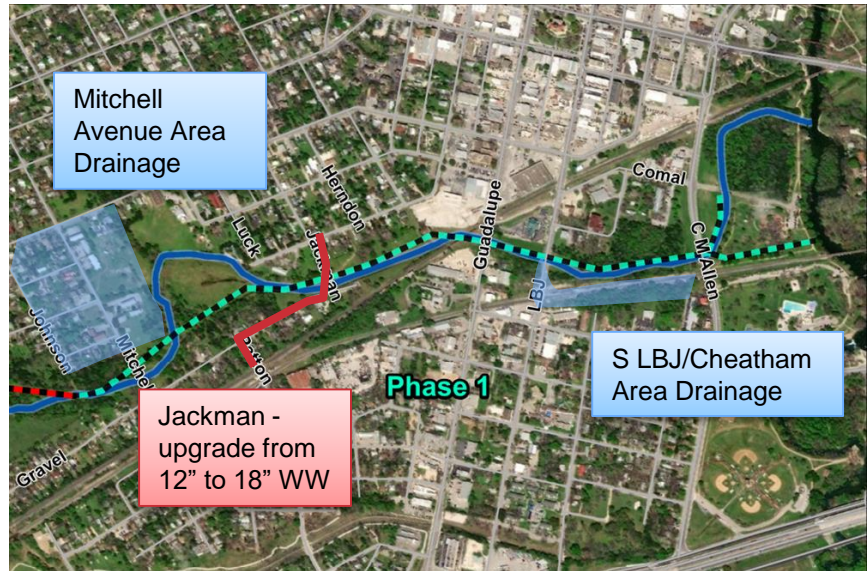
San Marcos River Outfall

- ➔ Transition back to Existing Channel at Comal into Bicentennial Park
- ➔ Spillway
 - High flows to be diverted downstream of CM Allen
 - Pedestrian-friendly access point to river
- ➔ Follow objectives outlined in the Habitat Conservation Plan



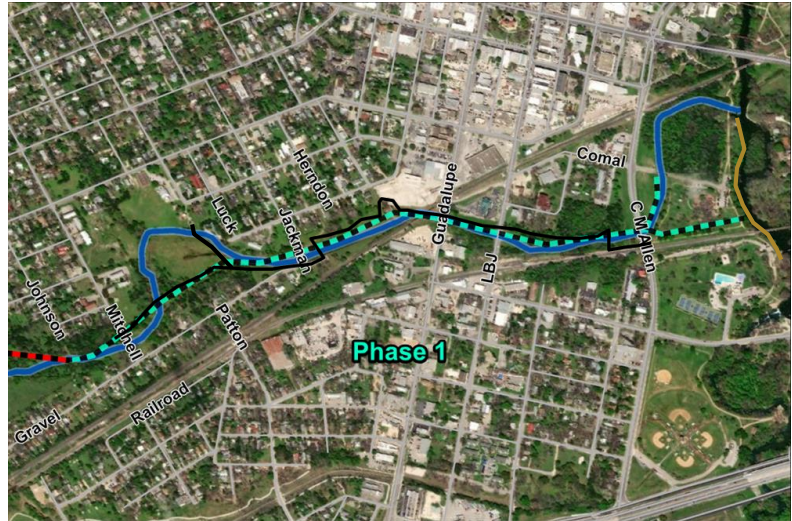
Utility Upgrades

- Wastewater Line Upgrade (WWMP #4)
- Mitchell Avenue Area Drainage Improvements (DMP #15)
- S LBJ Dr/Cheatham Drainage Improvements (DMP#25)



Trail Considerations

- > Multi-use path
- > Access
 - Streets
 - Other trails
 - Parks
 - River
- > ADA compliant
- > Green space
- > Maintenance
- > Safety
- > Wayfinding



Property Acquisitions & Drainage Easements

- ➔ Minimum width of 220 feet to contain channel improvement
- ➔ Will require
 - Acquisition of some properties
 - Establishment of new easements

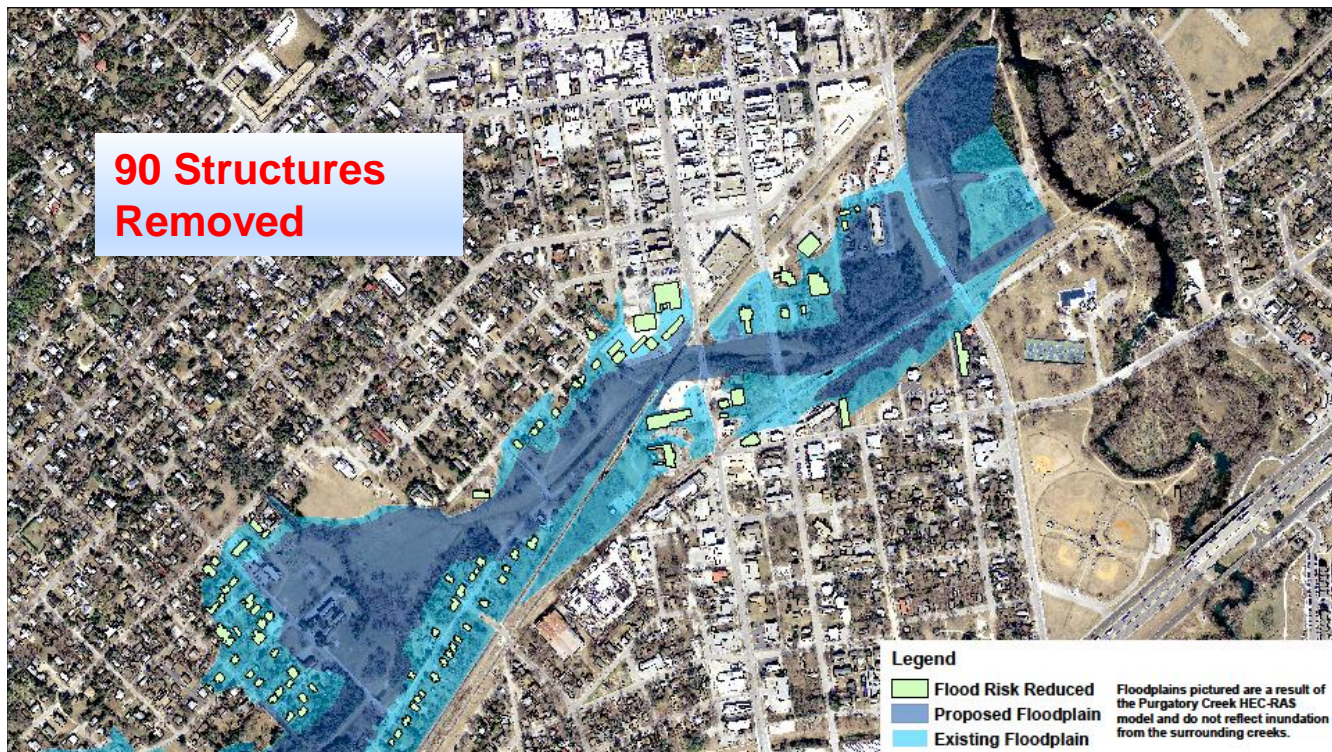


Permitting Requirements



- > **US Army Corps of Engineers**
 - Waters of the US
 - Historic Preservation Act
- > **Texas Commission on Environmental Quality**
- > **Texas Parks and Wildlife Commission**
- > **Texas Historical Commission**
- > **City of San Marcos**
 - Geologic Assessment
 - Tree Survey/Protection
- > **Union Pacific Railroad**

Flood Risk Reduction – Phase 1



Preliminary Conceptual Plan



Estimated Project Costs

	Phase 1 Area	Phase 2 Area	Grand Total
Professional Services	\$2,420,000	\$1,632,000	\$4,052,000
Right-of-way	\$900,000	\$6,850,000	\$7,750,000
Construction	\$20,105,000	\$13,440,000	\$33,545,000
Total	\$23,425,000	\$21,922,000	\$45,347,000

Estimated Values from PER

Next Steps

- Phase 1 Area (Johnson Avenue to San Marcos River)
 - Change In Service to engineering contract to complete
 - Design
 - Permitting
 - Right-of-way & easement determinations
 - Explore funding opportunities
 - Construction: 2021
- Phase 2 Area (Wonder World Drive to San Marcos River)
 - Funding dependent
 - Design: FY 2021
 - Construction: FY 2023

Questions

