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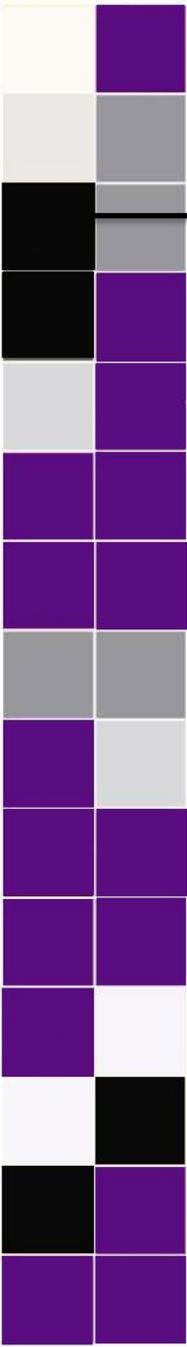
Paradise Creek

Recreational Use Attainability Analysis Overview

Texas Institute for Applied Environmental Research
Stephenville, Texas

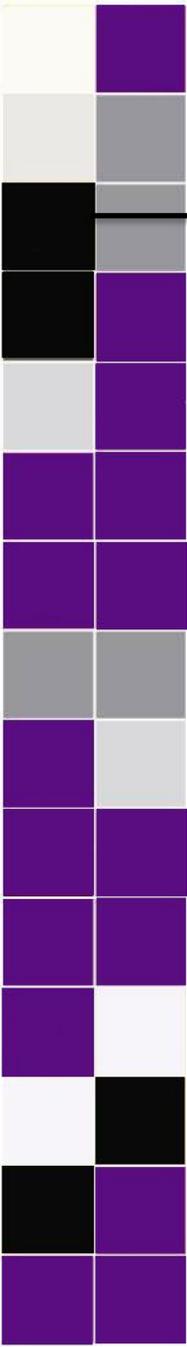
April 18, 2013





Why are we here?

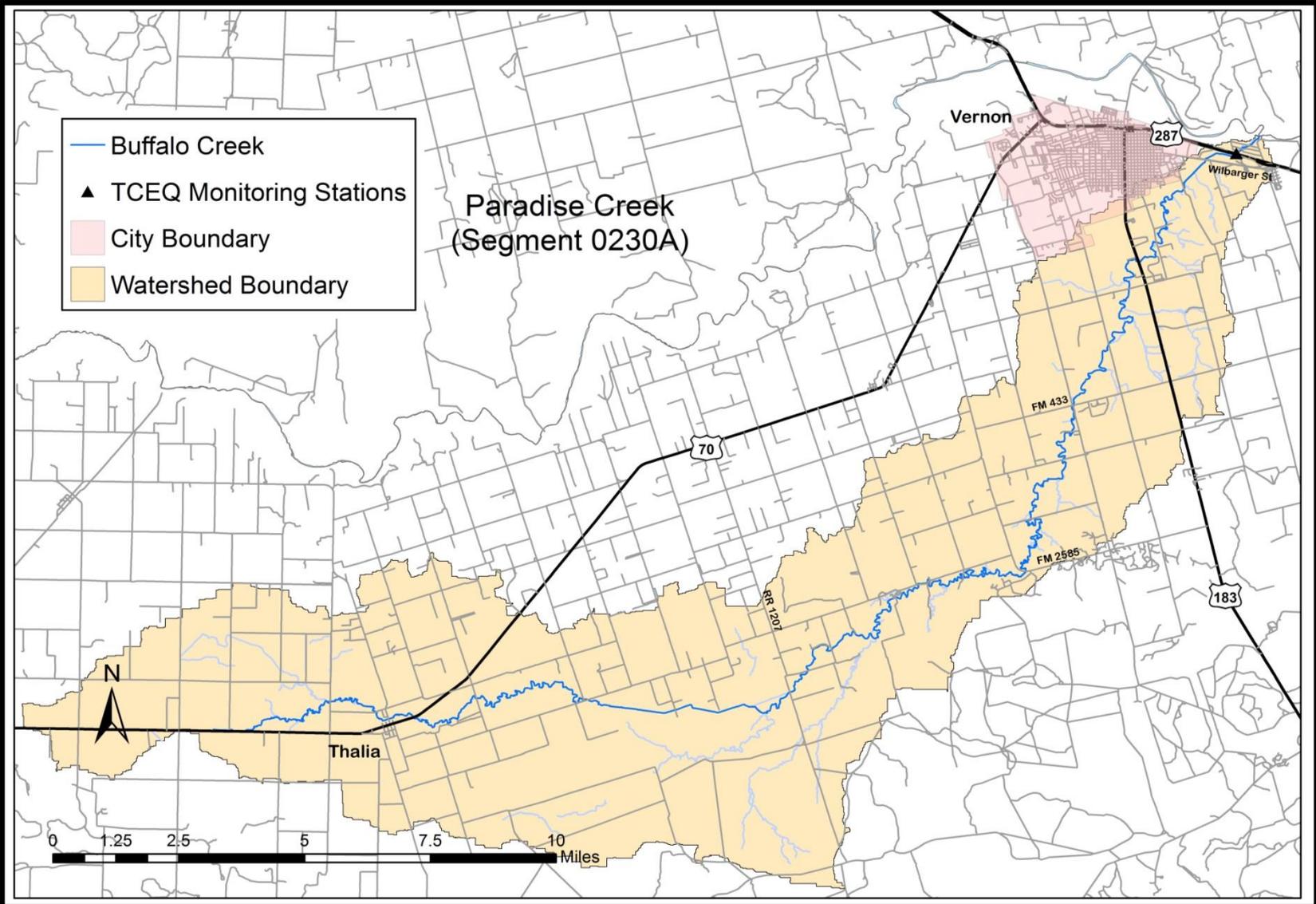
- Paradise Creek listed as impaired
 - 2006 Texas Water Quality 303(d) List
 - Impaired for primary recreation
 - Based on elevated levels of bacteria

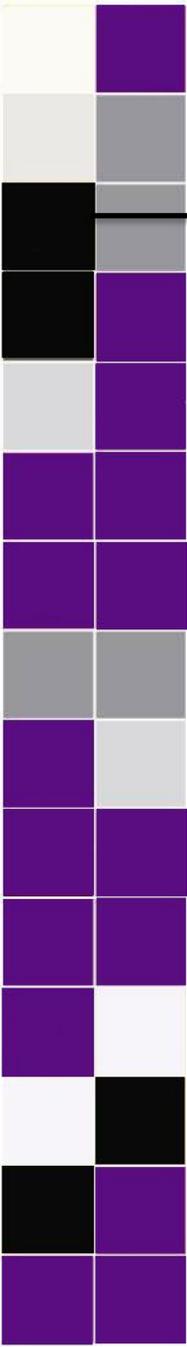


Why are we here?

- One potential way to get Paradise Creek off the impaired list?
 - Assess if the recreational standard is appropriate via a recreational use attainability analysis (RUAA)
 - Primary contact recreation presumed

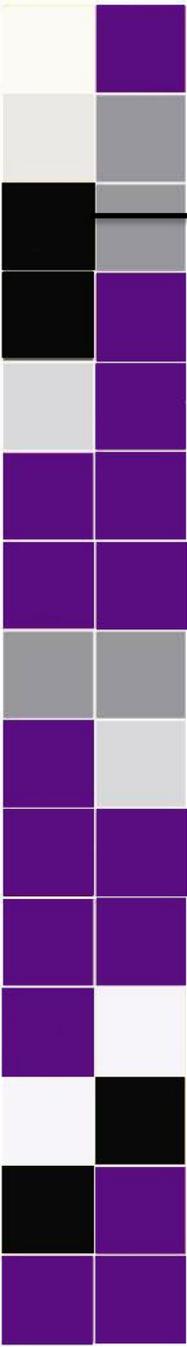
Monitoring Locations for 303(d) List





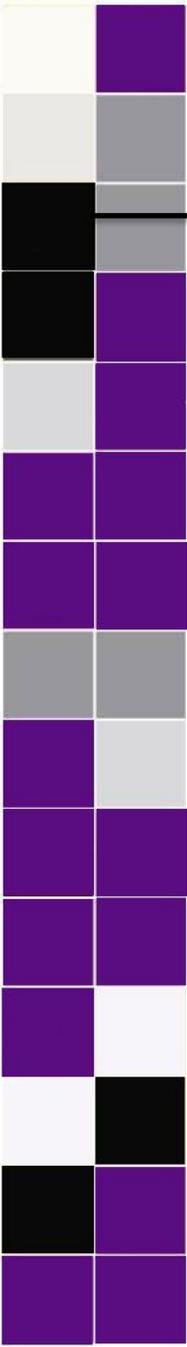
RUAA Use Categories

- **Primary Contact Recreation**
 - Activities that are presumed to involve a significant risk of ingestion of water
 - **Swimming**
- **Secondary Contact Recreation 1**
 - Activities that commonly occur but have limited body contact incidental to shoreline activity
 - wading by adults, fishing, canoeing
 - activities are presumed to pose a less significant risk of water ingestion than primary contact recreation but more than secondary contact recreation 2.



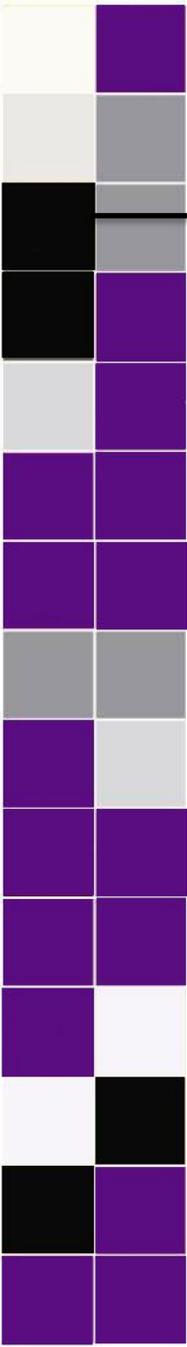
RUAA Use Categories

- **Secondary Contact Recreation 2**
 - These activities occur less frequently than secondary contact recreation 1 due to physical characteristics of the water body or limited public access.
- **Noncontact Recreation**
 - Activities that do not involve a significant risk of water ingestion, such as those with limited body contact incidental to shoreline activity, including birding, hiking, and biking.



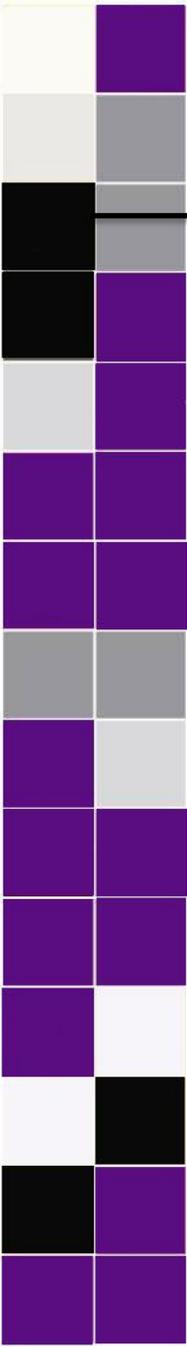
Purpose of RUAA

- To confirm primary contact recreation or provide information that might support changing the recreational use category of the creek



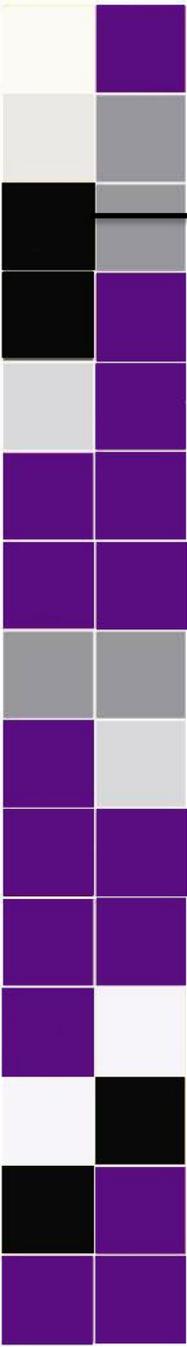
Components of a RUAA

- **Historical Information Review**- to document past recreational uses
- **Interviews**- to obtain feedback on current and past recreational uses from stakeholders
- **Field Surveys**- to document current stream conditions and uses



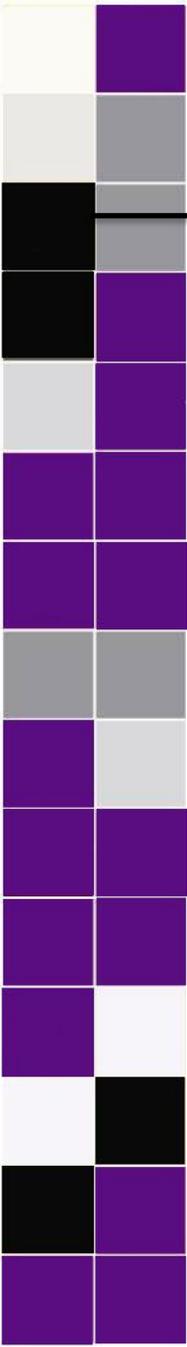
RUAA Components

- Historical Information Review
 - November 28, 1975 – PresentLooking for anything that documents recreational use of Paradise Creek
 - Newspaper clippings or other publications
 - Historical or Museum Records
 - Personal pictures or letters
 - Etc.



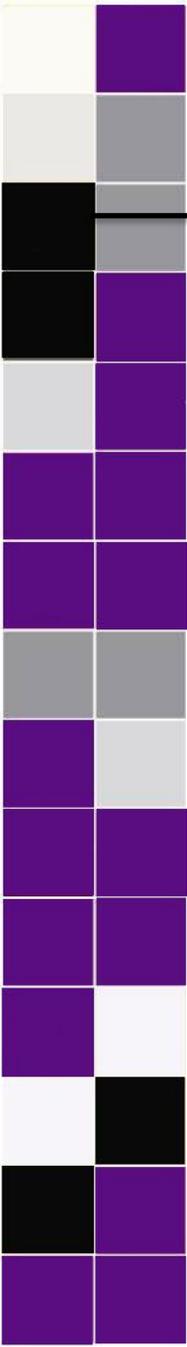
RUAA Components

- Stakeholder Interviews- document use of Paradise Creek from individuals
 - Conducted during field surveys (if individuals are encountered)
 - Streamside landowners
 - Local residents
 - Other users
- Interviews can be anonymous and conducted by phone, USPS mail, or email.



RUAA Field Surveys

- What they entail:
 - Goal: 3 sites for every 5 miles
 - At each site:
 - 300 meter reach traversed
 - Document
 - Stream characteristics that may promote or hinder recreational use
 - Observations of direct use or signs of recreational use
 - Interviews with individuals



RUAA Field Surveys

- 2 Surveys during

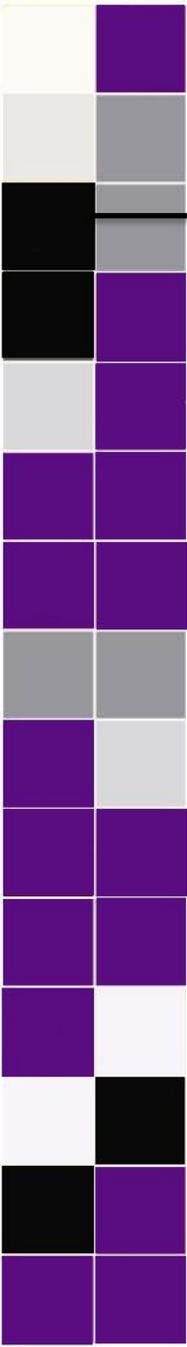
Base Flow Conditions

1. Sustained typical dry warm-weather flow
2. Between rainfall events

Periods of Likely Use (May-Sept)

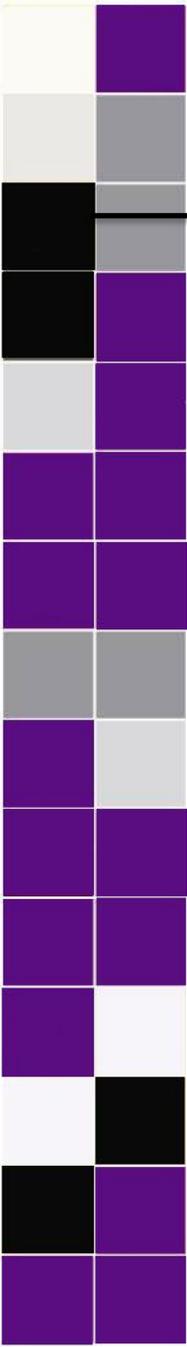
Air Temperature > 70°F

1. Spring Break
2. Weekends
3. Holidays
4. Summer



RUAA Field Surveys

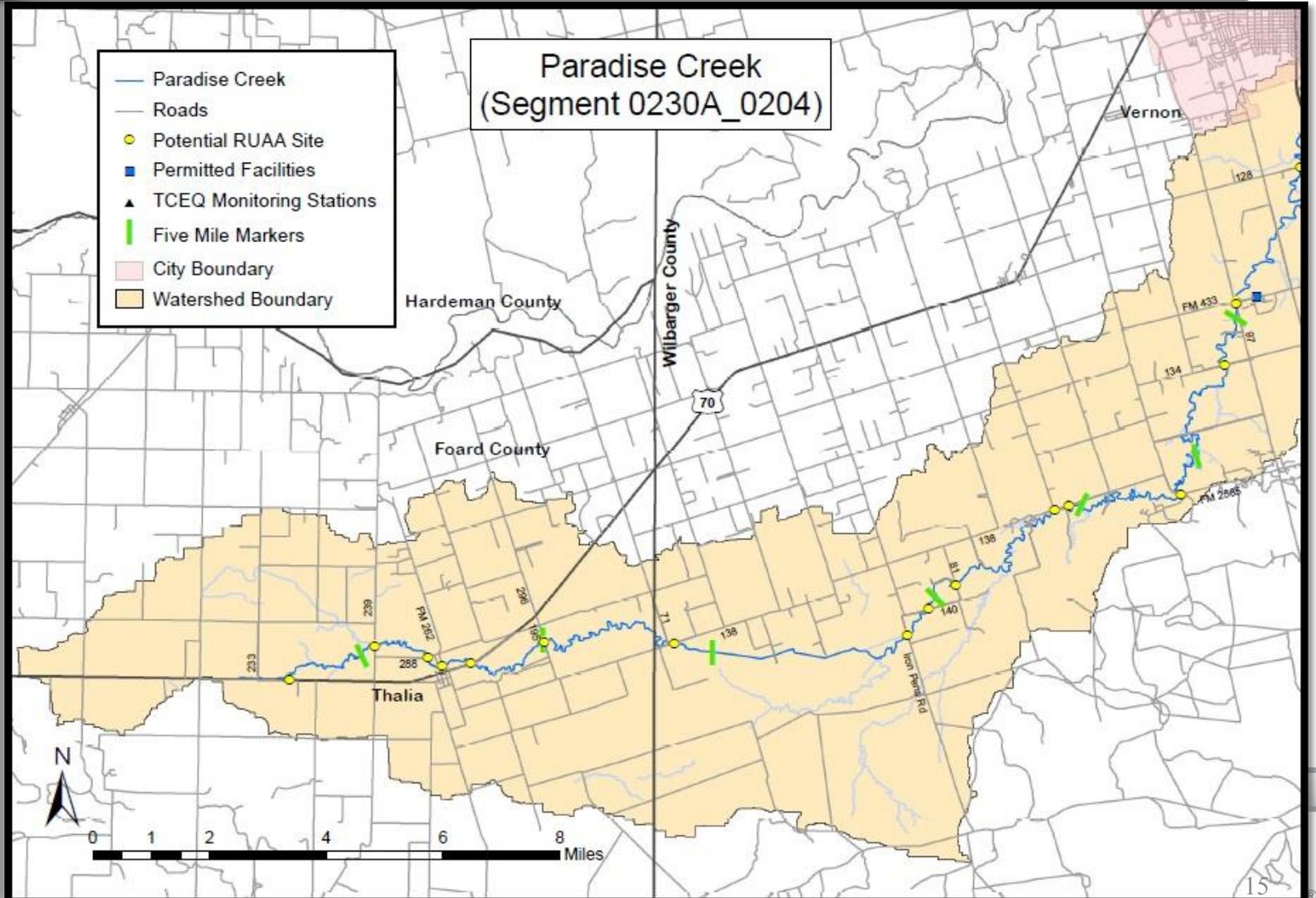
- Data Sheet Includes:
 - Stream characteristics
 - Current weather conditions & daily conditions for the previous month
 - Riparian zone, ease of bank access, dominant substrate
 - Document recreation observed (if any)
 - Stream and pool measurements



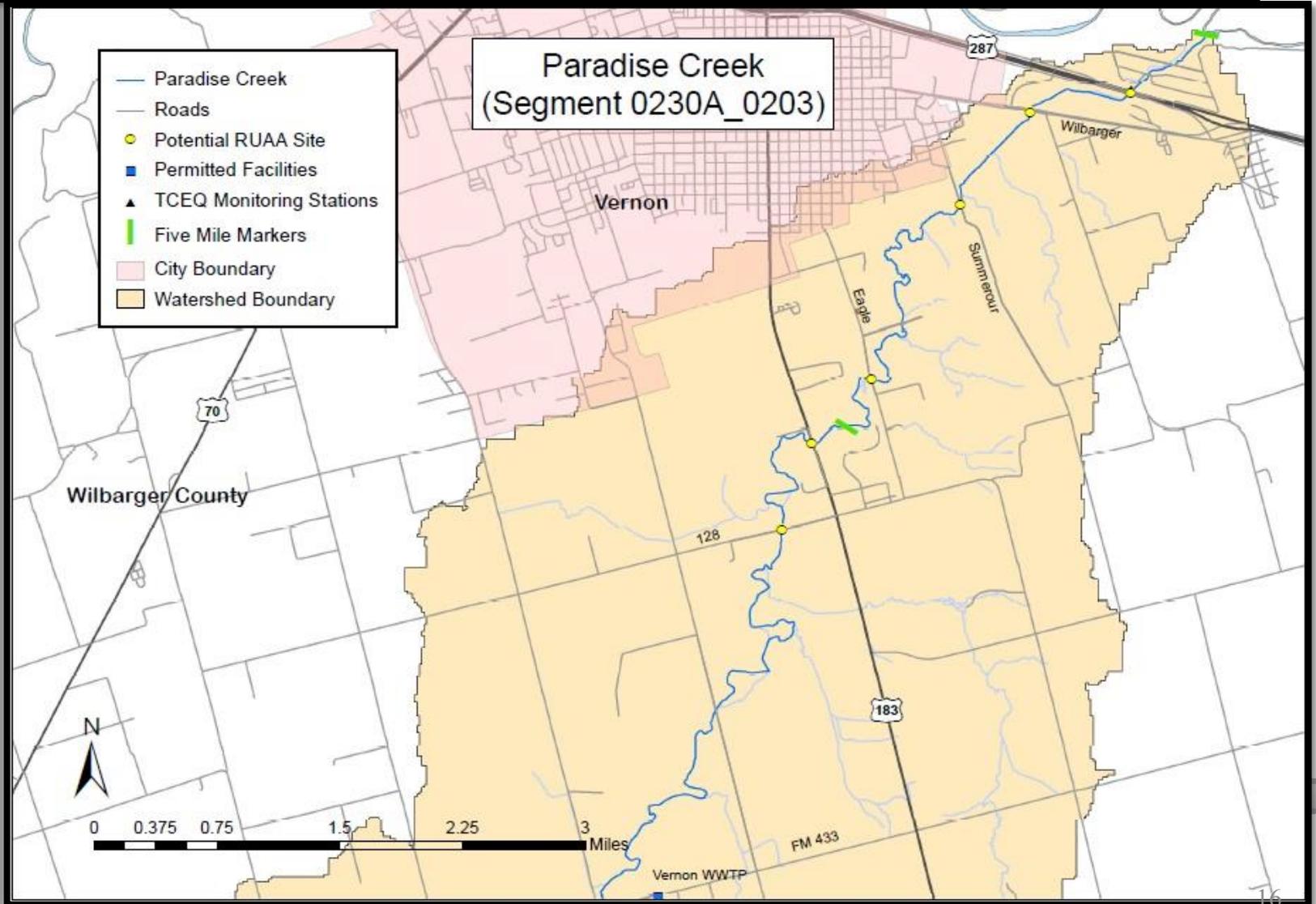
RUAA Field Surveys

- Field Surveys also Include
 - Photographic Record (Each Site)
 - Upstream
 - Left
 - Right Bank
 - Downstream
 - At 30, 150, 300 M

Proposed Survey Sites



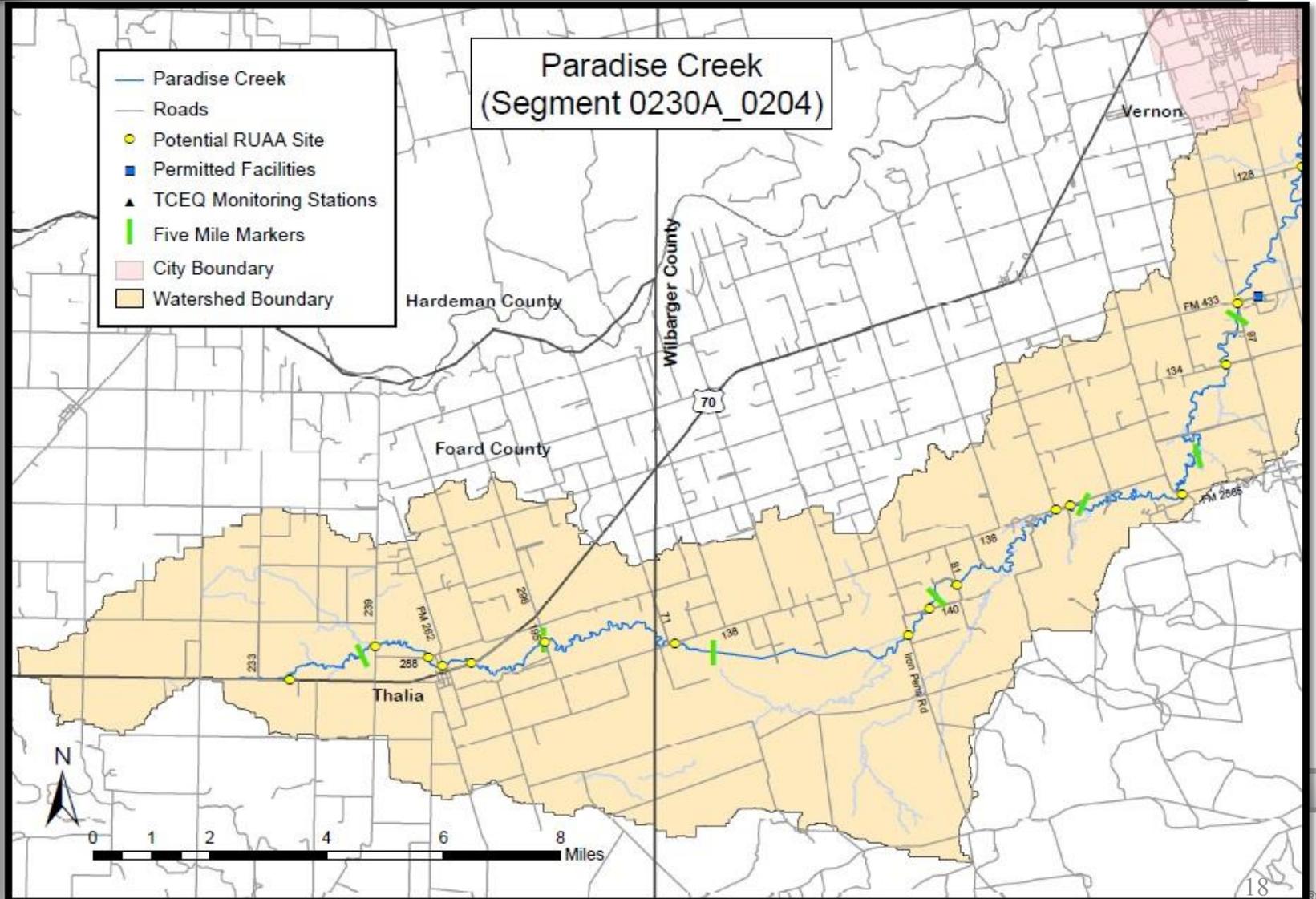
Proposed Survey Sites

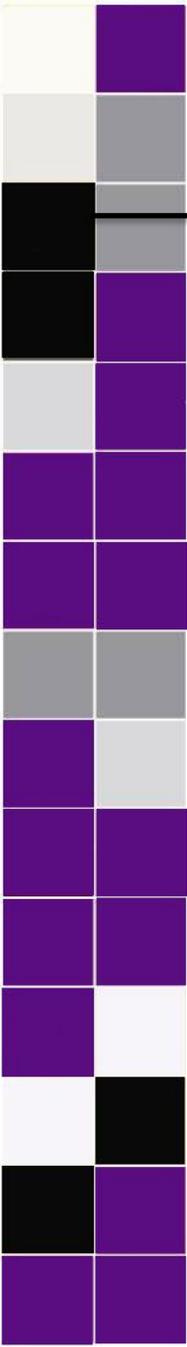


Proposed Survey Sites

Site Descriptions	
0230A AU_03	
Paradise @ Hwy 287	Paradise Creek at US Hwy 287
Paradise @ State Loop 488	Paradise Creek at Sate Loop 488 east of Vernon
Paradise @ Summerour Road	Paradise Creek at Summerour Road south of Vernon
Paradise @ Eagle Street	Paradise Creek at Eagle Street south of Vernon
Paradise @ Hwy 183	Paradise Creek at US Hwy 183 south of Vernon
Paradise @ CR 128	Paradise Creek at County Road 128

Proposed Survey Sites





Proposed Survey Sites

Site Descriptions

Paradise Creek at FM 433 west of Vernon Campus South WWTF

Paradise Creek at County Road 97S

Paradise Creek at County Road 134

Paradise Creek at FM 2585

Paradise Creek at County Road 138 approximately 450 M east of County Road 84

Paradise Creek at County Road 138 approximately 30 M east of County Road 85

Paradise Creek at County Road 81

Paradise Creek at County Road 140

Proposed Survey Sites

Site Descriptions

Paradise Creek at Ranch Road 1207

Paradise Creek at County Road 138 approximately 140 M east of County Road 71

Paradise Creek at County Road 195

Paradise Creek at US Hwy 70 east of Thalia

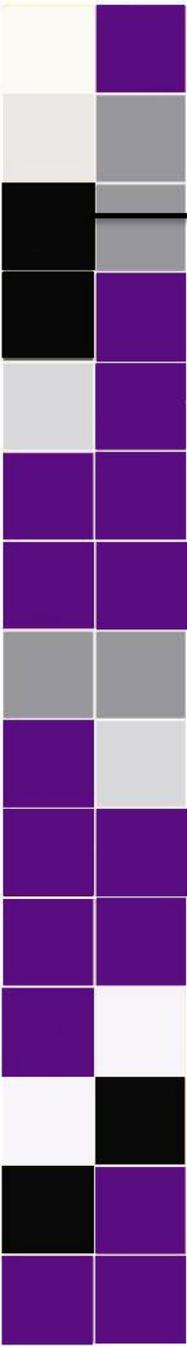
Paradise Creek at FM 262

Paradise Creek at County Road 288

Paradise Creek at County Road 239

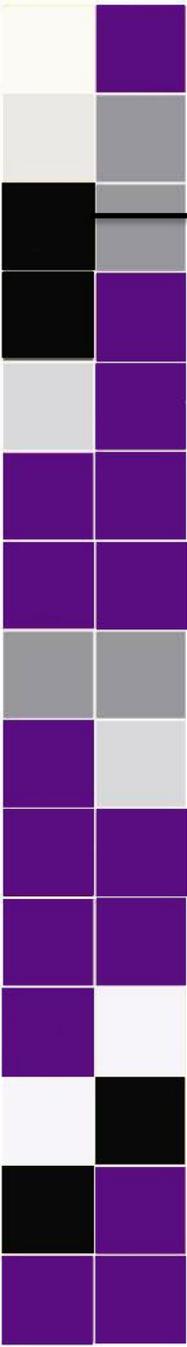
Paradise Creek at US Hwy 70 west of Thalia

Continued



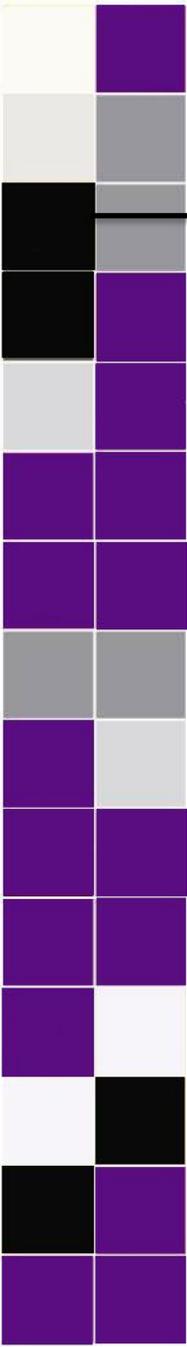
Site Selection for RUAA

- Currently proposed sites represent public road crossings, many of which are fenced
- Seeking Landowner permission to access points above and below road crossing and additional points on the river
- Need stakeholder input on
 - Site selection and additional sites



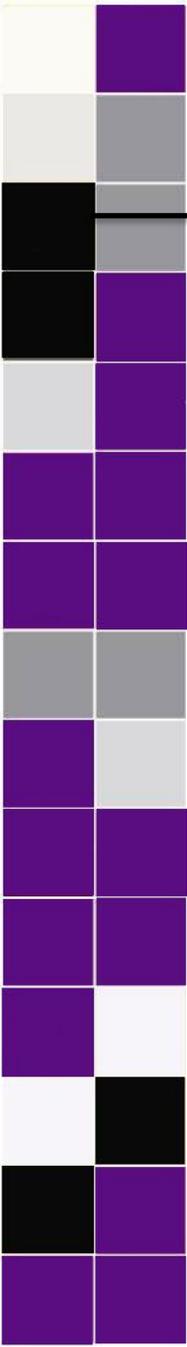
RUAA Site Selection Guidelines

- Identify areas where the water body is
 - Accessible to the public
 - Has a high potential for recreational use
 - Road crossings
 - Public lands
 - Parks
 - Populated areas
- Characterize the full river reach



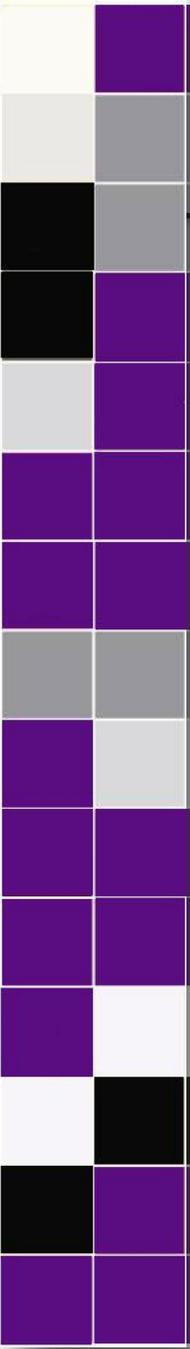
RUAA Site Selection Guidelines

- Goal for RUAA Survey
 - 3 sites for every 5 miles of stream
- Paradise Creek is about 45 river miles long
 - Goal: 28 sites



Time Frame

- Proposed Field Survey Dates
 - May 20-25, 2013
 - July 15-20, 2013



Questions on RUAA Overview?

Project Website:

www.tsswcb.texas.gov/en/managementprogram/RUAAPARADISE

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