

Water Quality Protection Surveys: Monitoring Trash and Litter in the Trinity River Basin

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Trinity River Authority

TCEQ SWQM Workshop – October 22, 2019



Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans

Background

- Village Creek Lake Arlington WPP
 - Initial monitoring conducted June 2016 to May 2017
 - Additional monitoring conducted March 2018 to November 2018
- Trash & litter identified as a issue by field staff and a priority to stakeholders
- Survey to identify where to focus efforts
- Generate a publicly available product



Definitions

- Litter

- Small quantities of waste that are improperly disposed of in public areas, blown or washed in to other areas
- Items that should be placed in a public trash can or recycling bin
- Plastic grocery bags, Styrofoam, cans, plastic bottles, paper, cigarettes

- Trash

- Illegal dumping of large quantities of waste
- Items that should be disposed of at a landfill or hazardous waste collection facility
- Often in trash bags, hazardous wastes, construction/commercial/industrial waste, tires, dead animals



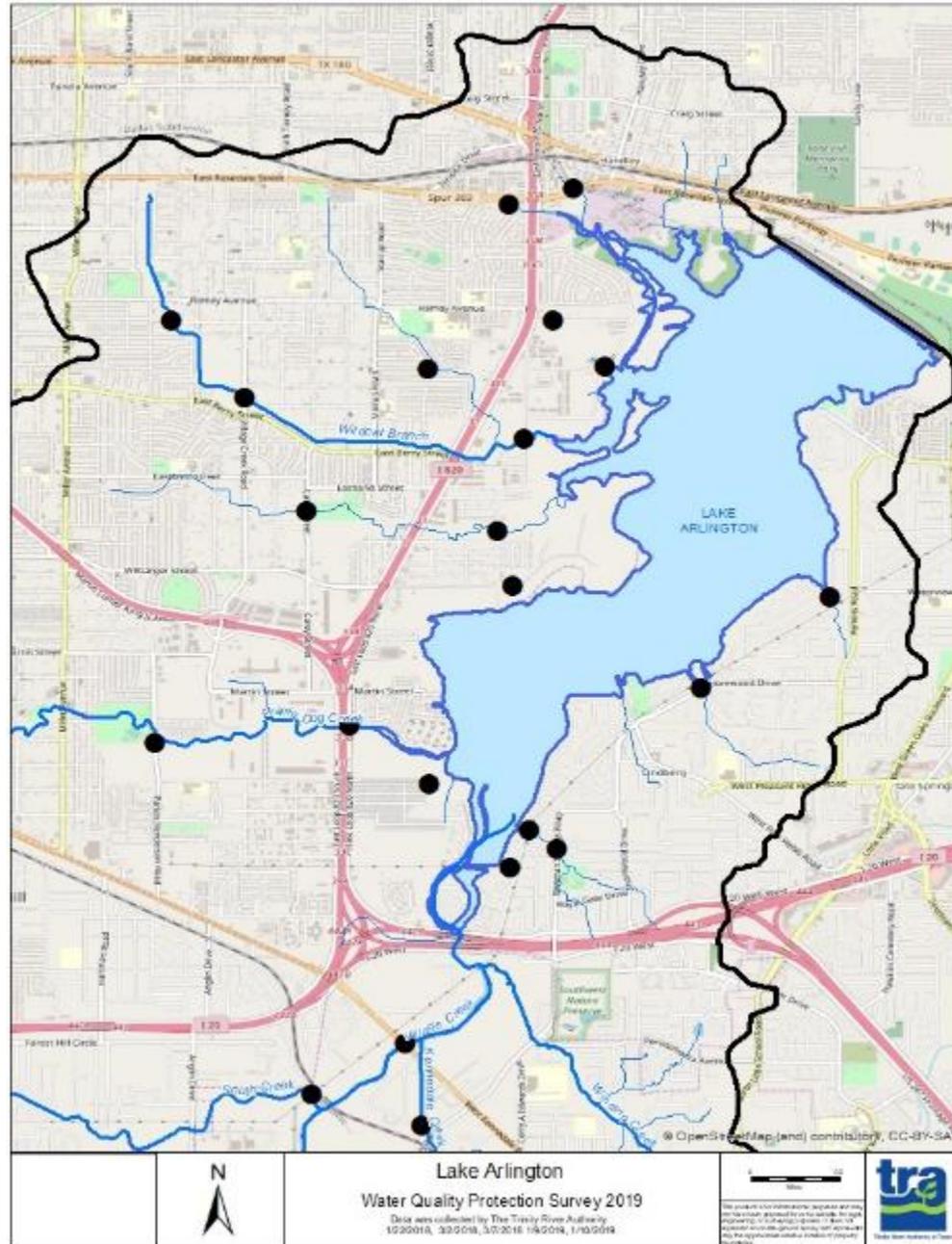
Litter



Trash



Survey Locations



Major Concern for Lake Arlington



Village Creek at I-20



WS19 – Village Creek near Freeman Drive Critical Impact



Field Data Sheet

Village Creek-Lake Arlington Water Quality Protection Survey



Station	Village Creek at Freeman Road WS19		
Date/Time	3/7/2018 10:30		
Waste Type			
Toxic +5	Medical waste +5	Human Waste +5	Dead animals +5
Graffiti +5	Construction +2	House Waste +2	Beer cans etc. +1
Basic Litter +1	Fishing +1	Tires +1	Other +?
			Subtotal: <u>22</u>
Erosion			
Yes +5	No +0		
			Subtotal: <u>22</u>
Homeless Occupation			
Yes +10	No +0		
			Subtotal: <u>32</u>
Estimated Flow Discharge			
> 10CFS +10	1-10CFS +5	<1CFS +1	No Flow +0
			Subtotal: <u>42</u>
Trash			
From offsite X1	Placed or dumped X2		
			Product: <u>84</u>
Waste Quantity			
< Trash can X1	> trash can < dumpster X1.2	About 1 Dumpster X1.5	> Dumpster X2
			Product: <u>168</u>
Impact Score			
Minimal 1 - 12	Some 12.1 - 20	Significant 20.1 - 40	Critical 40.1+
Photos Taken?		Notes	
Yes		This site has it all in mass quantities, includes automotive fluids, paints, and possible theft of items. Camera battery died before site was fully explored.	



Electronic Field Data Collection



My Survey

Village Creek Dumping Survey

Date and Time

Date Time

Site ID

Waste Type

- Toxic+5
- Medical+5
- Human Waste+5
- Dead Animals+5
- Graffiti+5
- Construction+2
- House Waste+2
- Beer cans etc.+1
- Basic Litter+1
- Fishing+1
- Tires+1
- Other+?

Erosion

- Yes
- No

Homeless Occupation

- Yes
- No

Estimated Flow Discharge

✓

My

Estimated Flow Discharge

- >10CFS +10
- 1-10CFS +5
- <1CFS +1
- No Flow +0

Trash

- From Offsite x1
- Placed or Dumped x2

Waste Quantity

- <Trash Can x1
- >Trash Can< Dumpster x1.2
- About 1 Dumpster x1.5
- >Dumpster x2

Photos

Notes

Site Location

32°40'N 97°7'W ± 14683 m

✓

11:08 LTE

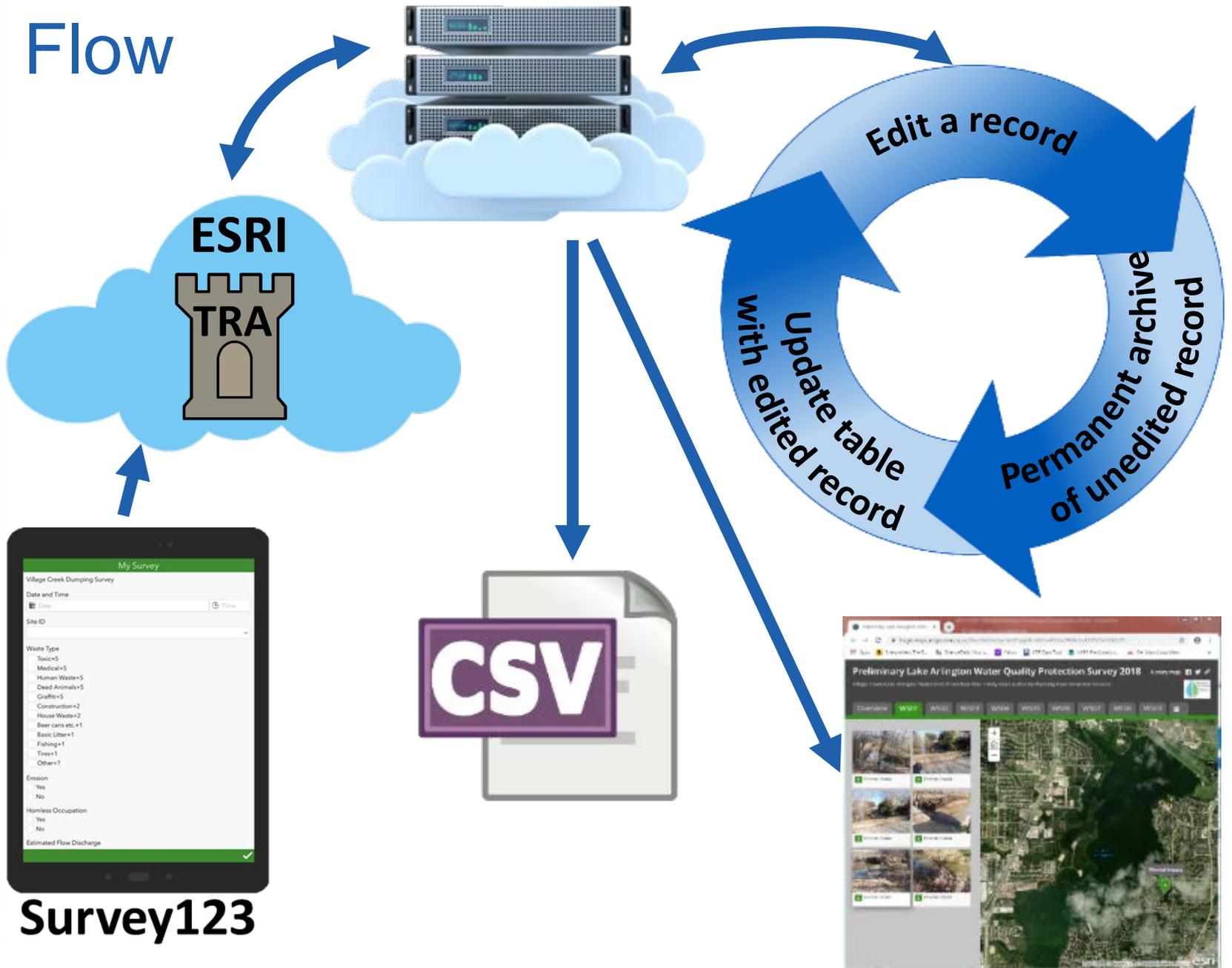
Survey123

Survey123 for ArcGIS
Utilities
★★★★☆ 45

OPEN

Data Flow

TRA Network



VCLA WPP Page

The screenshot shows the website for the Trinity River Authority of Texas. The header includes the TRA logo, the organization's name, and social media icons for Facebook, Twitter, Instagram, and YouTube. A search bar is located on the right. The main navigation menu includes links for ABOUT US, FACILITIES, BUSINESS SERVICES, BASIN PLANNING, and FINANCIAL INFORMATION. Below the navigation is a banner for 'Basin Planning' with sub-links for RECREATION and LAKE/RIVER DATA. The main content area is titled 'Village Creek-Lake Arlington Watershed Protection' and features a large image of a green canoe on a river. A sidebar on the right contains a 'Basin Planning' section with links to 'History of Water Quality', 'Clean Rivers Program', and 'Reports'. A hand cursor is visible over the 'View Story Map' link in the main text area.

Lake Arlington Illegal Dumping Survey

Funding for the planning phase of this effort was provided by the Texas Commission on Environmental Quality through a Clean Water Act § 319(h) grant from the U.S. Environmental Protection Agency, with matching funding from the City of Arlington and in-kind contributions from TRA.

A preliminary survey of sites around Lake Arlington where illegal dumping activity might occur was conducted in March of 2018. The results of the survey were mapped spatially with photo documentation. A public record of these findings is accessible here:

[View Story Map](#) (click VCLA logo)

Stay tuned for more information on upcoming meetings and events in the watershed. You can also check the [Meetings](#) page for additional information from past meetings related to the project.

In the News

LAKE ARLINGTON NOW ELIGIBLE FOR WATERSHED PROTECTION FUNDING

The U.S. Environmental Protection Agency recently approved the Village Creek – Lake Arlington Watershed Protection Plan. The plan was created by the Village Creek – Lake Arlington Watershed Partnership, the City of Arlington and the Trinity River Authority to restore

Point of Interest



Texas' legislature and courts have determined that the State of Texas owns, in trust for every citizen, all surface water in defined water courses in the state.

Browser tabs: Preliminary Lake Arlington Water, The Trinity River Authority of Tex..., Preliminary Lake Arlington Water

Browser address bar: Not secure | arcgis.com/home/item.html?id=b02ae97ebe7940c1a472ff43e5544105

Browser bookmarks: Apps, ScienceAlert: The B..., ScienceDaily: Your s..., Yahoo, CRP Data Tool, AHPS Precipitation..., Get Maps | topoView

ArcGIS logo | Search icon | Sign In

Preliminary Lake Arlington Water Quality Protection Survey 2018 Overview



Village Creek
Lake Arlington
View Application
PROTECTION

During routine Village Creek-Lake Arlington Watershed Protection Plan (VCLAWPP) water quality sampling, Trinity River Authority (TRA) Planning and Environmental Services (PES) field scientists observed large amounts of refuse and potentially toxic ma

Web Mapping Application by stuckya@trinityra.org [tragis](mailto:stuckya@trinityra.org)

Created: Mar 22, 2018 Updated: Jan 4, 2019
View Count: 518

[View Application](#)

Details

Size: 105 MB
API: JavaScript
Purpose: Ready To Use
★★★★★

[f](#) [t](#) [s](#)

Owner


stuckya@trinityra.org [tragis](mailto:stuckya@trinityra.org)

Tags

[Story Map, Shortlist](#)

Credits (Attribution)

No acknowledgements.

URL

<https://tragis.maps.arcg.com> [View](#)

Description

An in-depth description of the item is not available.

Terms of Use

No special restrictions or limitations on using the item's content have been provided.

Comments (0)

[Sign in to add a comment.](#)

www.arcgis.com/home/item.html?id=b02ae97ebe7940c1a472ff43e5544105

Story Map



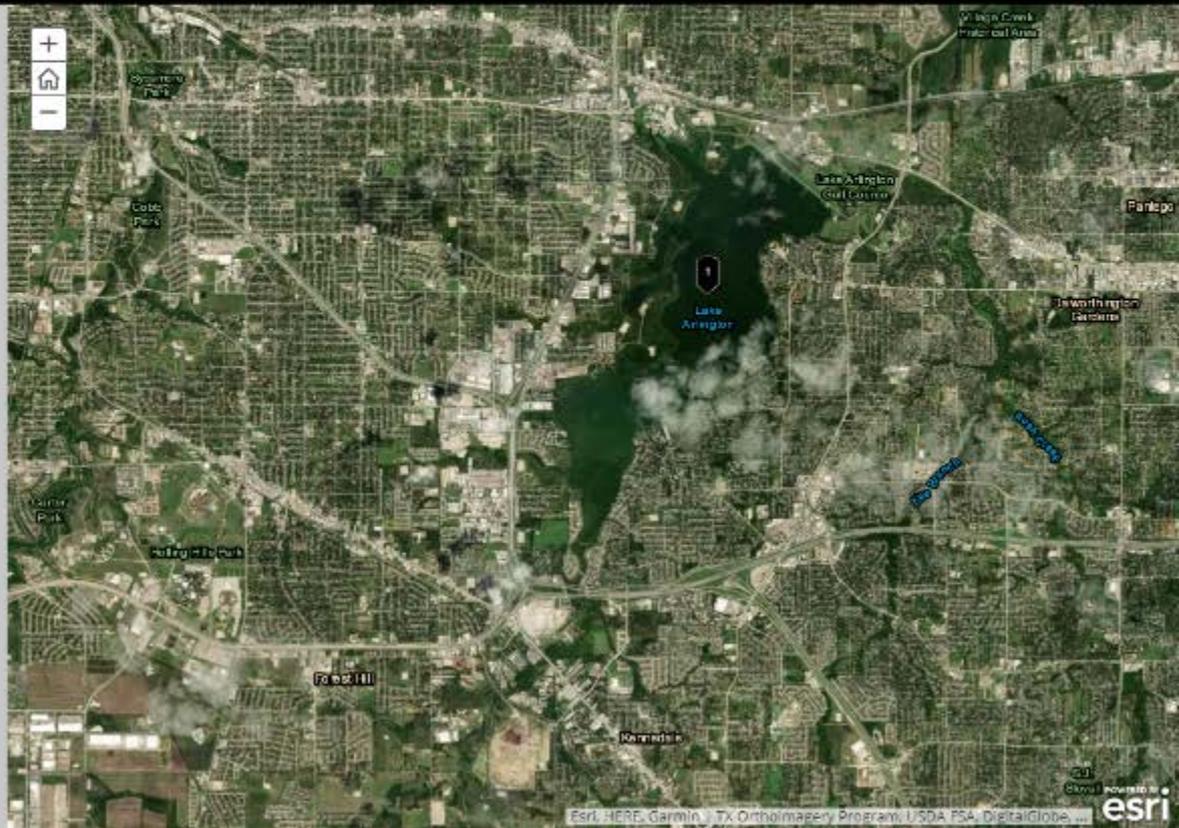
Preliminary Lake Arlington Water Quality Protection Survey 2018

Village Creek/Lake Arlington Watershed Protection Plan Trinity River Authority Planning Environmental Services

A story map [f](#) [t](#) [l](#)



- Overview
- WS01
- WS02
- WS03
- WS04
- WS05
- WS06
- WS07
- WS08
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- WS12
- WS13
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- WS15
- WS16
- WS17
- WS18



Story Map



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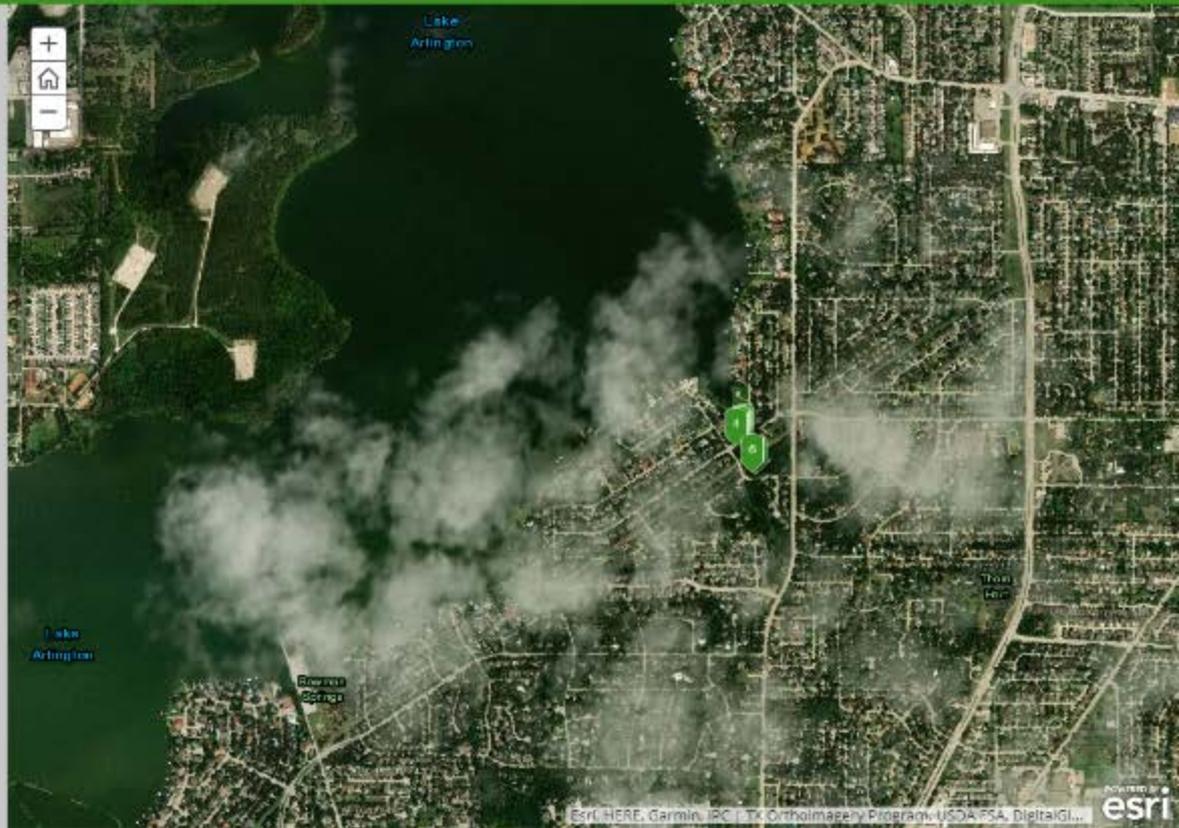
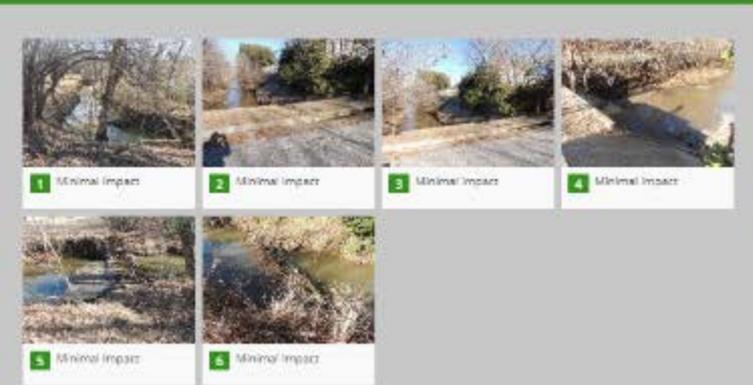
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Preliminary Lake Arlington Water Quality Protection Survey 2018

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A story map [f](#) [t](#) [l](#)

Overview **WS01** WS02 WS03 WS04 WS05 WS06 WS07 WS08 WS09 WS10 WS11 WS12 WS13 WS14 WS15 WS16 WS17 WS18



Story Map



Preliminary Lake Arlington Wat... x +

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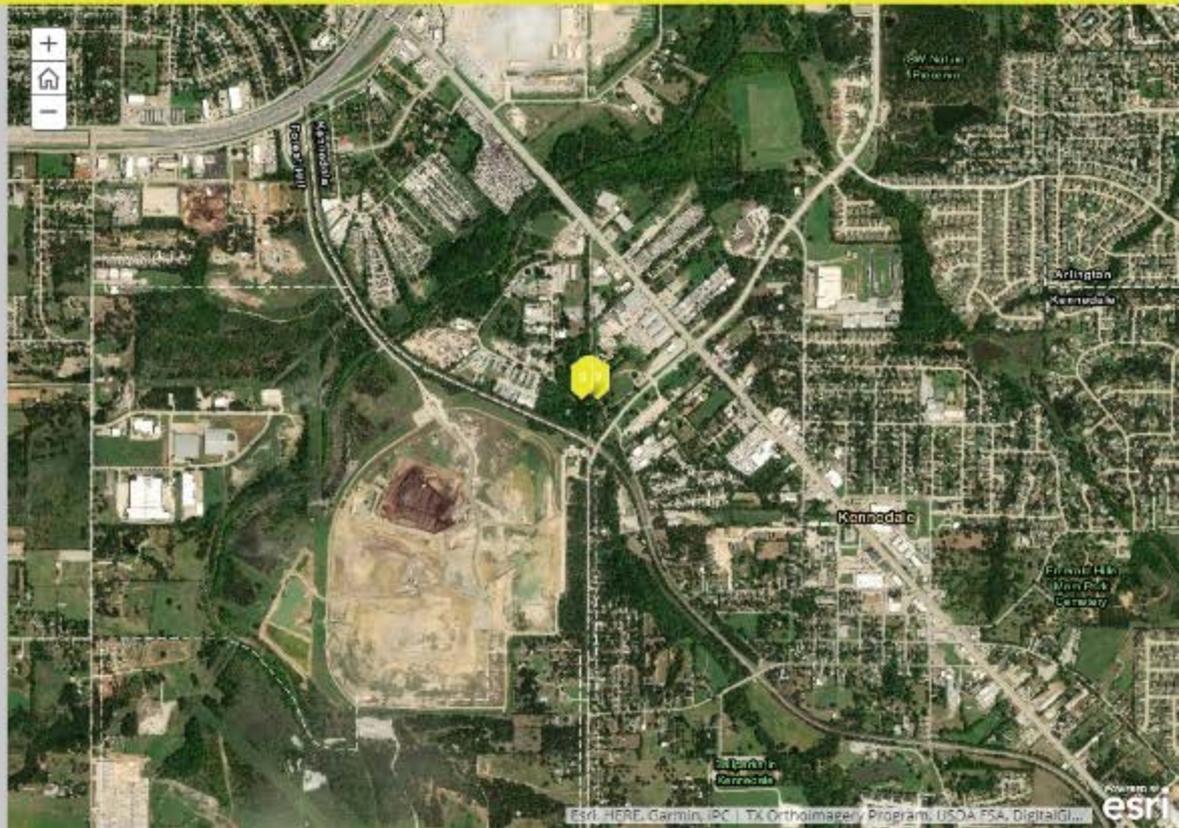
A story map

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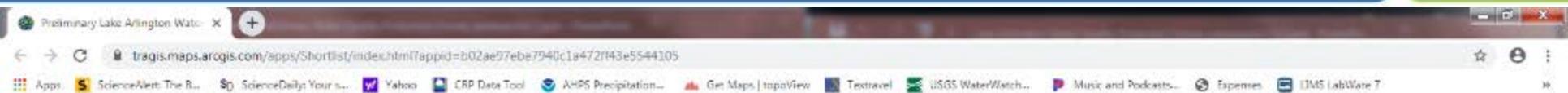
1 Some Impact

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Story Map



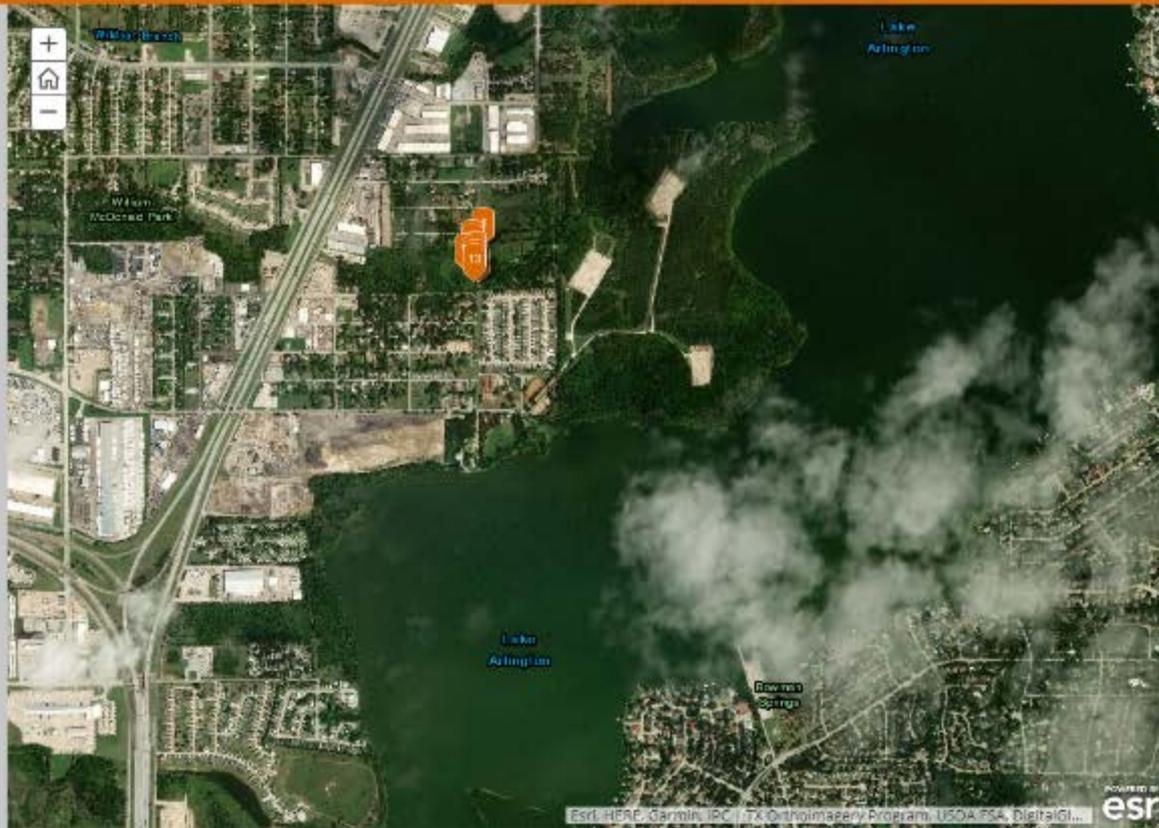
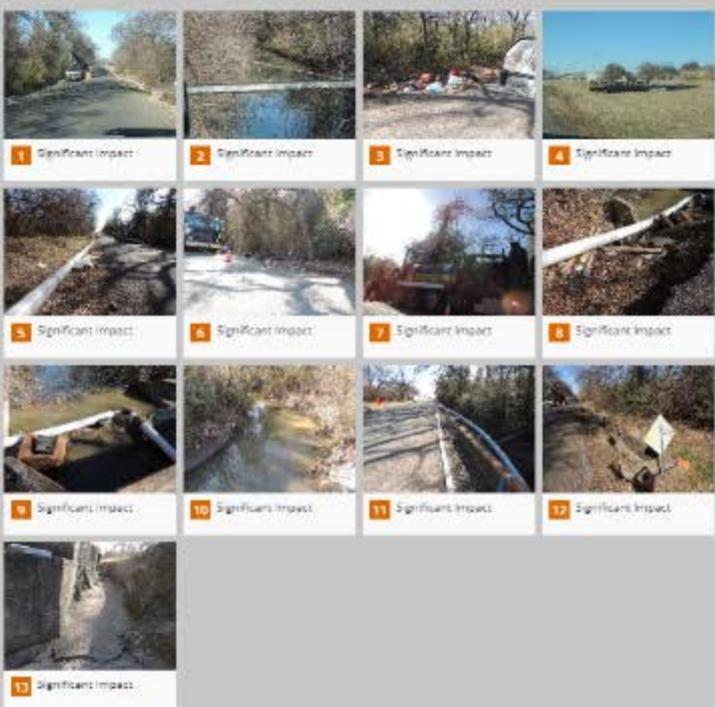
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A story map   



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Story Map



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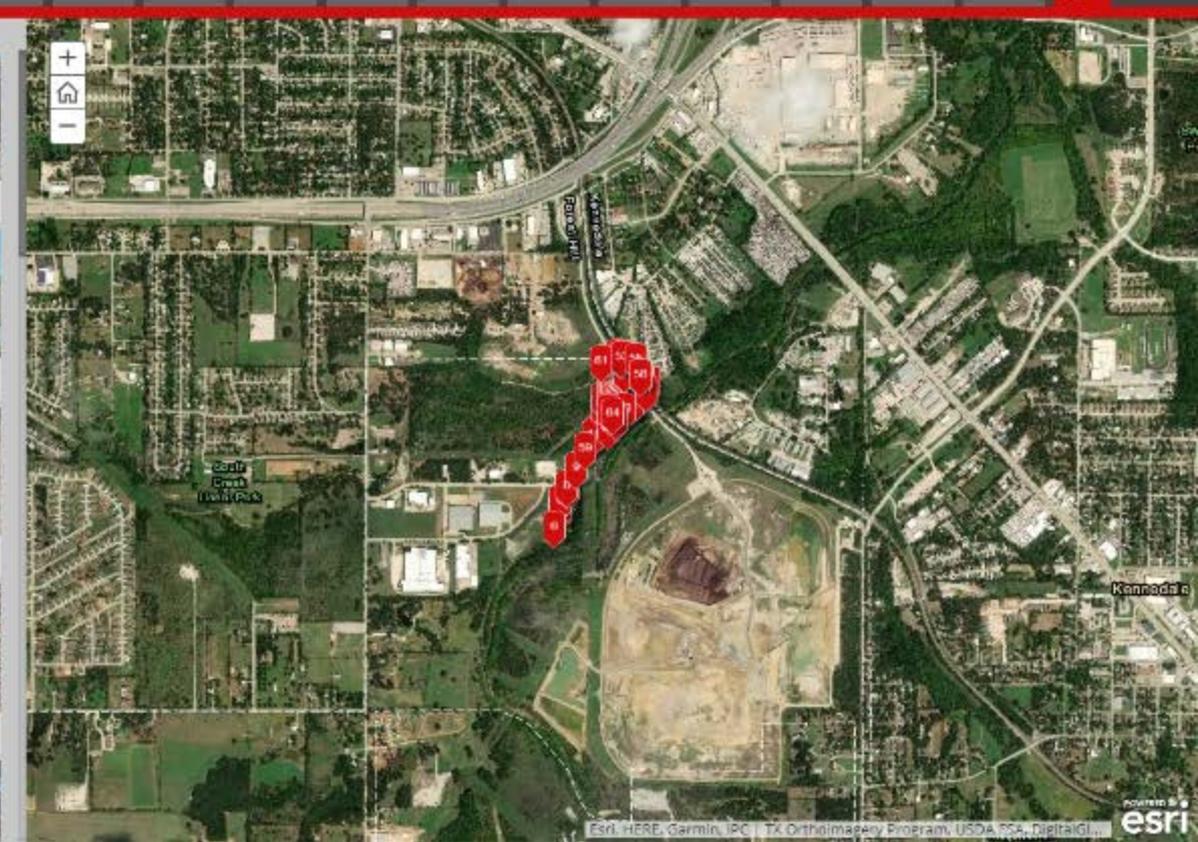
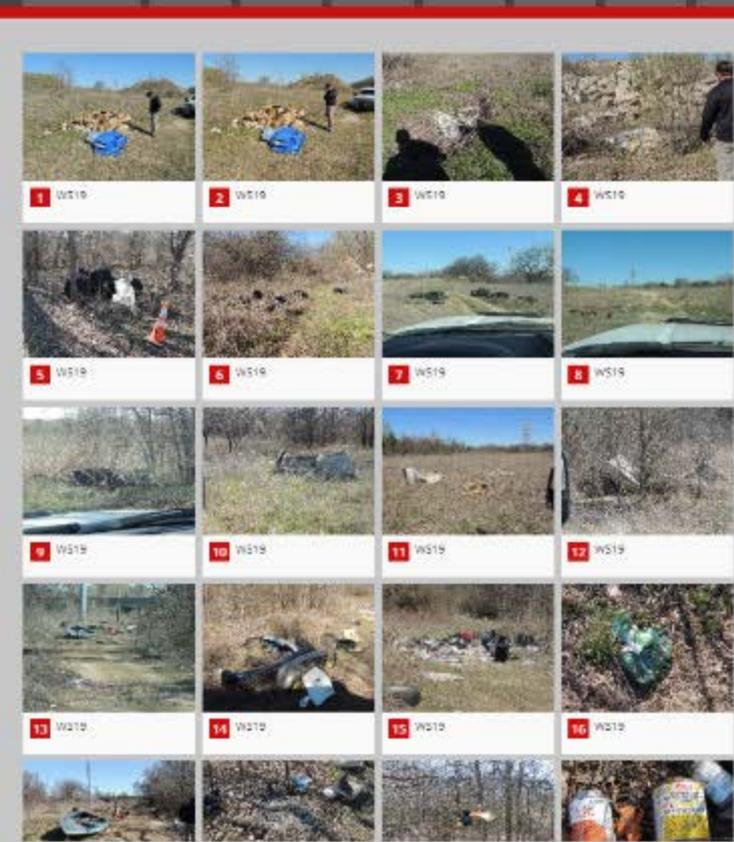
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Preliminary Lake Arlington Water Quality Protection Survey 2018

Village Creek/Lake Arlington Watershed Protection Plan Trinity River Authority Planning Environmental Services

A story map

Navigation tabs: Overview, WS01, WS02, WS03, WS04, WS05, WS06, WS07, WS08, WS09, WS10, WS11, WS12, WS13, WS14, WS15, WS16, WS17, WS18



Story Map



Preliminary Lake Arlington Water Quality Protection Survey 2018

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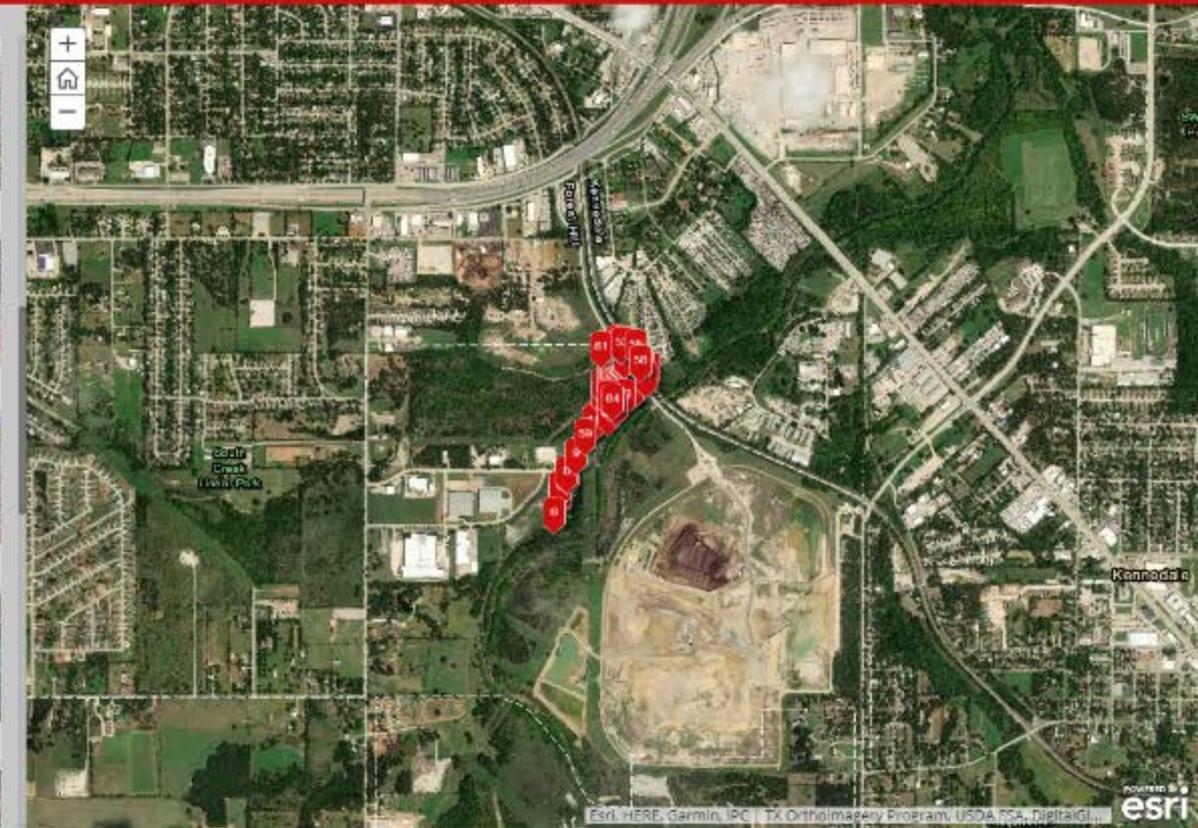
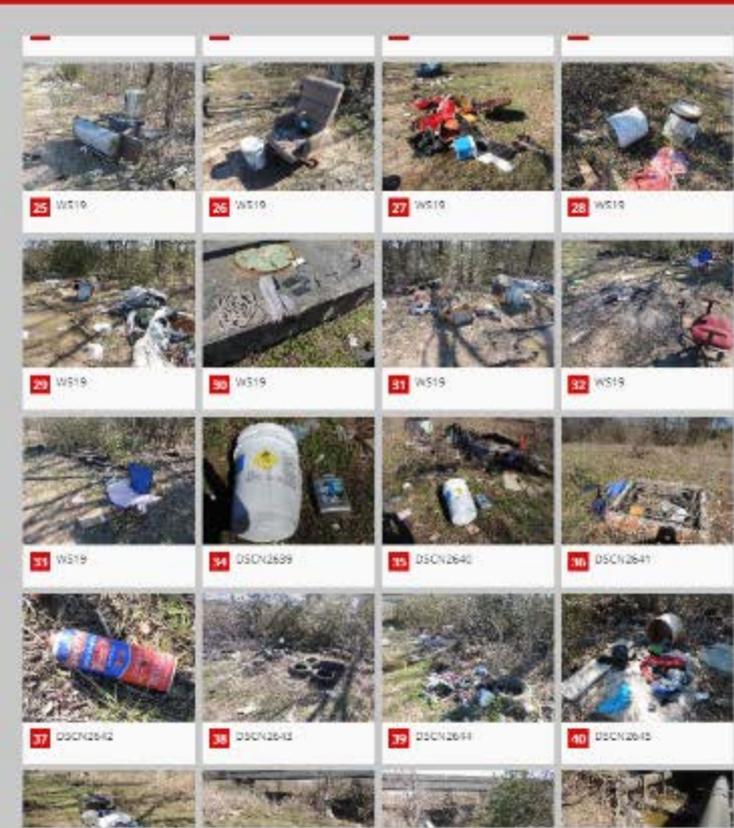
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Overview WS01 WS02 WS03 WS04 WS05 WS06 WS07 WS08 WS09 WS10 WS11 WS12 WS13 WS14 WS15 WS16 WS17 WS18 



Story Map



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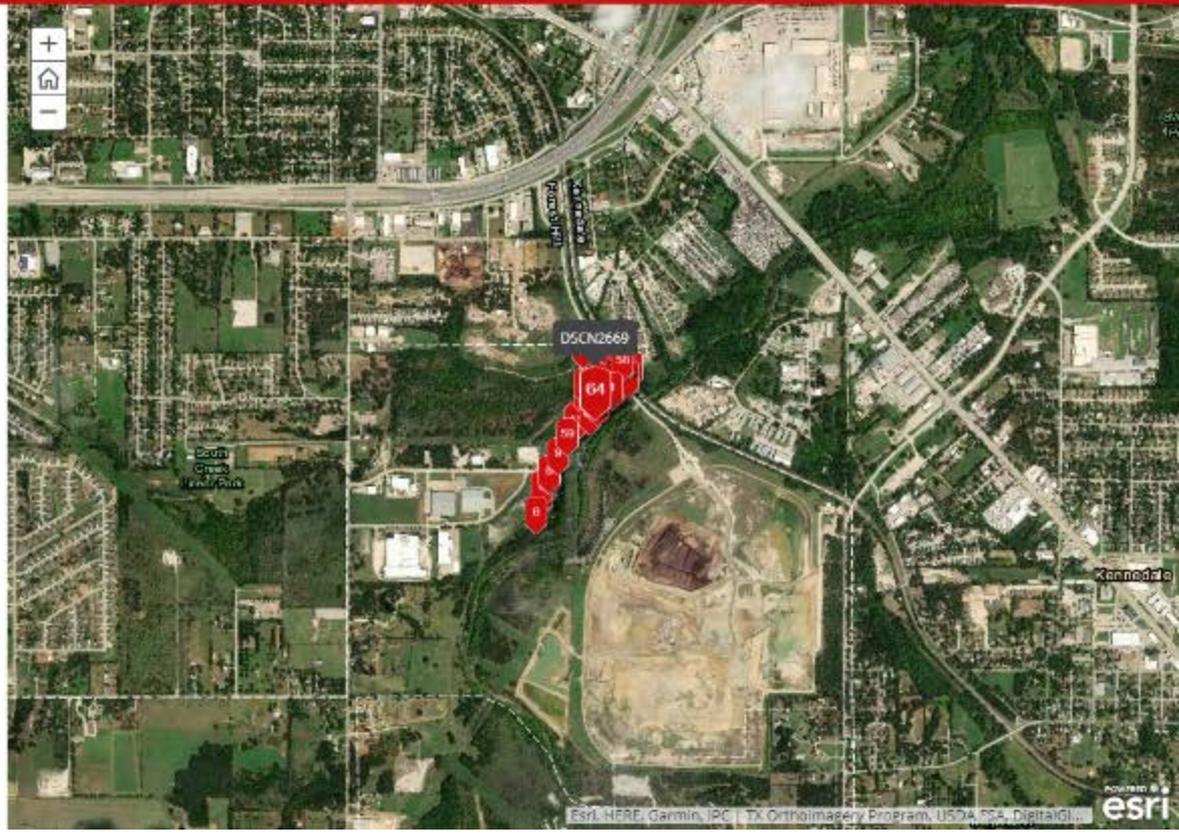
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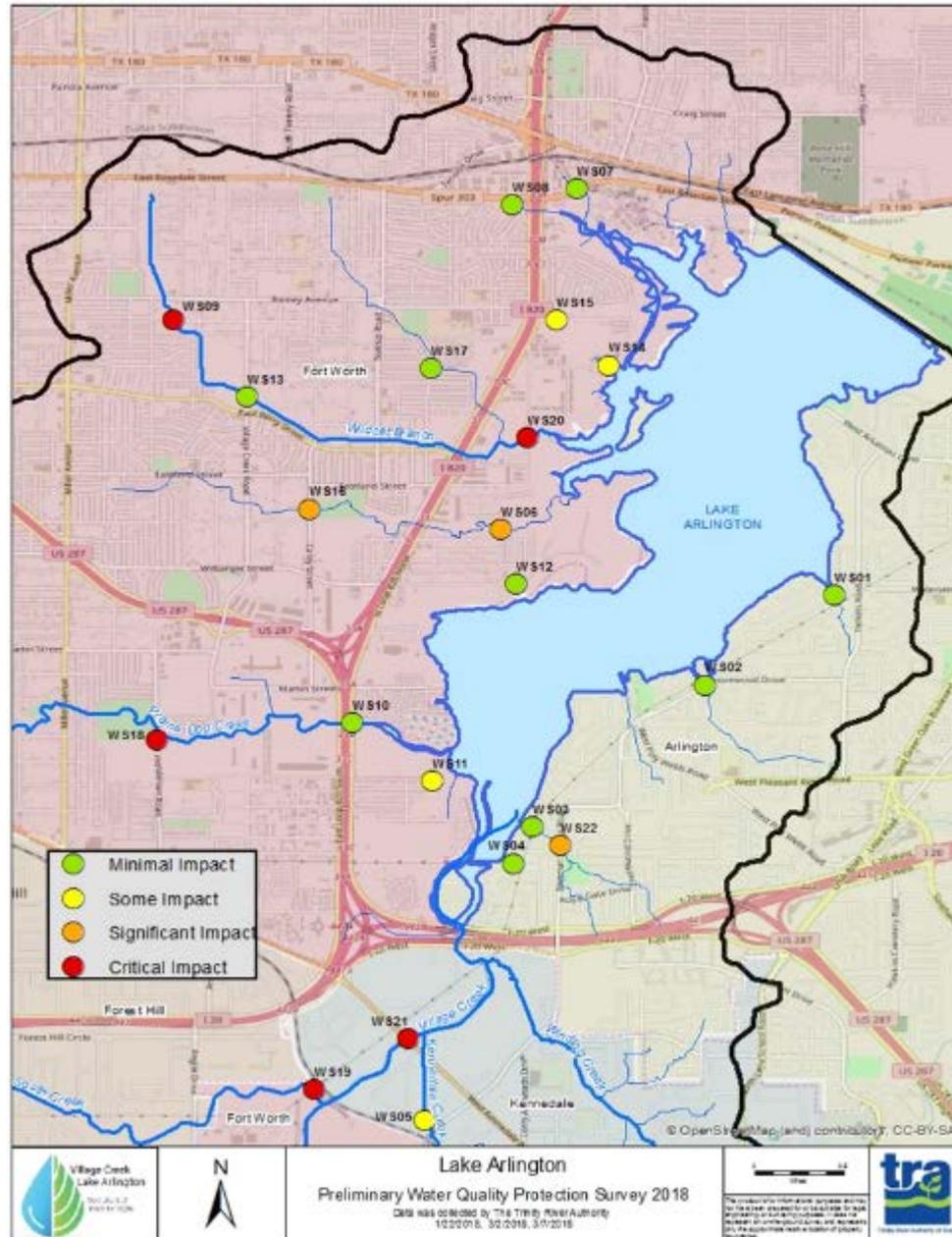
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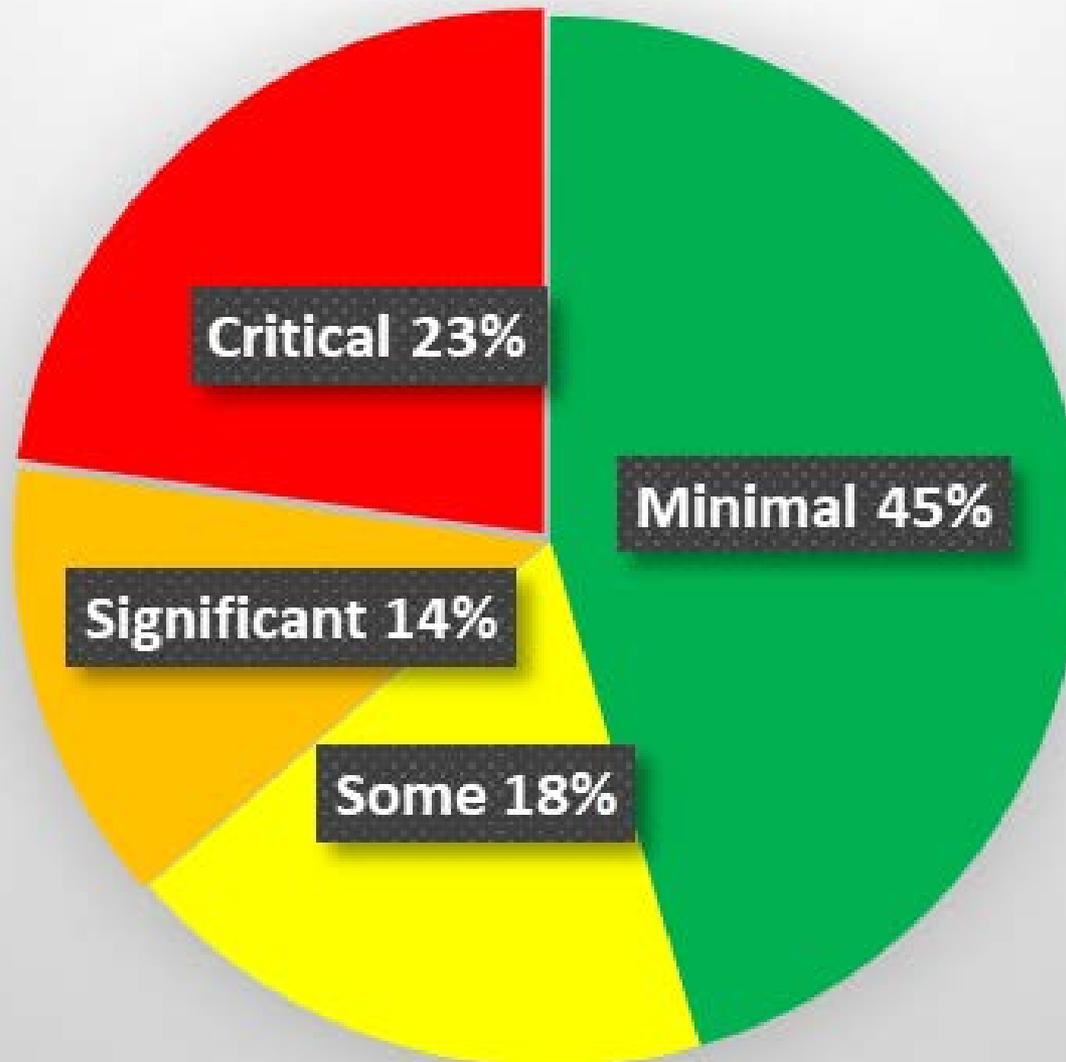
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Preliminary Survey



Site Severity 2018



Minimal Impact



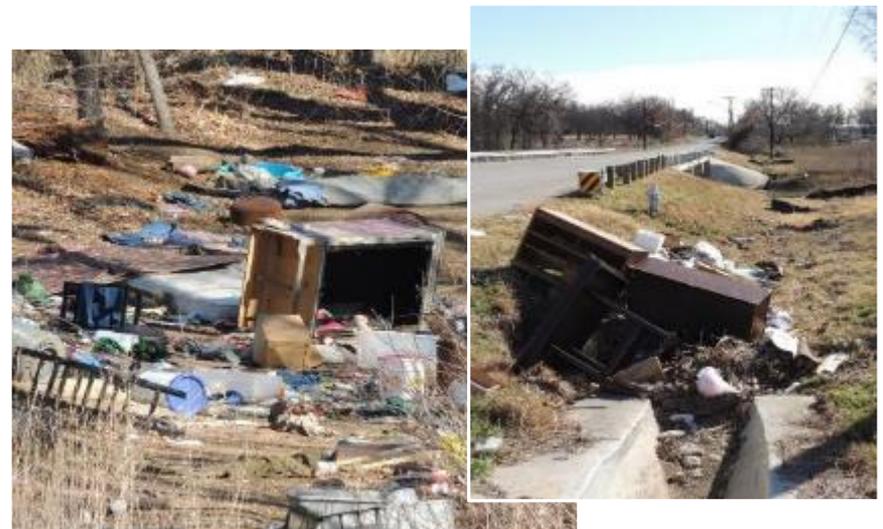
Some Impact



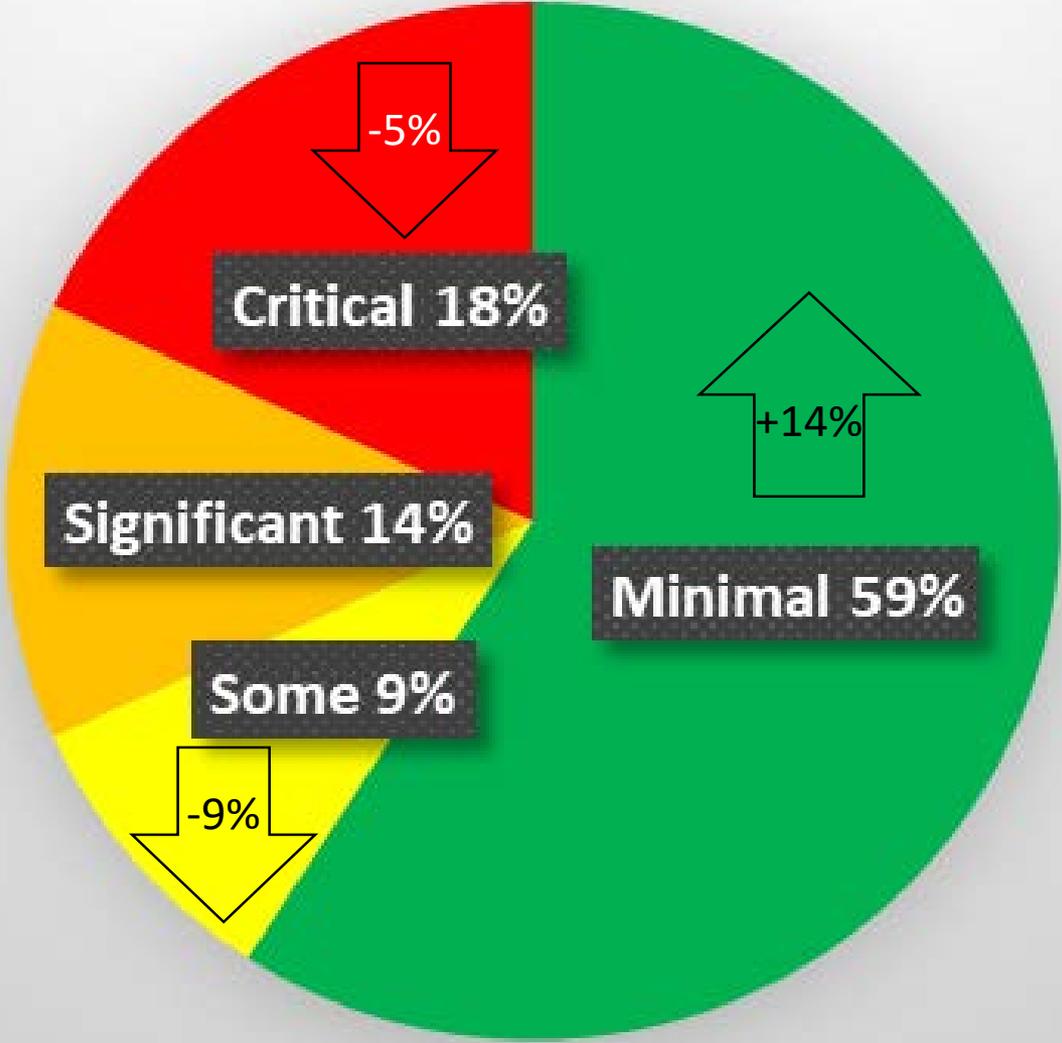
Significant Impact

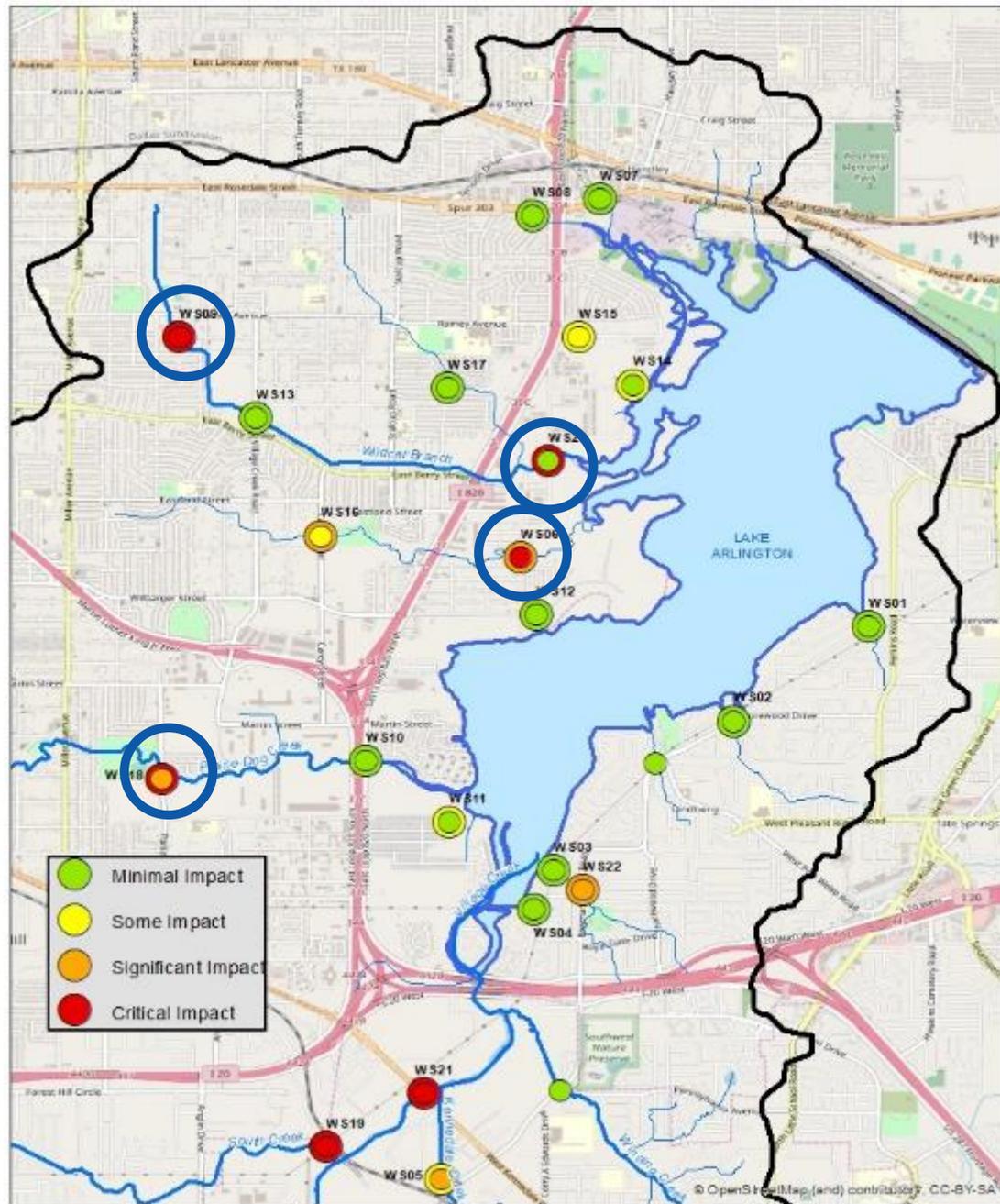


Critical Impact



Site Severity 2019





- Minimal Impact
- Some Impact
- Significant Impact
- Critical Impact



Lake Arlington
Water Quality Protection Survey 2019
 Data was collected by The Trinity River Authority
 1/22/2018, 3/2/2018, 3/7/2018, 19/2/2019, 1/10/2019



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WS09 Sanitary Sewer Leak & Repair



WS20 Clean Up Effort - Before



WS20 Clean Up Effort - After



WS18 Code Enforcement - Before



WS18 Code Enforcement - After



Summary

- Proof of concept
 - Identify areas of concern
 - Engage public
 - Code enforcement
 - Monitor for changes over time
- Implementation project for the VCLA WPP
- Will be done for the Mountain Creek-Joe Pool Lake WPP
- Can be modified/scaled up



Questions



Life, uh,
finds a
way.

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