

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	5/14/2025 - 5/15/2025	
Media Program:	Water	
Regulatory Program(s)	Clean Water Act	
Company Name:	Nemaha Environmental Services, LLC	
Facility Name:	Gray Commercial Mud Disposal, SWD, and Reclamation Facility	
Facility Physical Location:	Latitude: 36.551290 Longitude: -97.942700	
(city, state, zip code)	Kremlin, OK, 73753	
Mailing address:	5320 West Keowee Road	
(city, state, zip code)	Kremlin, OK 73753	
County/Parish:	Garfield County	
Facility Phone Number	580-541-2075	
Facility Contact:	Audie Dorrough adorrough@nemahaenviro.com	
FRS Number:	NA	
Identification/Permit Number:	OKU002218	
Media Identifier Number:	NA	
NAICS:	211111	
SIC:	1311	
Personnel participating in inspection:		
Michael Blaha (lead)	EPA/Region 6 ECDW	Enforcement Officer/Inspector
Tamara Griffin	EPA/Region 6 ECDW	Inspector
Matthew Wilkowske	Oklahoma Corporation Commission	Environmental Coordinator
EPA Lead Inspector Signature/Date		
	Michael Blaha	Date
Supervisor Signature/Date		
	Jeanne Eckhart	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

Environmental Protection Agency (EPA) Region 6 inspector Michael Blaha arrived at Nemaha Environmental Service, LLC – Gray Commercial Mud Disposal, SWD, and Reclamation Facility, located off West Keowee Road (36.551290, -97.942700) at 12:00 PM on May 14, 2025 and May 15, 2025, for an announced inspection. Brandon Hall was the facility representative at the time of the inspection. The inspection was conducted by the authority of the Clean Water Act (CWA) to determine compliance with EPA regulations. Matthew Wilkowske, Environmental Coordinator with Oklahoma Corporation Commission, and Tamara Griffin, EPA inspector, were present and participated during the inspection. There were no other federal, state, or local agency representatives present at the time of the inspection.

FACILITY DESCRIPTION

EPA conducted an inspection on the Nemaha Environmental Service, LLC – Gray Commercial Mud Disposal, SWD, and Reclamation Facility, which consists of pits, frac tanks, and Saltwater Disposal (SWD) wells. A spill occurred at the facility on June 3, 2023, due to a failure of the earthen berm.

Section II - OBSERVATIONS

I observed the unnamed tributary that runs through the facility. I also observed total dissolved solids (TDS) readings at Pit No. 9 located at the facility and in the unnamed tributary, 9-Mile Creek, and Wild Horse Creek; see Appendix 1 (photo log). For additional GPS location and photo metadata, see Appendix 1. Appendix 2 contains maps of all the TDS readings observed during the inspection.

I observed the beginning of the unnamed tributary that goes through the Nemaha Environmental Services, LLC's property. The beginning of the unnamed tributary was dry for approximately 100 to 200 yards, see photo No. 1.

I observed Pit No. 9 behind the beginning of the unnamed tributary, see photo No. 2. This pit is closest to West Keowee Road.

Following the unnamed tributary downstream, I observed the berm from which a spill occurred on June 3, 2023, see photo No. 3.

I observed the first spot in the unnamed tributary that had water and had a TDS reading of 5,975 mg/L. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 4 through photo No. 6.

Working downstream, I observed a (TDS) reading of 6,446 mg/L near a dammed area of the unnamed tributary. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 7 through photo No. 9.

I observed a bulk pile of soil on the north part of the facility, see photo No. 10.

In a pond near the bulk pile of soil, I observed the pond vegetation and a TDS reading of 1,452 mg/L, see photo No. 11 and photo No. 12.

Downstream in the unnamed tributary and near the bulk pile of soil, I observed a TDS reading of 9,711 mg/L. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 13 through photo No. 15.

Further downstream in the unnamed tributary, I observed a TDS reading of 8,570 mg/L. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 16 through photo No. 18.

Working downstream, I observed a TDS reading of 6,263 mg/L in the unnamed tributary. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 19 through photo No. 21.

Working downstream, I observed a TDS reading of 5,921 mg/L in the unnamed tributary. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 22 through photo No. 24.

Under a road crossing on North Oakwood Road, I observed oil staining on the wooden wall supports, see photo No. 25.

I observed a background TDS reading of 787 mg/L in 9-Mile Creek before the unnamed tributary enters 9-Mile Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 26 through photo No. 28.

I observed a TDS reading of 3,416 mg/L in 9-Mile Creek where the unnamed tributary flows into 9-Mile Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 29 through photo No. 31.

I observed a TDS reading of 2,277 mg/L in 9-Mile Creek. I also observed the flow path, bed and banks and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 32 through photo No. 34.

Working downstream, I observed a TDS reading of 2,223 mg/L in 9-Mile Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 35 through photo No. 37.

Working downstream, I observed a TDS reading of 2,220 mg/L in the 9-Mile Creek. I also observed the flow path, bed and banks and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 38 through photo No. 40.

Continuing downstream in 9-Mile Creek I observed a TDS reading of 2,461 mg/L in 9-Mile Creek. I also observed the flow path, bed and banks and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 41 through photo No. 43.

Continuing downstream, I observed a TDS reading of 1,993 mg/L in Wild Horse Creek, approximately 1.23 miles after 9-Mile Creek enters Wild Horse Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 44 through photo No. 46.

Upstream of the confluence between Wild Horse Creek and 9-Mile Creek, I observed a background TDS reading of 1,416 mg/L in Wild Horse Creek. I also observed the flow path, bed and banks and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 47 through photo No. 49.

Working downstream, I observed a TDS reading of 1,977 mg/L in the Wild Horse Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 50 through photo No. 52.

Back near the facility, I observed a background TDS reading of 980 mg/L in 9-Mile Creek before the unnamed tributary meets 9-Mile Creek. I also observed the flow path, bed and banks, and vegetation of 9-Mile Creek upstream and downstream of the TDS reading, see photo No. 53 through photo No. 55.

Near the facility, I observed a TDS reading of 817 mg/L in Wild Horse Creek before its confluence with 9-Mile Creek. I also observed the flow path, bed and banks, and vegetation of the unnamed tributary upstream and downstream of the TDS reading, see photo No. 56 through photo No. 58.

Off N Garland Road, I observed a wet spot on the backside of a berm, see photo No. 59.

At the facility, I observed a TDS reading of 652 mg/L in the runoff catchment area near the field office as well as upstream and downstream observations, see photo No. 60 through photo No. 62.

At the facility, near North Garland Road, I observed a pond and a TDS reading of 1,044 mg/L in the pond, see photo No. 63 and photo No. 64.

All TDS field readings observed throughout the inspection were taken with a properly calibrated, EPA issued, YSI Pro 30 conductivity meter.

Section III – AREAS OF CONCERN

EPA inspector Michael Blaha held a closing conference with Brandon Hall with Nemaha Environmental Services, LLC. The areas of concern at the time of the inspection include the elevated TDS levels observed in the unnamed tributary and 9-Mile Creek and the large soil pile at the facility, where the highest TDS levels were observed during the inspection.

Section IV – FOLLOW UP

Inspector will conduct follow-up phone calls with the company representatives over the coming weeks and month.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 64 photos taken on 05/14/2025*

Appendix 2 – Maps – 5 Maps displaying TDS Readings taken on 5/14/2025

*Arrows were added to several photos in Appendix 1 to point to features described in each photo description. The inspector has retained the original photos and associated metadata.

Appendix 1

Photograph Log

64 Photos



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140150

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 12:20 PM

Latitude: 36.551637

Longitude: -97.940678

Photographer: Michael Blaha

Description: This photo was taken looking NE and shows the starting point of the unnamed tributary that goes through the property. The starting point of the unnamed tributary in this photo is directly behind Pit No. 9. At the time of inspection, this section of the unnamed tributary was dry. The arrow shows the flow direction the unnamed tributary would have with water present.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140151

Orientation: S

Date of Photo: 5/14/2025

Time of Photo: 12:21 PM

Latitude: 36.551562

Longitude: -97.940243

Photographer: Michael Blaha

Description: This photo was taken looking S and shows Pit No. 9, which is the pit closest to West Keowee Road.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140152

Orientation: S

Date of Photo: 5/14/2025

Time of Photo: 12:31 PM

Latitude: 36.555765

Longitude: -97.939753

Photographer: Michael Blaha

Description: This photo was taken looking S and shows the berm from which the June 3, 2023, spill occurred.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma

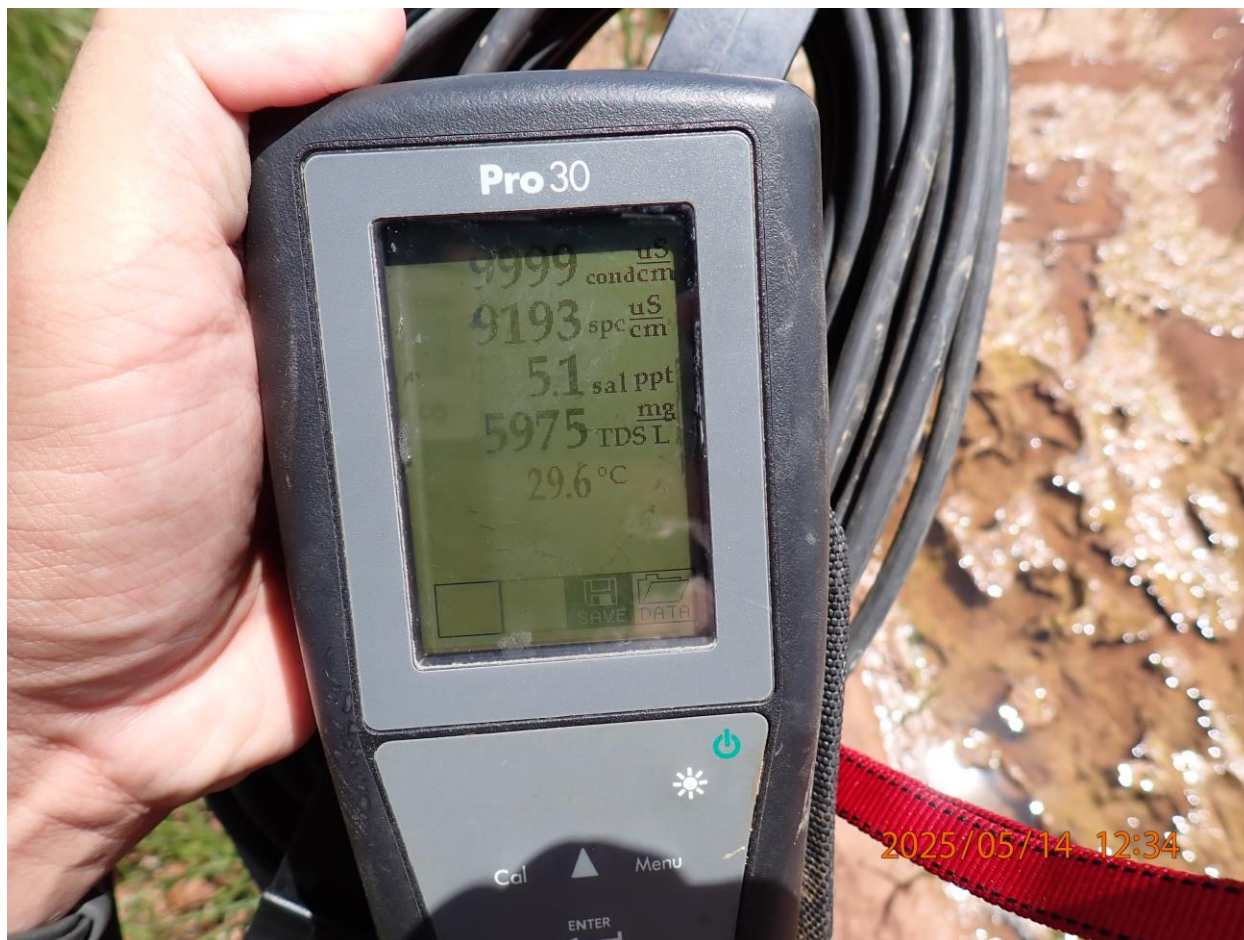


Photo File Name: P5140153

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 12:34 PM

Latitude: 36.555211

Longitude: -97.939068

Photographer: Michael Blaha

Description: This photo was taken showing a Total Dissolved Solids (TDS) reading of 5,975 mg/L at the first spot with water in the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140154

Orientation: S

Date of Photo: 5/14/2025

Time of Photo: 12:35 PM

Latitude: 36.555336

Longitude: -97.939113

Photographer: Michael Blaha

Description: This photo was taken from the same spot as Photo No. 4 looking S or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140155

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 12:35 PM

Latitude: 36.555336

Longitude: -97.939113

Photographer: Michael Blaha

Description: This photo was taken in the same spot as photo No. 4 looking NE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140156

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 12:42 PM

Latitude: 36.556156

Longitude: -97.938285

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 6,446 mg/L near the dammed area of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140157

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 12:42 PM

Latitude: 36.556193

Longitude: -97.938172

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 7 looking S or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140158

Orientation: NW

Date of Photo: 5/14/2025

Time of Photo: 12:42 PM

Latitude: 36.556193

Longitude: -97.938172

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 7 looking NW or downstream and shows the flow path (see arrow for flow direction), bed and banks, vegetation, and dam on the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140159

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 12:56 PM

Latitude: 36.558227

Longitude: -97.936605

Photographer: Michael Blaha

Description: This photo was taken looking NE showing a bulk soil pile at the facility.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140161

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 1:02 PM

Latitude: 36.560457

Longitude: -97.937596

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 1,452 mg/L in a pond near the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140162

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 1:03 PM

Latitude: 36.56049

Longitude: -97.937555

Photographer: Michael Blaha

Description: This photo was taken looking SW and shows an overview of the pond, vegetation, and soil.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140163

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 1:06 PM

Latitude: 36.56084

Longitude: -97.938505

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 9,711 mg/L in the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140164

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 1:06 PM

Latitude: 36.560835

Longitude: -97.938473

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 13 looking SW or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140165

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 1:06 PM

Latitude: 36.560835

Longitude: -97.938473

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 13 looking NE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140166

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 1:15 PM

Latitude: 36.561221

Longitude: -97.936953

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 8,570 mg/L in the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140167

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 1:15 PM

Latitude: 36.561221

Longitude: -97.936953

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 16 looking W or upstream towards a culvert and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140168

Orientation: N

Date of Photo: 5/14/2025

Time of Photo: 1:15 PM

Latitude: 36.561221

Longitude: -97.936953

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 16 looking N or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140169

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 1:34 PM

Latitude: 36.56404

Longitude: -97.9344

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 6,263 mg/L in the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140170

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 1:34 PM

Latitude: 36.56479

Longitude: -97.93411

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 19 looking SW or upstream towards the culvert and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140171

Orientation: N

Date of Photo: 5/14/2025

Time of Photo: 1:34 PM

Latitude: 36.564721

Longitude: -97.93421

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 19 looking N or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140172

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 1:44 PM

Latitude: 36.573715

Longitude: -97.925543

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 5,921 mg/L in the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140173

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 1:44 PM

Latitude: 36.573715

Longitude: -97.925543

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 22 looking W or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140174

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 1:44 PM

Latitude: 36.573675

Longitude: -97.925733

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 22 looking NE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 25

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140175

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 1:59 PM

Latitude: 36.573582

Longitude: -97.925112

Photographer: Michael Blaha

Description: This photo was taken looking W showing oil staining on the wood supports under the road crossing on North Oakwood Road.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 26

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140176

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 2:17 PM

Latitude: 36.575635

Longitude: -97.925886

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 787 mg/L in 9-Mile Creek before it meets with the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 27

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140177

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 2:18 PM

Latitude: 36.575583

Longitude: -97.925818

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 26 looking W or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 28

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140178

Orientation: SE

Date of Photo: 5/14/2025

Time of Photo: 2:18 PM

Latitude: 36.575588

Longitude: -97.925815

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 26 looking SE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 29

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140179

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 2:35 PM

Latitude: 36.573982

Longitude: -97.925688

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 3,416 mg/L at the unnamed tributary's confluence with 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 30

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140180

Orientation: SE

Date of Photo: 5/14/2025

Time of Photo: 2:36 PM

Latitude: 36.57374

Longitude: -97.925353

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 29 looking SE or downstream and shows the unnamed tributary's point of entry into 9-Mile Creek. The arrows were added to show the confluence of the unnamed tributary and 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 31

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140181

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 2:36 PM

Latitude: 36.573758

Longitude: -97.925398

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 26 looking SW or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of the unnamed tributary before it flows into 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 32

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140182

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 2:51 PM

Latitude: 36.57932

Longitude: -97.913293

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 2,277 mg/L in 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 33

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140183

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 2:51 PM

Latitude: 36.579332

Longitude: -97.91329

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 32 looking SW or upstream toward the road crossing and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 34

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140184

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 2:51 PM

Latitude: 36.579332

Longitude: -97.91329

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 32 looking NE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 35

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140185

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 3:00 PM

Latitude: 36.582425

Longitude: -97.908183

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 2,223 mg/L in the 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 36

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140186

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 3:00 PM

Latitude: 36.582695

Longitude: -97.908081

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 35 looking NE or downstream, off North Cleveland Street, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 37

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140187

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 3:01 PM

Latitude: 36.5825

Longitude: -97.908073

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 35 looking W or upstream, off North Cleveland Street, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 38

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140188

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 3:14 PM

Latitude: 36.591193

Longitude: -97.890737

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 2,220 mg/L in the 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 39

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140189

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 3:14 PM

Latitude: 36.591193

Longitude: -97.890737

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 38 looking W or upstream near North Van Buren Street crossing and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 40

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140190

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 3:14 PM

Latitude: 36.591171

Longitude: -97.890628

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 38 looking NE or downstream near North Van Buren Street crossing and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 41

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140191

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 3:30 PM

Latitude: 36.59792

Longitude: -97.875135

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 2,461 mg/L in the 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 42

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140192

Orientation: W

Date of Photo: 5/14/2025

Time of Photo: 3:30 PM

Latitude: 36.59792

Longitude: -97.875135

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 41 looking W or upstream, off Highway 81, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 43

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140193

Orientation: E

Date of Photo: 5/14/2025

Time of Photo: 3:31 PM

Latitude: 36.597917

Longitude: -97.875495

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 41 looking E or downstream, off Highway 81, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 44

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140194

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 3:45 PM

Latitude: 36.603846

Longitude: -97.857651

Photographer: Michael Blaha

Description: This photo was taken showing TDS reading of 1,993 mg/L in the Wild Horse Creek after 9-Mile Creek meets Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 45

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140195

Orientation: SE

Date of Photo: 5/14/2025

Time of Photo: 3:45 PM

Latitude: 36.603846

Longitude: -97.857651

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 44 looking SE or upstream, off County Road 890, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 46

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140196

Orientation: N

Date of Photo: 5/14/2025

Time of Photo: 3:46 PM

Latitude: 36.603913

Longitude: -97.85776

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 44 looking N or downstream, off County Road 890, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 47

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140197

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 3:58 PM

Latitude: 36.593486

Longitude: -97.8709

Photographer: Michael Blaha

Description: This photo was taken showing a background TDS reading of 1,416 mg/L in the Wild Horse Creek before meeting 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 48

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140198

Orientation: NW

Date of Photo: 5/14/2025

Time of Photo: 3:58 PM

Latitude: 36.593486

Longitude: -97.8709

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 47 looking NW or downstream, off County Line Road, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 49

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140199

Orientation: S

Date of Photo: 5/14/2025

Time of Photo: 3:58 PM

Latitude: 36.593612

Longitude: -97.870825

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 47 looking S or upstream, off County Line Road, shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 50

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140200

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 4:15 PM

Latitude: 36.607762

Longitude: -97.826683

Photographer: Michael Blaha

Description: This photo was taken showing TDS reading of 1,977 mg/L in the Wild Horse Creek further downstream after 9-Mile Creek meets Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 51

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140201

Orientation: SW

Date of Photo: 5/14/2025

Time of Photo: 4:15 PM

Latitude: 36.607762

Longitude: -97.826683

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 51 looking SW or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 52

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140202

Orientation: NE

Date of Photo: 5/14/2025

Time of Photo: 4:15 PM

Latitude: 36.607855

Longitude: -97.826605

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 51 looking NE or downstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 53

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140203

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 4:56 PM

Latitude: 36.56435

Longitude: -97.951723

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 980 mg/L in 9-Mile Creek before it meets with the unnamed tributary, off West Buffalo Road.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 54

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140204

Orientation: SE

Date of Photo: 5/14/2025

Time of Photo: 4:56 PM

Latitude: 36.56435

Longitude: -97.951723

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 53 looking SE or upstream and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 55

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140205

Orientation: N

Date of Photo: 5/14/2025

Time of Photo: 4:56 PM

Latitude: 36.56435

Longitude: -97.951723

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 53 looking N or downstream and shows the flow path (see arrow for flow direction), bed and banks and vegetation of 9-Mile Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 56

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140206

Orientation: NA

Date of Photo: 5/14/2025

Time of Photo: 5:08 PM

Latitude: 36.550188

Longitude: -97.916095

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 817 mg/L in Wild Horse Creek, off W Keowee Road, east of the facility.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 57

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140207

Orientation: SE

Date of Photo: 5/14/2025

Time of Photo: 5:08 PM

Latitude: 36.550188

Longitude: -97.916095

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 56 looking SE or upstream, off West Keowee Road, and shows the flow path (see arrow for direction of flow), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 58

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140208

Orientation: N

Date of Photo: 5/14/2025

Time of Photo: 5:09 PM

Latitude: 36.550188

Longitude: -97.916095

Photographer: Michael Blaha

Description: This photo was taken at the same location as Photo No. 56 looking N or downstream, off West Keowee Road, and shows the flow path (see arrow for flow direction), bed and banks, and vegetation of Wild Horse Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 59

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140209

Orientation: SE

Date of Photo: 5/15/2025

Time of Photo: 9:09 AM

Latitude: 36.563151

Longitude: -97.943433

Photographer: Michael Blaha

Description: This photo was taken looking SE showing a wet spot on the backside of a berm at the facility, off North Garland Road. The arrow was added to show the direction of flow.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 60

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140211

Orientation: NA

Date of Photo: 5/15/2025

Time of Photo: 9:51 AM

Latitude: 36.552249

Longitude: -97.942881

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 652 mg/L in the facility runoff catchment area near the field office.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 61

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140212

Orientation: W

Date of Photo: 5/15/2025

Time of Photo: 9:51 AM

Latitude: 36.552249

Longitude: -97.942881

Photographer: Michael Blaha

Description: This photo was taken looking W or downstream and shows the facility runoff catchment area near the facility field office. The arrow shows the flow direction.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 62

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140213

Orientation: NE

Date of Photo: 5/15/2025

Time of Photo: 9:51 AM

Latitude: 36.552249

Longitude: -97.942881

Photographer: Michael Blaha

Description: This photo was taken looking NE or upstream and shows the facility runoff catchment area near the facility field office. The arrow shows the flow direction.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 63

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140214

Orientation: NA

Date of Photo: 5/15/2025

Time of Photo: 10:00 AM

Latitude: 36.561692

Longitude: -97.942916

Photographer: Michael Blaha

Description: This photo was taken showing a TDS reading of 1,044 mg/L in a pond near North Garland Road.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 64

Location: 36.551290, -97.942700		
City: Kremlin	County/Parish: Garfield	State: Oklahoma



Photo File Name: P5140215

Orientation: NW

Date of Photo: 5/15/2025

Time of Photo: 10:00 AM

Latitude: 36.561692

Longitude: -97.942916

Photographer: Michael Blaha

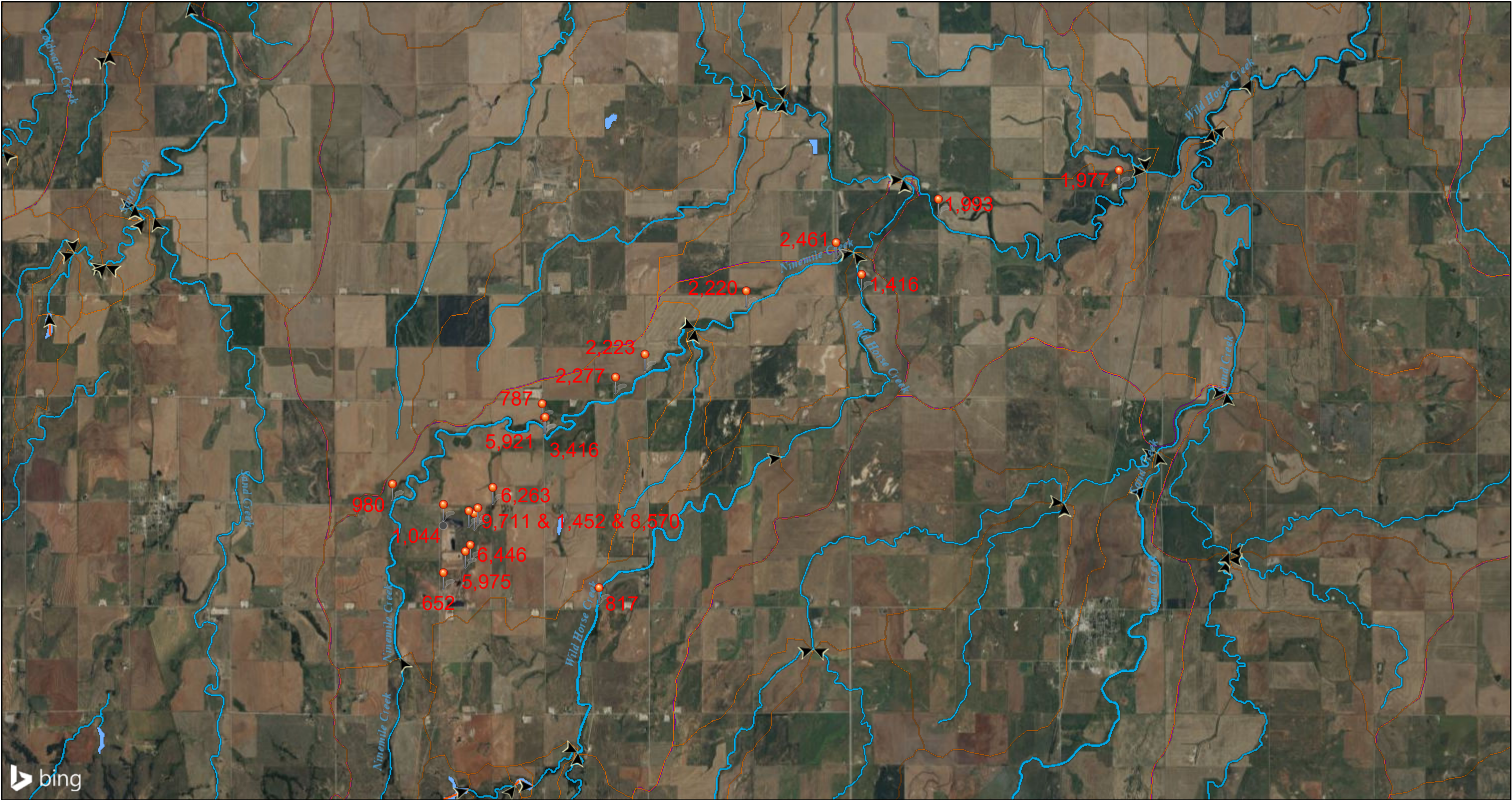
Description: This photo was taken at the same location as Photo No. 63 looking NW and shows the pond near North Garland Road.

Appendix 2

Map Showing Total Dissolved Solids (TDS) Reading from May 14, 2025

5 Maps

Map 1: All TDS Readings from Inspection



6/12/2025, 12:34:43 PM

1:72,224

Subwatershed (HUC12)

Catchment

Waterbody

Lake/Pond

Non-Network Flowline

Stream/River, Intermittent

Network Flowline

Connector

Stream/River, Intermittent

Stream/River, Perennial

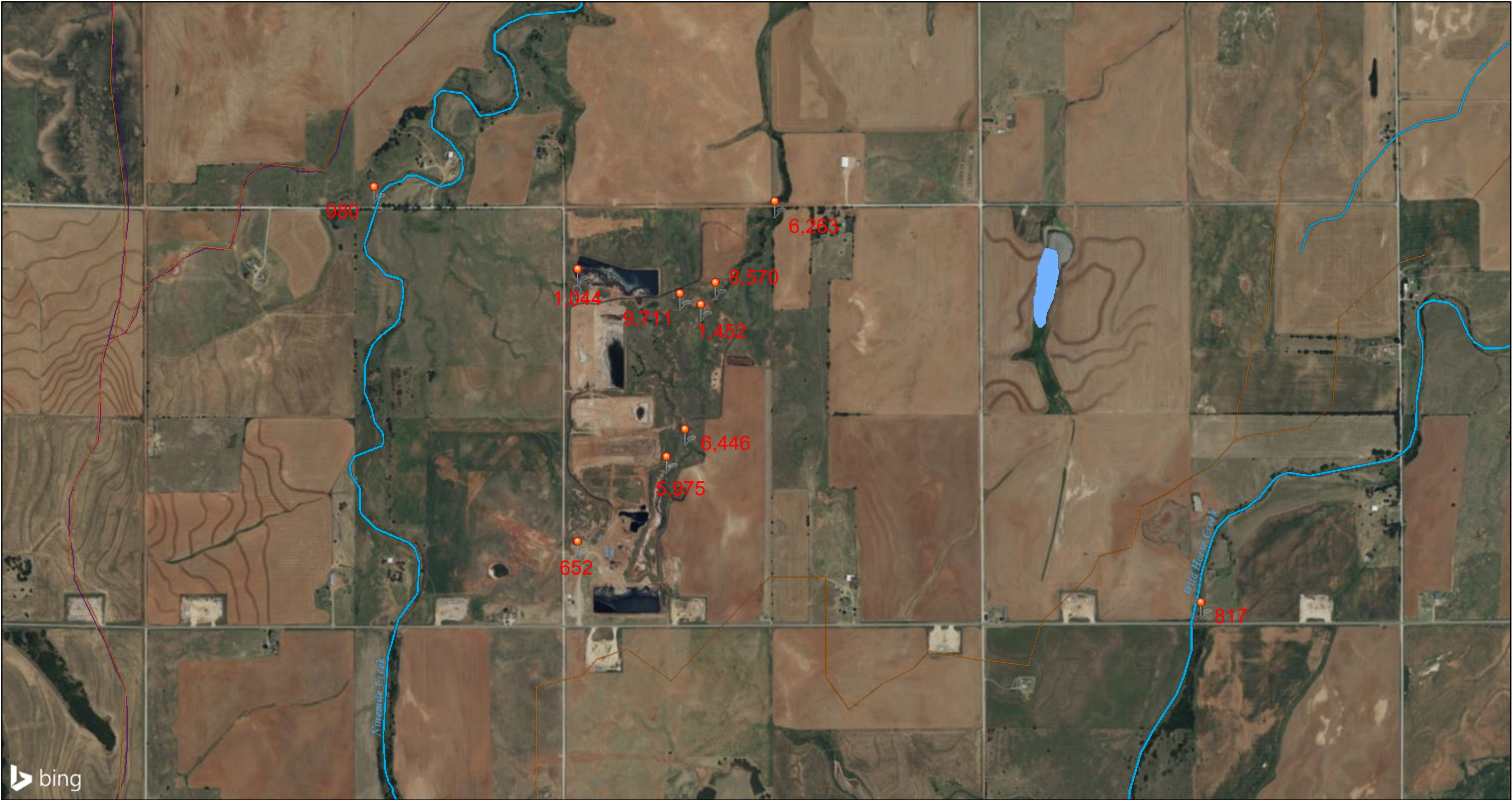
Artificial Path

Flow Direction

0 0.75 1.5 3 mi
0 1 2 4 km

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(2025) Distribution Airbus DS, US EPA Office of Water

Map 2: TDS Readings at the Facility



6/12/2025, 12:36:10 PM

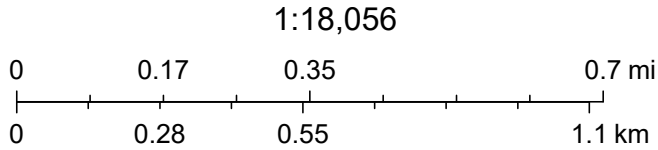
- Subwatershed (HUC12)

Catchment
- Waterbody

Lake/Pond
- Network Flowline

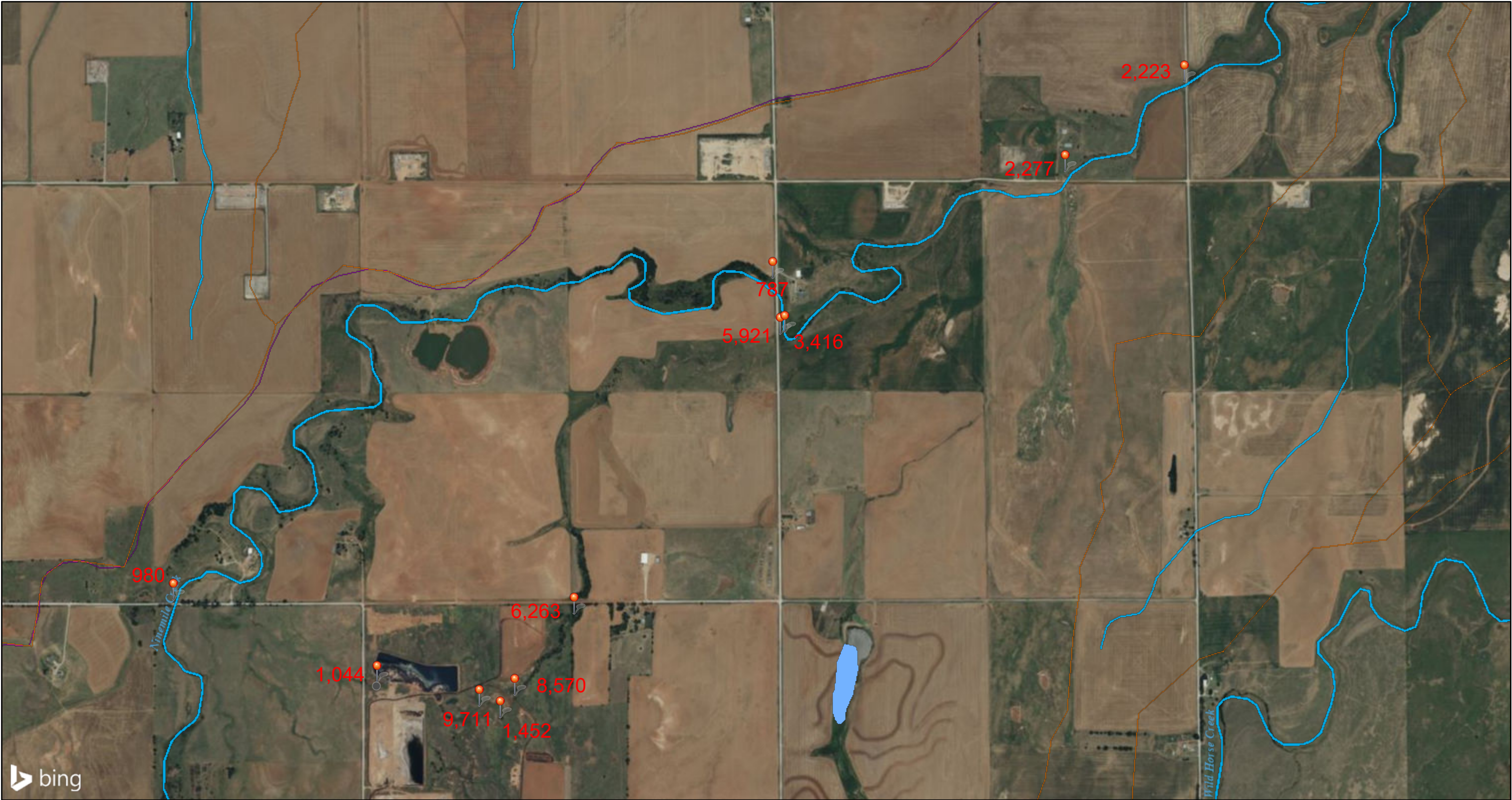
Stream/River, Intermittent

Stream/River, Perennial



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Map 3: TDS Readings along 9-Mile Creek



6/12/2025, 12:38:14 PM

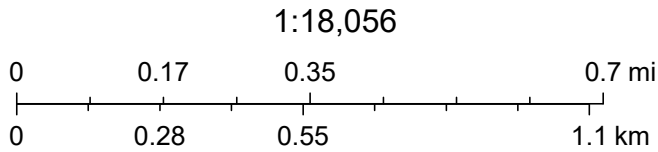
- Subwatershed (HUC12)

Catchment
- Waterbody

Lake/Pond
- Network Flowline

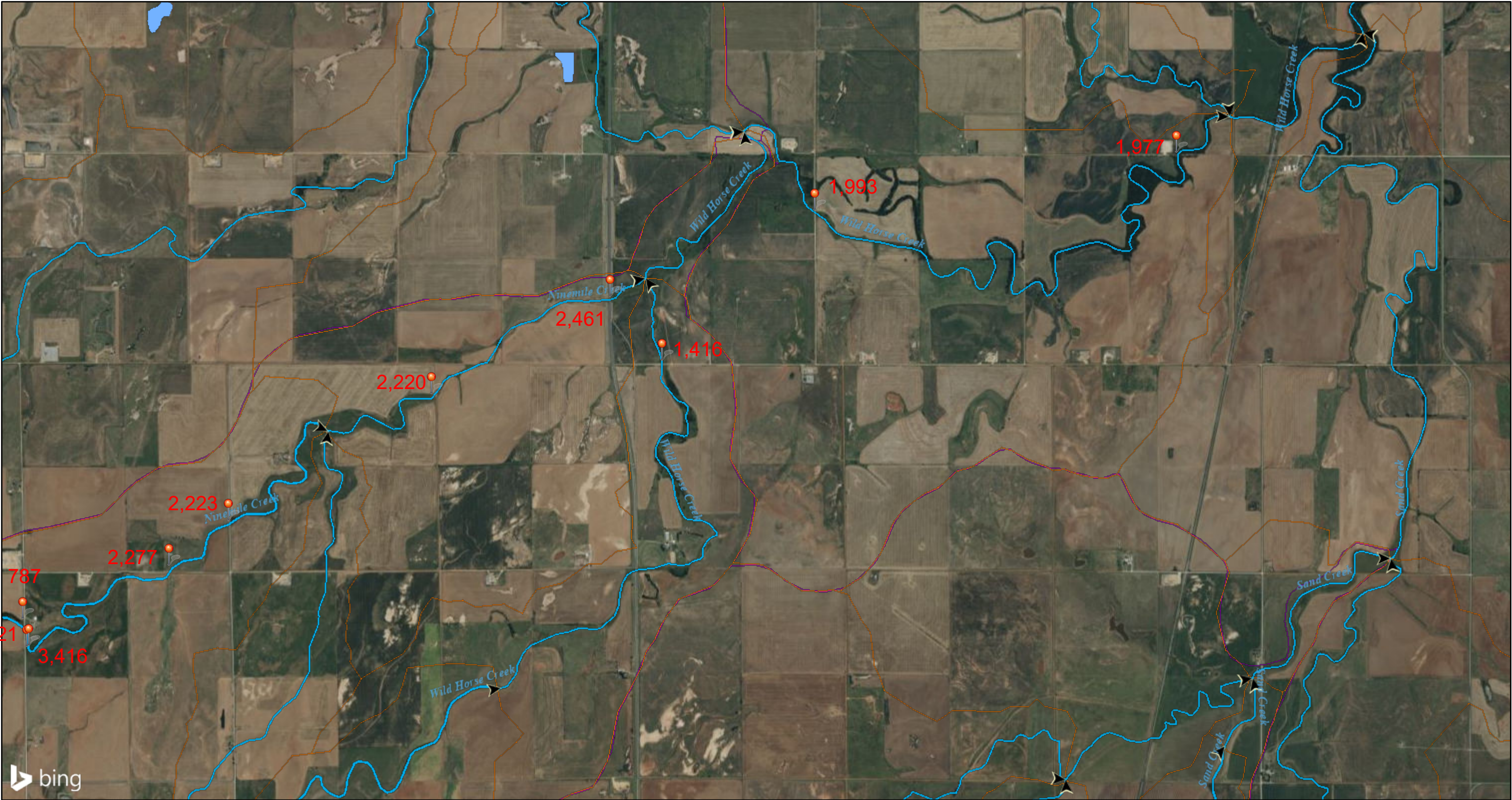
Stream/River, Intermittent

Stream/River, Perennial



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Map 4: TDS Readings along 9-Mile Creek and Wild Horse Creek



6/12/2025, 12:41:01 PM

Subwatershed (HUC12)

Catchment

Waterbody

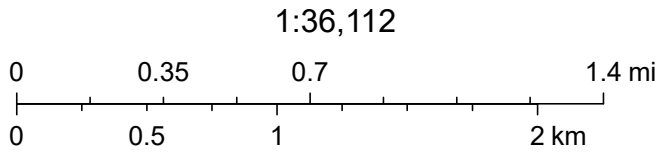
Lake/Pond

Network Flowline

Stream/River, Intermittent

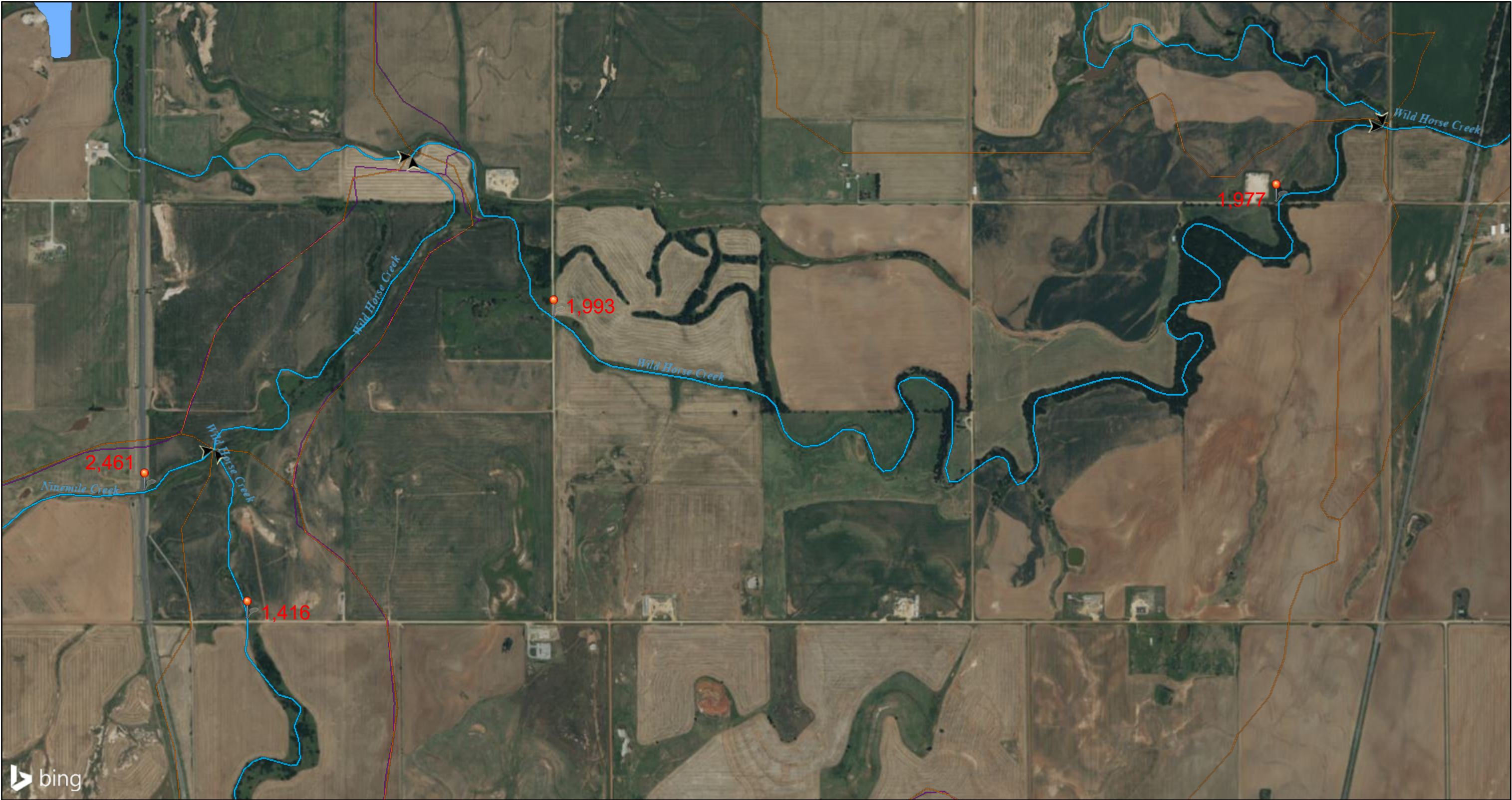
Stream/River, Perennial

Flow Direction



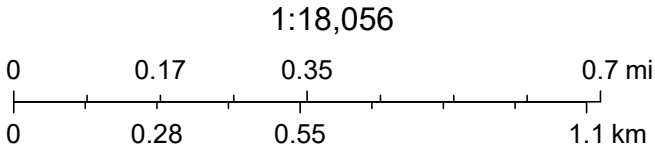
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Map 5: TDS Readings along Wild Horse Creek and 9-Mile Creek



6/12/2025, 12:42:42 PM

- Subwatershed (HUC12)
-
- Catchment



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