



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

TRA's Asset Management System for our Collection System

Evan Peters

Wastewater Treatment ▪ Water Treatment ▪ Water Storage ▪ Lake Livingston ▪ Recreation





What is TRA?

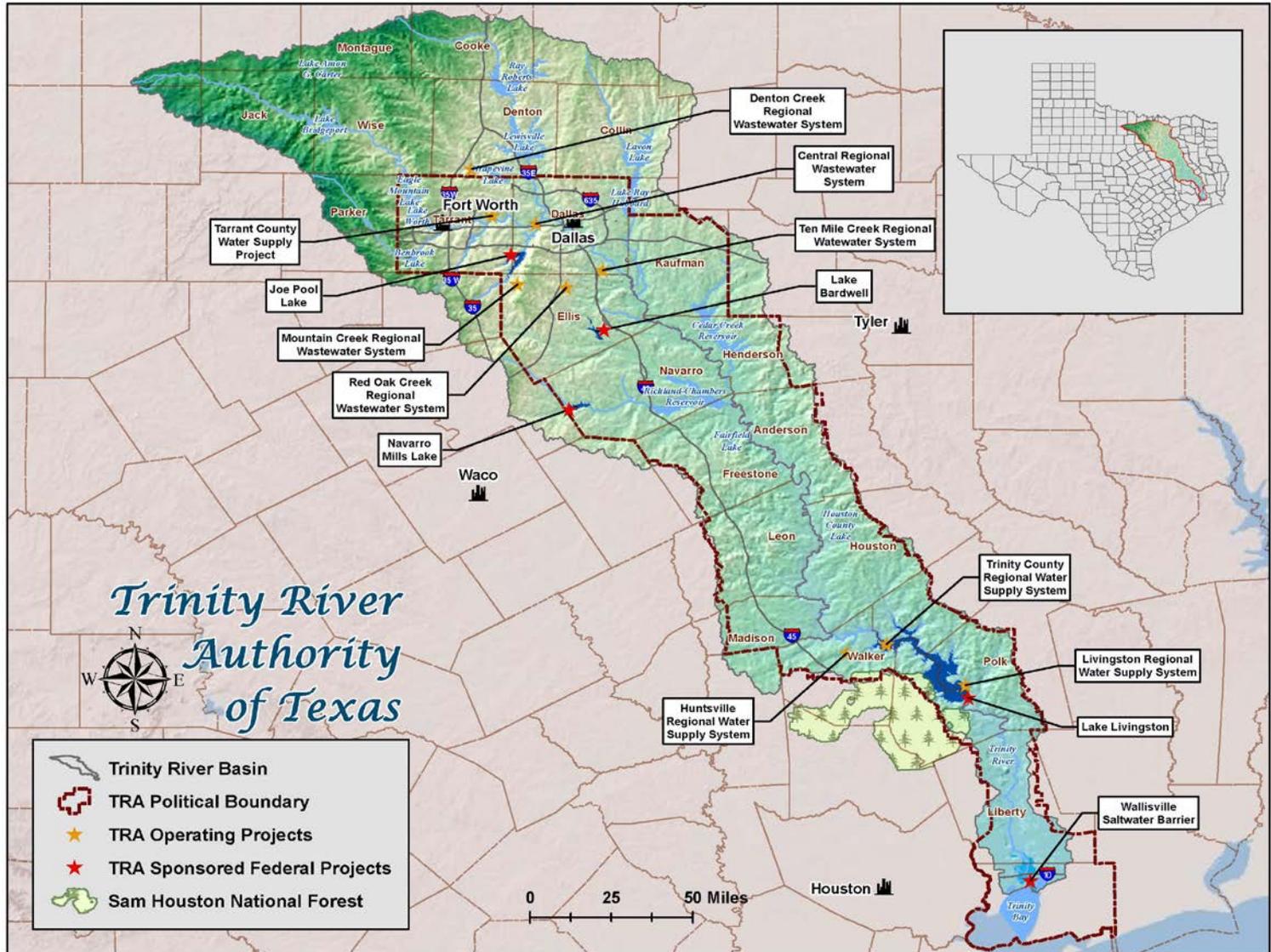
The Trinity River Authority was created by an Act of the 54th Texas Legislature in 1955

conservation and reclamation district that provides water from reservoir facilities, water and wastewater treatment, along with recreation and reservoir facilities, within the nearly 18,000-square-mile Trinity River basin

divided into a Northern (DFW area) & Southern Region (Huntsville south to Trinity Bay)

serves roughly 2.5 million Texans basin wide

Trinity River Basin



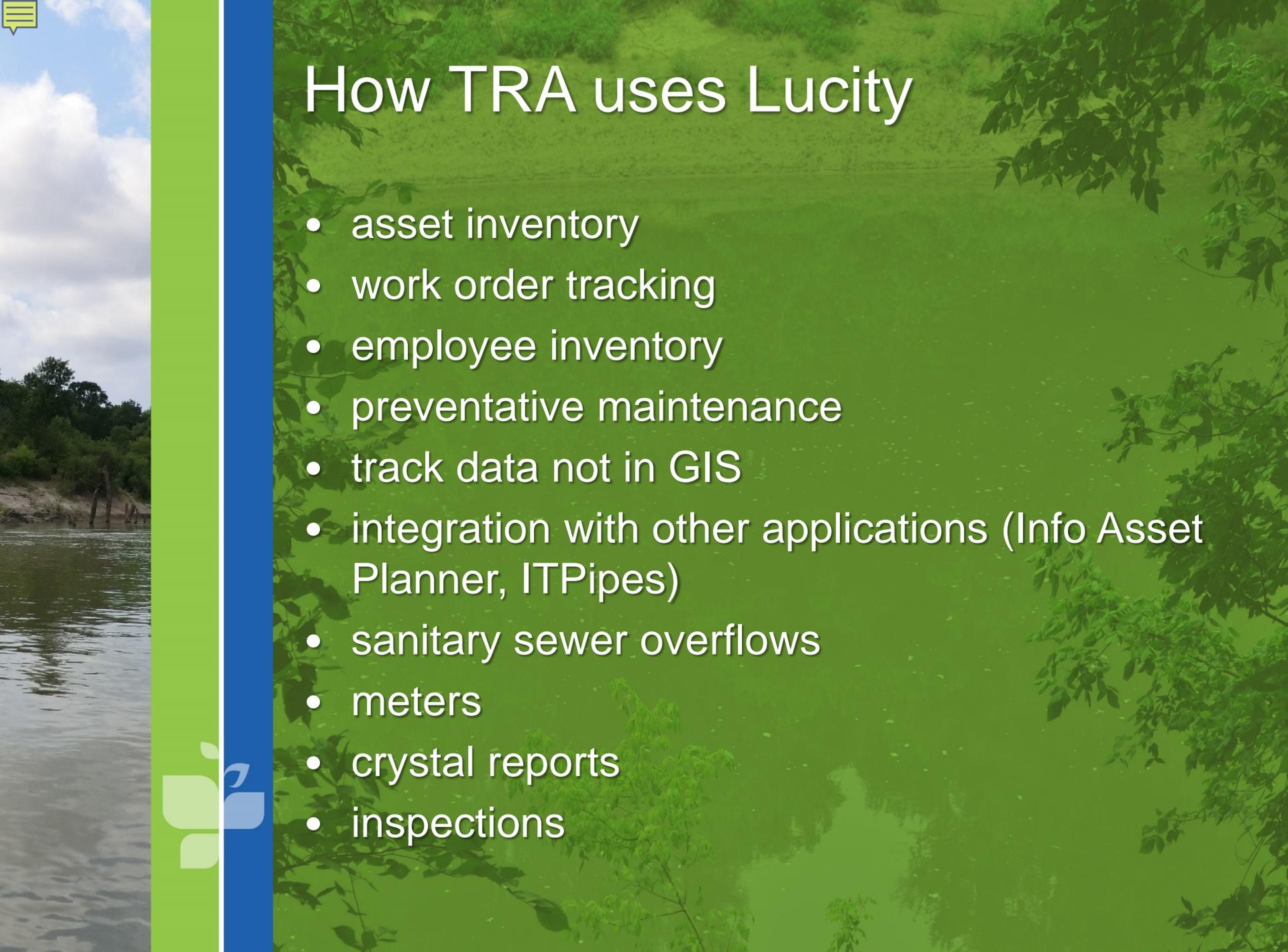
Collection System

- 5 wastewater Treatment plants
- located in Roanoke, Dallas, Ferris, Red Oak, & Midlothian
- largest is our Central plant in Dallas (162 MGD; 210 miles of pipeline)
- smallest is our Mountain Creek plant in Midlothian (3 MGD 15 miles of pipeline)
- total linear footage is approx. 350 miles
- also maintains an 11 mile long Dallas County Utility Reuse District (DCURD) pipeline



What is Lucity?

- software solution that enables agencies to meet their demands for management of assets, customer requests and work orders, preventive maintenance, resources and inventory
- GIS integrations to promote distributed asset data ownership across organizational units.
- full suite of asset management systems: sewer, signs, water, storm, etc.
- desktop, web, and mobile capability



How TRA uses Lucity

- asset inventory
- work order tracking
- employee inventory
- preventative maintenance
- track data not in GIS
- integration with other applications (Info Asset Planner, ITPipes)
- sanitary sewer overflows
- meters
- crystal reports
- inspections



Lucidity Desktop use in TRA

- used by GIS professionals, supervisors, or Engineers
- used for editing and field mapping in GIS (table joins)
- create filters to import spatial data (work orders, pipe inspections, etc.) for deliverables or exhibits
- Lucidity is moving away from using the Desktop application

Lucy Desktop Inventory

Sewer Pipe Inventory - No Filter

Pipe Number: 1000B Pipe Record #: 1 Address:

From End Type: 1 Structure US Structure: 1000B BCIIIA

To End Type: 1 Structure DS Structure: 990B BCIIIA

Attributes | Construct | Elevations | FM | TV | CCTV Assessment | Press Insp | Lamping | Smoke | Bldg Insp | Laterals | Overflows | Acceptance | Rehab | WO/PM/Req |

Status	1 Existing	Map Page No.		Review Comments	<input type="checkbox"/>	Active	<input type="checkbox"/>
Collected By		Length (ft)	605.00				
Flow Basin	9.0B	Length Status	1 Record Drawings				
Site Id	110 CRWS	Pipe Sec Length (ft)		Est # of Joints			
Location	0 N/A	Material	0 N/A				
Line Type	1 Gravity Line	Liner					
Flow Type	1 Sanitary	Lining Date	/ /	Year Lined			
Pipe Shape	1 Round	Slope %	0.522	<input checked="" type="checkbox"/> Slope Lock			
Cleaning Freq		Mannings	0.013	Last Cleaning Date	/ /		
TV Frequency		Capacity (cfs)	7.61	Next Cleaning Date	/ /		
Dia/Height (in)	18.00	IDM	2.06	Cleaning Freq			
Pipe Width (in)		Pump Station ID		Cleaning Freq Units			
Managed By		Plant ID		Entering Plant			
Fixed Asset ID		Plant ID		Leaving Plant			

Record 1 of 6821 View Mode Ready...

Lucidity Desktop Work Orders

Work Orders - No Filter

Work Order # 19-004879 Category 62001 Manhole Maintenance

Status 2 New Work Order Problem

Status Date 11/20/2019 02:12 PM Main Task 2090 MH R & L Replacement

WD | Location | Assets | List/Events | Tasks/Res | Routing | Costs | Billing | Related | Requests/Track | Links | Custom 1 | Custom 2 | Custom 3 | Custom 4

Asset

Location

Cause

Assigned Crew 4430-049-G DRS

Supervisor 1105 ROBERT BENDKOWSKI

Lead Worker 1105 ROBERT BENDKOWSKI

Contractor

Priority 3 Three to Five Days

Account #

Proj No - Acct

Project Text

Work Order Type 2 Correct Maint-Planned

Received By

Inspected By

Assigned By

Assigned Date 11/20/2019 : AM

Start Date / / : AM

End Date / / : AM

Comment From Request

Override Notifications

Problem

Overdue

Lead Worker

Task

Supervisor

Hard Lock WO

Publicly Available

Project ID

Record 36965 of 36965 View Mode Ready...

Sanitary Sewer Overflow

Sewer Overflows - No Filter

Overflow Rec # 233 Alt ID 232 Status 1 Unauthorized Discharged Confirmed Locked

Info Receipt Investigation Assets Cleanup Affected Assets 1 Affected Assets 2 Review Notification Tracking Req/WO Custom Custom2 Com

Date/Time Reported 02/23/2016 : AM Reported By Tim Morgan

Reported To Reported Phone

Location

Address Two mile south of IH 20 on Beltline Rd.

Nearest Street

Location Dallas

Station No 2110M Lateral No.

Facility Number

Overflow Start 02/23/2016 08:30 AM Overflow Source 1 Manhole

Overflow End 02/24/2016 08:00 AM Second Source

Reported As Third Source

Record 200 of 225 View Mode Ready...

PM templates

PM/Work Template - No Filter

PM/Template: Q-MS8_OHC_t-Temp

Category: 29000 Flow Meter

Main Task: 2732 MS Temporary Meter Calibration

Problem:

WO Template: Scheduled PM: Grouped PM:

PM Template: Out-of-Service: Grouped Assets:

Inactive: Tightly Linked PM: Affected PM:

WO | Location | Assets | Checklist | Tasks/Resources | Scheduling WOs | Grouped PMs | Related WOs | Billing | WO Custom | Tracking | Custom | Comments

Division:

Site: 117 DCRWS

Sub-Division:

Area:

Sub-Area:

Owner:

City:

Comments for Crew - Carried over to WO Comments for Crew

Loc No /	Address	Address2	Loc City	Loc X Coord.	Loc Y Coord.	General Locatic
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Record 261 of 262 View Mode Ready...



Lucidity Web use at TRA

- much more effective way to communicate/report
 - view in grids
 - view in maps
 - create new work orders/PMs
 - track metering equipment
 - create Crystal reports
 - show in map filters/show selected
 - redline markup tools
 - tied to AGO
- 

Lucity Web (Grid Views)



Home +

Calendar, Location, Settings, Notifications, Help, Evan Peters

Sewer Inspection

Sewer Inv

Sewer Inv Site Id

Inspections

- + PACP TV Insp (1024)
- + Structure Insp (3306)
- + TV Insp (872)
- + Smoke Testing (68)
- + Lamping Inspections (1777)
- + Surface Inspections FY 2015 (825)
- + Surface Inspections FY 2019? (256)

Overflows

- + Overflows - All (225)
- + Source - Manhole (149)
- + Source - Pipe (25)

inspection wo

- + Structure Insp (3306)
- + This Quarter (25)



Home Sewer Structures X +

Calendar, Location, Settings, Notifications, Help, Evan Peters

	Site ID	Address	Default WO Cat Text	Structure	Pipe Seal Text	Component Type	Status	Vented Structure	Flow Basin	Lateral Name	Project Number	GPS Flag	Rim Elev
+ [icon]	CRWS		Manhole	10000W		Tie to Other Interceptor	Existing	<input type="checkbox"/>	C-WF2/WF3	BOYD BRANCH INT PH I (WF-R1)	BB/PHI	<input type="checkbox"/>	
+ [icon]	CRWS		Manhole	1000B		Manhole	Existing	<input type="checkbox"/>	9 0B	BEAR CREEK, SECTION IIIA	BCIIIA	<input checked="" type="checkbox"/>	
+ [icon]	ROCRWS		Manhole	1000DC		Manhole	Existing	<input type="checkbox"/>	R-02	BEAR CREEK INT & LS	BCINTLS	<input checked="" type="checkbox"/>	
+ [icon]	DCRWS		Manhole	1000C		Manhole	Existing	<input type="checkbox"/>	D-CB1	CADE BRANCH RELIEF INT	CBRI	<input checked="" type="checkbox"/>	
+ [icon]	CRWS		Manhole Maintenance	1000E	Junction Box	Junction Box	Existing	<input type="checkbox"/>	15.0/16.5E	EF NORTH, PH I, III & IV	EFN	<input checked="" type="checkbox"/>	
+ [icon]	DCRWS		Manhole	1000H		Manhole	Existing	<input type="checkbox"/>	D-HC3	HENRIETTA CR PH II & FW TRK	HCIIFWT	<input checked="" type="checkbox"/>	

	Site Id	Pipe Record #	Default WO Cat Text	Pipe Number	US Struc.	DS Struc.	Material	Length (ft)	Criticality	Probability of Failure	Consequence of Failure	Risk	Project Number	Created By	Creation Date
	CRWS	10781	Pipe	10000W	10000W	8535W	FRP		5			0	WF11B	blb7439	05/02/2018

Work Orders (12) TV Inspections (0) Overflows (0) Overflows (0) CCTV Assessment (0) Smoke Tests (0)

Site Id	% Ouality	Asset #	Work Order #	Purchase Req #	Total Cost	Comment	Main Task	Lead Worker	Assigned Crew	Status	End Date	Work Order Type	Photos/ doc attach
CRWS		10120W	18-002602		182.42		Int Surface Inspection	DANIEL SUTTON	Pipeline Repair	Complete	07/16/2018	Correct Maint-Planned	<input type="checkbox"/>
CRWS		7945W	18-000057		458.7		Int Assist Contracted TV Work	JAMES COLEMAN	CCTV	Complete	01/06/2018	Preventive Maintenance	<input type="checkbox"/>

Lucity Web (map view)

The screenshot displays the Lucity Web interface in map view. The top navigation bar includes the Lucity logo, a home button, and active tabs for 'Sewer Structures' and 'Collection System'. A toolbar with various map interaction tools is visible below the navigation bar. On the left, a 'Layers' panel is open, listing several data layers: 'NR Redline - Point Redline Marker', 'NR Redline - Line Redline Marker', 'NR Redline - Poly Redline Marker', 'NR CitySewerPOE', 'NR GPSFieldSurvey', 'NotInService CSG', 'NR CollectionSystem', and 'LandRights'. The main map area shows a street grid with a red line representing the 'NR Collection System' and a green line representing 'NR CitySewerPOE'. The map includes labels for streets, parks, and landmarks. The bottom of the screen shows the text 'Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA' and 'Powered by Esri'.

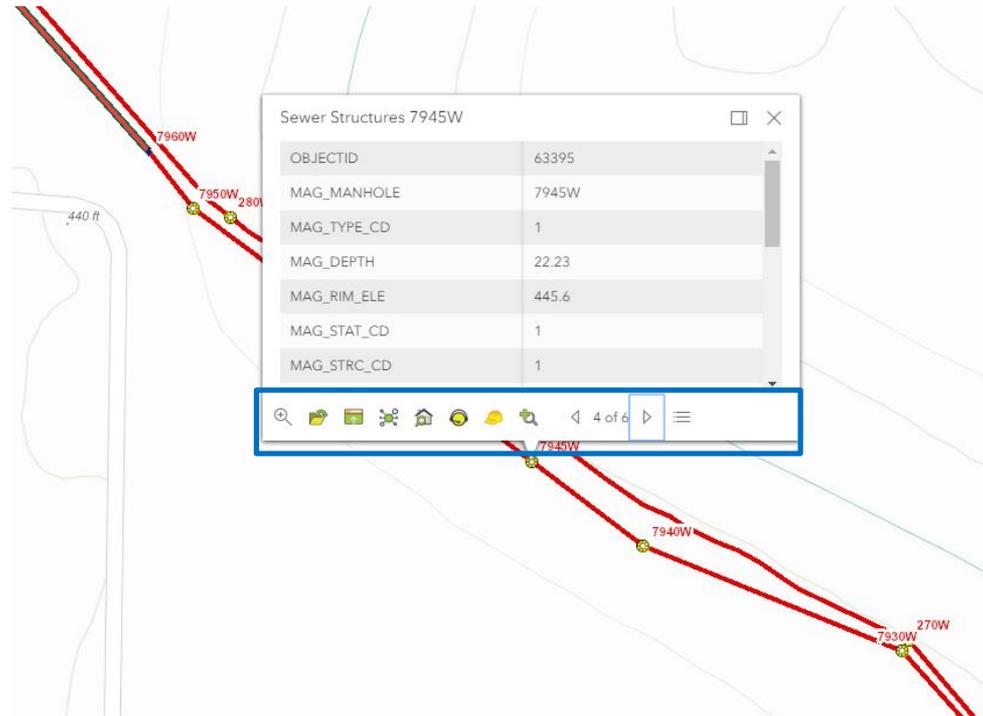
Layers

- NR Redline - Point Redline Marker
- NR Redline - Line Redline Marker
- NR Redline - Poly Redline Marker
- NR CitySewerPOE
- NR GPSFieldSurvey
- NotInService CSG
- NR CollectionSystem
- LandRights

Grand Prairie

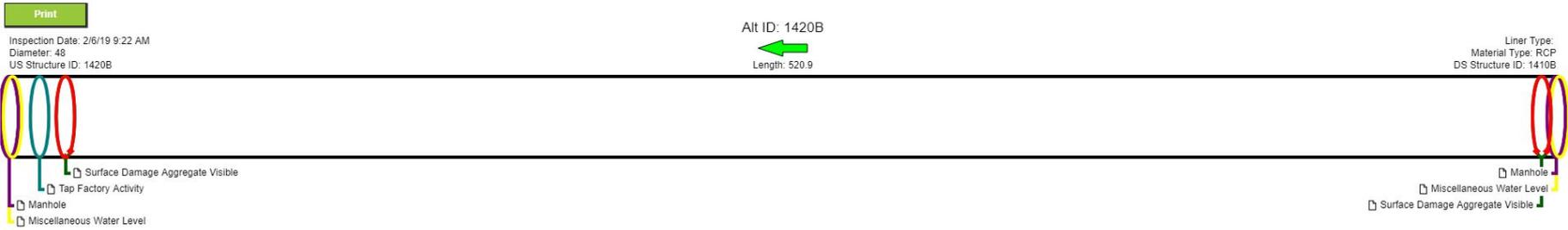
Powered by Esri

Lucidity Web (map view)



Can view more details, view the grid, create work orders or inspections, etc.

Inspection graph



Filters

Available Defect Types:
No Records found.

Selected Defect Types

- Manhole
- Miscellaneous Water Level
- Surface Damage Aggregate Visible
- Tap Factory Activity

Only Display Ratings From:
null to 2

Reset Filter

Page Size 50 1 of 1

This block contains the interface for filtering and displaying data. It features a red header bar with the word 'Filters'. On the left, there is a panel titled 'Available Defect Types' which currently shows 'No Records found.'. To its right is a 'Selected Defect Types' panel with a list of four items, each with an unchecked checkbox: 'Manhole', 'Miscellaneous Water Level', 'Surface Damage Aggregate Visible', and 'Tap Factory Activity'. Further right is a 'Only Display Ratings From:' section with two input fields containing 'null' and '2', and a 'Reset Filter' button. At the bottom, there is a navigation bar with a page size dropdown set to '50', a '1 of 1' indicator, and navigation icons.

Crystal Reports

Sewer Pipe Detail Report

12/3/2019

1:08 PM

Alt. Pipe ID: 10210W		Pipe Rec #: 10685	
From End Type: Structure	US Structure: 10210W	BBIPHI	
To End Type: Structure	DS Structure: 10200W	BBIPHI	
Status: Existing	Map Page No:	Review Comments: <input type="checkbox"/>	
Collected By:	Length (ft): 58.5	Active: <input type="checkbox"/>	
Flow Basin: 10.0W	Length Status: Record Drawings		
Owner: CRWS	Sec Length (ft):	Est # of Joints:	
Location:	Material: PVC		
Line Type: Gravity Line	Liner: N/A	Year Lined:	
Flow Type: Sanitary	Lining Date:	Slope Lock: <input type="checkbox"/>	
Shape: Round	Slope %: 0.769		
Cleaning Freq:	Mannings: 0.013		
TV Frequency:	Capacity (cfs): 9.82		
Dia/Height (in): 30	IDM: 0.33		
Pipe Width (in):	Pump Station ID:		
Managed By:	Fixed Asset ID:		
Last Cleaning Date:	Cleaning Freq:	Plant ID (Entering Plant):	
Next Cleaning Date:	Cleaning Freq Units:	Plant ID (Leaving Plant):	
Construction			
Date Constructed: 12/5/2012	Cleaning Area: West Fork	Ignore in Model:	False
Project Number: BBIPHI	Benefit District: WF42	Criticality:	
Index:	District: Fort Worth	Upsize Dia Needed:	
US Station: 11480.50	Sec-Twn-Rng:	Consequence of Failure:	
DS Station: 11422.00	Trap Area:	Probability of Failure:	
Surface:	Improve Method:	Mitigation:	1.00
Bedding:	Upstream Count:	Risk:	0.00
		Replacement Cost:	
Replacement Value:	Replacement Date:	Present Value:	Remaining Life:
Elevations			
<u>Active</u>			
US Rim:	US Rim Status:	DS Rim:	DS Rim Status:
US Invert: 477.05	US Invert Status:	DS Invert: 476.60	DS Invert Status:
			Elevation Lock: <input type="checkbox"/>
			Invert Lock: <input type="checkbox"/>
<u>Record Drawing</u>			
Record US Rim: 491.51	Adj US Rim Elev:	Record DS Rim: 490.02	Adj DS Rim Elev:
Record US Invert: 477.05	Adj US Inv Elev:	Record DS Invert: 476.60	Adj DS Inv Elev:
TV			
Most Recent - US to DS TV Inspection		Most Recent - DS to US TV Inspection	
Date:	Total Remaining	Date:	Total Remaining
Collapsed/Blocked:	Rating	Collapsed/Blocked:	Rating
Max Observations:	Structural	Max Observations:	Structural
Max Distance:	Flow	Max Distance:	Flow
Last Condition:	Cleaning	Last Condition:	Cleaning

Redline markup tools

tool to communicate issues or changes needed with GIS straight from the web

The screenshot displays a GIS web application interface. On the left, a layer control panel shows various layers, with 'NR Redline - Line Redline Marker' selected. The main map area shows a street layout with a red line segment and a yellow circle marker. On the right, a data table provides details for the selected marker. At the bottom, a table lists recorded issues.

NTG_USMAN	7945W
NTG_DYSMAN	7940W
I	0
NTG_LINE_CD	1
NTG_FLOW_CD	1
NTG_DIA	90
NTG_MAT_CD	12
NTG_LENGTH	197.86
NTG_US_INV	423.7
NTG_DS_INV	423.23
NTG_SLOPE	0.06041131
NTG_SHAP_CD	1
NTG_CLN_CD	5
NTG_IND_X_CD	
NTG_STAT_CD	1
NTG_USER1_CD	110
NTG_OW_N_CD	110

Issue	Observation	Recommendation	RecordedBy	DateRecorded	AssignedTo	Resolved	Date Resolved	Comment	Picture 1	Picture 2	Shape_Length	CreationDate
Not GPSed	Lancaster connection	Take GPS coordinates	Jorge C	12/31/1999 6:00 PM	Jorge C		12/31/1999 6:00 PM				371.454068157182	10/1/2019 10:14:10 AM
				12/31/1999 6:00 PM			12/31/1999 6:00 PM					10/4/2019 1:58 PM
Mh doesn't exist			GP	12/31/1999 6:00 PM	EP		12/31/1999 6:00 PM	11/12/19			75.2176598380611	11/12/2019 11:54:10 AM
				12/31/1999 6:00 PM			12/31/1999 6:00 PM					11/20/2019 4:56:10 AM



Lucity Mobile

- Android or iOS (TRA uses Android)
- Offline mode
- workers use grid or map mode to perform tasks
- tablet GPS tracking
- Redline tools
- ties into google maps to get directions

Lucity Mobile

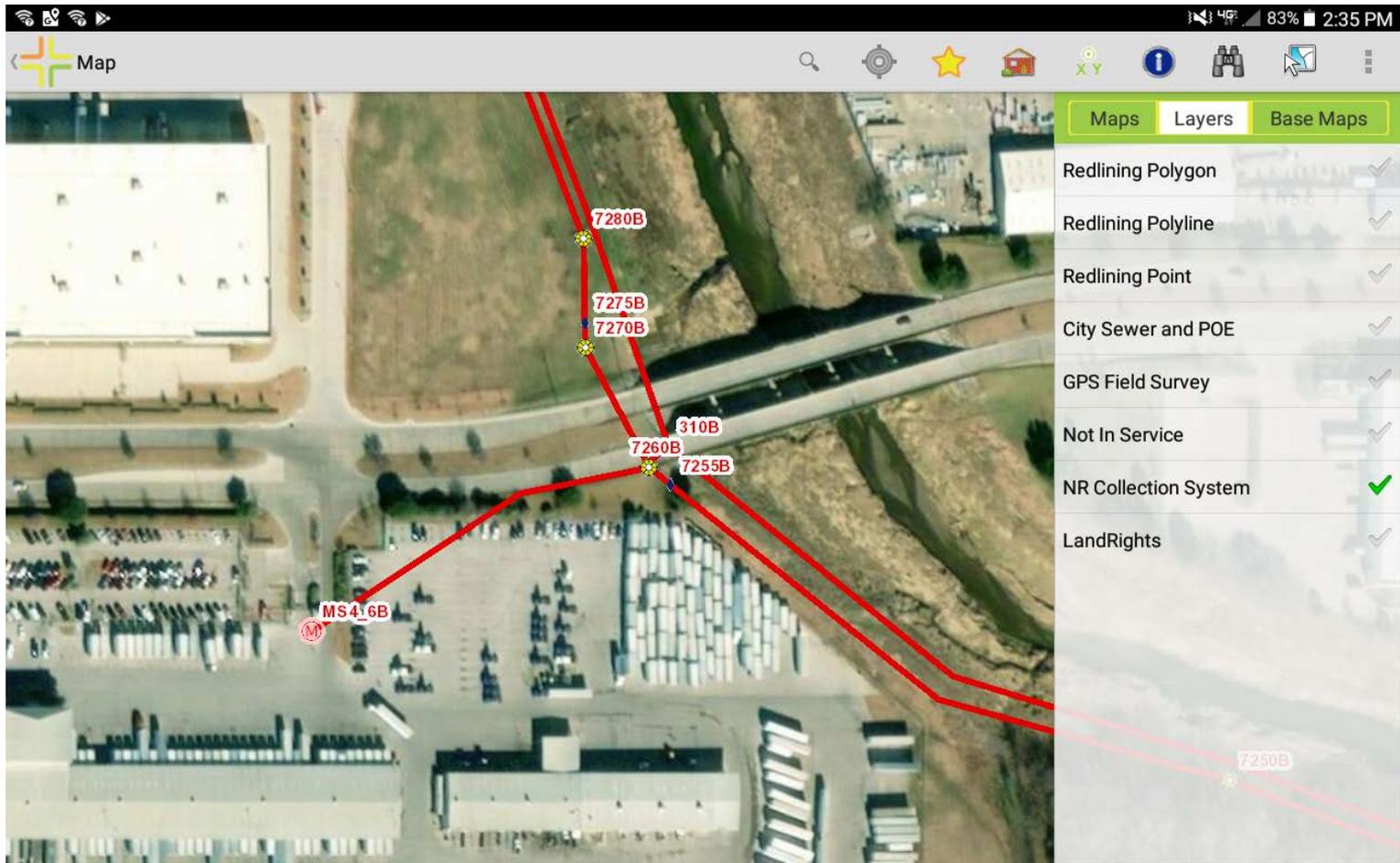
The screenshot displays the Lucity Mobile Dashboard interface. At the top, there is a status bar with icons for Wi-Fi, cellular signal, and battery level (85%), along with the time 2:25 PM. Below the status bar is a header area with the text "Lucity Mobile - Dashboard" and navigation icons for "GO OFFLINE", "MAP", "MENU", and "MODULES".

The main content area is divided into two sections:

- Pipe Inventory**: A green header bar with a refresh icon. Below it is a list of seven filter options, each preceded by a plus sign in a square:
 - + Pipe by Diameter and Age (6821)
 - + Pipe by Basin and City (6821)
 - + Pipe by Flow Basin/Subsystem and Line Type (6821)
 - + Pipe by Line Type and Basin (6821)
 - + Pipe by Material and Age (6821)
 - + Pipe by Site Id, Basin, and Project Number (6821)
 - + Pipe by Status and Basin (6821)
- Structure Inventory**: A green header bar with a refresh icon. Below it is a list of seven filter options, each preceded by a plus sign in a square:
 - + Structure by Site Id and Project Number (6560)
 - + Structure by Site Id and Lateral Name (6560)
 - + Structure by Component Type (6560)
 - + Structure by Flow Basin/Subsystem and Project Number (6560)
 - + Structure by Site Id and Flow Basin/Subsystem (6560)
 - + Structure by Status and Site Id (6560)

A faint background image of a skyscraper is visible in the bottom right corner of the dashboard area.

Lucy Mobile



Lucidity Mobile

Pipe by Diameter and Age			
Site Id: CRWS US Struct.: 1000W Criticality:	Pipe Record #: 10761 DS Struct.: 8535W Probability of Failure:	Default WO Cat Text: Pipe Material: FRP Consequence of Failure:	Pipe Number: 10000W Length (ft): 5 Risk: 0
Project Number: WF11B Modified By: peterse	Created By: bit67439 Location:	Creation Date Time: 19:07 Flow Basin: C-WF2/WF3	Modified Date: 05/21/2019 Pipe Age (yrs): 11
Site Id: CRWS US Struct.: 1000B Criticality: 5	Pipe Record #: 1 DS Struct.: 990B Probability of Failure: 2	Default WO Cat Text: Pipe Maintenance Material: N/A Consequence of Failure:	Pipe Number: 1000B Length (ft): 605 Risk: 8
Project Number: BCIIIA Modified By: bendkowskir	Created By: Location: N/A	Creation Date Time: Flow Basin: 9.0B	Modified Date: 09/13/2019 Pipe Age (yrs): 49
Site Id: ROCRWS US Struct.: 1000BC Criticality:	Pipe Record #: 8731 DS Struct.: 980BC Probability of Failure:	Default WO Cat Text: Pipe Material: PVC-Ultra Rib Consequence of Failure:	Pipe Number: 1000BC Length (ft): 410.8 Risk: 0
Project Number: BCINTLS Modified By: ayensuj	Created By: Location:	Creation Date Time: Flow Basin: R-B2	Modified Date: 09/15/2016 Pipe Age (yrs): 29
Site Id: DCRWS US Struct.: 1000C Criticality:	Pipe Record #: 11119 DS Struct.: 990C Probability of Failure:	Default WO Cat Text: Material: FRP Consequence of Failure:	Pipe Number: 1000C Length (ft): 132.69 Risk: 0
Project Number: CBRI Modified By: peterse	Created By: cooperm Location: Field	Creation Date Time: 19:12 Flow Basin: D-CB1	Modified Date: 04/06/2017 Pipe Age (yrs): 4
Site Id: CRWS US Struct.: 1000E	Pipe Record #: 2 DS Struct.: 990E	Default WO Cat Text: Pipe Material: RCP	Pipe Number: 1000E Length (ft): 238

Count: 6821 of 6821

1/455



Lucity Mobile

Work Orders

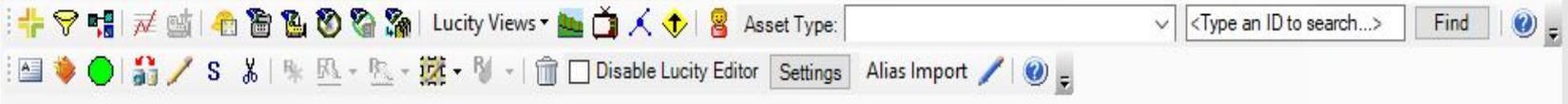
<p>Site Id: DCRWS Comment : mh inspection Status: Closed in Field</p> <p>Supervisor Text: ROBERT BENDKOWSKI Equip Cost: 2.98</p>	<p>Asset #: 3200H Main Task: MH Inspections End Date: 11/25/2019</p> <p>Pipe Material: Actual Labor Cost: 17.97</p>	<p>Work Order #: 19-004943 Lead Worker: JAMES COLEMAN Work Order Type: Preventive Maintenance</p> <p>Pipe Material Label: Actual Material Cost: 0</p>	<p>Total Cost: 20.95 Assigned Crew: CCTV Photos/ doc attached: false</p> <p>Contractor Cost: 0 Actual Labor Hours: 0.5</p>
<p>Site Id: DCRWS Comment : surface inspection Status: Closed in Field</p> <p>Supervisor Text: ROBERT BENDKOWSKI Equip Cost: 23.76</p>	<p>Asset #: MS11_OHC Main Task: Int Surface Inspection End Date: 11/25/2019</p> <p>Pipe Material: Actual Labor Cost: 143.72</p>	<p>Work Order #: 19-004942 Lead Worker: JAMES COLEMAN Work Order Type: Preventive Maintenance</p> <p>Pipe Material Label: Actual Material Cost: 0</p>	<p>Total Cost: 167.48 Assigned Crew: CCTV Photos/ doc attached: false</p> <p>Contractor Cost: 0 Actual Labor Hours: 4</p>
<p>Site Id: DCRWS Comment : mh inspection Status: Closed in Field</p> <p>Supervisor Text: ROBERT BENDKOWSKI Equip Cost: 2.98</p>	<p>Asset #: 3300H Main Task: MH Inspections End Date: 11/25/2019</p> <p>Pipe Material: Actual Labor Cost: 17.97</p>	<p>Work Order #: 19-004941 Lead Worker: JAMES COLEMAN Work Order Type: Preventive Maintenance</p> <p>Pipe Material Label: Actual Material Cost: 0</p>	<p>Total Cost: 20.95 Assigned Crew: CCTV Photos/ doc attached: false</p> <p>Contractor Cost: 0 Actual Labor Hours: 0.5</p>
<p>Site Id: WCE Comment :</p> <p>Status: Admin 1 Review Completed Supervisor Text: CRAIGHTON CROWDER Equip Cost: 0</p>	<p>Asset #: MS1_OWC_t2 Main Task: MS Temporary Meter QA/QC Calibration End Date: 11/15/2019</p> <p>Pipe Material: Actual Labor Cost: 180.94</p>	<p>Work Order #: 19-004940 Lead Worker: GEORGE SMITH Work Order Type: Preventive Maintenance</p> <p>Pipe Material Label: Actual Material Cost: 0</p>	<p>Total Cost: 180.94 Assigned Crew: Metering QAQC Team Photos/ doc attached: true</p> <p>Contractor Cost: 0 Actual Labor Hours: 6.33</p>
<p>Site Id: DCRWS</p>	<p>Asset #: MS12_OHC</p>	<p>Work Order #: 19-004939</p>	<p>Total Cost: 167.48</p>



Using Lucity in GIS

- GIS editing tools
- GIS analyst tools
- create exhibit maps from any field within Lucity
- compatible with ArcMap and ArcPro
- QA/QC using analyst tools
- field links (table join)
- used by other TRA power users of GIS

ArcMap/Lucy



- Lucy links for 3490B
- Open Module in Lucy Desktop
 - Open Module in Lucy Web
 - Sewer Pipes (1)**
 - Sewer TV Inspections (0)
 - Sewer Line Lampings (1)**
 - Sewer Smoke Tests (0)
 - Sewer Rehab Pipe Analysis Details (0)
 - Sewer Service Laterals (0)
 - Sewer CCTV Assessment (0)
 - Sewer Overflows (0)
 - Sewer Construction Records (0)
 - Sewer Pipe Air Tests (0)
 - Sewer Pipe Mandrel Tests (0)
 - Sewer Building Inspections (0)
 - Sewer Service Connections (0)
 - Sewer Nodes (0)
 - Sewer Control Valves (0)
 - Sewer System Valves (0)
 - Sewer IPT Facilities (0)
 - Sewer FOG Facilities (0)
 - Sewer Illicit Discharge (0)
 - Sewer Pressure Pipe Inspections (0)
 - Work Orders (17)**
 - PM/Work Templates (0)
 - Work Requests (0)

Layer Properties

Layer Properties dialog box showing the Fields tab. The 'Date Constructed (NT_DT_CONS)' field is selected. The 'Join Options' section shows 'Keep All Records' selected. The 'Lucy Field Links' section is empty.

General Source Selection Display Symbology Fields Definition Query Labels Joins & Relates

Time HTML Popup Lucy Field Links

Cleaning Instructions (NT_CLINST)
 Collected By (NT_CREW)
 Consequence of Failure (NT_COF)
 Construction Instructions (NT_CONINST)
 Created By (NT_CRT_BY)
 Creation Date Time (NT_CRT_DTTM)
 Criticality (NT_CRITICAL)
 Date Active (NT_USER9)
 Date Age Calc'd (NT_USER11)
 Date Constructed (NT_DT_CONS)
 Date Lined (NT_USER10)
 Default WO Cat (NT_BR_CD)
 Default WO Cat Text (NT_BR_TY)
 Dia/Height (in) (NT_DIA)
 Document Available (NT_DOC_FLG)
 DS Clean Rating (NT_DSCLNRT)
 DS Collap/Blocked (NT_DSBLOCK)
 DS Depo Depth (NT_DSDEPO)
 DS Flow Depth (NT_DSDEPTH)
 DS Flow Rating (NT_DSFLWRT)
 DS Invert (NT_DS_INV)
 DS Invert Status (NT_ST_DINVT)
 DS Lamp Clean # (NT_DSCLCLN)

These fields are available from the associated inventory module in Lucy. Place a check next to the fields you would like visible for this layer. These fields are not editable from ArcGIS. This tool simply creates a join between this feature class and the associated Lucy table. To edit data in these fields, use the Open Lucy Module Tool to right click on the feature and open the module in Lucy.

Join Options

Keep All Records
 Keep Only Matching Records*

**Recommended for best performance. Features will be hidden that do not have a related Lucy record.*

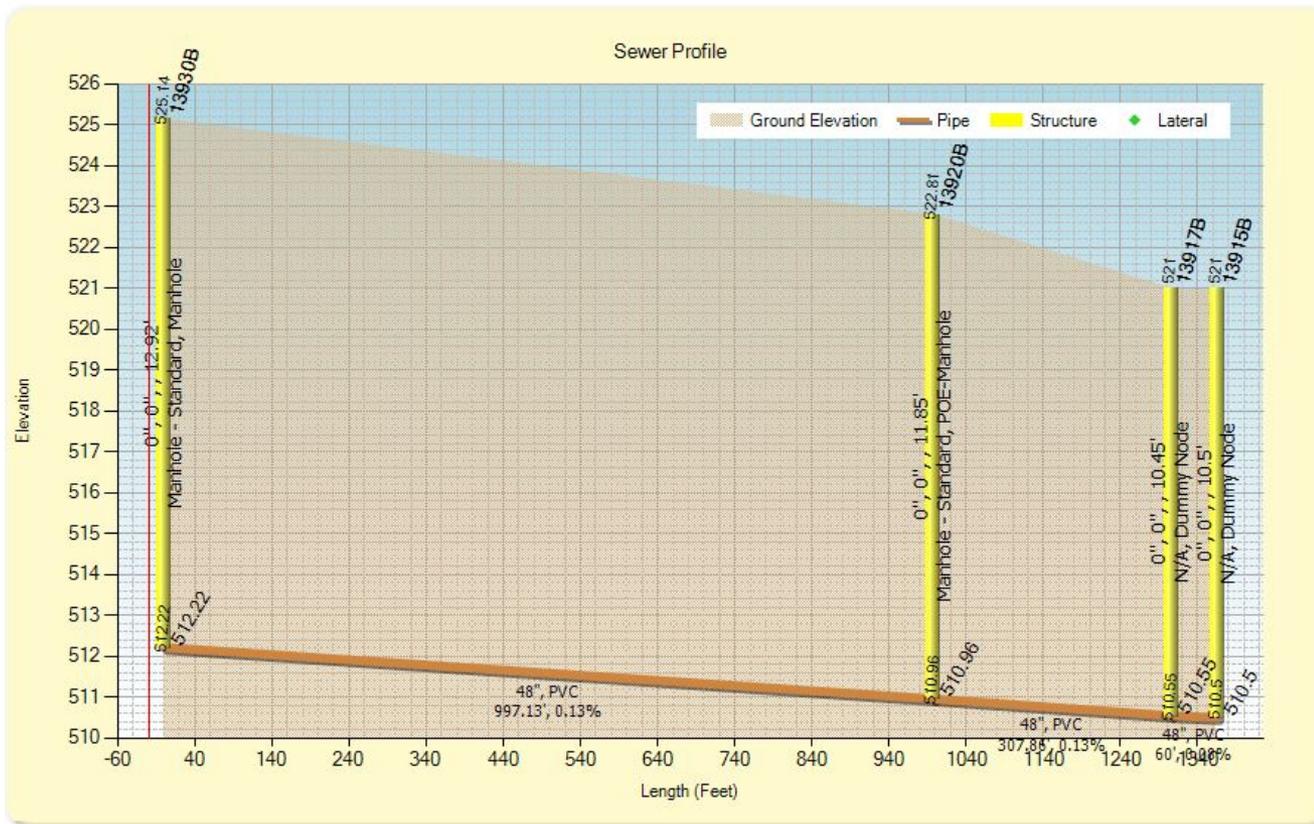
Check All Fields Load User Default
Uncheck All Fields Save as User Default

Changes will only take effect if you click the OK or Apply button at the bottom of the property page!

OK Cancel Apply

ArcMap/Lucity

Lucity GIS- Profile



Layers Labels 3D Options Print/Save

- Rim Elevations ...
 - Smart Labels Angle: -85
- Upstream Inverts ...
 - Smart Labels Angle: -60
- Downstream Inverts ...
 - Smart Labels Angle: -85
- Structure Info ...
 - Smart Labels Angle: -90
- Structure Name ...
 - Smart Labels Angle: -75
- Pipe Info ...
 - Smart Labels Angle: 0

Profile Summary

Number of Pipes: 3 [F1 for help](#)

Total Pipe Length: 1364.99

Pipe Elevation Span: 1.72

Calculated Pipe Slope: 0.13%

Number of lateral connections: 0

Lucidity in ArcPro

Relationships	Documents	Attributes
Sewer Pipes		1
Sewer TV Inspections		1
Sewer Line Lampings		0
Sewer Smoke Tests		0
Sewer Rehab Pipe Analysis Details		0
Sewer Service Laterals		0
Sewer CCTV Assessment		1
Sewer Overflows		0
Sewer Construction Records		0
Sewer Pipe Air Tests		0
Sewer Pipe Mandrel Tests		0
Sewer Building Inspections		0
Sewer Service Connections		0
Sewer Nodes		0
Sewer Control Valves		0
Sewer System Valves		0
Sewer IPT Facilities		0

Project | Map | Insert | Analysis | View | Edit | Imagery | Share | **Lucity Tools**

Tools: Relates, Bookmarks, Module Spatial Data

Edit Tools: Split, Merge, Renumber, Delete, Pavement

Management Tools: Domain Configuration, QA/QC, Menu

Administration: Settings, Process Log

Installed as an ESRI Add-in

Edited as a feature service

Tied to Lucity web NOT desktop

Need Utility Network extension to edit geometric network

How we've put the data together

Tracking fiberglass reinforced pipe ovality

CRWS 8750W 17-001279 50453.2600 Multi-Sensor Inspection (MSI) JAMES

Locations (0) Tasks (1) **Assets (12)** Checklist (0) Comments (0) Tracking (9) Work Orders (0)

Assets

Category Desc.	Asset Type	WO Cat. #	Sequence	Asset Rec. #	Desc 1	Desc 2	Document Available	General Comment	Last Modified By	Last Modified Date	Created By
Pipe	Sewer Pipe	61000	1	8750W	8750W - WF3PHII	8740W - WF3PHII	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	2	8610W	8610W - WF3PHII	8600W - WF3PHII	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	3	8600W	8600W - WF3PHII	7830W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	4	7830W	7830W - WF3	7820W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	5	7820W	7820W - WF3	7815W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	6	7815W	7815W - WF3	7812W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	7	7810W	7810W - WF3	7800W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	8	7800W	7800W - WF3	7790W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	9	7790W	7790W - WF3	7780W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj
Pipe	Sewer Pipe	61000	10	7780W	7780W - WF3	7770W - WF3	<input type="checkbox"/>		morgant	5/4/2018	colemanj

How we've put the data together



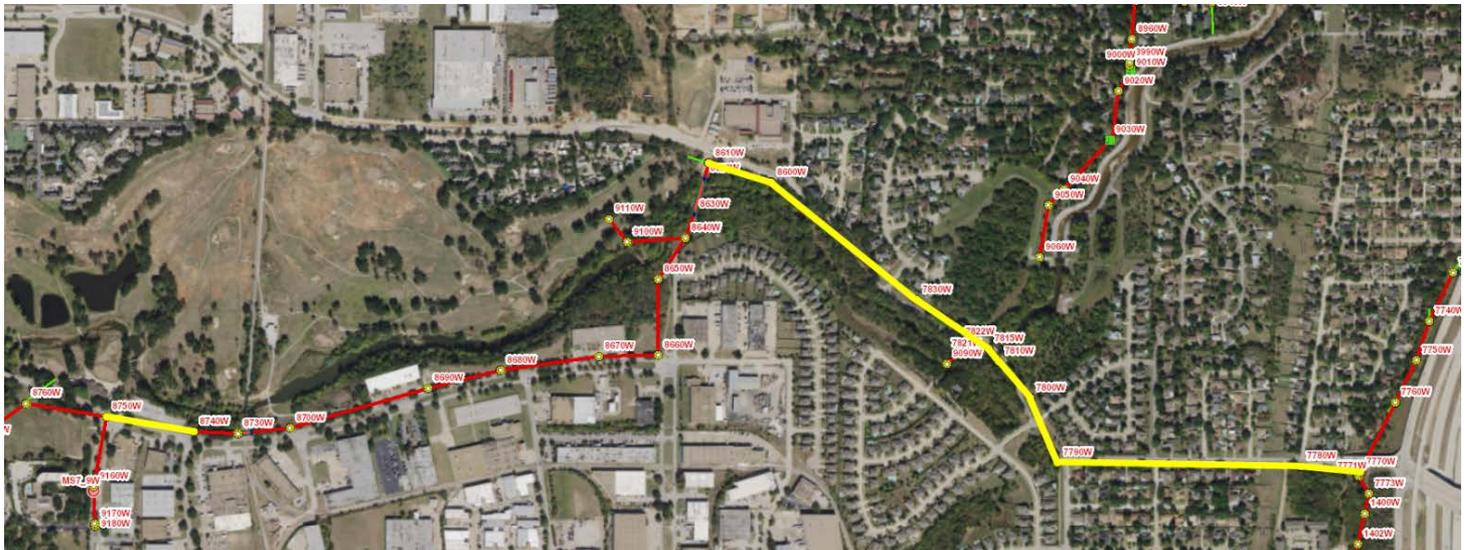
Filters

Available Defect Types:
No Records found.

Selected Defect Types:
 AMH
 DFE
 MW
 SR

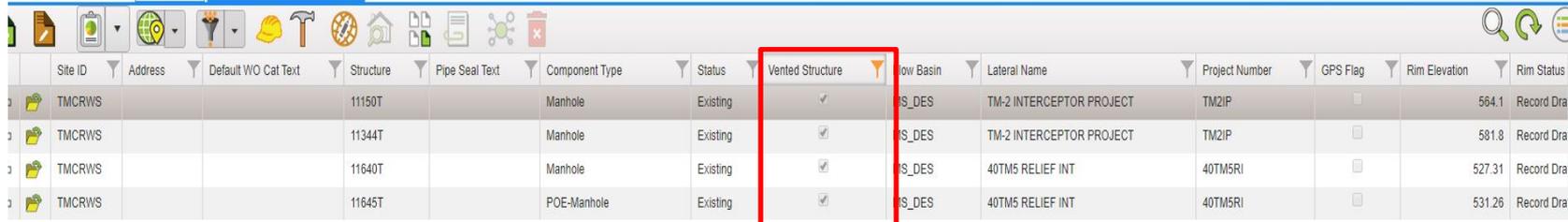
Only Display Ratings From:
null to 3

Reset Filter

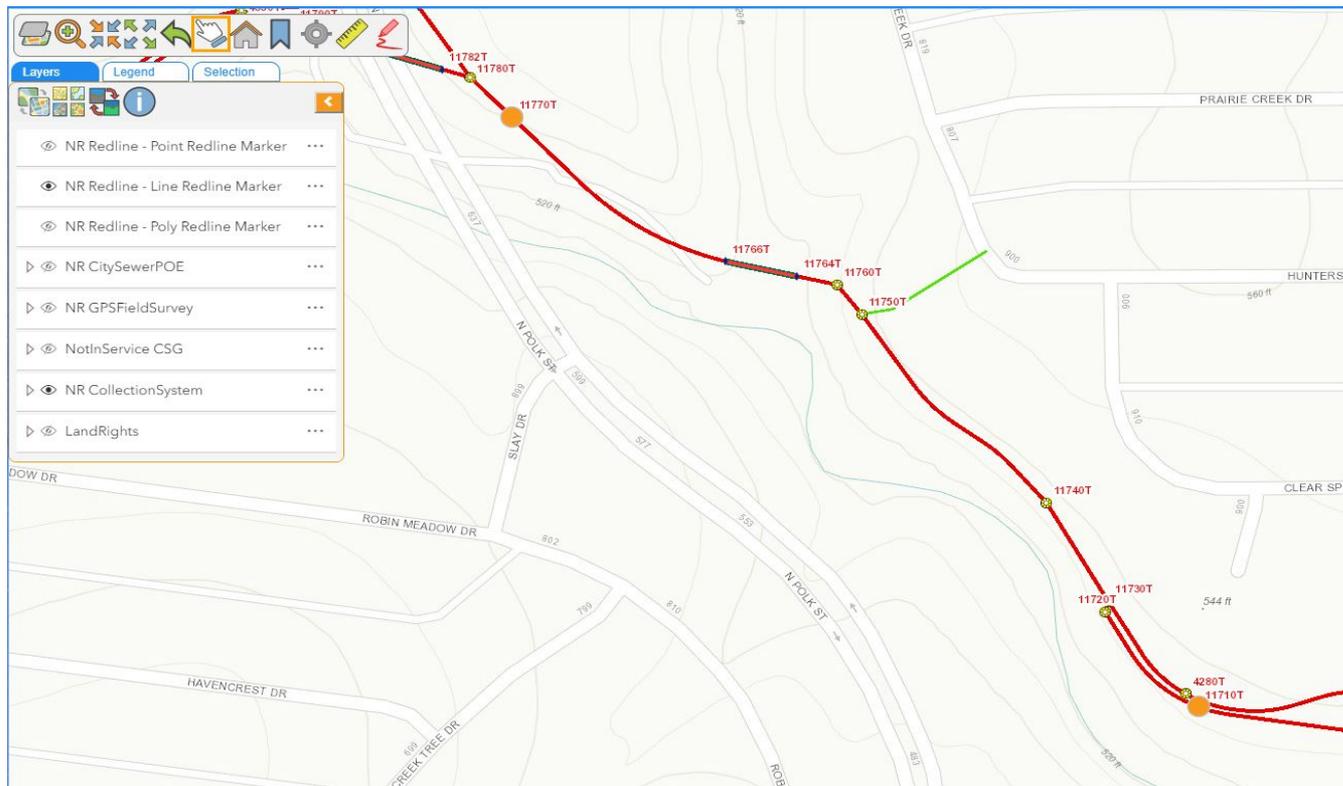


How we've put the data together

Tracking vented structures



Site ID	Address	Default WO Cat Text	Structure	Pipe Seal Text	Component Type	Status	Vented Structure	Flow Basin	Lateral Name	Project Number	GPS Flag	Rim Elevation	Rim Status
TMCRWS			11150T		Manhole	Existing	<input checked="" type="checkbox"/>	S_DES	TM-2 INTERCEPTOR PROJECT	TM2IP	<input type="checkbox"/>	564.1	Record Dra
TMCRWS			11344T		Manhole	Existing	<input checked="" type="checkbox"/>	S_DES	TM-2 INTERCEPTOR PROJECT	TM2IP	<input type="checkbox"/>	581.8	Record Dra
TMCRWS			11640T		Manhole	Existing	<input checked="" type="checkbox"/>	S_DES	40TM5 RELIEF INT	40TM5RI	<input type="checkbox"/>	527.31	Record Dra
TMCRWS			11645T		POE-Manhole	Existing	<input checked="" type="checkbox"/>	S_DES	40TM5 RELIEF INT	40TM5RI	<input type="checkbox"/>	531.26	Record Dra





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