

The background is a light blue gradient with several white, stylized bubbles of various sizes scattered across it. The bubbles have a slight shadow and a highlight, giving them a 3D appearance.

GIS

A ROCK SPRINGS STORY

NICK SEALS

CITY OF ROCK SPRINGS, WY

ABOUT ME

- WORKED IN WASTEWATER SINCE MARCH 2009.
- STARTED IN THE COLLECTION SYSTEM.
- WORKED MY WAY UP TO “PRETREATMENT AND COLLECTIONS SUPERVISOR” FOR THE CITY OF ROCK SPRINGS WATER RECLAMATION FACILITY.
 - MAKE SURE THE WATER GETS TO THE PLANT AND THE WATER IS TREATABLE.
 - WIFE TITLED ME “CONDUCTOR OF THE POOP TRAIN”
- MARRIED MY WIFE IN 2011, FIRST DAUGHTER WAS BORN IN 2017.
- I ENJOY ALL THINGS WASTEWATER, ANYTHING FAMILY, AND RIDING MY DIRT BIKE.

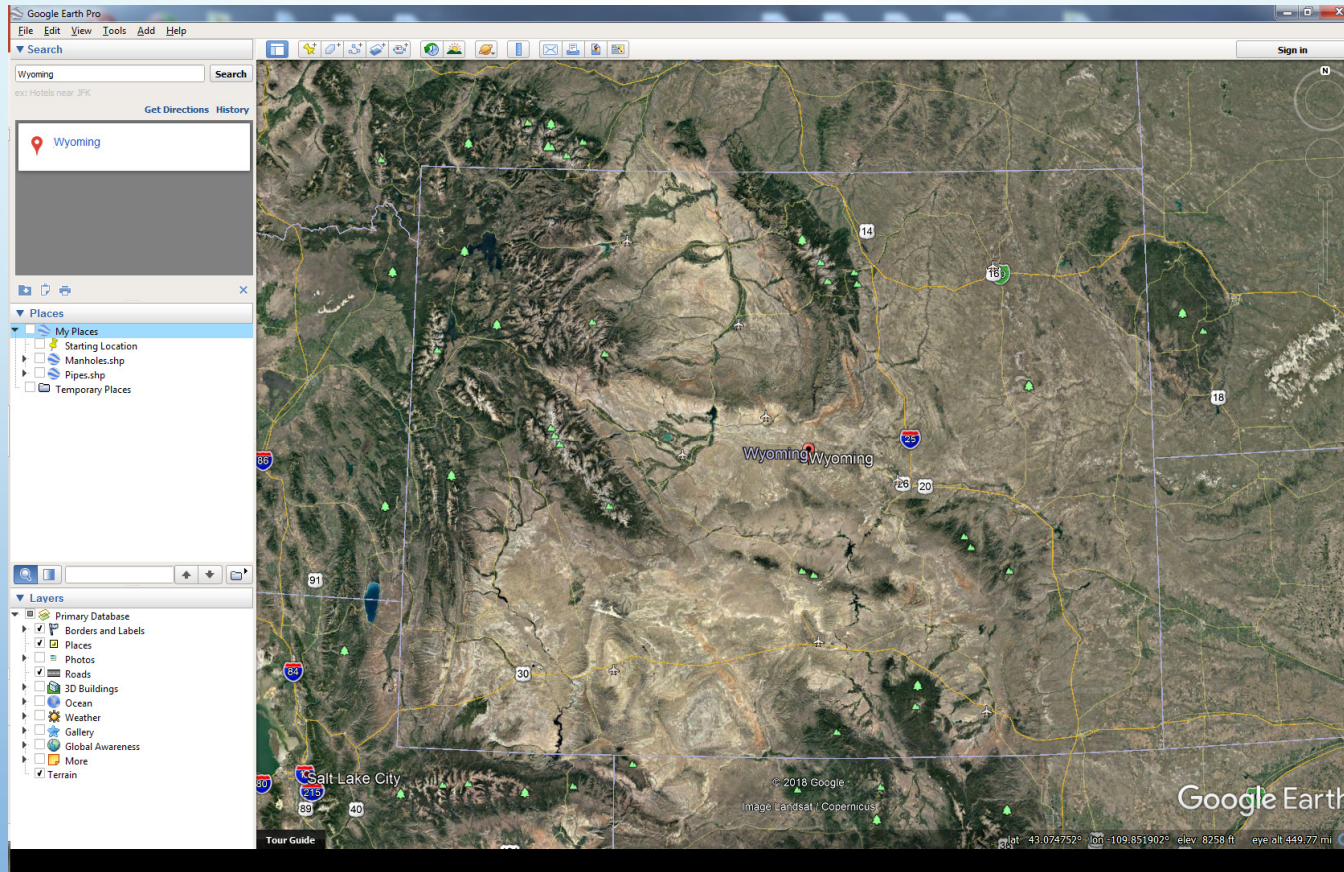
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INTRODUCTION TO GIS

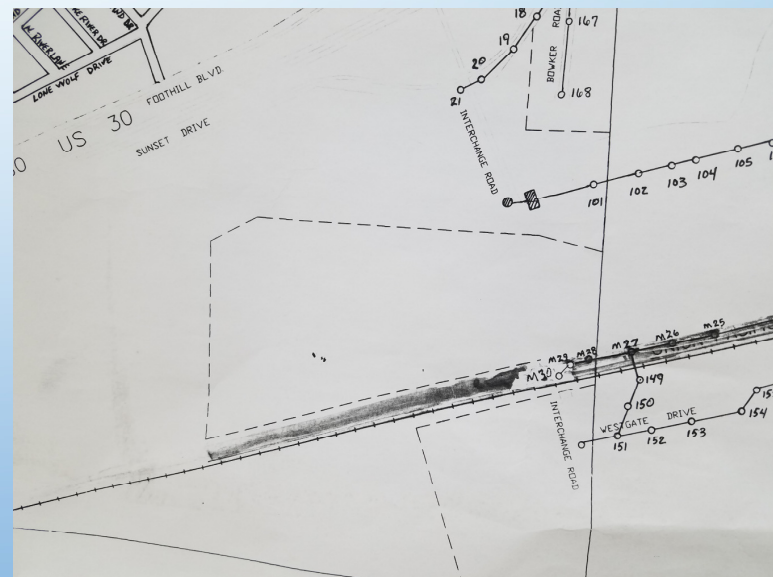
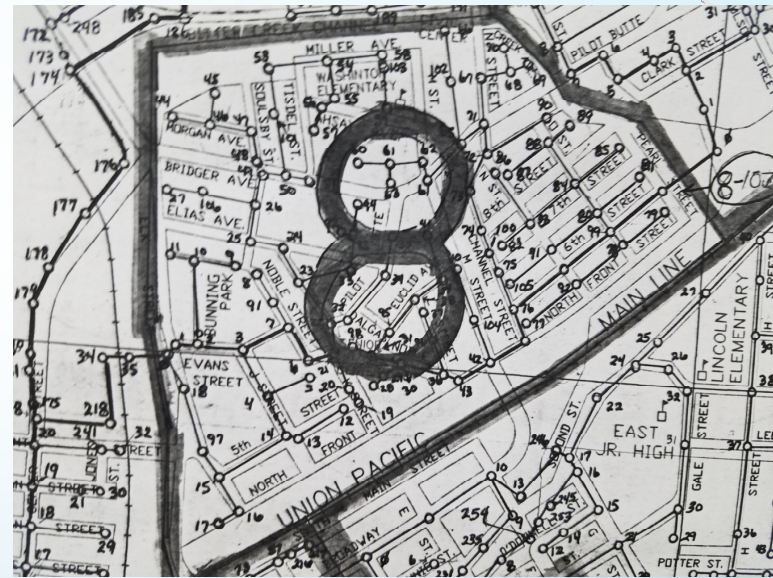
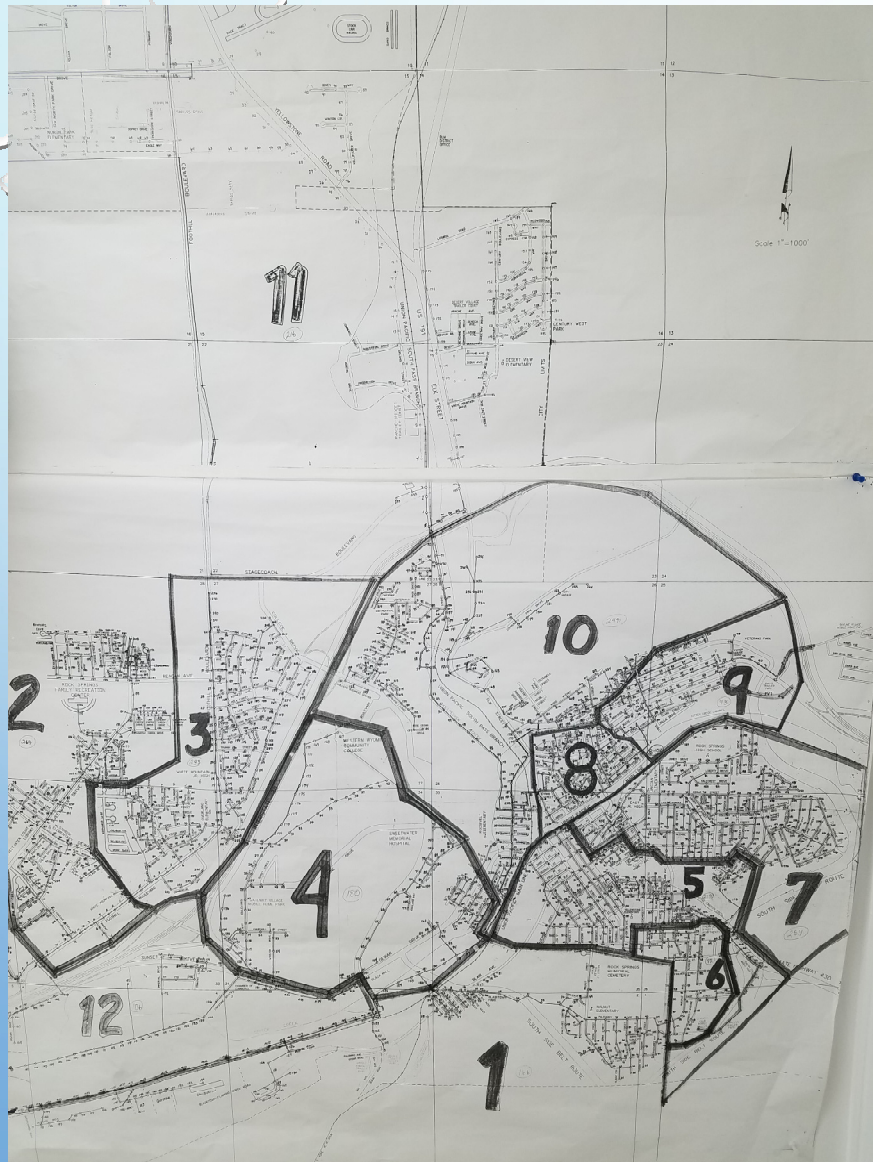
- GIS – **GEOGRAPHIC INFORMATION** SYSTEM
- MAPS
 - **GEOGRAPHIC** – WHERE IS IT?
 - **INFORMATION** – SEWER LINES, MANHOLES, INDUSTRIAL USERS, ANYTHING REALLY!
 - **SYSTEM** – “CONNECTED THINGS.” COMPUTERS, PHONES, SERVERS, GPS...
- KNOWLEDGE IS POWER!

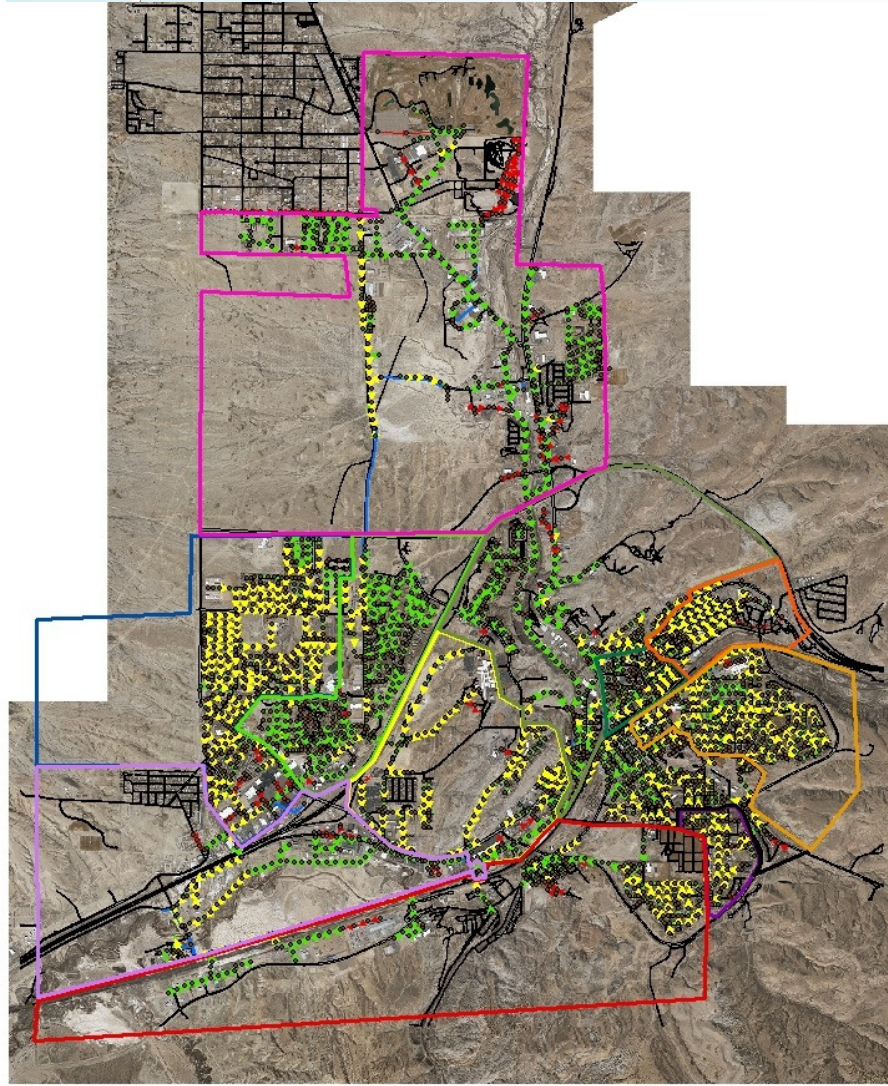
MAP OF SOME SORT



SEWER SYSTEMS

- SEWER LINES
 - WHERE ARE THEY, WHERE DO THEY GO
 - PUBLIC OR PRIVATE?
- MANHOLES
 - SANITARY SEWER, STORM SEWER, WATER, COMMUNICATION?
- VALVES
- LIFT STATIONS
- POTW'S
 - SERVICE AREA
 - IN-PLANT FLOW
- OTHER TREATMENT DEVICES

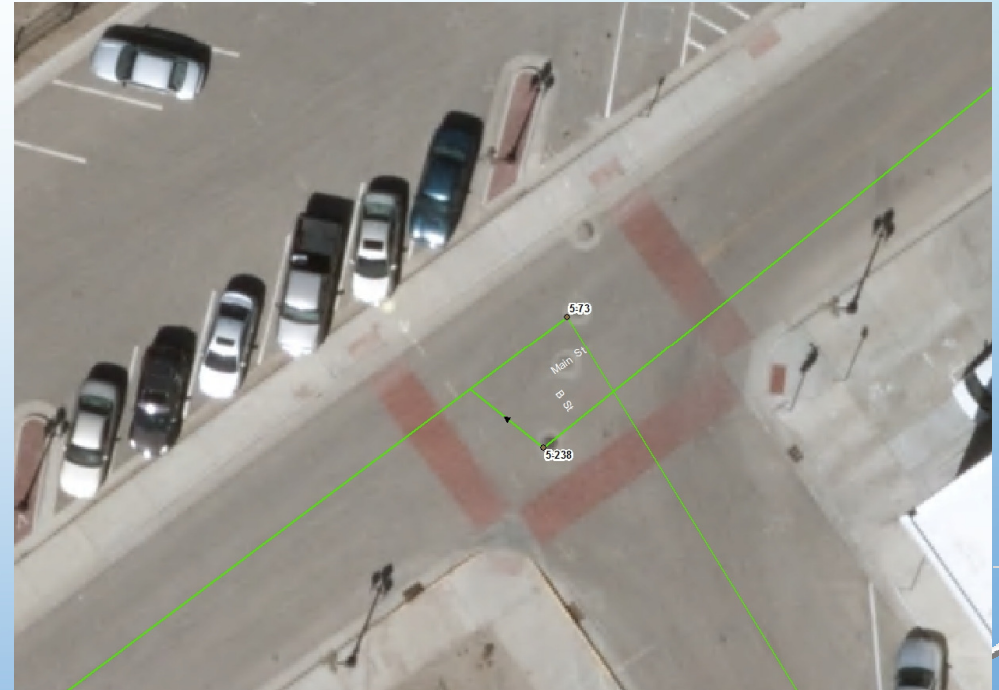




MANHOLES

4 MANHOLES, ANY IDEAS?

SANITARY SEWER LINES



INDUSTRIAL USER MAPPING

- NAME
- CHARACTERIZATION
- CATEGORIZATION
- ANYTHING YOU WANT TO TRACK



Attributes

Pretreat_Address
 SUNSET

ADDRESS	1675 SUNSET DR
ADD_NUMBER	1675
ADD_PRE_DI	
ADD_NAME	SUNSET
ADD_TYPE	DR
Characterization	Food Service
Categorization	Commercial User
Name	Old Chicago

ADDRESS
Text (Length = 72)
Null values allowed

ArcToolbox Identify Attributes Create Featu...



Attributes

Interceptors

OBJECTID	3
TRAP_SIZE	2000
DATE_INSP	8/15/2017
DATE_CLEANED	<Null>
X_VALUE	1830946.7
Y_VALUE	392846.78
Z_VALUE	6234.13
NOTES	
TRAP	GREASE INTERCEPTOR
Address	1675 Sunset Dr.

OBJECTID
Object ID
Null values not allowed

ArcToolbox Identify Attributes Create Featu...

The background is a light blue gradient that transitions from a pale blue at the top to a slightly darker blue at the bottom. Scattered throughout the background are several realistic-looking water bubbles of various sizes, some with highlights and shadows, giving the impression of water or a clean environment.

BACKTRACKING POLLUTANTS

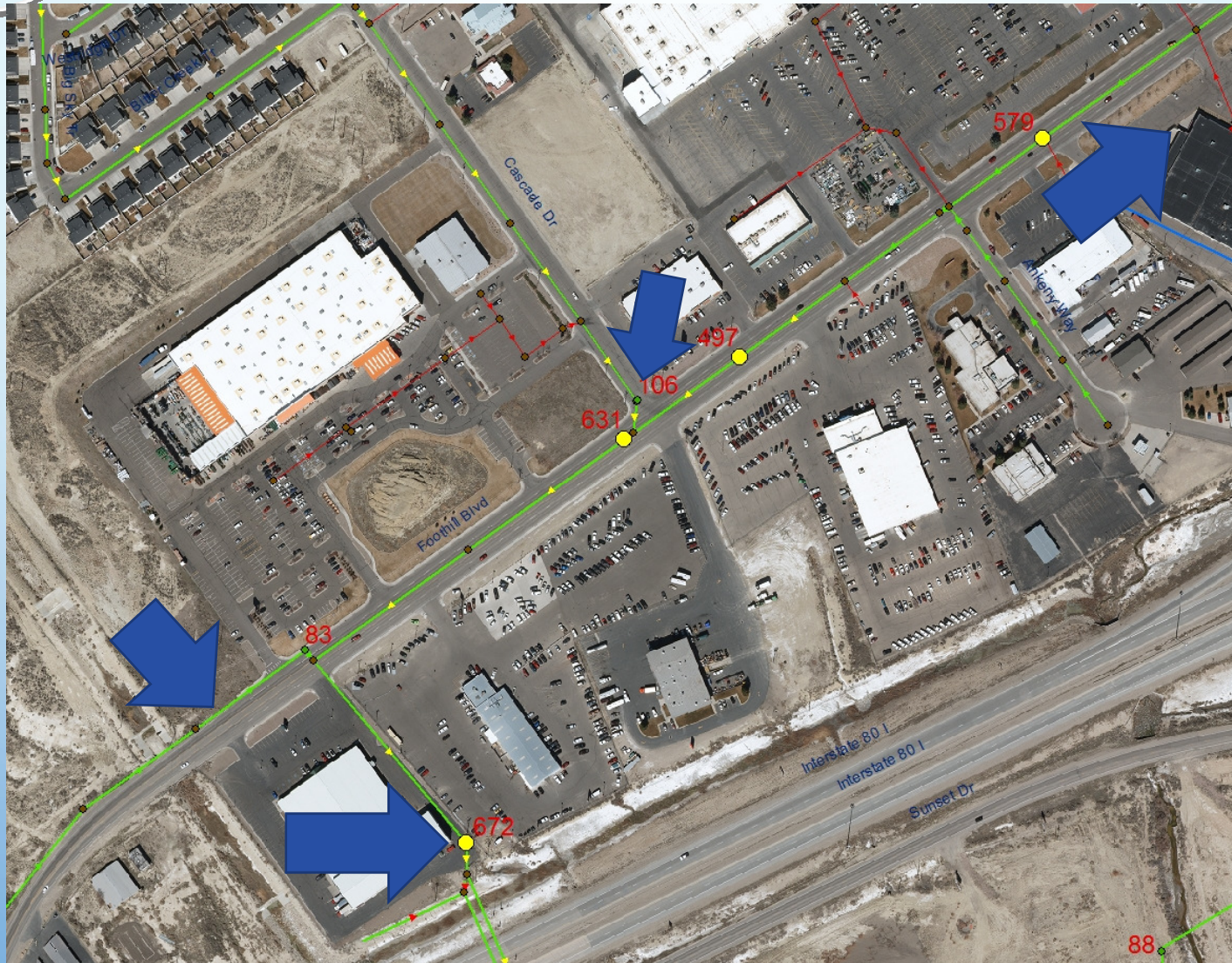
CHLORIDE

CHLORIDE HISTORY

- 2015 – CITY OF ROCK SPRINGS PUT ON A COMPLIANCE SCHEDULE TO MEET A 230 MG/L CHLORIDE LIMIT BY 2026
- 2015 – COMPLETED A LOCAL LIMITS EVALUATION ADDING CHLORIDE TO OUR LOCAL LIMITS.
PERMITTED IU'S – 1,738 MG/L TRIGGER LIMIT OF 1,500 MG/L
- DURING LOCAL LIMITS EVALUATION, PERMITTED IU'S IDENTIFIED AS NOT A SIGNIFICANT SOURCE OF CHLORIDE
- POTW DOES NOT TREAT FOR CHLORIDE, WHAT COMES IN GOES OUT
- INFILTRATION WAS QUICKLY IDENTIFIED AS THE MAJOR SOURCE
- WE PURCHASED A METER AND PROBE AND STARTED BACKTRACKING

CHLORIDE TABLE VIEW

Date	Chloride	Notes	Temperature	MH_ID	MH_Number
1/23/2018	8675		20.30	1217	11-83
1/23/2018	6332	East Flow	19.80	1574	11-88
3/5/2018	3433		16.30	2029	11-6
1/19/2018	3176		20.30	1914	12-76
3/6/2018	3135		19.20	969	11-10
3/8/2018	2965		21.00	Killpecker LS	
3/9/2018	2713		18.70	2013	11-173
1/23/2018	2683		20.00	2861	11-117
1/25/2018	2674		21.20	977	11-323







MS-3 Village Cir
MH 3-284

TO

5 FT
MH 3-305

8/23/2017

-3.7 %

0 FPM



MS-2 Low Income A
MH 2-20 T0

190.5 FT
MH 2-19

11/21/2014

1.1 %

30fpm



MS-2 Plaza Dr
MH 2-19

TO

65.3 FT
MH 2-20

7/13/2016

-0.4 %

0 FPM



BACKTRACKING

- USING GIS WE ARE ABLE TO QUICKLY IDENTIFY THE NEXT SECTION TO FOCUS ON
- CONTINUE MOVING UPSTREAM PLOTTING POINTS UNTIL THEY DROP OFF
- CAMERA THE LINES AND IDENTIFY THE PROBLEM
- FIX IT
 - REPLACE
 - REPAIR
 - LINE
- MANHOLES ARE GENERALLY THE ISSUE

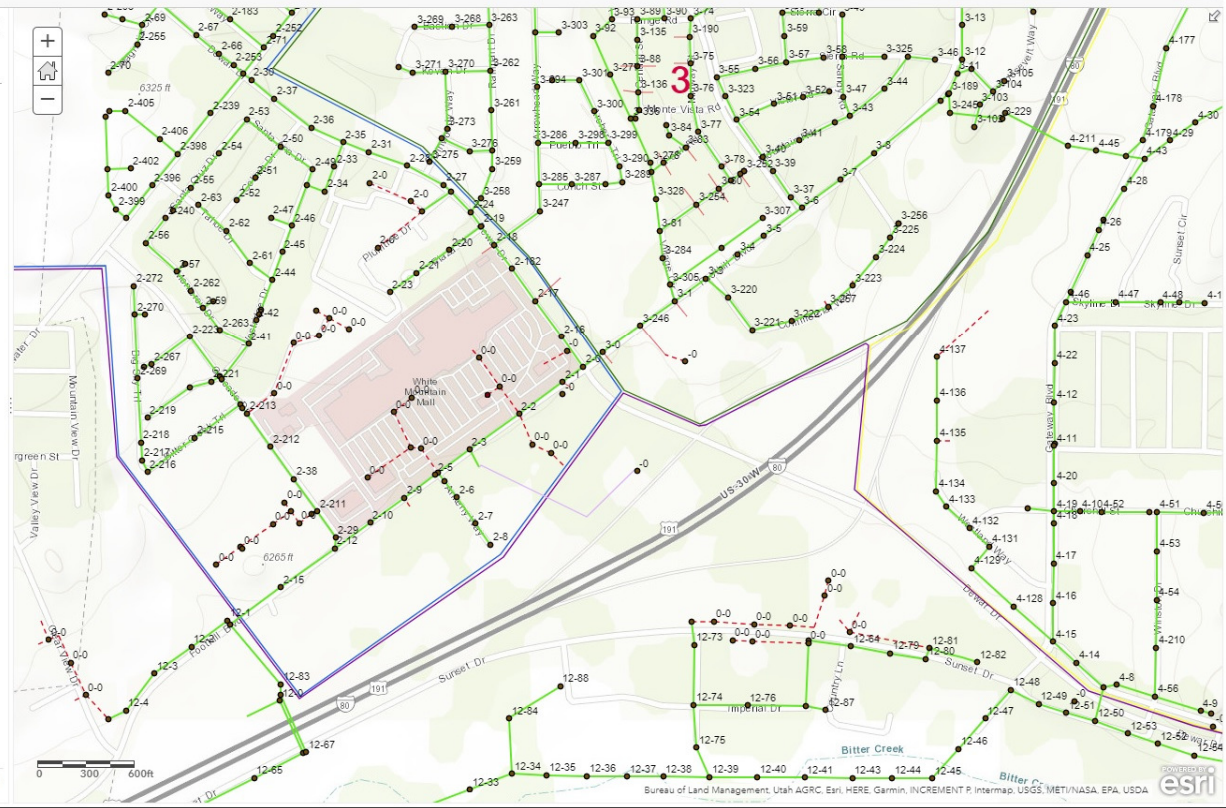
MOBILE GIS

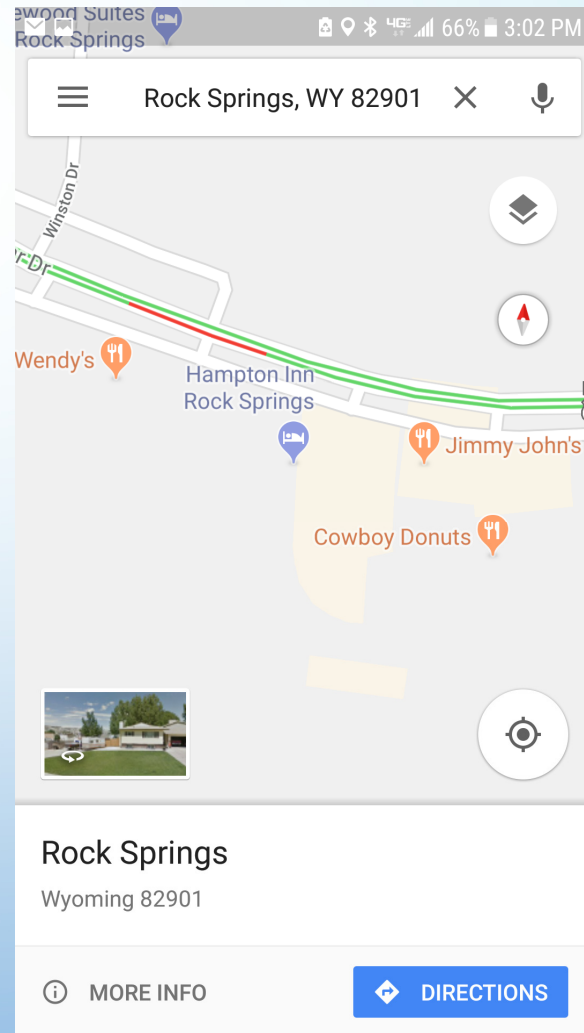
The background of the slide features a light blue gradient that transitions from a pale, almost white hue at the top to a deeper, medium blue at the bottom. Scattered throughout this gradient are numerous bubbles of varying sizes and shapes. Some bubbles are simple outlines, while others have a white highlight on their upper-left side, giving them a three-dimensional, glassy appearance. The bubbles are more densely clustered in the upper-left and lower-right corners, with a few smaller ones scattered in the center.

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 - 10 2015 E Sewer Online - Pipes
 - 10 2015 E Sewer Online - MiniSystem
 - Topographic





SHARING IS CARING

- SHARING INFORMATION WITH OTHER DEPARTMENTS
 - WATER DEPARTMENT KNOWS WHERE OUR SEWER LINES ARE
- CITY ENGINEERS HAVE A BETTER UNDERSTANDING OF SYSTEM DURING PROJECTS
- OUTSIDE ENGINEERS CAN LOCATE SEWER LINES DURING NEW CONSTRUCTION
- INDUSTRIAL USERS CAN SEE WHERE THERE SYSTEM IS CONNECTED AND HOW IT AFFECTS THE POTW
- SSO'S CAN BE RESPONDED TO APPROPRIATELY



QUESTIONS?

NICK SEALS

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CONDUCTOR OF THE POOP TRAIN

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