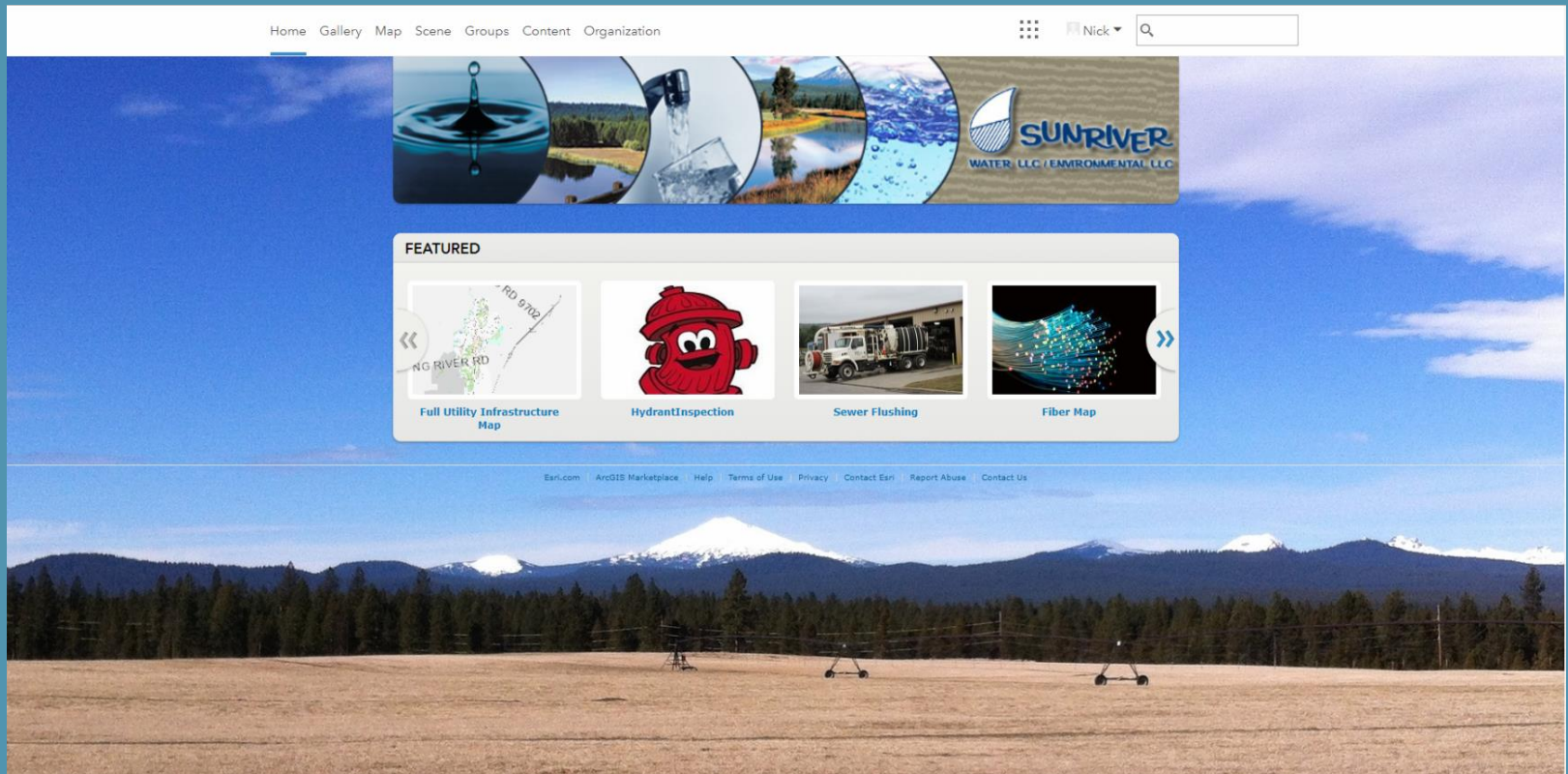


CROSS CONNECTION IDENTIFICATION AND REGULATION

Using Collector for ArcGIS

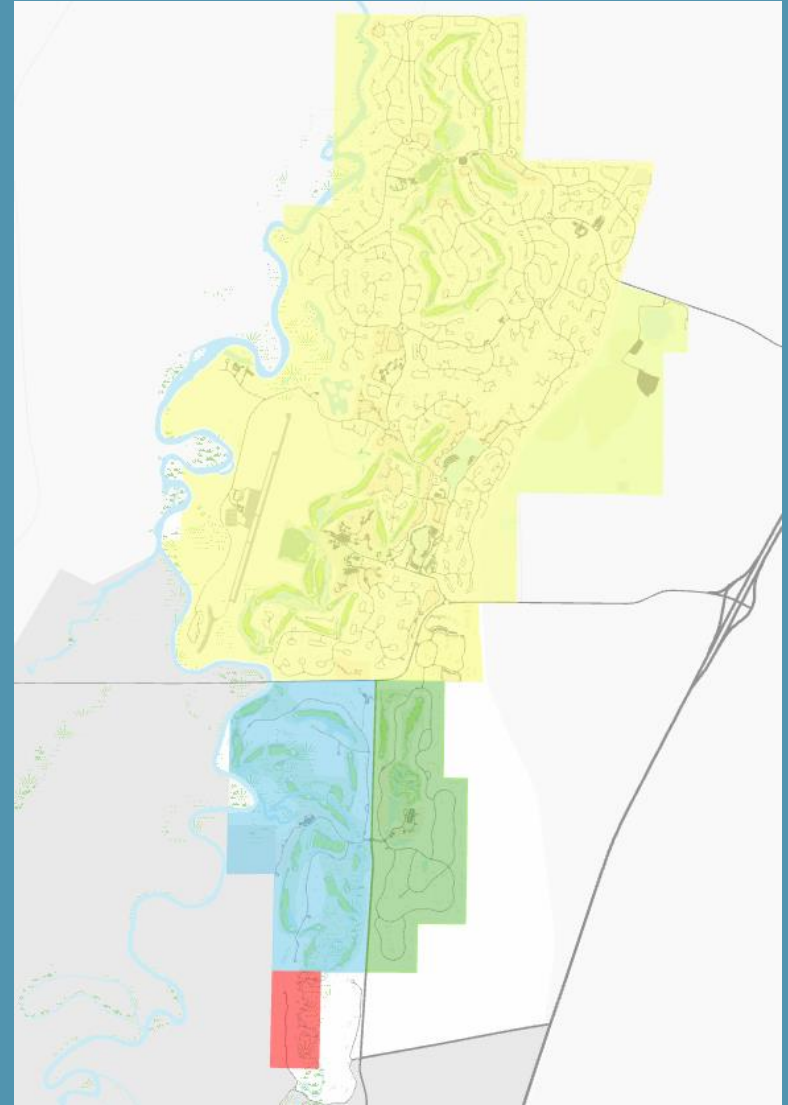
SUNRIVER GIS

- Esri ELA <10k connections
- 2 main editors
 - 12 field staff using collector
- Using AGOL for 4 years
- 11+ maps as collector apps



SUNRIVER WATER & ENVIRONMENTAL

- -4503 Customers
 - 1037 Irrigation & Commercial
 - All backflows known
 - 3415 Residential
 - Most volunteered info
 - Often find backflows not in billing system
 - Backflow inspection source of revenue
 - State required yearly inspections



SOLUTION TO CROSS-CONNECTION PROBLEM

- 1 field worker visit each property in Sunriver
- Walk around the property to find evidence of cross connection
 - Irrigation/ hot tub/frost-free hose bib
- Also looking for gutter outflow



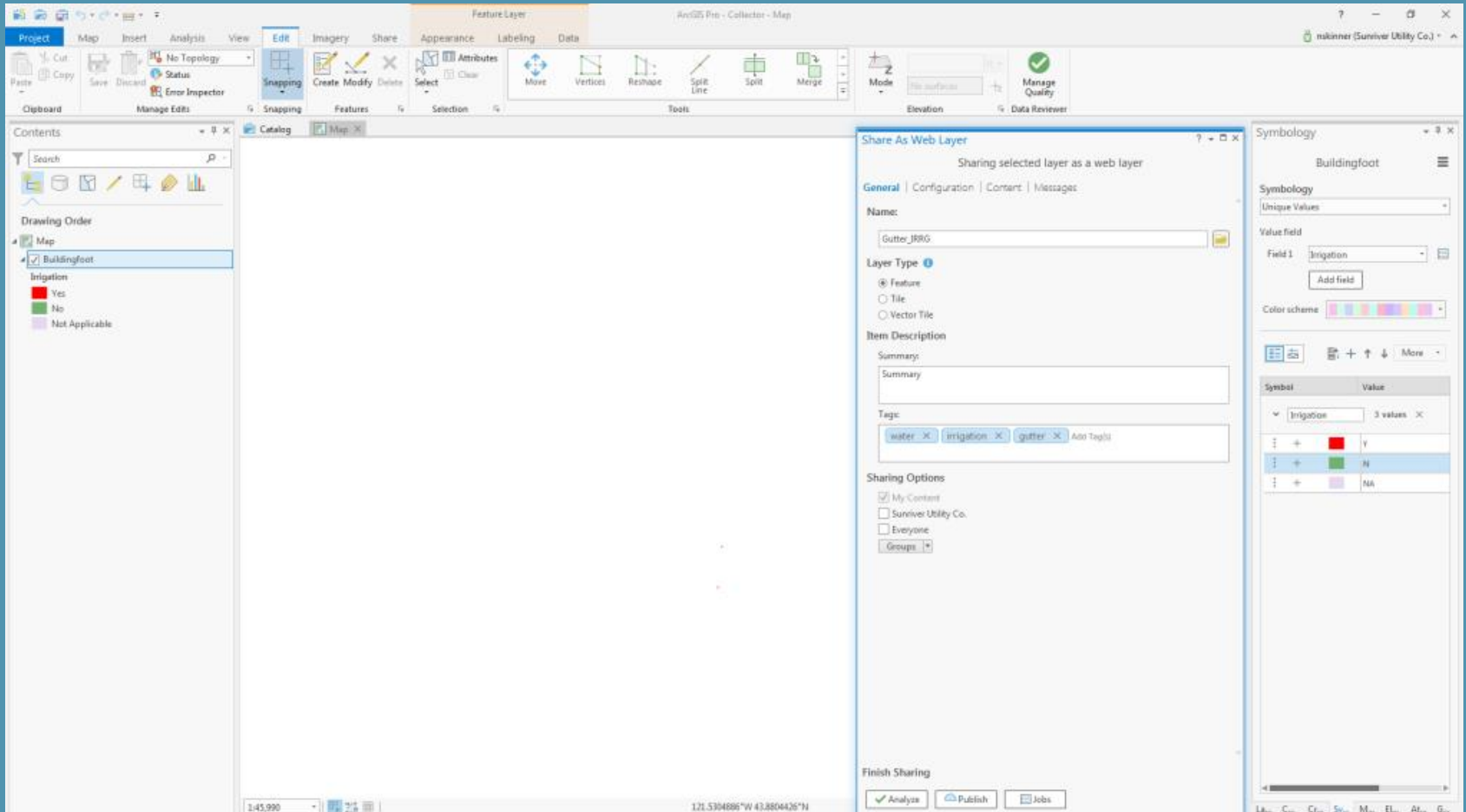
SIMPLE DATA COLLECTION

- Goal to make collecting the data as simple and efficient as possible
- Chose Building footprint
- Added pertinent fields
- Set text coded domains

[illegible]

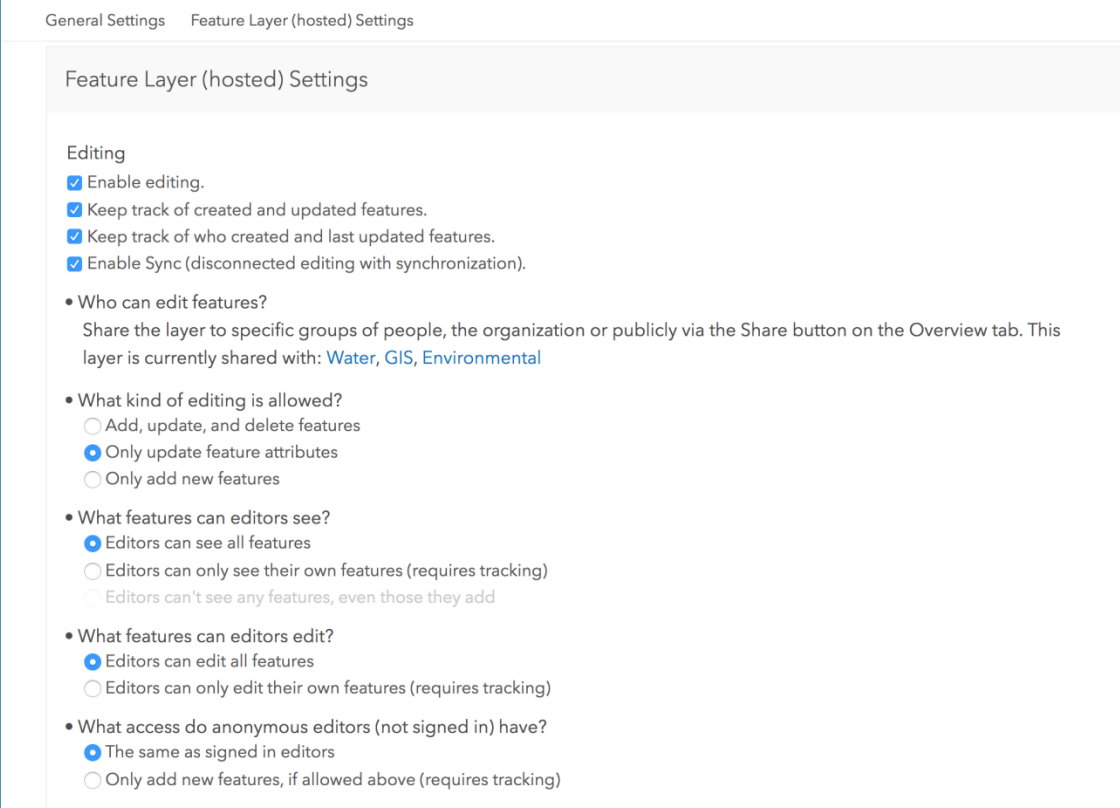
Code	Description
No	No Gutters
Above Ground	Gutters - Above Ground Only
Underground	Gutters - Underground Only
Partial	Gutters - Partially Underground
Unknown	Gutters - Unknown Outflow

SHARING TO ARCGIS ONLINE



EDIT FEATURE LAYER SETTINGS

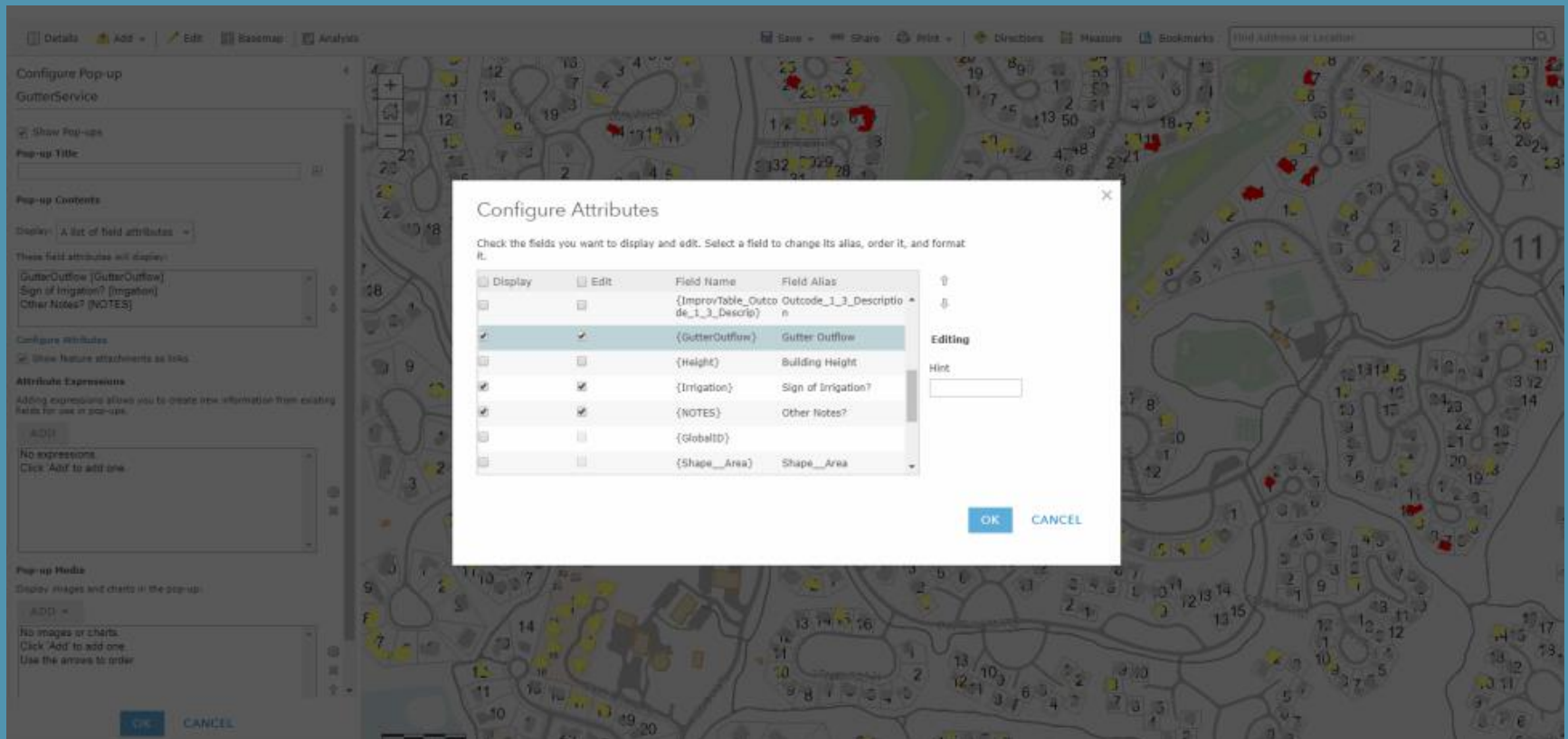
- Important step if you want to limit what can be edited
- Enabling editor tracking allows for more analysis later



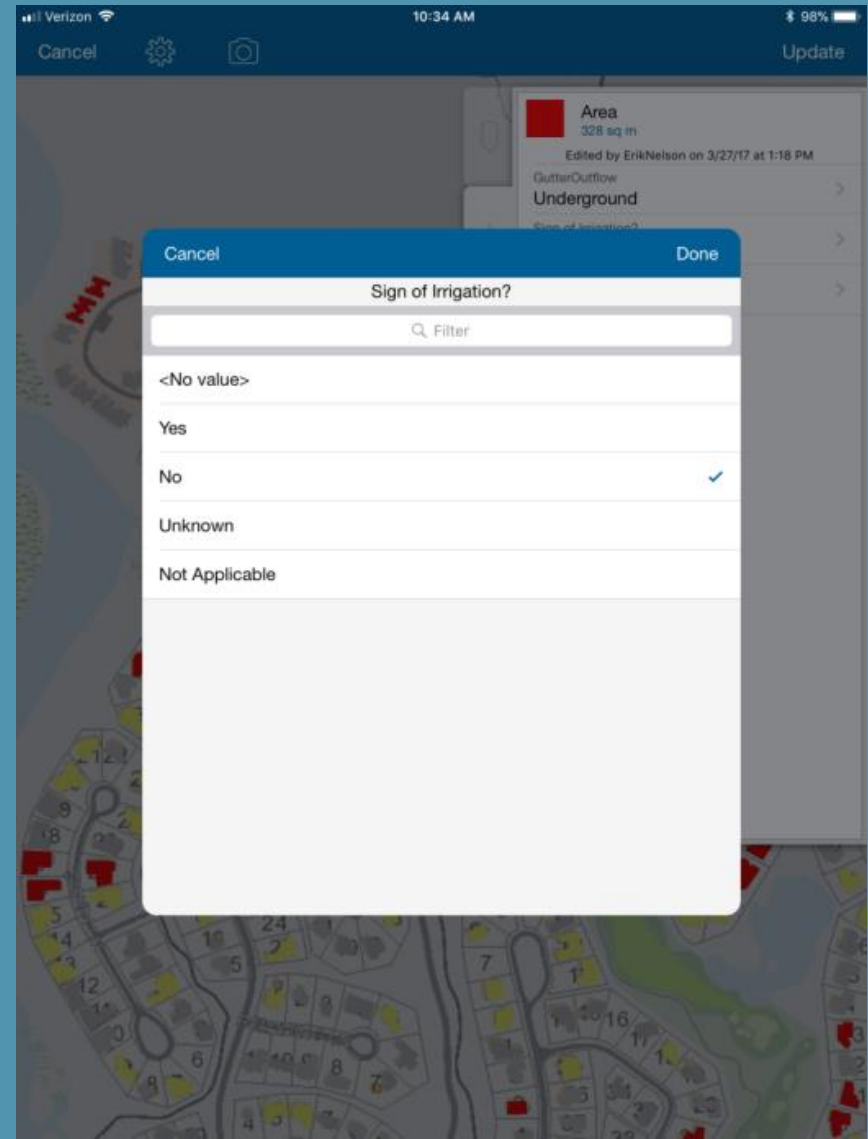
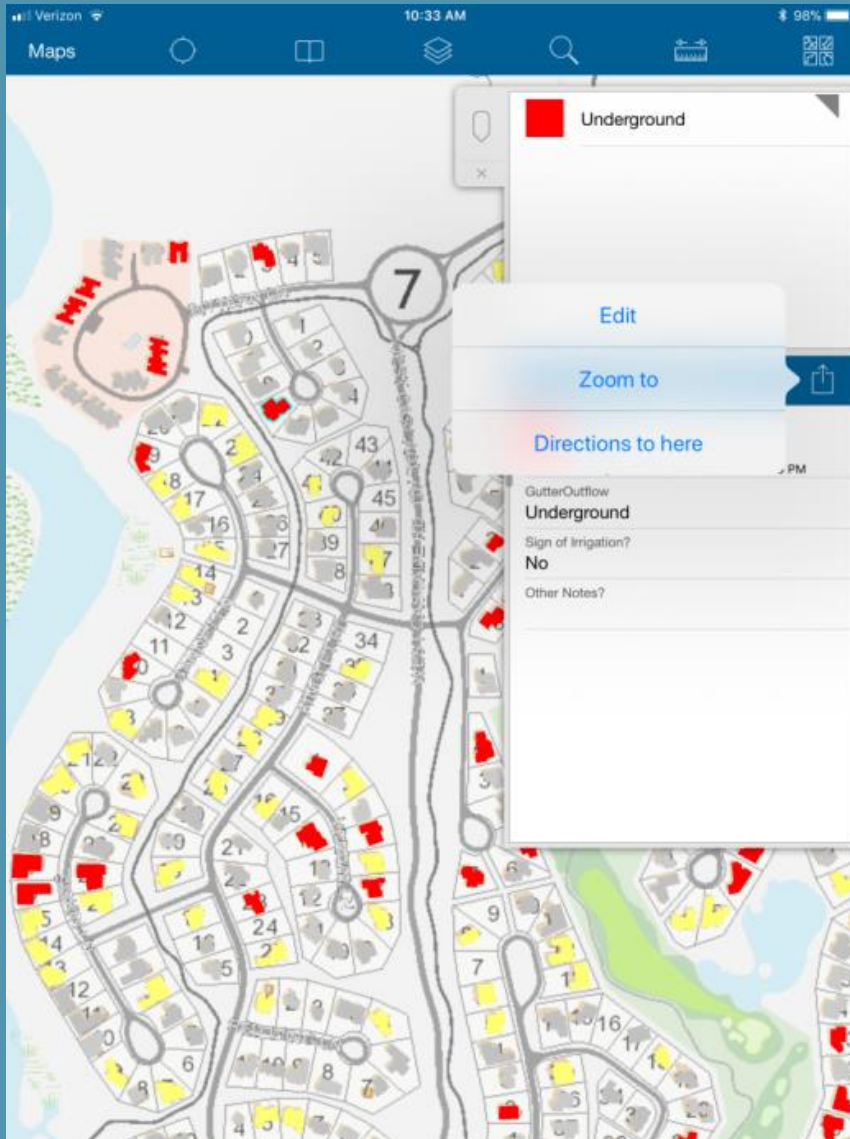
The screenshot displays the 'Feature Layer (hosted) Settings' interface. At the top, there are two tabs: 'General Settings' and 'Feature Layer (hosted) Settings', with the latter being the active tab. Below the tabs, the title 'Feature Layer (hosted) Settings' is centered. The main content area is titled 'Editing' and contains several configuration options:

- ☒ Enable editing.
- ☒ Keep track of created and updated features.
- ☒ Keep track of who created and last updated features.
- ☒ Enable Sync (disconnected editing with synchronization).
- Who can edit features?
Share the layer to specific groups of people, the organization or publicly via the Share button on the Overview tab. This layer is currently shared with: [Water](#), [GIS](#), [Environmental](#)
- What kind of editing is allowed?
 - ☐ Add, update, and delete features
 - ☒ Only update feature attributes
 - ☐ Only add new features
- What features can editors see?
 - ☒ Editors can see all features
 - ☐ Editors can only see their own features (requires tracking)
 - ☐ Editors can't see any features, even those they add
- What features can editors edit?
 - ☒ Editors can edit all features
 - ☐ Editors can only edit their own features (requires tracking)
- What access do anonymous editors (not signed in) have?
 - ☒ The same as signed in editors
 - ☐ Only add new features, if allowed above (requires tracking)

WEB MAP FOR COLLECTOR

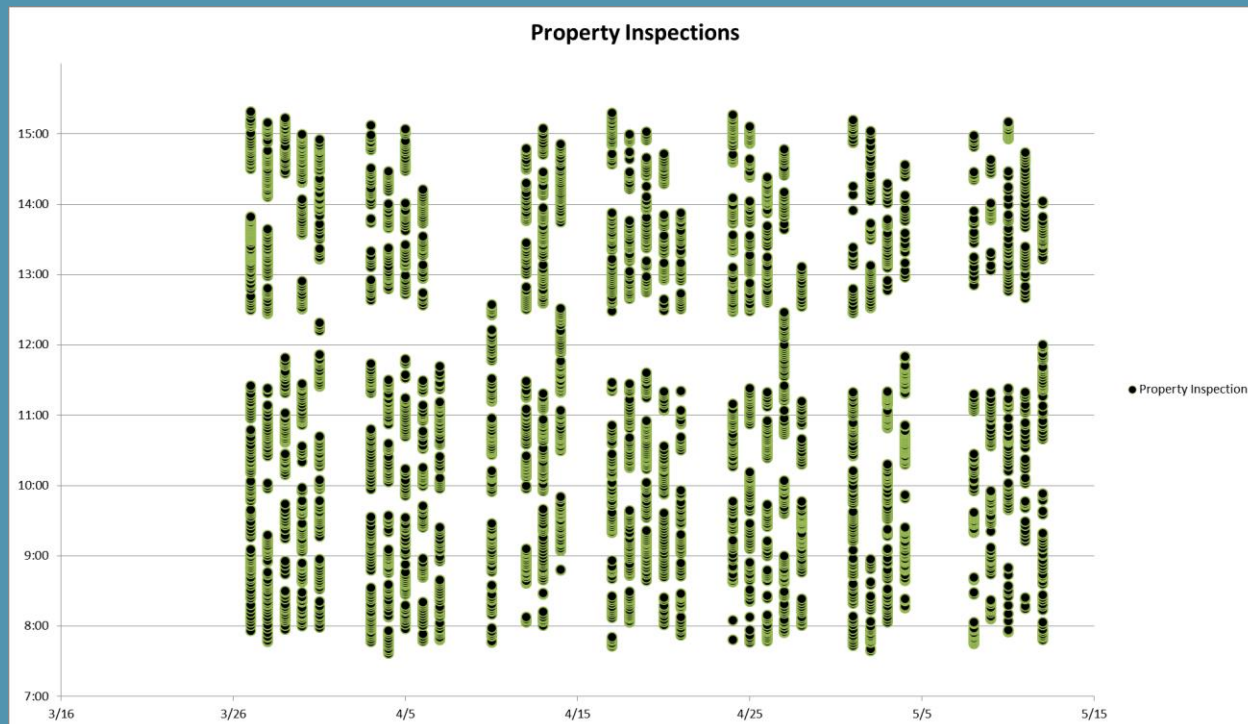


USE OF COLLECTOR



END OF STAGE 1

- Took Seasonal 34 Days to complete all properties
- Averaged 2:19 per property
- 3870 properties inspected



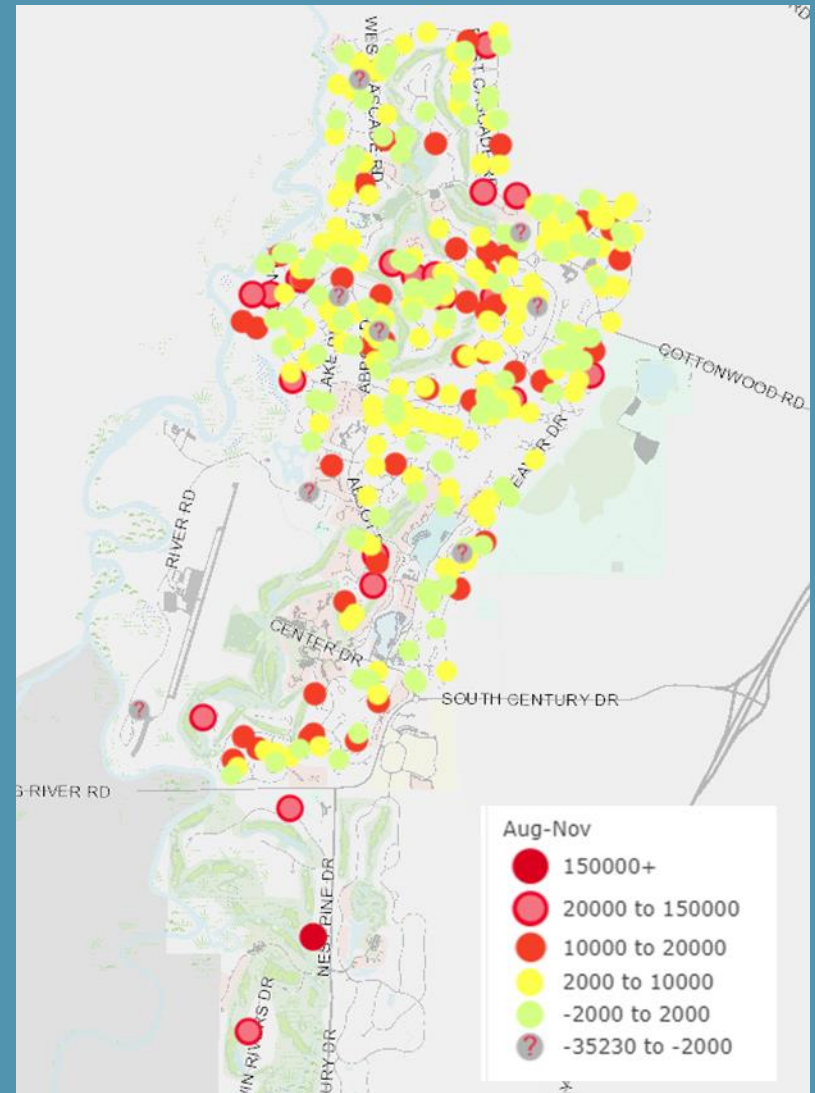
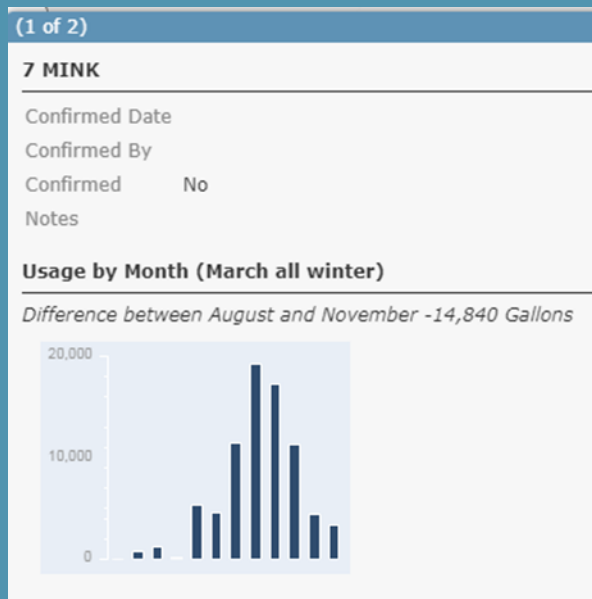
INITIAL RESULTS

- Step 1: Select all Footprints with Irrigation = Yes but property does not have any backflow data = **337 properties**
- Quick way to confirm likelihood of cross connection? Usage data

ObjectID *	Shape	LocID	Street	Full_Address	Jan16 use	Feb16 Us	Mar16 U	Apr16 U	May16 U	June16 Us	July16 Us	Aug16 Us	Sep16 Usa	Oct16 Us	Nov16 U	Dec16 Us	Aug-Nov	Confirmed as	Confirmed By	Confirmed Date	Notes
96	Point	7760200	16 HASHKNIFE RD	55875 HASHKNIFE 16	0	0	0	2600	97420	152190	183880	241070	168210	81020	34320	1050	206750	No	<Null>	<Null>	<Null>
169	Point	7545000	50 NEST PINE DR	56525 NEST PINE 50	700	680	1170	2590	2490	45860	165580	198960	217630	97570	4150	380	194810	No	<Null>	<Null>	<Null>
295	Point	7546600	57 TWIN RIVERS DR	56365 TWIN RIVERS 57	5270	2840	1780	33370	72530	107250	137880	133350	151550	110660	28700	14490	104650	No	<Null>	<Null>	<Null>
142	Point	2738100	12 MAURY MOUNTAIN LN	12 MAURY MTN	0	0	7830	0	6550	2930	28520	55340	20180	13240	1010	1830	54330	No	<Null>	<Null>	<Null>
168	Point	7541200	12 NEST PINE DR	56750 NEST PINE 12	4250	1130	720	11830	34910	33220	29940	41990	60610	52870	230	0	41760	No	<Null>	<Null>	<Null>
133	Point	1705500	2 LOON LN	2 LOON	0	0	0	11750	2080	10610	24810	42100	41750	29560	1320	0	40780	No	<Null>	<Null>	<Null>
184	Point	201100	6 OLYMPIC LN	6 OLYMPIC	130	350	770	30	180	9660	11350	41430	24290	25850	930	0	40500	No	<Null>	<Null>	<Null>
178	Point	2822000	6 OCHOCO LN	6 OCHOCO	0	0	1120	5090	4420	9460	10780	44110	37240	36740	6120	5190	37990	No	<Null>	<Null>	<Null>
177	Point	2526400	14 NORTH COURSE LN	14 NORTH COURSE EST	0	0	0	9540	10610	24570	28740	46710	64990	30480	8760	10	37950	No	<Null>	<Null>	<Null>
21	Point	2314300	4 BIG LEAF LN	4 BIG LEAF	0	0	6170	4220	11230	18570	39410	34240	37380	25110	750	0	33490	No	<Null>	<Null>	<Null>
306	Point	120000	6 VISTA LN	6 VISTA	440	1740	1220	3670	6780	26970	34010	36350	36320	30020	5010	1910	31340	No	<Null>	<Null>	<Null>
263	Point	1400800	8 SISTERS LN	8 SISTERS	0	0	12760	3390	8890	11090	11840	37490	41020	30970	6710	3180	30780	No	<Null>	<Null>	<Null>
251	Point	202500	6 SALISHAN LN	6 SALISHAN	1110	340	20	550	170	12570	22920	36500	33230	28670	6010	10	30490	No	<Null>	<Null>	<Null>
24	Point	2315400	15 BIG LEAF LN	15 BIG LEAF	0	0	4920	1310	2410	9860	21170	29300	28230	2220	790	0	28510	No	<Null>	<Null>	<Null>
311	Point	2718400	23 WHISTLER LN	23 WHISTLER	0	0	13580	3830	3910	10330	23940	29510	24180	6430	1580	0	27930	No	<Null>	<Null>	<Null>
97	Point	7700700	21 HASHKNIFE RD	55825 HASHKNIFE 21	5410	1430	490	5120	157170	242120	253160	226580	255980	238700	199700	390	26880	No	<Null>	<Null>	<Null>
278	Point	2508700	31 TAN OAK LN	31 TAN OAK	0	0	15650	7390	800	16830	32060	31890	28120	19480	6040	0	25850	No	<Null>	<Null>	<Null>

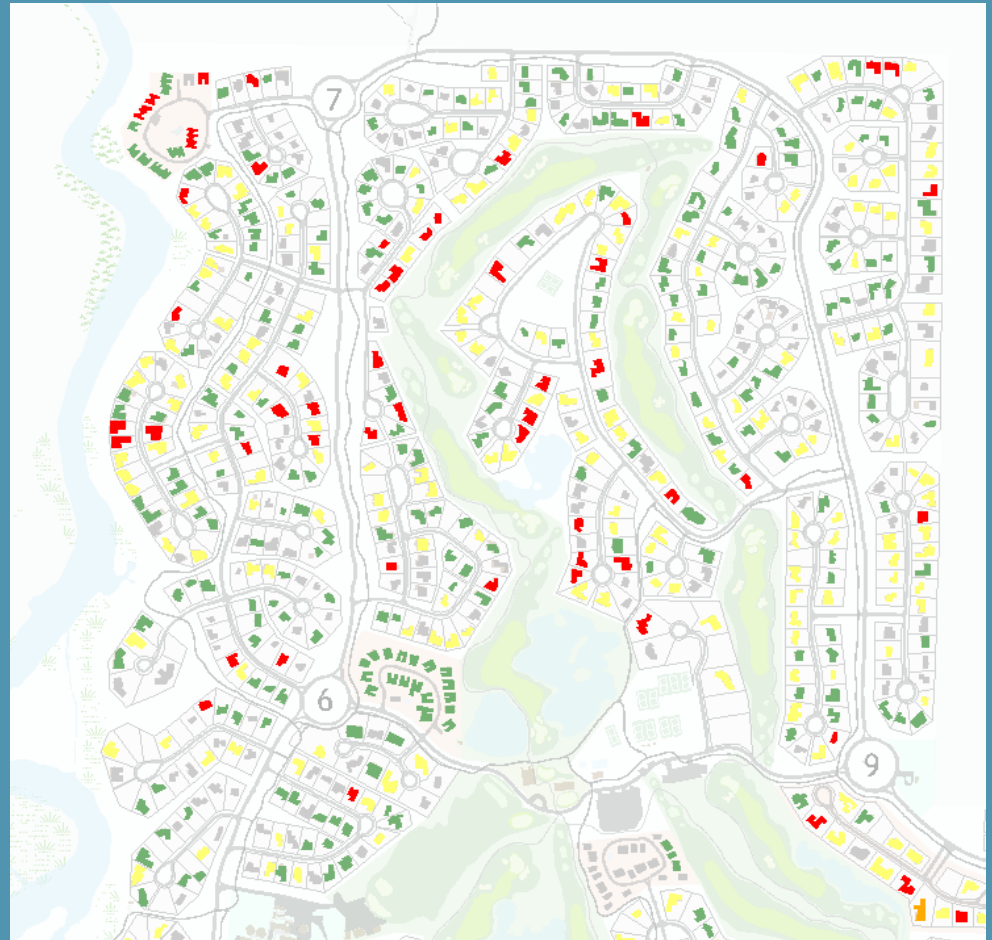
STAGE 2 WEB MAP CREATION

- Created Web map with color prioritization
- Added confirmation fields for cross connection specialist
- Edited popup to include custom data/chart



NEXT STEPS/ FINAL THOUGHTS

- Letters to properties in violation or with untested backflows
- Gutter investigations
- Collector made project possible



QUESTIONS? COMMENTS?

Contact Info

Email: Nickaskinner@gmail.com

Cell: (360) 901-6727

ADDING A CHART TO A POP-UP

Configure Pop-up

Illegalsignation

☒ Show Pop-ups

Pop-up Title

{Full_Address}

Pop-up Contents

Display: A list of field attributes

These field attributes will display:

- Confirmed Date {ConfirmDate}
- Confirmed By {ConfirmedBy}
- Confirmed {Confirmed}
- Notes {Notes}

[Configure Attributes](#)

Attribute Expressions

Adding expressions allows you to create new information from existing fields for use in pop-ups.

ADD

No expressions.
Click 'Add' to add one.

Pop-up Media

Display images and charts in the pop-up:

ADD

- Image
- Pie Chart
- Bar Chart
- Column Chart
- Line Chart

OK CANCEL

Configure Column Chart

Specify the title, caption and fields to chart.

Title:

Usage by Month (March all winter)

Caption

Difference between August and November - {AugVsNov} Gallons

Chart Fields

<input type="checkbox"/> Field Alias	Field Name
<input type="checkbox"/> Street_Number	{Street_Number}
<input checked="" type="checkbox"/> Jan16 usage	{Jan16}
<input checked="" type="checkbox"/> Feb16 Usage	{Feb16}
<input checked="" type="checkbox"/> Mar16 Usage	{Mar16}
<input checked="" type="checkbox"/> Apr16 Usage	{Apr16}

Normalize by: None

OK CANCEL