CITY OF CARROLLTON

Myriam Gomez

FROM PAPER STACKS TO DASHBOARDS:

An Adaptation of Survey123 and Survey123 Connect for Environmental Operations

SURVEY123 &
SURVEY123 CONNECT

ANALYZE

MANAGE

MOBILE

CHARTS,
GRAPHS,
MAPS

VISUALIZE

OPTIMIZE WORKFLOWS

SMART FORM BUILDER

RELIABLE DATA

Dynamic

CASE #1: WATER QUALITY MONITORING

Historical Records

SPER Turbidity Meter

designed by freepik.com

Oakton PH Meter

DiST3 Conductivity Tester

Pro20 DO Meter

CASE #1: WATER QUALITY MONITORING

ANDIE'S WORKFLOW

- 18 Excel Sheets for Each Testing Location
- Stack of Paper Records (historical and current)
- Analysis Done on Excel

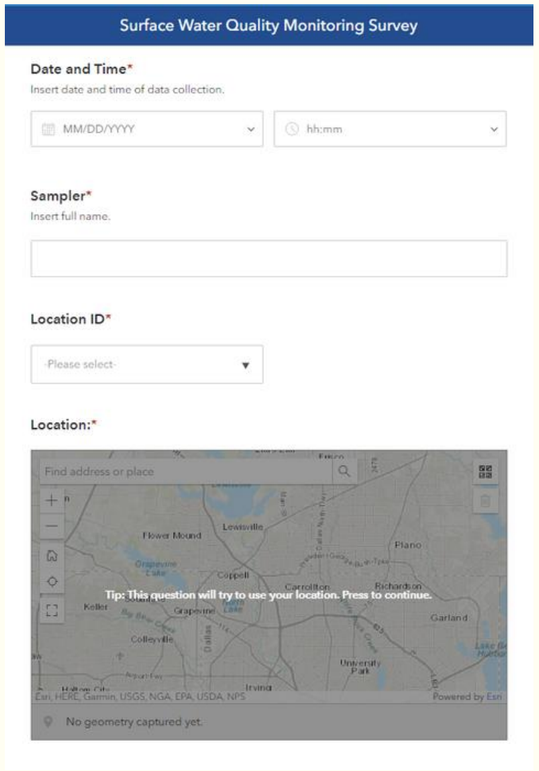
ANDIE'S WISHLIST

- Data in an Exportable format
- Apply Queries and Analysis
- Eliminate Paper in/out of the Field
- Images
- Automation!!

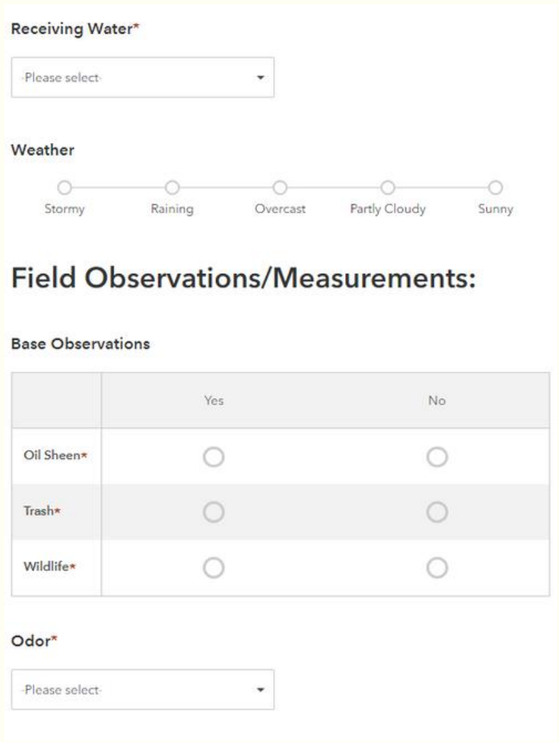
CASE #1: WATER QUALITY MONITORING

1. I GOT LUCKY
2. SURVEYS BUILT BASED ON FIELD PAPERWORK
3. ELIMINATED NEED OF A “HELPER” TO WRANGLE TOOLS AND PAPER

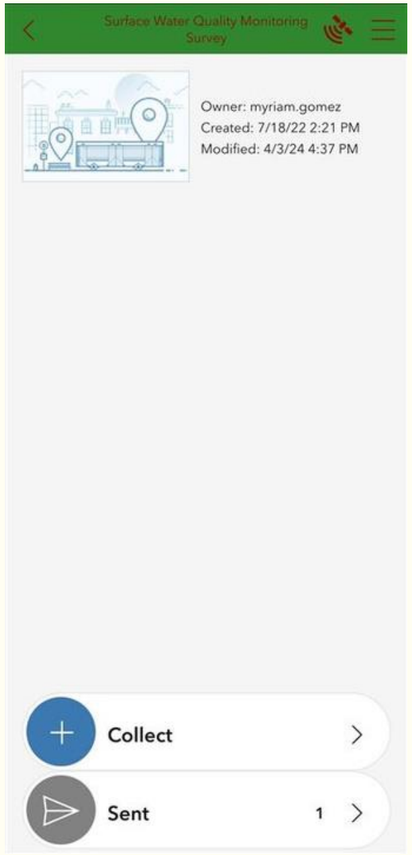
CASE #1: WATER QUALITY MONITORING



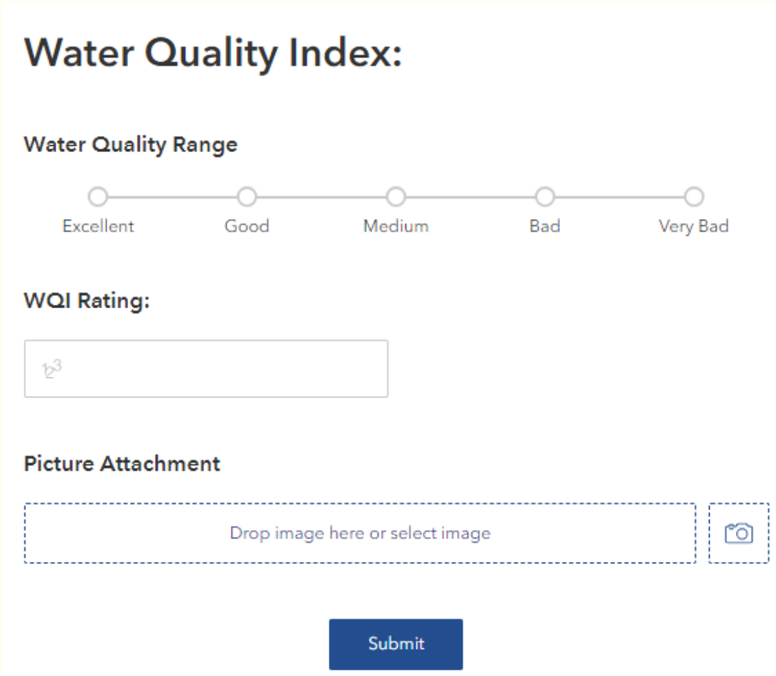
Ability to have more than 1 collector and get precise Sampling Locations



Mult. types of answer selections



Sent box; to save and edit surveys once lab results are available



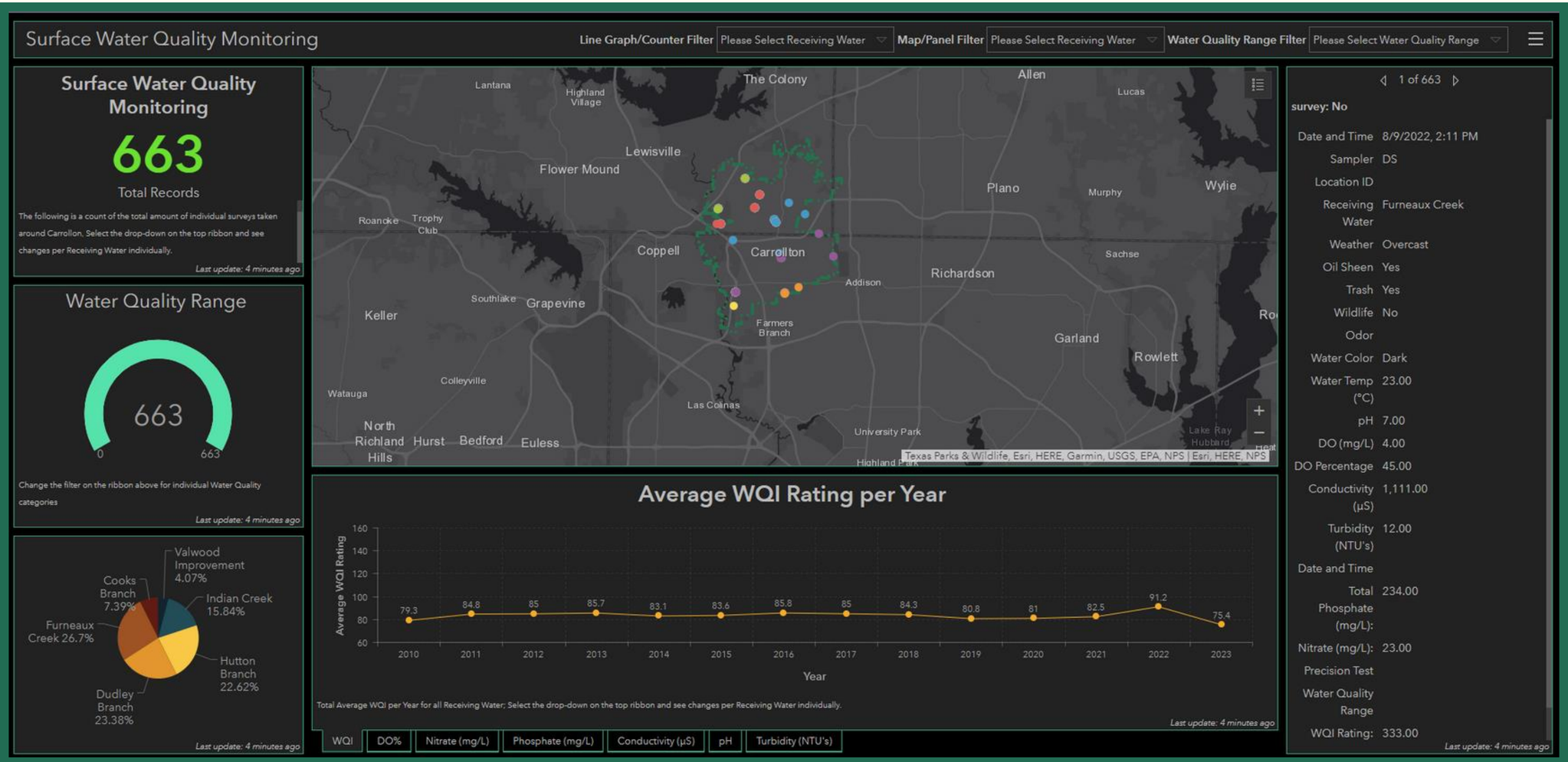
Picture attachments: for current testing conditions

CASE #1: WATER QUALITY MONITORING

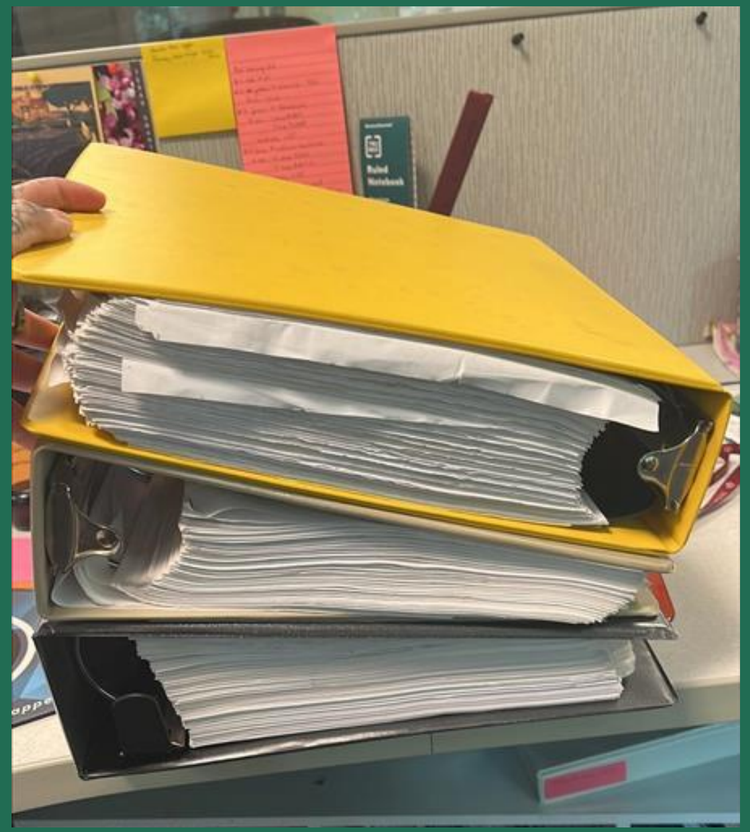
SO THE BIG QUESTION NOW....

WHAT TO DO ABOUT THE 18 EXCEL SREADSHEETS CONTAINING 10 YRS OF HISTORICAL DATA?

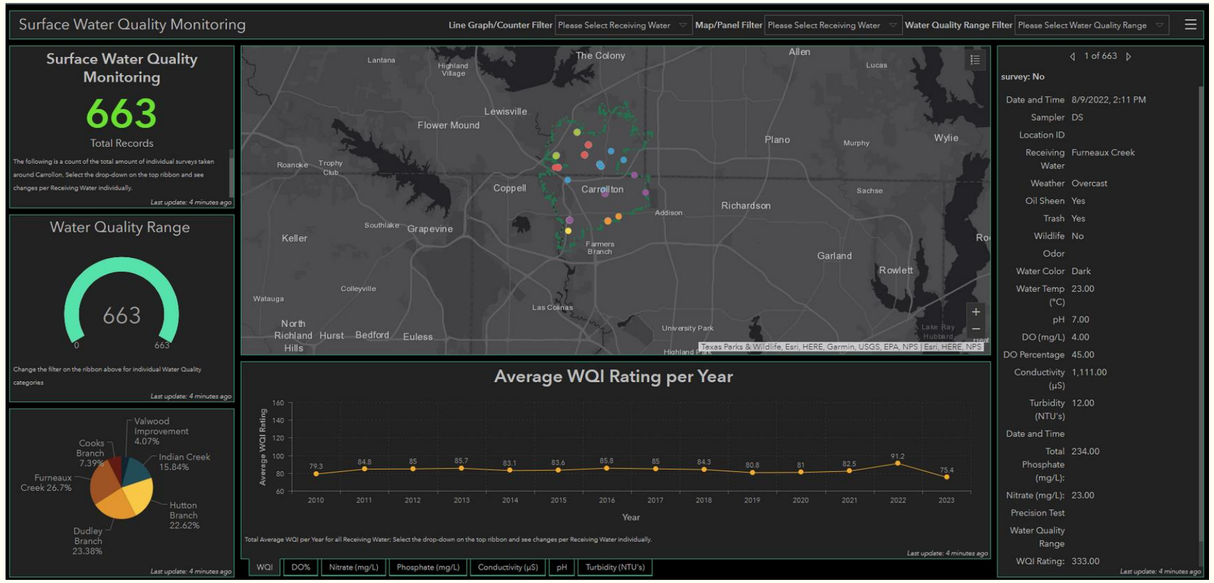
CASE #1: WATER QUALITY MONITORING



WE'VE GONE FROM THIS



TO THIS



CASE #2:
RESTAURANT INSPECTIONS

CASE #2:
RESTAURANT INSPECTIONS

SANITATIONS WORKFLOW

- Inspections tracked in Excel Sheet (due dates, over-due dates, scores, inspector assignments)
- Excel Sheet published periodically on City site to update public

SANITATIONS WISHLIST

- History of Inspections
- Show Inspections by next Due Date/Overdue Date
- Inspections/Restaurants created per month
- Prep Level
- Citizen Access to Data
- Automation!!

CASE #2:
RESTAURANT INSPECTIONS

1. CLEAN DATA OF 731 “FOOD PREP” ESTABLISHMENTS
2. SURVEY THAT CREATES HISTORICAL RECORD OF PREVIOUS INSPECTIONS
3. CREATE A PUBLIC AND INTERNAL RESTAURANT INSPECTIONS DASHBOARD

	C	D	E	F	G	H	I	J	K	L	M
1	City	State	Score	Columi	Distric	Score	Inspection Date	Days	Inspection Due	>30 Days Overdue	PrepLevel
2	Carrollton	TX		Michael	B	96	9/19/2023	180	3/17/2024	4/16/2024	Heavy: 2 insp/yr
3	Carrollton	TX		Michael	B	96	9/25/2023	180	3/23/2024	4/22/2024	Light: 2 insp/yr
4	Carrollton	TX		Dan	B	99	4/26/2023	180	10/23/2023	11/22/2023	Light: 2 insp/yr
5	Carrollton	TX		Dan	F	98	10/2/2023	180	3/30/2024	4/29/2024	Light: 2 insp/yr
6	Carrollton	TX		Michael	B	93	5/9/2023	180	11/5/2023	12/5/2023	Light: 2 insp/yr
7	Carrollton	TX		Hee Youn	A	97	5/30/2023	180	11/26/2023	12/26/2023	Light: 2 insp/yr
8	Carrollton	TX		Hee Youn	B	96	6/20/2023	180	12/17/2023	1/16/2024	Light: 2 insp/yr
9	Carrollton	TX		Hee Youn	F	94	9/20/2023	180	3/18/2024	4/17/2024	Light: 2 insp/yr
10	Carrollton	TX		Dan	F	98	6/20/2023	180	12/17/2023	1/16/2024	Light: 2 insp/yr
11	Carrollton	TX		Michael	A	95	6/20/2023	180	12/17/2023	1/16/2024	Light: 2 insp/yr
12	Carrollton	TX		Michael	B	93	6/5/2023	120	10/3/2023	11/2/2023	Heavy: 3-4 insp/yr
13	Carrollton	TX		Hee Youn	A	97	6/12/2023	120	10/10/2023	11/9/2023	Heavy: 3-4 insp/yr
14	Carrollton	TX		Michael	B	92	8/15/2023	120	12/13/2023	1/12/2024	Heavy: 3-4 insp/yr
15	Carrollton	TX		Michael	B	92	8/15/2023	120	12/13/2023	1/12/2024	Heavy: 3-4 insp/yr
16	Carrollton	TX		Michael	B	88	8/15/2023	120	12/13/2023	1/12/2024	Heavy: 3-4 insp/yr
17	Carrollton	TX		Michael	B	88	8/15/2023	120	12/13/2023	1/12/2024	Heavy: 3-4 insp/yr
18	Carrollton	TX		Michael	B	92	8/15/2023	120	12/13/2023	1/12/2024	Heavy: 3-4 insp/yr
19	Carrollton	TX		Michael	B	94	7/11/2023	365	7/10/2024	8/9/2024	None: 1 insp/yr
20	Carrollton	TX		Michael	B	90	6/7/2023	365	6/6/2024	7/6/2024	None: 1 insp/yr
21	Carrollton	TX		Michael	F	94	8/21/2023	120	12/19/2023	1/18/2024	Heavy: 3-4 insp/yr
22	Carrollton	TX		Don	B	96	3/7/2023	365	3/6/2024	4/5/2024	None: 1 insp/yr
23	Carrollton	TX		Don	F	99	6/21/2023	120	10/19/2023	11/18/2023	Heavy: 3-4 insp/yr
24	Carrollton	TX		Michael	B	99	5/12/2023	365	5/11/2024	6/10/2024	None: 1 insp/yr
25	Carrollton	TX		Hee Youn	B	99	8/21/2023	120	12/19/2023	1/18/2024	Heavy: 3-4 insp/yr
26	Carrollton	TX		Michael	B	94	7/25/2023	120	11/22/2023	12/22/2023	Heavy: 3-4 insp/yr
27	Carrollton	TX		Hee Youn	A	97	9/14/2023	120	1/12/2024	2/11/2024	Heavy: 3-4 insp/yr
28	Carrollton	TX		Michael	B	95	6/14/2023	120	10/12/2023	11/11/2023	Heavy: 3-4 insp/yr
29	Carrollton	TX		Michael	B	97	12/28/2022	365	12/28/2023	1/27/2024	None: 1 insp/yr
30	Carrollton	TX		Michael	B	90	8/14/2023	120	12/12/2023	1/11/2024	Heavy: 3-4 insp/yr
31	Carrollton	TX		Michael	B	89	9/12/2023	120	1/10/2024	2/9/2024	Heavy: 3-4 insp/yr
32	Carrollton	TX		Michael	B	92	8/14/2023	120	12/12/2023	1/11/2024	Heavy: 3-4 insp/yr
33	Carrollton	TX		Hee Youn	F	99	9/18/2023	120	1/16/2024	2/15/2024	Heavy: 3-4 insp/yr
34	Carrollton	TX		Hee Youn	F	96	9/18/2023	120	1/16/2024	2/15/2024	Heavy: 3-4 insp/yr
35	Carrollton	TX		Hee Youn	F	97	9/18/2023	120	1/16/2024	2/15/2024	Heavy: 3-4 insp/yr
36	Carrollton	TX		Hee Youn	F	100	4/25/2023	365	4/24/2024	5/24/2024	None: 1 insp/yr
37	Carrollton	TX		Michael	F	99	8/8/2023	365	8/7/2024	9/6/2024	None: 1 insp/yr
38	Carrollton	TX		Don	A	99	10/30/2023	120	2/27/2024	3/28/2024	Heavy: 3-4 insp/yr
39	Carrollton	TX		Michael	B	96	8/21/2023	120	12/19/2023	1/18/2024	Heavy: 3-4 insp/yr
40	Carrollton	TX		Michael	B	91	7/14/2023	120	11/11/2023	12/11/2023	Heavy: 3-4 insp/yr
41	Carrollton	TX		Hee Youn	A	98	6/22/2023	180	12/19/2023	1/18/2024	Light: 2 insp/yr

IS IT POSSIBLE TO ADD A HISTORY TO A SURVEY?

IN SHORT “YES.” BUT I DIDN’T KNOW HOW, SO I RESEARCHED.

“ArcGIS Survey123: Modeling Inspection Workflows”

Ismael Ichivite - Esri Dev Summit

2022

CASE #2:
RESTAURANT INSPECTIONS

type	name	label	hint	lance_	appearance	required_me	readonly	default	calculation	constraint
text	inspection_establishment	Establishment					pulldata("@property","mode")="edit"			
text	inspection_address	Address					pulldata("@property","mode")="edit"			
geopoint	inspection_map	Map								
text	inspection_city	City			hidden					
text	inspection_state	State			hidden					
select_one prep	inspection_preplevel	Prep Level			minimal					
text	inspection_score	Score			hidden					
text	inspection_inspector	Inspector								
text	inspection_district	District								
decimal	inspection_score2	Score2								
date	inspection_inspection_date	Inspection Date						now()	calculationMode=always	
integer	inspection_days	Days								
date	inspection_inspection_due	Inspection Due							date(decimal-date-time(now()) + ${inspection_days})	
date	inspection_f_30_days_overdue	>30 Days Overdue							date(decimal-date-time(${inspection_inspection_due}) + 30)	
begin repeat	log_history	Inspection Log			compact					
select_one prep	log_history_preplevel	Prep Level			minimal		pulldata("@property","mode")="edit"		${inspection_preplevel}	
text	log_history_score	Score			hidden		pulldata("@property","mode")="edit"		${inspection_score}	
text	log_history_inspector	Inspector					pulldata("@property","mode")="edit"		${inspection_inspector}	
text	log_history_district	District					pulldata("@property","mode")="edit"		${inspection_district}	
decimal	log_history_score2	Score2					pulldata("@property","mode")="edit"		${inspection_score2}	
date	log_history_inspection_date	Inspection Date					pulldata("@property","mode")="edit"		${inspection_inspection_date}	
integer	log_history_days	Days					pulldata("@property","mode")="edit"		${inspection_days}	
date	log_history_inspection_due	Inspection Due					pulldata("@property","mode")="edit"		${inspection_inspection_due}	
date	log_history_f_30_days_overdue	>30 Days Overdue					pulldata("@property","mode")="edit"		${inspection_f_30_days_overdue}	
end repeat										

pulldata("@property","mode")="edit"

calculationMode=always

date(decimal-date-time(now()) + ${inspection_days})

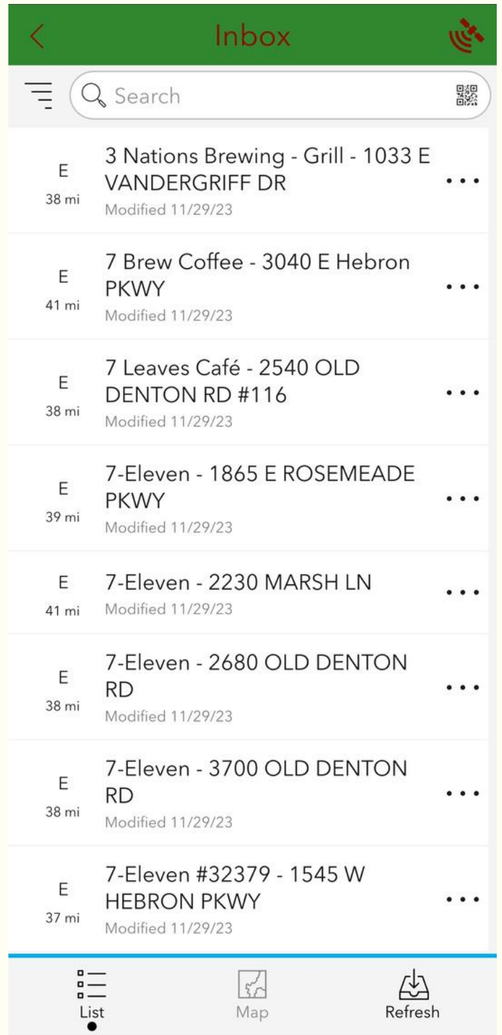
date(decimal-date-time(${inspection_inspection_due}) + 30)

begin repeat - end repeat → **this is what makes your historical record**

CASE #2:
RESTAURANT INSPECTIONS

form_title	form_id	instance_name
Restaurant Inspections with History		concat(${inspection_establishment}, " - ", ${inspection_address})

concat(${inspection_establishment}, " - ", ${inspection_address})



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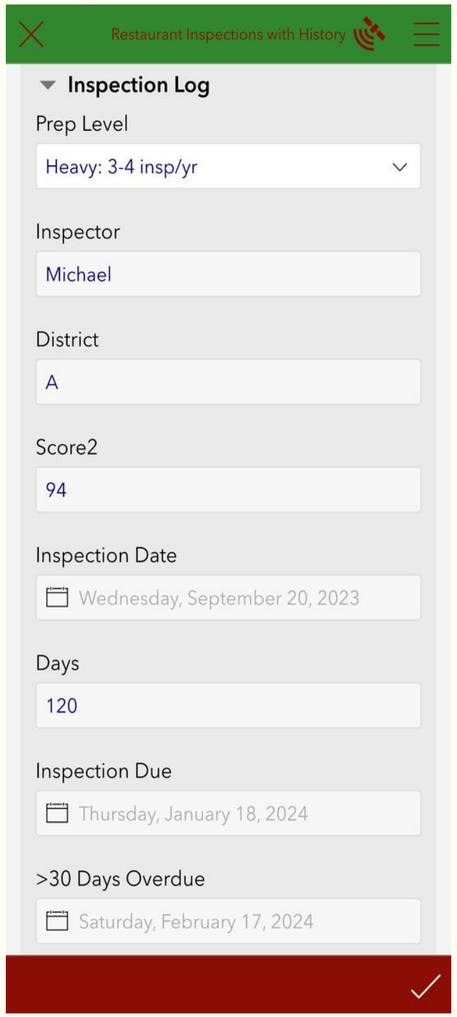
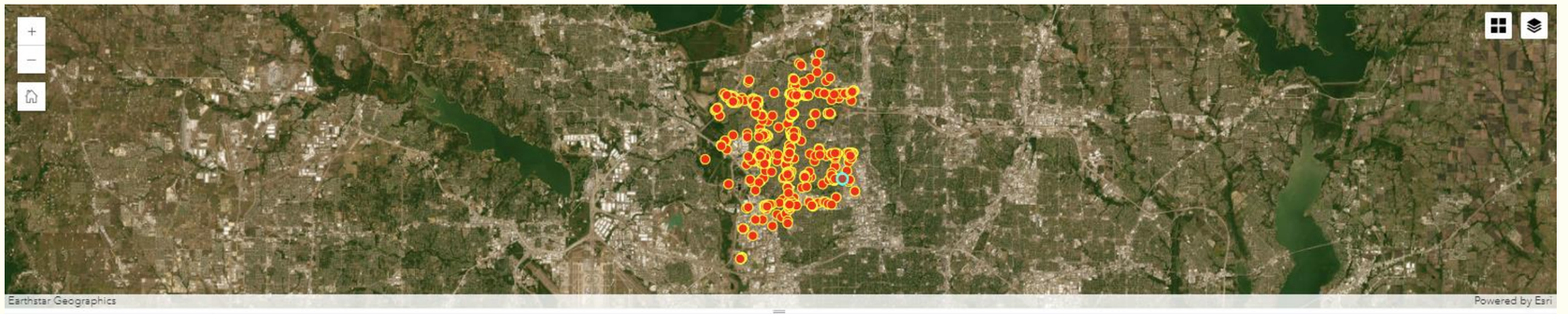
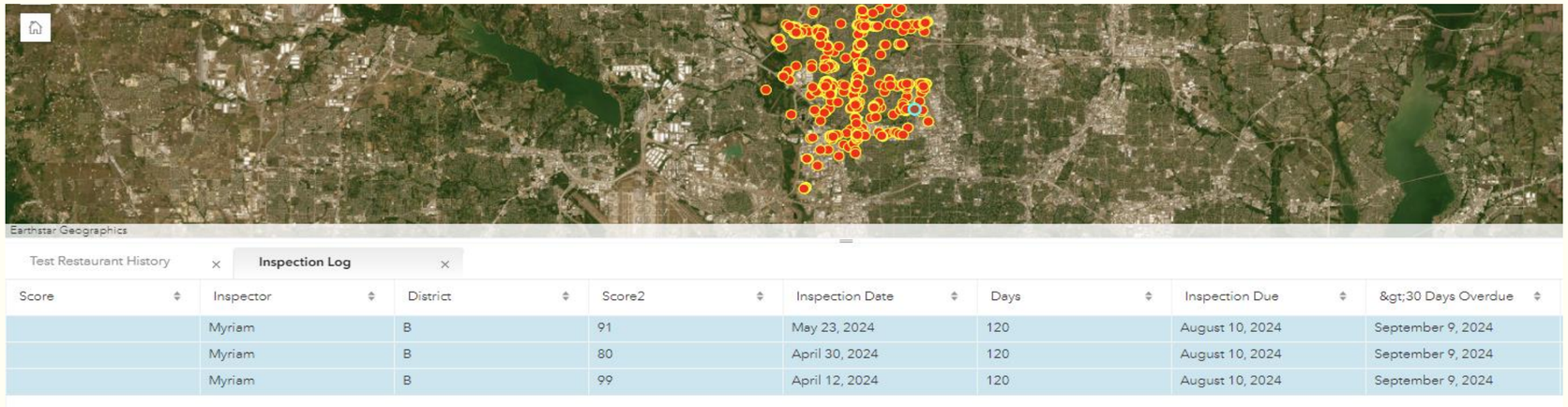
RESTAURANT INSPECTIONS

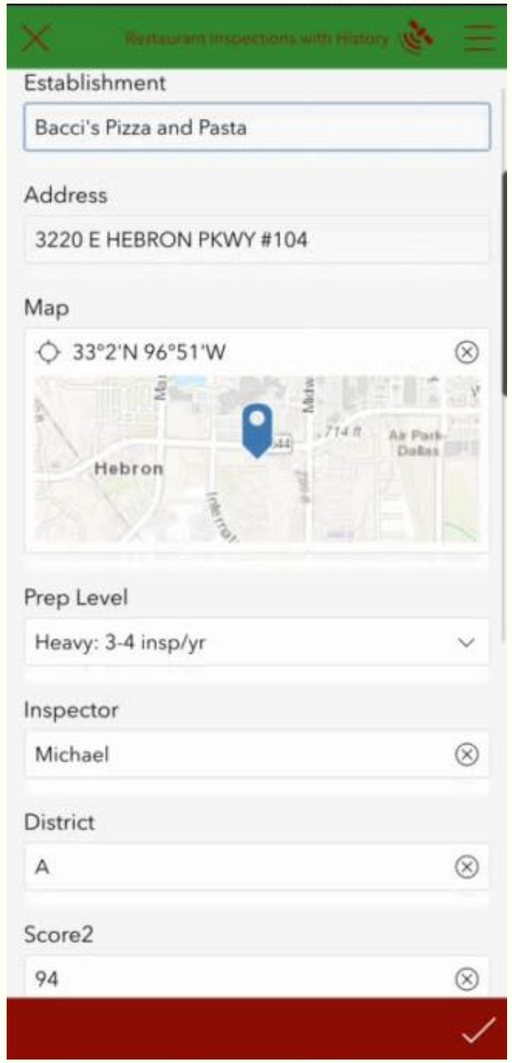


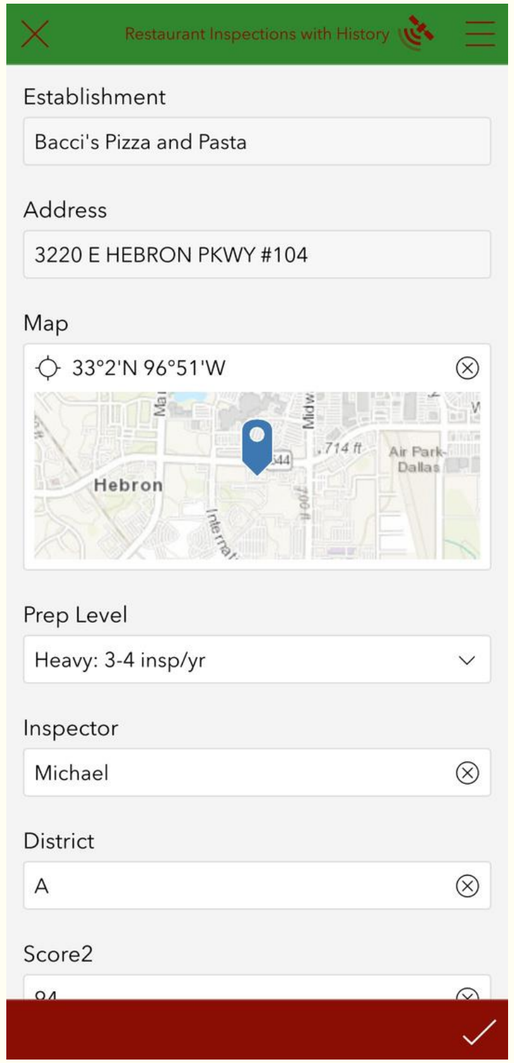


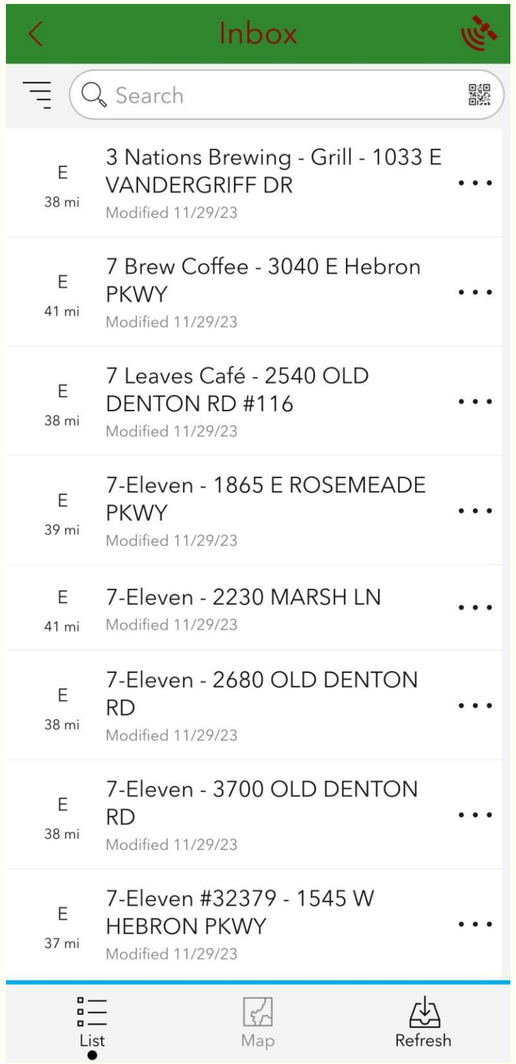


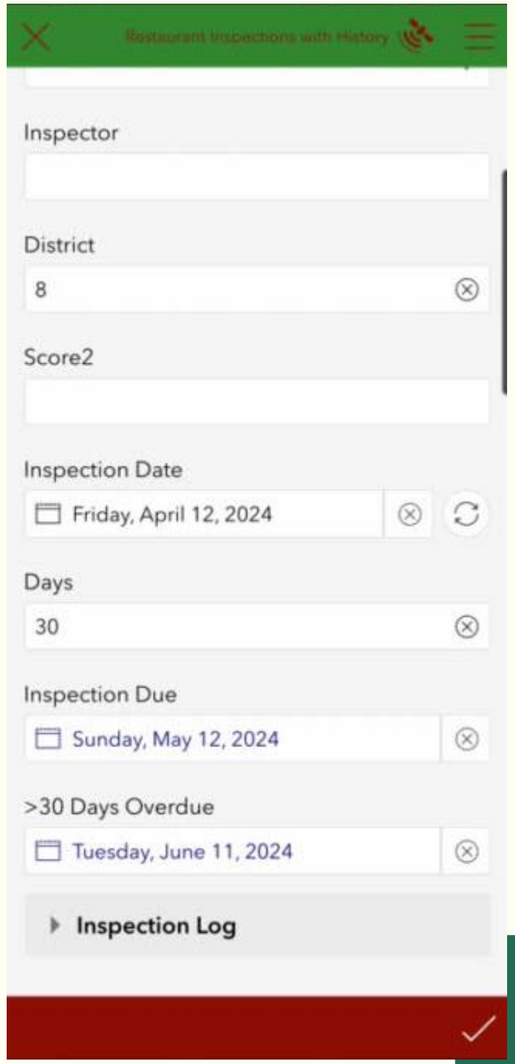
begin repeat - end repeat → **this is what makes your historical record**

CASE #2:
RESTAURANT INSPECTIONS

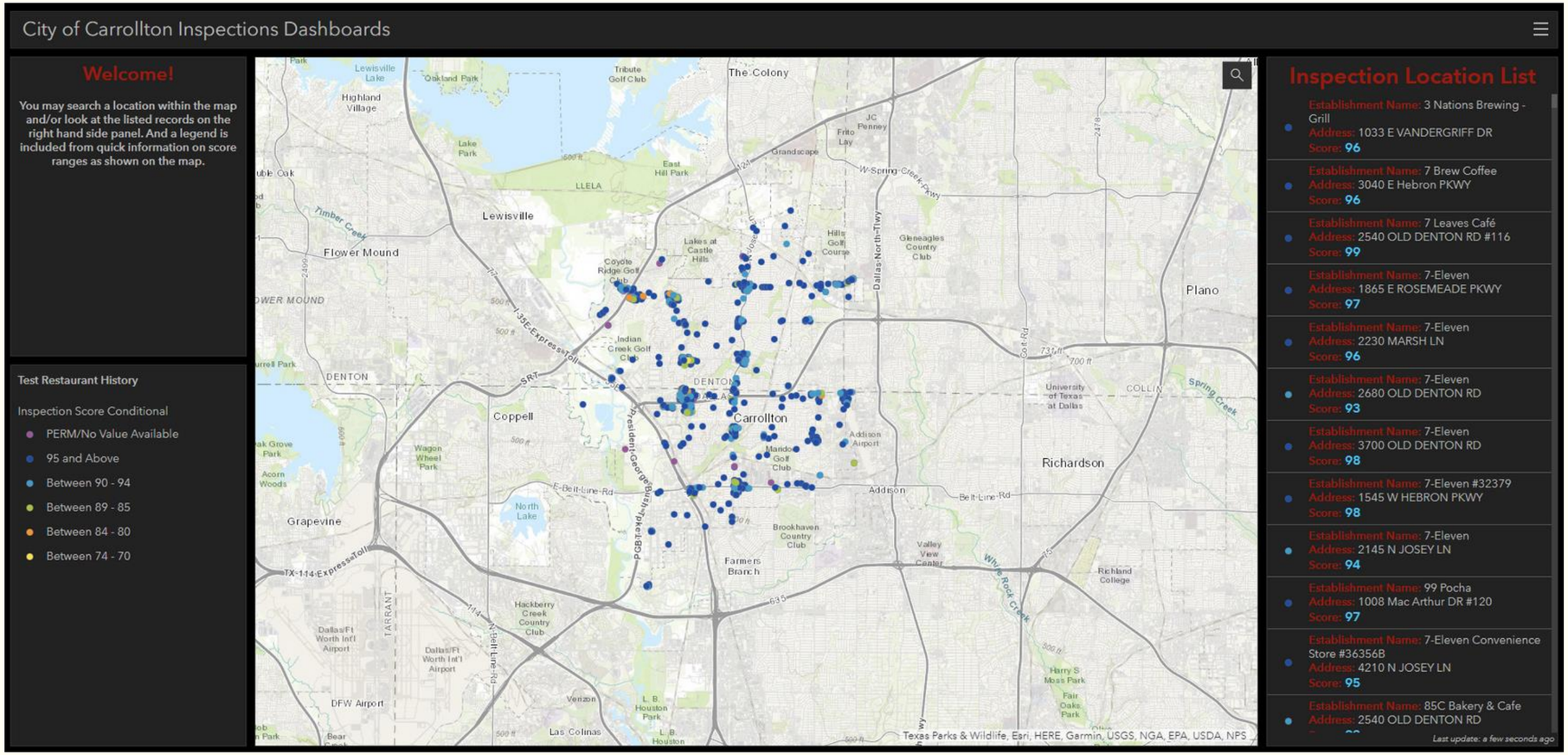








CASE #2:
RESTAURANT INSPECTIONS



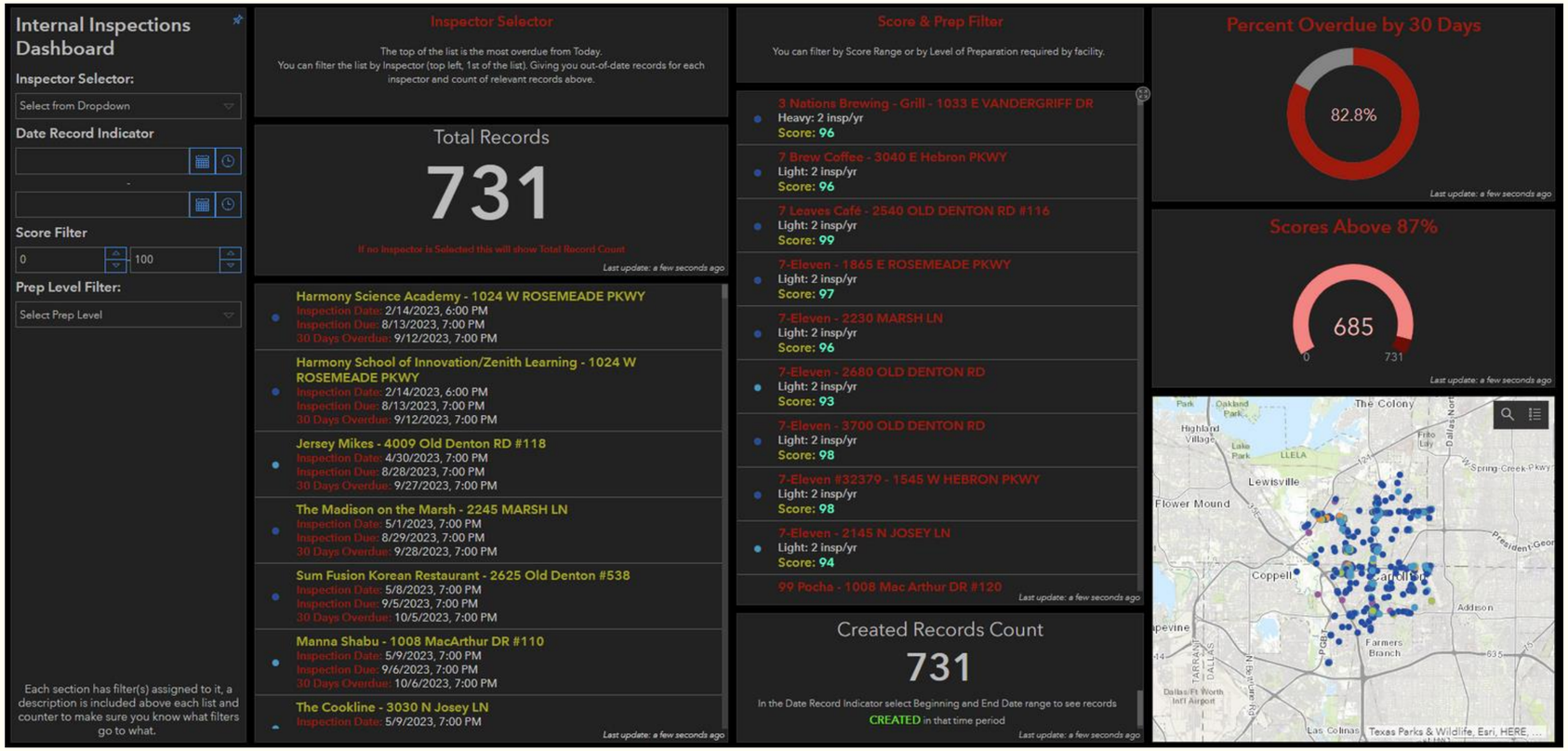
Inspection Score Conditional Edit

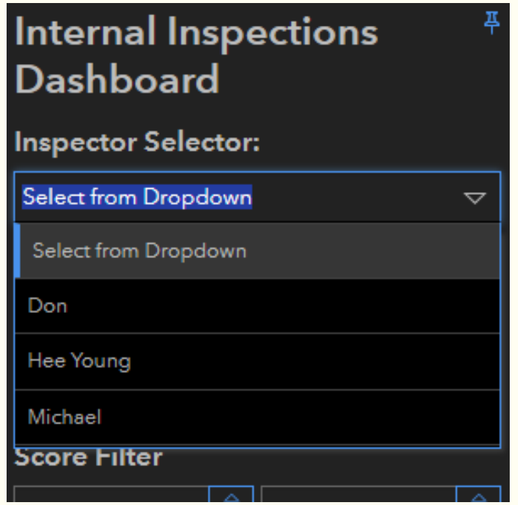
Expression Test

```
// Write a script that returns a value that will be used to draw features.
// For example, find the percentage of males:
// Round(($feature.MalePop / $feature.TotalPop) * 100, 2)

var SCORE = $feature["inspection_score2"]

if (IsEmpty(SCORE)) {
    return "PERM/No Value Available"
} else if (SCORE >= 95) {
    return "95 and Above"
} else if (SCORE < 95 && SCORE >= 90) {
    return "Between 90 - 94"
} else if (SCORE < 90 && SCORE >= 85) {
    return "Between 89 - 85"
} else if (SCORE < 85 && SCORE >= 80) {
    return "Between 84 - 80"
} else if (SCORE < 80 && SCORE >= 75) {
    return "Between 79 - 75"
} else if (SCORE < 75 && SCORE >= 70) {
    return "Between 74 - 70"
} else return "Below 70"
```

Custom Symbology for Score Ranges

CASE #2:
RESTAURANT INSPECTIONS





CASE #2:
RESTAURANT INSPECTIONS

WHAT'S NEXT?

- Implementations (in field and with another City App)
- Updating
- Expanding to Grease Traps

QUESTIONS?

MYRIAM GOMEZ

GIS Analyst, City of Carrollton

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THANK YOU