

# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)

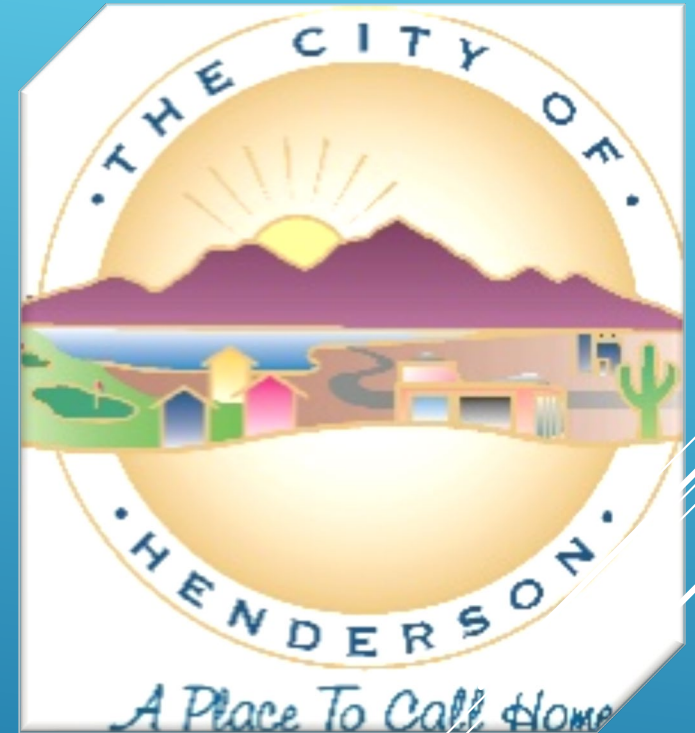


# REMOTE DESK-TOP ANALYSIS OF WATER CONSUMPTION TO ENFORCE OUTDOOR WATERING RESTRICTIONS

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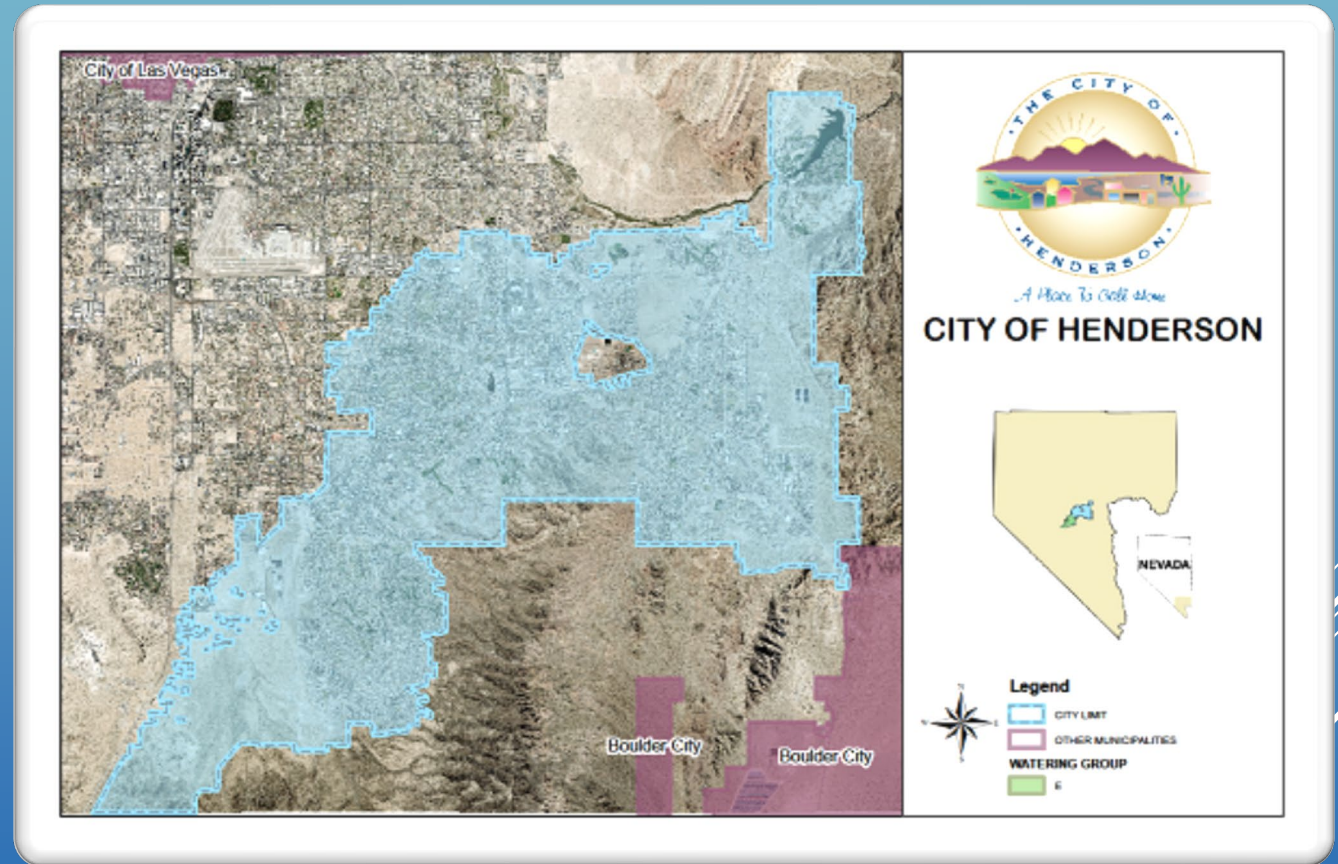


# BACKGROUND

Henderson is the second largest city in Nevada, with currently 103 square miles in size and 310,000+ in population

Henderson is 1 of the 7 local water and wastewater member agencies who formed the Southern Nevada Water Authority.

Henderson maintains more than \$1.6 billion in water and wastewater assets serving 100,086 customer accounts.



# WHAT WE KNEW IN 2019

SOUTHERN NEVADA RELIES UPON THE  
COLORADO RIVER FOR 90 % OF ITS WATER  
SUPPLY

20+ Years of Drought, approaching  
first federally declared shortage

REGIONAL CONSERVATION GOAL OF 199  
GALLONS PER CAPITA PER DAY BY 2035



CITY NOT EQUIPPED WITH ADVANCED METERING  
INFRASTRUCTURE (AMI), BUT CITY DID ACQUIRE NEW  
TECHNOLOGY THAT PROVIDED HOURLY DATA AS OPPOSED  
TO MONTHLY

WATER USED OUTSIDE EVAPORATES AND CANNOT  
BE RECYCLED. APPROXIMATELY 60 PERCENT OF  
SOUTHERN NEVADA'S WATER IS USED OUTDOORS

CITY KEEPS GROWING AND WE ARE NOT ABLE TO  
PATROL EACH PARCEL AS FREQUENT AS IS  
REQUIRED TO REACH REGIONAL GOAL







► Program summary:

To install new technology on outdoor irrigation water meters to have on-demand access to water consumption to monitor adherence to outdoor watering restrictions.

► 120 IRRIGATION METERS

► 17% WATER SAVINGS

# CREATION OF THE IRRIGATION METER DATA PATROL PILOT PROGRAM



City of Henderson

UTILITY  
20 A

HENDERSON



# PROGRAM TIMELINE



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	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	MIU ID	Consumption	Hour 0-1	Hour 1-2	Hour 2-3	Hour 3-4	Hour 4-5	Hour 5-6	Hour 6-7	Hour 7-8	Hour 8-9
2	8/1/2021		0	0	0	0	0	0	0	0	0	0
3	8/2/2021		187.5	18.8	59.7	25.2	2.4	63.6	16.8	1	0	0
4	8/3/2021		185.4	19.2	59.8	25	2.4	61.5	16.5	1	0	0
5	8/4/2021		186.1	18.9	59.4	24.9	2.5	62.5	16.7	1.2	0	0
6	8/5/2021		187.9	18.6	60.3	25.2	2.5	63.2	17	1.1	0	0
7	8/6/2021		185.7	19.1	60	25.1	2.5	61	16.8	1.2	0	0
8	8/7/2021		187.1	19.1	59.8	25.5	2.6	61.7	17.2	1.2	0	0
9	8/8/2021		0	0	0	0	0	0	0	0	0	0
10												

## Data Table

Service Address/Meter No.		2156 OLYMPIC AVE #A / 400013604															
Month		Jul															
Day of Month		12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM
16		1174.36	1054.68	164.56	0	0	0	0	0	0	0	0	0	0	0	0	0
17		1286.56	1054.68	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0
18		0	0	0	0	0	0	0	0	0	0	0	142.12	0	0	0	0
19		1323.96	1069.64	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0
20		1309	1069.64	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0
21		1286.56	1062.16	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0
22		1294.04	1054.68	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0
23		1309	1069.64	172.04	0	0	0	0	0	0	0	0	0	0	0	0	0

## Information Table

# CHALLENGES

## Meters

Some irrigation meters capture water used for other reasons than to irrigate outdoor vegetation

## Technology

Current portal only allows us to view history for one meter at a time

## Scalability

In order to continue expanding program we need additional resources





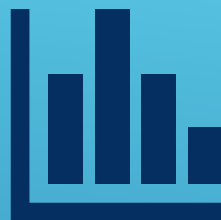
# ACHIEVEMENTS

- ▶ 17% Water savings
- ▶ Energy Savings
- ▶ Ability to use Field staff elsewhere
- ▶ Awarded a BUREAU OF RECLAMATION (BOR) grant to secure funding to further expand program





Seek alternate data  
portals



Seek ways to automate  
analysis of data



Expand program

# THE FUTURE



# QUESTIONS



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City of Henderson