

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Rebate Mapping

A Picture is Worth A Thousand Words

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October 2011



A Picture



is worth
=
=

Creamy, delicious, yummy,
fudge ice cream, smooth,
chocolate-chip mint ice
cream, strawberry ice
cream with real chunks of
strawberry, colored sugar
sprinkles, waffle sugar
cone, sweet, wonderful,
tastes great, cold, nice to
eat, dessert, good yummy
toppings, chocolate
sprinkles, comforting,
good, fun, dipping, terrific,

A thousand words.



Can the use of GIS improve the effectiveness of Water Conservation Rebate Programs?

A brief overview

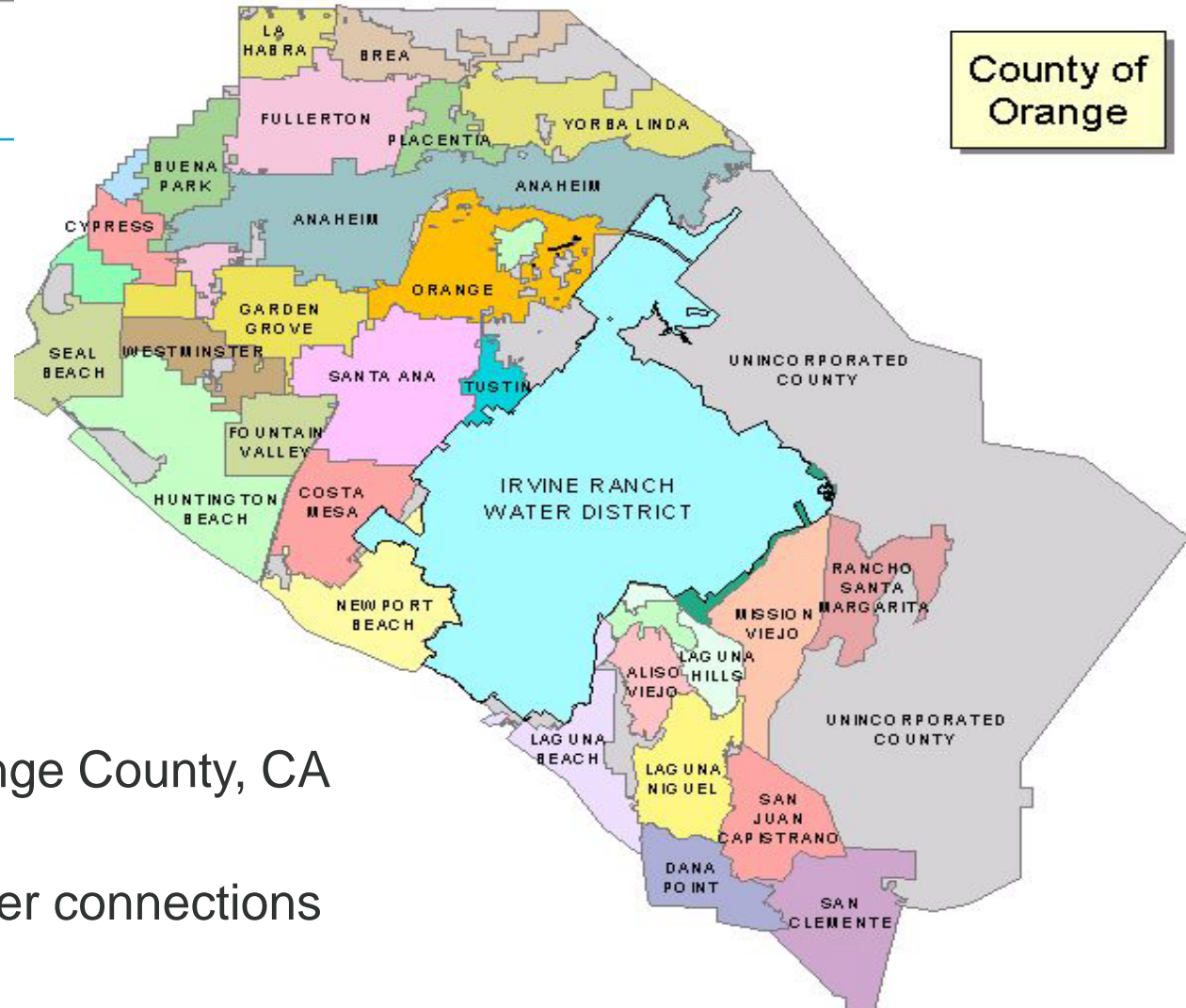
- Irvine Ranch Water District & its Tactical Incentive (Rebate) Program
- Geographic Information Systems (GIS)
- Map examples & uses





Irvine Ranch Water District (IRWD)

Irvine Ranch Water District



- Serves 20% of Orange County, CA
- Nearly 100,000 meter connections
- Implementing Water Conservation methods since 1991



IRWD Incentive Program

Irvine Ranch Water District

Thousands of “rebates” distributed over last 20 years

- Who are the recipients of these rebates?
- Where are the conservation devices installed?
- Which devices have saturated the market?
- Why aren't certain people/areas participating?



How to answer these types of questions quickly?



Program Information Management Preference?

Irvine Ranch Water District

YYYYMM_Receive d	Date_Received	User_Entered	Rebate#	Reservation#	MemberAgency	RetailAgency	Account#	APN	FirstName	LastName	InstallAddress	InstallApt	InstallCity	InstallState
201006	#####	EGIA	U226085	0	Water Ranch	Ranch	6021		CINDY	CHANG	ELDEN #A	MESA	CA	
201006	#####	WebUser	U019333	0	Water Ranch	Ranch	1040		KEXIU	LIU	BEAULIE	L RANCH	CA	

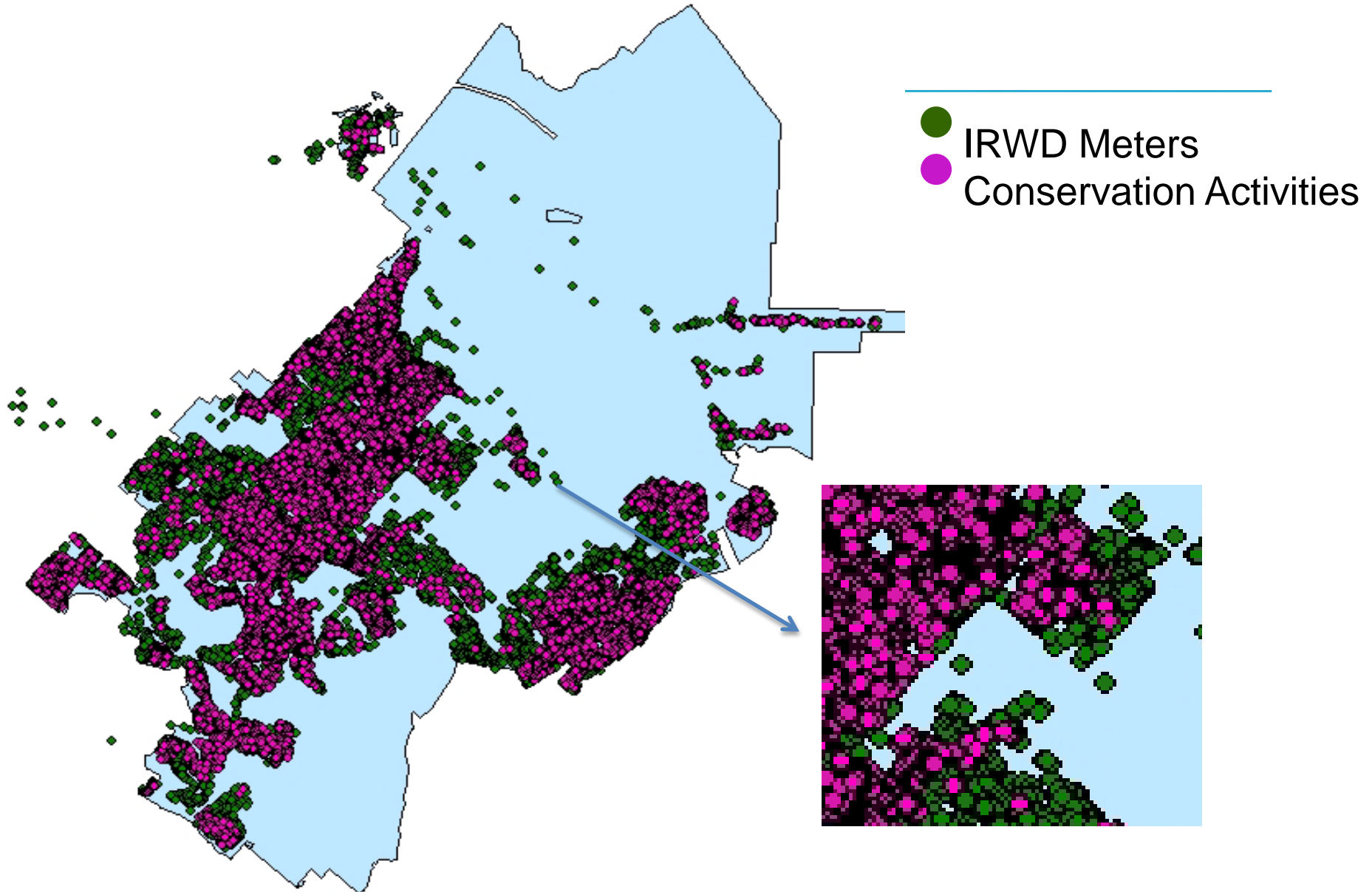
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201003	#####	EGIA												
201004	#####	WebUser												
201004	#####	WebUser	201006	#####	EGIA	U226085	0	Water Ranch	6021	CINDY	CHANG	ELDEN #A	MESA	CA
201004	#####	WebUser	201006	#####	WebUser	U019333	0	Water Ranch	1040	KEXIU	LIU	BEAULIE	L RANCH	CA
201005	#####	WebUser	201003	#####	EGIA	U008282	0	Water Ranch	7019	GARY	T	EARLYM	IRVINE	CA
201005	#####	WebUser	201004	#####	WebUser	U015877	0	Water Ranch	2173	KINN	CHU	SLOCUM	IRVINE	CA

YYYYMM_Receive d	Date_Received	User_Entered	Rebate#	Reservation#	MemberAgency	RetailAgency	Account#	APN	FirstName	LastName	InstallAddress	InstallApt	InstallCity	InstallState	
201005	#####	WebUser	201004	#####	WebUser	U017467	0	Water Ranch	7023	4.5E+07	KEITH ON		HALFMO	IRVINE	CA
201005	#####	WebUser	201004	#####	WebUser	U017483	0	Water Ranch	0027	9.4E+07	E MCKAY		FIREBIR	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U018098	0	Water Ranch	6062	4.5E+07	WILLIAM PITTMAN		NIGHTH	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U018145	0	Water Ranch	39032	5.3E+07	DAVID LEW		BRILLAN	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U018647	0	Water Ranch	5028	4.6E+07	DONALD N		SYCAMO	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U018923	0	Water Ranch	8126		HAMID OHAMM		SILKLEA	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U018923	0	Water Ranch	8126		HAMID OHAMM		SILKLEA	IRVINE	CA
201005	#####	EGIA	201005	#####	WebUser	U019049	0	Water Ranch	6074	4.6E+07	JAE LEE		BRIGADI	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019049	0	Water Ranch	6074	4.6E+07	JAE LEE		BRIGADI	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019451	0	Water Ranch	7087		A SHUTE		TROVITA	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019465	0	Water Ranch	1034	5.3E+07	CHRIS D		YORKTO	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019487	0	Water Ranch	5063	9.3E+07	JAMSHID GORJI		YALE LP	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019500	0	Water Ranch	1083		KHOI NGUYEN		MINERS	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019550	0	Water Ranch	3079	4.5E+07	BILL MALOHN		SCOTT'S	IRVINE	CA
201005	#####	WebUser	201005	#####	WebUser	U019555	0	Water Ranch	8040	5.3E+07	HAITAO TONG		AMISTAD	IRVINE	CA
201006	#####	WebUser	201006	#####	WebUser	U019704	0	Water Ranch	7083		MICHAEL IRION		IRONWO	IRVINE	CA
201004	#####	EGIA	U222174	0	Water Ranch	Ranch	7146		A		ARZ		BRIARW	IRVINE	CA
201004	#####	EGIA	U222290	0	Water Ranch	Ranch	5042		JOE	ZHOU			ST	IRVINE	CA
201005	#####	EGIA	U222518	0	Water Ranch	Ranch	6046		LYNNE	SADA			MANCHE	IRVINE	CA
201005	#####	EGIA	U222875	0	Water Ranch	Ranch	6021		RILEY	N			BUTLER	IRVINE	CA



IRWD Rebate Activity

Irvine Ranch Water District





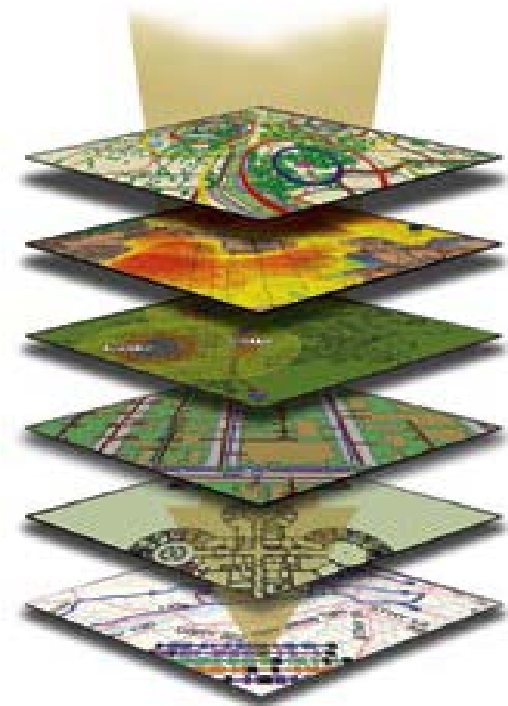
What is GIS?

Irvine Ranch Water District

Geographic Information Systems

Tool to manage and analyze data
and display it geographically

Helps answer questions and solve
problems by looking at data in a way
that is quickly understood and easily
shared.



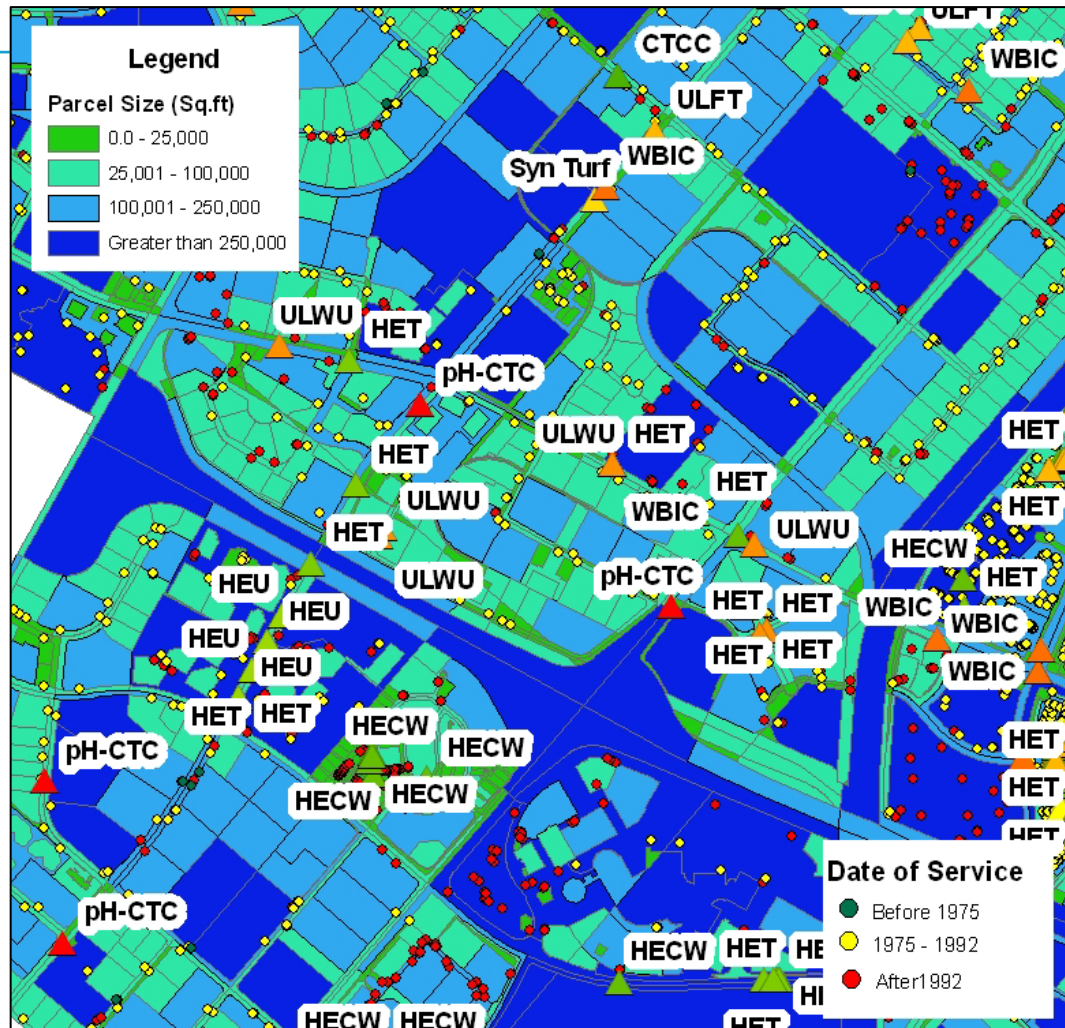
Two methods used by IRWD

1. Link rebate information to customer information collected from **Global Positioning System (GPS) meter project** –collection of meter location information using handheld satellite based tool
2. Obtained shapefile of rebate location points and product information created through **geo-coding** process of using geographic coordinates (latitude and longitude), such as installation address



Map design options

- Color coding
- Label design
- Shapes & symbols
- Automated legend





What's do you want your map say?

Irvine Ranch Water District

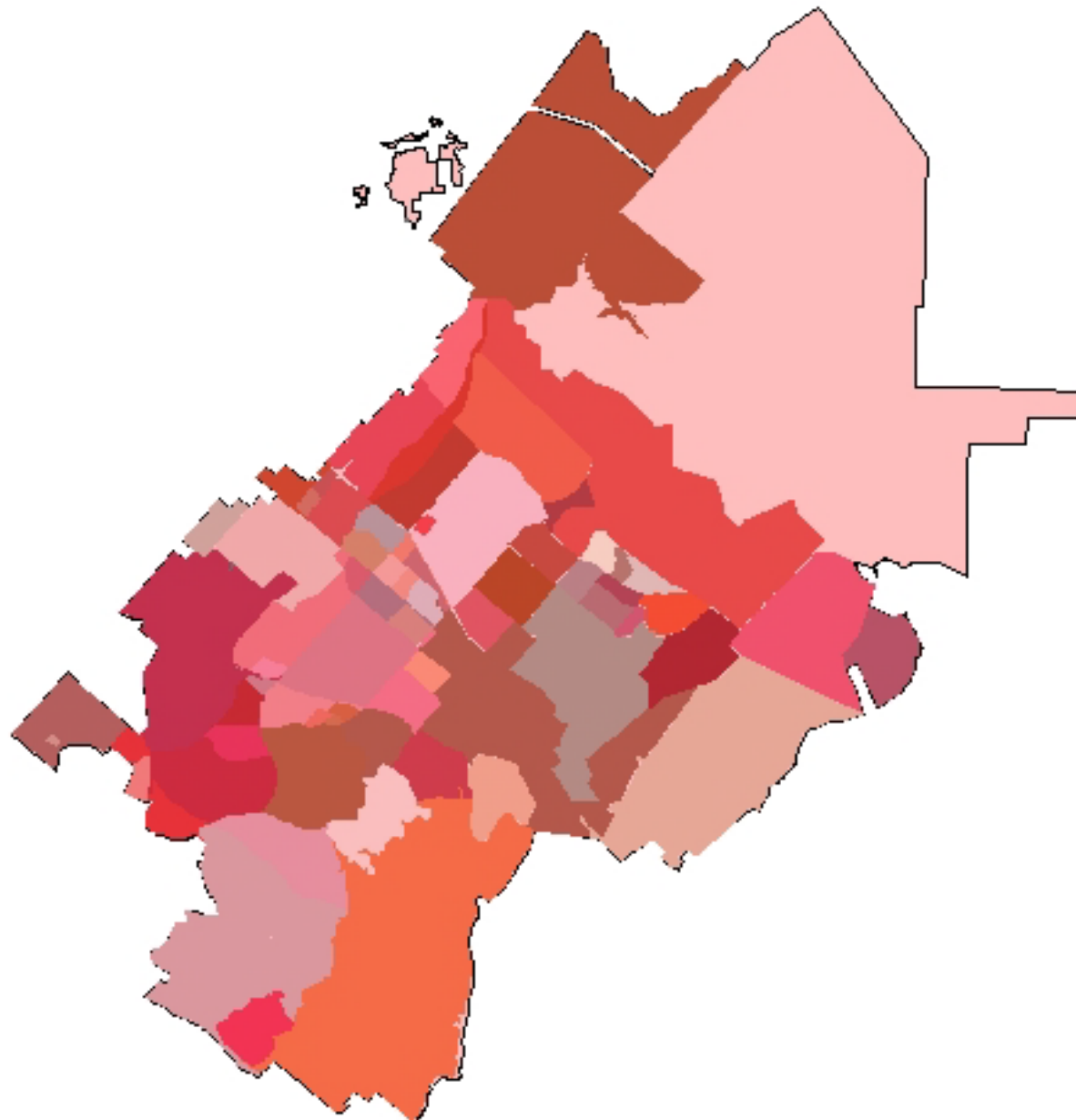


- What information is available to include in the map?
- What can be communicated about the status of the program?
- What information will be available after rebate information is “mapped”?



IRWD-Villages

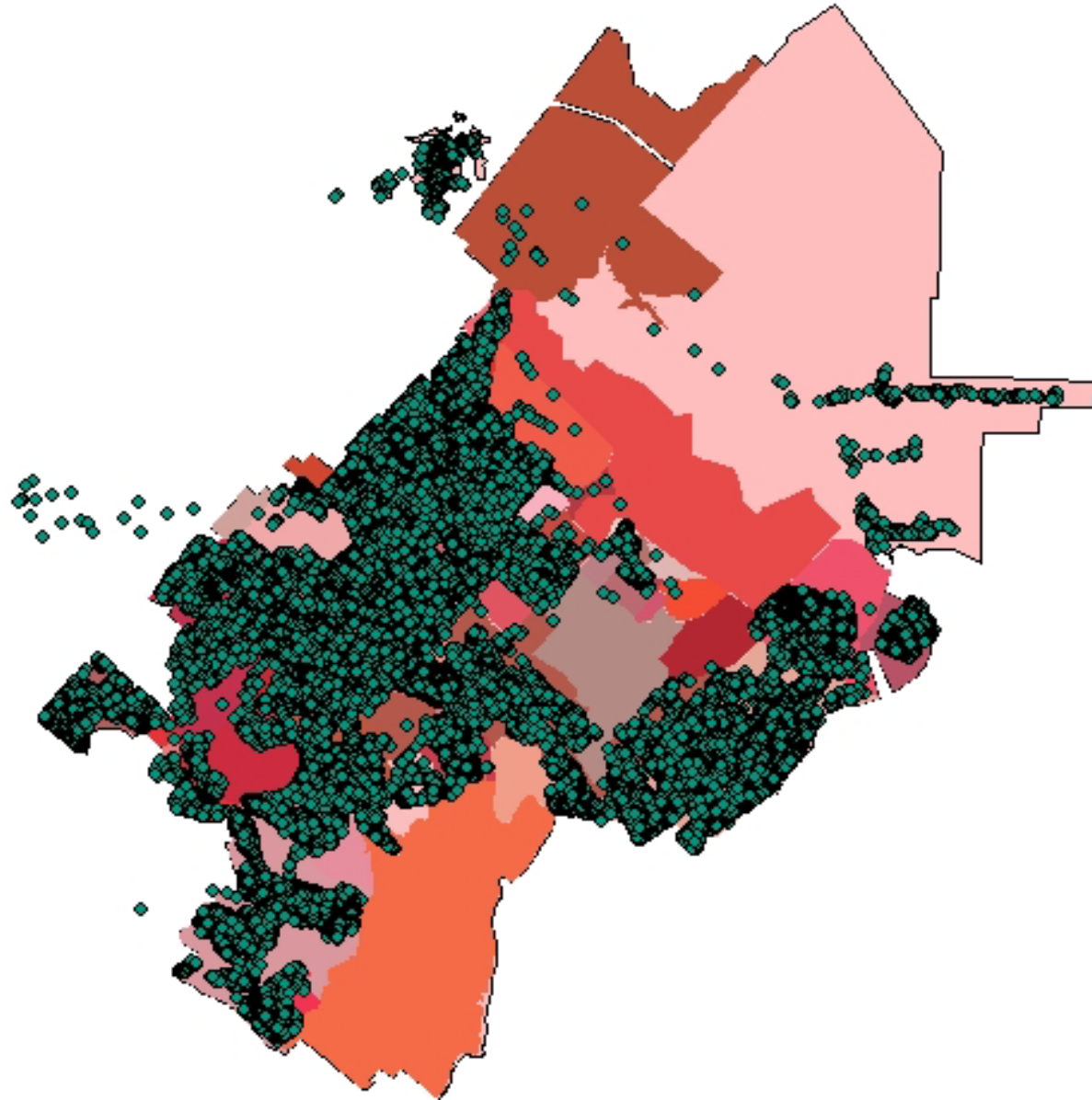
Irvine Ranch Water District





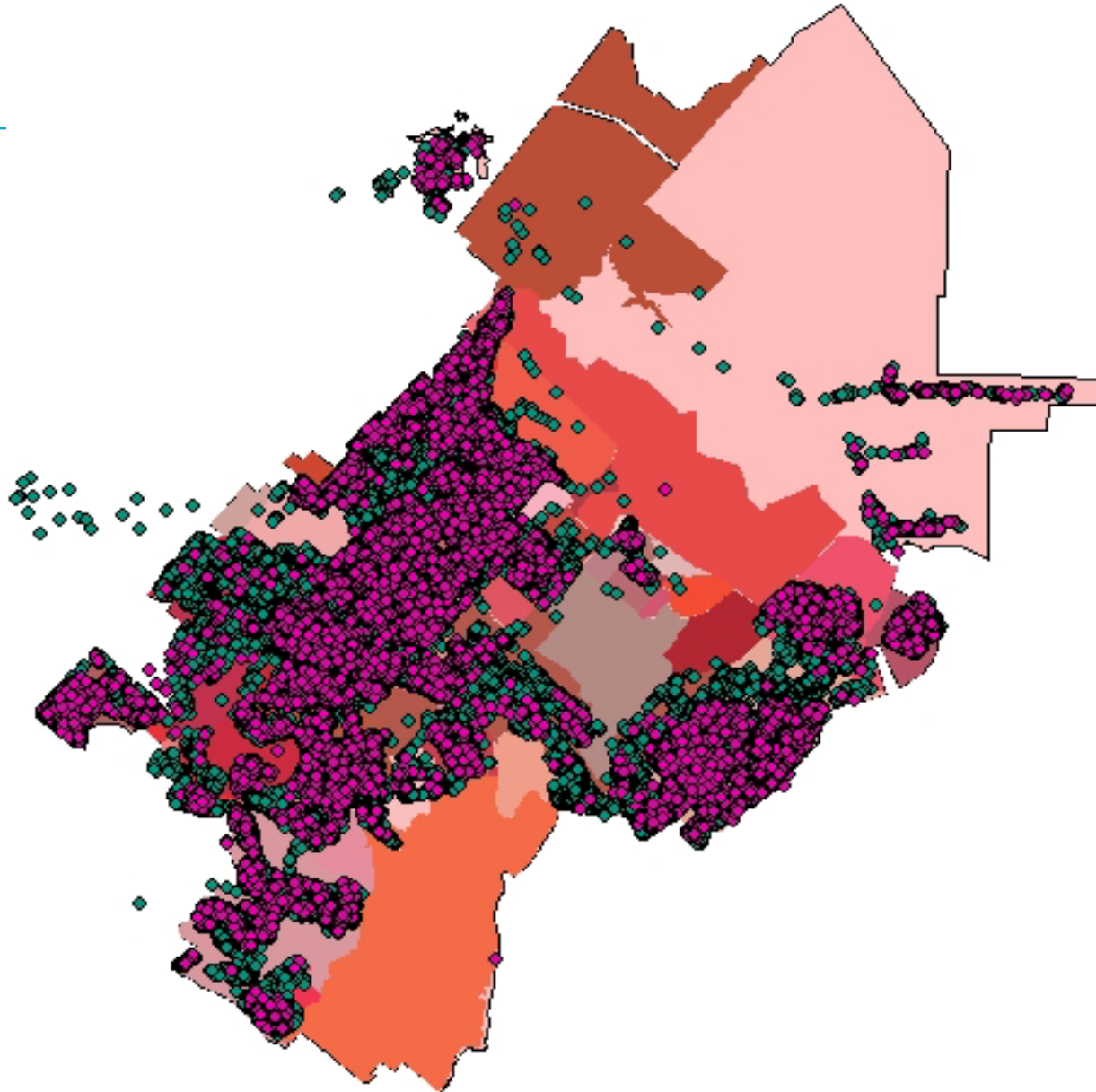
IRWD Meters

Irvine Ranch Water District



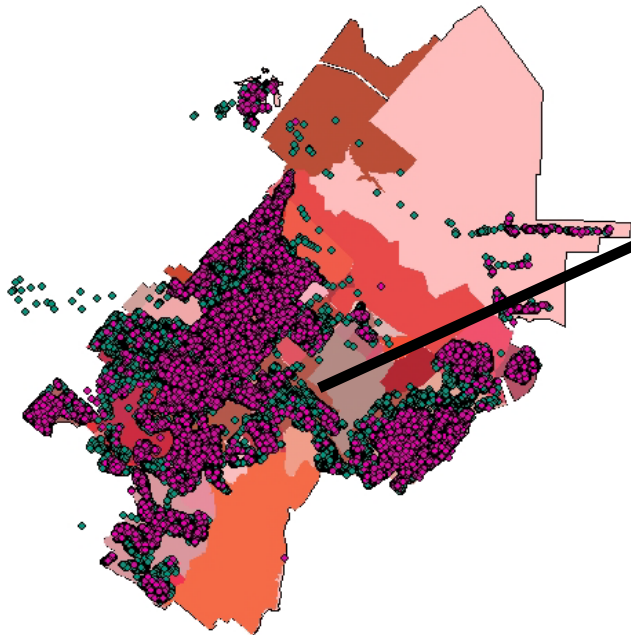
IRWD Rebates Issued

Irvine Ranch Water District



IRWD - Commercial Area (Zoom)

Irvine Ranch Water District

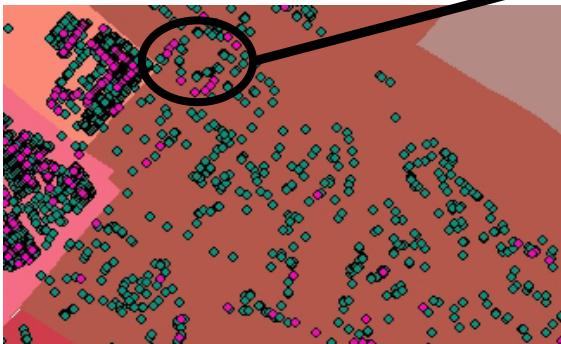
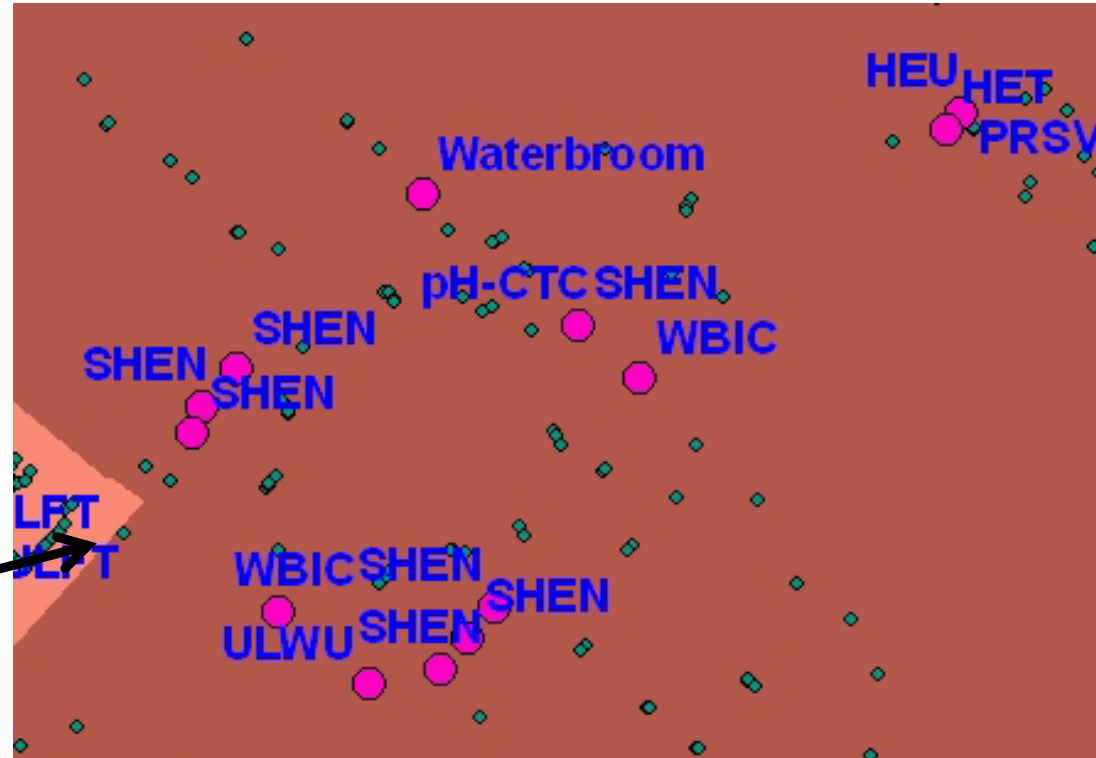




Rebates in a predominately commercial areas

Irvine Ranch Water District

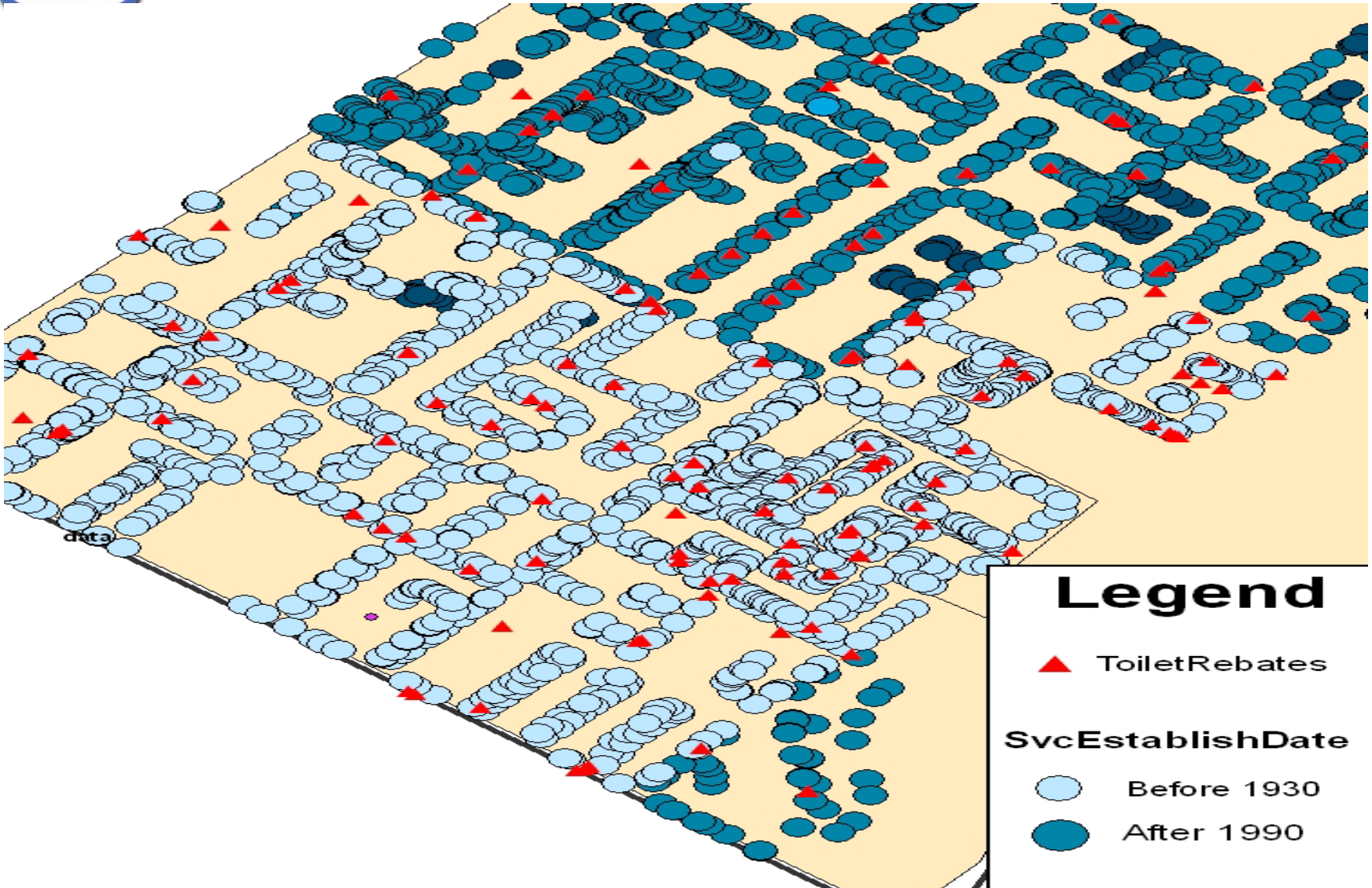
- SHEN- High Efficiency Nozzle
- ULWU-Ultra Low Water Urinal
- pH CT- PH Cooling Tower Conductivity Controller
- Waterbroom
- HET-High Efficiency Toilet





Toilet Rebates in Santa Ana Heights

Irvine Ranch Water District





Ultra-high efficiency toilets

- Service area of 3,000 customers
- Over half of the homes built before 1930.
- Less than 200 toilets installed through IRWD's rebate program
- Opportunity to reach customers with toilet flush volumes greater than 1.6 gallons



Stealth toilets: 0.8 gpf



WBIC Rebates in Foothill Ranch


Irvine Ranch Water District



Foothill Ranch

WBIC

Over-allocation Percent

0-10% 

Greater than 10% 

Weather Based Irrigation Controllers (WBIC)

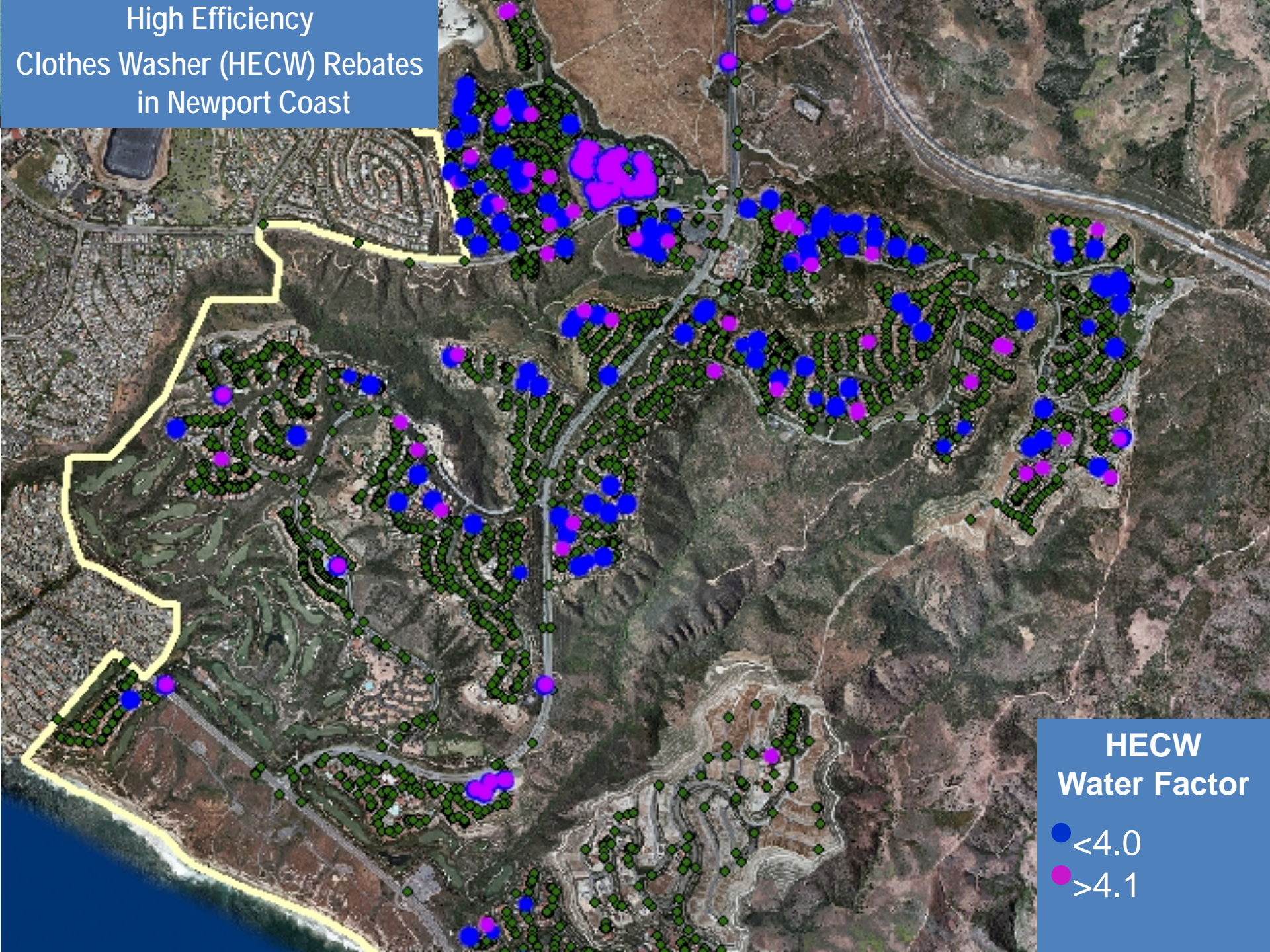
- 40 WBICs installed in Foothill Ranch service area, only 2 of these customers over-allocation

Opportunity

- To contact customers over allocation
- Promote the use of WBIC's for the purpose of meeting water budget allocations



High Efficiency
Clothes Washer (HECW) Rebates
in Newport Coast



HECW
Water Factor

- <4.0
- >4.1



High Efficiency Clothes Washers (HECW)



- Participation in high income neighborhood
- 65% rebates, water-factor < than 4.0

Opportunity

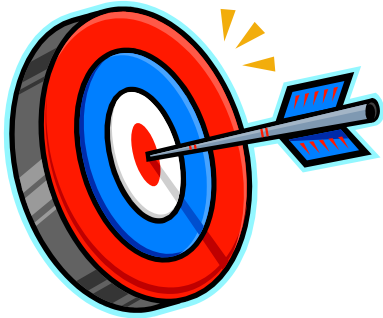
- Calculate water savings per service area
- Target areas with less saturation



Utilizing Rebate Maps

Irvine Ranch Water District

Tailor rebate programs



- According to customer type and service area
- Purpose of meeting 20 by 2020 water savings targets

Improve and diversify mode of communication

- Internal & external customers
- Marketing campaigns & web material



Can the use of GIS improve the effectiveness of Water Conservation Rebate Programs?





Questions?

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