

## Governor's Office of Energy Policy



**Water Energy Partnership in Arizona (WEPA)**

**Sustainable Cities Network**

**November 4<sup>th</sup>, 2014**



# What's the Cost

EPA estimates **3-4 percent of national electricity consumption**. Water and wastewater utilities are typically the largest consumers of energy, accounting for **30-40 percent of total energy consumed**.

Energy costs make up the majority of an annual operating budget, typically **second only to labor costs**.

Energy costs have a direct impact on an area's economic health through inefficient energy use and high utility rates.





# Water & Energy Efficiency

Becoming water and energy efficient provides a wide range of benefits—for utilities, consumers, businesses and the community as a whole.

*Using less water means moving and treating less water, reducing the strain on our water supplies, drinking water and wastewater infrastructure.*

# Future Energy Demand

- Energy demand increase » 20% - 30% in 15 years
  - *In water and wastewater*
- Population & more stringent regulations
  - *Aging infrastructure*
  - *Increasing threats to watersheds and aquifers*
  - *Changing compliance and public health standards*
  - *“Rising cost” industry*
  - *Higher customer expectations*
  - *Emerging contaminants (pharmaceuticals)*
  - *Increasing competition for raw water sources*





# Grant History

In February 2012 the U.S. Department of Energy (DOE) issued a competitive funding opportunity announcement (FOA) to state energy offices to advance policies, programs, and market strategies that accelerate job creation and reduce energy bills while achieving energy and climate security for the nation.

## Water Energy Partnership in AZ:

- Benchmark 100 facilities into EPA Portfolio Manager
- Identify Energy Efficiency Opportunities and match facilities with funding
- Conduct Energy Efficiency Training



# Develop A Strategy

Develop a successful strategy that utilizes planning, development incentives, and other tools to leverage limited funding. Create goals that build upon and maintain current assets before building new facilities.

Develop an approach to focus on:

- 1) efficiency;
- 2) economic & community development potential &;
- 3) quality of life

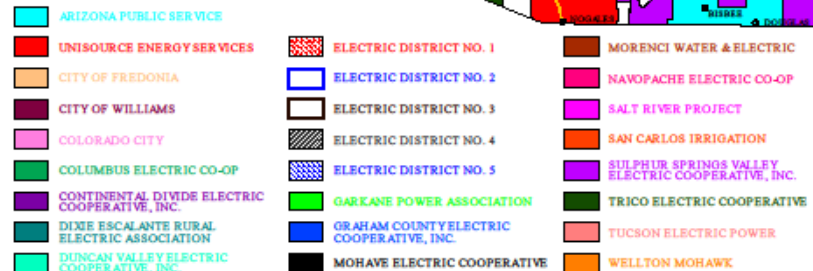
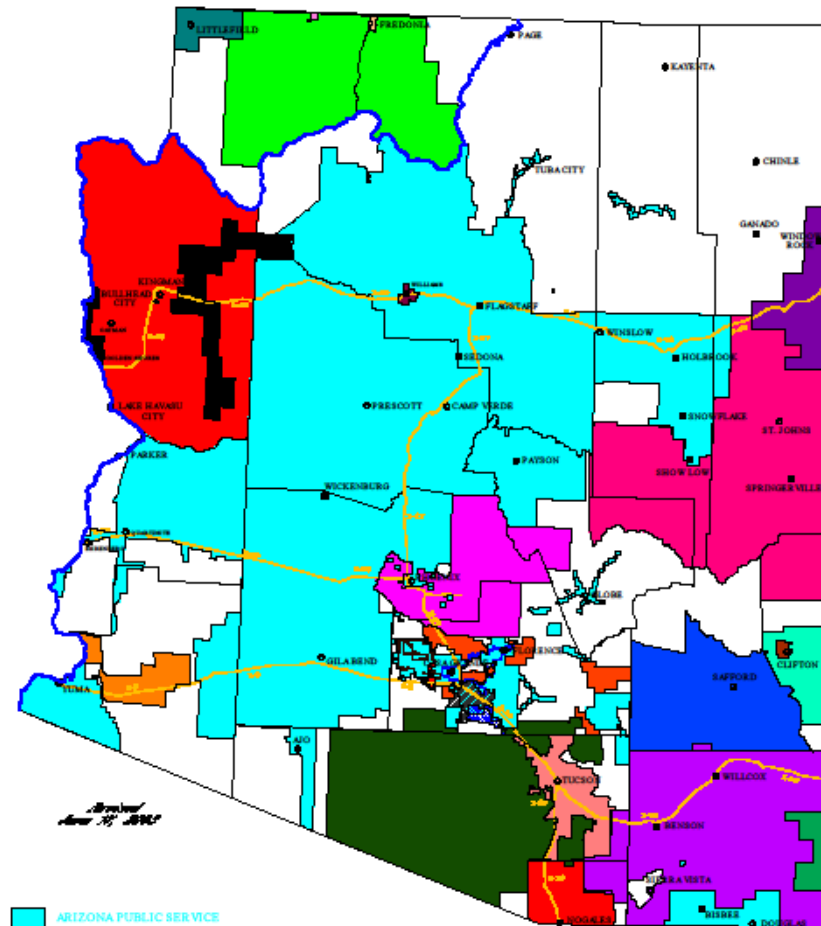


# Arizona Facts

- 6<sup>th</sup> Largest State
- 15 Counties
- 30 State Parks
- 20 Native American Tribes



# Arizona Utility Map



STATE OF ARIZONA - ELECTRIC





# Coordination and Collaboration

**Energy issues are here to stay and will only get more serious—no quick fixes!**

- Individual projects and technologies are fine, but something is needed to pull it all together (**a process**)
  - A Process to provide relevant information to those impacted by energy efficiency improvements.
- **We (Energy Office) are not the experts!**

# WEPA Arizona Activities



## INVESTIGATION

- Facility Identification
- Benchmarking
- Education/Training



## TECHNICAL ASSISTANCE

- Needs Assessment
- Funding Options
- Education/Training



## IMPLEMENTATION

- Project Upgrades
- Education/Training

**Coordination/Collaboration**



# Grant Application Partners

## **State:**

Arizona Department of Environmental Quality  
Water Infrastructure Finance Authority

## **Federal:**

U.S. Department of Agriculture Rural Development

## **Private:**

Arizona Public Service  
Honeywell  
Lincus Energy  
Rural Community Assistance Corporation



The logo features a stylized sunburst or starburst graphic on the left side, composed of multiple triangular rays in shades of yellow and orange. The background is a solid dark blue. The text "Partners Market Network" is written in a white, sans-serif font, positioned to the right of the graphic and centered vertically.

# Partners Market Network





# Current Partners

**State:** AZ Department of Environmental Quality, Water Infrastructure Finance Authority, AZ Department of Water Resources, AZ State Parks, AZ Department of Transportation, Arizona Corporation Commission

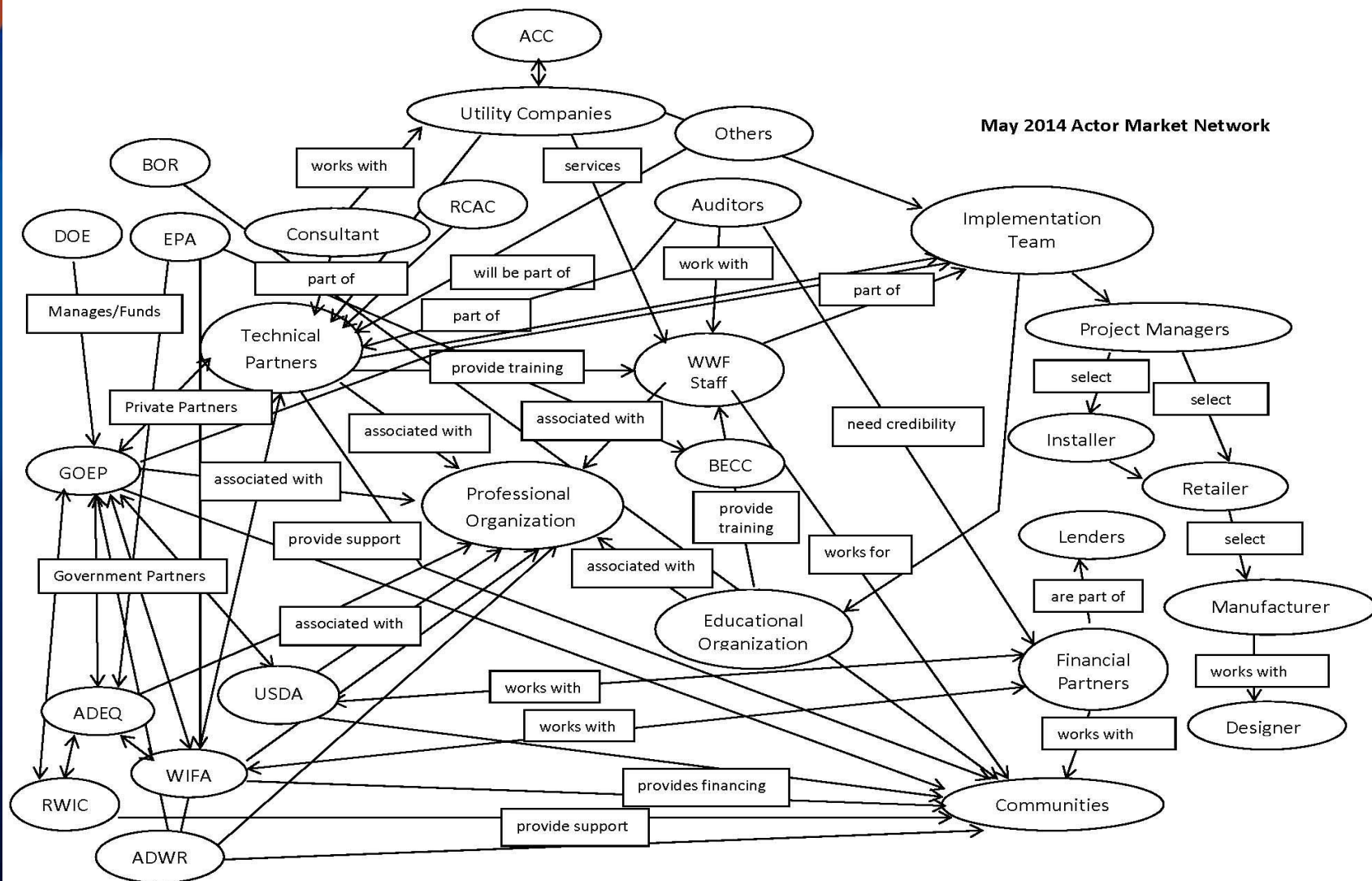
**Federal:** USDA Rural Development, EPA, U.S. Bureau of Reclamation

**Utility:** Arizona Public Service, Unisource, Salt River Project, Sulphur Springs, AZ Electric Power Cooperative, Mohave Electric Co-op

**Private:** Honeywell, Lincus Energy, AMERSCO, TRANE, NCS Engineering, Chelsea Group, Border Environment Cooperation Commission (BECC)

**Professional Organizations:** AZ Water Association, Rural Water Association, AZ Co-op Association

# Partners Market Network





# Water Infrastructure Finance Authority

## What does WIFA offer?

- Low-interest loans
- Planning and design grants, up to \$35K

## Who is eligible?

- Cities and towns
- Private water companies (ACC)
- Special districts
- Tribal entities

## What types of projects are eligible?

- Planning, design (1% interest rate)
- Improvement, construction
- Acquisition
- Green projects (incentives)



# Water Infrastructure Finance Authority

## Benefits of going with WIFA:

- Low interest rates
  - Average last year for public entities = 2.74% (20-year term)
- Financing available year-round
- No application deadlines
- No application fees or closing costs
- No minimum or maximum loan amount



## Recycle \$\$\$ in Arizona

- Create attractive/livable communities
- Increase property values
- Preserve quality of life

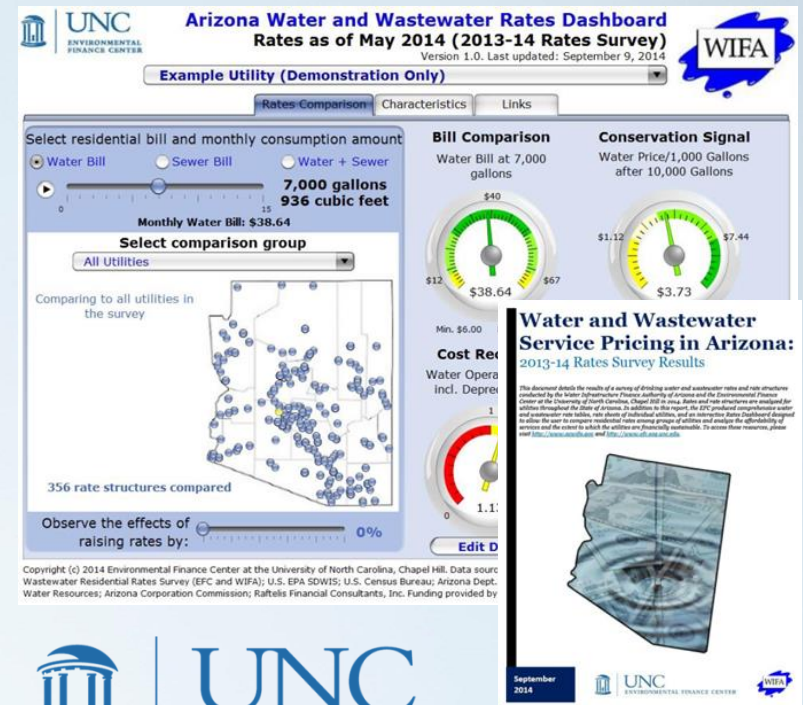




# WIFA

## Water Pricing: A Hot Topic in Arizona

*Where Does Your  
Community Stand?*



October 17, 2014



# Annual Water and Wastewater Rates Survey

💧 WIFA survey of water and wastewater utilities conducted each year

💧 Goal – provide data and information to help utilities set appropriate rates

💧 Outcome – Survey report with lots of data

Appropriate water pricing is key to managing our water resources and the infrastructure we need to transport, treat and distribute it.

ARIZONA WATER AND WASTEWATER RESIDENTIAL RATES – 2012

Section 6: Water System Data

System Name	Ownership	County	Watershed	Revenue \$1,000/yr	Number of Connections Residential	Other	Total	Gallons Sold Residential Meter	Avg. Size Residential Meter	Total \$ /Month Structure	Rate Structure	Average Usage	Average Bill	Survey Updated
City of Chandler	M	Maricopa	San Verde, Agua Fria	\$48,503.32	73,060	4,562	77,622	1,810	50"	\$20.87	nor. BA	12,000	\$28.83	2012
Chandler	M	Yavapai	San Verde	\$1,030.00	1,721	59	1,780	142	50"	\$50.32	nor. BA	4,700	\$42.80	2012
City Springs DVID	I	Navajo	Little Colorado	\$185.00	383	2	385	26	50"	\$44.65	nor. BA	4,181	\$17.41	2010
Clear Springs Utility Co., Inc.	I	Cochise	San Pedro	\$164.32	528	66	593	37	50"	\$24.88	nor. BA	NR	NR	2012
Cherokee Utilities Company, Inc.	I	Maricopa	Modoc Gta	\$222.00	828	4	832	161	1"	\$20.66	nor. BA	NR	NR	2011
Chesapeake Water Co. of Green Valley	A	Pima	Santa Cruz	\$2,372.00	8,600	297	9,897	887	NR	\$28.16	nor. BA	NR	NR	2011
Crescent DVID	D	Yavapai	San Verde	\$465.87	677	34	711	67	34"	\$64.93	unf. Vol	NR	NR	2011
Crossroads	M	Yavapai	San Verde	\$6,048.48	6,362	618	6,980	764	NR	\$38.23	nor. BA	5,000	\$30.25	2012
CP Water Company	I	Pima	Modoc Gta	\$1.90	15	0	15	0	50"	\$6.25	unf. Vol	NR	NR	2012
Desert Public Service	I	Yuma	Low w/ Gta	\$49.12	110	0	110	10	50"	\$34.75	nor. BA	NR	NR	2009
Desert Water	I	Yuma	Low w/ Gta	\$2.80	15	0	15	1	NR	\$20.00	unf. Vol	NR	NR	2009
Desert Creek	I	Gila	NR	\$54.55	127	0	127	7	50"	\$36.26	unf. Vol	NR	NR	2010
Delta Water Company	I	Yavapai	Verde	\$27.00	59	9	68	8	50"	\$24.38	unf. Vol	NR	NR	2011
Desert Hills Water Co., Inc.	M	Maricopa	Low w/ Gta	\$2,059.10	1,649	15	1,664	249	50"	\$74.38	unf. Vol	NR	NR	2010
Desert Oaks	M	Maricopa	NR	\$9,763.22	13,024	248	14,172	2,113	50"	\$30.11	unf. Vol	NR	NR	2010
Desert Trails Water System	I	Yuma	Low w/ Gta	\$4.90	11	0	11	NR	NR	\$11.75	nor. BA	NR	NR	2009
Dublin Village Water Company	I	Pima	Upper Santa Cruz	\$918.50	869	2	871	83	NR	\$42.50	unf. Vol	NR	NR	2009
Diversified Water Utilities, Inc.	I	Pima	Low w/ Gta	\$1,162.06	1,418	13	1,431	188	34"	\$54.87	unf. Vol	NR	NR	2012
Draper Park Water	A	Cocconino	Little Colorado	\$1,962.12	3,137	203	3,340	237	50"	\$71.70	nor. BA	NR	NR	2011
Draper	M	Cochise	Pio Yagui	\$1,659.27	4,969	536	5,505	867	34"	\$22.10	nor. BA	14,534	\$28.76	2012
Dryden Water Co., Inc.	I	Cochise	Wilcox Playa	NR	113	3	116	NR	50"	\$66.25	nor. BA	4,144	\$50.53	2012
DY Water Company	I	Mohave	Low w/ Gta	\$45.00	90	6	96	6	50" x 3/4"	\$21.13	unf. Vol	NR	\$14.00	2012
Dumas - Shuman Estates	M	Greenlee	NR	\$24.66	55	0	55	NR	34"	\$32.19	unf. Vol	NR	NR	2009
Eager	M	Apache	Upper Little CO	\$559.92	2,133	41	2,174	196	34"	\$21.58	nor. BA	NR	NR	2011
Engelhard Water Company, LLC	I	Maricopa	Low w/ Gta	\$3,206.15	55	0	55	NR	34"	\$55.73	nor. BA	NR	NR	2011
East Valley Water Company	I	Cochise	San Pedro	\$346.04	939	53	992	101	50"	\$22.73	nor. BA	7,564	\$22.84	2012
East Verde Park	I	Gila	NR	\$38.87	144	0	144	5	50"	\$34.19	nor. BA	NR	NR	2010
Eden Water Company, Inc.	A	Graham	Upper Gta	\$72.80	123	3	126	17	NR	\$36.00	unf. Vol	NR	NR	2009
Elmhurst Improvement Assoc.	A	La Paz	Colorado River	\$274.00	250	45	295	119	34"	\$24.38	unf. Vol	NR	NR	2009
El Mirage	M	Maricopa	Modoc Gta	\$6,300.00	16,203	1,076	17,279	1,893	34"	\$32.68	nor. BA	NR	NR	2010
Elmore Dunes Water Users Assoc.	A	Cochise	White Star Draw	\$55.30	223	4	227	27	NR	\$16.25	unf. Vol	NR	NR	2009
Elroy	M	Pima	Low w/ Gta	\$875.00	2,482	189	2,671	262	34"	\$25.71	nor. BA	NR	NR	2010
Empire Water Company, LLC	I	Cochise	San Pedro	\$19.80	30	0	30	3	50"	\$54.38	nor. BA	NR	NR	2010
Empire North Reach Utilities, LLC	I	Yavapai	Verde	\$99.30	409	1	410	28	50"	\$21.00	unf. Vol	NR	NR	2012
F & T Water Company	I	Cochise	San Pedro	\$2.30	NR	NR	NR	NR	NR	\$5.93	unf. Vol	NR	NR	2009
Fox Valley Water & Sewer, Inc.	I	Yuma	Low w/ Gta	\$5,724.90	13,838	992	14,830	1,721	NR	\$27.81	unf. Vol	NR	NR	2009
Fountain Water Co.	I	Pima	Upper Santa Cruz	\$818.98	2,675	83	2,758	290	50"	\$20.30	nor. BA	8,085	\$21.41	2012
Fountain Reach	M	Maricopa	NR	\$6,483.82	2,989	24	3,013	1	1"	\$30.36	nor. BA	NR	NR	2012
Fountain	M	Cocconino	Little Colorado	\$11,299.70	16,953	1,654	18,617	2,480	34"	\$44.03	nor. BA	NR	NR	2011
Fountain Reach Water Company, Inc.	I	Cocconino	Little Colorado	\$165.00	240	6	246	13	34"	\$46.15	unf. Vol	NR	NR	2012
Fountain	M	Pima	Low w/ Gta	\$2,646.77	3,200	306	3,506	545	50"	\$31.14	nor. BA	7,000	\$31.14	2012
Fountain Springs	I	Gila	NR	\$9.03	28	0	28	1	50"	\$34.19	unf. Vol	7,500	\$25.50	2010
Fountain Valley Irrigation	M	Pima	Upper Santa Cruz	\$2,348.16	2,641	842	3,483	779	34"	\$25.50	unf. Vol	NR	NR	2012
Fruit Valley Water Company	I	Navajo	Silver Creek	\$141.80	318	2	319	21	NR	\$33.96	unf. Vol	NR	NR	2009
Frontier Highlands Water Company	I	Cocconino	Verde	\$521.00	697	25	722	140	34"	\$54.80	nor. BA	NR	NR	2009

WATER INFRASTRUCTURE FINANCE AUTHORITY OF ARIZONA



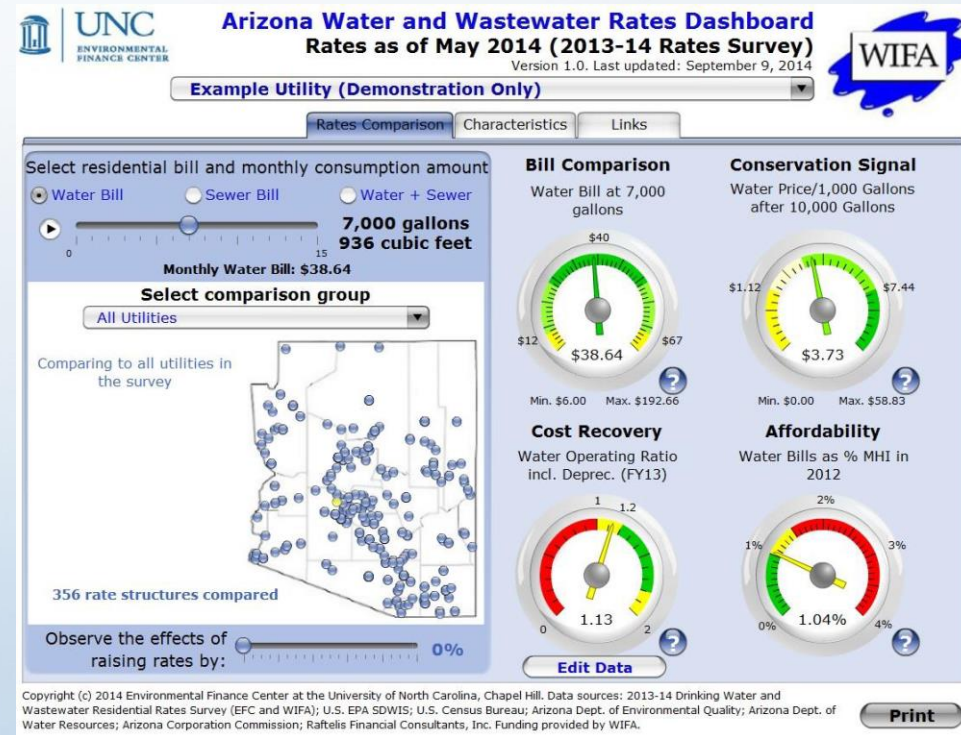
**Does this picture make you excited to dive into a rates analysis?**

WIFA

# AZ Water and Wastewater Rates Dashboard

## Interactive rates and financial benchmarking dashboard

- Created by Environmental Finance Center at UNC
- Designed for utility managers, finance directors, board members, elected officials
- Allows comparison of rates with other utilities of similar size, water source, area, etc.
- And much more...

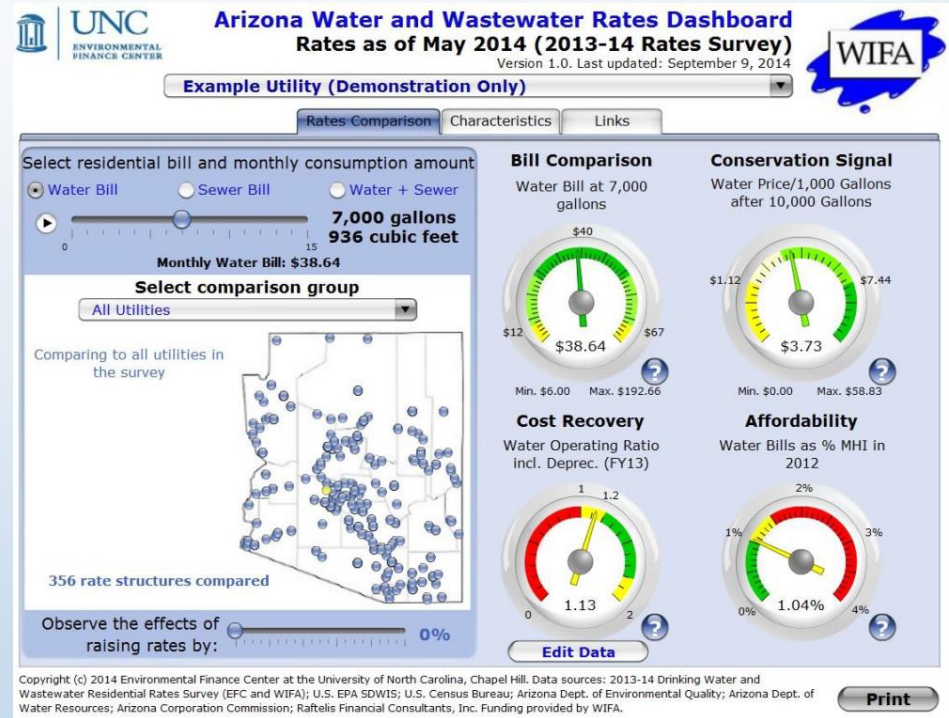


*How about this one?*



# AZ Water and Wastewater Rates Dashboard

- 💧 Conservation signal - are rates promoting conservation?
- 💧 Affordability – what is the financial burden on customers in relation to the MHI of the community?
- NEW!** 💧 **Cost recovery – do rates support the cost of operations and capital?**







# Water Energy Partnership in AZ

## Status:

- 72 WWTP Benchmarked into Portfolio Manager
- Preliminary Analysis
  - ✓ Visits to 6 facilities and 3 EPA Energy Audit
  - ✓ Technical Assistance to 15 facilities
- Developed WWTP Benchmarking curriculum and presented 10 energy education trainings
- Developing resource guide for facilities

# Keys to Successful Communication



# Challenge



PICK UP THE



AND MAKE SOMETHING HAPPEN



# Thank You



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