

TOHO WATER AUTHORITY

WATER CONSERVATION PROGRAM

February 20, 2015



Outline

- Conservation Program Approaches and Priorities
- Annual Budget
- Tracking Program Impact
- Customer Incentives
- Marketing, Education and Outreach
- Compliance and Enforcement
- New Program Initiatives

Conservation Program Approaches and Priorities



WATERING CITATIONS 2012 - 2013

ConserveTrack GoTo Case # GO Account # GO Other... User: Rodney Tilley

Phases/Steps Programs Outreach Find by Tools Admin Support

Actual Savings Case by Case: Single Program

Select a Program ☒ Only show cases with complete Pre and Post Usage

Select Phases Select Steps Months Previous Months Post Select a Period

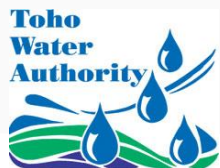
Date Field To Use Water Units ☒ Only include cases where the Selected Date is not empty

#	Case #	Phase	Location ID	Account Number	Street #	Street Name	Street Suffix	Selected Date	Pre AVG Cons (KG/mon)	Post AVG Cons (KG/mon)	Water Savings (KG/mon)	Water Savings Outlier	Step Name	Dwelling Units
Clear														
16752		Watering Violations 2012	000948160	002151923-000948160	2757	BARCLAY	LN	1/31/2012	3.31	1.92	1.39	False	Completed	
16753		Watering Violations 2012	000959810	002115514-000959810	2914	ARIEL	AVE	1/31/2012	11.08	7.98	3.10	False	Completed	
16757		Watering Violations 2012	000629170	001760510-000629170	1900	WILLOW WOOD	DR	2/2/2012	6.93	4.92	2.01	False	Completed	
16755		Watering Violations 2012	001178250	002125174-001178250	1525	ANGLER	AVE	2/1/2012	9.52	10.90	-1.38	False	Completed	
16754		Watering Violations 2012	000959520	002114017-000959520	2861	BOATING	BLVD	2/1/2012	19.95	4.70	15.25	False	Completed	
16760		Watering Violations 2012	000810660	001007090-000810660	1921	THE OAKS	BLVD	2/2/2012	11.12	9.00	2.12	False	Completed	
16763		Watering Violations 2012	000559560	001092020-000559560	1703	GOLFVIEW	DR	2/2/2012	12.87	1.35	11.52	False	Completed	
16761		Watering Violations 2012	000647660	001178740-000647660	1046	WILLOW WOOD	DR	2/2/2012	8.01	6.46	1.55	False	Completed	
16764		Watering Violations 2012	000571370	001243270-000571370	1718	GOLFVIEW	DR	2/2/2012	6.67	4.25	2.42	False	Completed	
16762		Watering Violations 2012	000602180	001604480-000602180	1929	WILLOW WOOD	DR	2/2/2012	6.53	4.00	2.53	False	Completed	
16758		Watering Violations 2012	000806030	002126039-000806030	2021	THE OAKS	BLVD	2/2/2012	3.75	1.06	2.69	False	Completed	
16759		Watering Violations 2012	000761820	002174266-000761820	1934	THE OAKS	BLVD	2/2/2012	9.83	8.15	1.68	False	Completed	
16765		Watering Violations 2012	001217610	002175183-001217610	3001	BOATING	BLVD	2/2/2012	12.74	4.69	8.05	False	Completed	
16772		Watering Violations 2012	000700340	000296730-000700340	2478	HURON	CIR	2/2/2012	8.77	5.95	2.82	False	Completed	
16775		Watering Violations 2012	000587770	000993080-000587770	7825	LAUREL OAK	LN	2/2/2012	5.64	7.78	-1.64	False	Completed	
Count=1,465								Total Average	18886.94 12.89	15528.57 10.60	3358.37 2.29			

Page 1 of 98 (1465 items) ...

* The date of the case. Date value is the date from the date field selected above.

Select All Cases on Page Deselect All Cases on Page Select All Cases in the List Deselect All Cases in the List



PRE

POST

DIF

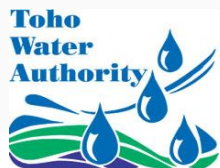
Total:
Average:

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12.89

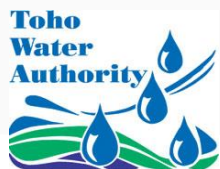
15528.57
10.60

3358.37
2.29

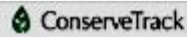
Hours To Run 100 Citations	20		
Staff	16		
Coordinator	4		
Employee	13.55		
W/ Benefits @ 40%	5.42		
	18.97		
Total 16h	303.52		
Coordinator	22.5		
W/ Benefits @ 40%	9		
	31.5		
Total 4h	126		
100 Citations Mail Cost	48		
Total Cost Per 100 Citations	477.52		
# Citations	662		
#Citations (662/20h)	33.1		
Total Cost BMP			
Assume 2 Years Savings	55366800		
Total Water Savings -(# Implemented (Units) * Product Life (Years) * (Water Savings (Gpm Gal/Month) * 12 Months * 1 T Gal/1000gal			
Total Bmp Cost	15805.912		
Total Bmp Water Saved	27683400	One Year	662 Units
Cost Effectiveness	0.570952701	Per Thousand	
Cost Of AWS	\$5 - \$7?	T Gal	



Evaluations		Hours	Completed	
		20.65	19	
		32	24	
Total		52.65	43	
Hours To Conduct 1 Eval		0.81671415		
Employee 1H		13.79	5.516	W Benefits @ 40%
Employee @1.22h		18.85		
Total		24.366		
Vehicle 1H		9.75		
Vehicle @ 1.22		13.27		
Total Cost Evaluation		37.636		
# Evaluations		312		
Total BMP Cost		11742.432		
Assume 2 Years Of Water Savings		25464000		
Total Water Savings -(# Implemented (Units) * Product Life (Years) * (Water Savings (Gpm Gal/Month) * 12 Months * 1 T Gal/1000gal				
Assumed 2 Years Of Water Savings				
Total BMP Cost	11742.43			
	1273200			
Total BMP Water Saved	0	One Year	312	Units Eval
Cost Effectiveness	0.922277	Per Thousand		
Cost Of AWS	\$5 - \$7	Tgal		



TOILET REBATES 2011 - 2013



GoTo Case # GO Account # GO Other User: Rodney Tilley ☒

Phases/Steps Programs Outreach Find by Tools Admin Support

Actual Savings Case by Case: Single Program

Select a Program ☒ Only show cases with complete Pre and Post Usage

Select Phases Select Steps Months Previous Months Post Select a Period From To Refresh

#	Case #	Phase	Location ID	Account Number	Street #	Street Name	Street Suffix	Selected Date	Pre AVG Cons (KG/mon)	Post AVG Cons (KG/mon)	Water Savings (KG/mon)	Water Savings Outlier	Step Name	Dwelling Units
Clear														
	16305	Toilet Rebate 2011 - 2012	000489970	002140074-000489970	3109	LANDSEND	CT	6/23/2011	1.23	1.25	-0.02	False	Credit Confirmed	
	16306	Toilet Rebate 2011 - 2012	000499030	0021450570-000499030	268	OLD MILL	CIR	6/23/2011	7.58	3.74	3.84	False	Credit Confirmed	
	16308	Toilet Rebate 2011 - 2012	000005090	000002855-000005090	722	DILLINGHAM	AVE	6/23/2011	0.96	0.83	0.13	False	Credit Confirmed	
	16330	Toilet Rebate 2011 - 2012	000274060	000127125-000274060	1711	VERONA	ST	6/28/2011	3.81	2.50	1.31	False	Credit Confirmed	
	16307	Toilet Rebate 2011 - 2012	000434080	000455790-000434080	189	HIDDEN SPRINGS	CIR	6/23/2011	0.27	0.50	-0.23	False	Credit Confirmed	
	16329	Toilet Rebate 2011 - 2012	000026060	001138430-000026060	800	NEPTUNE	RD	6/28/2011	2.59	2.06	0.53	False	Credit Confirmed	
	16313	Toilet Rebate 2011 - 2012	000010680	000006265-000010680	1829	MINOR	DR	8/8/2011	6.02	4.68	1.34	False	Credit Confirmed	
	16369	Toilet Rebate 2011 - 2012	000023370	000033360-000023370	214	BASS	ST	7/15/2011	8.42	3.03	5.39	False	Credit Confirmed	
	16338	Toilet Rebate 2011 - 2012	000220540	000125155-000220540	1910	PENFIELD	ST	7/8/2011	2.17	1.93	0.24	False	Credit Confirmed	
	16412	Toilet Rebate 2011 - 2012	000224210	000127205-000224210	1813	VERONA	ST	7/21/2011	2.21	1.96	0.25	False	Credit Confirmed	
	16341	Toilet Rebate 2011 - 2012	000003140	000134530-000003140	1016	HUGHEY	ST	7/14/2011	2.52	2.12	0.40	False	Credit Confirmed	
	16340	Toilet Rebate 2011 - 2012	000224050	001063480-000224050	105	LAVON	AVE	7/14/2011	3.43	2.47	0.96	False	Credit Confirmed	
	16552	Toilet Rebate 2011 - 2012	000121250	001403010-000121250	79	LAKE VILLA	WAY	9/1/2011	2.43	1.93	0.50	False	Credit Confirmed	
	16339	Toilet Rebate 2011 - 2012	000046010	001668300-000046010	1804	DAMON	AVE	7/8/2011	1.68	1.69	-0.01	False	Credit Confirmed	
	16717	Toilet Rebate 2011 - 2012	000104520	000058125-000104520	275	FLORIDA	PKWY	12/22/2011	8.82	5.51	3.31	False	Credit Confirmed	
Count=271									Total:	1160.01	993.83	166.18		
									Average:	4.28	3.67	0.61		

Page 1 of 19 (271 items) 1 2 3 4 5 6 7 ... 17 18 19

* The date of the case. Date value is the date from the date field selected above.

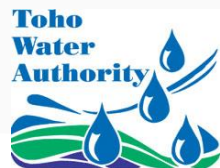
Select All Cases on Page

Deselect All Cases on Page

Select All Cases in List

Deselect All Cases in List

Export to XLS



PRE

POST

DIF

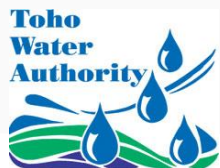
Total:
Average:

1160.01
4.28

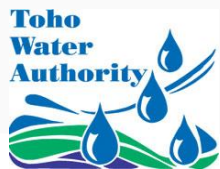
993.83
3.67

166.18
0.61

Toilet Rebates		
Time To Conduct 1 Rebate	1h	
Employee 1h	13.79	
Employee W/Benefits 40%	5.516	
Total	19.306	
Total Cost Rebate	19.31	
# Of Rebates	149	
Total Employee Cost	2877.19	
		Rebate Not Necessarily Invested But Is Loss Of Revenue As It Comes Off Their Bill. 15K Comes Back To Us From The Mgmt District In Cash.
Total Monies Invested/Toho & Sfwmd	30000	
Assumed Twenty Years Of Water Savings	28996800	
Total Bmp Cost	32877.19	
Total Water Saved * 20 Years	28996800	
Cost Effectiveness	1.133821318	
Cost Of AWS	\$5 - \$7?	T Gal



Inside Audits		
Employee		13.79
W/Benefits @ 40%		5.516
Total		19.306
Hours To Conduct 1 Audit		0.95
Employee @ 1.35		27.006
Vehicle @ 1h		9.75
Vehicle @ 1.35		15.35
Total Cost Audit		42.356
# Of Audits		41
Total Cost Audit		1736.596
Assume 5 Years Savings		13054200
Total Bmp Cost		1736.596
Total Water Savings 1 Year		2610840
Cost Effectiveness		0.665148
Cost Of AWS	\$5 - \$7?	Tgal

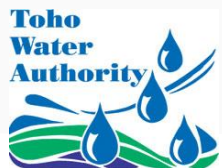


Annual Budget



Water Conservation Budget FY 2015

Salaries, OT, & Bonuses	\$110,500
Benefits	\$54,900
Total Personnel Expense	\$165,400
Professional Services	\$100,000
Other Services	\$30,000
Training & Travel	\$5,500
Office Supplies	500
Operating Supplies	\$10,000
Uniforms	\$500
Conservation Supplies	\$6,500
Postage – Conservation	\$20,000
Printing	\$13,000
Education & Outreach	\$9,500
Total Non-Personnel Expenses	\$195,500
Total Budgeted Expenses – FY15	\$360,900

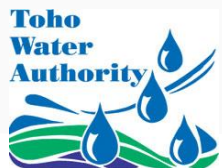


Tracking Program Impact



MONTHLY PROGRAM REPORT

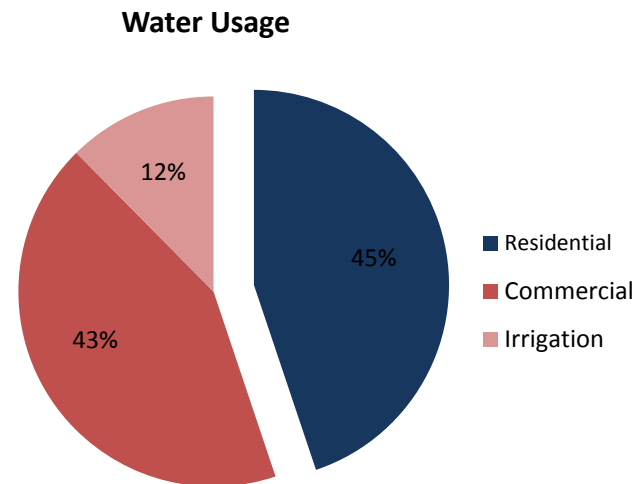
	2014							
Phase Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Total
2014 Comm Eval	0	0	1	1	0	0	7	9
2014 FWS / Beazer@Tapestry	0	0	0	12	17	16	7	59
2014 FWS / Lennar@Championsgate	0	0	3	110	3	14	12	142
2014 Inside Audits	18	23	12	20	9	18	51	152
Fixture Giveaways	0	0	0	0	0	1	9	13
IRRIGATION EVALUATIONS 2014	22	40	26	16	29	28	49	211
Irrigation Workshops 2014	0	0	0	12	0	0	0	12
Rain Sensor Giveaway, ongoing	3	6	3	0	2	8	6	28
Toilet Rebate 2013 - 2014	52	39	27	29	26	12	20	211
WATERING VIOLATIONS 2014	90	68	78	59	23	132	75	525



ACTUAL NUMBER OF CASES PER MONTH COMPLETED

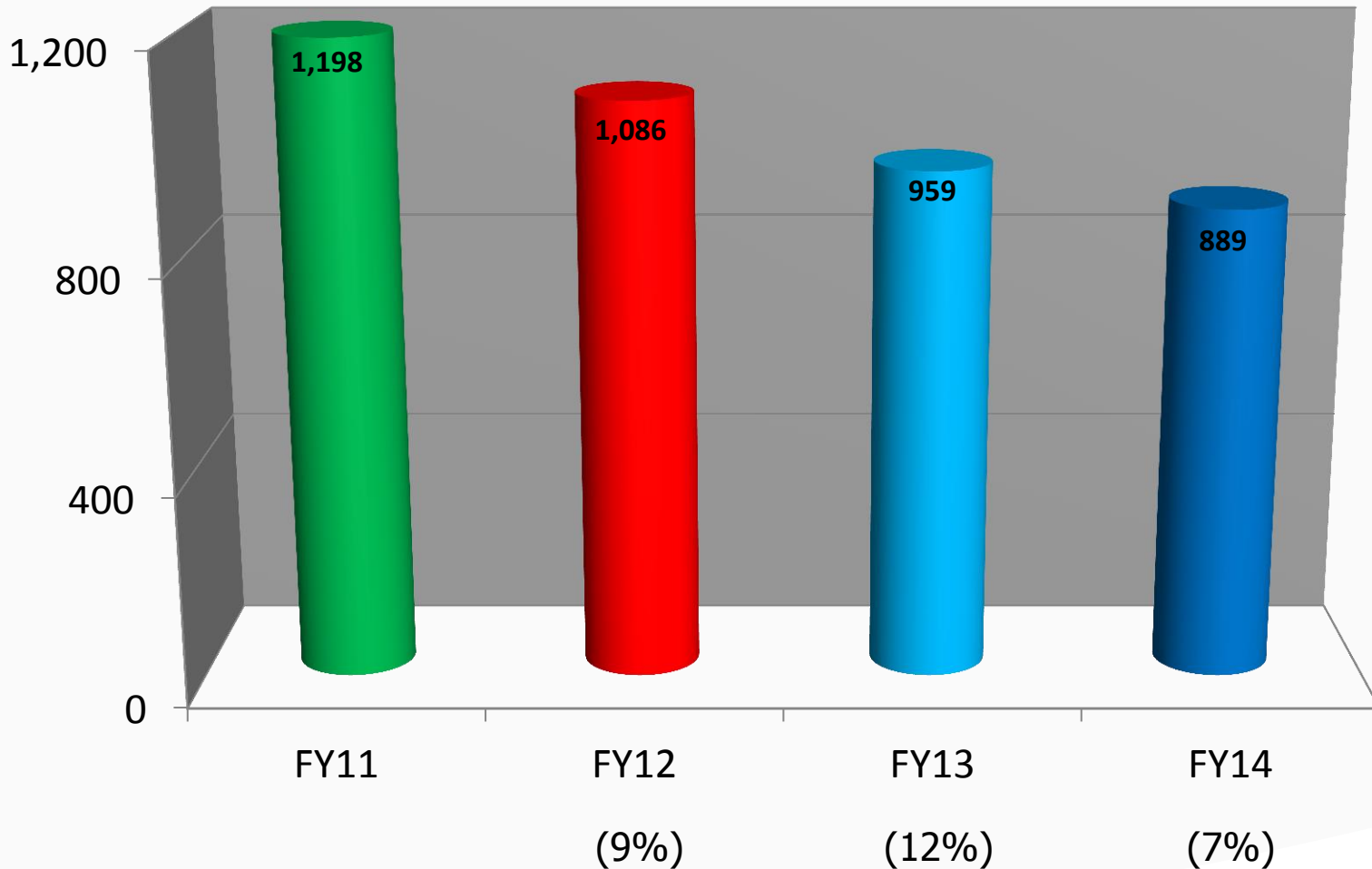
Metered Sales Characteristics

- All Metered sales represents approximately 96% of total operating revenues
- Potable Water Usage
 - Residential – 45%
 - Approximately 78,000 water meters
 - Commercial – 43%
 - Approximately 10,900 accounts
 - Irrigation – 12%
 - Approximately 15,800 irrigation meters

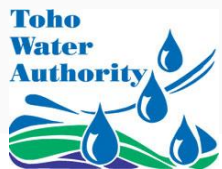


Irrigation Trends

(Thru June MG)



Since FY11 the overall 3-year usage reduction is 25.8%



Irrigation Trends

- ☐ FY12 Rate Equalization & Restructuring of Irrigation Rate
- ☐ FY13 Reviewed & Adjusted Irrigation Tier Structure
- ☐ Irrigation revenue growth more erratic than indoor residential and commercial usage
- ☐ Weather factors contribute greatly to irrigation usage

Irrigation Trends (cont.)

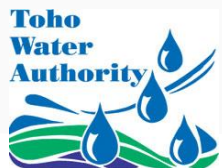
- ☐ Authority's Conservation efforts and resources increased beginning in 2008
- ☐ Increase use of water conservation devices
- ☐ Future growth in irrigation customers is limited due to reclaimed water

Customer Incentives



CUSTOMER INCENTIVES

- Watering Citations: Water Efficiency, Education, Sustainable Landscape
- Free Irrigation and Inside Evaluations: Efficient Sprinkler, Shower-head, Aerator, and Flapper giveaways. Saving Water = \$ that benefit customer.
- Toilet Rebate: \$145.00 per toilet two per household, 1.28 gpf



CUSTOMER INCENTIVES (cont.)

- Florida Water Star Home: Involve the developer. Start your savings from the purchase of the home.
- Commercial Evaluations: A new focus on large water users
- Irrigation Maintenance for Homeowners Seminar

Marketing, Education and Outreach



FREE COURSE FOR HOMEOWNERS

Take a class

UF | IFAS Extension
UNIVERSITY of FLORIDA

Irrigation Maintenance for Homeowners Seminar

Learn to set your controller, use your rain sensor and water the right amount for **FREE**
(Violations can be removed by attending the class)

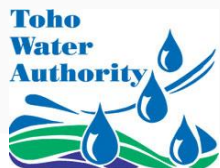
Select a class

spring class
April 17
6pm-8pm
Osceola Heritage Park
1921 Kissimmee Valley Ln
Kissimmee, FL

fall class
November 5
6pm-8pm
Heritage Park
1921 Kissimmee Valley Ln
Kissimmee, FL

**Seating is limited:
Call 407-944-5121
to register**

Toho Water Authority
10th ANNIVERSARY



TOILET REBATE ADVERTISEMENT



Is your toilet a dinosaur?

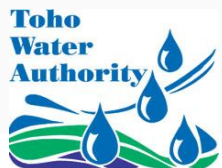
(Well, knock some EPA WaterSense into it)

\$145
OFF YOUR
WATER BILL

Toilet Rebate Program

If you are a Toho Water Authority residential customer and have a 3.5+ gallon toilet and you want to replace it with an EPA WaterSense toilet, you qualify.

Please visit the **News/Events** section
at www.tohowater.com for more
information or call 407-944-5123.
Para español llame al 407-944-5000.



INSIDE AND OUTSIDE EVALUATIONS

GET IT **Inside** and **Out**



Get a **free** irrigation evaluation **plus** an inside water audit of your home

Inside

AT NO COST

We'll check all the fixtures inside the customer's home for water efficiency

- Kitchen
- Bathroom
- Laundry

If needed we'll give you faucet aerators, low-flow showerheads and toilet flappers for **FREE**



Outside

AT NO COST

Customers will receive a report containing the following:

- Description and location of system issues
- Scheduling recommendations
- Rebate and incentive program information
- How to properly program the controller



Get a free rain sensor



Call us now at 407-944-5121

(This program is only available to Toho Water Authority residential customers)

SPANISH VERSION

Por dentro. por fuera



Reciba **GRATIS** una evaluación de su consumo de agua en el hogar

Adentro

SIN COSTO ALGUNO

Inspeccionamos las diferentes áreas dentro su hogar en cuanto al consumo de agua como la:

- Cocina
- Baño
- Lavadero

Si es necesario te daremos **GRATIS** aireadores para grifos, cabezales de bajo flujo para las duchas y sapitos (flappers) para los inodoros



Afuera

SIN COSTO ALGUNO

Clientes recibirán un informe sobre su sistema de irrigación con lo siguiente:

- Localización y descripción de problemas con el sistema
- Recomendaciones de programación
- Información sobre programa de incentivo y reembolso
- Como programar correctamente su sistema



Reciba gratis un
sensor de lluvia

llámennos al 407-944-5121

(Este programa solo está disponible para clientes residenciales de Toho Water Authority)

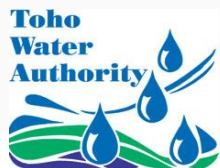
A DIFFERENT APPROACH TO IRRIGATION CONSUMPTION ANALYZING BY AMR

**Sprinkler system using
too much water?**

CALL US - WE CAN TELL YOU

Call us at **407- 944-5121** for an outdoor water usage analysis

PLUS: If you're using too much we'll help you lower your water usage



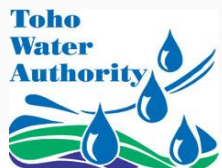
New Program Initiatives



PAM (PUBLIC ACCESSING MODULE)

Customer will have online access to their water data, featuring:

- **CHECK YOUR WATER USE:** Compare your water usage against others in your area.
- **HOME WATER CHECKUP:** Request and evaluation, inside or out.
- **YOUR ACTION HISTORY:** View past water saving actions and check their status
- **GET A REBATE:** Send in applications online for less staff time.
- **REPORT WATER WASTE:** If you see water wastage let us know.
- **Piloting PAM underway in the community of Harmony**





Let's save water! What would you like to do?



Check Your Water Use

Track your water use from month to month. Challenge yourself to use less.



Home Water Checkup

An evaluation will provide savings for your inside and outside water usage.



Your Action History

View your past water saving actions and check their status.



Get a Rebate!

Send in your rebate applications online.

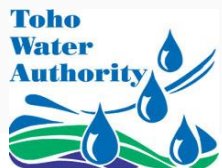


Report Water Waste

If you see water waste happening let us know.

FLORIDA WATER STAR

- A statewide certification program: Voluntary for most
- Adopted by Toho in April 2008
- 20% water impact fee reduction
- Compliance or certification for Toho
- Residential



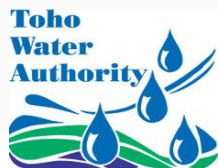
FLORIDA WATER STAR (cont.)

- Landscape
- Irrigation
- Indoor criteria
- 2013 Homes: 126
- 2014 Homes: 158 (so far, and growing)

FLORIDA WATER STAR COMPARISON

FWS HOMES	MONTHS	LOT SIZE	USAGE	MONTHLY AVERAGE
3424 SCHOOL HOUSE ROAD	22	0.11	157000	7136.363636
6836 BUTTERFLY	34	0.09	224000	6588.235294
6838 BUTTERFLY	47	0.11	200000	4255.319149
6840 BUTTERFLY	48	0.09	392000	8166.666667
6842 BUTTERFLY	37	0.11	148000	4000
6844 BUTTERFLY	47		274000	5829.787234
6845 SUNDROP	20	0.09	64	3.2
6846 BUTTERFLY	49	0.11	138	2.816326531
6847 SUNDROP	32	0.11	140	4.375
6848 BUTTERFLY	42	0.09	193	4.595238095
6849 SUNDROP	13	0.09	52	4
6850 BUTTERFLY	37	0.11	220000	5945.945946
6851 SUNDROP	34	0.11	75000	2205.882353
6852 BUTTERFLY	42	0.09	174000	4142.857143
6853 SUNDROP	32	0.09	112000	3500
TOTALS	536		1976587	3687.662313
COMPARISON HOMES				
7024 BUTTON BUSH	27	0.09	260000	9629.62963
6911 BEARGRASS	41	0.09	381000	9292.682927
3334 BRACKEN FERN	15	0.09	111000	7400
3332 BRACKEN FERN	119	0.09	631000	5302.521008
3308 POND PINE	109	0.09	498000	4568.807339
3316 POND PINE	67	0.09	488000	7283.58209
6975 BLUESTEM ROAD	30	0.09	228	7.6
6935 BEARGRASS	33	0.09	183	5.545454545
6929 BEARGRASS	28	0.09	217000	7750
3320 POND PINE	42	0.09	260000	6190.47619
TOTALS	511		2846411	5570.27593

*Difference of
~1900 gals/month*



New Program Initiatives Under Review

- Commercial Evaluations: Allocation of irrigation to square footage of property?
- Incentive: Lower rate for under allocation, substantial increase for over-usage?
- “Green Cities” Program: A pilot opportunity under review to change existing toilets with new HET 1.28GPM toilets.
- Incentive: Possible rebate opportunity for Multi Family Structures, Hotels.

Automatic Metering Infrastructure (AMI)

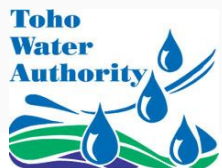
- Real-Time Data
- Replacing Windshield Surveys
- Cuts down on unnecessary visits
- Increase customer interaction by 4 – 5 times (citations)
- Sort/update users by quantity
- Detect leaks
- The 7-Day Report...



7-DAY REPORT

7 Day Daily Consumption

Day1	Day2	Day3	Day4	Day5	Day6	Day7	Meter Serial	ACCOUNT	C_SERVICE	C_CYCLE	Address	7 DAY TOTAL
17380	19190	20010	22250	0	0	0	71618243	031064750	31	306	881 CYPRESS PARKWAY KISSIMMEE, FL 34758	78830
47500	18000	0	0	1500	0	0	20011647	031120000	31	306	ENTRANCE OCTAVIA BOULEVARD KISSIMMEE, FL	67000
0	0	0	0	0	37200	0	71203427	031012000	31	306	ECHION KISSIMMEE, FL	37200
16000	0	1000	0	12000	0	0	30016796	031550975	31	306	5001 MERCANTILE LANE KISSIMMEE, FL 34758	29000
2890	4320	0	1440	2870	1450	1340	72947921	031040130	31	306	SOUTHPORT RD ENTRANCE KISSIMMEE, FL	14310
1200	5610	0	0	0	360	6960	71366938	031173000	31	306	HARRIS & SANDHURST (PARK) KISSIMMEE, FL	14130
1700	1700	1500	1100	1800	1700	1700	73261025	031060127	31	306	105 N DOVERPLUM AVENUE 	11200
0	2000	0	0	6800	0	0	73507430	031550176	31	306	3152 N AVENUE B-IRRIG KISSIMMEE, FL	8800
500	500	2000	2000	1500	0	2000	30016795	031550143	31	306	5005 S ORANGE BLOSSOM TRAIL KIS, 34758	8500



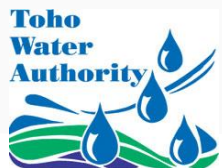
- MULTI DAY CITATIONS AT A QUICK GLANCE!!!

Commercial Evaluation Approach

- Starts with: citation, ranking top users
- Onsite visit to review controller settings and looking for leaks, proper water for plantings
- Advise as to watering schedule and repairs needed
- Tracking usage (through AMI)
- Future Recognition Program for water savers

RECAP

- Continued education and outreach: Mailers, Courses, Videos, etc.
- Conservation Programs: Continue to implement and record progress
- Water Citations: 7 Day Reporting
- Irrigation Evaluations: Residential / Commercial
- New Irrigation Evaluations Focus: Commercial



RECAP (cont.)

- PAM “Public Accessing Module”: Interactive with customers
- AML: Continue to use near-real-time data to support conservation efforts

