

DATE: December 2, 2019
TO: Matt Jordan, General Manager
FROM: Kenneth R. Herd, Chief Science and Technical Officer *KRH*
SUBJECT: Demand Management and Member Conservation Update – *Receive Status Report*

SUMMARY

In August 2018, Tampa Bay Water’s Board of Directors (Board) approved funding demand management through Tampa Bay Water and applied for water conservation grant funding from the Southwest Florida Water Management District (SWFWMD). The goal of the regional demand management approach is to save about 0.5 mgd in the first year of implementation and up to 11 mgd by 2030. To meet the Board’s intent and SWFWMD’s FY2020 funding cycle (beginning October 1, 2019), staff worked with the member governments (members) to develop and use an acceptable implementation strategy consistent with Tampa Bay Water’s Interlocal Agreement. Staff continues to work with the members on a variety of topics, some which are associated with the regional demand approach.

RECOMMENDATION

Receive Status Report

COST/FUNDING SOURCE

N/A

DISCUSSION

Program Description and Status

On August 20, 2018, the Tampa Bay Water Board of Directors approved funding demand management through Tampa Bay Water on behalf of the members and applying for water conservation cooperative funding from the SWFWMD. The goal of the regional demand management approach, established as part of the Board-approved 2018 Long-term Master Water Plan update, is to save about 0.5 million gallons per day (mgd) of water in the first year of implementation and up to 11 million gallons per day (mgd) total by 2030. This is intended to cost-effectively defer the need for new water supplies which will save the members money in addition to the environmental benefits of conservation throughout the region.

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As directed by the Board, staff worked with the members to develop an acceptable implementation strategy consistent with Tampa Bay Water's Interlocal Agreement. The strategy implements 11 program elements holistically and efficiently in each member service area to attain the identified conservation goals and is based on all members opting-in to the program. The implementation strategy includes the use of a third-party contractor to administer incentive distribution, program marketing and implementation reports to the members. This interaction with each member insures non-duplicative and optimized programming regionally and by member. Specific elements include;

- The third party administrator was selected by the Tampa Bay Water Board of Directors in October. Electric and Gas Industries Association (EGIA) in coordination with Big Sea Communications, St. Petersburg Florida will be implementing the demand management plan with and through each member that does not opt-out of implementation occurring in their service area(s).
- A Demand Management Working Group meeting was held on November 15 at Tampa Bay Water offices. Discussion highlights include;
 - Rebranding of www.Tampbaywaterwise.org website to promote regional conservation overall and specifically incentive based measures. There will be specific opportunity to co-brand with each member featuring member-specific logos at the top of each member-specific website page to ensure consumers they are navigating within their member site.
 - The entry for rebates will include use of a University of Florida created Geographic Information System that will create links to a specific address (geography) and member.
 - Outdoor measures will be applied to specific users where the potential for savings can occur. Through previous training sessions with the Florida Irrigation Society and the University of Florida Institute of Food and Agricultural Science (IFAS), contractors receiving certificates of completion will be allowed to install specific types of devices rebated in the program.
 - EGIA and Big Sea provided specific information on a high-level marketing strategy for the program overall. This includes media kits that will be provided to the members and other applicable organizations to help promote the brand. Big Sea is setting up discovery meetings with the members individually to get feedback on the strategy development.
 - The next meeting of the Working Group will be on February 14, 2020.
- Developed a bid package for services associated with inspection of installed toilets and urinals. Members provided specific input and feedback on the package development.
- Developing specifications on how to implement the incentive for installation of soil moisture sensors and evapotranspiration controllers on surplus irrigators. The goal is to use the specifications to create high quality consistent installation services for member customers.

- University of Florida IFAS developed and finalized a document, Recommendations for Optimizing Use of Smart Irrigation Controllers, that will be used to create a specification for installation of soil moisture sensors and evapotranspiration controllers (Smart Controllers)
- Development of geospatial database application that will allow members and the third party administrator to access applicable water utility information for conservation purposes continues with scheduled completion prior to March 2020 start of demand management programming. Development firm (University of Florida Program for Resource Efficient Communities) are working with EGIA to insure smooth transfer of data to and from the incentive-based platform.

Other Demand Management/Conservation Activities in October and November 2019

Detailed collection of members' monthly data occurs through coordination with members and with their water restriction enforcement staff. Member conservation tables were developed through feedback from members' conservation staff and are updated monthly. Reporting on both short and long-term water conservation and restriction enforcement undertaken by the members has a one-month lag due to records processing. Regional demand management activities for the past two months are as follow:

- Oct. 2019- Tampa Bay Water Board selected third party demand management program administrator. Received presentation on Water Wise Awards evaluation of applicants in Pasco County and viewed Tampa video on Water Wise landscapes. Worked with Florida Section American Water Works Association Water Use Efficiency Division committee to evaluate annual conservation awards applicants. Updated water supply status with members, SWFWMD and Florida Friendly Landscape (FFL) staff.
- Nov. 2019- Attended Pasco and Hillsborough FFL Advisory Committee meetings. Worked with third party administrator and marketing subconsultant to develop draft marketing materials for Demand Management Working Group meeting. Hillsborough County and City of Tampa Water Wise Award applicants and awardees presentation made. Received presentation on the Florida Water Star new home certification program. Updated water supply status with members, SWFWMD and FFL staff.

Education and Coordination Programs/Tampa Bay Water

Tampa Bay Water is involved in the following programs as part of its planning and coordination roles. Tampa Bay Water has a lead role in researching technology efficiency improvements that can be used actively by members and others; or passively through national, state, and local criteria and standards development.

<u>Program</u>	<u>Type</u>	<u>Status</u>
Florida-Friendly Landscaping (FFL)	Continuing environmental education in Pinellas, Pasco and Hillsborough Counties.	Public education coordinators implementing consistent water saving estimation techniques. Pinellas hired new public education coordinator. 2020 scope incorporates long term education of Florida Water Star recipients and soil moisture sensor and evapotranspiration controller installation. All agreements approved and implemented.
Water-Wise Awards Program	Conservation awards and promotion of drought-tolerant landscapes.	2019 program evaluation occurred on 31 entries with winners identified in all areas. Award stones were completed for awards ceremonies.
University of Florida IFAS Research	Outdoor water use efficiency research, application development and optimization	Developing model landscapes that can be used by builders in Florida Water Star program. Conducting field evaluation of recycled compost to increase soil water holding capacity. Will conduct irrigation technology training for irrigation contractors. Developed soil moisture sensor and evapotranspiration controller installation Best Management Practices (BMPs) document.
Water Efficiency in Green Buildings	Assist in the development and review of water-efficient green products, standards, codes and certification programs.	Florida Water Star Technical Advisory Committee member. Outgoing Chair of Alliance for Water Efficiency Research Committee. On American Society of Agricultural and Biological Engineers Committee 633 that developed testing protocol for Landscape Soil Moisture Sensors to be disbanded in early 2020.

Member conservation updates are summarized in Table 1 and Table 2.

BACKGROUND

At its December 2008 meeting, the Board of Directors approved a resolution directing Tampa Bay Water to prepare a revised Demand Management Plan (DMP). This project provided a comprehensive investigation of the benefits and costs of integrated water demand management as a quantifiable, alternative water supply source and reflects improvements in the state of knowledge that have occurred since 1995. The DMP evaluates the potential of demand management as a beneficial tool for long-term water supply planning and defines how demand management fits within Tampa Bay Water’s long-term water supply planning process, supply reliability, and member demand projections. Consideration of costs and water supply benefits permit a consistent “apples to apples” comparison to other water supply alternatives.

At the February 2013 Board meeting, the agency passed Board Resolution No. 2013-006, which incorporates water use efficiency evaluation efforts into Tampa Bay Water’s long-term water supply planning process. This resolution directs the agency to:

- Develop and implement data collection, management and analysis protocols and procedures for the continued assessment of passive water use efficiency within Tampa Bay Water's service area.
- Integrate passive water-use efficiency into the agency's Long-term Demand Forecast and Future Need Analysis.
- Include the Water Use Efficiency Evaluation as an element of the Long-term Master Water Supply Plan and include an updated evaluation of potential active measures for implementing efficient water-use products as part of future options for the next Long-term Master Water Supply Plan update.

Subsequently, the Board requested that Tampa Bay Water evaluate demand management implementation strategies to determine ways to insure if active demand management is selected by the Board, it could be implemented and help meet the Tampa Bay Water's unequivocal water supply obligations.

In August 2018, Tampa Bay Water staff developed a list of potential demand management BMPs that could save up to 11 mgd by 2030 at about a fifth of the cost to develop new water supplies. This approach optimizes the use of existing water resources and could defer the need to develop new supplies to a later date, all within a cost-effective strategy. The plan was approved by the Board in December 2018 as part of the Long-term Master Water Plan update.

On August 20, 2018, the Tampa Bay Water Board approved funding demand management through Tampa Bay Water and applying for matching cooperative funding from the SWFWMD. The Board also directed staff to work with members to develop implementation strategies that will help to secure identified savings while consistent with the Interlocal Agreement.

Attachments

**Tampa Bay Water
Member Government Water Conservation Programming
September 2019**

TABLE 1

Conservation Service/Action Provided	Pinellas County	City of St. Petersburg	Hillsborough County	City of Tampa	Pasco County	City of New Port Richey
Irrigation Evaluations		19	1	3		
Leak Detection Services		99		0		
Rain/Soil Moisture Sensor Rebates		19		0		
Meter Tests/Changeouts	1	1128		0		47
One-on-One Education		459	1	173		
Retrofit Kits Distributed		1		13		2
Water Restriction Citations	28	0		12	0	0
Water Restriction Warnings	217	1		0	0	0
Water Restriction Enforcement Hours	284	10		435.75		
Water Restriction Enforcement Mileage	2682	18		0		
Speaking Engagements	3	4	8	1		
Toilet Rebates (toilets)		15	36	0	0	
Toilet Rebates (locations)		13	24	0	0	
Billing Inserts	1	0		0	1	
News Releases	0	2	5	0	0	
Hotline Calls	79	251		18		
Reclaimed Water (new connections)	29	-		0	232	
Hose Nozzles		19	36	55		
Expos/Fairs/Events	0	0		2		
Tours		1		0		
Email Inquiries		365	968	0		
Conservation Website Users	373	2233	3055	0	1750	
Twitter Engagements		0		0	0	
Facebook Engagements		3		0		
LinkedIn Engagements		0		0		
E- Newsletter Opens		703		0		
Television Shows/Radio Interviews	0	0		0		

Conservation Website Users is a common measurement through Google Analytics (others can be used)

Twitter Engagements includes #times clicked and shared

Facebook Engagements is #clicks, shared and liked

LinkedIn Posts #clicked, shared, and liked

*FPL based evaluations

DNP- Data not provided in time

*** Reporting irregular due to updates. Function in repair

**Tampa Bay Water
Member Government Water Conservation Programming
October 2019**

TABLE 1

Conservation Service/Action Provided	Pinellas County	City of St. Petersburg	Hillsborough County	City of Tampa	Pasco County	City of New Port Richey
Irrigation Evaluations		16	10	0		
Leak Detection Services		259		0		
Rain/Soil Moisture Sensor Rebates		15		5		
Meter Tests/Changeouts	0	1537		0		53
One-on-One Education		601	243	65		
Retrofit Kits Distributed		5		3		
Water Restriction Citations	7/45R	0		33	0	0
Water Restriction Warnings	77/203R	0		0	0	0
Water Restriction Enforcement Hours	228	10		425.75		
Water Restriction Enforcement Mileage	2972	15		0		
Speaking Engagements	2	6	17	0		
Toilet Rebates (toilets)		5	29	0	0	9
Toilet Rebates (locations)		4	17	0	0	
Billing Inserts	1	1	1	1	1	
News Releases	0	3	6	0	0	
Hotline Calls	110	265		11		
Reclaimed Water (new connections)	21	-		27	161	
Hose Nozzles		56	15	10		
Expos/Fairs/Events	1	1	3	2		
Tours		1		0		
Email Inquiries		405	955	0		
Conservation Website Users	354	1,853	3000	0	1588	
Twitter Engagements		0		0	9	
Facebook Engagements		2		0		
LinkedIn Engagements		0		0		
E- Newsletter Opens		0		0		
Television Shows/Radio Interviews	0	0		0		

(others can be used)

Twitter Engagements includes #times clicked and shared

Facebook Engagements is #clicks, shared and liked

LinkedIn Posts #clicked, shared, and liked

*FFL based evaluations

DNP- Data not provided in time

R-Reclaimed

** Reporting irregular due to updates. Function in repair

September-19	Pinellas County	City of St. Petersburg	Hillsborough County	City of Tampa	Pasco County	City of New Port Richey
Non-Watering Days	Monday, Tuesday, Friday *	Monday, Thursday, Friday	Sunday*	Sunday*	Saturday, Sunday	Monday, Tuesday, Friday
	* unless by variance from SWFWMD		* unless by variance from SWFWMD	* unless by variance from SWFWMD		
Watering Days	Thursday, Sunday	Tuesday, Saturday	Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	Monday, Tuesday, Wednesday, Thursday, Friday	Thursday, Sunday
Addresses ending in even number or letters A through M	or	or				or
Addresses ending in odd number or letters N through Z	Wednesday, Saturday	Wednesday, Saturday	NOTE: Irrigation allowed twice/week based on address ending 0,1,2,3 Monday and/or Thursday 4,5,6 Tuesday and/or Friday 7,8,9 or no or mixed address Wednesday and/or Saturday	NOTE: Irrigation allowed twice/week based on address ending 0,1,2,3 Monday and/or Thursday 4,5,6 Tuesday and/or Friday 7,8,9 or no or mixed address Wednesday and/or Saturday	NOTE: Irrigation allowed once/week based on address ending 0-1 Monday, 2- 3 Tuesday, 4-5 Wednesday, 6-7 Thursday 8-9 or no or mixed address Friday	Wednesday, Saturday
Watering Hours						
In-ground irrigation system	12:01 a.m. to 10:00 a.m., or 4:00 p.m. to 11:59 p.m.	5:00 a.m. to 9:00 a.m. 7:00 p.m. to 11:00 p.m.	12:01 a.m. to 8:00 a.m., or 6:00 p.m. to 11:59 p.m.	Midnight to 8:00 a.m., or 6:00 p.m. to midnight	Midnight to 8:00 a.m. or 6:00 p.m. to midnight	Midnight to 10:00 a.m. or 4:00 p.m. to midnight
Manual equipment (hose, sprinkler)						
Private wells, lakes, ponds	12:01 a.m. to 10:00 a.m. 4:00 p.m. to 11:59 p.m.	5:00 a.m. to 9:00 a.m. 7:00 p.m. to 11:00 p.m.	12:01 a.m. to 8:00 a.m. or 6:00 p.m. to 11:59 p.m.	Midnight to 8:00 a.m. or 6:00 p.m. to midnight	Midnight to 8 a.m. 6:00 p.m. to midnight	Midnight to 10:00 a.m. 4:00 pm to midnight
Car Washing	Any day/time	Any day/time	Any day/time	Any day/time	Any day/time	Any day/time
Citations Issued	28	0		12	0	0
Warnings Issued	217	1		0	0	0
Cost of Citations	R= reclaimed \$193 if paid prior to or at time of arraignment or trial if contested; additional court costs possible if found guilty at time of trial	\$180 fine plus court costs (court costs range from \$13 for uncontested violations to \$58 for contested violations. Subsequent violations subject to higher fines as assessed by the court, up to a maximum fine of \$500 plus court costs.	\$100-1st, \$200-2nd, \$300-3 rd , \$400-4 th , 500-5 th and subsequent, plus Code Enforcement daily fines for non-payment of up to \$5,000	\$100-1st, \$200-2nd; 3 rd -\$450 and mandatory court appearance	\$125 1st; \$250 2nd, \$500 on 3rd and mandatory court.	Same as Pasco County

Tampa Bay Water
Member Government Water Restrictions Enforcement Details

Table 2

September-19	Pinellas County	City of St. Petersburg	Hillsborough County	City of Tampa	Pasco County	City of New Port Richey
Enforcement Personnel	1 full time Water Conservation Officer and 1 full-time supervisor.Enforcement24/7 with varied schedule by Officer.	Enforced 24/7 by authorized staff members of Water Resources and other City Departments. Law and Codes enforcement personnel authorized to issue citations.	1 FTE Environmental Codes Enforcement Officer Potential of Additional Code Enforcement Personnel 1 FTE Water Conservation Manager	Contracted water patrol for year-round service; 3 patrollers issue citations; law & code enforcement personnel authorized to issue citations.	16 code enforcement officers.	27 patrolmen and/or authorized code enforcement personnel.
Comments	Warning issued for first witnessed violation. Citation issued for subsequent witnessed violations.	Warnings issued for first witnessed violation. Citation issued on subsequent witnessed violation. Reclaimed-Voluntary Even address: Tues./Thurs./Sat. Odd address: Wed./Fri./Sun.	Issue citations on first witnessed violation. 3 years of no violations clears slate. Watering-in of chemical applications restricted to designated irrigation day, unless applied professionally, AND a dated advisory marker is posted. Irrigation of new lawns and landscaping (including City of Tampa Water Service Area) - any day, not between 8:00 am - 6:00 pm for initial 30 days; alternating days (odd addresses on Monday, Wednesday and Saturday, evens on Tuesday, Thursday and Sunday) for next 30 days, then regular schedule as above. Reclaimed water not restricted except its use must not be wasteful and unnecessary.	Issue citations on first witnessed violation. 3 years of no violations clears slate. Watering-in of chemical applications restricted to designated irrigation day, unless applied professionally, AND a dated advisory marker is posted. Irrigation of new lawns and landscaping (including City of Tampa Water Service Area) - any day, not between 8:00 am - 6:00 pm for initial 30 days; alternating days (odd addresses on Monday, Wednesday and Saturday, evens on Tuesday, Thursday and Sunday) for next 30 days, then regular schedule as above. Reclaimed water not restricted except its use must not be wasteful and unnecessary.		Complaints taken at Police Department Dispatch & Billing & Collection Office.

October-19	Pinellas County	City of St. Petersburg	Hillsborough County	City of Tampa	Pasco County	City of New Port Richey
Non-Watering Days	Monday, Tuesday, Friday *	Monday, Thursday, Friday	Sunday*	Sunday*	Saturday, Sunday	Monday, Tuesday, Friday
	* unless by variance from SWFWMD		* unless by variance from SWFWMD	* unless by variance from SWFWMD		
Watering Days Addresses ending in even number or letters A through M	Thursday, Sunday or Wednesday, Saturday	Tuesday, Saturday or Wednesday, Saturday	Monday, Tuesday, Wednesday, Thursday, Friday, Saturday NOTE: Irrigation allowed twice/week based on address ending 0,1,2,3 Monday and/or Thursday 4,5,6 Tuesday and/or Friday 7,8,9 or no or mixed address Wednesday and/or Saturday	Monday, Tuesday, Wednesday, Thursday, Friday, Saturday NOTE: Irrigation allowed twice/week based on address ending 0,1,2,3 Monday and/or Thursday 4,5,6 Tuesday and/or Friday 7,8,9 or no or mixed address Wednesday and/or Saturday	Monday, Tuesday, Wednesday, Thursday, Friday NOTE: Irrigation allowed once/week based on address ending 0-1 Monday, 2- 3 Tuesday, 4-5 Wednesday, 6-7 Thursday 8-9 or no or mixed address Friday	Thursday, Sunday or Wednesday, Saturday
Addresses ending in odd number or letters N through Z	NOTE: Mixed or no address irrigate on Tuesday and/or Friday					
Watering Hours						
In-ground irrigation system	12:01 a.m. to 8:00 a.m., or 6:00 p.m. to 11:59 p.m.	5 am to 9:00 a.m. or 7:00 p.m. to 11 p.m.	12:01 a.m. to 8:00 a.m., or 6:00 p.m. to 11:59 p.m.	Midnight to 8:00 a.m., or 6:00 p.m. to midnight	Midnight to 8:00 a.m. or 6:00 p.m. to midnight	Midnight to 8:00 a.m. or 6:00 p.m. to midnight
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Car Washing	Any day/time	Any day/time	Any day/time	Any day/time	Any day/time	Any day/time
Citations Issued	7/45R	0		33	0	0
Warnings Issued	77/203R	0		0	0	0
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