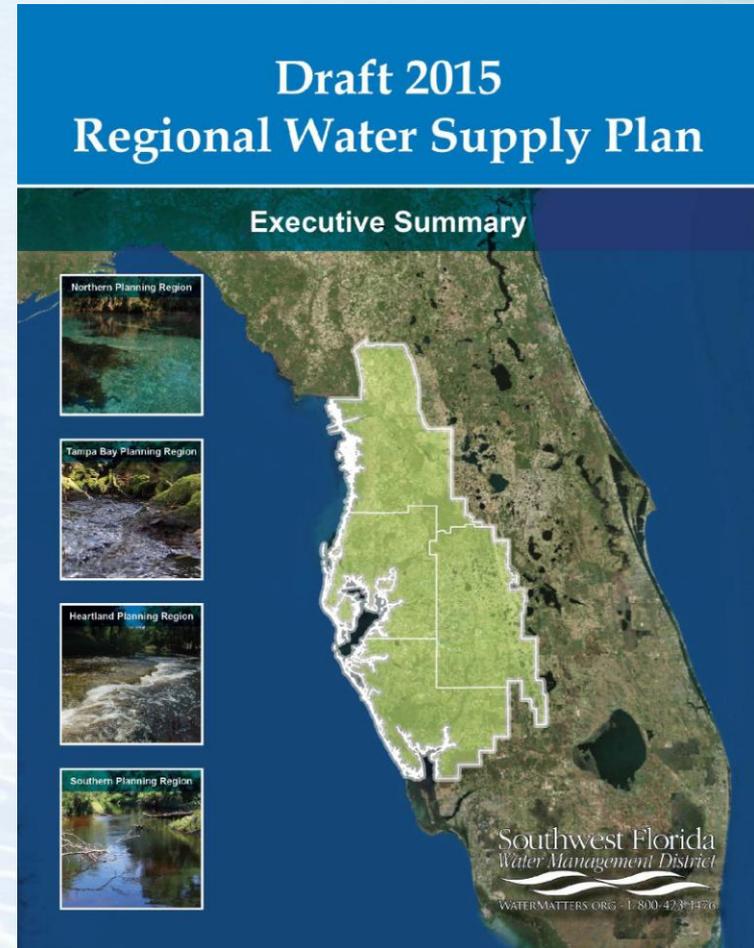


# Draft 2015 Regional Water Supply Plan

Agency on Bay Management  
Tampa Bay Regional Planning Council  
September 10, 2015

**George Schlutermann, P.G.**  
Senior Hydrogeologist  
Water Supply Section

**Southwest Florida**  
*Water Management District*

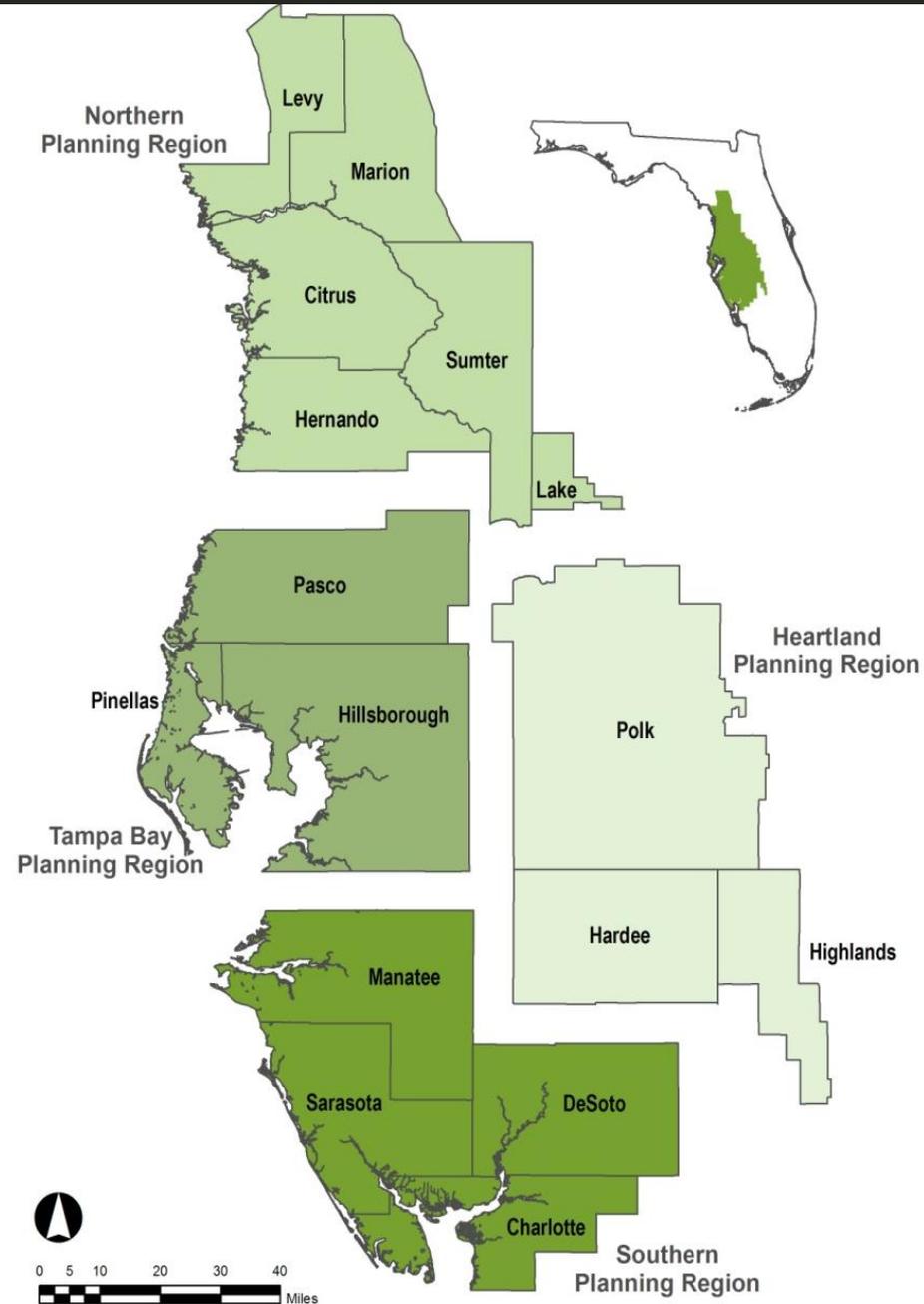


# Today's Presentation

- What is a RWSP?
- Schedule
- Districtwide Population and Water Demand
- Tampa Bay Population and Water Demand
- Water Availability
- Project Options to Meet Demand
- Differences Since 2010

# What is a RWSP?

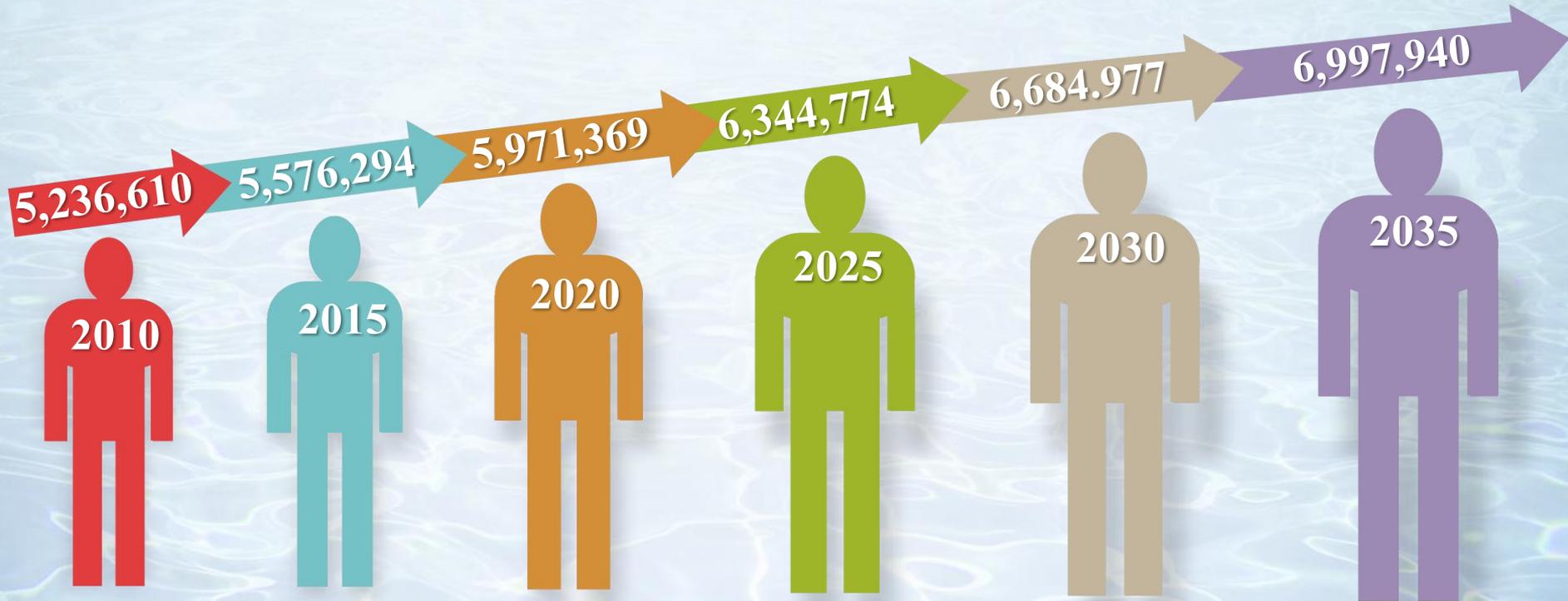
- Statutorily Mandated
- Update Every 5 Years
- Water Resource Evaluation
- Demands from All Categories
- How to Meet the Demands
  - Potential Sources
  - Project Options
- Funding Mechanisms
- Stakeholder Input



# RWSP Schedule

Activities	Time Frame
Preparation of draft 2015 RWSP 	Jan. 2014 – Feb. 2015
Internal/external review of water demand projections 	Sept. 2014 – Mar. 2015
Request Governing Board to approve draft RWSP 	April 2015
Open public comment and hold public workshops 	May 13 – August 17, 2015
Address public comments	May – September 2015
Request Governing Board to approve final RWSP	November 2015

# District Population Growth



# District Projected Total Water Use and Population

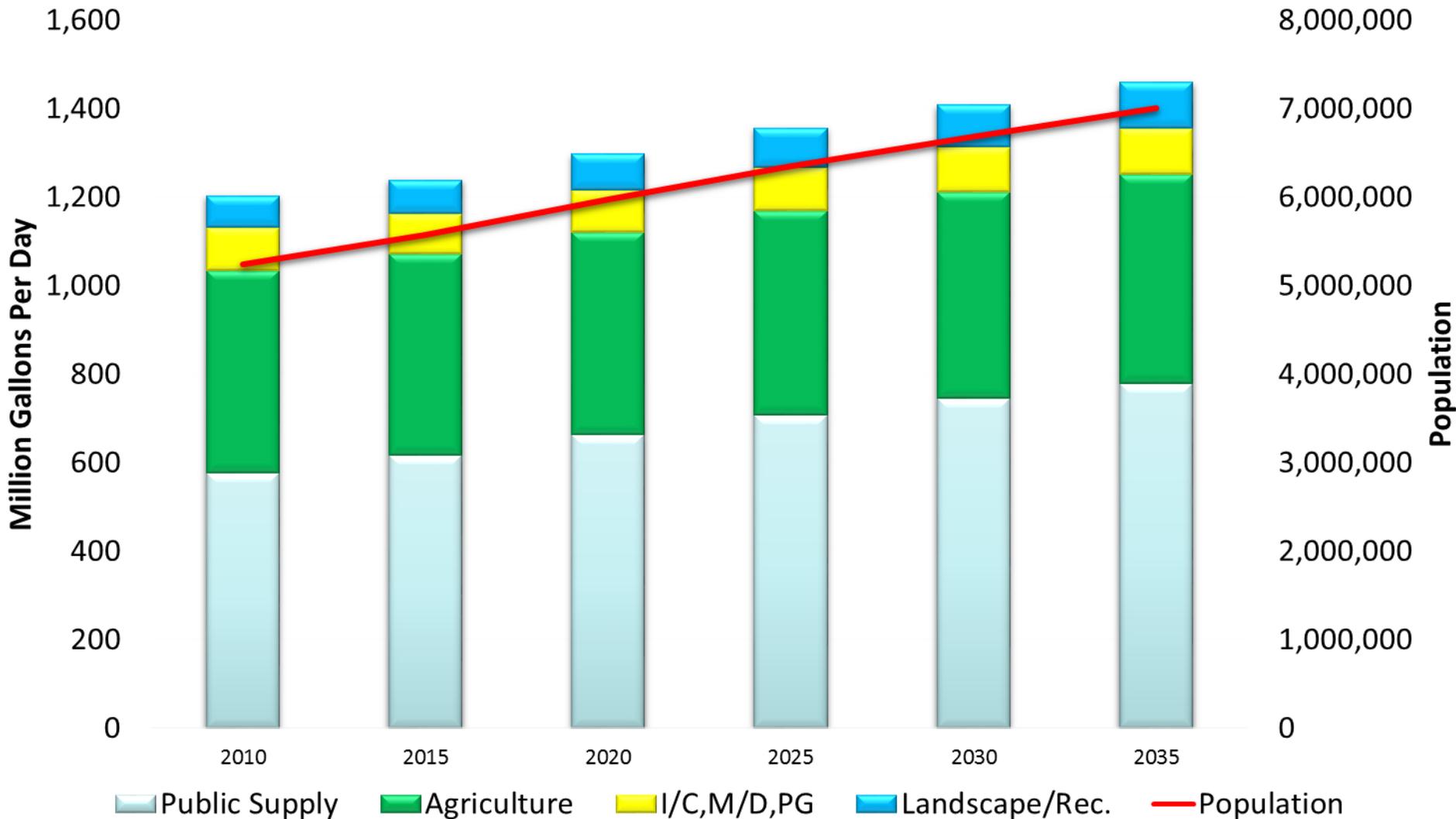


Table 1. Summary of the projected demand by water use sector (5-in-10) (mgd)								
Water Use Category	Water Demands (mgd)						Total Change	
	2010 Base	2015	2020	2025	2030	2035	mgd	%
Public Supply	577	617	663	706	744	779	202	35%
Agriculture	456	454	457	463	467	471	15	4%
I/C, M/D, PG	98	92	95	98	101	105	7	7%
Landscape/Rec	71	75	82	89	96	104	33	46%
Env. Restoration	-	-	8	25	25	25	25	N/A
<b>Total</b>	1,202	1,234	1,305	1,381	1,433	1,484	<b>282</b>	<b>23%</b>

# Tampa Bay Planning Region Population Projections

County	2010	2015	2020	2025	2030	2035
Hillsborough	1,313,505	1,417,947	1,545,681	1,666,551	1,773,747	1,872,223
Pasco	481,383	526,963	582,867	635,315	684,081	728,634
Pinellas	1,090,237	1,101,358	1,102,843	1,104,095	1,105,231	1,106,132
<b>Total</b>	<b>2,885,125</b>	<b>3,046,268</b>	<b>3,231,391</b>	<b>3,405,961</b>	<b>3,563,059</b>	<b>3,706,989</b>

# Demand Projections

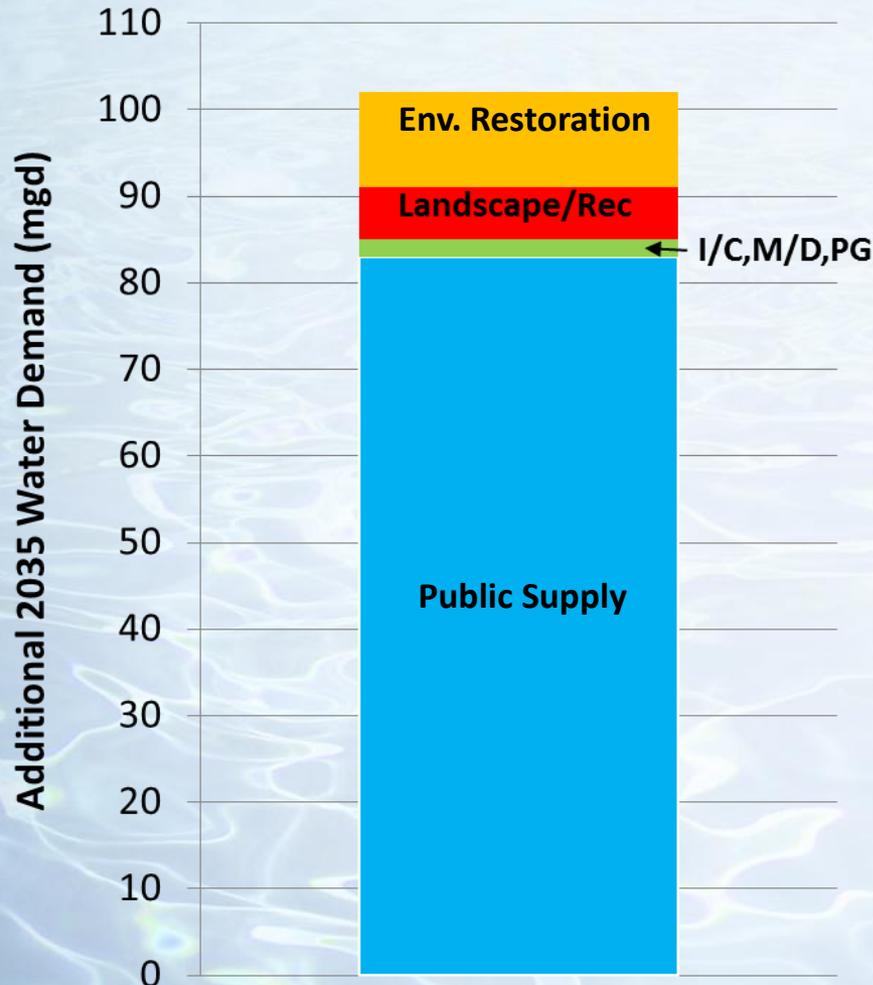
## Tampa Bay Region 2010-2035 (mgd)

Category	2010	2035	Change
Public Supply	292	375	83
Agriculture	76	64	-12
I/C, M/D, PG	14	13	-1
Landscape/Rec	16	22	6
<b>Total</b>	<b>398</b>	<b>474</b>	<b>76</b>

# Tampa Bay Planning Region Projected Water Demand and Water Availability

Approx. Total 102 mgd

Approx. Total 268 mgd



Water Availability Provided By:

- Desalination
- Groundwater
- Reclaimed water
- Surface water
- Water conservation

Note: Estimated Agricultural Reduction of 12 mgd

# Potential Additional Water Availability (mgd)

Planning Region	Surface Water		Reclaimed Water	Desalination		Fresh Groundwater		Water Conservation		Total
	Permitted Unused	Available Unpermitted	Post-2010 Benefits	Seawater	Brackish Groundwater	Surficial and Intermediate	Upper Floridan Unused/Permitted	Non-Ag.	Ag.	
Tampa Bay	66	19	66	35	9	6	15	46	6	268
Southern	30	152	26	40	13	20	3	12	7	303
Northern	1	88	11	15	0	0	23	19	5	162
Heartland	1	4	29	0	0	8	51	7	7	107
<b>Total</b>	<b>98</b>	<b>263</b>	<b>132</b>	<b>90</b>	<b>22</b>	<b>34</b>	<b>92</b>	<b>84</b>	<b>25</b>	<b>840</b>

# Meeting Future Demands - Districtwide

## Identified Supplies to Meet Demands

- Conservation
- Reclaimed Water
- Development of Other Water Supplies
  - Groundwater (traditional/brackish)
  - Surface water
  - Seawater
  - Increase storage (reservoirs and ASR)
- Regional Cooperation

Conservation options for Public Supply sector

# Conservation Options

BMP – Program Option	Savings in 2035 (mgd)	Cost/per 1,000 gallons	Total Cost
Alternative irrigation source	4.15	\$0.32	\$10,378,349
Residential High-Efficiency Toilet (HET)	2.94	\$0.35	\$8,658,653
Evapotranspiration (ET) Soil Moisture Sensor (SMS) irrigation controller	2.29	\$0.35	\$4,818,979
Residential Multi-family HET	1.26	\$0.37	\$3,897,424
Commercial High-Efficiency Urinal (HEU)	1.52	\$0.22	\$4,066,315
Commercial Ultra-Low-Flow Toilet (ULFT)	0.70	\$0.23	\$1,747,596
Cooling Tower	0.42	\$0.07	\$238,946
Commercial HET	0.33	\$0.32	\$1,204,266
Pre-Rinse Spray Valve	0.07	\$0.08	\$45,505
Dishwasher	0.05	\$0.42	\$146,640
<b>Total Public Supply</b>	<b>13.73</b>	<b>\$0.31</b>	<b>\$35,202,673</b>

# Conservation Options (cont.)

Other Conservation Options Listed For:

- Domestic Self-Supply (Residential HET, ...)
- Industrial/Commercial
- Landscape/Recreation (ET SMS irrigation controller)
- Agriculture (Mobile Irrigation Laboratory, Model Farms, ...)

# Reclaimed Water Options

- Augmentation With Other Sources
- Aquifer Storage and Recovery
- Distribution
- Efficiency/Research
- Interconnect
- Streamflow Augmentation
- System Expansion
- Natural System Enhancement/Recharge
- Saltwater Intrusion Barrier
- Storage
- Transmission
- Potable Reuse

# Partial List of Reclaimed Water Options

Option Name and Entity	County	Type	Supply (mgd)
City of Tampa and McKay Bay Restoration, Tampa. and the District	Hillsborough	Interconnect, NSE	7.1
N.W. Hillsborough Reuse Expansion, Hillsborough County	Hillsborough	System Expansion	4
S. Hillsborough County Recharge/Saltwater Intrusion Barrier, Hillsborough County, City of Tampa and others	Hillsborough	Recharge, SWB	20
N.W Hillsborough County/City of Temple Terrace Interconnect, City of Temple Terrace	Hillsborough	Interconnect	3.4
Central Hillsborough County/Plant City Interconnect, Plant City	Hillsborough	Interconnect	13.5
Plant City NSE, Plant City and others	Hillsborough	Rehydrate/Wetland/NSE	2.5
Water Purification Potable Reuse, City of Tampa and Tampa Bay Water	Hillsborough	Purification	20
Reuse Expansion Hillsborough County South County System 2016–2035, Hillsborough County	Hillsborough	System Expansion/Rehydrate Wetland/NSE	6
Recharge Plant City/ Dover WUCA 2025, Hillsborough County	Hillsborough	Rehydrate/Wetland/NSE	7.5
Interconnect with Tampa/ Hillsborough County East 2016–2035, City of Tampa and Hillsborough County	Hillsborough	Interconnect	32

# Reclaimed Water Options (cont.)

Option Name and Entity	County	Type	Supply (mgd)
<b>Tampa Bay Water Purification Project 2016–2035, Tampa Bay Water, City of Tampa, Hillsborough County, Pasco County, Pinellas County, City of St. Petersburg, City of New Port Richey</b>	Hillsborough	Purification	25
<b>Tampa Bay Water Aquifer Recharge-2016-2035, Tampa Bay Water and others</b>	Hillsborough/ Pasco	Rehydrate	22
<b>Pinellas County Potable Reuse Purification, Pinellas County and Tampa Bay Water</b>	Pinellas	Purification	10
<b>Reuse Expansion Clearwater 2016–2035, City of Clearwater</b>	Pinellas	System Expansion	2.5
<b>Clearwater Potable Reuse Purification 2016–2035, City of Clearwater</b>	Pinellas	Purification	2.5
<b>Reuse Expansion Dunedin 2016–2035, City of Dunedin</b>	Pinellas	System Expansion	1.75
<b>Largo Potable Reuse Purification 2016–2035, City of Largo</b>	Pinellas	Purification	5
<b>Reuse Expansion St. Petersburg System 2023–2035, City of St. Petersburg</b>	Pinellas	System Expansion	5
<b>St. Petersburg Potable Reuse Purification 2025–2035, City of St. Petersburg and Tampa Bay Water</b>	Pinellas	Purification	10

# Partial List of Surface Water/Stormwater Options

Option Water Body and Entity Responsible for Implementation	User Group	Avg Annual Yield (mgd)	Cost/1,000 gal	Storage Method/Level of Treatment
Lake Seminole Pinellas County Utilities	Urban reuse	1	2.07	Off-stream, ASR/1
Lake Tarpon Pinellas County Utilities	Urban reuse	3.7	4.94	ASR/2
S. Prong of Alafia River TBD	PS	5.8	7.06	Reservoir
N. Prong of Alafia River TBD	PS	5.2	7.06	Reservoir
Alafia River (Confluence of the North and South prongs) TBD	PS	13.2	7.14	Reservoir
Channel A Hillsborough County Water Resource Services	Urban reuse	1	6.59	Off-stream reservoir, ASR/3

# Desalination Water Options

Option Name and Entity	Capital Cost	Cost/1,000 gal	Supply (mgd)
TBW Big Bend	\$216,100,000	\$8.11	10
TBW Anclote Power Plant (full expansion)	\$551,100,000	\$7.00	25
TBW Anclote Power Plant (Phase 1)	\$262,200,000	\$9.00	9
TBW Anclote Power Plant (Phase 2)	\$252,200,000	\$7.00	Expand to 21

# Differences Since 2010 Plan

- Population estimates reduced and demand projections decreased

Planning Period	Population	Water Demand
2010	7,054,429 by 2030	1,620 mgd by 2030
2015	6,997,940 by 2035	1,484 mgd by 2035
Total Decrease	1%	9%

- Central Florida Water Initiative
  - Orange, Osceola, Polk, Seminole, and southern Lake counties

# Public Involvement

- Public workshops



- Brooksville: May 28 with live webcast – All sectors

Power Loss



- Tampa: June 18 with live webcast – AG sector



- Tampa: June 30 with live webcast – All sectors



- Sarasota: July 21 with live webcast – All sectors



- Inverness: July 23 – All sectors

Questions?