



# **SB 536 Study Workshop**

**SFWMD**

**October 20, 2014**



# Senate Bill 536

“DEP, in coordination with stakeholders shall conduct a comprehensive study and submit a report on the expansion of the beneficial use of reclaimed water, stormwater, and excess surface water in this state.”

Today, we will focus on three study elements related to expanding the beneficial use of these water sources:

- Impediments
- Incentives
- Storage Methods



# Senate Bill 536

## General Requirements:

- Hold a minimum of two public meetings to gather input on the study.
- Provide opportunity for public to submit written comments before submitting the report.
- Submit report to Governor, Senate President, Speaker of the House no later than December 1, 2015.

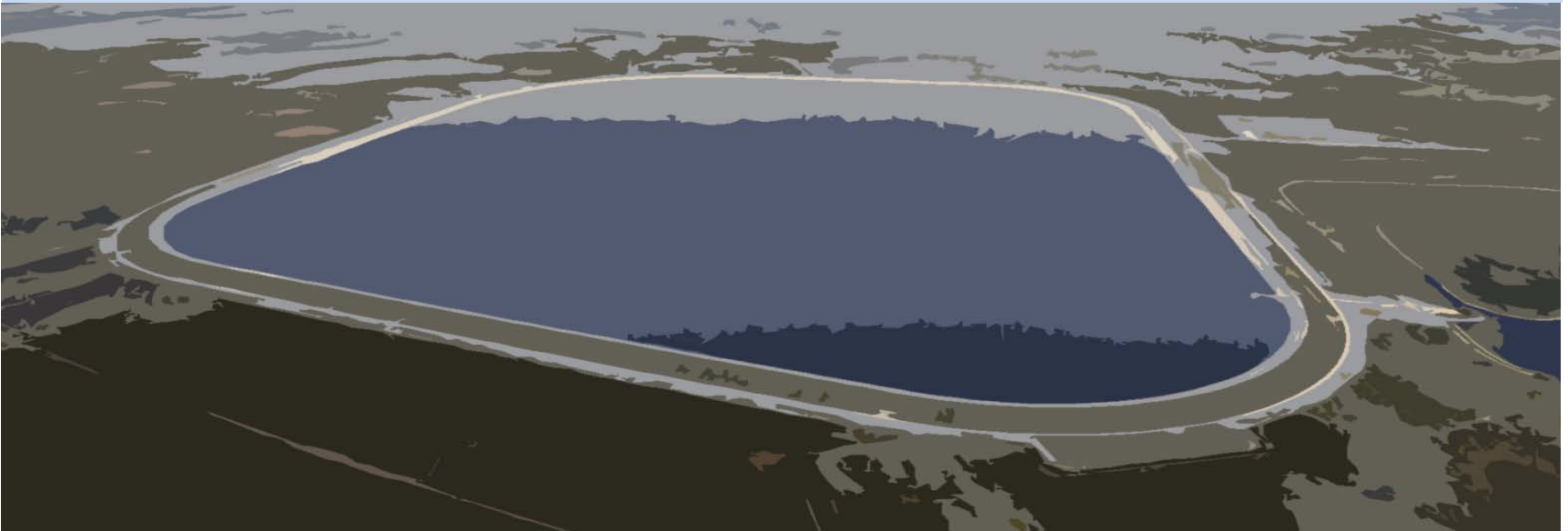


# Definitions

| Term                 | Definition   |
|----------------------|--|
| Reclaimed Water      | Water that has received at least secondary treatment and basic disinfection, and is reused after flowing out of a domestic wastewater treatment facility.  |
| Stormwater           | The flow of water which results from, and which occurs immediately following, a rainfall event and which is normally captured in ponds, swales, or similar areas for water quality treatment or flood control. |
| Excess Surface Water | Water withdrawn from rivers, lakes or other water bodies that is in excess of the amount of water needed to sustain healthy ecological conditions in the water body.   |

# Storage

Senate Bill 536 also directs DEP to determine the feasibility, benefit, and cost estimate needed to construct regional storage features for the beneficial use of reclaimed water, stormwater, and excess surface water.





# Storage Types

| Term             | Definition  |
|------------------|---|
| Aquifer Recharge | The enhancement of natural ground water supplies using man-made conveyances such as infiltration basins or injection wells. |
| ASR              | Aquifer Storage and Recovery - Injecting water underground and storing it for future withdrawal for beneficial purposes.    |
| Reservoirs       | A natural or artificial place where water is collected and stored for use, especially for water supply.                     |



# Storage Types

| Term                              | Definition   |
|-----------------------------------|--|
| Dispersed Water Storage           | The retention of regional stormwater runoff by private and public land owners, rather than allowing this water to drain off site into rivers and lakes. Typically, this water is stored using relatively simple structures to hold water on the landscape. |
| Wetlands & Other Natural Features | For the purposes of this study, the storage of water to create, enhance, or restore wetlands, and to indirectly recharge the aquifer or augment stream flows from these areas.   |



# Planning Workgroup

| Agency | Planning Workgroup Members                                      |
|--------|---|
| DEP    | Tom Beck, Janet Llewellyn, Carolyn Voyles<br>Shanin Speas-Frost |
| DACS   | Rich Buddell  |
| DOT    | Rick Renna  |
| NWFWMD | Leigh Brooks  |
| SFWMD  | Mark Elsner   |
| SJRWMD | Joanne Chamberlain  |
| SRWMD  | Ann Shortelle   |
| SWFWMD | Mark Hammond  |





# Major Tasks

- ✓ 1. Form Work Teams for Subject Areas in Study
  - a. Reclaimed Water
  - b. Stormwater
  - c. Excess Surface Water
  - d. Storage – Reservoirs
  - e. Storage – ASR (Aquifer Storage and Recovery) & Dispersed Water Management



# Subject Area Work Team Leaders

| Agency                     | Subject Area Work Team Leaders             |
|----------------------------|--|
| Reclaimed Water            | Shanin Speas-Frost (DEP)                   |
| Excess Surface Water       | Ann Shortelle (SR)                         |
| Stormwater                 | Joanne Chamberlain (SJR), Rick Renna (DOT) |
| Storage – Reservoirs       | Mark Hammond (SWF)                         |
| Storage –<br>ASR/Dispersed | Bob Verrastro (SF)                         |



# Major Tasks

- ✓ 2. Establish study website and email address for stakeholder communication
- ✓ 3. Conduct On-line Survey
- 4. Hold 1<sup>st</sup> Round of Public Workshops in Each WMD (**today**)
  - a. Present preliminary survey results to stakeholders
  - b. Solicit stakeholder comments on the study



# Major Tasks

5. Hold Additional Stakeholder Meetings, Review/Incorporate Stakeholder Comments, Prepare Draft Report
6. Hold 2<sup>nd</sup> Round of Public Workshops in Each WMD
  - a. Present draft report results to stakeholders
  - b. Solicit stakeholder comments on the draft report
  - c. Collect and review stakeholder comments
7. Prepare Final Report – **due December 1, 2015**



# Projected Schedule

| TASKS   | Date                        |
|---|-----------------------------|
| 4. Hold public workshops to present initial survey results, identify other stakeholder issues, and solicit comments   | October – November 2014     |
| 5. Hold additional stakeholder meetings<br>Review and incorporate stakeholder input<br>Assemble needed information for study report<br>Prepare draft study report | November 2014 – June 2015   |
| 6. Post draft study report on the web<br>Hold workshops for stakeholder comments<br>Review and incorporate stakeholder input                                      | July – August 15, 2015      |
| 7. Prepare draft final report for internal/team reviews   | August – November 2015      |
| Submit report to the Governor and the Legislature   | <b>NLT December 1, 2015</b> |

# Questions?



# Survey



Florida Department of Environmental Protection

## Survey for Senate Bill 536 Study Use of Reclaimed Water and Stormwater/Excess Surface Water

The 2014 Florida Legislature passed Senate Bill 536 requiring the Department of Environmental Protection to conduct a study and submit a report on the expansion of the use of [reclaimed water](#) and [stormwater/excess surface water](#). As a first step in our study, we are conducting a survey to gather stakeholder input and ideas related to expansion of these water sources. In the fall, we plan to hold public workshops in each water management district to present initial findings from the survey and to solicit further comments from stakeholders.

Please complete the survey no later than **August 19, 2014**. Thank you for your help with our study.

Please note that your responses to this survey are subject to disclosure as a public record pursuant to Chapter 119, Florida Statutes.

- I understand and wish to continue
- I do not wish to continue (end survey)



# Describe Self - % Respondents

| Describe Self (multiple choices allowed)    | %          |
|---|------------|
| Individual Water User                       | 26%        |
| Local Government                            | 24%        |
| Public Utility                              | 23%        |
| Consultant                                  | 18%        |
| Wastewater Utility                          | 12%        |
| Environmental Organization                  | 11%        |
| Regulatory or Oversight Agency              | 6%         |
| Professional Association                    | 6%         |
| Water Supply Authority                      | 5%         |
| Community Outreach Group                    | 5%         |
| Private Utility                             | 4%         |
| Builder/Developer/Contractor (added)        | 4%         |
| Academia                                    | 4%         |
| Industrial Association                      | 3%         |
| Research Organization                       | 3%         |
| Manufacturing/Commercial/Industrial (added) | 2%         |
| Attorney                                    | 2%         |
| Farmer/Cattleman/Ag Operations (added)      | 1%         |
| <b>Total Responses Statewide</b>            | <b>949</b> |

Responses:  
 949 statewide  
 354 SFWMD





# Sectors of Interest - % Respondents

| Sectors of Interest (multiple choices allowed) | %   |
|--|-----|
| Public Supply                                  | 49% |
| All  | 40% |
| Commercial/Industrial                          | 31% |
| Recreational Irrigation                        | 31% |
| Agriculture                                    | 23% |
| Power Generation                               | 8%  |
| Total Responses Statewide                      | 949 |

Responses:  
949 statewide  
354 SFWMD



# Survey Section - % Respondents

| Survey Type (statewide)           | %    |
|-----------------------------------|------|
| Both                              | 76%  |
| Stormwater / Excess Surface Water | 13%  |
| Reclaimed Water                   | 11%  |
| Total                             | 100% |

Responses:  
949 statewide  
354 SFWMD



# Survey Questions

- Reclaimed Water and Stormwater/Excess Surface Water
  - Impediments to Expanded Use and Potential Solutions
  - Incentives to Further Expanded Use
  - Methods for Increasing Storage
  - Other Relevant Information



# Survey Questions

- Reclaimed Water Only
  - Indirect Potable Reuse – Impediments and Solutions

| Term                          | Definition   |
|-------------------------------|--|
| <b>Indirect Potable Reuse</b> | The augmentation of either surface water or groundwater with reclaimed water, where natural processes of filtration and dilution of the water with natural flows will occur prior to intake by a drinking water treatment plant. |




# Ratings Table Example

**Question 2:** Please evaluate the importance of the following **incentives** that could further the expanded use of reclaimed water:

|   | Not Important         | Somewhat Important    | Moderately Important  | Important             | Very Important        |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Funding assistance for reclaimed water projects                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Funding or other assistance for educational programs to influence public perception | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Increased permit durations for related groundwater permits                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regulatory Changes  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other 1 (Please Specify)<br><input type="text"/>                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other 2 (Please Specify)<br><input type="text"/>                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |


# Preliminary Findings

 qualtrics

**Florida Department of Environmental Protection**

**Question 4:** Please evaluate the degree of importance of the following factors in **prohibiting or completing** **potable use** of reclaimed water:

|  | Not Important                    | Somewhat Important    | Moderately Important             | Very Important                   |
|--|----------------------------------|-----------------------|----------------------------------|----------------------------------|
| Engineering constraints/technology not available                                   | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Environmental constraints  | <input type="radio"/>            | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/>            |
| Fiscal constraints (cost prohibitive, bond funding, utility rate structures, etc.) | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> |
| Public health issues   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> |
| Public perception/customer resistance  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> |
| Regulations/regulatory actions   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input checked="" type="radio"/> |
| Other 1 (please specify)<br><input type="text"/>                                   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |
| Other 2 (please specify)<br><input type="text"/>                                   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            | <input type="radio"/>            |





# Impediments - Statewide

| Impediments (Totals = Number of Important + Very Important Responses)              | Reclaimed Water | Storm/XS Surface Water |
|--|-----------------|------------------------|
| Infrastructure availability  | 655             | 426                    |
| Fiscal constraints (cost prohibitive, bond funding, utility rate structures, etc.) | 604             | 439                    |
| Storage availability   | 585             | 430                    |
| Regulations/regulatory actions   | 556             | 341                    |
| Environmental constraints  | 548             | 366                    |
| Reliability of supply  | 511             | 378                    |
| Public perception/customer resistance  | 475             | 269                    |
| Direct potable reuse not allowed/considered  | 468             | n/a                    |
| Public health issues   | 460             | 245                    |
| Inefficient use of current reclaimed water supplies                                | 459             | n/a                    |
| Indirect potable reuse not allowed/considered                                      | 430             | n/a                    |
| Supplementation needed   | 409             | n/a                    |
| Technical expertise of local utility operators                                     | 407             | 236                    |
| Public's trust of utility operators  | 403             | 197                    |
| Engineering constraints/technology not available                                   | 336             | 250                    |
| Permit durations are too short   | n/a             | 207                    |

# Impediments – Essay Questions

- Identify the top two **impediments**
  - Describe each **impediment** in more detail
  - Tell us what could be done to **mitigate or eliminate** each impediment







# Incentives – Statewide

| Impediments (totals =Number of Important + Very Important Responses)                | Reclaimed Water | Storm/XS Surface Water |
|---|-----------------|------------------------|
| Funding assistance for projects   | 664             | 496                    |
| Regulatory Changes  | 491             | 357                    |
| Funding or other assistance for educational programs to influence public perception | 476             | 298                    |
| Increased permit durations  | 371             | 246                    |



# Incentives – Essay Questions

- Identify the top two **Incentives**
  - Describe each **incentive** in more detail





# Storage Methods - Statewide

| Storage Methods (Totals = Number of Important + Very Important Responses) | Reclaimed Water | Storm/XS Surface Water |
|---|-----------------|------------------------|
| Wetlands and other natural features                                       | 501             | 404                    |
| Aquifer recharge  | 500             | 377                    |
| Aquifer storage and recovery  | 459             | 331                    |
| Reservoirs  | 428             | 342                    |
| Dispersed Water Storage   | 423             | 347                    |
| Salt Water Barrier  | 372             | 255                    |



# Storage – Essay Questions



- Identify the top two **storage methods**
  - Describe **why** this is the most (second most) important method for increasing storage
  - What are the **impediments** to developing these regional storage methods
  - What can be done to **mitigate or eliminate** these impediments



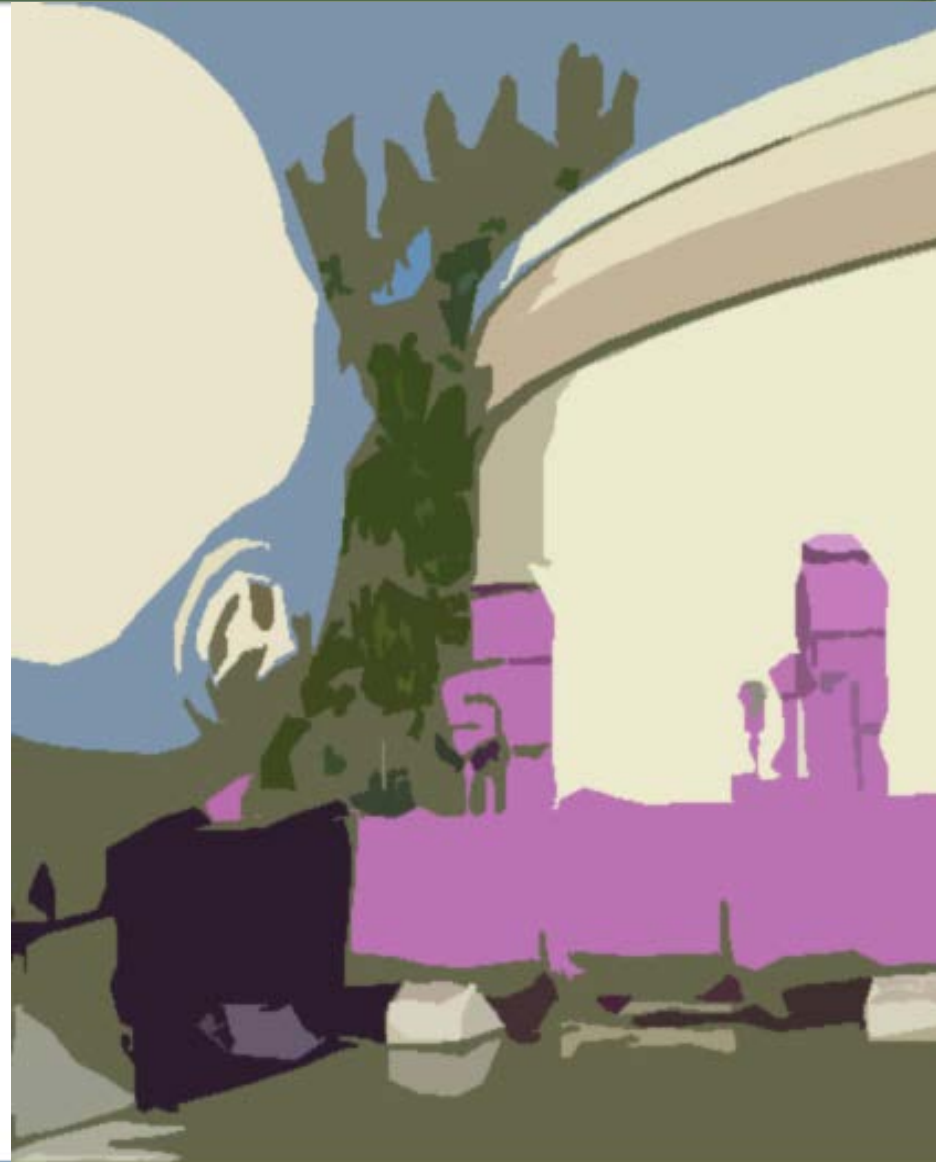
# Indirect Potable Reuse – Statewide

| Indirect Reuse Methods (Totals = Number of Important + Very Important Responses)   | Reclaimed Water |
|--|-----------------|
| Fiscal constraints (cost prohibitive, bond funding, utility rate structures, etc.) | 534             |
| Public perception/customer resistance  | 493             |
| Regulations/regulatory actions   | 455             |
| Environmental constraints  | 393             |
| Public health issues   | 392             |
| Engineering constraints/technology not available                                   | 278             |



# Indirect Reuse – Essay Questions

- Identify the top two **impediments**
  - Describe each **impediment** in more detail
  - Tell us what could be done to **mitigate or eliminate** each impediment





# Summary: Importance

| Category               | Top Ranked Items - Statewide  |
|------------------------|---|
| Impediments            | <ul style="list-style-type: none"><li>• Fiscal constraints</li><li>• Infrastructure availability</li><li>• Storage availability</li></ul> |
| Incentives             | <ul style="list-style-type: none"><li>• Funding for projects</li><li>• Regulatory changes</li><li>• Funding for education</li></ul>       |
| Storage Methods        | <ul style="list-style-type: none"><li>• Wetlands/natural areas</li><li>• Aquifer recharge</li></ul>                                       |
| Indirect Potable Reuse | <ul style="list-style-type: none"><li>• Fiscal constraints</li><li>• Public perception</li><li>• Regulations/regulatory actions</li></ul> |





# Summary: Importance - SF

| Category               | Top Ranked Items - Statewide  |
|------------------------|---|
| Impediments            | <ul style="list-style-type: none"><li>• Fiscal constraints</li><li>• Infrastructure availability</li><li>• Storage availability</li></ul> |
| Incentives             | <ul style="list-style-type: none"><li>• Funding for projects</li><li>• Regulatory changes</li><li>• Funding for education</li></ul>       |
| Storage Methods        | <ul style="list-style-type: none"><li>• Wetlands/natural areas</li><li>• Aquifer recharge</li></ul>                                       |
| Indirect Potable Reuse | <ul style="list-style-type: none"><li>• Fiscal constraints</li><li>• Public perception</li><li>• Regulations/regulatory actions</li></ul> |





# Summary: Themes

| Category               | Common Themes for All Categories - Statewide   |
|------------------------|--|
| Impediments            | <ul style="list-style-type: none"><li>• <b>Fiscal constraints</b></li><li>• Infrastructure availability</li><li>• Storage availability</li></ul>         |
| Incentives             | <ul style="list-style-type: none"><li>• <b>Funding for projects</b></li><li>• <b>Regulatory changes</b></li><li>• <b>Funding for education</b></li></ul> |
| Storage Methods        | <ul style="list-style-type: none"><li>• Wetlands/natural areas</li><li>• Aquifer recharge</li></ul>  |
| Indirect Potable Reuse | <ul style="list-style-type: none"><li>• <b>Fiscal constraints</b></li><li>• Public perception</li><li>• <b>Regulations/regulatory actions</b></li></ul>  |

# Questions?





# Contact Us

- Written comments are due to DEP by  
Friday, December 5, 2014
- Email: [sb536study@dep.state.fl.us](mailto:sb536study@dep.state.fl.us)
- SB 536 Study Web Site:  
<http://www.dep.state.fl.us/water/reuse/study.htm>

# Public Comments

