

REGION H

Water Planning Group

WATER MANAGEMENT STRATEGY COMMITTEE MEETING MATERIALS

March 21, 2018

**Freese and Nichols, Inc.
Houston Office**

Region H Water Planning Group
Water Management Strategy Committee
9:30 AM Wednesday
March 21, 2018
Freese and Nichols Houston Office
10497 Town and Country Way, Suite 600, Houston, TX 77024

AGENDA

1. Introductions.
2. Review and approve minutes of November 1, 2017 WMS Committee meeting.
3. **Receive public comments on specific issues related to agenda items 4 through 8.** (Public comments limited to 3 minutes per speaker)
4. Discuss Committee activities and schedule.
5. Discuss water management strategy recommendations and process from the Region H 2016 Regional Water Plan.
6. Discuss preliminary scope and budget for requesting Task 5 funds for the initiation of detailed investigation into potential water management strategies and consider making recommendations to the Region H Water Planning Group.
7. Discuss additional potential water management strategy focus areas for the 2021 RWP.
8. Consider development of a safety factor for the allocation of supplies and strategies to Water User Groups in development of the 2021 Regional Water Plan.
9. **Receive public comments.** (Public comments limited to 3 minutes per speaker)
10. Adjourn.

Persons with disabilities who plan to attend this meeting and would like to request auxiliary aids or services are requested to contact Philip Taucer at (713) 600-6835 at least three business days prior to the meeting so that appropriate arrangements can be made.

Agenda Item 2

Review and approve minutes of November 1, 2017 WMS
Committee meeting.

**REGION H WATER PLANNING GROUP
WATER MANAGEMENT STRATEGY COMMITTEE
MINUTES OF COMMITTEE MEETING
NOVEMBER 1, 2017**

A meeting of the Region H Water Planning Group Water Management Strategy Committee was held at 9:00 a.m., November 1, 2017, at the San Jacinto River Authority General and Administration Building. A notice of said meeting was posted as required by law.

MEMBERS PRESENT: Glenn Lord, John Bartos, Robert Bruner, Jace Houston, Ivan Langford, Mark Evans, Mike Turco, and Bob Hebert

DESIGNATED ALTERNATES: Brad Burnett for David Collinsworth, Jun Chang for Jimmie Schindewolf, Jim Sims for Kevin Ward

MEMBERS ABSENT: None

NON-VOTING MEMBERS PRESENT: Mark Evans

CONSULTANT TEAM: Jason Afinowicz, Philip Taucer, Mike Reedy, Courtney Merket, John Seifert, Glenda Callaway

The meeting was called to order at 9:01 a.m.

1. INTRODUCTIONS

Mr. Hebert welcomed the committee members and guests to the meeting.

2. RECEIVE PUBLIC COMMENTS ON SPECIFIC ISSUES RELATED TO AGENDA ITEMS 3 THROUGH 5

There were no public comments.

3. DISCUSS COMMITTEE ACTIVITIES AND SCHEDULE

Mr. Taucer provided an update to the 2021 Regional Water Plan schedule referencing various due dates.

4. DISCUSS THE PROCESS FOR IDENTIFYING POTENTIALLY FEASIBLE WATER MANAGEMENT STRATEGIES AND CONSIDER MAKING RECOMMENDATIONS TO THE REGION H WATER PLANNING GROUP.

Mr. Taucer explained the process applied by the Region H Water Planning Group in the 2016 Regional Water Plan (RWP) to identify potentially feasible Water Management Strategies (WMS) and

recommended applying a similar process for the 2021 RWP. The process would consist of identifying strategies from the prior RWP, adding new projects as requested by Water User Groups (WUGs) in a survey from August 2017, adding projects recommended by Major Water Providers, and considering other requests for inclusion. The Committee recommended updating the process to only consider identifying and evaluating projects where there is a projected water need. The Committee agreed to recommend this updated WMS identification process to the Region H Water Planning Group at a regular meeting later in the day on November 1, 2017.

5. DISCUSS THE PROCESS FOR EVALUATING POTENTIALLY FEASIBLE WATER MANAGEMENT STRATEGIES AND CONSIDER MAKING RECOMMENDATIONS TO THE REGION H WATER PLANNING GROUP.

Mr. Taucer explained the joint process of identifying shortages and evaluating potential Strategies based on WUG needs and WMS matrix criteria. The Committee recommended updating the process to only consider evaluating projects where there is a projected water need. The committee also discussed the consideration of physical proximity and ability to support a strategy or project's unit cost as factors when evaluating the viability and feasibility of applying WMS to a specific WUG. The committee recommended adding a check-box criterion (not a numerical rating) to WMS evaluation to check that a WMS development timeline is in agreement with the decade in which unmet needs are projected to occur.

6. RECEIVE PUBLIC COMMENTS

Mr. Ken Kramer noted that flood control function could be identified by note in applicable WMS technical memoranda.

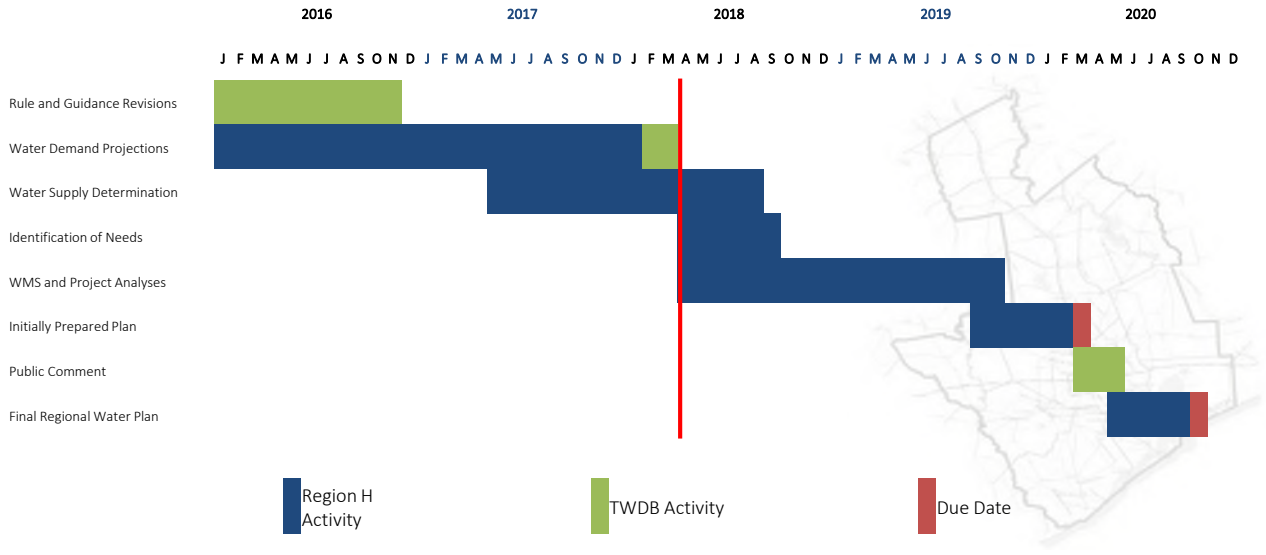
7. ADJOURN

Without objection, the meeting was adjourned at 9:40 a.m.

Agenda Item 4

Discuss Committee activities and schedule.

Agenda Item 4 Committee Activities and Schedule



Agenda Item 4 Committee Activities and Schedule

Date	Scheduled Events/Tasks
03/2018	Water Management Strategy Committee Meeting
04/2018	Region H WPG Meeting
09/2018	DUE DATE: Technical Memorandum
03/2020	DUE DATE: Initially Prepared Plan
10/2020	DUE DATE: FINAL RWP

Agenda Item 4

Committee Activities and Schedule

Completed

- Process to identify
- Process to evaluate

In Progress

- Supply factor goal
- Initial WMS scope development

In Near Future

- Additional WMS scope
- Evaluation and recommendations

At The End

- Implementation analysis
- Prioritization analysis

Agenda Item 5

Discuss water management strategy recommendations and process from the Region H 2016 Regional Water Plan.

Agenda Item 5 WMS in 2016 Region H Plan

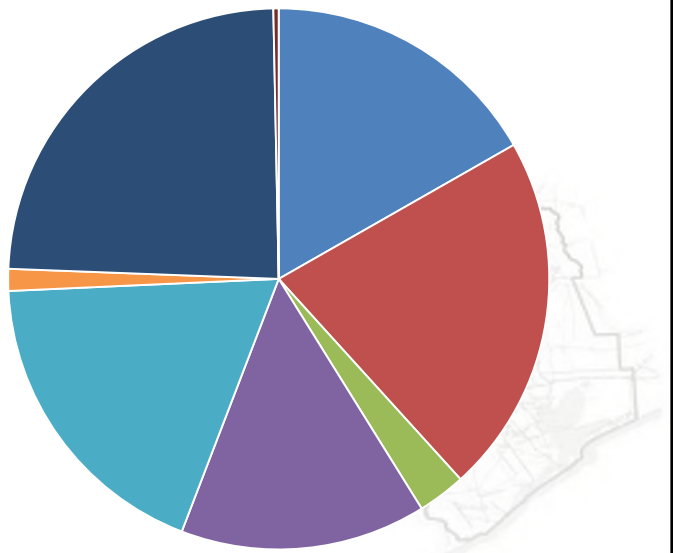
- Similar to adopted 2021 Region H process
- Two-track process
- High level of detail
 - 70 Water Management Strategies (WMS)
 - 705 Projects



Agenda Item 5 WMS in 2016 Region H Plan

2070 Projects

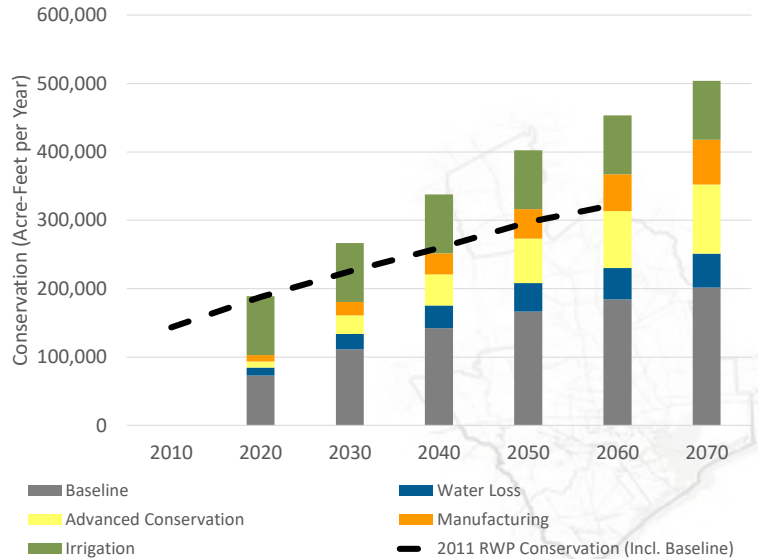
- Conservation
- Contracts
- Groundwater
- Surface Water
- Reuse
- Treatment
- GRPs
- Other



Agenda Item 5 WMS in 2016 Region H Plan

Conservation Projects

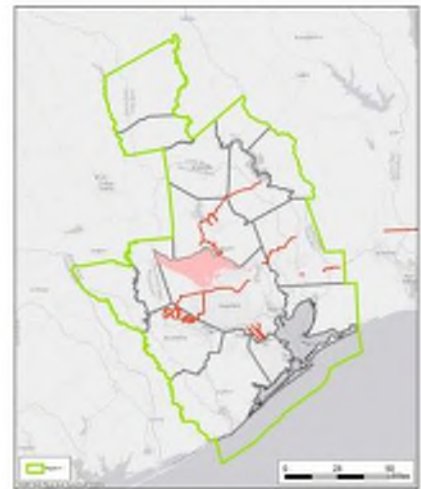
- Industrial
- Irrigation
- Municipal
 - Baseline
 - Advanced
 - Water Loss Reduction



Agenda Item 5 WMS in 2016 Region H Plan

Conveyance Projects

- GRP Transmission and Distribution
 - CHCRWA
 - NFBWA
 - NHCRWA
 - WHCRWA
- East Texas Transfer
- Lake Livingston to SJRA Transfer
- Luce Bayou Transfer
- Old Galveston Road Transmission

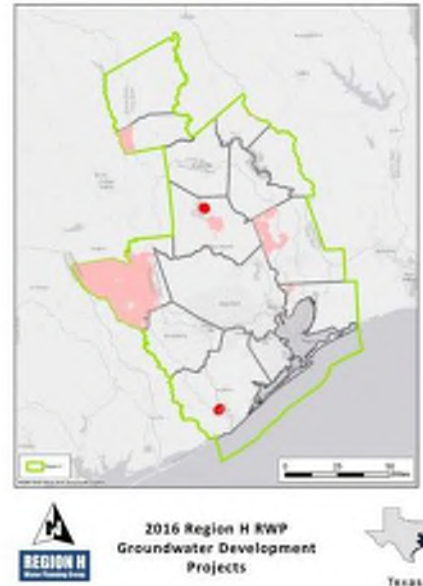


2016 Region H RWP
Conveyance Projects



Agenda Item 5 WMS in 2016 Region H Plan

- Groundwater Development Projects
 - Brackish Groundwater Supplies
 - General
 - BWA
 - City of Conroe
 - Expanded Use of Groundwater
 - Groveton Groundwater Expansion
 - SJRA Catahoula Aquifer Supplies



Agenda Item 5 WMS in 2016 Region H Plan

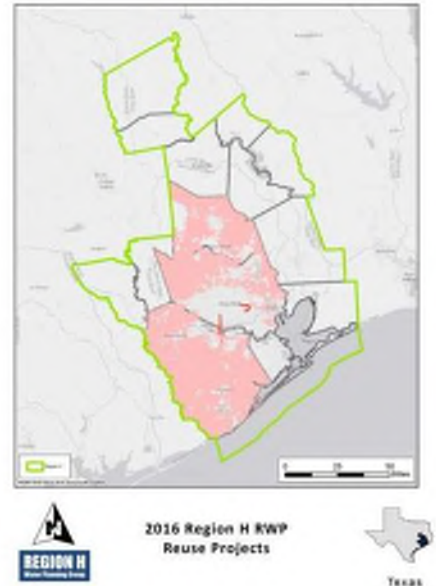
- Groundwater Reduction Plans
 - CHCRWA
 - City of Houston
 - City of Missouri City
 - City of Richmond
 - City of Rosenberg
 - City of Sugar Land
 - Fort Bend County MUD 25
 - Fort Bend County WCID 2
 - NFBWA
 - NHCRWA
 - Panorama Village and Shenandoah
 - Porter SUD
 - River Plantation
 - SJRA
 - WHCRWA



Agenda Item 5 WMS in 2016 Region H Plan

■ Reuse Projects

- Indirect
 - City of Conroe
 - City of Houston
 - City of Pearland
 - GCWA Reclaimed Water from Houston
 - Montgomery County MUDs #8 and #9
 - Regional Return Flows
 - SJRA City of Conroe
- Direct
 - Wastewater Reclamation for Municipal Irrigation



Agenda Item 5 WMS in 2016 Region H Plan

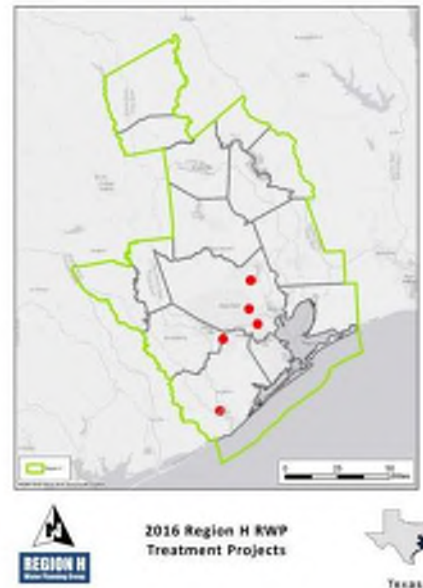
■ Surface Water Projects

- Allens Creek Reservoir
- BRA System Operation Permit
- Dow Expansion to Harris Reservoir
- Freeport Seawater Desalination



Agenda Item 5 WMS in 2016 Region H Plan

- Treatment Projects
 - BWA Treatment Plant Expansion
 - City of Houston Treatment Expansion
 - CLCND West Chambers County System
 - Houston NEWPP Expansion
 - Pearland Surface Water Treatment Plant



Agenda Item 5 WMS in 2016 Region H Plan

- Other Projects
 - Brazos Saltwater Barrier



Agenda Item 5 WMS in 2016 Region H Plan



\$62.6 billion

plan implementation

*\$73 - \$151 billion lost annually
424,000 – 1.3 million jobs lost*



\$10.9 billion

plan implementation

*\$16 - \$33 billion lost annually
77,300 – 251,000 jobs lost*

Agenda Item 6

Discuss preliminary scope and budget for requesting Task 5 funds for the initiation of detailed investigation into potential water management strategies and consider making recommendations to the Region H Water Planning Group.

Agenda Item 6 Task 5 Funding

- WMS analyses funded under Phase 2
- \$948,695 for Region H
- Additional steps for release
 - Scope and fee request
 - TWDB approval
- Can make multiple requests
 - Better assess RWP focus
 - Inter-task flexibility
- TWDB form now available



Agenda Item 6 Task 5 Funding



Development of WMS Planning Database

Scope and Budget

- Tool for allocation of volumes and costs
- Coordinate with TWDB to align with DB22 structure
- Budget of \$49,600

Key Considerations

- Overlaps all WMS studies
- Efficiency
- Stability
- Support of reports and requests

Agenda Item 6 Task 5 Funding



Update and Reallocation of Strategies to WUGs

Scope and Budget

- Evaluate based on studies/matrix
- Process documentation
- Strategy allocations
- Database efforts
- Develop RWP Chapter
- Budget of \$72,000

Key Considerations

- Overlaps all WMS studies
- Key to plan development

Agenda Item 6 Task 5 Funding



Expanded Use of Groundwater

Scope and Budget

- Regulating agency coordination
- Identify users and compare against remaining availability
- Allocate within regulatory limits
- Update yield, cost, etc.
- Budget of \$27,200

Key Considerations

- Major supply
- Considered early in allocation process
- Ties in to ongoing groundwater process

Agenda Item 6 Task 5 Funding



Groundwater Reduction Plans

Scope and Budget

- Project sponsor coordination
- Update technical details
- Update yield, cost, etc.
- Budget of \$49,600

Key Considerations

- Major components
- Driver of large number of projects
- Ties in to ongoing groundwater process

Agenda Item 6 Task 5 Funding



Contractual Transfers

Scope and Budget

- Consider WMS to allocate available supplies
- Consider new supplies and recursive water related to intermediary infrastructure
- Develop summary memorandum
- Budget of \$44,800

Key Considerations

- Any WMS contingent on contracts
- Crucial component of regional supply

Agenda Item 6 Task 5 Funding



Comprehensive Cost Updates

Scope and Budget

- Revisit cost updates for all projects
- Adjust for inflation
- Identify opportunities to more thoroughly assign costs for under-documented components
- Budget of \$113,700

Key Considerations

- Any WUG or sponsor with WMS not studied separately
- Enhanced project definition

Agenda Item 6 Task 5 Funding

Task	Cost
Development of WMS Planning Database	\$49,600
Update and Reallocation of Strategies to WUGs	\$72,000
Expanded Use of Groundwater	\$27,200
Groundwater Reduction Plans	\$49,600
Contractual Transfers	\$44,800
Comprehensive Cost Updates	\$113,700
TOTAL	\$356,900

Agenda Item 6

Task 5 Funding

- Thoughts?
- Recommendations to RWPG?



**SUGGESTED SCOPING TEMPLATE FOR CURRENTLY CONTRACTED TASK 5A FUNDING FOR
REGION-SPECIFIC SUBTASKS**

Strategy Type(s)	ASR	Conservation/Drought Management	Groundwater Desal	Groundwater Dvlp	Reuse	New Major Reservoir	Other Surface Water	Seawater Desal	Conjunctive Use	Other WMS (Subordination, etc)	Region	Overall TWDB Task Number	SubTask WMS evaluation number	SubTask WMS Database	SubTask Scope of Work Write-up	Deliverable	SubTask Budget (\$)	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle? If yes, describe the changed condition.	When was this WMS identified by RWPG as potentially feasible?	Was the WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical information? If no, indicate specific update in subtask sow column E	
										X	H	5A	01.0	Development of WMS Planning Database	Prepare a planning tool for allocation of WMS volumes and costs to enhance project allocation. Coordinate with TWDB regarding structure and functionality of DB22 in order to mirror statewide process for project and WMS tracking.	Inputs to DB22 for all WMS and projects.	\$ 49,600	Multiple	No	N/A	N/A	N/A	
										X	H	5A	02.0	Update and Reallocation of Strategies to WUGs	Evaluate potential water management strategies based on technical evaluations and selection criteria matrix and develop documentation of selection process. Allocate selected WMS to WUGs with needs. Update RWP document and incorporate strategy allocations into DB22. Develop Chapter 5 document, incorporating modifications from public, RWPG, and agency comments.	Chapter 5 of the Regional Water Plan document and corresponding data submittal through the DB22 interface.	\$ 72,000	All with projected needs	Yes - based on updated needs assessment and recommended WMS	N/A	No	No	
				X							H	5A	03.0	Expanded Use of Groundwater	Coordinate with the groundwater regulating agencies regarding the status and results of the ongoing groundwater availability rules. Identify WUGs or groups of WUGs currently utilizing groundwater sources. Compare against remaining volumes of modeled available groundwater after allocation of existing groundwater supplies. Allocate remaining modeled available groundwater to WUGs with needs within the limits of groundwater reduction plans and subsidence and conservation district rules. Update technical details, yields, costs, and other appropriate factors as applicable.	Technical memorandum describing strategy and summarizing as applicable supply sources and quantities, sponsors and users, facility locations, implementation schedule, cost, issues and considerations regarding implementation, and relevant references.	\$ 27,200	WUGs in counties with projected needs and unallocated groundwater supplies	Yes - Ongoing groundwater rule making	Yes - 2nd, 3rd, and 4th planning cycles	No	No	
										X	H	5A	04.0	Groundwater Reduction Plans	Coordinate with project sponsors regarding the status of their projects. Update technical details, yields, costs, and other appropriate factors as applicable.	Technical memoranda describing strategy and summarizing as applicable supply sources and quantities, sponsors and users, facility locations, implementation schedule, cost, issues and considerations regarding implementation, and relevant references.	\$ 49,600	Multiple WUGs and WWPs in Fort Bend, Galveston, Harris, and Montgomery Counties	Yes - Partial implementation and updates to a number of GRPs	Yes - 4th planning cycle	No	No	
										X	H	5A	05.0	Contractual Transfers	Examine WMS to identify which require contractual agreements and determine volumes associated with these agreements. Review will include both new supplies and recursive strategies such as transmission infrastructure WMS. Summarize recommended contractual relationships by entity and supply source.	Technical memorandum describing strategy and summarizing the contractual volumes and associated entities necessary to facilitate implementation of other WMS.	\$ 44,800	Any with WMS contingent on a contract	Yes - Potential for different contractual needs based on other WMS	Contractual transfer strategies recommended in 2001, 2006, 2011, and 2016 Regional Water Plans	Yes - 1st, 2nd, 3rd, and 4th planning cycles	No	No
										X	H	5A	06.0	Comprehensive Cost Updates	Revisit cost updates for all projects and apply proper cost adjustments for inflation. Also investigate projects to identify opportunities to more thoroughly assign costs for under-documented project components in previous RWPGs.	Updated technical memoranda for all projects not studied under specific, detailed analyses.	\$ 113,700	Any WUG or WWP with a WMS not studied in detail under separate funding	Yes - Updates for inflation and enhanced project definition	Yes - All planning cycles	Yes	Yes	
REGION-SPECIFIC SUBTASKS TOTAL BUDGET																	\$ 356,900						

April 4, 2018

Agricultural

Robert Bruner
Pudge Willcox,
Executive Committee

Counties

John Blount
Judge Mark Evans, Chair
Judge Art Henson

Electric Generating Utilities

Vacant

Environmental

John R. Bartos,
Executive Committee

Groundwater Management Areas

David Bailey
Kathy Jones

Industries

James Comin
Glenn Lord

Municipalities

Yvonne Forrest
Robert Istre

Public

Carl Masterson

River Authorities

David Collinsworth
Jace Houston, Secretary
Kevin Ward

Small Businesses

Judge Bob Hebert
Ruth Stultz
Vacant

Water Districts

Marvin Marcell
Mike Turco
Jimmie Schindewolf

Water Utilities

Ivan Langford
James Morrison
William Teer

Lann Bookout
Executive Administrator
Texas Water Development Board
1700 North Congress Av.
Austin, Texas 78701

Re: Region H Request for Task 5A Notice-to-Proceed

Dear Mr. Bookout:

The Region H Water Planning Group (RHWPG) took public comment on and adopted a process for identifying and evaluating Water Management Strategies (WMS) at a public meeting on December 6, 2017. The RHWPG, in conjunction with the Region H WMS Committee, has subsequently considered the efforts anticipated to be necessary for WMS analysis and has initiated the Task 5A scope development process. Six subtasks have been identified for which the RHWPG wishes to request written notice-to-proceed from TWDB; in accordance with Texas Water Development Board (TWDB) guidance, more information on these subtasks is included in the attached budget request form. Approval for submittal of this request was granted at the April 4, 2018 meeting of the RHWPG.

The identified subtasks were primarily selected due to applicability to and facilitation of a wide range of other anticipated Task 5A analyses. The proposed groundwater studies are also closely related to the evaluation of existing supplies due to the nature of groundwater regulation and ongoing source conversion initiatives in Region H. For these reasons, the RHWPG feels it appropriate to request notice-to-proceed prior to completion of the analysis of projected water needs.

Please feel free to contact myself or Philip Taucer of Freese and Nichols at 713-600-6835 with any questions regarding this request.

Sincerely,

Mark Evans
Chair, Region H Water Planning Group

Agenda Item 7

Discuss additional potential water management strategy focus areas for the 2021 RWP.

Agenda Item 7

WMS Focus Areas



Region H
DRAFT Potentially Feasible WMS and Key Projects

Conservation

Industrial Conservation
Irrigation Conservation
Municipal Conservation

Contractual Transfer

TRA to COH Transfer

Conveyance

CHCRWA Transmission and Distribution Expansion
COH, NHCRWA, and CHCRWA Shared Transmission
East Texas Transfer
GCWA Treated Water from LNVA¹
Jersey Village Second Connection²
Lake Livingston to SJRA Transfer
Luce Bayou Interbasin Transfer
NFBWA Phase 2 Distribution Segments
NHCRWA Distribution Expansion
NHCRWA Transmission Line
Old Galveston Road Transmission Improvements
WHCRWA Distribution Expansion
WHCRWA/NFBWA Transmission Line

Groundwater Development

Aquifer Storage and Recovery¹
Brackish Groundwater Development
BWA Brackish Groundwater
Conroe Brackish Groundwater Desalination
Expanded Use of Groundwater
Forestar Houston County Project¹
Forestar Liberty County Project¹
Groveton Groundwater Expansion
SJRA Catahoula Aquifer Supplies

Groundwater Reduction Plans

CHCRWA GRP
City of Houston GRP
City of Missouri City GRP
City of Richmond GRP
City of Rosenberg GRP
City of Sugar Land GRP
Fort Bend County MUD 25 GRP
Fort Bend County WC&ID No. 2 GRP
NFBWA GRP
NHCRWA GRP
Panorama Village and Shenandoah Joint GRP
Porter SUD Joint GRP
River Plantation and East Plantation Joint GRP
SJRA GRP
WHCRWA GRP

Region H
DRAFT Potentially Feasible WMS and Key Projects

Reuse

City of Conroe Reuse
City of Houston Reuse
City of Pearland Reuse
GCWA Reclaimed Water from COH
Grand Lakes Reclaimed Water System
Montgomery County MUDs #8 and #9 Reuse
San Jacinto Basin Regional Return Flows
SJRA Conroe Reuse Project
Wastewater Reclamation for Industry¹
Wastewater Reclamation for Municipal Irrigation
WHCRWA Reuse²

Surface Water Development

Allens Creek Reservoir
BRA System Operation Permit
Dow Reservoir and Pump Station Expansion
Freeport Seawater Desalination
Lake Somerville Augmentation¹
Little River Off-Channel Reservoir¹
Lone Star Lake¹

Treatment

BWA Treatment Plant Expansion
City of Houston Treatment Expansion
CLCND West Chambers System
Northeast Water Purification Plant Expansion
Pearland Surface Water Treatment Plant

Other Infrastructure

Brazos Saltwater Barrier

Notes:

1. *Considered but not recommended in the Region H 2016 RWP.*
2. *Requested through the 2017 Region H WUG survey.*

Agenda Item 8

Consider development of a safety factor for the allocation of supplies and strategies to Water User Groups in development of the 2021 Regional Water Plan.

Agenda Item 8

Allocation Safety Factor

WMS

Need

- Declared Management Safety Factor goal
- RWPG must justify in Plan
 - What
 - Why
- Otherwise, just calculate as normal
- Region H declined option in 2016 RWP

