MEETING MATERIALS

June 6, 2012

San Jacinto River Authority

Region H Water Planning Group
10:00 AM Wednesday
June 6, 2012
San Jacinto River Authority Office
1577 Dam Site Rd, Conroe, Texas

AGENDA

1. Introductions.
2. Review and approve minutes of May 2, 2012 meeting.
3. **Receive public comments on specific issues related to agenda items 4 through 11**. (Public comments limited to 3 minutes per speaker)
4. Consider and take action on the resignation of Danny Vance as a voting member of the Region H WPG representing River Authorities.
5. Consider and take action on the selection of J. Kevin Ward as a voting member of the Region H WPG representing River Authorities.
6. Receive update from Consultant Team regarding the schedule and milestones for the first phase of development of the 2016 Region H Regional Water Plan.
7. Discussion and possible action to authorize the Consultant Team to provide public notice and submit a grant application to TWDB on behalf of Region H for funding the second phase of the fourth round of regional water planning.
8. Receive update from Consultant Team and Surface Water Supply Committee regarding draft surface water supply availability estimates for use in development of the 2016 Region H Regional Water Plan.
9. Receive presentation from the Consultant Team and Water Management Strategy Committee on the strategy selection process and criteria for the 2016 Regional Water Plan and take action as necessary.
10. Review and consider authorizing Consultant Team to submit a scope of services and budget estimate for accelerated funding under Task 4D of the 2016 Regional Water Plan.
11. Receive report regarding recent and upcoming activities related to communications and outreach efforts on behalf of the Region H Planning Group.
12. Agency communications and general information.
13. **Receive public comments**. (Public comments limited to 3 minutes per speaker)
14. Next Meeting: September 5, 2012.
15. Adjourn

Agenda Item 2

Review and approve minutes of May 2, 2012 meeting.

MINUTES
REGION H WATER PLANNING GROUP MEETING
10:00 A.M.
May 2, 2012
SAN JACINTO RIVER AUTHORITY
GENERAL AND ADMINISTRATION BUILDING
1577 DAM SITE ROAD
CONROE, TEXAS

MEMBERS PRESENT: David Bailey, John Bartos, John Blount, Robert Bruner, Jun Chang, Mark Evans, Bob Hebert, Art Henson, John Hofmann, Jace Houston, John Howard, Robert Istre, Kathy Jones, Gena Leathers, Glynna Leiper, Ted Long, Carl Masterson, James Morrison, Ron Neighbors, Jimmie Schindewolf, C. Harold Wallace, and Pudge Willcox

DESIGNATED ALTERNATES: Tom Michel for Marvin Marcell, Jim Sims for Danny Vance

MEMBERS ABSENT: William Teer and Steve Tyler

NON-VOTING MEMBERS PRESENT: Scott Hall, Temple McKinnon, and Melinda Silva

PRESIDING: Mark Evans, Chair

CALL TO ORDER REGULAR MEETING AT 10:12 A.M.

A quorum was present.

INTRODUCTIONS

Mr. Evans welcomed everyone and alternates were announced.

REVIEW AND APPROVE MINUTES OF FEBRUARY 29, 2012 MEETING

The minutes for the February 29, 2012, meeting were presented. Motion was made by Mr. Ron Neighbors, seconded by Mr. Art Henson, to approve the minutes. Mr. Pudge Willcox stated that a small change needed to be made on the last page of the minutes to reflect that he had made the comments noted during the public comment period. The motion carried unanimously with the change.

RECEIVE PUBLIC COMMENTS ON SPECIFIC ISSUES RELATED TO AGENDA ITEMS 4 THROUGH 11

There were no public comments.

CONSIDER AND TAKE ACTION ON THE APPOINTMENT OF EXECUTIVE COMMITTEE MEMBERS OF THE REGION H WATER PLANNING GROUP

Mr. Evans stated that since Mr. Reed Eichelberger had stepped down from the planning group at the last meeting and because he also served as the Secretary of the Executive Committee, it was necessary to appoint someone to take his place. Mr. Jimmie Schindewolf encouraged the group to replace Mr. Eichelberger with Mr. Jace Houston.

Recommendation was made by Mr. Henson to replace Mr. Eichelberger with Mr. Houston as the Secretary for Region H and a member of the Executive Committee. Mr. Bruner seconded the motion. The motion carried unanimously.

RECEIVE UPDATE FROM CONSULTANT TEAM REGARDING THE SCHEDULE AND MILESTONES FOR THE FIRST PHASE OF DEVELOPMENT OF THE 2016 REGION H REGIONAL WATER PLAN

Mr. Jason Afinowicz gave a presentation regarding the schedule and milestones for the first phase of development. He stated that nothing had changed since the last meeting.

RECEIVE UPDATE FROM CONSULTANT TEAM AND GROUNDWATER SUPPLY COMMITTEE REGARDING DRAFT GROUNDWATER SUPPLY AVAILABILITY ESTIMATES FOR USE IN DEVELOPMENT OF THE 2016 REGION H REGIONAL WATER PLAN

Mr. Afinowicz discussed the draft groundwater supply availability estimates. He mentioned that Region H contains the following GMAs which are comprised of a specific number of counties: GMA-11 (1 county), GMA-12 (2 counties), and GMA-14 (12 counties). Discussion ensued regarding possible issues with GMA-14. The Groundwater Supply Committee and the Consultant Team will continue to work with GMA 14 in order to reconcile differences in the approximation of available groundwater supplies.

RECEIVE UPDATE FROM CONSULTANT TEAM AND SURFACE WATER SUPPLY COMMITTEE REGARDING DRAFT SURFACE WATER SUPPLY AVAILABILITY ESTIMATES FOR USE IN DEVELOPMENT OF THE 2016 REGION H REGIONAL WATER PLAN, INCLUDING SUPPLIES ORIGINATING FROM NECHES-TRINITY, TRINITY-SAN JACINTO, AND BRAZOS-COLORADO COASTAL BASINS

Mr. Afinowicz updated the group on the draft surface water supply availability estimates. He continued by stating the source, county, and yield for the following coastal basins: Neches-Trinity, Trinity-San Jacinto, and Brazos-Colorado. Discussion ensued regarding local supplies (ie: stock ponds and mining).

RECEIVE PRESENTATION FROM THE CONSULTANT TEAM AND WATER MANAGEMENT STRATEGY COMMITTEE ON THE STRATEGY SELECTION PROCESS AND CRITERIA, PRELIMINARY LIST OF ALTERNATIVES FOR DETAILED ANALYSIS IN THE DEVELOPMENT OF THE 2016 REGIONAL WATER PLAN, AND DEVELOPMENT OF A SAFETY FACTOR FOR THE ALLOCATION OF SUPPLIES AND STRATEGIES TO WATER USER GROUPS AND TAKE ACTION AS NECESSARY

Mr. Afinowicz presented the results from the Water Management Strategy Committee meeting including the rating system for WMS. Mr. Bob Hebert stated that the committee's recommendation was to stay away from negative numbers and to utilize a 1-5 system to give flexibility with regard to the evaluation criteria.

Discussion ensued regarding the WMS selection process, list of WMS for study, and safety factor for allocations. Discussion continued regarding how the rating system relates to specific projects for specific WUGs.

Mr. Afinowicz provided the potential water management strategies list and requested that the group email him any additions or changes within two weeks.

CONSIDER AND TAKE ACTION ON AUTHORIZING THE CONSULANT TEAM TO DEVELOP A SCOPE OF SERVICES AND BUDGET ESTIMATE FOR ACCELERATED FUNDING UNDER TASK 4D OF THE 2016 REGIONAL WATER PLAN

Mr. Afinowicz discussed developing a scope of services and budget estimates for accelerated funding. He stated that the Task 4D Schedule had changed resulting in a need for an additional meeting in June.

Motion was made by Mr. Morrison to authorize the consultant team to develop a scope of services and budget estimate for accelerated funding under Task 4D. Mr. Hebert seconded the motion. The motion carried unanimously.

RECEIVE REPORT REGARDING RECENT AND UPCOMING ACTIVITIES RELATED TO COMMUNICATIONS AND OUTREACH EFFORTS ON BEHALF OF THE REGION H PLANNING GROUP

Mr. Afinowicz continued by discussing recent community outreach activities. He stated that the consultant team spoke at the *Houston Land Water Sustainability Forum* at the end of March and the GMA 14 meeting in April. He also mentioned the following meetings: *Brazoria County Petrochemical Council (05/17), Deer Park CAC (06/04), and Brazoria County EDA (07/09)*.

AGENCY COMMUNICATIONS AND GENERAL INFORMATION

Ms. Temple McKinnon stated that the Board had proposed rule changes to Chapters 357, 358, and 355. She discussed the comment period on the rules.

RECEIVE PUBLIC COMMENTS

Brandt Manchenn, with the Houston Chapter of the Texas Sierra Club, expressed his ongoing concerns regarding proposed new reservoirs.

NEXT MEETING

June 6, 2012
San Jacinto River Authority
General and Administration Building
1577 Dam Site Road
Conroe, Texas 77304

ADJOURNED AT 12:10 P.M.

Agenda Item 4

Consider and take action on the resignation of Danny Vance as a voting member of the Region H WPG representing River Authorities.

DANNY F. VANCE

2322 TABLE ROCK COURT, ARLINGTON, TEXAS 76006

April 27, 2012

The Honorable Mark Evans, Chairman
Region H Water Planning Group
1577 Dam Site Road
Conroe, TX 77304

Dear Mark:

As the Region H Planning Group begins the next cycle of planning to meet the 50 year water needs of the region, it is timely for me to step down as a member of the Planning Group.

The Regional Planning Process exceeded my expectations in its deliberations and discussions regarding the future needs of a secure water future for Texas. I have been impressed with the dedication and effort demonstrated by all members of the Planning Group in their thoughtful comments and views about water resources. Region H is fortunate to have the water resources currently available but clearly more will be needed to meet the 50 year projections. The Region H Planning Group is comprised of a good combination of water professionals and others outside water resources management, and I am confident that the water future of the Region will be adequately planned.

It has been a pleasure to work with so many fine folks from different interests and areas of the Region.

This resignation is effectively immediately.

Please don't hesitate to contact me at any time if I can provide information or assistance.

Very truly yours,

Danny F. Vance
DannyVance@tx.rr.com
817-640-6300

Agenda Item 5

Consider and take action on the selection of J. Kevin Ward as a voting member of the Region H WPG representing River Authorities.

Trinity River Authority of Texas

General Office

May 16, 2012

The Honorable Mark Evans, Chairman
Region H Water Planning Group
1577 Dam Site Road
Conroe, Texas 77304

Re: Recommendation for J. Kevin Ward to fill the unexpired term for the recently vacated river authority position on the Region H Planning Group

Dear Mark:

On behalf of the Trinity River Authority of Texas, I request that the Nominating Committee consider my election to the open river authority position on the Region H Planning Group. That position was recently vacated by Danny Vance. As the General Manager of the Trinity River Authority, I hope the group agrees that I am the appropriate person to fill this position. I offer over 28 years of experience in the water industry in Texas, including nearly 9 years as the Executive Administrator for the Texas Water Development Board.

The water supply strategies developed through the regional planning process maintain both Texas' economic and ecological health, during times of plenty and times of severe drought. The 2011 Region H Regional Water Plan is a well-considered, comprehensive report that will serve the region as a strong foundation for the development of the 2016 Region H Regional Water Plan. I would be honored to join with the current group of water professionals associated with Region H to work on this next volume.

Respectfully Submitted,

J. Kevin Ward
General Manager

JKW/dlg

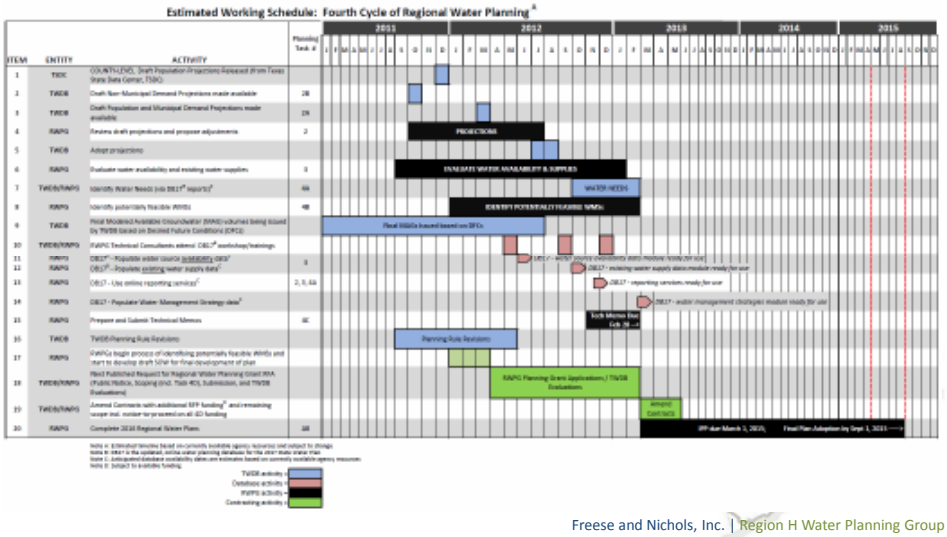
cc: Jimmy Schindewolf
Jace A. Houston

P.O. Box 60
Arlington, Texas 76004
Metro: (817) 467-4343
Fax: (817) 465-0970

Agenda Item 6

Receive update from Consultant Team regarding the schedule and milestones for the first phase of development of the 2016 Region H Regional Water Plan.

Agenda Item 6
2016 RWP Schedule and Milestones



Agenda Item 6
2016 RWP Schedule and Milestones

Date	Event	Scheduled Tasks
08/2011	RWPG Meeting	No Scheduled Tasks
12/2011	RWPG Meeting	No Scheduled Tasks
02/2012	RWPG Meeting	Review Non-Population Demands
05/2012	RWPG Meeting	Review Available Supplies
06/2012	**RWPG Meeting**	**Review available supplies** **Review WMS selection methodology** **Review Task 4D Scope and Budget for submittal to TWDB**
09/2012	RWPG Meeting	***Review Population Demands*** Review Supply Allocations
11/2012	RWPG Meeting	Review Water Needs and WMS
02/2013	RWPG Meeting	Approve Technical Memorandum
2/28/2013	Due Date	Technical Memorandum to TWDB

Agenda Item 7

Discussion and possible action to authorize the Consultant Team to provide public notice and submit a grant application to TWDB on behalf of Region H for funding the second phase of the fourth round of regional water planning.

Funding for Second Phase of 2016 RWP

- Funding for first phase approved by TWDB in mid-2011
- Application must be made for funding of additional Phase 2 tasks
- Phase 2 RFQ anticipated late 2012 or early 2013
- Contracts amended early to mid-2013
- Scope primarily developed by TWDB

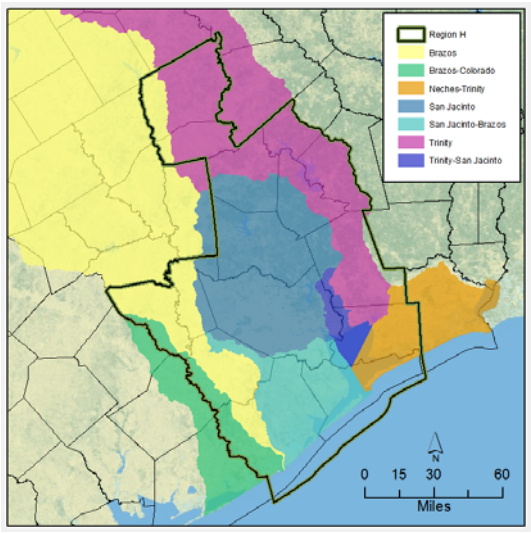
Funding for Second Phase of 2016 RWP

Task	Description
1	Planning Area Description
4D	Evaluate and Recommend WMS
5	Impacts of WMS
6	Water Conservation and Drought Contingency
7	Consistency w/ Long-Term Protection of Resources
8	Unique Stream Segments and Reservoir Sites
9	WMS Financing
10	Plan Adoption (additional effort)

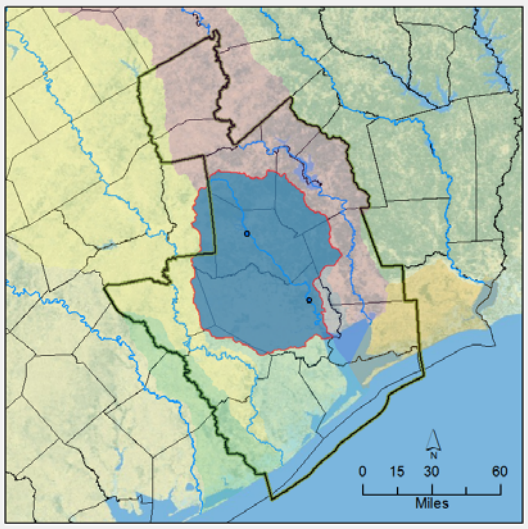
Agenda Item 8

Receive update from Consultant Team and Surface Water Supply Committee regarding draft surface water supply availability estimates for use in development of the 2016 Region H Regional Water Plan.

Region H Surface Water River Basins

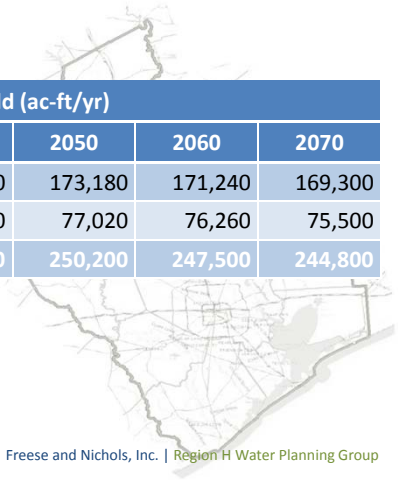


San Jacinto River Basin

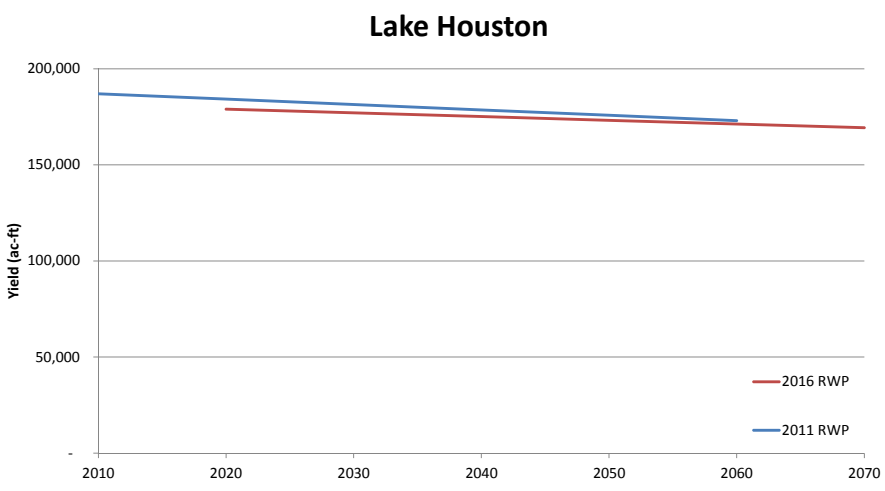


San Jacinto River Basin: Reservoir Supply

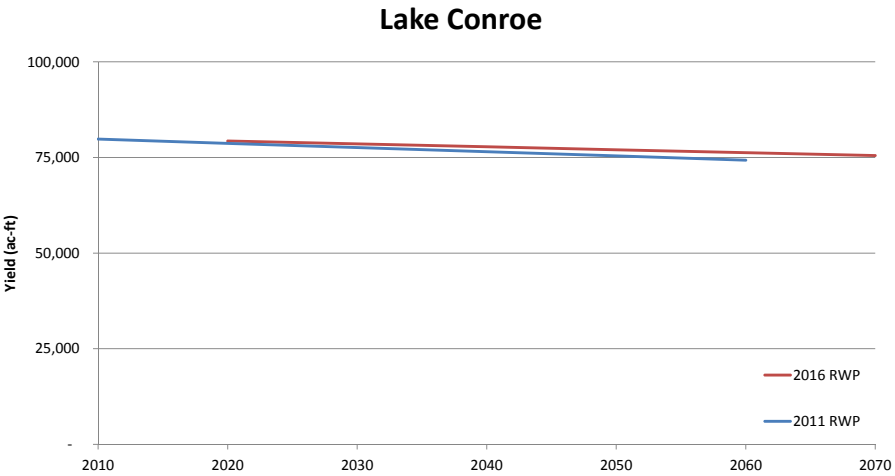
Reservoir	Firm Yield (ac-ft/yr)					
	2020	2030	2040	2050	2060	2070
Lake Houston	179,000	177,060	175,120	173,180	171,240	169,300
Lake Conroe	79,300	78,540	77,780	77,020	76,260	75,500
BASIN TOTAL	258,300	255,600	252,900	250,200	247,500	244,800



Lake Houston Projected Availability

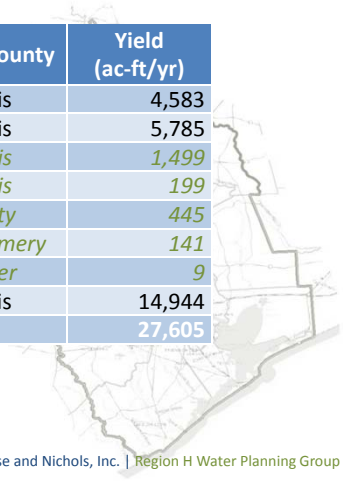


Lake Conroe Projected Availability

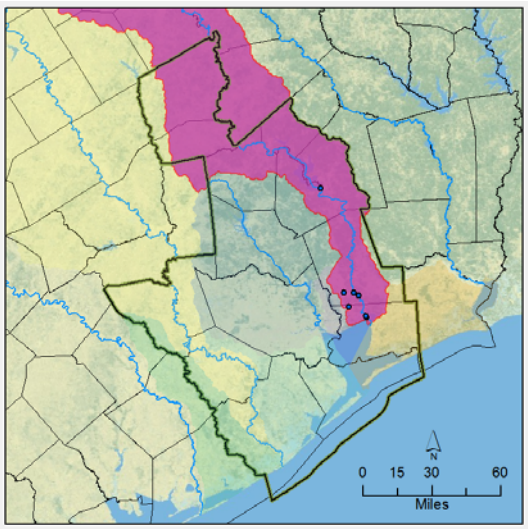


San Jacinto River Basin: Run-of-River and Reuse

Source	Source County	Yield (ac-ft/yr)
San Jacinto River ROR	Harris	4,583
San Jacinto Bayous	Harris	5,785
San Jacinto Irrigation ROR	*Harris*	*1,499*
San Jacinto Industrial ROR	*Harris*	*199*
San Jacinto Irrigation ROR	*Liberty*	*445*
San Jacinto Irrigation ROR	*Montgomery*	*141*
San Jacinto Irrigation ROR	*Walker*	*9*
SJRA Indirect Reuse	Harris	14,944
BASIN TOTAL		**27,605**

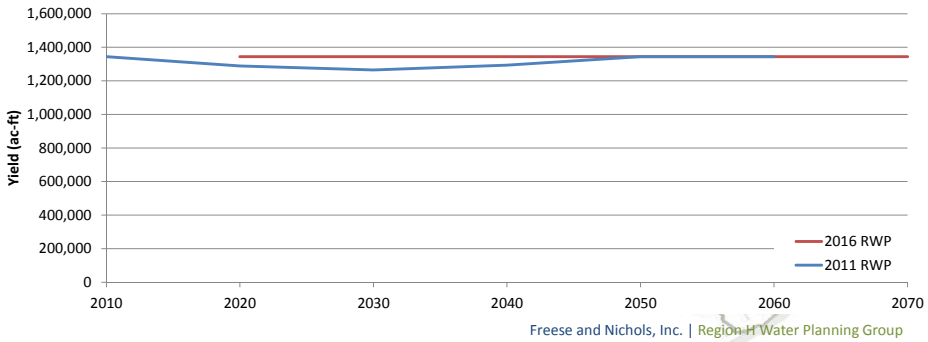


Trinity River Basin



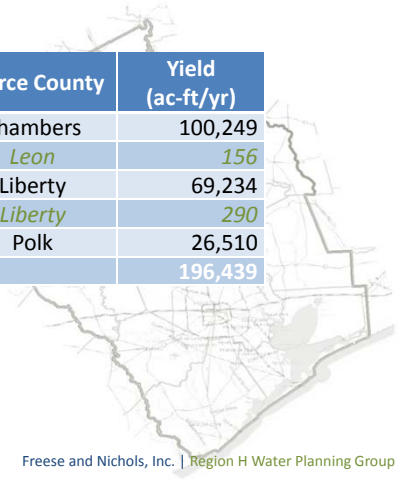
Trinity River Basin: Reservoir Supply

Reservoir	Firm Yield (ac-ft/yr)					
	2020	2030	2040	2050	2060	2070
Lake Livingston	1,344,000	1,344,000	1,344,000	1,344,000	1,344,000	1,344,000
BASIN TOTAL	1,344,000	1,344,000	1,344,000	1,344,000	1,344,000	1,344,000



Trinity River Basin: Run-of-River

Source	Source County	Yield (ac-ft/yr)
Trinity River ROR	Chambers	100,249
Trinity Irrigation ROR	*Leon*	*156*
Trinity River ROR	Liberty	69,234
Trinity River ROR Irrigation/Wetland	*Liberty*	*290*
Trinity River ROR	Polk	26,510
BASIN TOTAL		**196,439**

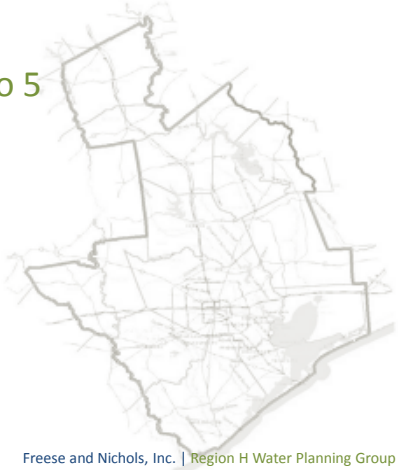


Agenda Item 9

Receive presentation from the Consultant Team and Water Management Strategy Committee on the strategy selection process and criteria for the 2016 Regional Water Plan and take action as necessary.

WMS Selection
May Planning Group Meeting

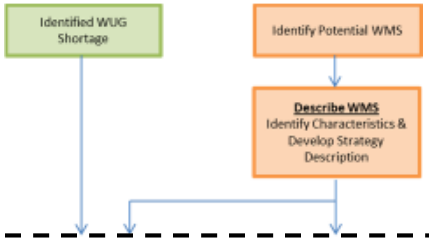
- Generally favorable response to revisions to selection process
- Favor a numeric scale from 1 to 5
- Interest in a simplified process



Proposed WMS Evaluation Approach

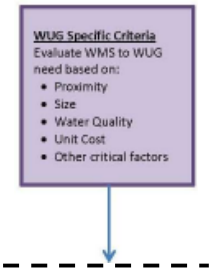
- Two-track process
- Follows application of generalized WMS
- More consistent method
- Major steps
  - Identification/definition of needs and WMS
  - WUG-centered evaluation
  - WMS-centered evaluation
  - Filtering, selection, and application

Identification/Definition of Needs and WMS



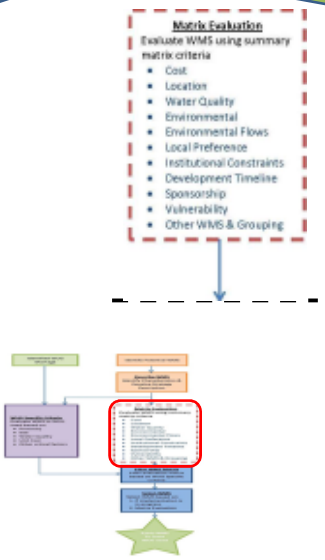
- Inputs into evaluation
- Identified shortages
- List of identified potentially-feasible WMS
- Must develop detailed WMS descriptions before evaluating

WUG Specific Evaluation Phase



- First WMS evaluation phase focused on specific WUG need
- WUG-specific questions
  - Reasonable proximity to need?
  - Right-sized or easily combined?
  - Unit cost supportable?
  - Known flaws?

Matrix Evaluation Phase

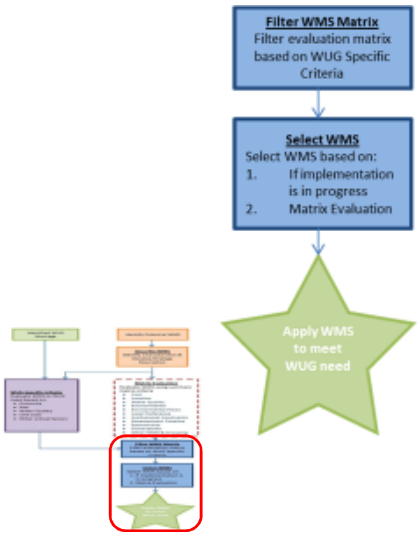


- Second evaluation phase focused on WMS
- Evaluation based on criteria matrix
- Utilizes a scoring system from 1 to 5 for each criterion
  - Allows more range per criterion
  - Avoids unnecessary bias from +/- system

Matrix Evaluation Phase

Category	Rating Criteria				
	1	2	3	4	5
Cost	>$1000/ac-ft	$750 to $1000/ac-ft	$500 to $750/ac-ft	$250 to $500/ac-ft	<$250/ac-ft
Location	IBT required, long distance or outside Region H.	IBT & Conveyance required for use to meet significant needs.	IBT required for some need centers. Conveyance required.	Some conveyance required to need centers.	No IBT required. Relatively near centers of high demand.
Water Quality	Quality of supply is reduced significantly.	Quality of supply is reduced.	No known water quality issues.	Quality of supply is improved.	Existing water quality problems are reduced.
Environmental Land & Habitat	Significant environmental issues and opposition.	Some environmental issues and opposition.	Environmental impacts can be mitigated. Limited concerns.	Minimal mitigation of impacts needed. Minimal concerns.	Limited or no known impacts.
Impacts on Environmental Flows	Significantly reduces instream or B&E flows.	Reduces instream or B&E flows.	No impact.	Increases instream or B&E flows.	Significantly increases instream or B&E flows.
Local Preference	No local support. Significant opposition.	Minimal local support. Some opposition.	Some local support. Limited opposition.	Local support. Minimal opposition.	Widespread local support. Multi-use benefits likely.
Institutional Constraints / Risk of Implementability	Permits opposed. Significant property required.	Some permit opposition. Some property acquisition necessary.	Permits expected with minimal problems. Property available.	Permit application in progress. Property acquired or under acquisition.	Permits issued. Facilities or land owned. Water available.
Vulnerability	Significant risk from natural and man-made disasters.	Substantial risk from natural and man-made disasters.	Moderate risk from natural and man-made disasters.	Slight risk from natural and man-made disasters.	Minimal risk from natural and man-made disasters.
Development Timeline	>35 years	25-35 years	15-25 years	5-15 years	0-5 years
Sponsorship	No sponsor readily identifiable.	Sponsor identifiable, but uncommitted.	Sponsor(s) identified, commitment level uncertain.	Sponsor(s) are identified and committed to strategy.	Sponsors identified and strategy is in development.
Impacts on Other Management Strategies	Significant negative impacts.	Some negative impacts and/or little chance of grouping.	No impact.	Some positive impacts, potential synergistic effects.	Significant positive impacts, synergy achieved.

Filtering, Selection, and Application



- Matrix filtered for each WUG need – list of WMS available to that WUG
- Strategies in progress selected first
- If need remains, select additional WMS based on matrix
- Apply results to plan and database

Methodology Approval

Consider action to approve the strategy selection process for the 2016 Regional Water Plan

MEMORANDUM

FREESE AND NICHOLS
Innovative approaches
Practical results
Outstanding service

10497 Town and Country Way, Suite 600 • Houston, Texas 77024 • 713-600-6800 • fax 713-600-6801 www.freese.com

TO: Region H Water Planning Group

CC: Temple McKinnon (TWDB), General Distribution

FROM: Jason D. Afinowicz, P.E.

SUBJECT: Potential Water Management Strategies (WMS) Identification and Selection

DATE: May 29, 2012

Memo Purpose

Pursuant to TAC 357.5(e)(4), the Region H Water Planning Group (RHWPG) is required to prepare a summary of its process for identifying and selecting Water Management Strategies (WMS) for development of the 2016 Regional Water Plan (RWP). This process shall be presented to the public for comment at a public meeting. This document proposes a WMS selection methodology for consideration and adoption by the RHWPG.

The primary goal of the WMS selection methodology is to pair WMS with a water shortage of a particular water user group (WUG). Subsequent portions of this memorandum detail this pairing process.

Potential WMS will be defined based on a determination of needs developed from a comparison of projected demands and existing supplies. These strategies are to be analyzed at the Wholesale Water Provider (WWP) or WUGs. A detailed technical memorandum will be prepared for each of the management strategies selected.

Shortage Analysis

The regional water planning process begins with identifying current and projected future water demands. After water demands are identified for all Water User Groups (WUGs), water supplies available to Region H are identified and allocated to WUGs and WWPs based on current usage and contracts. By matching the supplies and the demands, projected surpluses and shortages are determined. Wholesale water providers (WWP) supplies and contracts will be reviewed to determine their respective surplus or shortage during the planning period.

Application of General WMS

The selection of WMS begins with the identification of certain "general WMS" that are readily available. Such alternatives can provide simple, cost-effective solutions to shortage without the development of new, major water projects. These strategies include the use of groundwater where available, the expansion or extension of existing contracts for water supplies between WUGs and WWPs, and the reduction of demand through water conservation.

In evaluating the general WMS, the RHWPG would make three assumptions. First, water user groups would continue to develop groundwater until it is fully utilized. This is based upon the observed pattern of development in the region, where the Gulf Coast aquifer is available in all of the southern counties.

The supply of groundwater will not be allocated in excess of regulation set forth by subsidence or groundwater conservation districts, or other entities that have regulatory power over the consumption of groundwater.

Second, those WUGs currently receiving water from WWPs would be able to increase their contract amounts until the WWP supplies were fully allocated. This assumes the use of existing supplies conveyed through existing infrastructure wherever possible.

Finally, the RHWPG will assume that every municipal WUG with a projected shortage would utilize conservation before seeking out or increasing a WWP contract. This is pursuant to the language of 357.7(a)(7).

Identification of Potential WMS to Add New Water Supplies

Potential WMS will include but are not limited to the strategies considered in the 2011 RWP. These strategies, plus additional strategies formulated since the completion of the 2011 RWP are included as *Attachment 1* to this memorandum.

WMS Selection Process

For the 2016 RWP, a dual-phased WMS selection process is proposed. Inputs into the dual-phase process include the identified WUG shortages (after the application of General WMS) and the potential WMS. The output is the application of WMS(s) to meet a WUG need. *Figure 1* presents a flow chart of the proposed WMS selection process.

Prior to the dual-phases, the proposed strategies will be described in detail. Within the dual-phases, the first phase (the WUG Specific Criteria phase) focuses on the WUG, as it aims to evaluate the WMS for a specific WUG need. During this phase, questions such as the following must be addressed for a given WMS to be considered acceptable to apply to meet a WUG need:

- Is the strategy within reasonable proximity to location of water need?
- Is the strategy right-sized or easily paired with another WMS?
- Is the expected water quality produced by the strategy significantly different from existing water quality at the WUG?
- Is the unit cost (and capital if no WWP is present) supportable by the target WUG?
- Has any other flaw relating to the WMS and WUG been identified?

The second phase (the Matrix Evaluation phase) focuses on the evaluation of the WMS. In this phase, each WMS will be evaluated based on the matrix criteria presented in *Table 1*. Each WMS will be given a score from one to five for each analysis criterion, and the phase will ultimately develop a matrix of rated WMS. The analysis criteria include the following:

- Cost – Evaluates the unit cost of the water produced by the strategy.
- Location – Evaluates the degree of Interbasin transfer or conveyance required to move the water to significant demand centers within Region H.
- Water Quality – Evaluates the strategy's impact on water quality.
- Environmental Land & Habitat – Evaluates the degree of environmental land impacts and the degree of public opposition expected by the strategy.
- Environmental Flows – Evaluates the degree of impact to environmental flows to bays and estuaries.
- Local Preference – Evaluates the local preference and likelihood for public support or opposition created by the strategy.
- Institutional Constraints/Risk of Implementability – Evaluates the potential for factors such as permitting and land acquisition to affect the strategy.
- Development Timeline – Evaluates the amount of time necessary to implement the strategy.

- Sponsorship – Evaluates if a sponsor is identifiable and committed to implementing the strategy.
- Vulnerability – Evaluates the risk to the strategy's ability to deliver water from natural or man-made disasters such as hurricanes, climate change, or terrorism.
- Other WMS/Grouping Potential – Evaluates the likelihood of the strategy to impact other WMS and the potential for the strategy to be grouped with other WMS.

After the dual phase description, the emphasis of the methodology shifts to the identification and selection of Water Management Strategies to meet the particular WUG need of interest. To accomplish this process, the evaluation matrix is filtered for each WUG need, such that all WMS that meet the WUG Specific Criteria are available for selection.

Selection of the WMS will first occur by selecting any strategies that are already in progress. This is intended to make the planning process parallel with ongoing developments within Region H while still allowing for thorough quantitative evaluation of each strategy under consideration. Subsequent selections of WMS will be made, as needed, based on the filtered Matrix Evaluation. After WMS selection, the selected WMS are applied to meet WUG needs.

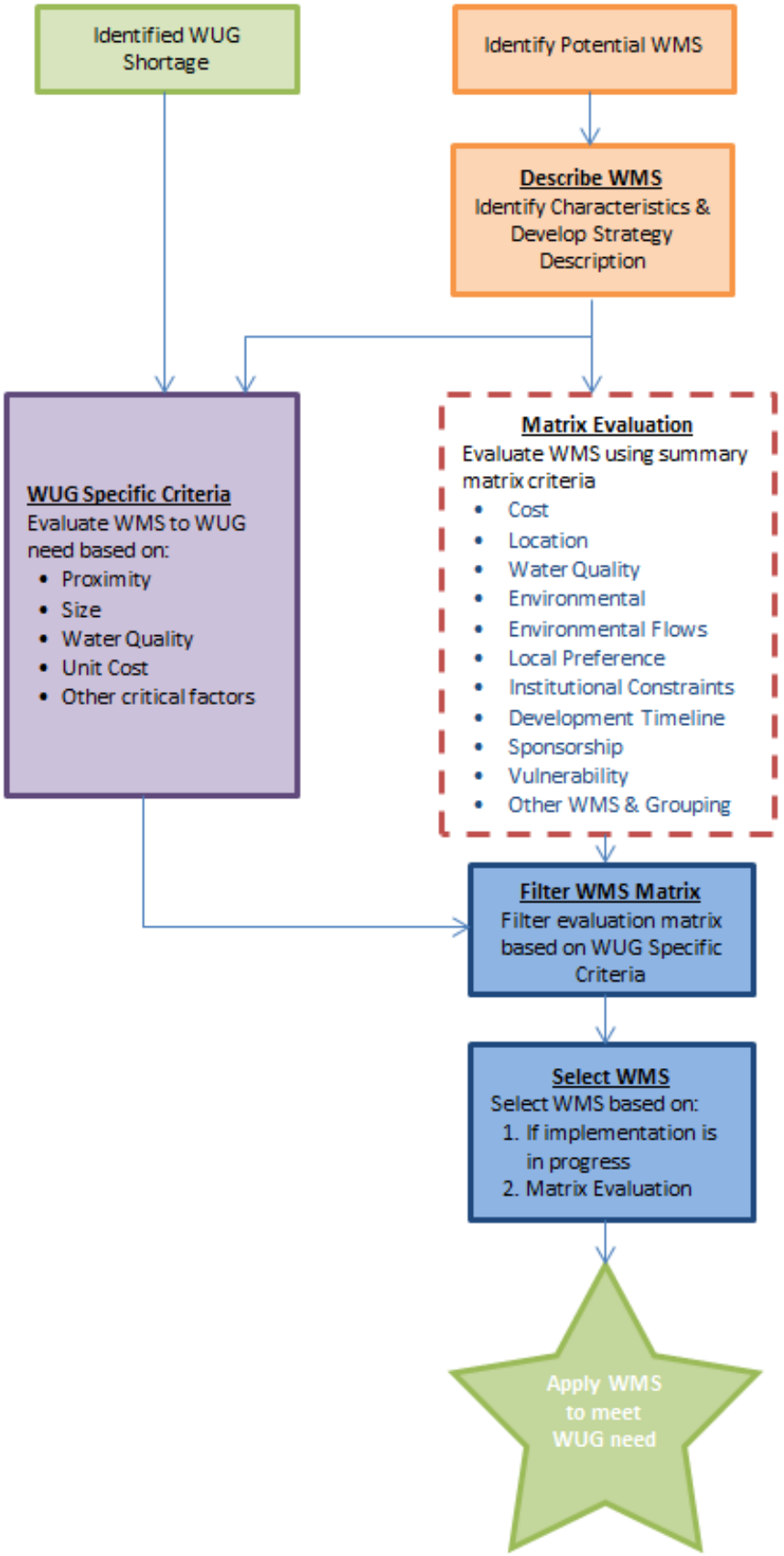


Figure 1. **WMS Selection Process Flowchart**

Table 1. **Evaluation Criteria**

Category	Rating Criteria				
	1	2	3	4	5
Cost	>$1000/ac-ft	$750 to $1000/ac-ft	$500 to $750/ac-ft	$250 to $500/ac-ft	<$250/ac-ft
Location	IBT required, long distance or outside Region H.	IBT & Conveyance required for use to meet significant needs.	IBT required for some need centers. Conveyance required.	Some conveyance required to need centers.	No IBT required. Relatively near centers of high demand.
Water Quality	Quality of supply is reduced significantly.	Quality of supply is reduced.	No known water quality issues.	Quality of supply is improved.	Existing water quality problems are reduced.
Environmental Land & Habitat	Significant environmental issues and opposition.	Some environmental issues and opposition.	Environmental impacts can be mitigated. Limited concerns.	Minimal mitigation of impacts needed. Minimal concerns.	Limited or no known impacts.
Impacts on Environmental Flows	Significantly reduces instream or B&E flows.	Reduces instream or B&E flows.	No impact.	Increases instream or B&E flows.	Significantly increases instream or B&E flows.
Local Preference	No local support. Significant opposition.	Minimal local support. Some opposition.	Some local support. Limited opposition.	Local support. Minimal opposition.	Widespread local support. Multi-use benefits likely.
Institutional Constraints / Risk of Implementability	Permits opposed. Significant property required.	Some permit opposition. Some property acquisition necessary.	Permits expected with minimal problems. Property available.	Permit application in progress. Property acquired or under acquisition.	Permits issued. Facilities or land owned. Water available.
Development Timeline	>35 years	25-35 years	15-25 years	5-15 years	0-5 years
Sponsorship	No sponsor readily identifiable.	Sponsor identifiable, but uncommitted.	Sponsor(s) identified, commitment level uncertain.	Sponsor(s) are identified and committed to strategy.	Sponsors identified and strategy is in development.
Vulnerability	Significant risk from natural and man-made disasters.	Substantial risk from natural and man-made disasters.	Moderate risk from natural and man-made disasters.	Slight risk from natural and man-made disasters.	Minimal risk from natural and man-made disasters.
Impacts on Other Management Strategies	Significant negative impacts.	Some negative impacts and/or little chance of grouping.	No impact.	Some positive impacts, potential synergistic effects.	Significant positive impacts, synergy achieved.

Agenda Item 10

Review and consider authorizing Consultant Team to submit a scope of services and budget estimate for accelerated funding under Task 4D of the 2016 Regional Water Plan.

Task 4D Schedule Acceleration

- Opportunity for advanced access to funds
  - Fast-track analysis of critical projects
  - Development of proposed scope and fee
  - Submittal to TWDB

Task 4D Schedule Acceleration: Priority WMS

- Allens Creek Reservoir
- Regional Return Flows
- Houston Indirect Reuse
- Brackish Groundwater Desalination
- Montgomery County Reservoir

Allens Creek Reservoir

Description (2011 RWP)

Type:	Reservoir
Yield:	99,650 ac-ft
Basin:	Brazos
Cap. Cost:	$223 mil.
Unit Cost:	$168/ac-ft

Scope and Budget

- Update yield and costs
- Document required permitting
- Identify needs for project
- Coordinate with sponsors & potential stakeholders
- Revise expected start date if needed
- Fee: $57,783 Phase 1
  $66,284 Total

Regional Return Flows

Description

Type:	Reuse
Yield:	TBD
Basin:	San Jacinto
Cap. Cost:	TBD
Unit Cost:	TBD

Scope and Budget

- Identify facilities and obtain discharge data
- Estimate current and future flow
- Consider impacts of other reuse projects
- Coordinate with sponsors & potential stakeholders
- Assess needs, uses, costs and recommend volume
- Fee: $36,032 Phase 1
  $44,272 Total

Houston Indirect Reuse

Description (2011 RWP)

Type:	Reuse
Yield:	160,000 ac-ft
Basin:	San Jacinto
Cap. Cost:	Var. by WUG
Unit Cost:	$402+/ac-ft

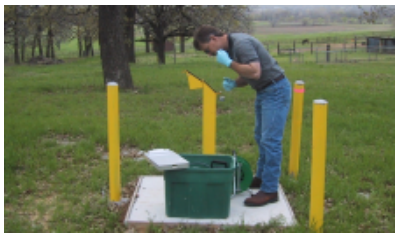
Scope and Budget

- Identify, map, and quantify discharges & COH coord.
- Characterize potential diversion locations
- Determine available DOR supplies
- Determine suitability for target WUGS
- Identify infrastructure needs and estimate cost
- Fee: $54,348 Phase 1
  $62,872 Total

Brackish Groundwater Desalination

Description

Type:	Groundwater
Yield:	TBD
Basin:	TBD
Cap. Cost:	TBD
Unit Cost:	TBD



Scope and Budget

- Identify formations and collect data
- Develop estimates of potential favorable areas
- Compare potential areas with locations of needs
- Develop cost estimates
- Fee: $54,924 Phase 1
  $66,733 Total

Montgomery County Reservoir

Description

Type:	Reservoir
Yield:	TBD
Basin:	San Jacinto
Cap. Cost:	TBD
Unit Cost:	TBD

Scope and Budget

- Identify potential location and delineate catchment
- Develop reservoir shape parameters
- Evaluate DOR supply availability and estimated storage trends
- Develop cost estimates
- Fee: $20,968 Phase 1
  $28,210 Total

Budget Summary

Task	Phase 1 Budget	Full Budget	% Phase 1
Allens Creek Reservoir	$ 57,783	$ 66,284	87.2%
Regional Return Flows	$ 36,032	$ 44,272	81.4%
Houston Indirect Reuse	$ 54,348	$ 62,872	86.4%
Brackish Groundwater Desal	$ 54,924	$ 66,733	82.3%
Montgomery County Reservoir	$ 20,968	$ 28,210	74.3%
Total	**$ 224,055**	**$ 268,371**	**83.5%**

SubTask / WMS evaluation number	SubTask / WMS(s) Title	SubTask Scope of Work Write-up	Deliverable	Total Budget	SubTask Budget [PARTIAL - For Phase 1 Only. All tasks to be completed in Phase 2.]	Remaining SubTask Budget [To Complete in Phase 2]	WUG(s) &/OR WWP Entities Potentially Served by WMS(s)	Addressing a changed condition from previous cycle?	When was this WMS identified by RWPG as a potentially feasible WMS?	Was WMS evaluated in any previous Regional Water Planning Cycles?	Is evaluation a limited update to previous technical evaluation information?
1	***Allens Creek Reservoir***	Evaluation of the Allens Creek Reservoir strategy: Assessment will include yield estimation in relation to the current status of the Brazos River Authority System Operations Permit, updates to planning level quantity estimates for construction, and updates to planning-level cost estimates. The evaluation will also include identification of potential users, user types, or stakeholders as well as identification of critical activities related to project implementation based on extended project development timeline. **[Partial completion in Phase 1]**	Water management strategy documentation will include description and discussion of planned facilities, impacts of system operations, firm DOR supply, environmental factors, engineering & costing considerations, and implementation issues. **[Phase 1 Deliverable: One Page Progress Report]**	$ 66,284	$ 57,783	$ 8,501	Brazos River Authority, City of Houston, and customer WWPs/WUGs	Yes - project sponsors soliciting participation from potential customers, potential shift in project timeline	Was a recommended WMS in 2001, 2006, and 2011 Regional Water Plans	Yes - 1st, 2nd, and 3rd planning cycles	No
2	***Regional Return Flows***	Evaluation of available supply from utilization of effluent return flows in the Lake Houston drainage basin: Assessment will include identification of treatment facilities in the Lake Houston drainage basin and characterization of discharge volumes, patterns, and availability. The evaluation will also consider potential availability impacts of other anticipated reuse projects, recommendation of a volume for potential permitting for indirect reuse from the discharges, and development of planning level cost estimates. **[Partial completion in Phase 1]**	Water management strategy documentation will include description and discussion of potential supply, recommended strategy volume, environmental factors, engineering & costing considerations, and implementation issues. **[Phase 1 Deliverable: One Page Progress Report]**	$ 44,272	$ 36,032	$ 8,240	WWPs and WUGs in the San Jacinto River Basin	No	Discussed with RWPG at May 2012 RWPG meeting	No	No
3	***Houston Indirect Reuse***	Evaluation of available supply from City of Houston indirect reuse: Assessment will include identification of wastewater discharges associated with the City of Houston's water right reuse permit (5827), consideration of future discharge trends, identification of potential diversion points, and determination of anticipated supply availability under drought of record conditions. The evaluation will also include identification of possible users or user types and planning level infrastructure needs summary and cost estimation. Task will expand upon the limited level of study performed in previous plans. **[Partial completion in Phase 1]**	Water management strategy documentation will include description and discussion of potential diversion locations, drought of record supply , potential users, required infrastructure, environmental factors, engineering & costing considerations, and implementation issues. **[Phase 1 Deliverable: One Page Progress Report]**	$ 62,872	$ 54,348	$ 8,524	City of Houston and customer WWPs/WUGs	Yes - TCEQ approval of return flow permit	Was a recommended WMS in 2001, 2006, and 2011 Regional Water Plans	Yes - 1st, 2nd, and 3rd planning cycles	No
4	***Brackish Groundwater Desalination***	Evaluation of brackish groundwater supplies: Assessment will include identification of groundwater formations with brackish water, estimation of areas with potential favorability for brackish groundwater development, identification of possible users or user types, and development of representative planning level costs for production and treatment facilities. **[Partial completion in Phase 1]**	Water management strategy documentation will include identification of potential brackish groundwater supply, a summary of required infrastructure , environmental factors, engineering & costing considerations, and implementation issues. **[Phase 1 Deliverable: One Page Progress Report]**	$ 66,733	$ 54,924	$ 11,809	Any with access to usable brackish formations - specific WUGs currently unknown	Yes - recent increase in development of brackish groundwater in the Region	Discussed with RWPG at May 2012 RWPG meeting	No	No
5	***Montgomery County Reservoirs***	Evaluation of a potential Montgomery County reservoir: Assessment will include identification of a potential reservoir site and development of reservoir characteristics based on catchment and topography. Firm yield and storage characteristics will be analyzed using the TCEQ WAM Run 3, plus appropriate environmental flow provisions. Cost estimates will be developed at the planning level. **[Partial completion in Phase 1]**	Water management strategy documentation will include description and discussion of potential reservoir location and configuration, firm DOR supply and estimated storage trends, environmental factors, engineering & costing considerations, and implementation issues. **[Phase 1 Deliverable: One Page Progress Report]**	$ 28,210	$ 20,968	$ 7,242	WUGs in the San Jacinto River Basin, primarily in Montgomery County	No	Various Montgomery County reservoirs considered in 2001, 2006, and 2011 Regional Water Plans	Yes - various reservoirs considered in 1st, 2nd, and 3rd planning cycles	No
			Budget	$ 268,371	$ 224,055	$ 44,316					

Agenda Item 11

Receive report regarding recent and upcoming activities related to communications and outreach efforts on behalf of the Region H Planning Group.

Agenda Item 11
Community Outreach

- Brazos Basin and Bay Area Stakeholder Committee (BBASC)
  May 30,2012

Agenda Item 12

Agency communications and general information.

Brazos River Authority

May 18, 2012

Mark Evans
Region H
San Jacinto River Authority, 1577 Dam Site Road
Conroe, TX 77304

ANNOUNCEMENT OF PUBLIC MEETINGS FOR BRA WATER MANAGEMENT PLAN

Dear Chairman Evans:

I am writing to formally notify you of upcoming public meetings concerning the Brazos River Authority's Water Management Plan.

In June 2004, the Brazos River Authority (BRA) filed an application with the Texas Commission on Environmental Quality (TCEQ) for a permit to appropriate available flows in the Brazos Basin. This permit, known as the BRA System Operations Permit, was subsequently recommended as a future water strategy for both Region G and Region H in the 2007 and 2012 State Water Plans.

In January 2012, TCEQ Commissioners directed the BRA to produce a Water Management Plan (WMP) for the pending System Operations Permit. We are required to have the WMP completed and submitted to TCEQ staff by November 2012.

The BRA believes that an important part of the process for preparation of the WMP is the opportunity for stakeholders to have input into its development. We are planning to host a series of nine meetings throughout the Basin over the next five months to allow for public input and participation. Information on the WMP process will be updated regularly on BRA's website at www.brazos.org. The locations, dates and times for the **first three public meetings** are listed below.

Bryan, Texas
Tuesday, June 5, 2012, 3:00 p.m.
Brazos Center
3232 Briarcrest Drive

Temple, Texas
Wednesday, June 6, 2012, 5:30 p.m.
Mayborn Convention Center
3303 N. 3rd Street

Granbury, Texas
Thursday, June 7, 2012, 5:30 p.m.
Granbury Resort Conference Center
116 W. Bridge St.

We welcome and encourage the participation of Regional Water Planning Groups in this stakeholder process. Should you have any questions on the upcoming public meetings schedule for the WMP, please don't hesitate to contact me directly at 254-761-3101.

Sincerely,

Phil Ford

Phil Ford
General Manager/CEO

4600 Cobbs Drive • P.O. Box 7555 • Waco, Texas 76714-7555
254-761-3100 • FAX 254-761-3215