

REGION H

Water Planning Group

MEETING MATERIALS

November 6, 2019

San Jacinto River Authority

Common Region H Terms and Conversion Factors

List of Abbreviations

COA	Certificate of Adjudication
CRU	Collective Reporting Unit
DCP	Drought Contingency Plan
DFC	Desired Future Condition
DOR	Drought of Record
EA	Executive Administrator
EPA	Environmental Protection Agency
FWSD	Fresh Water Supply District
GAM	Groundwater Availability Model
GCD	Groundwater Conservation District
GMA	Groundwater Management Area
GPCD	Gallons Per Capita Per Day
GRP	Groundwater Reduction Plan
IPP	Initially Prepared Plan
MAG	Modeled Available Groundwater
MPC	Master Planned Community
MUD	Municipal Utility District
MWP	Major Water Provider
PDSI	Palmer Drought Severity Index
PWS	Public Water Supply
RHWPG	Region H Water Planning Group
ROR	Run-of-River
RWP	Regional Water Plan
RWPA	Regional Water Planning Area
RWPG	Regional Water Planning Group
SWIFT	State Water Implementation Fund for Texas
SWP	State Water Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPWD	Texas Parks and Wildlife Department
TWC	Texas Water Code
TWDB	Texas Water Development Board
UCM	Unified Costing Model
WAM	Water Availability Model
WCID	Water Control and Improvement District
WCP	Water Conservation Plan
WMS	Water Management Strategy
WRAP	Water Rights Analysis Package
WUD	Water Utility Database
WUG	Water User Group
WWP	Wholesale Water Provider

Water Measurements

1 acre-foot (AF) = 43,560 cubic feet = 325,851 gallons

1 acre-foot per year (ac-ft/yr) = 325,851 gallons per year = 893 gallons per day

1 gallon per minute (gpm) = 1,440 gallons per day = 1.6 ac-ft/yr

1 million gallons per day (mgd) = 1,000,000 gallons per day = 1120 ac-ft/yr

Region H Water Planning Group
10:00 AM Wednesday
November 6, 2019
San Jacinto River Authority Office
1577 Dam Site Rd, Conroe, Texas 77304

AGENDA

1. Call to order.
2. Introductions.
3. Review and approve minutes of September 4, 2019 meeting.
4. **Receive public comments on specific issues related to agenda items 5 through 14.** (Public comments limited to 3 minutes per speaker)
5. Discuss vacancies on the Region H Water Planning Group (RHWPG) and consider taking action to approve members to fill vacancies on the Planning Group.
6. Receive update from Consultant Team regarding the schedule and milestones for the development of the 2021 Region H RWP.
7. Receive update from Water Management Strategy Committee and Consultant Team regarding the status of investigation of water supply alternatives for the 2021 Region H RWP.
8. Receive update from Water Management Strategy Committee and Consultant Team regarding drought management as a potential water management strategy and discuss recommendations.
9. Receive report from Consultant Team and Water Management Strategy Committee regarding options for remaining Task 5 funds and consider taking action to approve a notice-to-proceed request and authorizing the Consultant Team and San Jacinto River Authority to coordinate with TWDB and execute the subsequent contract amendment issued.
10. Receive update from Consultant Team on new legislative requirements for Regional Planning and discuss recommendations for addressing requirements in the 2021 Region H RWP.
11. Receive update from the Region H Legislative Committee and Consultant Team and discuss potential legislative and policy recommendations for the 2021 Region H RWP.
12. Receive presentation from the Region H Legislative Committee and Consultant Team regarding the status of ecologically unique stream segments and unique reservoir sites and discuss potential recommendations for the 2021 Region H RWP.
13. Receive report regarding recent and upcoming activities related to communications and outreach efforts on behalf of the RHWPG.
14. Agency communications and general information.
15. **Receive public comments.** (Public comments limited to 3 minutes per speaker)
16. Next Meeting: January 8, 2020.
17. Adjourn.

Persons with disabilities who plan to attend this meeting and would like to request auxiliary aids or services are requested to contact Sonia Zamudio at (936) 588-3111 at least three business days prior to the meeting so that appropriate arrangements can be made.

Agenda Item 3

Review and approve minutes of September 4, 2019 meeting.

**REGION H WATER PLANNING GROUP
MINUTES OF REGULAR MEETING
SEPTEMBER 4, 2019**

MEMBERS PRESENT: David Bailey, John Bartos, Robert Bruner, James Comin, Mark Evans, Yvonne Forrest, Bob Hebert, Art Henson, Jace Houston, Robert Istre, Gary Ashmore, Ivan Langford, Glenn Lord, William Teer, Michael Turco, and Pudge Willcox.

DESIGNATED ALTERNATES: Alisa Max for John Blount, Aaron Abel for Brad Brunett, Robert Thompson for Marvin Marcell, Ken Kramer for Carl Masterson, Jun Chang for Jimmie Schindewolf, and Jim Sims for Kevin Ward.

MEMBERS ABSENT: W.R. Baker and James Morrison.

NON-VOTING MEMBERS PRESENT: Lann Bookout and Melinda Silva for Wayne Ahrens.

1. CALL TO ORDER

The meeting was called to order at 10:02 a.m.

2. INTRODUCTIONS

There were not introductions.

3. REVIEW AND APPROVE MINUTES OF JUNE 5, 2019 MEETING

Mr. Henson made a motion to approve the minutes of June 5, 2019. The motion was seconded by Mr. Chang and carried unanimously.

4. RECEIVE PUBLIC COMMENTS ON SPECIFIC ISSUES RELATED TO AGENDA ITEMS 5 THROUGH 15

There were no public comments.

5. RECEIVE FINAICIAL REPORT FROM REGION H ADMINISTRATIVE AGENCY

Ms. Pam Steiger presented the financials of the Region H Water Planning Group.

6. RECEIVE UPDATE FROM CONSULTANT TEAM REGARDING THE SCHEDULE AND MILESTONES FOR THE DEVELOPMENT OF THE 2021 REGION H RWP

Mr. Taucer provided information related to the milestones for the development of the 2021 Region H Regional Water Plan by stating the current ongoing tasks were the WMS analysis, drought contingency

plan recommendations, and legislative recommendations. He provided upcoming due dates for scheduled events and tasks.

7. RECEIVE UPDATE FROM CONSULTANT TEAM REGARDING STATUS OF INVESTIGATION OF WATER SUPPLY ALTERNATIVES FOR THE 2021 REGION H RWP

Mr. Taucer provided an update related to the investigation of water supply alternatives for the 2021 Region H Regional Water Plan by providing statistics related to the five major strategies: advanced conservation; irrigation conservation; water loss reduction; expanded groundwater; and municipal reuse. He stated that just these initial strategies have produced favorable results.

8. RECEIVE PRESENTATION FROM CONSULTANT TEAM REGARDING CURRENT WATER CONSERVATION PLANNING IN REGION H AND DISCUSS CONSERVATION PLANNING RECOMMENDATIONS

Mr. Taucer stated that there is a subchapter of the plan that focuses on conservation which looks at current planning as well as RWP recommendations. He stated that this planning cycle, industrial conservation will not be measured due to water demand projection methodologies. He also stated that more focus will be on outdoor conservation versus indoor conservation. Mr. Taucer provided an overview of the survey responses detailing implemented water conservation plan measures and new water conservation plan measures. He went to provide an overview of the recommendations that water districts and suppliers strive to meet goals in their conservation plans; strive toward the conservation already included in TWDBs projections; and all WUGs reach a per capita level consistent with the implementation of water loss and advanced conservation recommendations.

9. RECEIVE PRESENTATION FROM CONSULTANT TEAM REGARDING CURRENT DROUGHT CONTINGENCY PLANNING IN REGION H AND DISCUSS DROUGHT CONTINGENCY RECOMMENDATIONS

Mr. Taucer provided an overview of drought contingency planning stating that over 253 new drought contingency plans were received along with approximately 77 survey responses. He provided details related to same. He explained the different challenges and risks related to the inclusion of drought contingency planning as a strategy. Discussion ensued. Mr. Houston stated that if drought contingency planning was included as a strategy it would provide a water offsetting need, therefore the need to develop fewer strategies to meet demands would be less. Mr. Turco stated that if drought contingency plans were to be included as a strategy, it could be a viable strategy that could be utilized by some, but not be overstated. Mr. Kramer stated that there is more of an interest in implementation of drought contingency plans from public officials. He stated that water plans are based upon meeting demands in a period of time in which drought is worse than the current historic drought of record. Mr. Hebert stated that drought contingency plans are designed to clip demand in response to the reduction in supply. He stated that the plan is to develop water, and drought contingency plans need to be a part of the plan, however, not to advocate developing more water than reasonably needed. Further discussion ensued and it was determined that the consultants would provide several different drought contingency plan options/assumptions based upon the comments.

10. RECEIVE PRESENTATION FROM CONSULTANT TEAM REGARDING EMERGENCY INTERCONNECT FACILITIES IN REGION H AND CONSIDER TAKING ACTION AUTHORIZING SUBMITTAL OF A CONFIDENTIAL REPORT TO THE TEXAS WATER DEVELOPMENT BOARD

Mr. Taucer provided information related to the existing emergency interconnect related to drought and emergency conditions. He stated that this is a confidential report provided to TWDB's Executive Administrator and delivered separately from the regional plan. Mr. Henson made a motion to authorize the consultant team to submit a confidential emergency interconnect report to the TWDB. The motion was seconded by Mr. Hebert and carried unanimously.

11. RECEIVE UPDATE FROM THE REGION H LEGISLATIVE COMMITTEE AND DISCUSS POTENTIAL LEGISLATIVE AND POLICY RECOMMENDATIONS FOR THE 2021 REGION H RWP

Mr. Taucer provided a brief overview of certain legislation related to regional planning.

12. DISCUSSION AND CONSIDER TAKING ACTION TO NOMINATE ONE OR MORE RHWPG MEMBERS FOR THE INTERREGIONAL PLANNING COUNCIL

Mr. Taucer provided information related to the Interregional Planning Council. Mr. Hebert made a motion to nominate Mr. Evans as the Region H member for the Interregional Planning Council. The motion was seconded by Mr. Kramer and carried unanimously.

13. REVIEW AND TAKE ACTION TO AMEND THE BUDGET FOR THE DEVELOPMENT OF THE 2021 REGIONAL WATER PLAN

Mr. Taucer provided information related to the budget stating that there is no change in the overall budget, however a shift in WSP task and expense is needed. Mr. Lord made a motion to approve the amendment of the budget for the development of the 2021 Regional Water Plan. The motion was seconded by Mr. Bartos and carried unanimously.

14. RECEIVE REPORT REGARDING RECENT AND UPCOMING ACTIVITIES RELATED TO COMMUNICATIONS AND OUTREACH EFFORTS ON BEHALF OF THE RHWPG

Mr. Taucer stated that there were no recent activities.

15. AGENCY COMMUNICATIONS AND GENERAL INFORMATION

Mr. Bookout provided updates relevant to regional water planning from the 86th Texas Legislature.

16. RECEIVE PUBLIC COMMENTS

There were no public comments.

17. NEXT MEETING: NOVEMBER 6, 2019

Mr. Evans announced that the next Region H Water Planning Group meeting would be November 6, 2019.

18. ADJOURN

Without objection, the meeting was adjourned at 11:47.m.

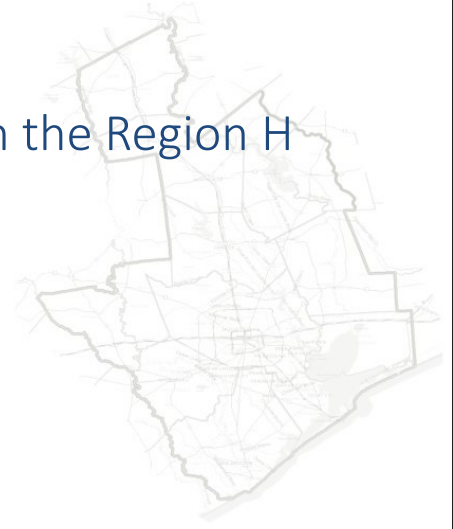
Agenda Item 5

Discuss vacancies on the Region H Water Planning Group (RHWPG) and consider taking action to approve members to fill vacancies on the Planning Group.

Agenda Item 5 Membership

Action:

Approve members to fill vacancies on the Region H
Water Planning Group.





910 Louisiana
Houston, TX 77002

August 13, 2019

Mark Evans, Chair Region H WPG
c/o San Jacinto River Authority
P.O. Box 329
Conroe, TX 77305

Subject: Vacancy for Region H Water Planning Group,
Member Representing Electric Generating Utilities

Dear Mr. Evans,

I, Carl Burch of NRG Energy would like to submit my name for consideration in the filling the open vacancy for the voting member representing the electric generating utilities.

I have worked in the electric utility industry for over 30 years in the environmental field, after graduating from the University of Houston/Clear Lake with a BS in Environmental Management. Responsibilities over my career include, wastewater permitting and compliance, regulatory compliance for waste and overseeing the water use program for the company. In my role overseeing the company's water use program, I have regular interface with the TCEQ Brazos River Watermaster and with the Brazos River Authority.

Should you have any questions or require additional information, please contact me at 713-537-2333 or carl.burch@nrg.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Carl Burch".

Carl Burch
Environmental Manager, Regulatory Compliance
NRG Energy



Life's better outside.®

June 3, 2019

Commissioners

Ralph H. Duggins
Chairman
Fort Worth

S. Reed Morlan
Vice-Chairman
Houston

Arch "Beaver" Aplin, III
Lake Jackson

Oliver J. Bell
Cleveland

Anna B. Galo
Laredo

Jeanne W. Latimer
San Antonio

James H. Lee
Houston

Dick Scott
Wimberley

Kelcy L. Warren
Dallas

Lee M. Bass
Chairman-Emeritus
Fort Worth

T. Dan Friedkin
Chairman-Emeritus
Houston

Carter P. Smith
Executive Director

Mr. Mark Evans, Chair
Region H Regional Water Planning Group
North Harris County Regional Water Authority
P.O. Box 2342
Trinity, Texas 75862

Dear Mr. Evans,

Please replace Bill Balboa with Glen Sutton as the TPWD non-voting member to the Region H Regional Water Planning Group. Glen can be contacted directly by email at Glen.Sutton@tpwd.texas.gov or by regular mail at:

Glen Sutton
Galveston Bay Ecosystem Leader
Coastal Fisheries Division
Texas Parks and Wildlife Department
1502 FM 517 East
Dickinson, TX 77539

Sincerely,

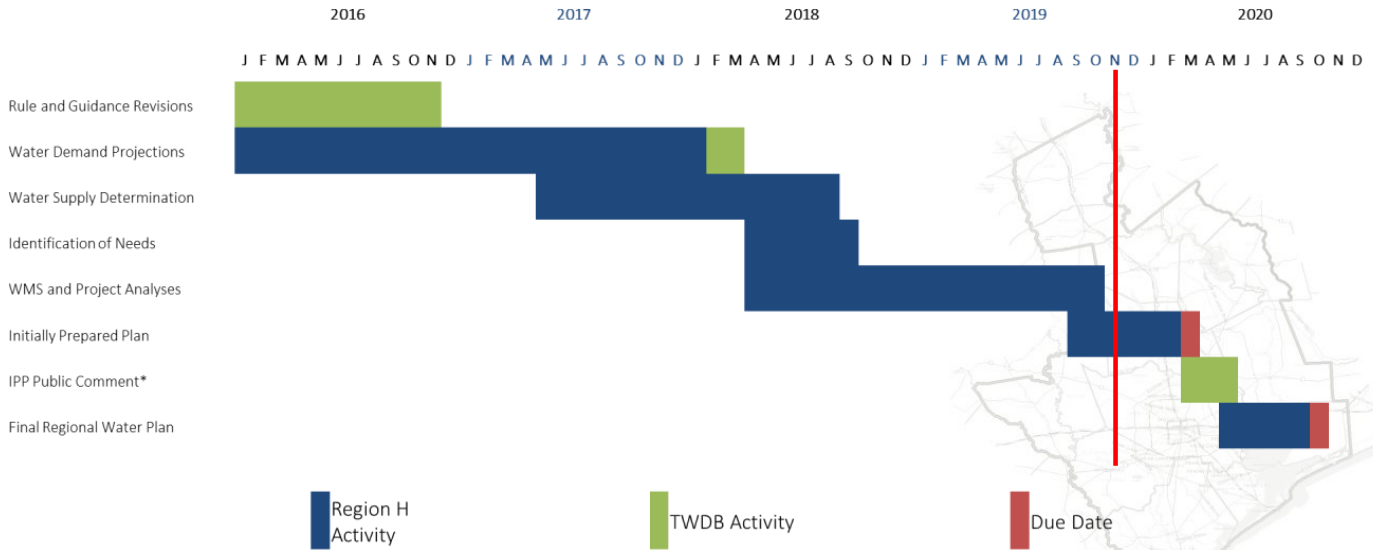
Cindy Loeffler, Chief
Water Resources Branch
Texas Parks and Wildlife Department

cc: Glen Sutton, TPWD
Lann Bookout, TWDB

Agenda Item 6

Receive update from Consultant Team regarding the schedule and milestones for the development of the 2021 Region H RWP.

Agenda Item 6 2021 RWP Schedule



*Region H accepts public comment throughout the planning cycle and at each RWPG and committee meeting.

Agenda Item 6 2021 RWP Schedule

Date	Scheduled Events/Tasks
11/2019	RWPG Meeting
01/2020	RWPG Meeting & WMS Committee Meeting
02/2020	RWPG Meeting
03/2020	DUE DATE: Initially Prepared Plan
10/2020	DUE DATE: FINAL RWP

Agenda Item 6

2021 RWP Schedule

- Ongoing
 - Wrap up WMS
 - Documentation
- Long Term
 - Infrastructure Finance Report
 - Project prioritization



Agenda Item 7

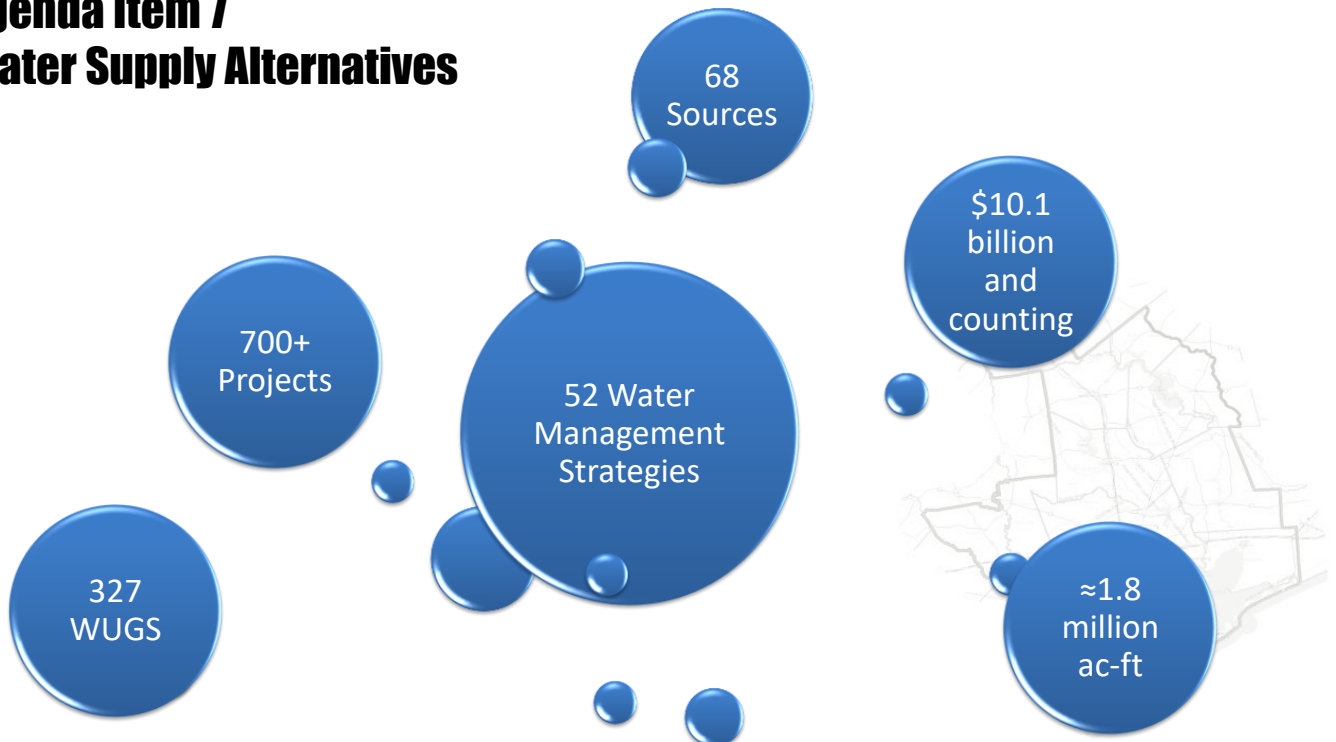
Receive update from Water Management Strategy Committee and Consultant Team regarding the status of investigation of water supply alternatives for the 2021 Region H RWP.

Agenda Item 7 Water Supply Alternatives

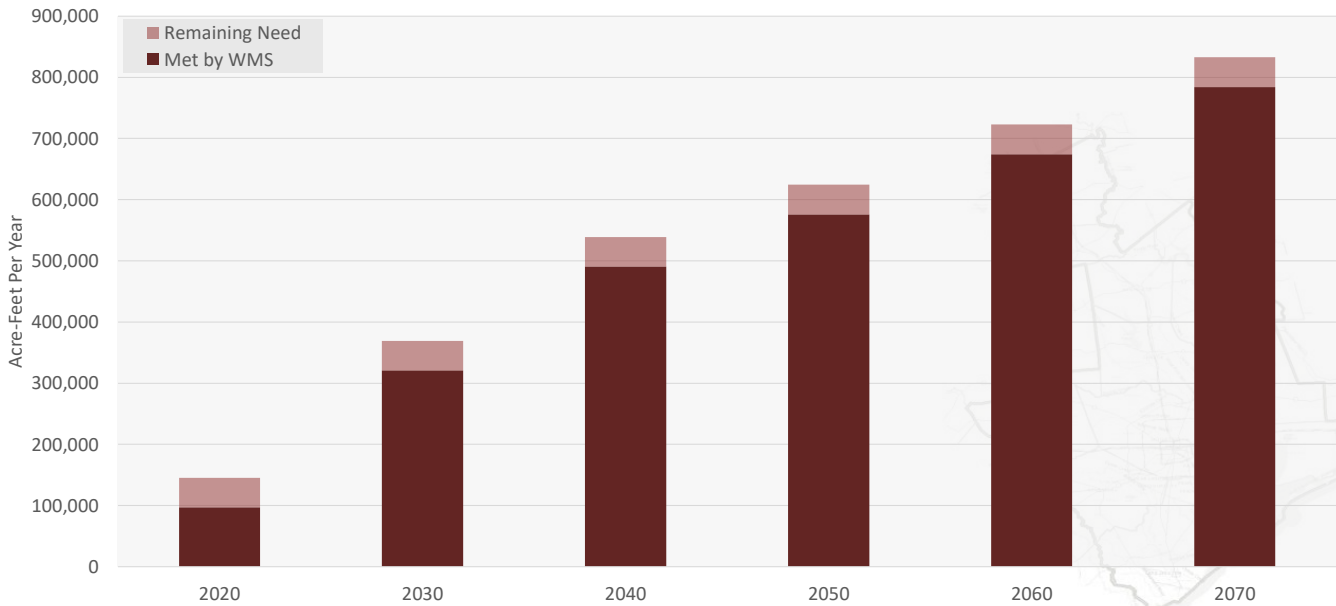
Primary
Topics
for
Today

- Status Update
- Unmet Need
- Sources, WMS, and Projects
- Ongoing Efforts

Agenda Item 7 Water Supply Alternatives



Agenda Item 7 Water Supply Alternatives – Unmet Need



Agenda Item 7 Water Supply Alternatives – Unmet Need

Agricultural Issues

- Cost of water
- Ability to enter into long-term contracts
- Need for firm-yield supply

Real-World Approaches

- Interruptible Supplies
- Local Supplies
- Refrain from Production
- Conjunctive Use

Agenda Item 7 Water Supply Alternatives

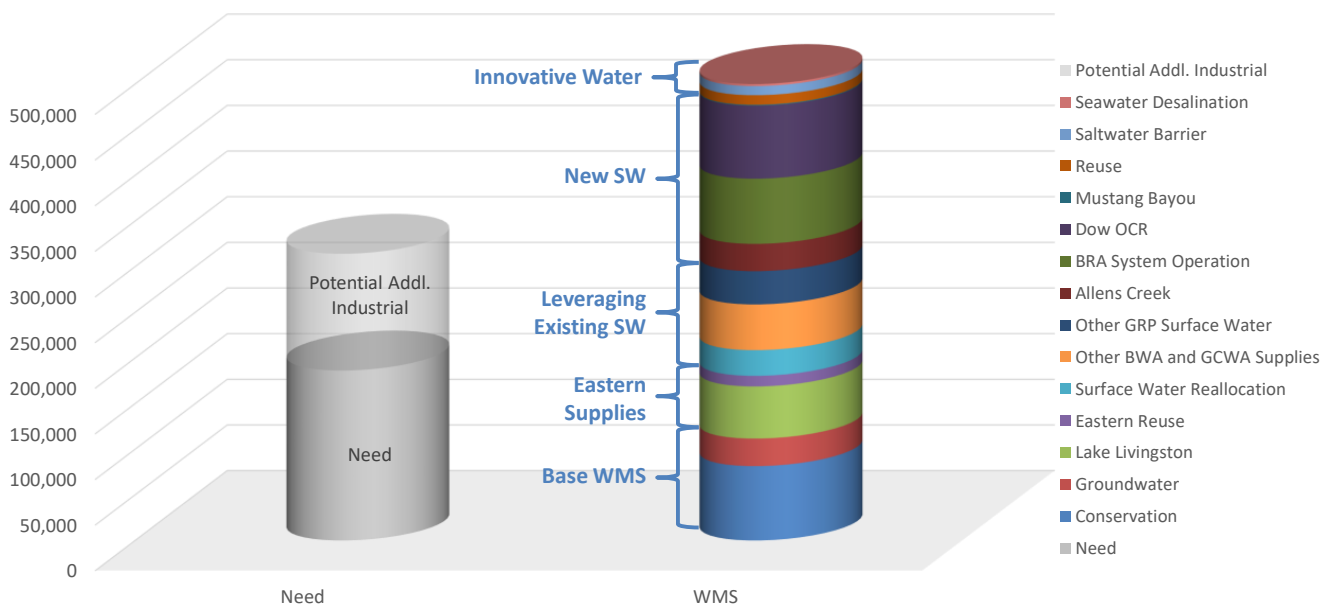


Early RWPs

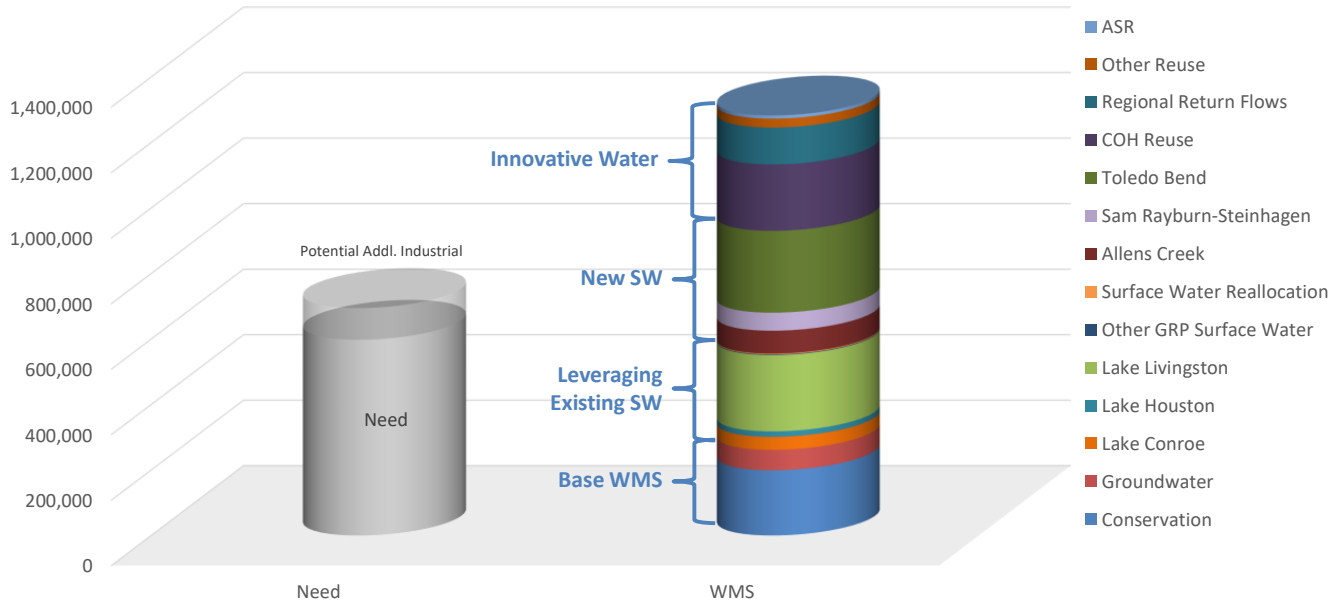


New RWPs

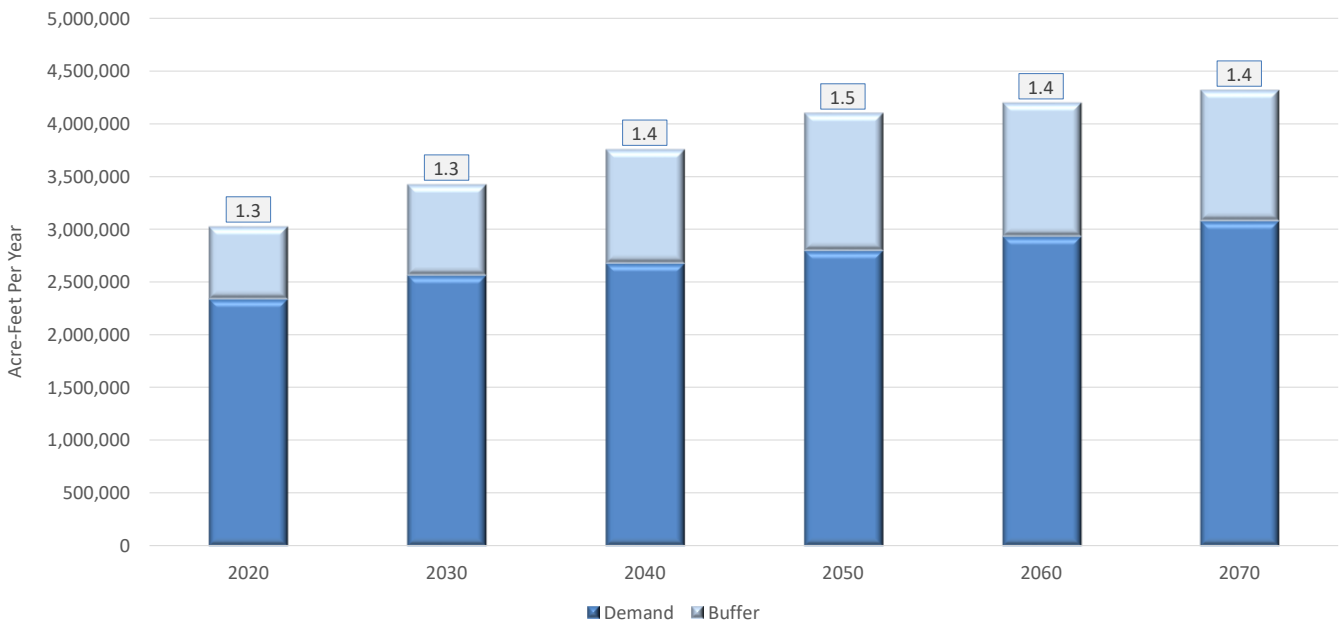
Agenda Item 7 Water Supply Alternatives – Western Sources



Agenda Item 7 Water Supply Alternatives – Eastern Sources



Agenda Item 7 Water Supply Alternatives – Supply Redundancy



Agenda Item 7 Water Supply Alternatives – Applied WMS



Conservation and Loss Reduction



New and Expanded Contracts



Groundwater Expansions



Infrastructure-Driven



Groundwater Reduction Plans



Surface Water Availability



Direct and Indirect Reuse



Interbasin Transfer



Agenda Item 7 Water Supply Alternatives - Projects

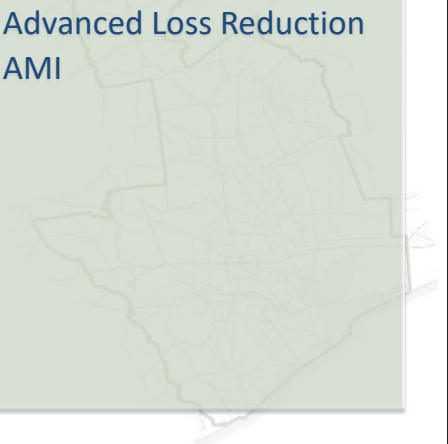
Demand Management

Returning Concepts

- Advanced Municipal Conservation
- Water Loss Reduction
- Irrigation Conservation

New Projects

- Sugar Land Advanced Loss Reduction
- Sugar Land AMI



Agenda Item 7 Water Supply Alternatives - Projects

Groundwater Development

Returning Concepts

- Expanded Use of Groundwater
- Groveton Well Development
- Montgomery County MUDs 8 & 9 GRP Infrastructure
- SJRA Catahoula Aquifer Supplies
- WUG-Level Brackish Projects

New Projects

- Manvel Groundwater Development
- 


Agenda Item 7 Water Supply Alternatives - Projects

Direct and Indirect Reuse

Returning Concepts

- City of Houston Reuse Infrastructure
- Municipal Irrigation Reuse Development (MPCs)
- Pearland Reuse Infrastructure
- River Plantation Reuse Expansion
- Sugar Land Reuse Infrastructure

New Projects

- NHCRWA Member District Reuse Infrastructure
 - NFBWA Member District Reuse Infrastructure
- 

Agenda Item 7 Water Supply Alternatives - Projects

Water Treatment

Returning Concepts

- BWA Brackish GW Treatment
- BWA Conventional Treatment Exp.
- City of Houston NEWPP
- City of Houston Treatment Exp.
- GRP Treatment Inf.
- Pearland SWTP
- Porter SUD GRP Infrastructure

New Projects

- City of Houston SW Treatment
- GCWA Galveston Co. Treatment Exp.
- Manvel Treatment and Transmission
- SEWPP Additional Module
- Sugar Land GW Plant Conversion
- Surfside Beach Supply Infrastructure

Agenda Item 7 Water Supply Alternatives - Projects

Major Transmission and Distribution

Returning Concepts

- East Texas Transfer
- Lake Livingston to SJRA Transfer
- LNVA Irrigation System Expansion
- RWA Shared Transmission Projects
- RWA Transmission and Distribution
- SJRA GRP Transmission

New Projects

- BWA Transmission Expansion
- GCWA Chocolate Bayou PS Exp.
- GCWA Galveston Co. Raw Water Exp.
- SE Transmission Improvements
- City of Houston GRP Transmission

Agenda Item 7 Water Supply Alternatives - Projects

Reservoir Development and Other Surface Water

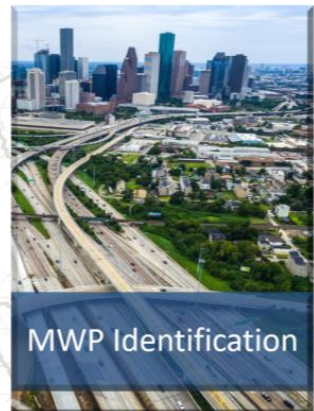
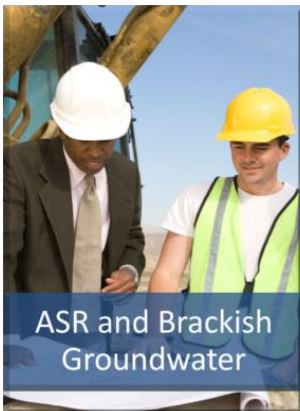
Returning Concepts

- Allens Creek Reservoir
- Brazos Saltwater Barrier
- Dow Reservoir and Pump Station Expansion
- Freeport Seawater Desalination

New Projects

- Chocolate Bayou SWB Improvements
- Manvel Right and Storage
- Mustang Reservoir Improvements
- SJRA Aquifer Storage and Recovery

Agenda Item 6 WMS Recommendations – Ongoing Effort



Agenda Item 8

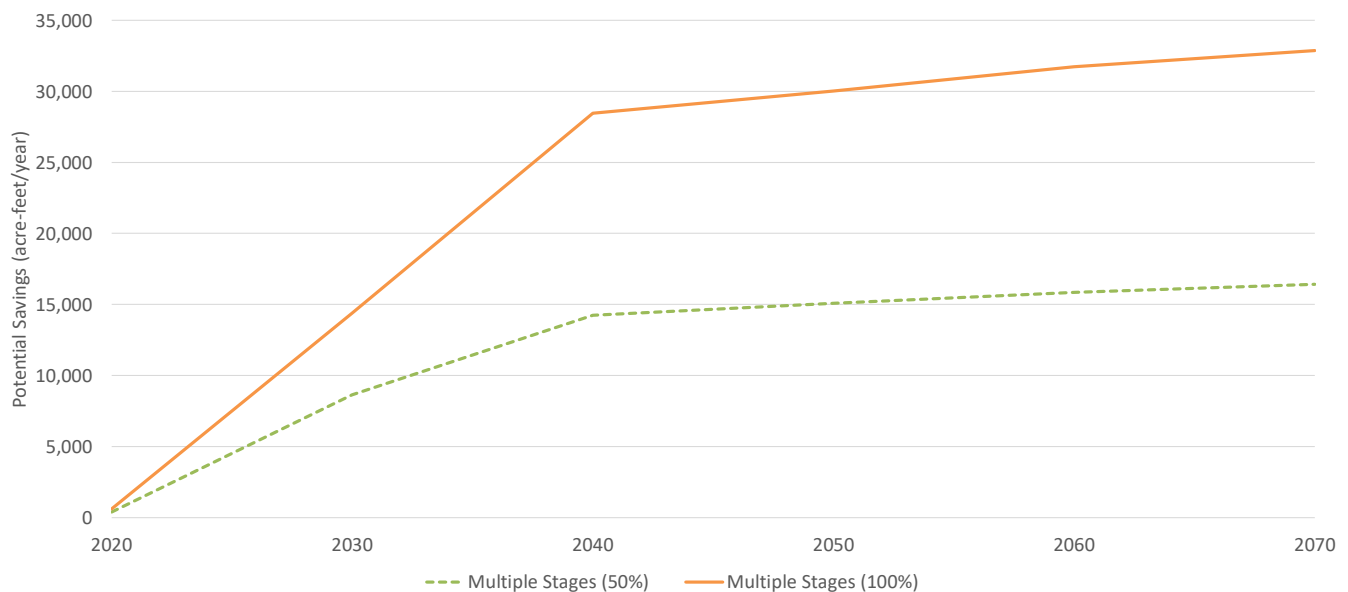
Receive update from Water Management Strategy Committee and Consultant Team regarding drought management as a potential water management strategy and discuss recommendations.

Agenda Item 8 Drought Management

- Time for fresh look
- Refined assumptions
 - Percent of 2011
 - Remove overlap with conservation
 - Efficacy factor
 - Cap at needs
- Discussed with WMS Committee on October 30th



Agenda Item 8 Drought Management



Agenda Item 8 Drought Management

Challenges

- Acceptance of impacts rather than supply
- Growth-driven regional demands
- Many variables on efficacy
- Overlap w/ projections
- Non-firm



Benefits

- RWP wants to promote drought planning
- Recognize water supplier efforts
- Quantify demand potential
- Real-world measure
- Clarity

Agenda Item 8 Drought Management



Formalize as Considered Strategy



Document in WMS Tech Memo



Ch. 7 Analysis and Considerations



Ch. 7 DCP Advocacy

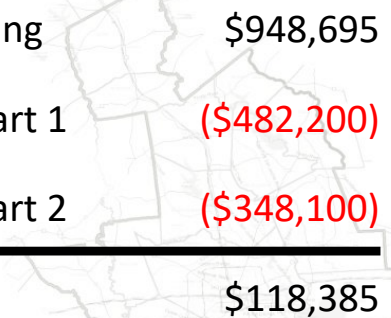


Agenda Item 9

Receive report from Consultant Team and Water Management Strategy Committee regarding options for remaining Task 5 funds and consider taking action to approve a notice-to-proceed request and authorizing the Consultant Team and San Jacinto River Authority to coordinate with TWDB and execute the subsequent contract amendment issued.

Agenda Item 9 WMS Funding

- \$118,385 remaining
 - Allocated to Region H
 - Not yet authorized
- WMS Committee discussed October 30th
- Recommendation to use for post-IPP adjustments



Task 5A Funding	\$948,695
4D Items Part 1	(\$482,200)
4D Items Part 2	(\$348,100)
<hr/>	
Remaining	\$118,385

Agenda Item 9 WMS Funding

- Potential Item:

Review input from stakeholders and identify requests to adjust recommended WMS and projects included in the IPP. This may include addition of new projects that have not been identified to date and will require further analysis and study in order to make them eligible for inclusion in the Final RWP. Effort will include revisions to DB22 to incorporate new projects as necessary.

Agenda Item 9

WMS Funding

Action:

Approve the notice-to-proceed request and authorize the Consultant Team and San Jacinto River Authority to:

1. Submit the request to TWDB.
2. Coordinate with TWDB as needed on follow-up information.
3. Execute the subsequent contract amendment issued.



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	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 evaluation information? If no, indicate specific update in subtask row column E
										X	H	5A	10.1	Revisions to WMS Based on IPP Input	Review input from stakeholders and identify requests to adjust recommended WMS and projects included in the IPP. This may include addition of new projects that have not been identified to date and will require further analysis and study in order to make them eligible for inclusion in the Final RWP. Effort will include revisions to DB17 to incorporate new projects as necessary.	Updated Plan with appropriate reallocation of WMS and projects as developed through IPP review process. Updates to DB17 as necessary.	\$ 118,395	Multiple potential WWPs and WUGs in Region H	Yes - based on stakeholder feedback	N/A	N/A (not a WMS, but was a task in the 4th cycle of RWP development)	Yes
REGION-SPECIFIC SUBTASKS TOTAL BUDGET																	\$ 118,395					

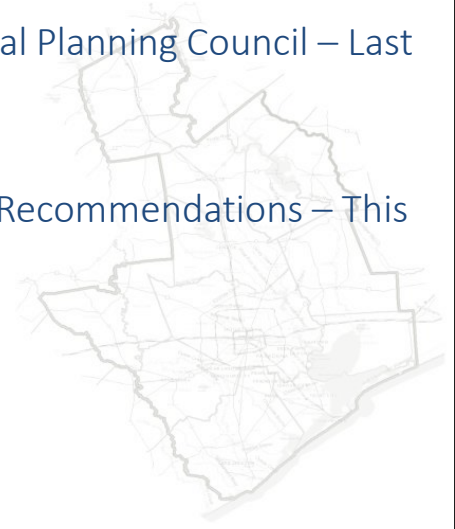
Agenda Item 10

Receive update from Consultant Team on new legislative requirements for Regional Planning and discuss recommendations for addressing requirements in the 2021 Region H RWP.

Agenda Item 10 Legislative Requirements

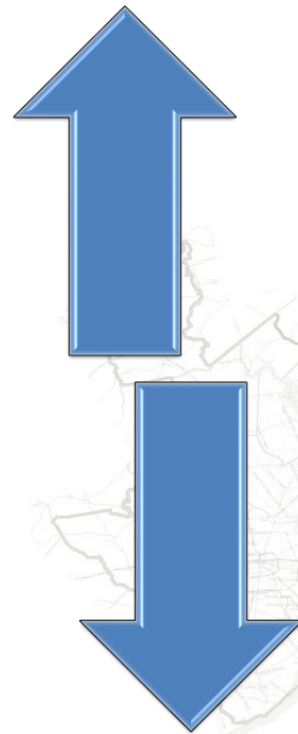


- Interregional Planning Council – Last meeting
- Legislative Recommendations – This meeting



Agenda Item 10 Legislative Requirements

- ASR – Define threshold of significant identified needs
- Region H already analyzing
- Formalize value for 2021 RWP
- Align with MWP threshold?



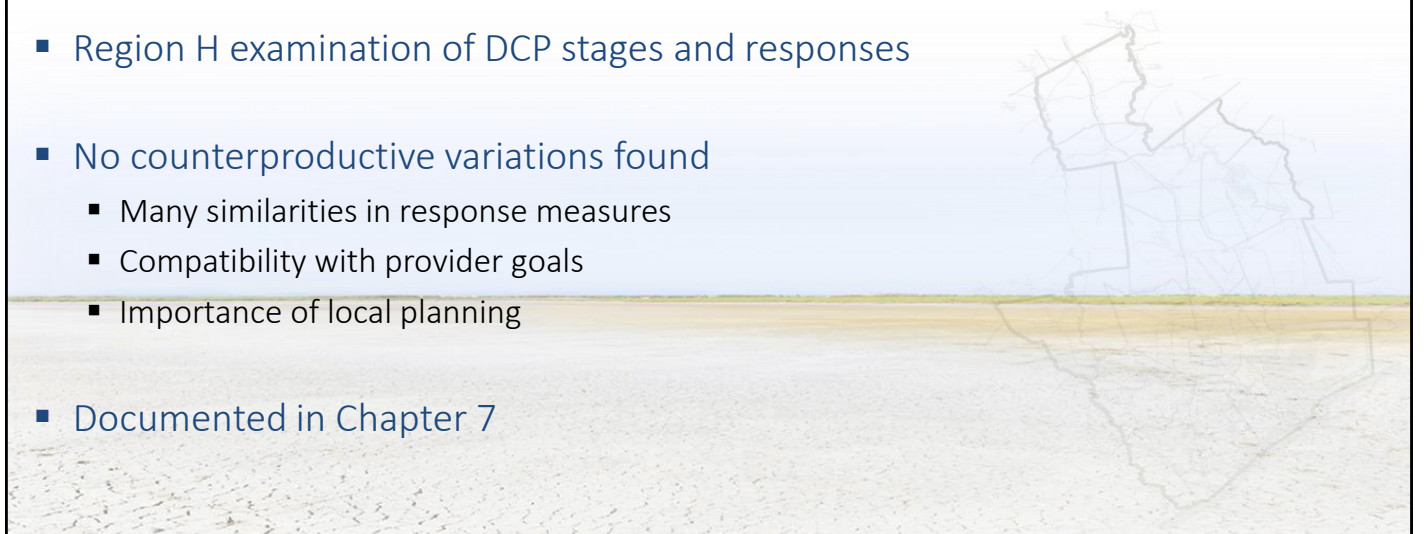
Agenda Item 10 Legislative Requirements

- HB 807 requires quantified GPCD goals
- TWDB guidance
 - Specific or range
 - Grouped or individual
- Documented in Chapter 5B



Agenda Item 10 Legislative Requirements

- Unnecessary or counterproductive variations in drought response strategies
- Region H examination of DCP stages and responses
- No counterproductive variations found
 - Many similarities in response measures
 - Compatibility with provider goals
 - Importance of local planning
- Documented in Chapter 7



Agenda Item 10 Legislative Requirements

- Assess progress of RWPA in cooperation and regionalization
- Region H summary
 - Multi-WUG sources
 - Multi-customer providers
 - Multi-sponsor WMS
- Documented in Chapter 11



pending demand reduction WMS from other regions

Table 5B-C1 – Gallons Per Capita Daily Goals for Municipal Water User Groups

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, AUSTIN	106	103	101	100	99	99	101	95	91	88	86	83
COUNTY-OTHER, BRAZORIA	136	132	130	130	129	129	132	127	124	123	122	121
COUNTY-OTHER, CHAMBERS	102	99	98	97	97	97	99	95	93	92	91	91
COUNTY-OTHER, FORT BEND	126	124	123	122	122	122	121	118	117	116	115	114
COUNTY-OTHER, GALVESTON	111	108	105	104	104	104	107	101	98	96	95	93
COUNTY-OTHER, HARRIS	124	120	118	117	117	117	120	115	112	111	110	109
COUNTY-OTHER, LEON	102	97	95	94	94	94	96	87	82	79	77	74
COUNTY-OTHER, LIBERTY	109	105	102	100	100	100	104	96	91	87	84	82
COUNTY-OTHER, MADISON	163	159	156	155	155	155	155	145	139	134	130	126
COUNTY-OTHER, MONTGOMERY	110	107	106	105	105	105	106	102	100	99	99	98
COUNTY-OTHER, POLK	93	90	87	86	86	86	90	84	81	79	79	78
COUNTY-OTHER, SAN JACINTO	103	100	98	97	97	97	98	92	89	88	87	86
COUNTY-OTHER, WALKER	188	184	181	179	179	179	182	177	173	171	170	169
COUNTY-OTHER, WALLER	110	106	105	104	103	103	105	100	98	96	96	95
ALVIN	155	151	148	147	147	146	150	144	140	138	137	136
ANAHUAC	105	101	98	96	96	96	100	92	86	82	80	77
ANGLETON	92	88	85	83	83	83	88	80	75	71	69	67
AUSTIN COUNTY WSC	131	127	124	123	122	122	125	117	113	110	109	108
BACLIFF MUD	66	63	60	60	60	60	63	60	60	60	60	60
BAKER ROAD MUD	225	222	220	219	219	219	218	214	210	209	209	209
BAYBROOK MUD 1	256	253	251	250	250	250	246	237	231	231	229	231
BAYTOWN	120	116	113	112	111	111	116	108	104	101	100	99
BAYVIEW MUD	76	72	70	69	69	69	73	67	65	63	62	61
BELLAIRE	199	194	191	190	189	189	193	186	182	179	178	176
BELLVILLE	248	244	241	239	239	239	240	232	227	225	225	225
BLUE BELL MANOR UTILITY	201	197	193	192	191	191	195	190	186	184	183	182
BLUE RIDGE WEST MUD	121	119	118	118	118	118	117	114	113	112	111	110
BOLIVAR PENINSULA SUD	60	60	60	60	60	60	59	58	57	57	56	55
BRAZORIA	91	87	84	83	82	82	88	82	78	76	75	73
BRAZORIA COUNTY MUD 2	368	366	365	364	364	364	354	342	333	325	318	312
BRAZORIA COUNTY MUD 21	133	132	131	131	131	130	128	125	124	123	122	121
BRAZORIA COUNTY MUD 25	88	85	82	81	81	81	85	81	78	77	76	75
BRAZORIA COUNTY MUD 29	92	89	86	85	85	85	89	84	81	79	78	77
BRAZORIA COUNTY MUD 3	139	137	135	134	134	134	134	130	128	127	126	125
BRAZORIA COUNTY MUD 31	235	232	229	228	228	228	227	220	217	214	213	211
BRAZORIA COUNTY MUD 6	193	191	191	190	190	190	188	185	184	183	182	181
BROOKSHIRE MWD	102	99	97	96	96	95	98	91	87	84	82	79
BUFFALO	175	171	168	167	166	166	168	158	150	146	143	141
BUNKER HILL VILLAGE	382	378	374	373	372	372	372	366	363	361	360	359
CAPE ROYALE UD	232	228	226	225	225	225	223	213	207	203	202	201
CENTERVILLE	167	162	159	158	157	157	161	150	146	143	143	143
CENTRAL HARRIS COUNTY REGIONAL WATER AUTHORITY	85	83	81	81	80	80	82	78	76	75	74	72
CHAMBERS COUNTY MUD 1	73	69	67	65	65	65	70	65	62	60	60	60
CHATEAU WOODS MUD	102	99	97	96	96	96	98	94	91	89	88	87
CHIMNEY HILL MUD	95	91	88	87	87	87	92	86	83	81	80	79
CLEAR BROOK CITY MUD	84	81	79	78	78	78	80	76	73	71	70	69
CLEAR LAKE CITY WATER AUTHORITY	166	163	161	160	160	160	160	154	150	148	147	146
CLEVELAND	178	174	171	169	169	169	171	162	155	151	148	146
CLUTE	116	112	109	107	107	107	112	107	104	101	101	100
CONCORD-ROBBINS WSC	67	64	61	60	60	60	64	60	60	60	60	60
CONROE	153	150	149	148	148	148	149	144	141	140	139	138
CORINTHIAN POINT MUD 2	261	258	256	255	255	255	253	249	246	245	244	242
COUNTRY TERRACE WATER	87	84	82	81	81	81	84	79	77	75	75	74
CROSBY MUD	108	102	102	102	101	101	103	94	92	89	87	85
CUT & SHOOT	79	75	72	71	71	70	76	71	67	65	65	64
DAISETTA	104	99	96	95	95	95	100	94	91	89	88	87
DANBURY	92	88	85	83	83	83	88	82	78	76	76	75
DAYTON	199	195	194	193	193	193	193	188	185	183	182	180
DEER PARK	112	108	105	104	104	104	107	98	92	87	84	81
DEVERS	199	196	194	193	193	193	193	188	186	185	184	183
DOBBIN PLANTERSVILLE WSC	69	67	66	66	65	65	67	63	62	61	60	60
DODGE OAKHURST WSC	104	100	98	97	97	97	100	95	92	90	90	88
DOMESTIC WATER	85	82	80	79	79	79	82	77	75	73	72	71
DOUGLAS UTILITY	82	77	74	73	73	73	79	74	71	70	70	69
EAST PLANTATION UD	176	172	168	166	166	166	170	163	160	157	156	155
EL DORADO UD	83	79	75	73	73	73	80	73	69	66	65	65
FAR HILLS UD	234	231	229	228	228	228	226	222	220	218	217	216

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
FIRST COLONY MUD 9	158	156	155	155	155	155	153	150	149	148	147	147
FLO COMMUNITY WSC	114	111	108	107	106	106	109	102	96	92	89	86
FOREST HILLS MUD	99	96	94	93	93	93	94	89	86	84	83	82
FORT BEND COUNTY FWSD 1	63	60	60	60	60	60	61	58	56	54	53	52
FORT BEND COUNTY FWSD 2	80	78	77	77	77	77	78	74	73	72	71	70
FORT BEND COUNTY MUD 115	425	423	422	422	422	422	412	404	397	394	393	393
FORT BEND COUNTY MUD 116	207	206	205	205	205	205	201	198	197	196	195	194
FORT BEND COUNTY MUD 121	111	110	109	109	108	108	107	104	104	103	102	101
FORT BEND COUNTY MUD 128	202	200	199	199	199	199	197	193	192	191	191	190
FORT BEND COUNTY MUD 129	222	220	220	219	219	219	216	213	212	211	210	210
FORT BEND COUNTY MUD 140	150	148	147	147	147	147	146	143	141	140	140	139
FORT BEND COUNTY MUD 149	91	89	88	88	88	88	86	82	80	78	77	75
FORT BEND COUNTY MUD 152	177	175	174	174	174	174	169	165	163	160	159	157
FORT BEND COUNTY MUD 155	140	138	137	137	137	137	134	130	128	126	125	124
FORT BEND COUNTY MUD 158	167	165	164	164	164	164	162	156	155	153	152	150
FORT BEND COUNTY MUD 162	87	85	84	84	84	84	83	80	79	77	76	75
FORT BEND COUNTY MUD 187	107	105	104	104	104	104	103	100	99	98	97	97
FORT BEND COUNTY MUD 23	101	100	99	99	99	99	97	94	93	92	91	90
FORT BEND COUNTY MUD 24	90	88	87	87	87	87	86	82	81	79	78	76
FORT BEND COUNTY MUD 25	115	113	111	110	110	110	111	107	105	104	103	102
FORT BEND COUNTY MUD 26	104	102	101	101	101	101	101	98	96	95	95	94
FORT BEND COUNTY MUD 42	171	169	168	168	168	168	166	162	161	159	159	158
FORT BEND COUNTY MUD 46	232	230	229	229	229	229	225	221	220	218	217	217
FORT BEND COUNTY MUD 47	100	98	97	97	97	97	96	93	91	89	88	87
FORT BEND COUNTY MUD 48	111	109	108	108	108	108	108	104	103	102	101	100
FORT BEND COUNTY MUD 49	138	136	135	135	135	135	133	130	129	128	127	127
FORT BEND COUNTY MUD 5	70	68	67	67	67	67	67	64	63	61	61	60
FORT BEND COUNTY MUD 81	535	533	532	532	532	532	519	509	504	503	502	501
FORT BEND COUNTY WCID 2	175	173	172	172	172	172	169	164	162	161	161	160
FORT BEND COUNTY WCID 3	526	524	523	523	523	523	514	511	509	509	508	508
FREEPORT	100	95	92	90	90	90	96	91	87	85	82	80
FRIENDSWOOD	158	154	152	151	150	150	151	143	138	134	131	130
FULSHEAR	102	101	101	101	101	101	98	95	94	92	91	89
G & W WSC	104	101	100	99	99	99	101	97	95	94	93	93
GALENA PARK	69	65	62	60	60	60	67	61	60	60	60	60
GALVESTON	290	285	283	282	282	282	276	258	245	235	226	217
GALVESTON COUNTY FWSD 6	180	176	174	173	173	173	173	166	164	161	161	159
GALVESTON COUNTY MUD 12	107	103	101	100	100	100	102	95	92	90	89	87
GALVESTON COUNTY WCID 1	100	96	94	93	93	93	95	88	84	81	79	76
GALVESTON COUNTY WCID 12	204	200	198	197	197	197	198	193	190	188	188	188
GALVESTON COUNTY WCID 8	95	91	89	88	88	88	89	79	73	68	65	61
GLENDALE WSC	126	123	121	119	119	119	121	115	112	109	108	107
GREEN TRAILS MUD	272	268	265	264	264	264	265	258	255	254	253	252
GREENWOOD UD	68	66	64	64	63	63	63	54	51	48	45	42
GROVETON	95	91	88	86	86	86	92	85	81	78	77	75
GULF UTILITY	154	153	153	152	152	152	149	146	145	144	144	143
HARDIN WSC	90	86	85	84	84	83	86	81	79	77	77	75
HARRIS COUNTY FWSD 1-A	80	77	75	74	74	74	75	67	63	60	57	54
HARRIS COUNTY FWSD 27	96	93	91	90	90	90	92	88	86	85	84	83
HARRIS COUNTY FWSD 58	185	182	180	179	179	179	178	174	172	170	170	169
HARRIS COUNTY MUD 106	250	249	248	248	248	248	242	235	231	228	224	223
HARRIS COUNTY MUD 11	93	90	87	86	86	86	89	84	81	79	79	77
HARRIS COUNTY MUD 119	76	72	69	67	66	66	74	68	65	62	62	61
HARRIS COUNTY MUD 122	92	89	87	86	86	86	88	84	83	81	80	79
HARRIS COUNTY MUD 132	160	156	152	152	152	152	155	149	145	144	144	143
HARRIS COUNTY MUD 148	67	65	64	64	63	63	64	61	60	60	60	60
HARRIS COUNTY MUD 151	151	149	147	146	146	146	146	142	140	139	138	137
HARRIS COUNTY MUD 152	122	119	118	117	117	117	117	114	112	111	110	109
HARRIS COUNTY MUD 153	153	151	149	149	148	148	148	144	142	141	140	140
HARRIS COUNTY MUD 154	114	111	109	108	107	107	111	106	103	102	101	100
HARRIS COUNTY MUD 158	96	93	91	90	89	89	92	88	85	83	83	82
HARRIS COUNTY MUD 180	80	77	75	74	73	73	76	71	67	65	64	62
HARRIS COUNTY MUD 189	80	77	77	76	76	76	78	75	74	74	73	73
HARRIS COUNTY MUD 216	129	126	124	123	123	123	122	115	111	108	105	103
HARRIS COUNTY MUD 221	89	87	87	87	86	86	85	83	82	81	81	80
HARRIS COUNTY MUD 23	70	67	65	64	64	64	67	63	61	60	60	60
HARRIS COUNTY MUD 278	89	88	88	87	87	87	86	84	82	81	80	79
HARRIS COUNTY MUD 290	110	109	109	109	109	109	106	103	102	101	100	98

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
HARRIS COUNTY MUD 321	185	182	180	179	179	179	179	174	171	170	169	169
HARRIS COUNTY MUD 342	158	155	153	152	152	152	153	149	147	146	145	145
HARRIS COUNTY MUD 344	224	221	219	218	218	218	218	213	211	210	209	208
HARRIS COUNTY MUD 345	202	199	197	196	195	195	196	191	189	187	186	185
HARRIS COUNTY MUD 36	212	209	207	206	206	206	206	202	199	198	198	198
HARRIS COUNTY MUD 361	122	119	117	116	116	116	117	112	110	108	108	106
HARRIS COUNTY MUD 372	271	268	266	265	265	265	263	259	257	255	255	254
HARRIS COUNTY MUD 400	146	145	145	145	144	144	142	139	139	138	138	137
HARRIS COUNTY MUD 412	185	182	180	179	179	179	177	170	165	161	159	158
HARRIS COUNTY MUD 420	80	77	75	74	74	74	76	72	70	68	67	66
HARRIS COUNTY MUD 46	148	145	142	141	141	141	143	138	135	134	133	132
HARRIS COUNTY MUD 49	87	86	85	84	84	84	84	81	80	79	78	77
HARRIS COUNTY MUD 5	73	69	67	65	65	65	69	64	60	58	57	57
HARRIS COUNTY MUD 50	112	107	105	105	105	105	106	96	92	88	85	82
HARRIS COUNTY MUD 55	92	88	85	83	83	83	88	82	78	75	73	71
HARRIS COUNTY MUD 58	101	98	96	95	95	95	98	95	93	91	91	91
HARRIS COUNTY MUD 6	102	99	97	96	96	96	98	94	92	90	90	89
HARRIS COUNTY MUD 8	95	90	87	86	86	86	92	87	83	83	82	82
HARRIS COUNTY MUD 96	77	76	75	74	74	74	74	71	70	69	68	67
HARRIS COUNTY UD 14	60	60	60	60	60	60	59	58	57	56	55	54
HARRIS COUNTY UD 15	129	126	123	122	122	122	125	121	118	116	115	115
HARRIS COUNTY WCID 1	91	86	83	82	82	82	86	78	73	71	69	67
HARRIS COUNTY WCID 133	111	107	103	102	101	101	107	102	99	96	95	95
HARRIS COUNTY WCID 156	203	200	198	197	197	197	196	193	191	189	189	188
HARRIS COUNTY WCID 50	114	111	109	108	108	108	109	104	102	100	99	97
HARRIS COUNTY WCID 70	139	136	134	133	133	133	132	125	120	116	114	110
HARRIS COUNTY WCID 74	99	95	91	89	89	89	96	91	87	85	84	83
HARRIS COUNTY WCID 89	76	73	71	70	70	70	71	65	62	59	57	55
HARRIS COUNTY WCID 96	166	165	164	164	164	164	161	159	158	158	157	157
HARRIS COUNTY WCID-FONDREN ROAD	85	82	80	79	79	79	81	77	74	73	72	71
HARRIS-MONTGOMERY COUNTIES MUD 386	124	121	119	118	118	118	120	116	114	112	112	111
HEMPSTEAD	173	170	168	167	167	166	168	163	160	159	158	158
HILLCREST VILLAGE	144	140	137	135	135	135	138	131	126	121	119	117
HILLTOP LAKES WSC	172	168	165	164	164	164	166	159	156	154	153	152
HILSHIRE VILLAGE	234	229	226	224	224	224	228	220	215	212	212	212
HITCHCOCK	99	95	92	91	91	91	95	90	87	86	85	84
HMW SUD	119	116	114	113	113	113	114	110	107	105	102	98
HOUSTON	181	177	175	173	173	173	174	165	159	154	151	148
HUMBLE	140	135	133	131	131	131	135	128	124	122	121	120
HUNTSVILLE	173	169	167	165	165	165	167	159	154	151	150	149
JACINTO CITY	66	62	60	60	60	60	63	59	58	58	58	58
JAMAICA BEACH	235	232	229	228	228	228	228	222	219	217	216	214
JERSEY VILLAGE	202	199	196	195	195	195	195	186	181	178	177	177
JEWETT	145	142	140	139	139	139	140	135	133	131	131	131
JOHNSTON WATER UTILITY	356	353	351	350	350	350	347	342	340	338	337	337
KATY	215	212	211	210	210	210	209	203	200	198	197	196
KENDLETON	285	283	282	282	282	282	271	254	243	232	222	214
KINGS MANOR MUD	105	102	100	99	99	99	102	97	95	93	93	92
KIRKMONT MUD	146	141	138	136	136	136	141	134	131	129	128	127
LA MARQUE	140	136	134	133	132	132	132	121	113	106	100	95
LA PORTE	125	122	118	117	116	116	120	112	108	105	104	102
LAKE BONANZA WSC	90	87	85	84	84	84	86	82	80	78	78	76
LAKE CONROE HILLS MUD	105	102	100	99	99	99	100	95	91	88	87	86
LAKE JACKSON	174	170	167	165	165	165	169	162	158	155	154	152
LAKE LIVINGSTON WSC	61	60	60	60	60	60	59	57	55	53	51	50
LAKE MUD	78	75	73	72	72	72	74	68	65	63	62	60
LAZY RIVER IMPROVEMENT DISTRICT	212	209	207	206	206	206	206	202	200	199	197	197
LEAGUE CITY	119	117	115	114	114	114	114	108	105	103	102	100
LEGGETT WSC	148	145	142	141	141	141	140	130	121	116	111	107
LIBERTY	152	148	145	143	143	143	145	135	127	123	120	117
LIBERTY COUNTY FWSD 1 HULL	135	132	130	129	129	129	129	125	122	120	119	118
LIVINGSTON	375	371	368	366	366	366	361	344	331	322	315	310
LONGHORN TOWN UD	201	199	198	198	198	198	195	191	189	188	188	188
LUCE BAYOU PUD	162	159	157	156	156	156	155	148	143	140	136	135
MADISON COUNTY WSC	132	129	126	125	125	125	127	122	119	117	115	114
MADISONVILLE	164	160	157	155	155	155	157	148	141	137	135	132
MAGNOLIA	200	198	196	196	196	195	194	189	187	186	186	185
MANVEL	128	125	124	124	124	124	120	113	108	104	102	101

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
MASON CREEK UD	172	167	164	164	163	163	166	160	157	156	155	154
MEADOWCREEK MUD	122	120	119	119	119	119	118	115	114	113	112	111
MEADOWS PLACE	148	144	140	139	138	138	143	137	133	131	130	130
MEMORIAL POINT UD	145	142	139	138	138	138	138	127	120	115	110	106
MEMORIAL VILLAGES WATER AUTHORITY	490	487	485	484	484	484	478	474	471	470	469	468
MERCY WSC	87	83	81	80	80	80	82	74	69	66	63	60
MISSOURI CITY	140	136	134	133	133	133	135	129	126	124	124	123
MONT BELVIEU	389	387	386	385	385	385	380	375	373	371	371	370
MONTGOMERY	211	209	209	208	208	208	204	199	197	196	196	197
MONTGOMERY COUNTY MUD 112	222	219	217	216	216	216	216	211	208	207	206	205
MONTGOMERY COUNTY MUD 115	156	153	151	150	150	150	150	147	144	143	142	141
MONTGOMERY COUNTY MUD 119	244	241	239	238	238	238	237	232	230	228	227	226
MONTGOMERY COUNTY MUD 15	117	115	114	113	113	113	113	108	107	105	104	103
MONTGOMERY COUNTY MUD 18	246	243	242	242	242	242	239	235	233	232	232	231
MONTGOMERY COUNTY MUD 19	117	113	109	108	107	107	114	110	106	104	104	103
MONTGOMERY COUNTY MUD 56	97	94	92	91	91	91	93	90	88	86	86	85
MONTGOMERY COUNTY MUD 8	134	130	127	126	125	125	129	122	119	116	115	114
MONTGOMERY COUNTY MUD 83	168	167	167	167	167	166	163	160	159	158	158	157
MONTGOMERY COUNTY MUD 84	197	194	192	191	191	191	189	181	177	175	174	172
MONTGOMERY COUNTY MUD 88	164	161	159	158	158	158	161	150	147	144	142	142
MONTGOMERY COUNTY MUD 89	71	70	69	69	69	69	68	65	65	64	63	62
MONTGOMERY COUNTY MUD 9	140	138	136	135	135	134	135	129	127	125	124	122
MONTGOMERY COUNTY MUD 95	76	73	71	70	70	70	72	68	66	64	63	62
MONTGOMERY COUNTY MUD 98	102	99	97	96	96	96	97	91	89	87	86	84
MONTGOMERY COUNTY MUD 99	197	194	192	191	191	191	188	180	175	170	166	163
MONTGOMERY COUNTY UD 2	111	106	103	102	102	102	106	99	96	95	94	92
MONTGOMERY COUNTY UD 3	131	127	127	126	126	126	122	108	101	95	90	84
MONTGOMERY COUNTY UD 4	149	144	141	140	140	139	143	136	133	131	130	129
MONTGOMERY COUNTY WCID 1	77	72	68	68	68	67	73	67	63	62	62	61
MORGANS POINT	319	316	314	313	313	313	310	304	302	300	301	299
MOUNT HOUSTON ROAD MUD	89	87	86	86	86	86	85	83	82	81	81	80
MSEC ENTERPRISES	205	202	200	199	199	199	199	194	191	189	188	186
NASSAU BAY	233	228	225	224	224	223	225	215	209	207	206	206
NEEDVILLE	95	91	88	86	86	86	91	85	82	80	79	78
NEW CANEY MUD	75	70	68	66	66	66	71	65	62	60	60	60
NEW WAVERLY	149	145	142	141	140	140	143	134	130	128	127	127
NEWPORT MUD	97	95	93	93	92	92	92	88	86	85	84	83
NORMANGEE	145	141	138	136	136	136	139	133	127	126	126	125
NORTH BELT UD	171	166	163	162	161	161	164	156	152	151	150	149
NORTH CHANNEL WATER AUTHORITY	111	108	106	104	104	104	107	101	97	95	94	92
NORTH FOREST MUD	119	116	114	113	113	113	112	103	96	91	88	83
NORTH FORT BEND WATER AUTHORITY	200	198	197	197	197	197	194	190	188	187	186	184
NORTH GREEN MUD	105	102	99	98	98	98	102	98	96	94	94	94
NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY	151	149	147	146	146	146	147	142	139	137	136	134
NORTH ZULCH MUD	121	118	115	114	114	114	116	109	104	101	100	99
NORTHWEST HARRIS COUNTY MUD 16	125	122	120	119	119	119	120	116	114	112	112	110
OAK HOLLOW UTILITY	104	101	100	99	98	98	100	95	93	91	91	89
OAK RIDGE NORTH	160	156	153	151	151	151	155	148	144	141	141	141
ONALASKA WSC	92	89	86	85	85	85	88	81	77	74	73	72
ONE FIVE O WSC	96	92	90	89	89	89	92	85	81	78	76	74
OYSTER CREEK	197	193	190	188	188	188	192	184	180	178	177	176
P B & S C WSC	120	116	114	113	113	113	116	110	108	106	105	104
PALMER PLANTATION MUD 1	212	210	209	209	209	209	206	203	201	200	200	198
PALMER PLANTATION MUD 2	114	112	111	111	111	111	111	107	106	105	104	104
PANORAMA VILLAGE	205	201	199	198	197	197	198	193	190	188	187	186
PARKWAY MUD	78	76	74	73	72	72	75	70	68	66	65	64
PASADENA	132	129	126	124	124	124	128	123	119	117	115	115
PATTISON WSC	138	135	134	133	132	132	134	129	127	126	125	124
PEARLAND	129	127	126	125	125	125	124	119	117	115	114	112
PECAN GROVE MUD 1	157	152	149	148	148	148	152	146	141	140	139	139
PHELPS SUD	98	94	92	90	90	90	94	89	87	84	84	82
PINE VILLAGE PUD	91	88	86	85	85	85	87	83	80	79	78	77
PINEHURST DECKER PRAIRIE WSC	61	60	60	60	60	60	60	59	58	58	58	58
PINEWOOD COMMUNITY	85	82	80	79	79	79	81	77	75	73	73	72
PLANTATION MUD	95	91	87	86	85	85	91	85	82	80	79	78
POINT AQUARIUS MUD	183	180	178	177	177	177	177	172	169	168	166	165
PORTER SUD	60	60	60	60	60	60	60	60	60	60	60	60

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
PRAIRIE VIEW	212	208	206	205	205	205	206	201	199	197	196	196
PRAIRIE VIEW A&M UNIVERSITY	60	60	60	60	60	60	60	60	60	60	60	60
PROVIDENCE WSC	66	63	60	60	60	60	63	60	60	60	60	60
QUADVEST	199	196	194	193	193	193	192	187	185	183	181	179
QUAIL VALLEY UD	149	147	146	146	146	146	145	141	139	137	136	134
RANCH UTILITIES	87	84	82	81	81	81	83	79	77	75	75	74
RAYFORD ROAD MUD	113	111	109	108	108	108	109	105	103	102	101	100
RICHMOND	146	142	139	138	137	137	142	136	132	130	130	127
RICHWOOD	93	89	86	85	84	84	88	82	78	75	74	73
RIVER PLANTATION MUD	217	213	212	212	212	211	211	205	204	203	202	201
RIVERSIDE WSC	60	60	60	60	60	60	60	60	60	60	60	60
ROLLING FORK PUD	157	154	152	151	151	151	151	147	145	144	143	142
ROMAN FOREST CONSOLIDATED MUD	128	125	123	122	122	122	123	118	116	115	114	113
ROSENBERG	105	102	100	99	98	98	101	96	93	91	91	89
ROYAL VALLEY UTILITIES	280	278	277	277	277	277	273	269	268	266	265	264
SAGEMEADOW UD	103	98	95	93	93	93	99	93	89	87	86	85
SAN JACINTO SUD	82	78	74	73	73	73	78	72	68	67	66	65
SAN LEON MUD	60	60	60	60	60	60	60	60	60	60	60	60
SEABROOK	130	127	124	123	123	123	126	121	118	116	115	115
SEALY	183	179	176	175	174	174	178	171	167	166	165	165
SEDONA LAKES MUD 1	136	133	130	129	129	129	130	122	118	115	114	113
SEQUOIA IMPROVEMENT DISTRICT	143	140	138	137	137	137	137	130	126	123	123	122
SHENANDOAH	390	387	385	384	384	384	380	372	367	365	365	366
SHEPHERD	108	104	102	100	100	100	104	98	95	93	92	91
SHOREACRES	198	194	191	189	189	189	192	186	182	179	179	178
SIENNA PLANTATION	213	212	211	211	211	211	207	203	202	200	199	197
SODA WSC	75	72	69	68	68	68	72	67	65	63	62	61
SOUTH CLEVELAND WSC	77	74	72	71	71	71	73	68	66	65	64	63
SOUTH HOUSTON	103	99	95	94	93	93	98	90	84	80	78	76
SOUTHEAST WSC	117	113	110	109	109	109	110	101	96	91	88	84
SOUTHERN MONTGOMERY COUNTY MUD	103	100	97	96	96	96	99	92	86	83	80	78
SOUTHERN WATER	95	92	90	89	89	89	91	87	85	83	83	82
SOUTHSIDE PLACE	136	132	128	127	127	126	132	126	123	121	120	120
SOUTHWEST HARRIS COUNTY MUD 1	66	63	62	61	60	60	63	60	60	60	60	60
SPLENDORA	88	86	84	83	82	82	84	77	74	71	69	66
SPRING CREEK UD	79	77	75	75	74	74	76	72	70	69	68	64
SPRING MEADOWS MUD	73	70	68	67	67	67	69	65	63	61	60	60
SPRING VALLEY	242	238	235	233	233	233	235	229	225	223	222	221
STANLEY LAKE MUD	197	194	192	191	190	190	191	185	183	181	180	180
SUBURBAN UTILITY	88	85	83	82	82	82	84	78	76	75	74	73
SUGAR LAND	223	221	220	220	220	220	216	211	210	209	208	207
SUNBELT FWSD	92	87	84	83	82	82	88	80	75	72	71	69
SURFSIDE BEACH	250	247	244	243	243	243	243	238	236	233	232	231
SWEEENY	130	126	123	121	121	121	126	120	115	113	113	112
T & W WATER SERVICE	224	221	219	218	218	217	217	213	211	209	208	204
TARKINGTON SUD	95	92	90	89	89	89	92	87	84	83	82	81
TDCJ JESTER UNITS	326	324	323	323	323	323	319	316	314	313	313	312
TDCJ RAMSEY AREA	755	752	749	748	748	748	737	733	731	729	728	728
TEMPE WSC 1	81	78	75	74	74	74	77	73	70	68	67	67
TEXAS CITY	123	119	117	115	115	115	118	109	104	99	96	93
THE COMMONS WATER SUPPLY	108	106	105	105	104	104	104	101	100	99	98	97
THE WOODLANDS	215	212	211	210	210	210	213	208	206	205	203	202
THUNDERBIRD UD	163	161	160	160	160	160	158	154	152	151	151	150
TOMBALL	225	222	220	219	219	219	218	209	203	199	198	196
TRAIL OF THE LAKES MUD	103	101	100	99	99	99	100	96	94	93	92	91
TRINITY	99	95	92	90	90	90	95	89	86	83	83	81
TRINITY BAY CONSERVATION DISTRICT	157	153	150	149	149	149	151	145	141	137	135	133
TRINITY RURAL WSC	106	103	101	100	100	100	102	96	93	91	90	89
VALLEY RANCH MUD 1	98	95	93	92	92	92	94	90	87	86	85	84
VARNER CREEK UD	125	121	117	117	117	117	120	112	108	107	107	105
WALKER COUNTY RURAL SUD	119	115	113	111	111	111	113	105	100	96	93	90
WALLER	157	153	150	149	149	149	149	138	132	128	125	123
WALLIS	108	104	101	99	99	99	103	95	91	88	86	84
WATERWOOD MUD 1	252	248	246	245	245	245	246	239	237	237	235	234
WEBSTER	229	227	225	225	225	224	224	220	217	216	216	216
WEST COLUMBIA	100	95	92	91	91	91	96	89	84	83	82	81
WEST END WSC	98	94	91	90	89	89	95	91	87	86	85	85
WEST HARRIS COUNTY MUD 6	121	117	115	113	113	113	117	113	110	109	109	108

Water User Group	Projected Per Capita Demand (gpcd)						Projected Per Capita Demand after Demand Management (gpcd)					
	2020	2030	2040	2050	2060	2070	2020	2030	2040	2050	2060	2070
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY	115	113	111	110	110	110	111	107	105	103	102	101
WEST UNIVERSITY PLACE	172	168	165	163	163	163	167	160	156	153	151	149
WESTWOOD NORTH WSC	160	158	158	157	157	157	154	151	150	149	148	148
WESTWOOD SHORES MUD	116	113	111	109	109	109	112	105	102	100	99	97
WHITE OAK UTILITIES	87	84	82	81	81	81	83	78	75	73	72	70
WHITE OAK WSC	81	78	76	75	75	75	78	74	72	70	69	69
WILLIS	112	109	107	106	106	106	108	104	102	101	100	99
WOOD BRANCH VILLAGE	69	64	60	60	60	60	65	60	60	60	60	60
WOODCREEK MUD	110	107	105	103	103	103	107	102	99	98	97	96
WOODCREEK WATER OF LIBERTY	88	85	83	82	82	82	84	79	77	76	75	74

Agenda Item 11

Receive update from the Region H Legislative Committee and Consultant Team and discuss potential legislative and policy recommendations for the 2021 Region H RWP.

Agenda Item 11 Legislative and Policy Recommendations

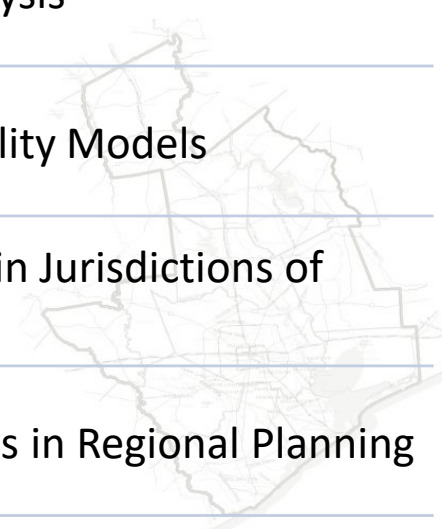
Regulatory

Quantitative Environmental Analysis

Access to Current Water Availability Models

Availability of Groundwater within Jurisdictions of
Groundwater-Regulating Entities

Promoting OneWater Approaches in Regional Planning



Agenda Item 11 Legislative and Policy Recommendations

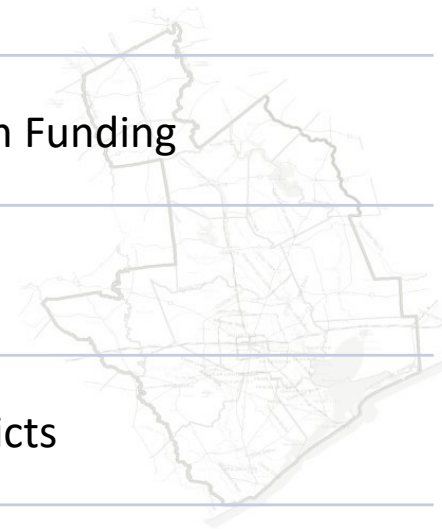
Legislative

Interbasin Transfers

Texas Bays and Estuaries Program Funding

Rule of Capture

Groundwater Conservation Districts



Agenda Item 11
Legislative and Policy Recommendations

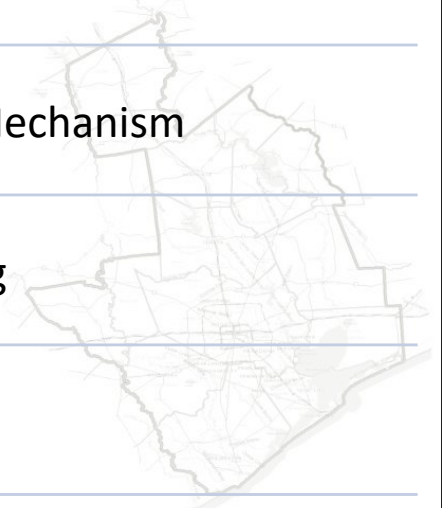
Legislative

Groundwater Availability Modeling Funding

Water Supply Project Financing Mechanism

Agricultural Conservation Funding

Water Conservation



Agenda Item 11
Legislative and Policy Recommendations

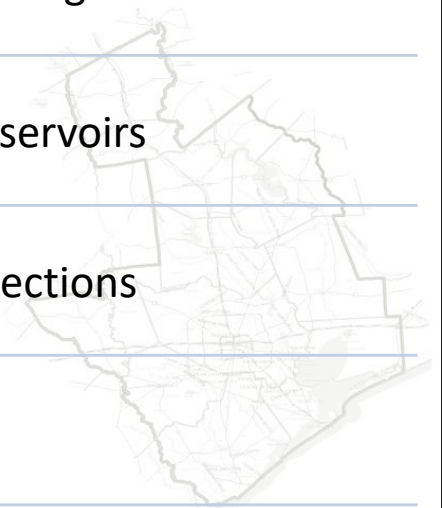
Legislative

Water Conservation Research Funding

Flood Liability of Water Supply Reservoirs

Technology Advancements in Projections

Ongoing RWPG Activities



Agenda Item 11 Legislative and Policy Recommendations

Infrastructure Finance

State Revolving Fund Programs

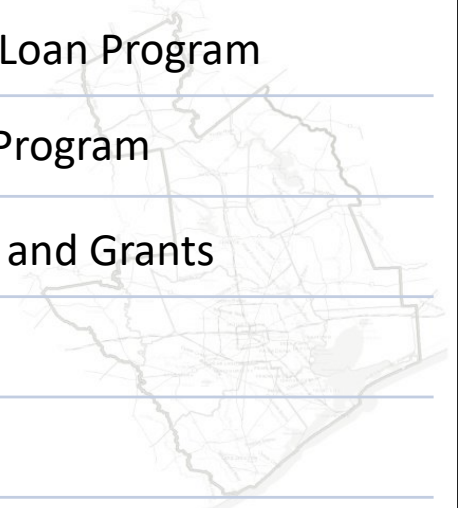
Agricultural Water Conservation Loan Program

Texas Community Development Program

Water and Waste Disposal Loans and Grants

Innovative Water Technologies

Regionalization



Recommendation	Type
Quantitative Environmental Analysis	Regulatory and Administrative
Discussion:	
<p>The Regional Water Planning Guidelines require that the evaluation of potentially feasible water management strategies include a quantitative analysis of environmental factors including effects on wildlife habitat, cultural resources, and effect of upstream development on bays, estuaries, and arms of the Gulf of Mexico (31TAC357.7.(a)(8)(A)). The TWDB has provided detailed guidance on specific study methods to be used in determining population, water demand, project costs, socioeconomic impacts and yield from current and proposed supply sources, but it has not provided similar guidance in the area of environmental impacts. This lack of specificity is resulting in different methods being used in different regions. Additionally, it places the planning groups at risk of needing to conduct additional analysis after state agencies review the Initially Prepared Plans and add those results to the report after the public review period has closed.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends that the TWDB determines, in conjunction with the TCEQ and TPWD, which specific environmental studies and analysis are required for each category of management strategy (i.e., new water right, new reservoir, etc.). Furthermore, the guidance should be added to the Planning Guidelines, so that RWPGs can reflect the cost of those requirements in their budgets and scopes of work. Adding environmental guidelines will also make water plans consistent across the State.</p>	

Recommendation	Type
Access to Current Water Availability Models	Regulatory and Administrative
Discussion:	
<p>Water Availability Models (WAMs) are a core component of the regional water planning process and, furthermore, are required by TWDB’s rules for plan development. In response to requests by planning groups and others seeking water rights applications, House Bill 723 was adopted to provide for updates to the Brazos, Neches, Red, and Rio Grande River Basins prior to December 1, 2022. These updates will address revised drought conditions and general updates that have been made since the initial development of these WAMS. Due to the vital importance of these tools in statewide water planning, it is imperative that this initiative continue throughout the state and that up-to-date models are made readily accessible through the TCEQ WAM website.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends that TCEQ continue routine updates to WAMs across the state based on a prioritized methodology based on observed climate conditions and the overall limitation on water resources in each basin. This may be prescribed in future rulemaking. Furthermore, these rules should require that the most recent model for each basin be made available through the TCEQ website for use by both the RWPGs and the public.</p>	

Recommendation	Type
Availability of Groundwater within Jurisdictions of Groundwater-Regulating Entities	Regulatory and Administrative
Discussion:	
<p>During the development of the 2016 Region H Regional Water Plan, it was recognized that the approach to groundwater availability required by TWDB’s rules may place an unrealistic limit on groundwater production for various reasons, including local preference for how Desired Future Conditions (DFCs) may be met, differences between average and peak pumping, and the undue pressure on the Groundwater Management Areas (GMAs) to keep up with the regional planning cycle. The TWDB worked to address these issues with the implementation of a Modeled Available Groundwater (MAG) peaking factor that helps align the average conditions considered by GMAs with the peak demand conditions considered by RWPGs. This approach has greatly improved the harmonization of the two planning processes.</p>	
Recommendation:	
<p>Provide for additional opportunities for GMAs and RWPGs to align their planning through rules that recognize the inherent differences of these process and account for the timing of the methodologies so that changes in groundwater management can be reflected in the RWPs.</p>	

Recommendation	Type
Promoting OneWater Approaches in Regional Planning	Regulatory and Administrative
Discussion:	
<p>A OneWater or comprehensive approach to water management has demonstrated potential for achieving the highest practicable value to return on investment for managing water, wastewater, recovered water, and stormwater resources. Recently, the Austin’s Water Forward program has done the most to push Texas toward a comprehensive approach to water management. However, obstacles still exist to implementation of these sorts of programs. First, more can be done to promote these concepts of demand management and water supply development with water suppliers and utilities. Often, this requires utilities to work with regional partners in order to capture the complete water budget into a program. Second, several strategies such as the conjunctive use of water sources and “banked” supplies like aquifer storage and recovery are difficult to incorporate into Regional Water Plans due to their focus solely on drought-of-record supply. Effort should be made to better reflect these opportunities to maximize water supply.</p>	
Recommendation:	
<p>Work with water utilities and planners to identify the limitations of current planning approaches regarding OneWater management and how these programs may best be reflected in regional plans. This will have the added benefit of promoting these options for comprehensive water management.</p>	

Recommendation	Type
Interbasin Transfers	Legislative
Discussion:	
<p>Senate Bill One states that water rights developed as a result of an interbasin transfer become junior to other water rights granted before the interbasin transfer permit. Senate Bill One made obtaining a permit for interbasin transfer significantly more problematic than it was under prior law and thus, it discouraged the use of interbasin transfers for water supply. This is undesirable for several reasons. First, current supplies greatly exceed projected demands in some basins, and the supplies already developed in those basins can only be used via interbasin transfers. Second, interbasin transfers have been used extensively in Texas and are an important part of the State’s current water supply. For example, three of the Region H Major Water Providers (City of Houston, Trinity River Authority, and San Jacinto River Authority) maintain current permits for interbasin transfers collectively of over 1,000,000 acre-feet per year. A substantial portion of future water demands within the San Jacinto basin (Harris County in particular) of Region H must rely on interbasin transfers. Third, emerging regional water supply plans for major metropolitan areas in Texas (Dallas-Fort Worth and San Antonio) rely on interbasin transfers as a key component of their plans. It is difficult to envision developing a water supply for these areas without significant new interbasin transfers. Furthermore, the inability to meet demands through transfer of existing supplies may result in the need for development of additional, in-basin projects that may have additional cost and environmental impact.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends that the legislature revise the current law on interbasin transfers and remove the unnecessary and counterproductive barriers to such transfers that now exist.</p>	

Recommendation	Type
Texas Bays and Estuaries Program Funding	Legislative
Discussion:	
<p>The Texas 80th Legislature established the current process of assessing the environmental quality of riverine and estuarine systems and applying the “best available science” in prescribing actions to preserve these systems. These recommendations have, in turn, been incorporated into the Regional Water Planning process and serve as a critical standard for the evaluation of future water management strategies. However, the current levels of funding within the State of Texas Bay & Estuary program are insufficient to continue the needed monitoring, study, and development of management strategies for the bay.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends establishment of additional and dedicated funding to pursue necessary future efforts of state’s bay and estuary programs.</p>	

Recommendation	Type
Rule of Capture	Legislative
Discussion:	
<p>Groundwater is a vital resource within Region H. This is especially true within the rural counties of the region that are predominantly dependent on groundwater. Current groundwater law based on the Rule of Capture has facilitated orderly development of groundwater systems throughout the State of Texas and, barred the intrusion of private interests, and it could continue to serve the water usage interests throughout the state. It appears that the Rule-of-Capture could continue per the status quo to serve the groundwater interests within the region.</p>	
Recommendation:	
<p>The Region H Water Planning Group supports continued usage of the Rule of Capture as the basis of groundwater law throughout the State of Texas except as modified through creation of certified groundwater conservation districts.</p>	

Recommendation	Type
Groundwater Conservation Districts	Legislative
Discussion:	
<p>Region H communities, particularly those within the rural areas of the region, are dependent on groundwater supplies. Groundwater is a very valuable resource to this region. Region H contains counties, specifically Austin, Leon and Madison, where some municipalities, water supply corporations, and property owners believe Groundwater Conservation Districts (GCD) are needed to retain long-term groundwater supplies within their respective counties. Region H also has several counties, including Brazoria, Waller and Montgomery, where groundwater supplies will reach their maximum sustainable yield due solely to projected in-county water usage. A GCD is a potential vehicle for these counties to manage and protect groundwater supplies from over-development within each respective county.</p>	
Recommendation:	
<p>The Region H Water Planning Group supports creation of GCDs, as necessary, by local subarea water interests. These districts provide a unique opportunity for balance local management with regional planning through the joint planning exercises of Groundwater Management Areas (GMAs).</p>	

Recommendation	Type
Water Supply Project Financing Mechanism	Legislative
Discussion:	
<p>The Region H Regional Water Plan includes development of several major water supply projects. The capital cost to develop these projects is significantly higher than the historic cost of water supply projects, as future resources are more difficult to perfect than the supplies that have already been developed. The high projected costs can dissuade local communities from making a financial commitment to support future projects and these challenges may delay the implementation of needed projects.</p>	
<p>The 80th Texas Legislature (2007) appropriated funding to enable issuance of \$440 million in bonds for the Water Infrastructure Fund (WIF) to fund water plan projects. The program is designed with a maximum repayment period of 20 years, which may not be adequate for financing larger projects such as surface water reservoirs.</p>	
<p>In 2013, the Texas Legislature created the State Water Implementation Fund for Texas (SWIFT) which was approved by Texas voters to provide \$2 billion dollars for the creation of a new loan program for the implementation of the State Water Plan. This program offers low-interest and deferred loan with maturities up to 30 years which enhances the opportunity for finding large, capital projects that are critical to the SWP. In addition, the program also funds the option of State ownership in projects as another alternative for development.</p>	
Recommendation:	
<p>The Region H Water Planning Group wishes to recognize the Legislature’s efforts in implementing the SWIFT program and also supports ongoing and expanded support for financing methods by the State of Texas for development of water supply projects recommended within adopted RWPs.</p>	

Recommendation	Type
Groundwater Availability Modeling Funding	Legislative
Discussion:	
Many areas of Region H are totally dependent on groundwater to support the long-term viability of these areas. The current Groundwater Availability Modeling (GAM) effort is supported since it is the most comprehensive groundwater assessment and analysis effort of the previous 20 years.	
Recommendation:	
The Region H Water Planning Group supports continued funding for the GAM effort and recommends comprehensive analysis of all groundwater resources within the state.	

Recommendation	Type
Agricultural and Irrigation Conservation Funding	Legislative
Discussion:	
<p>The Region H water management plan includes a number of irrigation conservation based water management strategies. It is apparent that adoption of irrigation conservation practices may benefit the irrigation and agricultural industry in addition to local communities that may take advantage of water supply savings resulting from irrigation conservation. Additionally, the RHWPG supports further research and development of water-efficient and drought-resistant crop and species.</p>	
Recommendation:	
<p>The Region H Water Planning Group supports funding of research and development studies associated with the efficient usage of irrigation technologies and practices.</p>	

Recommendation	Type
Water Conservation	Legislative
Discussion:	
<p>The RHWPG strongly supports water conservation at all levels. The RHWPG has incorporated water conservation in the regional water plan as a management strategy. However, realizing advanced conservation savings in municipal county-other areas may be difficult, as these practices require some management, funding, and oversight. While the RHWPG does not advocate a one-size-fits-all conservation program for the State of Texas, they recommend that the legislature address water conservation and provide some guidance and ability for county and local governments to implement these programs. The 78th Legislature appointed a Water Conservation Task Force to study water conservation policies and best management practices, and to report their results to the 79th Legislature in 2005. The 80th Legislature passed Senate Bill 3 creating a Water Conservation Advisory Council consisting of 23 members to provide a resource with expertise in water conservation. In 2018, TWDB funded the development of a water conservation planning tool specifically constructed for Texas water utilities. These efforts provide significant assistance to water suppliers that lack the resource to plan and implement water conservation approaches independently.</p>	
Recommendation:	
<p>Region H Water Planning Group supports water conservation and recommends that the legislature continue to address and improve water conservation activities in the state. In addition, the RHWPG recommends the State consider improvements to statewide efforts and messaging regarding the importance of water conservation.</p>	

Recommendation	Type
Water Conservation Research Funding	Legislative
Discussion:	
<p>The Water Conservation Implementation Task Force identified numerous best management practices in TWDB Report 362 – Water Conservation Best Management Practices Guide. The Best Management Practices outlined in the report were developed using information compiled from past research and studies along with information provided by the task force members. Additional water-saving technologies may still be developed in the future.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends that the State fund research into advanced conservation technologies.</p>	

Recommendation	Type
Flood Liability of Water Supply Reservoirs	Legislative
Discussion:	
<p>Flood control reservoirs are generally drawn down at the beginning of the annual wet season so that when large rain events occur, the runoff may be captured and later released more slowly into the receiving stream. These reservoirs therefore reduce downstream flood levels and prevent inundation in low areas. In contrast, water supply reservoirs are operated to capture and retain as much stream flow as allowable under their permits in order to have supply available during periods of high demand. This practice results in less available storage volume to capture runoff during major storms. When a major storm event occurs upstream or above a water supply reservoir, the reservoir operator must sometimes release flood flows during and after the event to prevent flooding upstream of the reservoir or to prevent damage to the dam and other facilities associated with the reservoir. Although this flood flow can contribute to downstream flooding, most reservoirs actually reduce the amount of flooding which could have occurred had the reservoir not been constructed.</p> <p>In recent years, plaintiffs with property in the downstream floodplains have brought multiple lawsuits against major water supply reservoir operators. Some recent court decisions have held the operators liable for damages to the downstream properties. If this trend is allowed to continue, it will increase insurance rates for these entities and will force operational changes to occur that may result in less available water supply for periods of need. The net effect to water users will be an increase in the cost of surface water throughout the state.</p>	
Recommendation:	
<p>Consider State legislation clarifying the liability exposure of reservoir operators for passing storm flows through water supply reservoirs.</p>	

Recommendation	Type
Incorporation of Technology Advancements in Projections	Legislative
Discussion:	
Current population projections based on traditional historic growth patterns may not accurately reflect the changes likely to occur in the future as digital connectivity continues to alter our economic, educational, and social institutions.	
Recommendation:	
The Region H Water Planning Group recommends that the State direct the State Demographer's office to explore the potential changes in population distribution made possible by rapid advancements in information technology.	

Recommendation	Type
Ongoing RWPG Activities	Legislative
Discussion:	
<p>It is apparent that the RWPGs will have to meet periodically to address changed conditions related to the adopted regional water management plans. Ongoing activities will include, but not be limited to:</p> <ol style="list-style-type: none"> 1. Consideration of additions and modifications to the adopted plans 2. Serving as communications liaisons with the water user communities within each region 3. Assisting in the reconciliation of inter-regional water issues <p>It will be necessary to consider additional and adequate funding to support maintenance of the RWPGs.</p>	
Recommendation:	
<p>The Region H Water Planning Group recommends that the TWDB request additional and adequate funding and the adoption of the appropriate administrative procedures from the legislature to facilitate ongoing activities of the RWPGs. Funding should be made available throughout the entirety of the planning cycle without funding gaps that make it difficult for planning groups to accomplish their ongoing efforts.</p>	

Recommendation	Type
State Revolving Fund Programs (Drinking Water State Revolving Fund and Clean Water State Revolving Fund)	Infrastructure Finance
Discussion:	
<p>These programs provide loans at subsidized interest rates for the construction of water treatment and distribution systems and for source water protection (DWSRF) and for wastewater collection and treatment systems (CWSRF). As the loans are paid off, the TWDB uses the funds to make new loans (thus the name Revolving Fund). State funds for the program receive a federal match through the Environmental Protection Agency. These loans are intended for projects to bring existing systems into compliance with rules and regulations, and are available to political subdivisions, water supply corporations, and privately-owned water systems. Applications are collected at the beginning of each year, given a priority ranking, and funded to the extent possible. Projects not funded in a given year may carry forward into the next year’s ranking.</p> <p>These programs are important in that they assist sub-standard water systems in attaining the minimum water quality mandated by Federal and State regulations, but they are not intended to fund system expansions due to projected growth. However, these programs may apply to individual systems in the Region experiencing water quality declines, or to those systems affected by the changed standard for Arsenic. The SRF Fund may also provide assistance to water providers with aging treatment systems and transmission lines.</p>	
Recommendation:	
<p>Increase the funding of the State Revolving Funds Program in future decades, and expand the program to include coverage for system capacity increases to meet projected growth for communities.</p>	

Recommendation	Type
Agricultural Water Conservation Loan Program	Infrastructure Finance
Discussion:	
<p>This program provides loans to soil and water conservation districts, underground water conservation districts and districts authorized to supply water for irrigation. These districts may further lend the funds to private individuals for equipment and materials, labor, preparation, and installation costs to improve water-use efficiency related to irrigation of their private lands. There is also a grant program for equipment purchases by eligible districts for the measurement and evaluation of irrigation systems and agricultural water conservation practices, and for efficient irrigation and conservation demonstration projects, among others. However, these grants are not available to individual irrigators. Similar Federal loan and grant programs are available but require a 25% to 50% local match.</p> <p>In the Region H Water Plan, irrigation conservation is a recommended strategy in eight counties (Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, and Waller). In some cases, the conservation of water through these agricultural programs provides additional water for use by municipalities that also use groundwater supplies. As it is unlikely that municipalities will seek out and fund irrigation conservation projects, the task of encouraging conservation will fall to the wholesale water providers and those government entities with jurisdiction in those counties. Even with Agricultural Water Conservation Loan Program assistance, irrigators will be slow to invest in water-conserving equipment until water rates increase, making it economically advantageous to do so. The difficulty increases in areas where groundwater is the primary supply source for irrigation.</p> <p>Additionally, irrigators in Region H also find it difficult to access funding programs as these typically require ownership of the irrigated property. Much of the production within the region is performed by farmers who lease land from others, making them ineligible for these programs.</p> <p>Eligible districts will need to act as conservation brokers, identifying those irrigators with the potential to reduce water demand through equipment improvements, and matching them with available loans. To assist with the immediate adoption of these improved conservation practices, a one-time grant or subsidy program for water-efficient equipment purchases may help by reducing the loans amounts required by each irrigator. If the requirements of an existing Federal loan or grant program could be met, the State could provide all or part of the local matching share. Since the methods used by irrigators vary across the state, such a program would need to be flexible, with local oversight provided by those districts currently eligible for the Agricultural Water Conservation Loan Program. Consistency with the applicable Regional Water Plan may be included as a prerequisite for this program, as it is for other State grants and loans.</p>	
Recommendation:	
<p>Provide a mechanism to leverage Federal grant programs for agriculture by providing the local matching share. Increase funding of associated loan programs and consider adding a one-time grant or subsidy component to stimulate early adoption of conservation practices by individual irrigators. Provide opportunities for joint cooperation between growers and land owners to facilitate the use of funding programs for property under long-term lease agreements.</p>	

Recommendation	Type
Texas Community Development Program	Infrastructure Finance
Discussion:	
<p>The federal Community Development Block Grant program provides grants and loans to low-income communities for certain projects, including water and wastewater infrastructure. It is administered in Texas under the Office of Rural Community Affairs as the Texas Community Development Program. The Small Town Environment Program (STEP) under the TCDP provides water and sewer system grants to cities and counties not eligible for funding under the Colonias or Economically Disadvantaged Areas Programs (EDAP). Within Region H, there are no Colonias or EDAP-eligible communities, but STEP grants may be obtained.</p>	
Recommendation:	
<p>Continue State and Federal support of the Texas Community Development Program, and increase the allocation of funds for the Small Town Environment Program.</p>	

Recommendation	Type
Water and Waste Disposal Loans and Grants from the USDA Rural Utilities Service	Infrastructure Finance
Discussion:	
<p>This Federal program provides loans and grants in rural areas and communities of up to 10,000 people for water, wastewater, storm water, and municipal solid waste projects. The program is intended for communities that cannot obtain commercial loans at reasonable rates. Loans are made at or below market rates, depending upon the eligibility of the recipient. Grants can cover up to 75% of project costs when required to reduce user costs to a reasonable level. A separate program of Emergency Community Water Assistance Grants (up to \$500,000 per project) is also available to communities experiencing rapid declines in water quality or quantity.</p>	
<p>This program is similar to the state loan and revolving fund programs. It offers another option to small communities and rural areas unable to finance required infrastructure without assistance. However, this is a nationwide program, and the competition for available funds is correspondingly greater. Colonias and border areas are specifically identified as target areas for the grant portion of this program, and it is therefore in the State’s interest to support its continued funding.</p>	
Recommendation:	
<p>Support continued and increased funding of Water and Waste Disposal Loans and Grants from USDA Rural Utilities Service at the Federal level.</p>	

Recommendation	Type
Innovative Water Technologies	Infrastructure Finance
Discussion:	
<p>The Texas Water Development Board’s Innovative Water Technologies Program has provided technical assistance for development of seawater desalination, brackish groundwater, rainwater harvesting, water reuse, and aquifer storage and recovery programs. This has included several statewide feasibility studies and participation in site-specific demonstration programs. These and similar projects will be an essential resource in progressing the status of innovative water supply projects that will form a critical component of the overall water budget as Texas continues to grow.</p>	
Recommendation:	
<p>Provide technical assistance grants for the advancement of desalination water supplies and implementation of new desalination technologies available to wholesale and retail water suppliers. Provide resources for identification and feasibility assessment of opportunities for aquifer storage and recovery projects. Continue to fund appropriate demonstration facilities to develop a customer base and pursue Federal funding for desalination programs.</p>	

Recommendation	Type
Regionalization	Infrastructure Finance
Discussion:	
<p>As communities assess the growing costs of water infrastructure, economies of scale can be realized by combining the needs of water user groups into larger, more efficient water supply, treatment and distribution facilities. Regional facilities offer interconnections between existing systems, which can increase overall reliability. The individual system connections to these systems can be phased over time to meet regional demands with less impact on individual systems than each individually trying to expand. In areas where groundwater limits are being reached, regional groups can identify areas where surface water supply is most needed, and allow other areas to remain on groundwater systems. Sharing costs across a wide customer base keeps rates comparable between service areas.</p>	
<p>A range of cooperative options exists, including formation of regional authorities, inter-local agreements, public-private partnerships, local government corporations, and public contracting with a private regional supplier. The optimal arrangement between political subdivisions depends upon the specific project and the goals of the parties. Partnerships with private investors through public-private partnerships and direct contracting with privately-owned facilities offer an advantage of using private financing to meet part of the initial planning and construction costs. The regulations governing these partnerships must protect the public represented by the partnership, but if too restrictive, may prevent the partnership from realizing potential cost savings through the use of private-sector procurement and construction practices.</p>	
<p>Consideration should be given to reducing procurement restrictions for Local Government Corporations to encourage the pooling of resources for funding regional projects. Also, existing assistance programs should remain available when political subdivisions enter into public/public or public/private partnerships.</p>	
Recommendation:	
<p>Region H supports the forming of regional partnerships and encourages the State to allow them the greatest possible latitude for financing in their governing regulations. Additionally, funding opportunities should be made available to these public/private partnerships and to private nonprofit water supply corporations.</p>	

Agenda Item 12

Receive presentation from the Region H Legislative Committee and Consultant Team regarding the status of ecologically unique stream segments and unique reservoir sites and discuss potential recommendations for the 2021 Region H RWP.

Agenda Item 12 Unique Sites

Unique Stream Segments

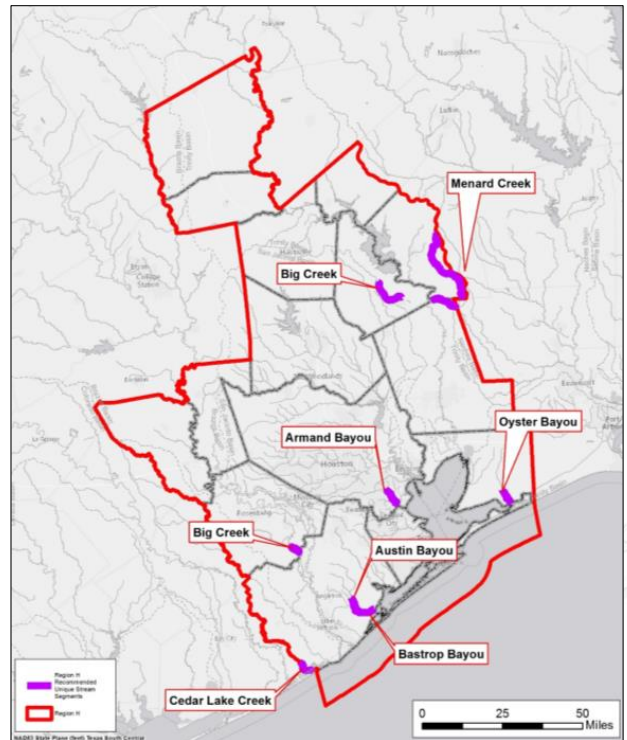
- Biological Function
- Hydrologic Function
- Riparian Conservation Areas
- High Water Quality / Exceptional Aquatic Life / High Aesthetic Value
- Threatened or Endangered Species / Unique Communities

River or Stream Segment	County	Biological	Hydrologic	Riparian	High Quality	T/E Species	Project Site	Water Rights	WW Outfall	2016 RWP
Considered in 2001 Regional Plan:										
Armand Bayou	Harris	•	••	••	•			•	••	•
Austin Bayou	Brazoria	•	•	••		•••		••		•
Bastrop Bayou	Brazoria	•	•	••		•••		•		•
Big Creek	Fort Bend	•	•	••	••			•	•	•
Big Creek	San Jacinto	•	•	•••	•			R		•
Brazos River	Austin/Waller/Braz.a/Ft Bend	•	•••	•••		••	•	••	••	
Caney Creek ¹	Walker/Harris	•	••	••				•		
Carpenters Bayou	Harris	•	••	••				•	••	
Cedar Lake Creek	Brazoria	•	••	••		••••		•		•
Clear Creek	Waller	•	••	••	•			R		
East Fork San Jacinto River	Walker/Harr./San J./Lib./Mont.	•	••	••	•••					•
East Sandy Creek	Walker	•	•	•						
Halls Bayou	Brazoria	•	•	•		•				
Harmon Creek	Walker	•	••	•	•			••	•	
Jones Creek	Brazoria	•	•	••				•		
Lake Creek	Montgomery	•	••	•	•••	•		R	•	
Luce Bayou	Harris/Liberty	•	••	•			•			
Menard Creek	Polk	•	••	•		•		R		•
Mill Creek	Austin	•	••	•	••	•			••	
Nelson Creek	Walker	•	•	•	••					
Old River	Liberty	•	••	•	•					
Oyster Bayou	Chambers	•	•	••				••		•
Redfish Bayou	Brazoria	•	•	••				•	•	
San Bernard River	Brazoria/Fort Bend/Austin	•	••	•		••		••	•	
Upper Trinity River	Walker/Leon/Houston	•	••	•		•		••		
Lower Trinity River	Chambers/Liberty	•	•••	•••		••	E	••	•	
Upper Keechi Creek	Leon	•	•	•				•		
Wheelock Creek	Leon	•	•	•	•					
Winters Bayou ²	San Jacinto/Walker	•	••	•	•					
Recommended by Houston Sierra Club (2005):										
Boswell Creek	Walker/San Jacinto	•	•	•	•	••				
Briar Creek	Walker	•	•	•						
East Bay Bayou	Chambers	•	•	•				••		
Henry Lake Branch	San Jacinto	•	•	•					•	
Little Lake Creek ³	Montgomery/Walker	•	•	•						
Lost River	Chambers/Liberty	•	•	•						
Onion Bayou West Fork San Jacinto	Chambers	•	•	•				••		
West Fork San Jacinto ³	Walker	•	•	•			•			
West Sandy Creek	Walker	•	•	•						
Recommended by RHWP Members (2005):										
Lone Oak Bayou	Chambers	•	•	•	•					
Whites Bayou, below IH-10	Chambers/Liberty	•	•	•	•					

Agenda Item 12 Unique Sites

Preliminary Recommendation

- Retain 2016 recommendations
 - Armand Bayou
 - Austin Bayou
 - Bastrop Bayou
 - Big Creek (Fort Bend)
 - Big Creek (San Jacinto)
 - Cedar Lake Creek
 - Menard Creek
 - Oyster Bayou



Agenda Item 12

Unique Sites

- Unique Reservoir Sites
 - Location
 - Hydrology
 - Geology
 - Topography
 - Water Availability
 - Water Quality
 - Environmental Qualities
 - Cultural Values
 - Development Characteristics
- 2016 RWP – Allens Creek
- Designated by Legislature
 - Expired September 1, 2015
- Preliminary recommendation for re-designation



Agenda Item 13

Receive report regarding recent and upcoming activities related to communications and outreach efforts on behalf of the RHWPG.

Agenda Item 13

Community Outreach

- IPP outreach coming up in 2020
- May 2020 – AlChE South Texas Section
Presentation on Region H Water Plan



Agenda Item 14

Agency communications and general information.

Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.texas.gov
Phone (512) 463-7847, Fax (512) 475-2053

October 17, 2019

Mr. Mark Evans
Region H Water Planning Group Chair
c/o San Jacinto River Authority
P.O. Box 329
Conroe, TX 77305

RE: Region H Emergency Interconnect Submittal

Dear Mr. Evans:

Thank you for the submittal of emergency interconnects within the Region H regional water planning area in accordance with 31 Texas Administrative Code §357.42(d).

As outlined by Section 7.3 of the contract Exhibit C, *Second Amended General Guidelines for Fifth Cycle of Regional Water Plan Development*, please include the following information regarding emergency interconnects in the 2021 Region H Regional Water Plan:

- A general description of the regional water planning group methodology used to collect emergency interconnects information;
- The number of existing and potential emergency interconnects in the regional water planning area, including who is connected to whom; and
- A general description of local drought contingency plans that involve making emergency connections.

Please don't hesitate to contact Region H's TWDB project manager, Lann Bookout at 512-936-9439 or Lann.Bookout@twdb.texas.gov if you have any questions

Sincerely,



Jeff Walker
Executive Administrator

JW/LB/ms

cc: Mr. Jace Houston, San Jacinto River Authority
Mr. Philip Taucer, Freese and Nichols, Inc.

Our Mission

To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas

Board Members

Peter M. Lake, Chairman | Kathleen Jackson, Board Member | Brooke T. Paup, Board Member
Jeff Walker, Executive Administrator

2021 Regional Water Plans

Summary of Posting Requirements for Public Hearings for Initially Prepared Plans (IPP), Adoption of IPPs, and Adoption of Final Plans

See the document below for detailed posting information:

http://www.twdb.texas.gov/waterplanning/rwp/planningdocu/2021/doc/current_docs/admin_docs/public_notice_quick_ref.pdf

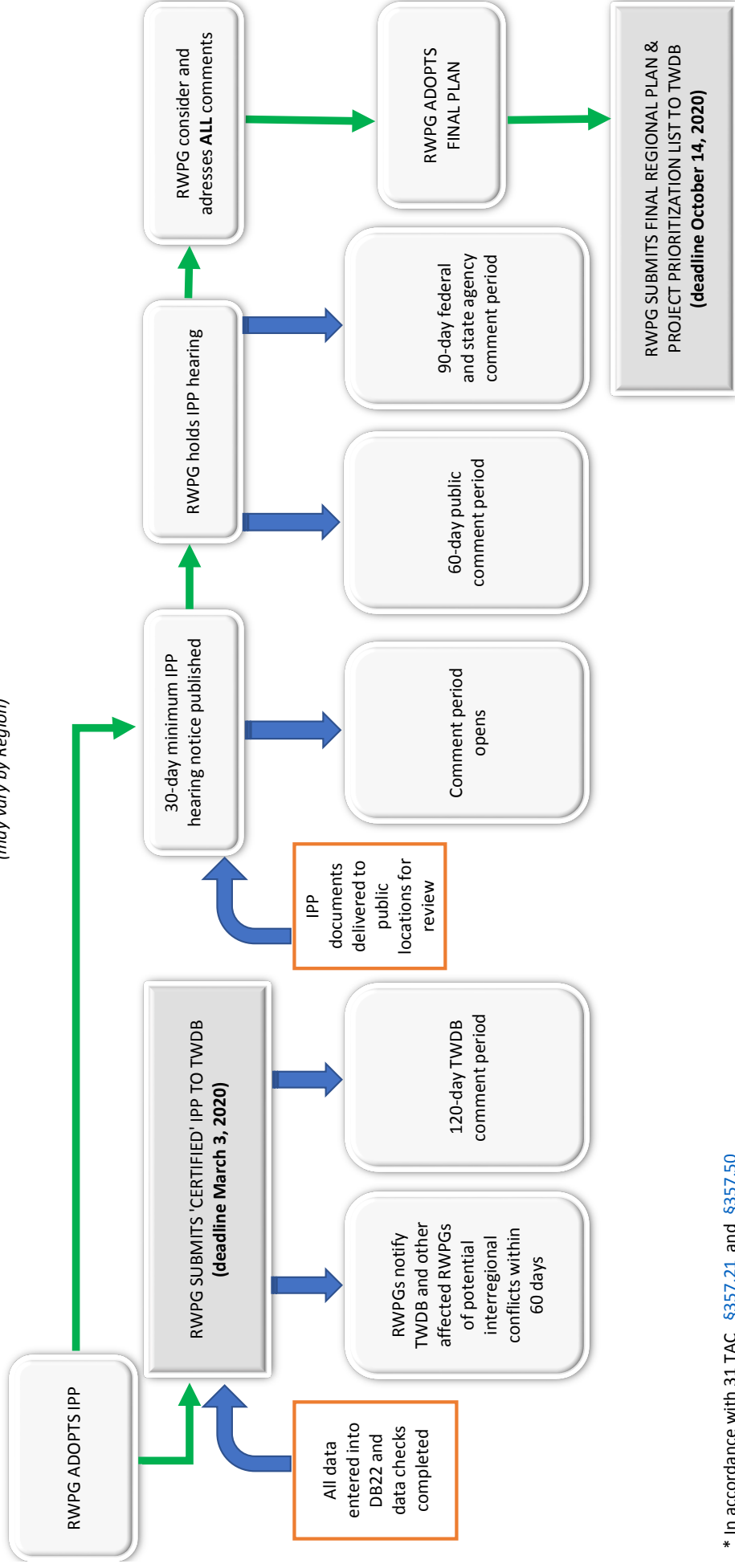
Posting Requirements	Public Hearing for IPP	Adoption of IPP and Adoption of Final Plan
Minimum Notice:		
72 hours prior the meeting		✓
30+ days prior the hearing	✓	
Notice Must Contain:		
Date, time, and location of the public meeting or hearing; summary of the proposed action to be taken; the name, telephone number, and address of a RWPG contact to whom questions or requests for additional information may be submitted	✓	✓
Information that the RWPG will accept written and oral comments at the meeting or hearing; how the public may submit written comments separately; and a specific deadline for submission of written public comments	✓	
Locations of IPPs available for public inspection	✓	
Comment Period:		
30 days prior to the hearing; until 60 days after hearing (public); until 90 days after hearing (federal and state agencies); TWDB issues comments within 120 days after IPP receipt	✓	
Entities Notified:		
All voting and non-voting RWPG members	✓	✓
Any person or entity who has requested notice of RWPG activities	✓	✓
Each RWPG where a recommended or alternative WMS being considered would be located	✓	
Each mayor of a municipality, located in whole or in part in the RWPA, with a population of 1,000 or more or which is a county seat	✓	
Each county judge of a county located in whole or in part in the RWPA	✓	
Each special or general law district or river authority with responsibility to manage or supply water in the RWPA (use list obtained from TCEQ)	✓	
Each Retail Public Utility, defined as a community water system, that serves any part of the RWPA or receives water from the RWPA (use list obtained from TCEQ)	✓	
Each holder of record of a water right for the use of surface water the diversion of which occurs in the RWPA (use list obtained from TCEQ)	✓	
Posting Venues:		
On the website of the RWPG or host Political Subdivision (must post notice and agenda). In lieu of posting the meeting notice and agenda on the website of the RWPG or host Political Subdivision, the notice and agenda may be provided, in writing, to the County Clerk of each county in the RWPA	✓	✓
Texas Secretary of State website	✓	✓
In the Texas Register	✓	
Publish in a newspaper of general circulation in each county located in whole or part in the RWPA	✓	

Posting Requirements	Public Hearing for IPP	Adoption of IPP and Adoption of Final Plan
Document Provision:		
Documents to be made available on the internet or in hard copy for public inspection prior to and following the meeting include: 1) meeting agenda, and 2) copies of all materials, reports, and/or plans presented or discussed at the meeting	✓	✓
Copies of the IPPs must be available for public inspection in: 1) at least one public library in each county, and 2) either the county courthouse's law library, the county clerk's office, or some other accessible place within the county courthouse of each county having land in the RWPA. According to the capabilities of the facility, the RWPG may provide copies electronically, on electronic media, through an internet web link, or in hard copy	✓	
OMA and PIA:		
Each RWPG and any committee or subcommittee of an RWPG are subject to Chapters 551 [Open Meetings Act] and 552 [Public Information Act], Government Code. A copy of all materials presented or discussed at an open meeting shall be made available for public inspection prior to and following the meetings and shall meet the additional notice requirements when specifically referenced as required under subsections	✓	✓

2021 Regional Water Plans

Initially Prepared Plan (IPP) and Final Plan Process Schematic*

(may vary by Region)



* In accordance with 31 TAC [§357.21](#) and [§357.50](#)

