REGION H
Water Planning Group

MEETING MATERIALS

June 5, 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
1:00 PM Wednesday
June 5, 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 February 6, 2019 meeting.
4. **Receive public comments on specific issues related to agenda items 5 through 12**. (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. Discuss and consider authorizing San Jacinto River Authority to consider and execute a TWDB contract amendment to increase committed funds.
7. Receive update from Consultant Team regarding the schedule and milestones for the development of the 2021 Region H RWP.
8. Receive update from Consultant Team regarding status of investigation of water supply alternatives for the 2021 Region H RWP.
9. Receive update from Consultant Team regarding Uniform Standards for project prioritization.
10. Receive update from the Region H Legislative Committee.
11. Receive report regarding recent and upcoming activities related to communications and outreach efforts on behalf of the RHWPG.
12. Agency communications and general information.
13. **Receive public comments**. (Public comments limited to 3 minutes per speaker)
14. Next Meeting: September 4, 2019.
15. 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 February 6, 2019 meeting.

REGION H
Water Planning Group

REGION H WATER PLANNING GROUP
MINUTES OF REGULAR MEETING
FEBRUARY 6, 2019

MEMBERS PRESENT: David Bailey, John Bartos, Robert Bruner, Brad Brunett, James Comin, Mark Evans, Bob Hebert, Art Henson, Jace Houston, Robert Istre, Kathy Jones, Ivan Langford, Glenn Lord, Marvin Marcell, Michael Turco, Kevin Ward, and Pudge Willcox.

DESIGNATED ALTERNATES: Alisa Max for John Blount, Veronica Osegueda for Yvonne Forrest, Ken Kramer for Carl Masterson, Zach Holland for James Morrison, Jun Chang for Jimmie Schindewolf, and Tom Michel for William Teer.

MEMBERS ABSENT: Ruth Stultz.

NON-VOTING MEMBERS PRESENT: Kristen Lambrecht and Lann Bookout.

1. Call to order

The meeting was called to order at 10:04 a.m.

2. INTRODUCTIONS

There were no introductions.

3. REVIEW AND APPROVE MINUTES OF APRIL 4, 2018, MEETING

Mr. Chang made a motion to approve the minutes of October 31, 2018. The motion was seconded by Mr. Hebert and carried unanimously.

4. RECEIVE PUBLIC COMMENTS ON SPECIFIC ISSUES RELATED TO AGENDA ITEMS 5 THROUGH 13

There were no public comments.

5. DISCUSS VACANCIES ON THE REGION H WATER PLANNING GROUP AND CONSIDER TAKING ACTION TO APPROVE MEMBERS TO FILL VACANCIES ON THE PLANNING GROUP

Mr. Hebert made a motion to approve the appointment of Mr. W.R. Baker to the Region H Water Planning Group to represent small business. The motion was seconded by Mr. Bruner and carried unanimously.

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

Mr. Taucer provided an update relative to the schedule and milestones for the development of the 2021 Region H Regional Water Plan ("RWP"), siting upcoming due dates for certain events/tasks.

7. RECEIVE UPDATE FROM CONSULTANT TEAM REGARDING WATER SOURCE AVAILABILITY

Mr. Taucer provided a recap of the run of river surface water availability, particularly changes to the Brazos, Trinity, and Brazos-Colorado Basins. He discussed the changes in Lake Houston and Lake Livingston relative to reservoir availability. Mr. Taucer then provided an overview of management strategies for groundwater and reuse availabilities for the region.

8. RECEIVE UPDATE FROM CONSULTANT TEAM REGARDING PROJECTED WATER NEEDS AND CONSIDER AUTHORIZING CONSULTANT TEAM TO SUBMIT A REQUEST TO TWDB FOR ANALYSIS OF SOCIOECONOMIC IMPACTS OF UNMET WATER NEEDS IN THE REGION H WATER PLANNING AREA

Mr. Taucer provided information related to substantial changes in projected water needs due to better data, utility-based WUGs, changes to overall non-municipal demand projections, MAG peak factors, and project implementation. He provided an overview of projected water needs in various basins. Mr. Taucer explained that the projected need is primarily in agricultural demand with little growth in manufacturing demand over time, and much more growth in municipal needs. Mr. Lord made a motion to authorize the consultant team to submit a request to TWDB for analysis of socioeconomic impacts of unmet water needs in the Region H Water Planning Area. The motion was seconded by Mr. Ward and carried unanimously.

9. RECEIVE PRESENTATION FROM THE TEXAS LIVING WATERS PROJECT REGARDING THE 2018 WATER CONSERVATION BY THE YARD REPORT

Ms. Jennifer Walker and Ms. Meagan Bach presented information related to Water Conservation by the Yard which restricts outdoor water by advocating the adoption of a mandatory, year-round, no more than twice per week watering schedule. She provided outdoor water use metrics and provided data exhibiting estimated municipal savings from outdoor watering restrictions for the Region H area. Ms. Walker stated that enacting this program can significantly reduce municipal water demand, which will in turn help close the gap between future municipal demand and future water supplies.

10. RECEIVE UPDATE REGARDING STATUS OF INVESTIGATION OF WATER SUPPLY ALTERNATIVES FOR THE 2021 REGION H WATER PLAN

Mr. Taucer provided information related to water supply alternatives focusing on TWDB's municipal conservation planning tool. He stated this tool provides an accounting framework for projecting future conservation program costs and water savings as well as estimating the water savings from previous implementation of conservation measures. Mr. Taucer also explained other water supply alternatives such as water loss reduction, expanded use of groundwater, groundwater reduction plans, reuse, and other infrastructure. He briefly discussed data management and comprehensive cost updates.

11. RECEIVE UPDATE ON THE REGION H LEGISLATIVE COMMITTEE

Mr. Evans and Mr. Marcell explained the premise for the Region H Legislative Committee and the path forward relative to the current session.

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

Mr. Taucer reported on recently attended and upcoming meetings related to the Region H Water Planning Group.

13. AGENCY COMMUNICATIONS AND GENERAL INFORMATION

Mr. Bookout provided an update of the Texas Water Development Board's upcoming Finance Workshop in Dallas on February 12, 2019.

14. RECEIVE PUBLIC COMMENTS

There were no public comments.

15. NEXT MEETING

Mr. Evans announced that the next Region H Water Planning Group meeting will take place on May 1, 2019.

16. ADJOURN

Without objection, the meeting was adjourned at 12:18 p.m.

Agenda Item 5

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

REGION H
Water Planning Group

Agenda Item 5
Membership

Action:

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

NOTICE OF VACANCY FOR
REGION H WATER PLANNING GROUP
MEMBER REPRESENTING ELECTRIC GENERATING UTILITIES

The Region H Water Planning Group (WPG) is hereby giving notice of a vacancy on the Region H Water Planning Group as a result of a resignation of a voting member representing electric generating utilities. The Region H WPG may consider making an appointment to fill this vacancy on or after December 6, 2017. The term of this appointment ends in 2018.

Background:

The Region H WPG was established by appointment of an initial coordinating body by the TWDB on February 19, 1998, and one subsequent additional appointment by the initial coordinating body. The purpose of the Region H WPG shall be to provide comprehensive regional water planning and to carry out the related responsibilities placed on regional water planning groups by state law, including Texas Water Code Chapter 16 and TWDB rules, including 31 TAC Chapters 355, 357, and 358, in and for the Region H Water Planning Area (WPA).

Responsibilities:

The Region H WPG shall have the responsibility for performing the functions defined in Texas Water Code, Chapter 16 and in 31 TAC Chapters 355, 357, and 358 related to regional water planning groups for the Region H WPA. Foremost among those responsibilities shall be the development of a regional water plan for the Region H WPA that identifies both short and long-term water supply needs and recommends water management strategies for addressing them.

Conditions of Membership:

In order to be eligible for voting membership on the Region H WPG, a person must represent the interest for which a member is sought, be willing to participate in the regional water planning process, and abide by the bylaws.

Any electric generating utility within the Region H area interested in nominating a representative to serve as a voting member representing electric generating utilities may submit a letter of interest or recommendation to:

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

Agenda Item 6

Discuss and consider authorizing San Jacinto River Authority to consider and execute a TWDB contract amendment to increase committed funds.

REGION H
Water Planning Group

Agenda Item 6
Contract Amendment

Action:

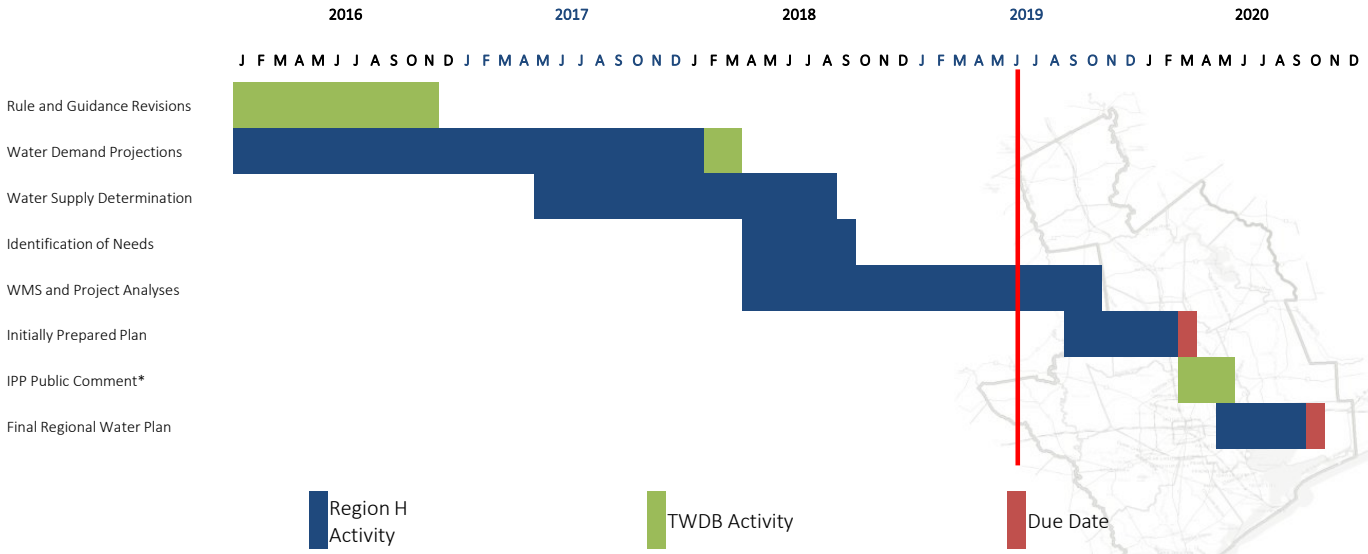
Approve authorizing San Jacinto River Authority to consider and execute a TWDB contract amendment to increase committed funds.

Agenda Item 7

Receive update from Consultant Team regarding the schedule and milestones for the development of the 2021 Region H Regional Water Plan (RWP).

REGION H
Water Planning Group

Agenda Item 7
2021 RWP Schedule



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

Agenda Item 7
2021 RWP Schedule

Date	Scheduled Events/Tasks
06/2019	**RWPG Meeting**
03/2020	DUE DATE: Initially Prepared Plan
10/2020	DUE DATE: FINAL RWP

Agenda Item 7
2021 RWP Schedule

- WMS studies
- WCP analysis and recommendations
- Drought analysis and recommendations
- Legislative recommendations
- Infrastructure Finance Report
- Project prioritization

Agenda Item 8

Receive update from Consultant Team regarding status of investigation of water supply alternatives for the 2021 Region H Regional Water Plan.

REGION H
Water Planning Group

Agenda Item 8
Water Supply Alternatives

- Similar projects to 2016 RWP
- 5 years of change
- Impacts to
  - Volumes
  - Costs
- Draft results


Availabilities


Project Implementation


Refined Analyses

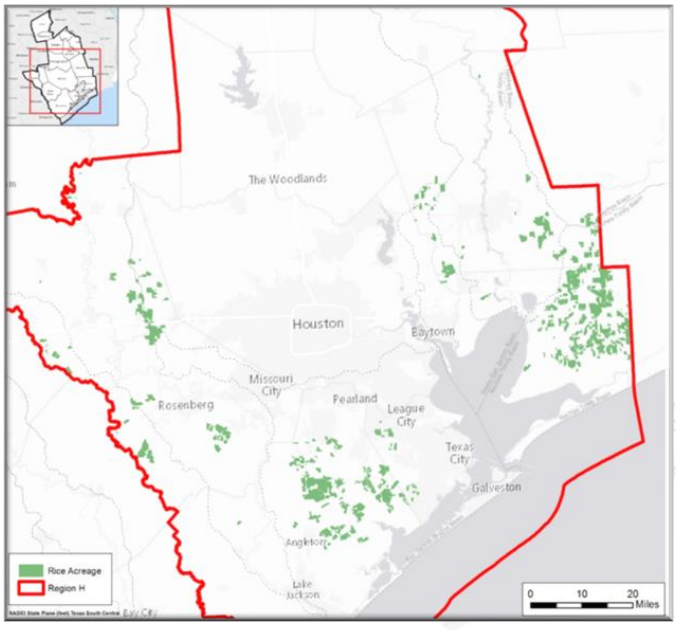

UCM Cost Tables


Urban Land Cost


Time

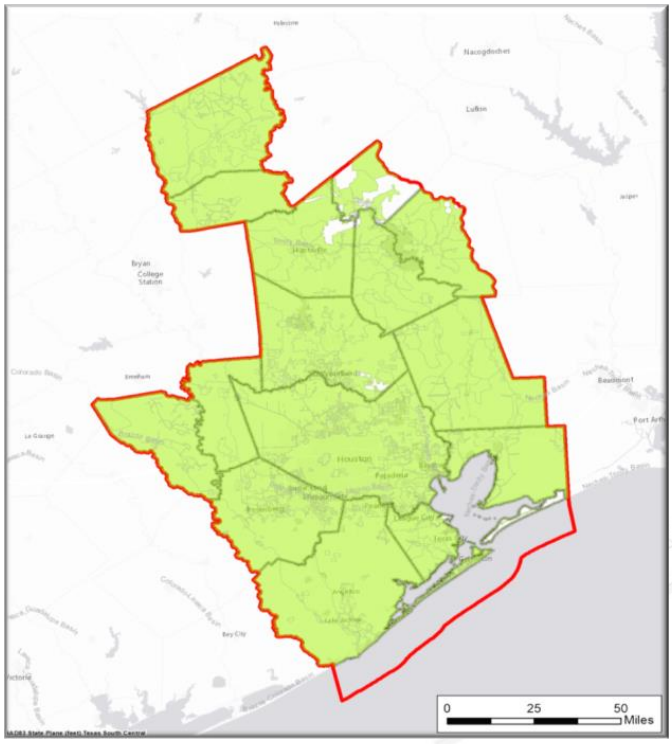
Agenda Item 8
Water Supply Alternatives

Irrigation Conservation	
Quantity	93,562 ac-ft/yr (83.5 mgd)
Source	Demand reduction
Decade	2020
Capital Cost	$1,489,156
Unit Cost	$133 per ac-ft (during loan period) $131 per ac-ft (after loan period)



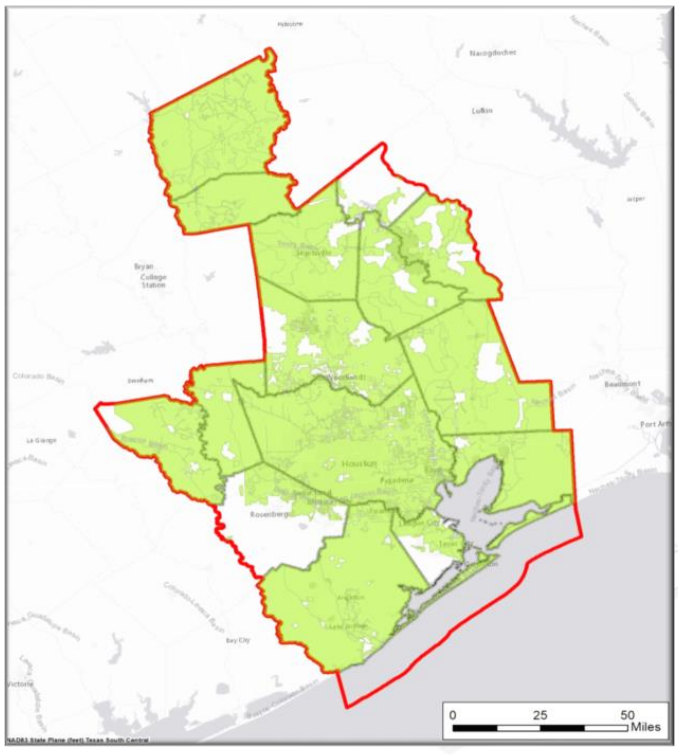
Agenda Item 8
Water Supply Alternatives

Advanced Municipal Conservation	
Quantity	23,549 - 107,961 ac-ft/yr (21.0 – 96.4 mgd)
Source	Demand reduction
Decade	2020
Capital Cost	$280,466,727
Unit Cost	$474 - $1,761 per ac-ft



Agenda Item 8
Water Supply Alternatives

Water Loss Reduction	
Quantity	7,431 – 81,078 ac-ft/yr (6.6 – 72.4 mgd)
Source	Demand reduction
Decade	2020
Capital Cost	$1,612,235,770
Unit Cost	$597 - $629 per ac-ft



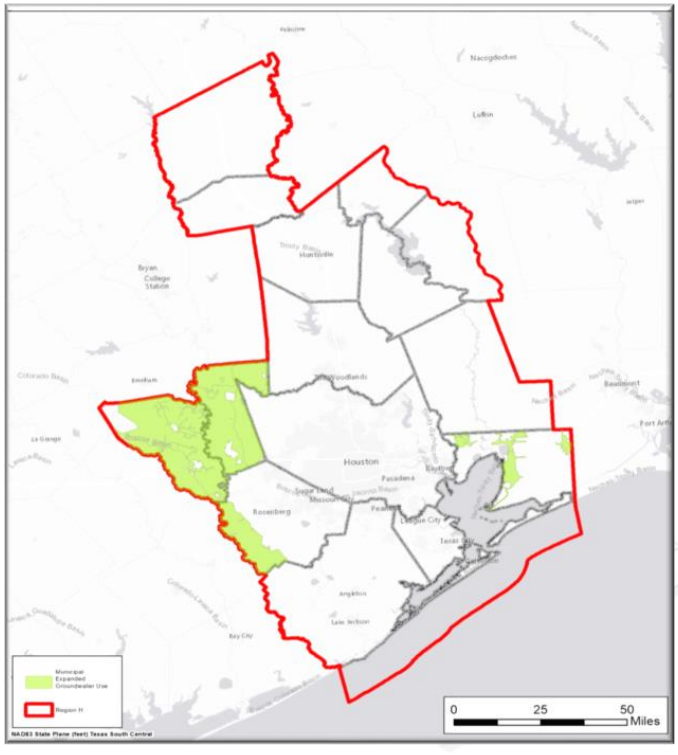
Agenda Item 8
Water Supply Alternatives

Expanded Use of Groundwater

- Key strategy for region
- Constrained by physical and regulatory limits
- Changes over time
  - Applicable to fewer WUGs
  - Less volume early on
  - Higher costs for municipal

Agenda Item 8
Water Supply Alternatives

Expanded Use of Groundwater	
Quantity	6,975 – 29,630 ac-ft/yr (6.2 – 26.5 mgd)
Source	Gulf Coast and Carrizo-Wilcox Aquifers
Decade	2020 (varies by WUG)
Capital Cost	$108,795,529
Unit Cost	Varies by WUG

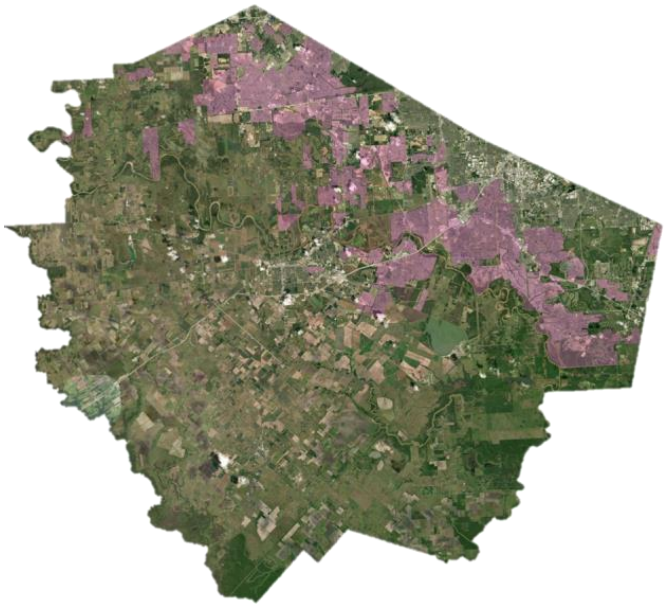


Agenda Item 8
Water Supply Alternatives

Wastewater Reclamation for Municipal Irrigation

- Long-standing strategy
- Future MPCs
  - Urbanizing County-Other
  - Regional Water Authorities
- Ideal time for fresh look

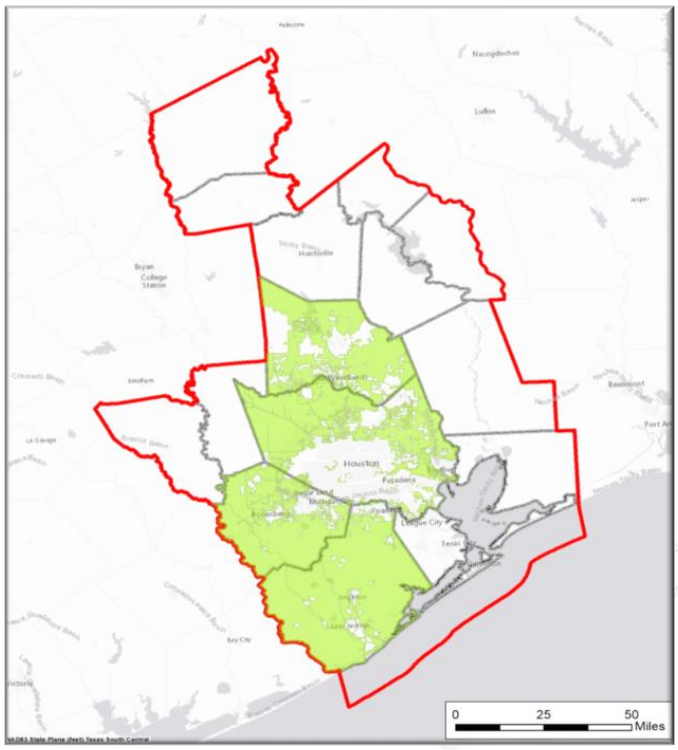
Agenda Item 8
Water Supply Alternatives



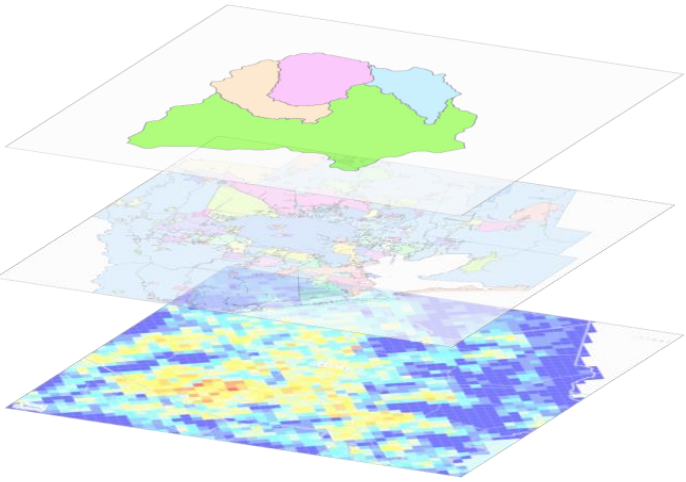
- Consider
  - Prior analyses
  - Fort Bend EDC data
- Major changes
  - MPCs at 45%
  - Conservation
  - Green space
  - Golf courses
- Source up, targets down

Agenda Item 8
Water Supply Alternatives

WW Reclamation for Mun. Irrigation	
Quantity	3,797 – 19,776 ac-ft/yr (3.4 – 17.7 mgd)
Source	Direct reuse
Decade	2030
Capital Cost	$189,072,417
Unit Cost	$1,118 per ac-ft (varies by WUG)



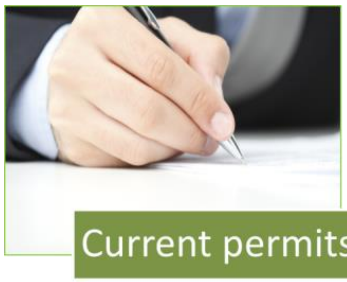
Agenda Item 8
Water Supply Alternatives



Regional Return Flows

- Recommended in 2016 RWP
- Lake Houston drainage
- Examine projections, WUG coverage, drainage areas, etc.
- Demand x rate = *Potential* source

Agenda Item 8
Water Supply Alternatives


Current permits


Reuse WMS

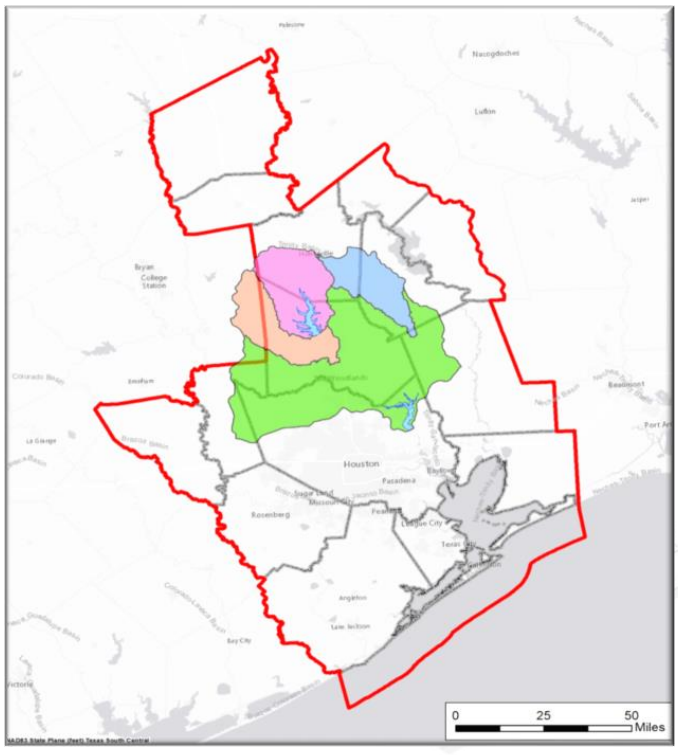

Conservation


OSSFs


Channel Loss

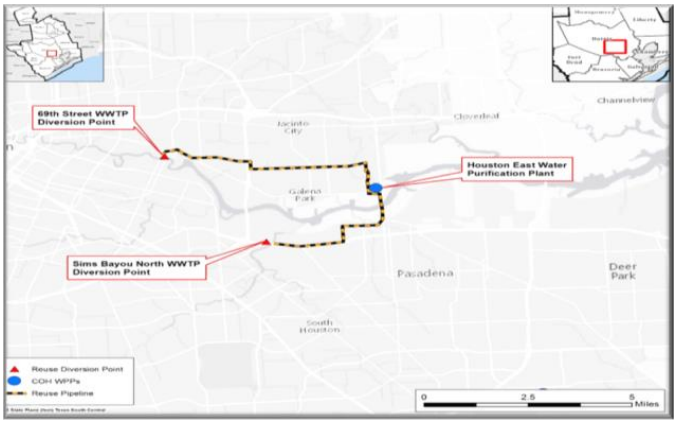
Agenda Item 8
Water Supply Alternatives

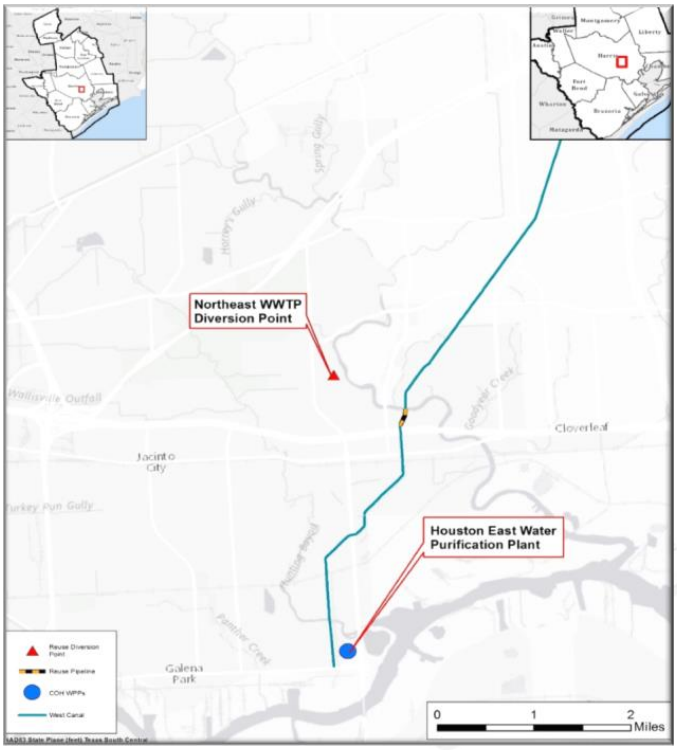
Regional Return Flows	
Quantity	61,548 – 118,765 ac-ft/yr (55.0 – 106.0 mgd)
Source	Indirect reuse
Decade	2020
Capital Cost	$0 (under other projects)
Unit Cost	$0 (under other projects)



Agenda Item 8
Water Supply Alternatives

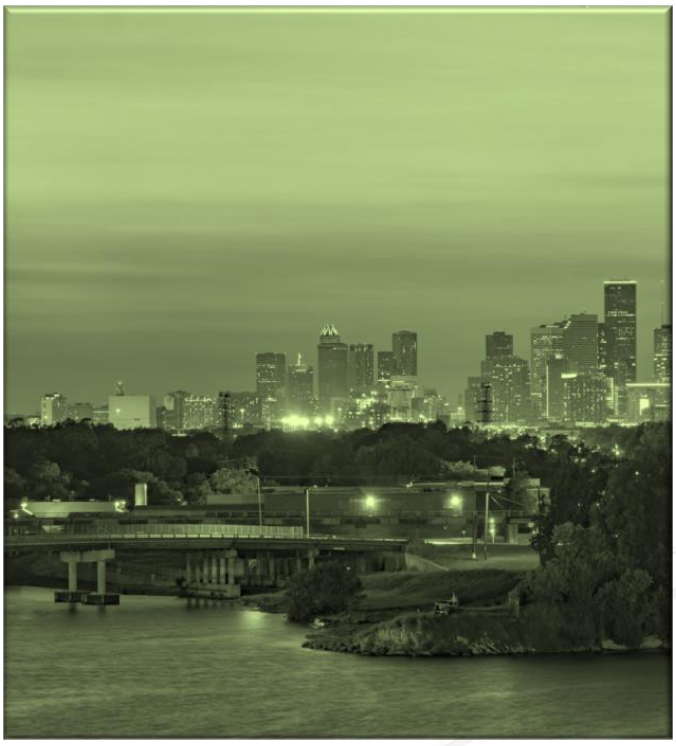
- Implementation of Permit 5827
- Updated from 2016 RWP analysis
- Population, naturalized flow, etc.





Agenda Item 8
Water Supply Alternatives

COH Reuse	
Quantity	Up to 197,847 ac-ft/yr (176.6 mgd)
Source	Indirect reuse
Decade	2040
Capital Cost	$163,299,990
Unit Cost	$58-275 per ac-ft (during loan period) $25-34 per ac-ft (after loan period)



Agenda Item 8
Water Supply Alternatives

- Additional WUG reuse
- ASR and Brackish Groundwater
- BRA System Operation supply
- Regional Water Authority projects
- BWA
- Dow
- Houston
- Sugar Land
- Others

Agenda Item 9

Receive update from Consultant Team regarding Uniform Standards for project prioritization.

REGION H
Water Planning Group

Agenda Item 9
Project Prioritization

- SWIFT
- All Projects
- RWPG must consider multiple factors
- TWDB prioritization examines other factors

Agenda Item 9
Project Prioritization

- Uniform Standards
- Minor Changes
  - Dates
  - Supporting data
  - Written requests
- Updated TWDB guidance

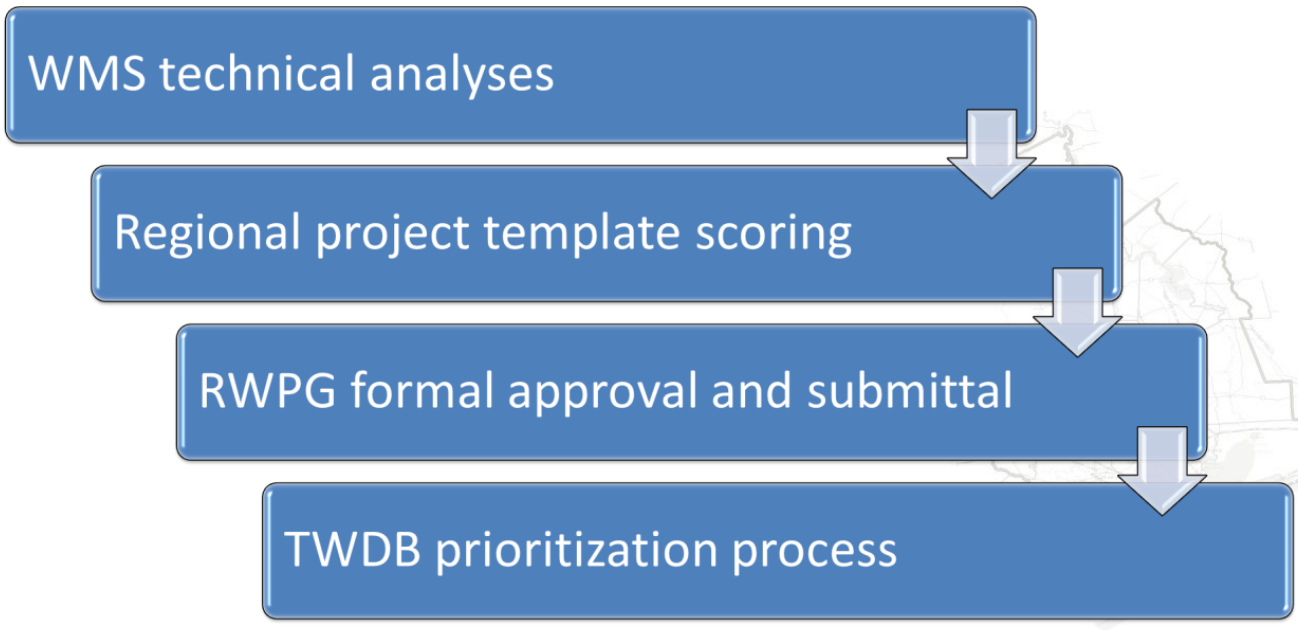
Criteria		Potential %
Decade of Need (40%)	Online Decade	20
	Funding Need	20
Feasibility (10%)	Supporting Data	2
	Rights	2
	Level of Planning	4
	Sponsor Request	2
Viability (25%)	First Decade Supply Factor	8.3
	2070 Supply Factor	8.3
	Only Economical Source?	4.2
	Multiple WUG?	4.2
Sustainability (15%)	Lifespan	10
	Changing Volume?	5
Cost Effectiveness (10%)	Unit Cost	10

Agenda Item 9
Project Prioritization

TWDB Criteria	Potential %
Population Served	50
Urban/Rural	
Regionalization	
Percentage of Needs Served	
Local Contribution	5
Capacity to Repay	2
Emergency Need	5
Ready to Proceed	8
Conservation	15
Regional Prioritization	15

RWPG Criteria	Potential %
Decade of Need	6
Project Feasibility	1.5
Project Viability	3.75
Project Sustainability	2.25
Project Cost Effectiveness	1.5

Agenda Item 9
Project Prioritization



State Water Implementation Fund for Texas (SWIFT) Project Prioritization

SWIFT Program Overview

The State Water Implementation Fund for Texas (SWIFT) was created by the Texas Legislature to provide affordable and ongoing state financial assistance for projects in the state water plan. The program helps communities develop cost-effective water supplies by providing low-interest loans, extended repayment terms, deferral of loan repayments, and incremental repurchase terms.

Eligible projects are recommended water management strategy projects (WMSP) with an associated non-zero capital cost in the most recently adopted state water plan at the time abridged applications are due to the Texas Water Development Board (TWDB) for consideration. The SWIFT abridged application collects the information necessary for TWDB staff to review and rank projects based on the prioritization system described in 31 Texas Administrative Code (TAC) § 363.1303 and criteria listed in 31 TAC § 363.1304.

Following review and prioritization of the abridged applications, the Board considers the prioritization and then establishes the funds available by category, the structure of financing, and the terms of any subsidy. Invitations to submit full financial assistance applications are extended to those projects within the limits of available funding.

What is the SWIFT project prioritization process?

SWIFT project prioritization occurs at two levels: regional and state (Figure 1).

At the regional level, the 16 regional water planning groups (RWPG) prioritize all recommended WMSPs in their regional water plans every five-year cycle using uniform standards developed by a stakeholder committee. Texas Water Code (TWC) Section 15.436 summarizes the minimum criteria that must be considered by the RWPGs in prioritization, which include the following:

1. The decade of need
2. The feasibility of the project
3. The viability of the project
4. The sustainability of the project
5. The cost-effectiveness of the project

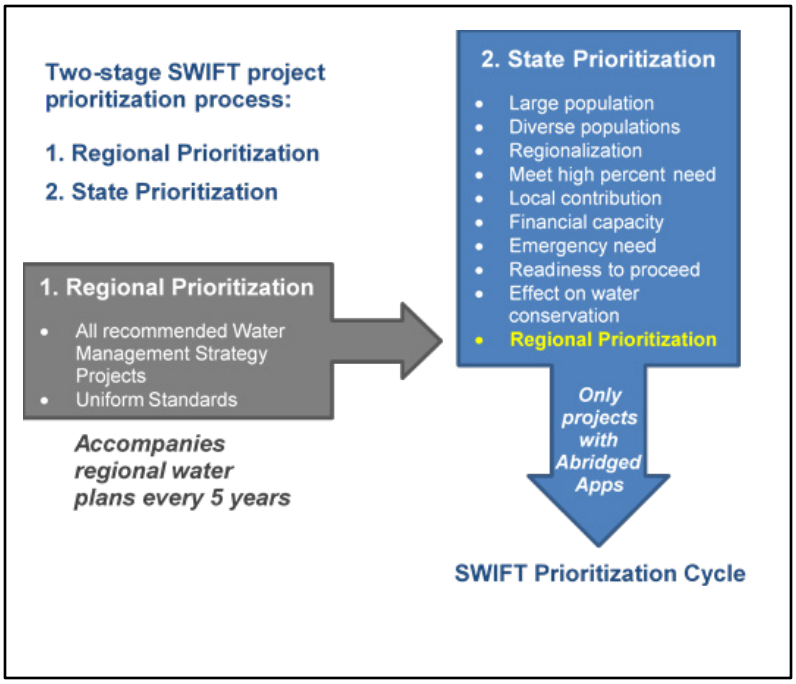


***Figure 1**: SWIFT project prioritization process summary*

The regional prioritization criteria and scoring are further defined in the uniform standards. The final product is a prioritized list of recommended WMSPs for each RWPG that is submitted to the TWDB along with the final adopted regional water plan. The regional prioritization of each project is incorporated into the state prioritization based on its relative percentile within the overall rankings of all other projects *within that region*.

The state prioritization is only applied to state water plan recommended projects for which an abridged application for SWIFT funding has been submitted. The TWDB will solicit SWIFT abridged applications up to twice a year. The state prioritization system is based on TWC Section 15.437 and TWDB administrative rules. The TWDB's SWIFT rules were developed with significant stakeholder input and adopted in November 2014.

State-level prioritization criteria outlined in 31 TAC § 363.1304 include the following:

1. The population served by the project when fully operational
2. Whether the project serves a diverse urban and rural population
3. Whether the project provides regionalization
4. The percentage of water supply needs met by the project within the first decade
5. Local contributions to the project
6. Financial capacity of the applicant to repay
7. Whether the project addresses an emergency need
8. Whether the project is ready to proceed with implementation or construction
9. Demonstration or projected effect of the project on water conservation
10. The priority ranking assigned to the project by the applicable RWPG

If two or more projects receive the same state-level priority ranking, priority will be given to the project with the highest water conservation score. If a tie still remains, priority will be given to the project with the highest emergency need score.

Additional Resources

Uniform standards for regional-level project prioritization:
www.twdb.texas.gov/financial/programs/swift/doc/HB_4_SHC_Uniform_Standards.pdf

Final prioritizations of recommended WMSPs in the 2016 regional water plans, as submitted by the RWPGs:
www.twdb.texas.gov/waterplanning/rwp/plans/2016/2016_Project_PrioritizationList.pdf

SWIFT program information sheet:
www.twdb.texas.gov/publications/shells/swift_info_sheet.pdf

SWIFT state-level prioritization point system:
www.twdb.texas.gov/financial/programs/swift/doc/Prioritization_Summary.pdf

For specific questions on the SWIFT program, please contact Financial_Assistance@twdb.texas.gov or visit www.twdb.texas.gov/financial/programs/SWIFT.

Agenda Item 10

Receive update from the Region H Legislative Committee.

REGION H
Water Planning Group

Agenda Item 10
Legislative Session

- 86th Texas Legislature
- Began January 8, 2019
- Concluded May 27, 2019

REGION H
Water Planning Group

Mission of the Region H Water Planning Group:

- Recognize the water supply needs of one of the largest economic and population centers in the nation
- Identify cost-effective and environmentally responsible strategies for meeting tomorrow's water needs
- Facilitate open discussion of water-related issues among key stakeholders
- Provide a platform for public input to our water supply future

Politically:

15	14	6	3	100s
Counties	River and Water Authorities	Groundwater-Regulating Bodies	Councils of Governments	Water Utilities

Economically:

2/3	1/3	2nd	Population of 7.3
US Petrochemical Production	US Petroleum Industries	Busiest Port in the US	Million (2010)

Water Supply:

3
River Basins

2
Major Aquifers

3
Major Reservoirs

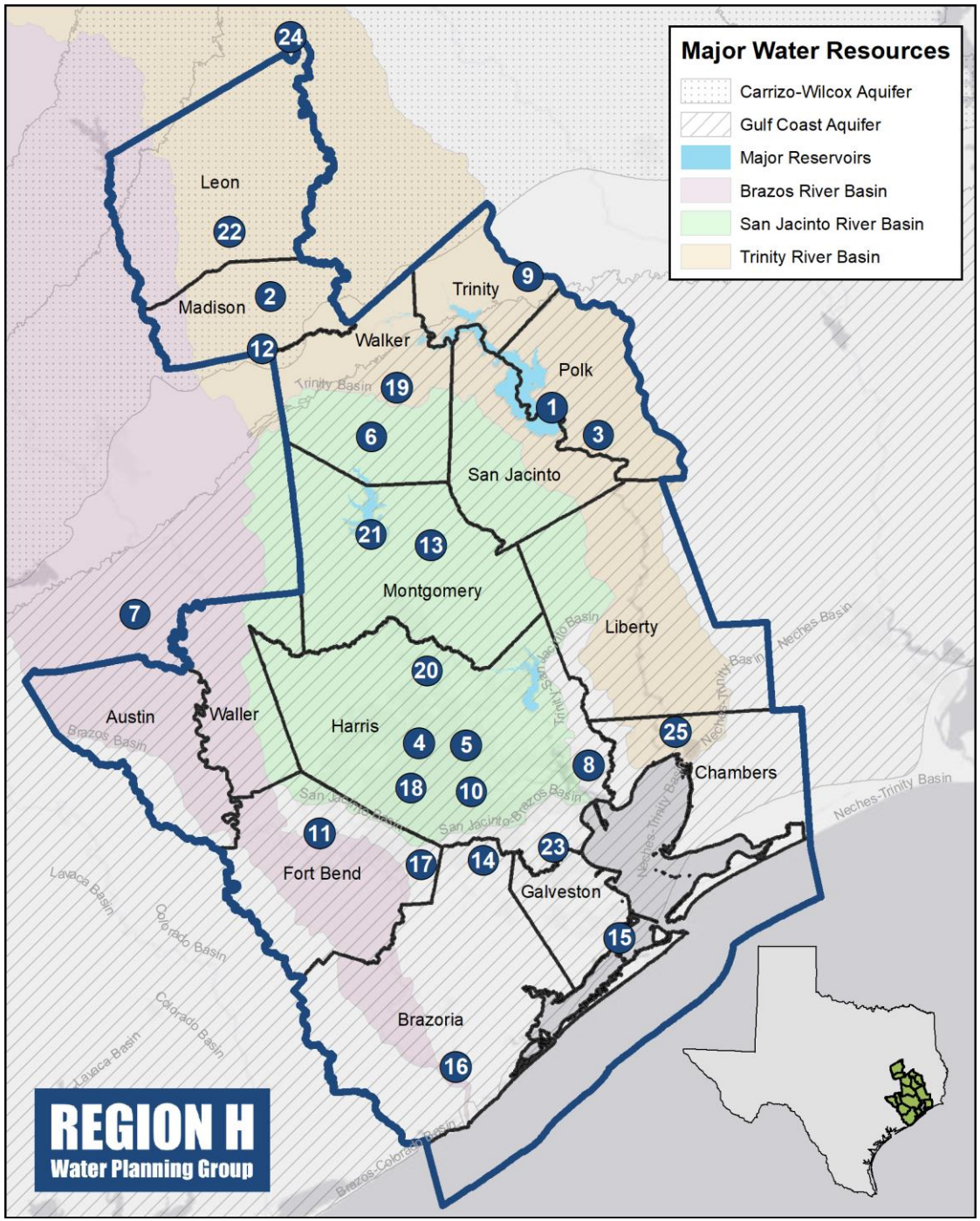
Planning Group:

26
Voting Members

12
Interest Groups

The 2016 Region H Water Plan:

Population of 11.7 Million (2070)	60% Population Growth	Irrigation 345+ Thousand Acre-Feet per Year
Industry 750+ Thousand Acre-Feet per Year	705 Projects Planned	$10.9 Billion Planned for Infrastructure



No.	Name	County	Representing
1	Gary Ashmore	Polk	GMA 14
2	David Bailey	Madison	GMA 12
3	W.R. Baker	Polk	Small Business
4	John R. Bartos	Harris	Environmental
5	John Blount	Harris	Counties
6	Robert Bruner	Walker	Agriculture
7	Brad Brunett		River Authorities
8	James Comin	Harris	Industries
9	Mark Evans	Trinity	Counties
10	Yvonne Forrest	Harris	Municipalities
11	Bob Hebert	Fort Bend	Small Business
12	Art Henson	Madison	Counties
13	Jace Houston	Montgomery	River Authorities
14	Robert Istre	Harris	Municipalities
15	Ivan Langford	Galveston	Water Utilities
16	Glenn Lord	Brazoria	Industries
17	Marvin Marcell	Fort Bend	Water Districts
18	Carl Masterson	Harris	Public
19	James Morrison	Walker	Water Utilities
20	Jimmie Schindewolf	Harris	Water Districts
21	Ruth Stultz	Montgomery	Small Business
22	William Teer	Leon	Water Utilities
23	Michael Turco	Galveston/Harris	Water Districts
24	J. Kevin Ward		River Authorities
25	Pudge Willcox	Chambers	Agriculture
	VACANT		Electric Gen. Utilities

Agenda Item 11

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

REGION H
Water Planning Group

Agenda Item 11
Community Outreach

- 02/07 – HGAC Natural Resources Advisory Committee
  Update on the 2021 Region H Plan

- 05/09 – Brazoria County GCD
  Regional Water Planning: What Exactly is it?

Agenda Item 12

Agency communications and general information.

REGION H
Water Planning Group

Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
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Phone (512) 463-7847, Fax (512) 475-2053

March 15, 2019

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

RE: Region H Regional Water Planning Group (RWPG) request to utilize modeled available groundwater (MAG) peak factors for the Gulf Coast Aquifer in Austin, Brazoria, Montgomery, Walker, and Waller Counties and the Sparta Aquifer in Madison County in the 2021 Region H Regional Water Plan (RWP)

Dear Mr. Evans:

The Texas Water Development Board (TWDB) has reviewed your request on behalf of the Region H RWPG dated November 14, 2018 for approval to utilize MAG peak factors for the Gulf Coast Aquifer in Austin, Brazoria, Montgomery, Walker, and Waller Counties and the Sparta Aquifer in Madison County for the purpose of establishing groundwater availability for drought condition planning in the 2021 Region H RWP. This letter confirms that the TWDB approves the request as shown in the table below:

County	Aquifer	Groundwater Conservation District (GCD)	Groundwater Management Area (GMA)	MAG Peak Factor
Austin	Gulf Coast	Bluebonnet GCD	14	123.92%
Brazoria	Gulf Coast	Brazoria Co. GCD	14	140.87%
Madison	Sparta	Mid-East Texas GCD	12	117.41%
Montgomery	Gulf Coast	Lone Star GCD	12	133.15%
Walker	Gulf Coast	Bluebonnet GCD	14	114.76%
Waller	Gulf Coast	Bluebonnet GCD	14	144.70%

This approval is specific to the Gulf Coast Aquifer in Austin, Brazoria, Montgomery, Walker and Waller Counties and the Sparta Aquifer in Madison County. Any additional MAG peak factor requests for use in the Region H RWP will be subject to the TWDB's review and approval.

While the TWDB authorizes these groundwater availability estimates for development of the 2021 Region H RWP, it is the responsibility of the RWPG to ensure that the estimates of water availability are reasonable for drought planning purposes and will reflect conditions expected in the event of actual drought conditions; and in all other regards will be evaluated in accordance with the contract Exhibit C, *Second Amended General Guidelines for Fifth Cycle of Regional Water Plan Development.*

If you have any questions, please do not hesitate to contact Lann Bookout, project manager for Region H, at 512-936-9439 or via email at lann.bookout@twdb.texas.gov.

Sincerely,

Jeff Walker
Executive Administrator

Attachment: MAG Peak Factor Information Sheet

c: Jace Houston, General Manager, San Jacinto River Authority
Jason Afinowicz, Freese and Nichols, Inc.
Philip Taucer, Freese and Nichols, Inc.
Gary Westbrook, GMA 12
John M. Martin, GMA 14
Zach Holland, Bluebonnet GCD
Kent Burkett, Brazoria County GCD
Rick Moffatt, Lone Star GCD
David Bailey, Mid-East Texas GCD
Larry French, TWDB
Sarah Backhouse, TWDB
Lann Bookout, TWDB

Modeled Available Groundwater (MAG) Peak Factor

Texas Water Code (TWC) §36.1132 requires management of groundwater production on a long-term basis to achieve applicable desired future conditions. In practice, this may include variations in pumping from year to year, for example, in response to relative wet and dry periods. Modeled available groundwater (MAG) is the amount of water that the Texas Water Development Board (TWDB) Executive Administrator determines may be produced on an average annual basis to achieve a desired future condition. Most of the MAG values were developed using groundwater availability models calibrated for long-term average, not drought of record, conditions.

In response to stakeholder concerns during the fourth cycle of regional water planning, the TWDB revised its planning rules to include a MAG Peak Factor that ensures regional water plans have the ability to fully reflect how, under current statute, groundwater conservation districts anticipate managing *groundwater production* under drought conditions.[i]

What is the MAG Peak Factor?

The purpose of the MAG Peak Factor is to

- provide reasonable flexibility and temporary accommodation of increased groundwater pumping above the MAG;
- accommodate anticipated fluctuations in pumping between wet and dry periods, or to account for other shifts in the timing of pumping while remaining consistent with desired future conditions;
- allow regional water planning groups to develop plans that reflect more realistic drought condition groundwater availability and pumping, where appropriate; and
- maintain the integrity of the regional and state water planning process.

The use of proposed MAG Peak Factors requires review and approval by relevant groundwater conservation districts, groundwater management areas, regional water planning groups, and the TWDB Executive Administrator.

Subject to many factors, the MAG Peak Factor might be considered in instances, for example, where

- actual pumping in wetter years is expected to fall below the MAG, thereby allowing intermittent pumping of volumes greater than the MAG during drought; or,
- groundwater pumping in early decades is expected to consistently remain well below the MAG, thereby accommodating pumping volumes somewhat higher than the MAG in later decades—all while achieving the desired future condition.

The MAG is the amount of water that can be produced on an annual average basis, instead of the amount that can be permitted. Groundwater conservation districts must consider MAGs, along with other factors in TWC §36.1132, when issuing permits for groundwater production. Accordingly, the MAG Peak Factor reflects groundwater available for pumping, not permitting, and is utilized for regional water planning purposes only. The MAG Peak Factor is not intended as a limit to permits or as guaranteed approval or pre-approval of any future permit application.

How does the process work?

It is not a mandatory requirement that regional water planning groups utilize MAG Peak Factors in the development of their regional water plans. Rather, it is the decision of each planning group, in concurrence with the relevant groundwater conservation district and groundwater management area, to determine what, if any, MAG Peak Factor is appropriate for planning efforts. A groundwater conservation district may also initiate the use of the MAG Peak Factor. The definition specifies that a MAG Peak Factor would be expressed as a percentage of modeled available groundwater (e.g., greater than 100 percent) and would represent the quantified annual groundwater availability for planning purposes.

Regional water planning groups must request the TWDB Executive Administrator's approval of each MAG Peak Factor. Each planning group request for MAG Peak Factors must

- include written approval from both the relevant groundwater conservation district, if one exists within the particular aquifer-region-county-basin split, and representatives of the groundwater management area;
- include the technical basis for the request in sufficient detail to support groundwater conservation district, groundwater management area, and the Executive Administrator evaluation; and
- document how the MAG Peak Factor will not prevent the associated groundwater conservation district(s) from managing groundwater resources to achieve the desired future condition(s).

If approved by the Executive Administrator, each MAG Peak Factor would be applied by the TWDB to the associated modeled available groundwater volume to calculate the modified groundwater availability volume that would be used by regional water planning groups.

More Information

To learn more about regional water planning requirements, please visit: www.twdb.texas.gov/waterplanning/rwp/planningdocu/2021/current_docs.asp.

Or please contact:
Sarah Backhouse
sarah.backhouse@twdb.texas.gov
(512) 936-2387

[i] *31 TAC §357.10(20); process §357.32(d)(3). This rule change eliminated the effect of modeled available groundwater values acting as immovable, "hard caps" on groundwater pumping that could be reflected in the regional water plans.*

The Role of Modeled Available Groundwater in Regional Water Planning

What is modeled available groundwater?

Groundwater is regulated locally by groundwater conservation districts except in locations that do not have a district. Districts may issue permits that regulate pumping of groundwater and spacing of wells within their jurisdictions. Multiple districts within a single groundwater management area determine the desired future conditions of relevant aquifers within that area. (Desired future conditions are the desired, quantified conditions of groundwater resources, such as water levels, water quality, spring flows, or volumes, at a specified time or times in the future or in perpetuity.) TWDB staff then translate those desired future conditions into modeled available groundwater values using the groundwater availability models (or other approaches if a groundwater availability model is not applicable). A modeled available groundwater value is the amount of groundwater production, on an average annual basis, that will achieve a desired future condition. The desired future condition in a specific location may not be achieved if pumping quantities exceed the modeled available groundwater volume over a long term.

How are modeled available groundwater volumes used in the regional water plans?

Regional water plans consider the volume of groundwater that is anticipated to be actually pumped during a drought in any planning decade. Texas Water Code requires that regional water plans be "consistent with the desired future conditions…" (Texas Water Code Section 16.053(e)(2-a)). Water planning rules require that regional water planning groups "shall use Modeled Available Groundwater volumes for groundwater availability" unless there is no modeled available groundwater volume (Title 31 Texas Administrative Code Section 357.32(d)).

Regional water planning requirements do mean that

- the regional water planning process focuses on anticipated pumping volumes in each planning decade rather than on permit volumes;
- the total anticipated pumping volume in any planning decade may not exceed the modeled available groundwater volume in any county-aquifer location (total pumping volume includes the quantities both from existing water supplies and from any recommended water management strategies);
- planning groups may not recommend water management strategy supply volumes that result in exceeding (e.g., "overdrafting") the modeled available groundwater volumes; and
- in the absence of specific information about how groundwater will be managed to meet desired future conditions in a particular location, planning groups may have to develop their own planning basis for allocating the modeled available groundwater volume to complete their regional water plans. The allocation of groundwater may impact the identified water needs and/or the strategy options available to meet needs.

Regional water planning requirements do not mean that

- planning groups may modify groundwater permits that districts have already issued or limit future permits that districts may issue;
- districts must consider whether a project is in an adopted regional water plan when determining whether to issue a groundwater permit; or
- planning groups may modify the desired future conditions (or modeled available groundwater volume) within their planning area through the regional water planning process[1].

Only districts in groundwater management areas can modify desired future conditions.

[1] *Per Rule 357.32, if no groundwater conservation district exists within a region, for example the northeast Texas region, then the region may determine the availability of groundwater for planning purposes if it is physically compatible with the desired future condition. If there is a groundwater conservation district in the region, then the region can request a modeled available groundwater (MAG) peak factor (greater than 100 percent of the MAG) in any aquifer-region-county-basin split if it does not prevent the groundwater conservation district from achieving the associated desired future condition.*

Regional Water Planning Groups in Texas: What They Do and Don't Do

Texas has 16 regional water planning groups (RWPG), one for each designated regional water planning area (A–P). The RWPGs have many responsibilities; however, they have a limited scope and authority. The bottom-up approach to the planning process was designed to focus RWPGs on the identification of water needs (potential shortages) and feasible water management strategies to ensure there are adequate water supplies in times of drought.

It is important to recognize that regional water plans (RWP) are high-level, long-term (50-year) water supply plans and that individual water management strategies and projects often require additional detailed evaluations by the project sponsor[1] prior to permitting and implementation. This document is intended to help the public understand the RWPGs' role.

What RWPGs Do

RWPGs are tasked to develop a 50-year RWP that serves the entire region and takes into consideration the water needs of all water use categories[2] within the region. RWPs must reflect and respond to changes in population, water supplies, technological improvements, economic shifts, project viability, and state policy.

On average, each RWPG consists of roughly 20 voluntary voting members representing a variety of 12 interest categories required by statute. Members must represent their interest category in the planning process. Local water plans developed by local entities must also be considered during plan development.

The RWPGs conduct their work during public meetings in an open and participatory manner and hold public hearings during the development of their RWPs. Planning group members approve draft plans and adopt final plans by voting at open meetings in accordance with each group's bylaws. Once the RWPG adopts its final RWP, the plan is sent to the TWDB for approval.

The adopted RWPs must meet requirements outlined in the Texas Water Code, TWDB Administrative Rules, and the TWDB contractual planning grant scopes of work (SOW) and guidance documents. These documents identify the scope of water management strategies that must be considered and provide limitations on infrastructure and components that may not be included in the RWPs. RWPGs must also manage the development of their RWP within their allocated budget. Development of the RWPs are funded primarily through legislative appropriations administered by the TWDB. The TWDB grant contracts allocate specific funding amounts to each RWPG and each SOW task.

[1] A project sponsor, such as a utility or wholesale water provider, is an entity identified in the RWP that would take further action to implement, including paying for, water management strategy projects. Project sponsors designated in RWPs do not restrict the project to only being implemented by that entity in the future.

[2] Categories of water use planned for in the regional water planning process include municipal, manufacturing, irrigation, steam-electric power generation, mining, and livestock.

The RWPGs must complete the following 12 tasks to develop their RWP:

1. Describe the water planning area
2. Quantify current and projected population and water demand over a 50-year planning horizon
3. Evaluate and quantify current water supplies and source availability*
4. Identify surpluses and needs (potential shortages)
5. Identify, evaluate, and recommend water management strategies to meet the needs*
6. Evaluate impacts of the RWP and describe how the plan is consistent with long-term protection of the state's water, agricultural, and natural resources
7. Develop drought response information and recommendations
8. Recommend regulatory, administrative, and legislative changes
9. Describe how sponsors of water management strategies will finance projects
10. Describe the status of project implementation in the regional planning area and impediments to implementation and provide a summary of how the RWP differs from the previous RWP
11. Prioritize the recommended projects in the RWP
12. Adopt the plan, ensuring the state required level of public participation in the process*

Examples of What RWPGs Don't Do

RWPGs do not have the authority or financial means to implement the water management strategies or projects recommended in the RWPs. RWPGs also do not have authority to provide permits for the projects recommended in the plan. Project sponsors are responsible for implementing projects.

RWPGs are not regulatory bodies. They do not have the ability to develop, modify, or enforce compliance with federal, state, county, or local statutes or ordinances.

Although they must consider environmental requirements, RWPGs do not specifically plan (identify water supplies, demands, or resulting needs) for the environment as a water user group (WUG). The categories of water use for WUGs are defined by TWDB rules (see footnote 2). It is these categories of use for which water needs are identified and water management strategies recommended. However, environmental factors such as instream flows and bay and estuary inflows must be considered when evaluating water management strategies during development of the RWPs. Such consideration must be consistent with the Texas Commission on Environmental Quality (TCEQ) environmental flow standards where adopted.

RWPGs do not have the authority to issue or modify groundwater production permits. RWPGs must utilize groundwater availability resulting from the groundwater management area (GMA) joint planning process, [i.e., modeled available groundwater (MAG) based on desired future conditions (DFC)], when developing their RWP. RWPGs may not modify the DFC or MAG.[3] Only groundwater districts in GMAs can modify DFCs.

RWPGs do not have the authority to issue or modify surface water rights, including those regarding reuse. TCEQ is the agency responsible for surface water rights in Texas.

For additional information on the regional water planning process and current activities, please call 512-475-2057 or visit our website at www.twdb.texas.gov/waterplanning/rwp/index.asp.

* These tasks are typically associated with the largest budgets.

[3] Except for in a regional water planning area with no groundwater conservation districts or under an approved MAG peak factor or MAG reallocation in accordance with TWDB rules and contract guidance processes.

Texas Water Development Board

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Phone (512) 463-7847, Fax (512) 475-2053

January 31, 2019

Mr. Jace Houston
General Manager
San Jacinto River Authority
P.O. Box 329
Conroe, TX 77305

RE: Informal Review Comments on Region H's Technical Memorandum

Dear Mr. Houston:

In addition to reviewing the Technical Memorandum report for administrative completeness, Texas Water Development Board (TWDB) staff have reviewed the draft groundwater and surface water data and methodologies presented in the planning group's Technical Memorandum. The attached comments are being provided for Region H's consideration during the remainder of their regional water plan development.

Unlike TWDB comments on the initially prepared plans (IPP), these are informal comments that do not require responses from the planning group. We have added this to our process timeline to allow for a more thorough review of source data and methodologies, and a longer timeline for planning group consideration, prior to the IPP comment and response period.

If you have any questions, please feel free to contact Lann Bookout of our Regional Water Planning staff at 512-936-9439 or via email at lann.bookout@twdb.texas.gov.

Sincerely,

Jessica Zuba
Deputy Executive Administrator
Water Supply and Infrastructure

Attachment: TWDB Comments

cc: Mark Evans, RWPG Chair
Philip Taucer, Freese and Nichols, Inc.
John Dupnik, TWDB
Sarah Backhouse, TWDB
Natalie Ballew, TWDB
Nelun Fernando, Ph.D., TWDB
Lann Bookout, TWDB

JZ/LB/ms

Region H Regional Water Planning Group
TWDB Informal Comments on the Technical Memorandum
Groundwater and Surface Water Source Data & Methodologies

1. TWDB staff has conducted a modeling analysis and determined that the availability reflected in the Technical Memorandum for the sources listed in the table below may be physically incompatible with adjacent or nearby desired future conditions (DFC) of the regional aquifers. The TWDB acknowledges that real world conditions, such as the timing or placement of possible projects, aquifer characteristics, and monitoring, or other approaches may show that the availability is compatible. Please consider this information during regional water plan development. The TWDB provided planning groups with DFC-compatible non-relevant groundwater availability values in May 2018, which are also available for your consideration.

SourceId	DbSoId	Source Name	Source Region	Source County	Source Basin	Source Review Comments
1546	1411	SPARTA AQUIFER	H	WALKER	TRINITY	GMA 12 DFC exceeded in Brazos Valley GCD
1733	3873	YEGUA-JACKSON AQUIFER	H	WALKER	SAN JACINTO	GMA 12 DFC exceeded in Mid-East Texas GCD
1004	4285	CARRIZO-WILCOX AQUIFER	H	WALKER	TRINITY	GMA 12 DFC exceeded in Lost Pines, Brazos Valley, and Mid-East Texas GCDs
1489	4288	QUEEN CITY AQUIFER	H	WALKER	TRINITY	GMA 12 DFC exceeded in Brazos Valley GCD
1589	5218	SPARTA AQUIFER	H	WALKER	SAN JACINTO	GMA 12 DFC exceeded in Brazos Valley GCD
1761	5250	YEGUA-JACKSON AQUIFER	H	TRINITY	TRINITY	GMA 12 DFC exceeded in Mid-East Texas GCD

2. With acknowledgement that Region H's work is ongoing, it is noted that the firm yield of Lake Livingston remains constant from 2020-2070. Please verify the reasoning for this (1,344,000 acre-feet/year (AFY)). Please also consider that TWDB simulations for Lake Livingston show a firm yield of 1,122,300 AFY for 2020 and 1,091,600 AFY for 2070.