

# LCRA'S WATER MANAGEMENT PLAN

Participant Meeting

May 21, 2018



FOR DISCUSSION PURPOSES ONLY

# Agenda

- Water Management Plan presentation
  - WMP background
  - Why we are updating the plan
  - Schedule for update
  - What will and won't change in the updated application
- Discussion and questions

# LCRA's Water Management Plan

- Governs LCRA's operation of lakes Buchanan and Travis to supply water to users throughout the lower Colorado River basin
- Allows for supply of interruptible water provided we don't impair our ability to meet the needs of our firm customers
- Helps meet the environmental needs of the river and bay

# 2015 Water Management Plan

- Approved by TCEQ in November 2015
- Set minimum combined storage through a repeat of historical hydrology
- Framework changed from 2010 plan
- More responsive to changing conditions



# 2015 WMP – Interruptible Agricultural Supply

- No “open supply”
- Two evaluation dates for interruptible stored water
- Three water supply conditions: Normal, Less Severe Drought, Extraordinary Drought
  - Based on storage and prior three months of inflows
- Look-ahead tests

# 2015 WMP – Environmental Flows

- Two evaluation dates for environmental flows
- Instream flows levels:
  - Base Average, Base Dry and Subsistence
- Matagorda Bay inflows:
  - Four levels of two-month inflows
  - Monthly Threshold value

# Why are we updating the plan?

- WMP was first approved in 1989
- WMP updated periodically:
  - In 1991, 1992, 1999, 2010 and 2015
- TCEQ required update process to begin in 2018

# Meetings and Communications

- Had initial discussion with Texas Commission on Environmental Quality in January
- Since January, met with interested groups
- Discussed update process with LCRA Board

# Timeline

- May 21 – First participant meeting
- July 12 – Second participant meeting
- Aug. 10 – Third participant meeting

# Timeline

- Sept. 6 – Fourth participant meeting
- October/November – Present draft WMP to LCRA Board
- December – Request LCRA Board approval
- Early 2019 – Submit to TCEQ

# UPDATING THE WATER MANAGEMENT PLAN



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# What's not changing?

- The basic objectives:
  - Meet firm demands without shortage
  - Maintain minimum combined storage
- The basic WMP framework:
  - Three water supply conditions – Normal, Less Severe Drought and Extraordinary Drought
  - Two evaluation dates for interruptible water availability for agriculture
  - Look-ahead tests
  - Environmental flow criteria

# What's changing?

- Updating water demands
- Extending hydrology through 2016
  - Hydrology reviewed and approved by TCEQ
- Adding new water supplies:
  - Arbuckle Reservoir
  - Amended Garwood water right

# What might change?

- Amounts of water available for interruptible agricultural and environment
- Curtailment triggers
- Consider adding fall evaluation date for environmental flow criteria
- How LCRA meets environmental flow criteria at Wharton and the bay

# UPDATES TO THE WATER DEMANDS

# Water Demands

- Update for 2025 conditions
- Firm demands
  - Municipal and manufacturing
  - Steam-electric cooling
- Interruptible agricultural demands

# Weather-varied Demands

- Demands are influenced by weather
- 2015 WMP weather-varied demands:
  - Lake evaporation
  - Irrigation
- WMP update weather-varied demands:
  - Lake evaporation
  - Irrigation
  - Municipal and manufacturing
  - Steam-electric

# Municipal and Manufacturing Demands

- Based on Region K demands
  - Reflects high-use year (high GPCD)
  - Conservative for high-use years
  - Much higher than average years
- Average use occurs in many years
- Developed method to toggle between high-use and average-use years in WMP update

# Steam-electric Demands

- Weather-varied demand:
  - STP reservoir and Lake LBJ evaporation in 2015 WMP
  - Expand to include FPP and Decker in WMP update
- Use 2011 as maximum demand
- FPP and Decker power plant:
  - Weather variation correlated to summer temperatures

# Interruptible Agricultural Demands

- Based on Region K
- Uses 2011 planted acreage
- Reflects contracting practices and efficiency improvements
- Weather-varied

# Methodology Recap

- Based on Region K projections and recent use
- Expands use of weather variation
- Uses highest projected demands through 2025

## Preliminary Projected 2025 Demands (a-f/yr)

	Normal/Average	High/Max
<b>Municipal/Manufacturing</b>		
City of Austin <sup>1</sup>	167,200	215,900
Other <sup>2</sup>	105,300	124,000
<b>Steam-electric<sup>3</sup></b>		
LCRA power plants	14,600	19,700
COA power plants	13,300	18,600
STP	39,400	39,400
Bastrop Energy Partners	2,300	2,300
<b>Agriculture<sup>4</sup></b>		
Lakeside	114,000	135,300
Garwood	88,000	100,000
Pierce Ranch	27,000	30,000
Gulf Coast	139,000	156,700

<sup>1</sup> Average-use year projections estimated by City of Austin Water Forward Task Force. High-use year projections estimated by Region K.

<sup>2</sup> High-use year projected demands based on Region K. For entities not reported in Region K, high-use projected demands are based on use since 2010. Average-use year projections estimated from ratio of average to high use in recent years.

<sup>3</sup> Max-use year based on 2011. Weather variation applied to FPP and Decker power plant, and evaporation from STP cooling reservoir.

<sup>4</sup> Based on Region K projected demands. Weather variation applied to all operations.

# Next Steps

- Comment period open until June 20
  - Submit comments to **LCRAWMP@lcra.org**
- July 12 – Second participant meeting
  - Discuss demands and preliminary modeling results