



# Brazos River Authority

## System Management and Drought Protection Plan

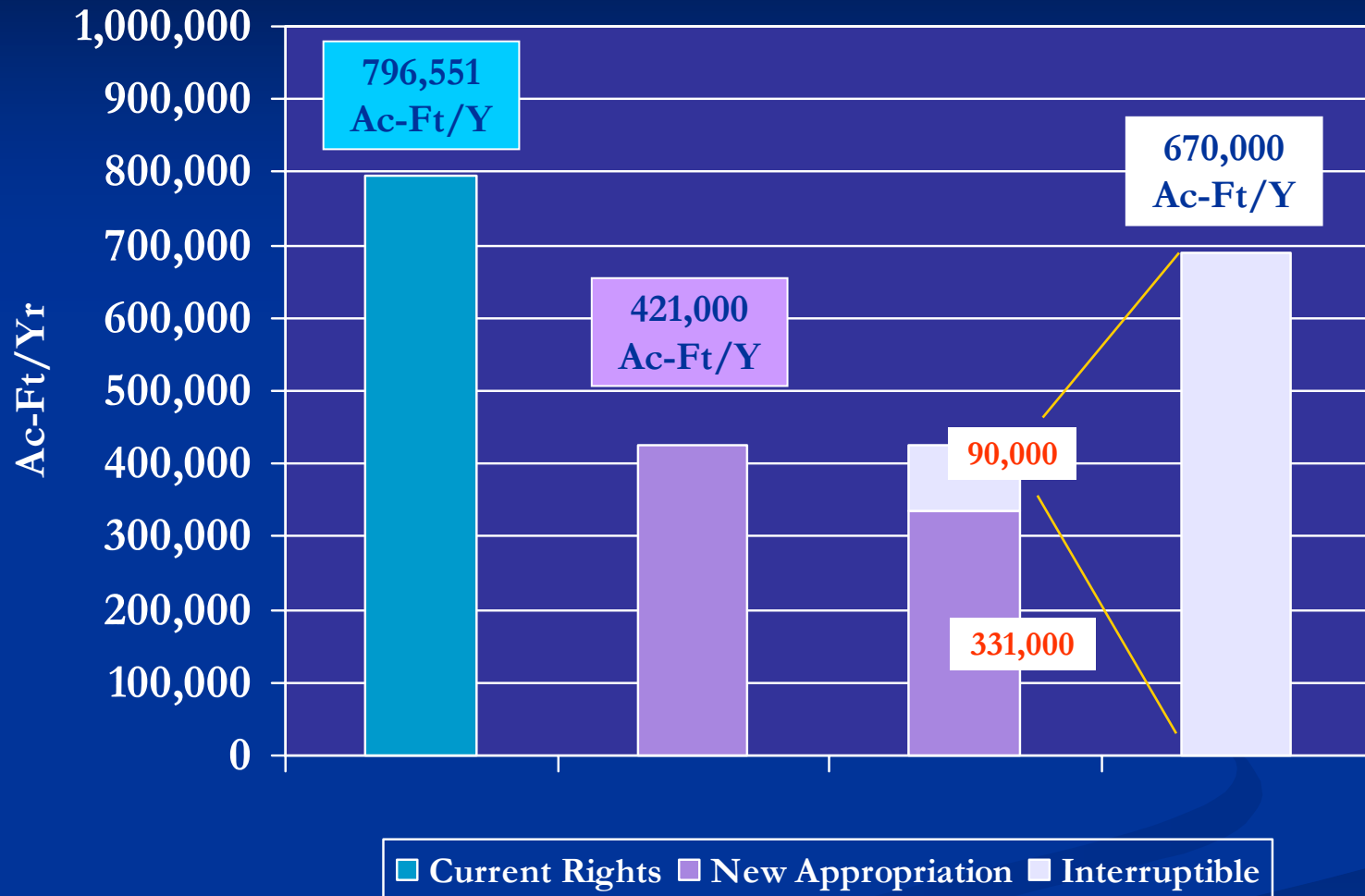
- Major New, Environmentally Sensitive Supply
- Due to Reservoir System, Only BRA Can Do This
- Basin-wide Water Management Plan
- BRA is Fulfilling its Legislative Mandate
  - Develop
  - Manage
  - Conserve

# Why Is This Being Requested?

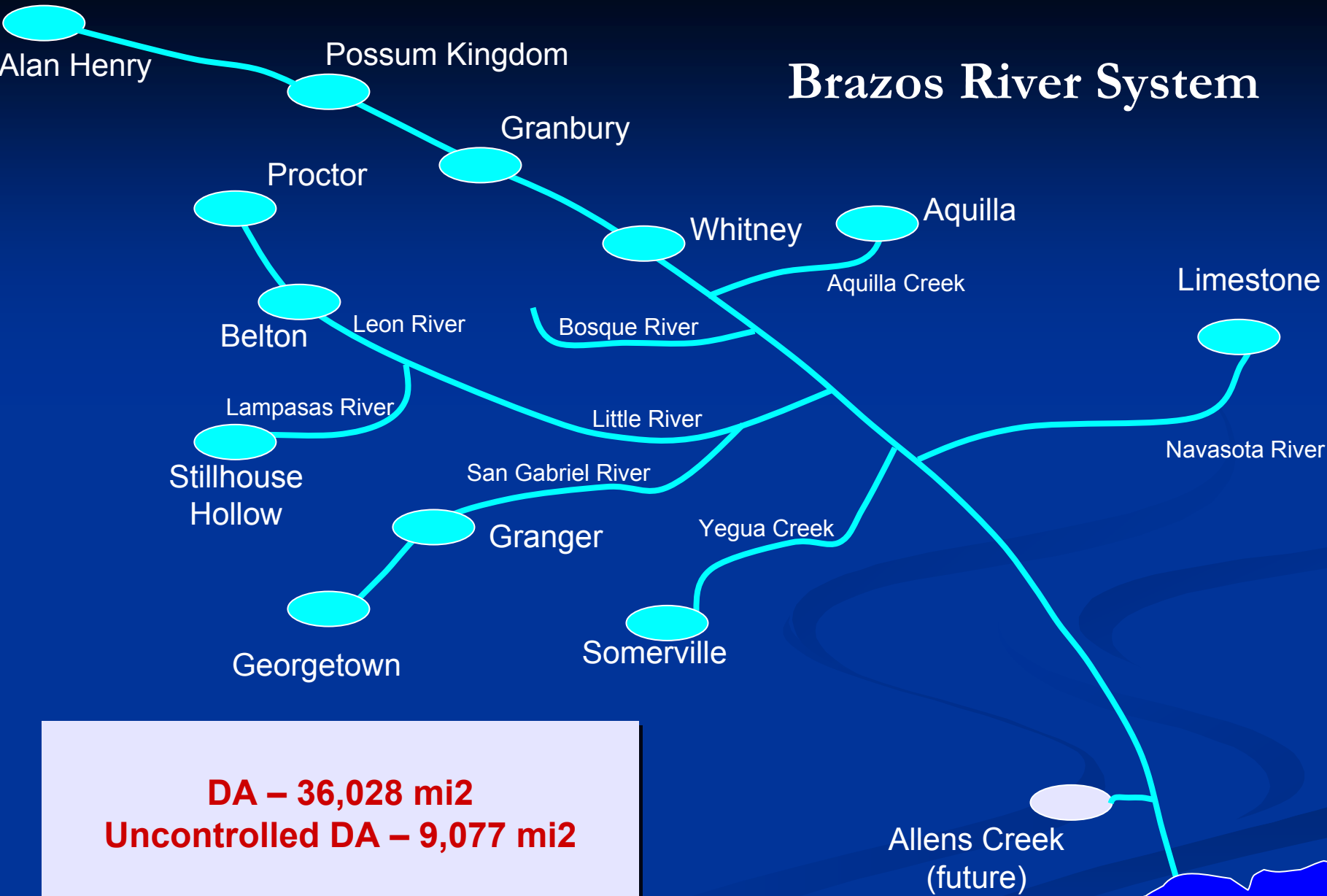


- **Senate Bill 1 and 2 Water Planning Process**
- **Brazos Basin Needs**
  - 2050
  - 1.5 Million Acre-Feet/Year
  - Includes Counties that are Completely or Partially in Basin

# What Is Being Requested?



# Brazos River System



**DA – 36,028 mi<sup>2</sup>**  
**Uncontrolled DA – 9,077 mi<sup>2</sup>**

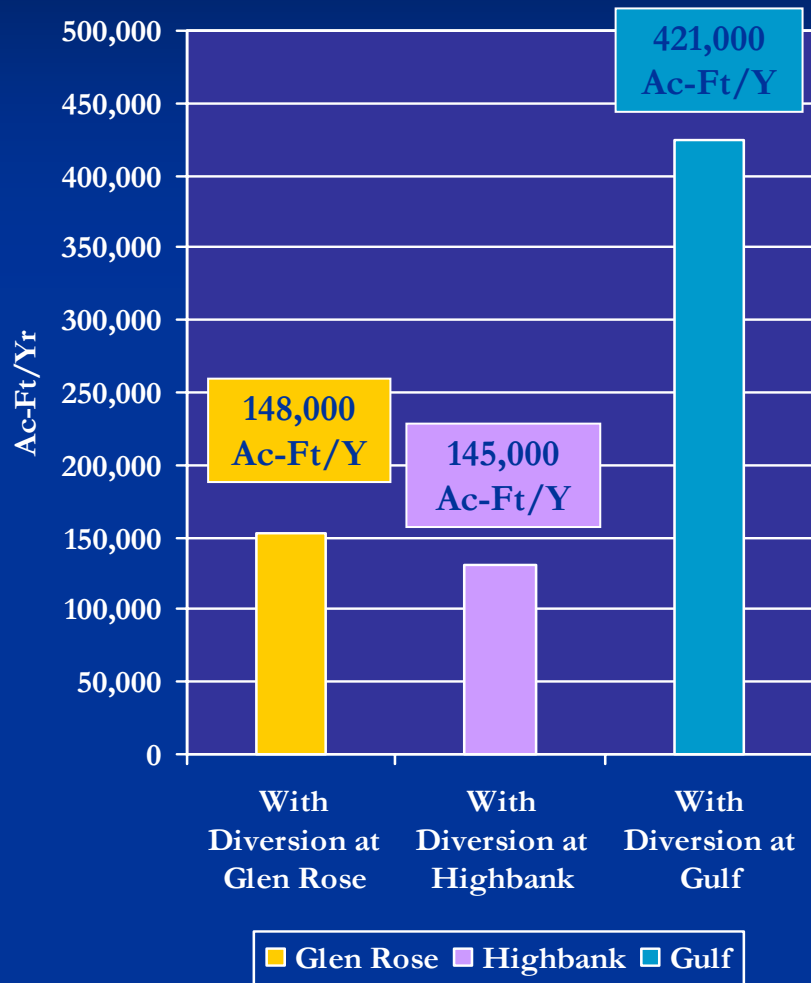
# What Is Being Requested?

- Water for Municipal, Agricultural, Industrial Purposes from System Operations
- Unappropriated Flows
- Un-permitted Storage
- Flexibility to Transport, Store, and Uses Water from Any Permitted BRA Source
- Use of Return Flows

# Where Is Water Available?

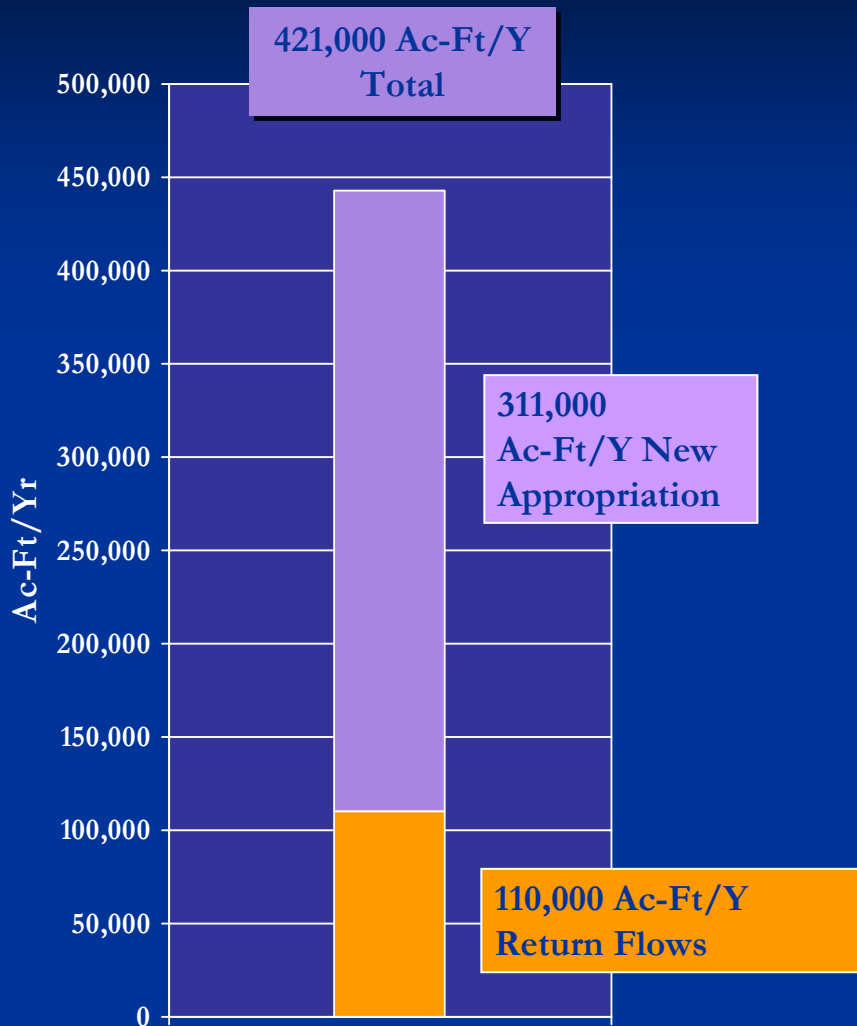
- **Primarily in Mainstem**
- **Largest Amounts in the Lower Basin**
- **Some in Non-Mainstem Reservoirs**
- **Transmission may be Required to Meet Local Needs**

# How Much Water Will Be Available?



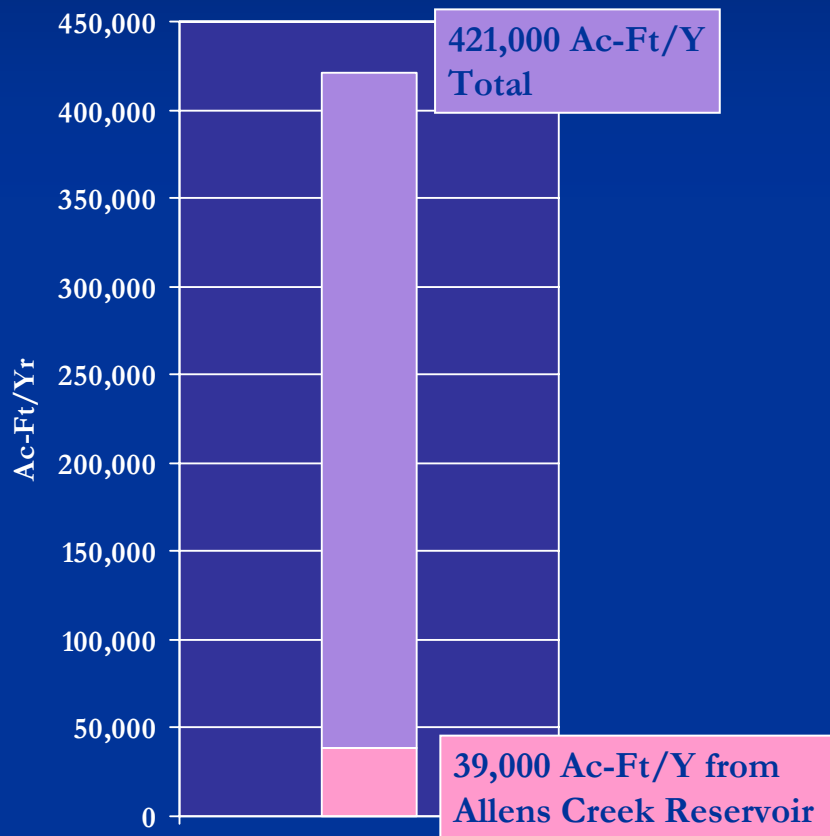
- Not all 421,000 Ac-Ft/Y
- Will be less because
  - Diversion Location
  - 2060 Return Flows
  - Original Reservoir Capacities

# Return Flows



- Statewide Issue
  - Contested
  - Unresolved
- 2060 Return Flows
- Existing Rights Continue to Get First Right
- Does Not Impact Direct Reuse

# Allens Creek Reservoir



- Some Additional Yield
- Makes System Operation Simpler
- Partnership with Houston and TWDB

# Instream Flows



- **System Operation Will Improve Flows**
  - **Low Flow Periods**
    - More Water in River
  - **High Flow Periods**
    - Slightly Less Water in River
  - **Improves environmental flows**
  - **Specific Amount to be Reserved for Environmental Purposes**

# Reservoir Storage

(Backup)

## ■ System operation

- All Reservoirs – 75% of the time at higher levels
- Possum Kingdom – 95% of time at higher level
- Lower levels during extreme droughts

## ■ System operation with interruptible

- 20% of the time at higher levels

## ■ Climatic conditions control



# System Management and Drought Protection Plan Benefits

- **Creates Most Cost-Effective Additional Water**
- **Future Water Demands Addressed**
- **Uses State of the Art WAM to Analyze Basin-wide Water Availability**
- **Ability to Move Water Within Basin**
- **Delays Construction of New Reservoirs**
- **Instream Flows**

# System Management and Drought Protection Plan

- System Order Allowed BRA to be Efficient
- SMDPP Allows BRA to Make More Water Available
- Water Management Plan Developed in Conjunction with All Basin Participants Ensures its Success

*Whole is Larger than the Sum of the Parts!*

