



**North Houston Association  
Water Committee Meeting  
May 11, 2023**



**LAKE CONROE DIVISION OVERVIEW**



# SJRA's Organizational Structure

## **General & Administrative**

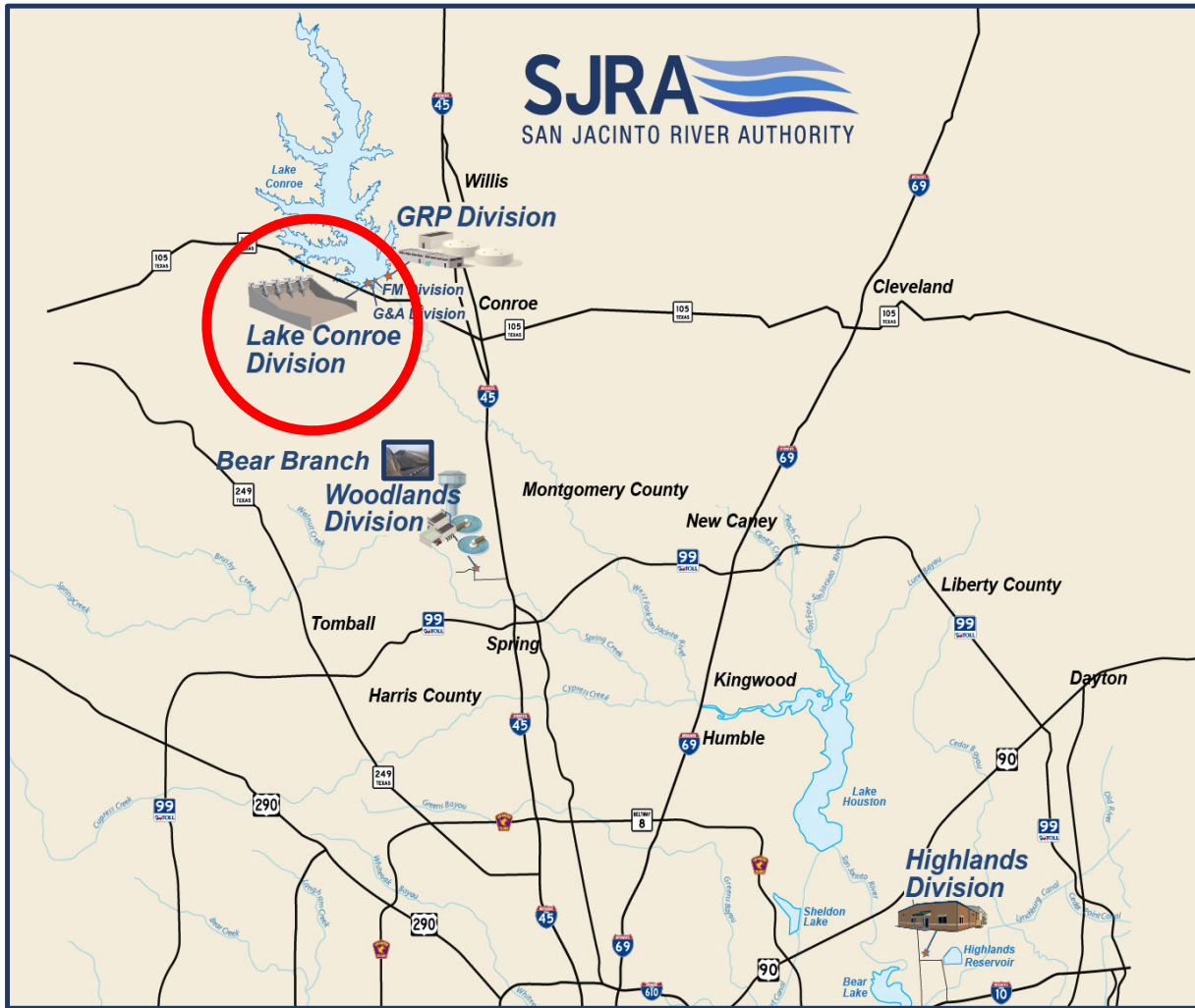
General and administrative support services to operating divisions

## **Flood Management Division**

## **Four Operational Divisions**

**Bear Branch Division**

**Region H**



# SJRA's Operational Divisions

**Groundwater Reduction Plan**  
Treated surface water

**Highlands**  
Raw water (industrial, municipal, agricultural)

**Lake Conroe**  
Dam and Reservoir Operations

**Woodlands**  
Treated water/wastewater

# Lake Conroe Construction (1968 – 1973)

- Water Supply Reservoir
- Built in response to the record 7-year drought of the 1950s
- Joint venture
  - City of Houston (2/3)
  - SJRA (1/3)

50<sup>th</sup> Anniversary

# Project Details

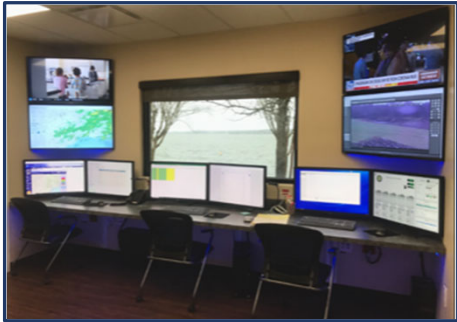
- 444 square mile watershed
- 20,000 acres
- 430,000 ac-ft
- Permitted yield 100,000 ac-ft/yr.
- Earthen - High Hazard dam
- Gated spillway (radial Tainter gates)
- Service outlet (sluice gates)
- Spillway capacity  $\approx 150,000$  cfs



## Lake Conroe Division's Primary Mission

*To safely operate and maintain the Lake Conroe dam and reservoir so that Lake Conroe continues to serve its intended purpose – Water Supply*

# Division's Responsibilities



Spillway Operations



Source Water Protection



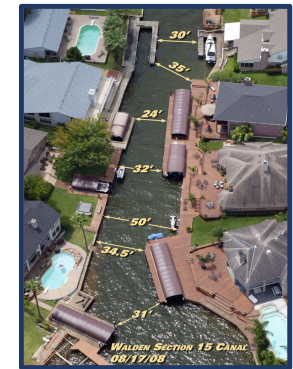
Invasive Species



Maintenance



Habitat Restoration



Licensing & Permitting

# Spillway Operations

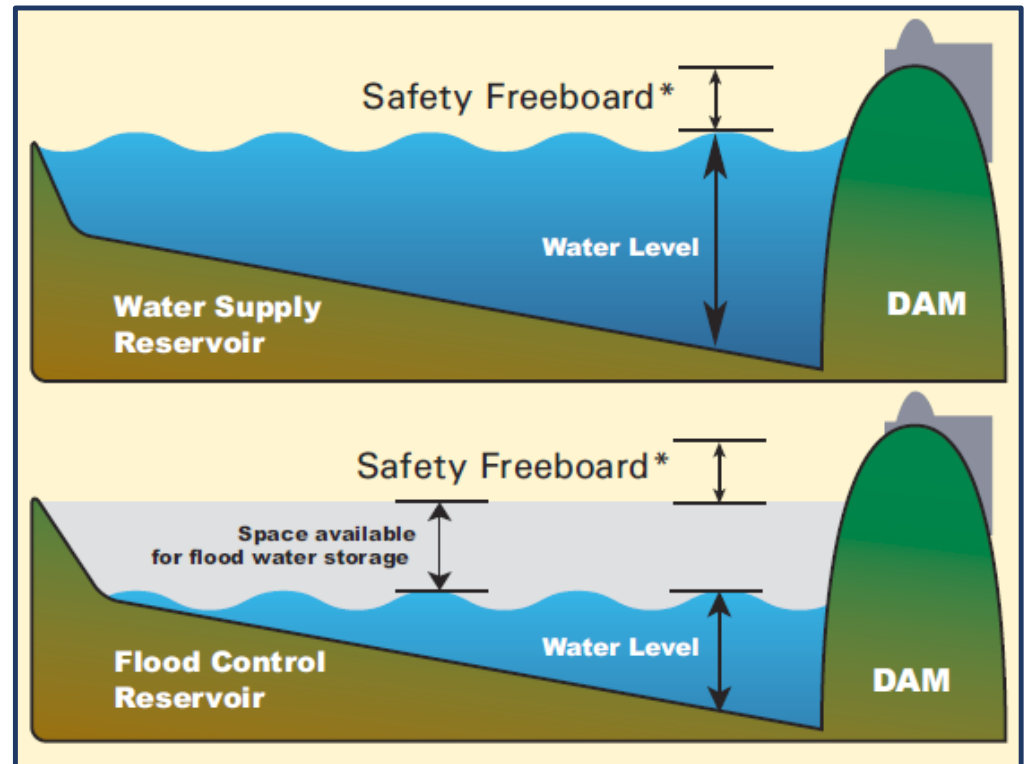




# Water Supply Vs. Flood Control

Minimal Freeboard  
Designed to Pass % of Inflows  
Not Designed for Overflow

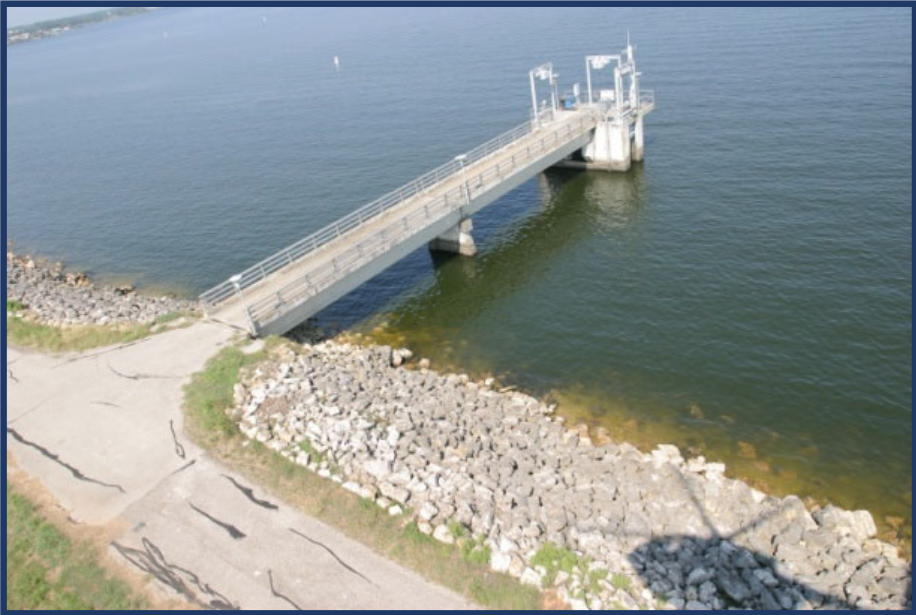
Maximum Freeboard  
Designed to retain of inflows



# Radial Tainter Gates



# Service Outlet (Low Flows)



Upstream

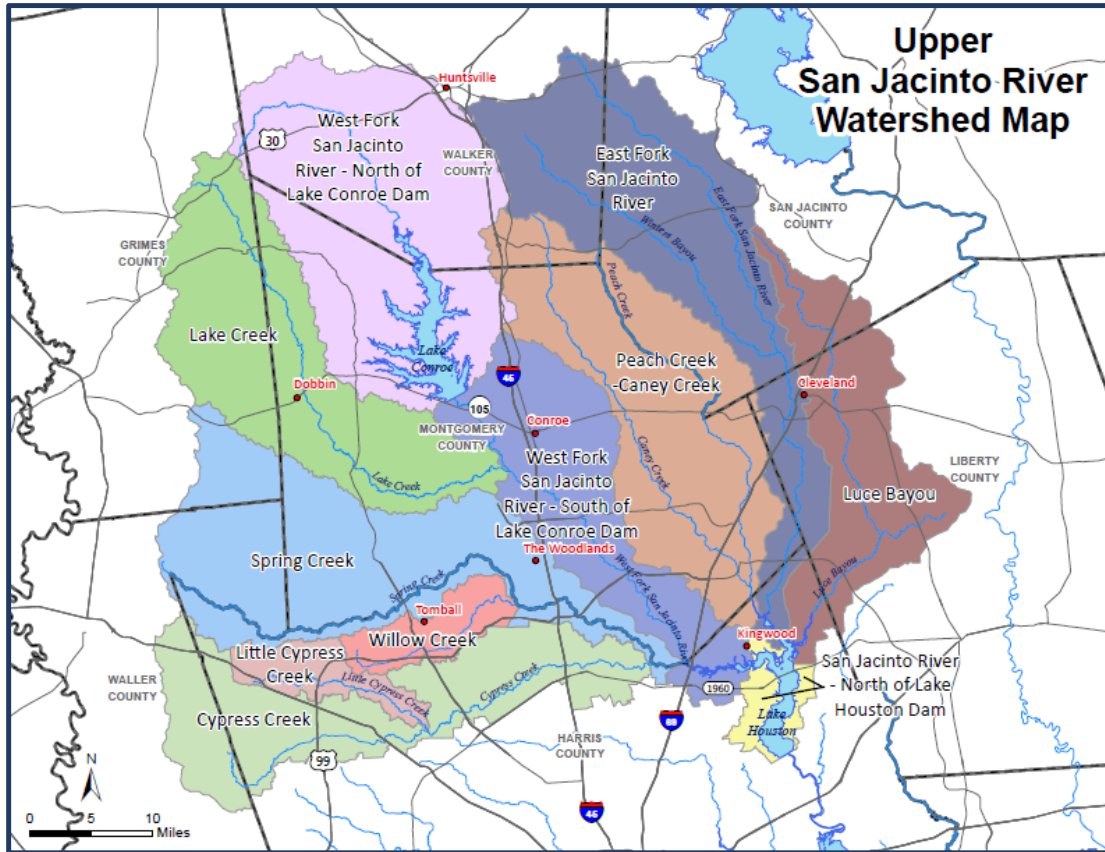


Downstream



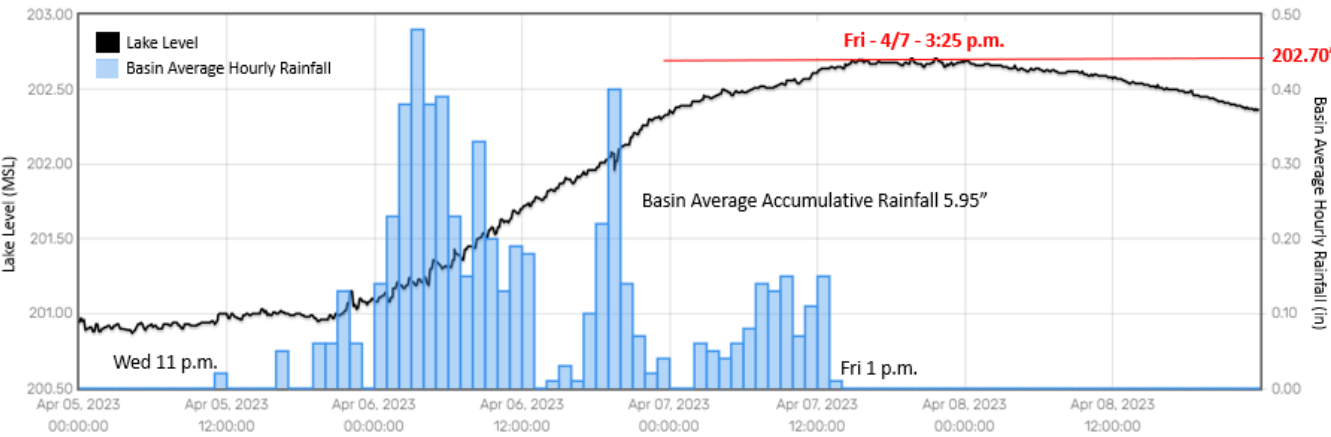
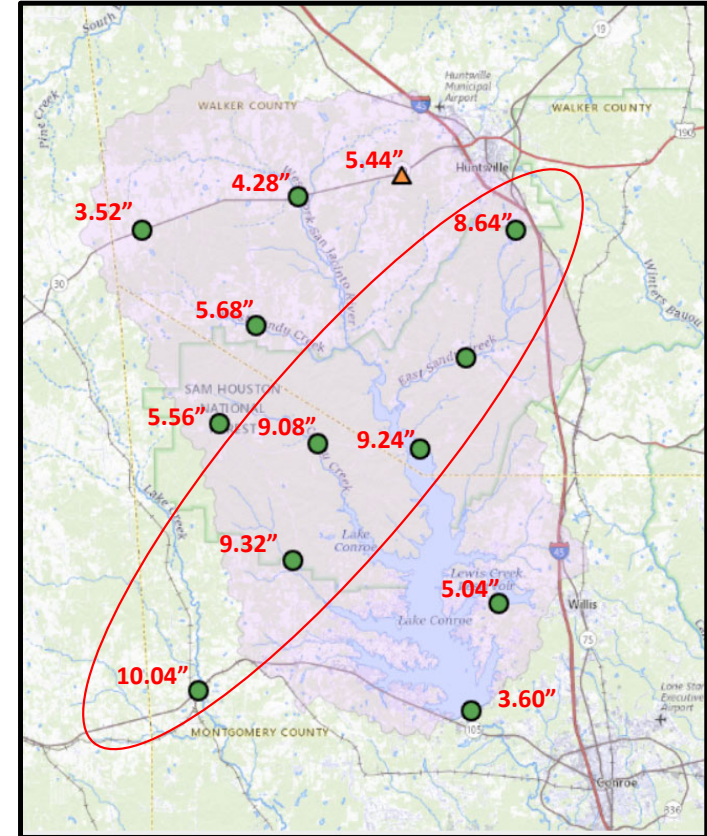
Weir

# Public Education/Outreach



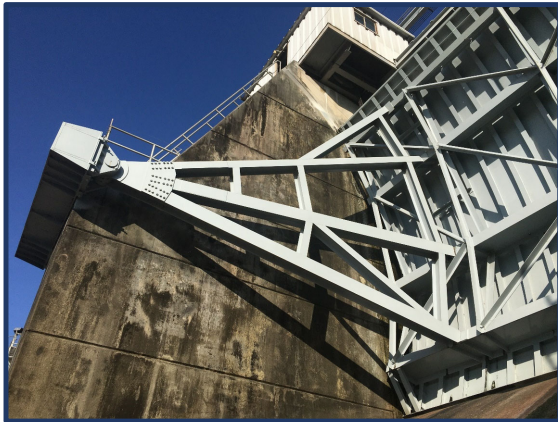
# Easter Rainfall Event 4/5/23 – 4/8/23

8,132 cfs



# Inspections

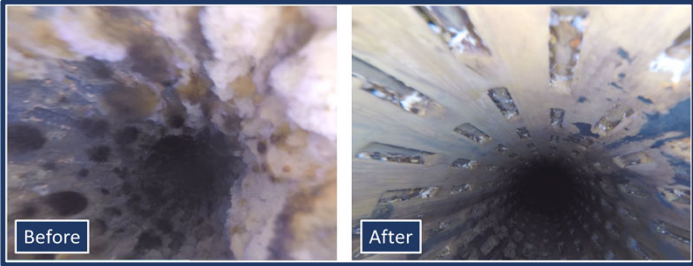
- Routine
- TCEQ 5-yr.
- Post-Event



# Maintenance

## Computerized Management

- Preventative
- Corrective





# Licensing and Permitting

## Residential

- Docks/Piers/Slips
- Land Management
- Septic Systems

## Commercial Operations

- Marinas
- Contractors
- Watercraft Rentals
- Retail/Restaurants



# Source Water Protection



AWWA Exemplary Source  
Water Protection Award

## Objectives

*To maintain or improve the quality of  
Lake Conroe's water (unimpaired)*

*To provide source water protection  
for the GRP*

## Key Elements

- Watershed Protection Plan
- Stakeholder Involvement
- Public Outreach
- Stormwater Management
- On-Site Sewage Facility Program
- Aquatic Vegetation Management

# Habitat Restoration



Native Plants



Artificial Habitat

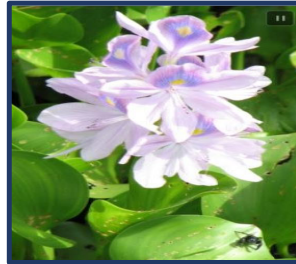
# Invasive Species Management

Plant Identification

Treatment

- Biological
- Herbicide

Public Outreach



**INVASIVE SPECIES IN TEXAS**

**HELLO ZEBRA MUSSELS.  
GOODBYE TEXAS LAKES.**

Zebra mussels are a destructive invasive species that can spread across Texas by hitching a ride on boats and trailers.

**Boats are the primary carrier of zebra mussels.**

Zebra mussels can easily attach to a boat's hard surfaces and boaters travel frequently between water basins. Surveyed boaters planned to visit more than 50 Texas lakes in the next 30 days.

**HELLO GIANT SALVINIA.  
GOODBYE FISHING HOLE.**

**CLEAN YOUR BOAT AND TRAILER.**

TEXAS FORESTS & WILDLIFE



# Thank You Questions?



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[www.facebook.com/SanJacintoRiverAuthority](https://www.facebook.com/SanJacintoRiverAuthority)