



Brazos River Authority

State of the Basin Meeting

March 21, 2019



Opening Remarks & Introductions

***David Collinsworth
General Manager/CEO***

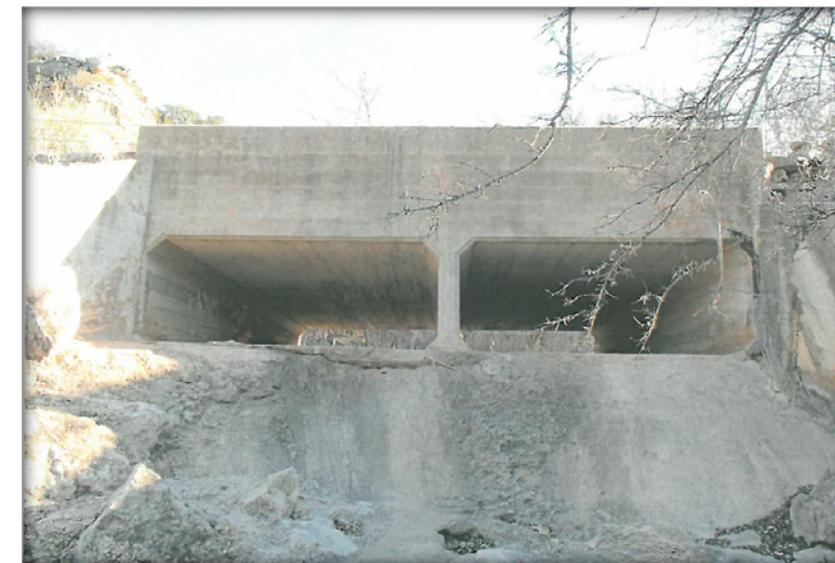
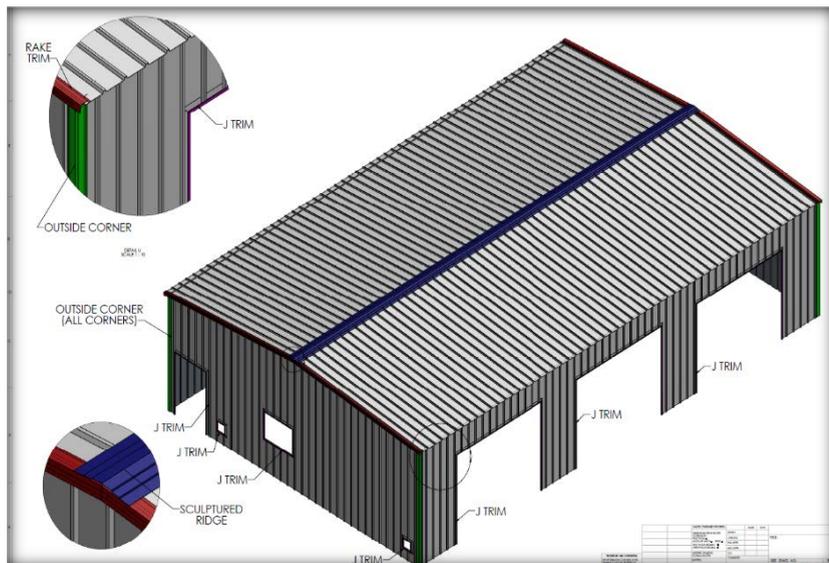


Update on Capital Projects

Chuck Wolf
Technical Services Manager



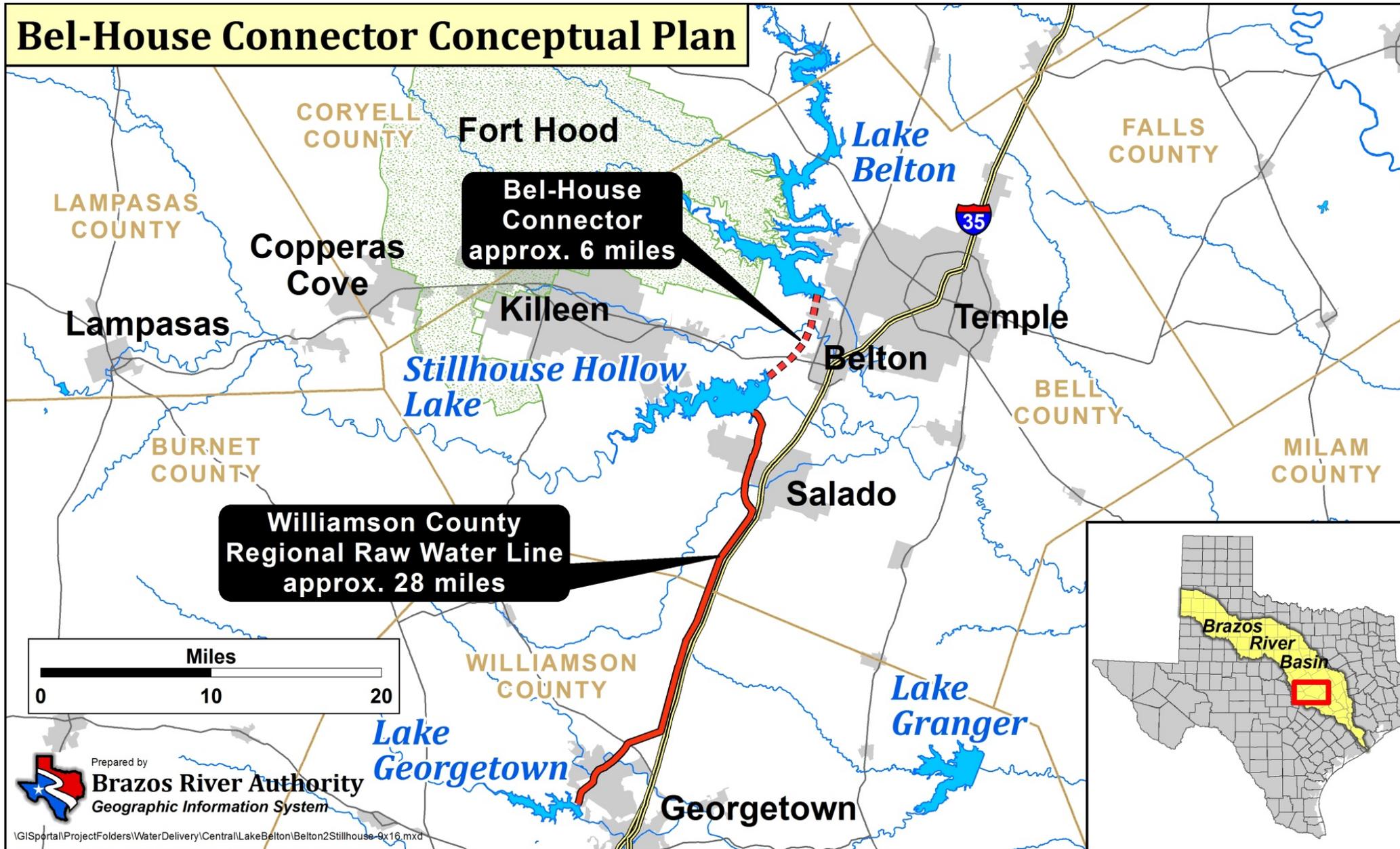
Possum Kingdom Lake Miscellaneous Structural Improvements



On the Horizon – Engineer Selection Complete



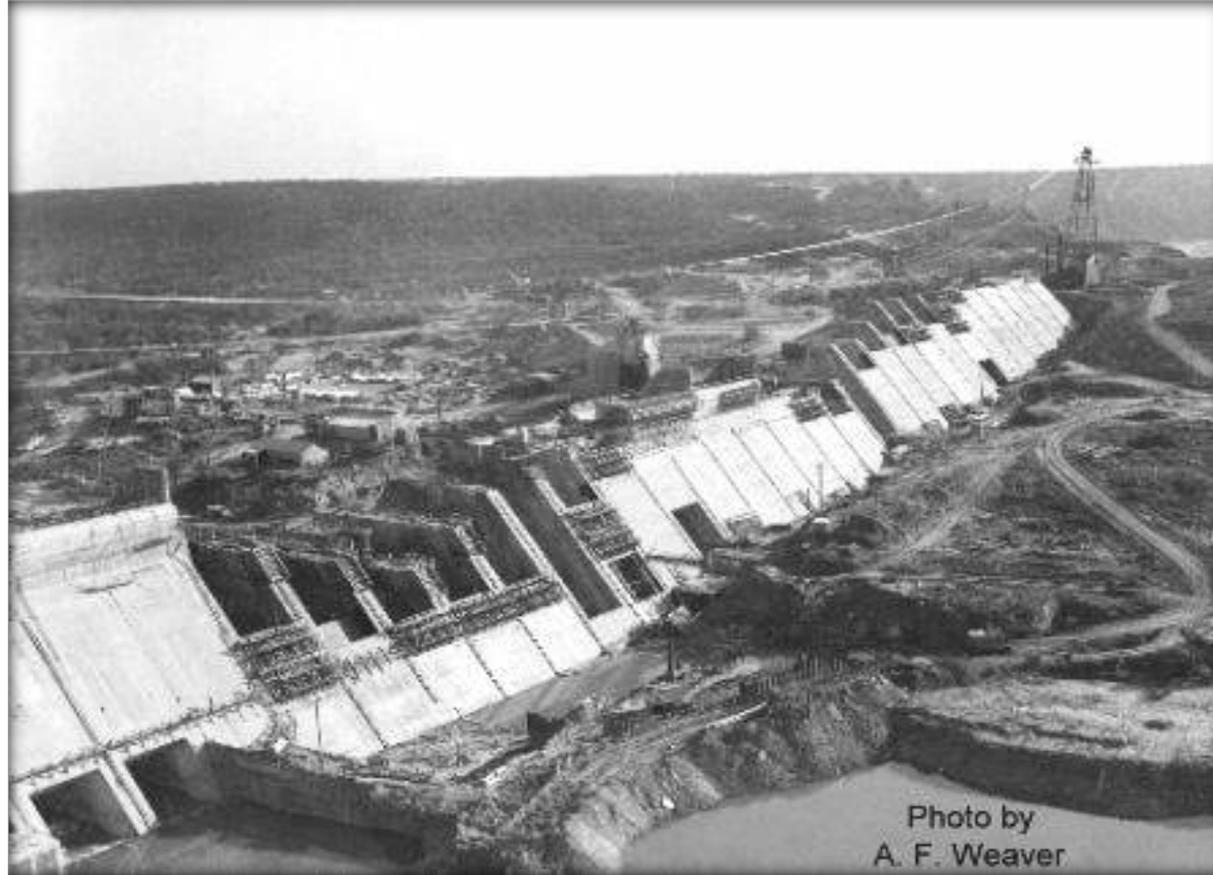
Belton-Stillhouse Pipeline



On the Horizon – Engineer Selection Complete



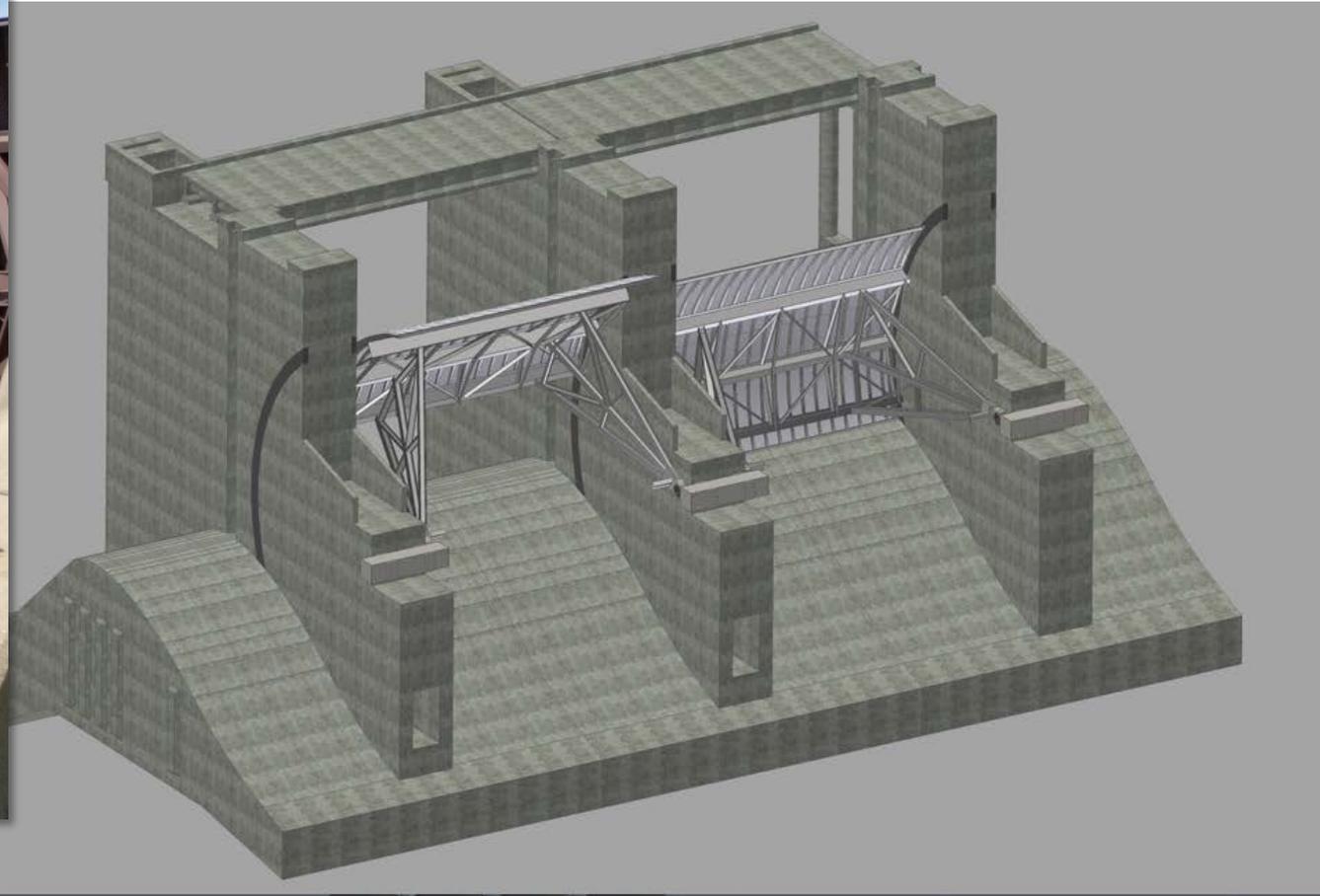
Possum Kingdom Lake Dam CAASLE



Started a One-Year Evaluation in February



Lake Limestone Dam Improvements



Engineering Underway with 30% Design on Gate



Trinity Aquifer Groundwater Wells



Anticipate Well Testing This Month



Possum Kingdom Lake Dam Ring Jet Valve Repairs



Partially Complete – 78” valve operational



Overview of Risk-Based Capital Planning

Chuck Wolf
Technical Services Manager



Risk-Based Capital Management

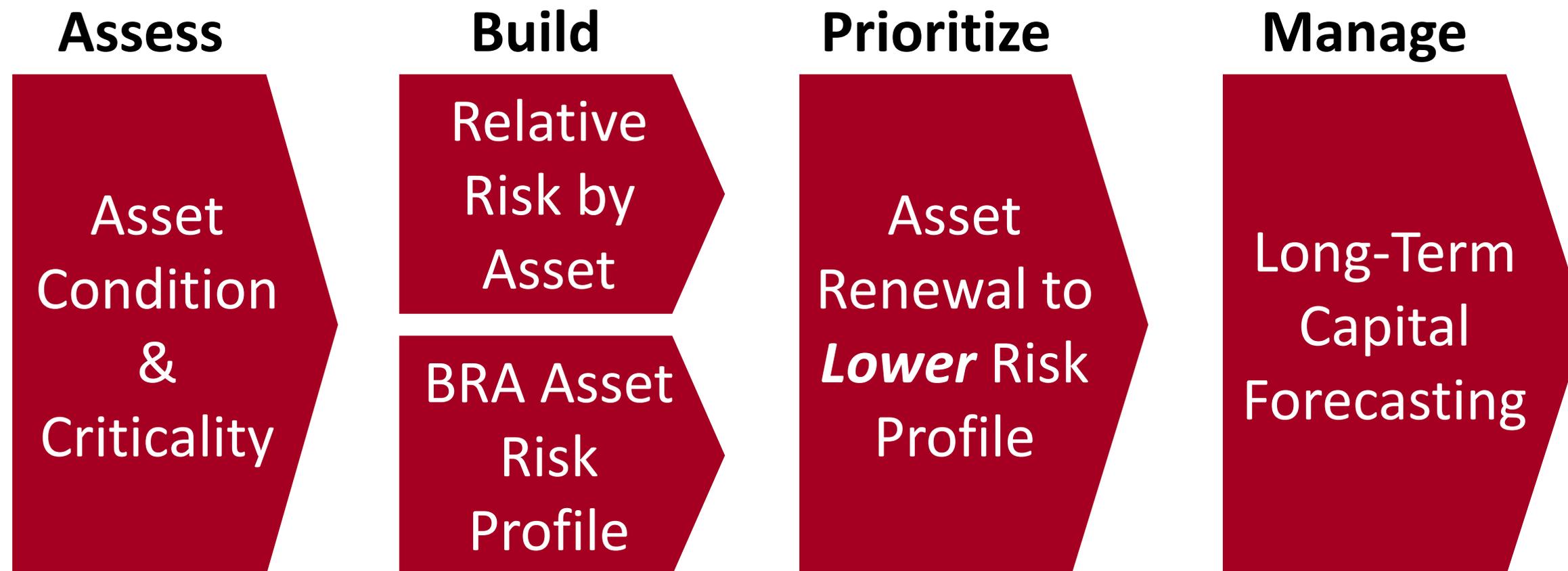
Objectives

- **Improve decision making on asset renewal through improved prioritization of assets across BRA**
- **Improve long-term capital forecasting through improved assessment of renewal needs**



Risk-Based Capital Management

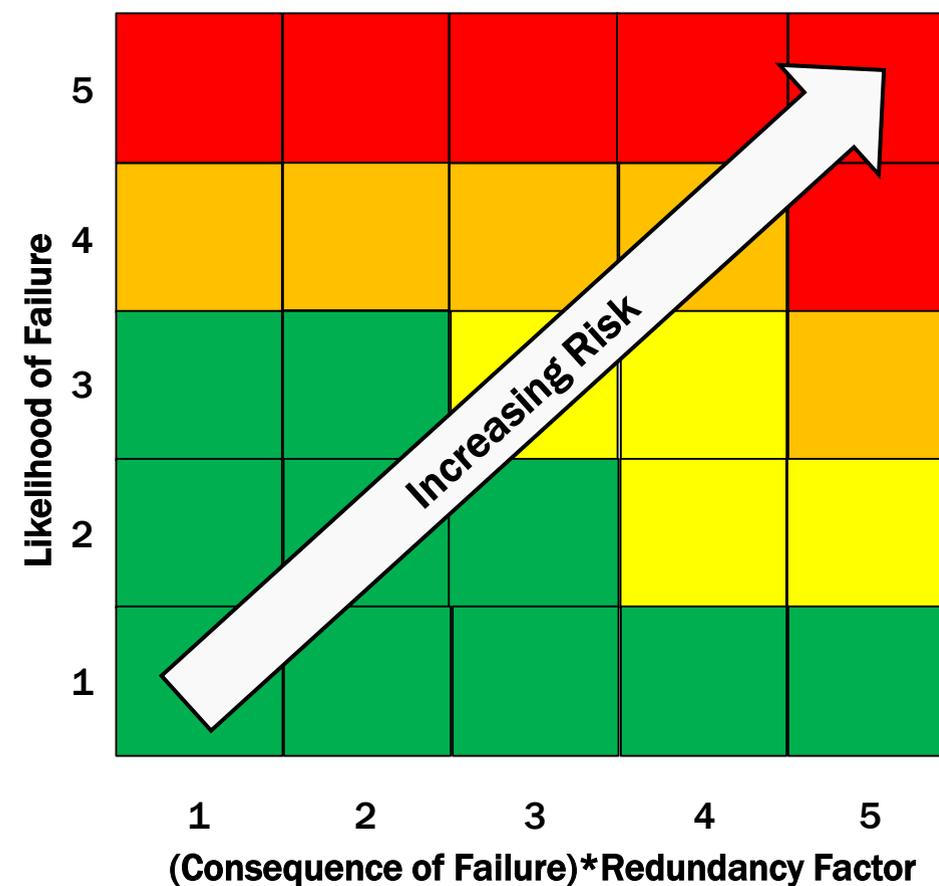
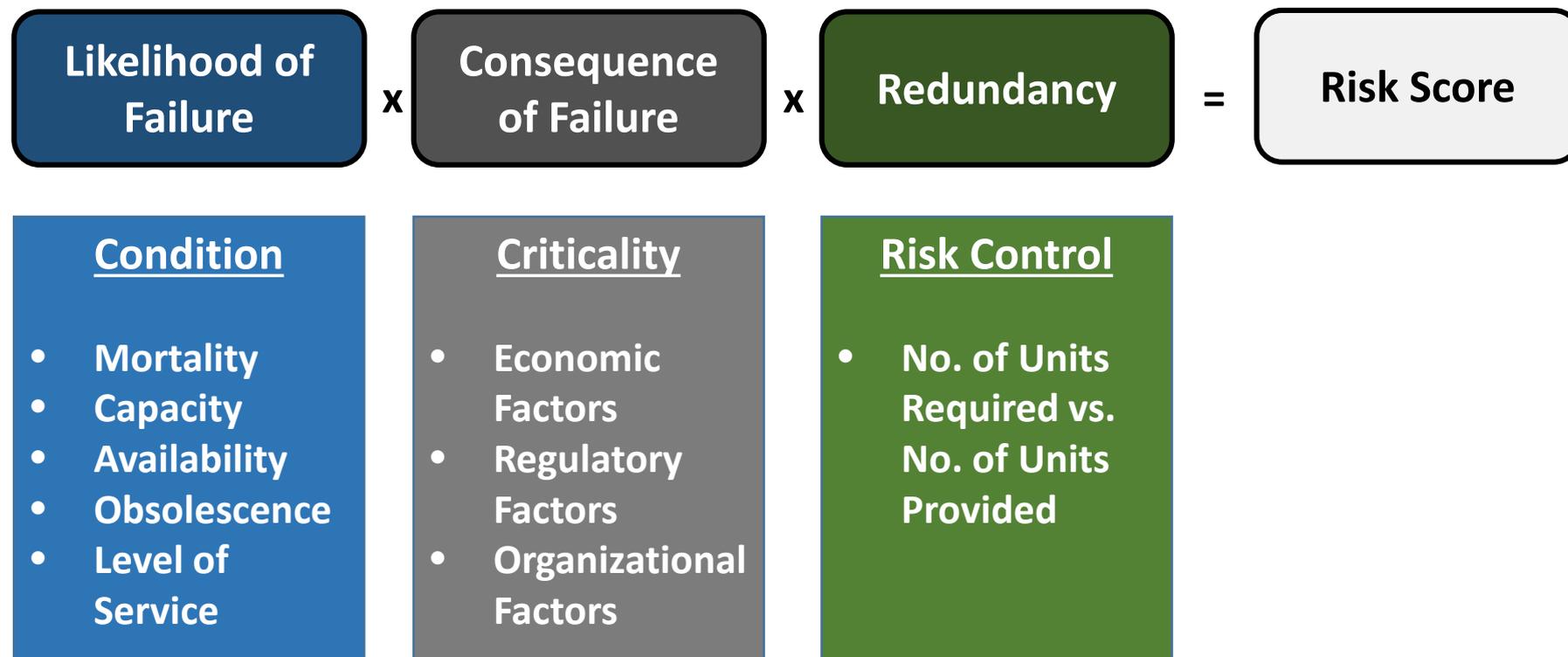
Process, In General





Risk-Based Capital Management

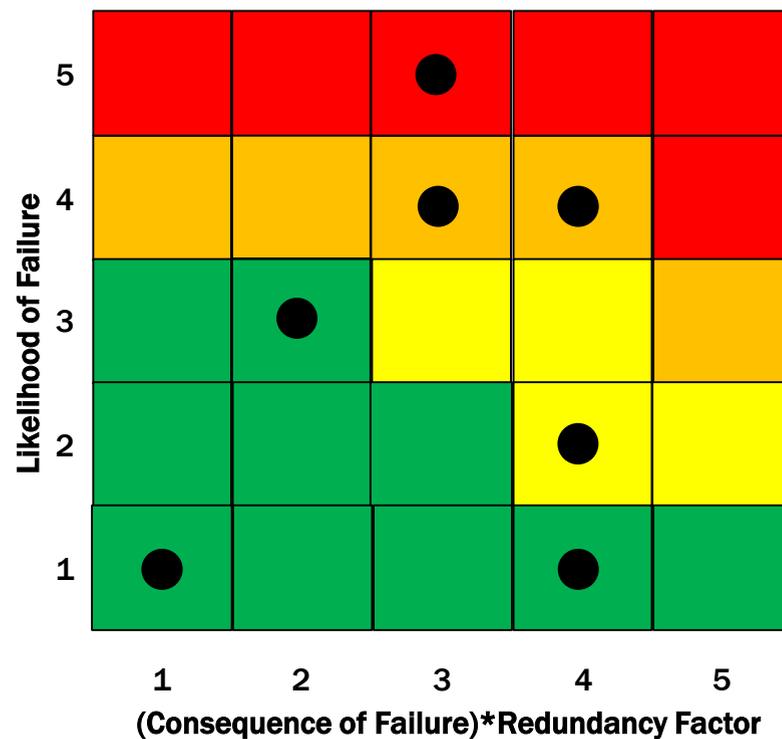
Identifying relative asset risk...



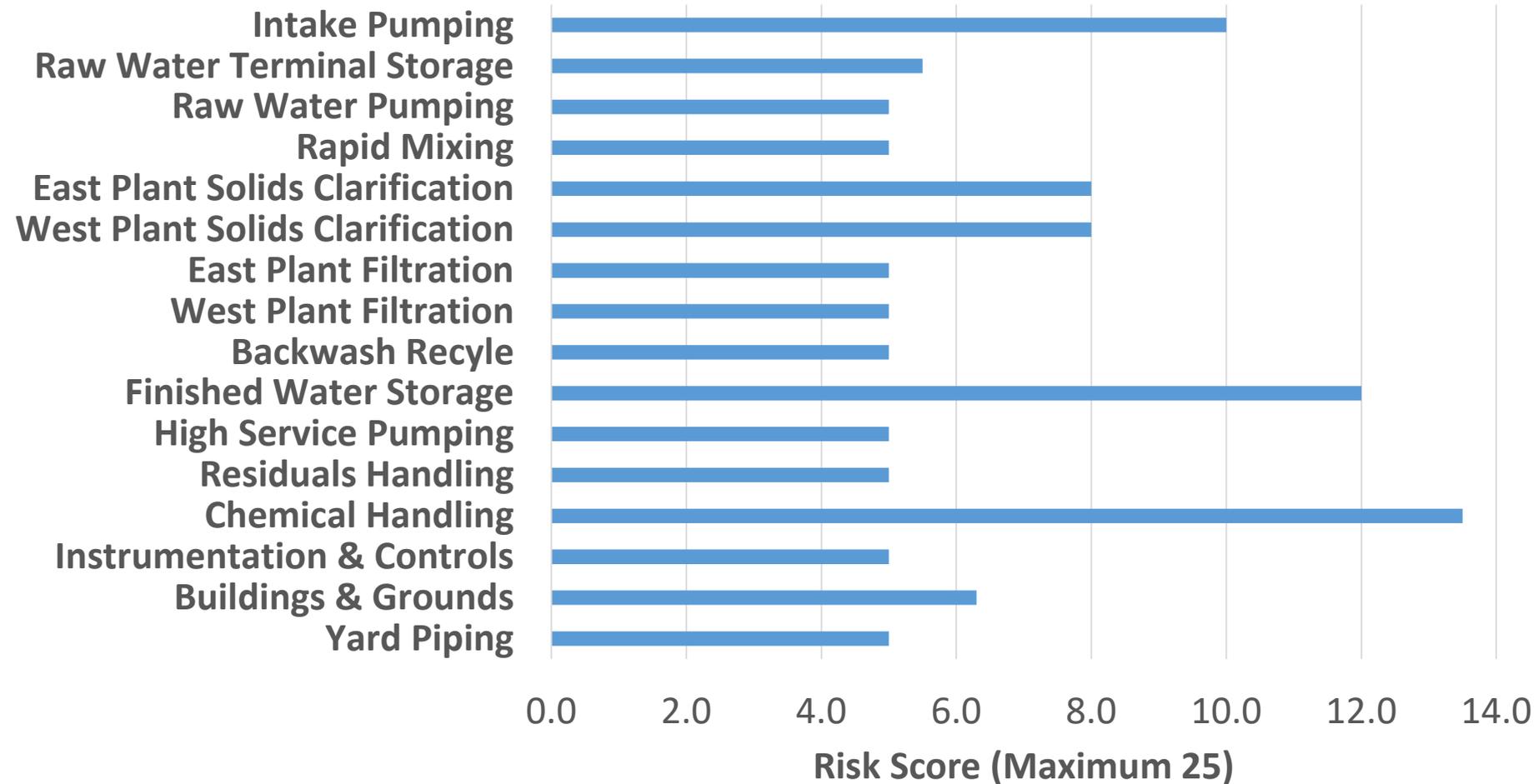


Risk-Based Capital Management

Reviewing Risk Profile...



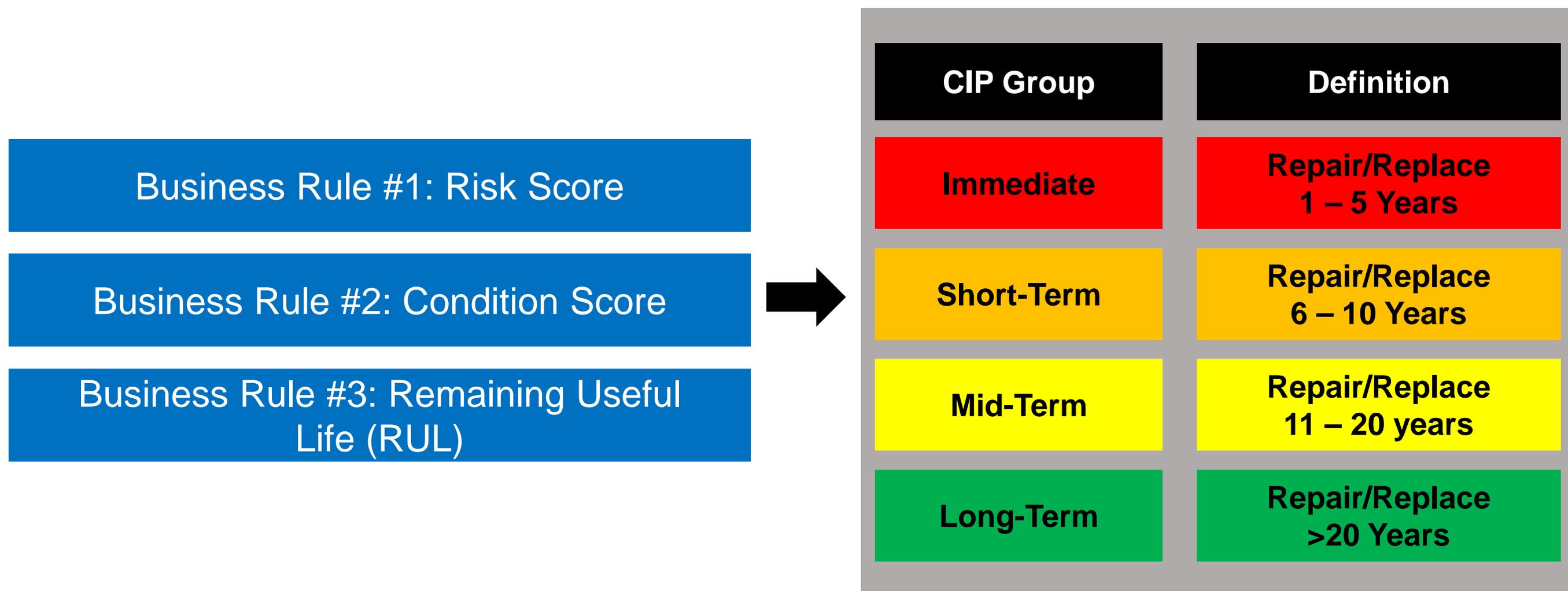
E. Williamson County WTP





Risk-Based Capital Management

Prioritize Assets to Reduce Risk Profile...

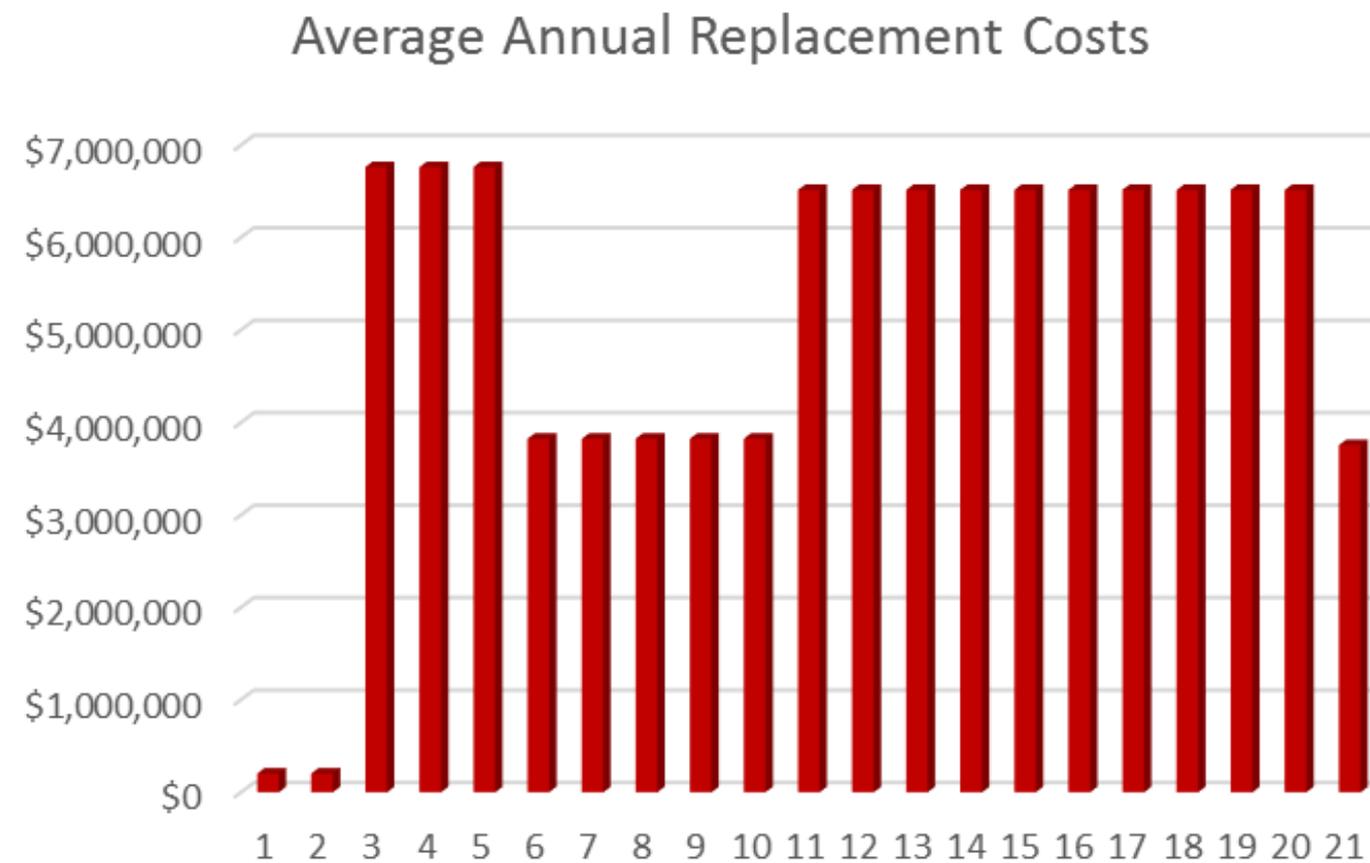




Risk-Based Capital Management

Use Asset Groups to Improve Long-Term Capital Forecasting...

CIP Group	Definition	Number of Assets	Replacement Cost (000s)
Immediate	1 – 5 Years	371	\$20,695
Short-Term	6 – 10 Years	466	\$19,122
Mid-Term	11 – 20 years	620	\$65,156
Long-Term	>20 Years	25	\$3,754





Risk-Based Capital Management

Next Steps

- **FY19 Efforts**
 - **Establish asset hierarchy to assign criticality information to groups of assets**
 - **Map hierarchy to Infor financial database**
 - **Perform gap analysis on asset database**
 - **Initial assignment of criticality data to asset list**



Risk-Based Capital Management

Next Steps

- **FY20 Efforts**
 - **Develop condition assessment data for all assets**
 - **Finalize criticality data for all assets**
 - **Use prioritization to frame FY21 CIP planning decisions**
 - **Develop initial estimates of replacement cost and timing for all assets**



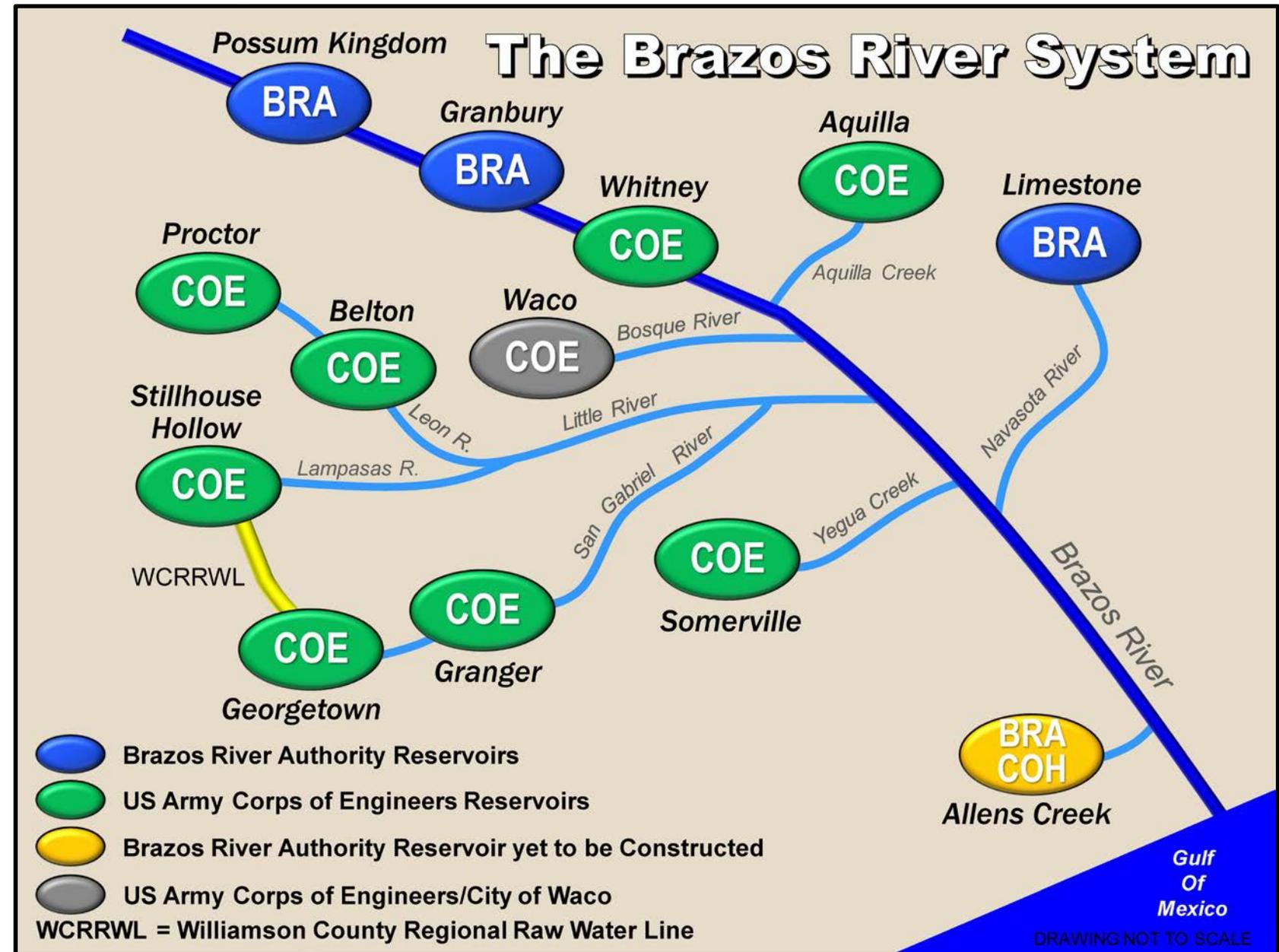
***System Operation Permit
and
Updates to the Drought Contingency Plan***

***Aaron Abel
Water Services Manager***



Status Update on System Operation Permit and Water Management Plan

- Project Initiated – April, 2003
- Permit Application – June, 2004
- Priority Date – October 15, 2004
- SOAH Hearings on the Merits
 - May/June, 2011/February, 2015
- Proposals for Decision (PFD)
 - October, 2011/July 2015/June 2016
- Final Order Issued – September 16, 2016
- Permit Issued – November 30, 2016
- Drought Study required by Permit
 - Completed August 2017
- Updated/conformed WMP
 - Approved April 2, 2018





Status Update on System Operation Permit and Water Management Plan

- **Basic Elements of Permit**
 - Up to 334,000 Acre-Feet (Non-Firm)
 - Firm Supply Dependent on Water Budget Tool modeling
 - Subject to Senior Water Rights and Environmental Flow Requirements
- **Currently operating under the Updated WMP and Accounting Plan**
- **Determination of New Long-term Contracts Under the Permit**
 - Presentation to the BRA BOD on April 29th
 - New contracts to be executed for FY2020



Drought Contingency Plan Update



Brazos River
Authority

Drought Contingency Plan

**5-yr updates required by Texas
Admin. Code, Title 30, Chapter 288**

Due May 1, 2019

Plan to be submitted to TCEQ

**Coordinated through the Regional
Water Planning Process**



Drought Contingency Plan Update Process

- **Public Comment Period – March 22 to April 22**
 - Draft posted on BRA Website (March 22nd)
<https://www.brazos.org/DCP>
 - Letter notification of the proposed update
 - Posted within the Secretary of State's Office – Texas Register
- **Address Comments**
- **Present to BOD for approval – April 29**
- **Submit Final Plan by May 1, 2019**



Drought Contingency Plan – Summary of Proposed Changes

- **Establish new trigger levels**
- **Incorporate the East Williamson County Regional Water System DCP**
- **Referenced seasonal forecasts from the TWDB as a drought monitoring tool**
- **Clarification of pro-rata curtailment language**



Trigger Levels

- **Maintaining 4 trigger levels in the updated Plan:**
 - **Stage 1 Drought Watch**
 - Considers Palmer Hydrological Drought Index & lake level
 - **Stage 2 Drought Warning**
 - Halfway between Stage 1 and Stage 3 lake triggers
 - **Stage 3 Drought Emergency**
 - Greater of 40% capacity or one year supply remaining
 - **Stage 4 Drought Curtailment**
 - Greater of 20% capacity or six month's supply remaining



Trigger Level Comparison

Reservoir/Reservoir System	Drought Contingency Plan - Drought Trigger Comparison							
	Stage 1		Stage 2		Stage 3		Stage 4	
	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current
Lake Aquilla	533.6	533.6	530.5	530.1	526.8	525.8	523.7	523.1
Lake Belton	588.1	587.2	578.7	577.9	566.3	565.8	550.2	549.4
Lake Granger	501.8	501.8	498.4	498.3	494.1	493.7	490.0	489.7
Lake Limestone	357.6	357.5	354.8	354.7	351.5	351.4	346.9	346.2
Lake Proctor	1,158.2	1,158.2	1,156.1	1,155.7	1,153.3	1,152.3	1,150.1	1,149.8
Lake Somerville	234.9	234.8	231.8	231.6	228.2	227.8	223.9	223.9
Lake Possum Kingdom, Granbury, Whitney	564,737	561,290	427,173	420,968	289,609	280,645	144,804	140,323
Lake Georgetown, Stillhouse	222,398	220,503	164,789	162,752	107,180	105,001	53,590	52,501
Authority System	1,524,177	1,514,536	1,152,423	1,140,639	780,668	766,741	419,031	413,416



Incorporation of the East Williamson County Regional Water System

- **Incorporated criteria specific to the EWCRWS for initiation and termination of Drought Stages**
- **EWCRWS triggers based on consumption and production capacity**
- **Going forward BRA will only maintain one DCP**



TWDB Seasonal Rainfall Forecast

- **BRA worked with the TWDB on a grant funded project to develop forecasted May-June-July rainfall**
- **Cited in DCP as an information source only**
- **Issued every two weeks from January through end – April (last issued on March 18th)**

<https://waterdatafortexas.org/drought/rainfall-forecast>



Endangered Mussels and CCAA Progress

***Tiffany Morgan
Environmental & Compliance Manager***



Freshwater Mussels Under Consideration for Federal Protection in Brazos River Basin

Texas Fawnsfoot



Smooth Pimpleback



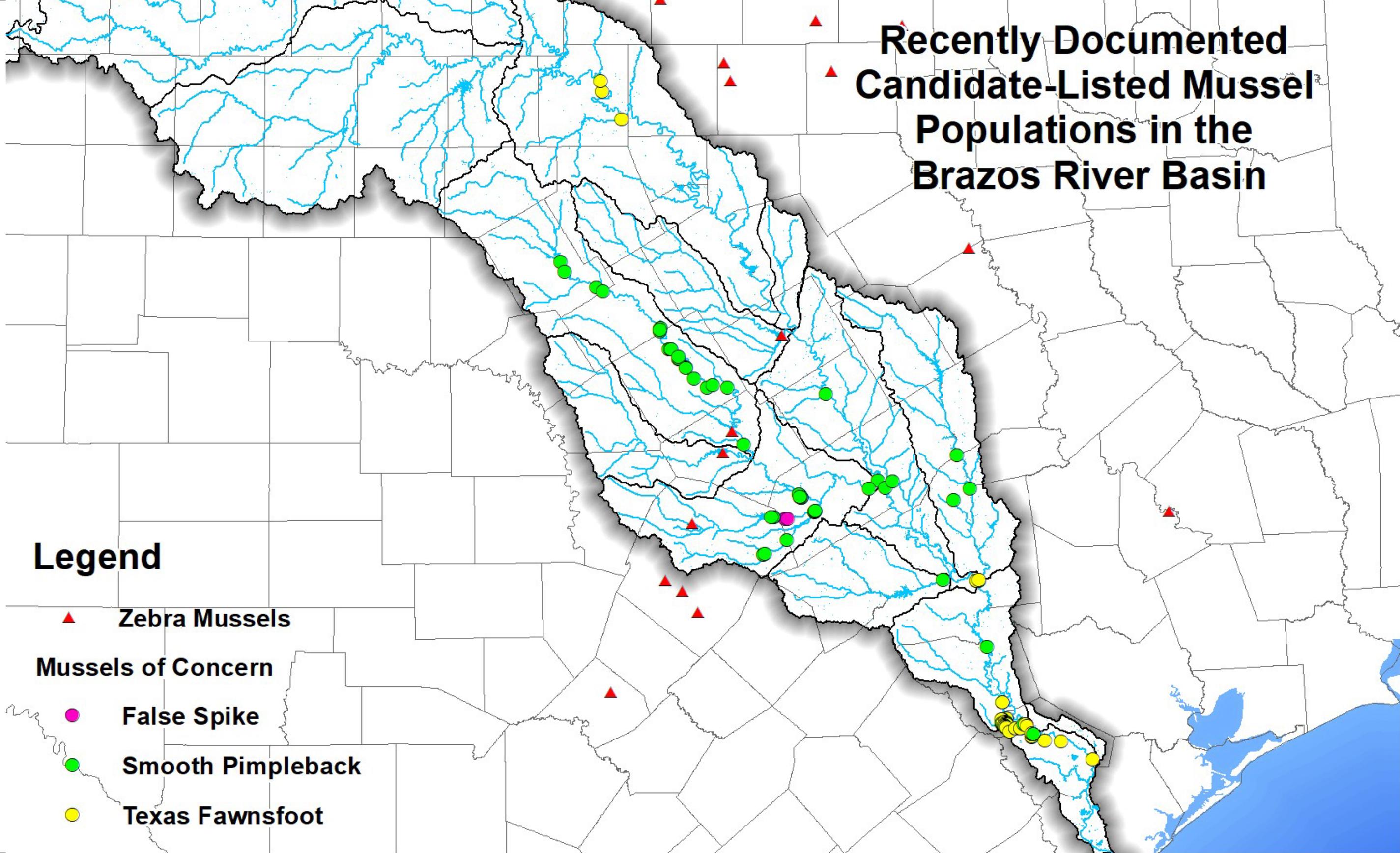
False Spike



Recently Documented Candidate-Listed Mussel Populations in the Brazos River Basin

Legend

- ▲ Zebra Mussels
- Mussels of Concern
 - False Spike
 - Smooth Pimpleback
 - Texas Fawnsfoot





Listing Decision on Texas Fawnsfoot and False Spike

- **Delayed until Fall**

Listing Decision on Smooth Pimpleback

- **Anticipated that it will be removed from consideration for Endangered Species Act protection**



Candidate Conservation Agreement With Assurance (CCAA)

- **Voluntary agreement with the U.S. Fish and Wildlife Service (USFWS)**
- **Provides net conservation benefit to Covered Species**
- **Allow for continued water supply development to meet the growing demands of an increasing population within the Brazos River basin**
- **Incidental take protection**
- **Regulatory assurance for no additional conservation measures if listed**



Risk of No Agreement

- **The Endangered Species Act (ESA) prohibits activities that affect listed species and their habitats**
 - **By covering our operations under a CCAA agreement with USFWS we minimize future impacts to BRA water supply operations**
 - **USFWS has disrupted state water rights systems in other states**
- **Permit required for activities that may “take” threatened or endangered species**
 - **Minimize exposure to ESA liabilities during conditions beyond our control**



CCAA Status Update

Task	Percent Completion
Permit Type Determination	100%
Internal Meetings, Coordination, Reporting	75%
Consultation with USFWS	85%
Data Compilation and Analysis	100%
Future Drought Scenario and Environmental Flows Analysis	100%
Habitat Quantification Tool	5%
Field Work to Fill Data Gaps	33%
Permit Development	95%
NEPA Support to USFWS	5%
Operations/Business Plan	10%
Sampling Plan/Standard Operating Procedures	5%
Scientific Collection Permits	0%
Staff Training	0%

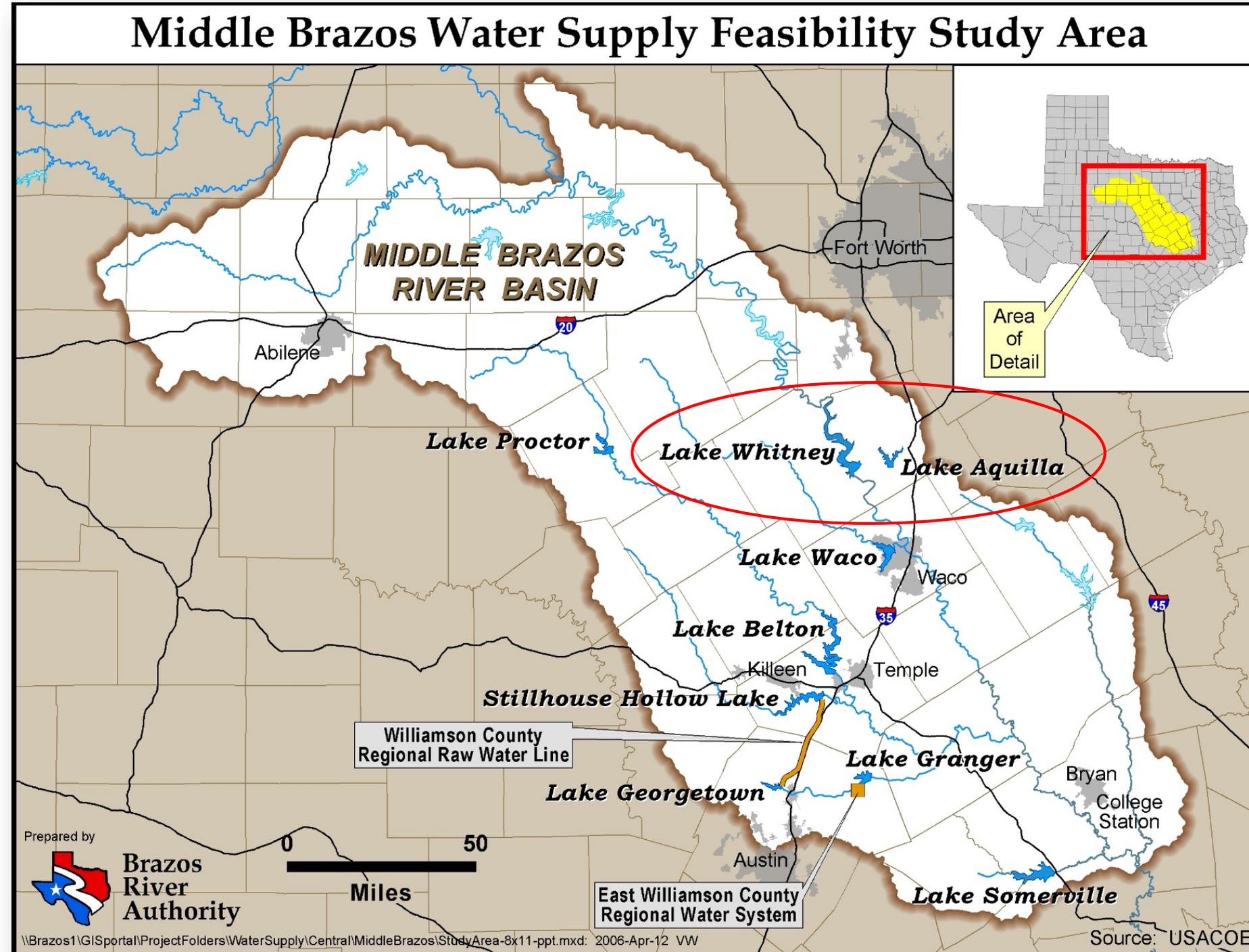


***Update on Reallocation Studies,
Allens Creek Reservoir, and
Lower Brazos Flood Protection
Planning Study***

Brad Brunett, CB-LB Manager

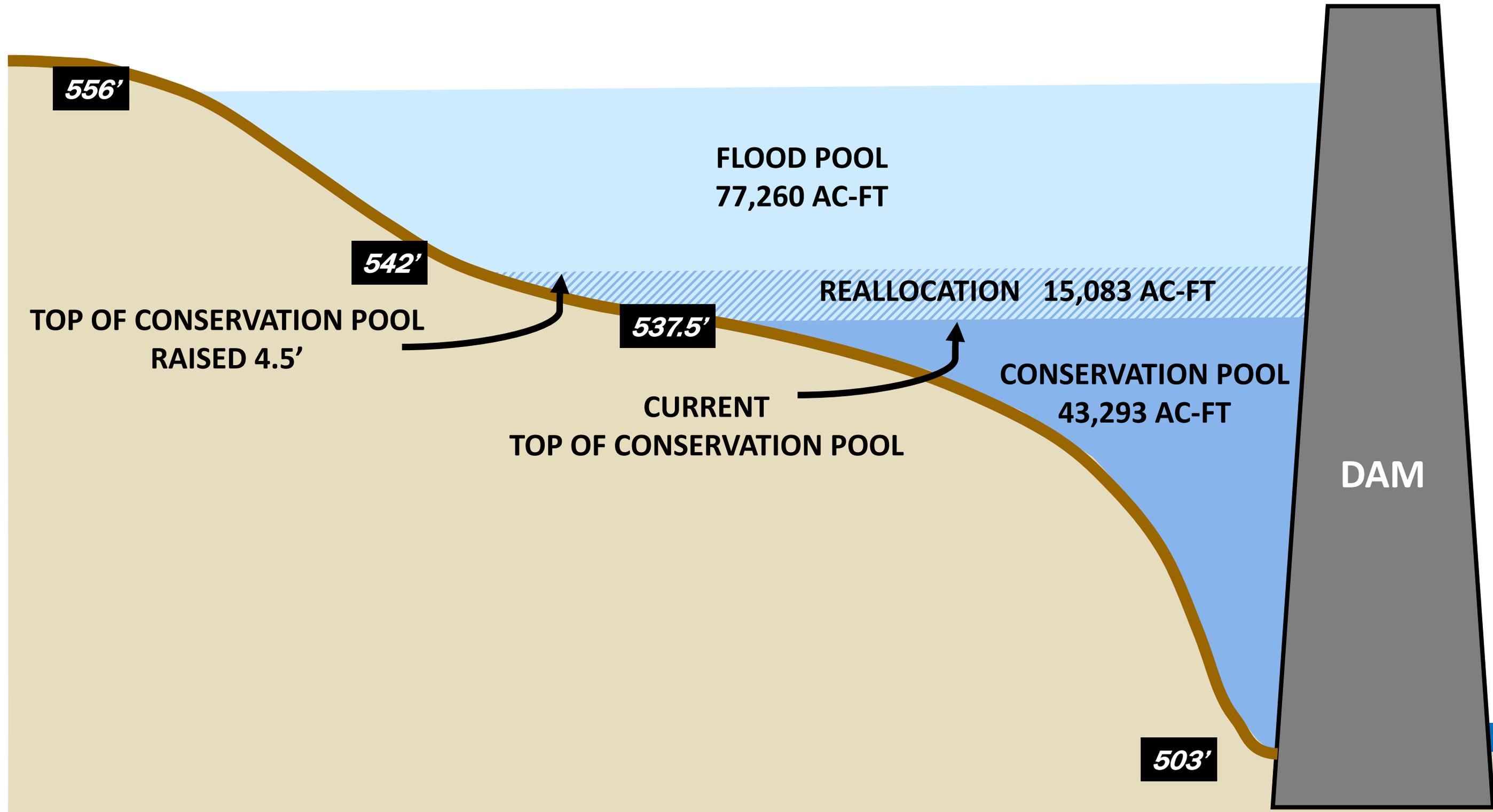


Aquila & Whitney Reallocation Studies



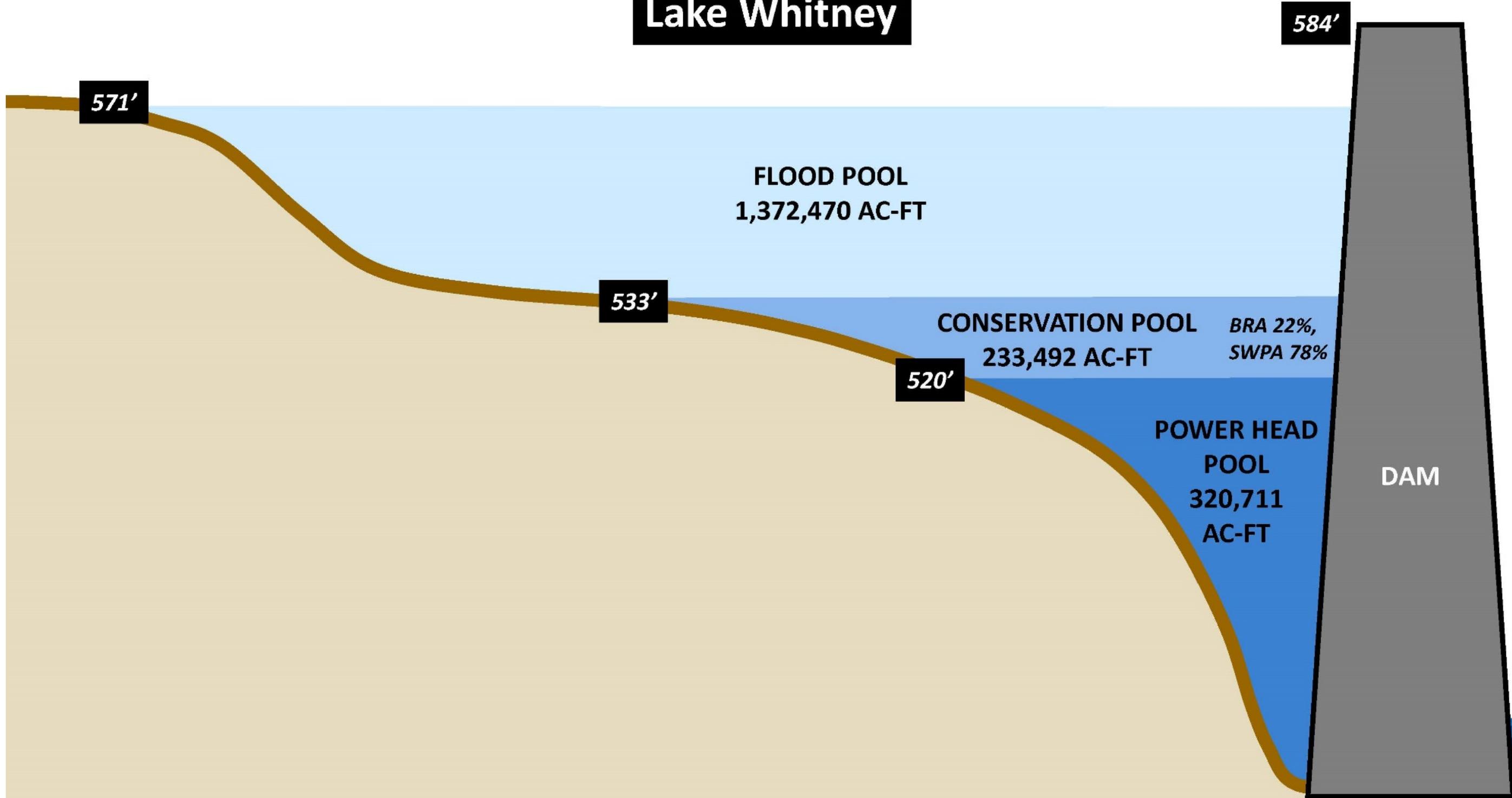


Lake Aquilla



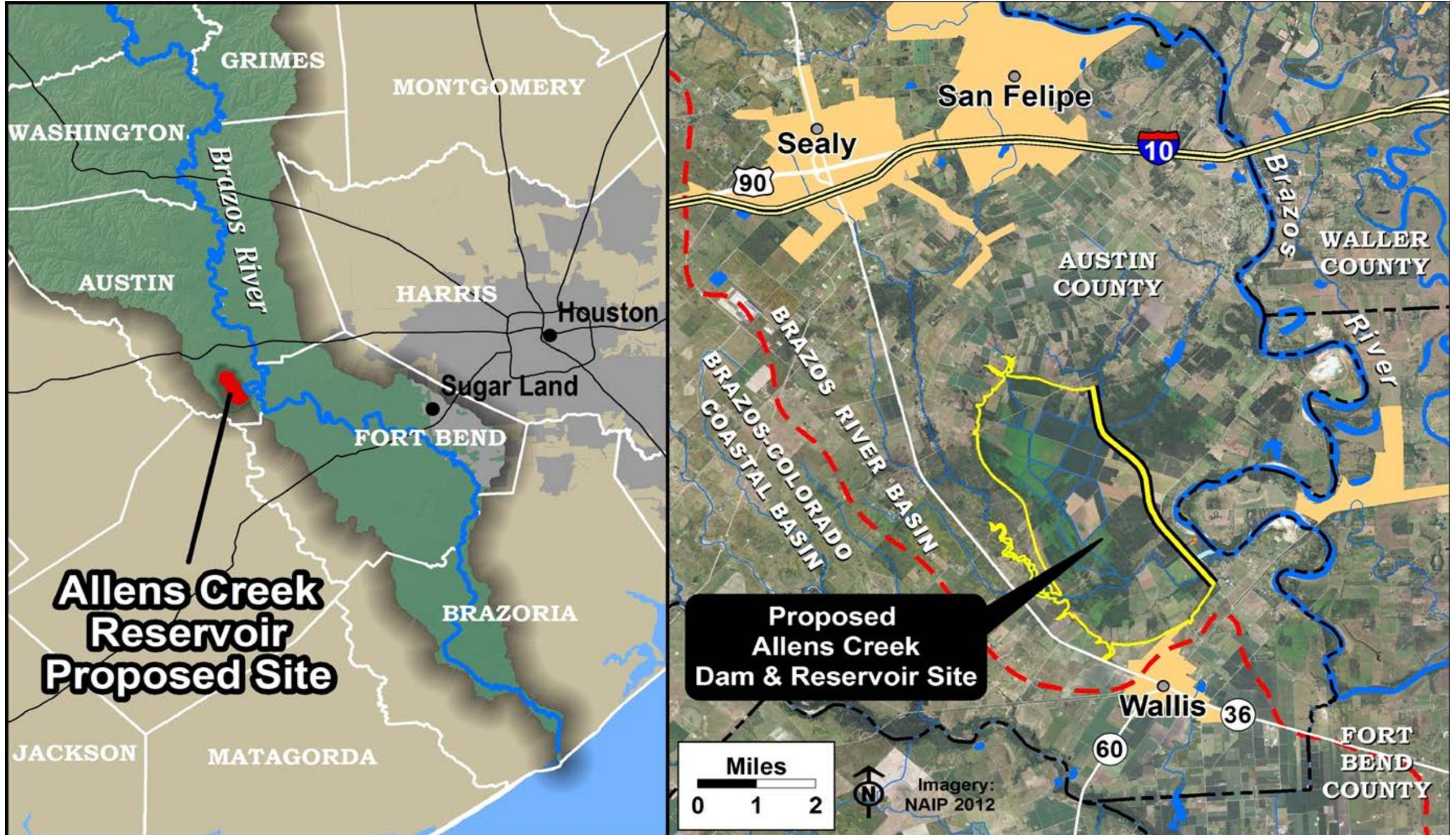


Lake Whitney





Allens Creek Reservoir





Lower Brazos Flood Protection Planning Study

- **Why?**

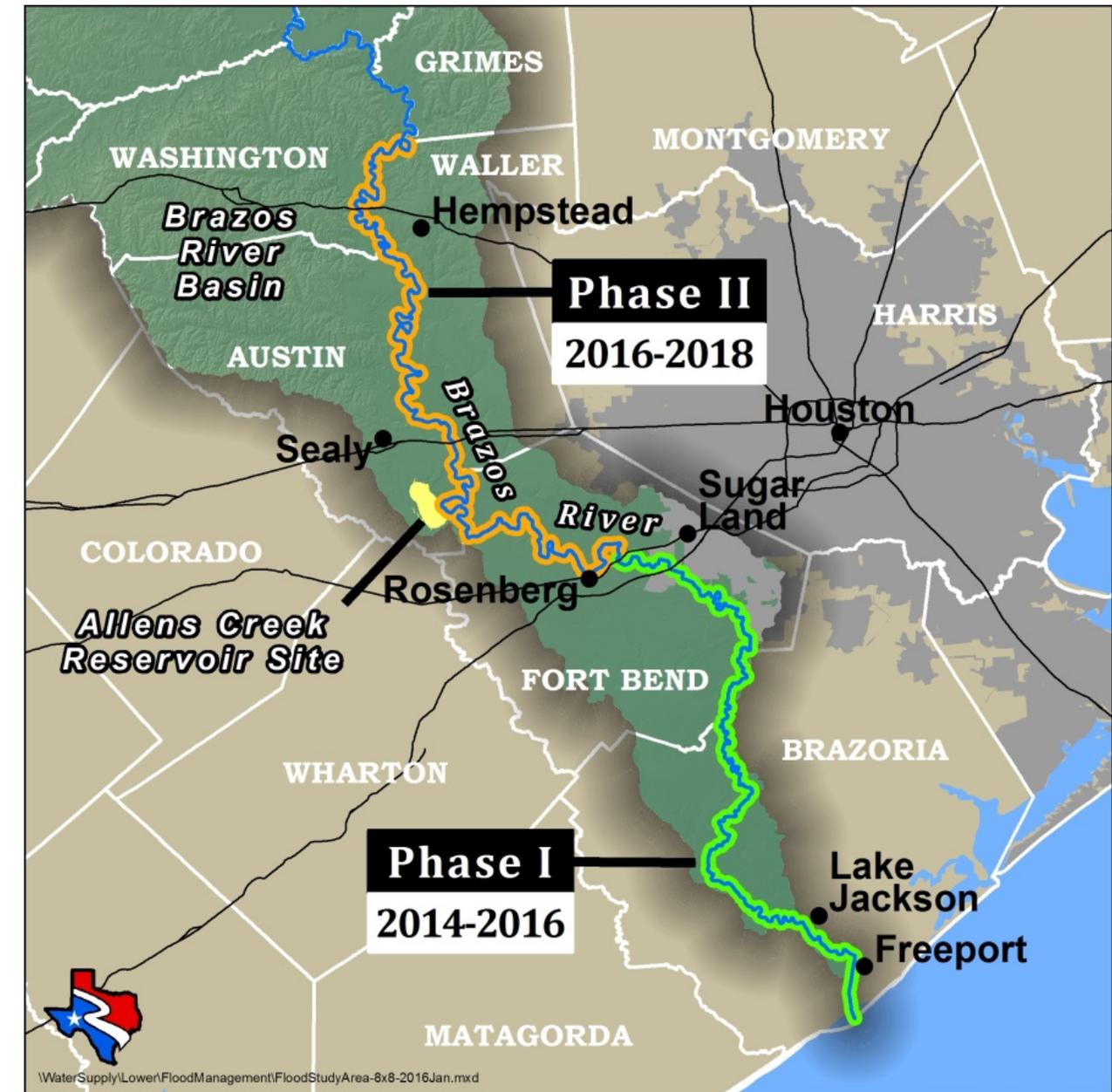
- High growth area with outdated and inconsistent Brazos River floodplain information

- **Who?**

- Texas Water Development Board, lower basin entities, BRA, & Half Associates, Inc.

- **What?**

- New models
- New estimates of how much water, how fast, and how high
- New maps
- Alternatives to reduce/mitigate future damages





Final Remarks & Questions



Brazos River Authority



Brazos

— ★ —
RIVER AUTHORITY