



# ***Water Resource Modeling Contract for Lake Whitney Reallocation***

***Presented by***

***Aaron Abel***

***Water Services Manager &***

***Destiny Rauschhuber***

***Staff Counsel***

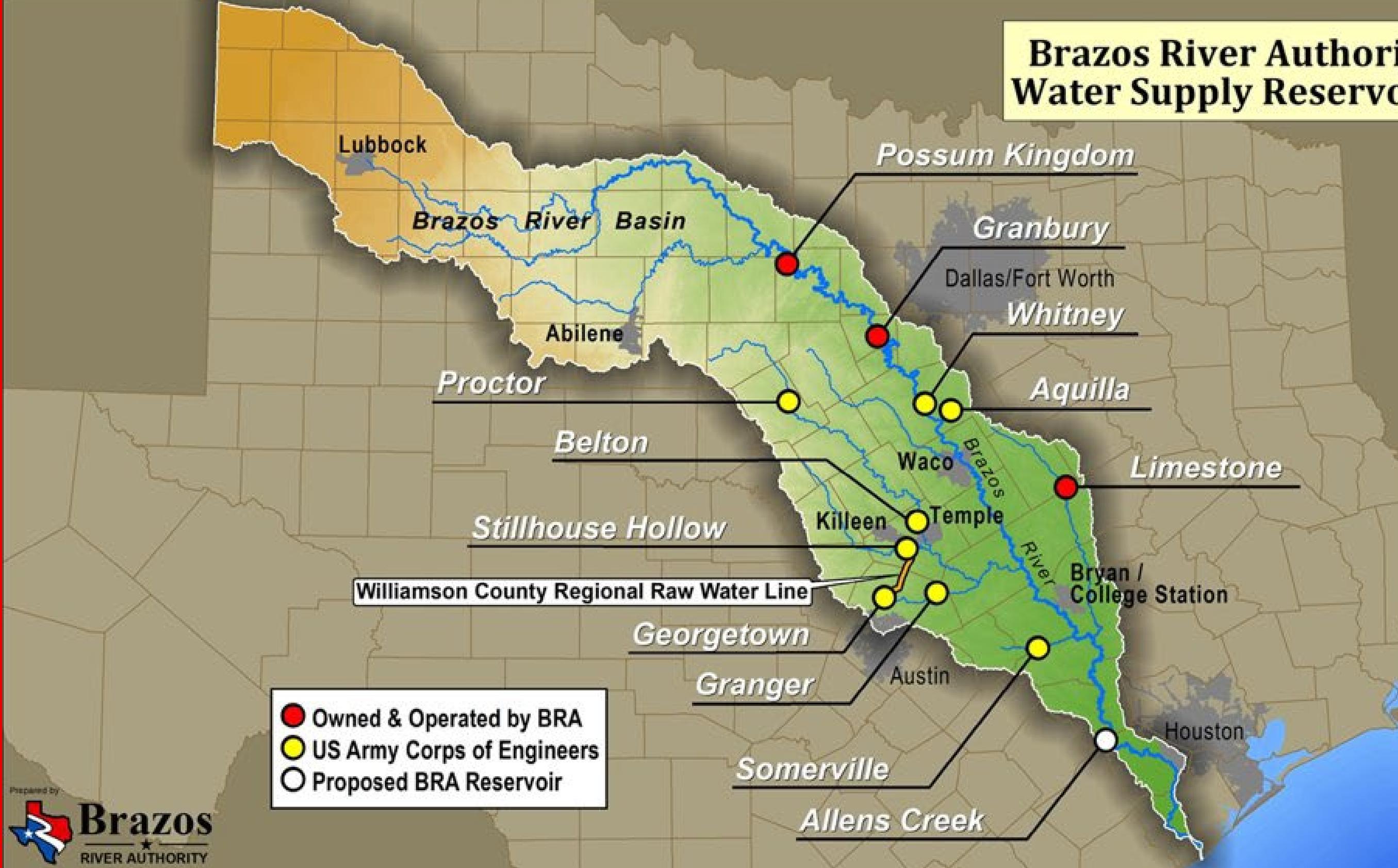


# ***Project Background & Overview***

- In April 2023, the USACE began a Reallocation Feasibility Study, with BRA as the non-federal sponsor, to evaluate whether a reallocation of Whitney Lake is the most efficient and effective solution to addressing water supply needs in the Brazos Basin.**
- The overall goal of the reallocation is to secure additional water supply storage for the BRA as Whitney Lake is the last substantial supply of readily available and relatively inexpensive water in the Basin.**



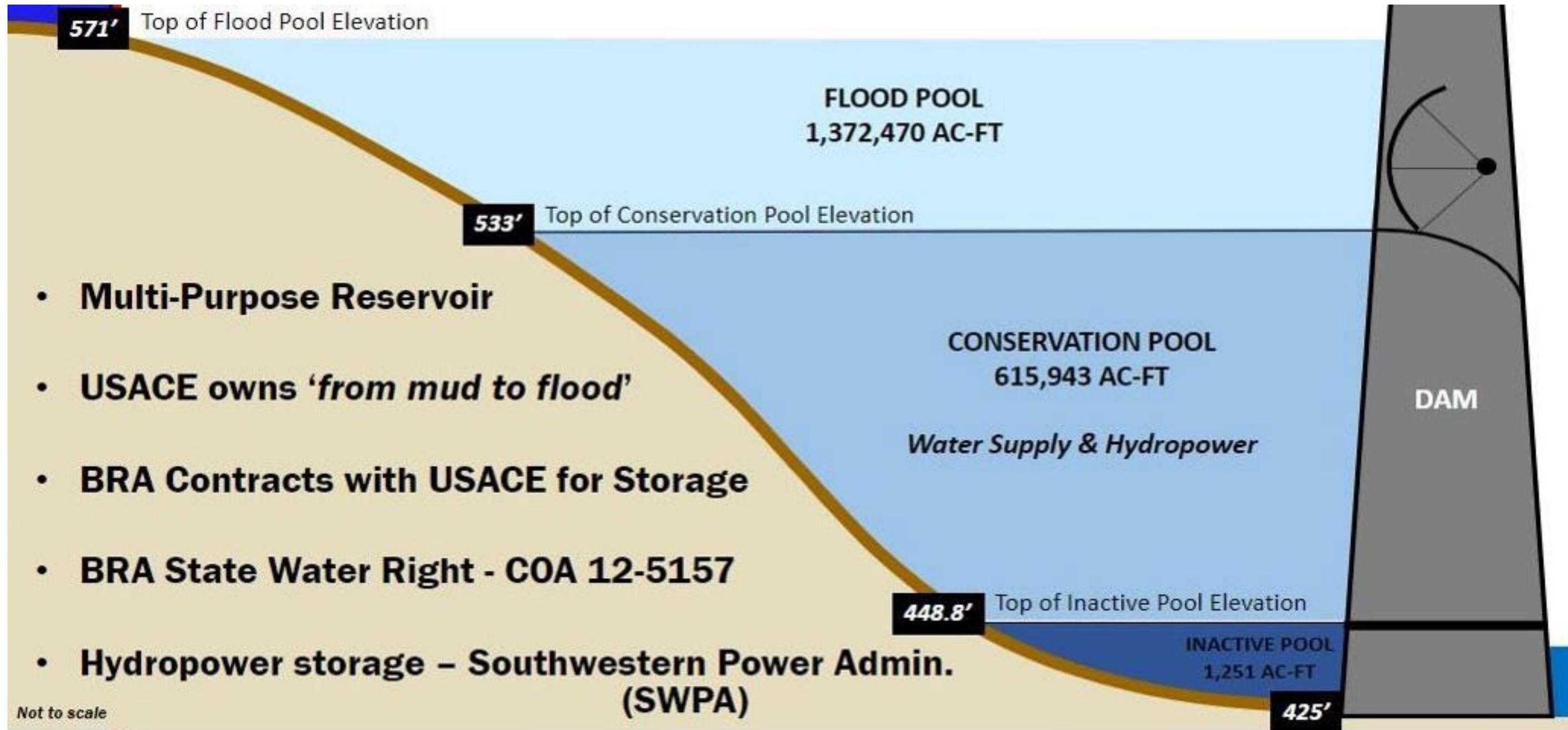
# Brazos River Authority Water Supply Reservoirs



- Owned & Operated by BRA
- US Army Corps of Engineers
- Proposed BRA Reservoir

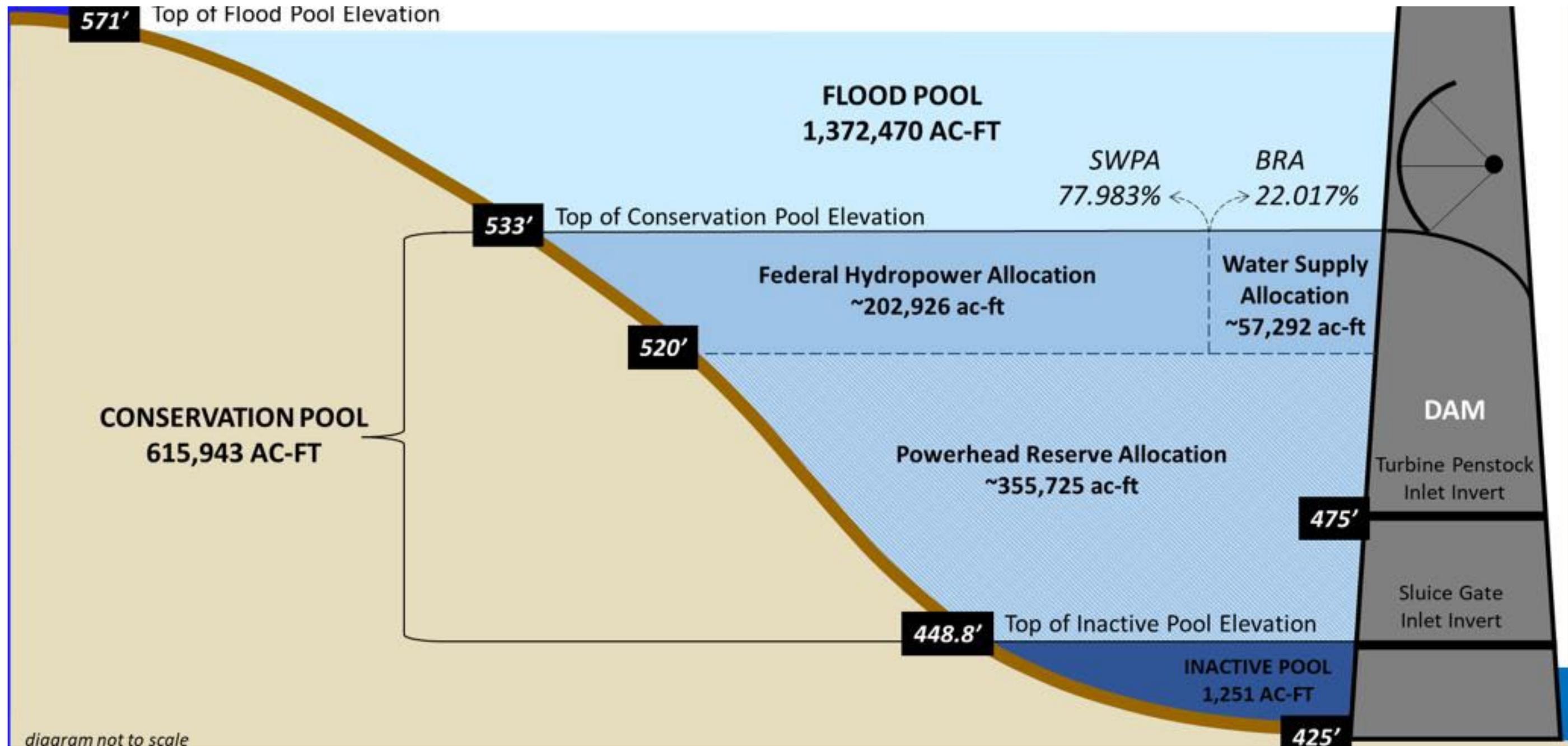


# Current Allocation





# Current Allocation





# *Reallocation Study Components*

- Throughout the course of this Study, the USACE has been developing a system wide model, utilizing a modeling system known as Riverware, to determine what reallocation scenario(s) may be feasible.
- Riverware is a complex and proprietary system that considers both water supply and hydropower operations concurrently.
- In addition, the model evaluates many other factors including economic factors, dam safety, environmental concerns, and cultural considerations when determining if a reallocation scenario is feasible.



# ***Model Functions***

- **Once the USACE is satisfied with the model outputs, the USACE will recommend a reallocation scenario.**
- **Any change to the current allocation of Whitney Lake will be met with opposition from the hydropower marketing agency.**
- **The preciseness of the Riverware model will ultimately determine:**
  1. **Whether a Whitney reallocation is achieved;**
  2. **How much volume of water is reallocated to water supply (BRA); and,**
  3. **The cost of compensating hydropower for any impacts caused by a reallocation to water supply.**



# ***Request for Proposals***

- **After a public solicitation process, BRA selected Hazen and Sawyer for water resource modeling support.**
- **Hazen and Sawyer has worked on five (5) other major USACE reallocations all of which included assessing impacts to hydropower and yield impacts.**
  - **Additionally, all projects include the use of highly complex modeling simulators include Riverware, OASIS, and HEC-RESSIM.**
  - **All previously worked reallocation projects included Hazen and Sawyer providing litigation support in relation to changes in hydropower operations.**



# ***Project Necessity***

- **Due to the highly sensitive nature of the USACE's modeling system as well as the need to obtain a precise calculation, BRA determined that a secondary modeling group was necessary to:**
  - 1. Verify the USACE's model contains no errors.**
  - 2. Verify that all calculations related to impacts to hydropower operations are accurate as to ensure the cost calculations are accurate.**
  - 3. Verify that the chosen reallocation scenario is the most effective and efficient for meeting future water supply demands.**



**“WHEREAS in conjunction with the United States Army Corps of Engineer’s (“USACE”) Reallocation Feasibility Study of Whitney Lake, the Brazos River Authority requires hydrological modeling services to support the USACE's modeling efforts and reallocation scenario(s);**

**WHEREAS after a public solicitation process, the Brazos River Authority selected Hazen and Sawyer for purposes of contract and scope of work negotiations;**

**WHEREAS the Brazos River Authority has negotiated a contract with Hazen and Sawyer for such water resources modeling services.**

**NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Brazos River Authority hereby authorizes the General Manager/CEO to negotiate and execute a contract for the water resources modeling services required in connection with the Whitney Reallocation Feasibility Study as determined necessary by the General Manager/CEO for an amount not to exceed two hundred and eighty thousand dollars (\$280,000).”**



Brazos River Authority



**Brazos**

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**RIVER AUTHORITY**