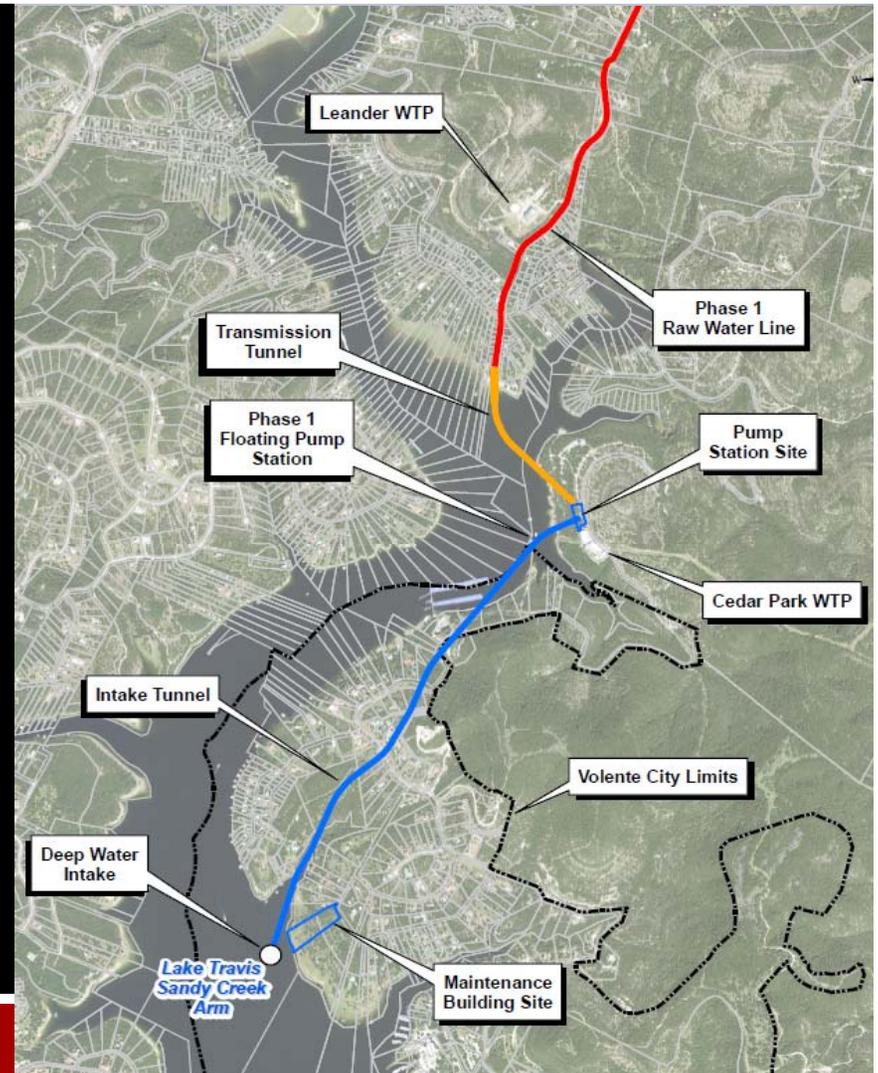


# Village of Volente Community Meeting

Volente VFD Fire Hall  
June 10, 2017



## Phase 2 Deep Water Intake Project Update

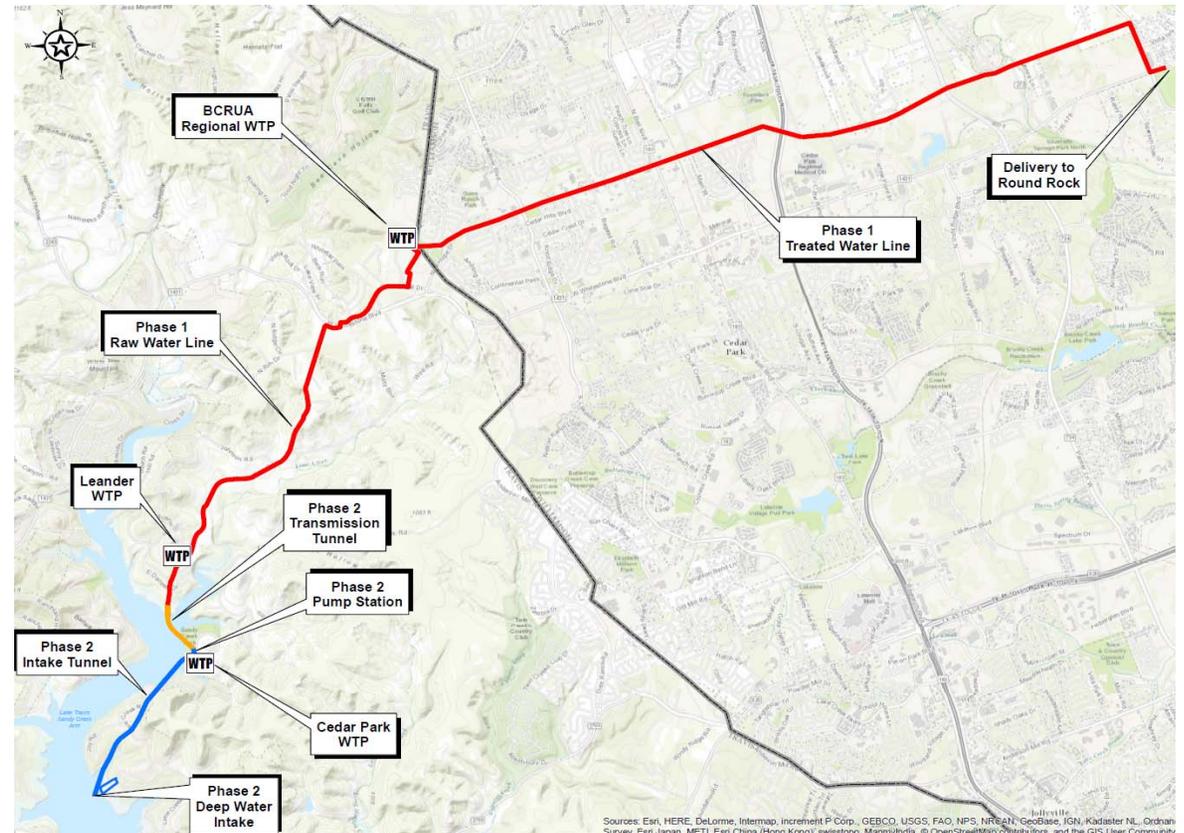


# Meeting Objectives and Overview

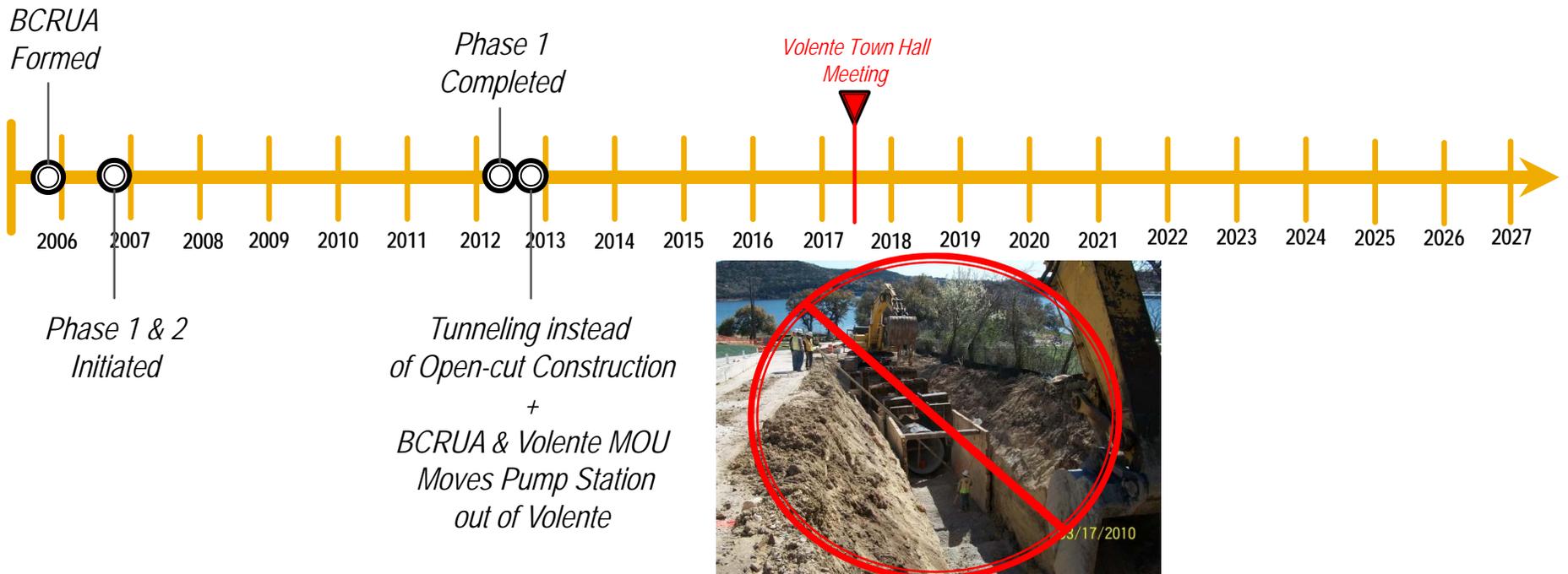
- Describe the BCRUA Regional Water System
- Review the project history and milestones
- Present the Phase 2 deep water intake project layout and schedule
- Discuss upcoming 2017-18 activities

# BCRUA Regional Water System

- Phase 1
  - Temporary floating intake
  - Water treatment plant (WTP)
  - Raw/treated pipelines
- Phase 2
  - Deep water intake
  - Pump station
  - Intake/transmission tunnels
- Phase 3 – pump station and WTP expansions

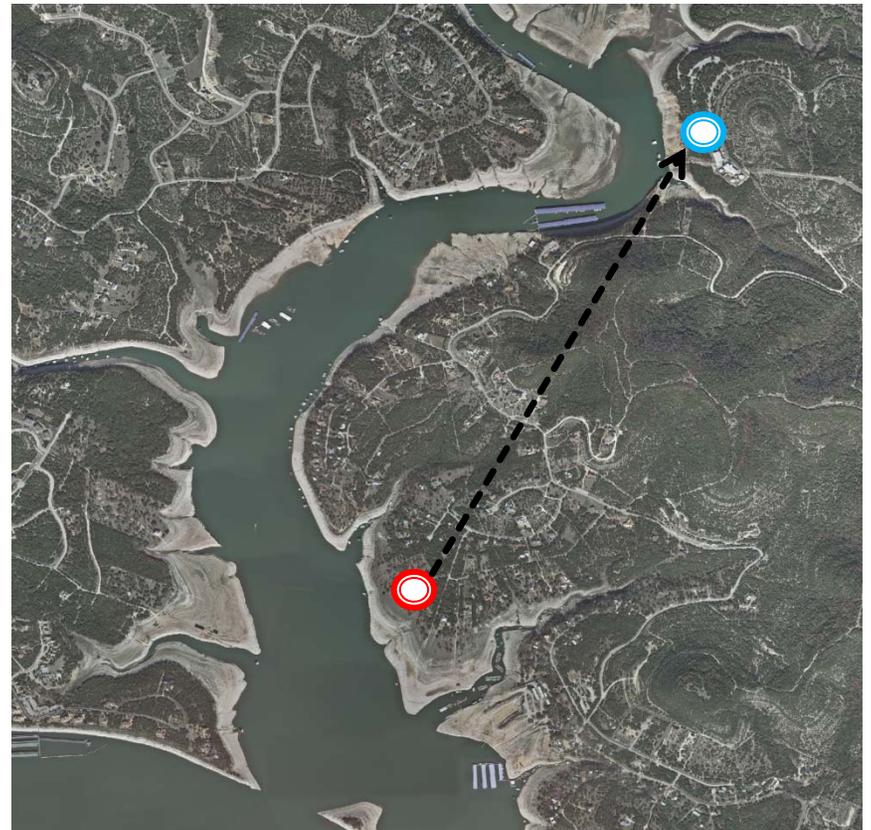


# BCRUA History and Milestones

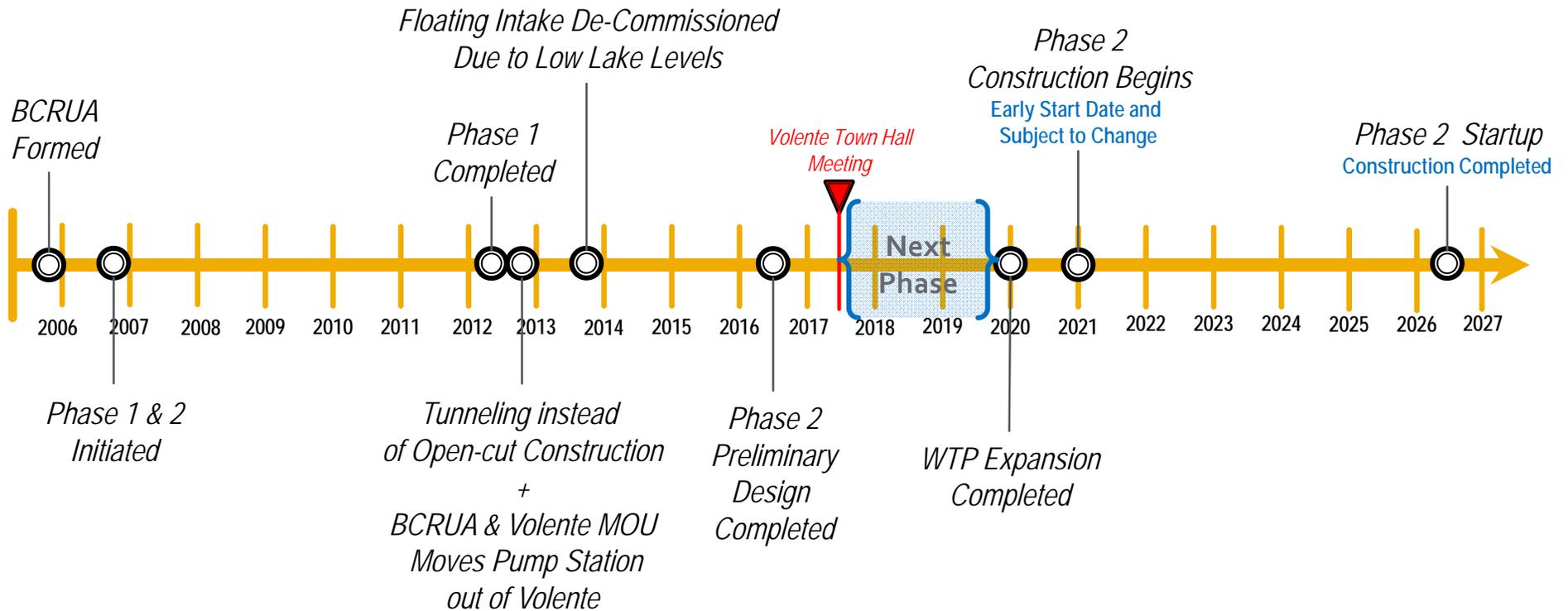


## Volente and BCRUA Memorandum of Understanding

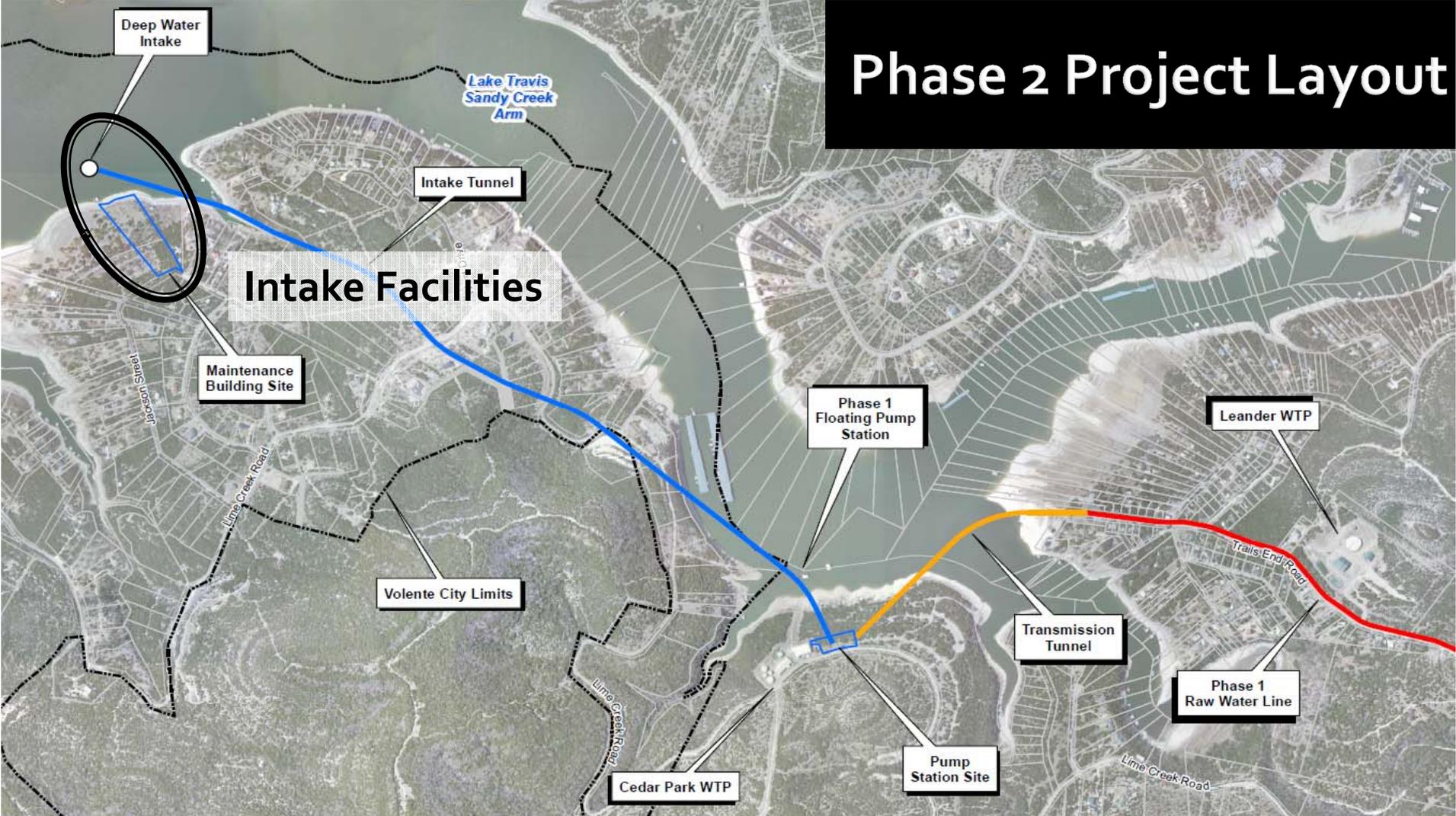
- BCRUA moves the pump station out of Volente at increased costs
- Volente withdraws objections to the intake and maintenance building on Bernard Street
- BCRUA and Volente deal in good faith with respect to Volente regulations



# BCRUA History and Milestones

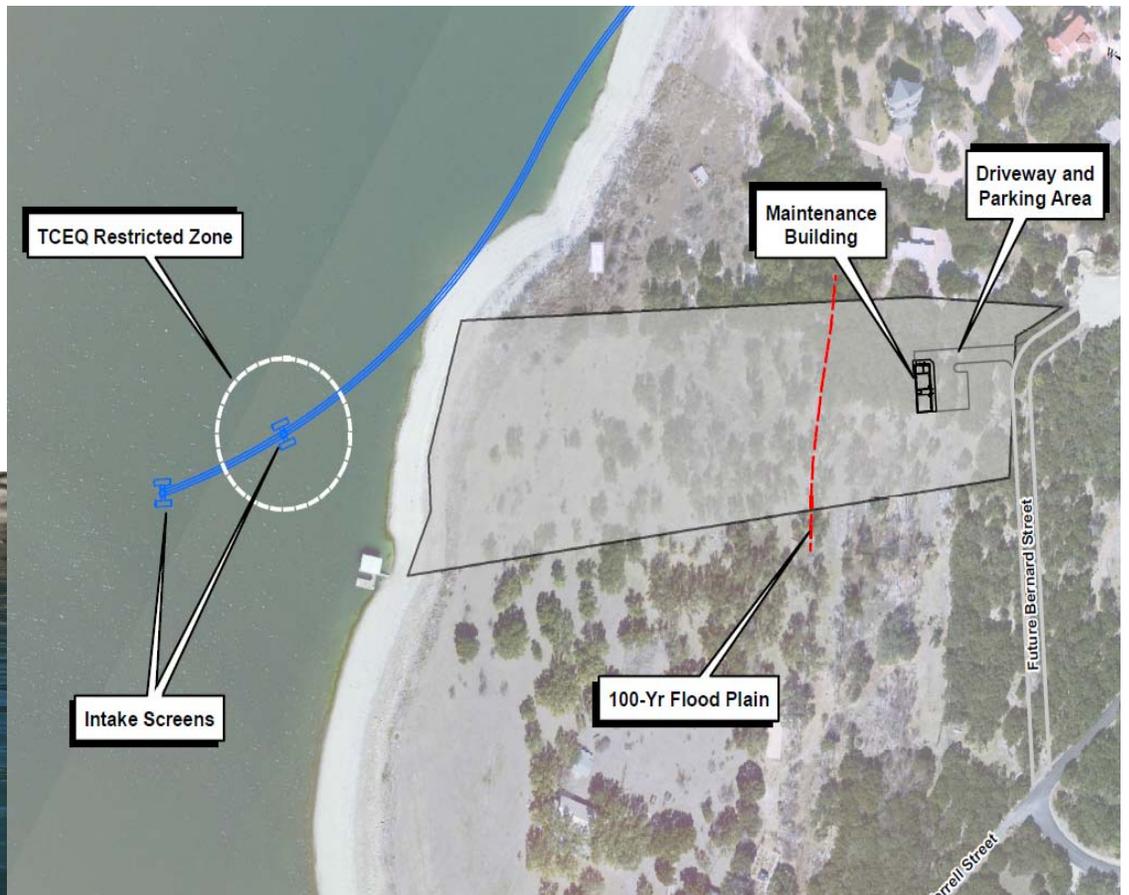


# Phase 2 Project Layout



# Intake Facilities

- Top screen visible at lake level 660 ft-msl
- State required water quality zone
- No noise or impingement hazards
- LCRA approved turbidity control plan will be followed



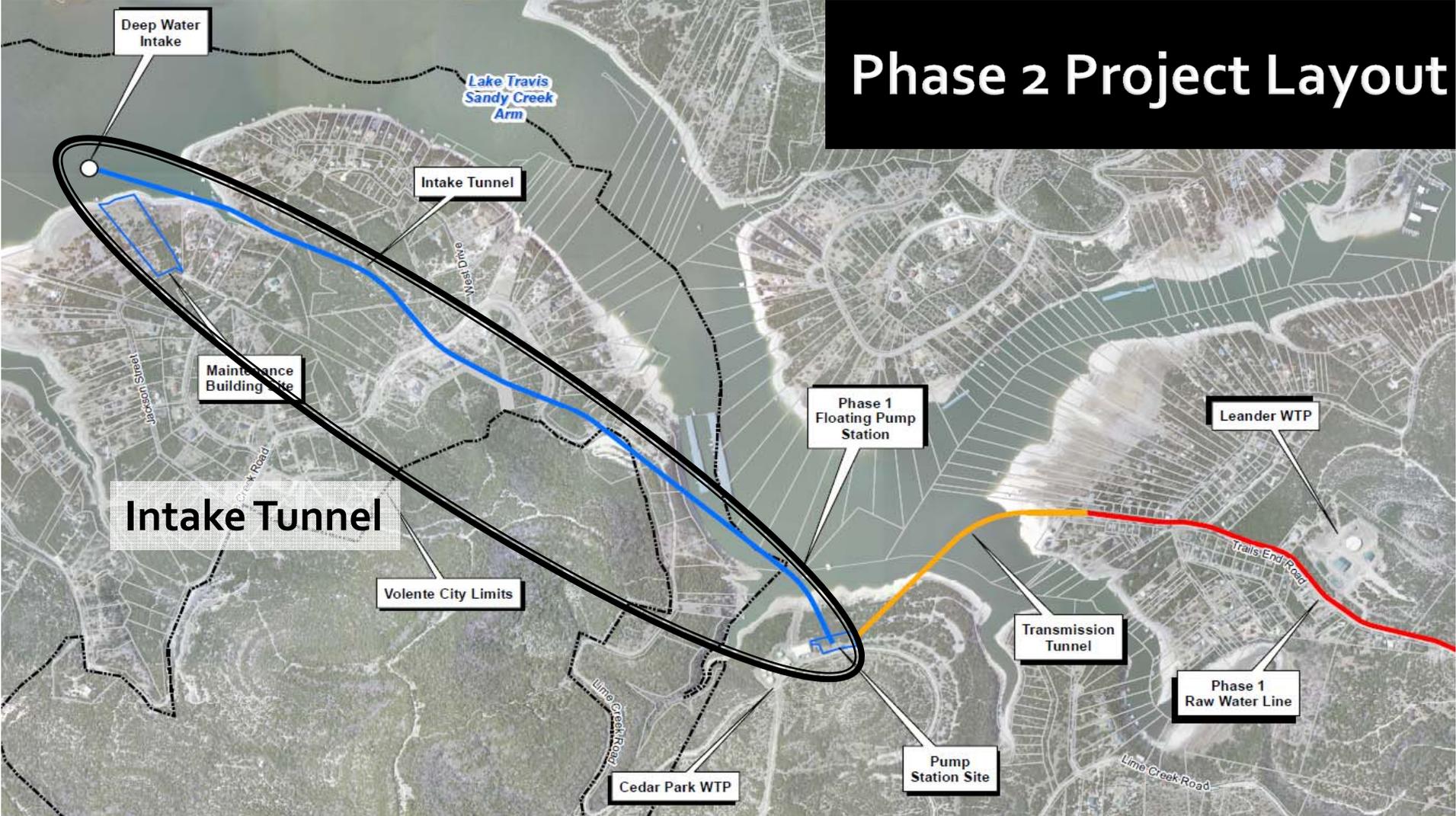
# Intake Facilities – Maintenance Building

- Onshore maintenance building (~1500 SF) to control invasive mussels
- Develop existing ROW for road access
- Adhere to Volente ordinances
- Support intake construction
- Minor electrical upgrades required



*Maintenance Building Rendering*

# Phase 2 Project Layout



# Intake Tunnel

- 96" diameter tunnel 100 to 350 below grade
- Alignment selected to minimize easement and well impacts and avoid preserve
- Construction by tunnel boring machine (no noise or vibration)
- Spoils removed from the pump station site outside of Volente
- Two temporary drop shafts required to facilitate concrete placement and address quality issues



06/08/2012 11:12

WTP<sub>4</sub> Jollyville Tunnel TBM

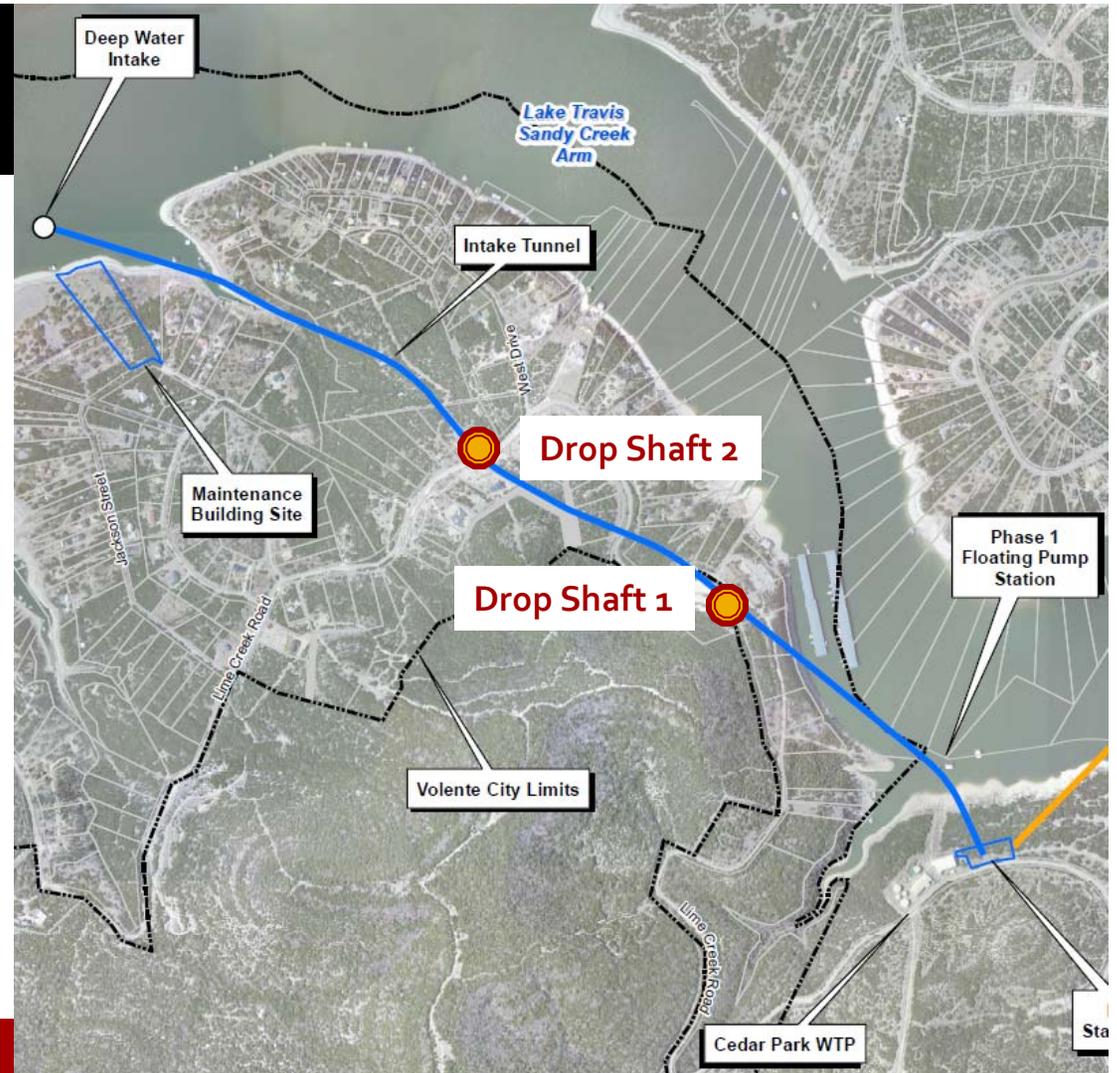


Tunneling to City of Austin Lake Tap

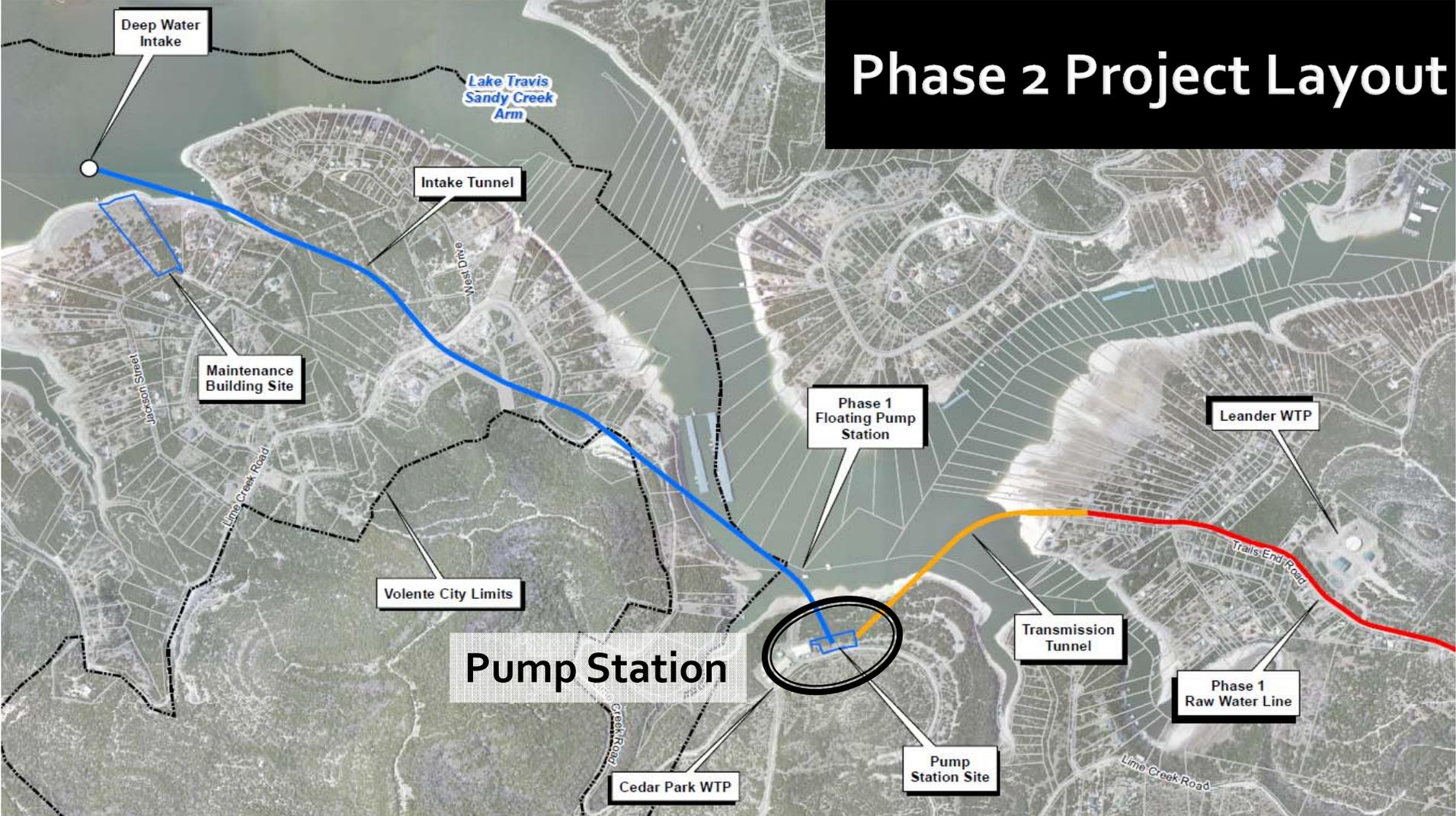
# Intake Tunnel

## Drop Shafts

- Temporary construction easements at Sandy Creek Marina and adjacent to Lime Creek Road
- 12-inch diameter shaft
- 12 concrete deliveries per day for 1.5 – 2.5 months
- Seal shaft after completion and restore site
- Total 4-6 months activity from start to finish



# Phase 2 Project Layout

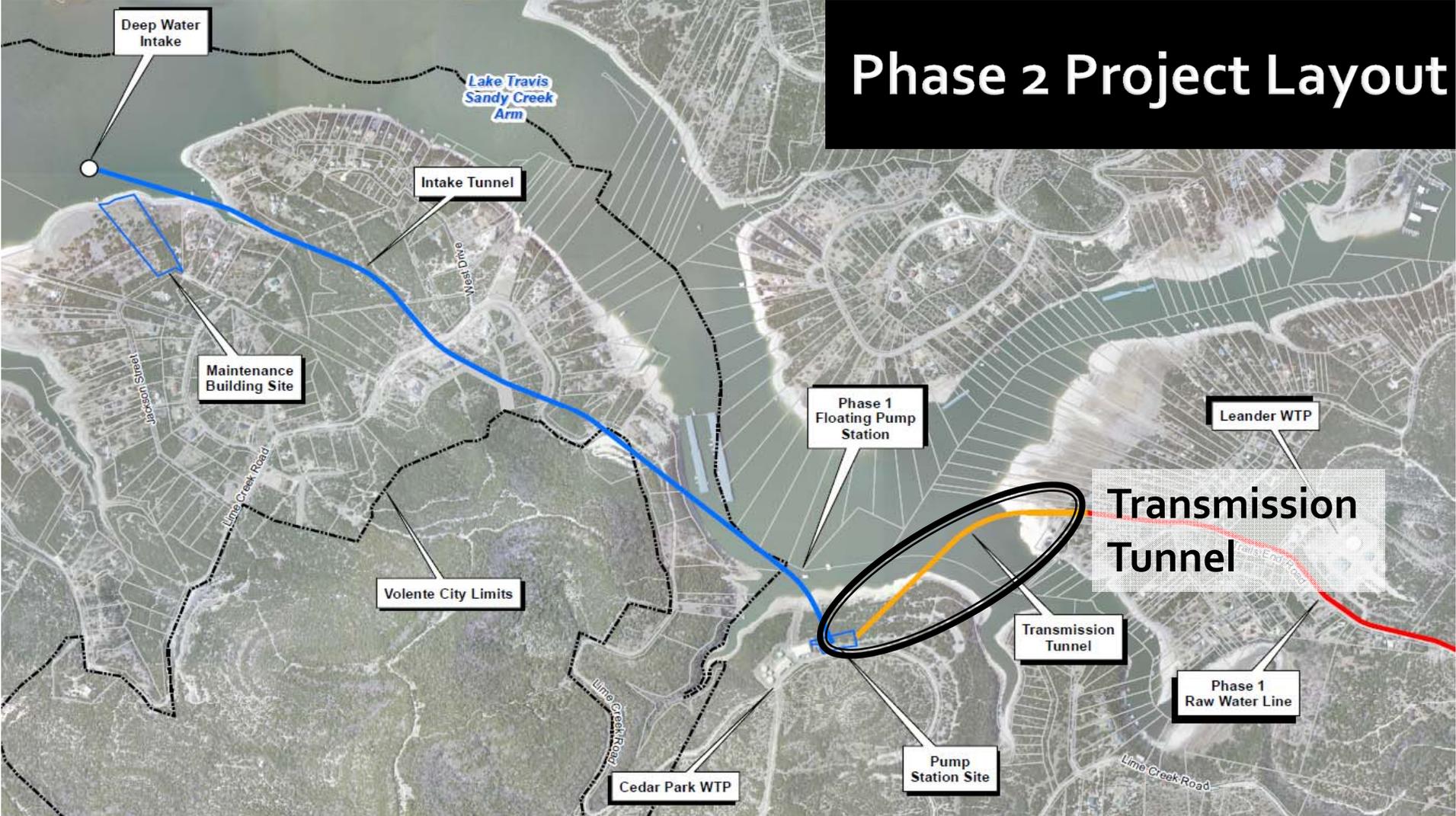


# Pump Station

- Adjacent to Cedar Park WTP
- Extensive planning done as part of site acquisition to minimize impacts to park
- Primary work site for tunnel launching and construction
- Hauling to Anderson Mill
- Eliminates four floating pump stations



# Phase 2 Project Layout



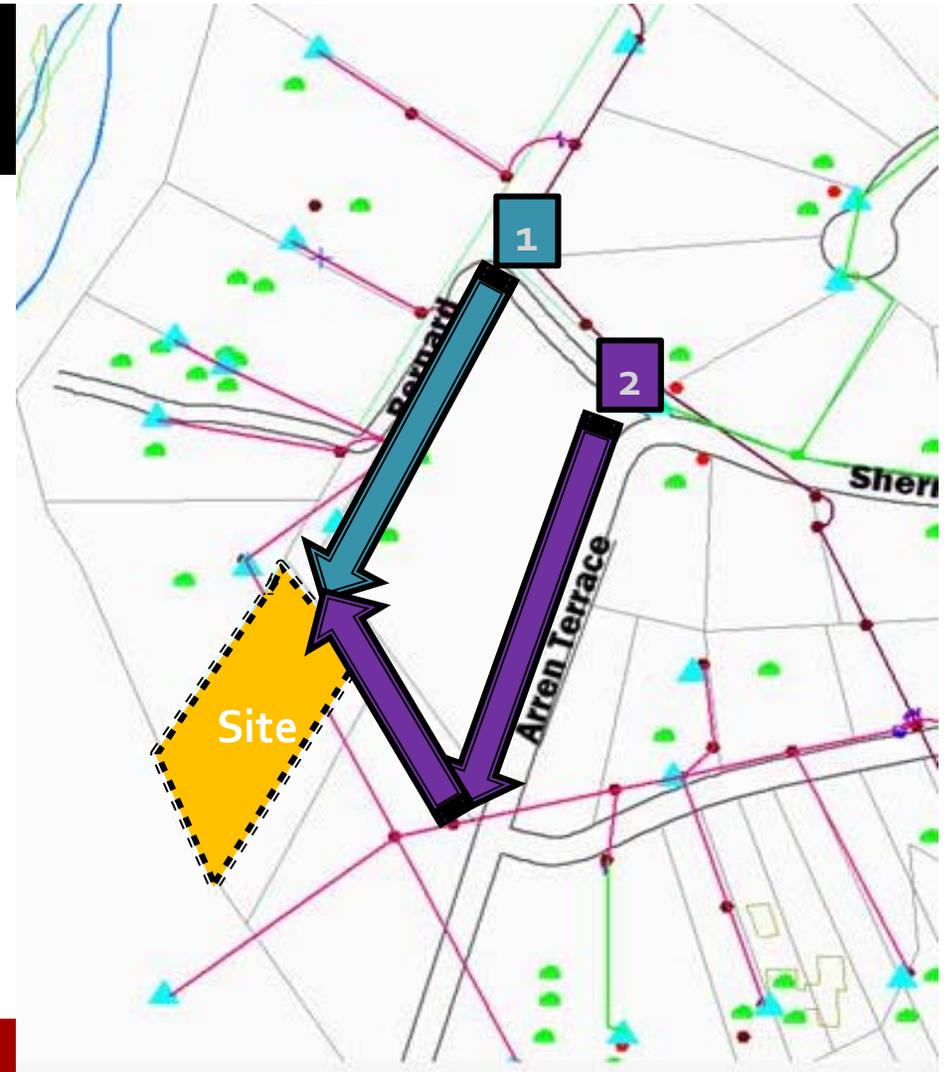
# Transmission Tunnel

- Deep 84" tunnel at depths of 70 to 300 feet
- Riser at end of Trails End Road to connect to Phase 1 raw water line

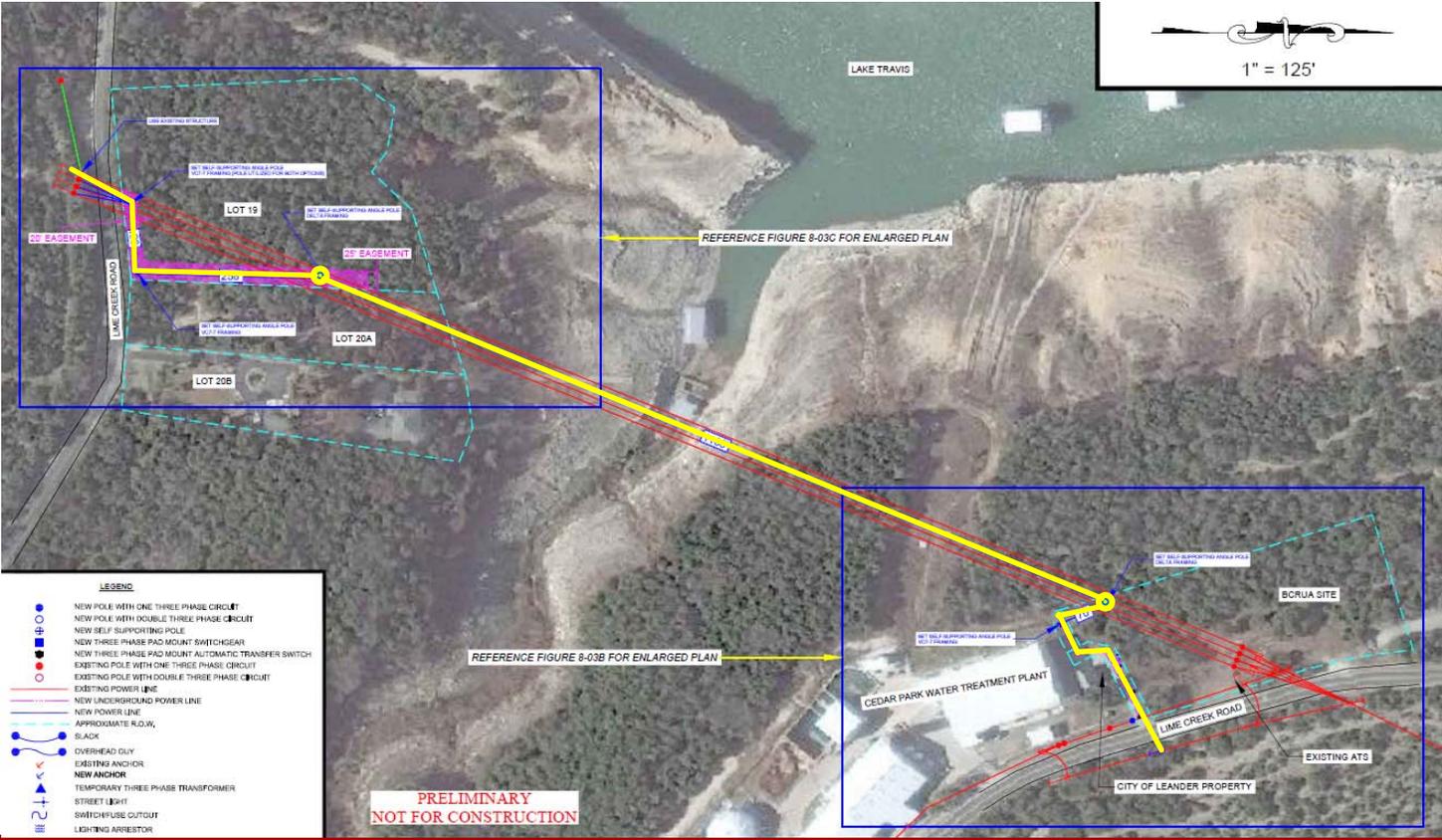


# Electrical Service

- Major power upgrades occurring outside of Volente
- Minor upgrades required for maintenance facilities
  - Option 1: Bernard Street Extension
    - 1A – Buried
    - 1B – Existing poles
  - Option 2: Arren Terrace Extension – Buried
- Rebuild lake crossing adjacent to Cedar Park WTP



# Electrical Service



## 2017-18 Schedule and Activities

1. Phase 1C WTP and floating intake expansion
2. Easement acquisition
3. Groundwater well study
4. Stakeholder communication and coordination

# Phase 1C Expansion



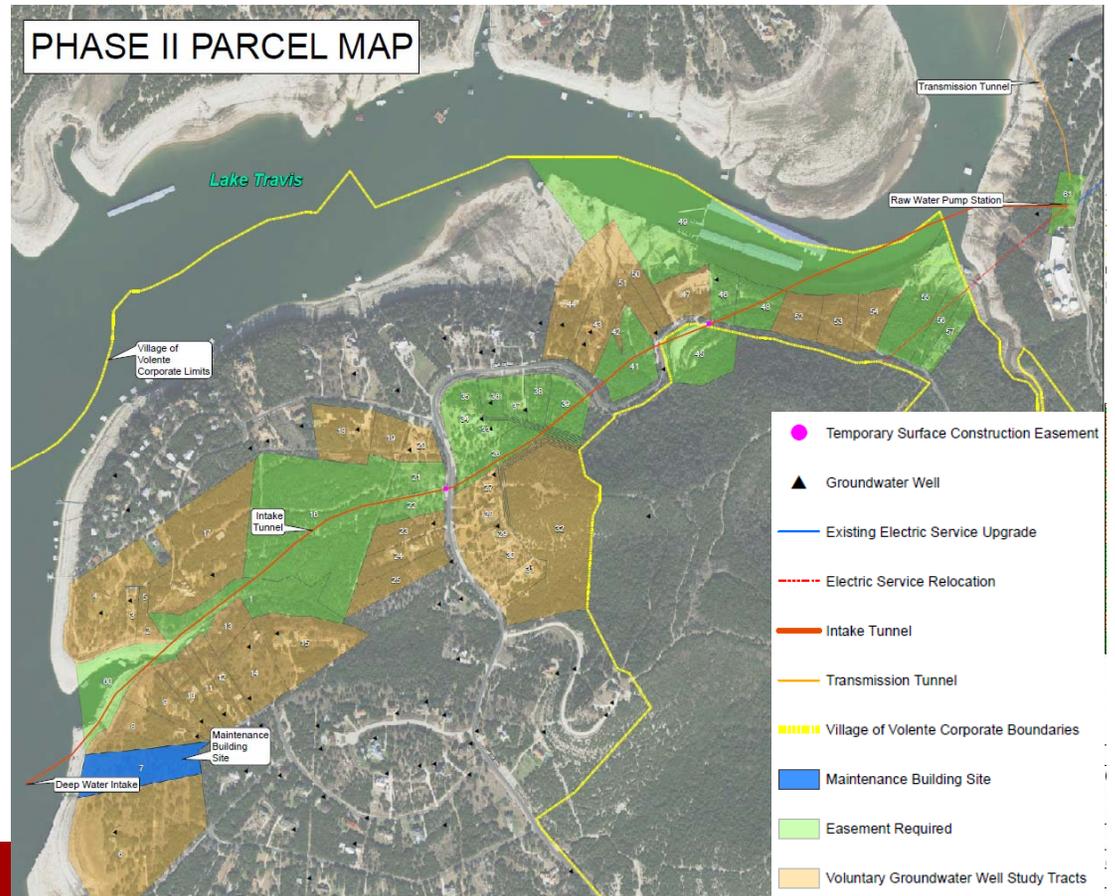
*Floating Raw Water Intake*

*Water Treatment Plant*



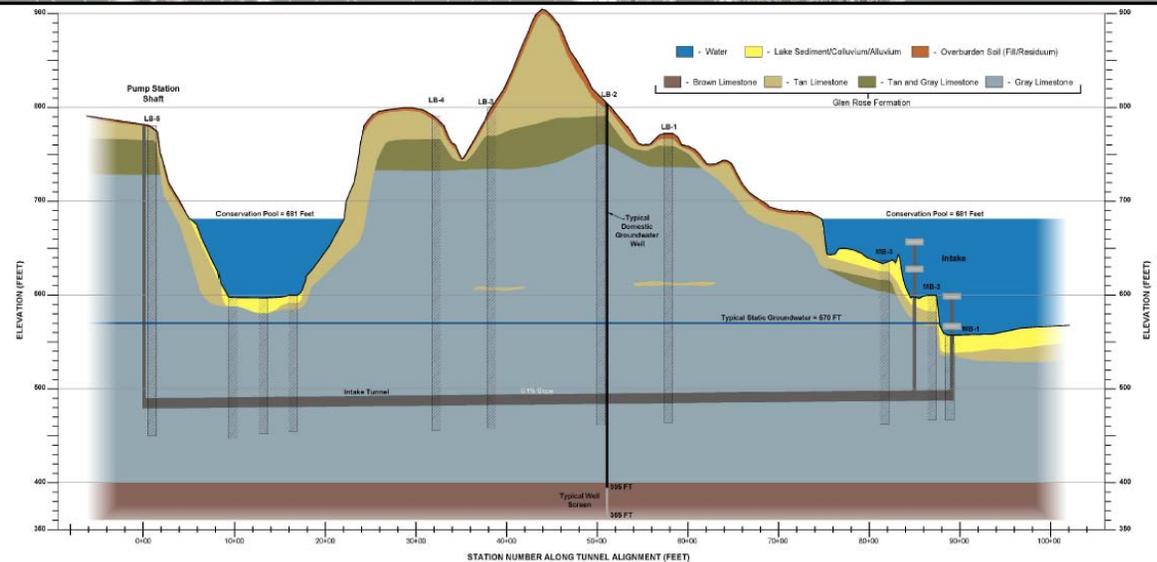
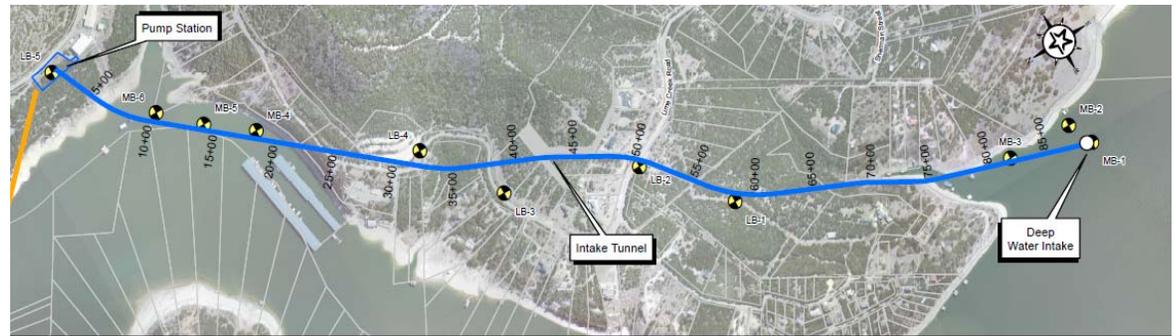
# Easement Acquisition

- Acquire easements for intake, tunnels, electrical upgrades
- Approximately 20 easements needed in Volente
- Process:
  - Introduction letter and right-of-entry request
  - Meet with property owners
  - Surveying
  - Appraisals and negotiation
- Project includes voluntary groundwater well study right of entry requests



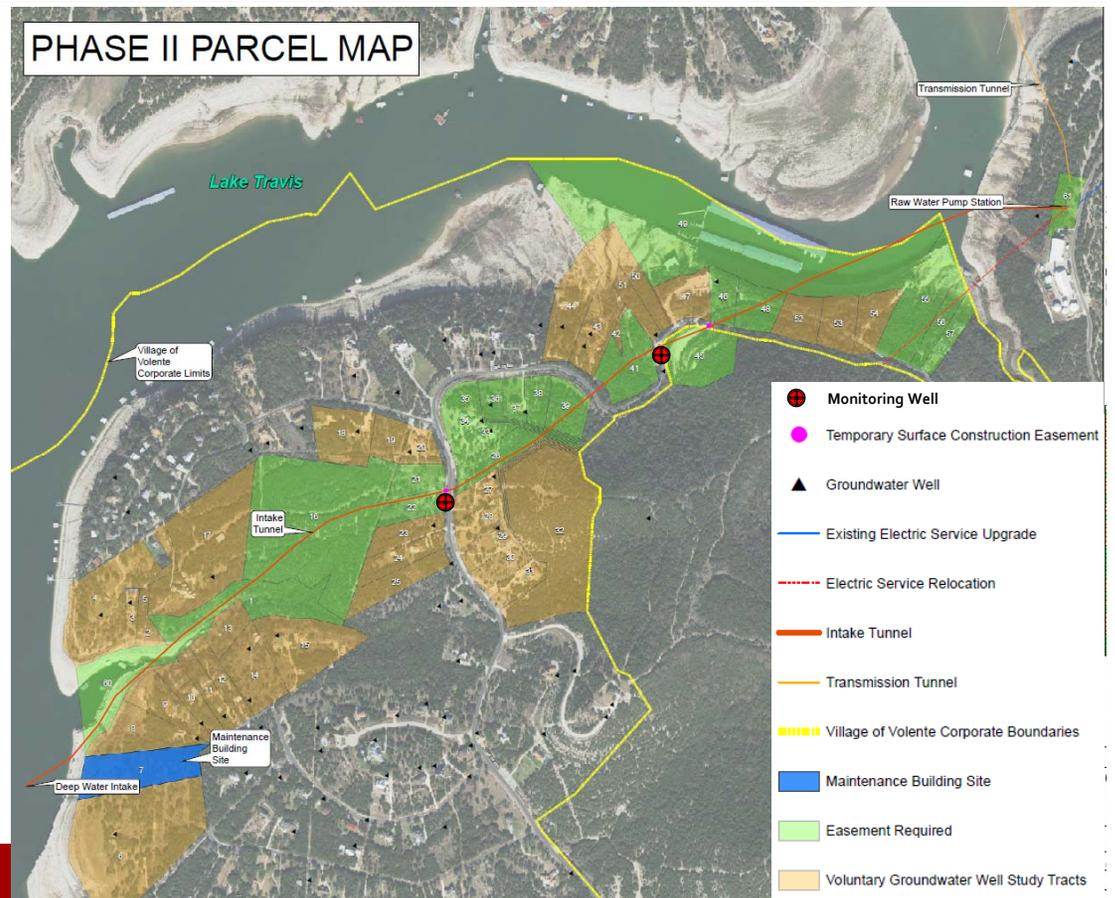
# Groundwater Well Study

- Minimizing groundwater seepage into the tunnel is advantageous for BCRUA and Volente residents
- Existing data from BCRUA and WTP<sub>4</sub> projects suggest minimal groundwater seepage
- Completed Groundwater Study and borings in 2016



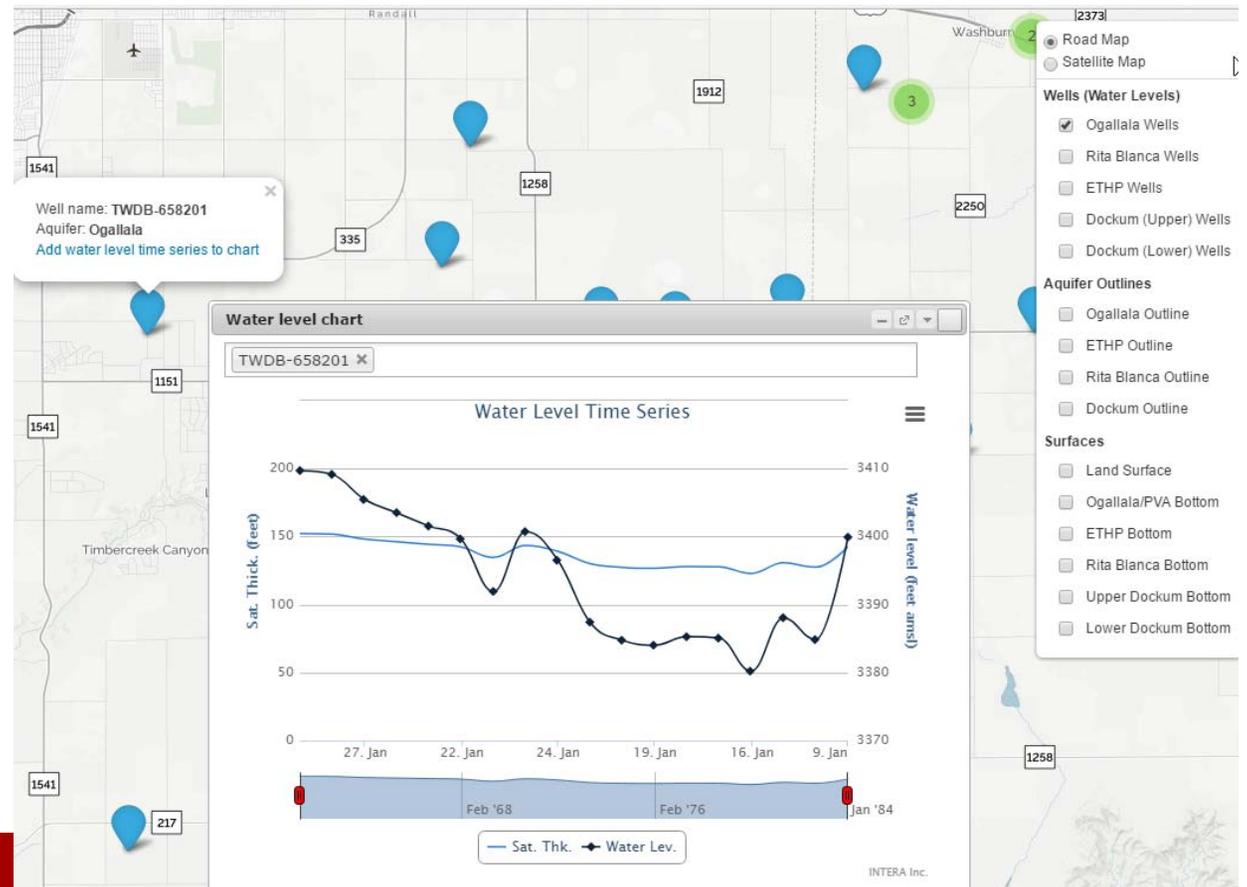
# Groundwater Well Study

- Step 1: Well Inventory
  - Survey well locations
  - Collect additional well information
- Step 2: Monitoring
  - Monthly sampling (water level and quality)
  - Construct 4 monitoring wells adjacent to the tunnel
  - Share sampling data online



# Groundwater Well Study

- Step 3: Mitigation Planning
  - Develop strategies to reduce water table impacts during and after construction
  - Address temporary and permanent impacts
  - Respond quickly



# Stakeholder Coordination

- Village of Volente
  - Quarterly meetings with elected officials
  - Regular updates of upcoming activities
  - Future interlocal agreement to respond to Village and BCRUA key issues
- Travis County
- LCRA

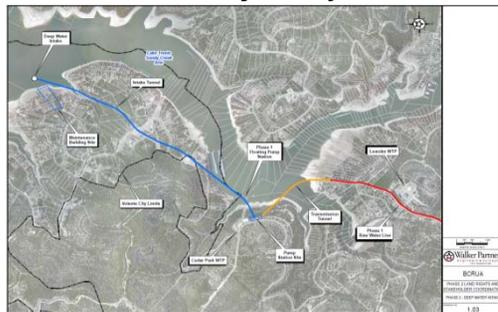
## What to Expect Going Forward

- Introduction letters and right of entry requests – June
- Surveying – late July through end of 2017
- Monitoring well construction – July and August
- Groundwater well sampling – July through Summer 2018
- Phase 1C construction start – Fall 2018

# Open House Stations

## Station 1

### *Phase 2 Project Layout*



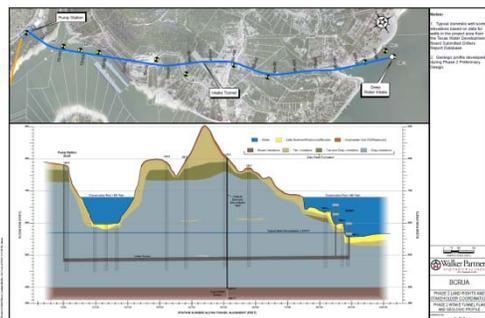
## Station 2

### *Intake and Maintenance Facilities*



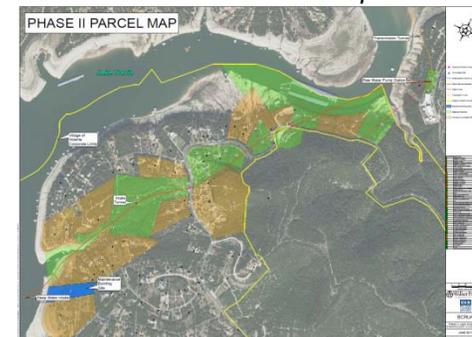
## Station 3

### *Intake Tunnel Plan and Geological Profile*



## Station 4

### *Phase 2 Parcel Map*



# Village of Volente Community Meeting

Phase 2 Deep Water Intake  
Project Update

*Thank you for attending!*



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Walker Partners  
Project Manager

