

CREWS LAKE NATURAL SYSTEMS RESTORATION

Lack of Water is the Cause of Ecological Function Loss

Adjacent to Cross Bar Ranch Wellfield that withdraws 15-20 million gallons of groundwater daily

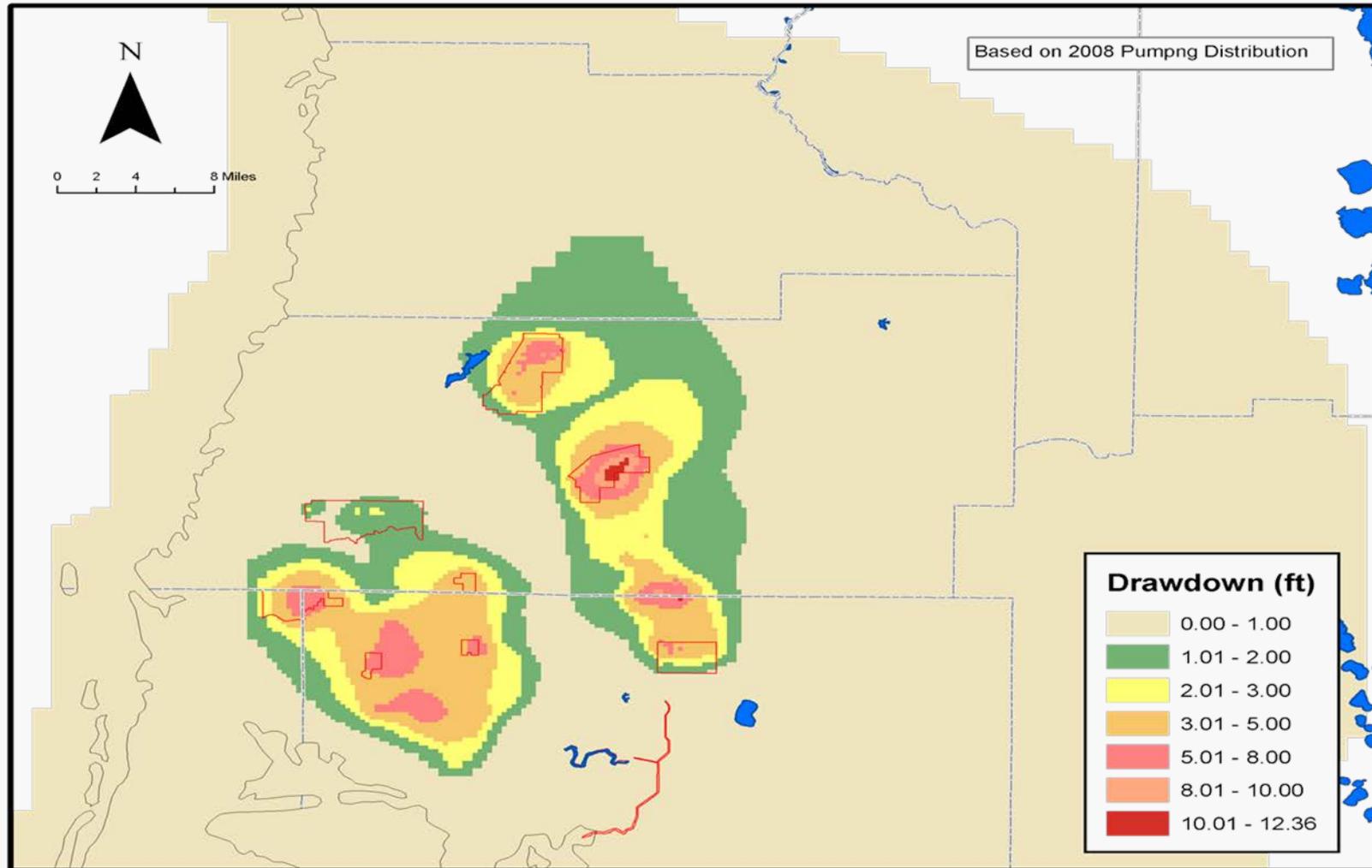
Crews Lake is impacted to the point that it no longer fits the definition of a lake

The fishing pier, boat ramp, and canoe launch are rendered useless at Crews Lake Wilderness Park

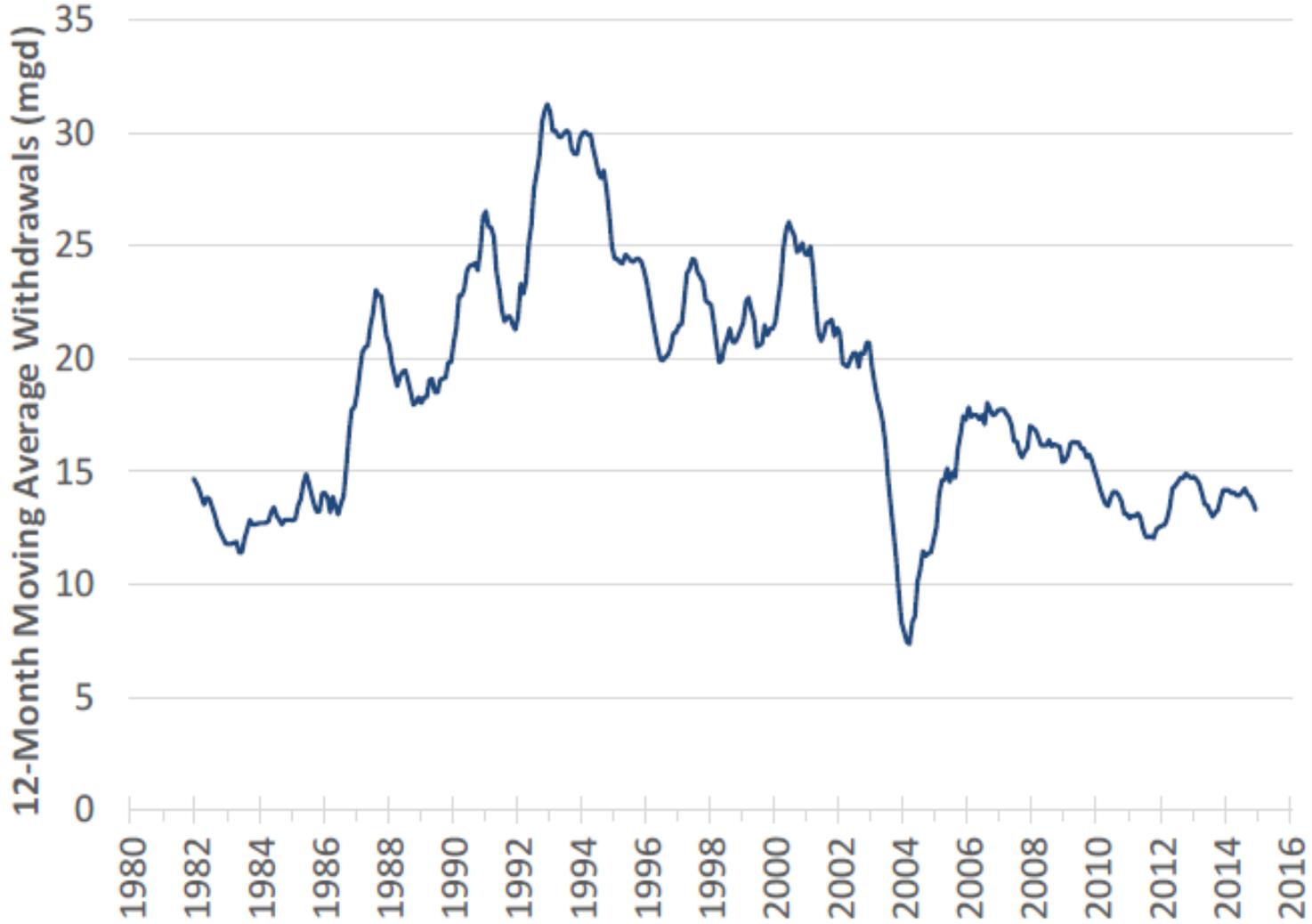
Engineering evaluations indicate that Crews Lake is not expected to recover without mitigation



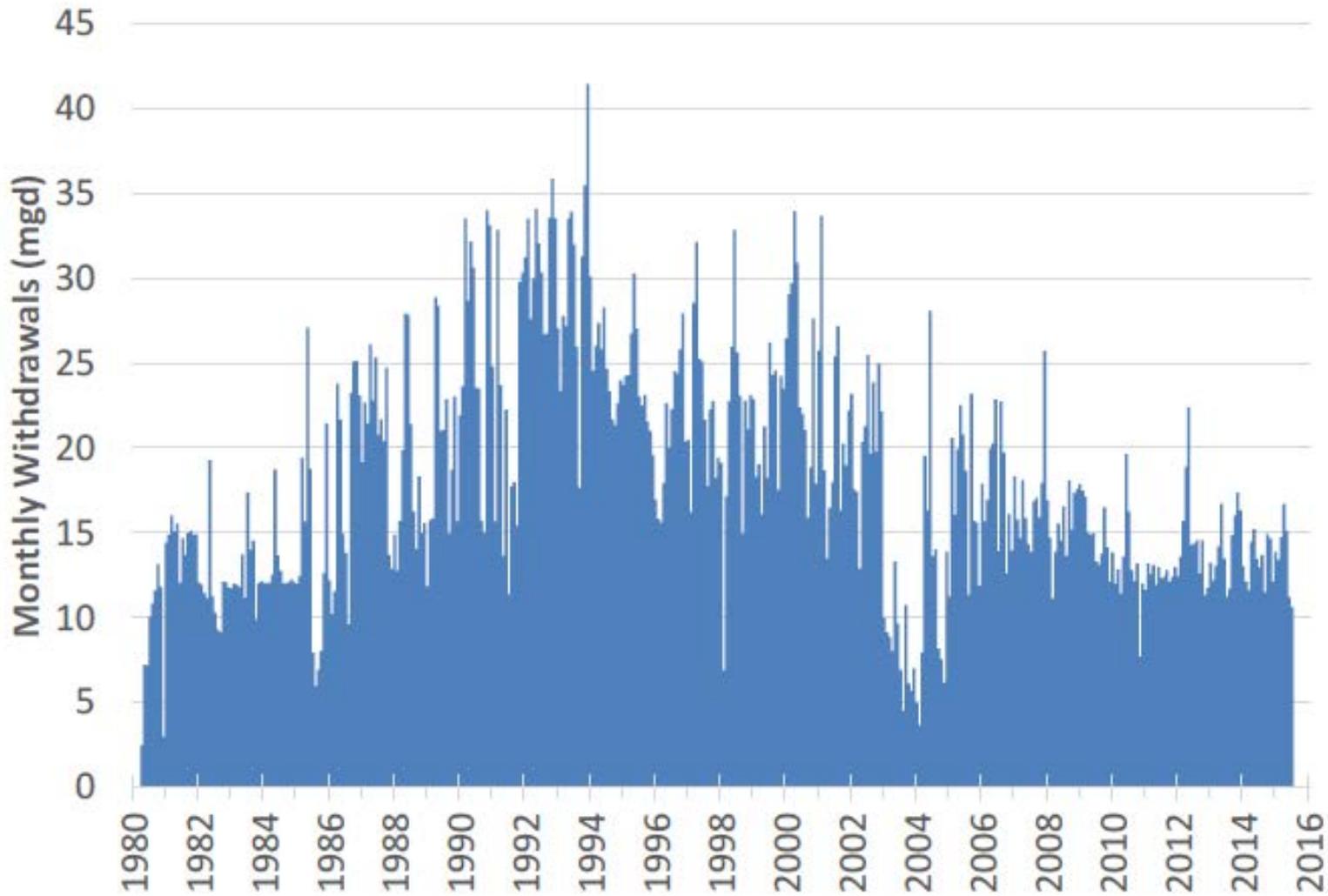
Wellfield Drawdowns Impact the Region's Hydrologic Systems



Cross Bar Ranch Wellfield Groundwater Withdrawals

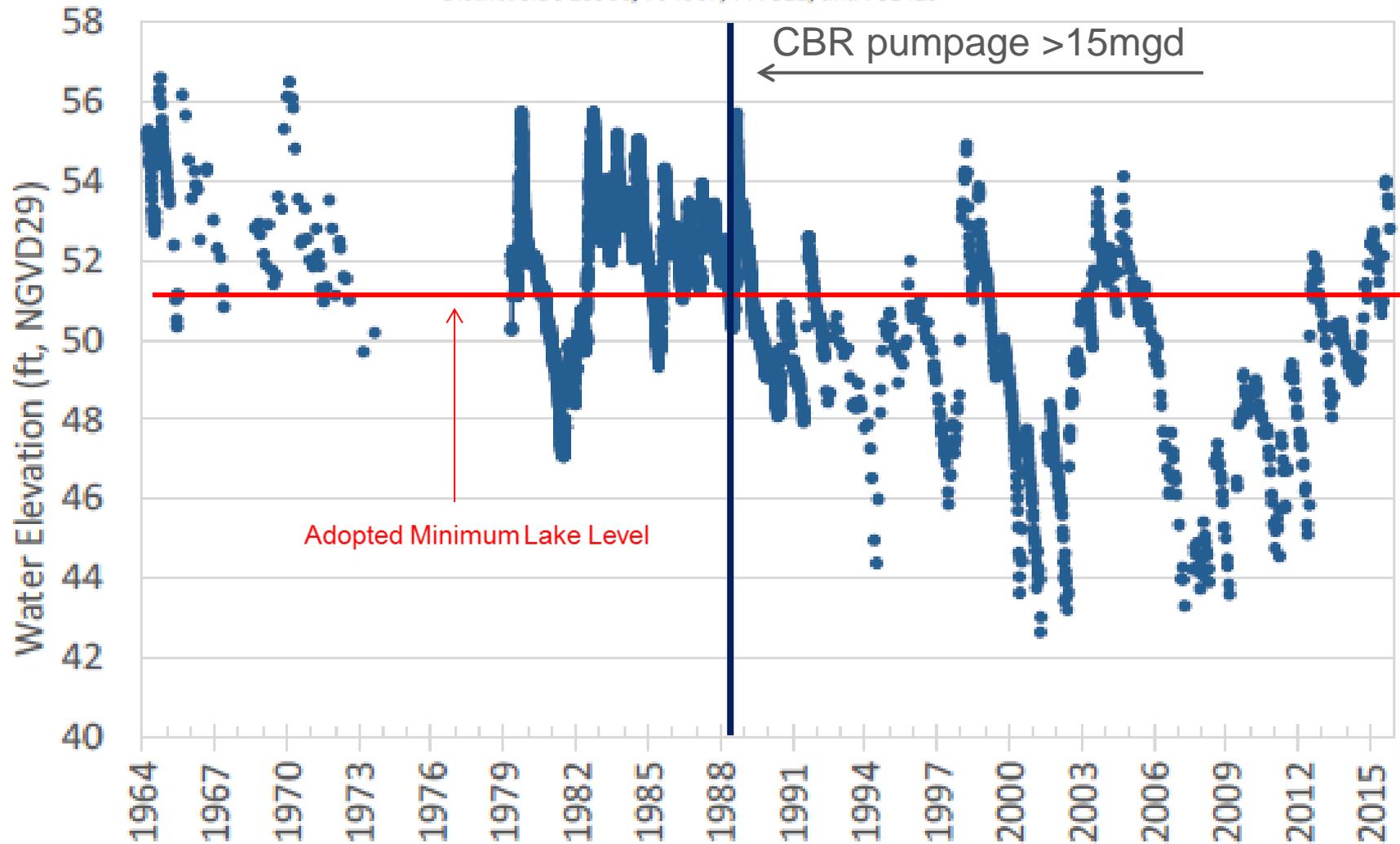


Cross Bar Ranch Wellfield Groundwater Withdrawals



Crews Lake Water Elevations

District SIDs 20506, 734367, 777811, and 782429



Crews Lake – 2006



Recognition of impact

- **1984** - SWFWMD acknowledges impact and adopted lake management levels and incorporated into rule (Chapter 40D-8, F.A.C.)
- **1992** – SWFWMD puts Crews Lake on it's list of stressed lakes. Stressed lakes are lakes with chronically low water levels
- **2006** – SWFWMD refines MFL protocol and includes Crews Lake on the MFL priority List & Schedule again
- **2006** – SWFWMD develops draft management levels for the lake.
- **2016** – SWFWMD adopts minimum lake level



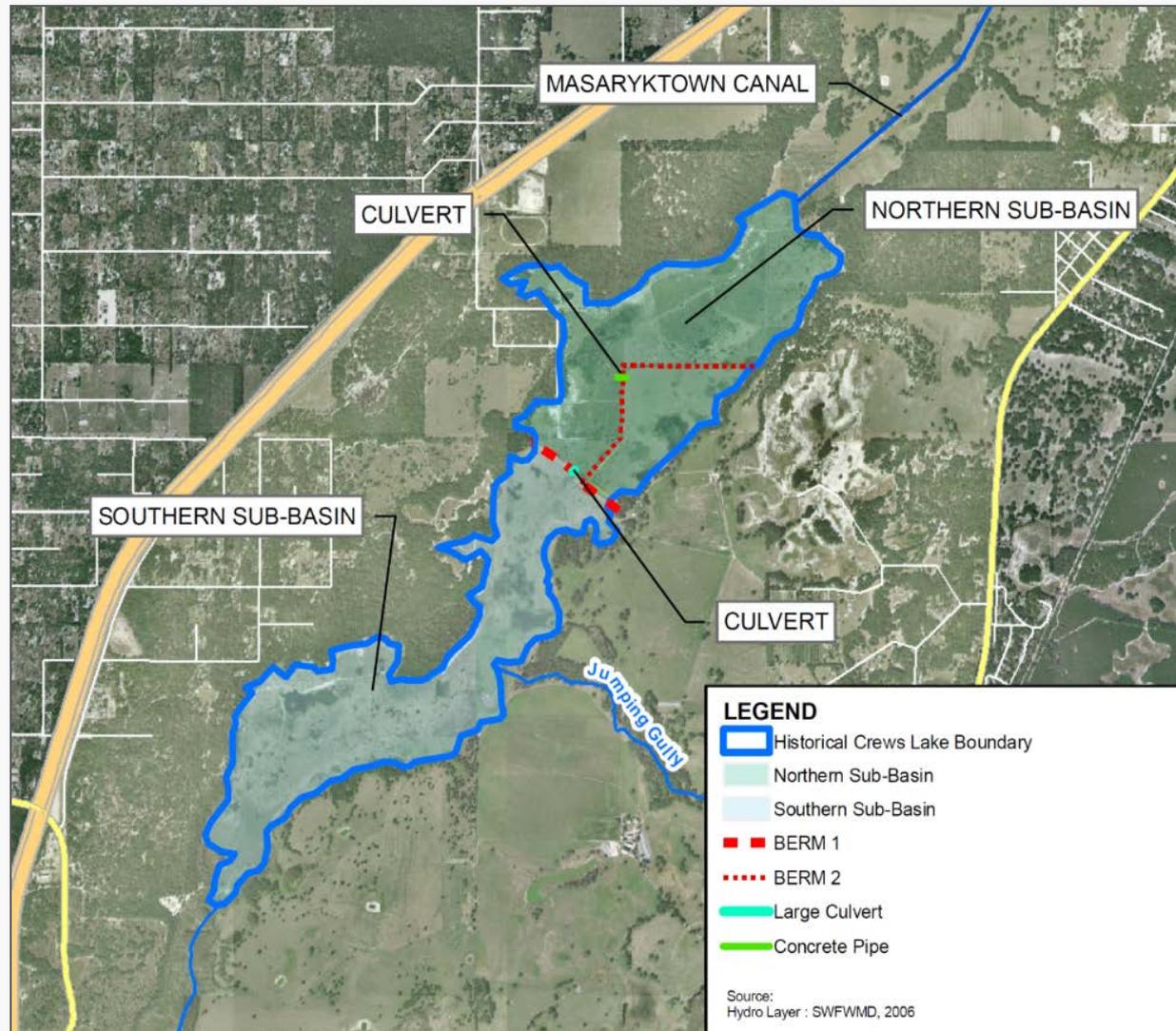
Crews Lake Natural Systems Restoration Project Drivers

- Chronically low water levels resulted in terrestrial plant and animal species invasion
- Much needed and beneficial reclaimed water management option
- Recovery of lost ecological value
- Passive land management
- Park enhancement



Project Concept

- Pipeline to the north basin
- Use existing features for treatment and hydrologic benefit
- Distribute 4 mgd to rehydrate hydrologically altered wetlands
- Wetlands remove nitrogen to background levels <1 mg/l
- Lift at Crews Lake Park expected to achieve (P50) adopted MFL of 51 ft
- SWFWMD and FDEP support the project
- Clear permitting pathway



Benefits to County Departments & Citizenry

Utilities

- Operational flexibility and wet-weather management
- Pasco County is committed to a 100% reuse policy
- Cost-effective, environmentally responsible solution for resource management
- Avoids costly land acquisition for reclaimed water disposal and utility rate hikes

Environmental Lands

- Restores aquatic systems to recover lost ecological function
- Critical habitat for a myriad of species
- Connectivity of wildlife corridors
- Restoring aquatic habitat eliminates costly land management activities

Parks & Recreation

- A healthy Crews Lake will garner more patronage and increase Parks revenue
- Recovers of a portion of the 113-acre jewel of the Pasco County Parks system
- Patrons of the park will once again fish, canoe, and kayak the lake



Quantifiable Ecological Benefits



- Delivers of up to 4 million gallons of water daily
- Directly rehydrates at least 200 acres of wetlands
- Rehydrates an additional 150-200 acres
- Creates diverse wildlife habitat
- Returns ecological function
- Improves water quality naturally and passively
- Manages invasive species passively

