NORTH TEXAS MUNICIPAL WATER DISTRICT

Regional Service Through Unity… Meeting our Region's Needs Today and Tomorrow



GETTING FROM PERMITTING TO CONSTRUCTION

NATIONAL WATER RESOURCES ASSOCIATION ANNUAL MEETING

Nov. 8, 2018

Tom Kula, NTMWD Executive Director

NORTH TEXAS MUNICIPAL WATER DISTRICT



REGIONAL PROVIDER: WATER, WASTEWATER, SOLID WASTE

NORTH TEXAS MUNICIPAL WATER DISTRICT

BY THE NUMBERS



SERVES about **80** COMMUNITIES

Service area of 2,200 square miles in 10 counties

Serving 1.7 million people in one of the fastest-growing regions in the country

14 WATER PUMP STATIONS

6 WATER TREATMENT PLANTS
806+ MGD Capacity
(million gallons/day)

575+ MILES
WATER TRANSMISSION PIPELINES

250+ MILES
LARGE-DIAMETER WASTEWATER PIPELINES

14 WASTEWATER TREATMENT PLANTS

151+ MGD
WASTEWATER TREATMENT CAPACITY
MGD (million gallons/day)

DID YOU KNOW?

3 TRANSFER STATIONS
up to 3,295 tons of solid waste/day

1 MILLION+
tons/year accepted at landfill

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Water Essential for Economic Growth

Water supply infrastructure is the driving force of community and business vitality



CityLine - Richardson



Watters Creek Convention Center - Allen



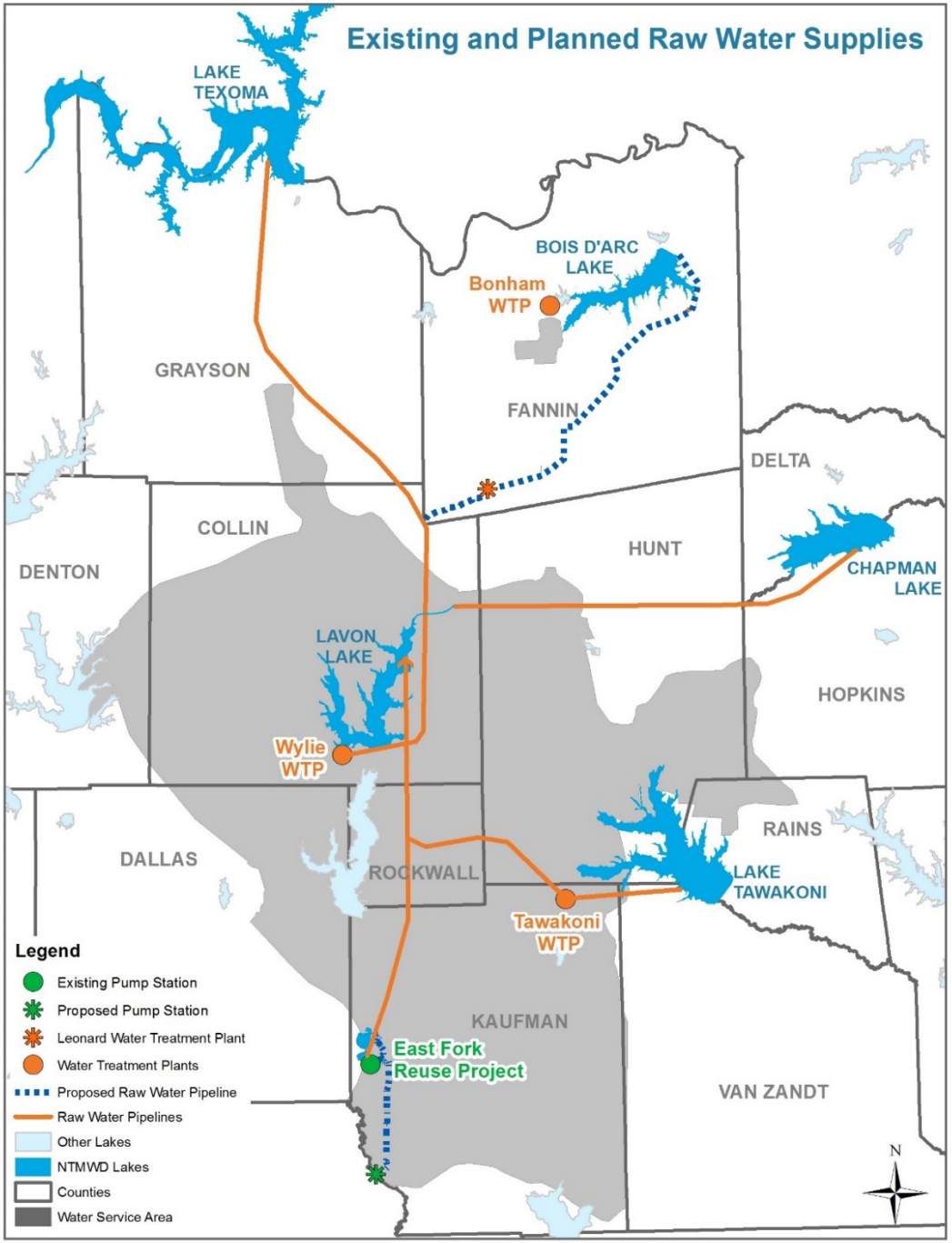
The Star - Frisco



Legacy West - Plano

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Raw Water Supplies



Existing:

- Lavon Lake
- Lake Texoma
- Lake Tawakoni
- Chapman Lake
- Reuse/Wetland

In Progress:

- Bois d'Arc Lake in Fannin County

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FUTURE SUPPLIES: NEW RESERVOIR IN FANNIN COUNTY

Bois d'Arc Lake: Why it's Needed

- **Growing communities = growing needs**
- **Population to double in 50 years**
- **Critical part of state water plan**
- **Reservoir will help:**
  - Meet projected North Texas water supply needs through 2040 and beyond
  - Support region's economic growth
  - Better serve Fannin County
  - Provide recreational opportunities



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BOIS D'ARC LAKE

- Decade+ of planning, permitting
- Surface Area: 16,641 acres
- Supply: up to 108 MGD
- Average/ Max Depth: 22/70 ft
- Lake Elevation: 534 ft mean sea level
- Owner & operator: NTMWD
- Cost Estimate: $1.6B
- Permitting Required:
  - TX Water Rights – received June 2015
  - USACE Section 404 – received Feb. 2018
- Construction in progress
- Water delivery in 2022

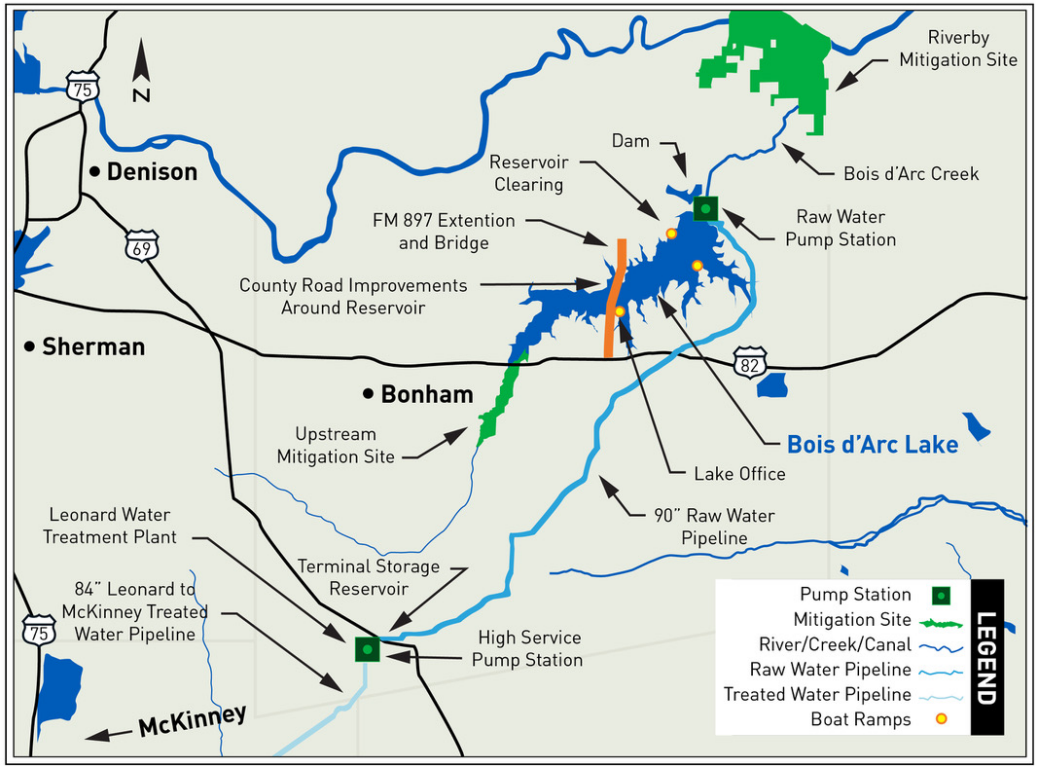


First major reservoir to be constructed in Texas in nearly 30 years

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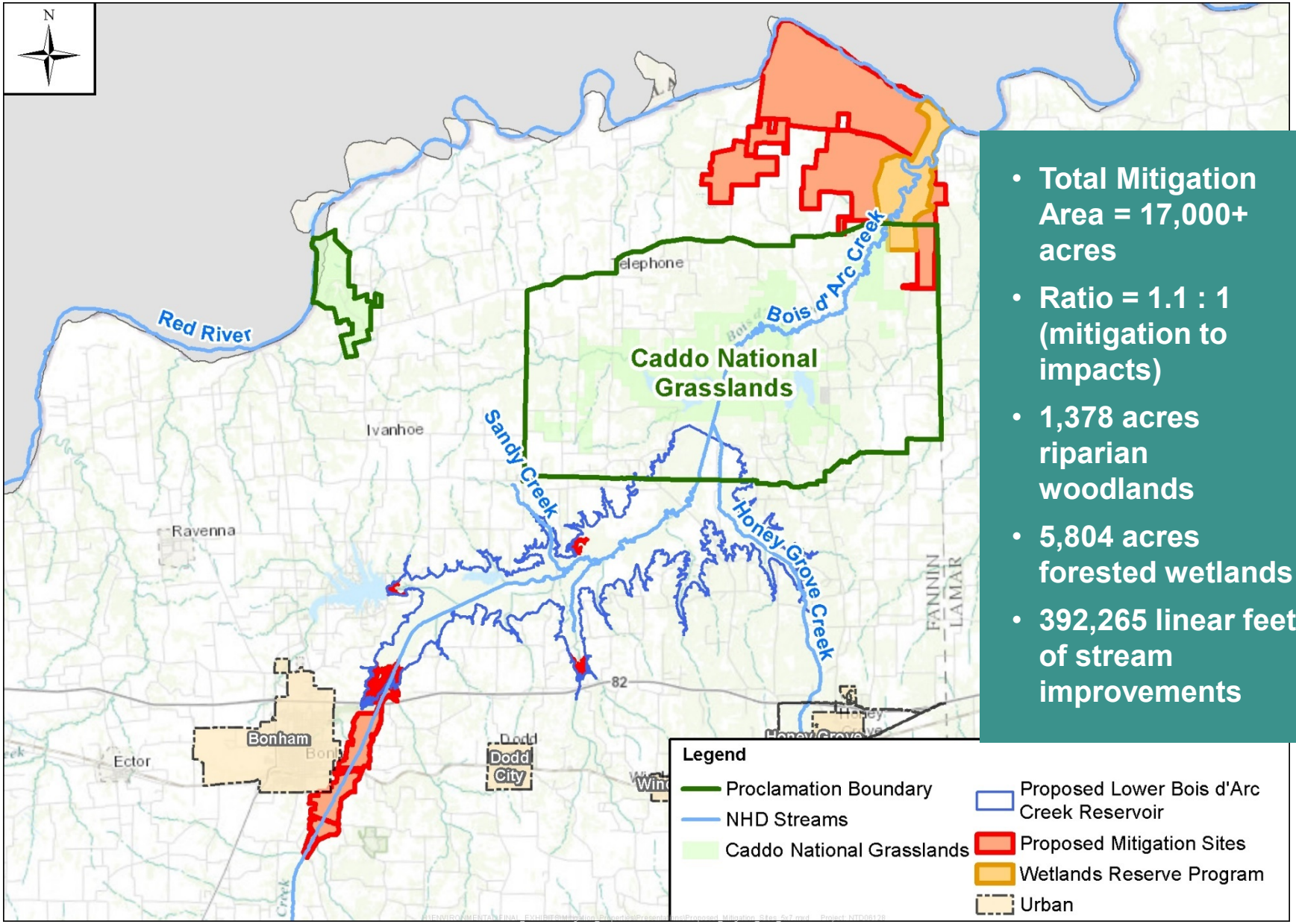
Bois d'Arc Lake: Key Components & Related Infrastructure

1. Dam and intake structure for reservoir
2. 35-mile underground raw water pipeline
3. New water treatment plant (70 MGD initial capacity)
4. Rerouting highway and bridge over lake
5. Required mitigation area (over 17,000 acres)





Bois d'Arc Lake: Planned Mitigation



- Total Mitigation Area = 17,000+ acres
- Ratio = 1.1 : 1 (mitigation to impacts)
- 1,378 acres riparian woodlands
- 5,804 acres forested wetlands
- 392,265 linear feet of stream improvements

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BOIS D'ARC LAKE CONSTRUCTION PHOTOS



Clearing Footprint of Dam

Two-mile-long, 90-foot-tall earthen embankment dam with a bentonite slurry trench

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BOIS D'ARC LAKE CONSTRUCTION PHOTOS



Excavation for Raw Water Intake Pipe



Planning Fish Habitat Structures in Lake

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BOIS D'ARC LAKE CONSTRUCTION PHOTOS





FM 897 Bridge over Future Lake



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PERMITTING REFORM RECOMMENDATIONS

OPTIMIZE EXISTING SUPPLIES

- Connect existing supplies and find ways to retain floodwaters

STREAMLINE PERMITTING

- Unnecessary delays from changeover in people, policies, concepts and procedures – process should only take 2-3 years

STATUTE OF LIMITATIONS TO PERMIT CHALLENGES

- Should be shortened to 180 days vs. 5+ years to avoid further delays of litigation

FEDERAL FUNDING FOR SUPPLY PROJECTS

- Water supply lowest priority and lowest funded program of USACE – need Congress to approve more funding and resources

ESTABLISHING PURPOSE & NEED

- Population and demand projections developed/approved by state should be sufficient

USE OF BEST AVAILABLE INFORMATION

- Applicants shouldn't be required to develop new or updated information late in permitting process – recommend statutory deadline.
- Applicant and agencies should have binding agreement on impact assessment methods required for evaluation.

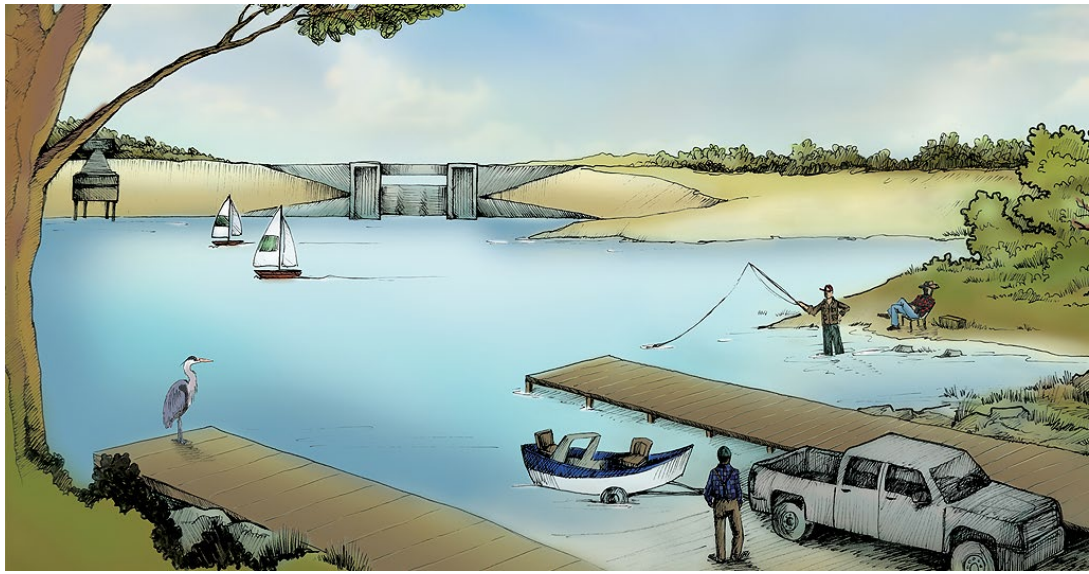
COMPENSATORY MITIGATION

- Environmental benefits of supply projects should be considered as offsets to impacts



KEYS TO SUCCESS

- **Reservoirs are an absolute necessity and we've stayed focused on:**
  - **PROTECTING ENVIRONMENT**
  - **SMART DEVELOPMENT**
  - **PROVIDING ESSENTIAL SERVICES TO NORTH TEXANS… WATER IS LIFE**
- **Initiate and build relationships to coordinate with state and federal agencies early in process**
- **Assemble dream team – get right resources/expertise in place to support**
- **Get support from city, state and federal elected officials – keep informed along the way**
- **Identify and offer win-win solutions for stakeholders**



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