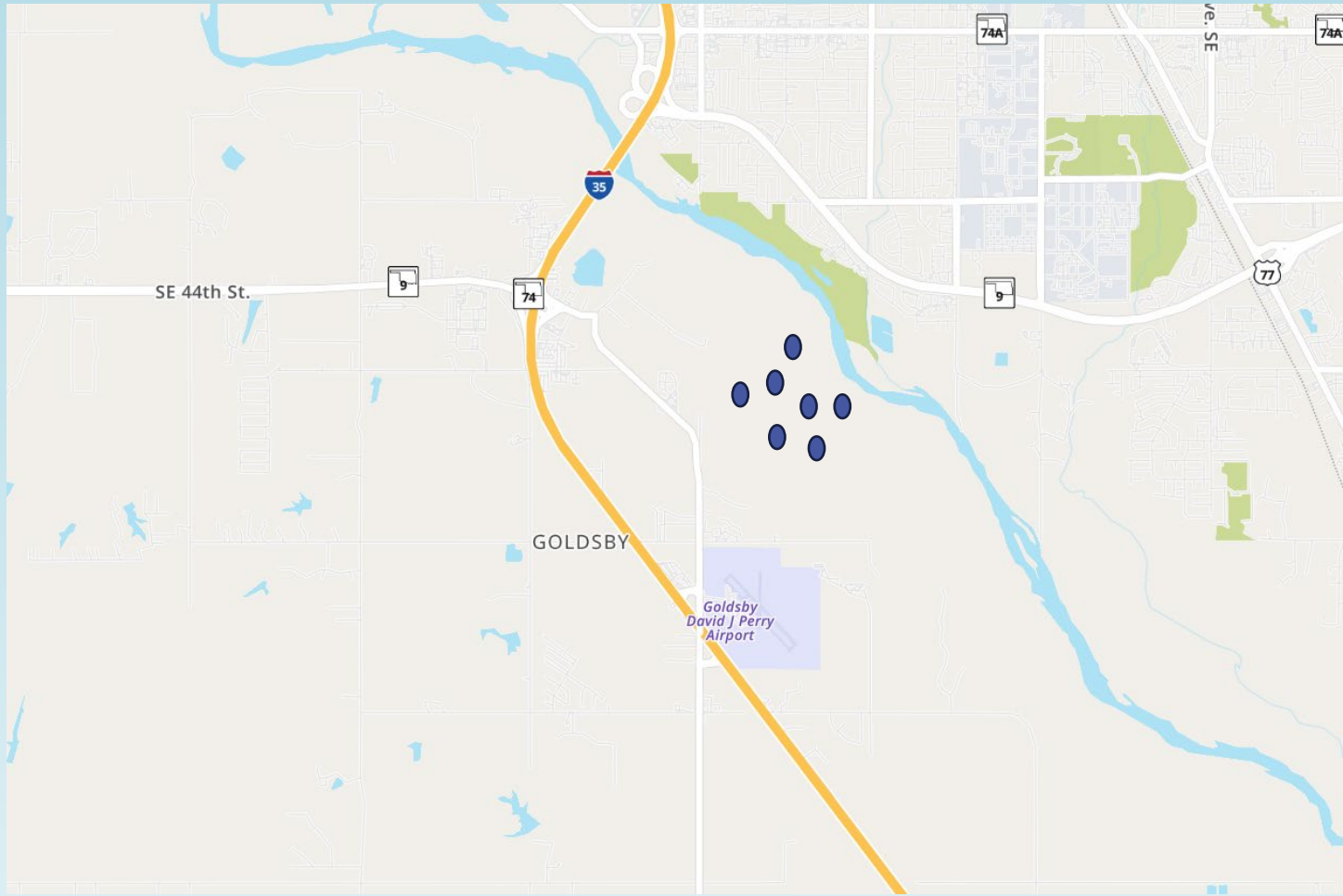


Town of Goldsby Water System

PRESENT AND FUTURE

What Does Our Infrastructure Look Like?



It Starts At The Well Sites

We have 7 Water Wells

What Can These 7 Wells Produce?

- Its All About Water Rights That You Own or Lease
- Regulated By The State of Oklahoma
- Limits Amount Of Water That Can Be Pumped Out

What Can These 7 Wells Produce?

- 1 Acre of Land = 2 Acre Feet Of Water Rights
- 1 Acre Foot Of Water = 43,560 Cubic Feet
- 7.48 Gallons Water/Per Cubic Foot
- $43,560 \times 7.48 \times 2 = 651,656$ Gallons Of Water/Per Acre Of Water Rights/Per Year
- Goldsby Has ~ 1,120 Acres Of Dedicated Water Rights (owned or leased)
- $1,120 \text{ Acres} \times 651,656 \text{ Gallons} = 730,000,000$ Gallons/Per Year

Water Treatment Plant

- Built in 1997
- Major Expansion in 2018
- Cost of \$5.5 Million
- Loan From Oklahoma Water Resources Board
- Remaining Debt = approximately \$2 Million
- Paid Off in 2038 (annual payments approximately \$180,000)
- Maximum Water Production = 2.0 Million Gallons/Per Day (GPD)
- 2.0 Million GPD x 30 Days = 60 Million Gallons/Per Month
- 2.0 Million GPD x 365 Days = 730,000,000 Gallons/Per Year



West Tower

South Tower

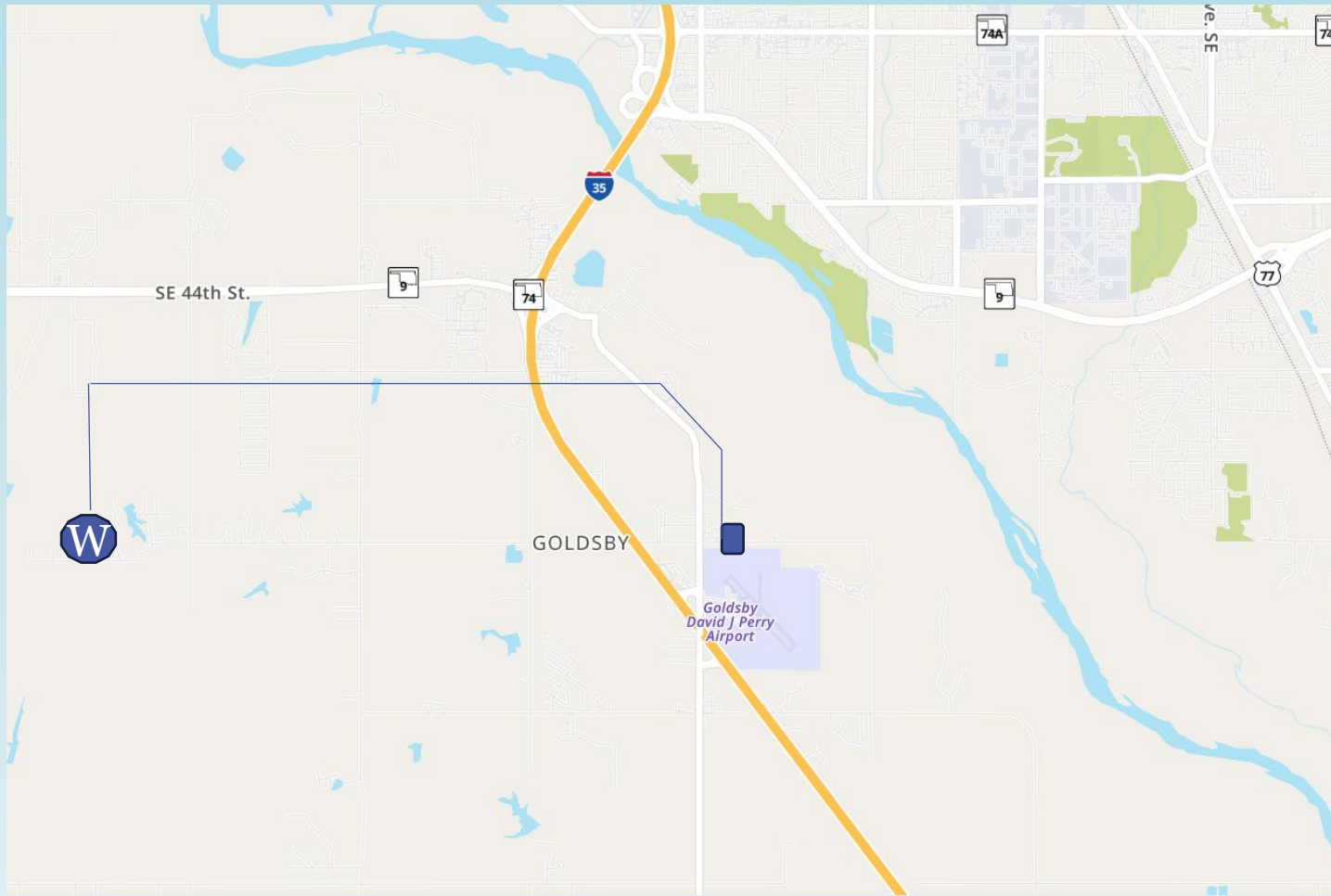
Total Capacity = 300,000 Gallons
At Each Tower

How Does Water Get From The Treatment Plant To The Towers?

West Tower

8" Water Line

Indirect Route To
To West Tower
~ 5 Miles In Length

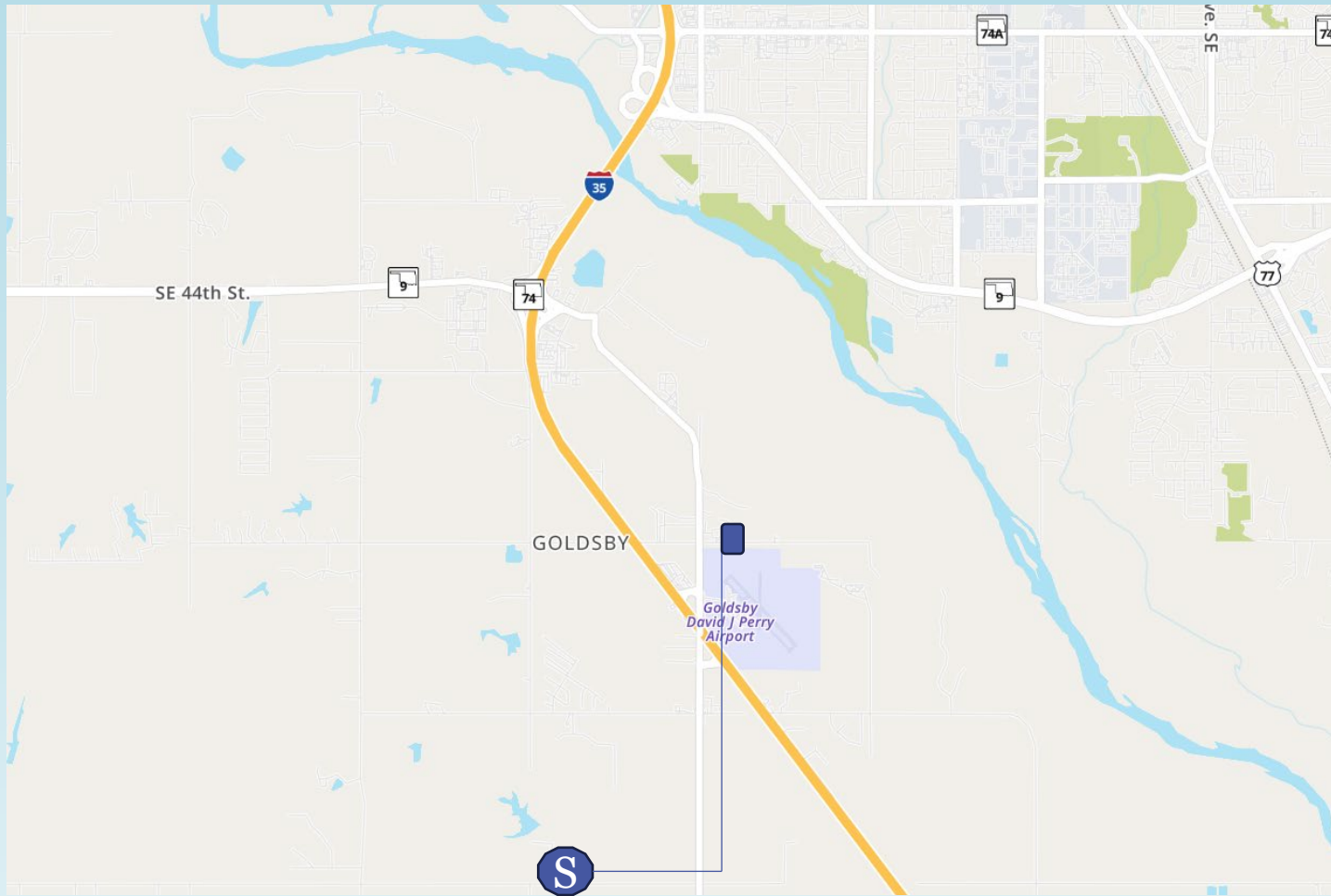


How Does Water Get From The Treatment Plant To The Towers?

South Tower

8" Water Line

Route To
To South Tower
~ 3.5 Miles In Length



How Much Water Can We Pump Through These 8” Lines ?

- Pump to West Tower = Maximum Capacity Is 350 Gallons/Per Minute (GPM)
- $350 \text{ GPM} \times 1,440 \text{ Minutes/Per Day} = 504,000 \text{ Gallons/Per Day (GPD)}$
- $350 \text{ GPM} \times 1,440 \text{ Minutes/Per Day} \times 30 \text{ Days} = 15,120,000 \text{ Gallons/Per Month}$

- Pump to South Tower = Maximum Capacity Is 240 Gallons/Per Minute (GPM)
- $240 \text{ GPM} \times 1,440 \text{ Minutes/Per Day} = 345,600 \text{ Gallons/Per Day}$
- $240 \text{ GPM} \times 1,440 \text{ Minutes/Per Day} \times 30 \text{ Days} = 10,368,000 \text{ Gallons/Per Month}$

How Are The Water Meters Distributed?

- West Tower Serves 619 Meters
- South Tower Serves 819 Meters

What Caused Our Water Crisis?

- The simple answer:

The water infrastructure has not been improved to match the residential growth Goldsby has experienced

2023 Residential Water Usage = 80%

2023 Commercial Water Usage = 20%

What Caused Our Water Crisis?

- Water Usage Out Of The Towers (West Tower worse)
During Summer High-Peak Times
Exceeds The Systems Ability To Fill The Towers
Equals

LOW WATER PRESSURE OR WORSE - NO WATER

What We Know

- The Major Chokepoint = 8” Water Line To Towers
- Additional Infrastructure Needed
 - Larger Water Lines from Treatment Plant to Towers
 - Higher Capacity Pumps At Treatment Plant
 - Higher Capacity Water Storage At Treatment Plant
- Current Capacity Of Water Wells Is More Than Adequate
- Current Capacity Of Treatment Plant Is More Than Adequate
- Current Production Capability is up to 2,000,000 GPD

What Can The Current Board Do To Fix This?

- How Do We Increase Water Flow To The Towers?
- Increasing Water Flow To West Tower Is Highest Priority
- 18” Water Line From Treatment Plant To West Tower?
- 12” Water Line From Treatment Plant to Old Town Square?
- Purchase Water From Newcastle?
- Other Options?
- **Need Comprehensive Water Study By An Engineer**

Need Comprehensive Water Study By An Engineer

- This project was a top priority
- Developed a computerized water model of our water system
- Provides computer generated answers to critical questions
- Will serve as a guide for future improvements to the system
- Completed June 2024

18” Water Line To West Tower

- At Least 3 - 4 years to complete this project?
- ~ 3.5 miles along Burr Oak (direct route)
- Cost At Least \$4 - \$5 Million Dollars
- High Capacity Pump - max 1,500 GPM (Gallons/per Minute)
- Increase Water Storage At Treatment Plant ~\$850,000
- This is a long-term solution for our infrastructure needs

12” Airport Water Line

- Connect Treatment Plant to existing 12” water line at Old Town Square
- Completes a 12” loop from Treatment Plant to West Tower
- Provides a second route for water from Treatment Plant to West Tower (original 8” line plus new 12” line)
- Doubles the amount of water available for the West Tower
- Should allow Goldsby to meet the peak daily water usage from the West Tower (>1,000,000 GPD) for the next few summers

12” Airport Water Line

- 1.5 miles from Treatment Plant to entrance of Old Town Square at Highway 74
- Cost = \$1.4 million (paid with grant money)
- Completed December 2024

12” Airport Water Line

- The real value of this project:
 - Provides a second independent route to West Tower (redundancy important if repairs needed to one line)
 - Doubles capacity to West Tower to meet summer demand (gets us critical infrastructure improvement short-term until a long-term project can be completed)
 - Enables Goldsby to be Self-Sufficient for our water needs (Current production capability is maximum of 2,000,000 GPD)
 - Avoids need to purchase Newcastle water (significant cost = significant increase in monthly water bills)

Newcastle Water **N**

SE 44th St.

Yellow Line = Existing 12" Line added years ago

Blue Line = Original 8"

West Tower

W

Treatment Plant

Goldsby
David J Perry
Airport

Green Line = 12" (2024)
Airport Waterline

Red Line = 12" (2022/2023) to Old Town Square

Purchase Water

- Newcastle 16” Water Line At Highway 9/NW 24th (Sante Fe)
- Connects to Goldsby 12” Water Line That Runs Along NW 24th
- Booster Station completed
- Newcastle Contract Limits Water Purchase to 400,000 GPD
- 400,000 GPD = 12,000,000 Gallon per Month
- Cost is ~\$67,000 per month
- ~\$808,000 per year = ~\$2,400,000 for 3 year contract

Purchase Water

- Ideal for Goldsby would be ability to purchase Newcastle water **only during 2024** summer high-demand months
- This would allow Goldsby to meet the peak daily water usage from the West Tower (>600,000 GPD)
- Then Goldsby's 2024 12" waterline project will allow us to meet peak daily water usage from the West Tower upon completion

Purchase Water

- Ideal for Goldsby would be to purchase Newcastle water **only during 2024** summer high-demand months
- But Newcastle offered one type contract
 - Locked into contract for 3 years
 - Goldsby sets amount of water to be purchased per month (12,000,000 gallons)
 - Goldsby billed for this amount every month, even if not needed during winter months (total cost of 3-year contract \$2.4 million)
 - Portion of costs for future improvements to Newcastle infrastructure passed on to Goldsby (in addition to monthly fee)
 - So Goldsby would be spending \$2.4 million (at least) in an attempt to avoid water rationing during the summer of 2024, then for the remainder of the 3 year contract paying for water we do not need, and there was no guarantee the contract would get us through the summer of 2024 without water rationing

Other Options?

- Multi-Town/Tribal Consortium?

Initial Discussions For New Water Line From OKC

Might be a Potential Long-Term Option?

- Purchase Water From Norman?

Cheaper Than Newcastle Water?

Requires Additional Infrastructure

Might be a Potential Long-Term Option?

Summer of 2024

- Must Conserve Water – Mandatory Odd/Even Rationing
- Improve Awareness And Understanding Of The Problem
- Improve Notification On Water Rationing
 - Start Notifications And Water Rationing **Prior** To Summer
 - Start Water Rationing While The Tower Is Full
 - Alert On Water Bill, Facebook, Electronic Billboard
 - Newspaper, Town Website
- Need Cooperation From Every Water Meter Holder!!!!

Summer of 2024

- We saw a tremendous level of acceptance and cooperation from residents on the water rationing!!!!
- The summer water rationing was a success in keeping the water at a high level in both water towers during the summer high-demand months.

After 2024

- 12” Airport Water Line (completed in December 2024)
Doubles amount of water to West Tower
before maximum to West Tower was 500,000 GPD
now 1,000,000 GPD (gallons per day) to West Tower
- Increased size of pumps to Both Towers completed in
December 2024
- South Tower
before maximum to South Tower was 350,000 GPD
now 500,000 GPD

After 2024

- These improvements completed to our water system in 2024 should give us a couple years “breathing room” and allow us to start planning more long-term improvements to the water system.
- There are a couple large residential housing developments that were approved by the previous town board but have not been completely built-out yet.
- The 2024 improvements have gotten us ahead of the current water usage; we must continue our focus to stay ahead of the future growth curve.

Send Questions Or Comments

- Town Of Goldsby Facebook Page
- Email: mike@townofgoldsby.com