

STATE OF ALABAMA) (:
COUNTY OF BALDWIN) (

The City Council met in a Work Session
at 4:30 p.m., Fairhope Municipal Complex Council Chamber,
161 North Section Street, Fairhope, Alabama 36532,
on Monday, 12 December 2022.

Present were Council President Jay Robinson, Councilmembers: Jack Burrell, Corey Martin, Jimmy Conyers (arrived at 4:47 p.m.), Mayor Sherry Sullivan, City Attorney Marcus E. McDowell, and City Clerk Lisa A. Hanks. Councilmember Kevin Boone was absent.

Council President Jay Robinson called the meeting to order at 4:30 p.m.

The following topics were discussed:

- The first item on the agenda was the Fairhope Public Schools Commission update by Amy Foley. She told the City Council their goal for Fairhope Schools is to be ranked in the “Top 5.” (See attached handout) Ms. Foley said the Fairhope Middle School is ranked number 6. Councilmember Burrell questioned whether the ACT figures were scores or percentages. Council President Robinson commented he was glad to see improvement. Councilmember Martin explained why the Fairhope Public Schools Commission put this together for the presentation. Ms. Foley stated she tried to simplify the update for their presentation. Councilmember Burrell said the goals have switched from the “Top 10” to the “Top 5.”
- The Update on Water Line was next on the agenda. Caleb Leach and Mark Smith with Krebs addressed the City Council and presented a Power Point Presentation named “Water System Planning.” (See attached Power Point Presentation) Councilmember Burrell questioned multiple wells on site and aquifers. Mr. Leach replied this will be the largest treatment plant for the City and has room for expansion. Councilmember Martin questioned how many models, when done, and what time. Mr. Leach replied there will be different demands and different models, i.e., peak times during the summer. Councilmember Burrell asked if water was tied to efficiencies not just growth. Councilmember Martin asked if we should look forward if we did not have enough water. Mr. Smith replied we should plan for the worse case scenario and budget for same. PFAS concerns were discussed along with EPA regulations.

Council President Robinson briefly went through the Agenda Items and who would explain if needed.

Monday, 12 December 2022

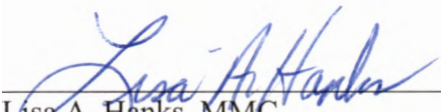
Page -2-

- City Treasurer Kim Creech addressed the City Council and gave an update on interest for the Operating Account (2.65%) and the Reserve Account (3.25%).
- Community Affairs Director Paige Crawford addressed the City Council and thanked them for the Christmas Luncheon. She mentioned the Movie in the Street will be "Grinch;" the movie in the stadium on Friday; and the Arts Alley Project update.
- Human Resources Director Cory Pierce addressed the City Council and gave an update on the Biometric Screening.
- Electric Superintendent Conrad Havranek addressed the City Council regarding Agenda Item No. 13; and answered any questions if needed.
- Public Works Director Richard Johnson addressed the City Council regarding Arts Alley Project; intersection at Gayfer Avenue and U.S. 98; TAP Grant for sidewalks. He explained Agenda Item No. 14; and said Agenda Item No. 15 is being pulled. Mr. Johnson answered any questions if needed.
- Gas Superintendent Jeremy Little addressed the City Council and announced that the Public Services Commission awarded the Fairhope Gas Department as the "Gas System of the Year" for all of the upgrades and work that has been done in the City. He explained Agenda Item No. 16 and the problems with getting the truck; and answered any questions if needed. Councilmember Burrell asked who we could file a complaint with regarding this issue.
- Mayor Sherry Sullivan addressed the City Council regarding Agenda Item No. 12; and answered any questions if needed.
- City Attorney Marcus McDowell addressed the City Council regarding Agenda Item No. 10; and answered any questions if needed.
- Planning Director Hunter Simmons addressed the City Council regarding Agenda Items No. 5 through No. 7, and No. 9; and answered any questions if needed.

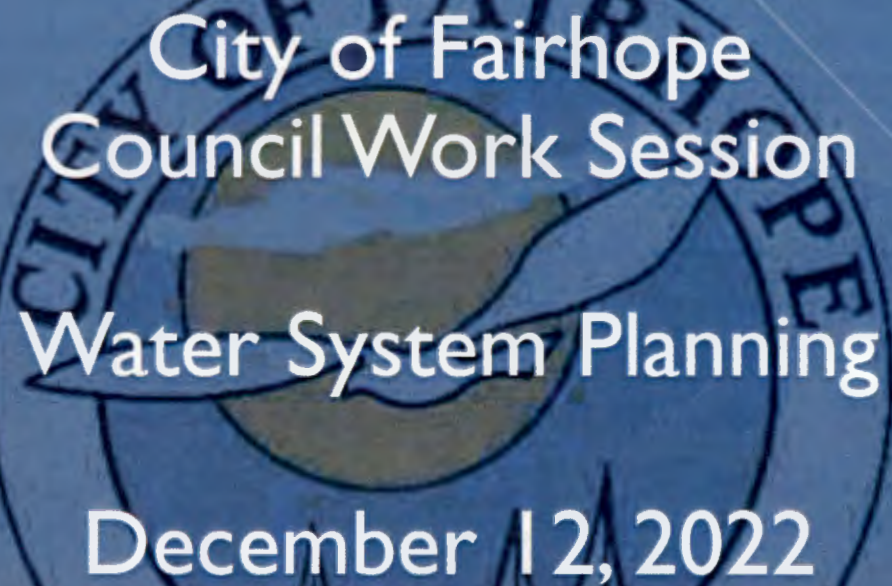
Council President Robinson stated we will be taking a 10 minute recess; and then start the City Council Meeting. There being no further business to come before the City Council, the meeting was duly adjourned at 6:04 p.m.



Jay Robinson, Council President



Lisa A. Hanks, MMC
City Clerk

The seal of the City of Fairhope, Alabama, is a circular emblem. It features a central sun rising over a body of water with several sailboats. The words "CITY OF FAIRHOPE" are written in a circle around the top, and "ALABAMA" is written around the bottom.

City of Fairhope Council Work Session Water System Planning December 12, 2022

Caleb Leach, P.E. and Mark Smith, P.E.
Krebs Engineering, Inc.



OVERVIEW OF TODAY'S DISCUSSION

- ABOUT KREBS ENGINEERING
- OVERVIEW OF EXISTING WATER SYSTEM
- UPDATE ON WATER SYSTEM IMPROVEMENTS
- WHY IS WATER SUPPLY PLANNING IMPORTANT?
- TYPICAL WATER SUPPLY PLANNING PRACTICES
- HYDRAULIC MODELING
- HISTORICAL WATER DEMANDS
- PROJECTED WATER DEMANDS
- WHAT'S NEXT?

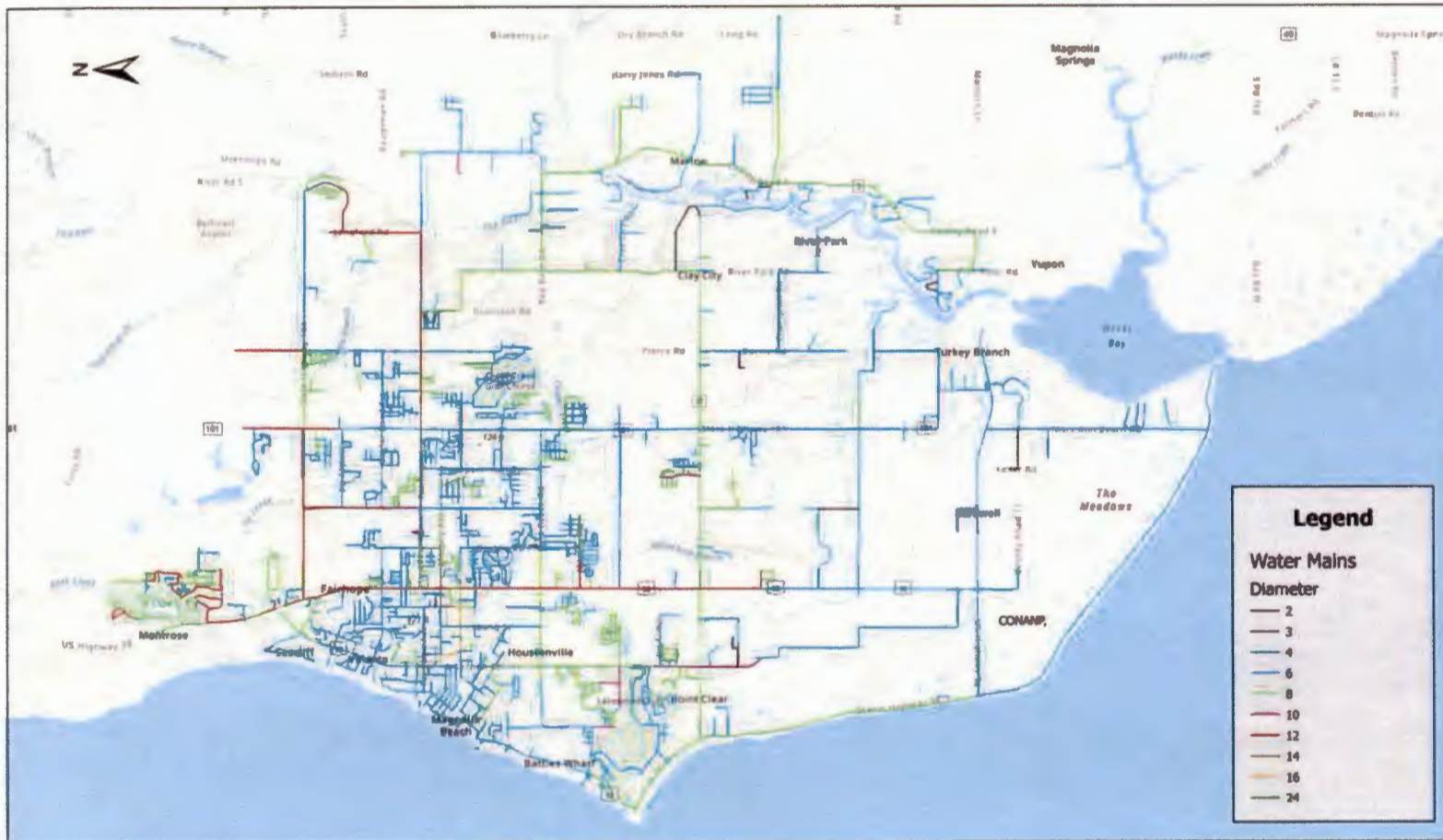


About KREBS ENGINEERING

- 96-Year-Old Alabama Engineering Firm; Founded in 1926
- Our Primary Focus is Water & Wastewater Engineering
- Our Client Relationships Average Over 30 Years in Length
- **100%** Employee Owned

OFFICE LOCATIONS

- Birmingham, AL
- Montgomery, AL
- Newnan, GA

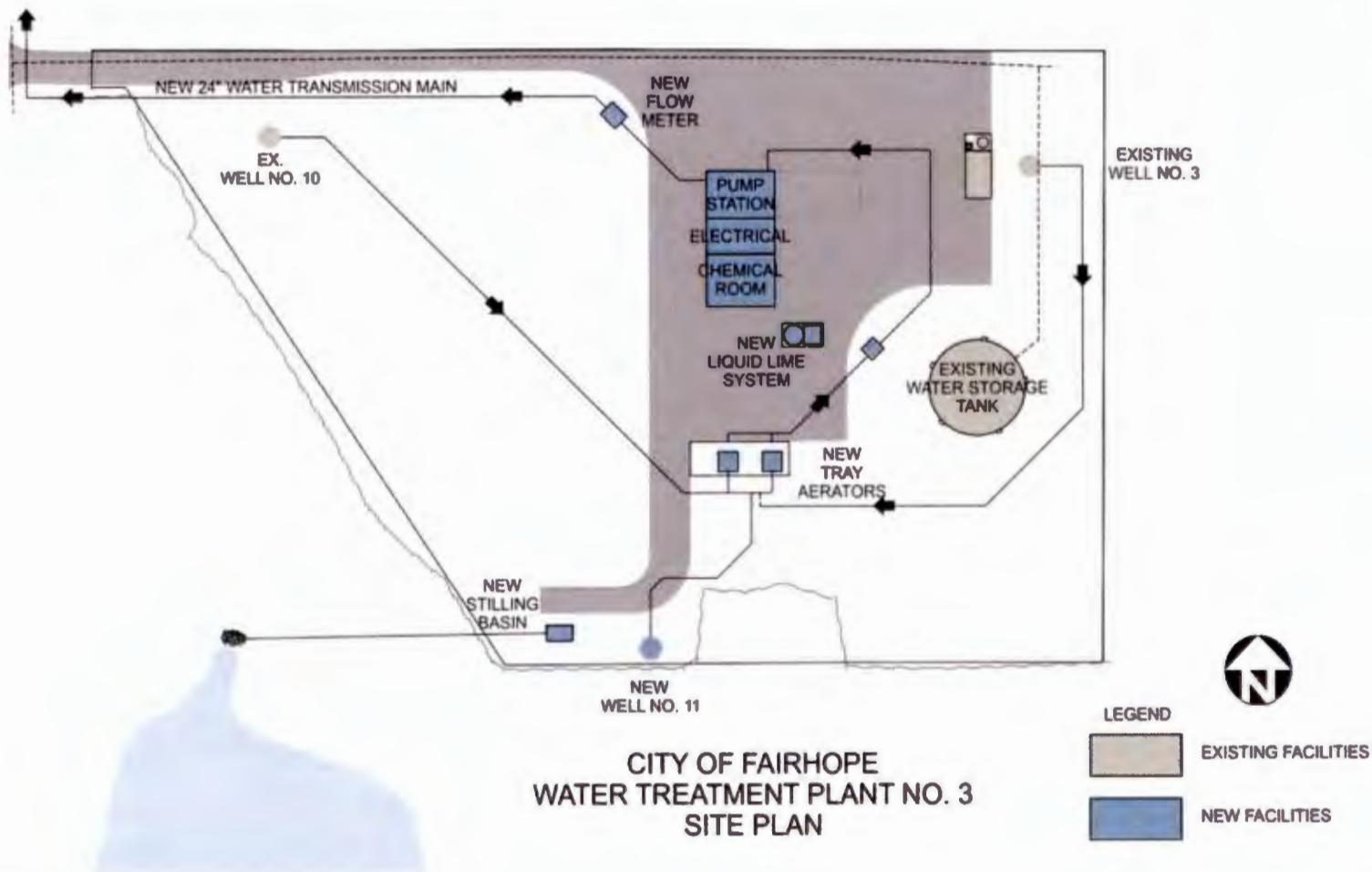


- Decentralized System
- 10 Water Supply Wells
Totaling a Raw Water
Capacity of 11 MGD
- 5 Treatment Facilities
- Total Treatment Capacity –
8.5 MGD
- Approximately 85% of
Water Distribution Piping is
8-inch Diameter or Smaller

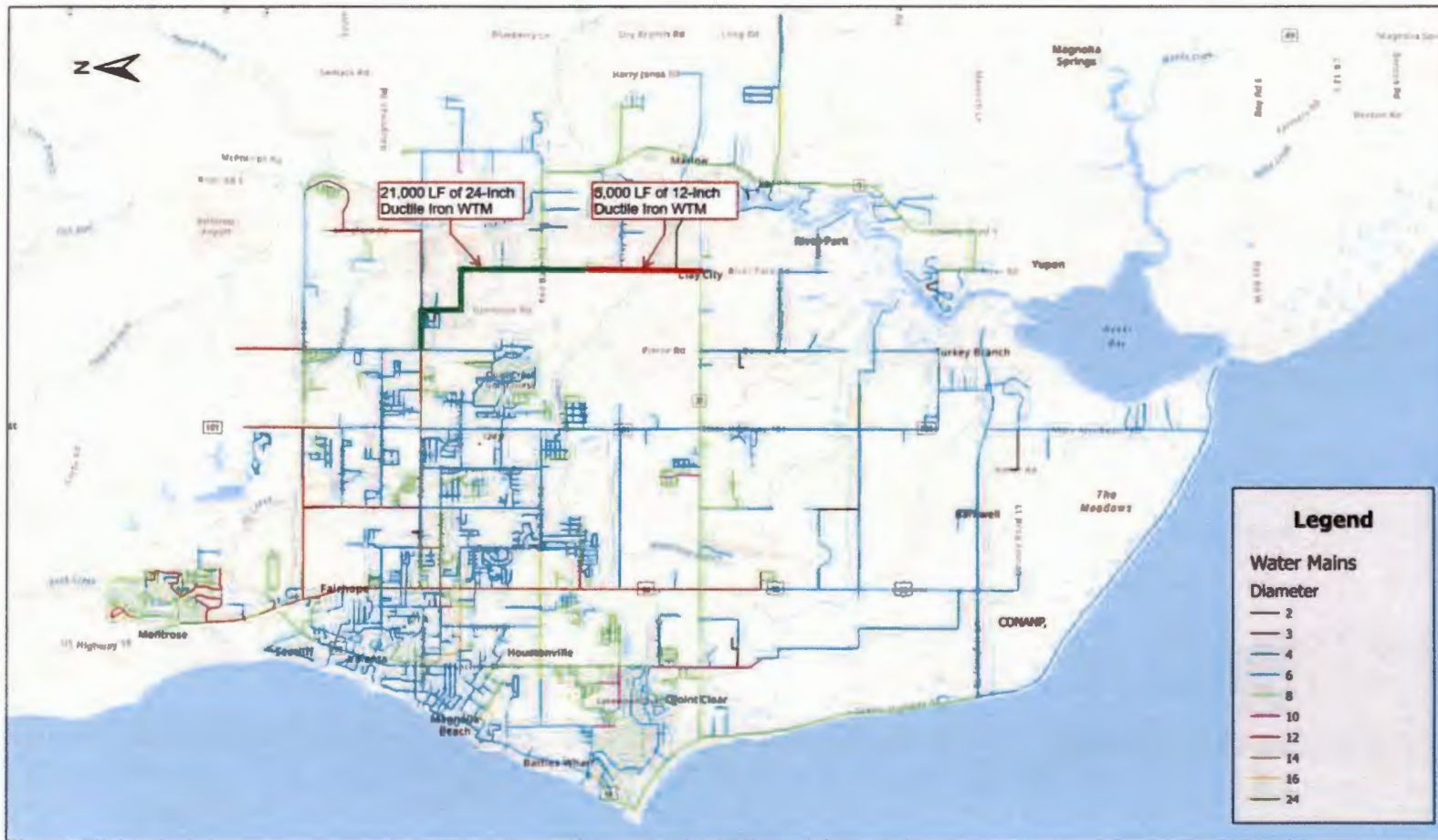


City of Fairhope Water System Map





- Bid Awarded to The Creel Company, Inc.
- Contracts are Executed and worked began on 12/5/2022
- Total Contract Amount = \$7,589,893.00
- Ex. Treatment Capacity – 1,050 GPM or 1.5 MGD
- Treatment Capacity at Project Completion – 2,500 GPM or 3.6 MGD
- Estimated Completion Date - Prior to Summer 2024
- Total Future Buildout Capacity – 6 MGD



24-Inch Water Transmission Main

- Bid Awarded to Hemphill Construction Company, Inc.
- Contracts are Pending Execution
- Contract Amount = \$6,452,960.00
- Estimated Completion Data - Prior to Summer 2024

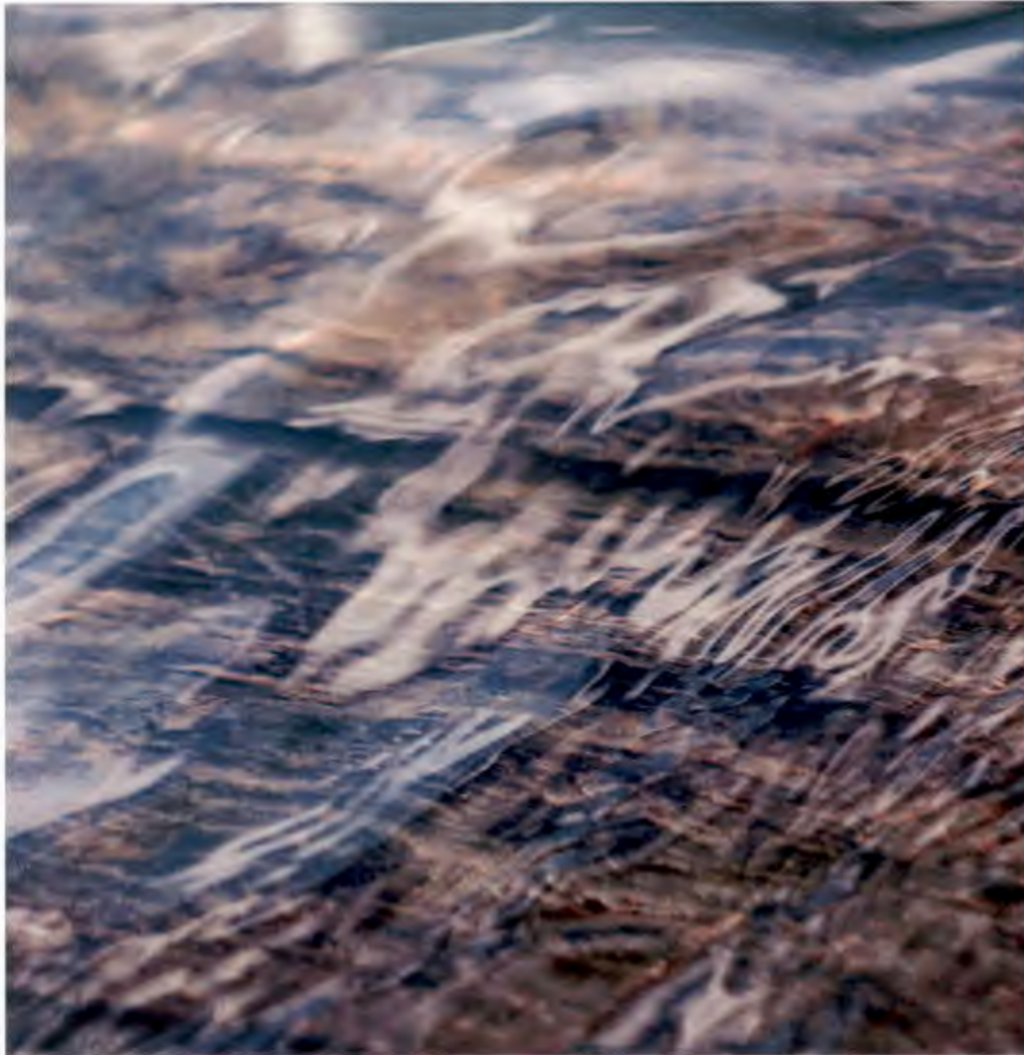
12-Inch Water Transmission Main

- Project is in Design
- Estimated Project Cost – \$900,000



**City of Fairhope
Water System Map**





WHY IS WATER SUPPLY PLANNING IMPORTANT?

- Ensures that Fairhope has the Water Supply it Needs
- Enables the City to Identify and Prioritize Water Supply Improvements
- Enables the City to Budget for Water Supply Improvements
- Improves Water System Reliability and Redundancy
- Required for Funding and ADEM Approval

TYPICAL WATER SUPPLY PLANNING PRACTICES

- Review Historical Population & Water Usage Data
- Evaluate Water Demand Growth & Population Growth
- Identify Areas of Future Development
- Develop a Water Conservation Plan and Monitor Water Loss
- Develop a Hydraulic Model
- Identify Water System Improvements Needed for Different Planning Horizons
 - Short-Term (0 - 5 Years)
 - Intermediate-Term (5 - 10 Years)
 - Long-Term (Minimum 20 Years – Some States Require 50 Years)
- Develop a Water Supply Master Plan Report to Summarize the Findings



WHAT IS HYDRAULIC MODELING AND HOW WILL IT HELP FAIRHOPE?

- Evaluate the City's Ability to Provide Fire Flow
- Evaluate the Ability to Provide Adequate Water Pressure
- Troubleshoot Low-Pressure Complaints
- Perform Water Quality Analysis
- Evaluate Impacts from Pending and Proposed Developments, and Growth
- Identify Improvements Needed for Developments/Growth
- Evaluate Future Wells and Other Sources of Supply
- Useful Tool when Sizing and Locating Pipelines and Storage Tanks



As requested, Krebs has completed the analysis of the potential impacts on the water distribution system from the Cleft Farms development. It is our understanding that the development will generally be located north of Highway 72 between Wall Triana Highway and Balch Road. Furthermore, it will consist of 350,000 sq-ft of commercial space, 1,150 dense residential dwellings, and 100 residential estate sized lots. Krebs reviewed these development usages and determined that an approximate 700 gpm total demand would account for both domestic and irrigation for the complete build out of the development. The demand assumptions were based on industry standards. The flows were split 54 percent domestic and 46 percent irrigation. This is based on historical meter data provided by Madison Utilities. The following summarizes the improvements/operational changes required to serve this new development.

1. It is recommended the new development connect to the existing 12-inch water main along Highway 72 in two locations to loop the feed.
2. PRV-9 (far northern PRV on Hughes Road) is required to be put into service with an approximately pressure setting of 100 psi.
3. The Pump House Booster Pump Station would be required to pump approximately 800 gpm during a peak flow event and be available for use when the Keene Water Treatment Plant is not in service.

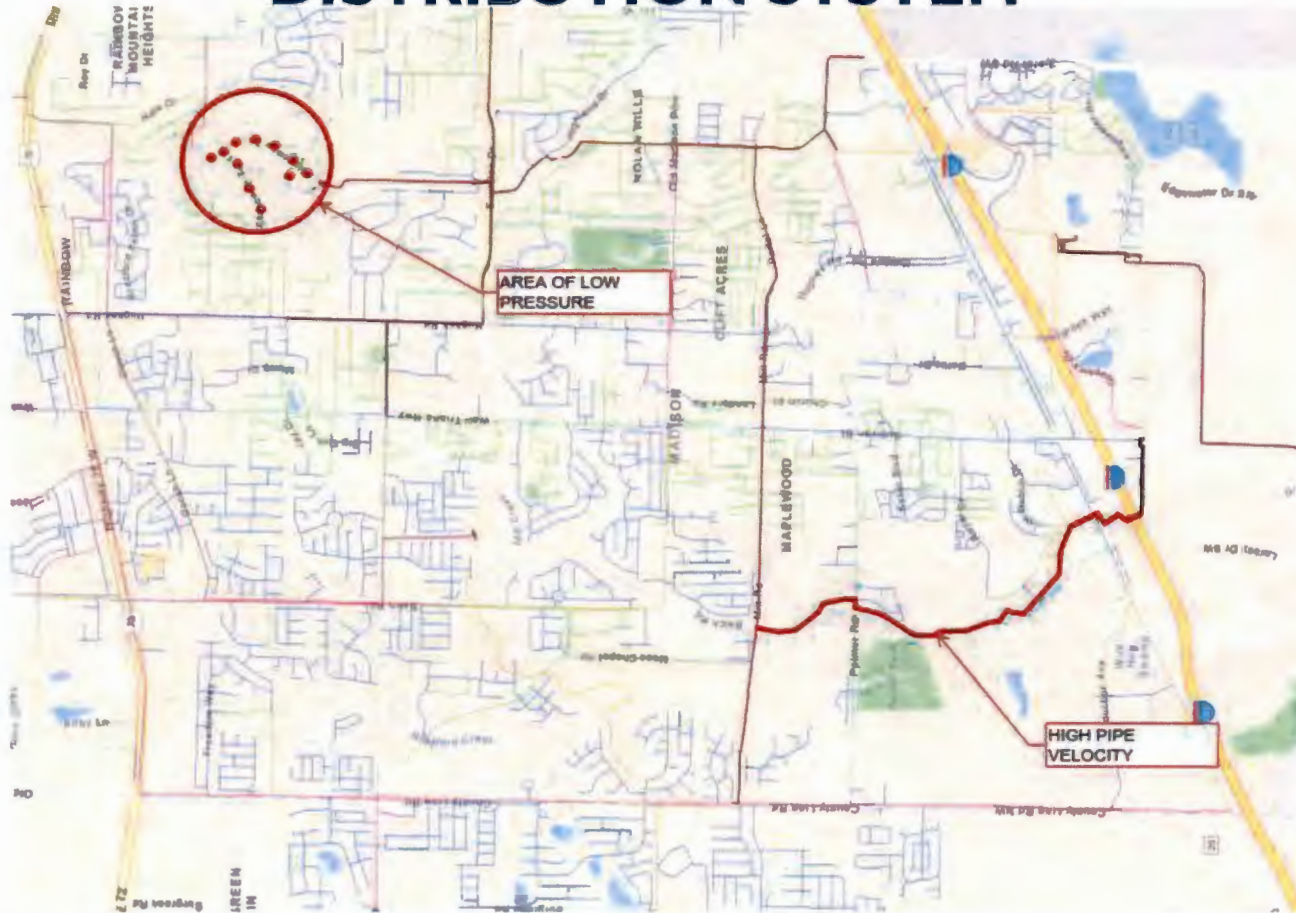
We sincerely appreciate the opportunity to serve Madison Utilities in this matter. If you have any questions, please do not hesitate to contact us.

Krebs Engineering, Inc.

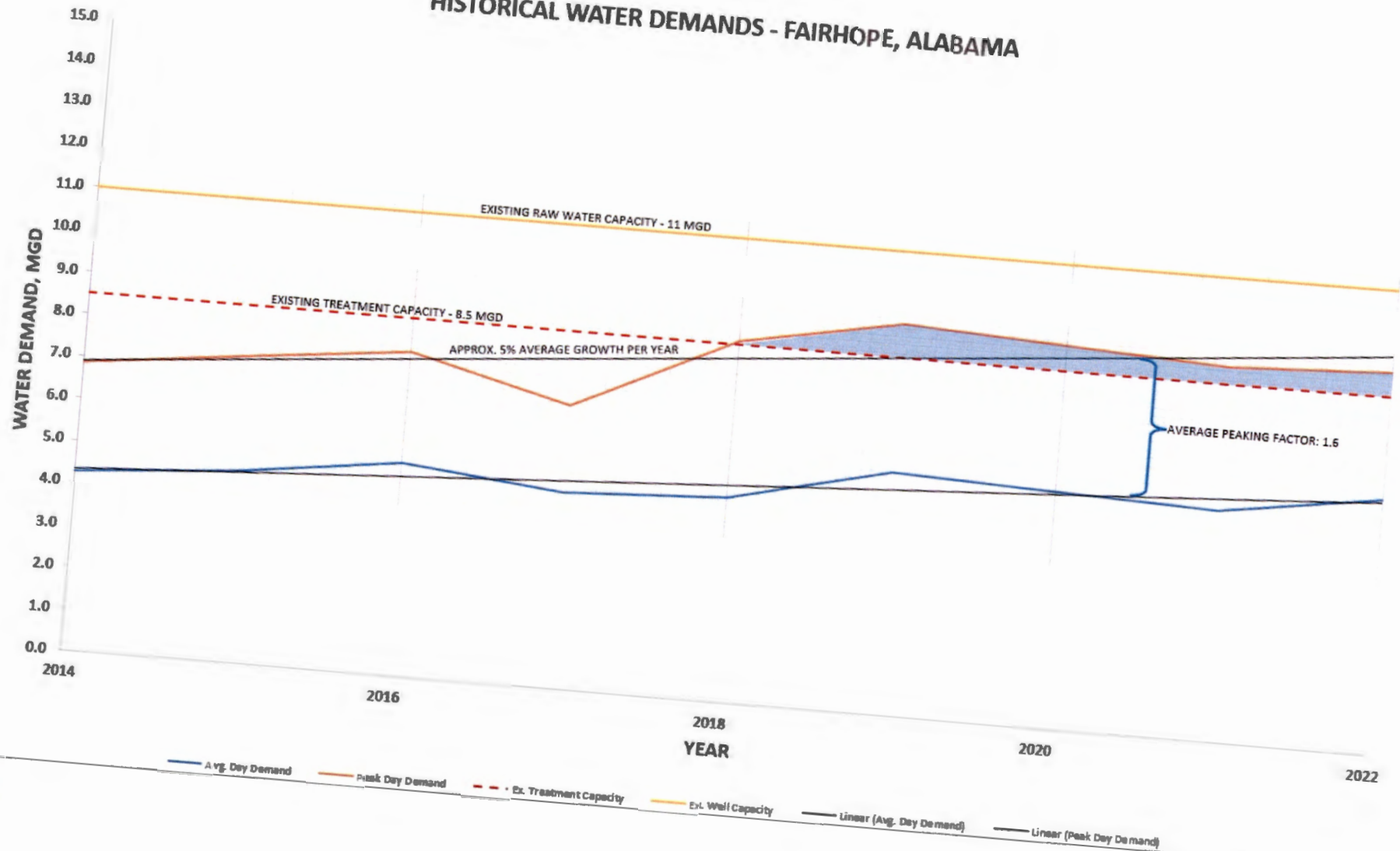
By Caleb L. Leach
Caleb L. Leach
Sr. Project Engineer



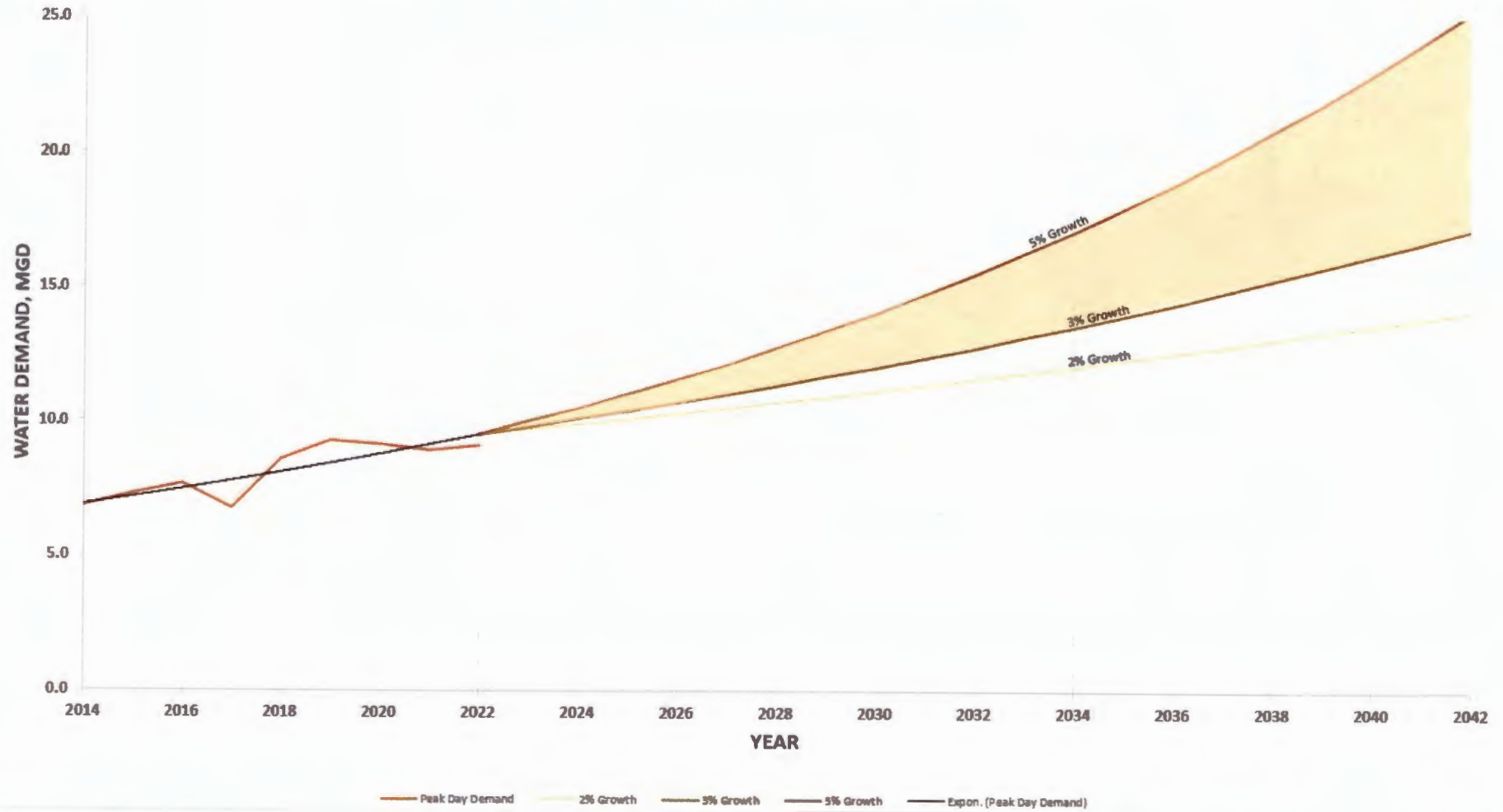
EXAMPLES OF IDENTIFYING ISSUES WITHIN DISTRIBUTION SYSTEM



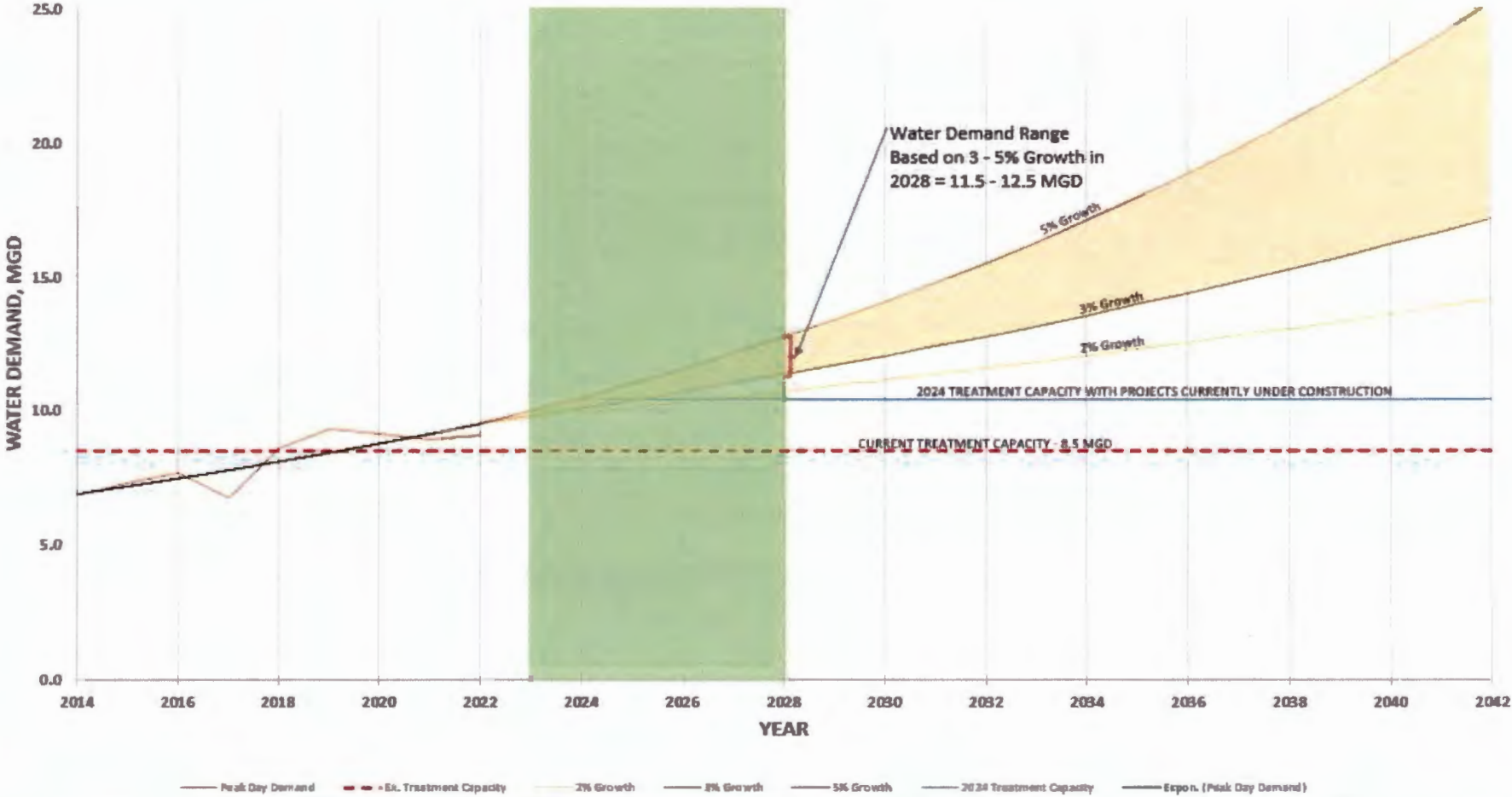
HISTORICAL WATER DEMANDS - FAIRHOPE, ALABAMA



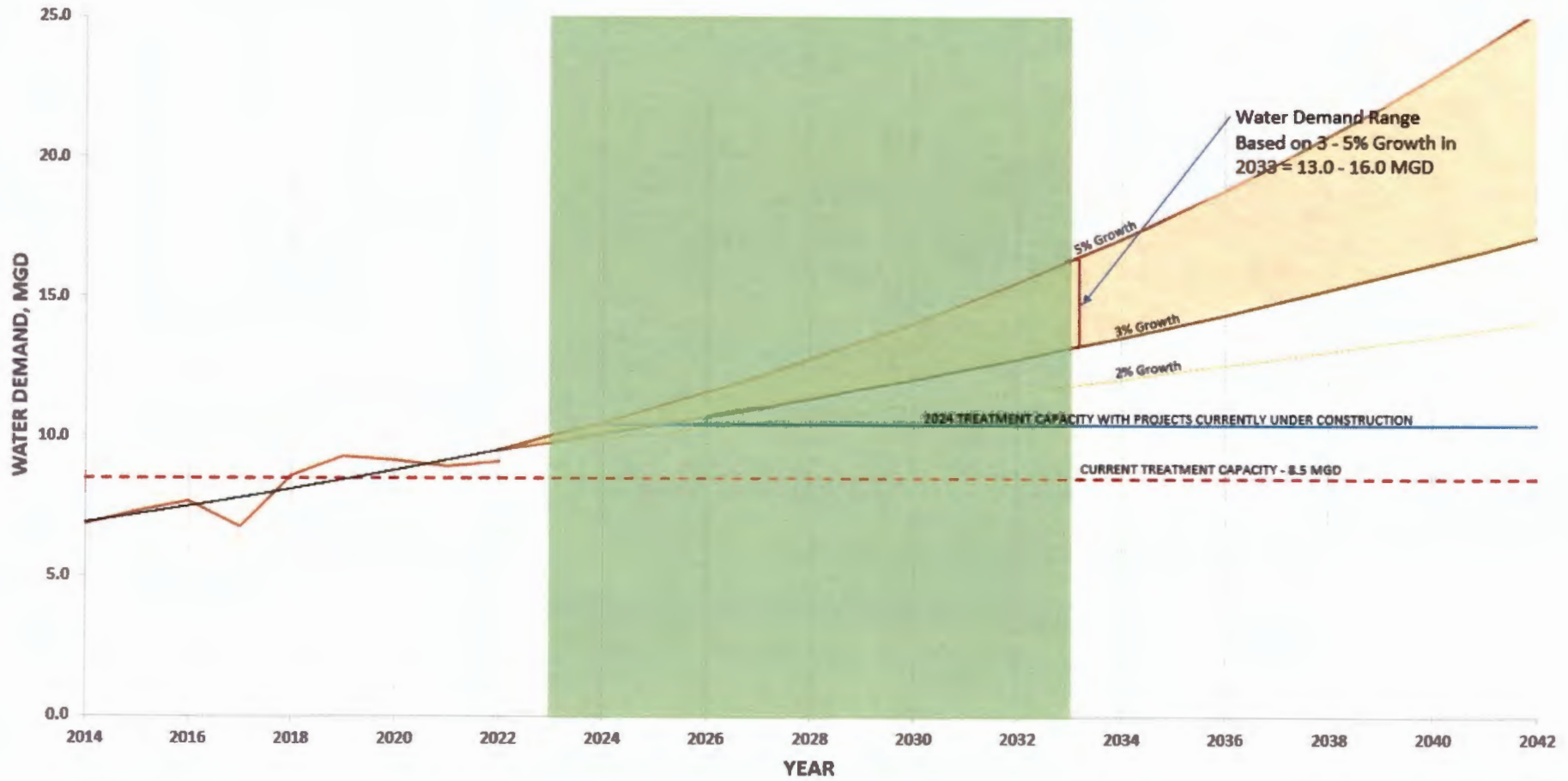
PROJECTED WATER DEMANDS - FAIRHOPE, ALABAMA



SHORT-TERM PLANNING - FAIRHOPE, ALABAMA



INTERMEDIATE-TERM PLANNING - FAIRHOPE, ALABAMA



— Peak Day Demand
 - - - Ex. Treatment Capacity
 — 2% Growth
 — 3% Growth
 — 5% Growth
 — 2024 Treatment Capacity
 — Expon. (Peak Day Demand)

WHAT'S NEXT?

Identify Short-Term Improvements Need in Next 5 Years

- Develop Additional Well at WTP No. 1
- Develop Additional Well at WTP No. 3
- Create a Hydraulic Model
- Use Model to Identify Required Piping Improvements
- Investigate Deeper Aquifer at Well No. 4 (PFAS Concerns)

Identify Improvements Needed in Next 5-10 Years

- Perform a Water Supply Study to Identify and Prioritize Water System Improvements Projects
- Summarize in a Water Supply Master Plan Report
- Develop a Rate Study to Ensure Sufficient Funding

QUESTIONS?

KREBSENG.COM