



Chatham County Board of Commissioners

UTILITIES PARTNERING STUDY

April 19, 2021

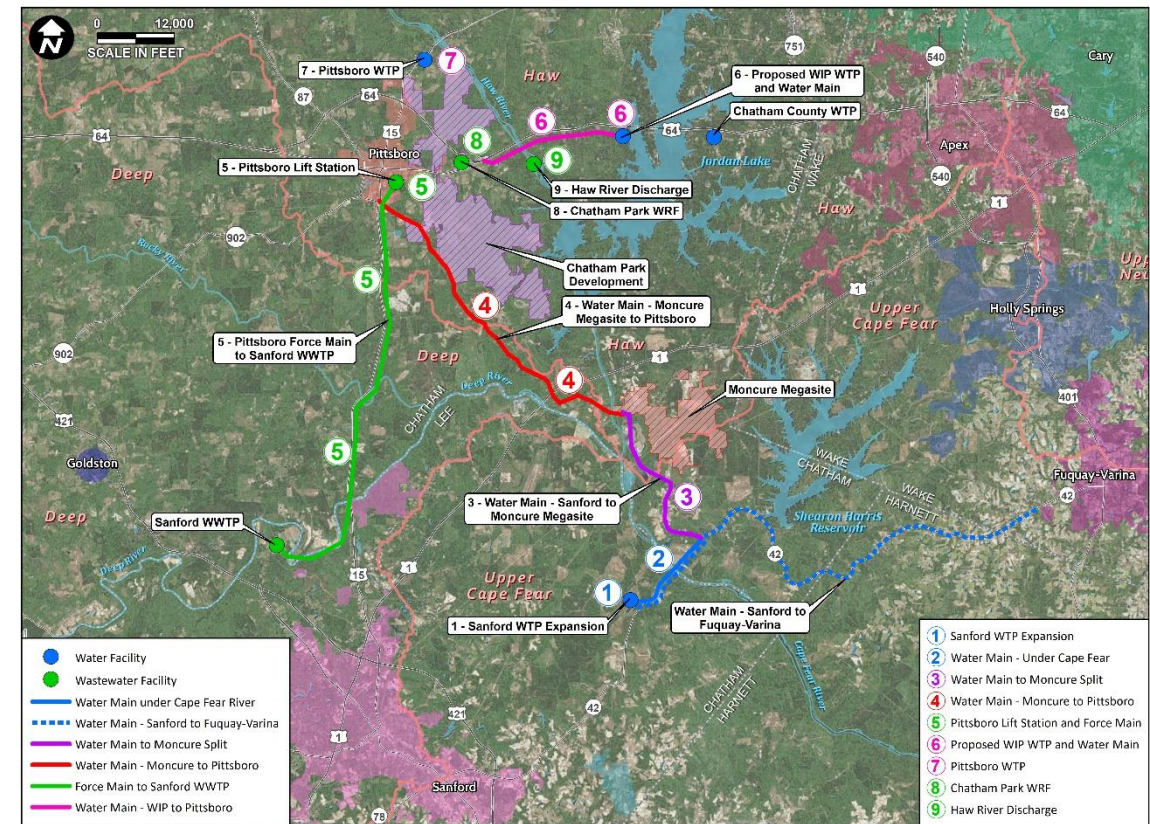
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Chatham County, Pittsboro & Sanford Partnering Study

- Purpose: Identify options for Chatham County, Town of Pittsboro and City of Sanford to share their respective resources with a goal of providing safe, reliable and sustainable water and wastewater utility services to their respective communities.
- Goal: Define an equitable path forward
- Key Considerations:
 - Water Quality
 - Water Quantity
 - Cost
 - Schedule/Timing



Water Quality

Partnering Study

Water Quality

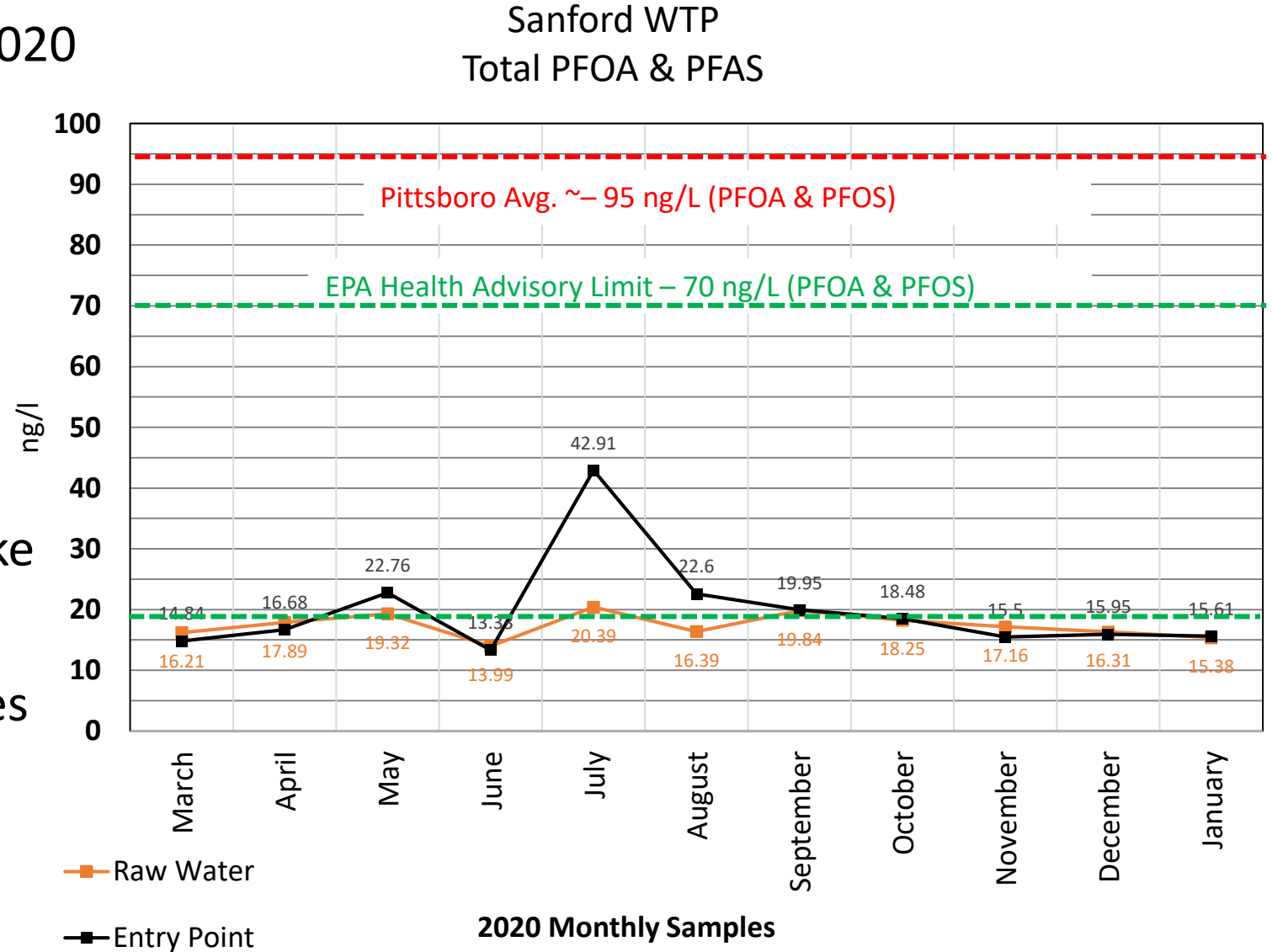
Primary Concerns

- PFAS
- 1-4 Dioxane
- Pittsboro WTP installing advanced treatment for 1 MGD of flow
- Sanford WTP Expansion to include Advanced Treatment for contaminant removal
- 1-4 Dioxane levels have been non-detect



Partnering Study Water Quality

- Cape Fear River PFOA & PFAS 2020
 - Avg. at Entry Point = 19.9 ng/L
 - Avg. at Raw Water = 17.4 ng/L
- 70 ng/L EPA Advisory Limit
- 95 ng/L avg. Haw River Intake
- 844.8 ng/L max Haw River Intake
- Sanford WTP Expansion includes Advanced Treatment



Water Demands

Partnering Study

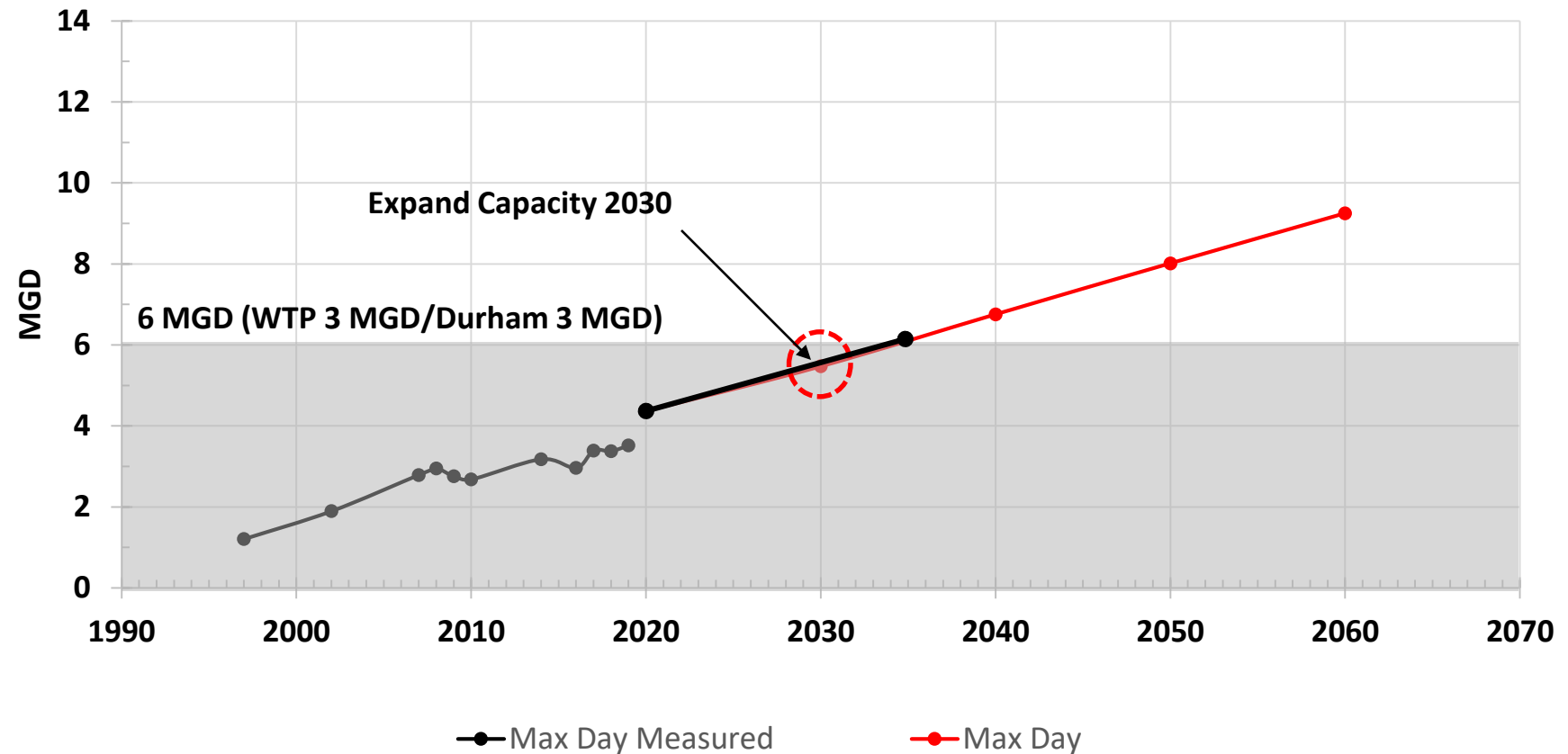
Chatham County Water Demands

Observations:

- Water Sources:
 - Jordan Lake: 13+ MGD
 - Durham: 3 MGD
 - Sanford: 41 MGD
- ~2 MGD Remaining
- 2040 Demand: ~7 MGD
- 2060 Demand: ~9 MGD

NOTE: Demands assume 1 MGD to Moncure in 2020

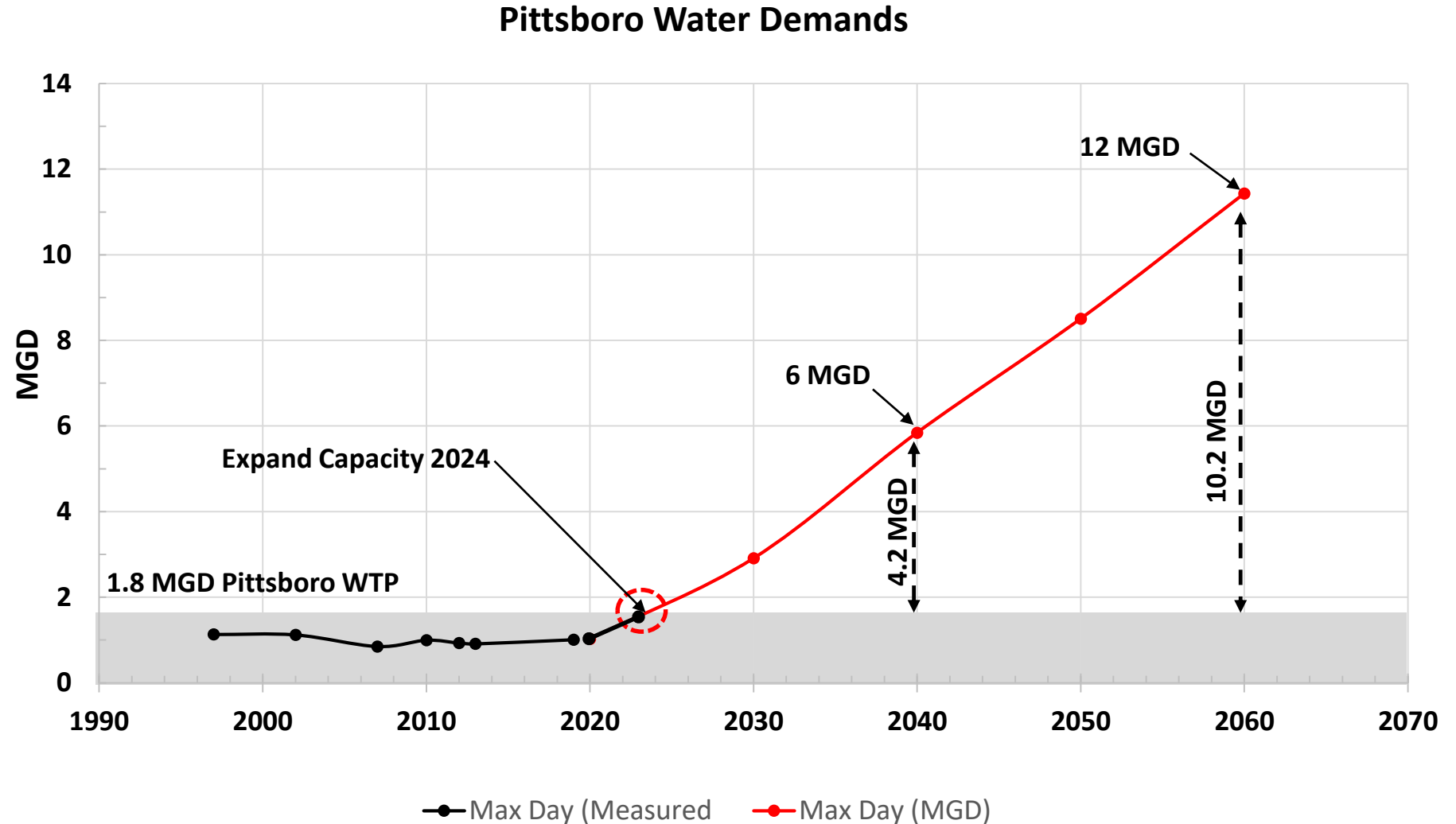
Chatham County Water Demands



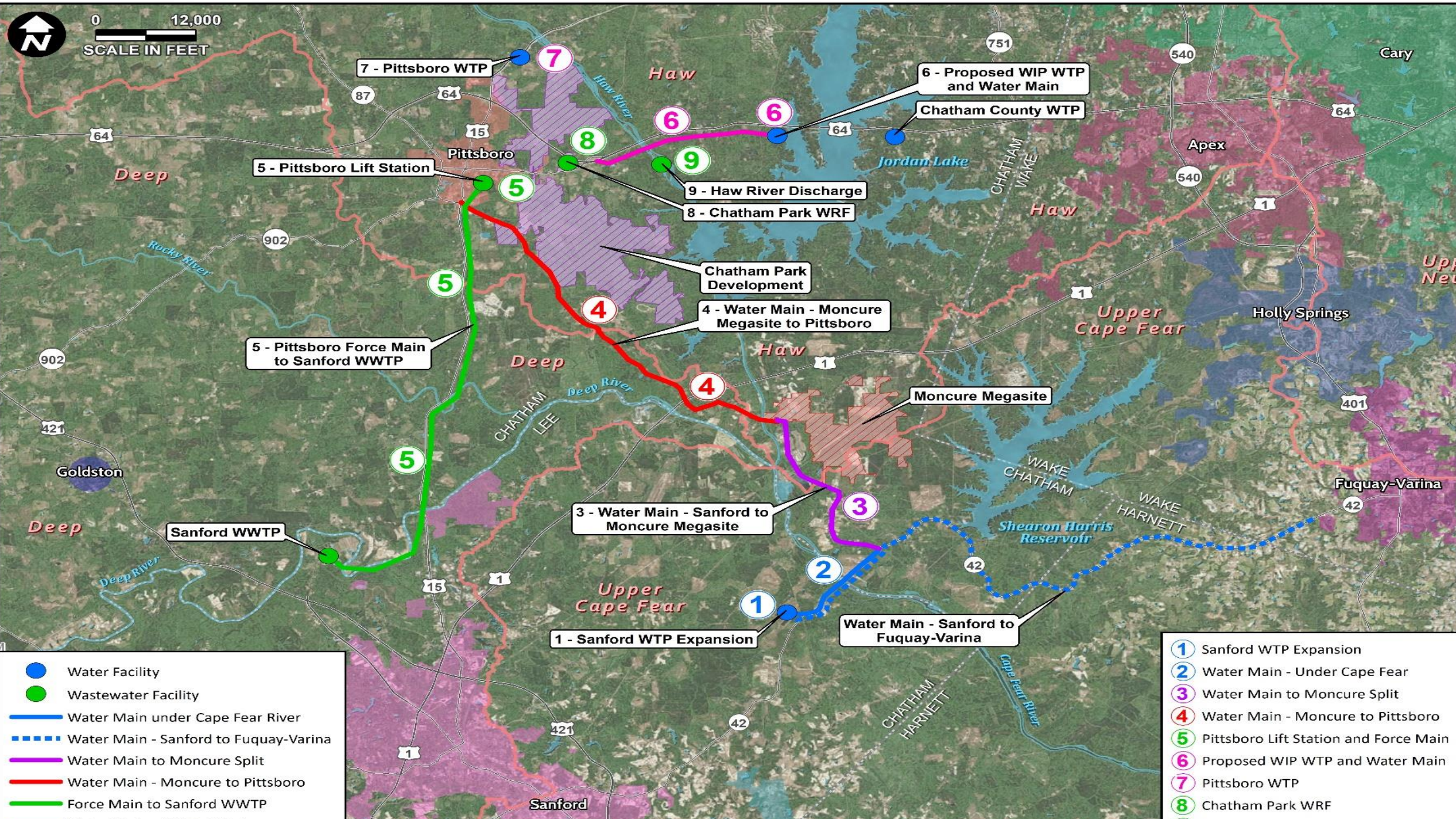
Partnering Study Pittsboro Water Demands

Observations:

- Water Sources:
 - Haw River: 8 MGD
 - Jordan Lake: 9+ MGD
 - Sanford: 41 MGD
- ~0.8 MGD Remaining
- Expand Capacity (Urgent)
- 2040 Demand: ~ 6 MGD
- 2060 Demand: ~ 12 MGD



Alternatives Review



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SCALE IN FEET

7 - Pittsboro WTP

6 - Proposed WIP WTP and Water Main

Chatham County WTP

5 - Pittsboro Lift Station

9 - Haw River Discharge

8 - Chatham Park WRF

Chatham Park Development

4 - Water Main - Moncure Megasite to Pittsboro

5 - Pittsboro Force Main to Sanford WWTP

4 - Water Main - Moncure Megasite

Moncure Megasite

3 - Water Main - Sanford to Moncure Megasite

1 - Sanford WTP Expansion

Water Main - Sanford to Fuquay-Varina

- Water Facility
- Wastewater Facility
- Water Main under Cape Fear River
- - - Water Main - Sanford to Fuquay-Varina
- Water Main to Moncure Split
- Water Main - Moncure to Pittsboro
- Force Main to Sanford WWTP
- Water Main - WIP to Pittsboro

- 1 Sanford WTP Expansion
- 2 Water Main - Under Cape Fear
- 3 Water Main to Moncure Split
- 4 Water Main - Moncure to Pittsboro
- 5 Pittsboro Lift Station and Force Main
- 6 Proposed WIP WTP and Water Main
- 7 Pittsboro WTP
- 8 Chatham Park WRF
- 9 Haw River Discharge

Costs

Preliminary Cost Estimates*

Partner with Pittsboro/Sanford

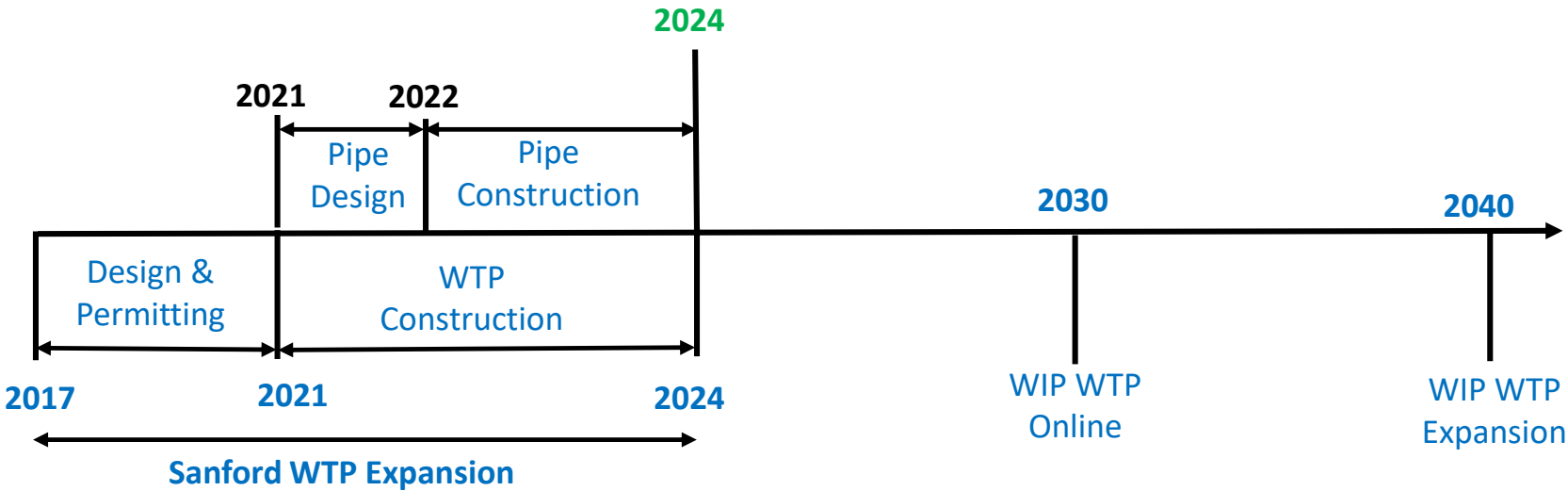
ID#	Project	Year	Total Cost
2	Water Main under Cape Fear	2024	\$7,552,740
3	Water Main to Moncure Split	2024	\$9,182,290
4	Water Main to Pittsboro	2024	\$17,515,420
	TOTAL		\$34,250,450

- Assumes wholesale water purchase agreement with Sanford
- Water transmission costs likely to be shared with Pittsboro & Sanford reducing total project cost for Chatham County

* 2021 Capital Costs.

Schedule

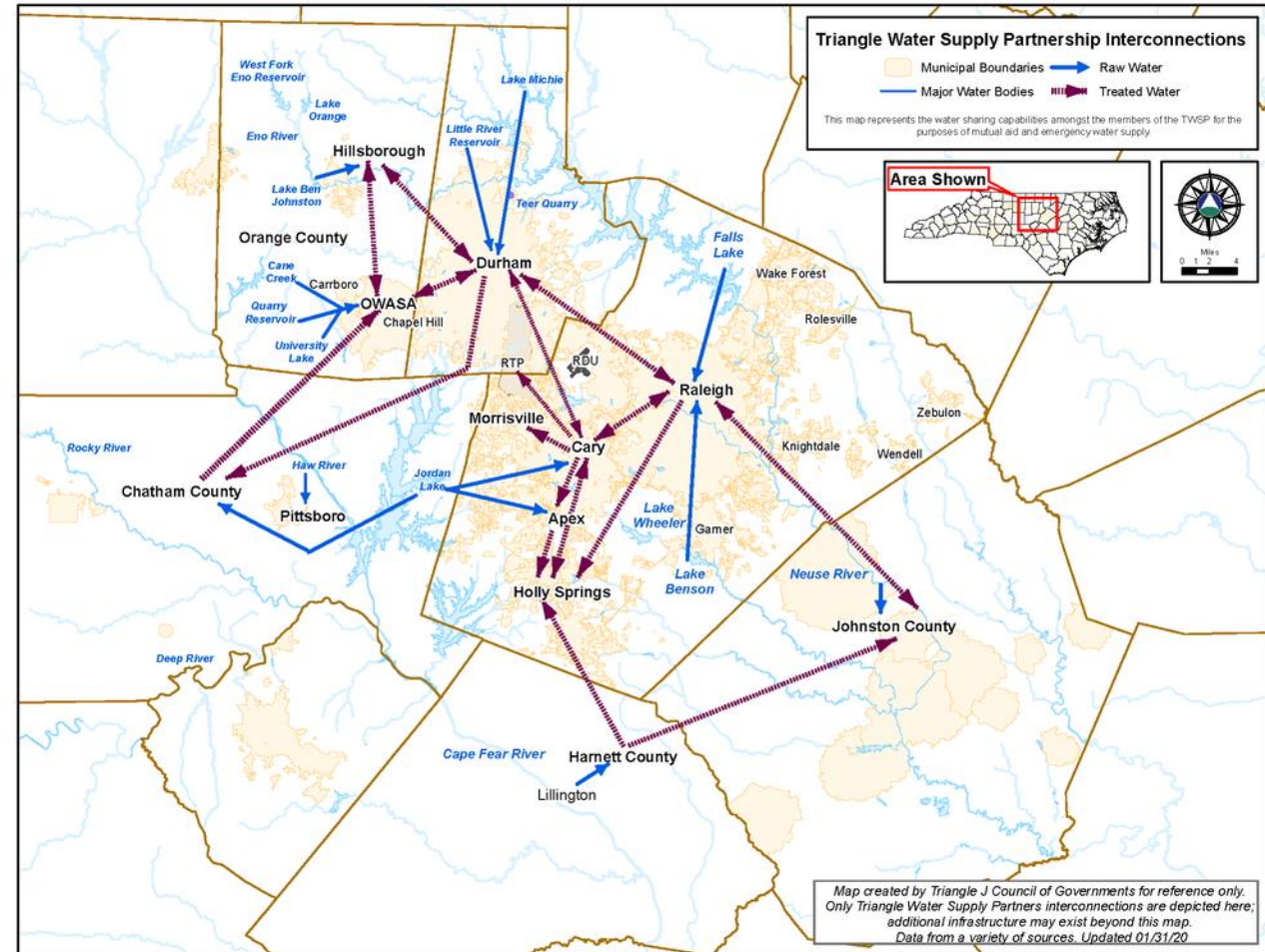
Project Timelines



Conclusions

Partnering Study Summary

- Advantages of Partnering with Pittsboro/Sanford
 - Least Cost
 - Water Quality
 - More resilient water source
 - Interconnections with Pittsboro and Sanford
 - Provides additional water supply for the Moncure Megasite
 - Assists Pittsboro in meeting growing water demands to allow continued planned growth



Summary

	Partner with Pittsboro/Sanford
Schedule	<ul style="list-style-type: none">• 2024 Transmission from Sanford
Cost Share	<ul style="list-style-type: none">• Economies of scale w/multiple partners (Chatham Co/Pittsboro/Sanford)
Water Quality	<ul style="list-style-type: none">• Lower Concentration of PFAS in Cape Fear
Water Quantity	<ul style="list-style-type: none">• Cape Fear River yield 41+MGD
Costs	<ul style="list-style-type: none">• ~\$34,250,450 (shared with Pittsboro & Sanford)



Thank you!
Questions?