

Cape Fear Water Supply Meeting NC Division of Water Resources

HARNETT COUNTY PUBLIC UTILITIES WATER TREATMENT PLANT RAW WATER INTAKE

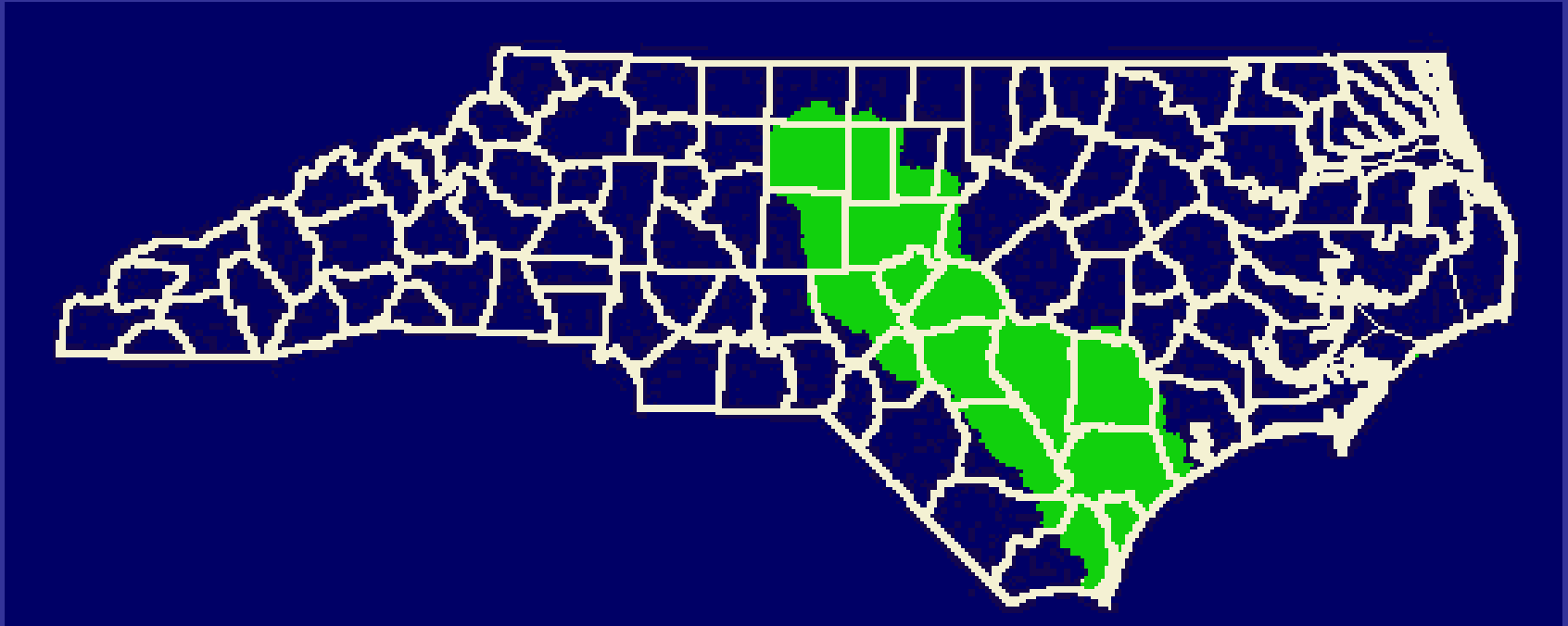
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CAPE FEAR BASIN



Harnett County
Raw Water Intake

CAPE FEAR RIVER



INTAKE LOCATION



INTAKE DESCRIPTION

The new RAW WATER INTAKE was constructed in 2004 - 2005 adjacent to the existing raw water intake. The intake was designed to allow inflow at minimal Cape Fear River water levels.

The intake is 51 feet long with 42 feet of weir in seven openings. Each opening can be isolated . A bar grate protects the intake from large objects entering.



INTAKE DESCRIPTION

The intake includes three stainless steel static intake screens. The screens are 48-inch in diameter with a 30-inch outlet. The screens were designed for a inlet velocity of 0.5 FPS at a flow rate of 11,100 gallons per minute. The intake screen capacity is 48 MGD.

The intake is connected to the existing Raw Water Pump Station with a 60-inch intake.

The intake has continuous sediment removal. The screens are “air burst” cleaned on regular intervals or as needed based on loss of head across the screens.



Harnett County
Raw Water Intake

INTAKE SCREENS



STRUCTURE LAYOUT



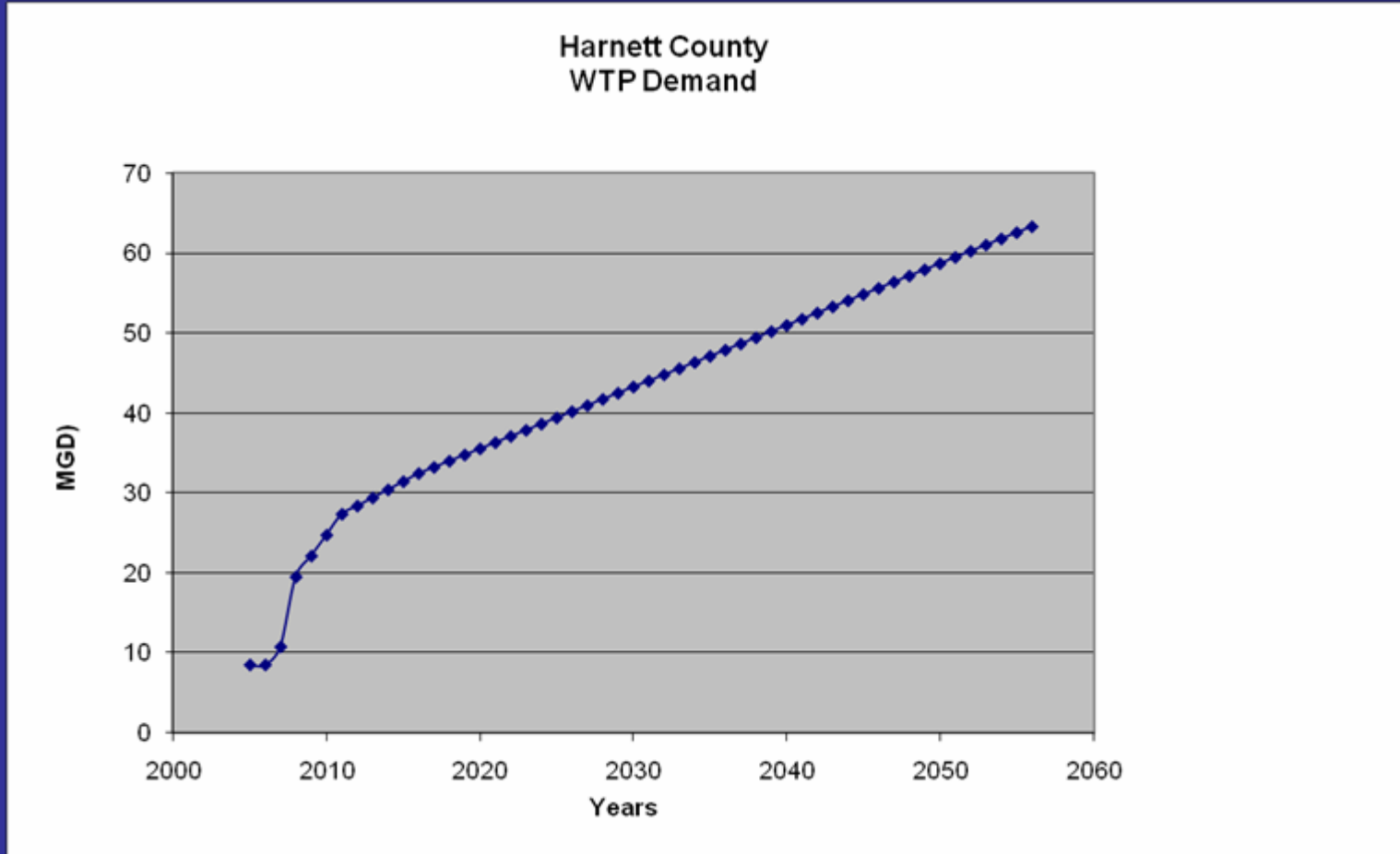
SYSTEM GROWTH

Current water treatment design is sized for 24 MGD that can be expanded to 36 MGD. The Preliminary Engineering Report identified growth in the system for next 15 years that approached 36 MGD.

Projecting the growth out from 2021 at the proposed growth rate for the next 50 years indicates a demand on the system that could approach 60 MGD.



GROWTH PROJECTIONS



QUESTIONS COMMENTS

