

Tennessee River Transmission Main Feasibility Study

Preliminary Findings – August 10, 2026

Agenda

Project Overview

Hydraulic Analysis

Pipeline Route and Treatment Attributes

Environmental, Cultural, and Historic

Permitting

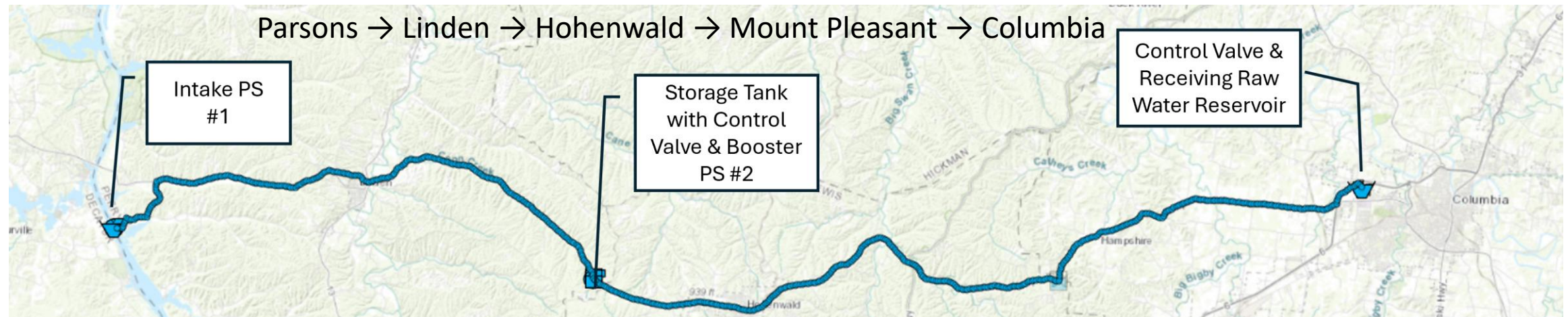
Water Quality

Opinion of Probable Construction Cost

Project Overview

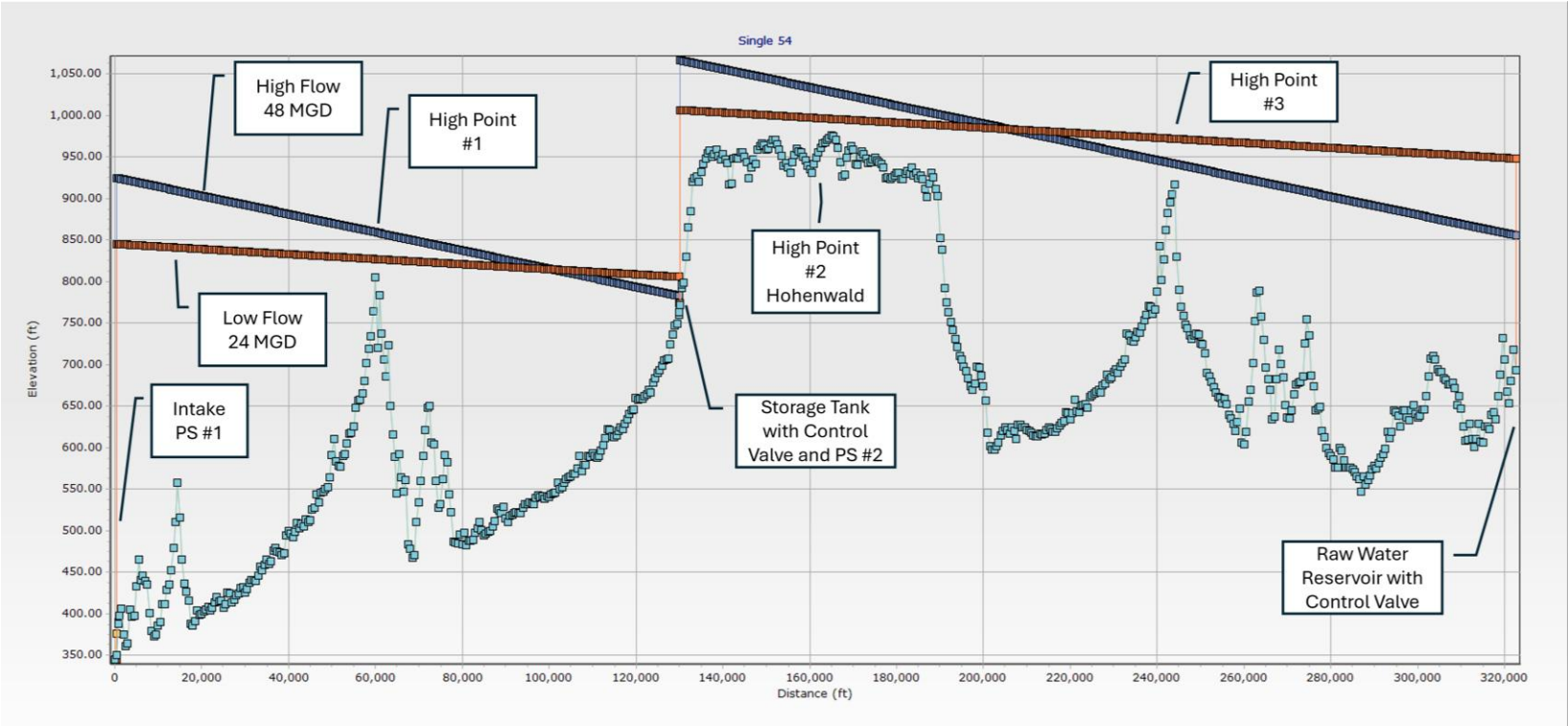
August 10, 2026

- Evaluate possible water transmission main from the Tennessee River to Maury County
- Prioritize TDOT ROW where possible
- Terminate pipeline at existing CPWS West WTP site
- Accommodate demand range of 20 – 40 MGD
- Evaluate route, pipe size and material, and pumping and storage requirements
- Consider water quality, environmental, permitting, and constructability
- Develop cost estimate and schedule for design and construction



Hydraulic Analysis

- Evaluated flow ranges between 24 – 48 mgd (20 – 40 treated)
- Maintain 10 psi minimum pressure
- Maintain velocity between 2 and 8 fps
- Recommendation:
 - Single 54-inch
 - Dual 42-inch
- Requires Raw Water PS and single Intermediate PS



Pipeline Alternative	Pressure Class 350 DIP Inside Diameter (in)	Cross-sectional area (ft2)	Velocity (ft/s)						
			20MGD	24MGD	25MGD	30MGD	35MGD	40MGD	48MGD
Single 36"	36.93	7.44	4.16	4.99	5.20	6.24	7.28	8.32	9.98
Single 42"	42.99	10.08	3.07	3.68	3.84	4.60	5.37	6.14	7.37
Single 48"	49.15	13.18	2.35	2.82	2.94	3.52	4.11	4.70	5.64
Single 54"	55.73	16.94	1.83	2.19	2.28	2.74	3.20	3.65	4.38
Single 60"	59.70	19.44	1.59	1.91	1.99	2.39	2.79	3.18	3.82
Parallel 36"	36.93	14.88	2.08	2.50	2.60	3.12	3.64	4.16	4.99
Parallel 42"	42.99	20.16	1.53	1.84	1.92	2.30	2.69	3.07	3.68

Less than 2.0 ft/s
Greater than 8 ft/s

Pipeline and Route Attributes

- Pipeline and Route

- Single 54-inch pipeline or dual 42-inch pipelines
- 66 miles from TN River to Regional Maury Co WTP location
- About 95% is within TDOT ROW
- Three RR crossings, 8 transmission gas pipelines, roadways, etc.

- Pumping and Storage

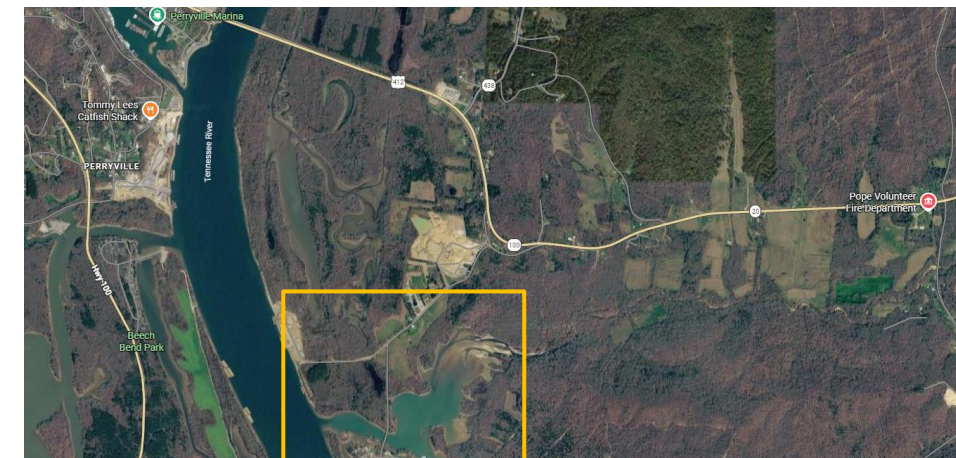
- Raw Water Pump Station and Intermediate PS
- One 10MG storage tank
- 100 MG terminal reservoir at WTP

- Water Treatment Plant

- 20 to 40 MGD capacity
- Ability to pump to existing CPWS WTP to supplement supply



Raw Water Intake and Pump Station at the Tennessee River South of Hwy 412 Bridge



Route Analysis along Highway 412



Residential frontage constraining ROW along the tight corridor through Hampshire



Two-lane rural corridor with steep cut slope limiting ROW width



Hohenwald Municipal Airport



Recently widened section with rock cut through the ridge

Environmental, Cultural, and Historic

Water Resources

32 forested wetlands, 22 named streams, 119 unnamed tributaries, and 8 Exceptional Tennessee Waters; field verification will confirm jurisdiction.

Protected Species

USFWS and state data indicate federally and state-protected species may occur; habitat assessments and surveys are needed.

Cultural and Historic

12 NRHP sites within 2 miles; coordination with the Tennessee Historical Commission and Division of Archaeology will set survey needs.

Bottom line: These constraints do not preclude the project, but they are critical path items to verify early and fold into route refinement, permitting, and design.

Permitting

Agency Coordination

TDEC for water quality and source approval, TDOT for work in highway ROW, and USACE for federal waters and Section 404.

Permitting Roadmap

A permitting matrix and sequencing flow charts identify likely permits, responsible agencies, submittal needs, and critical-path dependencies.

Supporting Field Work

Stream and wetland delineations, protected species assessments, cultural resource coordination, and traffic studies will back the applications.

Bottom line: Permitting is a major implementation driver. Early agency engagement and disciplined sequencing will protect the schedule and reduce regulatory risk.

Water Quality

Source Approval

Complete TDEC analyses, baseline raw water sampling, and Cryptosporidium bin classification to set treatment requirements.

In-Transit Changes

Extended detention drives pH shifts, DO depletion, iron and manganese precipitation, and biofilm growth.

Monitoring and O&M

Sampling at intake, storage, and reservoir, plus provisions for sediment management, flushing, and commissioning.

Bottom line: Water quality risks are manageable, but they belong in the basis of design and operating strategy, not as post-design operational fixes.

Preliminary OPCC

Cost in millions of dollars escalated to the midpoint of construction (66-month construction beginning January 2030)

Component	Single 54-in SWSP	Single 54-in DIP	Dual 42-in SWSP
Transmission Pipeline	\$ 1,269	\$ 2,467	\$ 1,717
Raw Water Intake & Pump Station	\$ 211	\$ 211	\$ 214
Booster Pump Station & Storage Tank	\$ 64	\$ 64	\$ 65
Raw Water Reservoir	\$ 95	\$ 95	\$ 95
Raw Water Metering Pump Station	\$ 40	\$ 40	\$ 40
Treatment Capacity	\$ 1,130	\$ 1,130	\$ 1,130
Sub-Total	\$ 2,809	\$ 4,007	\$ 3,261
Engineering Services	\$ 134	\$ 230	\$ 171
Land Acquisition	\$ 20	\$ 20	\$ 20
Permits	\$ 1	\$ 1	\$ 1
Finance	\$ 30	\$ 43	\$ 35
Total	\$ 2,994	\$ 4,301	\$ 3,488
Expected Cost Range	\$ 2,322	\$ 3,334	\$ 2,705
	to	to	to
	\$ 4,045	\$ 5,808	\$ 4,711

Single 54-in SWSP unadjusted cost is ~ \$2.2 billion

thank you!