



Department of  
**Environment &  
Conservation**

Comprehensive Water Withdrawal  
Permitting in the Duck River  
Watershed and the Governor's  
Conservation Initiative

# Duck River Watershed

Duck River has unique water withdrawal challenges and opportunities:

- Number of public water system withdrawals
- Exceptional Tennessee Water (ETW) designation
- Public interest in the river, known as the most biologically diverse river in North America with 50 documented species of freshwater mussels and 151 species of fish. T&E species include globally significant populations and some species found nowhere else in the world
- There is an existing regional planning organization – the DRA as an established cooperative framework is an asset for this pilot project.
- Water systems' participation in DRA helps to set the framework for participate in this initiative.

# The Need for Comprehensive Regional Permitting

TDEC met with eight water systems in 2019-2020 about new or expanded intakes

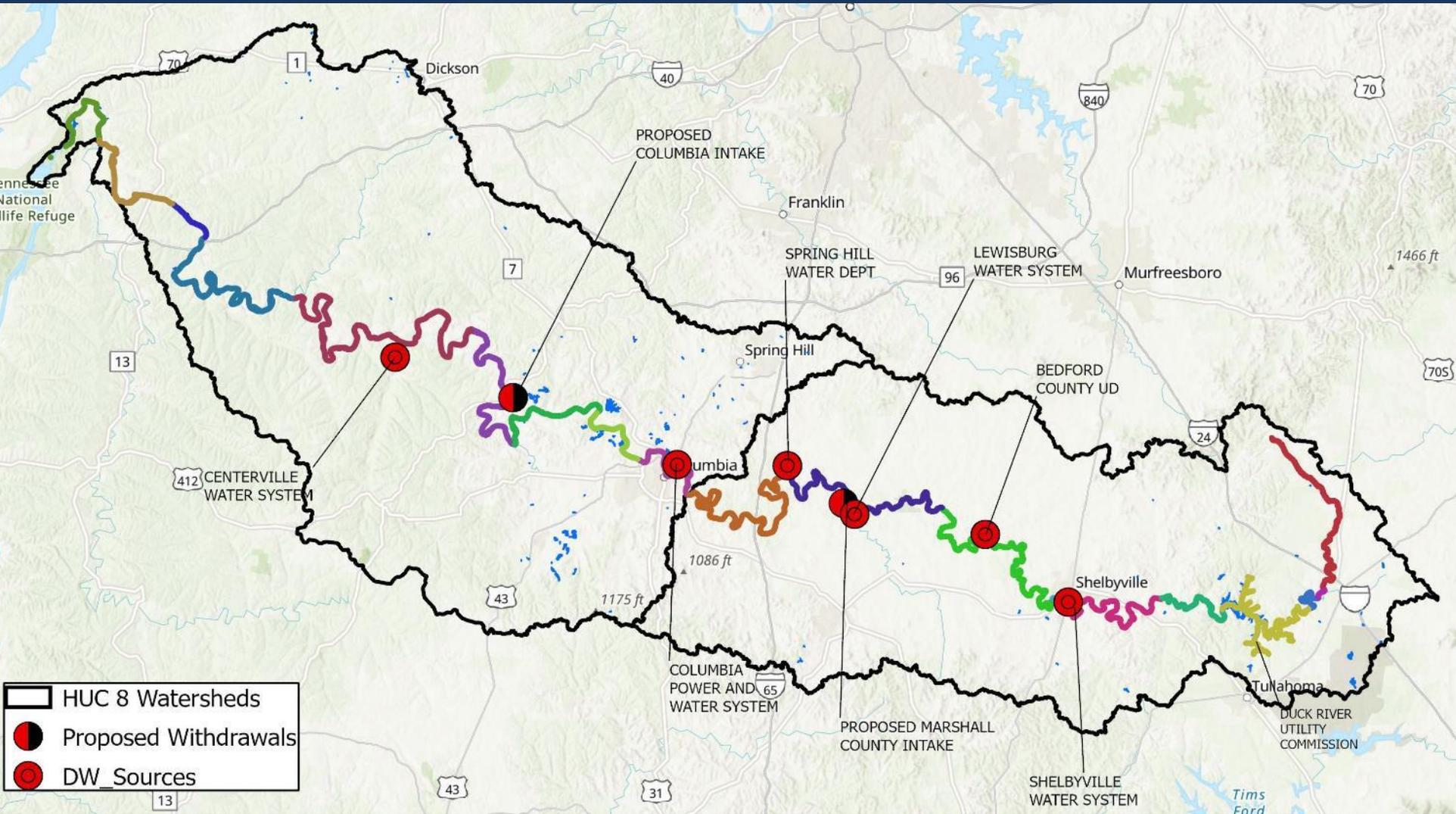
- Concerns about accommodating rapid growth in the area
- Questions about “grandfathering” immediate water availability and purchase options limiting growth potential
- TDEC has received multiple ARAP withdrawal permit applications for the same resource
- DWR believes we can authorize current withdrawals, allowing us to accommodate additional short-term (less than 5 year) needs
- Long-term needs (greater than 5 years) will require further analysis and cooperation to ensure an equitable water withdrawal permitting strategy

# TDEC Rules Drive Water System Planning

Rule 0440-45-01-.05(10)

*System Capacity - Whenever a public water system reaches eighty (80) percent of the design capacity based on average day usage, the supplier of water shall immediately obtain the services of a competent engineer to prepare plan documents for expansion of said system.*

# Duck River Watershed



# Began Meeting with Stakeholders in 2020

- Water systems (DRATAC members)
- DRA
- stakeholders listed at <https://duckriveragency.org/wrc.htm> (plus Centerville)
- Agencies – TDEC, TWRA, TVA, USACE, USFWS, EPA, later ECD
- NGOs – TNC, SELC, HRC, TWF, Sierra Club
- Individual stakeholders from 9 TDEC stakeholder meetings since June 2020

# What is an ARAP?

- Aquatic Resources Alteration Permit (ARAP)
  - Tennessee Rule 0400-40-07-.01 (3) requires a permit for any activity that results in the alteration of waters of the state, including water withdrawals.
  - ARAP serves as §401 Water Quality Certification, needed for federal permitting

# Grandfathering of Water Withdrawals

- Grandfathering History:
  - Tennessee Rule 0400-40-07-.02 (4) *Existing water withdrawals on July 25, 2000, which do not adversely alter or affect the classified use of the source stream are not subject to these requirements.*
  - These are based on water withdrawals, not the public water supply treatment system capacity at that time.
  - Water quality rule – considered the water quality effect of withdrawals on Duck River at that time
- Permitting is the Path Forward: DWR records show that withdrawals have increased since 2000

# Overview

1. **Create a baseline of permitted withdrawals**
2. Consider new intakes and expansions and identify:
  - **areas for regional growth planning/regional water need**
  - regional interconnection and infrastructure opportunities and projects
  - endangered species analysis and mitigation (will involve other agencies)
  - how to better understand other designated uses such as recreation, agriculture
  - how to utilize ARP, BIL, or other funds to develop and implement collaborative plans
3. Based on this info, TDEC will be able to consider and apply such information as the **basis for renewal of the ARAP withdrawal permits.**
4. **Ongoing/iterative process** -continually go through steps 2 and 3 into the future as circumstances evolve in the watershed.

# ARAP Timeline

- CPWS\* revoke and reissuance of existing permit
  - Proposed permit adds new intake
  - Public Hearing held on October 19, 2023 in Columbia
  - 60- day public comment period ended November 17, 2023
- Key permit conditions
  - The withdrawal rate near river mile 134 shall not exceed 20 MGD
  - The withdrawal rate near river mile 100/ total withdrawal shall not exceed 32 MGD
  - Withdrawal at the existing intake near river mile 134 is prohibited when flow gaged at the USGS gage Duck River at Columbia, TN 03599500 is below 100 cfs
- Because proposed CPWS intake > *de minimis*:
  - Next step: Notice of Determination of Social and Economic Necessity\*
  - 30 day waiting period
  - Permit issued
  - 30-day appeal period

*\*proposed withdrawal > de minimis*

# ARAP Timeline

- Baseline permits on public notice simultaneously:
  - Duck River Utility Commission
  - Shelbyville\*
  - Bedford County
  - Lewisburg
  - Spring Hill\*
  - Maury County Water Systems
- Public hearing for baseline permits on October 30, 2023 at Henry Horton State Park
- 60-day public comment period to end on December 13, 2023
- TDEC reviews public comments, will issue final permits individually as they are completed

*\*proposed withdrawal > de minimis*

# Key Condition in Baseline Permits

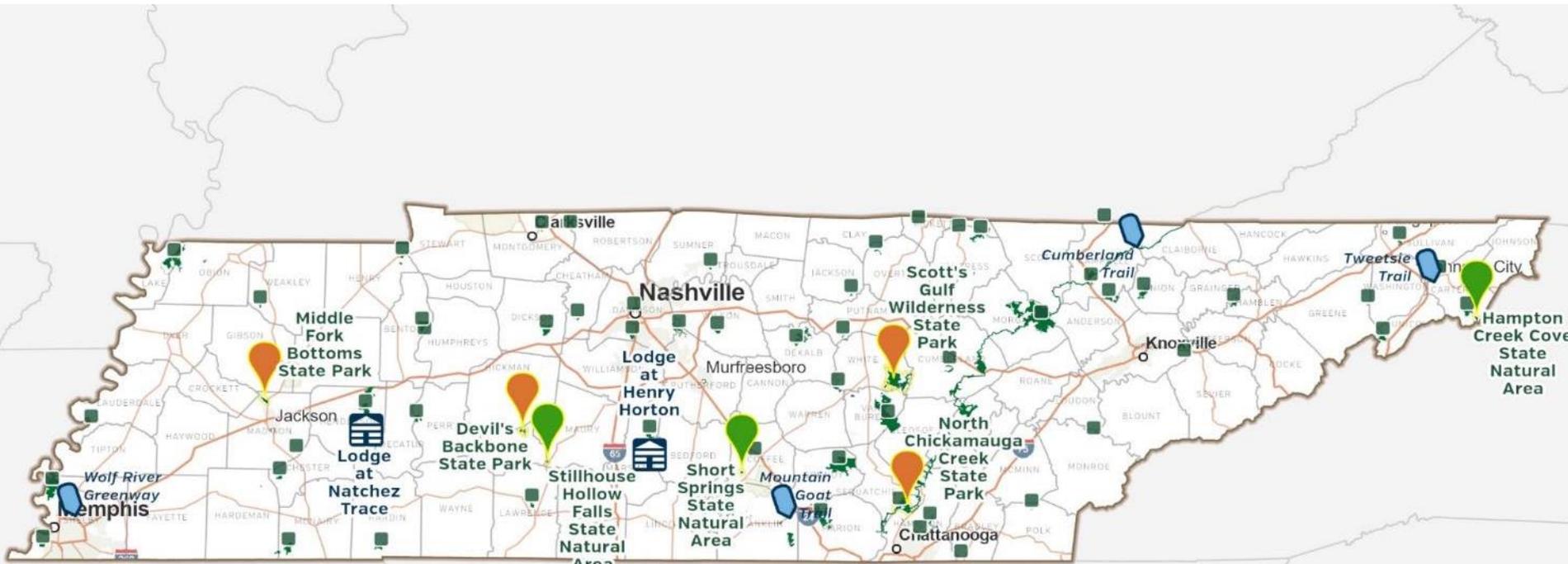
- Special condition 5
  - Withdrawal above the grandfathered amount (in MGD) shall cease when flow at the Milltown USGS gage is at or below 175 cfs
  - Subject to a schedule of compliance:
    - Permittee shall develop a plan for reducing water withdrawal to coincide with certain drought triggers (within 1 year)
    - Permittee shall demonstrate water loss < 25% calculated with specific procedures. If not, develop and implement a plan to reduce water loss.
    - Permittee shall participate in T&E studies
    - Permit condition effective 5 years from effective date of permit

# Governor's Conservation Initiative

## State of the State

*Tennesseans have accomplished remarkable things in our 226-year history. Once again, we are called to be a guiding light & carry the spirit that took our state from **frontier** to **frontrunner**.*

## **Conservation Strategy**



 New State Parks

 Improved State Natural Areas

 New Lodge

 Existing Tennessee State Parks

 Trails Funding

# Survey Respondents

## Tennessee State and Local Government Entities

### Tennessee State Government Organizations

- Department of Environment and Conservation
- Department of Agriculture
- Department of Economic and Community Development
- Department of Finance and Administration
- Department of Health
- Department of Tourist Development
- Office of the Attorney General

### Local Governments

- Grundy County
- Jackson County
- Johnson City
- Shelby County
- Madison County
- Fayette County
- Dickson County

## Non-Profit Organizations



## Academic Institutions, Private Sector and Other Entities



# Conservation Strategy

