

Conservation, Water Loss, Public Education & Community Engagement Initial Recommendations

1. Incentivize and promote mechanisms to preserve and improve habitat within the Duck River Watershed and create watershed-wide growth plans based on protecting watershed health.

Programs or incentives to preserve or improve habitat within the Duck River Watershed would benefit water quantity and quality as well as drought and flood resilience within the Duck River. The Partnership has identified multiple mechanisms to further these goals:

- Providing incentives for private landowners to pursue conservation easements and sustainable agricultural practices (potentially supported through NRCS's EQIP and RCPP programs or the recently passed Tennessee Farmland Preservation Act) would safeguard riparian habitat in the watershed to protect water quality.
- Investments in groundwater recharge projects, rainwater harvesting, or green infrastructure can reduce stormwater pollution and improve drought resilience.
- A wetland restoration fund can improve water quality, flood resilience, and habitat connectivity by restoring and expanding wetlands across the Duck River watershed in strategic and appropriate locations.
- Local governments could adopt a standard overlay establishing permanent buffer areas on each side of the river and develop a watershed-wide smart growth plan, potentially overseen by regional entities.

2. Promote the Duck River Watershed and watershed protection measures.

The Conservation, Water Loss, Public Education & Community Engagement working group will steward initial outreach, education, and communications efforts, including design of Duck River Watershed communication packets, to inform multiple audiences across the watershed about watershed protection activities, responsible river recreation, and river safety. The working group will also evaluate education resources and opportunities for specific stakeholders, including recreational users, utilities, farmers, and non-profit organizations. The Partnership Chair should have the opportunity to review any educational materials shared on behalf of the Partnership.

3. Ensure strategic marketing and communications with representation from the Duck River Watershed.

The Conservation, Water Loss, Public Education & Community Engagement working group will lead initial efforts to establish a clear messaging framework to tie various watershed issues (low flow/drought, land-use, etc.) to action steps and educational opportunities. As part of this framework, it is recommended to develop a tool kit that includes a communications playbook, "Watershed Content Calendar" template, videos, and ready-to-use communication materials for community partners. **Complements and integrates with existing, emerging information channels and data platforms, including "Duck River Dashboard."**

4. Reduce overall water demand and protect river flows by promoting water-efficient fixtures, smart irrigation, industrial reuse, and green infrastructure.

Reducing demand across private sectors, residential, commercial, and industrial, is one of the most effective near-term strategies to relieve pressure on the Duck River while also reducing infrastructure costs. In homes and businesses, adoption of low-flow sinks, toilets, and showerheads can cut indoor water use by 20–30%, while smart irrigation controllers can reduce outdoor consumption significantly. For commercial and institutional buildings, green infrastructure such as rain gardens, green roofs, and permeable pavements not only capture and reuse stormwater but also improve groundwater recharge and reduce polluted runoff. Industrial users, often the largest single withdrawals, can deploy water recycling and process reuse systems (e.g., using gray water for cooling or cleaning) to dramatically lower withdrawals from the river. Collectively, these measures reduce peak demand during drought, extend the life of existing water supplies, and contribute to watershed health by maintaining higher instream flows for aquatic species. The Duck River Development Agency could be a good convening organization to track and promote these ideas.

5. Increase supply reliability for essential water use during drought conditions and protect instream flows by capturing excess water in off-stream storage ponds and/or reusing treated water during drought conditions.

Diversifying water supply sources for communities along the Duck River will increase the resilience and reliability of their drinking water systems. Off-stream storage ponds near treatment plants can capture excess water during high-flow periods, reducing withdrawals during droughts and protecting the viability of aquatic species. In critical periods, reservoirs can also be used to provide supply security and boost river flow. This recommendation further recommends direct and indirect water reuse as a sustainable supply option where practicable.

6. Build a water loss reduction program with incentivization that works directly with utilities across Tennessee.

Establish a program that works directly with utilities across Tennessee to reduce water loss through conducting water loss audits, supporting utilities in addressing the problems found during the audit (field work, financial support, etc.), and providing necessary resources. This recommendation further proposes the organization of a working group for this project comprised of TDEC, Tennessee Association of Utility Districts, large and small utilities in the Duck River Watershed, the State Comptroller's office, NGOs, AWWA (KY-TN section) and national organizations with expertise addressing water loss.

7. Develop a Water Use Efficiency Plan for Duck River Watershed.

The Duck River Agency should oversee the development, implementation, and assessment of a Water Use Efficiency Plan for the watershed that identifies, evaluates, promotes, and tracks water use efficiency practices.