



Department of the Army Permit

DRPP Workshop
Reservoir Alternatives
Henry Horton State Park
27 October 2025

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Regulatory Division



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Overview

- ✓ **Regulatory Mission and Authorities**
- ✓ **Permit review process**
- ✓ **Project purpose and need**
- ✓ **Columbia Dam as it existed in 1983**
- ✓ **Brief overview of aspects of the review process**



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Regulatory Mission

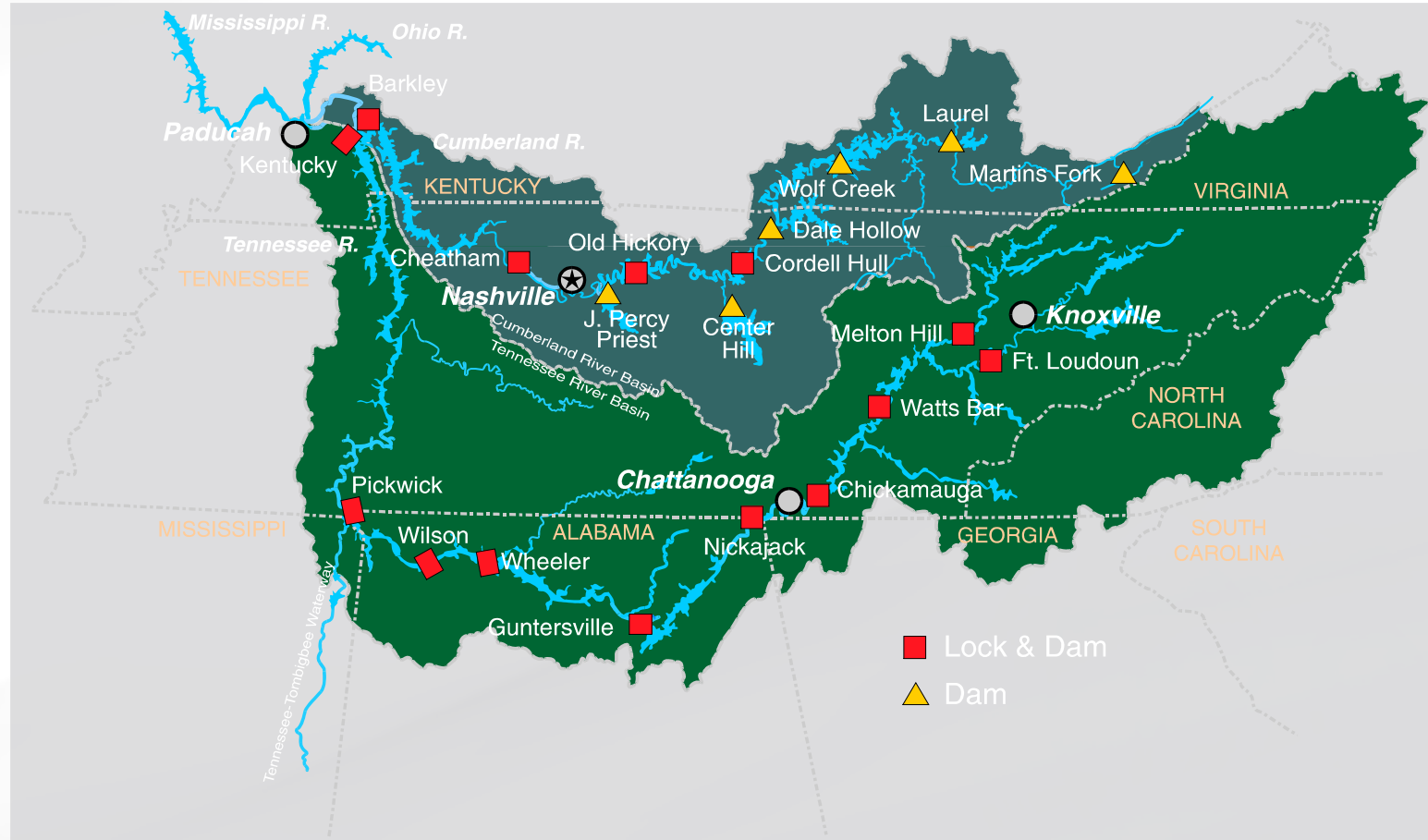
Protecting the Nation's aquatic resources and navigation capacity, while allowing reasonable development through fair and balanced decisions



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Navigable Waters



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Regulatory Program Authorities



Section 9 - Rivers and Harbors Act of 1899.
Dams and dikes across navigable waters
(Corps authority).

Section 10 - Rivers and Harbors Act of 1899.
Any structure or work in, over, or under a
navigable water of the U.S.



Section 404 - Clean Water Act.
The discharge of dredged or fill material in any
water of the U.S. (WOUS).



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Columbia Dam

Design:

- 648' MSL dam top elevation
- 635' MSL (Flood)
- 630' MSL (Normal Summer Pool maximum)
- 603' MSL (Winter Pool minimum)
- Provide up to 300 cfs (193.8 MGD) for water supply

Status as of October 1983:

- Project was about 45% complete
 - Concrete portion virtually complete
 - Earth embankment about 75% complete
 - 13,000 acres of the required 27,500 acres of land had been acquired.
- Remaining major activities
 - Completion of the earth embankment
 - Acquisition of remaining 14,500 acres
 - Replacing two upstream I-65 bridges
 - Relocating about 22 additional miles of roads and relocating utilities
 - Clearing the basin

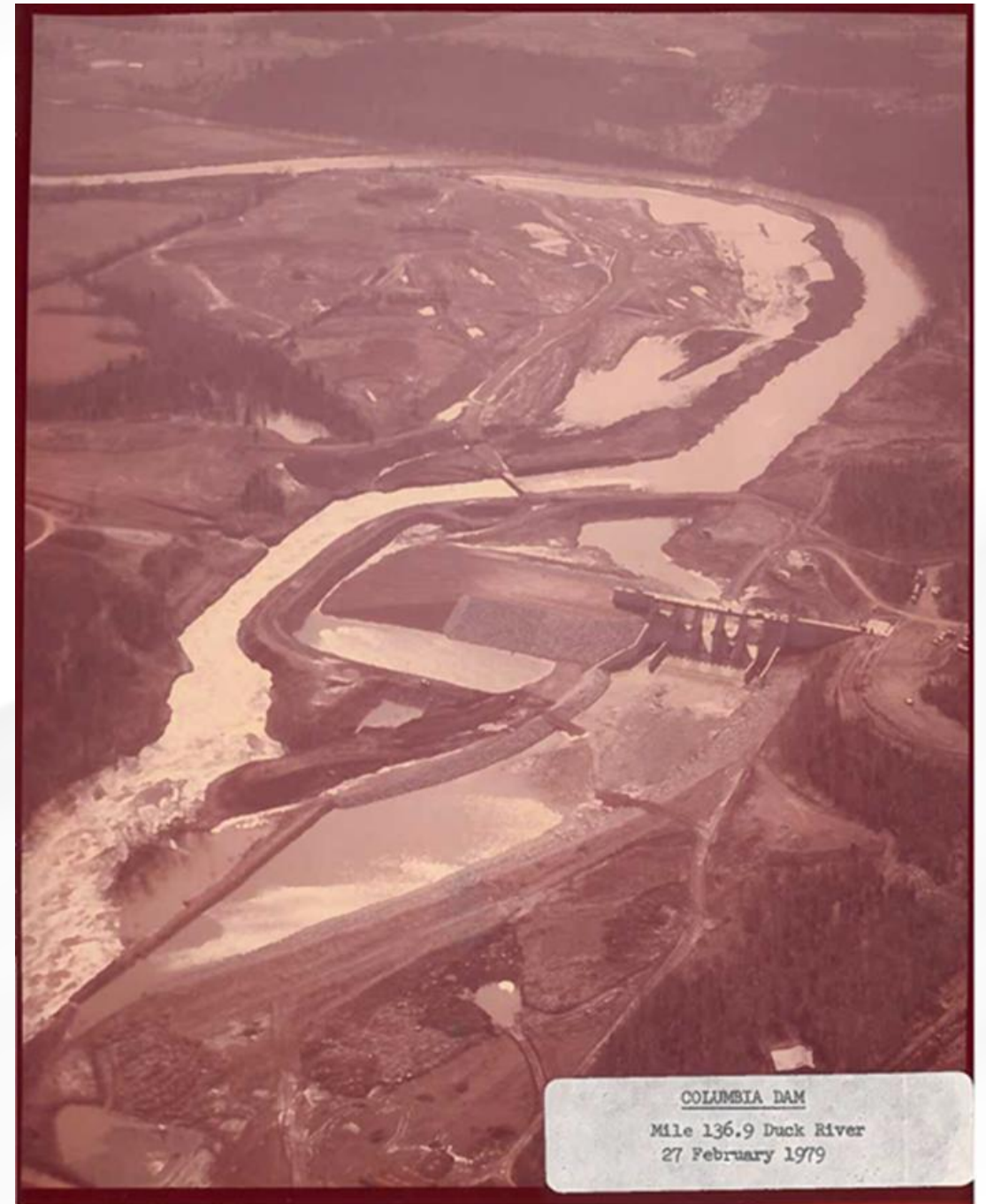
Source: TVA Office of Natural Resource and Economic Development



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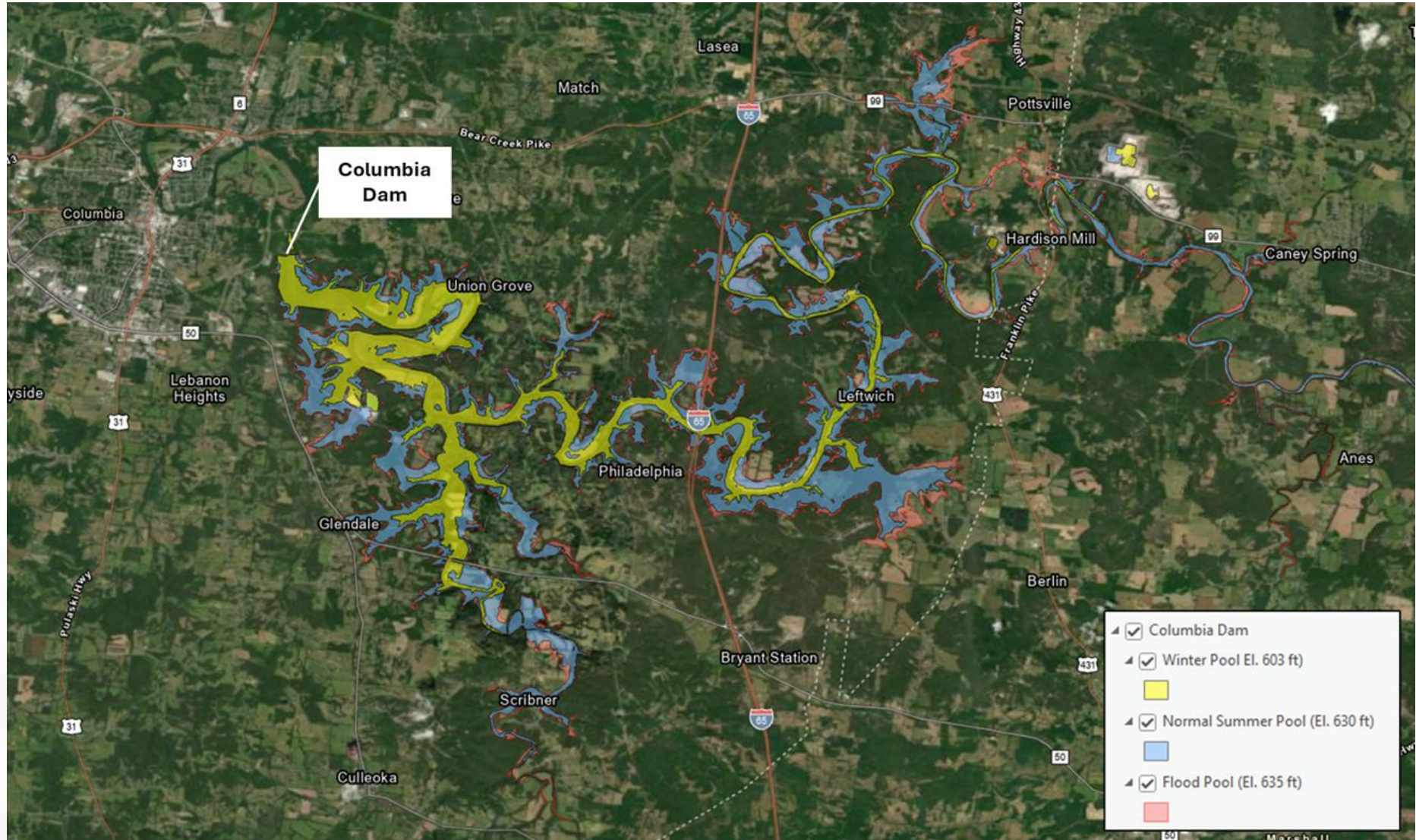
COLUMBIA DAM

Mile 136.9 Duck River
27 February 1979



Columbia Dam Design elevations

Illustration for discussion



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Elevations

Illustration for discussion

Selected infrastructure	Latitude	Longitude	Feet
Hwy 50 over Fountain Creek	35.53544	-86.96523	609.81
Vulcan Quarry	35.57144	-86.98851	615.84
I-65 over Duck River	35.56452	-86.90639	623.76
I-65 over Nancy Branch	35.60563	-86.90098	633.42
I-65 over Derryberry Br	35.61615	-86.90000	632.32
99 over Flat Creek	35.64259	-86.85470	642.16

Elevations derived from the Digital Elevation Models in the USGS The National Map: <https://apps.nationalmap.gov/viewer/>



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Types of Permits

General, Nationwide, and Individual Permits

- General Permits
 - Programmatic permits (PGP)
 - Regional General permits (RGP)
 - Nationwide permits (NWP)
- Individual Permits
 - Letters of Permission
 - Standard Permits



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Federal Actions

A Department of the Army Permit issued by the Corps of Engineers must comply with the Rivers and Harbors Act of 1899 and the Clean Water Act. This constitutes a Federal Action. All Federal actions must also comply with:

- National Environmental Policy Act (NEPA)
- Endangered Species Act (ESA)
- National Historic Preservation Act (NHPA)
- Clean Water Act Section 401
(Water Quality Certification from the State)
- Public Interest Review (33 CFR Part 320-332)
- Executive Orders
- Fish and Wildlife Coordination Act
- Wild and Scenic Rivers Act



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Project Purpose and Need

Context:

NEPA – An EIS “...shall briefly specify the underlying *purpose and need* to which the agency is responding in proposing the alternatives including the proposed action.” (40 CFR 1502.13)

Public Interest Review – Evaluation of all permits shall include consideration of “*The relative extent of the public and private need* for the proposed structure or work” (33 CFR 320.4 (a)(2))

404(b)(1) Guidelines – Project purpose provides the basis for the alternatives analysis. “*An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.*” (40 CFR 230.10(a)(2))



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Public Interest Review Factors

- Conservation
- Economics
- Aesthetics
- General Environmental Concerns
- Wetlands
- Historic Properties
- Fish and Wildlife Values
- Flood Hazards
- Floodplain Values
- Land Use
- Navigation
- Shore Erosion and Accretion
- Recreation
- Water Supply and Conservation
- Water Quality
- Energy Needs
- Safety
- Food and Fiber Production
- Mineral Needs
- Property Ownership



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CWA Alternatives Analysis

- “No discharge shall be permitted if there is a practicable alternative that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” (40 CFR 320.10)
- Riffle and pool complexes are by definition “Special Aquatic Sites.” The applicant has the burden of overcoming two presumptions when fill is proposed in Special Aquatic Sites.
 - Practicable alternative(s) exist that meet the purpose of the project which do not involve discharge into a special aquatic site
 - Discharges to special aquatic sites are presumed to be the most environmentally damaging.
- Only the least environmentally damaging practicable alternative (LEDPA) may be permitted. The applicant has the burden of clearly demonstrating that their preferred alternative is the LEDPA.



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Threatened or Endangered Species

Preliminary list
generated from IPAC
for discussion

14 Mussels (14)

- Birdwing Pearlymussel *Lemiox rimosus* **Endangered**
- Cumberland Monkeyface (pearlymussel) *Theliderma intermedia* **Endangered**
- Cumberlandian Combshell *Epioblasma brevidens* **Endangered**
- Fanshell *Cyprogenia stegaria* **Endangered**
- Fluted Kidneyshell *Ptychobranthus subtentus* **Endangered**
- Oyster Mussel *Epioblasma capsaeformis* **Endangered**
- Pale Lilliput (pearlymussel) *Toxolasma cylindrellus* **Endangered**
- Purple Cat's Paw (=purple Cat's Paw Pearlymussel) *Epioblasma obliquata* **Endangered**
- Rabbitsfoot *Quadrula cylindrica cylindrica* **Threatened**
- Rayed Bean *Villosa fabalis* **Endangered**
- Round Hickorynut *Obovaria subrotunda* **Threatened**
- Slabside Pearlymussel *Pleuonaia dolabelloides* **Endangered**
- Snuffbox Mussel *Epioblasma triquetra* **Endangered**
- Spectaclecase (mussel) *Cumberlandia monodonta* **Endangered**

Plants (3)

- Short's Bladderpod *Physaria globosa* **Endangered**
- Price's Potato Bean *Apios priceana* **Threatened**
- Short's Bladderpod *Physaria globosa* **Endangered**

Mammals (1)

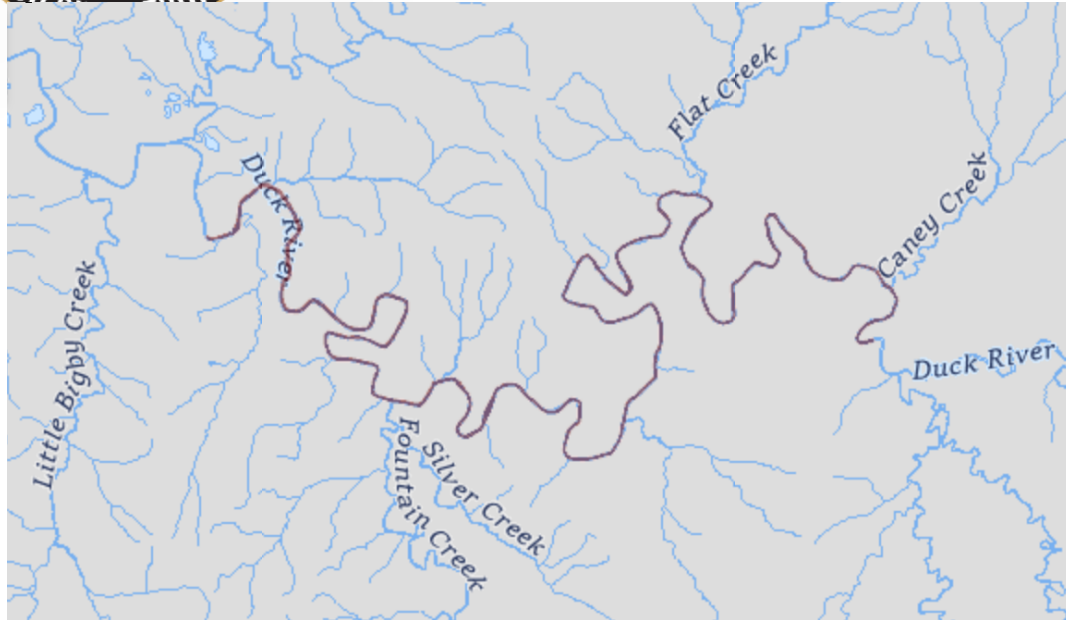
- Gray Bat *Myotis grisescens* **Endangered**



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Designated Critical Habitat for Mussels



Cumberlandian Combshell *Epioblasma brevidens* **Endangered**
Oyster Mussel *Epioblasma capsaeformis* **Endangered**

In addition, this reach is **Proposed** as critical habitat for
Snuffbox mussel (*Epioblasma triquetra*) **Endangered**



Fluted Kidneyshell *Ptychobranhus subtentus* **Endangered**
Rabbitsfoot *Quadrula cylindrica cylindrica* **Threatened**
Round Hickorynut *Obovaria subrotunda* **Threatened**
Slabside Pearlymussel *Pleuroanaia dolabellodes* **Endangered**



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Mitigation

- Sequence of avoid, minimize, compensate (33 CFR 320.4(r))
- Compensatory mitigation for losses of aquatic resources (33 CFR 322)
- Replace lost functions (not necessarily quantity of waters)
- Must be related to project impacts
- Corps determines type and amount of compensatory mitigation
- May be required to meet 404(b)(1) Guidelines as a result of a public interest review



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Permit Decision Criteria

- Project is NOT contrary to the Public Interest
- Project complies with the 404(b)(1) Guidelines
 - No practicable alternative with less environmental impacts exists
 - Does not violate Water Quality Standards
 - No Significant Degradation
- Does not jeopardize the continued existence of an endangered species
- Mitigation is adequate to compensate for aquatic impacts
- Complies with all laws and regulations
- Sufficient information available to make a reasonable judgment



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Questions?

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