

# CTP-ICE Screening for Cumulative Effects TECHNICAL MEMORANDUM (CTP-ICE Product 3 – Part 2)



<b>Date:</b>	<b>Revision:</b> <b>Date:</b> <b>Date of Original Version:</b>
<b>To:</b>	<b>NCDOT Transportation Planning Branch Regional Unit Head, TPB NCDOT Community Studies Team Leader, HES</b>
<b>From:</b>	<b>Staff, TPB/MPO/RPO</b>
<b>Subject:</b>	<b>CTP-ICE Screening for Cumulative Effects for the 2009 Eden CTP</b>

This Technical Memorandum documents the Comprehensive Transportation Plan-Indirect and Cumulative Effects (CTP-ICE) Screening for Cumulative Effects of the CTP. This cumulative effects screening is a broad assessment, applied to the entire CTP Study Area. Documentation of screening for indirect effects (for the entire CTP Study Area and separately for the proposed NC 14-87 Bypass) can be found in CTP-ICE Screening for Indirect Effects Technical Memorandum (CTP-ICE Product 3 – Part 1).

Metropolitan Planning Organizations (MPO) or Rural Planning Organizations (RPO)/Transportation Planning Branch have conducted the Cumulative Effects Screening of alternatives and have drafted the Technical Memorandum summarizing the results. The NCDOT Human Environment Section-Community Studies (HES-CS) staff reviewed the Cumulative Effects Screening Technical Memorandum and Screening Matrix, and provided comments to the MPO/RPO and Transportation Planning Branch (TPB) Staff to ensure consistency between long-range planning and the National Environmental Policy Act (NEPA) process during project development.

## ***CTP-ICE Screening Results for the Eden CTP Study Area***

Cumulative effects can be expected for notable cultural, community, water quality, and natural habitat features. This is due to features having minimal incorporation in local planning protections and/or policies. It appears that notable cultural features are prevalent in planning regulations, whereas water quality and natural habitat features are unique resources that are both under-protected and under-recognized. For community, water quality, and natural habitat features, present and future policies do indicate shifts in including these attributes but they have historically not been prioritized.

## **CTP-ICE Screening Matrix for Cumulative Effects: Eden CTP Study Area**

Product 3: CTP-ICE Screening Matrix for Cumulative Effects: Eden CTP Study Area													
Rating	Notable Cultural Features			Notable Community Features			Notable Water Quality Features			Notable Natural Habitat Features			Result
More Concern	Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			Cumulative Effects Expected
	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	
High				X			X			X			
Medium-High											X		X
Medium					X			X	X				
Medium-Low						X							
Low	X	X	X										
Less Concern	Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			

\*Refer to Product 3 Procedure for rating descriptions

**Figure 1 – See attached matrix for larger image**

### **Notable Cultural Features**

*Ranking: Past, Present, Future: Low*

The City of Eden has a Historic Preservation Commission that possesses authority to designate and regulate historic landmarks and districts, comprised of city council-appointed members. Working in coordination with the Commission, the Eden Preservation Society is a non-profit organization that assists in the preservation and protection of Eden’s cultural heritage through nomination and election support. Past actions taken to preserve notable cultural features include placing seven structures and four historic districts on the National Register of Historic Places (NRHP) within the City of Eden. As stated in Eden’s City Code Administration, the Commission is authorized within the planning and zoning jurisdiction of the city to nominate and protect past and future historic sites. Throughout the late 1990s, Rockingham County identified 150 prehistoric and historic archaeological sites, including public structures, private homes, and outbuildings. Sites and districts currently on the NRHP list and in the CTP Study Area include:

- Boone Road Historic District – 8/31/1987
- Bullard-Ray House – 6/11/1982
- Cascade Plantation (Willow Oaks Farm) – 10/14/1975
- Central Leaksville Historic District – 12/9/1986
- Dempsey-Reynolds-Taylor House – 12/2/1982
- First Baptist Church – 3/9/1989
- Dr. Franklin King House – 9/19/1985
- Leaksville Commercial Historic District – 10/23/1987
- Leaksville-Spray Institute – 3/9/1989 (demolished)
- Lower Sauratown Plantation and Village – 10/11/1984
- Mount Sinai Baptist Church – 6/23/1987
- Saint Luke’s Episcopal Church – 3/17/1989
- Spray Industrial Historic District – 12/9/1986

Five sites of archaeological significance are listed on the NRHP and recognized by the North Carolina Office of State Archeology located both within the CTP Study Area and in Rockingham County.

Presently, the Preservation Commission and the Society recognize other historic points of interest as potential sites to include in future potential NRHP nominations. These sites include:

- Governor Morehead Park
- Rhode Island Mill
- Community Pump
- Little Red Schoolhouse
- Sunshine School
- Lakeside School
- Burton Grove School
- Draper Elementary School
- Douglass Elementary School
- Leakesville Male Academy
- Island Ford (bridge)
- Bateau Loading Dock
- Mebane's Bridge

The City of Eden has a strong dedication to the preservation of historic properties and considers its strong cultural heritage an essential component in economic development and tourism efforts. Through guidance and authority of the State Historic Preservation Office of North Carolina and the Historic Preservation Commission of the City of Eden, dedication to preserving, maintaining, and expanding historic and archaeological significant sites results in Notable Cultural Features ranked with less concern for overall cumulative effects. This low ranking is a reflection of cultural features incorporated in local planning and protection and avoidance in all three types of CTP project proposals (highway, public transportation/rail, and bicycle).

*References:* Eden City Code, Chapter 2 (2009); North Carolina State Historic Preservation Office, <http://www.hpo.ncdcr.gov/NR-PDFs.pdf>

### ***Notable Community Features***

*Ranking: Past: High, Present: Medium Low, Future: Low*

The City of Eden has established a "Get Fit Eden" walking community and has progressively been implementing planning policies to ensure the preservation and expansion of its parks system and potential future greenways. With diverse natural features existing green and open spaces are looked at as mechanisms to guide future development. Without strong protections or recognition of the City of Eden's parks and open spaces, a high rating was given to past actions as an indication of minimal planning efforts. Presently, recommendations have been given to expand this infrastructure and develop a Parks and Recreation Master Plan. A medium (current) and medium-low (future) ranking was given to Eden's *Notable Community Features* as no protection exists to preserve these resources despite recommendations to implement such policies.

*References:* City of Eden City Council Meeting Minutes (May 2013)

## ***Notable Water Quality Features***

*Ranking: Past: High; Present: Medium; Future: Medium*

The City of Eden and Rockingham County have industrial origins in textiles, tobacco, and grist mills, where the Dan and Smith Rivers provided power and transport, resulting in severe water pollution. Although there are no rivers and streams in the CTP Study Area currently included on North Carolina's 303(d) list of impaired streams, impaired rivers and streams in Rockingham County include:

- Troublesome Creek
- Little Troublesome Creek
- Dan River
- Arm of Belews Lake
- Smith River

The City of Eden and Rockingham County use a regulatory approach to environmental resource protections and management of sprawl. According to the Eden Area Watershed Assessment, both City and County are prevented from such regulatory control by state legislation, depending largely on planning boards to make recommendations to the City Council or County Commissioners. Minimal protection of water systems in both the historic and near past has contributed to increased regulations for water quality at present. Adopted in 2001, Eden's zoning ordinances now mandate watershed protections within the City planning area, divided into two areas. These areas are: *Critical Areas* (moderate to high land use and single-family residential uses, maximum two units per acre. Other non/residential development is allowed a maximum 24 percent built area) and *Protected Areas* (moderate to high land use and single-family residential uses, maximum two units per acre. Other non/residential development is allowed a maximum 24 percent built area. Projects without a curb or gutter street system are allowed a maximum three units per acre or 36 percent built area). This provides state-mandated watershed protection for Eden's water resources and for each critical or protected area include regulations that regard:

- Stormwater drainage systems in subdivision standards and improvements adhere to best management practices to minimize water quality impacts. Erosion and sedimentation control are to be included for all new development.
- The ordinance recommends roads are to be located outside of critical areas and watershed buffer areas, or constructed to minimize impact on water quality.
- All developable(ed) land must be designed and located so as to minimize impacts from stormwater runoff to receiving waters and to reduce concentrations of stormwater flow.
- More stringent watershed regulations apply to new development than expansions of existing development.
- Vegetative buffer areas are required for all new development activities. Water dependent structures or public projects are the only allowable use in buffer areas.
- Remaining land on new development must remain in a natural or vegetative state.

Regionally, the City of Eden is located in the Dan River Basin, which is partially protected by the Piedmont Land Conservancy (PLC) in partnership with the Dan River Basin Association, Natural Resources Conservation Service, NC Plant Conservation Program, and the NC Department of Parks and Recreation. The Riparian Corridor Conservation Design Study for the Dan, Mayo, and Smith Rivers, was conducted in 2005 by the PLC, Conservation Trust for North Carolina, and North Carolina Clean Water Management Trust Fund. It recognized the need for riparian buffer protection and restoration and continued efforts to provide stringent water quality policies to the County as a whole. Although the US Fish and Wildlife Service National Wetlands Inventory provides recognition of the wetlands adjacent to the Smith and Dan rivers, many of these natural resources are not protected and/or incorporated in local planning regulations. Rockingham County uses its *Riparian Buffer Protection Ordinance* to guide development in lands adjacent to the watershed and its Hazardous Mitigation Plan to address water quality impacts.

The rank given to the past (high), present (medium), and future (medium) *Notable Water Quality Features* was based off concern that these resources are not fully protected by local or state planning policies. Although regulations have been put in place over time, stronger management practices would need to be incorporated in future developments locally and regionally to receive a ranking of low concern. Future development as proposed in former planning documents contain proposals that would intersect with the water supply watershed and wetlands identified in the National Wetlands Inventory. Examples include the proposed NC 14-87 Bypass, West Draper Spur, and the Harrington Highway Eastern Extension that would cross the water supply watershed, wetlands, and the Dan River.

*References:* Conservation Trust for North Carolina; Dan River Basin Association; Eden Area Watershed Assessment (2012); National Wetlands Inventory; North Carolina Clean Water Management Trust Fund; Piedmont Land Conservancy

## ***Notable Natural Habitat Features***

*Ranking: Past:* High; *Present:* Medium High; *Future:* Medium High

The North Carolina Natural Heritage Program recognizes seven natural heritage sites in the CTP Study Area, only two of which are officially registered. These sites include:

- Wide Mouth Creek – significant natural heritage area
- Fitzgerald Woodland – significant natural heritage area
- Leaksville Loam Forests – significant natural heritage area
- Roundhouse Road Forest – significant natural heritage area
- Dan River Aquatic Habitat – significant natural heritage area
- Bear Slide Bluff – managed area
- Rocky Branch – managed area

Rare plant or animal species include:

- Roanoke Hog Sucker
- Cliff Stonecrop
- American Barberry
- Smooth Coneflower
- Carolina Birdfoot-trefoil
- Southeastern Bold Goldenrod
- Bigeye Jumprock

Federally listed Threatened and Endangered species in the area include:

- Green Floater
- Glade Wild Quinine
- Virginia Spiderwort
- Riverweed Darter
- Goldenseal

The Natural Heritage Program serves to identify rare species and natural communities as a way to make recommendations and facilitate potential future protections of natural features. No past or present official legal protections exist to protect most of the natural heritage sites and/or plants and animal species in the City of Eden or the County of Rockingham. With state and nationally-recognized natural features, these *Notable Natural Habitat Features* have been given high to medium-high ratings due to an overall lack of protection in local planning regulations. The exact locations of these species and communities would need to be determined in order to assess the impact to them by CTP project proposals.

*References:* North Carolina Heritage Program, <http://www.ncnhp.org/>