Indirect and Cumulative Effects Assessment in Long Range Planning

What is Integration?

- Definition: a planning process that provides a seamless connection between long range transportation planning and project development that ultimately leads to supporting the timely delivery of transportation projects
- Background: The North Carolina Department of Transportation (NCDOT) is working with Federal Highway Administration (FHWA), MPOs, RPOs, and environmental resource agencies to integrate the long range planning process with the National Environmental Policy Act (NEPA)/ State Environmental Policy Act (SEPA) project development process.
- Components: For the Integration project, linkages (or topic areas) have been identified between long range transportation planning and project development. Best practices and other guidance or tools are being developed for each of the linkages in order to ensure the products developed in long range planning can be used to better inform the NEPA/ SEPA project development process. Integration aims to improve the quality of transportation planning and to ensure products from long range planning are developed and documented in a way that may be useful in project development.

Long range planning		*Project development*
Problem Statement	linked to	Purpose and Need
Alternatives analysis	linked to	Alternatives selected for detailed study
Community impacts assessment	linked to	Community impacts analysis
Indirect and cumulative effects assessment	linked to	Indirect and cumulative effects analysis
Public involvement	linked to	Public involvement
Mitigation opportunities	linked to	Mitigation needs/ opportunities

- Benefits:

  -Improved long range transportation planning: better coordination, products, and documentation

  -Efficiency gains through use of information from long range planning in project development; more timely and predictable delivery of projects

What are Indirect and Cumulative Effects (ICE)?

- Indirect and cumulative effects are defined as shown below in relation to direct impacts:

Direct Impacts

Impacts caused by a project that occur at the same time and place, and typically result from project construction and the project itself.

Indirect (Secondary) Effects

Impacts caused by a plan or project which occur after the project is built or are outside of the project's actual location, but which are still reasonably foreseeable.

Cumulative Effects

The incremental impacts of the proposed plan or project added to other past, present and future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Indirect effects (effects caused by the project, but occurring later in time or farther removed in distance than direct impacts) include changes in land use attributable to the project (induced growth) and impacts on environmental resources that occur as a result of the project's influence on land use.

Cumulative impacts include the total sum of all impacts to a particular resource that have occurred, are occurring, and will likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a project. Cumulative effects are any and all actions (past, present, and anticipated future) that impact a resource. Cumulative impacts can result from multiple seemingly small actions that collectively create a substantial impact over time.

The analysis of indirect and cumulative effects in project development is a requirement under NEPA regulations and is a primary element of the 404 water quality certification permit application for individual projects. Consideration of ICE in long range planning will generate useful information to not only inform the ICE analysis that occurs in project development, but also to inform decision-making in long range transportation and land development planning. Implementing assessment of ICE issues in the planning process can provide and improve consistency of the ICE information and analysis occurring later in the NEPA process, highlighting important issues early and potentially streamlining project delivery later in the process.

Integration ICE Products for Long Range Planning

The proposed best practices for consideration of ICE in long range planning describe four (4) work products that document existing conditions, assess future growth, screen proposed projects in the long range transportation plan for indirect and cumulative effects, and recommend best management practices for minimizing the effects.

Product 1: Existing Conditions Assessment
Provides a baseline of the existing human and natural environmental features contained within the long range planning Study Area. This product sets the scene for the subsequent ICE analysis that follows.
Product 2: Future Growth Potential Assessment
Produces future growth potential map(s) that identify current and future utilities, current and future land use scenario(s), available land for development, and areas of short, medium, and long-term growth.
Product 3: CTP Indirect and Cumulative Effects Screening
Performs a screening of indirect and cumulative effects for multi-modal long range planning project proposals. A Plan-Level Screening is conducted for the Study Area. A Project-Level Screening is conducted for indirect effects if specific project proposal(s) are anticipated to result in a higher potential for impacts.
Product 4: Best Management Practices Recommendations
Recommends best management practices to minimize the potential for indirect and cumulative effects of the proposed transportation projects identified in the long range plan.