# Collection and Presentation of Environmental Data

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| Transportation Planning Branch | | Revised: 11/22/11<br>Approved: 10/20/10<br>Version 1.1 |

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## *Purpose*

The purpose of this procedure is to provide a consistent methodology for gathering and presenting environmental data. The data will be used during alternatives analysis to identify constraints and evaluate alternatives. (Future link)

## *Background*

In recent years, environmental considerations have come to the forefront of the transportation planning process. Section 102 of the National Environmental Policy Act (NEPA) requires consideration of impacts on wetlands, wildlife, water quality, historic properties, and public lands. While full NEPA evaluations are not conducted during Comprehensive Transportation Plan (CTP) development, resources that may potentially be impacted are identified and documented as a means of integrating the long range transportation planning process with the project development process.

## *Responsibility*

It is the responsibility of the **Project Engineer (PE)** to:

- collect all applicable environmental data layers
- map the environmental data and incorporate into the CTP Report.

## *Policy, Regulatory, and Legal Requirements*

National Environmental Policy Act (NEPA)

State Environmental Policy Act for North Carolina (SEPA)



*The information contained in this procedure is deemed accurate and complete when posted. Content may change at any time without notice. We cannot guarantee the accuracy or completeness of printed copies. Please refer to the online procedure for the most current version.*

## *Scheduling and Time Constraints*

The collection and mapping of environmental data should be completed before the alternatives analysis is conducted on the highway system as a whole, as part of the CTP Study.

## *Procedures*

Environmental data is collected for use in identifying potential environmental impacts during alternatives analysis and creating environmental features mapping for the CTP Report. The PE uses the following procedures to create the Environmental Features Map(s).

| Step | Action |
|---|---|
| 1 | **Collect all environmental data layers and store in appropriate folder on the local drive.**<br>• Open the CTP GIS Data Layers.xls file from the S: drive (S:/Shared/TPB Reference/Comprehensive Transportation Plan folder)<br>• Click on the "Report Maps" tab<br>• Locate the "Environmental Features" section, which is highlighted in **orange**<br>❖ In the first two sections, download the all layers directly to your local drive.<br>❖ In the last section, request restricted data layers using the "Restricted Data Request" instructions. |
| 2 | **Create the Environmental Features Map(s) in ArcMap.**<br>**Note:** It is suggested that if one of the CTP maps (such as the Adoption Sheet) is complete, use it as the start for the Environmental Features Map(s). See the "Develop CTP Maps procedure. Otherwise, use the aforementioned procedure to create a base map and start from there. **Multiple maps may be required to clearly display the information.**<br>• Add all environmental layers collected in Step 1 to the map. If a particular resource does not occur in your planning area, remove the layer from the map.<br>• Clip all remaining layers to your planning area boundary.<br>• Apply different symbology and colors to data layers in order to distinguish each environmental feature. There is currently no standard symbology for these data layers, thus the PE should use best judgment to clearly display the information. |
| 3 | **Analyze Alternatives**<br>• Using the Environmental Features Map(s), identify constraints and evaluate alternatives using the Alternatives Analysis procedure (future link). |
| 4 | **Complete Documentation**<br>• After CTP adoption, add final CTP Highway Layer to the Environmental Features Map (s) so that potential impacts can be easily identified.<br>• Insert completed map(s) in the appropriate location in Chapters 1 of the CTP Report.<br>• Specific environmental features that may potentially be impacted by an alternative should be referenced in the Natural & Human Environmental Context section of the Problem Statement for each CTP recommendation in |



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| | Chapter 2 of the CTP Report. |

## Warnings and Precautions

Multiple maps may be required to clearly display all environmental features.

## Resources and Tools

- ArcMap (ESRI software)
- Minimum CTP Standard Report Template
- Alternatives Analysis procedure (Future Link)
- Problem Statement procedure
- Develop CTP Maps procedure
- CTP GIS Data Layers (S:/Shared/TPB Reference/Comprehensive Transportation Plan)
- ArcGIS Frequently Asked Questions

## Contacts

- For suggestions to change this procedure contact: Elena Talanker (919) 707-0911
- For questions about performing this procedure contact: Earlene Thomas, PE (919) 707-0909
- For GIS questions relative to this procedure contact: Priya Nimbole (919) 707-0958

## Glossary

For a complete listing of terms, definitions and acronyms, go to the Master Glossary.

## User Access

- Intended for NCDOT Internal Use Only, but not exempt from the public records access requirements

## Flowchart

None.

## Record of Revision

| Version | Section Affected | Description | Effective Date |
|---|---|---|---|
| 1.1 | all | Updated links, phone numbers, changed chapter # to align with current report structure | 11/22/2011 |
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