

STEP 1

Examples of permanent cumulative impacts are extirpation of species or development of natural areas. An example of a temporary cumulative impact is a recurring disturbance associated with management activities (e.g., timber harvest, prescribed burns, seasonal impoundments, sewer line maintenance, rights-of-way mowing and powerline maintenance).

Additional Triggers for Consideration

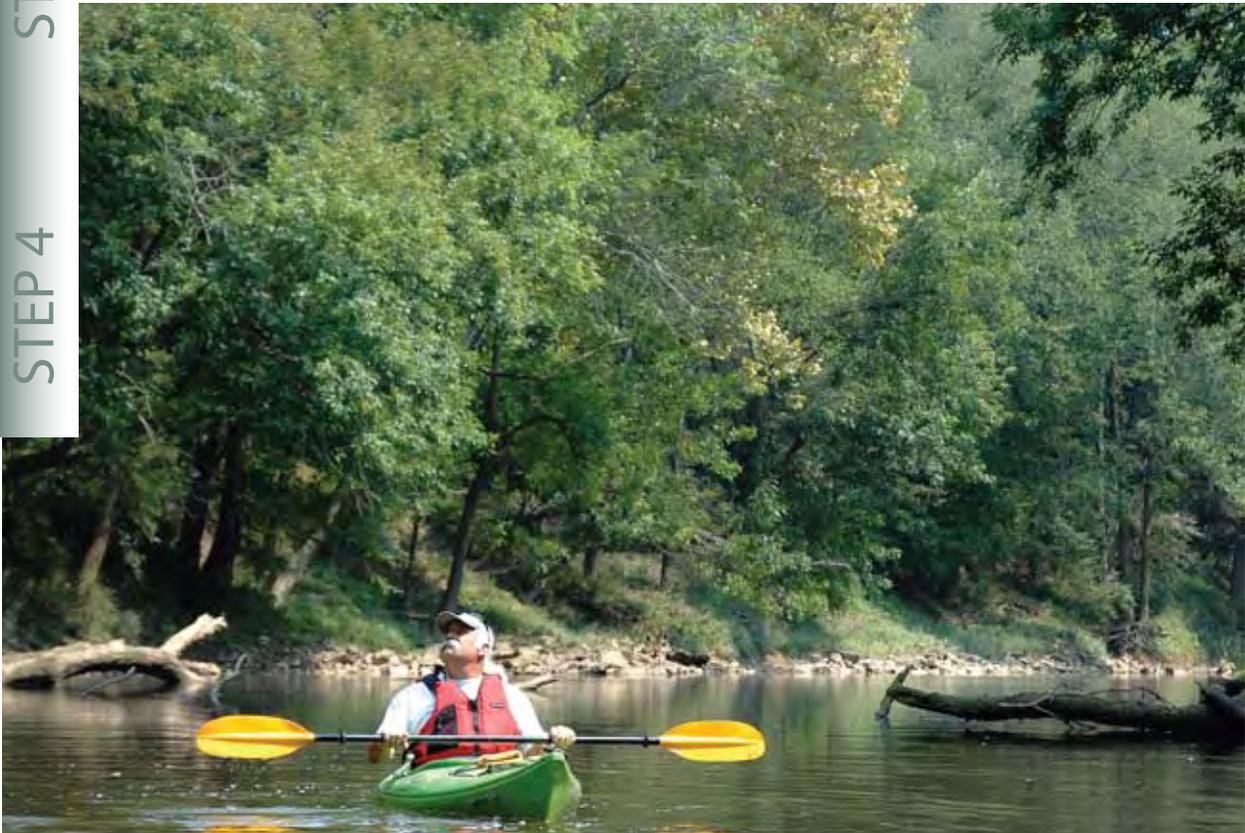
The following is a list of natural areas that are recognized as environmentally significant and may require consideration for environmental review by various DENR agencies:

- Areas designated by Division of Parks and Recreation
 - Properties designated under State Nature and Historic Preserves Act
 - State trails and canoe trails
 - Wild and Scenic Rivers
- Areas designated by N.C. Wildlife Resources Commission
 - Leased game lands
 - Wildlife (e.g., turkey) restoration sites
 - Trout Waters
 - Stream restoration sites
 - Inland Primary Nursery Areas

STEP 2

STEP 3

STEP 4



STEP 1

- Areas designated by Division of Water Quality
 - High Quality and Outstanding Resource Waters
 - Water supply watersheds
 - Mitigation areas or watershed restoration areas
- Areas designated by Division of Marine Fisheries
 - Primary Nursery Areas (PNA)
- Areas designated by Division of Coastal Management

STEP 2

- Areas of Environmental Concern
 - Shellfish beds
 - Submerged aquatic vegetation (SAV) beds
 - Offshore hardbottom areas
- Areas designated by the Natural Heritage Program
 - Registered Natural Areas – lands where the owner has entered into a management agreement with the Natural Heritage Program (as authorized under the State Nature Preserves Act).
 - Other Significant Natural Heritage Areas, including Significant Aquatic Habitats, where populations of state listed species are present (see section on state listed species above).
 - Other areas of importance to wildlife including:
 - Large blocks of unfragmented habitat
 - Habitat connections linking the natural areas or blocks of wildlife habitat identified above

STEP 3

STEP 4



STEP 1

The following is a list of resources for which the state (or federal) government has a formal involvement (e.g., statutory requirement) for their protection. Projects where the area of impact intersects these resources may require consideration for environmental review:

- Natural areas where the state either owns the land or holds a dedication or easement.
 - Public lands
 - State Parks or Aquariums
 - State Game Lands
 - Division of Coastal Management Estuarine Reserves
 - Department of Agriculture Plant Protection Sites (e.g., Boiling Springs Lakes; Picture Creek Diabase Barrens)
 - State Forests
 - State Historic Sites
 - Dedicated State Nature Preserves
- Protected Species - any federally listed species or federally designated Critical Habitat

STEP 2

STEP 3

STEP 4



STEP 1

Step 1 – Gathering Information

- Determine Study Area Boundary
- Determine Study Time Frame
- Describe Environmental Features
- Identify Project Design and Alternatives

STEP 2

Step 2 – Determining Significance of SCI

- Determine Environmental Consequences
- Determine Significance of SCI Effects

STEP 3

Step 3 – Reducing Significance of SCI

- Avoid
- Minimize
- Mitigate
- Conclude Magnitude and Significance of SCI
- Agency Expectations

STEP 4

Step 4 – Documenting Your Findings

- Prepare an Environmental Assessment
- Proceed to a Finding of No Significant Impact
- Prepare an Environmental Impact Statement
- Proceed to a Record of Decision

Step 3: Reducing Significance of SCI

Once the significance of a project's SCI has been determined, the next step involves evaluating measures to avoid or minimize the environmental impacts of the proposed project. This is referred to as mitigation. Mitigation measures may allow a SEPA review to conclude with an EA/FONSI, making an EIS unnecessary. For projects that require an EIS, mitigation is often required to meet the permitting requirements of the state and federal review agencies. The type of mitigation needed for each project will vary depending on the size of the project, the amount and type of resources to be impacted, and the amount of growth and development the project will support.

STEP 1

STEP 2

STEP 3

STEP 4

Mitigation Measures

An EA should include a description of the mitigation measures that will be used or implemented to avoid or minimize direct impacts and the significance of the project's SCI. An EIS should include appropriate mitigation measures, including those associated with each alternative. Mitigation measures can be used to proceed with a proposed project, formulate a revised project, mitigate adverse effects or mitigate and/or enhance relevant and practicable environmental impacts.

The five categories of mitigation are:

- **Avoiding** the impact altogether by not taking a certain action or parts of an action;
- **Minimizing** impacts by limiting the degree or magnitude of the action and its implementation;
- **Rectifying** the impact by repairing, rehabilitating or restoring the affected environment;
- **Reducing** or eliminating the impact over time by preservation and maintenance operations during the life of the project; and
- **Compensating** for the impact by replacing or providing substitute natural resources or environments.



Avoiding impacts to the fullest extent possible generally expedites both the project's SEPA review and permitting. SCI may be avoided through project planning and design, modification of the proposed project or by adopting the no-action alternative. If impacts cannot be avoided, then the project should be designed to minimize impacts. Impacts can be minimized by reducing the size of the project, locating the project in the least environmentally sensitive area and using certain construction techniques. Rectifying, reducing or eliminating impacts over time, or compensating for an impact can be used only after avoidance and minimization have been documented. Often a project will include a combination of these mitigation measures.

The magnitude and significance of SCI varies with each project. For instance, large infrastructure projects (e.g., a wastewater treatment plant expansion) that will support increased urban development of forested or agricultural lands will have SCI of greater magnitude and significance than smaller infrastructure projects (e.g., replacing septic systems with public sewer within an existing developed area). Generally, projects that support increased urban development and growth may need to implement additional, or improve existing, mitigation measures or best management practices (BMPs) to reduce the significance of SCI. Avoidance is usually more successful and preferred over remediation or mitigating for unwanted effects.

STEP 1

STEP 2

STEP 3

STEP 4

A project's SCI, which may require mitigation, could cause any of the following:

- Induced land development
- Redirected land development
- Increase in impervious surfaces
- Increase in nonpoint source pollution
- Increase in stormwater flow
- Increase in flooding events
- Increased nutrient loading to streams/reservoirs
- Increased sedimentation and erosion to streams/reservoirs
- Loss of riparian buffer
- Erosion of stream banks
- Altered watershed hydrology
- Modified stream flows
- Degradation of water quality
- Degradation of aquatic habitat
- Degradation of wetland quality and function
- Deforestation
- Habitat fragmentation and/or degradation
- Lower diversity of macroinvertebrates and fish
- Disrupted migration of aquatic and terrestrial wildlife populations
- Increased shellfish closure
- Reduced groundwater recharge
- Contamination of groundwater supply
- Increased freshwater flow into estuary or decreased freshwater flow into estuary
- Increased usage of navigable waters
- Increased turbidity in streams/reservoirs from boat traffic

Mitigation measures for SCI include, but are not limited to:

- Preserve critical habitat areas
- Protect wildlife corridors and/or crossings
- Establish, maintain or create riparian buffers
- Protect the 100-year floodplain
- Protect open space
- Manage stormwater
- Use low-impact development techniques
- Restore forests
- Re-vegetate with native species
- Control invasive/exotic species



STEP 1

- Use construction designs that allow aquatic life passage
- Locate utilities outside of riparian buffers
- Maintain large trees and bushes at the edge of utility corridors
- Use construction site sediment traps and barriers
- Stabilize disturbed ground surfaces immediately
- Mitigate for stream impacts including enhancement, restoration and preservation
- Use bioengineering techniques for stream bank stabilization
- Establish conservation easements

STEP 2

Agency Expectations

Each DENR agency reviewing environmental documents has its own set of standards or tools that it uses to determine appropriate mitigation for project impacts. Generally, these are based upon pre-existing rules, guidelines or BMPs that the agency implements, requires or recommends. The expectation is if the applicant adheres to or implements the minimum level of agency standards, the project will have reduced the significance of SCI. Where such measures will not provide adequate mitigation for projected impacts, agencies may request or recommend that the applicant adopt additional mitigation measures or improve existing ones, in order for the project to be approved. Coordination with local government can be helpful because they have the land use authority to avoid, minimize or otherwise mitigate against potential adverse SCI.

STEP 3

Below is a list of DENR agencies and the standards or tools used by each to establish or evaluate mitigation for SCI. Appendix VII – State and Federal Laws: What do they mean for me? – provides a brief overview of the natural resources laws most likely to be involved in the environmental review of a project. Many of the documents listed below are established through provisions provided in some of these laws.

STEP 4

Division of Air Quality: Compliance Monitoring Strategy, Implementation Policy, Compliance Assurance Monitoring

Division of Coastal Management: Coastal Area Management Act (CAMA); Technical Manual for Coastal Land Use Planning, Rules of the Coastal Resources Commission, North Carolina Environmental Policy Act (NCEPA) Requirements for Projects Requiring a Coastal Area Management Act (CAMA) Permit

Division of Forest Resources: Forest Practice Guidelines Related to Water Quality; North Carolina Forestry Best Management Practices Manual (“Blue Book”)

Division of Land Resources: Sediment Pollution Control Act; Erosion and Sedimentation Control Plan; Forest Practice Guidelines Related to Water Quality

STEP 1

Division of Marine Fisheries: Coastal Habitat Protection Plan and Implementation Plan

Division of Water Quality: Surface Waters and Wetlands Standards (“REDBOOK”), NPDES Wastewater and Stormwater, and 401 Water Quality Certification

Wildlife Resources Commission: Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality (see Appendix VI)

STEP 2

Mitigation Measure Responsibility

The implementation of mitigation measures is the responsibility of the applicant. Mitigation requirements are generally enforced through project permits. For infrastructure expansion projects, the permitting agencies may require mitigation by each local government receiving service from the project. Often, the applicant is a public utility without decision or rulemaking authority for land use matters, or the applicant may not have jurisdiction over all the areas to which service will be provided. It is the responsibility of the applicant to ensure that adequate mitigation is provided by each local government within the project’s service area. DENR strongly urges all applicants to coordinate with local government planning and environmental staff early and often during the SEPA review process to ensure that adequate mitigation is provided.

STEP 3

Applicants should coordinate with DENR agencies prior to submitting an environmental document to determine how to provide mitigation; specifically, where impacts may go beyond an established service area boundary or when the applicant is providing service to other jurisdictions and SCI are expected within those jurisdictions. Mitigation measures should be described separately for each impact that is being mitigated. If multiple jurisdictions are involved, for each jurisdiction, the mitigation measures should be described separately for each impact that is being mitigated. Statements such as “consult or coordinate with” “strive to protect” “monitor the impacts” or “will further study” are not considered adequate mitigation.

STEP 4

STEP 1

Step 1 – Gathering Information

- Determine Study Area Boundary
- Determine Study Time Frame
- Describe Environmental Features
- Identify Project Design and Alternatives

STEP 2

Step 2 – Determining Significance of SCI

- Determine Environmental Consequences
- Determine Significance of SCI Effects

STEP 3

Step 3 – Reducing Significance of SCI

- Avoid
- Minimize
- Mitigate
- Conclude Magnitude and Significance of SCI
- Agency Expectations

STEP 4

Step 4 – Documenting Your Findings

- Prepare an Environmental Assessment
- Proceed to a Finding of No Significant Impact
- Prepare an Environmental Impact Statement
- Proceed to a Record of Decision

Step 4: Documenting Your Findings

The next step is to document your findings. This allows DENR and other reviewing agencies to conduct their review in an efficient and timely manner. Keeping the appropriate state and federal agencies informed throughout the entire planning and development process results in a complete document and can save time and money. Depending on the agency's mission, each agency may evaluate the project differently; therefore, coordinating and planning with each agency is important. Environmental documents that provide adequate data, high quality maps, field studies or conceptual modeling, rather than guesswork, will result in a better review outcome and a more environmentally sensitive project.

This step assists the applicant in deciding whether to prepare an EA or EIS, and then details the process for completing environmental documentation.

STEP 1

Prepare an Environmental Assessment

The primary difference between an EA and an EIS is the level of SCI analysis. SEPA requires the preparation of an EIS if significant impacts will occur.

Preparation of an EA begins after a proposal has been sufficiently planned, screened and analyzed. An EA ensures that the environmental impacts of a project are kept to a minimum. An EA can be prepared if (1) significant impacts are eliminated through avoidance or other mitigation measures and it is determined that no significant impacts to human and natural resources will occur; or (2) to determine whether the proposed project has the potential to cause significant impacts. SEPA requires the preparation of an EIS if it is determined that significant impacts will occur. Generally, the contents of an EA should include:

- Need for the project;
- Reasonable alternatives;
- Environmental effects of the project; and
- Mitigation to avoid or minimize significant impacts.

STEP 2

STEP 3

Sufficient discussion and documentation of SCI must be included in an EA to support a FONSI. In some cases SCI are unavoidable; therefore mitigation measures that offset impacts are warranted. Any proposed mitigation measures should be documented in the EA.

DENR requests more specific information in the EA than the State Clearinghouse guidance. This additional information produces a more detailed EA that addresses agencies' concerns and expedites the review process.

STEP 4

When DENR is the State Project Agency, the EA is circulated within DENR prior to the State Clearinghouse Intergovernmental Review Process. This establishes uniformity and ensures that the proposed action is consistent with DENR rules. It is also recommended that the lead agency provide copies to the Department of Cultural Resources and federal agencies during the DENR internal review process.

In preparing an EA for DENR's internal review, copies are provided to the lead agency to determine that the document is complete. This completeness review is only for the purposes of ensuring that the document format and information is accurate prior to circulation to other DENR and federal agencies. The lead agency's initial evaluation does not assess the merits and environmental consequences of the proposed project; that is done during the DENR's internal review. DENR allows at least 15 working days for agencies to review and comment; however, the internal review **may require 4 to 6 weeks**. Agencies are allowed to request additional review time.

Following DENR's internal review, comments are returned to the lead agency noting any changes that are needed before the document is released for public review through the State Clearinghouse. If the EA has insufficient information or agency concerns are significant,

STEP 1

a second DENR internal review may be necessary. If revisions or additional information are requested and the EA requires a second DENR review, the review process may take an additional 4 to 6 weeks. (Note: This may be avoided by scoping.) Once the changes have been incorporated and the lead agency determines that significant concerns have been addressed, the lead agency submits the EA and FONSI to the State Clearinghouse for distribution. The EA can be submitted to the State Clearinghouse without the FONSI. However, final SEPA compliance requires both the EA and FONSI to be circulated. If submitted separately, each requires a 30-day State Clearinghouse review.

Additional information regarding the DENR internal review process and the State Clearinghouse Intergovernmental review process can be obtained from the lead agency or see the review process charts in Figures 6 and 7 on pages 68 and 69.

Proceed to a Finding of No Significant Impact (FONSI)

After DENR approves the EA, the FONSI is prepared by the lead agency. A FONSI is a decision document that briefly describes why a project will not have any significant impacts on the environment and human resources, and why a project will not require an EIS.

A FONSI should include:

- All agency review comments;
- Responses to agency comments;
- Outstanding issues, conditions;
- Mitigation measures; and
- Reference to any related environmental documents.

The lead agency submits the EA/FONSI for circulation through the State Clearinghouse for a **30-day review**.

The rules for implementing SEPA give the lead agency both the responsibility and the authority to determine whether a FONSI is appropriate for a given project. If the lead agency chooses to submit only the EA, the State Clearinghouse's comments can be used to determine if a FONSI is sufficient. **Submitting the EA and FONSI separately to the State Clearinghouse results in a 60-day review.**

A mitigated FONSI is prepared when



STEP 2

STEP 3

STEP 4

STEP 1

an EA indicates that the environmental impacts of a proposed project have the potential to be significant. The preparation of a mitigated FONSI consists of mitigation that must reduce all the significant impacts of the proposed project to a level of no significant impacts. The mitigated FONSI should be based on specific project related mitigation. An applicant always has the option of preparing an EIS at any time if it is determined that there will be significant impacts.



STEP 2

STEP 3

Prepare an Environmental Impact Statement

If the lead agency determines that a proposed project will have significant environmental impacts, then the applicant could forego the preparation of an EA and prepare an EIS. An EIS is intended to be a more complete description of the affected environment and the potential consequences of the project.

The alternative analysis is a crucial component of the EIS and must consider a range of options, including the no-action alternative. The EIS should include the direct, secondary and cumulative impacts of the alternatives and discuss all impacts that cannot be avoided. Since impacts to resources are significant, the SCI analysis should be comprehensive and comparable to the level of impact. While projects with long-lasting and widespread SCI in environmentally sensitive areas should receive close scrutiny, the alternative analysis should be clear and concise. Certain types of information may be difficult to obtain for a complete analysis. Situations where specific information is unavailable or incomplete should be communicated to the lead agency and resource agencies as early as possible. These agencies may be able to assist in providing information. Additional studies by the applicant may be required to complete the alternative analysis.

STEP 4

Like the EA, the EIS process allows agencies and the public to participate in the environmental decision-making process. Scoping meetings and public hearings, although not required by SEPA, are recommended when preparing an EIS. Interested parties should be given notice of such hearings in the Environmental Bulletin published by the State Clearinghouse. Additional information on holding public hearings and giving notice through the Environmental Bulletin can be obtained from the lead agency.

STEP 1

After DENR has reviewed the draft EIS (DEIS) and agency concerns have been satisfied, the DEIS is submitted to the State Clearinghouse by the lead agency for a **45 day** public review. Items that should be added to the contents of the DEIS include:

- Scoping comments, if appropriate;
- DENR agency review comments and responses;
- Identification of any project conditions or commitments;
- Mitigation plan or measures; and
- Related environmental documents.

STEP 2

Upon completion of the DEIS review and comment period through the State Clearinghouse, the final EIS (FEIS) is prepared and submitted for circulation through the State Clearinghouse for a **30-day public review**. The contents of the FEIS are very similar to the contents of the DEIS but should also include:

- DEIS review comments and responses;
- Public hearing documentation;
- Any outstanding issues;
- Specific permit conditions or commitments;
- Mitigation plan or measures; and
- Any materials that will result in a Record of Decision (ROD).

STEP 3

If substantial changes occur in alternatives, project location or environmental conditions, a supplemental DEIS or supplemental FEIS will need to be prepared and circulated for DENR's internal review prior to the State Clearinghouse Intergovernmental Review Process. DENR allows at least 15 working days for agency review and comment. However, the internal review process **may require 4 to 6 weeks**. The circulation and review of a supplemental DEIS through the State Clearinghouse will take **45 days**, and the review of a supplemental FEIS will take **30 days**.

STEP 4

Proceed to Record of Decision (ROD)

After completing the review of a FEIS, a ROD should be prepared that details the following:

- Project description;
- Preferred alternative;
- Factors in making the decision;
- Mitigation measures; and
- Commitments that were made to reach the decision.

The ROD is submitted to the State Clearinghouse by the lead agency and circulated to appropriate state, federal and local agencies for informational purposes only. The ROD must be circulated through the State Clearinghouse to complete the SEPA review process.

6. Responding to DENR Comments

The lead agency will send agency comments on the scoping document, EA or DEIS to the applicant after the DENR or State Clearinghouse review process have been completed. Agency comments can include requests for additional maps; supporting information or studies; consideration of additional alternatives; clarification of vague or confusing language; or editorial corrections to the document's content.

The applicant should respond to all agency comments. To ensure that agency comments are addressed thoroughly, the applicant may contact specific agencies to clarify their responses. The applicant or lead agency may request a meeting with any commenting agency to discuss and resolve any outstanding issues. Substantive comments from an agency with either resource expertise, permitting

authority or persuasive evidence of potential project impacts should be given appropriate weight in the lead agency's decision how to resolve outstanding issues. If concerns cannot be resolved, the department can mediate controversies between applicant, lead agency and commenting agency.

Upon revision, the applicant will resubmit the draft document to the DENR lead agency. The revised document will be circulated only to those agencies that initially responded with concerns or recommendations. Once agency concerns are addressed, the DENR lead agency will issue the appropriate document and submit it to the State Clearinghouse, which will post a notice in the Environmental Bulletin that the document is available for public review.



NC Tourism - Bill Russ

7. Environmental Justice

The USEPA Office of Environmental Justice describes environmental justice as the fair and equitable treatment of people, regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies (Environmental Justice Executive Order 12898). USEPA further describes fair treatment as meaning that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. USEPA has described meaningful involvement as meaning that (1) people have an opportunity to participate in decisions about activities that may affect their environment and/or health; (2) the public's contribution can influence the regulatory agency's decision; (3) the public's concerns will be considered in the decision-making process; and (4) the decision makers seek out and facilitate the involvement of those potentially affected (see Appendix IV for link to Basic Information posted on USEPA's Web site).

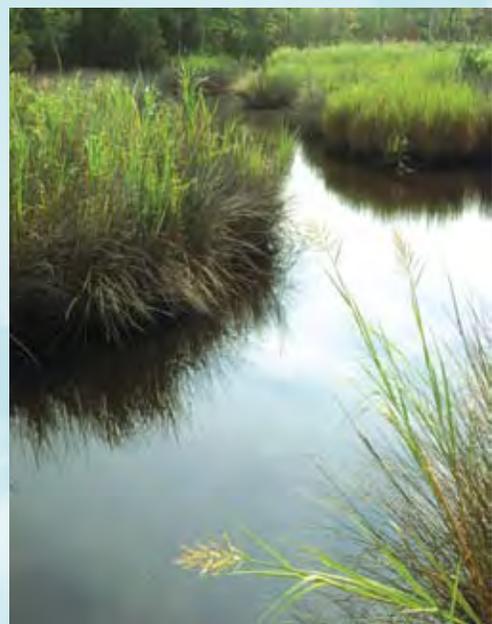
State agencies must address environmental justice if they receive federal funding. Title VI of the Civil Rights Act of 1964 forbids discrimination by any program receiving federal funding. Since DENR receives significant funding from the USEPA, all



state environmental permit decisions linked to federal programs are potentially subject to Title VI discrimination claims. To further implement the Title VI prohibition on discrimination, the USEPA promulgated regulations that prohibit recipient agencies, including state agencies granting environmental permits, from engaging in practices creating discriminatory effects or locating a facility where it will have discriminatory effects. Other federal agencies, including the Council for Environmental Quality which oversees NEPA, have promulgated regulations to address environmental justice in their programs.

SEPA does not use the phrase “environmental justice,” but does ask DENR agencies to evaluate and analyze the environmental, health, economic and social effects of the proposed project on minority and low-income communities. This includes reviewing the communities’ access to public information and meetings. DENR shares the views and goals of the USEPA’s Environmental Justice Program and seeks to implement its guidance to ensure environmental equity for the citizens of North Carolina.

DENR developed the Environmental Equity Initiative to help provide guidance to the public on how to notify DENR regarding environmental equity or environmental justice issues or complaints. It also provides guidance on how DENR should respond to such issues or complaints. Any person or agency needing additional information or wishing to raise an issue or file a complaint (“referral”) about an environmental equity topic should refer to DENR’s Customer Service Center Web site (see Appendix IV).



8. SEPA Review Process – Flowcharts

When DENR is the State Project Agency, environmental documents must be reviewed by DENR agencies prior to submitting the document to the State Clearinghouse. Upon the completion of this review, the lead agency submits the appropriate

environmental document to the State Clearinghouse for public review. Figures 6 and 7 illustrate the DENR internal and the State Clearinghouse review processes.

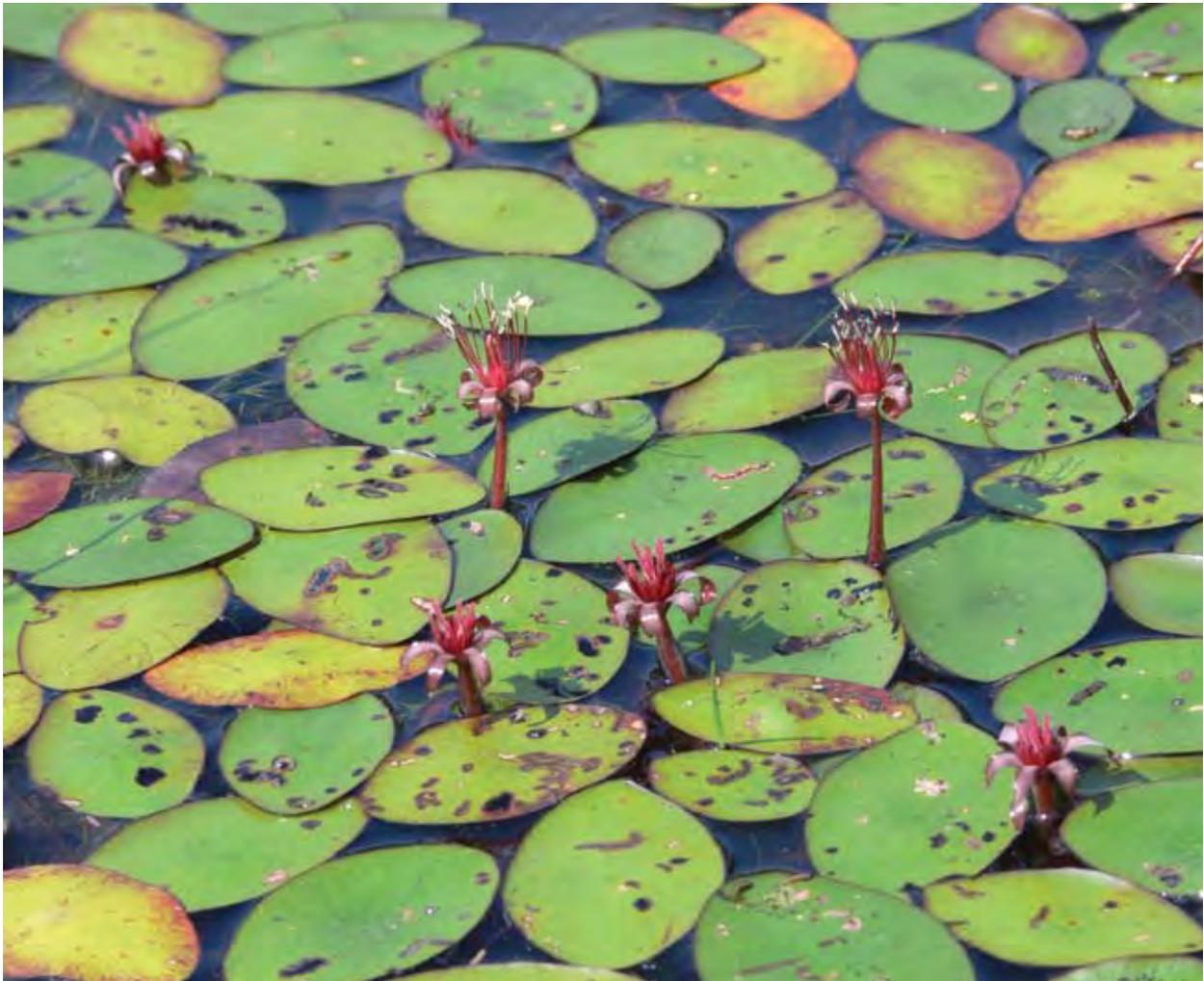
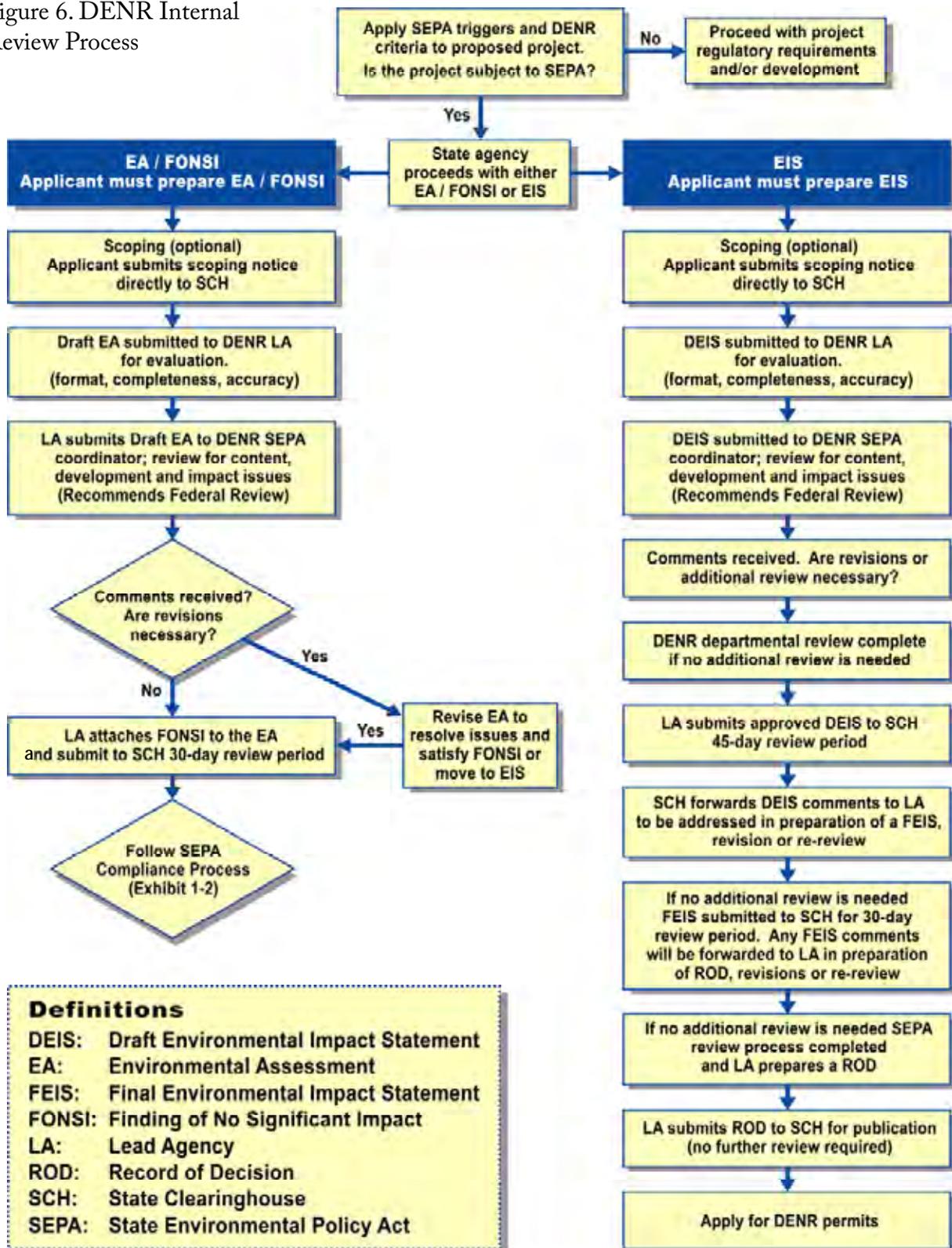


Figure 6. DENR Internal Review Process



Definitions

- DEIS: Draft Environmental Impact Statement
- EA: Environmental Assessment
- FEIS: Final Environmental Impact Statement
- FONSI: Finding of No Significant Impact
- LA: Lead Agency
- ROD: Record of Decision
- SCH: State Clearinghouse
- SEPA: State Environmental Policy Act

Figure 6

Figure 7. SEPA Review Process

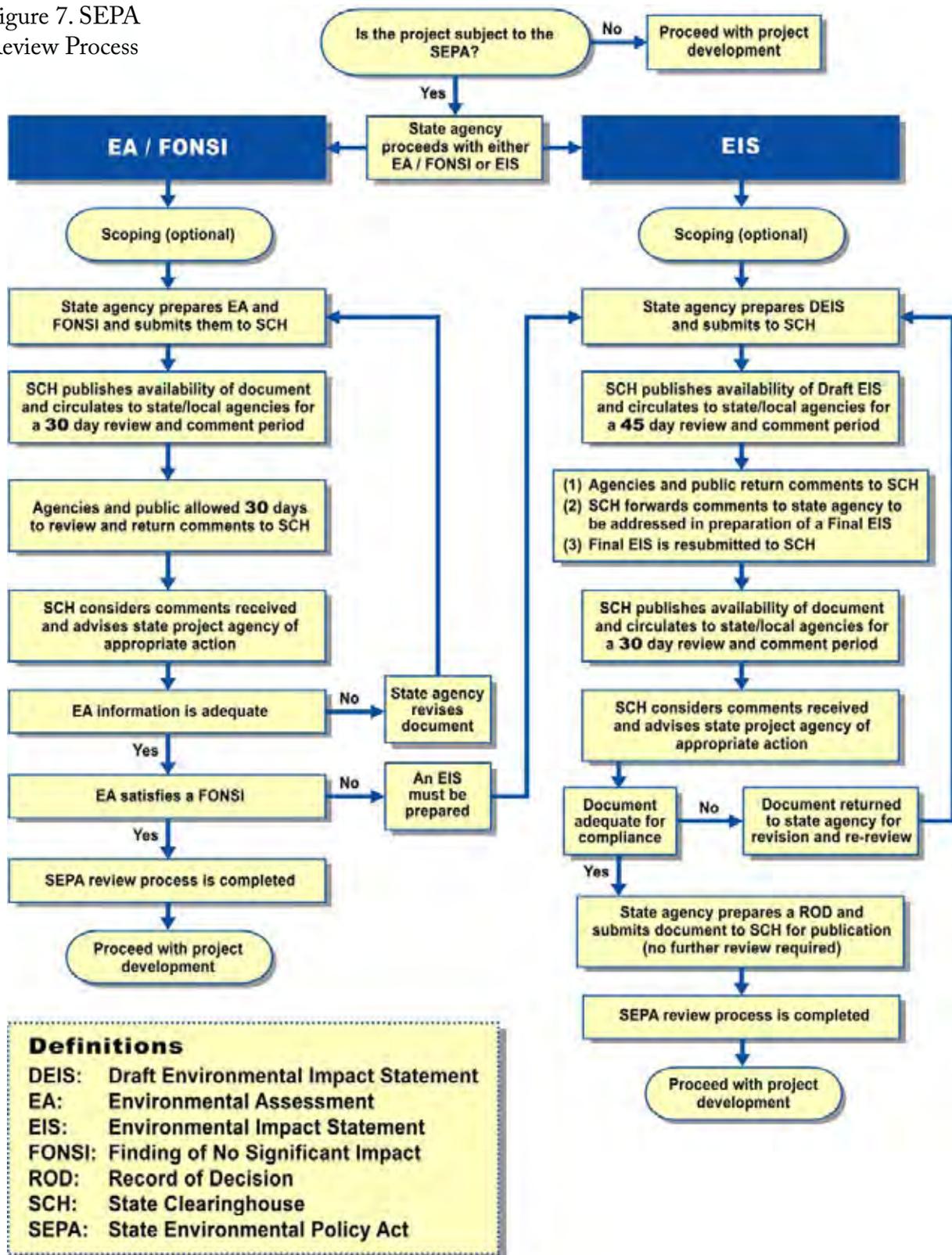


Figure 7

9. Why Environmental Reviews Take Time

How long does an environmental review take? This is difficult to predict and depends on the project's complexity, whether revisions or clarifications to the environmental document are required, the public's interest in the project and whether a public hearing may be necessary. Some typical reasons why an EA or EIS are returned for clarification or revisions include:

- Inaccurate project description;
- Narrowly focused purpose and need section;
- Inadequate description of the loss, degradation or fragmentation of wildlife habitat that will occur because of the project;
- Inadequate evaluation of all reasonable alternatives that address the project's needs and purpose;
- Inadequate assessment of impacts;
- Inadequate management practices to avoid and minimize impacts or to otherwise mitigate for unavoidable impacts;
- Inaccurate project boundary that does not include the area for all potential impacts;
- Inadequate documentation of SCI, in general, but specifically on listed species such as freshwater mussels;
- Appropriate surveys have not been completed;
- Agency review comments were not adequately addressed; and

- Impacts have not been reduced to less than significant to reach a FONSI.

Coordinating with state and federal agencies early in the planning of a project through scoping expedites the review process and saves time and money. Also, these agencies can advise the applicant about sensitive or conservation areas or rare species in the project area.

The following questions should be considered prior to submitting an environmental document for review. The length of time required for the review of an environmental document can be directly related to the adequacy of how these questions are answered. If additional questions arise, please do not hesitate to contact review agencies.

1. Has an adequate inventory of the natural, historic or cultural resources that may be affected by the project been completed?
2. Have the direct, secondary and cumulative impacts of the project on natural resources been considered sufficiently?
3. Have all practical project alternatives been considered and the environmentally preferable alternative identified?
4. Have impacts been avoided or minimized?
5. Are there additional phases to the project that need to be combined into one environmental document?

6. For projects inducing land development, have such activities been guided away from important natural resources, critical habitat and hazard areas?

In determining if adequate mitigation has been provided for a project's impacts, agencies may ask such questions as:

- Are forested riparian buffers in place?
- Is the proposed infrastructure routed outside of the riparian buffer?
- Will commercial or residential land development be permitted within the 100-year floodplain?
- Are impervious surfaces minimized?
- Are steps being taken to control erosion and sedimentation?
- Are disturbed areas being reseeded and/or landscaped with native plants?
- Are natural or critical habitat areas being preserved?

In review, the following are actions the applicant

should consider to reduce the length of a SEPA review.

1. **Scoping**

Submit a scoping document for review through the State Clearinghouse to reduce the likelihood that a document will contain inadequate or erroneous information, analysis or mitigation measures that may delay final EA or EIS approval.

2. **Speculative limits**

For wastewater treatment plant (WWTP) projects, request speculative limits from DWQ prior to drafting the SEPA document. The speculative limits response letter must be included in the environmental document's appendix.

3. **Alternatives analysis**

Describe all project alternatives considered, including non-discharge options and taking "no action." The analysis needs to include a description of the site-selection process



and factors considered in the preferred site's selection. The focus should be environmental factors although economic factors should be disclosed as well. For WWTPs, include a completed engineering alternatives analysis in the environmental document.

4. Local government coordination

Applicants and their consultants (if applicable) are strongly encouraged to begin coordination early and continue throughout the SEPA process with local government planning and development management offices having jurisdiction over areas served and impacted by the proposed project. This is very important when completing the land use, environmental features and mitigation sections of the EA or EIS.

This document provides guidance to assist in understanding how environmental documents should be prepared and evaluating the critical environmental impacts of a proposed project. For any project that could trigger a SEPA review, local governments should notify the appropriate permitting agency within DENR to determine whether an environmental document is required.

Local governments should note that federal agencies are provided the opportunity to participate in the DENR internal review.



10. Local Government Authority

State agencies have very limited control over land-use planning and development decisions made by local governments. Local government planning is the most effective way to resolve SCI on natural resources that result from land-use changes and increases in population density. Proactive planning on the local level can help streamline the environmental review and permitting process. The following is a summary of the general powers of local government.

North Carolina cities and counties have gradually implemented provisions to their regulations addressing the environmental impacts of development. The General Assembly granted regulatory authority to both cities and counties through ordinances that allow them to define, prohibit, regulate or decline acts, omissions or conditions detrimental to the health, safety or welfare of its citizens. In addition, cities and counties have been given specific authority for a wide range of land development regulations including zoning and a variety of specialized growth management and environmental regulations, such as:

- Sedimentation and erosion control;
- Floodplain management;
- Mountain ridge protection; and
- Watershed protection.

When it comes to general local power, there are few differences between cities and counties. The fact that a particular land use may be subject to both state and local regulations is a common occurrence and does not in itself preempt local regulation. In some instances, local regulations that go beyond state requirements are specifically authorized.

No overlapping local authority exists for development regulations; either the city has exclusive jurisdiction over a particular site or the county does. Generally, cities have exclusive authority over land within the city's corporate limits and counties have exclusive authority over all unincorporated lands. If a city chooses to have zoning, the regulation must apply to all land within the entire city limits. Counties can provide partial zoning coverage provided the regulated area is at least 640 acres, and includes at least 10 separate parcels and 10 separate land owners.



Extraterritorial Jurisdiction

All municipalities in the state have been granted the authority to apply city zoning, subdivision and other land use ordinances in the unincorporated areas just outside the city's boundaries. This area is recognized as the city's extraterritorial jurisdiction (ETJ).

The maximum size of the ETJ depends on the city's population. In cities with populations:

- up to 10,000, the ETJ can extend up to one mile from the city limits;
- from 10,000 and 25,000 can extend up to two miles; and
- more than 25,000, the ETJ can extend up to three miles.

These limits extend only from a city's corporate limits and cannot be extended from the fringe area around noncontiguous areas, known as "satellite annexations."

Cities and counties have broad authority to enter into agreements with each other regarding their individual jurisdictions. A city can:

- Contract to have a county administer some or all of a city's ordinances;
- Have the county apply regulations in the city;
- Choose to exercise less than its maximum ETJ; and
- Extend its ETJ beyond county lines.

In order to exercise its ETJ, a city must adopt an ETJ map ordinance and follow public notice and hearing procedures as it does for a zoning ordinance adoption or amendment. County approval is required within the first mile if the county is already exercising county zoning, subdivision control and building code

enforcement for that geographic area. The county must be exercising all three of these county ordinances in the area proposed to be added to the city's jurisdiction. County approval is required for all ETJs beyond one mile, even if county regulations are not in place. County approval is a discretionary decision that can be rescinded by the county commissioners.

Annexation

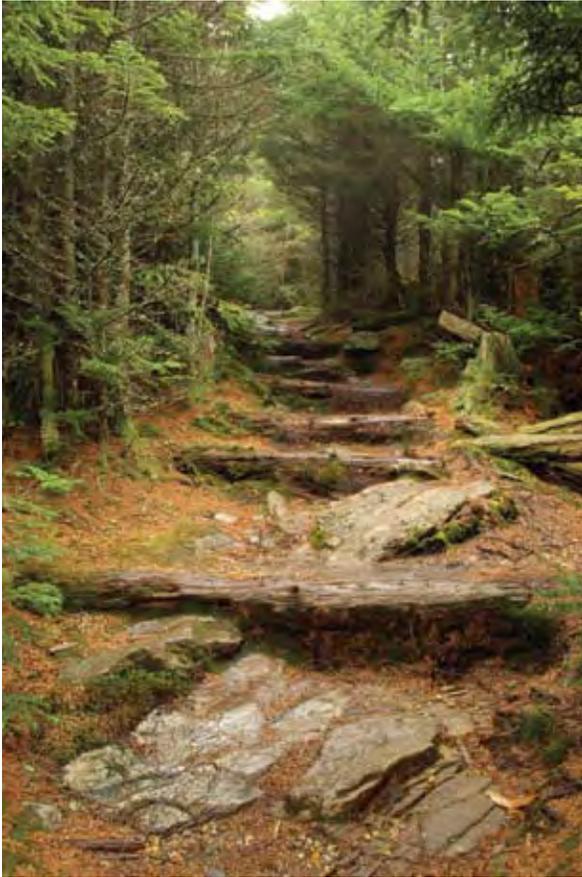
There are two types of annexation - voluntary and involuntary. Voluntary annexation or annexation by petition is initiated by the landowners involved. If the property is contiguous to the city, there are few limitations to these annexations beyond the consent of the parties.

If the area to be annexed is essentially urban in character the property can be involuntarily annexed. North Carolina has very detailed statutes on what lands meet the criteria for municipal annexation and the standards to be applied. While state law encourages urban areas to be annexed into adjacent cities, statutes require a fairly long, detailed notice and hearing process. The city is also required to provide the same services to the new area as previous city boundaries.

Ordinances

Many communities in North Carolina are facing challenges associated with natural resource degradation due to rapid growth and development. Local governments need to have legal authorities in place to shape development and to protect resources.

The USEPA has set up a web site that provides for



local governments the necessary information needed to develop effective resource protection ordinances (see Appendix IV).

This Web site includes model ordinances to serve as a template for those charged with making decisions concerning growth and environmental protection. For each model ordinance listed, there are several real-life examples of ordinances used by local and state governments around the nation. The ordinances address matters that are often forgotten in many local codes, including aquatic buffers, erosion and sediment control, open space development, stormwater control operation and maintenance, illicit discharges and post-construction controls. There is also a miscellaneous category containing ordinances that do

not fit into these sections. In addition, this Web site has materials that support particular ordinances, such as maintenance agreements and inspection checklists. The following is information from the USEPA's Web site:

Aquatic Buffers

Aquatic buffers serve as natural boundaries between local waterways and existing development. They help protect water quality by filtering pollutants, sediment and nutrients from runoff. Other benefits of buffers include flood control, stream bank stabilization, stream temperature control and room for lateral movement of the stream channel. Good aquatic buffer ordinances specify the size and management of the stream buffer and are a specific planning tool to protect stream quality and aquatic habitat.

Effective buffer ordinances provide guidelines for buffer creation and maintenance and should require:

- buffer boundaries to be clearly marked on local planning maps;
- maintenance language that restricts vegetation and soil disturbance;
- tables that illustrate buffer width adjustment by percent slope and type of stream; and
- direction on allowable uses and public education.

Each of the 10 sections of the model ordinance provides suggested language or technical guidance designed to create the most effective

stream buffer zones possible. Much of the model ordinance is based on Baltimore County, Md., regulations for the protection of water quality, streams, wetlands and floodplains. In certain sections, additional features and language judged to enhance the protective measures and functions of the proposed stream buffer have been added.

Erosion and Sediment Control

By most accounts, the most environmentally dangerous period of development is the initial construction phase when land is cleared of vegetation and graded to create a proper surface for construction. The removal of natural vegetation and topsoil makes the exposed area particularly susceptible to erosion, causing transformation of existing drainage areas and disturbance of sensitive areas.

The model ordinance in this section borrows language from the erosion and sediment control ordinance for Westchester County, N.Y., and also incorporates some additional features that might help prevent erosion and sedimentation and protect natural resources more fully. The model ordinance will need to be adapted to be broadly applied for several reasons. For example, some of the requirements might not be politically feasible or technically appropriate in all communities. In addition, the ordinance does not strongly correlate with the process by which building permits are granted because the process may vary between communities.

Open Space Development

Open space development, also called “cluster development,” is an alternative site planning technique that concentrates dwelling units in a compact area to reserve undeveloped space elsewhere on the site. In this technique, lot sizes, setbacks and frontage distances are minimized to allow for open space. The typical open space development creates less impervious cover and reduces the need to clear and grade by 35 to 60 percent of the site. Open space areas are often used for neighborhood recreation, stormwater management facilities or conservation purposes. Open space, preserved in a natural condition, needs little maintenance and helps to reduce and sometimes to treat stormwater runoff from development.

The model open space ordinance is intended to be a guide. It contains language that fosters development that is substantially consistent with many local zoning standards yet allows for modifications from the original standards to ensure appropriate, fair and consistent decision-making. The model ordinance sets guidelines for management of open space and the amount of open space required on a site, but it is not intended to be a “one size fits all” document.

Stormwater Control, Operation and Maintenance

The expense of maintaining most stormwater BMPs is relatively small compared to the original

construction cost. Too frequently, however, BMP maintenance is not completed, particularly when the BMP is privately owned. Improper maintenance decreases the efficiency of BMPs and can also detract from the aesthetic qualities of the practice. The operation and maintenance language within a stormwater ordinance can ensure that designs facilitate easy maintenance and that regular maintenance activities are completed.

This section includes model ordinance language, which focuses primarily on the maintenance of stormwater BMPs, and includes the elements of design, routine maintenance and inspections. Stormwater ordinance language regarding the

maintenance of erosion control measures would differ slightly from a sediment and erosion control ordinance due to the short-term nature of these measures. In addition, it is important to note that elements such as the process of applying for a permit would be included in more comprehensive sediment and erosion control or stormwater ordinances.

Illicit Discharges

An illicit discharge is defined as any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater, except for discharges allowed under a NPDES permit or waters used for firefighting operations. These non-stormwater discharges occur due to illegal





connections to the storm drain system from business or commercial establishments. As a result of these illicit connections, contaminated wastewater enters into storm drains or directly into local waters before receiving treatment from a wastewater treatment plant. Illicit connections may be intentional or may be unknown to the business owner and often are due to the connection of floor drains to the storm sewer system. Additional sources of illicit discharges can be failing septic systems, illegal dumping practices, and the improper disposal of sewage from recreational practices such as boating or camping.

Illicit discharge detection and elimination programs are designed to prevent contamination of ground and surface water supplies by monitoring, inspection and removal of these illegal non-stormwater discharges. An essential element of these programs is an ordinance granting the authority to inspect properties suspected of releasing contaminated discharges

into storm drain systems. Another important factor is the establishment of enforcement actions for those properties found to be in noncompliance or that refuse to allow access to their facilities. The model ordinance in this section includes language to address illicit discharges in general, as well as illicit connections from industrial sites. The language is borrowed from a number of ordinances and communities will need to assess appropriate enforcement methods for their area.

Post-Construction Controls

Management of stormwater runoff from sites after the construction phase of a project is vital to controlling the impacts of development on urban water quality. The increase in impervious surfaces from land development, such as rooftops, roads, parking lots and sidewalks can have a detrimental effect on aquatic systems. Heightened levels of impervious cover have been associated with stream warming and loss of aquatic biodiversity in urban areas. Runoff from impervious areas

can also contain a variety of pollutants that are detrimental to water quality, including sediment, nutrients, road salts, heavy metals, pathogenic bacteria and petroleum hydrocarbons.

The main goal of the model post-construction stormwater management ordinance for existing development is to limit surface runoff volumes and reduce water runoff pollution loadings.

There are other ideas that can be included in an ordinance to improve its ability to control stormwater runoff. The ordinance could include what nonstructural and structural stormwater practices are allowed within the community. Communities may also wish to add language regarding on-site stormwater requirements and whether off-site treatment is an option.

Zoning

Zoning is one of the most widely used ordinances by both cities and counties. Most cities with populations over 1,000 have their own zoning ordinances. Heavily populated counties now have county zoning. Zoning ordinances usually set minimum criteria for dimensions of lots, setbacks for buildings and maximum building sizes and can also include standards on landscaping, buffering, parking and signs. Within zoning districts, municipalities may regulate and restrict construction, alteration, repair and use of buildings and land for a variety of purposes, including preventing overcrowding, facilitating the adequate provision of public services and

promoting health, safety and welfare. Subdivision statutes provide regulations for the orderly growth and development of cities and counties.

More specific statutes authorize regulation of floodways, water supply watersheds, airport areas, places of amusement and public health nuisances.

Planning

There are few mandates for local planning in North Carolina beyond the 20 coastal (CAMA) counties; however, many local governments see the benefit of planning. These plans are used to protect and enhance the quality of the community and usually address land, infrastructure, utilities, transportation, economic/community development and environmental and historic preservation. Local governments also plan for several specific government functions, including provisions for water, city streets and handling solid waste. The SEPA/NEPA processes should not be the driving force behind local land-use planning.

The typical planning tool for local governments is the comprehensive plan. This plan is an official long-range policy, normally 10 to 20 years, adopted and amended by formal resolution of the city council or commission. The framework of the plan provides goals and objectives, as well as policies and guidelines for public infrastructure systems. Comprehensive plans are not regulations, and they do not have binding legal effect.

North Carolina local governments have extensive authority to plan and coordinate with one another to undertake planning, regulatory and public investment

activities to implement environmentally sensitive programs. However, a variety of growth management tools are not specifically mentioned in the state statutes. The broad interpretation of this authority provides the opportunity to consider the range of additional and supplemental powers that may be used. Enacting environmentally sensitive measures falls within the *scope* of local government's authority. Zoning ordinances can be amended to allow mixed uses, open space and buffers along waterways to protect important natural areas. On occasion, additional legislative authorization may be needed for a few of the growth management techniques mentioned above.

Moratoria

Moratoria are waiting periods on the issuance of construction permits by local zoning authorities. A moratorium is typically imposed to allow time to develop or refine ordinances; projects are put on hold while new regulations are being considered or new public improvements are implemented. This allows time for environmental studies and public participation. A moratorium:

- Should be based on need;
- Must apply uniformly throughout the jurisdiction;
- Should apply equally to existing and future uses;
- Can be limited in scope and time; and
- Can be applied to projects that are already underway.

Development moratoria serve an important

purpose that no other land-use management tool can accomplish. They allow a temporary freeze on development activity while long-term solutions to urgent problems are developed and implemented. However, a project generally can be completed, if it has received a permit or where substantial expenditures have been made.



Definitions

*All bold, italicized words
in the guidance are defined below.*

7Q10: The lowest stream flow that occurs over seven consecutive days and has a 10-year recurrence interval, or a 1-in-10 chance of occurring in any one year. Daily stream flows in the 7Q10 range are general indicators of prevalent drought conditions that normally cover large areas.

Action (as defined by SEPA): Includes but is not limited to licensing, certification, permitting and the lending of credit, expenditures of public monies and other similar final agency decisions, the absence of which would preclude the proposed activity. Action does not include the allocation of any public funds transferred in accordance with a statutory or regulatory formula, which leaves no discretion to the allocating agency.

Note: This last exception is intended to exclude the following types of revenues: Powell bill, sales tax, intangibles tax, beer and wine taxes, utility franchise taxes, and General Revenue Sharing (see 01 North Carolina Administrative Code 25 .0108(b)(1)).

Action: Is also referred to as a project, activity or proposal.

Applicant: Local governments, contractors and individuals or corporations to whom SEPA may apply.

Assimilative Capacity: The ability of a natural body of water to receive wastewater or toxin material without harmful effects and without damage to aquatic life.

Best Management Practice (BMP): State-of-the-art technology as applied to a specific problem and often required as a part of major land development projects. The BMP presents physical, instructional, or strategic approaches to environmental problems, particularly with respect to the control of nonpoint source pollution.

Biotic: Of or having to do with life or living organisms.

Buffer: An adjacent area of vegetated land that serves to attenuate noise, odor, artificial light, nonpoint pollution; to provide terrestrial habitat; and/or to maintain and protect aquatic habitat and water quality. (see Riparian)

Cumulative Impact: Environmental impact resulting from incremental effects of an activity when added to other past, present and reasonably foreseeable future

activities regardless of what entities undertake other such projects. Cumulative impacts are the reasonably foreseeable impacts from individually minor but collectively significant activities (see 15A North Carolina Administrative Code 01C .0103(3)).

Direct Impact: Environmental impact that is caused by an activity and occurs at the same time and place.

Duration Curve: A cumulative frequency graph that shows the relationship of specified values to the percent of values that equal or exceed the specified values. This is known as a percent exceedance duration curve. For example, if the 75 percent exceedance value corresponds to the value 100, then 75 percent of the values equal or exceed 100.

Easement: A right acquired from a property owner that affords the person receiving the right the ability to make limited use of the real property.

Ecosystem: All the interrelated organisms and their environment within a defined area (see 15A North Carolina Administrative Code .0103(6)).

Encroachment–Alteration Effect: Direct, cumulative and/or secondary impact that changes the behavior and functioning of the environment through placement of a project, or multiple projects over time, in or near an ecosystem.

Environmental Assessment (EA): A document prepared to evaluate whether the probable impacts

of a proposed project require the preparation of an environmental impact statement. (see North Carolina General Statute 113A).

Environmental Impact Statement (EIS): Document that provides a full and fair discussion of significant impacts of a proposed project and informs decision-makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the environment (see North Carolina General Statute 113A).

Environmental Justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies.

Extraterritorial Jurisdiction (ETJ): Authority granted to local municipalities by the state of North Carolina to establish boundaries for land-planning purposes on lands that are not within the local municipality's incorporated boundary.

Finding of No Significant Impact (FONSI): Document that list the probable environmental impacts of a proposed action, concludes that a

proposed action will not result in a significant adverse effect on the environment, states the specific reason or reasons for such conclusion and states that an environmental impact statement is not required.

Growth-Inducing Effects: Direct, cumulative and/or secondary impacts to natural systems caused by land-use alteration occurring, supported or encouraged by a project.

Hydrologic Unit Code (HUC): Numerical cataloging system developed by the U.S. Geological Survey to delineate drainage areas. An 8-digit number represents the hydrologic unit. The first two numbers represent the region while each following couplet represents the subregion, basin and subbasin, respectively. A joint effort of federal and state agencies to standardize the delineation of watersheds and subwatersheds produced the 10- and 12-digit HUC's, replacing the 11- and 14-digit codes.

Lead Agency: Agency preparing or having taken primary responsibility for preparing an environmental document. The lead agency is a subagency of the state project agency (see 15A North Carolina Administrative Code 01C .0103(13)).

Minimum Criteria Threshold: Level at or below which a proposed activity deemed by the Department of Environment and Natural Resources, under the authority of North Carolina General Statute 113A-11(b), does not require the preparation of an environmental document. The Secretary

of the Department may require environmental documentation for proposed activities that would otherwise qualify (see 15A North Carolina Administrative Code 01C .0405).

Mitigation: Action taken to lessen or eliminate impacts resulting from a project.

Nonpoint Sources: Pollution that is (1) induced or mobilized by natural processes or human activity, including precipitation, seepage, percolation and runoff, (2) not traceable to any discrete or identifiable facility, and (3) controllable through the utilization of best management practices.

Noteworthy Characteristic: Significant, prominent or distinctive natural and man-made features and planning designations present in the study area. Examples include: specific habitats; municipality limits; buffers; parks; 100-year floodplains; watersheds; extra-territorial jurisdictions; known rare, threatened or endangered species; resources that are sensitive to future degradation; project service area; surface waters and applicable governmental boundaries.

Permit: A written notification of permission to proceed with a proposed project after a review of the project to ascertain its compliance with regulations. The permit may contain conditions which if violated may result in a fine or revocation of the permit. The agency responsible for issuing and enforcing a permit is the permitting agency.

Point Source: Any discernable, confined and discreet conveyance, including but specifically not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or animal-feeding operation from which wastes are or may be discharged to the surface waters of the state.

Project: A proposal, activity or action of something to be planned and done.

Project Footprint: The area where the project physically stands.

Project Service Area: An area where a particular service, product or resource is made available for use by the public. It typically includes any area that receives or will receive services from a water or wastewater treatment plant.

Public Trust Areas: Public trust areas are navigable waters and the lands under navigable waters. “Navigable waters” include all waters that can be navigated by a recreational boat (which could be a canoe or kayak) under normal conditions. Public trust rights apply to the full extent of the water body (even if some portions of the water body are too shallow to navigate); the dividing line between public trust areas and private lands is the normal high water line or, in nontidal areas, the normal water level. Note: Public trust rights do not apply in lakes or ponds located entirely within the boundaries of a private property.

Quantitative: Describing with the use of determinate or estimated amounts, typically with the use of a mathematical model or formula.

Reasonably Foreseeable: Activity and/or impact that is likely to occur and within a time frame such that its consideration and evaluation is credible.

Record of Decision (ROD): A public document that explains the reasons for a project decision. The ROD is based on information generated from the review of a Final Environmental Impact Statement.

Recurrence Interval (also called the return period): The average time in years between occurrences of a given event.

Riparian: Of or relating to or located on the banks of a river, stream, impoundment, estuary or ocean.

Scope: Range, extent or breadth of a project, activity or impact.

Scoping: A voluntary discovery action by a lead agency or applicant to gather issues of concern from agencies or the public regarding a proposed project.

Secondary Impact: Environmental impact caused by and resulting from a specific activity that occurs later in time or further removed in distance than direct impacts but are reasonably foreseeable. Secondary impacts, also called indirect impacts, may include growth-inducing effects and other effects related to

induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (see 15A North Carolina Administrative Code 01C .0103(20)).

Service Area: The geographic area within which a particular service, product or resource is provided for use.

Site Plan: A plan that identifies existing conditions, proposed changes and noteworthy characteristics within the proposed project site.

Significant: Whether a proposed action “significantly” affects the quality of the human or natural environment is determined by considering the ecological and social aspects of the area in which it will occur and the potential for environmental impacts arising from the action.

Analysis of the significance of the proposed action must also consider indirect impacts that may occur in the future or in an area spatially removed from the proposed action.

Special Order by Consent: An action that is taken if a wastewater facility is unable to consistently comply with the terms, conditions or limitations in an NPDES Permit.

State Project Agency: State department or council of state agency which has been designated, under 01 North Carolina Administrative Code 25 .0210(a), for ensuring compliance with the North Carolina Environmental Policy Act (see 15A North Carolina Administrative Code 01C .0103(22)).

Study Area Boundary: Area in which the proposed project may have an impact on the environment.

Subwatershed: A smaller basin of a larger drainage area that all drains to a central point of the larger watershed. (See Hydrologic Unit Code)

Sustainability: Defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. (World Commission on Environment and Development 1987)

Viewshed: A view showing the geographic area from which a proposed project may be seen.

Watershed: The region or land area draining into a body of water (such as a stream, creek, river, pond, lake, bay or sound). A watershed may vary in size from several acres for a small stream or pond to thousands of square miles for a major river system. The watershed of a major river system is referred to as a basin or river basin. Watershed boundaries are typically formed at the ridgeline and are defined by the topography of a given region. (See Hydrologic Unit Code)

Wetlands: Soils or lands that are inundated or saturated by an accumulation of surface or ground water at a frequency and duration sufficient to support and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands can include swamps, marshes, bogs and similar areas, as well as headwater and bottomland hardwood forests.

APPENDIX I

15A NCAC 07H .0207 PUBLIC TRUST AREAS

(a) Description. Public trust areas are all waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of state jurisdiction; all natural bodies of water subject to measurable lunar tides and lands thereunder to the normal high water or normal water level; all navigable natural bodies of water and lands thereunder to the normal high water or normal water level as the case may be, except privately-owned lakes to which the public has no right of access; all water in artificially created bodies of water containing public fishing resources or other public resources which are accessible to the public by navigation from bodies of water in which the public has rights of navigation; and all waters in artificially created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means. In determining whether the public has acquired rights in artificially created bodies of water, the following factors shall be considered:

- (1) the use of the body of water by the public;
- (2) the length of time the public has used the area;
- (3) the value of public resources in the body of water;
- (4) whether the public resources in the body of water are mobile to the extent that they can move into natural bodies of water;
- (5) whether the creation of the artificial body of water required permission from the state; and
- (6) the value of the body of water to the public for navigation from one public area to another public area.

(b) Significance. The public has rights in these areas, including navigation and recreation. In addition, these areas support commercial and sports fisheries, have aesthetic value, and are important resources for economic development.

(c) Management Objective. To protect public rights for navigation and recreation and to conserve and manage the public trust areas so as to safeguard and perpetuate their biological, economic and aesthetic value.

(d) Use Standards. Acceptable uses shall be those consistent with the management objectives in Paragraph (c) of this Rule. In the absence of overriding public benefit, any use which jeopardizes the capability of the waters to be used by the public for navigation or other public trust rights which the public may be found to have in these areas shall not be allowed. The development of navigational channels or drainage ditches, the use of bulkheads to prevent erosion, and the building of piers, wharfs, or marinas are examples of uses that may be acceptable within public trust areas, provided that such uses shall not be detrimental to the public trust rights and the biological and physical functions of the estuary. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below normal high water, cause adverse water circulation patterns, violate water quality standards, or cause degradation of shellfish waters are considered incompatible with the management policies of public trust areas. In every instance, the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas.

*History Note: Authority G.S. 113A-107(a); 113A-107(b); 113A-113(b)(5); 113A-124;
Eff. September 9, 1977;
Amended Eff. February 1, 2006; October 1, 1993.*

APPENDIX II

SECTION .0300 - PREPARATION OF ENVIRONMENTAL DOCUMENTS

15A NCAC 01C .0301 IMPLEMENTATION

15A NCAC 01C .0302 INCORPORATION BY REFERENCE

15A NCAC 01C .0303 INCOMPLETE OR UNAVAILABLE INFORMATION

History Note: Authority G.S. 113A-2; 113A-4; 113A-5; 113A-6; 113A-10; 143B-10; Eff. August 1, 1989; Transferred from T15.01D .0401; .0402; .0403 Eff. November 1, 1989; Amended Eff. March 1, 1990; Repealed Eff. April 1, 2003.

15A NCAC 01C .0304 ACTIVITIES ABOVE THE MINIMUM CRITERIA

Any activity which is outside the parameters of the minimum criteria set out in Section .0400 of this Subchapter is required to have environmental documentation under the NCEPA.

History Note: Authority G.S. 113A-2; 113A-4; 113A-6; 113A-11; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0305 TYPES OF ACTIVITIES REQUIRING ENVIRONMENTAL DOCUMENTATION

The following DENR agency activities will be deemed to have a potential effect upon the environment of the state and require preparation of an environmental document unless they fall under the minimum criteria set out in Section .0400 of this Subchapter.

- (1) Proposed construction of facilities or infrastructures on lands and waters owned or managed by any DENR agency.
- (2) Specific programs conducted by DENR agencies on lands and waters or in the atmosphere owned or managed by the state.
- (3) Demolition of or additions, rehabilitation and/or renovations to a structure listed in the National Register of Historic Places or more than 50 years of age except where agreement exists with the Department of Cultural Resources that the structure lacks architectural or historical significance.
- (4) Ground disturbances involving National Register listed archaeological sites or areas around buildings 50 years old or older, except where agreement exists with the Department of Cultural Resources.

History Note: Authority G.S. 113A-4; 113A-6; 113A-8; 113A-9; 113A-10; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0306 ACTIVITIES OF A SPECIAL NATURE

Any activity falling within the parameters of the minimum criteria set out in Section .0400 of this Subchapter shall not routinely be required to have environmental documentation under the NCEPA. However, an environmental document is required when the Secretary determines that:

- (1) the proposed activity may have a potential for significant adverse effects on wetlands; surface waters such as rivers, streams and estuaries; parklands; game lands; prime agricultural or forest lands; or areas of local, state or federally recognized scenic, recreational, archaeological, ecological, scientific research or historical value, including secondary impacts; or would threaten a species identified on the Department of Interior's or the state's threatened and endangered species lists; or
- (2) the proposed activity could cause changes in industrial, commercial, residential, agricultural, or silvicultural land use concentrations or distributions which would be expected to create adverse water quality, instream flow, air quality, or ground water impacts; or affect long-term recreational benefits, fish, wildlife, or their natural habitats; or
- (3) the proposed activity has secondary impacts, or is part of cumulative impacts, not generally covered in the approval process for the state action, and that may result in a potential risk to human health or the environment; or
- (4) the proposed activity is of such an unusual nature or has such widespread implications that a concern for its environmental effects has been identified by the DENR agency or expressed to the DENR agency.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10;
Eff. April 1, 2003.

15A NCAC 01C .0405 PURPOSE OF THE MINIMUM CRITERIA THRESHOLDS

(a) This Section establishes minimum criteria to be used in determining when environmental documents are not required. The minimum criteria, as defined in state rules at 01 NCAC 25, shall be used by the Secretary and DENR agencies to provide sound decision-making processes by allowing separation of activities with a high potential for environmental effects from those with only a minimum potential.

(b) The minimum criteria set out in this Section are established to determine when environmental documentation under the NCEPA is not required. An activity must be at or below each applicable minimum criteria threshold to maintain this status. As set out in Rule .0306 of Section .0300, the Secretary may require environmental documentation for activities that would otherwise qualify under these minimum criteria thresholds.

History Note: Authority G.S. 113A-2; 113A-4; 113A-6; 113A-11; 143B-10;
Eff. April 1, 2003.

15A NCAC 01C .0406 SAMPLING, SURVEY, MONITORING, AND RELATED RESEARCH ACTIVITIES

Sampling, survey, monitoring and research activities do not require the filing of environmental documentation. These activities include, but are not limited to the following:

- (1) Aerial photography projects involving the photographing or mapping of the lands of the state;
- (2) Biology sampling and monitoring of:
 - (a) Fisheries resources through the use of traditional commercial fishing gear, electricity, and rotenone; and
 - (b) Wildlife resources through the use of traditional techniques, including but not limited to traps, drugs, and firearms;
- (3) Soil survey projects involving the sampling or mapping of the soils of the state;
- (4) Establishing stream gaging stations for the purpose of measuring water flow at a particular site;
- (5) Placement of monitoring wells for the purpose of measuring groundwater levels, quantity, or quality;
- (6) Gathering surface or subsurface information on the geology, minerals, or energy resources, of the state.
- (7) Placement and use of geodetic survey control points;
- (8) Other routine survey and resource monitoring activities, or other temporary activities required for research into the environment which do not have adverse effects; and
- (9) Investigation and assessment of sites contaminated with regulated substances.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10;
Eff. April 1, 2003.

15A NCAC 01C .0407 STANDARD MAINTENANCE OR REPAIR ACTIVITIES

Standard maintenance or repair activities, if needed to maintain the originally defined function of an existing project or facility (but without expansion, increase in quantity, decrease in quality, use, or release of hazardous waste), do not require the filing of environmental documents. These activities include but are not limited to maintenance and repair of the following:

- (1) Housekeeping projects which maintain a facility's original condition and physical features, including re-roofing and minor alterations where in-kind materials and techniques are used. This also encompasses structures 50 years of age and older and for which no separate law, rule, or regulation dictates a formal review and approval process;
- (2) Roads, bridges, parking lots, and their related facilities;
- (3) Utilities on their existing rights-of-way;
- (4) Surface drainage systems;
- (5) Boat ramps, docks, piers, bulkheads, rip rap, breakwaters and associated facilities;
- (6) Diked, high ground dredge-material disposal areas;

- (7) Activities necessary to fulfill the existing requirements of in-effect permits for the protection of the environment and human health;
- (8) Other maintenance and repair activities on projects which are consistent with previously approved environmental documents; and
- (9) Routine grounds maintenance and landscaping of sidewalks, trails, walls, gates, and related facilities, including outdoor exhibits.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0408 MINOR CONSTRUCTION ACTIVITIES

This Rule sets out the general and specific minimum criteria for construction activities.

Construction and land disturbing activities must fall under both the general minimum criteria and any specific minimum criteria applicable to the project.

- (1) General criteria. The following categories of land disturbing activity do not require preparation of an environmental document.
 - (a) In the 20 coastal counties, land disturbing activity that:
 - (i) is located more than 575 feet away from waters classified as High Quality Waters (HQW) or impacts less than five acres located all or in part within 575 feet of waters classified as High Quality Waters (HQW);
 - (ii) is located outside of any Outstanding Resource Waters (ORW) watershed or area that requires specific management actions to protect ORW waters as defined in 15A NCAC 02B .0225; and
 - (iii) impacts less than five acres located in any Outstanding Resource Waters (ORW) watershed or in any area that requires specific management actions to protect ORW waters as defined in 15A NCAC 02B .0225.
 - (b) Land disturbing activity outside the twenty coastal counties that:
 - (i) is located more than one mile from waters classified as HQW or impacts less than five acres located within one mile of and draining to waters classified as HQW;
 - (ii) is located outside of any Outstanding Resource Waters (ORW) watershed or area that requires specific management actions to protect ORW waters as defined in 15A NCAC 02B .0225;
 - (iii) impacts less than five acres located in any Outstanding Resource Waters (ORW) watershed or in any area that requires specific management actions to protect ORW waters as defined in 15A NCAC 02B .0225; and
 - (iv) is located more than 25 feet from any waters classified as Trout (Tr) waters or impacts less than five acres located all or in part within 25 feet of any waters classified as Trout (Tr) waters.
 - (c) Channel disturbance and land disturbing activities associated with non-compensatory stream restoration or stream enhancement.
 - (d) Land disturbing activities impacting wetlands if the activity will result in the loss of one acre or less of Class WL wetlands.
 - (e) Land disturbing activities impacting streams if the activity will result in channel disturbance of less than 500 linear feet of perennial streams. Land disturbing activities that impact 500 linear feet or more of perennial streams do not require preparation of an environmental document if stream restoration or stream enhancement is performed.
- (2) Specific Criteria. Construction or expansion activities listed below require an environmental document if they exceed either the minimum criteria set out in Item (1) of this Rule or the thresholds established below.
 - (a) The following activities related to wastewater treatment systems.
 - (i) Relocation of discharge points within the same river basin;
 - (ii) New discharge facilities with a proposed permitted expansion of less than 500,000 gallons per day and producing an instream waste concentration of less than 33 percent during the 7-day 10-year low flow conditions;
 - (iii) Expansion of an existing discharge facility of less than 500,000 gallons per day additional flow;
 - (iv) New surface irrigation, high rate infiltration, or subsurface waste water systems with a proposed permitted capacity not exceeding 100,000 gallons per day;

- (v) Reclaimed water utilization systems with reclaimed water utilization being the sole disposal option with a proposed permitted capacity not exceeding 200,000 gallons per day;
- (vi) New reclaimed water utilization sites with a proposed permitted capacity not to exceed 500,000 gallons per day when the reclaimed water utilization system is required for compliance with any other wastewater disposal permit;
- (vii) New reclaimed water utilization sites with a proposed permitted capacity not to exceed 1,000,000 gallons per day when the reclaimed water utilization system is not required for compliance with any other wastewater disposal permit;
- (viii) New reclaimed water utilization distribution lines;
- (ix) New permits or modification to existing permits for land application of residuals utilization, where less than 10 acres not previously permitted is prior converted within three years or will be converted from a non-plantation forested area to application area;
- (x) New or expanding surface disposal sites disposing less than 3000 dry tons of residuals per year;
- (xi) Gravity sewer extensions with less than three miles of new lines or lines of less than 18 inches in diameter; and
- (xii) New or expanding individual pump stations and associated force mains with a proposed permitted capacity of less than 1750 gallons per minute.
- (b) The following activities related to potable water systems.
 - (i) Improvements to water treatment plants that involve less than 1,000,000 gallons per day added capacity and total design withdrawal less than one-fifth of the 7-day, 10-year low flow of the contributing stream;
 - (ii) Improvements not intended to add capacity to the facility;
 - (iii) Installation of appurtenances in existing rights-of-way for streets or utilities, or water lines and appurtenances less than five miles in length and having only directional bore stream crossings or no stream crossings; and
 - (iv) Construction of water tanks, or booster pumping or secondary or remote disinfection stations.
- (c) Groundwater withdrawals of less than 1,000,000 gallons per day where such withdrawals are not expected to cause alterations in established land use patterns, or degradation of groundwater or surface water quality.
- (d) The following activities related to solid waste disposal:
 - (i) Construction of solid waste management facilities, other than landfills exempt pursuant to G.S. 130A-294 (a)(4), which store, treat, process incinerate, or dispose of less than 350 tons per day (averaged over one year) of solid waste; and
 - (ii) Disposal of solid waste by land application on 100 total acres or less, where less than 10 percent of the total land application area is converted from a non-plantation forested area.
- (e) Development requiring a Coastal Area Management Act (CAMA) permit or State Dredge and Fill Law permit that does not involve:
 - (i) Construction of a new marina, or a 25% or greater expansion in the number of slips at existing and operating marinas;
 - (ii) Excavation of a new navigation channel. Maintenance activities associated with maintaining the traditional and established use of a channel and new excavation activities located entirely within 100 feet of the shoreline, or within 50 feet from the waterward edge of any existing or authorized docking facility and involving the excavation of less than 5,000 square feet of public trust bottom do not constitute excavation of a new navigation channel for purposes of these rules.
 - (iii) Excavation of materials from aquatic environments for use for beach nourishment or other purposes not directly related to approved navigation projects;
 - (iv) A large scale beach nourishment or spoil deposition project. A project shall be considered large scale when it places more than a total volume of 200,000 cubic yards of sand at an average ratio of more than 50 cubic yards of sand per linear foot of shoreline;
 - (v) The salvaging of cut logs from public trust waters for commercial use, unless the salvage operation complies with any departmentally-approved best management practices developed for such activities;

- (vi) The construction over state owned submerged lands of private bridges to privately owned islands, unless the length of the bridge is less than 50 feet; and
- (vii) The excavation, dredging or other hydrodynamic manipulation of an inlet, inlet channel(s) or inlet shoal(s) for non-navigational purposes.
- (f) Construction of a minor source or modification of a minor source of air emissions as defined in 15A NCAC 02D .0530, that are less than 100 tons per year or 250 tons per year as defined therein.
- (g) Construction relating to the reclamation of underground storage tanks and restoration of groundwater quality.
- (h) The construction, repair or removal of dams less than 25 feet in height and having less than 50 acre-feet of effective storage capacity.
- (i) Any new construction for a building which involves all of the following:
 - (i) A footprint of less than 10,000 square feet;
 - (ii) A location that is not a National Register Archaeological site; and
 - (iii) The building's purpose is not for storage of hazardous waste.
- (j) Demolition of or additions, rehabilitation or renovations to a structure not listed in the National Register of Historic places or less than 50 years of age.
- (k) Routine grounds construction and landscaping of sidewalks, trails, walls, gates and related facilities, including outdoor exhibits.
- (l) Installation of on-farm Best Management Practices that meet the standards of the North Carolina Soil and Water Conservation Commission and the federal Natural Resources Conservation Service.
- (m) Construction or remodeling of swimming pools.
- (n) Construction of a new two-lane road in accordance with DOT accepted design practices and DOT standards and specifications involving less than a total of 25 cumulative acres of ground surface limited to a single project, and not contiguous to any other project making use of this provision.
- (o) Expansion of a two-lane road in accordance with DOT accepted design practices and DOT standards and specifications involving less than a total of 10 cumulative acres of ground surface limited to a single project, and not contiguous to any other project making use of this provision.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0409 MANAGEMENT ACTIVITIES

Management activities do not require the filing of environmental documents. These activities include but are not limited to the following:

- (1) Replenishment of shellfish beds through the placement of seed oysters, seed clams or shellfish cultch on marine or estuarine habitats.
- (2) Creation and enhancement of marine fisheries habitat through the establishment of artificial reefs in accordance with the Division of Marine Fisheries' Artificial Reef Master Plan.
- (3) Placement of fish attractors and shelter in public waters managed by the N.C. Wildlife Resources Commission.
- (4) Translocation and stocking of native or naturalized fish and wildlife in accordance with appropriate DENR agency species management plans, watershed management plans, or other state agency approved resource management plans.
- (5) Reintroduction of native endangered or threatened species in accordance with state or federal guidelines or recovery plans.
- (6) Production of native and agricultural plant species to create or enhance fish or wildlife habitat and forest resources, including fertilization, planting, mowing, and burning in accordance with fisheries, wildlife, or forestry management plans.
- (7) Forest products harvest in accordance with the forestry Best Management Practices (BMPs) and the performance standards in the Forest Practice Guidelines (FPGs) Related to Water Quality (15A NCAC 01I .0201 - .0209) and the United States Forest Service or the N.C. Division of Forest Resources forest management plans.
- (8) Reforestation of woodlands in accordance with the United States Forest Service or the N.C. Division of Forest Resources forest management plans.
- (9) Use of forestry best management practices to meet the performance standards in Forest Practice Guidelines Related to Water Quality codified as 15A NCAC 01I.

- (10) The control of forest or agricultural insects and disease outbreaks by biological treatments, mechanical treatments, or the lawful application of labeled pesticides by licensed applicators, or any combination of those practices, on areas of no more than 100 acres.
- (11) Control of species composition on managed forestlands as prescribed by approved forest management plans by the lawful application of labeled herbicides by licensed applicators, on areas no more than 100 acres.
- (12) Control of aquatic weeds in stream channels, canals and other water bodies, by the lawful application of labeled herbicides by licensed applicators, on areas of no more than two acres or 25 percent of surface area, whichever is less, except in Primary Nursery Areas designated by the Marine Fisheries Commission, Inland Primary Nursery Areas designated by the Wildlife Resources Commission, and Anadromous Fish Spawning Areas designated by the Marine Fisheries Commission or the Wildlife Resources Commission.
- (13) Removal of logs, stumps, trees, and other debris from stream channels where there is no channel excavation, and activities are carried out in accordance with "Best Management Practices (BMPs) for Selective Clearing and Snagging," Appendix B in Incremental Effects of Large Woody Debris Removal on Physical Aquatic Habitat, US Army Corps of Engineers Technical Report EL-92-35, Smith et al, 1992, or other guidelines approved through the Intergovernmental Review process as set out at 01 NCAC 25 .0211.
- (14) Dredging of existing navigation channels and basins to originally approved specifications, provided that the spoil is placed in existing and approved high ground disposal areas.
- (15) Controlled or prescribed burning for wildlife, timber enhancement, and hazard reduction in accordance with applicable management plans.
- (16) Plowing fire lines with tractor plow units, or other mechanized equipment, for the purpose of suppressing wildland (brush, grass, or woodland) fires and prescribed burning.
- (17) Scooping or dipping water from streams, lakes, or sounds with aircraft or helicopters for the purpose of suppressing wild land (brush, grass, or woodland) fires.
- (18) Drainage projects where the mean seasonal water table elevation will be lowered less than one foot over an area of one square mile or less, and riparian and wetland areas will not be affected.
- (19) Manipulation of water levels in reservoirs or impoundments in accordance with approved management plans, for the purpose of providing for water supply storage, flood control, recreation, hydroelectric power, fish and wildlife, downstream water quality and aquatic weed control.
- (20) Installation of on-farm Best Management Practices that meet the standards of the North Carolina Soil and Water Conservation Commission and the federal Natural Resources Conservation Service.
- (21) Continuation of previously permitted activities where no increase in quantity or decrease in quality are proposed.
- (22) Acquisition or acceptance of real property to be retained in a totally natural condition for its environmental benefits.
- (23) Acquisition or acceptance of real property to be managed in accordance with plans for which environmental documents have been approved.
- (24) Care of all trees, plants, and groundcovers on public lands.
- (25) Care, including medical treatment, of all animals maintained for public display.
- (26) Activities authorized for control of mosquitoes such as the following:
 - (a) Mosquito control water management work in freshwater streams performed in accordance with "Best Management Practices (BMPs) for Selective Clearing and Snagging" Appendix B in Incremental Effects of Large Woody Debris Removal on Physical Aquatic Habitat, US Army Corps of Engineers Technical Report EL-92-35, Smith et al, 1992, or other guidelines reviewed through the Intergovernmental Review process as set out at 01 NCAC 25 .0211;
 - (b) Mosquito control water management work in salt marsh environments performed under Open Marsh Water Management guidelines reviewed through the Intergovernmental Review process as set out at 01 NCAC 25 .0211;
 - (c) Lawful application of chemicals approved for mosquito control by the United States Environmental Protection Agency and the State when performed under the supervision of licensed operators; and
 - (d) Lawful use of established species to control mosquitoes.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0410 PRIVATE USE OF PUBLIC LANDS

Activities related to the private use of public lands, when conducted in accordance with permit requirements, do not require the filing of environmental documents. These activities include but are not limited to the following:

- (1) Use of pound nets.
- (2) Shellfish relaying and transplanting.
- (3) Harvest of shellfish during closed season.
- (4) Special fisheries management activities under 15A NCAC 03I .0012.
- (5) Aquaculture operations within coastal waters.
- (6) Scientific collecting within coastal waters.
- (7) Introduction and transfer of marine and estuarine organisms.
- (8) Development requiring a Coastal Area Management Act (CAMA) or a State Dredge and Fill Law permit that does not involve:
 - (a) Construction of a new marina, or a 25% or greater expansion in the number of slips at existing and operating marinas;
 - (b) Excavation of a new navigation channel. Maintenance activities associated with maintaining the traditional and established use of a channel and new excavation activities located entirely within 100 feet of the shoreline, or within 50 feet from the waterward edge of any existing or authorized docking facility and involving the excavation of less than 5,000 square feet of public trust bottom do not constitute excavation of a new navigation channel for purposes of these rules.
 - (c) Excavation of materials from aquatic environments for use for beach nourishment or other purposes not directly related to approved navigation projects;
 - (d) A large scale beach nourishment or spoil deposition project. A project shall be considered large scale when it places more than a total volume of 200,000 cubic yards of sand at an average ratio of more than 50 cubic yards of sand per linear foot of shoreline;
 - (e) The salvaging of cut logs from public trust waters for commercial use, unless the salvage operation complies with any Departmentally approved best management practices developed for such activities;
 - (f) The construction over state owned submerged lands or private bridges to privately owned islands, unless the length of the bridge is less than 50 feet; and
 - (g) The excavation, dredging or other hydrodynamic manipulation of an inlet, inlet channel(s) or inlet shoal(s) for non-navigational purposes.
- (9) Construction of piers and boat docks on all State Lakes when conducted in accordance with 15A NCAC 12C .0300.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10; Eff. April 1, 2003.

15A NCAC 01C .0411 REMEDIATION ACTIVITIES

Activities that seek to clean up, remove, remediate, abate, contain or otherwise protect public health or the environment from the effect of contamination released to the environment do not require the filing of environmental documentation.

History Note: Authority G.S. 113A-4; 113A-6; 113A-9; 113A-10; 113A-11; 113A-12; 143B-10; Eff. April 1, 2003.

APPENDIX III**DENR Division/Lead Agency Contact List**(Also see www.enr.state.nc.us/html/contact_denr.html)

*When calling divisions, ask for the SEPA coordinator.

Agency	Mailing Address	Phone Number
Division of Air Quality	1641 Mail Service Center Raleigh, NC 27699-1641	(919) 733-3340
Division of Coastal Management	400 Commerce Avenue Morehead City, NC 28557-3421	(252) 808-2808
Construction Grants and Loans	1633 Mail Service Center Raleigh, NC 27699-1633	(919) 733-6900
Division of Environmental Health	1632 Mail Service Center Raleigh, NC 27699-1632	(919) 733-2870
Division of Forest Resources	1616 Mail Service Center Raleigh, NC 27699-1616	(919) 857-4801
Division of Marine Fisheries	3441 Arendell Street Morehead City, NC 28557	(252) 726-7021
Division of Parks and Recreation	1615 Mail Service Center Raleigh, NC 27699-1615	(919) 733-4181
Division of Soil and Water Conservation	1614 Mail Service Center Raleigh, NC 27699-1614	(919) 733-2302
Division of Waste Management	1646 Mail Service Center Raleigh, NC 27699-1646	(919) 508-8400
Division of Water Quality	1617 Mail Service Center Raleigh, NC 27699-1617	(919) 733-7015
Division of Water Quality – DOT Projects	1650 Mail Service Center Raleigh, NC 27699-1650	(919) 733-5694
Division of Water Resources	1611 Mail Service Center Raleigh, NC 27699-1611	(919) 733-4064
Wildlife Resources Commission	1721 Mail Service Center Raleigh, NC 27699-1721	(919) 707-0220

APPENDIX IV**Useful Web Links****STATE AGENCIES****Division of Air Quality:**

Permits: daq.state.nc.us/permits/

Division of Coastal Management:

N.C. Coastal Region Evaluation of Wetland Significance (NC-CREWS):

dcm2.enr.state.nc.us/wetlands/download.htm

“A watershed-based wetlands functional assessment model that uses geographic information systems (GIS) software and data to assess the level of water quality, wildlife habitat, and hydrologic functions of individual wetlands.”

Coastal Area Management Act (CAMA) Land-Use Planning:

dcm2.enr.state.nc.us/Planning/planning.htm

Department of Cultural Resources, State Historic Preservation Office (SHPO):

National Register of Historic Places in North Carolina: hpo.dcr.state.nc.us/nrhome.htm

Local Historic Preservation Commissions in North Carolina:

www.hpo.dcr.state.nc.us/commhome.htm

Division of Forest Resources:

N.C. Forestry Best Management Practices Manual:

www.dfr.state.nc.us/water_quality/wq_bmpmanual.htm

Division of Land Resources:

N.C. Erosion and Sediment Control Planning and Design Manual:

www.dlr.enr.state.nc.us/pages/publications.html#eslinks

Division of Marine Fisheries:

Coastal Habitat Protection Plan (CHPP): www.ncfisheries.net/habitat/index.html

Division of Water Quality:

General Information: www.ncwaterquality.org

NPDES Phase II Stormwater Program:

h2o.enr.state.nc.us/su/NPDES_Phase_II_Stormwater_Program.htm

Stormwater & Runoff Pollution, Technical Assistance:

www.ncstormwater.org/pages/technicalassist.html

Basinwide Water Quality Planning: h2o.enr.state.nc.us/basinwide/index.htm

“Basinwide water quality planning is a nonregulatory, watershed-based approach to restoring and protecting the quality of North Carolina's surface waters.”

Division of Water Resources:

Water Resources Information, Storage, Analysis, and Retrieval System (WRISARS):

www.ncwater.org/wrisars/

IBT and Capacity Use permits, Water Withdrawal registration:

www.ncwater.org/Permits_and_Registration

Local Water Supply Plans:

www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/index.php

Ecosystem Enhancement Program (EEP):

EEP Resources: www.nceep.net/pages/resources.htm

Natural Heritage Program:

Database search by map or county: 149.168.1.196/nhp/

County Natural Area Inventory: www.ncnhp.org/Pages/countysummaries1.htm

The Virtual Workroom: http://nhpweb.enr.state.nc.us/nhis/public/gmap75_main.phtml

The login name “public” and the password is “heritage”. Before using the Virtual Workroom, users should read the User’s Manual (available through the “Help” link at the upper right of the webpage).

N.C. Crime Control & Public Safety, Emergency Management Division:

NC Floodplain Mapping: www.ncfloodmaps.com/

N.C. Department of Environment and Natural Resources (DENR):

Center for Geographic Information and Analysis (CGIA): www.cgia.state.nc.us/

“The lead agency for geographic information systems (GIS) services and GIS coordination for the State of North Carolina.”

Customer Service Center (Environmental Equity): www.envhelp.org/html/feedback.html

N.C. OneMap: www.nconemap.com/

“...a new vision for data coordination and distribution in North Carolina.”

N.C. Wildlife Resources Commission (NCWRC):

Swimming With the Current:

www.ncwildlife.org/planningforgrowth/swimming_with_the_current.pdf

SCI Guidance Memorandum:

www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7c3_impacts.pdf

Gamelands Maps: www.ncwildlife.org/fs_index_04_hunting.htm

FEDERAL AGENCIES

U.S. Army Corps of Engineers (COE):

Stream Mitigation Guidelines:

www.saw.usace.army.mil/wetlands/Mitigation/stream_mitigation.html#Forms

Hydrologic Engineering Center (HEC): www.hec.usace.army.mil

U.S. Environmental Protection Agency (USEPA):

Low Impact Development: www.epa.gov/nps/lid/

National Pollutant Discharge Elimination System (NPDES) Stormwater Final Rules:

cfpub1.epa.gov/npdes/regresult.cfm?program_id=6&view=all&type=1

Nonpoint source pollution publications and information resources:

www.epa.gov/owow/nps/pubs.html

Surf Your Watershed: cfpub.epa.gov/surf/state.cfm?statepostal=NC

Technical Tools and Models: www.epa.gov/epahome/datatool.htm

Environmental Justice (Basic Information): www.epa.gov/compliance/basics/ej.html

U.S. Fish and Wildlife Service (FWS):

The Endangered Species Program: endangered.fws.gov/

Wetlands Online Mapper: wetlandsfws.er.usgs.gov/wtlnds/launch.html

U.S. Geological Survey (USGS):

The National Map: nationalmap.gov/index.html

“It provides public access to high-quality, geospatial data and information from multiple partners to help support decisionmaking by resource managers and the public.”

Instream Flow Incremental Methodology: www.fort.usgs.gov/Products/Software/IFIM/

U.S. National Oceanic & Atmospheric Administration (NOAA), Coastal Services Center:

Topographic Change Mapping: maps.csc.noaa.gov/TCM/

“...works with various branches of NOAA and other federal agencies to bring information, services, and technology to the nation's coastal resource managers.”

U.S. Natural Resources Conservation Service (NRCS):

Soil Data Mart: soildatamart.nrcs.usda.gov/

Web Soil Survey: websoilsurvey.nrcs.usda.gov/app/

MISCELLANEOUS

Environmental Law Institute – *Planner's Guide to Wetland Buffers for Local Government*:

www.eli.org/news.cfm#buffer

Land Preservation Notebook – North Carolina County and Municipal Land Preservation Ordinances and Programs: www.cals.ncsu.edu/wq/lpn/ncordinances.htm

Nature Conservancy's Indicators of Hydrologic Alteration (IHA):

www.nature.org/initiatives/freshwater/conservationtools/

Smart Growth Network, Smart Growth Online: www.smartgrowth.org/Default.asp?res=1024

Water Environment Research Foundation: Sustainable Stormwater BMPs

www.werf.org/livablecommunities/

APPENDIX V

NOTE: Large printed maps (i.e., poster sized) are easier for viewing the impacts of land use on environmental features. GIS information was taken from the Town of Cary's 2005 SCI Master Mitigation Plan. (See CD in pocket)

Sample

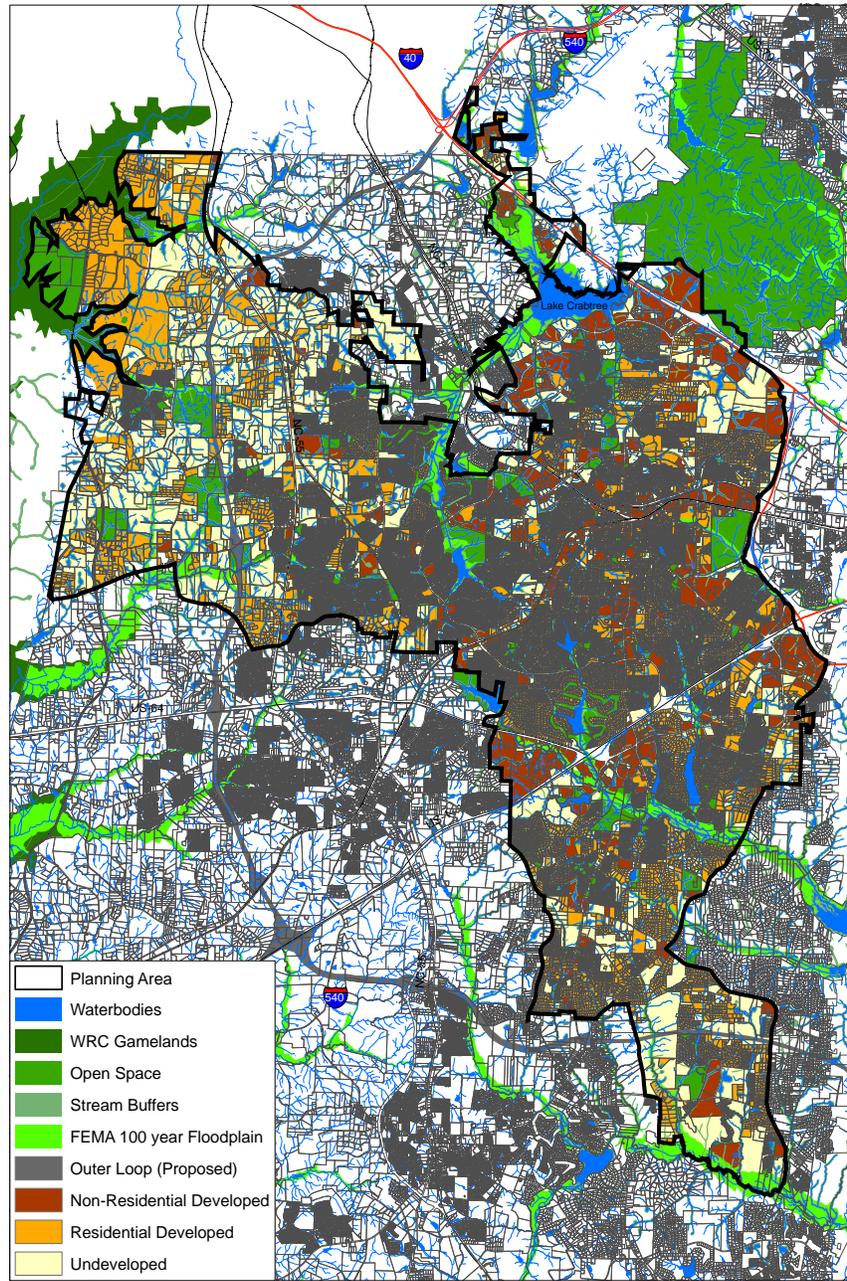


Figure 4-2
Town of Cary - Existing Land Use
Secondary and Cumulative Impacts Master Mitigation Plan

APPENDIX VI



☒ North Carolina Wildlife Resources Commission ☒

Charles R. Fullwood, Executive Director

GUIDANCE MEMORANDUM TO ADDRESS AND MITIGATE SECONDARY AND CUMULATIVE IMPACTS TO AQUATIC AND TERRESTRIAL WILDLIFE RESOURCES AND WATER QUALITY (August 2002)

Preface

This document is intended to serve as a guidance memorandum for local governments to assist with addressing secondary and cumulative impacts associated with public projects. Implementation of these recommendations will assist in the mitigation of impacts to water quality, to fish and wildlife and their habitat generally, and in situations where federally threatened and endangered species exist. Alternatives to these measures will be examined on a case-by-case basis, provided that the same level of protection is afforded. The recommendations provided herein are intended to be applied to new developments or to existing developments for which significant modifications or expansions are proposed. Incorporation of the measures that are outlined throughout the document by local governments will alleviate the concerns of the natural resource agencies and will provide for a smoother and more timely review of environmental documents and permits.

Agencies, municipalities, landowners, and the public share a responsibility to protect and conserve fish and wildlife, which are public resources. Efforts to minimize secondary and cumulative impacts may not show immediate rewards, however such efforts are important to prevent future damage to riparian and stream systems and to rebuild degraded areas. These efforts will also help meet the anti-degradation standard established in Rule 15A NCAC 02B .0201, which provides for the maintenance, protection, and enhancement of existing uses.

During the fall of 2001 and through 2002 the N. C. Department of Environment and Natural Resources (DENR) established and guided a Cumulative and Secondary Impact (CSI) Working Group. This group was made up of a variety of staff from Divisions within DENR. The CSI Working Group undertook the task of identifying, drafting, and developing a system and protocol for ensuring that cumulative and secondary impacts are adequately addressed during the review of documents required under the N. C. Environmental Policy Act. Identification of mitigation measures effective in reducing potential negative impacts associated with projects was a major component of this endeavor; therefore, a “mitigative measures” subgroup was formed. This document was developed as a result of that effort.

Mailing Address: Division of Inland Fisheries · 1721 Mail Service Center · Raleigh, NC 27699-1721

Telephone: (919)733-3633 ext. 281 · **Fax:** (919) 715-7643

Page 2
August 2002
CSI Mitigation Measures

This document was primarily authored by biologists with the N. C. Wildlife Resources Commission (NCWRC) and the N. C. Division of Parks and Recreation, and significant contributions were provided by the mitigative measures subgroup. The document includes comments, ideas, and suggestions from the entire CSI Working Group, which includes representatives from the N. C. Division of Coastal Management, N. C. Division of Environmental Health, N. C. Division of Land Resources, N. C. Division of Marine Fisheries, N. C. Division of Parks and Recreation, N. C. Division of Water Quality, N. C. Division of Water Resources, N. C. Office of Legislative and Intergovernmental Affairs, and the NCWRC. Constructive comments from many of these agencies improved the document. The U. S. Fish and Wildlife Service (USFWS), which supports these recommendations, also provided constructive review of the document.

The NCWRC and the Division of Parks and Recreation recognize that ongoing development and change to the natural landscape will continue and that continued economic development is critical to the citizens of the state. Furthermore, a healthy state is dependent upon a healthy economy and a healthy natural environment, both of which are integrated components. How and where change to the landscape occurs makes all the difference in the future of a sustainable economy and healthy natural environment. The assembled information consists of recommendations, that when implemented by a local government, will simultaneously work to maintain or improve water quality, protect aquatic habitat, permit economic expansion, and preserve the character of the land.

Introduction

Thousands of acres of land are developed each year in North Carolina, and this development consists of many individual and often unrelated projects. Without proper safeguards, the cumulative effects of land development can transform the landscape and negatively impact the environmental character and natural functions of the ecosystems. North Carolina projects a population increase of more than 3 million new individuals by the year 2020 (N. C. Progress Board 2001); therefore, it is imperative that coordinated measures be implemented to protect wildlife resources and their habitats. Most citizens want a clean environment and a healthy economy, therefore measures must be implemented statewide to allow economic growth without significant and irretrievable impacts to North Carolina's environment.

Some of the greatest impacts of development, both land-based and near-water development, occur on water quality in our streams and rivers. Many of our native species of aquatic organisms have become highly imperiled as a result. Approximately one-third of North American freshwater fish species (Williams et al. 1989) and 72% of freshwater mussel species (Williams et al. 1993) qualify for classification as "endangered", "threatened", or "special concern" at the federal level, and habitat loss is a primary culprit, particularly for mussels. In North Carolina, 21% of freshwater fishes and 53% of freshwater mussel species are designated endangered, threatened, or of special concern at the state level (LeGrand et al. 2001). The decline in freshwater species is a direct reflection of declining quality of our streams and rivers. Federally endangered and threatened species are particularly affected by secondary and cumulative impacts associated with urban development due to their sensitivity to slight habitat alterations. A high proportion of listed species occurs within areas of the state that are developing the most rapidly; some have lost major reaches of their habitats within the past few decades, others are in danger of being extirpated from entire river basins, and one species has been extirpated from the state, and thus is extinct (Carolina Elktoe, *Alasmidonta robusta*).