Model Natural Resources Conservation Ordinance

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Explanatory Note: Throughout this model ordinance, comments from the drafters of this ordinance are placed in boxes such as this. These comments should be removed before the ordinance is adopted; they are not part of the ordinance itself.

Optional provisions are provided throughout this document and are intended to address the diverse needs of local governments. Optional provisions are discussed in the commentary and delineated by brackets like these {XXX}.

The **bold underlined text** serves as a prompt for local governments to customize the text or insert local government names.

*Defined terms* are shown in italics.

Footnotes give information about the source of the text language.

This ordinance was developed to address degradation of natural resources, including wildlife habitats, water and air, from the direct and cumulative impacts of development. The intent is to conserve only areas with the most sensitive natural resources and to maintain the healthy functioning of significant natural resources in individual local governments’ jurisdictions while accommodating desired growth and development. Enacting local conservation measures will help developers and landowners to meet state and federal environmental permit requirements reducing unexpected delays and design problems.

This model ordinance is not designed as a stand-alone ordinance but offers a variety of optional language and measures to achieve natural resource conservation. The conservation measures provided are based on recommendations from a comprehensive review of the scientific literature. If a local government chooses to incorporate the provisions of this ordinance into a comprehensive land use regulation ordinance, these provisions should be reviewed, amended, or omitted as may be necessary to ensure consistency, avoid redundancy, retain any provisions specifically related to project review and to ensure the ordinance is adopted, implemented, and enforced pursuant to appropriate local government authority.

***This model ordinance can be edited and adapted to be implemented as an option that developers can choose in exchange for a density bonus or other type of incentive.***

As another alternative, we recommend that conservation development be permitted within the conservation district and that conventional development be a conditional use within the district.

For more information on many ways to implement and incentivize conservation development please see the NC Wildlife Resources Commission Green Growth Toolbox at: [www.ncwildlife.org/greengrowth](http://www.ncwildlife.org/greengrowth).

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# Section I. General Provisions

 **A. Title**

This ordinance shall be officially known as theNatural Resources Overlay District for the [**Insert local government name here**]. It is referred to herein as “the ordinance.”

 **B. Authority**

This ordinance is adopted pursuant to N.C. Const. art XIV, sec 5 and [**Insert appropriate county, e.g.*,* N.C. Gen. Stat § 153A-121 and § 153A‑340 (2011) or municipal authority*,* N.C. Gen. Stat. §160A-174 and §160A-381 (2011)** **here**]

**Explanatory Note:** Some jurisdictions may wish to incorporate this ordinance into a land use ordinance or unified development ordinance and may want to add a reference to statutory authority for planning and regulation of development (Chapter 153A, Article 18 (Parts 1, 2, and 3) and G.S. 160A, Art. 19). Jurisdictions should evaluate other ordinances to ensure consistent application of land use regulations such as open space, storm water regulations, tree ordinances, and others. In addition, when adopting this ordinance as part of land use regulations, local governments should follow the standards for adopting or amending ordinances found in G.S. 153A-323 or 160A-364 and all other applicable requirements

**C. Effective Date**

 This ordinance takes effect on [**Insert date here**]

**D. Findings of Fact**

1**.** Natural resources such as natural water supply systems, forests, and plant and wildlife habitat provide valuable cultural, educational, and recreational opportunities and support local industries and public health and welfare.

2. Areas that contain a diversity of plant and animal species can be a natural resource of local, state, national, and global significance.

3. Plants and animals play an important role in maintaining healthy ecosystems through ecological interactions such as predation, pollination, and seed dispersal. Maintaining healthy natural resources mitigates air pollution, improves water quality, reduces drought and flooding, and sustains local timber, recreation and associated jobs and local revenue.

4. The quantity and quality of drinking water is enhanced by healthy ecosystems through mechanisms such as water absorption and filtration. These services can be degraded when *impervious surfaces* are placed in sensitive areas.

5. Maintaining healthy and diverse natural resources is important for a robust farming, forestry, and horticulture economy. These industries rely on pollinators, predators of pests, healthy soil, and other natural resources. These industries can be compromised when incompatible land uses surround them.

6. Certain types of land development can negatively impact ecosystems, natural areas and wildlife. Properly planned development can maintain these natural resource assets by avoiding the *fragmentation* of key natural areas and the associated reduction of ecosystem function and services.

**Explanatory Note:** The Findings of Fact are designed to help local governments identify benefits of natural resources conservation specific to their community. This wording is intended to be a clear and simple description of purpose and value of habitat conservation. The local government adopting this ordinance may want to supplement the Findings of Fact, depending on specific local needs, including local government’s finding that outdoor recreation, preservation of green space is important to the community. The Findings of Fact are designed to complement the subsequent Purposes and Goals section.

 **E. Purposes and Goals**

1. The purpose of the Natural Resources Overlay District is to maintain the quality of life in [**insert local government name here**] and to protect the health, safety, welfare and general well-being of the citizens of [**insert local government name here**] by conserving and connecting the highest priority waterways, forests, and habitat for terrestrial and aquatic native plants and animals in [**insert local government name here**]’s jurisdiction while accommodating development and other land uses.

2. The Natural Resources Overlay District is designed to preserve and protect ecosystems while balancing the need for planned growth. This shall be accomplished by minimizing *fragmentation* or separation of *significant natural resource areas*, protecting upland habitats in addition to adjacent waterways and water sources, maintaining plant and animal habitat diversity and specifically protecting unique environmental features identified as integral parts of the designated landscape.

3. This ordinance shall establish standards and procedures for the use and development of land. The standards and procedures are designed to protect, conserve, enhance, restore, and maintain *significant natural resource areas* and the ecological connections between them.

4. The Natural Resources Overlay District conserves *significant natural resource areas* identified by [**insert local government name here**].

5. It is intended that the implementation of this ordinance accomplish the following goals:

**Explanatory Note**: This subsection is designed to help communities identify relevant goals. This list is illustrative only and some objectives may be redundant or may not capture the full needs of the local government. The local government should evaluate all benefits, including secondary benefits, of adopting a natural resources conservation ordinance.

1. Create an aesthetically pleasing and functional living environment by conserving remaining healthy terrestrial and aquatic habitats within our jurisdiction.
2. Maximize the retention of existing [**describe region’s significant natural resources here, for example streams, lakes, longleaf pine forest, bottomland or floodplain forest**] which constitute *significant natural resource areas*, which is identified as a valuable natural resource of our community.
3. Connect *significant natural resource areas* with corridors of land in a natural state to maximize the migration of wildlife and plant species among habitat areas.
4. Maintain balanced outdoor recreation opportunities such as hunting, fishing, bird watching, and other outdoor pursuits.
5. Create opportunities for greenways throughout the community for trails, connecting habitat, protecting streams, sustaining wildlife, and providing recreation activities for residents.
6. Ensure that land uses and development are planned and designed to be harmonious with *significant natural resources* *areas* and to reduce conflicts with working lands, wildlife conservation, and habitat management activities.
7. Protect remaining large contiguous *significant natural resource areas* from activities that would alter their ecological integrity, balance, or character.
8. Maintain the diversity of plant and wildlife species and habitat found in the community and help to keep rare species from requiring Endangered Species Act protections in the future.
9. Promote multiple community benefits e.g. nutrient pollution reduction, water supply protection, flood protection, steep slope protection, priority plant and animal habitat protection, air quality, soil conservation, minimizing noise and light pollution, and others.
10. Protect and enhance scenic resources including landscapes, ridgelines, meadows, and geologic features that have special scenic character or a historic or aesthetic interest or value.

**F. Relationship to Other Laws, Regulations, and Ordinances.**

1. The regulations contained in this law are not intended to be substituted for other general zoning district provisions, but should be considered as additional requirements to be met by applicants, prior to project approval. The purpose of the Natural Resource Overlay District is to provide the [**insert local government name here**] with an additional level of review and regulation to specify how land use and development, permitted by the [**insert local government name here**]’s primary zoning districts, occurs in *significant natural resource areas*.

2. This ordinance is not intended to modify or repeal any other ordinance, rule, regulation or other provision of law. The requirements of this ordinance are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law. Where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare shall control.[[1]](#footnote-1)

{**Alternate language**: Nothing in this ordinance is intended to alter or pre-empt any other applicable regulations or the federal, state, or local government as they may apply within or outside the natural resources overlay district. Specifically, all federal or state regulations regarding protection of waterways, water bodies, and wildlife or plant species habitat shall apply throughout the jurisdiction notwithstanding this ordinance. Nothing in this ordinance is intended to usurp, limit or to be inconsistent with the authority of local, state or federal regulatory agencies. Further, the regulations set forth in this ordinance shall be in addition to the regulations set forth in the [**insert local government’s name here**] code regarding landscaping, tree removal, site clearing and wetland protections and setbacks.}

**G. Severability**

If the provisions of any section, subsection, paragraph, subdivision, or clause of this ordinance are adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision, or clause of this ordinance.[[2]](#footnote-2)

 **H. Interpretation[[3]](#footnote-3)**

 1. Meaning and Intent

All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in this ordinance. If a different or more specific meaning is given for a term defined elsewhere in **[insert name of local government’s code of ordinances]**, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance. Any term not herein defined elsewhere in the **[insert local government name here]** Code, or if not defined elsewhere in the Code, then as defined in Webster’s New International Dictionary most recent addition, unless the result does not effectuate the intent of the governing bodies, leads to absurd or illogical results, or is inconsistent with the surrounding textual context.

 2. Text Controls in Event of Conflict

In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.

 3. References to Statutes, Regulations, and Documents

Whenever reference is made to a resolution, ordinance, statute, regulation, manual, or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.

 4. Word Usage

 a. Mandatory and Discretionary Terms

The words “shall,” “must,” and “will” are mandatory in nature, establishing an obligation or duty to comply with the particular provision. The words “may” or “should” are permissive in nature.

 b. Conjunctions

Unless the context clearly indicates the contrary, conjunctions shall be interpreted as follows: The word “and” indicates that all connected items, conditions, provisions and events apply. The word “or” indicates that one or more of the connected items, conditions, provisions or events apply.

 c. Tense, Plural, and Gender

Words used in the present tense include the future tense. Words used in the singular number include the plural number and plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise. Words used in the masculine gender include the female gender and vice versa.

# Section II. Natural Resources Conservation District Established and Official Map

**Explanatory Note:** Extensive biological survey information and natural resource maps already exist for the state and can be used by local governments in delineating their Natural Resources Conservation Overlay District. The drafters encourage local governments creating an overlay district to utilize the Biodiversity and Wildlife Habitat Assessment map created by the NC Department of Environment and Natural Resources as the basis for delineating parcel boundaries for their overlay district with the exception of certain habitat types. We recommend that local governments also use additional wildlife, habitat and other natural resources conservation data available to communities in North Carolina. This conservation data is explained and compiled in one place by the NC Wildlife Resources Commission in the Green Growth Toolbox and available at [www.ncwildlife.org/greengrowth](http://www.ncwildlife.org/greengrowth). Utilizing existing data reduces the burden on local governments to collect natural resources data on their own. If a local government chooses to develop and use their own data, the model ordinance must be revised accordingly. The NC Wildlife Resources Commission or another natural resources agency may be consulted to provide technical information about the conservation data.

Please note: North Carolina statutes establish special mandates that must be observed in order for the map and ordinance to be adopted, amended or repealed. This model ordinance does not set out those procedures.

**A.** The Natural Resources Conservation District is hereby established as a separate district. The boundaries of the Natural Resources Conservation District are shown on [**insert local government’s name here**]’s Natural Resources Conservation Map, dated [**insert data**], on file with [**insert appropriate office here, e.g., office of city clerk**], which map is herein adopted by reference. This map shall be known and cited as the “Official Natural Resources Conservation Map.” The Official Natural Resources Conservation Map and all explanatory information contained therein accompany and are hereby made part of this ordinance. Upon adoption of this ordinance, the parcels included in the Natural Resources Conservation District shall be shown on the official zoning map.

**B.** The general boundaries of the Natural Resources Conservation District are defined by the best available conservation data delineating *significant natural resource areas* identified by [**insert local government name here**], with rights-of-way and property lines used to determine inclusion or exclusion in the Natural Resources Conservation District.

**C.** In the event of a dispute, the applicability of this ordinance to a particular area of land shall be determined by reference to the North Carolina General Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

# SECTION III. APPLICABILITY

 **A. Applicability**

The provisions of this ordinance shall apply to all *development* that requires a *development approval* within the Natural Resources Conservation District, unless the *development* is expressly exempted by law, or as provided herein. Before the [**insert name of local government here**] issues a *development approval*, the *development* on the parcel shall have an approved *natural resources conservation plan* as required pursuant to this ordinance.

Whenever the city annexes any parcel or property, the annexed area shall undergo review for a determination of existence of *significant natural resource area*.

**Explanatory Note:** Most activities that require formal project review or even just a building permit are obvious choices as applicable activities given some degree of review of these activities is expected at the local level. Activities that could affect the functional value of the resource being considered by the ordinance, but that do not necessarily trigger review under current mechanisms need to be carefully considered.

Local governments should consider how to coordinate natural resources conservation plan review and approval with other land use project reviews. For example, local governments that administer their own sedimentation and erosion control program should ensure that natural resources conservation plan approval occurs prior to grading or sedimentation and erosion control plan approval. In some cases, a natural resources conservation plan may require revision when the preliminary subdivision plan is finalized. Local governments may choose to require a preliminary plan to be approved along with the preliminary subdivision plan and require a final plan to be approved prior to final approval of the subdivision plan.

***Alternatively,*** ***this model ordinance can be edited and adapted to be implemented as an option that developers can choose in exchange for a density bonus or other type of incentive.***

**B. Exempt Activities**

**Explanatory Note:** This model ordinance does not identify specific exempt activities because local governments have different needs, capacity for review and enforcement, and authority. The drafters encourage local governments to evaluate specific types of activities to be included and recommend the following.

1. Activities that do not pose a significant adverse impact on the environmental value of the *significant natural resource area*, e.g., maintenance of existing structures or open spaces or *de minimus* building activities. Local governments may choose to exempt single family residences for lots one acre or less existing as of the date of the ordinances. Suggested language:

{Single family and duplex residential and recreational development that cumulatively disturbs less than one acre and is not part of a larger common plan of development or sale is exempt from the provisions of this ordinance.

Commercial, industrial, institutional, multifamily residential or local government development that cumulatively disturbs less than one-half acre and is not part of a larger common plan of development or sale is exempt from this ordinance.

Redevelopment that cumulatively disturbs less than one acre and is not part of a larger common plan of development or sale is exempt from the provisions of this ordinance.

Development and redevelopment that disturbs less than the above thresholds are not exempt if such activities are part of a larger common plan of development or sale and the larger common plan exceeds the relevant threshold, even though multiple, separate, or distinct activities take place at different times on different schedules} (adopted from the Jordan Model Stormwater Ordinance for New Development)

2. Agriculture, forestry, silviculture, and any other activity the local government determines is consistent with conservation of *significant natural resource area* or activities for which the local government does not have the authority to regulate.

3. Development activities that are vested pursuant to statutory or common law.

***Alternatively,*** ***this model ordinance can be edited and adapted to be implemented as an option that developers can choose in exchange for a density bonus or other type of incentive.***

# SECTION IV. STANDARDS

**Explanatory Note:** This section sets out the land use guidelines designed to conserve *significant natural resource area*s. The overall structure requires developers and land owners that are not exempt to conserve *significant natural resource areas* (up to 50% of the tract – See B.2. management plan) and implement performance standards to offset impacts to the *significant natural resource areas*. The standards below communicate the best current scientific knowledge about conservation of natural resources alongside development and can be changed to meet the needs of your jurisdiction.

**A. General Standards**

All activities to which this ordinance applies shall comply with the standards in this ordinance. The approval of the *natural resource conservation plan* shall require an enforceable restriction on property usage that runs with the land to ensure that future activities maintain the site consistent with the approved project plans.

**B. Natural Resources Conservation Plan**

*Natural resources conservation plans* shall be developed by *persons* proposing to impact a *significant natural resource area* within the Natural Resources Conservation District.

**Explanatory Note**: The NC Wildlife Resources Commission or another natural resources agency may be consulted to evaluate natural resources conservation plans. It is advisable to identify and inquire with agency biologists at the earliest opportunity ahead of submittal of the natural resources conservation plan to schedule technical guidance, so that reviews can be completed in a timely manner.

No *person* shall commence *development* that is subject to this ordinance without an approved *natural resources conservation plan*. The *person* proposing to conduct *development activity* shall prepare a *natural resources conservation plan* that consists of the following:

1. Site information, if not otherwise required for the approval of the *development*, including the following:

a. A location plan and boundary line survey of the tract.

b. The location of the Natural Resources Conservation District boundaries.

c. A habitat survey shall confirm the presence of *significant natural resources.* The habitat survey should include documentation of wetlands, rock outcrops, intermittent and perennial streams, caves and mines, longleaf pine forest, upland hardwoods and upland pine forest and other *significant natural resource areas.* The habitat survey shall be conducted by a *qualified biologist* with demonstrated experience in wildlife habitat identification. The boundaries of all of the *significant natural resources* shall be identified and labeled on the sketch plan and all site plans. Photographs depicting each of the significant natural resources on the site shall be provided.

d. The site plan must identify and provide pictures of existing disturbed areas, existing buildings, structures, utility lines, sewers, water and storm drains, all constructed stormwater management systems, and existing impervious surfaces.

e. Detailed sketch plan of proposed development outlining the total disturbance area, including proposed building footprints, site property improvements, utilities, and landscaping. The sketch plan is intended to be an approximation of the final site plan and serves the purpose of providing an opportunity for changes to be proposed ahead of significant investment by the applicant. The sketch plan should be reviewed by the planning department ahead of formal submission of the detailed final site plan.

f. Final site plan of proposed development outlining the total disturbance area, including proposed building footprints, site property improvements, utilities, and landscaping.

2. Management plan for *significant natural resources* preserved on-site. The management plan shall identify habitat management activities that will act to maintain the *significant natural resources*. The management plan shall be developed by a *qualified biologist* and shall contain specific habitat management implementation activities, schedules, and assignment of responsibility. The management plan shall also include the following performance standards that are applicable to the type of habitat found in the habitat survey:

a. *Significant natural resources* shall not be cleared of vegetation and shall not be developed in any manner that would negatively impact the habitat, except under the following conditions:

i. Improvements that protect or enhance the enjoyment of the habitat, including but not limited to uncovered walkways, self-guided trails, and protective fences.

ii. If the *significant natural resources* cover greater than 50% of the tract, then up to 50% of the tract may be developed. Significant natural resources should be permanently protected in order of priority listed in the definition section such that any higher item on the list is a higher priority. The undeveloped habitat areas shall be contiguous within the tract and with habitat areas on adjacent tracts to the maximum extent possible. The undeveloped habitat should have the maximum habitat interior to edge ratio possible (circular shape) to prevent habitat *fragmentation*. To the maximum extent possible the development design shall protect and connect as many priority *significant natural resources* as possible and such that wetlands, as defined under definition 22.c, are not filled and the protection area is maintained around the wetland and connected to other wetlands or streams or floodplain forest. Connectivity means that habitat areas are linked with areas of contiguous, natural vegetation that is at least 300 feet wide.

iii. To provide for access to otherwise inaccessible parts of the parcel/development. If part of the parcel could be developed, but would be inaccessible due to the existence of *significant natural resources*, a road and/or utilities may be constructed through the *significant natural resources*. The road and/or utilities, however, shall cross at the narrowest practical point and shall be designed and constructed to the maximum extent possible to minimize impact to and *fragmentation* of the highest priority *significant natural resources*. Where *significant natural resources* must be negatively impacted, an equal area must be restored and protected on site, up to 50% of the tract.

b. Construction Performance Standards

**Explanatory Note:** Construction standards must be reviewed to ensure consistency with the local government’s authority to regulate construction stormwater and with the local government’s other stormwater and development programs. If the local government does not have a delegated sedimentation and erosion control program and approved ordinance, then local governments may not impose sedimentation and erosion controls pursuant to this ordinance.

North Carolina General Statute § 113A-60 allows local governments to develop jurisdiction specific sedimentation and erosion control ordinances. Local sedimentation and erosion control programs must be approved by the North Carolina Sedimentation Control Commission and may include provisions that exceed the minimum standards established in the Sedimentation Pollution Control Act, N.C. Gen. Stat. §113A-50 et seq. If the local government adopting a natural resources conservation ordinance also has a local sedimentation and erosion control program, the drafters encourage the local government to add the following measures to protect significant natural resource areas:

1. Minimize the clearing and grading of native vegetation and target development activities to areas with *non-native invasive species* vegetation. A list of non-native invasive plants in North Carolina can be found at <http://ncwildflower.org/invasives/list.htm>

2. Protect waterways by preventing clearing adjacent to waterways, and stabilize drainage ways.

3. Phase construction for construction sites larger than 25 acres to reduce time and area that disturbed soils are exposed.

4. Stabilize soils within 14 calendar days with a grass or mulch cover.

5. Protect steep slopes, and avoid clearing or grading existing steep slopes as much as is practical.

6. To the extent possible, employ advanced settling devices. Some examples include increased wet or dry storage volume, perforated risers, better internal geometry, use of baffles, skimmers and other outlet devices, and multiple cell construction.

If the local government adopting a natural resources conservation ordinance does not have a local sedimentation and erosion control program, then the Land Quality Section administers the North Carolina Sedimentation Control Act of 1973 under the North Carolina Sediment Sedimentation Control Commission and the local government may not adopt more stringent measures for construction stormwater.

c. *Significant natural resource area*s shall be permanently protected. Permanent protection shall be by conservation easements, protective covenants, or similar restrictions or by any of the procedures for the dedication of park, recreation, and open space areas. Conservation easements on *significant natural resource areas* may, at the discretion of [**insert local government name here**], be required as a condition of natural resources conservation plan approval.

 c. Planning and Post-Construction Performance Standards:

i. Runoff from *impervious surfaces* on the parcel shall not be discharged directly to the *significant natural resources* without vegetated filtration and energy dissipation.

ii. Sewer lines, water lines, and other utility *infrastructure* shall not be constructed within 100 feet of perennial and intermittent streams to the maximum extent possible. All utility crossings shall be minimized. The directional bore stream crossing method (installation of utilities beneath the riverbed avoiding impacts to the stream and protection area) shall be used for utility crossings wherever practical, and the open stream crossing method shall only be used when water level is low and stream flow is minimal.

 iii. Maximum *impervious surface* coverage

Not more than fifteen (15) percent of the total tract area may be covered by buildings and any impervious surfaces.

**Explanatory Note:** The impervious surface is calculated over the entire tract and includes the conserved area. Therefor the impervious surface on the buildable area would be higher than 15% and up to 30%, provided a conservation area is required. Because the model overlay district is intended to cover only those areas with the most sensitive natural resources it is important to limit impervious surface in order to maintain natural water flow on the site and reduce stormwater runoff into sensitive areas. The 15% limit was chosen because this is the average level of impervious surface on conservation subdivisions in NC. It is ideal that highly sensitive areas not be zoned for intense development, industrial or commercial land uses. However, if the district in the community is extensive it may be necessary to raise the impervious surface limits to a higher proportion or to offer a density bonus for certain necessary land uses.

iv. Pesticides (including insecticides and herbicides) shall not be used for maintenance of rights-of-way within one hundred (100) feet of perennial and fifty (50) feet of intermittent streams, or within the 100 year floodplain, unless the pesticide is labeled for use in aquatic systems or is part of the approved *Natural Resource Conservation Plan*.

v. If curbs are used, curbing shall be with a 1:4 slope to allow passage of small animals.

vi. Use bridges for all permanent roadway crossings of streams and associated wetlands. If culverts must be used, culvert must be designed to allow passage of aquatic organisms by burying the culvert(s) in the stream bottom or bank by at least 1 foot. Stream relocation or widening shall be avoided but may be done if necessary providing state-of-the-art natural channel design and construction techniques are used.

vii. The land surrounding built structures should be maintained in natural vegetation to the maximum extent possible. *Non-native invasive species* shall not be planted for any purpose.

viii. The post-development condition should maintain connectivity of all *significant natural resources*, both within the tract and between adjacent tracts. Connectivity means that habitat areas are linked with areas of contiguous, natural vegetation that is at least 300 feet wide.

ix. Site gas stations, car washes, and other potential “spill” land uses at least two hundred (200) feet from perennial and intermittent streams.

**C. Approval of Natural Resources Conservation Plan:**

Approval of a *Natural Resources Conservation Plan* does not abrogate any legal requirement to comply with the regulations of any other governmental agency, local, state, or federal, which may have jurisdiction over the proposed activity upon the land.

1. The [**insert relevant local government approval agency**] may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included in the approval.

2. Approval will be issued by the [**insert relevant approval agency**] pursuant to this ordinance only if the applicant demonstrates that:

a. The natural resources conservation plan complies with this ordinance, including being consistent with the purposes and objectives set forth in this ordinance.

b. The natural resources conservation plan completely addresses the minimum performance standards outlined in this ordinance. If the [**insert appropriate local government approval agency here**] determines that the natural resources conservation plan is incomplete, the developer shall be notified of the deficient elements and shall be provided the opportunity to submit a complete natural resources conservation plan.

c. The proposed activity is compatible with public health, safety, and welfare.

**Explanatory Note:** Local governments may also choose to specify the expiration of unimplemented Natural Resources Conservation Plans and set a time period consistent with the local government’s normal site plan approval period, which is typically two (2) years. Language adopted from the City of Tampa’s Upland Habitat Protection Ordinance: {Approval of a natural resources conservation plan shall be effective for a period of two years from date of issue unless otherwise specified on the approved plan. Any plan approval not acted upon within the prescribed time limit shall become void and future work shall require a new plan approval.}

# SECTION V. DEFINITIONS

**Explanatory note:** It is intended that local governments adjust the definitions to suit the needs and purpose of their ordinance. For example if the criteria contained within the definition of *significant natural resource area* are too stringent, the criteria can be changed to fit the local government’s needs. The criteria within the definition of habitats and *significant natural resource areas* are based on the best current scientific knowledge and are not defined to meet any existing state or federal regulations.

1. *Adjacent:* Property abutting directly on the boundary of, touching, or sharing a common point.
2. *Aquatic Significant Natural Heritage Area*: an Aquatic Significant Natural Heritage Area as defined and mapped by the NC Natural Heritage Program. These are, ”aquatic sites that are of special biodiversity significance. A site’s significance may be due to the presence of rare species, exemplary or unique natural communities, or other important ecological features. The areas identified represent the approximate boundaries of ecologically significant sites.”
3. *Building*: The word “building” includes the word “structure.”
4. *Protection area*: A portion of property designated to protect natural areas from degradation or pollutants. Native vegetation is not removed from these areas unless it is with a goal of improving wildlife habitat through thinning of young, thick vegetation or prescribed burning.
5. *Developer*:The person, firm, corporation or legal entity that has financial or operational control over the development activity; or the person, firm, corporation, or legal entity in possession or control of the land when he/she directly or indirectly allowed the development activity, has benefited from it, or has failed to comply with any provision of this ordinance.
6. *Development*: The division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any building or other structure or facility, or any grading, soil removal or relocation, excavation or landfill, or any use or change in the use of any building or other structure or land or extension of the use of the land.[[4]](#footnote-4)
7. *Development approval*: any of the following approvals issued by the local government regardless of the form of approval, that are for the development of land:
	1. Any approval of an erosion and sedimentation control plan granted by a local government or by the North Carolina Sedimentation Control Commission under Article 4 of Chapter 113A of the General Statutes.
	2. Any building permit issued under Article 9 of Chapter 143 of the General Statutes.
	3. Any approval by a county of sketch plans, preliminary plats, plats regarding a subdivision of land, a site specific development plan or a phased development plan, a development permit, or a building permit under Article 18 of Chapter 153A of the General Statutes.
	4. Any approval by a municipality of sketch plans, preliminary plats, plats regarding a subdivision of land, a site specific development plan or a phased development plan, a development agreement, or a building permit under Article 19 of Chapter 160A of the General Statutes.[[5]](#footnote-5)
8. *Disturbance area or disturbed area*: the area where vegetation clearing or land manipulation takes place for the purpose of development. This includes the area where fill material is removed or placed, the area affected by changes to natural hydrology, land converted from natural vegetation to lawns, golf courses and other *non-native vegetation*, and any area where development and related activities negatively impact wildlife habitat. This term includes the area lost to the construction of new lakes and other impoundments. It does not include alteration of existing disturbed areas (e.g. paving of an existing gravel road).
9. *Existing conditions*: Conditions that exist at time of plan or plat submittal.
10. *Final Plat*:The final map of all or a portion of a subdivision which is presented for final approval.
11. *Flood or flooding*: A general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of inland waters; and/or (2) The unusual and rapid accumulation of runoff of surface waters from any source.
12. *Fragmentation*: Disruption in continuity and loss of habitat or *significant natural resources* by development of land or alteration of *natural vegetation*. Disruption or impediment of the natural movement and dispersal of wildlife within and between previously connected blocks of habitat caused by removing or altering the natural vegetation (forest, shrubland and grassland) within or between blocks of habitat or by building structures or other *infrastructure* within or between habitats and *significant natural resources*.
13. *Impervious Surface*: A surface composed of any material that impedes or prevents infiltration of water into the soil. Impervious surfaces shall include but are not limited to impervious roofs, driveways, patios, sidewalks, parking areas, tennis courts, concrete or asphalt streets, solid decks, or compacted gravel surfaces. Wooden slatted decks and the water area of swimming pools shall be considered pervious. Calculations of impervious surfaces for streets shall include the area compacted for impermeable pavement or gravel base for impermeable pavement.
14. *Infrastructure*: includes roads, sidewalks, houses, commercial and industrial buildings, utilities and utility corridors, railways, docks, and other forms of built structures and impervious surfaces.
15. *Natural Resources Conservation Plan*: A document that details the specific required measures that the developer will take to minimize impacts and fragmentation of significant natural resources on the development site as described in section IV.B.
16. *Natural vegetation:* Vegetation, excluding any non-native vegetation, as it exists on the tract prior to any of the proposed development or disturbance associated with the proposed development that is not part of a disturbance area or a disturbed area.
17. *Non-native invasive species:* 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.[[6]](#footnote-6)
18. *Non-native vegetation:* non-native (or alien) to the ecosystem under consideration. [[7]](#footnote-7)
19. *Plat:* A map, chart, or plan of a tract or parcel of land which is to be or which has been subdivided.
20. *Person* includes, without limitation, individuals, firms, partnerships, joint ventures, trusts, trustees, estates, corporations, associations, and any other similar entities.
21. *Qualified biologist*: A qualified biologist is defined as one or more of the following: a Wildlife Society Certified Wildlife Biologist (CWB), a Professional Wetlands Scientist (PWS) certified by the Society of Wetlands Scientists, a Certified Ecologist or Certified Senior Ecologist certified by the Ecological Society of America, a biologist currently employed by the NC Wildlife Resources Commission, US Fish and Wildlife Service, NC Natural Heritage Program, US Army Corps of Engineers, or a biologist that is prequalified by the NC Department of Transportation or the NC Environmental Enhancement Program to conduct biological or ecological surveys.
22. *Runoff:*  Water from precipitation that flows off a property.
23. *Sediment:* Solid particulate matter, both mineral and organic that has been or is being transported by water, air, gravity, or ice from its site of origin.
24. *Sedimentation:*  The process by which sediment resulting from accelerated erosion has been or is being transported off the site of the land-disturbing activity or into a lake or natural watercourse.
25. *Significant natural resource areas:* shall include those areas so designated by **[insert local government name here]** by virtue of containing rare or declining habitats or habitats that support rare species or a high diversity of species. These significant natural resource areas consist of the following natural resources and habitats which are:
26. Jurisdictional and non-jurisdictional wetlands or endangered species habitat as delineated by state and federal agencies for environmental permitting.
27. The presence of a natural community or communities as defined by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina[[8]](#endnote-1) within *Significant Natural Heritage Areas* identified and mapped by the NC Natural Heritage Program. *Significant Natural Heritage Areas* are not the same as significant natural resource areas and have their own definition.
28. An average 750 foot radius upland area of any shape adjacent to isolated non-alluvial wetlands not connected to streams or not within conserved floodplains, starting from the edge of the water or watermark. This area includes a 150 foot radius protection area of symmetrical shape around the wetland water’s edge. Wetlands are jurisdictional and non-jurisdictional wetlands with an area of water inundation over 100 square feet in size and of the following types defined by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina: Floodplain Pool, all types of Mountain Bogs and Fens, Upland Seepages, Piedmont and Mountain Upland Pools and Depressions and Coastal Plain Depression Communities and Interdune Ponds.
29. Two hundred (200) feet on either side of permanent (“blue line”) streams or rivers within *subwatersheds* (14 digit Hydrologic Unit Code) which support federally endangered or threatened aquatic species. These protection areas may be reduced to accommodate other priority habitat conservation on site, but shall not be less than 100 feet.
30. A 300 foot wide area on either side of the waterway adjacent to Aquatic Significant Natural Heritage Areas identified by the NC Natural Heritage Program. These protection areas may be reduced to accommodate other priority habitat conservation on site, but shall not be less than 100 feet.
31. Habitat that is sufficient (as determined by the qualified biologist) to conserve species occurrences on the tract of documented Natural Heritage Element Occurrences tracked by the NC Natural Heritage Program.
32. Sufficient habitat as determined by the qualified biologist, of state listed wildlife species or federally listed plants observed opportunistically during site visits. The term “listed” includes designation as Endangered, Threatened, or Special Concern.
33. High elevation habitats (Blue Ridge Mountains) which are forests above 3500 ft. in elevation that meet the definition of one of the following community types defined by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina: Fraser-fir forest, red spruce-Fraser fir forest, high elevation red oak forest, northern hardwood forest, and boulderfield forest.
34. Beaches, dunes and estuarine islands (Coastal Plain) which are sand covered habitats occurring along the immediate ocean coastline and in estuaries. Dune vegetation is characterized by sand substrate dominated by open sand and grasses including sea oats grass and American beach grass. Some shrubs and exotic vegetation may be present. Upper beach vegetation can include sea rocket, Dixie sandmat, seaside sandmat, and seabeach amaranth. Estuarine islands include both naturally occurring islands and islands created by dredged materials in estuaries.
35. A three hundred and thirty (330) foot wide area on all sides of a colonial waterbird nesting colony (in the Piedmont or Coastal Plain) encountered or as mapped by the NC Wildlife Resources Commission. A waterbird nesting colony is defined as an area where 2 or more colonial waterbirds are nesting or have nested within the past 2 years. Colonial waterbirds are any species of heron, egret, anhinga, tern, skimmer, plover, ibis, pelican, stork, and gull. These data are mapped (please see the user’s manual for details on obtaining these maps).
36. A 650 foot protection area around rock outcrops, caves, and mines (Piedmont and Mountains). Rock outcrops which are natural features that contribute to a natural community structure consistent with physical characteristics of the underlying geological unit. For the purposes of this ordinance, rock outcrops include any of the following natural communities described by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina: High and low elevation rocky summit, High and low elevation granitic dome, Montane, Piedmont, and Coastal Plain acidic and mafic cliffs, Montane and Piedmont mafic and calcareous cliffs ,Coastal Plain marl outcrops, Granitic flatrocks, High elevation mafic glade, Diabase glade, Ultramafic outcrop barren and Boulderfield forests.
37. Maritime forests and shrublands found on the Coastal Plain on stabilized upper dunes and flats protected from salt water flooding and the most extreme salt spray. This habitat includes all types of Maritime Upland Forests as described by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina. Canopies of maritime forests can be dominated by live oak, sand laurel oak, loblolly pine, beech, American holly or hickory. The understory is often dominated by dense shrubs and vines. Any forests or shrublands along the coast or islands meeting this description will be considered maritime forest.
38. Longleaf pine forest (Piedmont, Sandhills and Coastal Plain), defined as forests where 20% of the tree canopy consists of longleaf pine trees, regardless of age, within a stand at least 10 contiguous acres in size. These 10 acres can occur solely on the development tract or only a portion of the 10 acres can occur within the development tract.
39. An undeveloped area at least 300 feet wide connecting isolated wetlands on the property.
40. Floodplain forests with a canopy that is dominated by hardwood trees within the 100 year floodplain. Floodplain forests are also Coastal Floodplains and Piedmont and Mountain Floodplains within and outside of the 100 year floodplain as defined by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina.
41. Wet Pine Savannas (Piedmont, Sandhills and Coast), Peatland Pocosins, Streamhead Pocosins (Sandhills and Coast) and Coastal Plain Nonalluvial Wetland Forests as defined by the NC Natural Heritage Program in the Classification of the Natural Communities of North Carolina.
42. A 100 foot wide area adjacent to each side of perennial streams, rivers, lakes and reservoirs and a 50 foot wide area adjacent to intermittent streams.
43. Mature hardwood forest consisting of greater than 25% hardwood trees native to the region over 50 years old or greater than 20 inches diameter to indicate “mature” trees (this will vary depending upon tree species and growing conditions).
44. Lands designated by [**insert local government name**] as important for hunting, wildlife viewing, and other traditional forms of wildlife-related recreation, including lands outside of NC Wildlife Resources Commission Game Lands, within 150 yards of Game Land boundaries. These data are mapped (please see the user’s manual for details).
45. Wildlife corridors and habitat connectors between significant natural resource areas where sufficient information exists to designate these areas or where these areas are part of the Biodiversity and Wildlife Habitat Assessment of the NC Department of Environment and Natural Resources Conservation Planning Tool**.**
46. S*ignificant natural resources:* significant natural resource areas that have been confirmed in site surveys by the *qualified biologist* and or state and federal permitting biologists.
47. *Significant Natural Heritage Area*: A Significant Natural Heritage Area as defined and mapped by the NC Natural Heritage Program. These are, “terrestrial sites that are of special biodiversity significance. A site’s significance may be due to the presence of rare species, exemplary or unique natural communities, or other important ecological features. The areas identified represent the approximate boundaries of ecologically significant sites.” These data are mapped (please see the user’s manual for details on obtaining these maps).
48. *Site Plan*: An accurately scaled development plan that shows existing conditions on a site as well as depicting details of proposed development.
49. *Stormwater* The flow of water which results from precipitation and which occurs immediately following rainfall or snowmelt.
50. *Subwatersheds which support federally endangered or threatened aquatic species*: These watersheds (14 digit Hydrologic Unit Code) have been surveyed by state and federal biologists and are known to contain federally endangered and threatened species. These data are mapped (please see the user’s manual for details on obtaining these maps).
51. *Tract*: Contiguous land under one ownership or under multiple ownership either developed as a single unit or recorded as a single unit.
52. *Wetlands*: Jurisdictional and non-jurisdictional wetlands as defined or delineated by state and federal regulatory agencies or those wetlands following the definition under the definition of significant natural resource areas (c.). Wetlands are important for flood and drought control and water pollutant filtration and act as sponges across the landscape.
53. *Wildlife corridors*: Areas of undeveloped land at least 300 feet wide that connects significant natural resource areas allowing wildlife to move between habitats.
1. From Jordan Model Stormwater Ordinance for New Development [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)
3. Adapted from the Jordan Lake Model Stormwater Ordinance for New Development [↑](#footnote-ref-3)
4. Adopted from “The Permit Extension Act of 2009” S.L. 2009-406 [↑](#footnote-ref-4)
5. Adopted from “The Permit Extension Act of 2009” S.L. 2009-406 [↑](#footnote-ref-5)
6. U.S. Department of Agriculture. Native Invasive and other Plant Related Definitions. Retrieved 8/3/12. http://www.ct.nrcs.usda.gov/plant\_definitions.html [↑](#footnote-ref-6)
7. U.S. Department of Agriculture. Native Invasive and other Plant Related Definitions. Retrieved 8/3/12. http://www.ct.nrcs.usda.gov/plant\_definitions.html [↑](#footnote-ref-7)
8. Shafale, M.P. 2012. Classification of the Natural Communities of North Carolina, Fourth Approximation. North Carolina Natural Heritage Program, Raleigh. [↑](#endnote-ref-1)