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5 U.S.C. Section 552 (b)(5), Exemption 5,
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Specific Privilege: Deliberative Process Privilege

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Becky:

Here is the draft Gregory assessment of the SNHA. Would be interesting to get the NC NHP's perspective.

-Palmer

(See attached file: 4-16-09 draft forestry report-SNHA_Jim Gregory.pdf)

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Response to Jim Gregory's letter of April 16.doc

Response to Jim Gregory's letter of April 16, 2009, regarding the PCS Bonnerton Nonriverine Wet Hardwood Forest site.

Mike Schafale, North Carolina Natural Heritage Program
April 23, 2009

Dr. Gregory's primary assertion is that the area does not meet the definition of a Nonriverine Wet Hardwood Forest and that, because of past land use, it is not a significant example of a Nonriverine Wet Hardwood Forest.

As Dr. Gregory notes, Nonriverine Wet Hardwood Forest was first defined as a type by the Natural Heritage Program. The name was first used in the program's classification of natural communities, based on concepts that had been used previously by program contractors and likely earlier in the scientific community. Dr. Gregory refers to Schafale and Weakley (1990), the program's official classification of natural communities, and Schafale (2008), a recent manuscript on status and trends of Nonriverine Wet Hardwood Forests. However, neither of these documents define Nonriverine Wet Hardwood Forests as having to be dominated by swamp chestnut oak, cherrybark oak, and laurel oak. Schafale and Weakley (1990) describe them as being dominated by various hardwood trees, with these three species named first but with sweetgum, tulip poplar, red maple, and several other species also named. Many of the earliest qualitative descriptions of specific sites described them as dominated by these oaks, but later quantitative study of some of the same sites found that, while abundant, oaks did not dominate.

Schafale (2008) does not define Nonriverine Wet Hardwood Forest as having to be dominated by the three oak species. In fact, it specifically discusses the fact that, while the *presence* of wetland oaks is important, these species often do not dominate in the best remaining examples and that their dominance is not crucial to recognition of the type. Nowhere is there a suggestion that all three species must be present to recognize the type or for an occurrence to be a good example. Because swamp chestnut oak, cherrybark oak, and laurel oak are collectively the most frequent oak species in these communities, they are often emphasized in other descriptions of the type. Abundant presence of other wetland oaks would also potentially support recognition as Nonriverine Wet Hardwood Forest. However, a forest that had no oaks and consisted only of the other trees mentioned in descriptions would not be considered an extant example of the type, but would be either a degraded example or a successional forest of some other type.

The fact that the Bonnerton site shows evidence of human action and past land use does not disqualify it from being a significant example and from being regarded as a Significant Natural Heritage Area. Indeed, there could be no Significant Natural Heritage Areas at all under such a definition that required no human influence. The Natural Heritage Program seeks the least altered, closest-to-natural examples remaining for each community type, and those closest to this ideal are regarded as the most significant. While we have not formalized definitions for mature forests, in our experience, any hardwood forest that has most trees 12 inches dbh or over and has

some many trees 18-20 inches is unusually mature. While forestry books may suggest trees should be 20 inches to be considered mature, this does not appear to match the practice in that field, as most stands are harvested well before trees reach that size. While I noted the evidence of past logging that Dr. Gregory cites, such evidence is common even in our best natural areas. There are no Nonriverine Wet Hardwood Forests that have not been logged, and selective logging of the sort noted by Dr. Gregory is the least alteration we can expect to find in any remnants of these communities. The Bonnerton site is in better condition than most remaining examples despite these impacts. Its condition and relatively large size place it among the best examples of this community type known to remain.

I am not sure how relevant Dr. Gregory's other observations on hydrology and soils are. He notes that the soils have hydric indicators. Most of the site has wetland vegetation, though there are minor marginal upland inclusions. The southern red oaks he reported may have been in such upland inclusions, which are also marked by beech trees. I visited the site with a number of people experienced in delineating wetlands, and there was no dispute that the area was jurisdictional wetland. Standing water does not always occur in Nonriverine Wet Hardwood Forests, though sporadic ponded water, along with seasonal saturated soil and widespread hydric indicators, would be expected.