

COOPER PROJECT  
Contentnea Creek Development Company  
Comments for Board of Commissioners Public Hearing  
18 September 2006  
Allison E. Weakley, Biologist

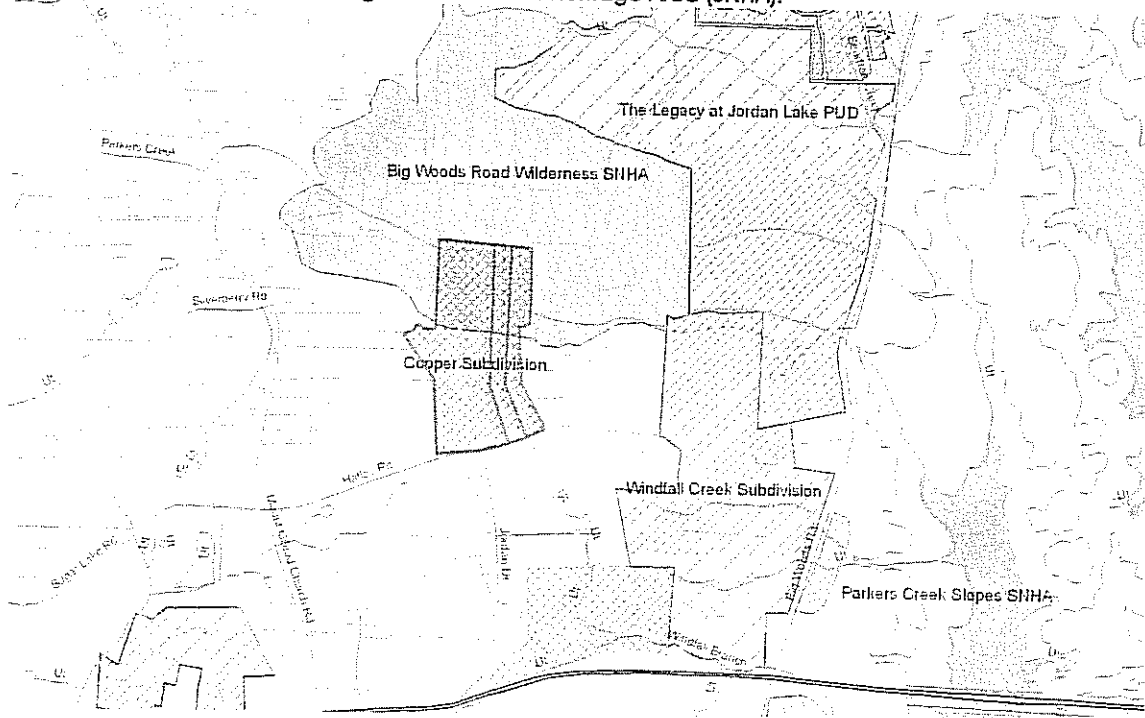
Thank you for the opportunity to speak tonight on the request for rezoning and conditional use for the Cooper property by Contentnea Creek Development Company.

My name is Allison Weakley, and I live at 311 Boothe Hill Road, just a few miles north of the proposed development site off Hatley Road.

I am a biologist (see qualifications attached) and Chatham citizen who has considerable experience reviewing impacts to natural resources at the County, State and Federal levels, including conducting, writing and reviewing environmental assessments. I serve on the River Watch Steering Committee for the Haw River Assembly (HRA), and am an active volunteer in the HRA River Watch Program. My family and I (mostly me and my 4-year old daughter) monitor Parker's Creek 4 times a year for the HRA.

Over the past year, the water quality in Parker's Creek has declined significantly. Impacts from development in its small watershed have had big impacts on this creek, mostly by way of large amounts of sediment making its way into the creek. The Parker's Creek watershed stretches from just west of Mt. Gilead Church Road and drains directly to Jordan Lake just east of Big Woods Road (see Figure 1 below).

Figure 1. Map showing Cooper Subdivision and surrounding area, including watershed of Parkers Creek and the Big Woods Wilderness Significant Natural Heritage Area (SNHA).



Parkers Creek empties in to the Parkers Creek Recreation Area of Jordan Lake State Park, which is a popular swimming hole, especially for young families. Unfortunately, the Parker's Creek area of Jordan Lake is cut off from the rest of the Lake by the US64 causeway, making

this area especially susceptible to pollution from sediment and other non-point pollution within the small Parkers Creek watershed.

The project proposed by Contentnea Creek Dev. Co. for the Cooper property contains a segment of Parker's Creek upstream from the two development sites responsible for impacts to Parkers Creek from sediment over the past year - namely The Legacy and Windfall Creek Estates.

Windfall Creek Estates is also being developed by Contentnea Creek Dev. Co., and has been issued two Notices of Violation from our County Sedimentation Program since January 2006 (see attached).

I met with John Harris, engineer for the developer, on 15 September 2006 to discuss ways that he could design the project to best avoid and mitigate impacts to water quality and wildlife habitat.

We reviewed briefly two alternate designs - one under current zoning (1 home per 5 acres), and one under the rezoning and CUP request (ca. 1 home per 2 acres).

Based on that brief review, I made the following recommendations:

1. Eliminate the off-site drain fields if possible.
2. Realign roads to avoid stream crossings.
3. Consider topography and proximity to streams when choosing locations of roads, driveways, and home sites.
4. Require setbacks so houses and driveways are kept away from streams to the extent possible.
5. Use open-bottom culverts or bridges to span streams instead of metal culverts that limit flow.
6. Phase construction so it's conducted in a manageable, appropriate way.
7. Provide careful oversight during construction to prevent problems that have occurred at Windfall Creek Estates. (Have contractors meet with Jim Willis on site? We discussed the possibility of voluntary incentive-based training for contractors in sediment control.)
8. Increase natural stream buffers, especially along the two major streams - buffer all intermittent and perennial streams, and also consider ways to mitigate impacts to ephemeral streams.

Only 50' buffers are currently proposed along the major creeks, and no buffers have been proposed along the smaller drainages.

Contentnea Creek Dev. Co. agreed to a minimum of 100' buffers along Windfall Branch in their Windfall Creek project - but a 100' buffer still was not enough to prevent sediment problems in area creeks when road construction began. Vegetated buffers are one of the best ways to mitigate impacts to streams, especially when the potential for problems with soil erosion is high. The topography of the site, the soils present, and the number of streams on site all make this project even more of a challenge with higher density.

I suggested to Mr. Harris that he buffer Parkers Creek 150 feet on each side (300 feet total) to protect water quality and wildlife habitat. I noted that part of that buffer could potentially be placed within lot lines. If the buffers are contained within lot lines, setbacks and/or restrictions on the deeds may be necessary (for example, "X feet shall remain undisturbed at rear of lot along creek"). The goal is to keep the stream buffer undisturbed with natural vegetation.

Since my meeting with Mr. Harris, I have reviewed the application and would like to address my concerns as they pertain to the Five Required Findings:

*FINDING #3 states that the requested permit will not impair the integrity or character of the surrounding or adjoining districts, and will not be detrimental to the health, safety or welfare of the community.*

Given that water quality in Parkers Creek has considerably declined over the past year due construction downstream of this site, and the fact that Jordan Lake is "impaired" by non-point source pollution already, rezoning this property to RA-90 from RA-5, which was intended to help protect the water quality in Chatham streams, especially Jordan Lake, and allowing a residential development with twice the density allowed, would be detrimental to the health, safety or welfare of the community, and would impair the integrity of the streams and Lake downstream.

*FINDING #4 states that the requested permit will be consistent with the objectives of the Land Conservation and Development Plan.*

Major goals of the Chatham County Land Conservation and Development Plan (Land Use Plan) include:

- Chatham County's natural resources are identified, conserved and protected.
- Chatham County's surface and underground water resources are effectively protected.

Major Recommendations of the Land Use Plan (pgs. 3-5) which are applicable to the request for rezoning and a Conditional Use Permit include:

3. *Retain the current 5-acre average lot size in the areas designated in the county's watershed protection ordinance and shown as resource protection areas on the community plan map.*

*The county will maintain the current zoning of 1 dwelling unit per 5 acres or more where this standard has long applied in order to protect rural character and water quality.*

The Land Use Plan designates seven types of places in order to accommodate and conservation and development policies, one of which is *Resource Protection Areas*.

*Resource Protection Areas* are lands designed to provide for farming, forestry, and rural homes along the Haw, Rocky and Deep Rivers and in special resource areas such as the Big Woods area and the Brooks Creek-Terrell's Creek area.

The Plan specifically states that the County should "retain the current 5-acre average lot size in the areas designated in the county's watershed protection ordinance and shown as resource protection areas," and established a protected low density rural corridor in the Big Woods area where residential development densities are limited to one unit per five acres.

18. *Work closely with the state to identify impaired waters and develop and implement strategies for restoring them.*

21. *Provide public water and/or sewer service to designated high growth areas such as towns and economic centers, and restrict or prohibit extension to areas designated for low-density growth.*

27. *Use site-based planning as a means of preserving the precious resources of Chatham County. Require that developers inventory the community resources existing on major proposals including botanical, historical, and water resources.*

The proposed site is located within the Big Woods Wilderness Significant Natural Heritage Area (Hall and Boyer 1992), as noted above. The Plan supports site-based planning as a means of preserving precious resources of Chatham County by requiring that developers inventory for natural resources for major proposals. Our Subdivision Ordinance also supports this requirement under the Environmental Assessment.

The proposed site should, at the very least, be surveyed for the Carolina ladle crayfish and Sweet Pinesap (both known to occur just north of the site, in a tributary off Big Woods Road and on Boothe Hill, respectively), and the four-toed salamander.

The developer should be encouraged to preserve undisturbed forest to the extent practicable to minimize the impact on wildlife habitat, especially along Parkers Creek, and should also be encouraged to leave undisturbed, vegetated buffers along 150 feet of each side of Parker's Creek.

A major policy objective of the Plan is to *ensure the long-term quality and availability of groundwater and surface water resources.*

- examine the cumulative effects of well and septic tank concentrations; especially in areas with significant concentrations of well and septic service.
- include the considerations in the lot-size report
- work with up-stream and down-stream jurisdictions
- increase the health and quality of water bodies in the County
- promote the safe use of water bodies in the County

As stated in the Land Use Plan, *"the County has established protected low density rural corridors in several areas. These corridors include the Haw River, New Hope Creek, the Rocky River, the Deep River, the Cape Fear River, the Big Woods area, and the Brooks Creek-Terrell's Creek area. Within these areas, residential development densities are generally limited to one unit per five acres, and more extensive stream buffers are required."*

The Land Use Plan (pg. 61) supports 6 major principles relating to the water and sewer infrastructure and services, one of which states that *"restricting or prohibiting the extension of public water and/or wastewater service to areas designated for low density growth, except where such utility extensions will enhance rural character and provide for open space and water resource protection by allowing clustered development."*

The Land Use Plan also very specifically states that "the County should continue its present policy that states that the availability of public water should not be accepted as justification for changing or granting exceptions to land uses prescribed in the development plan in any instance where more intensive uses of a tract of land are precluded by factors other than the availability of water."

*FINDING #5 states that adequate utilities, access roads, drainage, sanitation, and/or other necessary facilities have been or are being provided.*

The Submission Materials Checklist specifically asks requires that if individual septic is proposed, that the applicant provide a septic improvements permit letter from the Chatham County Health Department.

Has such a permit letter been received?

#### RECOMMENDATIONS for CONDITIONS OF APPROVAL

1. Require all intermittent and perennial streams buffers to exceed the minimum required by our Watershed Protection Ordinance. To ensure protection of water quality and wildlife habitat, especially along Parkers Creek, a minimum 300 foot undisturbed vegetated buffer should be encouraged. On other streams a minimum of 100 feet should be required.
2. Encourage the buffering of ephemeral streams (that carry significant amounts of stormwater during rainfall events).
3. Require/encourage surveys be conducted for the Carolina ladle crayfish and four-toed salamander so that impacts to these species can be avoided or mitigated. The Carolina ladle crayfish is known to occur in a tributary of Jordan Lake northeast of this site off Big Woods Road.

In lieu of a survey for the species, a survey for suitable habitat should be conducted to help guide the design plan to avoid or mitigate impacts to the species or for suitable habitat for the species. A request for an Environmental Assessment that assesses impacts to rare species and their habitats is supported by our Land Conservation and Development Plan and by our Subdivision Ordinance.

4. Restrictive covenants could serve to avoid and mitigate impacts by limiting lot clearing, impervious surface, and ensuring buffers along streams and property boundaries.

5. Prohibit off-site wastewater disposal.

#### SUMMARY

For the reasons stated above, the rezoning request should be denied. Rezoning from RA-5 to RA-90 and will more than double the currently allowed density, which will have will have negative impacts on an already threatened watershed and the area-sensitive wildlife that depend on it.

#### REFERENCES

NC DWQ (NC Division of Water Quality). 2006. North Carolina Water Quality Assessment and Impaired Waters (2006 Integrated 305(b) and 303(d) Report. Public review draft. [Accessed on 25 July 2006 at [http://h2o.enr.state.nc.us/imdl/General\\_303d.htm](http://h2o.enr.state.nc.us/imdl/General_303d.htm)]

NC DWQ. 2004. Basinwide Assessment Report for the Cape Fear River Basin. Environmental Sciences Branch, NC Department of Environment and Natural Resources, Division of Water Quality. August 2004. [Accessed on 25 July 2006 at <http://www.esb.enr.state.nc.us/Basinwide/CPF%202004%20Report%20Final.pdf>]

NCWRC (North Carolina Wildlife Resources Commission). 2002a. *Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality*. Raleigh, NC.

NCWRC (North Carolina Wildlife Resources Commission). 2002b. [Online]. Potential Distribution of *Cambarus davidii* (Carolina Ladle Crayfish) in North Carolina. North Carolina Wildlife Resources Commission, Nongame & Endangered Wildlife Program.  
[http://www.ncwildlife.org/pa07\\_wildlifeSpeciesCon/nccrayfishes/c\\_davidii/c\\_davidii.html](http://www.ncwildlife.org/pa07_wildlifeSpeciesCon/nccrayfishes/c_davidii/c_davidii.html)

Hall, Stephen P. and Marjorie Boyer. 1992. Inventory of the Natural Areas and Wildlife Habitats of Chatham County, North Carolina. NC Department of Environment and Natural Resources, NC Division of Parks and Recreation, NC Heritage Program, Raleigh, NC.

Schafale, Michael P. and Alan S. Weakley. 1990. *A Classification of Natural Communities of North Carolina, 3<sup>rd</sup> Approximation*. NC Natural Heritage Program, Raleigh, NC.