

Parkers Springs, LLC's Response to Review by the Chatham County Environmental Review Board of Parkers Springs Environmental Assessment

Parkers Springs, LLC provided an Environmental Impact Assessment (EIA) that fully addressed all areas required by Section 5.2 (A)(1) of the Chatham County Subdivision Regulations. The EIA was prepared by an un-affiliated environmental firm, ECS Carolinas, LLP, under the direction of a licensed Professional Geologist, Mark Brown, and environmental scientists Christina Breen and Lauren Tucker. An Addendum to the EIA was prepared and provided to the County on March 17, 2008 with greater details and documentation of what ECS Carolinas had relied upon in reaching their findings. The EIA and Addendum were prepared consistent with accepted standards and practices under the National Environmental Protection Act ("NEPA") which were copied as the same criteria set forth in Chatham County Subdivision Regulations Section 5.2A(1). The Addendum, page 3, specific states that ECS Carolina prepared the EIA to address the area set forth in Section 5.2A(1). Even though all information required by the Subdivision Regulations has been provided, Parkers Springs, LLC is glad to supplement the EIA with the following additional information in response to the General Peer Review Comments of the Chatham County Environmental Review Board ("ERB").

1. The proposed method for wastewater treatment and disposal is individual subsurface septic systems, and the specific options for the individual subsurface septic systems are: a conventional subsurface system, a low pressure pipe system, and a subsurface drip system. For clarification, no drip irrigation system has been proposed or will be used. Also for clarification, no community septic systems will be used; rather, the subsurface septic system will consist of individual septic systems on individual lots and 15 remote septic areas that will be owned by respective lot owners. Of those 15 remote septic areas, 14 remote systems will be located on the southern remote field (adjacent to parcel 17440, the Haw River Baptist Church property), and two one remote systems will be located on the northern remote site field.

The Addendum specifically includes the Overall Septic Lot Layout by Mitchell Environmental. Thomas Boyce, Chatham County Soil Specialist, has reviewed the soil scientist report and found the information adequate for preliminary design.

For further clarification, lot #18 does pump wastewater to an off-site area, but it does not cross any streams.

In regard to lot #41, a rock outcrop is located on the lot, but the rock outcrop is not located in the septic area.

2. The proposed use of the land is legal and permitted by the Chatham County zoning ordinances and the approved Sketch Plan. The average lot size is greater than 40,000 square feet, and all roads will be public. Further information about Purpose and Need, beyond what is stated in EIA Sections 2.1 and 2.2, is neither needed nor required by law.

3(a). The preliminary design is consistent with the approved Sketch Design. Several modifications to the Sketch Design were incorporated into the Preliminary Plat, as described more fully in the Letter to the Chatham County Board of Commissioners dated April 28, 2008. The

purpose of the EIA was to assess the environmental impacts of 50-lot subdivision consistent with the approved Sketch Design. Because the EIA found that the Preliminary Plat as proposed did not create any significant environmental effects that were not mitigated, there was no need to consider other alternatives.

3(b). The stream crossing is consistent with the approved Sketch Design, and the crossing could not be avoided because the property north of the Parkers' Creek does not have access to public roads or utilities. The crossing is consistent with NCDOT, DWQ and US Army Corps of Engineer (USACE) standards and has been reviewed and approved by DOT, DWQ and USACE in permitting. In providing the DWQ and USACE permits, DWQ and USACE determined that the impact to Parkers' Creek has been minimized to the extent possible. Furthermore, the applicant has minimized impact to Parkers' Creek by the following measures: crossing the creek in a perpendicular direction; designing the crossing of the creek in a straight section of the creek; and installing the culvert below the stream bed to allow passage of stream life. Parker Springs received permission from NCDOT to design streets to generally follow the natural contour of the properties and to minimize cut and fill grading for the roads. That design for the streets will minimize the amount of coverage over the culverts at crossings which, in turn, will limit the amount of earth fill that will have to be placed in those areas on either side of Parkers Creek. Section 4.5, 4.5.1, 4.7.1, and 4.7.1.1 of the EIA Addendum discussed Water Resources and Aquatic Habitats in greater detail.

3(c) All lot lines have been pulled back to the edge of the 100-foot buffer and the entire 200-foot width of the buffer will be owned by the HOA and not by individual lot owners. The lot labeled "Lot 41" of the approved sketch design bordering Parkers Creek on the south – which would otherwise have allowed construction of a house and required grading closest to Parkers Creek – has been completely moved and relocated elsewhere in the subdivision. The lot labeled as "Lot 38" on the approved sketch design, otherwise bordering Parkers Creek on the north and containing some of the steepest slopes in the subdivision has been moved and relocated elsewhere in the subdivision. The relocation of Lot 38 allows the lot lines between lots 33 and 34, between lots 34 and 35, and between lots 35 and 36, to be rotated approximately 25 feet counter-clockwise around the cul-de-sac at the end of Parker Springs Way. These changes allow for an additional 25-foot (for a total of 75-feet) buffer on the west (steeper) side of the ephemeral stream north of Parkers Creek.

3(d). The plan is consistent with the approved Sketch Design. The only mature trees to be removed by the applicant will be those necessary for soils assessment and the construction of the roads.

3(e) The Parkers Springs Preliminary Plat shows connections with existing easements/rights-of-way within Monterrane, where preserved in the Monterrane subdivision.

4(a). The land cover is forested. See EIA Addendum, Sec. 4.1.1, 4.2.1, and Figure 8.

4(b). Topographic maps are part of the Sketch Design and Preliminary Plat submittals, as well as in the EIA Addendum (Figure 2). Soil maps are part of the preliminary plat application, as well as in the EIA Addendum (Figure 3, Appendix B, Sheet X-01, X-02). Surface water features

are indicated on the preliminary plat, as well as in the EIA Addendum (Figure 5, 6, Appendix B, pg. 1).

4(c). The groundwater depth is considered shallow (15 inches) in some septic areas, but groundwater depth of 15 inches is within the permissible limits for subsurface septic systems, as provided by NC DENR regulations.

4(d). The adjacent land uses are a church, a residential subdivision, an approved but not yet built residential subdivision, and vacant land. The proposed use is consistent with the surrounding area in general and the Chatham County zoning ordinances and the approved Sketch Plan in particular. See EIA Addendum, Figure 7.

4(e). The soils report shows the location of the lines for the subsurface septic systems. Any subsurface drip systems will cause minimal soil disturbance, the conventional septic system will require 3-foot wide trenches, and the low pressure pipe system will require 18-inch wide trenches. The septic system will require soil disturbance of 4,000 to 5,000 feet for the nitrification fields. The analysis of the soils indicates that the soils on the property will support subsurface septic systems for at least 50 homes, and Thomas Boyce, Chatham County Soil Scientist, has reviewed the soil scientist report and found the information adequate for preliminary design. Furthermore, the analysis of the soils indicates that there are additional suitable soils on the property that are not proposed for use for the septic system.

4(f). Clearing and grading by the applicant will be limited to the road rights-of-way. The areas in which clearing and grading may occur for the individual homes are indicated on the preliminary plat. See EIA Addendum Sec. 4.1.1.

4(g). The subdivision will meet all applicable impervious surface requirements. Parkers' Creek will have 100-foot buffers on both sides of the creek, other than at the crossing, which is twice the required buffer. All other surface water features are buffered in compliance with all applicable standards. Parkers Springs LLC has decided to treat stormwater in accordance with NCDWQ approved Best Management Practices (BMP) Manual, in a V-ditch or grass swale and not curb-and-gutter in order to avoid concentrated flows. Discharge points have been designed in a way to ensure pipe flows will be minimized and sheet flow utilized. There will be no pipe flow discharge points within the 100-foot buffers of Parkers Creek. See EIA Addendum Section 4.5.1.

4(h). The proposed roadway and lot alignments are consistent with the approved Sketch Design, except where they have been relocated to remove the individual lot lines within the Parkers Creek buffers and to avoid potential driveway crossing of surface water features. See all Sections of EIA and EIA Addendum Sections 4.1 through 4.10.1.

4(i). Detailed lot footprints have been provided in the soils report, and show the locations of the homes and driveways. Information has been provided that the average impervious surface for each lot should not exceed 6,300 square feet as the impervious footprint of the proposed homes and appurtenant structures is expected to be about 4,800 square feet and the driveways are expected to average about 1,500 square feet. Therefore, the impervious area for the total build-out will be approximately 12%.

4(j). A Declaration of Restrictive Covenants is planned for the subdivision, and erosion and stormwater management will be addressed in the Restrictive Covenants.

4(k). Because “non-regulatory floodplains” is an undefined, unknown, and unknowable term, this question cannot be answered.

4(l). With the exception of the road crossings that have been permitted by DWQ and NCACE, and a water line easement along the edge of Lot 32, the buffers will remain undisturbed. The water line easement will not be within 30-feet for the intermittent stream and will be re-vegetated following construction of this line. Specifically, there will be no septic fields or greenways located in the buffer areas.

4(m). Detailed knowledge and analysis of the watershed above and outside the site is not required by any applicable regulation or law. However, the adequacy of the stream crossing design regarding the road design and the pipe design has been reviewed and approved by NCDOT, and the adequacy of the stream crossing design was also reviewed and approved by Chatham County Environmental Health Services.

4(n). Parkers’ Creek is being protected as a 100-foot buffer (which is twice the County’s required buffer width at the time of Sketch Design approval) will be on both sides of Parkers’ Creek, and individual lot lines will not extend into the buffer, although not required by County or State requirements. The stream crossing, as proposed, has been approved by DWQ and NCACE. **The lot labeled “Lot 41” of the approved sketch design bordering Parkers Creek on the south – which would otherwise have allowed construction of a house and required grading closest to Parkers Creek – has been completely moved and relocated elsewhere in the subdivision. The lot labeled as “Lot 38” on the approved sketch design, otherwise bordering Parkers Creek on the north and containing some of the steepest slopes in the subdivision, has been moved and relocated elsewhere in the subdivision.**

4(o). There are no known or anticipated significant adverse impacts on downstream water resources. DWQ reviews the proposed impervious surface for the subdivision to determine potential impacts to surface water quality, and the protection of the surface water resources on site has been approved and permitted by DWQ. The project is classified, in stormwater terms, based upon construction methods, as a Low Impact Development. The plan for impervious surface on the property is low (only 11.4 acres), which is significantly less than the threshold amount that DWQ requires for stormwater detention devices.

4(p). The applicant is not aware of the specifics of the seep referred to in this comment. However, there is an extremely small jurisdictional wetland located between lots 9 and 10 that will be filled. DWQ and NCACE are aware of the impact to this wetland and have permitted the impact to this small wetland.

4(q). All required sediment and erosion control permits and plan approvals will be obtained as required by County and State law. [See EIA Addendum 4.5.1.](#)

4(r). Please refer to the preliminary plat application. The cemetery is being protected as that area has been designated as open/common space and will be maintained by the homeowners' association.

4(s). A stone foundation was found on the property. The stone foundation will be preserved and protected as it will be included in the area designated as open/common space. The applicant met with Jane Pyle, Jim Wiggins and Beverly Wiggins with the Chatham County Historical Association to discuss the protection of the cemetery and the features located in the cemetery area. The applicant requested input from the Chatham County Historical Association for methods to preserve the cemetery area, and did receive such input.

4(t). The project is not expected to cause a material increase in ozone levels during the temporary building phase because the number of lots (50 lots) and amount of roadways is low.

4(u)(i), (ii), (iii). The proposed preliminary plat application is consistent with the zoning classification and the approved Sketch Design for this property. The area, plans, and classifications referenced are not part of the Chatham County land use regulations, zoning classification, or approved Sketch Design, and therefore not applicable to the review of a preliminary plat. However, impact to the NHA will be minimized as a 100-foot undisturbed buffer will be provided on each side of Parkers' Creek. Also, water quality will be protected as the impervious surface for the project is low (11.4 acres of impervious surface), and grassline channels (the best practice for stormwater management) will be used. Furthermore, we have received permission from NCDOT to design the streets in a way that allows the streets to follow the natural contours of the property and therefore minimize the amount of coverage over the culverts at crossing which, in turn, limits the amount of earth fill that would have to be placed in those areas. The discharge points have been designed to ensure pipe flows would be minimized and sheet flow utilized. See also EIA Addendum 4.7.1 and 4.7.1.1 addressing Impacts to Aquatic and Terrestrial Habitats. Natural resources in the Big Woods area were specifically considered in the EIA Addendum, as noted in the pages attached to the Addendum numbered 545 to 555.

4(u)(iv). According to the NC Natural Heritage Program, suitable habitat for the Carolina Ladle Crayfish and the Loggerhead Shrike may be present on the site. Suitable habitat for the significantly rare Carolina Ladle Crayfish includes perennial drainage features in the Neuse and Cape Fear Watersheds. Parkers' Creek on the property would qualify as suitable habitat for this species. As stated in the EIA, potential impacts are from roadway construction and sedimentation, which will be minimized by providing 100-foot buffers around Parkers' Creek and 50-foot buffers around the remaining streams on the property, and by using sediment and erosion control devices which will have to be approved as part of the Sediment and Erosion Control Permit. Impacts due to stream roadway crossings will be minimized as part of the Section 404/401 Clean Water Act approval process.

Suitable habitat for the species of special concern, the Loggerhead Shrike, includes fields and open pasture, longleaf pine savannas, and open, mature stands of loblolly pine-shortleaf pine. This habitat was not observed by ECS during their site reconnaissance.

4(u)(v). At the time of ECS's review of the NHP database in March 2007, a radius of 1 mile from the project site was used to identify elemental occurrences of Threatened and Endangered Species and rare species. At that time, no elemental occurrences of those species were identified within that radius. A description of impacts to those species and mitigation measures, as described above, has already been provided.

4(u)(vi). The Basic Oak-Hickory Forest Classification was the closest match for the site from Schafale, Michael P., and Weakley, Alan S., *Classification of the Natural Communities of North Carolina, Third Approximation*, 1990, and does closely match the description of the site in Section 4.1 of the EIA. Please see Figure 7 for habitat types and their locations in the EIA. Also, Table 1 gives the percentage of those types found on the property.

4(u)(vii). The species discussed in the EIA were taken from Schafale, Michael P., and Weakley, Alan S., *Classification of the Natural Communities of North Carolina, Third Approximation*, 1990, as those that are most likely to be found in the Basic Oak-Hickory forest. Impacts to that habitat were discussed. However, due to the frequent logging of the property, it is ECS's opinion that the wildlife habitat on the site has already been highly disturbed.

Also, the preliminary plat is consistent with the Chatham County land use regulations, the approved Sketch Design, and all applicable state and federal environmental laws. In light of existing and approved residential uses in this area, no material impact on habitat or natural resources will result from this approved subdivision.

4(u)(viii). Loss of habitat was discussed in the EIA. Also, see response to 4(u)(vii) above.

Also, as stated in response to number 4(u)(vii), the preliminary plat is consistent with the Chatham County land use regulations, the approved Sketch Design, and all applicable state and federal environmental laws. In light of existing and approved residential uses in this area, no material impact on habitat or natural resources will result from this approved subdivision.

4(u)(ix). Street lights are being proposed. In light of how wildlife have adapted to other residential developments in eastern and northeastern Chatham County, there is no anticipated adverse impact of street lights on wildlife habitat.

5. Clearing and grading by the applicant will be limited to the road rights-of-way and for soils suitability testing. The areas in which clearing and grading may occur for the individual homes are indicated on the preliminary plat Septic Layout.

6. Please see the letter to Mr. Jim Willis included in Appendix B to the EIA Addendum and the documents that follow that letter in the Appendix. Parker Springs has received its Land-Disturbing Permit and is now in full compliance with its approved Erosion Control and Sedimentation Control Plan. As indicated in the Inspection Report by Mr. Willis, no sediment damage occurred as a result of the soils assessments and cutting.

7. ECS conducted their research into Threatened and Endangered Species and rare species at the North Carolina Heritage Program, which is a part of the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources. “The program inventories, catalogues, and supports conservation of the rarest and most outstanding elements of the natural diversity of our state. The Natural Heritage Program follows methodology developed by The Nature Conservancy and shared by the Natural Heritage Network and NatureServe.” (<http://www.ncnhp.org/Pages/missoin.html>) The two species noted were listed in the NHP database as having suitable habitat in this area. No other rare species were listed, and therefore, no other habitat was evaluated.

8-9. The preliminary plat is consistent with the Chatham County subdivision land use regulations, zoning classification, the approved Sketch Design, and all applicable state and federal environmental laws. Specifically, please see (1) responses to questions above, (2) [text of EIA and EIA Addendum Sections 4.1 through 4.10.1](#), (3) [the Additional Conditions of the 401 Water Quality Certification attached to the EIA Addendum](#), (4) [Permit Conditions, and Nationwide Permit Conditions of the U.S. Army Corps of Engineers 404 Permit, pursuant to the Clean Water Act, 33, U.S.C. 1344](#), attached to the EIA Addendum.